76th Annual Meeting

of the International Society of Electrochemistry

7 - 12 September 2025

Mainz, Germany

Electrochemistry –
From Basic Insights
to Sustainable Technologies

PROGRAM

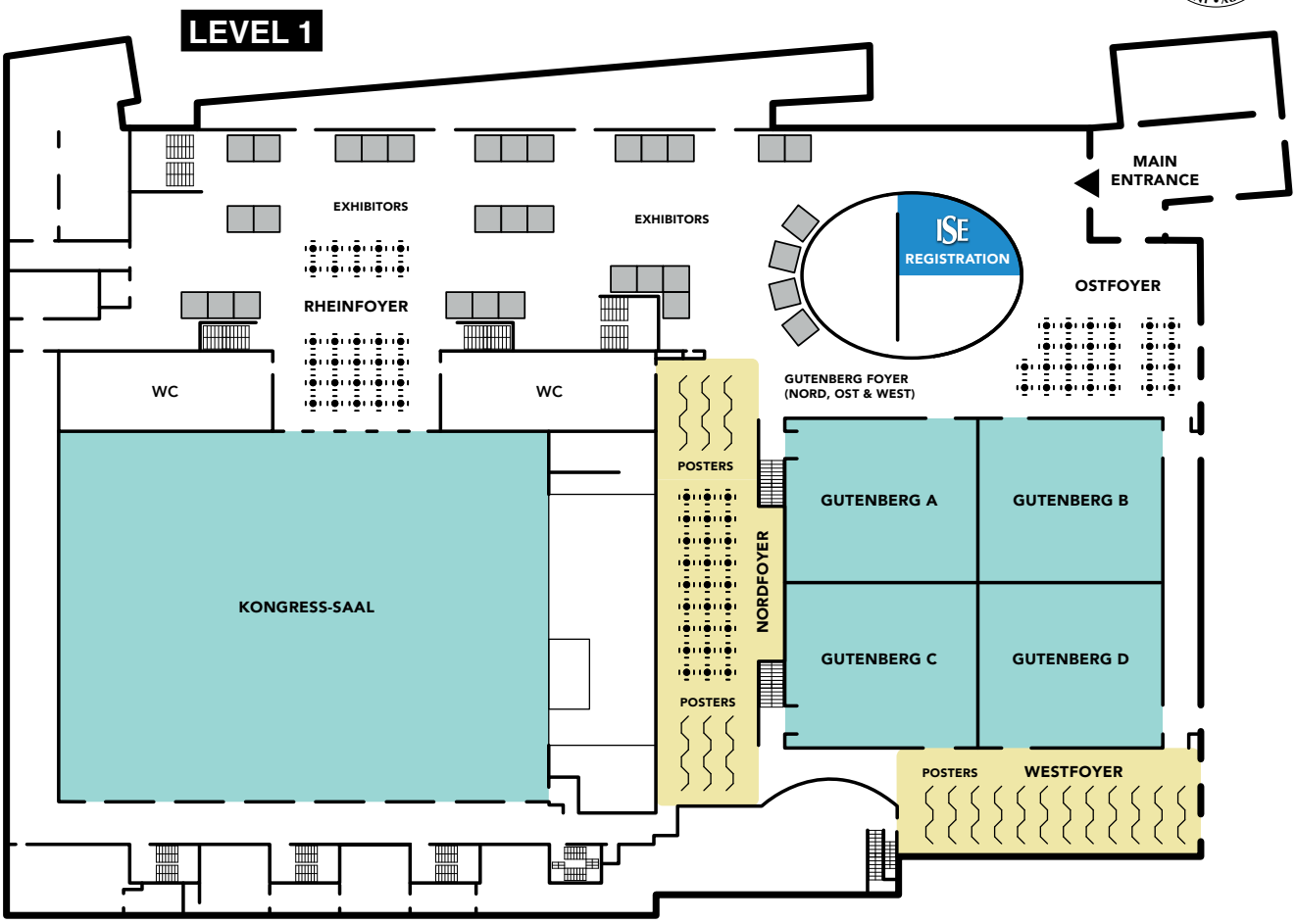
https://annual76.ise-online.org
e-mail: events@ise-online.org

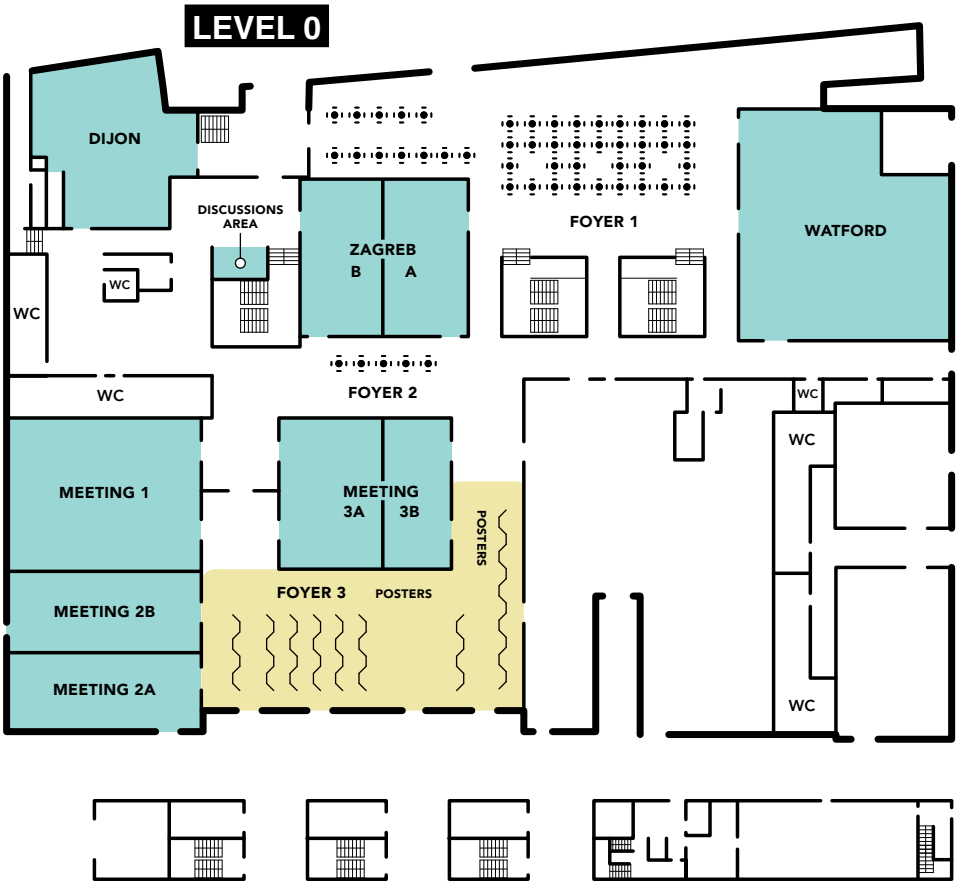
Symposium Schedule by Room

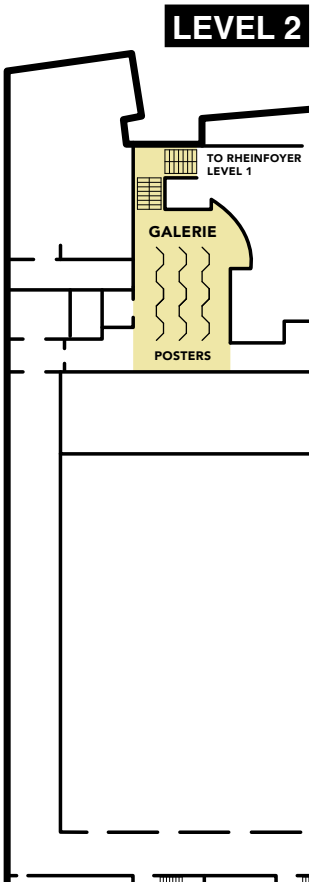
Room Name	Monday 8		Tuesday 9		Wed 10	Thursday 11		Friday 12
	AM	PM	AM	PM	AM	AM	PM	AM
Watford	Symp. 5		Symp. 5a		Symp. 5a	Symp. 5a		Symp. 5a
Meeting 3A	Symp. 3		Symp. 3		Symp. 3	Symp. 3		Symp. 13
Meeting 2A	Symp. 8		Symp. 2	Symp. 8	Symp. 8	Symp. 8	Symp. 15	Symp. 15
Gutenberg A	Symp. 4b		Symp. 4b	Symp. 5b	Symp. 5b	Symp. 10b	Symp. 5b	Symp. 5b
Dijon	Symp. 9		Symp. 9		Symp. 9	Symp. 2		Symp. 2
Gutenberg B	Symp. 4a		Symp. 4a		Symp. 4	Symp. 4		Symp. 4
Zagreb B	Symp. 10b	Symp. 1	Symp. 1		Symp. 2	Symp. 1		Symp. 1
Meeting 1	Symp. 10a		Symp. 10		Symp. 10	Symp. 10a		Symp. 10
Kongress-Saal	Symp. 6a		Symp. 6a		Symp. 6a	Symp. 6a		Symp. 6a
Gutenberg D	Symp. 6b		Symp. 6b		Symp. 6b		Symp. 6b	Symp. 6b
Meeting 3B	Symp. 7		Symp. 7	Symp. 13	Symp. 13	Symp. 7	Symp. 13	Symp. 7
Meeting 2B	Symp. 11		Symp. 11		Symp. 11	Symp. 14b		Symp. 14b
Gutenberg C	Symp. 14		Symp. 14		Symp. 14	Symp. 14a		Symp. 14a
Zagreb A	Symp. 16		Symp. 16		Symp. 12	Symp. 12		Symp. 12

Symposium 1	Electroanalysis: From fundamentals towards smart devices
Symposium 2	Bioelectrochemistry from fundamentals to sustainable applications
Symposium 3	Electrochemical and bioelectrochemical synthesis of small molecular products
Symposium 4	Lithium-ion batteries: From liquid to solid state
Symposium 5	New battery chemistries
Symposium 6	Hydrogen production and conversion: Advances in water electrolysis and fuel cells
Symposium 7	High power devices: Electrodes and electrolytes, limiting factors or assets for power capability?
Symposium 8	Corrosion, coatings, and nanostructures for a sustainable future
Symposium 9	Durability of materials for energy conversion and storage: Mechanism, mitigation and performance
Symposium 10	Green electrochemistry for a sustainable world
Symposium 11	Electrochemical technologies for energy and industrial electrosynthesis at scale
Symposium 12	Molecular spectro-photo-electrochemistry and electrosynthesis
Symposium 13	Mechanisms in molecular electrochemistry for (bio-)catalysis, (bio-)sensing and electronics
Symposium 14	Experimental and theoretical methods for atomistic understanding of electrochemical interfaces
Symposium 15	Artificial intelligence for electrochemistry
Symposium 16	General Session – Hidden treasures – diversity of electrochemistry

ISE Conference Venue Plan - 'Rheingoldhalle', Mainz, Germany.







The ISE Annual meeting is supported by the Fonds der Chemischen Industrie (FCI)
and the German Research Foundation (DFG)

International Society of Electrochemistry, chemin du Closelet 2, 1006 Lausanne, Switzerland.

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The 76th Annual Meeting of the International Society of Electrochemistry

Electrochemistry – From Basic Insights to Sustainable Technologies

7 - 12 September, 2025. Mainz, Germany.

Rheingoldhalle - Rheinstraße 66, 55116 Mainz, Germany
www.mainz-congress.com

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Welcome Address

Dear Colleagues,

Welcome to the beautiful and historic city of Mainz and an exciting week of electrochemical science! The ISE Executive Committee and Office, along with the Organizing Committee and Symposium Organizers, warmly welcome you to the 76th Annual Meeting of the International Society of Electrochemistry under the theme "Electrochemistry: From Basic Insights to Sustainable Technologies".

Germany is one of the largest regions in ISE and has eagerly looked forward to hosting an Annual Meeting in Germany after previous editions in Lindau (1955), Elmau (1967), Erlangen (1983), Berlin (1993), and Düsseldorf (2002). Since the last ISE Annual Meeting in Germany 23 years ago, a whole new generation of electrochemists and electrochemical engineers has emerged, who will showcase research ranging from fundamental to applied topics in Mainz and at the Satellite Meetings in Berlin, Mülheim, and Ulm.

In Germany, academic research in electrochemistry takes place at numerous universities, universities of applied sciences, and institutes of the Max Planck Society, the Helmholtz Society, the Leibniz Association of research institutions, and the Fraunhofer Society. Germany prides itself on a long tradition of intense collaborative research efforts between academia and industry. Companies like BASF, Siemens, Bosch, Evonik, Lanxess, Covestro, Atotech, and ThyssenKrupp are actively involved in electrochemistry, working on everything from electrosynthesis and batteries to green electrochemistry and electroanalysis. With the country's ambitious goals to defossilize its highly industrialized economy in the heart of Europe, electrochemistry has become even more significant for Germany. This is reflected not only in the increasing number of ISE members but also in the rising number of companies developing electrochemical expertise to address future challenges.

Our venue is the "Rheingold-Halle", named after a mystical treasure hidden somewhere in the river Rhine. This treasure has the power to bring well-being and happiness to its owner, but also tempts them with the promise of absolute power. This tension has inspired artists for many centuries, from the Nibelungen-Saga—one of the earliest accounts of German literature—to the operas of Richard Wagner, and more recently, to an award-winning film by Fatih Akin from 2022 about the history of a Kurdish refugee.

Mainz has over 2000 years of history, with the Romans planting a vibrant viticulture still visible today. In 780, after the fall of the Roman Empire and the chaos of the migrating nations, Mainz became the seat of the archbishop, who from the very beginning in 919 was one of the seven electors of the German kings. Between 1244 and 1462, Mainz was a free city, where elected citizens managed their affairs without aristocratic or clerical rulers passing down authority. This period of economic growth was also when Johannes Gutenberg invented printing with movable type. This innovation made books, like the Bible, affordable for ordinary citizens. Also, it enabled the mass production of political leaflets on the eve of the Reformation, which shook European societies for centuries. Today, Mainz has more than 220,000 residents, is the capital and largest city of Rhineland-Palatinate, and is home to a university, a university of applied sciences, two Max Planck institutes, and one Fraunhofer Institute, along with a vibrant industry scene.

The organizers and student helpers feel delighted and privileged by the large number of participants in this Annual Meeting and look forward to inspiring scientific discussions inside and outside the lecture halls. Please take the opportunity also to visit the Forum, a new discussion format at the ISE Annual Meetings. Last but not least, we encourage you to explore the rich local history, charming surroundings, and local culture.

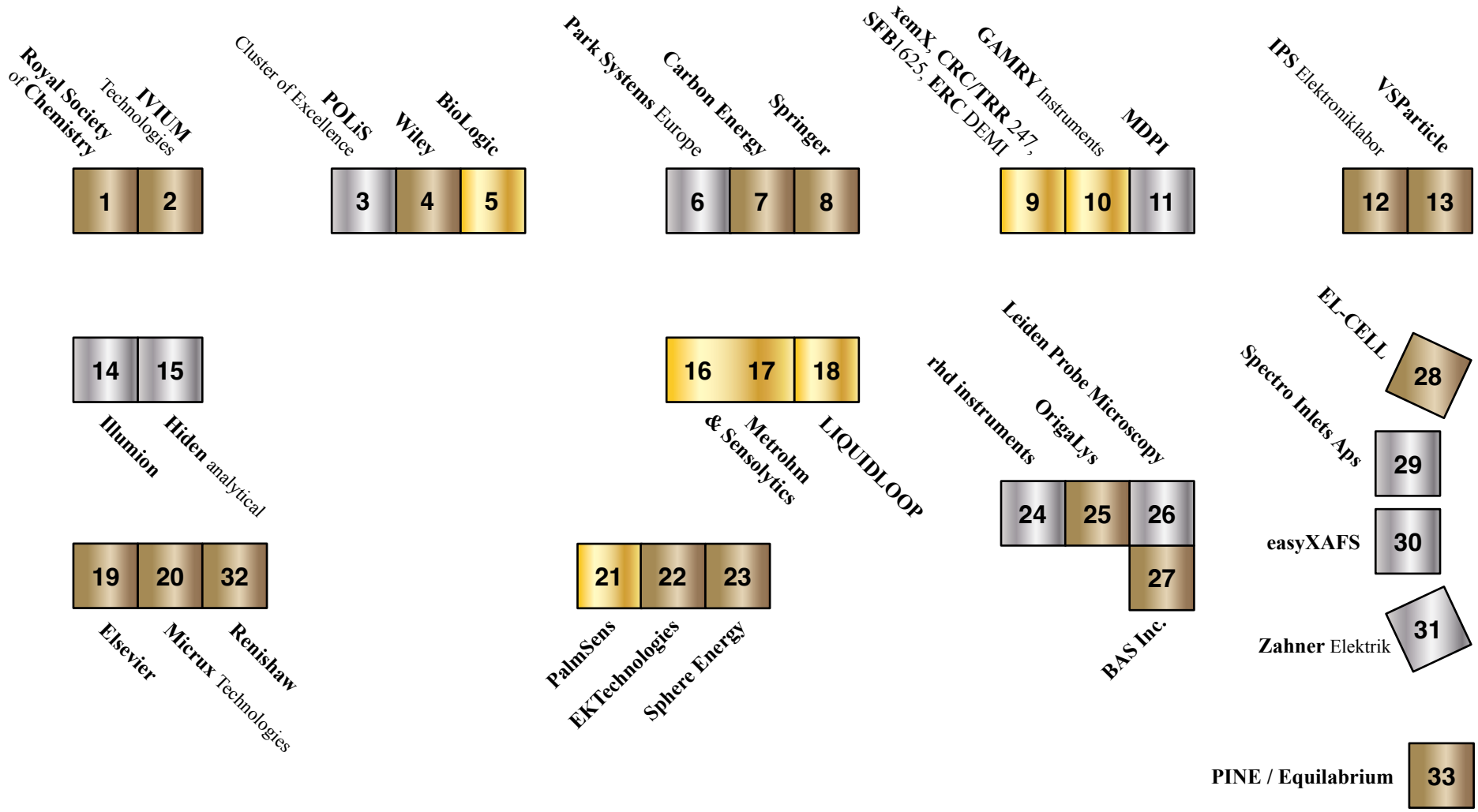
Ulrike Krewer and **Gunther Wittstock**
Co-Chairs of the 76th ISE Annual Meeting Organizing Committee

Organizing Committee

Philipp Adelhelm, *Berlin, Germany*
Plamen Atanassov, *Irvine, USA*
Ulrike Krewer ***(Co-chair),*** *Karlsruhe, Germany*
Katharina Krischer, *Munich, Germany*
Jaeyoung Lee, *Gwangju, Rep. of Korea*
Shelley Minteer, *Salt Lake City, USA*
Christina Roth, *Bayreuth, Germany*
Debbie Silvester-Dean, *Perth, Australia*
Siegfried R. Waldvogel ***(Local Organizer),*** *Mainz, Germany*
Gunther Wittstock ***(Co-chair)*****,** *Oldenburg, Germany*

Exhibitor booths

Gold Silver Bronze



Exhibitor Hours: Sun : **18:00-20:00** Mon : **09:00-20:00** Tue : **09:00-18:00** Wed : **09:00-12:30** Thur : **09:00-18:00** Fri : **09:00-11:00**

Exhibitors

BAS Inc. #27

BioLogic #5

Carbon Energy #7

easyXAFS #30

EKTechnologies #22

EL-CELL #28

Elsevier #19

GAMRY Instruments #10

HIDEN Analytical #15

Illumion #14

IPS Elektroniklabor #12

IVIUM Technologies #2

Leiden Probe Microscopy #26

LIQUIDLOOP #18

MDPI #11

Metrohm & Sensolytics #16 & 17

Micrux Technologies #20

OrigaLys #25

PalmSens #21

Park Systems Europe #6

PINE / Equalibrium #33

POLiS - Cluster of Excellence #3

Renishaw #32

rhd instruments #24

Royal Society of Chemistry #1

Spectro Inlets Aps #29

Sphere Energy #23

Springer Verlag #8

VSParticle #13

Wiley #4

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Zahner Elektrik #11

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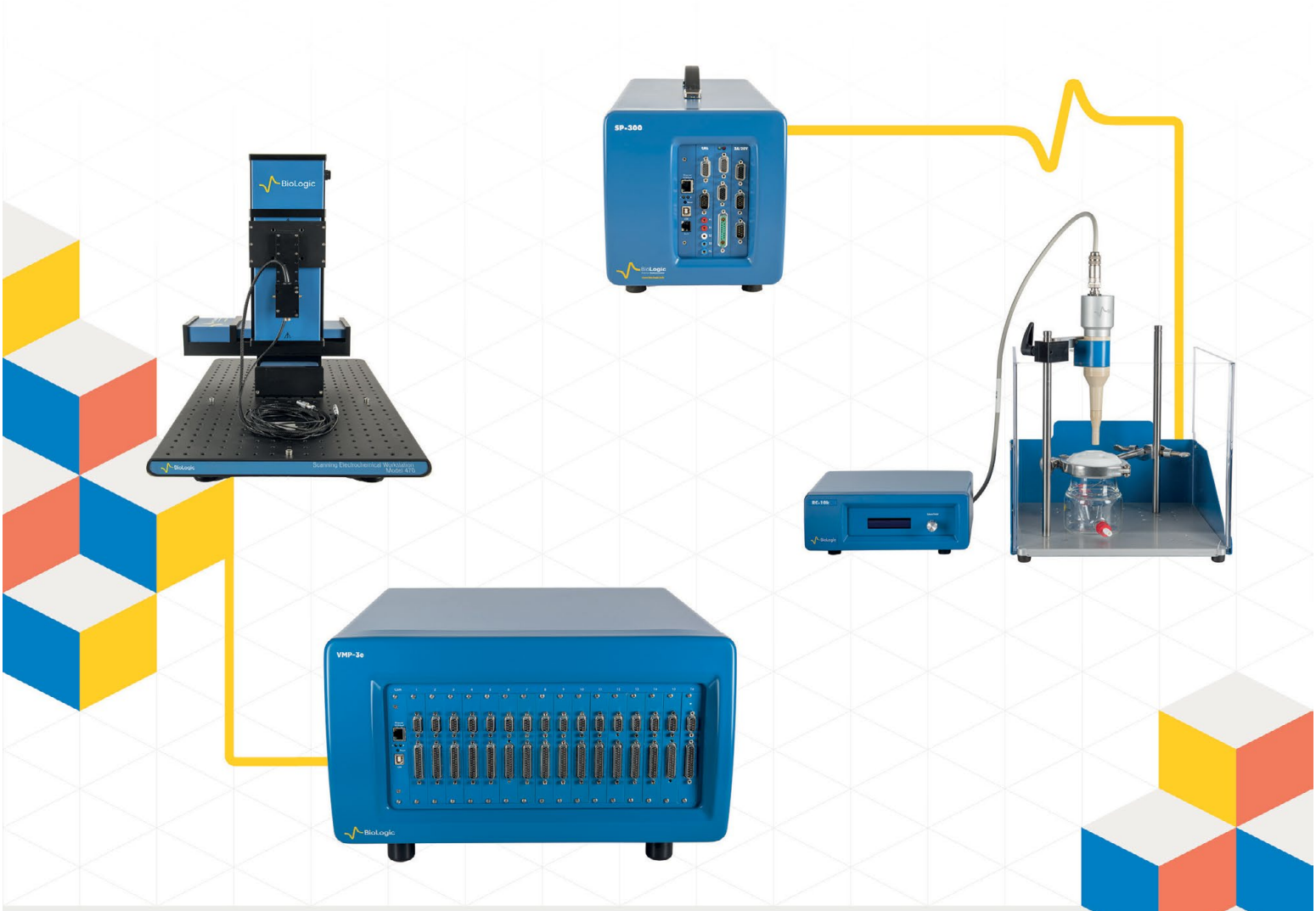
Purpose-built instruments for

Analytical Electrochemists



80+ techniques:
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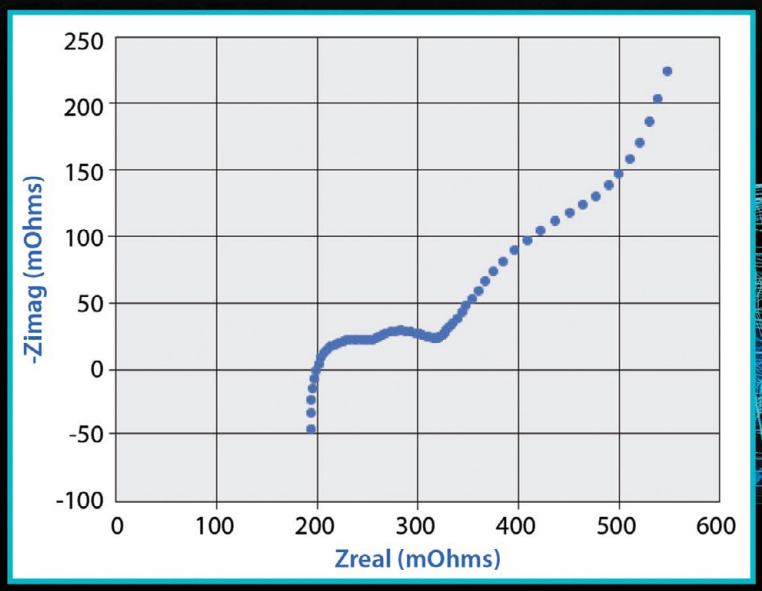
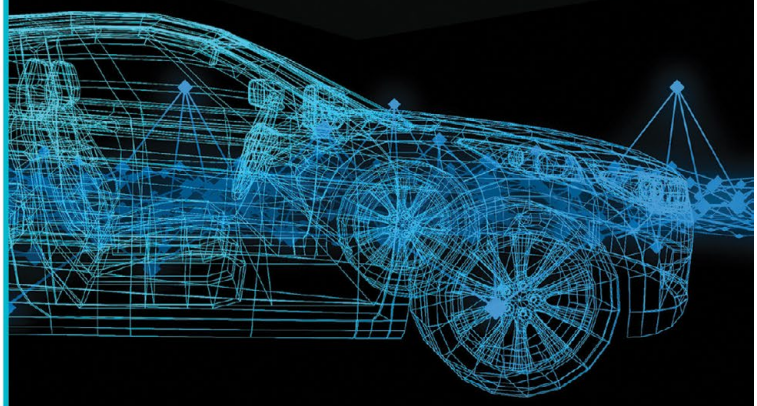
HIGH VOLTAGE EIS for Batteries & Fuel Cells

Gamry's new LPI1010 can be used to perform EIS on devices up to 1000V*

The LPI1010 modulates a load or power supply attached to the devices under test while simultaneously measuring the devices response.





Galvanostatic EIS on a 60.9V battery. 5 kHz-1 mHz, 0.5 A rms

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*when used in conjunction with an appropriate load/power supply

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DEMS System

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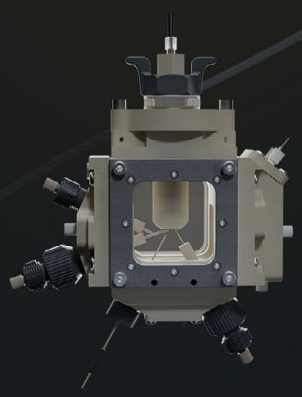

Capillary Cell Features

- Customizable & transparent
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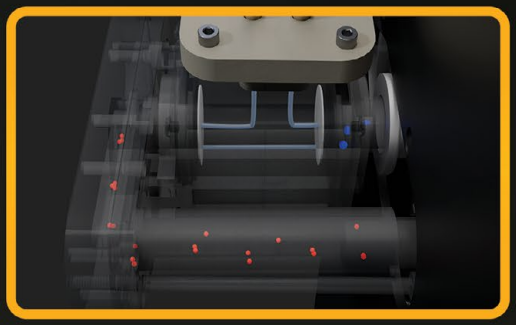
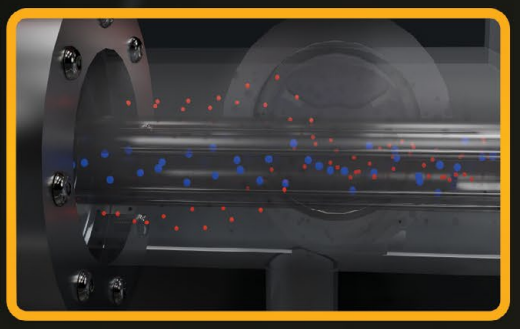
- Unique droplet setup (0.05 mL volume)

Analysis

- Detects down to 5 nmol s^{-1}
- Time-resolved gas monitoring
- CO_2RR, OER, HOR, N_2RR & more





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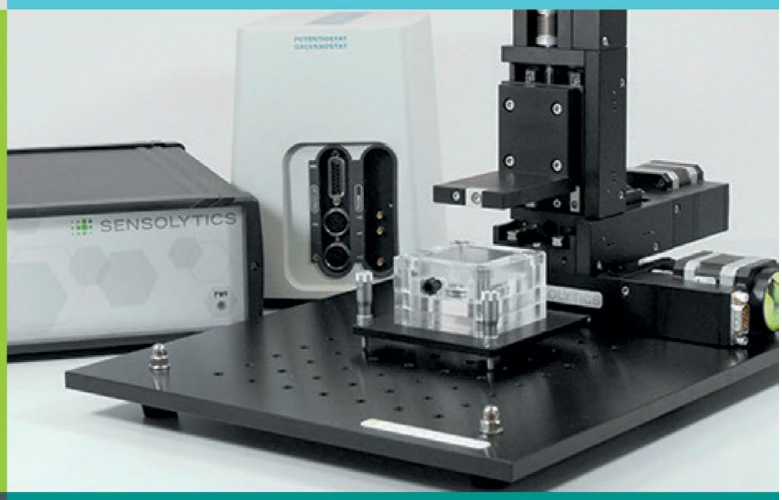

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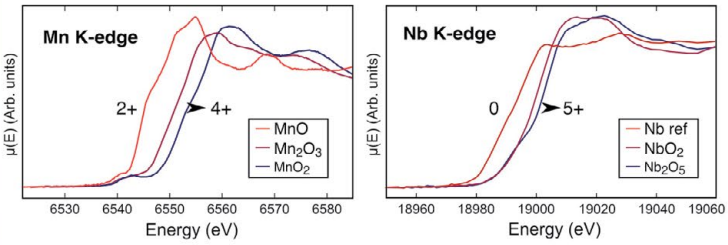

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- Nitrogen Reduction
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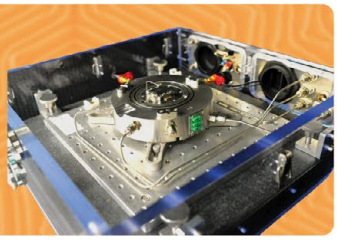

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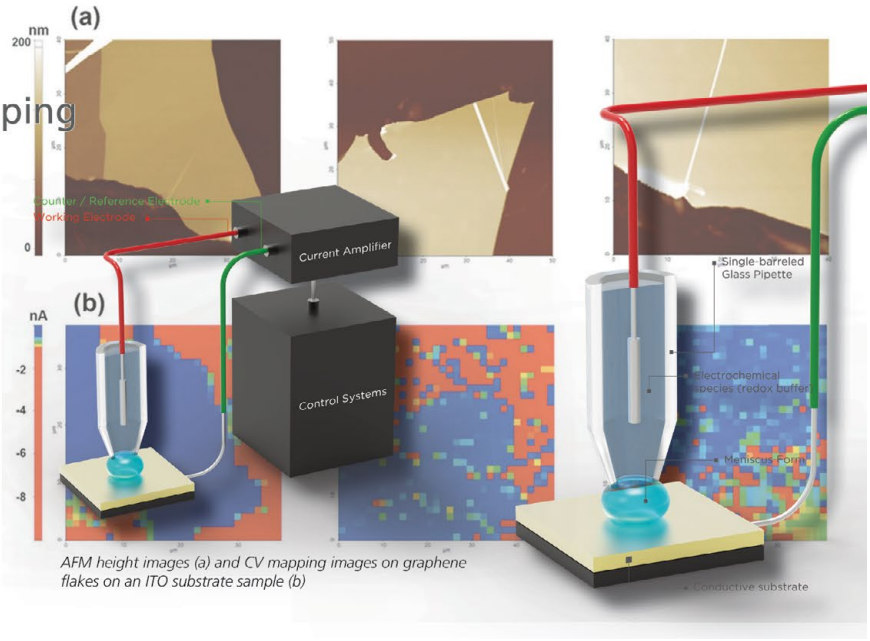

AFM height images (a) and CV mapping images on graphene flakes on an ITO substrate sample (b)

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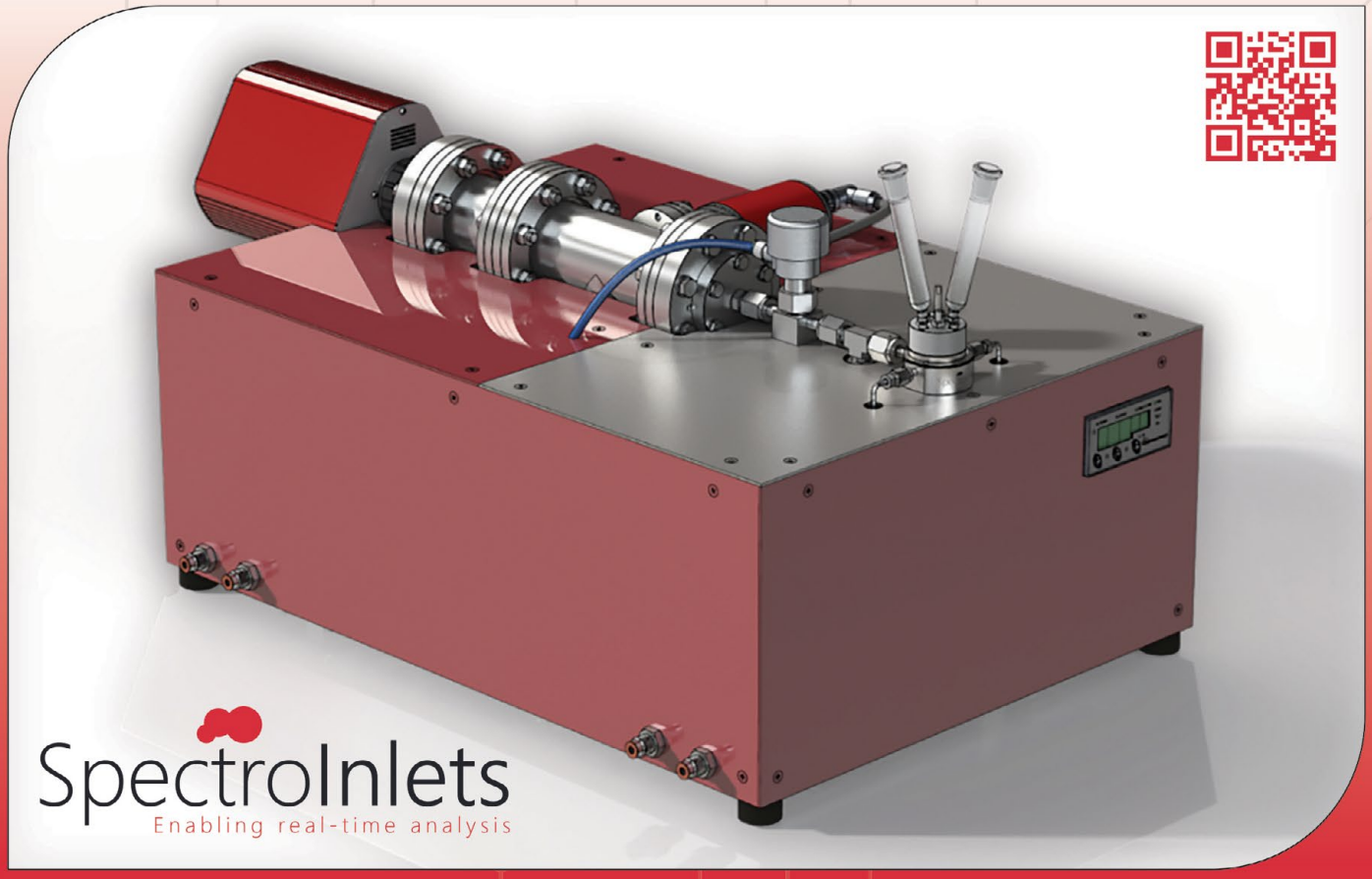

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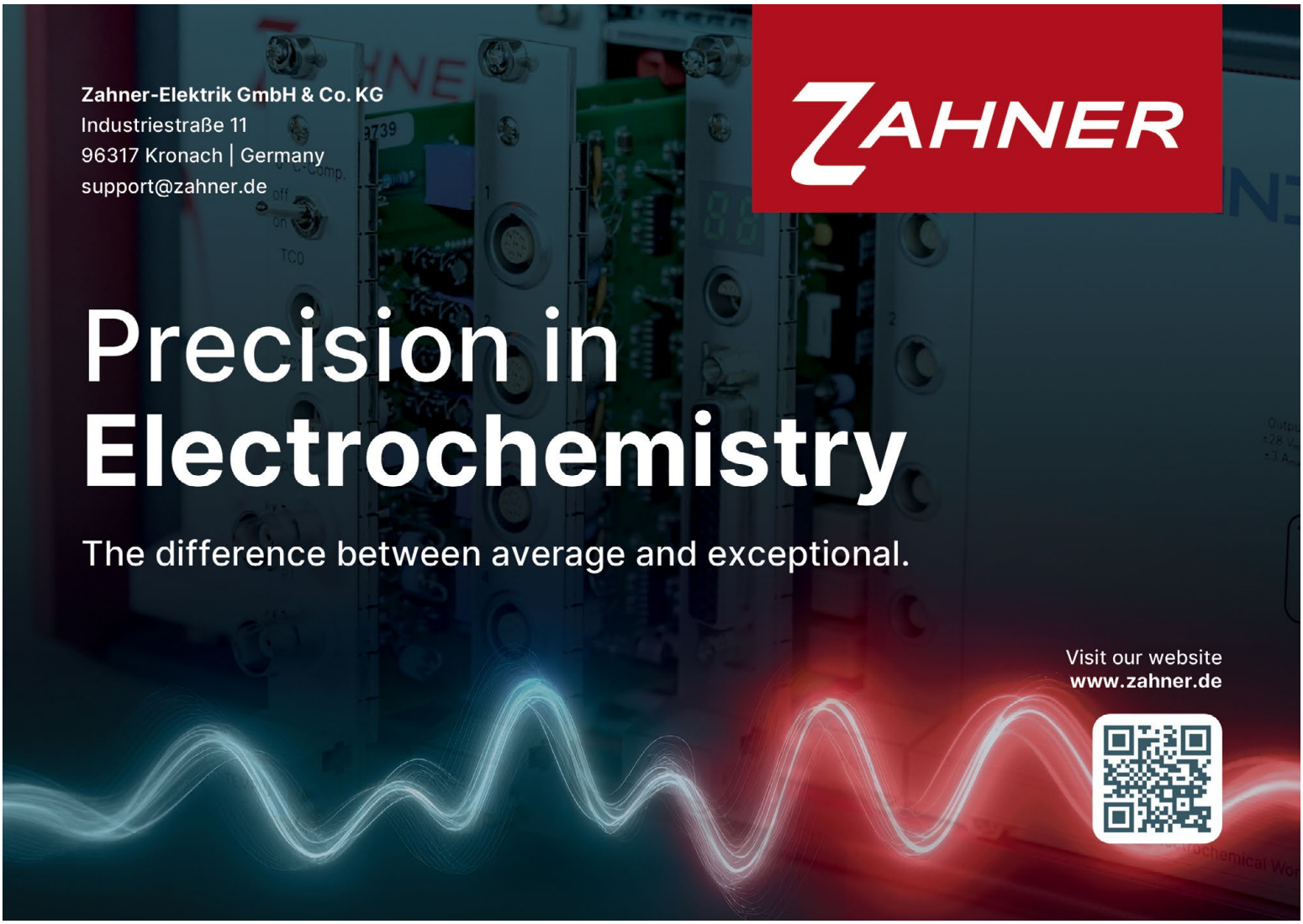

Notes

Symposium Organizers

Symposium 1 Electroanalysis: From fundamentals towards smart devices

Guy Denuault (lead organizer), *University of Southampton, UK.*
Mauro Bertotti, *University of São Paulo, Brazil.*
Frank-Michael Matysik, *Universität Regensburg, Germany.*
Christine Kranz, *ULM University, Germany.*

Symposium 2 Bioelectrochemistry from fundamentals to sustainable applications

Ilaria Palchetti (lead organizer), *University of Florence, Italy.*
Elisabeth Lojou, *Aix-Marseille University, France.*
Omer Yehezkeli, *Technion, Israel.*
Nicolas Plumere, *TUM, Germany.*

Symposium 3 Electrochemical and bioelectrochemical synthesis of small molecular products

Carlo Santoro (lead organizer), *University of Milano-Bicocca,*
Italy. Corina Andronescu, *University Duisburg-Essen, Germany.*
Fatwa Abdi, *City University of Hong Kong, Hong Kong.*
HyungKuk Ju, *Dankook University, South Korea.*

Symposium 4 Lithium-ion batteries: From liquid to solid state

Jelena Popovic-Neuber (lead organizer), *University of Stavanger, Norway.*
Yu-Guo Guo, *Chinese Academy of Sciences (CAS), China.*
Dominic Bresser, *Helmholtz Institute Ulm (HIU), Germany.*
Isidora Cekic-Laskovic, *Helmholtz Institute Münster (HI MS), Germany.*

Symposium 5 New battery chemistries

Rebeca Marcilla (lead organizer), *IMDEA Energy Institute, Spain.*
Tetsu Ichitsubo, *Tohoku University, Japan.*
Matteo Bianchini, *University of Bayreuth, Germany.*
Sonia Dsoke, *University of Freiburg, Germany.*

Symposium 6 Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Ifan Stephens (lead organizer), Imperial College London, UK.
Svitlana Pylypenko, *Colorado School of Mines, USA.*
Kai Exner, *University Duisburg-Essen, Germany.*
Aaron Marshall, *University of Canterbury, New Zealand.*

Symposium 7 High power devices: Electrodes and electrolytes, limiting factors or assets for power capability?

Maria Arnaiz (lead organizer), *CIC Energigune, Spain.*
Binson Babu, *Shiv Nadar Institution of Eminence, India.*
Andrea Balducci, *Friedrich-Schiller-University Jena, Germany.*
Elzbieta Frackowiak, *Poznan University of Technology, Poland.*

Symposium 8 Corrosion, coatings, and nanostructures for a sustainable future

Hiroki Habazaki, (lead organizer), *Hokkaido University, Japan.*
Carmen Pérez, *University of Vigo, Spain.*
James Noël, *Western University, Canada.*
Andreas Bund, *Technische Universität Ilmenau, Germany.*

Symposium 9 Durability of materials for energy conversion and storage: Mechanism, mitigation and performance

Jan M. Macak (lead organizer), *University of Pardubice, Czech Republic.*
Mireille Turmine (lead organizer), *Sorbonne Université, France.*
Bernard Lestriez, *Université de Nantes, France.*
Arno Bergmann, *Fritz-Haber-Institute of the MPG, Germany.*

Symposium 10 Green electrochemistry for a sustainable world

Ignasi Sirés (lead organizer), *Universitat de Barcelona, Spain.*
Manuel Rodrigo, *Universidad de Castilla – La Mancha, Spain.*
Minghua Zhou, *Nankai University, China.*
Claudia Weidlich, *DECHEMA-Forschungsinstitut, Germany.*

Symposium Organizers

Symposium 11 Electrochemical technologies for energy and industrial electrosynthesis at scale

Carlos Ponce de Leon (lead organizer), *University of Southampton, UK.*
Thomas Turek, *Clausthal University of Technology, Germany.*
Rakel Wreland Lindström, *KTH – Royal Institute of Technology, Sweden.*
Carlos A Martínez-Huitle, *Federal University of Rio Grande do Norte, Brazil.*

Symposium 12 Molecular spectro-photo-electrochemistry and electrosynthesis

Jiří Ludvík (lead organizer), *J. Heyrovsky Institute of Physical Chemistry, Czech Republic.*
Mahito Atobe, *Yokohama National University, Japan.*
Robert Francke, *Leibniz Institute for Catalysis, Germany.*
Jose H. Zagal, *University of Santiago de Chile, Chile.*

Symposium 13 Mechanisms in molecular electrochemistry for (bio-)catalysis, (bio-)sensing and electronics

Federico Polo (lead organizer), *Ca' Foscari University of Venice, Italy.*
Magdaléna Hromadova, *J. Heyrovský Institute of Physical Chemistry, Czech Republic.*
Hye Jin Lee, *Kyungpook National University, South Korea.*
Valentina Pifferi, *University of Milan, Italy. Kristina Tschulik, Ruhr-University Bochum, Germany.*

Symposium 14 Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Rik Mom (lead organizer), *Leiden University, Germany.*
Katharina Doblhoff-Dier, *Leiden University, Germany.*
Helmut Baltruschat, *Uni Bonn, Germany.*
Olaf Magnussen, *Christian-Albrechts-Universität zu Kiel, Germany.*

Symposium 15 Artificial intelligence for electrochemistry

Jun Cheng (lead organizer), *Xiamen University, China.*
Marialore Sulpizi, *Ruhr Universität Bochum, Germany.*
Katrin Domke, *University of Duisburg-Essen, Germany.*
De-en Jiang, *Vanderbilt University, USA.*

Symposium 16 General Session – Hidden treasures – diversity of electrochemistry

Wolfgang Schuhmann (lead organizer), *Ruhr-Universität Bochum Germany.*
Priscilla G. L. Baker, *University of the Western Cape, South Africa.*
Silvia Cere, *University of Mar, Argentina.*
Zhong-Qun Tian, *Xiamen University, China.*

Tutorial Lectures

Sunday, 7 September 2025

Tutorial 1

Room: **Watford**

13:30 to 16:45

Artificial intelligence in electrochemistry

Matthias Arenz, *University of Bern, Bern, Switzerland*
Jan Rossmeisl, *University of Kopenhagen, Kopenhagen, Denmark*

Tutorial 2

Room: **Meeting 1**

13:30 to 16:45

Electrochemical characterization of porous electrodes: Theory and experiment

Aaron Marshall, *University of Canterbury, Christchurch, New Zealand*
Thomas Turek, *Technical University Clausthal, Clausthal, Germany*

Forums

Room: **Discussions Area**

Monday, 8 September 2025

16:00 to 17:00 **Women in Science** - A look at the bright female side of electrochemistry.
Isotta Cerri & Radenka Maric *and* **Iryna Zenyuk**

17:00 to 18:00 **ISE Awards** - Learn about the selection processes.
Tim Albrecht, Shelley Minteer *and* **Wolfgang Schuhmann**

Tuesday, 9 September 2025

16:00 to 17:00 **International Mobility** - Incoming, outgoing, hosting, support and networking
Tobias Böttcher *and special guests from* **Alexander von Humboldt Foundation**

17:00 to 18:00 **Author and Reviewer Workshop** - Why publish with Electrochimica Acta?.
Rob Hillman, Vito di Noto *and* **Elena Savinova**

Thursday, 11 September 2025

16:00 to 17:00 **ERC Awards** - Paths to Success.
Deborah Jones, Jan Rossmeisl *and* **Ifan Stephens**

17:00 to 18:00 **Careers Paths in Industry** - Curious about the other side ?
Emilia Witkowska-Nery, Günter Schmid *and* **Aaron Marshall**

Plenary Lectures

Room: **Kongress-Saal**

Monday, 8 September 2025

08:15 to 09:15

Y. Shirley Meng

(Argonne National Laboratory, USA & University of Chicago, USA)

Materials Innovation and Interfacial Science for Better Batteries

Tuesday, 9 September 2025

08:15 to 09:15

Bin Ren

(Xiamen University, China)

The Interplay between Plasmonics and Electrochemistry

Wednesday, 10 September 2025

08:15 to 09:15

Julie Macpherson

(University of Warwick, United Kingdom)

Playing to Strengths: The Advantages of Using Boron Doped Diamond in Electrochemical Research

Thursday, 11 September 2025

08:15 to 09:15

Hubert Girault

(EPFL Wallis, Switzerland) (The Electrochimica Acta Gold Medal 2024)

Electrochemistry. A Science with Many Potentials

Friday, 12 September 2025

08:15 to 09:15

Guenter Schmid

(Siemens Energy Global, Germany)

Scaling and Production Ramp-up, the Major Challenges for the Hydrogen Economy

ISE Prize Winners 2024

Electrochimica Acta Gold Medal

Hubert Girault, *École Polytechnique Fédérale de Lausanne, Switzerland*

Thursday 11 September 2025 - 08:15-09:15, Room: Kongress-Saal

Electrochemistry. A science with many potentials

The Electrochimica Acta Gold Medal was awarded to **Hubert Girault**, for his innovative studies of diverse electrified liquid-liquid interfaces and exploitation of the resulting fundamental insights to redox mediated electrocatalysis, photosynthesis, sensors and energy storage.

Bioelectrochemistry Prize of Division 2

Fred Lisdat, *Technische Hochschule Wildau, Germany*

Tuesday 9 September 2025 - 10:15-10:45, Symposium 2, Room: Meeting 2A

Combining photoactive proteins with electrodes – advances and bottlenecks

The Bioelectrochemistry Prize of Division 2 was awarded to **Fred Lisdat**, for his contribution to the areas of protein-based electrochemistry and electron transport in biological systems, from enzymatic multilayers to artificial systems, including photobioelectrochemistry and biosensing applications.

Jaroslav Heyrovský Prize for Molecular Electrochemistry

Cyrille Costentin, *Université Grenoble Alpes, France*

Thursday 11 September 2025 - 14:30-15:00, Symposium 12, Room: Zagreb A

Self-modulation and Self-protection Mechanisms in Molecular Catalysis of Electrochemical Reactions

The Jaroslav Heyrovský Prize for Molecular Electrochemistry was awarded to **Cyrille Costentin**, for fundamental studies explaining a general framework of PCET catalysts operation in particular in relation to small molecules activation.

Brian Conway Prize for Physical Electrochemistry

Di Wei, *Beijing Institute of Nanoenergy and Nanosystems, China*

Monday 8 September 2025 - 11:00-11:30, Symposium 7, Room: Meeting 3B

Nanoconfined iontronics: Controlled charge flow via EDL

The Brian Conway Prize for Physical Electrochemistry was awarded to **Di Wei**, for in recognition of his outstanding contributions to the field of electrical double layer regulation for controlled charge transport based on iontronics. Controlled charge transport is a crucial aspect of diverse scientific and technological processes, for example, as energy and information carrier as well as a probe for material properties and kinetics.

Tajima Prize

Yi-Chun Lu, *The Chinese University of Hong Kong, Hong Kong*

Monday 8 September 2025 - 14:00-14:30, Symposium 5, Room: Watford

Sustainable Aqueous Battery Chemistries

The Tajima Prize was awarded to **Yi-Chun Lu**, for her innovative work in the field of advanced rechargeable batteries such as redox-flow, metal-air, and metal-sulfur batteries.

Zhaowu Tian Prize for Energy Electrochemistry

Federico Calle-Vallejo, *University of the Basque Country, Spain*

Wednesday 10 September 2025 - 10:15-10:45, Symposium 11, Room: Meeting 2B

Gas-phase Errors in Computational Electrocatalysis

The Zhaowu Tian Prize for Energy Electrochemistry was awarded to **Federico Calle-Vallejo**, for his seminal contributions to computational modelling of electrocatalytic pathways.

ISE Prize Winners 2024

ISE-Elsevier Prize in Experimental Electrochemistry

Peng Chen, *Cornell University, USA*

Wednesday 10 September 2025 - 10:15-10:45, Symposium 14, Room: Gutenberg C

Sub-particle optical microscopy of particulate photoelectrodes

The ISE-Elsevier Prize in Experimental Electrochemistry was awarded to **Peng Chen**, for pioneering development of techniques allowing for in-operando single-molecule, single-particle and single-reaction imaging represents a truly qualitative advance in experimental electrochemistry. His development of super-resolution microscopy to image reactions at the nanoscale on catalysts is fascinating and highly relevant for catalysis research.

ISE-Elsevier Prize for Green Electrochemistry

Yudong Xue, *École Polytechnique Fédérale de Lausanne, Switzerland*

Tuesday 9 September 2025 - 14:45-15:00, Symposium 10, Room: Meeting 1

Electrochemical product engineering for sustainable resource recovery and high-value chemical manufacturing

The ISE-Elsevier Prize for Green Electrochemistry was awarded to **Yudong Xue**, for work on electrochemical solid waste treatment, valuable metal extraction, product engineering and manufacturing of critical metals.

ISE-Elsevier Prize for Applied Electrochemistry

Edison Huixiang Ang, *Nanyang Technological University, Singapore*

Tuesday 9 September 2025 - 18:30-18:45, Symposium 6, Room: Kongress-Saal

Engineering 2D MXenes: The Role of Doping in Hydrogen Production

The ISE-Elsevier Prize for Applied Electrochemistry is awarded to **Edison Huixiang Ang**, for pioneering work in nanomaterial development for advanced batteries.

ISE-Prize for Electrochemical Material Science

Nerea Casado, *University of the Basque Country, Spain*

Tuesday 9 September 2025 - 14:00-14:30, Symposium 5, Room: Gutenberg A

Functional Polymer Binders for Next-Generation Batteries

The ISE-Prize for Electrochemical Material Science was awarded to **Nerea Casado**, for significant achievements in conducting and redox polymers and polymeric mixed ionic-electronic conductors for energy storage and has extended her research areas to bioelectronics.

Early Career Prize in Electroanalytical Chemistry of ISE Division 1

Muamer Dervisevic, *Monash University, Australia*

Monday 8 September 2025 - 14:00-14:15, Symposium 1, Room: Zagreb B

Advancing microneedle technology: 3D-printed complex surfaces for enhanced transdermal sensing

Early Career Prize in Electroanalytical Chemistry of ISE Division 1 was awarded to **Muamer Dervisevic**, for his contribution to the development of transdermal electrochemical biosensors for health care monitoring and diagnostics.

Oronzio and Niccolò De Nora Foundation Young Author Prize

Marco Mazzucato, *Univeristy of Padova, Italy*

Tuesday 9 September 2025 - 11:15-11:30, Symposium 3, Room: Meeting 3A

SbFe-N-C Single-atom catalyst for H_2O_2 production in neutral media: Effect of Sb precursor

The Oronzio and Niccolò De Nora Foundation Young Author Prize was awarded to **Marco Mazzucato**, for his paper with Christian Durante, titled Comparative Analysis of Rotating Electrode and Gas Diffusion Electrode Methods for Assessing Activity and Stability of Fe-N-C Based Catalysts in ORR, *Electrochimica Acta*, 463 (**2023**), 142801.

Electrochimica Acta and ISE Travel Awards for Young Electrochemists 2025

Electrochimica Acta Travel Award Winners

Chen Jia, *University of New South Wales*
Miao Wang, *National Institute for Materials Science (NIMS)*
Leticia Anahi Azpeitia, *Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA)*

ISE Travel Award Winners

Zhihong Ye, *Chongqing University*
Maria Rodrigues Pinto, *Technical University of Denmark*
Kent (Jingxu) Zheng, *The University of Texas at Austin*
Rebecca Pittkowski, *University of Copenhagen*
Áine Brady, *Dublin City University*
Sopon Butcha, *Thammasat University*
Gabriel Floriano Costa, *Institut Català de Nanociència i Nanotecnologia (ICN2)*

Poster Presentation Sessions

Room: **Nord Foyer, West Foyer, Foyer 3, & Galerie**

For poster placements, see ***page 163***

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Monday 8 September *from* ***18:00*** *to* ***20:00***

Symposia 4, 5, 7, 8, 9, 10, 16

Poster set-up: **Monday,** *from* **09:00** *to* **16:30**
Poster take-down: ***before*** **Tuesday, 12:00**

Session 2, Posters *Sponsored by* ***BioLogic Science Instruments***

Wednesday 10 September *from* ***11:00*** *to* ***12:30***

Symposia 1, 2, 3, 6, 11, 12, 13, 14, 15

Poster set-up: **Tuesday,** *from* **13:00** *to* **19:00**
Poster take-down: ***before*** **Thursday, 12:00**

ISE Society Meetings

Sunday, 7 September 2025

Opening Ceremony *Sponsored by xemX, CRC/TRR 247, SFB1625, ERC DEMI*

17:00 to 18:00 › Room: **Kongress-Saal**

Monday, 8 September 2025

Division Officers Meeting

12:40 to 13:30 › Room: **Meeting 1**

Regional Representatives Meeting

12:40 to 13:30 › Room: **Meeting 3A**

Tuesday, 9 September 2025

Council Meeting

12:40 to 13:30 › Room: **Meeting 1**

Thursday, 11 September 2025

General Assembly

11:00 to 12:00 › Room: **Kongress-Saal**

Division Meetings

12:40 to 13:30

Division 1 Analytical Electrochemistry › Room: **Meeting 2B**
Division 2 Bioelectrochemistry › Room: **Meeting 3B**
Division 3 Electrochemical Energy Conversion and Storage › Room: **Meeting 1**
Division 4 Electrochemical Materials Science › Room: **Zagreb B**
Division 5 Electrochemical Process Engineering and Technology › Room: **Zagreb A**
Division 6 Molecular Electrochemistry › Room: **Meeting 2A**
Division 7 Physical Electrochemistry › Room: **Meeting 3A**

Friday, 12 September 2025

Closing Ceremony

12:15 to 12:45 › **Kongress-Saal**

Publications

Electrochemistry – From Basic Insights to Sustainable Technologies

Electrochimica Acta is launching a **Virtual Special Issue** (VSI) in **May 2026**, which comprises a selection of papers presented at the 76th Annual Meeting, held from September 7 to 12, 2025, in Mainz, Germany.

Special Issue Editors:

Prof. Dr.-Ing. Ulrike Krewer - *Institute for Applied Materials – Electrochemical Technologies, Karlsruhe Institute of Technology.*
Prof. Dr. Christina Roth - *Electrochemical Process Engineering, University of Bayreuth.*

A team of Executive and Guest editors will be involved in the process.

This is an invited-only special issue.

Upon invitation, please provide prospective contributors with the following specific instructions on how to submit an article:

1) Go to: ***https://www.journals.elsevier.com/electrochimica-acta***
2) Click on the "**Submit your article**" option from the top menu
3) Enter your **username** and **password** (first time users will have to register)
4) Select "**ISE-2025**" as the "*Article Type*"
5) Select "**Sotiropoulos**" at the "*Request Editor*" dropdown menu
6) Follow the remaining step-by-step instructions to submit your article

Submission of contributions: **From 30 June 2025 with deadline 31 January 2026**

Social Program

RECEPTIONS

Welcome Reception *Sponsored by **PalmSens***

Sunday, 7 September 2025, *from 18:00 to 20:00*

in Room : **Rheinfoyer**

Session 1, Posters & Drinks *Sponsored by **GAMRY Instruments***

Monday, 8 September 2025, *from 18:00 to 20:00*

in Room : **Rheinfoyer, Gutenberg Foyer, and Foyer 1 & 2**

Thursday Banquet *Sponsored by **LIQUIDLOOP***

Thursday, 11, September 2025, *at 19:30*

Electoral Palace (Kurfürstliches Schloss)
Peter-Altmeier-Allee 9, 55116 Mainz, Germany

https://www.mainz-congress.com/en/ *... then click on **'Kurfürstliches Schloss'***

~~110 Euros~~ **Sold out** : Places are limited. All tickets for the banquet must be pre-booked and are non-refundable.

EXCURSIONS

Wednesday, 10 September 2025

https://annual76.ise-online.org *... then click on **'Excursions'***

Some guided tours require advance booking and prepayment. Please note that tickets are non-refundable unless the tour is canceled by the provider or if the minimum number of participants is not reached by the end of June.

A special highlight of the program is the excursion to BASF SE in Ludwigshafen (**sold out**). The website also contains recommendation for self-guided tours that do not require prebooking.

Please be aware that there will be no tourist office booth at the venue, and the availability of similar tours from other providers cannot be guaranteed.

Oral presentation program

Sunday 7 September 2025

Tutorial 1

Room: **Watford**

13:30 to 16:45

Artificial intelligence in electrochemistry

Matthias Arenz *(University of Bern, Bern, Switzerland)*
Jan Rossmeisl *(University of Kopenhagen, Kopenhagen, Denmark)*

Tutorial 2

Room: **Meeting 1**

13:30 to 16:45

Electrochemical characterization of porous electrodes: Theory and experiment

Aaron Marshall *(University of Canterbury, Christchurch, New Zealand)*
Thomas Turek *(Technical University Clausthal, Clausthal, Germany)*

Opening Ceremony

Room: **Kongress-Saal**

Chaired by Ulrike Krewer & Gunther Wittstock

17:00 to 18:00

Opening Ceremony in the Kongress-Saal of the Rheingoldhalle conference center.

*Sponsored by **xemX, CRC/TRR 247, SFB1625, ERC DEMI***

Welcome Reception

Room: **Rheinfoyer**

18:00 to 20:00

Welcome reception in the Rheinfoyer of the Rheingoldhalle conference center.

*Sponsored by **PalmSens***

Monday 8 September 2025 - *Morning*

Plenary

Room: **Kongress-Saal**

Chaired by Philip Adelhelm

08:15 to 09:15

Y. Shirley Meng *(Energy Storage Research Alliance (ESRA), Argonne National Laboratory, IL, USA. Laboratory for Energy Storage & Conversion, The University of Chicago, IL, USA)*

Global Race for A Better Battery

Symposium 3 Electrochemical and bioelectrochemical synthesis of small molecular products

Room: **Meeting 3A**

Chaired by Daniel Guay, Matthew Mayer & Carlo Santoro

09:30 to 10:00 ***Keynote Invited***

Jaeyoung Lee *(Ertl Center for Electrochemistry and Catalysis, GIST, Gwangju, Korea)*

Scale-up Science in Electrolytic Conversion Processes of CO_2

10:00 to 10:15

Konstantin Nikolaev *(Institute for Functional Intelligent Materials (I-FIM), National University of Singapore, Singapore, Singapore)*, Fei Chen, Ng Pei Rou, Artemii Ivanov, Daria Andreeva-Baeumler, Konstantin Novoselov

Catalytic CO_2 Conversion On In-situ Encapsulated CuNP/rGO

10:15 to 10:30

Yun Jeong Hwang *(Department of Chemistry, Seoul National University, Seoul, Korea)*

Probing *CO intermediate configuration on the Cu surface in electrochemical CO_2reduction reaction

10:30 to 11:00

Coffee Break *Sponsored by* ***rhd instruments*** rhd instruments flexible cell solutions

11:00 to 11:15 ***Invited***

Matthew Mayer *(Electrochemical Conversion, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Chaoqun Ma, Flora Haun

Dynamic Electrolyte Behaviors Influence Selectivity in CO_2 Electroreduction

11:15 to 11:30

Daniel Guay *(Énergie Matériaux Télécommunications, INRS, Varennes, Canada)*, Shahab Mojabi, Zahra Hagheh Kavousi, Kholoud Abousalem, Shreyanka Shankar Naik, Navid Ghane, Zhangsen Chen, Shuhui Sun, Federico Rosei, Drew Higgins, Mikhael Bechelany

Improved Electrocatalysis for CO_2 Reduction Using Oxide-Modified porous Pb & Sn Electrodes

11:30 to 11:45

Aleksandra Wawrzyniak *(Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Marc Koper

Electrocatalytic $CO_{(2)}$ reduction to methanol on Pt(111) modified with a Pd monolayer

MONDAY AM

11:45 to 12:00

Manuel Häßner *(Institute of Engineering Thermodynamics, German Aerospace Center - DLR, Stuttgart, Germany)*, Faria Huq, Luca Riillo, Abdessamad Grirrane

Copper catalyzed low-temperature electrochemical CO_2 reduction to carbonaceous e-fuels and chemicals

12:00 to 12:15

Alix Haurez *(DCM, University Grenoble Alpes, Grenoble, France)*, Noémie Lalaoui, Bertrand Reuillard, Vincent Artero, Carole Duboc

Electrocatalytic Reduction of CO_2 to CH_4 by Copper Nanoparticles Generated from a Cu-EDTA Pre-Catalyst

12:15 to 12:30 ***Invited***

Anthony Shoji Hall *(Materials Science and Engineering, University of Pennsylvania, Philadelphia, USA)*

Promoting CO_2 reduction by tuning the interfacial dynamics of H_2O

12:30 to 14:00 Lunch Break Sponsored by ***Zahner Elektrik***

Symposium 4a Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg B**

Chaired by Jelena Popovic-Neuber

9:30 to 10:00 ***Keynote***

M. Rosa Palacin *(Solid State Chemistry, ICMAB-CSIC, Bellaterra, Spain)*

Understanding Added Value in Blending Materials for Li-ion Batteries

10:00 to 10:15 ***Invited***

Robert House *(Department of Materials, University of Oxford, Oxford, United Kingdom)*

Li-rich layered and disordered rocksalt cathodes for next-generation Li-ion batteries

10:15 to 10:30

Mélanie Guyot *(CNRS, UMR – 5819, SYMMES Laboratory, Univ. Grenoble Alpes, CNRS, CEA, Grenoble INP, Grenoble, France)*, Charlotte Burmeister, Milo Jouan, Yann Kervella, Saïd Sadki, Manuel Maréchal

A comprehensive study of mixed organic ionic/electronic components for coating nickel-rich active materials in lithium-ion battery cathodes

10:30 to 11:00 Coffee Break Sponsored by ***rhd instruments***

11:00 to 11:15

Laurence Hardwick *(Chemistry, University of Liverpool, Liverpool, United Kingdom)*, Manel Sonni, Jungwoo Lim, Luke Daniels, Zhao Li, Alex Neale, Mounib Bahri, Marco Zanella, Ruiyong Chen, Nigel Browning, Matthew Dyer, John Claridge, Matthew Rosseinsky

High-rate capability and cycling stability in multi-domain nanocomposite titanium-substituted lithium nickel oxide.

11:15 to 11:30

Anna Windmüller *(Institute for Energy Technologies - IET-1, Jülich, Germany)*, Hans Kungl, Tingting Yang, Leyla Hassem Adem, Chih-Long Tsai, Kristian Schaps, Baolin Wu, Luc Raijmakers, Mirijam Zobel, Bing Joe Hwang, Rüdiger-A. Eichel

Ni-stabilized Fe-rich High Voltage Spinels for Lithium-Batteries

11:30 to 11:45

Fu Ming Wang *(Graduate Institute of Applied Science and Technology, National Taiwan University of Science and Technology, Taipei, Taiwan)*

Entropy-driven derivative organic coverage designs on Ni-rich layered cathodes in Li-ion battery

11:45 to 12:00

Marc Kamlah *(Institute for Applied Materials, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany)*, Johanna Naumann, Marcus Müller, Nicole Bohn, Joachim R. Binder, Yixiang Gan

Modeling Morphology Dependent Influences on the Performance of Battery Cells with Hierarchically Structured Cathodes

12:00 to 12:15

Esther Poncy Mathew *(SINTEF Industry / Department of Material Science, SINTEF / NTNU, Trondheim, Norway)*, Ann Mari Svensson, Per Erik Vullum, Nils Wagner

Enabling Lithium Oxalate as a Sacrificial Salt in High Voltage Lithium-ion Batteries by Optimisation of Electrode Structure

12:15 to 12:30

Alisa Bogdanova *(Department of Chemistry and Materials Science, Aalto University, Espoo, Finland)*, Filipp A. Obrezkov, Anna A. Kobets, Tanja Kallio

Atomic Layer Deposition of AlO_x on $LiNi_{0.8}Mn_{0.1}Co_{0.1}O_2$ Precursor for Enhanced Positive Electrode Performance in Li-ion Batteries

12:30 to 14:00 Lunch Break Sponsored by ***Zahner Elektrik***

Symposium 4b Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg A**

Chaired by Sara Drvaric-Talijan

09:30 to 09:45 ***Invited***

Erik Berg *(Department of Chemistry - Ångström Laboratory, Uppsala University, Uppsala, Sweden)*, Neeha Gogoi, Robin Lundström, Laura King, Tim Melin, Maria Hahlin

A Deeper Scrutiny of Electrolyte Additive Reaction Pathways in Li-ion Batteries

09:45 to 10:00

Wesley Dose *(School of Chemistry, Univ. of Sydney, Sydney, Australia)*, Jason Terreblanche, Tongjun Luo

Electrolyte-dependent Degradation at the Surface and Sub-surface of Layered Positive Electrodes for Lithium-ion Batteries

10:00 to 10:15

Simone Lisa Holzmann *(Institute for Applied Materials, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Leon Schmidt, Ulrike Krewer

Degradation Mechanisms and Gas Evolution during Thermal Abuse of Lithium-Ion Batteries using Fluoroethylene Carbonate

10:15 to 10:30

Tjasa Pavcnik *(Solid State Chemistry, Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Bellaterra, Spain)*, Alexandre Ponrouch

On the Parameters Affecting the Reliability of Cyclic Voltammetry in Three-Electrode Swagelok Cells

10:30 to 11:00

Coffee Break *Sponsored by* ***rhd instruments*** rhd instruments flexible cell solutions

11:00 to 11:15

Sven Uhlenbruck *(Institute of Energy Materials and Devices (IMD-2), Forschungszentrum Jülich GmbH, 52425 Jülich, Jülich, Germany)*, Christian Dellen, Doris Sebold, Dina Fattakhova-Rohlfing, Olivier Guillon

Battery Material Libraries derived from High Throughput Experimentation and their Application in Lithium Batteries

11:15 to 11:30

Tomas Kazda *(Department of Electrical and Electronic Technology, Brno University of Technology, Brno, Czech Republic)*, Ondrej Klvač, Zuzana Stravová, Tomáš Zikmund, David Trochta, Pavel Blažek, Libor Novák, Jozef Kaiser

Comprehensive Study of Li-ion Battery Degradation Mechanisms

11:30 to 11:45

Janine Richter *(Chemistry, McGill University, Montreal, Canada)*, Eric McCalla, Nathan Wu

EIS, PITT & GITT – extending the portfolio of high-throughput characterization of battery materials

11:45 to 12:00

Subham Khange *(Department of Chemical Engineering, Indian Institute of Technology Roorkee, Roorkee, India)*, Ashwini Kumar Sharma

Fast Charging Strategy Optimization Using the Taguchi Method: Enhancing Cycle Life and Thermal Stability of Li-ion Batteries

12:00 to 12:15

Jonathan Marin Goncalves *(D-ITET, ETH Zurich, Zurich, Switzerland)*, Michael Dippon, Vanessa Wood

A comprehensive methodology for quantifying the degradation mechanisms behind path dependency

12:15 to 12:30

Brinti Mondal *(CIRIMAT, Université de Toulouse, Toulouse, France)*, Pierre-Louis Taberna, Patrice Simon

In-Plane Operando Resistance Measurements: A Versatile Tool for Understanding Charge Transport in Battery Materials

12:30 to 14:00 *Lunch Break* *Sponsored by* ***Zahner Elektrik*** ZAHNER

Symposium 5 New battery chemistries

Room: **Watford**

Chaired by Sonia Dsoke & Naoaki Yabuuchi

09:30 to 10:00 ***Keynote***

Naoaki Yabuuchi *(Department of Chemistry and Life Science, Naoaki Yabuuchi, Professor, Yokohama National University, Yokohama, Japan)*, Yosuke Ugata

Na-ion Batteries with Durable and Cost-effective Layered Materials

10:00 to 10:15

Natalia Voronina *(Department of Nanotechnology and Advanced Materials, Sejong University, Seoul, Korea)*, Konstantin Köster, Payam Kaghazchi, Seung-Taek Myung

Lattice and Surface Synergy for Enhanced Cycling Stability in P3-Type Layered Manganese Oxide

10:15 to 10:30

Marzieh Abdolhosseini *(Chemistry, McGill University, Montreal, Canada)*, Valentin Saibi, Eric McCalla

A Comparative Study of Doped O3 and Doped P2 Cathode Materials for Sodium-Ion Batteries Using High-Throughput Methods

10:30 to 11:00

Coffee Break *Sponsored by* ***rhd instruments*** rhd instruments flexible cell solutions

11:00 to 11:15

Changhee Lee *(Dept. of Applied Chemistry, Tokyo University of Science, Tokyo, Japan)*, Masayoshi Shimizu, Ryoichi Tatara, Kosuke Nakamoto, Zachary T. Gossage, Tomooki Hosaka, Shinichi Komaba

Novel Approaches to Sacrificial Electrode Additives for Na-ion Batteries with Na-Deficient Positive Electrodes

11:15 to 11:30

Mattia Canini *(Chemistry, University of Pavia, Italy)*, Daniele Callegari, Samuele Santarelli, Matteo Bianchini, Eliana Quartarone

Solid-state vs. Spray-drying synthesis for Mg-doped $P_{2-}Na_{0.67}Fe_{0.5}Mn_{0.5}O_2$ as cathode material for Sodium-Ion Batteries

11:30 to 11:45

Gonçalo Leite *(LEPABE, Faculty of Engineering of the University of Porto, Porto, Portugal)*, Rita Duarte, Miguel Almeida, Miguel Duarte, Adélio Mendes

Structural Optimization of $NaNi_{1/3}Mn_{1/3}Fe_{1/3}O_2$ via Doping and Quenching

11:45 to 12:00

Zeynep Erdöl *(Institut für Chemie, Humboldt-Universität zu Berlin, Berlin, Germany)*, Philipp Adelhelm

Synergistic Impact of Morphology and Electrolyte Concentration on the Properties of P2-Type Layered Oxides for Sodium-Ion Batteries

12:00 to 12:15

Saveria Santangelo *(Dept. of Civil Energy, Environmental and Materials Engineering, Mediterranean University, Reggio Calabria, Italy)*, Mauro Coduri, Daniele Callegari, Claudia Triolo, Maria G. Musolino, Hemanth Kumar Beere, Saveria Santangelo, Mariam Maisuradze, Abdelhaq Nassiri, Marco Giorgetti

Layered high-entropy oxides for sodium-ion batteries: a path towards stable and high-capacity cathodes

12:15 to 12:30

Jing Guo *(Engineering Science, University of Bayreuth, Bayreuth, Germany)*, Chen Zhao, Deniz Wong, Qingsong Wang, Christina Roth

Li-doping in O3-type layered oxide cathodes for sodium ion batteries and its effect on their structural and electrochemical properties

12:30 to 14:00 Lunch Break Sponsored by ***Zahner Elektrik***

Symposium 6a Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Kongress-Saal**

Chaired by Svitlana Pylypenko & Peter Strasser

09:30 to 10:00 ***Keynote***

Peter Strasser *(Department of Chemistry, Technische Universität Berlin, Berlin, Germany)*

Molecular Machineries of Electrolytic Water Splitting

10:00 to 10:15

Safeer Ahmed *(Chemistry, Quaid-i-Azam University, Islamabad, Pakistan)*, Laiba Jameel

Electrocatalytic OER Activity of Bimetallic Combinations of Ni, Fe, and Co as Layered Double Hydroxides

10:15 to 10:30

Garance Cossard *(LEPMI, Grenoble INP - Université Grenoble Alpes, Saint Martin d'Hères, France)*, José Carlos Martinez Rosales, Gaël Maranzana, Elena Savinova, Antoine Bonnefont, Eric Sibert, Gwénaëlle Kéranguéven, Marian Chatenent

Enhancing stainless steel activity for the Oxygen Evolution Reaction in Alkaline Electrolyte using Co_3O_4 spinel deposition

10:30 to 11:00

Coffee Break Sponsored by ***rhd instruments***

11:00 to 11:15

Merve Buldu-Akturk *(Electrocatalysis: Synthesis to Devices, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Axel Zuber, Bastian Schmidecke, Can Kaplan, Thorsten Schultz, Norbert Koch, Michelle P. Browne

Understanding the Enhanced Performance of NiFe-MXene composites for the Oxygen Evolution Reaction

11:15 to 11:30

Yong-Wook Choi *(Energy System Group, Korea Institute of Industrial Technology (KITECH), Busan, Korea)*

Exploring the Correlation between Grades of Stainless Steel-based Electrodes for Oxygen Evolution Reaction in Alkaline Electrolyte

11:30 to 11:45

Fatma Aras *(Chemische Metallkunde, Max-Planck-Institut für Chemische Physik fester Stoffe, Dresden, Germany)*, Fatma Aras, Ulrich Burkhardt, Simone G. Altendorf, Yuri Grin, Iryna Antonyshyn

Intermetallic Borides for Water Electrolysis: From Fundamental Understanding to the Potential Applications

11:45 to 12:00

Bruna Ferreira Gomes Lobo *(Electrochemical Process Engineering, University of Bayreuth, Bayreuth, Germany)*, Carlos Manuel Silva Lobo, Christina Roth

Fabrication and Analysis of DHBT-Derived Trimetallic Catalysts for the Oxygen Evolution Reaction in Alkaline Media

12:00 to 12:15

Dandan Gao *(Department of Chemistry, Johannes Gutenberg University, Mainz, Germany)*

Synergistic Behavior in Water Electrolysis Catalyzed by Co-W-Cu Mixed Metal Oxides

12:15 to 12:30

Hatem Amin *(Institute of Inorganic Chemsitry, Universität Duisburg-Essen, Essen, Germany)*, Julian Grahl, Carsten Placke-Yan, Stephan Schulz

Shape-controlled Synthesis of $NiFe2O_4$ Nanocatalysts for the Oxygen Evolution Reaction

12:30 to 14:00 Lunch Break Sponsored by ***Zahner Elektrik***

Symposium 6b Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Gutenberg D**

Chaired by Samira Siahrostami & Ifan Stephens

09:30 to 10:00 ***Keynote***

Samira Siahrostami *(Chemistry, Simon Fraser University - Burnaby Campus, Burnaby, Canada)*

Computational Understanding of Carbon-Based Materials for Oxygen Reduction Reaction

10:00 to 10:15

Kaido Tammeveski *(Institute of Chemistry, University of Tartu, Tartu, Estonia)*, Kaarel Kisand, Ave Sarapuu, Srinu Akula, Arvo Kikas, Alexey Treshchalov, Maike Käärik, Helle-Mai Piirsoo, Jekaterina Kozlova, Jaan Aruväli, Jaan Leis, Vambola Kisand, Kaupo Kukli, Ghenwa El Chawich, Frédéric Jaouen, Sara Cavaliere

Iron and manganese co-doped mesoporous carbon-based catalysts via template-assisted synthesis for proton exchange membrane fuel cells

10:15 to 10:30

Justus Bienert *(Chemistry, Technical University of Darmstadt, Darmstadt, Germany)*, Hendrik Haak, Ulrike Kramm

Comparison of potential step methods vs RRDE for the selectivity determination of FeNC catalysts

10:30 to 11:00

Coffee Break *Sponsored by* ***rhd instruments*** rhd instruments flexible cell solutions

11:00 to 11:15

Lior Elbaz *(Chemistry, Lior Elbaz, Bar Ilan University, Ramat-Gan, Israel)*, Rifael Snitkoff-Sol

Investigating the Fuel Cell Performance Tradeoffs of Thick PGM-free based Cathode Layers

11:15 to 11:30

Hendrik Haak *(Chemistry, Technical University of Darmstadt, Darmstadt, Germany)*, Lingmei Ni, Pascal Theis, Ulrike I. Kramm

Tracking iron-related changes of FeNC catalysts in half- and fuel cell setups utilizing operando Synchrotron ^{57}Fe Mössbauer spectroscopy

11:30 to 11:45

Giovanni Zuccante *(Material Science U5, University of Milan-Bicocca, Milan, Italy)*, Valerio Ficca, Alessio Cosenza, Plamen Atanassov, Carlo Santoro, Mohsin Muhyuddin

Oxygen Reduction Reaction Across a Wide pH Range: Distinct Electrocatalytic Traits of Fe-N-Cs Driven Synthesis Parameters and Evolved Active Sites Structures

11:45 to 12:00

Julia Müller-Hülstede *(Institute of Engineering Thermodynamics, DLR Institute of Engineering Thermodynamics, Oldenburg, Germany)*, Julia Gertrud Buschermöhle, Tanja Zierdt, Dana Schonvogel, Anna Katharina Mechler, Piyush Kumar, Michael Wark, Kaspar Andreas Friedrich

M-N-C Catalysts Development for PEM Fuel Cells and CO_2 Electrolysis

12:00 to 12:15 ***Invited***

Chuan Zhao *(School of Chemistry, University of New South Wales, Sydney, Australia)*

Capture and Mitigate the Degradation of Non-Platinum Catalysts in Proton Exchange Membrane Fuel Cells

12:15 to 12:30

Kohei Miwa *(Graduate School of Science and Technology, Kwansei Gakuin University, Sanda, Japan)*, Daiju Matsumura, Kenji Ishii, Genki Nakamura, Kaito Matsuo, Hirohisa Tanaka

Synchrotron radiation studies of Fe-N-C catalysis in alkaline environments

12:30 to 14:00 *Lunch Break* *Sponsored by* ***Zahner Elektrik*** ZAHNER

Symposium 7 High power devices: Electrodes and electrolytes, limiting factors or assets for power capability?

Room: **Meeting 3B**

Chaired by Thierry Brousse & Jim Zheng

09:30 to 10:00 ***Keynote***

Celine Merlet *(CIRIMAT, CNRS - Université de Toulouse, Toulouse, France)*

Modelling High Power Devices Across Scales

10:00 to 10:15 ***Invited***

Simon Fleischmann *(Helmholtz Institute Ulm- HIU, Karlsruhe Institute of Technology-KIT, Ulm, Germany)*

Solvent Co-Intercalation Reactions: A Mechanism for Power Capability?

10:15 to 10:30

Alexander Forse *(Yusuf Hamied Department of Chemistry, University of Cambridge, Cambridge,UK)*

Advancing Energy Storage in Supercapacitors: Disorder, Porosity and Tortuosity

10:30 to 11:00

Coffee Break Sponsored by ***rhd instruments***

11:00 to 11:30

Di Wei *(Iontronics Laboratory, Beijing Institute of Nanoenergy and Nanosystems (BINN), Beijing, China)*

Nanoconfined iontronics: controlled charge flow via EDL

11:30 to 11:45

Ashwini Jadhav *(Department of Chemistry, University of Turku, Turku, Finland)*, Plawan Kumar Jha, Mikko Salomäki, Sari Granroth, Pia Damlin

Supercapacitive Performance of Ionic-Liquid-Intercalated Two-Dimensional Ti3C2Tx in Redox Electrolyte

11:45 to 12:00

Rebecka Kost *(Institute for Technical and Environmental Chemistry (ITUC), Friedrich Schiller University, Jena, Germany)*, Andrea Balducci

Simultaneous Electrochemical and Solvent Decomposition Analysis for Investigating Stability of Supercapacitors at Various Temperatures

12:00 to 12:15

Guinevere Giffin *(Institute of Inorganic Chemistry, Julius-Maximilians-University Würzburg, Würzburg, Germany)*, David Müller, Merlin Bohn, Dorela Hoxha, Konstantinos Mylonas, Nikolaos Ploumis, Athanasios Masouras, Jan A. P. Sprenger, Maik Finze

MFB-based Ionic Liquids as Electrolytes for High Energy Density Supercapacitors

12:15 to 12:30

Alberto Morenghi *(Bedimensional SpA, Bedimensional, Genoa, Italy)*, Agnese Gamberini, Tobias Burton, Alix Ladam, Ahmad Bagheri, Samaneh Vaez, Teresa Gatti, Sebastiano Bellani, Sebastien Fantini, Anais Falgayrat, Francesco Bonaccorso

Ionogel-based electrodes for non-flammable high-temperature operating electrochemical double layer capacitors

12:30 to 14:00 Lunch Break Sponsored by ***Zahner Elektrik***

Symposium 8 Corrosion, coatings, and nanostructures for a sustainable future

Room: **Meeting 2A**

Chaired by Hiroki Habazaki & Monica Santamaria

MONDAY AM

09:30 to 10:00 ***Keynote***

Achim Walter Hassel *(Chemical Technology of Inorganic Materials, Johannes Kepler University Linz, Linz, Austria)*

The 100th Birthday of Rhenium

10:00 to 10:15

Md Mahmudul Hasan *(Research Organization for Nano and Life Innovation, Waseda University, Shinjuku, Japan)*, Tongshuang Huang, Mikiko Saito, Yota Takamura, Philippe Allongue, Takayuki Homma

3D CoPt Multilayered Alloy Nanowires for Magnetic Storage Application

10:15 to 10:45

Coffee Break *Sponsored by* ***rhd instruments*** rhd instruments flexible cell solutions

10:45 to 11:00 ***Invited***

Lina Marcela Sepúlveda *(Center of Materials and Nanotechnologies, Univerzita Pardubice, Pardubice, Czech Republic)*, Lina Marcela Sepulveda, Jan Macak

Anodic TiO_2 Nanotube Layers: Large Scale Photocatalysis

11:00 to 11:15

Katarzyna Grochowska *(Centre of Plasma and Laser Engineering, Institute of Fluid-Flow Machinery Polish Academy of Sciences, Gdansk, Poland)*, Saiful Islam Khan, Aleksandra Mielewczyk-Gryn, Jakub Karczewski, Karol Zaleski, Emerson Coy, Katarzyna Siuzdak

Anodization of Sputtered Ti with Au Layer as a Route Towards Gold-Enriched Titania Nanotubes for Energy Applications

11:15 to 11:30

Sachiko Ono *(Department of Applied Chemistry, Kogakuin University, Tokyo, Japan)*, Hidetaka Asoh

Effect of Cell Morphology on the Thickness of the Barrier Layer of Anodic Film on Aluminum

11:30 to 11:45

Majid Shahsanaei *(Chemistry and Biology, Universität Siegen, Siegen, Germany)*, Manuela S. Killian

Enhanced Corrosion Resistance and Bioactivity of Nanostructured MgO Directly Formed on Pure Mg through Anodization

11:45 to 12:00

Song-Zhu Kure-Chu *(Dept. of Materials Function & Design, Nagoya Institute of Technology, Nagoya, Japan)*, Jiacheng Liu, Kohei Okumura, Erli Lin, Peng Wang, Takehiko Hihara, Xiaopei Li, ZhengMing Sun

Controlling the Microstructure and Properties of Nanoporous Al_2O_3-(Ni, Mo, W)Ox Composite Oxide Films on Al Alloys through a Hybrid Anodizing Approach

12:00 to 12:15

Lara-Pauline Faden *(Chemical and biomolecular engineering, University of California, Berkeley, Berkeley, USA)*, Minkyoung Kwak, Shannon Boettcher, Alexander Katz

A Porous Molecular Metal Consisting of Tetrairidium Clusters

12:30 to 14:00 *Lunch Break* *Sponsored by* ***Zahner Elektrik*** ZAHNER

Symposium 9 Durability of materials for energy conversion and storage: Mechanism, mitigation and performance

Room: **Dijon**

Chaired by Bernard Lestriez & Dominic Rochefort

09:30 to 10:00 ***Keynote***

Sandrine Lyonnard *(IRIG, CEA, Grenoble, France)*

Advanced X-ray and Neutron techniques for operando characterization of batteries: challenges and prospects

10:00 to 10:15

Jonas Geisler *(Institut for Chemistry, Humboldt Universität zu Berlin, Berlin, Germany)*, Shu-Han Wu, Paul Appel, Jonas Krug von Nidda, Tim-Patrick Fellinger, Annica Freytag, Philipp Adelhelm

Understanding Degradation in Sodium-Ion Batteries with DEMS

10:15 to 10:30

Harol Anibal Moreno Fernandez *(Materials and Geosciences, Technical University of Darmstadt, Darmstadt, Germany)*, Achim Alkemper, Kai Wang, Crizaldo Jr. Mempin, Julia Gallenberger, Jan Philipp Hofmann

Kinetic Analysis of NiOOH Self-Discharge in KOH for OER: Insights from In-Situ Raman and UV-Vis Spectroscopy

10:30 to 11:00

Coffee Break *Sponsored by* ***rhd instruments***

11:00 to 11:15

Marta Mirolo *(Structure of Materials, ESRF - The European Synchrotron, Grenoble, France)*, Erik Lübke, Lukas Helfen, Sandrine Lyonnard, Lise Daniel, Jakub Drnec

Synchrotron radiation tomography studies to investigate battery degradation on commercial batteries

11:15 to 11:30

Loïc Baggetto *(DEHT, CEA, Grenoble, France)*, Quentin Jacquet, Irina Profatilova, Bouthayna Alrifai, Elisabeth Addes, Paul Chassagne, Nils Blanc, Samuel Tardif, Lise Daniel, Sandrine Lyonnard

Online Electrochemical Mass Spectrometry Coupled with Synchrotron Scattering Techniques for Operando Analyses of Li-Ion Batteries

11:30 to 11:45

Wolfgang Bessler *(Institute of Sustainable Energy Systems, Offenburg University of Applied Sciences, Offenburg, Germany)*, Jonas Braun

A Novel Approach for Operando SOC and SOH Diagnosis of Lithium-Ion Batteries Using Voltage-Controlled Models

11:45 to 12:00

Sebastian Risse *(Institute for Electrochemical Storage, Helmholtz-Zentrum Berlin, Berlin, Germany)*, Rafael Müller, Tom Boenke, Susanne Dörfler, Thomas Abendroth, Paul Härtel, Holger Althues, Stefan Kaskel, Nikolay Kardjilov, Henning Markötter, Michael Sintschuk, André Hilger, Ingo Manke

Advancing Lithium-Sulfur Battery Technology: The Critical Role of Multimodal Operando Analysis in Multilayer Pouch Cells

12:00 to 12:15

Jorge Roberto Valenzuela García de León *(Institute of Applied Materials – Electrochemical Technology, Karlsruhe Institute for Technology, Karlsruhe, Germany)*, Leon Schmidt, Ulrike Krewer

A Kinetic Simulation Study on Thermal Degradation in Lithium-Ion Batteries

12:15 to 12:30

Svenja Both *(Institute of Engineering Thermodynamics, German Aerospace Center - DLR, Stuttgart, Germany)*, Simon Hein, Timo Danner, Arnulf Latz

Multiscale modeling of oxygen loss and phase transformation in Ni-rich cathode materials: Impact of electrode microstructure

12:30 to 14:00 Lunch Break Sponsored by ***Zahner Elektrik***

Symposium 10 Green electrochemistry for a sustainable world

Room: **Meeting 1**

Chaired by Maryam Abdinejad & Thomas Turek

09:30 to 10:00 ***Keynote***

Thomas Turek *(Chemical and Electrochemical Process Engineering, Clausthal University of Technology, Clausthal-Zellerfeld, Germany)*, Lydia Weseler, Jens Osiewacz

CO_2 Electrolysis for CO Production – From Gas-Diffusion Electrodes to Membrane Electrode Assemblies

10:00 to 10:15

Saein Suh *(Clean Energy Research Center, Korea Institute of Science and Technology, seoul, Korea)*, Woong hee lee, Hyung-Suk Oha Oh

Construction of Ion/Regenerated CO_2 Mass Transfer Pathway to Efficient Bicarbonate Electrolysis

10:15 to 10:30

Hermann Tempel *(Institute of Energy Technologies - IET-1, Forschungszentrum Jülich, Jülich, Germany)*, Sergio Sanz, Bernhard Schmid, Ansgar Kretzschmar, Victor Selmert, Urbain Nzotcha, Burkhard Hecker, Rüdiger-A. Eichel

CO_2 value chain – direct air capture towards electrochemical reduction and value products

10:30 to 11:00

Coffee Break Sponsored by ***rhd instruments***

11:00 to 11:15 ***Invited***

Maryam Abdinejad *(Energy, Denmark Technical University, Copenhagen, Denmark)*

Electrochemical Direct Air Capture Using Redox-Active Quinones:Homogeneous and Heterogeneous Approaches for Sustainable CO_2 Capture

11:15 to 11:30

Bernhard Schmid *(Institute of Energy Technology 1 - IET-1, Forschungszentrum Juelich, Juelich, Germany)*, Hermann Tempel, Ruediger-A. Eichel

Keeping pace with the potentiostat:Real time product gas analysis combining gas chromatography and mass spectrometry during cyclic voltammetry measurements in electrochemical CO_2 reduction

11:30 to 11:45

Francesco Panico *(Department of Chemistry, University of Milan, Milan, Italy)*, Alessandro Minguzzi, Michael Russell, Alberto Vertova

Timeless questions and modern challenges: a journey from the origin of life to electrochemical CO_2 reduction

11:45 to 12:00

Abdullah Alyahya *(School of Engineering, The University of Edinburgh , Edinburgh , United Kingdom)*, Mayra S. Tovar-Olivas, Timm Krüger, Ignacio Tudela

Advancing Electrochemical CO_2 Reduction: Insights from Numerical Modelling and Experimental Validation.

12:00 to 12:15

Elias Klemm *(Institut für Technische Chemie (ITC), Üniversitat Stuttgart, Stuttgart, Germany)*, Shahin Rafiee Taghanaki, Andrea Loi, Vladimir Atanasov

Exploring Ionomers to Control Mass Transport in Gas Diffusion Electrodes for Electrochemical Reduction of CO_2 to Formic Acid

12:15 to 12:30

Davide Molino *(DISAT, Politecnico di Torino, Torino, Italy)*, Simone Martellone, Pietro Zaccagnini, Giuseppe Ferraro, Sergio Bocchini, Andrea Lamberti

Comparison of diluted and undiluted electrolyte performances in CO_2Cap system

*12:30 to 14:00 Lunch Break Sponsored by **Zahner Elektrik***

Symposium 11 Electrochemical technologies for energy and industrial electrosynthesis at scale

Room: **Meeting 2B**

Chaired by Luis Fernando Arenas & Qiong Cai

09:30 to 10:00 ***Keynote***

Rebeca Marcilla *(Electrochemical Processes Unit, imdea energy, Mostoles, Spain)*

Membrane-Free Redox Flow Batteries: Bridging Innovation and Commercialization

10:00 to 10:15 ***Invited***

Luis Fernando Arenas *(Department of Mechanical Engineering, School of Chemistry, University of Southampton, Southampton, United Kingdom)*, Carlo Caianiello, Tim Tichter, Lavrans F. Söffker, Ulrich Kunz, René Wilhelm, Thomas Turek

Viologens, Anthraquinones and Triphenylamines: A Journey Through Organic Flow Batteries

10:15 to 10:30

Juliana Valentina Diaz-Reyes *(Chemical Sciences, University of Limerick, Limerick, Ireland)*, Alonso Gamero-Quijano, Micheál Scanlon

Oxidative PEDOT Electrosynthesis at Polarised Liquid|Liquid Interfaces: A “Dual-Flow” Redox Flow Battery Perspective

10:30 to 11:00

*Coffee Break Sponsored by **rhd instruments***

11:00 to 11:15

Wojciech Bacalski *(Department of Physical Chemistry, Gdańsk University of Technology, Gdańsk, Poland)*, Joanna Krakowiak, Pawel Slepski

I Contain Multitudes – Dynamic Electrochemical Impedance Spectroscopy for Redox Flow Batteries

11:15 to 11:30

Thorsten Struckmann *(Mechanical Engineering & CC4E, University of Applied Sciences Hamburg, Hamburg, Germany)*, Niklas Janshen

Multi-observable monitoring for consistent state of health and capacity fade observables for vanadium flow batteries

11:30 to 11:45 ***Invited***

Qiong Cai *(School of Chemistry and Chemical Engineering, University of Surrey, Guildford, UK)*

Designing 3D Porous Electrode Microstructures for Electrochemical Energy Storage and Conversion Technologies

11:45 to 12:00

Achyuth Marammurian Chathoth *(Chemical Sciences, Ariel University, Ariel, Israel)*, Hanan Teller

Enhanced Electrochemical Nitrogen Reduction to Ammonia Using Concentrated Bivalent Halide Electrolytes on Pt: Ru Alloy Catalysts

12:00 to 12:15

James Ebenezer *(Chemical Sciences, Ariel University, Ariel, Israel)*, Parthiban Velayudham

A Sustainable Two-Step Electrochemical Conversion of N_2 to Ammonia Using Rhodium Nanoparticles on Carbon Nanosheets

12:15 to 12:30

Anna Mangini *(DISAT-Department of Applied Science and Technology, Politecnico di Torino, Turin, Italy)*, Noemi Pirrone, Sara Garcia-Ballesteros, Federico Bella

"Well Begun is Half Done" Principle Applied to the Ammonia Electrosynthesis through the Lithium-Mediated System

12:30 to 14:00 Lunch Break Sponsored by ***Zahner Elektrik***

Symposium 14 Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Gutenberg C**

Chaired by Andrea Auer & Katharina Doblhoff-Dier

09:30 to 10:00 ***Keynote***

Yang Shao-Horn *(Mechanical Engineering, Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, USA)*

Unlocking interfacial water for efficient making of clean fuels and chemicals

10:00 to 10:15 ***Invited***

Andrea Auer *(Institute of Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*

Visualizing Solvent Structuring at Electrified Solid–Liquid Interfaces

10:15 to 10:30

Ariba Adnan *(Faculty of Science - Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Saeid Behjati, Núria Félez-Guerrero, Kasinath Ojha, Marc T. M. Koper

Tracking the Surface Structure and the Influence of Cations and Anions on the Double-layer Region of a Au(111) Electrode

10:30 to 11:00

Coffee Break *Sponsored by* ***rhd instruments*** rhd instruments flexible cell solutions

11:00 to 11:15 ***Invited***

Yvonne Grunder *(Department of Physics, University of Liverpool, Liverpool, United Kingdom)*, Christopher A Lucas, Yves Joly, Yvonne Soldo-Olivier, Paul Thompson

In situ x-ray diffraction studies of the atomic structure and charge distribution at the electrochemical interface

11:15 to 11:30

Yvonne Soldo-Olivier *(Néel Institut, CNRS, Grenoble, France)*, Maurizio De Santis, Yvonne Gruender, Eric Sibert, Yves Joly

New insights into molecular and electronic structure at electrochemical interfaces from in situ resonant X-ray diffraction coupled to ab initio calculations

11:30 to 11:45

Nicci L. Fröhlich *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Jinwen Liu, Kasinath Ojha, Hanna Sjö, Katharina Doblhoff-Dier, Marc T. M. Koper

Structure Sensitivity of the Double-Layer Properties of a Platinum Electrode

11:45 to 12:00

Jinwen Liu *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Nicci Fröhlich, Arthur Hagopian, Katharina Doblhoff-Dier, Marc Koper

Effect of Surface Heterogeneity and Adsorbates on Electrochemical Interfaces: Insights from Ab Initio Molecular Dynamics

12:00 to 12:15

Mohammed Bin Jassar *(Chemistry, École normale supérieure - ENS - Université PSL, Paris, France)*, Simone Pezzotti

Redefining the Solid/Water Interfaces: the Emergence of Amphiphilic Interfaces

12:15 to 12:30

Mathijs Janssen *(Institute of Physics, Norwegian University of Life Sciences, Ås, Norway)*, Ole Nickel, Ludwig Ahrens-Iwers, Robert Meißner

Electrolyte Seebeck Effect between Blocking Electrodes at Unequal Temperatures

12:30 to 14:00 *Lunch Break* *Sponsored by* ***Zahner Elektrik*** ZAHNER

Symposium 16 General Session - Hidden treasures - diversity of electrochemistry

Room: **Zagreb A**

Chaired by Taek Dong Chung & Matthieux Etienne

MONDAY AM

09:30 to 09:45

Grégoire Herzog *(LCPME, Université de Lorraine - CNRS, Nancy, France)*, Madjid Tarabet, Romuald Yechi-Yavo, Manuel Dossot

Coupling Electrochemistry and SERS at Soft Polarized Interfaces

09:45 to 10:00

Robert Hillman *(School of Chemistry, University of Leicester, Leicester, United Kingdom)*, Meclycia Alves, Jeane Melo, Cristiane Costa, Mariyam Ula, Johnnatan de Freitas, Josealdo Tonholo, Alexandro de Assis, Adriana Ribeiro

Electrodeposition of Silver Nanoparticles For the Visualization of Latent Fingermarks on Metallic Surfaces

10:00 to 10:15

Mathieu Etienne *(LCPME, CNRS, Nancy, France)*, Harpreet Singh, Shaohua Chen, Marouen Zammali, Hubert Perrot, Pooi See Lee, Liang Liu

In-situ analysis of $Ti_3C_2T_x$ MXene for electrochemical actuation

10:15 to 10:30

Robert Dryfe *(Chemistry, University of Manchester, Manchester, United Kingdom)*, Hannah Burnett, Hannah Wood, Paola Carbone, Ben Mullock

Organic/organic and Aqueous/Aqueous electrochemistry

10:30 to 11:00

Coffee Break *Sponsored by* ***rhd instruments*** rhd instruments flexible cell solutions

11:00 to 11:15

Taek Dong Chung *(Chemistry, Seoul National University, Seoul, Korea)*, Sung Il Kim, Moonjoo Kim

In Situ monitoring of a Single Polybromide Droplet by Snapshots of Electrochemical Impedance Spectroscopy

11:15 to 11:30

Vivien Andrieux *(Institut of Organic Chemistry II and Advanced Materials, Ulm University, Ulm, Germany)*, Christophe Bucher, Denis Frath, Thomas Gibaud, Birgit Esser

Electrochemical control of structuring π-π interactions for new high performance self-assembled organic materials

11:30 to 11:45

Viktor Colić *(Electrochemistry for Energy Conversion, Max-Planck-institute for Chemical Energy Conversion, Muelheim an der Ruhr, Germany)*, Andre Olean-Oliveira, Ali Raza Khan, Najeeb Hasnain, Aneeta Jose Puthuserry

Scales at the Electrode/Electrolyte Interface and their Significance for the Determination of the Electrochemical Surface Area

11:45 to 12:00

Christine Kranz *(Institute of Analytical and Bioanalytical Chemistry, Ulm University, Ulm, Germany)*, Giada Caniglia, Sarah Horn

Prussian Blue and Platinum-black modified AFM-SECM Probes: Multifunctional mapping of photocatalytic active materials

12:00 to 12:15

Seong Jung Kwon *(Department of Chemistry, Konkuk University, Seoul, Korea)*

Electrochemical Observation and Analysis of Stochastic Single Nanoparticle Collisions (Single Entity Electrochemistry) of Pt, and Ag Nanoparticle System

12:15 to 12:30

Marco Schönig *(Catalysis and Surface Chemistry, Leiden University, Leiden, Netherlands)*

Confining the electrical double-layer

12:30 to 14:00 Lunch Break Sponsored by ***Zahner Elektrik*** ZAHNER

Monday 8 September 2025 - *Afternoon*

MONDAY PM

Symposium 1 Electroanalysis: From fundamentals towards smart devices

Room: **Zagreb B**

Chaired by Guy Denuault & Valentina Pifferi

14:00 to 14:15 ***Invited***

Muamer Dervisevic *(Monash Institute of Pharmaceutical Sciences, Monash University, Parkville,* Australia)

Advancing Microneedle Technology: 3D-Printed Complex Surfaces for Enhanced Transdermal Sensing

14:15 to 14:30

Manusha Thathsarani Dissanayake Rajakannage *(School of Chemistry, Australian Centre for nanomedicine, University of New South Wales, Sydney, Australia)*, Samuel V. Somerville, Yoshiki Soda, Yin Yao, Emma Han, H.T.Kim Duong, Lars Ingemar, Richard D. Tilley, J. Justin Gooding

Enhanced Glucose Sensing through Tailored Enzyme-Inspired Substrate Channels on Electrode Surface

14:30 to 14:45

Ria Sijabat *(Biosensor Technology, IMEC-OnePlanet Research Center, Wageningen, Netherlands)*, Francesca Leonardi, Aniek Even, Roseanne Minderhoud, Tom Torfs, Arjan Van Heusden, Dimitrios Firfilionis, Ivan Dario Castro Miller, Ramzy Rammouz, Tobias Teichmann, Ruben Van Bergen, Gunter Vermeeren, Edoardo Capuano, Rachel Armstrong, Klaus Mathwig, Sonja De Vries, Annelies Goris, Nick Van Helleputte, Guido Hooiveld, Chris Van Hoof

Unlocking Gut Health: Ingestible Electrochemical Sensors for Real Time Continuous Monitoring along the GI Tract

14:45 to 15:00

Saimon Moraes Silva *(Biochemistry and Chemistry, La Trobe University, Melborne, Australia)*, Thiago Coimbra Pimenta, Wren Greene

Rapid Electrochemical Glycomics towards Real-Time Cancer Monitoring

15:00 to 15:15

Giuseppe Misia *(Department of Molecular Science and Nanosystems, Ca' Foscari, University of Venice, Venice, Italy)*, Alessandro Puzzello, Nicola Furlan, Ines Fasolino, Alessandro Silvestri, Chiara Zanardi

Amperometric Immunosensor based on Microneedle Arrays for the Detection of Biomarkers of Amyotrophic Lateral Sclerosis in Human Interstitial Fluid

15:15 to 15:30 ***Invited***

Steven Linfield *(Department of Electrode Processes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland)*, Wojciech Mazurkiewicz, Martyna Durka, Emilia Witkowska-Nery

Discerning between structurally similar neurotransmitters using fast-scan cyclic voltammetry on pyrolyzed carbon–ITIES double-barrelled micropipettes

15:30 to 15:45

Kosuke Ino *(Graduate School of Engineering, Tohoku University, Sendai, Japan)*, Kimiharu Oba, Kaoru Hiramoto, Hiroya Abe, Hitoshi Shiku

Electrochemiluminescence Microscopy for Analyzing Cellular Junctions in Vascular and Intestinal Cell Culture Models

15:45 to 16:00

Muhammad Abd Elhamied *(Institute of Analytical and Bioanalytical Chemistry, Ulm University, Ulm, Germany)*, Soumya Rajpal, Min Guo, Yiming Wei, Joachim Bansmann, Rasha M. El Nashar, Franz Oswald, Boris Mizaikoff, Christine Kranz

A novel hybrid biosensor for miRNA detection based on peptide nucleic acids and molecularly imprinted polymers

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy*** Leiden Probe Microscopy driving operando research

16:30 to 16:45 ***Invited***

Cecilia Cristea *(Department of Analytical Chemistry, University of Medicine and Pharmacy Cluj-Napoca, Cluj-Napoca, Romania)*, Magdolna Casian, Oana Hosu Stancioiu, Mihaela Tertis, Maria-Bianca Irimes, Alexandra Pusta

Electrochemical Aptasensors for Healthcare Applications. From SELEX to Sensors: The Use of Aptamers for Healthcare Applications

16:45 to 17:00

Juliana Naomi Yamauti Costa *(Brazilian Nanotechnology National Laboratory, Brazilian Center for Research in Energy and Materials, Campinas, Brazil)*, Juliana N. Y. Costa, Gabriel J. C. Pimentel, Paula C. R. Corsato, Christian O. Silva, Daniel S. Doretto, Pedro H. N. da Silva, James C. Pessoa, Bruna Bragantin, Lucas B. Ayres, Luis C. S. Vieira, Waldemir J. Paschoalino, Lauro T. Kubota, Iris R. S. Ribeiro, Carlos D. Garcia, Maria H. O. Piazzetta, Angelo L. Gobbi

Ultradense Electrochemical Chips: A Promising Platform in Biosensing Applications

17:00 to 17:15

Justin Gooding *(School of Chemistry, University off New South Wales, Sydney, Australia)*, Tania Benedetti, Sam Somerville, Manusha Dissanayake, Richard Tilley

An Artificial Enzyme: How Nanoconfinement Allows the Selective Electrochemical Detection of Multiple Species Directly in Whole Blood

17:15 to 17:30

Luis Romay *(Analytical Chemistry, University of Burgos, Burgos, Spain)*, Esther Carcelen, Martin Perez-Estebanez, Sara Collado, Ana Arnaiz, Rocio Barros, Carlos Rumbo, Aranzazu Heras, Alvaro Colina

EC-SERS for the detection of Pseudomonas aeruginosa based on the presence of pyocyanin as a characteristic phenazine biomarker

17:30 to 17:45

Gaudin Valerie *(AB2R, Anses, Fougères, France, France)*, Lucille Rousseau, Eric Verdon, Christophe Soumet

How to Overcome the Obstacles in Developing Electrochemical Aptasensors for the Detection of Chloramphenicol, a Banned Antimicrobial, in Food Products

17:45 to 18:00

Paolo Bollella *(Department of Chemistry, University of Bari Aldo Moro, Bari, Italy)*, Verdiana Marchianò, Angelo Tricase, Blanca Cassano, Alessandra Cimino, Eleonora Macchia, Luigi Gentile, Dónal Leech, Reshma Kidayaveettil, Luisa Torsi

Ultrasensitive Flexible Bioelectronics based on Water-based Multipurpose Conductive Inks

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 3 Electrochemical and bioelectrochemical synthesis of small molecular products

Room: **Meeting 3A**

Chaired by Corina Andronescu, Youngkook Kwon & Federica Proietto

14:00 to 14:15 ***Invited***

Federica Proietto *(Department of Engineering, University of Palermo, Palermo, Italy)*, Silvia Lo Raso, Mario Contino, Giuseppe Cammisa, Claudia Prestigiacomo, Alessandro Galia, Onofrio Scialdone

Pressurized CO_2 Electrochemical Conversion into Value-added Chemicals

14:15 to 14:30

Peter Ngene *(Chemistry, Utrecht University, Utrecht, Netherlands)*, Matt L.J. Peerlings, Petra E. deJongh

Improving the selectivity and stability of Cu in CO_2 electroreduction via ionomer-modulated electrode interface

14:30 to 14:45

Suanto Syahputra *(Chemistry, Aix-Marseille Université, CNRS, MADIREL (UMR 7246), Marseille, France)*, Emanuela Sgreccia, Maria Luisa Di Vona, Véronique Wernert, Florence Vacandio, Philippe Knauth

Multiphase Catalytic Electrode of Copper-doped Carbon Quantum Dots and Ionomer for Electrochemical CO_2 Conversion to Formate and Acetate Ions

14:45 to 15:00

Simone Dussi *(Heat Transfer Fluid Dynamics, TNO, Rijswijk, Netherlands)*, Aviral Rajora, Endino Gieske, Michele Tedesco

Optimizing Electrochemical Conversion of CO_2 to Ethylene via Continuum Simulations

15:00 to 15:15

Hye Won Chung *(Department of Chemistry, Massachusetts Institute of Technology, Cambridge, USA)*, India Cox, Hai-Xu Wang, Yogesh Surendranath

Interfacial Hydride Transfer Enables Hydricity Quantification and Electrochemical CO_2 reduction

15:15 to 15:30

Kai Hetze *(HIPOLE Jena, Friedrich-Schiller University Jena/Helmholtz-Zentrum Berlin, Jena, Germany)*, Yongchao Chen, Konstantin Schutjajew, Martin Oschatz

Enabling Direct Flue Gas CO_2RR through enhanced CO_2 accessibility of Nitrogen-Rich Polymer Carbon composites

15:30 to 15:45

Lukas Cino *(Department of Chemical Engineering, Masa+ Institute of technology, University of Twente, Enschede, Netherlands)*

Electrochemical CO_2 reduction to formaldehyde on boron-doped diamond electrodes

15:45 to 16:00

Federico Dattila *(Department of Applied Science and Technology (DISAT), Politecnico di Torino, Torino, Italy)*, Anna Loiudice, Ludovic Zaza, Giulia Cuatto, Jari Leemans, Jia Du, Simelys Hernández, Raffaella Buonsanti

CO_2 Reduction on Ni-based Catalysts: Effect of Applied Current Density, Electrolyte, and Binder

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy***

16:30 to 16:45 ***Invited***

Youngkook Kwon *(School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology, Ulsan, Korea)*

Copper Catalysts for Tunable Electrochemical CO_2 and CO Conversion

16:45 to 17:00

Rafaël Vos *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Pengfei Sun, Daniel Schauermann, Selwyn Hanselman, Gang Fu, Marc Koper

Change in the C-C coupling mechanism during CO_2 electroreduction on Cu at elevated temperature and pressure

17:00 to 17:15

Saad Diris *(Chemical Engineering, LRGP, Nancy, France)*, Emmanuel Mousset, Marie-noëlle Pons

Roles of Interelectrode Distances and Mass Transport Effects on Electrochemical CO_2 Reduction to Formic Acid under Low Carbonate Concentration Solutions

17:15 to 17:30

Mohd Monis Ayyub *(Department of Physics, Technical University of Denmark, Kongens Lyngby, Denmark)*, Alex Kotiagin, Bjørt Óladóttir Joensen, Francesco Longhin

Electrochemical CO_2 reduction coupled with hydrogen oxidation reaction

17:30 to 17:45

Ruud Kortlever *(Process & Energy, Delft University of Technology, Delft, Netherlands)*

Tuning Carbon-Based Electrocatalysts for Enhanced CO_2 Electrolysis Performance

17:45 to 18:00

Julian Buchholz *(Electrosynthesis, Max Planck Institute For Chemical Energy Conversion , Mülheim an der Ruhr, Germany)*, Carla M. Stork, Siegfried R. Waldvogel

Anodic Decarboxylative Alkylation Reaction of Electron Poor Double Bonds, Enabling a Sustainable and Metal-Free Alternative to Minisci-Type Reactions

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments*** *s*

MONDAY PM

Symposium 4a Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg B**

Chaired by Dominic Bresser

14:00 to 14:15

Lee Johnson *(School of Chemistry, University of Nottingham, Nottingham, UK)*, Rory C. McNulty, Kieran Jones, Darren Walsh, Hon Wai Lam, Graham Newton, Benjamin Denison, Elizabeth Hampson

Interfacial and electrolyte solution reactions at nickel-rich electrodes

14:15 to 14:30

Andrew Naylor *(Department of Chemistry - Ångström Laboratory, Uppsala University, Uppsala, Sweden)*, Florian Gebert, Mohammad Baghban Shemirani, Matilde Longhini, Neeha Gogoi, Dumindu P. Siriwardena, Fosca Conti

Overcoming interfacial challenges for non-flammable battery electrolytes

14:30 to 14:45

Michel Klein *(Institute for Technical and Environmental Chemistry, Friedrich Schiller University, Jena, Germany)*, Debanjana Pahari, Tobias König, Matteo Bianchini, Andrea Balducci

Development of Sulfone-based Low Fluorine Electrolytes for High Voltage Cobalt Free Cathodes

14:45 to 15:00

Bing Joe Hwang *(Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan)*

Innovations in Anode-Free Lithium Metal Batteries: Enhancing Stability through Advanced Materials

15:00 to 15:15

Sigita Trabesinger *(PSI Center for Energy and Environmental Sciences, Paul Scherrer Institute, Villigen PSI, Switzerland)*

Understanding Li-metal Anode Peculiarities

15:15 to 15:30

Dominik Kramer *(Institute of Applied Materials - IAM, Karlsruhe Institute of Technology - KIT, Eggenstein-Leopoldshafen, Germany)*, Filiz-Pinar Seren, Reiner Mönig

Growth Mechanisms of Lithium Metal Dendrites:On the Importance of Tip Growth, Ionic Depletion, and Sand's Time

15:30 to 15:45

Sara Drvaric Talian *(Department of Materials Chemistry, National Institute of Chemistry, Slovenia, Ljubljana, Slovenia)*, Gregor Kapun, Jože Moškon, Robert Dominko, Miran Gaberšček

Operando impedance spectroscopy with combined dynamic measurements and overvoltage analysis in lithium metal batteries

15:45 to 16:00

Andrea Gentile *(Chemical Engineering and Chemical Sciences, Sapienza University of Rome and University of Montpellier, Rome/Montpellier, Italy)*, Margherita Moreno, Flaminia Rondino, Serena Gagliardi, Mauro Falconieri, Laure Monconduit, Lorenzo Stievano, Sergio Brutti

Evaluating Multi-salt Electrolytes and Textured Supports for Zero-excess Lithium Metal Batteries

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy***

16:30 to 16:45

Robert Dominko *(Dept. of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia)*, Luis Miguel Guerrero Mejia, Mariana Vargas Ordaz, Urban Košir, Aiping Wang, Sara Drvarič Talian

Interface Engineering with Single-Ion Conducting Polymers for Lithium-Metal Batteries

16:45 to 17:00

Heesu Kim *(Chemical engineering, Hanyang univeristy, Seoul, Korea)*, Ji-Wan Kim, Myung-Keun Oh, Dong-Hyun Lee, Won-Keun Kim, Samuel Seo, Kyoung-Han Ryu, Dong-Won Kim

Stabilizing Lithium Metal Anodes with Dual-Functional Polymeric Layers for Lithium Metal Batteries

17:00 to 17:15

Lorena García *(Electrochemical Energy Storage, Centro de Investigación Cooperativa CIC energiGUNE, Vitoria-Gasteiz, Spain)*, Michal Fabianski, Maciek Dranka, Itziar Aldalur, Eduardo Sanchez-Diez, Michel Armand, Maria Martinez-Ibañez

Synthesis and Characterization of a Fluorine-Free Hückel-Based Lithium Salt for Enhanced Solid Polymer Electrolytes in Lithium Metal Batteries

17:15 to 17:30

Sara Pakseresht *(Chemistry and materials science, Aalto university, Espoo, Finland)*, Tanja Kallio

In-Situ X-Ray Photoelectron Spectroscopy Investigation of TiO_x ALD on Lithium Metal: Growth Mechanism and Battery Performance

17:30 to 17:45

Moritz Exner *(Department of Chemistry, Humboldt-University of Berlin, Berlin, Germany)*, Dominik Stepien, Annica Freytag, Goutham Srinivas, Philipp Adelhelm

Electrolyte-Driven Dendrite Morphologies in Anode-Free Alkali Metal Batteries

17:45 to 18:00

Svetlozar Ivanov *(Electrochemistry and Electroplating Group, Technische Universität Ilmenau, Ilmenau, Germany)*, Ivan Genov, Mario Kurniawan, Michael Witt, Alexander Tesfaye, Shovon Goutam, Andreas Bund

In-Situ Design of Initial Solid-Electrolyte Interphase for Performance Improvement of Anode-Free Li-Metal Batteries with Localized High Concentration Electrolyte Based on Sulfolane

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 4b Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg A**

Chaired by Laurence Hardwick

MONDAY PM

14:00 to 14:15

Fridolin Röder *(Bavarian Center for Battery Technology, University of Bayreuth, Bayreuth, Germany)*, Hossein Harimi, Felix Schomburg, Johann C. Wurzenberger

The Critical Role of Diffusion Coefficients in P2D Battery Models

14:15 to 14:30

Niklas Bless *(Institute of Energy and Process Systems Engineering (InES), TU Braunschweig, Braunschweig, Germany)*, Daniel Schröder

Decoding Reversible Lithium Plating in LIBs through the Synergistic Use of Physico-Chemical Modelling, Electrochemical Analysis, and Operando Microscopy

14:30 to 14:45

Nobuhiro Ogihara *(Energy Carrier Research-Domain, Toyota Central R&D Laboratories Inc., Nagakute, Japan)*, Yuichi Itou

Advances in Thick-Film Lithium-Ion Batteries: Mathematical Modeling Approach of Equivalent Circuits for Ion Transport and Kinetic Limitations

14:45 to 15:00

Nicolò Pianta *(Materials Science, University of Milano - Bicocca, Milan, Italy)*, Federico Scarpioni, Fabio La Mantia, Riccardo Ruffo

Dynamic electrochemical impedance spectroscopy as a tool for the study of energy storage systems

15:00 to 15:15

Federico Scarpioni *(Energy Storage and Converters, Fraunhofer IFAM, Bremen, Germany)*, Fabio La Mantia

Broad-Band Multi-Sine Non-Stationary Impedance Spectroscopy for the Monitoring of Battery State

15:15 to 15:30

Dolly Tanwar *(Energy and process engineering, Norwegian university of Science and Technology-NTNU, Trondheim, Norway)*, Steven Tyler Boles

Deploying Fiber Optic Sensing for Improved Understanding of Battery Degradation in Nickel-rich Cathode Materials

15:30 to 15:45

Yosuke Ugata *(Chemistry and Life Science, Yokohama National University, Yokohama, Japan)*, Komei Amakawa, Takuto Araki, Naoaki Yabuuchi

Fast Discharging of Lithium Batteries with Acetonitrile-Based Concentrated Electrolytes and High-loading Positive Electrodes: A Joint Experimental and Numerical Study

15:45 to 16:00

Luciana Pitta Bauermann *(Electrical Storage, Fraunhofer ISE, Freiburg, Germany)*, Daniel Nusko, Sonia Dsoke, Moritz Kroll

Thickness changes in compressed lithium-ion battery cells during charge and discharge cycles

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy***

16:30 to 16:45

Andrew R. T. Morrison *(Chemical Engineering, University College London, London, United Kingdom)*, Andrew R. T. Morrison, Will J. Dawson, Thomas S. Miller, James B. Robinson, Paul R. Shearing

Li-ion Battery Slurry Age, Electrode Performance, and Light Microscopy as an In-Line Sensor

16:45 to 17:00

Felix Schomburg *(Bavarian Center for Battery Technology (BayBatt), University of Bayreuth, Bayreuth, Germany)*, Arun Kumar Anjanapura Venkatesh, Santu Rana, Fridolin Röder

A Correlation Analysis of Lithium-Ion Battery Formation Protocols

17:00 to 17:15

Christoffer Karlsson *(R&D, rhd instruments, Darmstadt, Germany)*, Benedikt Huber, Marcel Drüschler

Battery Cell Breathing under Constant Pressure and Constant Volume Regulation using Passive and Active Control

17:15 to 17:30

Damian Kowalski *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Mewin Vincent, Sandra Sajeev

In-Situ Observations of Electrochemical Reactions in 1D Battery Electrodes

17:30 to 17:45

Lennart Reuter *(School of Natural Science, Technical University of Munich, Munich, Germany)*, Moritz Bock, Leonhard J. Reinschlüssel, Daniel Goldbach, Benjamin Strehle, Johannes Wandt, Hubert A. Gasteiger

Time-dependent Depletion of Electrolyte Salt and H_2 Evolution upon Calendaric Aging of Lithium-Ion Batteries

17:45 to 18:00

Luca Weckelmann *(Institute of Energy Technologies - IET-1, Forschungszentrum Jülich, Jülich, Germany)*, Krzysztof Dzieciol, Christoph König, Chih-Long Tsai, Anna Windmüller, Luc Raijmakers, Hermann Tempel, Hans Kungl, Rüdiger-A. Eichel

A novel pressurized in-operando battery cell for laboratory X-ray computed tomography

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 5 New battery chemistries

Room: **Watford**

Chaired by Hasna Aziam & Yongyao Xia

14:00 to 14:30 ***Invited***

Yi-Chun Lu *(Mechanical and Automation Engineering, The Chinese University of Hong Kong, Shatin,* China)

Sustainable Aqueous Battery Chemistries

14:30 to 14:45

Adrián Licari *(Departamento de Química Inorgánica e Ingeniería Química, Universidad de Cordoba, Cordoba, Spain)*, Rafael Trócoli

Vacancies in Prussian Blue Analogs, effects on the electrochemical performance on Beyond-Lithium batteries

14:45 to 15:00

Filiz-Pinar Seren *(Institute for Applied Materials - IAM, Karlsruhe Institute of Technology - KIT, Eggenstein-Leopoldshafen, Germany)*

Berlin Green as a Versatile and Reliable Positive Electrode Material for Different Alkali Insertion Ions

15:00 to 15:15

Agnes-Matilda Mattsson *(Department of Chemistry - Ångström Laboratory, Uppsala University, Uppsala, Sweden)*, Ida Nielsen, Fredrik Björefors, William R. Brant

Shifting the Phase Transition of Prussian White with Li-ions

15:15 to 15:30

Adélaïde Clavelin *(Na-based batteries, CIC energiGUNE, Vitoria-Gasteiz, Spain)*, Montserrat Galceran Mestres, Marcus Fehse, Damien Saurel

Unravelling the Impact of Mn Partial Substitution on Prussian White Materials for Na-ion Batteries

15:30 to 15:45

Samuel Franz Gatti *(Center for Energy and Environmental Sciences, Paul Scherrer Institut (PSI), Villingen PSI, Switzerland)*, Andrea Testino, Sigita Trabesinger

Performance limitations in sidorenkite-type $Na_3Fe(PO_4)(CO_3)$as a Na-ion battery cathode – can we overcome them?

15:45 to 16:00

Gleb Zheleznov *(Inorganic Active Material for Electrochemical Energy Storage, University of Bayreuth, Bayreuth, Germany)*, Matteo Bianchini

Evaluation of KTP-type Polyanionic Cathode Materials for Potassium-based Batteries

16:00 to 16:30

Coffee Break Sponsored by ***Leiden Probe Microscopy***

Leiden Probe Microscopy
driving operando research

16:30 to 16:45

Yongyao Xia *(Department of Chemistry, Fudan University, Shanghai, China)*, Congxioa Wang, Yongjie Cao, Zhangzhi Wang, Pengkun Sun, Yanxian Sun

Polyanion-type electrode materials for sodium-ion batteries

16:45 to 17:00

Jonathan Delaney *(Akkumulatoren Materialforschung (ECM), Zentrum für Sonnenenergie-und Wasserstoff- Forschung (ZSW), Ulm, Germany)*, Fabio Maroni, Mario Marinaro

Elemental Excess: Exploring $Na_4Fe_3(PO_4)_2P_2O_7$ / $Na_2FeP_2O_7$ Reaction Pathways as a Promising Mixed Na-ion Cathode Blend

17:00 to 17:15

Hasna Aziam *(HTMR Lab, Mohammed VI Polytechnic University, Ben Guerir, Morocco)*, Noha Sabi, Soraia El Moutchou, Nouredine Oueldna, Messaoud Harfouche, Hicham Ben Youcef

Investigating the electrochemical performance of Novel NaSICON-type positive electrode material for Sodium-ion batteries

17:15 to 17:30

Soraia El Moutchou *(High Throughput Multidisciplinary Research Laboratory, Mohamed 6 Polytechnique University (UM6P), Bengurir, Morocco)*, Noha Sabi, Ben Youcef Hicham, Aziam Hasna

Unraveling the Electrochemical Performance of a Novel High-Entropy Vanadium-based NaSICON as a Positive Electrode Material for Sodium-Ion Batteries

17:30 to 17:45

Rita Duarte *(LEPABE, Faculty of Engineering, University of Porto, Porto, Portugal)*, Gonçalo Leite, Miguel Duarte, Adélio Mendes

Optimization of Anionic Redox Reactions for Transition Metal Oxide Cathodes via Al-doping and Sacrificial Salt Addition

17:45 to 18:00

Sonia Dsoke *(Electrical Energy Storage, Fraunhofer Institute for Solar Energy Systems, Freiburg, Germany)*, Angelina Sarapulova, Benan Oguz, Robby Mathew, Jonathan Delaney, Fabio Maroni, Gyeong wan Jo, Maider Zarrabeita, Mario Marinaro, Sonia Dsoke

Optimization of a Hard Carbon // $Na_7V_4(P_2O_7)_4(PO_4)$ Na-ion cell via a one-step presodiation strategy

18:00 to 20:00

SSession 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 6a Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Kongress-Saal**

Chaired by Yan-Xia Chen & Kai Exner

MONDAY PM

14:00 to 14:15

Yan-Xia Chen *(Chemical Physics, University of Science and Technology of China, Hefei, China)*

Disentangling multiple pH-dependent factors on the hydrogen evolution reaction at Au(111)

14:15 to 14:30

Elena Gubanova *(Department of Physics, ECS, Technical University of Munich, Garching b. München, Germany)*, Elena Gubanova

Investigation of Hydrogen Evolution Reaction Mechanism on the Pd Catalyst

14:30 to 14:45 ***Invited***

Stephan Steinmann *(Laboratoire de Chimie, ENS de Lyon, Lyon, France)*, Nawras Abidi, Amit Sahu, Pascal Raybaud

Electrochemical potential-dependent stability and activity of MoS_3 during the hydrogen evolution reaction

14:45 to 15:00

J. Niklas Hausmann *(Materials Chemistry for Catalysis, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*

Current Electrocatalytic Protocols are not Reproducible and How to Fix This

15:00 to 15:15

Steffi Hlawenka *(Electrocatalysis: Synthesis to Devices Group, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Michael Götte, Carla Terboven, Ana Karen Velazquez Sanchez, Marcel Risch, Michelle Browne

Accelerating Electrocatalysis Research through Digitalization: Integrating Data Science into Experimentation

15:15 to 15:30

Uzoma Nwabara *(Materials Discovery Research Institute, Underwriters Laboratories Research Institutes, Skokie, USA)*, Kunran Yang, Kristine Wilson, Conor Brew, Jorge Gonzalez, Stuart Miller

Nanoprinting Experimental Design for Accelerated Discovery of Hydrogen Evolution Catalysts

15:30 to 15:45

Anja Logar *(Department of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia)*, Dževad K. Kozlica, Ožbej Vodeb, Miran Gaberscek, Nejc Hodnik, Dusan Strmcnik

Bubble Trouble at the Electrochemical Interphase

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy*** Leiden Probe Microscopy driving operando research

16:30 to 16:45

Julia Hoffmann *(Chair of Power-to-X Technologies, FAU Erlangen-Nürnberg, Fürth, Germany)*, Julia Hoffmann, Manuel Bleiziffer, Camila Kisukuri, Bastian J. M. Etzold

Electrode Structure and Flow Field Influence on Bubble Dynamics and Potential Losses in Alkaline Water Electrolysis

16:45 to 17:00

Ridha Zerdoumi *(Materials Discovery and Interfaces, Institute for Materials, Ruhr University Bochum, Bochum, Germany)*, Thomas Quast, Alan Savan, Alfred Ludwig, Wolfgang Schuhmann

High-Throughput Screening of Electronic and Geometric Effects in Multi-Metal Materials: Toward a Rational Design in Electrocatalysis

17:00 to 17:15

Vasilica Badets *(Institut de Chimie, UMR 7177, University of Strasbourg, Strasbourg, France)*, Vasilica Badets, Shen Xin, Samer Dawoud, Laurent Ruhlmann, Marian Chatenet, Antoine Bonnefont

Modulating the Porosity of Ni Foams Has an Impact on the Hydrogen Evolution Reaction

17:15 to 17:30

Tien-Hsiang Hsueh *(Department of Physics, National Atomic Research Institute -NARI, Taoyuan, Taiwan)*, Po-Wen Chen, Yung-Ching Liu, Tian-Cheng Liu, Ai-Tang Chang, Yu-Chen Li, Yong-Song Chen

The efficient alkaline water electrolysis achieved with sputtering high entropy alloys thin film electrodes for hydrogen production

17:30 to 17:45

Mohsin Muhyuddin *(Dept. of Materials Science, University of Milano-Bicocca, Milano, Italy)*

Deciphering the Evolution of HER and ORR Activity: Insights from Pyrolyzed Nickel Phthalocyanine Functionalized Carbon Black

17:45 to 18:00

Aleksandar Petricevic *(Department of Materials Science, Institute for Multidisciplinary Research, Belgrade, Serbia)*, Mila Krstajic Pajic, Piotr Zabinski, Dawid Kutyla, Mateusz Marzec, Marta Gajewska, Nevenka Elezovic, Jovic Vladimir

Durable Composite Ni-MoO_x Catalysts Electrodeposited on High Surface Nickel Substrates for Low-Cost Green Hydrogen Production

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 6b Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Gutenberg D**

Chaired by Plamen Atanassov & Aaron Marshall

14:00 to 14:15 ***Invited***

Kensaku Kodama *(Hydrogen Energy Research-Domain, Toyota Central R&D Labs., Inc., Nagakute, Japan)*, Ryuichi Murase, Masanori Inaba, Akihiro Shinohara, Tomohiro Takeshita, Naomi Naraki, Yuto Okayama, Naoto Todoroki

Practical Application of Insights Gained from Experimental Analyses Using Model Electrodes to Fuel Cells and Water Electrolyzers

14:15 to 14:30

Rik Mom *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Hassan Javed, Jan Rodriguez, Kees Kolmeijer

Resolving the structural dynamics of ORR catalysts using electrochemical XPS

14:30 to 14:45

Adrian Baumunk *(Chemical and Biological Engineering, FAU Erlangen-Nürnberg / Power-to-X Technologies, Fürth, Germany)*, Mario Kircher, Viktor Hacker, Bastian J.M. Etzold

Bringing GDE half-cell and MEA single cell testing closer together

14:45 to 15:00

Dominik Dworschak *(Electrocatalysis, Forschungszentrum Jülich GmbH - HI ERN, Erlangen, Germany)*, Thomas Ackstaller, George Pätzold, Nico Röttcher, Gun Akkoc

Accelerated evaluation of electrocatalysts with ALEC – The Automated Laboratory for Electrochemical Characterisation

15:00 to 15:15

Raphaël Riasse *(Department of Electricity and Hydrogen for Transports, CEA Liten, Grenoble, France)*, Fabrice Micoud, Damien Gloriod, Guillaume Laphitz, Marine Tregaro, Sébastien Rosini

How to properly carry out electrochemical characterizations by cyclic voltammetry in PEMFC stacks ?

15:15 to 15:30

Andrew Wain *(Electrochemistry Group, National Physical Laboratory, Teddington, United Kingdom)*, Graham Smith

Exploring the Self-Purge Mechanism in Anion Exchange Membranes using Infrared Spectroelectrochemistry

15:30 to 15:45

Min-Hsing Chang *(Energy Engineering, National United University, Miaoli, Taiwan)*, Min-Hsing Chang, Wet-Te Lu

Dealloying Electrospun PtCo Nanowires as Electrocatalyst for Oxygen Reduction Reaction in Polymer Electrolyte Membrane Fuel Cells

15:45 to 16:00

Tristan Asset *(ICPEES, CNRS/University of Strasbourg, Strasbourg, France)*, Kirill Dosaev, Paul Chassagne, Kate Fraser, Alexandr G. Oshchepkov, Amaria Wafaa Oudjdi, Nikolas Theodoropoulos, Steven Holdcroft, Elena R. Savinova, Sergey N. Pronkin

Electrolyte and Ionomer-Electrocatalyst Interactions – Electrochemical Diagnosis Tools and Applications

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy*** Leiden Probe Microscopy driving operando research

16:30 to 16:45

Plamen Atanassov *(Chemical & Biomolecular Engineering, University of California Irvine, Irvine, USA)*, Giovanni Ferro, Camille Roirin, Plamen Atanassov

Hybrid Pt-PtCo Designer Electrocatalyst for Oxygen Reduction Reaction with Controlled Nanoparticle Locality

16:45 to 17:00

Matteo Finco *(Advanced Technologies for Chemical and Biological Systems, Robert Bosch GmbH, Renningen, Germany)*, Aaron Meetz, Markus Schilling, Andreas Netz, Hubert A. Gasteiger, Ulrich Berner

Impact of PEM-FC catalyst ink composition on rheology, electrode morphology and performance for long and short side-chain ionomers

17:00 to 17:15

Yuze Hou *(Modeling department, Fraunhofer ISE, Freiburg, Germany)*, Nada Zamel

Pore-Scale Investigation of Ordered Mesoporous Carbon Supported Catalyst in Proton Exchange Membrane Fuel Cells

17:15 to 17:30

Minoru Inaba *(Department of Molecular Chemistry and Biochemistry, Doshisha University, Kyotanabe, Japan)*, Minoru Inaba, Hideo Daimon, Hideo Inoue

MEA Performance of Pt-based Catalysts Supported on CNovel® Mesoporous Carbon for Polymer Electrolyte Fuel Cells

17:30 to 17:45

Nadezda Kongi *(Institute of Chemistry, University of Tartu, Tartu, Estonia)*, Vladislav Ivanistsev, Ritums Cepitis, Jan Rossmeisl

Scaling Relations in Oxygen Electrocatalysis - Twenty Years After

17:45 to 18:00

Rifael Snitkoff-Sol *(Leiden Institute of Chemistry, Leiden University, LEIDEN, Netherlands)*

Investigating Single-Crystal Pt(111) at Low Potentials Using Advanced Transient Voltammetry

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments*** GAMRY INSTRUMENTS

Symposium 7 High power devices: Electrodes and electrolytes, limiting factors or assets for power capability?

Room: **Meeting 3B**

Chaired by Scott Donne, Chi-Chang Hu & Celine Merlet

14:00 to 14:15 ***Invited***

Clara Rodrigues Pereira *(LAQV-REQUIMTE, Chemistry and Biochemistry Department, Faculty of Sciences, University of Porto, Porto, Portugal)*, Joana S. Teixeira, Gabriela P. Queirós, Ana R. Sousa, Rui S. Costa, Marta S. Nunes, André M. Pereira

Unlocking the Boundless Potential of Hybrid Carbon Nanomaterials for Multifunctional Textile Supercapacitor Technologies

14:15 to 14:30

Thierry Brousse *(Institut des Matériaux de Nantes Jean Rouxel, IMN, Nantes Université, CNRS, Nantes, France)*, Marcelo Amaro de Andrade, Aram Bugaev, Alina Skorynina, Camille Douard, Olivier Crosnier, Björn Wickman, Patrik Johansson

Second life of waste water absorbents in high power devices

14:30 to 14:45

Francesco Lufrano *(Energy, CNR-ITAE, Istituto di Tecnologie Avanzate per L'Energia, Messina, Italy)*, Achref Chebil, Antonino Brigandì, Natalia Rey-Raap, Ana Arenillas, Stefano Sinopoli, Umberto Emanuele

Proof-of-concept of Flexible Supercapacitors Fabricated with Carbon Gels and MnO_2 Deposited on Carbon Cloth

14:45 to 15:00

Joana S. Teixeira *(Department of Chemistry and Biochemistry, REQUIMTE/LAQV - Faculty of Sciences, University of Porto, Porto, Portugal)*, Joana S. Teixeira, Ana Pires, Luís Cruz, André Pereira, Clara R. Pereira

Beyond Energy Storage: Redox-Active Hybrid Solid-Gel Electrolytes Enabling Thermal-to-Electric Conversion in Textile Supercapacitors

15:00 to 15:15

Christophe Lethien *(IEMN, IEMN / CNRS / Université de Lille, villeneuve d'ascq, France)*, Chiara Crivello, Patrick Gerlach, Camille Douard, Cedric Teyssédou, David Troadec, Marielle Huvé, Lydia Karmazin, Maxime Hallot, Kevin Robert, Florent Marlec, Jérémie Chaillou, Isabelle Roch-Jeune, Pascal Roussel, Jean Le Bideau, Thierry Brousse

High voltage electrolytic and hybrid 3D micro-capacitors for fast power applications

15:15 to 15:30

Ahmed Bahrawi *(Inorganic Chemistry I, Technical University Dresden, Dresden, Germany)*, Przemyslaw Galek, Christin Gellrich, Nick Niese, Mohamed Abdullah, Martin Hantusch, Julia Grothe, Stefan Kaskel

Nanostructured h-WO_3-Based Ionologic Gates with Enhanced Rectification and Transistor Functionality

15:30 to 15:45

Yoga Trianzar Malik *(Faculty of Chemistry and Biosiences, Helmholtz-Institut Ulm, Karlsruhe Institute of Technology, Ulm, Germany)*, Simon Fleischmann

Understanding Li^+ Intercalation Kinetics in Transition Metal Dichalcogenide Electrodes via Distribution of Relaxation Time (DRT)

15:45 to 16:00

Elisabetta Petri *(Department of Chemistry "G.Ciamician", University of Bologna, Bologna, Italy)*, Elisabetta Petri, Francesca Soavi, Chiara Gualandi, Maria Arnaìz, Jon Ajuria

Towards Sustainable Supercapacitor Manufacturing: Scaling Up Pullulan-Based Electrodes and Separators for EDLCs

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy*** Leiden Probe Microscopy driving operando research

16:30 to 16:45 ***Invited***

Juan Luis Gómez Urbano *(Institute for Technical and Environmental Chemistry, Friedrich Schiller University, Jena, Germany)*, Khai Shin Teoh, Massimo Melchiorre, Francesco Ruffo, Andrea Balducci

Enhancing the Sustainability of Lithium-ion Capacitors through the Formulation of Fluorine-Free Electrolytes and Water-Based Recycling

16:45 to 17:00

Célia Clémentz *(CNRS, Institut des Sciences Chimiques de Rennes, Rennes, France)*, Sandrine Berthon-Fabry, Phillipe Hapiot, Corinne Lagrost, Yann Leroux

Impact of aryldiazonium salts grafting onto porous carbon as electrodes for supercapacitors

17:00 to 17:15

Souhaib Abouricha *(HTMR, Mohammed VI polytechnic university, Ben Guerir, Maroc)*, Steven Le Vot, Mohammed Lahcini, Ouassim Ghodbane, Frédéric Favier, Hicham Ben Youcef

Beyond Liquid Electrolytes: Biopolymer-Immobilized Ionic Liquids for Next-Gen Supercapacitors

17:15 to 17:30

Aleksandra Mroziewicz *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Magdalena Skunik-Nuckowska

Redox-active Deep Eutectic Solvents Utilizing Propylene Glycol and Iodide Salts Comprising Monovalent Cations as Electrolytes for Hybrid Electrochemical Capacitors

17:30 to 17:45

Armando Santiago-Carboney *(Dept. of Chemistry, University of Illinois Urbana-Champaign, Urbana, USA)*, Mrinalini Kalyani Ayilliath Kolaprath, Adam Imel, Mark Dadmun, Joaquín Rodríguez-López

Assessing the Electrochemical Performance of Redox-Active Microemulsions via Analysis of Stochastic Responses Using Scanning Electrochemical Microscopy

17:45 to 18:00

Masoud Foroutan Koudahi *(Department of Thin Films and Nanostructures, FZU-Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic)*, Andres Parejo Tovar, François Béguin, Elzbieta Frackowiak

Operando Electrochemical Dilatometry Expansion of MXenes in Ionic Liquids

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments*** GAMRY INSTRUMENTS

Symposium 8 Corrosion, coatings, and nanostructures for a sustainable future

Room: **Meeting 2A**

Chaired by Achim Walter Hassel & Carmen Pérez

MONDAY PM

14:00 to 14:30 ***Keynote***

Michael Rohwerder *(Interface Chemistry and Surface Engineering, Max Planck Institute for Sustainable Materials , Düsseldorf, Germany)*

On the Fundamental Mechanisms of Corrosion Driven Delamination and their Implications for Self-Healing Coating Systems

14:30 to 14:45 ***Invited***

Isao Shitanda *(Department of Pure and Applied Chemistry, Tokyo University of Science, Noda, Japan)*

Electrochemical Monitoring Sensor for Evaluating the Freshwater Corrosiveness of Copper and Tin-plated Copper

14:45 to 15:00

Jelena Bajat *(Physical Chemistry and Electrochemistry, University of Belgrade, Belgrade, Serbia)*, Andjela Simovic

Scientifical and technological challenges and potentials of nature derived corrosion inhibitors

15:00 to 15:15

Carmen Pérez *(ENCOMAT Group, Universidade de Vigo, Vigo, Spain)*, Belén Díaz, Raúl Figueroa, X. Ramón Nóvoa

Effect of the addition of modified reduced graphene oxide nanosheets on the corrosion performance of an acrylic resin.

15:15 to 15:30

Halina Krawiec *(Faculty of Foundry Engineering, AGH University of Krakow, Krakow, Poland)*, Aleksandra Pierwola, Vincent Vignal, Andrzej Fijolek

Corrosion mechanisms of Mg, Zn and MgZn20 alloy in artificial seawater: immersion in bulk solution vs. exposure to salt spray

15:30 to 15:45 ***Invited***

Nishtha Saxena *(Chemistry, University of Western Ontario, London, Canada)*, Emmanuel Morcillo, Mehran Behazin, Peter Keech, Samantha Gateman

Investigating Localized Corrosion of Copper Coatings using Scanning Electrochemical Cell Microscopy

15:45 to 16:00

Daniel Blackwood *(Materials Science & Engineering, National University of Singapore, Singapore, Singapore)*, Glenys Susanto

How do Sulphate Reducing Bacteria Cause Pitting Corrosion in Stainless Steels?

16:00 to 16:30

Coffee Break Sponsored by ***Leiden Probe Microscopy***

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16:30 to 16:45 ***Invited***

Rene Böttcher *(Airbus Central Research & Technology, Airbus Defence & Space GmbH, Taufkirchen, Germany)*, Mats Meeusen, Nourhan Abdelrahman, Quentin Bignon, Herman Terryn, Tom Hauffman, Jürgen Wehr

Towards prediction of corrosion protection on aerospace aluminum alloys by deterministic modeling

16:45 to 17:00

Hendra Hermawan *(Mining, Metallurgical and Materials Engineering, Universite Laval, Quebec City, Canada)*, Mariya Kadiri

Contradictory Role of Niobium on the Passivation of $TiHfZrNb_x$ High-Entropy Alloys in Two Different Electrolyte Solutions

17:00 to 17:15

Takumi Haruna *(Department of Chemistry and Materials Engineering, Kansai University, Suita, Japan)*, Satoru Mochizuki, Yuka Harada, Youhei Hirohata

Effects of Potential and pH on Hydrogen Absorption into Fe in Aqueous Solutions Containing Sulfate Ions

17:15 to 17:30

Katharina Krischer *(Physics Department, Technical University of Munich, Garching, Germany)*, Moritz Feil, Simon Leisibach

Corrosion of Au at the Onset of the Hydrogen Evolution Reaction: A Fundamental Study Combining Cyclic Plasmo-Voltammetry and Atomic Force Microscopy

17:30 to 17:45

Hideki Katayama *(National Institute for Materials Science, Institute, Tsukuba, Japan)*

Atmospheric corrosion monitoring of carbon steels in snowy cold region

17:45 to 18:00 ***Invited***

Alexandre Bastos *(Department of Materials and Ceramic Engineering, University of Aveiro, Aveiro, Portugal)*, Mariana Raposo, Alexandra Santos, Celestino Gomes, Rui Sampaio, Frederico Maia, Cláudia Rocha, Kiryl Yasakau, João Tedim, Mário Ferreira

Nanostructured-Based Corrosion Protection Using ZnAl Layered Double Hydroxides (LDH)

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 9 Durability of materials for energy conversion and storage: Mechanism, mitigation and performance

Room: **Dijon**

Chaired by Arno Bergmann & Sandrine Lyonnard

14:00 to 14:15 ***Invited***

Dominic Rochefort *(Chemistry, Universite de Montreal, Montreal, Canada)*, Hélène Lebel, Calvine Lai, Thomas Boulanger, Alizée Debiais, Louis Hamlet, Meysam Maleki, Marc-Antoni Goulet

Hydrazobispyridinium Derivatives for Sustainable Energy Storage in Aqueous Organic Redox Flow Batteries

14:15 to 14:30

Jonas Hereijgers *(Applied Electrochemistry & Catalysis, University of Antwerp, Antwerp, Belgium)*, Raphaël Delogne

The Cell-in-Series Accelerated Degradation Method as a Diagnostic Tool to Evaluate Operation Metrics of Flow Batteries

14:30 to 14:45

Felix Lulay *(Applied Electrochemistry, DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany)*, Claudia Weidlich, Adam H. Whitehead, Markus Valtiner, Christian M. Pichler

Membrane Ageing in Vanadium Redox Flow Batteries

14:45 to 15:00

Leon Schmidt *(Institute of Applied Materials, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Tongjun Luo, Wesley Dose, Ulrike Krewer

The Effect of Electrolyte Composition on the High Temperature Degradation of Lithium-ion Batteries

15:00 to 15:15

Daniele Callegari *(Physical Chemistry, University of Pavia, Pavia, Italy)*

Chitosan-decorated Alumina Hybrid Nanoparticles as Smart Scavengers of HF and Dissolved Transition Metals in Lithium-ion Batteries

15:15 to 15:30

Yu-Sheng Su *(International College of Semiconductor Technology, National Yang Ming Chiao Tung University, Hsinchu City, Taiwan)*, Hang Thi Vu

Mechanistic Insights into Mismatched Na_4 and Li_4 Electrolyte on the Durability of $Li_4Ti_5O_{12}$ Battery Anodes

15:30 to 15:45

Ying Hu *(Institute of Energy Technologies, Forschunugszentrum Juelich GmbH, Juelich, Germany)*, Christian Rodenbücher, Verena Theußl, Carsten Korte

In-situ Raman and XRD investigations on Prussian Blue Analogues as cathode material for sodium ion batteries

15:45 to 16:00

Zuzanna Zarach *(Faculty of Chemistry, Gdansk University of Technology, Gdansk, Poland)*, Miroslaw Sawczak, Carsten Dosche, Konrad Trzciński, Mariusz Szkoda, Ralf Riedel, Gunther Wittstock, Andrzej P. Nowak

A Key to Material's Stability: Tuning Pyrolysis Temperature in SnS_x@C Anodes for Sodium-Ion Batteries

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy*** Leiden Probe Microscopy driving operando research

16:30 to 16:45 ***Invited***

Matthias Arenz *(Department of Chemistry, Biochemistry, and Pharmaceutical Sc, University of Bern, Bern, Switzerland)*

Degradation of Pt/C fuel cell catalysts – from GDE to operando X-Ray Scattering Studies

16:45 to 17:00

Adam Weber *(Energy Conversion Group, 1 Cyclotron RD, Berkeley, CA, USA)*

Impacts of Gas Crossover in Fuel Cells and Electrolyzers

17:00 to 17:15

Miftakhul Huda *(Department of Chemical Systems Engineering, Graduate School of Engineering, Nagoya University, Nagoya, Japan)*

Nitrogen-containing Carbon-shelled Platinum Electrocatalysts Supported by Single-walled Carbon Nanotubes for Fuel Cells

17:15 to 17:30

Jan Ole Fehrs *(Institut für experimentelle und angewandte Physik, Christian-Albrechts-Universität zu Kiel, Kiel, Germany)*, Timo Fuchs, Fabian Schröfel, Finn Schröter, Barbara Schröder, Jing Tian, Nick Merkel, Simon Kempf, Jakub Drnec, Valentín Briega-Martos, Serhiy Cherevko, Olaf Magnussen

In situ GISAXS studies of the nanoscale restructuring of platinum electrodes during high numbers of oxidation/reduction cycles

17:30 to 17:45

Mattia Parnigotto *(Chemical Sciences, University of Padova, Padova, Italy)*, Gabriele Pesce, Elisabetta Campedelli, Marco Mazzucato, Christian Durante

Unveiling Catalyst Degradation Mechanisms in GDE Devices through DRT Analysis and Realistic Testing Protocols

17:45 to 18:00

Iwona Rutkowska *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Anna Chmielnicka, Sylwia Zoladek, Aldona Kostuch, Enrico Negro, Gioelle Pagot, Vito Di Noto, Pawel Kulesza

Application of Double-Potential-Step Chronoculometry to Diagnose Efficiency and Stability of Oxygen Reduction Catalysts

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments*** GAMRY INSTRUMENTS

Symposium 10 Green electrochemistry for a sustainable world

Room: **Meeting 1**

Chaired by Siegfried Waldvogel & Chularat Wattanakit

14:00 to 14:15

Tom Breugelmans *(Research group ELCAT, University of Antwerp, Antwerp, Belgium)*, Luis F. Leon-Fernandez, Nick Daems, Sam Van Daele

Electrochemical Reduction of Carbon Dioxide with Flue Gas Impurities

14:15 to 14:30

James Finn *(Department of Chemical Engineering & Department of Chemistry, Loughborough University, Loughborough, United Kingdom)*, Benjamin Buckley, Nuno Bimbo, Eileen Yu

Designer Capture Materials: Supercapacitive Swing Adsorption for Efficient Electrochemical CO_2 Capture

14:30 to 14:45

Chularat Wattanakit *(School of Energy Science and Engineering, Vidyasirimedhi Institute of Science and Technology (VISTEC), Rayong, Thailand)*, Anousha Sohail, Chomphunuch Wansa, Alexander Kuhn

Asymmetric Synthesis of Chiral Compounds from CO_2 at Chiral Encoded Metal Surfaces

14:45 to 15:00

Anousha Sohail *(School of Energy Science and Engineering, Vidhyasirimedhi Institute of Science and Technology, Rayong, Thailand)*, Anousha Sohail, Watinee Nunthakitgoson, Sorasak Klinyod, Anawat Thivasasith, Anittha Prasertsab, Peeranat Chaipornchalerm, Warot Prasanseang, Wanmai Srisuwanno, Poobodin Mano, Somlak Ittisanronnachai, Supawadee Namuangruk, Chularat Wattanakit

Simultaneous Electrooxidation of Hydroxymethylfurfural and CO_2 Electroreduction on CO_2-derived Carbon Nanotubes

15:00 to 15:15

Linda Brösgen (Angewandte Elektrochemie, Fraunhofer-Institut für Chemische Technologie *(ICT), Pfinztal, Germany)*, Robin Kunkel

Exploring Mass Transfer in Flow Reactors for Coupled Electrosynthesis

15:15 to 15:30

Dhananjai Pangotra *(BioCat, Fraunhofer IGB, Straubing, Germany)*, Emilia Pawlowicz, Arne Roth, Luciana Vieira

Paired Electrolysis of HMF to FDCA and DMF/BHMF: the effect of hydrothermally generated HMF

15:30 to 15:45

Tobias Harhues *(Chemical Process Engineering, RWTH Aachen University, Aachen, Germany)*, Anselm Brodersen, Matthias Wessling, John Linkhorst, Robert Keller

3D-printed Electrodes for the Biphasic Electrochemical Oxidation of HMF to FDCA

15:45 to 16:00

Tomas Horsten *(Department of Electrosynthesis, Max-Planck-Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Edward Rayner, Siegfried Waldvogel

Sustainable Electrochemical Modification of Shellac

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy***

16:30 to 16:45

Akash Raman *(Department of Chemical Engineering, University of Twente, Enschede, Netherlands)*, Robbie Venderbosch, Aalbert Zwijnenburg, Guido Mul, Marco Altomare

Tuning Formose-like Reactions During the Electrochemical Reduction of Aldehydes

16:45 to 17:00

Marius Spallek *(Chemistry and Biochemistry, Ruhr University Bochum, Bochum, Germany)*, Christoph J. Bondue, Kristina Tschulik

Avoiding Degradation Pathways during Electrochemical Biomass Upgrading using a Liquid | Liquid | Solid Triple Phase Boundary Electrode

17:00 to 17:15

Marola Lenhard *(Department for Electrosynthesis, Max-Planck-Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Johannes Winter, Alexander Sandvoß, María de Jesús Gálvez-Vázquez, Dieter Schollmeyer, Siegfried Waldvogel

Simple and Versatile Electrochemical Synthesis of Highly Substituted 2,1-Benzisoxazoles

17:15 to 17:30

Pablo Fernández *(Physical-Chemistry, University of Campinas, Campinas, Brazil)*

Fundamental Insights into the Role of Cations in the Electro-Oxidation of Alcohols and Polyols on Platinum Electrodes

17:30 to 17:45

Finn Moeller *(Department of Electrosynthesis, Max-Planck-Institut for Chemical Energy Conversion, Mülheim, Germany)*, Siegfried Waldvogel

Electrochemical Depolymerization of Lignin to Value-Added Products

17:45 to 18:00

Wutong Chen *(Shenzhen International Graduate School, Tsinghua university, Shenzhen, China)*, Xiao-yan Li, Lin Lin

CDI-EO Nexus: Integrated Electrochemical System for Heavy Metal Recovery and Organic Degradation

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 11 Electrochemical technologies for energy and industrial electrosynthesis at scale

Room: **Meeting 2B**

Chaired by Theresa Schoetz & Rakel Wreland Lindström

MONDAY PM

14:00 to 14:30 ***Keynote***

Tanja Vidakovic-Koch *(Electrochemical Energy Conversion, Max Planck Institute für Dynamik komplexer technischer Syste, Magdeburg, Germany)*

Polymer Electrolyte Water Electrolysis Under Dynamic Conditions

14:30 to 14:45

Roel Bisselink *(Wageningen Food and Biobased Research, Wageningen University and Research, Wageningen, Netherlands)*, Jacco van Haveren, Harry Bitter

Towards production of pure H_2O_2 using a porous solid polymer electrolyte filled dual membrane electrolyser

14:45 to 15:00

Ali Raza Khan *(Electrochemistry for Energy Conversion, Max Planck Institute for Chemical Energy Conversion, Duisburg, Germany)*, Ricardo Martínez-Hincapié, Jan Wegner, Bhawana Kumari, Muhammad Usman Anwar, Steffen Franzka, Corina Andronescu, Stefan Kleszczynski

3D Printed Ni Electrodes: Electrochemical Properties and Energy Applications

15:00 to 15:15

Felix Lohmann-Richters *(Institute of Energy Technologies, IET-4, Forschungszentrum Jülich, Jülich, Germany)*, Lukas Ritz, Anna Mechler, Martin Müller

Scaling AWE from lab to stack: Relevant parameters and stack design

15:15 to 15:30

Anna K. Mechler *(Institute of Energy Technologies (IET-4), Forschungszentrum Jülich, Jülich, Germany)*, Niklas Thissen, Sharon V. Pape, Felix Lohmann-Richters, Martin Müller

Stability Investigations of Alkaline Water Electrolysis – Impact of Fe-Impurities and Dynamic Operation

15:30 to 15:45

Robert Baumann *(Chair for Laser-based Manufacturing, Technische Universität Dresden, Dresden, Germany)*, Fabian Ränke, Hannes Rox, Jonathan Mädler, Mateusz Marzec, Krystian Sokolowski, Homa Hamedi, Gerd Mutschke, Xuegeng Yang, Kerstin Eckert, Leon Urbas, Andrés Fabian Lasagni

Increasing of Electrochemical Performance by Laser Texturing of Electrodes

15:45 to 16:00 ***Invited***

Theresa Schoetz *(Chemical and Biomolecular Engineering, University of Illinois Urbana-Champaign, Urbana, USA)*, Parham Ghasemiahangarani

Understanding Charge Storage Mechanisms at Electrochemical Interfaces for the Hypothesis-Driven Fabrication of Energy Storage Materials

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy***

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16:30 to 16:45

Rakel Wreland Lindström *(Chemical Engineering - Applied Electrchemistry, KTH Royal Institute of Technology, Stockholm, Sweden)*

Intermediate Temperature PEMFC - Promises and Challenges

16:45 to 17:00

Martin Paidar *(Department of Inorganic Technology, University of Chemistry and Technology, Prague, Prague, Czech Republic)*, Martin Prokop, Francesco Mazzeo, Karel Bouzek, Lukas Polak

Development of Independent Power Supply with PEM Fuel Cell

17:00 to 17:15

Deniz Yildiz *(Dep. of Chemical Eng. Division of Applied Electrochemistry, KTH Royal Institute of Technology, Stockholm, Sweden)*, Klas Engvall, Göran Lindbergh, Carina Lagergren

Experimental Investigation of Integration of Reversible Molten Carbonate Fuel Cell (MCFC) into Biomass Gasification

17:15 to 17:30

Tommaso Bertolin *(IET-4, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Verena Theußl, Carsten Korte, Rafael Leiritz, Peter Schulz

Protic Phosphonium-Based Ionic Liquids as Supporting Electrolytes for IT-PEMFCs

17:30 to 17:45

Ncholu Manyala *(Physics, University of Pretoria, Pretoria, South Africa)*, Daba Bakhoum, Fatou Sylla, Samba Sarr, Vusani Maphiri, Maty Ndiaye, Delvina Tarimo, Astou Check, Mohammed Chaker

Activated carbon from crosslinked polymers co-doped with nitrogen and phosphorous for supercapacitor applications

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 14 Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Gutenberg C**

Chaired by Helmut Baltruschat & Yang Shao-Horn

14:00 to 14:15 ***Invited***

Masashi Nakamura *(Applied Chemistry and Biotechnology, Chiba University, Chiba, Japan)*

Structure and Dynamics of Electrical Double Layer on Metal Electrodes

14:15 to 14:30

Elif Öykü Alagöz *(Interface Science Department, Fritz Haber Institute of Max Planck Society, Berlin, Germany)*, Leon Jacobse, Seenal Lopes, Ziqing Lao, Beatriz Roldan Cuenya, Mariana C.O. Monteiro

Catching up with Cations: Potentiodynamic Surface X-ray Diffraction for Probing the Double Layer during Electrochemical Reactions

14:30 to 14:45

Haiting Yu *(Physics of Energy Conversion and Storage, Technical University of Munich, Garching, Germany)*, Haiting Yu, Song Xue, Elena Gubanova, Jian Zhou, Rodrigo Bautista, Adrian Himmelreich, Aliaksandr Bandarenka

Cation-Dependent Interfacial Properties as a Descriptor of Energy-Related Electrocatalytic Reaction Activity on Pt(111)

14:45 to 15:00

Pavithra Gunasekaran *(Advanced Centre for Energy and Sustainability - ACES, University of Aberdeen, Aberdeen, United Kingdom)*

Double-layer structure and cation-dependent solvent decomposition in acetonitrile-based electrolytes.

15:00 to 15:15

Arthur Hagopian *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Sheena Louisia, Katinka Boterman, Katharina Doblhoff-Dier, Marc Koper

The Capacitance of Pt Surfaces: Double Layer vs. HUPD

15:15 to 15:30

Adèle Debono *(Interface Chemistry and Surface Engineering Department, Max Planck Institute for Sustainable Materials, Düsseldorf, Germany)*, Cristiano Kasdorf Giesbrecht, Martin Stratmann, Michael Rohwerder

Study of the Role of Amount of Water in the Electrochemical Double Layer of Emersed Electrodes: a Coupled Kelvin Probe and Infrared Spectroscopy Approach

15:30 to 15:45

Manuel Landstorfer *(Numerical Mathematics and Scientific Computing, Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany)*, Ahmed Shatla, Helmut Baltruschat

The double layer capacitance of aqueous and aprotic electrode-electrolyte interfaces: Thermodynamic modeling and experimental data

15:45 to 16:00

Helmut Baltruschat *(Clausius Institut für Physikalische und Theoret. Chemie, University of Bonn, Bonn, Germany)*, Inhee Park, Andreas Koellisch-Mirbach, Ahmed S. Shatla, Manuel Landstorfer

The effect of solvent and specific ion adsorption on friction and double layer structure

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy***

16:30 to 16:45

Nils Bruch *(IET-3, Forschungszentrum Jülich, Jülich, Germany)*, Michael Eikerling, Tobias Binninger

Classical theory of electron-ion correlations at electrochemical interfaces

16:45 to 17:00

David Fertig *(Institute of Physics, Norwegian University of Life Sciences, Ås, Norway)*, Mathijs Janssen

Charging dynamics of electric double layer capacitors including beyond-mean-field electrostatic correlations

17:00 to 17:15

Zhenyu Wang *(Department of Computational Materials Design, Max Planck Institute for Sustainable Materials, Düsseldorf, Germany)*, Mira Todorova, Christoph Freysoldt, Jörg Neugebauer

Quantitative Modeling of the Coordination and Solvation Dynamics of Electrically Charged Solvated Systems via Molecular Dynamics Simulations

17:15 to 17:30

Yufan Zhang *(Institute of Energy Technology (IET-3), Juelich Research Center, Juelich, Germany)*, Tobias Binninger, Jun Huang, Michael Eikerling

Theory Unravels Electro-Ionic Metal-Support Interactions at Supported Electrocatalyst Nanoparticles

17:30 to 17:45

Annika Kirsten *(Physical Chemistry II, University of Duisburg Essen, Essen, Germany)*, Anuscha Lalitha, Rosa M. Arán-Ais, Enrique Herrero Rogríguez, Denis Andrienko, Marialore Sulpizi, Katrin F. Domke

Electrolyte Influence on Molecular Adsorption Geometry

17:45 to 18:00

Anni Zheng *(Department of Chemistry, Xiamen University, Xiamen, China)*, Dongping Zhan, Fangzu Yang, Bingwei Mao, Jiawei Yan

In-Situ STM Study on the Mechanism of Leveling Agent Safranine and its Synergistic Interaction with Cl^- in Copper Electroplating

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Symposium 16 General Session - Hidden treasures - diversity of electrochemistry

Room: **Zagreb A**

Chaired by Yann Leroux & Wolfgang Schuhmann

14:00 to 14:15

Corina Andronescu *(Chemical Technology III, University of Duisburg-Essen, Duisburg, Germany)*

Visualization of the Oxygen Evolution Reaction Activity of Ni-based Intermetallic Compounds enabled by Scanning Electrochemical Cell Microscopy (SECCM)

14:15 to 14:30

Nathan Goffart *(ChemSIN, Université libre de Bruxelles (ULB), Bruxelles, Belgium)*, Jon Ustarroz, Thomas Doneux

Determination of the shape and dimension of a meniscus under stress for pipette based electrochemical microscopies

14:30 to 14:45

Kathryn Vannoy *(Chemistry, Leiden University, Leiden, Netherlands)*, Jeffrey Dick, Marc Koper

Tracking Nanometric Contact Radii for Microdroplets Adsorbing on Electrified Microinterfaces

14:45 to 15:00

Geovane Arruda de Oliveira *(Chemistry and Biochemistry, Ruhr-Universität Bochum, Bochum, Germany)*, Geovane Arruda de Oliveira, Wellerson dos Reis Ramos, Cynthia Marina Rivaldo Gomez, Moonjoo Kim, Carla Santana Santos, Benjamin Fragneaud, Daniel Grasseschi, Wolfgang Schuhmann

Probing the Local Electrochemical and Electronic Behavior of $MoSe_2$-MoS_2 Heterostructures with SECCM

15:00 to 15:15

Paula Calli Falcoswki *(Fundamental Chemistry, University of São Paulo, São Paulo, Brazil)*, Douglas Saraiva, Nicolas Ishiki, Edson Ticianelli, Mauro Bertotti

A dual barrel carbon fiber microelectrode for SECM generator collector experiments

15:15 to 15:30

Souheil Mourtada *(ChemSIN, Chemistry of surfaces, interfaces and nanomaterials, Université libre de Bruxelles, Brussels, Belgium)*, Suzanne Delfosse, Torres Daniel, Jon Ustarroz

Towards an automated analysis of alloy NP nucleation and growth by scanning electrochemical cell microscopy (SECCM) and correlative microscopy

15:30 to 15:45

Guilhem Pignol *(CNRS, Universite de Rennes, Rennes, France)*, Philippe Hapiot

Ferrocenylated Gold Nanoparticles As a New Class of Mediator for SECM Measurements: From Experimental to Theoretical Considerations

15:45 to 16:00

Ceren Alpaydin *(Chemistry, IJCLab, ISMO, Université Paris-Saclay, Orsay, France)*, Ceren Alpaydin, Veronika Zinovyeva, Arturo Illatopa, Jérôme Roques, Minh Huong Ha-Thi, Vladimir Sladkov, Karine Steenkeste, Rachel Méallet-Renault, Thomas Pino

Revealing the Potential of Deep Eutectic Solvents for Nuclear Fuel Reprocessing: A Study on Lanthanide and Actinide Electrochemistry and Speciation

16:00 to 16:30

Coffee Break *Sponsored by* ***Leiden Probe Microscopy***

16:30 to 16:45

Carla Santana Santos *(Analytical Chemistry - Center for Electrochemical Sciences, Ruhr University Bochum, Bochum, Germany)*, Nomnotho S. Jiyane, Wolfgang Schuhmann

Addressing Relevant Challenges of Interfaces in Advanced Redox Flow Batteries by Scanning Electrochemical Microscopy

16:45 to 17:00

Patrice Perrenot *(MIEL, LEPMI, Grenoble, France)*, Ove Korjus, Lukas Helfen, Claire Villevieille

Understanding lithiation gradient in solid-state batteries by means of operando neutron radiography

17:00 to 17:15

Yann Leroux *(CNRS, Institut des Sciences Chimiques de Rennes, Rennes, France)*, Max Taras, Jiayang Lin, Paula Brooksby, Jean-François Bergamini, Philippe Philippe, Corinne Lagrost, Dongping Zhan

Patterning nanometer scale organic layer using protected aryl diazonium salts

17:15 to 17:30

Feixiang Fang *(School of Life Sciences and Technology, Xi'an Jiaotong University, Xi'an, China)*, Fei Li

Real-time SICM imaging of tunneling nanotube dynamics and mitochondria transfer between live cells

17:30 to 17:45

Lin Zhang *(Engineering Research Center for Nanomaterials, Henan University, Kaifeng, China)*, Yuheng Fu, Bingbing Xie, Wensheng Yang, Alexander Kuhn

Design of Janus Microparticles by Bipolar Electrochemistry at Water/Organic Interfaces

17:45 to 18:00

Wenzel Plischka *(Chemical Process Engineering, RWTH Aachen University, Aachen, Germany)*, Matthias Heßelmann, Matthias Wessling, Robert Keller

Modeling Different Wetting States in Gas Diffusion Electrodes for CO_2 Electrolysis

18:00 to 20:00

Session 1, Posters & Drinks *Sponsored by* ***GAMRY Instruments***

Tuesday 9 September 2025 - *Morning*

Plenary

Room: **Kongress-Saal**

Chaired by Gunther Wittstock

08:15 to 09:15

Bin Ren *(Department of Chemistry, Xiamen University, Xiamen, China)*, Xiang Wang, Yi-Fan Bao, Meng-yuan Zhu, Teng-Xiang Huang

The Interplay between Plasmonics and Electrochemistry

Symposium 1 Electroanalysis: From fundamentals towards smart devices

Room: **Zagreb B**

Chaired by Mauro Bertotti & Christine Kranz

09:30 to 10:00 ***Keynote***

Fabiana Arduini *(Dept. of Chemical Science and Technologies, University of Rome Tor Vergata, Rome, Italy)*

The roadmap in the electrochemical paper-based analytical devices

10:00 to 10:15

Grzegorz Kowalski *(Department of Inorganic and Analytical Chemistry, University of Lodz, Lodz, Poland)*, Olga Szymaniec, Bartlomiej Hurny, Lukasz Półtorak, Karolina Kwaczyński

Additive manufacturing strategies for electroanalysis: application of fused deposition modeling and direct ink writing

10:15 to 10:30

Charles Henry *(Chemistry, Colorado State University, Fort Collins, USA)*, Emie Marin, Maxwell Bridges, Nikki Villarini, Guy Scangarello, Thaisa Baldo

Combining Laser-Induced Graphene Electrodes with Microfluidics for Sensitive Point-of-Care Diagnostics

10:30 to 11:00

Coffee Break *Sponsored by* ***MDPI***

11:00 to 11:15

Thiago Paixao *(Institute of Chemistry, University of São Paulo, São Paulo, Brazil)*, Julia O. Cardoso, Lauro Antonio Pradela Filho

Electrochemical Sensing of Picric Acid Using μPADs Integrated with 3D Pen-Extruded Electrodes

11:15 to 11:30

Zoraida González *(Chemistry of Materials, Carbon Science and Technology Institute, Oviedo, Spain)*, Zoraida González, Lucía Quintana, Ana M. Pérez-Mas, Sonia Melendi-Espina, David García, Natalia Rey-Raap, Rosa Menéndez

Innovating carbon-based electrochemical sensors for reliable and confident sensing of target analytes: from modified GCEs to inkjet-printed electrodes

11:30 to 11:45

Callum Crockford *(Department of Chemistry, University of Warwick, Coventry, United Kingdom)*, Ben Breeze, Joshua Tully, Daniel Sung, Mark Newton, Julie Macpherson

In-Situ Electrochemical-Electron Paramagnetic Resonance Spectroscopy (EC-EPR) and the Use of 3D Printing in Cell Design

11:45 to 12:00

Estefania Costa-Rama *(Physical and Analytical Chemistry, University of Oviedo, Oviedo, Spain)*, Ricarda Torre, Maria Cerrato-Alvarez, Pablo Rioboó-Legaspi, Henri P.A. Nouws, Cristina Delerue-Matos, María Teresa Fernández-Abedul

Hand-Made Carbon-Based Electroanalytical Platforms for the Affordable Determination of Pharmaceuticals and Biogenic Amines

12:00 to 12:15

Andreas Lesch *(Department of Industrial Chemistry, University of Bologna, Bologna, Italy)*, Maria Alejandra Tapia Montesinos, Mostafa Fytory, Nicola Lovecchio, Fabian Weyand, Stefano Gianvittorio, Federica Mariani, Cosimo Trono, Alessandra Stefan, Alejandro Hochkoeppler, Domenico Caputo, Sara Tombelli

Inkjet-printed Point-Of-Care platform for bacterial infection identification

12:15 to 12:30

Francesca Polli *(Chemistry and Drug Technologies, Sapienza University Of Rome, Rome, Italy)*, Francesca Bruno, Luca Surace, Maria Gabriela Almeida, Franco Mazzei

Systematic Optimization and Comparison of Gold Electrodeposition Procedures on 3D-Printed Electrodes for Enhanced Electrochemical Sensing

12:30 to 14:00 Lunch Break Sponsored by ***Metrohm & Sensolytics***

Symposium 2 Bioelectrochemistry from fundamentals to sustainable applications

Room: **Meeting 2A**

Chaired by Elisabeth Lojou, Ross Milton & Ilaria Palchetti

09:30 to 10:00 ***Keynote***

Frank Crespilho *(Physical Chemistry, University of São Paulo, São Carlos, Brazil)*

Lessons from Bioelectrochemistry: Enzymes, Bio-Batteries, and the Electrochemical Path to Decarbonization

10:00 to 10:15

Tim Albrecht *(School of Chemistry, University of Birmingham, Birmingham, United Kingdom)*, Rand Al-Waqfi, Cengiz Khan, Oliver Irving, Lauren Matthews

DNA Crowding Effects in Nanopipettes and a New Paradigm for Single-Molecule Bioanalytical Analysis

10:15 to 10:45

Fred Lisdat *(Biosystems Technology, Technical University Wildau, Wildau, Germany)*

Combining photoactive proteins with electrodes – advances and bottlenecks

10:45 to 11:00

Coffee Break *Sponsored by* ***MDPI***

11:00 to 11:15 ***Invited***

Ariel Furst *(Chemical Engineering, Massachusetts Institute of Technology, Cambridge, USA)*

Materials innovation for optimizing electron transfer in microbial electrochemical technologies

11:15 to 11:30 ***Invited***

Matteo Grattieri *(Chemistry, University of Bari Aldo Moro, Bari, Italy)*, Pierluigi Lasala, Rosa Maria Matteucci, Savino Grieco, Umberto Mattia, M. Lucia Curri, Elisabetta Fanizza

Tuning Bacteria-based Photoelectrodes at the Nanoscale

11:30 to 11:45

Christophe Léger *(Laboratoire de Bioénergétique et Ingénierie des Protéines, CNRS/AMU, Marseille, France)*

Direct Electrochemistry Reveals the Functional Diversity of Hydrogenases

11:45 to 12:00

Antonio De Lacey *(Instituto de Catálisis y Petroleoquímica, CSIC, Madrid, Spain)*, Gabriel García-Molina, Carlos Echavarri-Erasun, Melisa Del Barrio, Sandra González-García, Luis Rubio, Marcos Pita

Electroenzymatic N_2 Reduction to Ammonia by Direct Electron Transfer of Nitrogenase

12:00 to 12:15

Rokas Zalneravicius *(Bioanalysis, Vilnius university, Life Sciences center, Vilnius, Lithuania)*, Evelina Lukaite, Mindaugas Oksas, Marius Butkevicius, Pannawich Thirabowonkitphithan, Atefeh Shafaat, Tautgirdas Ruzgas, Marius Dagys

Electrogenicity of medically relevant bacteria: towards early stage detection of microbial biofilms

12:15 to 12:30 ***Invited***

Sophie Sacquin-Mora *(Laboratoire de Biochimie Théorique, CNRS UPR9080, Institut de Biologie Physico-Chimique, Paris, France)*

Immobilized redox enzymes on solid surfaces: Lessons from multiscale modelling approaches

12:30 to 14:00 *Lunch Break* *Sponsored by* ***Metrohm & Sensolytics***

Symposium 3 Electrochemical and bioelectrochemical synthesis of small molecular products

Room: **Meeting 3A**

Chaired by Marco Mazzucato & Ignasi Sires

09:30 to 10:00 ***Keynote***

Beatriz Roldan Cuenya *(Interface Science, Fritz Haber Institute, Max Planck Society, Berlin, Germany)*

Chemical Dynamics in CO_2 Electroreduction Catalysts

10:00 to 10:15

Fabian Hauf *(Institute of Technical Chemistry, University of Stuttgart, Stuttgart, Germany)*, Ricarda Kollmuss, Stefan Haufe, Elias Klemm

Exploring Mass Transport Limitations in Integrated CO_2 Electrolysis

10:15 to 10:30

Hong Phong Duong *(Laboratory of Chemistry of Biological Processes, College de France, Paris, France)*

Advancing C_{2+} alcohols synthesis from electrochemical CO reduction by a gold-silver incorporated with copper-nitride material

10:30 to 11:00

Coffee Break Sponsored by ***MDPI***

11:00 to 11:15 ***Invited***

Ignasi Sirés *(Departament de Ciència de Materials i Química Física, Universitat de Barcelona, Barcelona, Spain)*

Performance of Carbons and Air-Diffusion Cathodes for H_2O_2 Production in Electro-Fenton Process

11:15 to 11:30 ***Invited***

Marco Mazzucato *(Chemical Science, University of Padova, Padova, Italy)*, Andrea Zitolo, Christian Durante

SbFe-N-C Single-Atom Catalyst for H_2O_2 Production in Neutral Media: Effect of Sb Precursor

11:30 to 11:45

Sang Hoon Joo *(Department of Chemistry, Seoul National University, Seoul, Korea)*, June Sung Lim

Enzyme-Mimicking Design of Coordination Structure-Controlled Atomically Dispersed Ni Catalysts for Efficient H_2O_2 Electrosynthesis

11:45 to 12:00

Rosa M. Arán-Ais *(Institute of Electrochemistry, University of Alicante, Alicante, Spain)*, Lorena Chico-Mesa, Antonio Rodes, Enrique Herrero

Electrochemical Oxidation of 5-Hydroxymethylfurfural on Single-Crystal Gold Electrodes: Structure-Activity Correlations

12:00 to 12:15

Julius Ponhöfer *(Heterogeneous Catalysis, Max Planck für Kohlenforschung, Mülheim an der Ruhr, Germany)*, Moritz Lukas Krebs, Ferdi Schüth

Electrooxidation of acetal protected HMF in alkaline media

12:15 to 12:30

Youli Yu *(Department of Materials, Imperial College London, London, United Kingdom)*, Yifeng Wang, Hanzhi Ye, Santosh Kumar, Pilar Ferrer, Georg Held, Magda Titirici, Reshma R Rao

Operando Mechanistic Study of Glycerol Electro-oxidation on $Ni(OH)_2$/NiOOH electrodes

*12:30 to 14:00 Lunch Break Sponsored by **Metrohm & Sensolytics***

TUESDAY AM

Symposium 4a Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg B**

Chaired by Lee Johnson

09:30 to 10:00 ***Keynote***

Yang-Kook Sun *(Department of Energy Engineering, Hanyang University, Seoul, Korea)*

Columnar Structured Ni-rich Cathode Materials for High-Performance All-Solid-State Batteries

10:00 to 10:15 ***Invited***

Yan Yao *(Electrical and Computer Engineering, University of Houston, Houston, USA)*

Stabilizing Li–Solid Electrolyte Interface Using MIEC Interlayer: Insights from Operando Electron Microscopy and Modeling

10:15 to 10:30

Elena Sánchez Ahijón *(Multifunctional Nanocomposites Group - MNG, IMDEA Materials, Getafe, Spain)*, Afshin Pendashteh, Juan José Vilatela

Pure Paper-Like Si NWs Anode for Solid-State Lithium-Ion Batteries: Understanding Structural Changes Controlling Cyclability

10:30 to 11:00

*Coffee Break Sponsored by **MDPI***

11:00 to 11:15 ***Invited***

Andrew Westover *(Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, USA)*, Ralph Gilles, Katie Browning, Jiri Vacik, Robert Sacci

Precisely Measuring the Interphase between Li Metal and Solid-State Electrolytes

11:15 to 11:30

Chunpeng Yang *(School of Chemical Engineering and Technology, Tianjin University, Tianjin, China)*

Electrolyte Materials Design and Interface Control for All-Solid-State Lithium Batteries

11:30 to 11:45

Antunes Staffolani *(Department of Chemistry, University of Bologna, Bologna, Italy)*

Solid-State Li Batteries via Stereolithography 3D-Printing

11:45 to 12:00

Koji Hiraoka *(Nanostructures Research Laboratory, Japan Fine Ceramics Center, 2-4-1, Mutsuno, Atsuta, Nagoya, Japan)*, Koji Hiraoka, Yuna Kobayashi, Shiro Seki, Kazuo Yamamoto

Degradation analysis in multiple-layered all-solid-state batteries

12:00 to 12:15

Carsten Korte *(Institute of Energy Technologies, IET-4, Forschungszentrum Jülich, Jülich, Germany)*, Tobias Wekking, Martin Finsterbusch

Ionic Charge Transfer Kinetics between Solid State and Liquid Lithium Electrolytes

12:15 to 12:30

Tewelde Hailay Gebregeorgis *(Department of Materials and Chemistry, Vrije Universiteit Brussel (VUB), Brussels, Belgium)*, Tewelde Hailay Gebregeorgis, Joan Roca Busacker, Rodrigo Lopez Baez, Louis De Taeye, Xinhua Zhu, Annick Hubin, Mesfin Haile Mamme

Quantitative Assessment of CEI and Crack-Induced Degradation in All-Solid-State Lithium-Ion Batteries: Experimental and Modeling Insights

12:30 to 14:00 *Lunch Break* *Sponsored by* ***Metrohm & Sensolytics***

Symposium 4b Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg A**

Chaired by Vito Di Noto

09:30 to 09:45

Edward Brightman *(Department of Chemical & Process Engineering, University of Strathclyde, Glasgow, United Kingdom)*, Calvin N. Turner, Niall Dalton, Pasidu Pallawela, Stuart D. Robertson, Edward Brightman, Thomas Leckie

Mitigating the effects of polysulfide shuttle through catholyte additives in lithium polysulfide flow batteries

09:45 to 10:00

Jameela Karol *(Helmholtz Institute Ulm, Karslruhe Institute Technology, Ulm, Germany)*

Nanoconfinement geometry of pillared V_2O_5 determines electrochemical ion intercalation mechanism, storage sites and diffusion pathways.

10:00 to 10:15

Andrea Paola Gualdron Plata *(Departamento de Engenharia Metalúrgica e de Materiais, Universidade de São Paulo, São Paulo, Brazil)*, Leonardo D. De Angelis, Susana I. Cordoba de Torresi, Vitor L. Martins

A proposal for a low-cost 3D printed cell for Lithium-oxygen batteries

10:15 to 10:30

Toshihiro Kondo *(Chemistry, Ochanomizu University, Bunkyo-ku, Japan)*, Makoto Aoki, Dilinigeer Dilixiati, Kazuno Maeda, Asumi Yorita

Detailed Analyses of Discharge Products in Li-O_2 Battery Based on Operando and In situ XRD Measurements

10:30 to 11:00

Coffee Break *Sponsored by* ***MDPI***

11:00 to 11:15

Gerhard Pirngruber *(Catalysis, Biocatalysis and Separation, IFP Energies nouvelles, Solaize, France)*, Leo Roult, Long Hoang Bao Nguyen, David Pasquier, Lorenzo Stievano, Laure Monconduit

Si anodes for high energy density Li-batteries: what changes when moving from liquid to solid electrolytes?

11:15 to 11:30

Sonja Schreiner *(Electrochemical Energy Systems Laboratory, ETH Zurich, Zurich, Switzerland)*, Manuel Reiter, Maria R. Lukatskaya

Mechanistic Study of the Solid Electrolyte Interphase Formation in Flame-retardant Phosphate-based Electrolytes for Li-metal batteries

11:30 to 11:45

Youngseon Jeon *(Nanochemistry, Max Planck Institute for Solid State Research, Stuttgart, Germany)*, Sebastian Bette, Christian Schneider, Phillip Weiss, Bettina V. Lotsch

Influence of Anion Substitution on Ion Transport in $Li_3ScCl_{6-x}Br_x$ Halide Solid Electrolytes for All-Solid-State Batteries

11:45 to 12:00

Stefanie Arnold *(Energy Materials, INM - Leibniz Institute for New Materials, Saarbrücken, Germany)*, Volker Presser

Electrochemical perspectives for Li-ion battery recycling

12:00 to 12:15

Constantin Schwetlick *(Electrochemistry, Ulm University, Ulm, Germany)*, Max Schammer, Arnulf Latz, Birger Horstmann

A Model for Solvation in Battery Electrolytes and Analysis of Electrochemical Double Layer Differential Capacitance

12:15 to 12:30

Neil Curtis *(Chemistry, Tyndall National Institute, Cork, Ireland)*

Microdisk Electrode Arrays for Accelerated Battery Materials Analysis

12:30 to 14:00 Lunch Break Sponsored by ***Metrohm & Sensolytics***

Symposium 5 New battery chemistries

Room: **Watford**

Chaired by Mouad Dahbi & Laure Monconduit

09:30 to 10:00 ***Keynote***

Laure Monconduit *(MaterialsChemistry, Nanostructures, Materials for Energ, Montpellier, France)*, Louisa Larbi, Badre Larhrib, Hervé Martinez, Lénaïc Madec, Camelia Ghimbeu

Where are we in the negative electrodes for K-ion batteries ?

10:00 to 10:15

Xiao Bian *(Institute for Materials Research, Tohoku University, Sendai, Japan)*, Hongyi Li, Tetsu Ichitsubo, Hidemi Kato

3D Bicontinuous Nanoporous Silicon Carbide Fabricated by Liquid Metal Dealloying and Its Applications in Alkali-Metal Batteries

10:15 to 10:30

Giovanni Gammaitoni *(Chemistry, University of Bayreuth, Bayreuth, Germany)*, Matteo Bianchini

On the Effect of Sn Incorporation in Hard Carbon Anodes: Opportunities and Challenges

10:30 to 11:00

Coffee Break Sponsored by ***MDPI***

11:00 to 11:15 ***Invited***

Mouad Dahbi *(Materials Science,Energy and Nano-engineering Department, Mohammed VI Polytechnic University - UM6P, Bengrirre, Maroc)*

Advancing Sustainable Sodium-Ion Batteries: Utilizing Biomass Resources for Hard Carbon Materials

11:15 to 11:30

Ulrich Haagen *(Institut für Technische und Umweltchemie, Friedrich-Schiller-Universität Jena, Jena, Germany)*, Konstantin Schutjajew, Martin Oschatz

Controlling the pore size and understanding the impact of closed pore size on Na^+-storage in hard carbons via controlled pyrolysis of molecular precursors

11:30 to 11:45

Yuki Fujii *(Department of Applied Chemistry, Tokyo University of Science, Tokyo, Japan)*, Zachary Tyson Gossage, Changhee Lee, Shinichi Komaba

How Fast Can Sodium Insertion into Hard Carbon Be in a Diluted Electrode?

11:45 to 12:00

Dohyeon Yu *(Electronic and Information Materials Engineerig, Jeonbuk National University, Jeonju, Korea)*, Baeksang Yoon, Hwan Kim, Gyujeong Jang, yoonseob So, Byeonghun Oh, Inseok Seo

Enhanced Electrochemical Performance of Boron doped Hard Carbon Anode for Sodium-Ion Batteries

12:00 to 12:15

~~**Javeed Ahmad Dar** *(Materials Engineering, Indian Institute of Science, Bengaluru, India)*, Sai Gautam Gopalakrishnan~~

~~Ab Initio Thermodynamics of Sodium-Tin Alloy as Negative Electrode for Sodium-ion Batteries~~

12:15 to 12:30

Subramani Kaipannan *(Department of Materials Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway)*, Ran Tao, Liang Wang, Fride Vullum-Bruer, Gang Xin, Ann Mari Svensson

Hard Carbon Anodes for Na-ion Batteries from Norwegian Spruce: Potential for Efficient Formation Protocol

12:30 to 14:00 Lunch Break Sponsored by ***Metrohm & Sensolytics***

Symposium 6a Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Kongress-Saal**

Chaired by Radenka Maric & Svitlana Pylypenko

09:30 to 10:00 ***Keynote***

Radenka Maric *(President, University of Connecticut, Mansfield, USA)*, Alanna Gado, Leonard Bonville, Stoyan Bliznakov

Effective Strategy for Hydrogen Crossover Mitigation in PEM Water Electrolyzers: Thinner Membranes for Improved Performance

10:00 to 10:15

Kassa B. Ibrahim *(Department of Molecular Science and Nano-systems, Ca'Foscari University of Venice, Venezia, Italy)*, Elisa Moretti, Alberto Vomiero

High Entropy Layered Double Hydroxides as Robust Catalysts for Water Oxidation

10:15 to 10:30

Atsunori Ikezawa *(Faculty of Urban Environmental Sciences, Tokyo Metropolitan University, Hachioji, Japan)*, Shinji Koito, Hajime Arai

Oxygen Evolution Reaction Activities of Highly Crystalline NiFe-LDHs Synthesized Using Soft Chemistry

10:30 to 11:00

Coffee Break Sponsored by ***MDPI***

11:00 to 11:15

Lucile Magnier *(LEPMI, Univ. Grenoble Alpes, CNRS, Grenoble INP, Grenoble, France)*, Antoine Bonnefont, Léa Droguet, Nicolas Richet, Marian Chatenet

Activation and characterization of different Fe-Ni-based alloys as catalyst for the oxygen evolution reaction: 3D materials investigation

11:15 to 11:30

Soumyajit Maitra *(Department of Materials, University of Oxford, Oxford, United Kingdom)*, Peixi Cong, Connor Sherwin, Leanne Jones, Christoph Sahle, Dave Ginter, Pilar Ferrer, Sebastian Bonilla

Investigating the Role of Crystal Phase Driven Surface and Bulk Reconstruction in Triggering Lattice Oxygen Mediated Oxygen Evolution in Perovskite Oxides

11:30 to 11:45

Can Kaplan *(Electrocatalysis: Synthesis to Devices - CE-NESD, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Karuppasamy Dharmaraj, Thorsten Schultz, Leiqiang Qin, Ningjun Chen, Danielle A. Douglas-Henry, Bastian Schmiedecke, Merve Buldu-Akturk, Axel Zuber, Iris Dorbandt, Maximilian Reinhardt, Valeria Nicolosi, Norbert Koch, Johanna Rosen, Michelle P. Browne

V_2CT_x MXene-derived CoFe Catalysts for Anion Exchange Membrane Electrolyzers

11:45 to 12:00

Glen McClea *(Department of Chemical and Process Engineering, University of Canterbury, Christchurch, New Zealand)*, Steve Matthews, Aaron Marshall

Developing Crystalline $NiFe_2O_4$ Electrodes for Alkaline-based Water Electrolysis Using Scalable Plasma-spray Technology

12:00 to 12:15

Dulce M. Morales *(Engineering and Technology Institute Groningen - ENTEG, University of Groningen, Groningen, Netherlands)*, Faiz Sultan, Jorge L. Cholula Diaz

Bimetallic NiCo Oxide-Based OER Electrocatalysts: Comparing Typical Lab-Scale and Industry-Like Operating Conditions

12:15 to 12:30

Chuan Qin *(Chemical and Biological Engineering, FAU Erlangen-Nürnberg / Power-to-X Technologies, Fürth, Germany)*, Chuan Qin, Bastian J.M. Etzold

Influence of Morphology of Nickel-Iron (Oxy)Hydroxide Catalysts on OER Performance Under Industrially Realistic Conditions for Alkaline Water Electrolysis

*12:30 to 14:00 Lunch Break Sponsored by **Metrohm & Sensolytics***

Symposium 6b Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Gutenberg D**

Chaired by Laetitia Dubau & Reshma Rao

09:30 to 09:45 ***Invited***

Reshma Rao *(Grantham Institute - Climate Change and the Environment, Imperial College London, London, United Kingdom)*

Operando Characterisation of Iridium-based Catalysts for Water Oxidation – From Model Systems to Catalyst Coated Membranes

09:45 to 10:00

Francisco José Pérez-Alonso *(Energía y Química Sostenibles, Instituto de Catálisis y Petroleoquímica, CSIC, Madrid, Spain)*, Isabel Rodríguez-García, Álvaro Tolosana, José Luis Gómez de la Fuente, Dalia Liuzzi, Laura Pascual, Sergio Rojas, María Retuerto

Highly active and durable electrocatalyst for acidic Oxygen Evolution based on a low-Iridium, low-Ruthenium $Dy_2NiRu_{0.5}Ir_{0.5}O_6$ Double Perovskite Precursor

10:00 to 10:15

Michelle Philippa Browne *(Helmholtz Young Investigator Group Electrocatalysis: Synthes, Helmholtz Zentrum Berlin, Berlin, Germany)*

Ni/MXene composites for Electrochemical Green H_2 Production

10:15 to 10:30

Sonja Blaseio *(Technical Electrocatalysis Laboratory, University of Hamburg, Hamburg, Germany)*, Giulia Ioselli, Philipp Seidel, Thies Reetz, Jochen Klein, Halil Sözen, Thorsten Klüner, Mehtap Oezaslan

Mechanistic Insights into the Bifunctionality of Cell-Reversal Tolerant Pt-Ir Alloy Catalysts during HER and OER using operando Quick-XANES

*10:30 to 11:00 Coffee Break Sponsored by **MDPI***

11:00 to 11:15 ***Invited***

Laetitia Dubau *(LEPMI, CNRS Grenoble INP, Grenoble, France)*, Delphine Clauss, François Guillet, Sarah Turnbull, Vincent Martin, Jean Pierre Magnin, Marian Chatenet, Lenka Svecova, Frédéric Maillard

Recovering Pt and Ir from PEMFC and PEMWE catalytic layers

11:15 to 11:30

Andrés Llorens Pastor *(Materials Research, Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-W, Stuttgart, Germany)*, Andrés Llorens-Pastor, Wolfram Hempel, Oliver Thimm, Alex Grünzweig, Theresa Magorian Friedlmeier, Michael Powalla, Sylvain Brimaud

Ti-based Coatings for PEMWE Bipolar Plates and Key Challenges in Their Study

11:30 to 11:45

Meimei Yang *(Chemistry, Imperial College London, London, United Kingdom)*, Caiwu Liang, Yifeng Wang, Reshma Rao, Ifan Stephens, Andreas Kafizas

Probing conductivity loss of the supports for iridium oxide water oxidation electrocatalysts in situ with the interdigitated electrodes

11:45 to 12:00

Camille Roiron *(Chemical and Biomolecular Engineering, Univeristy of California, Irvine, USA)*, Elena Cazzulani, Lindsay Zhang, Giovanni Ferro, Plamen Atanassov

Multi-layered Iridium Oxide Supported Catalysts for Oxygen Evolution Reaction and their Spectroscopic Signature

12:00 to 12:15

Raghunandan Sharma *(Department of Green Technology, University of Southern Denmark, Odense, Denmark)*, Vahid Karimi, Ebrahim Sadeghi, Shuang Ma Andersen

Ir Mass Specific OER Activity in Supported Ir-based Electrocatalysts: How Ir Loading on RDE Affects the Observed Activity?

12:15 to 12:30

Ioannis Spanos *(Heterogeneous Reactions, Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Ahyoun Lim, Kahyun Ham, Garlef Wartner, Steffen Czioska, Merve Kurt, Paolo Ciocci, Jan-Dierk Grunwaldt, Marc Tesch

Operando QEXAFS Spectroscopy and Analysis of OER Active Iridium Species for PEM Water Electrolysis

12:30 to 14:00 Lunch Break Sponsored by ***Metrohm & Sensolytics***

Symposium 7 High power devices: Electrodes and electrolytes, limiting factors or assets for power capability?

Room: **Meeting 3B**

Chaired by Andrea Balducci & Clara Rodrigues Pereira

09:30 to 10:00 ***Keynote***

Jon Ajuria *(EES, CIC energiGUNE, Vitoria-Gasteiz, Spain)*

From Interface Design to Prototyping: A Scalable Pre-Lithiation Strategy for Advanced Lithium-Ion Capacitors

10:00 to 10:15 ***Invited***

Jim Zheng *(Dept. of Electrical Engineering, The State University of New York at Buffalo, Buffalo, USA)*

High-performance Lithium-ion Capacitors and Critical Pre-lithiation Process

10:15 to 10:30

Krzysztof Fic *(Institute of Chemistry and Technical Electrochemistry, Poznan University of Technology, Poznan, Poland)*, Adam Maćkowiak, Przemyslaw Galek, Pawel Jezowski

Unraveling the Effects of Redox-Active Electrolytes on Carbon Electrodes in Li-ion Capacitor

10:30 to 11:00

Coffee Break Sponsored by ***MDPI***

11:00 to 11:15 ***Invited***

Marta Sevilla *(Chemistry of Materials, Institute of Carbon Science and Technology, Oviedo, Spain)*, Sara Payá, Noel Díez, María Dolores Casal

A Single Route for the Production of Battery-type and Capacitor-type Electrode Materials for Na-Ion Capacitors

11:15 to 11:30

Andrea Hainthaler *(Institute for Technical and Environmental Chemistry, Friedrich Schiller University Jena, Jena, Germany)*, Andrea Balducci

Improving Electrolyte Sustainability and Safety for Sodium-ion Capacitors by Combining a Bio-based Solvent with a Low-fluorine Salt

11:30 to 11:45

Camélia Ghimbeu *(Institut de Sciences des Matériaux de Mulhouse, CNRS, Mulhouse, France)*, Ademola Adeniji, Adrian Beda

Understanding the intriguing role of porous carbon properties to achieve outstanding performance in Na-ion capacitors

11:45 to 12:00

Andrés Velasco Santiago *(DEHT/STB/L2PC, CEA liten, Grenoble, France)*, Andrés Velasco Santiago, Eric Mayousse, Agathe Martin, Thibaut Gutel, David Peralta, Benoit Chavillon, Marie-Eve Yvenat

Hybrid Positive Electrodes for Enhanced Potassium-Ion Capacitors

12:00 to 12:15

Abhishek Lahiri *(Chemical Engineering, Brunel University of London, Uxbridge, United Kingdom)*

Redox active bio-ionic liquids as biodegradable electrolytes for Zn ion capacitors

12:15 to 12:30

Binson Babu *(Physics, Shiv Nadar Institution of Eminence Deemed to be University, NH-91, Tehsil Dadri Gautam Buddha Nagar, India)*, Christof Neumann, Marcel Enke, Alexandra Lex-Balducci, Andrey Turchanin, Ulrich S Schubert, Andrea Balducci

Gel-polymer Electrolytes for Hybrid-ion Capacitors

12:30 to 14:00 Lunch Break Sponsored by ***Metrohm & Sensolytics***

Symposium 9 Durability of materials for energy conversion and storage: Mechanism, mitigation and performance

Room: **Dijon**

Chaired by Jean Francois Guillemoles & Olga Kasian

09:30 to 10:00 ***Keynote***

Jean Francois Guillemoles *(UMR IPVF, CNRS, Palaiseau, France)*

Service Lifetime of Photovoltaic Device : Towards a Predictive Knowledge?

10:00 to 10:15

Simone Pokrant *(Chemistry and Physics of Materials, University of Salzburg, Salzburg, Austria)*, Julian Hörndl, Franky Bedoya Lora, Sophia Haussener

Degradation of oxynitride based photoanodes

10:15 to 10:30

Ziyanda Tshobeni *(Chemistry, University of the Western Cape, Cape Town, South Africa)*, Wisly Fidel, Guido Perrin, Emmanuel Ramoroka, Safae Aazou, Jacques Botsoa, Conchi Ania, Emmanuel Iwuoha, Esidor Ntsoenzok

Tandem perovskite-silicon solar cell optimized by carbon-based photon conversion layer using SCAPS-1D.

10:30 to 11:00

Coffee Break Sponsored by ***MDPI***

11:00 to 11:15 ***Invited***

Olga Kasian *(YIG Dynamic Electrocatalyst Interfaces, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin, Germany)*, Leopold Lahn, Erdogan Celik

Durable Electrocatalysts with Reduced PGM Loading

11:15 to 11:30

Guilherme Fortunato *(Sustainable Energy Materials, Technical University Munich, Campus Straubing, Straubing, Germany)*, Marc Ledendecker

Stability of Carbon-based Electrocatalysts in the Presence of H_2O_2

11:30 to 11:45

Viktoriia Zemtsova *(LEPMI, CNRS, Grenoble, France)*, Ricardo Sgarbi, Marian Chatenet, Huong Doan, Julien Thuilliez, Vincent Martin, Nicolas Bibent, Simon Amigues, Frédéric Jaouen

PdNi carbon-cap catalysts for Hydrogen Oxidation Reaction and Hydrogen Evolution Reaction: high activity and durability

11:45 to 12:00

Justus Masa *(Electrosynthesis, Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*

From Nature Inspired Catalysts to Industrially functional electrodes

12:00 to 12:15

Fabio H. B. Lima *(São Carlos Institute of Chemistry, University of São Paulo, São Carlos, Brazil)*, Rafael L. Romano, Kotaro Sasaki, Maykon L. Souza, Antonio Roveda Jr.

Durability Enhancement in CO_2 Electrocatalysis via Copper Complex Restructuring

12:15 to 12:30

Mingye Yang *(School of Vehicle and Mobility, Tsinghua University, Beijing, China)*, Fuqi Yuan, Shaojie Du, Fuyuan Yang

Degradation Law and In-situ Recovery of Ordered Porous Transport Electrode for Proton Exchange Membrane Water Electrolysis

12:30 to 14:00 Lunch Break Sponsored by ***Metrohm & Sensolytics***

Symposium 10 Green electrochemistry for a sustainable world

Room: **Meeting 1**

Chaired by Julio J. Lado & Emmanuel Mousset

09:30 to 10:00 ***Keynote***

Xiao Su *(Chemical and Biomolecular Engineering, University of Illinois Urbana-Champaign, Urbana, USA)*, Johannes Elbert, Hee-Eun Kim, Aderiyike Aguda

The pathway to continuous redox-electrochemical separations for critical element recovery

10:00 to 10:15

Francois Lapicque *(LRGP, CNRS-Univ. Lorraine, Nancy, France)*, Wen Xuan, Benjamin Rotonnelli, David Brunello, Maud Lebrun, Stephanie Michel, Calogera Bertoloni, Eric Meux, Sophie Legeai

Silver and gold recovery from electronic wastes by combined electroleaching-electrodeposition

10:15 to 10:30

Emmanuel Mousset *(GEPEA, CNRS, La Roche sur Yon, France)*, Faidzul Hakim Adnan, Aurélien Ruffet, Paul Moretti, Bruno Cédat

How Micro-distances could Influence Electro-coagulation Efficiency in Low-conductivity Solutions?

10:30 to 11:00

Coffee Break Sponsored by ***MDPI***

11:00 to 11:15 ***Invited***

Julio J. Lado *(Electrochemical Processes Unit, IMDEA Energy, Móstoles, Spain)*, Jessica M. A. Freire, Gonzalo Castro, Elisane Longhinotti, Enrique García-Quismondo, Jesús Palma

Optimizing Electrochemical Desalination: Aligning Electrode Design with Hybrid Operational Modes

11:15 to 11:30

Vicent Ayala-Andreu *(Grupo de Electróquímica Aplicada y Electrocatálisis, Universidad de Alicante, San Vicente del Raspeig (Alicante), Spain)*

Desalination of water via electrodialysis: Semi-empirical multi-ionic mathematical model based on experimental characteristics parameters for the simulation of a reactor of electrodialysis in batch mode

11:30 to 11:45

Maya Richa *(Department of Chemical Engineering, Universidad de Castilla la Mancha, Ciudad Real, Spain)*, Raul Garcia Cervilla, Justo Lobato, Pablo Canizares, Manuel Andres Rodrigo Rodrigo

The Use of Electrodialysis for the Selective Separation and Purification of Carboxylic Acids from Wastewater

11:45 to 12:00

Muhammed Musthafa O T *(Department of Chemistry, Indian Institute of Science Education and Research Pune, Pune, India)*

Electricity from Acid-Base Reaction

12:00 to 12:15

Andrea Nataly Arias Sanchez *(School of Sustainable Engineering and the Built Environment, Arizona State University, Tempe, USA)*, Andrea Nataly Arias Sanchez, Thais Betoni, Paul Westerhoff, Maria Gomez Mingot, Carlos Sanchez Sanchez, Sergi Garcia Segura

Unlocking the Potential of Brine Valorization for Electrochemical Hydrogen Production: A Sustainable Water-Energy Nexus Approach

12:15 to 12:30

Sandra Maldonado *(Chemical Engineering, Universidad de Castilla la Mancha, Ciudad Real , Spain)*, Raúl García-Cervilla, Gabriela Roa-Morales, Reyna Natividad, Justo Lobato

Circular Economy employing Algae as a new alternative to CO_2 valorisation

*12:30 to 14:00 Lunch Break Sponsored by **Metrohm & Sensolytics***

TUESDAY AM

Symposium 11 Electrochemical technologies for energy and industrial electrosynthesis at scale

Room: **Meeting 2B**

Chaired by Michael Küttinger & Florian Schwarz

09:30 to 10:00 ***Keynote***

Elisama Vieira dos Santos *(School of Science and Technology, Federal University of Rio Grande do Norte, Natal, Brazil)*, Jussara Câmara Cardozo, Karen G. Duarte Magalhaes, Tabata Natasha Feijoó Zambrano, Luis D. Loor-Úrgilés, Amanda Duarte Gondim, Carlos Alberto Martínez Huitle, Elisama Vieira Dos Santos

Towards an electrochemically-based circular economy: Electro-refinery in organics for sustainable production of fuels and chemicals

10:00 to 10:15 ***Invited***

Juliana Brito *(Analytical Chemistry, Physical Chemistry and Inorganic, Institute of Chemistry - UNESP, Araraquara, Brazil)*, Vinicius Carvalho, Marina Medina, Guilherme Bessegato, Maria Valnice Zanoni

Use of Wastewater as a Source for Photoelectrosynthesis of Energetic Molecules

10:15 to 10:30

Tessa de Koning Gans *(Photocatalytic Synthesis Group, University of Twente, Enschede, Netherlands)*, Kasper Wenderich, Guido Mul

Electrochemical Epoxidation of Alkenes using Hollow Fiber Electrodes

10:30 to 11:00

*Coffee Break Sponsored by **MDPI***

11:00 to 11:15

Michael Küttinger *(Electrochemical Technologies IAM-ET, Karlsruhe Institute for Technology, Karlsruhe, Germany)*, Emmanuel Stripling, Nicolas Bernard, Philipp Röse

Process Development for Electroorganic Synthesis in Flow Cells for Fine Chemicals Production

11:15 to 11:30

Anil Kumar Sihag *(Technical chemistry, Vienna University of Technology, Wien, Austria)*, Moritz Lukas Krebs, Markus Valtiner, Ferdi Schüth, Christian Pichler

Efficient Integration of 5-Hydroxymethylfurfural Oxidation to 2,5-Furandicarboxylic Acid with Electrochemical Reduction of CO_2 to Tunable Syngas Production

11:30 to 11:45

Shahid Ullah Khan *(Large Scale Energy Storage, Department of Process and Energy, Delft University of Technology, Delft, Netherlands)*, Shahid Ullah Khan, Wiebren De Jong, Earl Goetheer, Ruud Kortlever

Energy-Efficient Dicarboxylation of 1,3-Butadiene with CO_2 to 3-hexenedioic acid using Non-Sacrificial Anodes

11:45 to 12:00

Zhigang Yan *(Chemistry, CNRS IRCELYON, Villeurbanne, France)*, Itzcoatl Rafael Garduno Ibarra, Antoinette Boreave, Frederic Dappozze, Valerie Meille, Mathieu Prévot, Laurence Retailleau-Mevel, Jesus González-Cobos, Philippe Vernoux

Highly selective Ni-Cu catalysts for HMF electrooxidation

12:00 to 12:15

Florian Schwarz *(Electrochemical Reaction Engineering, RWTH Aachen University, Aachen, Germany)*, Anna K. Mechler

Impact of the Electrolyte on the Selectivity of Anhydrous Methanol Oxidation to Formaldehyde

12:15 to 12:30

Abdulrahman Alfaraidi *(SEAS, Harvard University, Cambridge, USA)*, Jianhan Zhou, Nicholas Su, Dawei Xi, Eugene Kwan, Michael Aziz, Richard Liu

Multiphase Electrochemical Platform for Metal-Free Hydrogenation Via Aqueous-Organic Pcet Catalysis

12:30 to 14:00 Lunch Break Sponsored by ***Metrohm & Sensolytics***

Symposium 14 Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Gutenberg C**

Chaired by Michael Eikerling & Andrea Russell

09:30 to 10:00 ***Keynote***

Jian-Feng Li *(Department of Chemistry, Xiamen University, Xiamen, China)*, Jian-Feng Li

In-situ Probing of Electrochemical Reactions using Core-Shell Nanoparticle-Enhanced Raman Spectroscopies

10:00 to 10:15 ***Invited***

Jun Cheng *(Chemistry, Xiamen University, Xiamen, China)*, Jia-Xin Zhu, Xiang-Long Du, Qi You, Jia-Bo Le, Fujie Tang

AI acceleration of AIMD simulation of electrochemical interfaces

10:15 to 10:30

Sheena Louisia *(Chemistry, CNRS UMR 8235 - LISE, Paris, France)*, Rik Mom, Marc Koper

Revisiting Ionic Interactions in the Electric Double Layer Using In Situ X-ray Photoelectron Spectroscopy

10:30 to 11:00

Coffee Break *Sponsored by* ***MDPI***

11:00 to 11:15

Yan Sun *(State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, CAS, Dalian, China)*, De-Hui Deng, Kelvin H.L. Zhang, Jia-Wei Yan, Jun Cheng

High-resolution investigation of oxide interfaces using electrochemical scanning tunneling microscopy

11:15 to 11:30

Zhao Li *(Department of Materials, Imperial College London, London, United Kingdom)*

Probing Electrochemical Interfaces under Operando/In Situ Conditions: Integrated Approaches in Probe Selection, Cell Design, Data Acquisition, and Analysis

11:30 to 11:45

Yujie Peng *(Chemical Energy Department, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin, Germany)*, Zan Lian, Núria López, Beatriz Roldan Cuenya, Christopher Kley

Nanoscale Surface Reconstruction of Electrocatalysts Resolved by in situ Electrochemical Atomic Force Microscopy

11:45 to 12:00

Hassan Javed *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Rik. V. Mom

The potential-dependent structure of Pt_3Ni alloy electrocatalysts and its effect onelectrocatalytic activity

12:00 to 12:15

Vladislav Mints *(Department of Chemical Engineering, Imperial College London, London, United Kingdom)*, Jack Pedersen, John Olsen, Mads Plenge, Matthias Arenz, Jan Rossmeisl

Unraveling the Mixing Entropy-Activity Relationship in High Entropy Alloy Catalysts: More does not equal better.

12:15 to 12:30

Conor Price *(Institute of Energy Technologies (IET-3), Forschungszentrum Jülich, Jülich, Germany)*, Robert Appel, Maximilian Schalenbach, Piotr Kowalski

Exploring TiO_2-RuO_2 Solid Solutions for Catalytic Applications

12:30 to 14:00 *Lunch Break* *Sponsored by* ***Metrohm & Sensolytics***

Symposium 16 General Session - Hidden treasures - diversity of electrochemistry

Room: **Zagreb A**

Chaired by Martin Jonsson-Niedziólka & Micheál D. Scanlon

09:30 to 09:45

Martin Jönsson-Niedziólka *(Department of Electrode Processes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland)*, Julia Maciejewska-Komorowska, Damien W. M. Arrigan

Electrochemical Behaviour of Proteins and Fluorescent Salts at a Liquid|Organogel Micro-Interface Array

09:45 to 10:00

Jon Bjarke Valbæk Mygind *(NanoElectrocatalysis and Sustainable Chemistry, Catalan Institute of Nanoscience and Nanotechnology, Bellaterra, Spain)*, Jakob Kibsgaard, Ib Chorkendorff

Investigating HOR Across Non-Aqueous Solvents and Aprotic Additives

10:00 to 10:15

Micheál D. Scanlon *(Department of Chemical Sciences, Bernal Institute, University of Limerick (UL), Limerick, Ireland)*, Nataly Rey-Muñoz, Jessica L. Smith-Osorio, Alonso Gamero-Quijano

A Biphasic Photoelectrochemical System for Solar Fuel Generation: Photoelectrochemical Reduction of O_2 to H_2O_2 by P3HT Thin Films at a Polarizable Liquid|Liquid Interface

10:15 to 10:30

Talia Stockmann *(Chemistry, Memorial University of Newfoundland, St. John's, Canada)*, Arezou Bahrami

Electrocatalytic polymerization reactions investigated via Au nanoparticle stochastic impacts at micro liquid/liquid interfaces

10:30 to 11:00

Coffee Break *Sponsored by* ***MDPI***

11:00 to 11:15

Marella De Santis *(Department of Industrial Engineering, Alma Mater Studiorum - University of Bologna, Bologna, Italy)*, Irene Giusti, Alfredo Liverani, Luca Piancastelli

Development of Multiphysics Models for Simulating Advancements in Large Format Cylindrical and Blade Cells Performance

11:15 to 11:30

Sougat Purohit *(Department of Materials Engineering, Indian Institute of Science, Bengaluru, India)*, Andreas Kuhlmann, Marten Huck, Hans-Georg Steinrück, Sai Gautam Gopalakrishnan

High-throughput screening of intercalation electrodes for electrochemical ion-capture and desalination

11:30 to 11:45

Anthony O'Mullane *(School of Chemistry and Physics, Queensland University of Technology, Brisbane, Australia)*, Jessica Crawford, Benchaporn Lertanantawong

Liquid Metal Electrochemistry – Nanomaterial Synthesis and Electrocatalysis

11:45 to 12:00

Chao Zhan *(College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China)*, Shu-Yi Zhu, Feng Xue, Xia-Guang Zhang, Zhong-Qun Tian

Photo-Electrochemistry Based on the Nanostructured Plasmonic Electrode

12:00 to 12:15

Jing-Hua Tian *(Research Institute of Big Science Infrastructure, IKKEM, Xiamen, China)*, Si-Yuan Ma, Hai-Long Wang, Wei-Wei Wang, Dan Wu, Zhong-Qun Tian

AI-Driven Closed-Loop Paradigm for Electrochemical Devices

12:15 to 12:30

Julian Becker *(Center of Applied Space Technology and Microgravity, University of Bremen, Bremen, Germany)*, Omer Akay, Byron Ross, Àlvaro Romero-Calvo, Katharina Brinkert

Towards Photoelectrochemical Water Splitting on a Sounding Rocket

12:30 to 14:00 Lunch Break Sponsored by ***Metrohm & Sensolytics***

Tuesday 9 September 2025 - *Afternoon*

Symposium 1 Electroanalysis: From fundamentals towards smart devices

Room: **Zagreb B**

Chaired by Lucio Angnes & Frank-Michael Matysik

14:00 to 14:15

Elena Atanasova *(Chemical Technology of Inorganic Materials, Johannes Kepler University of Linz, Linz, Austria)*, Andrei Ionut Mardare, Achim Walter Hassel

Anodic TiO_2 Crossbar Memsensor for Selective Dopamine Detection

14:15 to 14:30

Danjela Kuscer *(Electronic Ceramics Department, Jožef Stefan Institute, Ljubljana, Slovenia)*, Nina Pugelj, Barbara Repič, Darko Belavič, Andraž Bradeško

Fluidic Electrochemical Sensor Platform for Detection of Pesticides in Water

14:30 to 14:45

Debbie Silvester-Dean *(School of Molecular and Life Sciences, Curtin University, Perth, Australia)*, Elena Gorenskaia

Anti-Fouling Electrochemical Sensors for Bisphenol A Based on an Ionic Liquid and Poly(ionic liquid) Gelled Electrolyte

14:45 to 15:00

Bryan Pichún *(Química de los Materiales, Universidad de Santiago de Chile, Santiago, Chile)*, Isidora Alfaro, Johisner Penagos, Rodrigo Segura, María Aguirre

FeCoNiCrMn High-Entropy Alloy-Modified Carbon Black Paste Electrode for Hydrazine Determination in Water Samples

15:00 to 15:15

Valdomiro Conceição *(Department of Fundamental Chemistry, University of São Paulo, São Paulo, Brazil)*, Vinicius Rodriguez, Valdomiro Conceição, Mauro Bertotti

Paracetamol: Quantification of an Emerging Pollutant Using a Nanoporous Gold Microelectrode

15:15 to 15:30

Wallans Torres *(Pharmacy, UFVJM, DIAMANTINA, Brazil)*, Anne Macedo, Dilton Pimentel, Karla Souza, José Costa

Integrated Colorimetric-Electrochemical Method for Paracetamol Determination: A Diagnosis of Intoxication in Clinical Analysis

15:30 to 15:45

Chaitanya Lekshmi Indira *(Centre for Equitable and Personalized Healthcare, Plaksha University, Mohali, India)*, Rahul Pillai, Anamika Singh, Amruta Ranjan Behera

Leveraging Hierarchical NiO/Carbon Nanocomposites for Miniaturized Sensors for Catechol and Catecholamine Electrochemical Detection

15:45 to 16:00

Daniel Mandler *(Institute of Chemistry, Hebrew University, Jerusalem, Israel)*, Din Zelikovich, Hila Sagi, Pavel Savchenko

Speciation of Nanoparticles: Nanoparticle-Imprinted Matrices (NAIM)

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

POLiS Post Lithium Storage Cluster of Excellence

16:30 to 16:45

Michael Douglas Peçanha de Souza *(Department of Molecular Sciences and Nanosystems, Ca' Foscari University of Venice, Venice, Italy)*, Giulia Moro, Kamila Tassone Polisel, Daniele Massari, Manuela Melucci, Matteto Gigli, Chiara Zanardi

Enhanced Electrochemical Detection of Glyphosate in Water Applying rGO-LYS/Chitosan-Modified Electrodes

TUESDAY PM

16:45 to 17:00

Reshma Kidayaveettil *(School of Biological and Chemical Sciences (SBCS), University of Galway, Galway, Ireland)*, Verdiana Marchianò, Leander Suetzl, Christopher Schulz, Alfons K. G. Felice, Paolo Bollella, Dónal Leech

Development of an oxygen-insensitive electrochemical biosensor for L-lactate quantification in human plasma and sweat using a novel FMN-dependent lactate dehydrogenase enzyme

17:00 to 17:15

Guobao Xu *(State Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Changchun, China)*, Islam M. Mostafa, Ala'a Mhmoued Abdllh Alboull, Wei Zhang, Baohua Lou

Selective Electrochemical Detection via Generation of Easily Detectable Phenols

17:15 to 17:30

Wojciech Mazurkiewicz *(Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland)*, Emilia Witkowska Nery

Modified carbon fiber microelectrodes with antifouling properties

17:30 to 17:45

Lucio Angnes *(Departamento de Química Fundamental, Universidade de São Paulo, São Paulo, Brazil)*, Nathalia F. B. Azeredo, Thawan G. Oliveira, Caroline M. G. Santos, Claudimir L. Lago

Influence of Electrical Contact Resistance Compensation on Paper Based Electrodes

17:45 to 18:00

Nikolai Tiuftiakov *(Department of Inorganic and Analytical Chemistry, University of Geneva, Geneva, Switzerland)*, Eric Bakker

Exploring the Fundamental Limits and Opportunities of Reference Electrodes based on Organic Electrolytes

Symposium 3 Electrochemical and bioelectrochemical synthesis of small molecular products

Room: **Meeting 3A**

Chaired by Valerio Ficca, Marta Costa Figuereido, Antonia Herzog & Mohsin Muhyuddin

14:00 to 14:15 ***Invited***

Marta Costa Figueiredo *(Chemical Engineering and Chemistry, Eindhoven University of Tecnology, Eindhoven, Netherlands)*

Electrocatalysis for the synthesis of ammonia and urea

14:15 to 14:30

Simone Lombardi *(Materials Science, University of Milano-Bicocca, Milan, Italy)*, Tatiana Rodriguez-Flores, Lorenzo Mirizzi, Roberto Nisticò, Rosanna Viscardi, Mohsin Muhyuddin, Carlo Santoro

Comparative study of various metal oxides in different oxidation states for the Electrochemical Reduction of Nitrate to Ammonia (NO_3^-RR)

14:30 to 14:45

Gabriel Costa *(ICN2, Catalan Institute of Nanoscience and Nanotechnology , Bellaterra, Spain)*, Jaxiry Barroso-Martinez, Camilo A. Mesa, María Escudero-Escribano

In-situ Time Resolved Surface Enhanced Raman Spectroscopy of Nitrate Electrochemical Reduction on Silver

14:45 to 15:00

Kenneth Flores *(School of Sustainable Engineering and the Built Environment, Arizona State University, Tempe, USA)*, Colleen Gately, Ivory Flemister, Emma Mast, Gabriel Cerron, Manuel Roldan, Sergi Garcia-Segura

Electroless generation of silver nano-fern catalysts upon Cu foam as a highly effective bimetallic electrocatalyst design for ammonia electrosynthesis

15:00 to 15:15

Nessa Hald *(School of Sustainable Engineering and the Built Environment, Arizona State University, Tempe, USA)*, Colleen Gately, Emma Mast, Kenneth Flores, Sergi Garcia-Segura

Nano interfacial engineering of a copper electrocatalyst to enhance selective electrogeneration of ammonia from nitrate pollution

15:15 to 15:30

Raphael Nagao *(Chemistry, UNICAMP, Campinas, Brazil)*, Manuel E. G. Winkler, Matheus P. Sales, Rafael G. Yoshimura, Kauan G. Lemos, Pamella S. Rodrigues, Itamar T. Neckel, Santiago J. A. Figueroa, João B. Souza Jr, Nirala Singh, Edson A. Ticianelli, Fabio H. B. Lima, Serhiy Cherevko

Boosting Nitrate-to-NH_3 Efficiency on Co_3O_4/Cu_xO_y Electrode by Tailoring Electrochemical Surface Activation

15:30 to 15:45

Jian Zhang *(Analytical Chemistry—Center for Electrochemical Sciences, Ruhr University Bochum, Bochum, Germany)*, Thomas Quast, Bashir Eid, Yen-Ting Chen, Ridha Zerdoumi, Sabine Seisel, Wolfgang Schuhmann

In-situ Electrochemical Reconstruction and Modulation of Adsorbed Hydrogen Coverage in Cobalt/Ruthenium-based Catalyst Boost Electroreduction of Nitrate to Ammonia

15:45 to 16:00

Amanda Garcia *(Van't Hoff Institute for Molecular Sciences, University of Amsterdam, Amsterdam,* Netherlands)

Mechanistic Study of Electrochemical N-Formylation via Methylisocyanide Intermediates

16:00 to 16:30

Coffee Break Sponsored by ***POLiS - Cluster of Excellence***

16:30 to 16:45

Pawel Kulesza *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Iwona Rutkowska, Anna Chmielnicka, Beata Rytelewska, Saim Emin, Takwa Chouki, Shaghayegh Naghdi, Dominik Eder

Structure and relative reactivity of hybrid electrocatalysts for reduction of inert reactants: carbon dioxide, nitrogen and nitrates

TUESDAY PM

16:45 to 17:00

Thi Mung Vu *(School of Chemistry, Monash University, Melbourne, Australia)*, Siddulu Naidu Talapaneni, Felipe Matamala-Troncoso, Sam Johnston, Darcy Simondson, Tam D. Nguyen, Daniel Van Zeil, Rosalie K. Hocking, Douglas R. Macfarlane, Alexandr N. Simonov

Sustainable Electrochemical Synthesis of Nitrite and Nitrate: from Fundamentals to Practice

17:00 to 17:15

Takuma Nakano *(Technology & Intellectual Property HQ, TDK Corporation, Narita, Japan)*, Matthew Spry, Kotaro Suzuki, Yasuyuki Kondo, Yu Katayama, Yuki Yamada

Lithium-mediated Ammonia Electrosynthesis with Water as an Effective Proton Source

17:15 to 17:30

Romain Tort *(Department of Materials, Imperial College London, London, United Kingdom)*, Yasuyuki Kondo, Anna Winiwarter, Bethan J. V. Davies, Guanglei Chen, Yu Katayama, Yuki Yamada, Mary P. Ryan, Maria-Magdalena Titirici, Ifan E. L. Stephens

Electrolyte Activities Unify Selectivity Trends in Lithium-Mediated Nitrogen Reduction

17:30 to 17:45

Leandro Augusto Faustino *(Química Fundamental, Instituto de Química, Universidade de São Paulo, São Paulo, Brazil)*, Leonardo D. Angelis, Eduardo C. Melo, Giliandro Farias, Egon C. Santos, Caetano R. Miranda, Ana G. Buzanich, Roberto M. Torresi, Paulo F. M. Oliveira, Susana I. Córdoba de Torresi

Mechanistic Investigation of Urea Synthesis by Plasmon-Assisted N_2 and CO_2 co-electrolysis of Silver Nanoparticles on Heterojunctions

17:45 to 18:00

Giacomo Zuliani *(Chemical Energy, Helmholtz-Zentrum Berlin, Wannsee, Berlin, Germany)*, Marcel Risch

In-situ potentiometric product quantification for electrocatalytic ammonia generation in alkaline solutions.

18:00 to 18:15

Masaru Kato *(Faculty of Environmental Earth Science, Hokkaido University, Sapporo, Japan)*, Zhengwei Ma, Naoto Kuwamura, Ichizo Yagi

Electrocatalytic Nitrous Oxide Reduction to Dinitrogen at Carbon-Supported 3d Transition Metal Complexes

18:15 to 18:30

Antonia Herzog *(MIT Electrochemical Energy Lab, MIT, Cambridge, USA)*, Haldrian Iriawan, Yang Shao-Horn

The Role of Anions for Efficient Lithium-Mediated Ammonia Synthesis in Flow Cells

18:30 to 18:45

Manuel Gutiérrez Roa *(Grupo de Conversión de Combustibles, Instituto de Carboquímica (ICB), Zaragoza, Spain)*, Sara Pérez Rodríguez, Cristina Giménez Rubio, David Ríos Ruíz, Pablo Arévalo Cid, María Victoria Martínez Huerta, Andrea Zitolo, María Jesús Lázaro, David Sebastián

In Situ Product Detection during CO_2 Electroreduction on Cu N C Catalysts Using a Rotating Ring Disk Electrode (RRDE)

18:45 to 19:00

Alexander Giovannitti *(Chemistry and Chemical Engineering, Chalmers University of Technology, Gothenburg, Sweden)*, Albin Petrén, Ruby Susan Raju, Megan Westwood, Jessica Vasquez

Tailor-made polymer electrodes for driving chemical reactions with electricity

Symposium 4 Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg B**

Chaired by Sigita Trabesinger

14:00 to 14:15

Bernard Lestriez *(Institut des Matériaux de Nantes Jean Rouxel (IMN), Nantes Université, CNRS, Nantes, France)*, Clément Meyssonnier, Cassandre Chalard, Nicolas Goubard-Bretesché, Sarah Olivier-Archambaud, Mylène Deleplanque, Nicolas Dupré, Cyril Paireau

SiO_x-Rich Electrode Directly Optimized Using Key FormulationParameters

14:15 to 14:30

Michael Mercer *(Department of Chemistry, Lancaster University, Lancaster, United Kingdom)*, Mangayarkarasi Nagarathinam, Yan Zhang

Entropy changes during interphase formation and degradation of silicon-based lithium-ion anode materials

14:30 to 14:45

Timo Danner *(Computational Electrochemistry, German Aerospace Center - DLR - at HIU, Ulm, Germany)*, Lioba Boveleth, Max Okraschevski, Arnulf Latz

Effect of Si Content in Si/C Composite Anodes on Particle Expansion-Induced Electrolyte Motion

14:45 to 15:00

Morihiro Saito *(Department of Science and Technology, Seikei University, Musashino-shi, Japan)*, Minori Obara, Hikaru Enomoto, Yusuke Himata, Fumisato Ozawa, Akihiro Nomura

Solution Li Pre-doping Technique Toward Si-based Anode for Advanced LIBs and Next-generation Batteries

15:00 to 15:15

Pedro Alonso Sánchez *(Multifunctional Magnetic Molecular Materials - M4, Aragon Nanoscience and Materials Institute - INMA, Zaragoza, Spain)*

Structural Changes in Silicon-rich Silicon-Graphite Anodes: Insights from Operando Synchrotron X-ray Diffraction

15:15 to 15:30

Gian Marco Trippetta *(Chemical Engineering, KTH Royal Institute of Technology, Stockholm, Sweden)*, Agnes-Matilda Mattsson, Fredrik Björefors, Göran Lindbergh, István Furó, Rakel Wreland Lindström

Quantitative Method for the Characterization of Composite (Gr-SiO_x) Negative Electrodes via ^{7}Li NMR

15:30 to 15:45

Rob Lehane *(Solid State Chemistry, Institut de Ciència de Materials de Barcelona -ICMAB-CSIC, Barcelona, Spain)*, Juan José Vilatela, Alexandre Ponrouch

Modification of Silicon Nanowire Anodes with Carbon and Polymer Electrolyte Coatings for Lithium-Ion Batteries

15:45 to 16:00

Katsumasa Torii *(SANKEN, The University of Osaka, Ibaraki, Japan)*, Anusha Pradhan, Yasuyuki Kondo, Yu Katayama, Yuki Yamada

Real-Time Observation of the SEI Formation on Silicon-Based Anodes Using In Situ Infrared Spectroscopy

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

POLiS Post Lithium Storage Cluster of Excellence

16:30 to 16:45

Hyun Woo Kim *(Department of Chemical Engineering, Gyeongsang National University, Jinju, Korea)*, Jongwoo Kim, Dowan Kim, Youngsik Kim, Wang-Geun Lee

Synthesis & Charactrization of Sacrificial Template based Composite Electrolyte for High-Voltage Sold-state Batteries

16:45 to 17:00

Nico Zamperlin *(Solid State Ionics - Ceramic Electrolytes, CIC energiGUNE, Vitoria-Gasteiz, Spain)*, Ander Orue Mendizabal, Ville Kekkonen, Rosalia Cid, Arianna Pesce, Manar Cheddadi, Pedro López-Aranguren

Engineering Anodic Interfaces in Solid-State Batteries via Pulsed Laser Deposition

17:00 to 17:15

Mohammed Alabdali *(LRCS, Université de Picardie Jules Verne - UPJV, Amiens, France)*, Franco M. Zanotto, Benoît Notredame, Virginie Viallet, Vincent Seznec, Alejandro A. Franco

Dual Approach Analysis of Slurry-based Manufacturing of Solid-State Battery Composite Cathode

17:15 to 17:30

Hyeon-ji Shin *(Energy Storage Research Center, Korea Institute of Science and Technology, Seoul, Korea)*, Jun Tae Kim, Daseul Han, Kyung-Wan Nam, Hun-Gi Jung

2D Carbon Interface Engineering to Mitigate Inhomogeneous Reactions in Sulfide-based ASSBs

17:30 to 17:45

Francesco Gambino *(DISAT, Politecnico di Torino, Torino, Italy)*

Formulating New Polyelectrolytes for All-Solid-State Li-based Batteries

17:45 to 18:00

Kevin Llopart *(Chemical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, USA)*, Robert Sacci, Jie Zheng, Andrew Ullman, Liqun Guo, Yan Yao, Jagjit Nanda

Controlling Crystal Structure in $Li_3In_xY_{(1-x)}Cl_6$ Halide Superionic Conductor via Mechanochemical and Water-Based Syntheses

18:00 to 18:15

Branimir Stamenkovic *(Researcher, PhD Student, IMN Nantes, Nantes Univeristy, Nantes, France)*, Oskar Thompson, Eric Quarez, Nicolas Dupre, Irina Profatilova, Vasily Tomopolskiy, Claire Villevieille, Philippe Moreau, Joel Gaubicher

Fueling from Electrochemistry of Halide Solid-State Redox Electrolytes – Elucidating the Underlying Mechanism

18:15 to 18:30

Ji Eun Jung *(Department of Energy Engineering, Hanyang University, Seoul, Korea)*, Dayoung Jun, Seong Gyu Lee

Development of High-Capacity All-Solid-State Batteries with LTO Protective Layer

18:30 to 18:45

Ai Watanabe *(Department of Electrical Engineering and Bioscience, Waseda Univeristy, Tokyo, Japan)*, Masaki Fujita, Kosuke Kawai, Masashi Okubo

MXene Nb_2CT_x for Negative Electrode Materials of All-Solid-State Batteries

18:45 to 19:00

Baeksang Yoon *(Department of Electronic and Information Materials Engineeri, Jeonbuk national university, Jeonju, Korea)*, Dohyeon Yu, Gyujeong Jang, Byeonghun Oh, Yoonseob So, Inseok Seo

High Performance of All-Solid-State Batteries using Sulfide Solid Electrolyte and Composite Cathode

Symposium 5a New battery chemistries

Room: **Watford**

Chaired by Montse Casas Cabanas & Marie Guignard

14:00 to 14:15 ***Invited***

Montse Casas Cabanas *(Electrochemical Energy Storage and Conversion, CIC energiGUNE, Vitoria-Gasteiz, Spain)*

From Structure to Function: Decoding Anode and Cathode Mechanisms in Sodium-Ion Batteries

14:15 to 14:30

Yauhen Aniskevich *(Centre for Organic and Nanohybrid Electronics, Silesian University of Technology, Gliwice, Poland)*, Seung-Taek Myung

Monitoring Charge Transfer and Storage in Hard Carbon by Electrochemical Impedance and Raman Spectroscopy

14:30 to 14:45

Eneli Härk *(Institute Electrochemical Energy Storage, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin, Germany)*, Laura Kalder, Enn Lust, Yan Lu

Enhancing Energy Storage: Small-Angle Scattering for Nanostructure Analysis in Sodium-Ion Batteries

14:45 to 15:00

Jiangming Cao *(1Faculty of Mechanical and Civil Engineering, Helmut-Schmidt-University, Hamburg, Germany)*, Michael Mercer, Andrea Silva, Denis Kramer

Sodiation anodes derived from 2D transition-metal dichalcogenides

15:00 to 15:15

Koji Yazawa *(NM Business Unit, JEOL Ltd., Akishima, Japan)*, Natalia Voronina, Seung-Taek Myung

Direct NMR observation of Na and Li ion migration in sodium ion battery cathodes

15:15 to 15:30

Katja Frenzel *(X-Ray Spectrometry, Physikalisch-Technische Bundesanstalt, Berlin, Germany)*, Giorgia Greco, Philipp Hönicke, Adrian Jonas, Lena Mathies, Sergio Brutti, Burkhard Beckhoff

SEI formation on sustainable hard carbon electrodes for SIB – an operando study

15:30 to 15:45

Sven Daboss *(Institute of Analytical and Bioanalytical Chemistry, Ulm University, Ulm, Germany)*, Salimeh Saleh, David Schäfer, Marcus Rohnke, Tobias Cramer, Christine Kranz

Characterization of Hard Carbon Anodes for Sodium-Ion Batteries using Scanning Electrochemical Probe Microscopy

15:45 to 16:00

Svetlana Menkin *(Yusuf Hamied Department of Chemistry, University of Cambridge, Cambridge, United Kingdom)*, James T. Simon, Veronika Sedajova, Debashis Tripathy, Holly E. Smith, Stuart M. Clarke, Clare P. Grey

Insights into the zinc metal electrodeposition mechanism and its effect on anode cyclability

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

POLiS Post Lithium Storage Cluster of Excellence

16:30 to 16:45 ***Invited***

Marie Guignard *(Institute of Condensed Matter Chemistry of Bordeaux -ICMCB, University of Bordeaux, CNRS, Bordeaux INP, Pessac, France)*, Claude Delmas

Phase transitions occurring during sodium intercalation and deintercalation in sodium layered oxides

16:45 to 17:00

Mohammed Ahmed Zabara *(Chemistry, University of Cambridge, Cambridge, United Kingdom)*, Jeongjae Lee, Christopher A. O'Keefe, Clare P. Grey

Investigating Sodium Storage and Degradation Pathways in Hard Carbon Anodes via EIS and NMR

17:00 to 17:15

Junyi Zhao *(Department of Materials, University of Oxford, Oxford, United Kingdom)*, Mauro Pasta

Quantifying Electrolyte Transport and Thermodynamic Parameters with Operando Raman Gradient Analysis (ORGA)

17:15 to 17:30

Vanesa Munoz-Perales *(Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, USA)*, Haldrian Iriawan, Yang Shao-Horn

Revealing Anode/Electrolyte Interface in Sodium-Metal Batteries with In-Situ EC-MS and SEI Analysis

17:30 to 17:45

Gareth Rogers *(Technological innovation, illumion Ltd., Cambridge, United Kingdom)*, Alice Merryweather, Cathryn Langley, Christoph Schnedermann

Charge photometry: operando imaging of electrodes for capturing local state-of-charge and morphology changes with single particle resolution

17:45 to 18:00

Sphumelele Nomnotho Jiyane *(Chemie und Biochemie, RUB, Bochum, Germany)*, Sphumelele Nomnotho Jiyane, Carla Santana Santos, Igor Echevarria Poza, Mario Palacios Corella, Maria Ibáñez, Edgar Ventosa, Wolfgang Schuhmann

Microelectrochemical Analysis of Multi-Metals Prussian Blue Analogues for Aqueous Sodium-Ion Batteries

18:00 to 18:15

Iuliia Neumann *(Institute of Inorganic Chemistry, University of Stuttgart, Stuttgart, Germany)*, Bertold Rasche

New Metastable Tungsten Bronzes Investigated Electrochemically with In Situ X-ray Diffraction

18:15 to 18:30

Hye-Jin Kim *(Nanotechnology and Advanced Materials Engineering, Sejong University, Seoul, Korea)*, Seung-Taek Myung

Trade-off Effect of Fe in Earth-abundant P2-Type Sodium Cathode Materials: Transition Metal Dissolution and Oxygen Redox mechanism

18:30 to 18:45

Rishikesh Vengarathody *(Helmholtz Institute Ulm, Ulm University, Germany)*, Yang Hu, Blanka Detlefs, Prabeer Barpanda, Maximilian Fichtner

Operando XANES study on the redox mechanism in O3- $Na_{0.9}Mn_{0.48}Fe_{0.3}Cu_{0.22}O_2$ cathode for sodium-ion battery

18:45 to 19:00

Iqra Moeez *(Center for Energy Storage Research, Korea Institute of Science and Technology, Seoul, Korea)*, Sourav Baiju, Ali Hussain Umer Bhatti, Payam Kaghazchi, Kyung Yoon Chung Chung

Synthesis and Characterization of NaCl/CNT Composite for Sodium-ion Batteries

Symposium 5b New battery chemistries

Room: **Gutenberg A**

Chaired by Birgit Esser & Ji Eon Kwon

14:00 to 14:30 ***Invited***

Nerea Casado *(POLYMAT, University of the Basque Country, UPV/EHU, Donostia-San Sebastián, Spain)*

Functional Polymer Binders for Next-Generation Batteries

14:30 to 14:45

Felix Schwab *(TT - CEC, German Aerospace Center - DLR, Ulm, Germany)*, Britta Doppl, Niklas Herrmann, Birger Horstmann

Nickel-Zinc Cell Modelling on a Continuum Scale

14:45 to 15:00

Anetta Platek-Mielczarek *(Unbound Potential AG, Thalwil, Switzerland)*, Alexandra Lyons, Moritz Junker, Gaurav Singh, David P. Taylor, Anetta Platek-Mielczarek, Federico Paratore

Membrane-Less Redox Flow Batteries: Developing a Scalable Hardware Platform

15:00 to 15:15

Ruben-Simon Kühnel *(Laboratory Materials for Energy Conversion, Empa, Dübendorf, Switzerland)*, Maximilian Becker, Francesco Bernasconi, Konstantin Egorov, Enea Svaluto-Ferro, Corsin Battaglia

Niobium Oxide Anode Materials with Suppressed Activity Toward Hydrogen Evolution Reaction for Aqueous Batteries

15:15 to 15:30

Roswitha Zeis *(Department of Electrical Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany)*, Alexander Rampf, Robert Leiter, Simon Fleischmann

Enhanced Electrochemical Performance of Al-Air Batteries Using α-MnO_2 ORR Electrodes

15:30 to 15:45

Mohamed Yahia *(Center for Cooperative Research on Alternative Energies, CIC energiGUNE, Vitoria-Gasteiz, Spain)*, Marina Enterría, Cristina Pozo-Gonzalo, Nagore Ortiz-Vitoriano

Next-Generation Na-O_2 Batteries: A novel Quasi-Solid Polymer Electrolyte (QSPE) Based on Pebax®1657 copolymer.

15:45 to 16:00

Kohei Shimokawa *(Institute for Manufacturing, University of Cambridge, Cambridge, United Kingdom)*, Arvind Pujari, Byung-Man Kim, Michael De Volder

Fundamental Design Principles for Photobatteries

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

POLiS Post Lithium Storage Cluster of Excellence

16:30 to 16:45 ***Invited***

Birgit Esser *(Institute of Organic Chemistry II and Advanced Materials, Ulm University, Ulm, Germany)*

Organic Electrode Materials for Next-Generation Batteries

16:45 to 17:00 ***Invited***

Ji Eon Kwon *(Functional Composite Materials Research Center, Korea Institute of Science and Technology - KIST, Jeonbuk, Korea)*

In situ Electrochemical Crosslinking: A Key to Achieving Highly Stable and Fast-Rechargeable Organic Electrodes

17:00 to 17:15

Anna Fischer *(IAAC, University Freiburg, University of Freiburg, IAAC, Fischer Lab, Germany)*, Niklas Ortlieb, Bärbel Tengen, Verena Perner, Martin Winter, Birgit Esser, Peter Bieker

Enhancing Capacity Retention of Polymer Battery ElectrodesUsing Pore Size Engineered Porous N-Doped Carbon Nanospheres as Conductive Additives

17:15 to 17:30

Olivera Lužanin *(Department of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia)*, Olivera Lužanin, Jože Moškon, Jan Bitenc, Robert Dominko, Miran Gaberšček

Understanding the Electrochemical Mechanism Driving Organic Electrode Performance in Mg and Li Batteries

17:30 to 17:45

Ashley Black *(Solid State Chemistry, icmab-csic, Bellaterra, Spain)*, Deyana S. Tchitchekova, Damien Monti, Nagaraj Patil, Nicolas Goujon, David Mecerreyes, Rebeca Marcilla, Ibraheem Yousef, Alexandre Ponrouch

Operando Synchrotron-based Fourier Transform Infrared Microspectroscopy of Metal-ion Organic Battery Materials

17:45 to 18:00

Zhen Su *(College of Chemistry, Central China Normal University, Wuhan, China)*, Haocheng Guo, Chuan Zhao, Wen-Jing Xiao

Rational Design of Electrodes and Electrolytes for Stable Proton Batteries with High Power and Energy Density

18:00 to 18:15

Victoria Greussing *(Institute of Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Daniel Werner, Daniel Pattis, Josef M. Gallmetzer, Corina Schimanofsky, Dominik Wielend, Sebastian Liebl, Teja Stüwe, Martin Ciganek, Jozef Krajčovič, Mihai Irimia-Vladu, Thomas S. Hofer, Engelbert Portenkirchner

Naturally Occurring Amino- and Hydroxy Substituted Anthraquinones as Sustainable Materials for Organic SIBs

18:15 to 18:30

Sebastian Liebl *(Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Daniel Werner, Engelbert Portenkirchner

On the Charge Storage Mechanism of Small Organic Molecules for Aqueous Sodium Ion Batteries

18:30 to 18:45

Anja Lenzer *(Helmholtz Institute Ulm, Karlsruhe Institute of Technology, Ulm, Germany)*, Kai Shi, Valentin Gouget, Lionel Picard, Dominic Bresser

Conjugated Carbonyl Compounds as Sustainable Electrode Materials for All-Organic Sodium-Ion Batteries

18:45 to 19:00

Angelina Castro Trujillo *(n/a, Institute of Science and Technology Austria - ISTA, Klosterneuburg, Austria)*, Julia Valentin, Stefan A. Freunberger

Rate and Capacity Limiting Factors for Redox-Active Organic Materials

Symposium 6a Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Kongress-Saal**

Chaired by Arno Bergmann & Julia Linnemann

14:00 to 14:15

Julia Linnemann *(Analytical Chemistry II - Shape-dependent Electrochemistry, Ruhr University Bochum, Bochum, Germany)*, Christian Leppin

Exploring the Role of Pseudocapacitive Metal Oxide Transformations for Electrocatalytic Activity by Impedance Spectroscopy and Structural Operando Methods

14:15 to 14:30

Qunjie Xu *(College of Chemical and Environmental Engineering, Shanghai University of Electric Power, Shanghai , China)*

Active Non-bonding Oxygen Mediate Lattice Oxygen Oxidation on $NiFe_2O_4$ Achieving Efficient and Stable Water Oxidation

14:30 to 14:45

Jian Wang *(School of Energy and Environment, City University of Hong Kong, Hong Kong, China)*

Dynamically reconstructing anodic electrodes for membrane water electrolysis

14:45 to 15:00

Turgut Sönmez *(Chemistry, Karabuk University, Karabük, Turkey)*

The Impact of Low-Content Metals in Covalent Triazine Frameworks (CTF) on Enhancing Oxygen Evolution Reaction (OER) Activity

15:00 to 15:15

Maksim Sokolov *(Theoretical Catalysis and Electrochemistry, University of Duisburg-Essen, Essen, Germany)*, Kai S. Exner

On Coverage, Bulk Oxidation, and Mechanistic Diversity of Oxygen Evolution Reaction on Pentlandite Electrodes

15:15 to 15:30

Johanna Schröder *(Institute for Chemical Technology and Polymer Chemistry, Karlsruhe Institute of Technology , Karlsruhe, Germany)*, Miika Mattinen, Giulio D'Acunto, K. Alex A. Persson, Ashton M. Aleman, Elisa L. Ponte, Mikko Ritala, Michaela Burke Stevens, Stacey F. Bent, Thomas F. Jaramillo

Precatalyst-dependent material dynamics of non-precious metal, thin film catalysts for alkaline oxygen evolution

15:30 to 15:45

Bastian Schmiedecke *(Chemical Energy, Helmholtz-Zentrum Berlin, Berlin, Germany)*, Bing Wu, Namrata Sharma, Thorsten Schultz, Aline Emerenciano, Danielle Douglas-Henry, Apostolos Koutsioukis, Mehmet Görüyilmaz, Valeria Nicolosi, Tristan Petit, Norbert Koch, Zdenek Sofer, Michelle Browne

Exploring the Role of V_2CT_x MXene in Enahncing the Oxygen Evolution Reaction: A Comparative Study Utilizing Fresh and Oxidized MXene

15:45 to 16:00

Lars Sanderbrandes *(Institute of Chem. and Electrochem. Process Engineering, Clausthal University of Technology, Clausthal-Zellerfeld, Germany)*, Thomas Turek

Investigation of Hydrogen Crossover in a Hybrid Alkaline Water Electrolysis Setup Utilizing Nickel-Based Gas Diffusion Electrodes

16:00 to 16:30

Coffee Break Sponsored by ***POLiS - Cluster of Excellence***

16:30 to 16:45

Vadim Ratovskii *(TNW, University of Twente, Enschede, Netherlands)*, Christoph Baeumer

Epitaxial $CoFe_2O_4$ films model systems for studying the origin of magnetically enhanced oxygen evolution reaction

16:45 to 17:00

Aleksandar Zeradjanin *(Electrochemistry group - Physical Electrochemistry, Max Planck Institute for Chemical Energy Conversion, Muelheim an der Ruhr, Germany)*

Entropic Barriers at Electrocatalytic Interfaces –"Fingerprints" of Preexponential Frequency Factor in Electrolytic Water Spliting

17:00 to 17:15

Arno Bergmann *(Interface Science, Fritz Haber Institute of the Max Planck Society, Berlin, Germany)*, Felix T. Haase, Timon Wagner, Eduardo Ortega, Sascha Saddeler, Carsten Placke-Yan, Janis Timoshenko, Axel Knop-Gericke, Stephan Schulz, Thomas Lunkenbein, Beatriz Roldan Cuenya

The Oxygen-Evolving State of Co-based Electrocatalysts – Dynamic Interfaces and the Role of Fe Decoration

17:15 to 17:30

Sirui Li *(Department of Materials, University of Oxford, Oxford, United Kingdom)*, Leanne Jones, Longxiang Liu, Peixi Cong, Peter Bencok, Robert Weatherup

Size Effect Investigation on Cobalt Nanoparticles by Operando Soft X-Ray Absorption Spectroscopy

17:30 to 17:45

Ricardo Martínez-Hincapié *(Interface Science, Fritz-Haber Institute, Berlin, Germany)*, Janis Timoshenko, Timon Wagner, Jody Druce, Mariana Cecilio de Oliveira Monteiro, Martina Rüscher, Joonbaek Jang, Elif Öykü Alagöz, Samuele Lasagna, Leon Jacobse, Arno Bergmann, Beatriz Roldan Cuenya, Sebastian Oener

The Role of Charged Intermediates in the Oxygen Evolution Reaction

17:45 to 18:00

Tomohiko Utsunomiya *(SANKEN, The University of Osaka, Ibaraki-shi, Japan)*, Qing Su, Yasuyuki Kondo, Reshma Rao, Yu Katayama, Yuki Yamada

Tuning Hydrogen-Bond Network of Water within Stacked 2D Nanolayers for Enhanced Oxygen Evolution Reaction

18:00 to 18:15

Yifeng Wang *(Department of Materials, Imperial College London, London, United Kingdom)*, Eleanor Ender, Santosh Kumar, Georg Held, Katie Moore, Alex Walton, Mary Ryan, Reshma Rao

Role of the Oxide Species in Ni-based Catalysts for Alkaline Water Electrolysis

18:15 to 18:30

Maris Minna Mathew *(Faculty of Chemistry and Chemical Technology, University of Ljubljana, Ljubljana, Slovenia)*, Dylan Joseph Samuel, Dušan Strmcnik, Boštjan Genorio

Challenges and Pitfalls in Electrocatalytic Studies of Poorly Conducting Nickel-based Powder Catalysts

18:30 to 18:45

Edison Huixiang Ang *(Natural Sciences and Science Education, Nanyang Technological University, Singapore, Singapore)*

Engineering 2D MXenes: The Role of Doping in Hydrogen Production

18:45 to 19:00

Md. Abdul Aziz *(IRC for Hydrogen Technologies and Carbon Management, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia)*, Yuda Prima Hardianto

Electrodeposition of Platinum Nanoparticles on Stainless-Steel Mesh for Enhanced Hydrogen Evolution Performance

Symposium 6b Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Gutenberg D**

Chaired by Laurie King & Soren B. Scott

14:00 to 14:15 ***Invited***

Soren B. Scott *(Chemistry, University of Copenhagen, Copenhagen, Denmark)*

Towards identifying the fundamental steps of electrocatalytic water oxidation on mixed-metal oxide surfaces

14:15 to 14:30

Huize Wang *(Sustainable Energy Materials, Technical University of Munich, Straubing, Germany)*, Marc Ledendecker

Laser-induced solid-state synthesis of ultra-small metal-based nanoparticles

14:30 to 14:45

Jaak Nerut *(Institute of Chemistry, University of Tartu, Tartu, Estonia)*, Mairis Berzinš, Rutha Jäger, Enn Lust, Peeter Valk, Priit Möller, Jaan Aruväli, Marian Külaviir

Oxygen Evolution Reaction on Ruthenium Oxide – Nickel Oxide Composite Catalysts

14:45 to 15:00

Burkhard Hecker *(IET-1, Forschungszentrum Juelich, Juelich, Germany)*, Xuehuai Hou, Marco Münstermann, Deniz Dogan, Andreas Müller, Asha Jacob, Guido Wasserschaff, Inka Dessel, Hermann Tempel, Rüdiger-A. Eichel

Accelerated electrochemical research using high throughput approach at industrially relevant process parameters

15:00 to 15:15

Fenghua Zheng *(Institute of Fuel Cells, School of Mechanical Engineering, Shanghai Jiao Tong University, Shanghai, China)*

Design and Performance Study of Low Iridium High Performance Catalyst for Acid Oxygen Evolution Reaction

15:15 to 15:30

Tanja Kallio *(Department of Chemistry and Materials Science, Aalto University, Espoo, Finland)*, Moritz Rosenthal, Lilian Moumaneix, Tatiana Priamushko, Eeva-Leena Rautama, Serhiy Cherevko

Iron and Manganese-based Electrocatalysts for Promoting the Oxygen Evolution Reaction in Acidic Media

15:30 to 15:45

Gozde Kardes *(Insitute for Applied Materials-Electrochemical Technologies, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Philipp Röse, Ulrike Krewer

Understanding Oxygen Evolution in PEM Electrolysis: From Half-Cell to Full-Cell

15:45 to 16:00 ***Invited***

Laurie King *(Natural Sciences, Manchester Metropolitan University, Manchester, United Kingdom)*, Hessan Khalid, Hongjun Niu, Eleanor Ender, Troy Manning, Alex Walton, Matthew Rosseinsky, Yagya Regmi

Epitaxial Pyrochlore Electrocatalysts for the Oxygen Evolution Reaction in Acidic Media

16:00 to 16:30

Coffee Break Sponsored by ***POLiS - Cluster of Excellence***

POLiS Post Lithium Storage Cluster of Excellence

16:30 to 16:45 ***Invited***

María Escudero-Escribano *(Catalan Institute of Nanoscience and Nanotechnology, ICN2, Catalan Institution for Research and Advanced Studies, ICREA, Bellaterra, Spain)*

In-Situ Characterisation and Electrode-Electrolyte Engineering for Oxygen Electrocatalysis

16:45 to 17:00

Delphine Clauss *(LEPMI, Univ. Grenoble Alpes, Grenoble INP, Grenoble, France)*, Vincent Martin, Michal Ronovsky, Bilal Iskandarani, Iryna Zenyuk, Laetitia Dubau, Frédéric Maillard

Balancing Activity and Stability of IrO_2 catalysts for the OER: The Influence of Nanoparticle Size

17:00 to 17:15

Rui Huang *(Institute of Catalysis Research and Technology - IKFT, Karlsruhe Institute of Technology - KIT, Eggenstein-Leopoldshafen, Germany)*, Rui Huang, Mareike Sonder, Merve Kurt, Paolo Ciocci, Philipp Röse, Erisa Saraçi, Ulrike Krewer, Jan-Dierk Grunwaldt

Enhancing Oxygen Evolution Reaction Performance: The Role of Cerium in Iridium-Cerium Mixed Oxides

17:15 to 17:30

Ahyoun Lim *(Electrochemistry, Max-Planck-Institut für Chemische Energiekonversion, Mülheim an der Ruhr, Germany)*, Kahyun Ham, Thomas Quast, Marc F. Tesch, Steffen Czioska, Daniela Ramermann, Walid Hetaba, Wolfgang Schuhmann, Jan-Dierk Grunwaldt, Ioannis Spanos, Hyun S. Park

Surface Oxide Growth Restriction: A Necessity for the Stable Low-Loading Iridium Electrodes in PEM Water Electrolysis

17:30 to 17:45

Lalita Sharma *(Structure and Dynamics in Catalysis, J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic)*, Roman Nebel, K. L Svane, Katerina Minhová Macounová, J. Rossmeisl, Petr Krtil

Identification of Active Sites in Mixed Iridium-Ruthenium Oxides for Oxygen Evolution in Acidic Media via X-ray Absorption Spectroscopy

17:45 to 18:00

Florian Kessler *(SE TI SES PRM CD ECH, Siemens Energy Global GmbH & Co. KG, Erlangen, Germany)*, Steffen Kupfer, Marcel Merkel

Metal Ion Uptake of Catalyst-Coated Membranes and its Influence on Cell Performance in PEM Water Electrolysis

18:00 to 18:15

Koichi Matsuzawa *(Graduate School of Engineering, Yokohama National University, Yokohama, Japan)*

Oxygen Evolution on Cerium Oxide-based Catalyst in Acidic Media

18:15 to 18:30

Patrick Elsaesser *(Institute of Inorganic and Analytical Chemistry, University of Freiburg, Freiburg im Breisgau, Germany)*, S. Esmael Balaghi, Philip Veh, Christopher S. Allen, Caroline Schneider, Severin Vierrath, Matthias Breitwieser, Anna Fischer

Dual atom Fe-Zn ORR Catalyst for with Molecular Fe-N_x and Zn-N_x Sites for High Performance Anion-Exchange Membrane Fuel Cells

18:30 to 18:45

Lin Zhuang *(College of Chemistry and Molecular Sciences, Wuhan University, Wuhan, China)*, Kaicong Yang

New Insights into the Hydrogen Oxidation Mechanism from Operando EIS Studies

18:45 to 19:00

Manjodh Kaur *(LEPMI, University of Grenoble Alpes, Grenoble, France)*, Simon Amigues, Kavita Kumar, Laëtitia Dubau, Frédéric Maillard, Frédéric Jaouen

Study of Carbon-Capped and Uncapped Ni Nanoparticles on the Hydrogen Oxidation Reaction (HOR) in Alkaline Medium

Symposium 8 Corrosion, coatings, and nanostructures for a sustainable future

Room: **Meeting 2A**

Chaired by Andreas Bund & Mikito Ueda

14:00 to 14:15 ***Invited***

Mikito Ueda *(Faculty of Engineering, Hokkaido University, Sapporo, Japan)*

Formation of porous surfaces using pulse electrolysis

14:15 to 14:30

Sai Gourang Patnaik *(BEChem, Interuniversity Microelectronics Centre - imec, Leuven, Belgium)*, Farzad Rouzafzay, Philippe Vereecken

Towards dense columnar Li via electrodeposition

14:30 to 14:45

Ayman El-Zoka *(Materials Engineering, Imperial College London, London, United Kingdom)*

Designing Novel Nanostructures through Inner-Pore Electrodeposition in Dealloyed Nanoporous Metals

14:45 to 15:00

Dmitry Momotenko *(Institute of Chemistry, School of Mathematics and Sciences, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany)*

Electrochemical Multi-Material Additive Manufacturing With Sub-Microscale Resolution

15:00 to 15:15

Daniel Escalera López *(Department of Interface Science, Fritz-Haber Institute of the Max Planck Society, Berlin, Germany)*, Carlos Gomez Rodellar, Raquel Anastacio Amaral, Beatriz Roldan Cuenya, Sebastian Zeki Oener

Reconciling the Effects of Electrolyte Additives in Electrodeposition Kinetics: a Case Study for Zn

15:15 to 15:30

Zaher Jlailati *(Chemsitry and Biochemsitry, Ruhr-Universität Bochum, Bochum, Germany)*, Maximillian Gerwin, Athanasios Papaderakis, Johanna Angona, Kristina Tschulik

Combined Effect of Boric Acid and Heterogenous Magnetic Fields on Cu-Ni Electrodeposition

15:30 to 15:45

Ludwig Kibler *(Institute of Electrochemistry, Ulm University, Ulm, Germany)*, Sebastian Fackler, Johannes Hermann, Timo Jacob

Cu Underpotential Deposition in the Presence of Acetic Acid

15:45 to 16:00

Dongping Zhan *(Chemistry, Xiamen Univeristy, Xiamen, China)*, Fang-Zu Yang, Lan Geng

Advanced Instrumental Methods for Electronic Electroplating

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

POLiS Post Lithium Storage Cluster of Excellence

16:30 to 16:45

Eugenijus Norkus *(Department of Catalysis, Center for Physical Sciences and Technology (FTMC), Vilnius, Lithuania, Lithuania)*, Ina Stankevičienė, Aldona Jagminienė, Loreta Tamašauskaitė-Tamašiūnaitė

The Autocatalytic Reduction of Cu-Zn alloys using Co(II)-Ethylenediamine Complexes as a Reducing Agent

16:45 to 17:00

Liang Liu *(LCPME, CNRS-LCPME, Villers-les-Nancy, France)*, Marouen Zammali, Mathieu Etienne

Electrodeposition of PVA-borate gel probes for scanning gel electrochemical microscopy

17:00 to 17:15

Martin Nichterwitz *(Electrochemical Sensors and Energy Storage, Chemnitz University of Technology, Chemnitz, Germany)*, Ben Billinger, Karin Leistner

Impact of the Electrolyte Composition on the Self-Termination Mechanism During Nanoscale Iron Oxide/Iron Electrodeposition

17:15 to 17:30

David Adner *(Institute of Chemistry, Martin-Luther-University Halle-Wittenberg, Halle - Saale, Germany)*, Victoria Bombeck, Anne Noubi, Francesco Caddeo, Wouter Maijenburg

Microstructured Cu_2O photocathodes: From electrochemical synthesis to improved properties with ALD-based coatings

17:30 to 17:45

Oliver Chyan *(Chemistry, University of North Texas, Denton, USA)*, Shyam Nair, Khanh Tran, Shinoj Nair

Investigating Bimetallic Corrosion and Reliability in Palladium Coated Copper Wire Bonded Systems

17:45 to 18:00

Frank Kaulfuss *(Carbon Coatings, Fraunhofer Institute for Material and Beam Technology IWS, Dresden, Germany)*, Cory Rusinek, Volker Weihnacht

Carbon thin films as a versatile electrode material in electrochemistry

18:00 to 18:15

Andrea Conte *(Department of Chemical Sciences, University of Padova, Padova, Italy)*, Sebastian Murcia-López, Sara Bonacchi, Sabrina Antonello, María Escudero-Escribano

Nanostructuring Polycrystalline Copper with Chloride and Iodide Electrolytes through a Multivariate Analysis

18:15 to 18:30

Paula Sebastián-Pascual *(Chemistry Department, KTH Royal Institute of Techonology, Stockholm, Sweden)*, Vicente Pascual-Llorens, Albert Serra Ramos, Marco Milia

Electrochemically induced copper shape structures with the square-wave potential method for electrocatalysis

18:30 to 18:45

Vessela Tsakova *(Institute of Physical Chemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria)*, Anelia Nakova, Chiydem Hyusein, Ralitsa Peneva, Ivan Zahariev, Stela Atanasova-Vladimirova, Bogdan Ranguelov

Spontaneous Metal and Bi-metal Deposition on Cathodically Pretreated Carbon Electrodes – a New Approach for Preparation of Carbon-supported Nanocatalysts

18:45 to 19:00

Anjali John *(Chemistry, University of Warwick, Coventry, United Kingdom)*, Joshua J Tully, Julie V Macpherson

Investigation of the Initial Stages of Anodic Corrosion of Boron Doped Diamond

Symposium 9 Durability of materials for energy conversion and storage: Mechanism, mitigation and performance

Room: **Dijon**

Chaired by Matthias Arenz & Annick Hubin

14:00 to 14:15

Shigeto Hirai *(School of Earth, Energy and Environmental Engineering, Kitami Institute of Technology, Kitami, Japan)*, Jeevan Kumar Padarti, Tomoya Ohno

Development of the Highly Durable Electrocatalysts under the Harsh Conditions of Oxygen Evolution Reaction

14:15 to 14:30

Pei Zhao *(Department of Chemistry, University of Warwick, Coventry, United Kingdom)*, Daniel Houghton, Julie Macpherson

Atomic-Level Observation of the Degradation of Iridium Oxide Nanoparticles during the Oxygen Evolution Reaction

14:30 to 14:45

Rebecca Pittkowski *(Department of Chemistry, University of Copenhagen, Copenhagen, Denmark)*

Multi-modal X-ray characterization to probe electrocatalyst amorphization during oxygen evolution

14:45 to 15:00

Muzaffar Maksumov *(Institute of Energy Technologies - IET-1, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Anton Kaus, Zhenjie Teng, Karin Kleiner, Felix Gunkel, Rüdiger-A Eichel, Florian Hausen

In-operando Study of Dynamic and Static Degradation in Perovskite Oxide OER Catalysts by Electrochemical AFM

15:00 to 15:15

Suzanne Delfosse *(ChemSIN, Université Libre de Bruxelles, Brussels, Belgium)*, Souheil Mourtada, Daniel Torres, Aleksei Leontev, Alejandro Gomez-Perez, Jonathan Quinson, Aleksei Makogon, Viacheslav Shkirskiy, Leonardo Bertolucci Coelho, Jon Ustarroz

A Correlative Approach to the Electrodissolution of Gold Nanoparticles

15:15 to 15:30

Herbert Over *(Physical Chemistry, Justus Liebig University, Giessen, Germany)*

Acidic Water Electrolysis for Green Hydrogen Production: Surface Science Approach to Anodic Corrosion

15:30 to 15:45

Santhana Eswara *(Advanced Instrumentation for Nano-Analytics - AINA, Luxembourg Institute of Science and Technology, Belvaux, Luxembourg)*, Athira Suresh Kumar, Tom Wirtz

In-situ microscopy and chemical imaging to investigate local hydrogen-material interactions in metallic alloys

15:45 to 16:00

Hiroki Komiya *(Department of Chemical System Engineering, The University of Tokyo, Bunkyo-ku, Japan)*, Swastik Laha, Keisuke Obata, Kalishankar Bhattacharyya, Kazuhiro Takanabe

Dynamic Potential-pH Diagram of Ni-Based Anodes in Buffered Electrolytes with Chloride Ions for Durable Oxygen Evolution

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

16:30 to 16:45 ***Invited***

Svitlana Pylypenko *(Chemistry, Colorado School of Mines, Golden, USA)*, Matthew Coats, Jonathan Braaten, Lei Cheng, Björn Stühmeier, Christina Johnston, Ulrich Berner

Quantifying Cathode Catalyst Layer Degradation in Proton Exchange Membrane Fuel Cells Using Transmission Electron Microscopy

16:45 to 17:00

Nico C. Röttcher *(Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen, Germany)*, Karl J. J. Mayrhofer, Dominik Dworschak

Tracing Iridium Dissolution Pathways in Proton Exchange Membrane Water Electrolyzers at Relevant Current Densities in Real Time

17:00 to 17:15

Gerard Agravante *(Chemical Engineering, University of Waterloo, Waterloo, Canada)*, Gerard Agravante, Jeff Gostick

Pore Network Modeling of Platinum Catalyst Degradation in PEM Fuel Cells

17:15 to 17:30

Christine Heume *(Institute of Energy Technologies - Fundamental Electrochemistry, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Krzysztof Dzieciol, Eva Jodat, André Karl, Rüdiger-A. Eichel

Inside the MEA: Tracking Degradation in PEM Water Electrolysis with X-Ray Computed Tomography

17:30 to 17:45

Dorottya Hursán *(MEA Development, eChemicles Zrt., Szeged, Hungary)*, Angelika A. Samu, Nikolett Csipak, Csaba Janáky

Optimizing CO_2 Electrolysis: The Role of Cell Conditioning in Enhancing Durability

17:45 to 18:00

Mylène Robert *(Univ Grenoble Alpes, CEA, Liten, DEHT, Grenoble, France)*, Arnaud Morin, Laure Guétaz, Joël Pauchet, Jens Mitzel, Pawel Gazdzicki, Mylène Robert

PEM Fuel Cell Durability under Accelerated Stress Test by Voltage Cycling: Effect of High Operating Temperature

18:00 to 18:15

Jonathan Goh *(Electromagnetic and Electrochemical Technologies, National Physical Laboratory, Teddington, United Kingdom)*, Ali Al-Sikab, Graham Smith

Investigating the Impact of a Hydrogen Impurity Mixture on PEMFC Performance under Static and Dynamic Operation

18:15 to 18:30

Yagya Regmi *(Natural Sciences, Manchester Metropolitan University, Manchester, United Kingdom)*, Debora Belami, Daria Kriuchkova, Thomas Pomone, Laurie King

Durabilities of porous transport layers and coatings in proton exchange membrane water electrolysers

18:30 to 18:45

Amritha P. Sandra *(Chemical Engineering, KTH Royal Institute of Technology, Stockholm, Sweden)*, Vishnu Arumughan, Roberta Texeira Polez, Maria Hahlin, Eero Kontturi, Rakel Wreland Lindström

Nanochitin Enabled Aqueous Processing of Graphite Electrodes for Greener Lithium-ion Batteries

18:45 to 19:00

Andrea Zaffora *(Department of Engineering, University of Palermo, Palermo, Italy)*, Edoardo Gallo, Martina Totaro, Monica Santamaria, Orazio Barbera, Giosué Giacoppo

Synergistic Use of Polarization Curves and Current Density Mapping for Studying PEMFCs Performance

Symposium 10 Green electrochemistry for a sustainable world

Room: **Meeting 1**

Chaired by Carlos A. Martínez-Huitle & Minghua Zhou

14:00 to 14:15

Björn Wickman *(Department of Physics, Chalmers University of Technology, Göteborg, Sweden)*, Vera Roth

Efficient Mercury Decontamination of Aqueous Solutions Using Electrochemical Alloy Formation

14:15 to 14:30

Benjamin Rotonnelli *(institut Jean Lamour, Univeristé de Lorraine, Nancy, France)*, Stéphanie Michel, Elvie Nkoma Nzaou, Sie Ismaël Romarique Youl, Wen Xuan, François Lapicque, Angel Fernandez Blanco, Romain Duwald, Sophie Legeai

Electrowinning-Electrodeposition Process Development for Selective Separation of Noble Metals from Waste-Electronic-Equipments in Deep Eutectic Solvents

14:30 to 14:45

Luis F. Chazaro-Ruiz *(Division de Ciencias Ambientales, Instituto Potosino de Investigacion Cientifica y Tecnologica, San Luis Potosi, Mexico)*, Jonathan J. Ruiz-Martinez, Rene Rangel-Mendez

Fluoride Electrosorption in a Continuous System Using Lanthanum-Modified Activated Carbon Electrode

14:45 to 15:00

Yudong Xue *(BS, EPFL, Sion, Switzerland)*

Electrochemical Product Engineering for Sustainable Resource Recovery and High-Value Chemical Manufacturing

15:00 to 15:15

Jian Zhou *(Physical department, Technical University of Munich, Munich, Germany)*, Pantila Sittikariyakul, Sebastian Sturm, Knut Müller Caspary, Elena Gubanova, Elena V. Sturm, Aliaksandr Bandarenka

Au@Ag Core-shell Nanostructures for Enhanced Nitrate Electroreduction to Ammonia

15:15 to 15:30

Huiyu Gai *(Physics department, Technical University of Munich, Munich, Germany)*, Shilong Fu, Ruud Kortlever, Elena Gubanova, Aliaksandr Bandarenka

Cu-based catalysts for Efficient Ammonia Synthesis

15:30 to 15:45 ***Invited***

Carlos A Martínez-Huitle *(Institute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil)*, Sergio Fernández-Velayos, Kaique S.G.C. Oliveira, Tabata N. Feijoó, Luis D. Loor-Urgilés, Amanda D. Gondim, Livia N. Cavalcanti, Elisama Vieira dos Santos

Exploring Innovative Ex-Cell Applications of the Electrogenerated Oxidants

15:45 to 16:00

Stephane Bastide *(Institut de Chimie et des Matériaux Paris-Est, CNRS - Unversité Paris-Est Créteil, Thiais, France)*, Raihana Benyahia, Lamia Rebiai, Kadiatou Bah, Encarnacion Torralba, Diane Muller, Vincent Rocher, Sam Azimi, Melissa Lopez-Viveros, Christine Cachet-Vivier

Influence of the Urine Matrix on the Electrochemical Oxidation of Urea with Nickel-Based Catalysts for Urine Nitrogen Removal Treatments

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

POLiS Post Lithium Storage Cluster of Excellence

16:30 to 16:45

Joshua Tully *(Department of Chemistry, University of Warwick, Coventry, United Kingdom)*, Marius Amerio-Cox, Fengping Tang, Anna Dettlaff, Julie Macpherson, Tim Mollart, Tim Sidnell, Simone Mathias, Patrick Sears, Madeline Bussemaker

Investigating the Rate of Short-Chain PFAS Destruction via Electrochemical Oxidation with Boron Doped Diamond Electrodes

16:45 to 17:00

Serena Randazzo *(Ingegneria, University Of Palermo, Palermo, Italy)*, Onofrio Scialdone, Alessandro Galia

Chlorination of Phenol Solutions by Chemical and Electrochemical Processes

17:00 to 17:15

Waralee Dilokekunakul *(Chemical Process Engineering, RWTH Aachen University - Aachener Verfahrenstechnik , Aachen, Germany)*, Waralee Dilokekunakul, Mojtaba Mohseni, Matthias Wessling, Robert G. Keller

A Flow-Through Electrochemical Reactor for Dehalogenation of Halogenated Pollutants using Homemade Carbon Microtubes

17:15 to 17:30 ***Invited***

Zhihong Ye *(College of Environment and Ecology, Chongqing University, Chongqing, China)*, Pan Xia, Chao Wang

Modulating the Adsorption Behaviors of Reaction Intermediates on Transition Metal-based Catalysts for Two-Electron Oxygen Reduction

17:30 to 17:45

Ivo van Luijk *(Biobased Chemistry and Technology, Wageningen University and Research - biobased chemistry and , Wageningen, Netherlands)*

Geometrical Particle Size Effect for Efficient Electrochemical Hydrogen Peroxide Production with Nickel Nanoparticles

17:45 to 18:00

Ida Dinges *(Chemical Technology, DECHEMA Research Institute, Frankfurt am Main, Germany)*, Elias Klemm, Siegfried R. Waldvogel, Markus Stöckl

Complete Electrosynthesis of Performic Acid from CO_2, O_2 and H_2O

18:00 to 18:15

Minghua Zhou *(College of Environmental Science and Engineering, Nankai University, Tianjin, China)*

(Photo)electrocatalysis system for simultaneous water purification and value-added chemicals production

18:15 to 18:30

Omotayo Arotiba *(Chemical Sciences, University of Johannesburg, Johannesburg, South Africa)*, Dimpo Sipuka, Tsholofelo Sebokolodi, Kehinde Jayeola

Semiconductor Heterojunctions in Photoelectrocatalytic Treatment of Water

18:30 to 18:45

Myriam Kellou *(GEPEA, Nantes University/Treewater, Alixan, France)*, Hélène Métivier, Gerald Thouand, Bruno Cédat, Emmanuel Mousset

Determination of the Most Influential Parameters of an Innovative Electrochemical Reactor Design for Efficient Industrial Wastewater Treatment

18:45 to 19:00

Davide Clematis *(Department of Civil, Chemical and Environmental Engineering, University of Genoa, Genoa, Italy)*, Ekaterina Skolotneva, Antonio Barbucci, Marco Panizza

Advancing Operando Diagnostics in Electrochemical Advanced Oxidation Processes: Overcoming Instabilities in Electrochemical Impedance Spectroscopy

Symposium 11 Electrochemical technologies for energy and industrial electrosynthesis at scale

Room: **Meeting 2B**

Chaired by José L. Nava & Luciana Vieira

14:00 to 14:15

Faria Huq *(Institute of Engineering Thermodynamics, German Aerospace Center, Stuttgart, Germany)*, Joost Helsen, Pieterjan Debergh, Martin Avagyan, David Solera, Eirini Zagoraiou, Anastasia-Maria Moschovi, Iakovos Yakoumis, Charly Azra, Luca Riillo, Anna Ramunni Ramunni

Progress and Insights into a 50 kW Stack Electrolyzer for CO_2 Conversion to Value-Added Chemicals and Fuels

14:15 to 14:30

Mark Sassenburg *(SPES, TNO, Rijswijk, Netherlands)*

Towards industrial ethylene electrosynthesis: upscaling hurdles and perspectives

14:30 to 14:45

Philipp Beeskow *(Institute of Catalysis Research & Technology - IKFT, Karlsruhe Institute of Technology - KIT, Eggenstein-Leopoldshafen, Germany)*, Niklas Oppel, Philipp Röse, Ulrike Krewer, Jörg Sauer

Applying a sustainability modeling framework on CO_2 reduction to guide technological advances

14:45 to 15:00

Egon Kecsenovity *(Stack Development, eChemicles Zrt., Szeged, Hungary)*, Pedro Arrias Villaroel, Csaba Janáky

Scaling Up CO_2 Electrolyzer Cell Stack: Addressing Mechanical Challenges on Performance

15:00 to 15:15

Balázs Endrõdi *(Department of Physical Chemistry and Materials Science, University of Szeged, Szeged, Hungary)*, Angelika A. Samu, Csaba Janáky

What's behind the limited lifetime of CO_2 electrolyzers?

15:15 to 15:30

Lieven Hintjens *(Faculty of Applied Engineering, University of Antwerpen, Wilrijk, Belgium)*, Sam Van Daele, Järi Van den Hoek, Daniel Choukroun, Tom Breugelmans

Controlling Water and Product Crossover through Cation Exchange Membranes for Sustainable Zero-Gap CO_2 Electrolyzers

15:30 to 15:45

Asato Inoue *(RCSEC, Graduate School of Engineering Science, The University of Osaka, Toyonaka, Japan)*, Sora Nakasone, Ryotaro Yoshida, Shoko Nakahata, Takashi Harada, Shuji Nakanishi, Kazuhide Kamiya

Effect of Interparticle Spacing in Catalyst Layers on the Current Density of Gaseous CO_2 Reduction Reactions

15:45 to 16:00

Mahdi Salehi *(Chemical Engineering, McGill University, Montreal, Canada)*, Ali Seifitokaldani

Bridging the Lab-to-Industry Gap: A Scalable ITO Catalyst for Stable CO_2 Electroreduction to Formate at 200 mA/cm^2 for 1000 Hours

16:00 to 16:30

Coffee Break Sponsored by ***POLiS - Cluster of Excellence***

16:30 to 16:45

Flora Haun *(Electrochemistry, Helmholtz-Zentrum Berlin, Berlin, Germany)*, Siddharth Gupta, Christina Roukounaki, Gumaa El-Nagar, Matthew Mayer

Understanding the Influence of Cations in Zero-Gap $CO_{(2)}$ Electrolyzers

16:45 to 17:00

Bishnubasu Giri *(Institut Parisien de Chimie Moléculaire, Sorbonne Université, Paris, France)*, Medhanie G. Gebru, Marc Robert

Electrochemical Conversion of CO_2 to MeOH by Cobalt-based Molecular Catalyst in Flow Electrolyzer

17:00 to 17:15

Anoop Naikkath *(Chemical Engineering, Indian Institute of Technology Madras, Chennai, India)*, Kothandaraman Ramanujam, Ramanathan Srinivasan

Integrated CO_2 Electrolysis and Hypochlorite Production: Assessment of Performance and Economic Viability

17:15 to 17:30

Kun Jiang *(Department of Chemistry, Fudan University, Shanghai, China)*

Continuous Electrosynthesis of High-Purity HCOOH Solution from CO_2 Building Blocks within Solid-State Electrolyzer

17:30 to 17:45 ***Invited***

José L. Nava *(Geomatic and Hydraulic Engineering, University of Guanajuato, Guanajuato, Mexico)*

Design of Electrochemical Flow Cells for the Electrosynthesis of HClO and H_2O_2

17:45 to 18:00

Sergio Fernández-Velayos *(Departamento de Química Física Aplicada, Universidad Autónoma de Madrid, Madrid, Spain)*, Jorge Sánchez-Marcos, Eva Mazarío, Elisama V. dos Santos, Carlos A. Martínez-Huitle

New Insights into Persulfate Electrochemical Production Mechanism using a BDD anode: On the Frontier between Hydrogen Peroxide and Persulfate Production

18:00 to 18:15

Jürgen Kintrup *(Basic Chemicals, Isocyanates & Infrastructure, Covestro Deutschland AG, Leverkusen, Germany)*, Katja Weichert

Insights How to Address Electrocatalyst and Electrode Lifetime and Reliability Issues in Early Development – "Bridging the Gap"

18:15 to 18:30

Luciana Vieira *(Sustainable Catalytic Processes, BioCat Straubing, Fraunhofer IGB, Straubing, Germany)*, Kaiyue Lou, Carsten Pietzka, Dhananjai Pangotra, Arne Roth

Power to Hydrogen Peroxide: Paired Electrochemical Generation of Hydrogen Peroxide from Air, Water and Renewable Electricity

18:30 to 18:45

Francisca Mendez Florido *(Process Engineering of Electrochemical Systems, TU Darmstadt, Darmstadt, Germany)*, Francisca Mendez Florido, Anselm Brodersen, John Linkhorst

Direct Electrochemical Reduction of Iron Oxide for Metal Energy Storage

Symposium 13 Mechanisms in molecular electrochemistry for (bio-)catalysis, (bio-)sensing and electronics

Room: **Meeting 3B**

Chaired by Valentina Pifferi & Federico Polo

14:00 to 14:15 ***Invited***

Dan Bizzotto *(Chemistry, University of British Columbia, Vancouver, Canada)*, Adrian Grzedowski

Electrochemical DNA nanocube SAM based sensors using redox modulated fluorescence

14:15 to 14:30 ***Invited***

Ismael Diez-Perez *(Chemistry, Kings College London, London, United Kingdom)*, Tracy Ha, Desmond Koomson, Albert C Aragones, Kavita Garg, Sarah Barry, Alex Brogan, Jessica P., Qiankun Wang

Real-Time Electrical Transduction of Single Catalytic Turnover Events in a Single-Protein Enzymatic Junction

14:30 to 14:45

Manuela López-Tenés *(Dpto. de Química Física, Universidad de Murcia, Murcia, Spain)*, Eduardo Laborda, Angela Molina, Joaquin Gonzalez

Study of a surface two-electron transfer mechanism with slow kinetics. Theoretical framework under Butler-Volmer and Marcus-Hush-Chidsey kinetic models

14:45 to 15:00

Eduardo Laborda *(Physical Chemistry, University of Murcia, Murcia, Spain)*, Javier López-Asanza, Judit Moreno-Molina, Joaquín Gonzalez, Angela Molina

Homogeneous Molecular Catalysis Under Second Order Kinetics: Insights into Substrate Depletion and Voltammetric Signatures

15:00 to 15:15

Junyang Liu *(College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China)*, Yiqang Jiang, Yuting Li, Hua Zhang, Meiling Su, Zhixin Qiu, Wenjing Hong

Probing Molecular Electrocatalytic Mechanism for Hydrogen Evolution Reaction through Single-molecule Conductance Measurement by MCBJ

15:15 to 15:30

Joaquin Gonzalez *(Dpto. de Química Física, Universidad de Murcia, Murcia, Spain)*, Manuela López-Tenés, José-Víctor Hernández-Tovar, Antonio J. Martínez-García

Kinetic influences in electrochemical responses under finite diffusion conditions

15:30 to 15:45

Leigh Aldous *(Department of Chemical Engineering, National Taiwan University, Taipei, Taiwan)*, Kristine Laws, Mark Buckingham

Entropy-Driven Thermoelectrochemical Systems for Waste Heat Harvesting: Electrostatic Electrocatalysis using Charged Self-Assembled Monolayers or DNA

15:45 to 16:00

Alan Liška *(Department of Molecular Electrochemistry and Catalysis, J. Heyrovský Institute of Physical Chemistry of the CAS, Praha, Czech Republic)*, Veronika Ružičková

Approximate first redox potential estimations by smartphone app QuantumChemDroid

16:00 to 16:30

Coffee Break Sponsored by ***POLiS - Cluster of Excellence***

16:30 to 16:45 ***Invited***

Paolo Actis *(Electronic and Electrical Engineering, University Of Leeds, Leeds, United Kingdom)*, Chalmers Chi Cheng Chau, Dylan Charnock, Christoph Wälti

Nanopore Sensing Beyond the Genomics Era

16:45 to 17:00 ***Invited***

Yi-Lun Ying *(School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China)*

Nanopore Electrochemistry for Studying Single-Molecule Reaction

17:00 to 17:15 ***Invited***

Ilaria Palchetti *(Department of Chemistry, University of Florence, Firenze, Toscana, Italy)*, Anna Emanuele, Patrick S. Sfragano, Serena Laschi, Lorenzo Quadrini, Francesca Spatafora

Smart electrode surfaces for sensing contaminants of environmental concern

17:15 to 17:30

Patrizia Romana Mussini *(Dipartimento di Chimica, Università degli Studi di Milano, Milano, Italy)*, Serena Arnaboldi, Sara Grecchi, Emanuela Licandro, Silvia Araneo, Tiziana Benincori, Francesca Fontana, Simona Rizzo, Lorenzo Guazzelli, Roberto Cirilli

A Casebook of Selectors and Probes in Chiral Voltammetry: Stereogenic Elements, Interactions, Implementation Strategies

17:30 to 17:45

Mengchi Wang *(School of Life & Environmental Sciences, Deakin University, Highton, Australia)*, Na Kong, Aisha Javed, Motilal Mathesh Shanmugam

Electrochemical Evidence of Chiral Recognition between Microperoxidase-11 and Cysteine-Modified Chiral Electrodes

17:45 to 18:00 ***Invited***

Stefano Cinti *(Pharmacy, University of Naples Federico II, Naples, Italy)*

The Impact of Paper-based Architectures on Electroanalysis

18:00 to 18:15

Giovanni Valenti *(Chemistry Ciamician, University of Bologna, Bologna, Italy)*, Giovanni Valenti, Claudio Santo, Andrea Fiorani, Yasuaki Einaga, Luca Prodi, Francesco Paolucci

Electrochemiluminescence Microscopy: Cutting-Edge Material for Boosting Sensitivity in Bead-Based Assay

18:15 to 18:30

Omolola Fayemi *(Chemistry, North West University, Mafikeng South Africa, Mafikeng, South Africa)*

Uric acid electrochemical sensors at screen-printed modified 2,3-naphthalocyanine/nickel oxide electrode

18:30 to 18:45

Elzbieta Jarosinska *(Sensor Arrays Group, Institute of Physical Chemistry PAS, Warszawa, Poland)*, Karthika Kappalakandy Valapil, Antonina Lavrentieva, Emilia Witkowska-Nery

A sensor arrays for simultaneous measurements oxygen, glucose and cellular adhesion in cell culture

18:45 to 19:00 ***Invited***

Chia-Liang Sun *(Department of Chemical and Materials Engineering, Chang Gung University, Taoyuan, Taiwan)*, Hung-Yu Chen, Mrinal Poddar

Lighting up Graphene Oxide Nanoribbons for Photoelectrochemical Sensing

Symposium 14 Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Gutenberg C**

Chaired by Yvonne Grunder, Jian-Feng Li & Rik Mom

14:00 to 14:15 ***Invited***

Michael Eikerling *(Institute of Energy Technologies - IET-3, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Jun Huang, Yufan Zhang, Nils Bruch, Tobias Binninger

Advancing the Theory of the Local Reaction Environment in Electrocatalysis: from Model Interfaces to Supported Nanoparticles

14:15 to 14:30

Xinwei Zhu *(IET-3, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Jun Huang, Michael Eikerling

Hierarchical Modeling of Local Reaction Environment in Electrocatalysis

14:30 to 14:45

Liana Savintseva *(Institute of Catalysis Research and Technology - IKFT,, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany)*, Dmitry I. Sharapa, Felix Studt

DFT-Based Microkinetic Simulation of Cyclic Voltammetry for Protected Amines

14:45 to 15:00

Tamás Pajkossy *(Institute of Materials and Environmental Chemistry, Research Centre for Natural Science, Budapest , Hungary)*

Diffusion-affected charge transfer: demonstration experiment for the linear relationship between current and its semiintegral

15:00 to 15:15

Masao Suzuki Shibata *(Chemical and Biomolecular Engineering, University of California, Irvine, Irvine, USA)*, Yu Chen, Alexandra Zagalskaya, Tadashi Ogitsu, Tuan Anh Pham, Yu Morimoto, Adam Weber, Iryna Zenyuk

How does Electric Double Layer Impact Reaction Kinetics?

15:15 to 15:30

Sheila Hernandez *(Chair of Analytical Chemistry II, Ruhr-univesität Bochum, Bochum, Germany)*, Rami Shafei, Dimitrios Manganas, Stephan Schulz, Frank Neese, Kristina Tschulik

The strength of combining theory and experimental Raman spectroscopy. The case of Co_3O_4 as electrocatalyst.

15:30 to 15:45

Eleanor Ender *(Department of Chemistry, University of Manchester, Manchester, United Kingdom)*

Towards the Understanding of Alkaline Electrolyser Degradation – Prolonged and Intermittent Operation

15:45 to 16:00

Ramadan Chalil Oglou *(Interdisciplinary Nanoscience Center, Aarhus University, Aarhus, Denmark)*, Morten Linding Frederiksen, Zhaozong Sun, Marcel Ceccato, Andrey Shavorskiy, Jeppe Vang Lauritsen

Operando NAP-XPS Study of Porous Electrodes for Water Splitting

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

16:30 to 16:45 ***Invited***

Travis Jones *(Theoretical Division, Los Alamos National Lab, Los Alamos, USA)*, Rahul Jayan, Akhil Peeketi, Lorena Alzate Vargas, Detre Teschner

Role of Surface Phases in Electrocatalytic Oxygen Evolution

16:45 to 17:00

Andrea Russell *(School of Chemistry and Chemical Engineering, University of Southampton, Southampton, United Kingdom)*, Connor Sherwin, Veronica Celorrio, Alessandro Difilippo, Katie Rigg, Mark Clapp, Armando Ibraliu, Luke Luisman, Thomas Wakelin, Thomas Wakelin, Amber Watson, Nikolay Zhelev, Lucy Mcleod, Chris Zalitis

Structural transformations of IrO_2 during electrochemical cycling

17:00 to 17:15

Yemin Tao *(Materials, Imperial College London, London, United Kingdom)*, Tomohiko Utsunomiya, Haiting Yu, Caiwu Liang, Yifeng Wang, Mary Ryan, Ifan Stephens, James Durrant, Yu Katayama, Aliaksandr Bandarenka, Reshma Rao

Investigating Cation-Dependent Water Oxidation Kinetics on Iridium Based Oxides

17:15 to 17:30 ***Invited***

James Durrant *(Chemistry, Imperial College London, London, United Kingdom)*

Operando optical spectroelectrochemical analyses of water oxidation catalysis.

17:30 to 17:45

Justus Leist *(Institute of Electrochemistry, Ulm University, Ulm, Germany)*, Annika Neufischer, Benjamin Schick, Sylvain Brimaud, Timo Jacob, Albert K. Engstfeld

Effect of pH on the Near Surface Structure of Nickel Anodes during the Oxygen Evolution Reaction

17:45 to 18:00

Marc Tesch *(Heterogeneous Reactions, Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Garlef Wartner, Aliakbar Ghafari, Twinkle Yadav, Ronny Golnak, Jie Xiao, Travis Jones, Axel Knop-Gericke, Alexandr Simonov, Ioannis Spanos

Potentiodynamic Spectroscopy to Study Pre- and Post-Catalytic Processes in 3d Transition Metal Based OER Catalysts

18:00 to 18:15

Jordy Eggebeen *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Ida Kær Mønge, Onno Van der Heijden, Marc Koper, Rebecca Pittkowski

Influence of Alkali Cations on NiFeOOH Structure During Operando Oxygen Evolution

18:15 to 18:30

Sid Halder *(Department of Materials, Imperial College London, London, United Kingdom)*, Qing Su, Yifeng Wang, Caiwu Liang, Veronica Cellorio, Yu Katayama, Mary Ryan, Reshma Rao

Impact of cobalt intercalation on the electrochemical properties of layered birnessite under water oxidation potentials

Symposium 16 General Session - Hidden treasures - diversity of electrochemistry

Room: **Zagreb A**

Chaired by Wolfgang Schuhmann & Zhong-Qun Tian

14:00 to 14:10

José Ferreira *(Physical Organic Chemistry, Radboud University, Nijmegen, Netherlands)*, Jeroen Michiels, Marty Herregraven, Peter Korevaar

Electrochemical growth of dynamic conductive networks, mediated by supramolecular myelin filaments

14:10 to 14:20

Johanna Angona *(Analytical Chemistry II, Faculty of Chemistry & Biochemistry, Ruhr University Bochum, Bochum, Germany)*, Dylan Jennings, Xelenia Agliuzza, Carlo Franke, Parham Gemagami, Aleksander Kostka, Guillaume Laplanche, Christian H. Liebscher, Tong Li, Kristina Tschulik

Probing Crystal Orientation-Dependent Catalytic Activity and Surface Reconstruction of CrMnFeCoNi High Entropy Alloys by Correlative Microscopy

14:20 to 14:30

Sarah Horn *(Institute of Analytical and Bioanalytical Chemistry, University of Ulm, Ulm, Germany)*, Sarah Horn, Giada Caniglia, Sarah Jasmin Finkelmeyer, Martin Presselt, Christine Kranz

Scanning Photoelectrochemical Microscopy for the in situ Investigation of Modified Langmuir-Schaefer Films

14:30 to 14:40

Annika Just *(Chemistry and Biochemistry, Analytical Chemistry II, Ruhr-Universität Bochum, Bochum, Germany)*, Mahnaz Azimadeh Sani, Kristina Tschulik

Exploring the Kinetics of the Hydrogen Evolution Reaction on Platinum Nanoparticles at Single Entity Level

14:40 to 14:50

Zoé Dessoliers *(Chemical Energy - Nanoscale Solid-Liquid Interfaces, Helmholtz Zentrum Berlin, Berlin, Germany)*, Louis Godeffroy, Mailis Lounasvuori, Namrata Sharma, Arsène Chemin, Philipp Adelhelm, Tristan Petit

Chemical imaging of Na^+ intercalation in $Ti_3C_2T_x$ MXene in organic electrolyte

14:50 to 15:00

Renata Palowska *(Faculty of Chemistry, Jagiellonian University, Krakow, Poland)*, Grzegorz Sulka, Agnieszka Brzozka

Preparation of Co, Ni, and Ru-Containing Microstructured Materials Through Electrodeposition From a Deep Eutectic Solvent

15:00 to 15:10

Javier López Asanza *(Physical Chemistry, University of Murcia, Murcia, Spain)*, Francisco Martínez-Ortiz, Angela Molina, Eduardo Laborda

Square Wave Voltammetry for Reference-Free Electrochemical Detection: Theoretical and Experimental Insights

15:10 to 15:20

Yunju Kim *(Department of Chemistry, Seoul National University, Seoul, Korea)*, Song Yi Yeon, Chung Mu Kang, Sanguk Park, Taek Dong Chung

Aqueous Power Source Integrated on a Microfluidic Chip

15:20 to 15:30

Ying-Huan Fu *(School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China)*, Yi-Tao Long, Yi-Lun Ying

Exploring the Single-Molecule Transient Interactions with Nanopore Electrochemical Frequency Spectrum

15:30 to 15:40

Wooyeoul Shim *(Department of Chemistry, Seoul National University, Seoul, Korea)*, Taek Dong Chung

Determination of Trace Amount of Cu in NCM of Lithium Ion Battery

15:40 to 15:55

Armin Leonhard *(Electrochemistry and Resources, DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany)*, Christian Modrzynski

Electrochemical Recovery of Battery Materials

16:00 to 16:30

Coffee Break *Sponsored by* ***POLiS - Cluster of Excellence***

POLiS Post Lithium Storage Cluster of Excellence

16:30 to 16:45

Carla Marie Stork *(Electrosynthesis, Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Siegfried R. Waldvogel

Exploring Eco-Friendly Pathways: Innovative Approaches to Hydrogen Isotope Labelling

16:45 to 17:00

Alessandra Pensieri *(CPCV, Ecole Normale Supérieure, Paris, France)*, Jérôme Delacotte, Manon Guille-Collignon, Frédéric Lemaître, Neso Sojic, Éric Labbé, Laurent Thouin, Olivier Buriez

Combination of Electrochemiluminescence and Microfluidics to Study Molecular Fluxes Induced by Membrane Permeabilization of Giant Liposomes in Real Time

17:45 to 18:00

José María Gisbert-González *(Interface Science, Fritz Haber Institute of the Max Planck Society, Germany)*, Beatriz Roldan Cuenya, Sebastian Z. Oener

Disentangling Electrochemical Reaction Pathways via Bias-Dependent Entropy-Enthalpy Relationships

17:00 to 17:15

Fan Gao *(School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China)*, Yi-Tao Long, Yi-Lun Ying

Identification of Oligosaccharide Isomers Using an Electrostatically Asymmetric OmpF Nanopore

17:15 to 17:30

Alex Ricardo Silva Olaya *(Interface Science, Fritz Haber Institute of the Max Planck Society, Berlin, Germany)*, Jody Druce, Jose M. Gisbert Gonzalez, Beatriz Roldan Cuenya, Sebastian Z. Oener

The Impact of Pressure and Bias on the Transition State of the Oxygen Reduction Reaction

17:30 to 17:45

Géssica Santos *(Department of Molecular Chemistry and Physics, University of São Carlos, São Carlos, Brazil)*, Gessica Santos, Beatriz Marin, William Parra, Artur Motheo, Otaciro Nascimento, Marcos Lanza

Carbon-based gas diffusion electrodes for two-electron oxygen reduction: mechanistic study and performance in organic and water-alcohol media in flow cells

18:00 to 18:15

Martín Pérez-Estébanez *(Chemistry, University of Burgos, Burgos, Spain)*, Maria Huidobro, Luis Romay, Natalia Perez-Gomez, Aranzazu Heras, Alvaro Colina

Electrodeposition of Wide Band Gap Semiconductors for SERS Sensing

18:15 to 18:30

Sho Toriumi *(Department of Applied Chemistry, Tokyo University of Science, Tokyo, Japan)*, Kodai Moriya, Mika Takemura, Changhee Lee, Shinichi Kumakura, Shinichi Komaba

Phase Formation Process of Layered A_xCoO_2 (A = Li, Na, and K) Observed with High-Temperature Synchrotron XRD

18:30 to 18:45

Karthik Kumaran Saravanan *(Department of Chemistry, The University of Manchester, Manchester, United Kingdom)*, Robert A.W. Dryfe

Charge Transfer at Ethylene Glycol | TFT Interface: A new Oil | Oil Interface between Two Immiscible Electrolyte Solutions

Wednesday 10 September 2025 - *Morning*

Plenary

Room: **Kongress-Saal**

Chaired by Siegfried Waldvogel

08:15 to 09:15

Julie Macpherson *(Chemistry, University of Warwick, Coventry, United Kingdom)*

Playing to Strengths: The Advantages of Using Boron Doped Diamond in Electrochemical Research

Symposium 2 Bioelectrochemistry from fundamentals to sustainable applications

Room: **Zagreb B**

Chaired by Renata Bilewicz & Frank Crespilho

09:30 to 10:00 ***Keynote***

Wlodzimierz Kutner *(Institute of Physical Chemistry, Polish Academy of Sciences, Kasprzaka 44/52, 01-224, Warsaw, Poland)*, Fatah Ben Moussa, Tutku Beduk, Amadeo Sena-Torralba, Ebrahim Mostafavi

Natural versus Artificial Electrochemical Bio- and Chemosensing of Cancer Biomarkers

10:00 to 10:15

Stefania Rapino *(Department of Chemistry Giacomo Ciamician, University of Bologna, Bologna, Italy)*, Simona De Zio, Maila Becconi, Elisa D'Arrigo, Marco Malferrari

3D Bioprinting and Electrochemical Imaging: A Sustainable Approach to Study Tumor Metabolism and Microenvironment

10:15 to 10:30

Dhesmon Lima *(Department of Chemistry and Physics, Mount Saint Vincent University, Halifax, Canada)*, Roy Daou, Mengzhen Lyu, Katherine Bazin, Dao Trinh, Mark Nachtigal, Sabine Kuss

Detection of Carboplatin Chemoresistance in Living Ovarian Cancer Cells by Scanning Electrochemical Microscopy

10:30 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

WEDNESDAY AM

Symposium 3 Electrochemical and bioelectrochemical synthesis of small molecular products

Room: **Meeting 3A**

Chaired by Nicolas Plumere & Eileen Yu

09:30 to 09:45

Eileen Yu *(chemistry and chemical engineering, University of Southampton, Southampton, United Kingdom)*, Mohammad Danish Khan, Martin Kingsley

Microbial Fuel Cells and Microbial Electrosynthesis: Transforming Glycerol-rich Wastewater and CO_2 into Valuable Products

09:45 to 10:00

Kavita Jayakumar *(Instituto de Catálisis y Petroleoquímica, CSIC, Madrid, Spain)*, Cristian Fera, Jose Maria Abad, Antonio Lopez De Lacey, Marcos Pita

Viologen-Based Redox Polymers as Artificial Cofactors for NADH-Independent Bioelectrocatalysis

10:00 to 10:15

Gabriela Rizzo Piton *(Chair of Electrobiotechnology, Technical University of Munich / Fraunhofer IGB, Straubing, Germany)*, Melanie Speck, Jonathan Thomas Fabarius, Dhananjai Pangotra, Carina Sagstetter, Nicolas Plumeré, Arne Roth, Luciana Vieira

Bio-electro Cascade Process for CO_2 Conversion to Glycolic Acid

10:15 to 10:30

Anirudha Shekhawat *(Chemistry and Biochemistry, Ruhr University Bochum, Bochum, Germany)*, Anirudha Shekhawat, Shubhadeep Chandra, Bashir Eid, Ridha Zerdoumi, Wolfgang Schuhmann

Coupling CO_2 Reduction with Ethanol Oxidation for High-Yield Acetic Acid Production in a Dual-Reactor System

*10:30 to 11:00 Coffee Break Sponsored by **HIDEN Analytical***

*11:00 to 12:30 Session 2, Posters Sponsored by **BioLogic - Science Instruments***

Symposium 4 Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg B**

Chaired by Stefan Freunberger

09:30 to 10:00 ***Keynote***

Kelsey Hatzell *(Mechanical and aerospace engineering, Princeton University, Princeton, USA)*

Chemo-mechanics in solid-state battery cathodes and anodes

10:00 to 10:15 ***Invited***

Zhen Chen *(School of Electrical and Electronic Engineering, Harbin University of Science and Technology, Harbin, China)*, Yang Wang, Zeyu Niu, Minghua Chen

Multiscale Regulation of Ceramic Dispersion and Interfacial Dynamics in Composite Solid-State Electrolytes for Lithium Metal Batteries

10:15 to 10:30 ***Invited***

Nella Vargas-Barbosa *(Chemistry, University of Bayreuth, Bayreuth, Germany)*

(Almost) Solid-State Batteries: Liquid Electrolyte-Solid Electrolyte Hybrids

10:30 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

Symposium 5a New battery chemistries

Room: **Watford**

Chaired by Sai Gautam Gopalakrishnan & Rebeca Marcilla

09:30 to 09:45 ***Invited***

Sai Gautam Gopalakrishnan *(Materials Engineering, Indian Institute of Science, Bengaluru, India)*, Aqshat Seth, Vijay Choyal, Debsundar Dey

Machine Learning Guided Exploration of Amorphous Electrodes and Electrolytes

09:45 to 10:00

Che-an Lin *(Laboratory for Chemistry and Life Science, Institute of Science, Tokyo, Yokohama, Japan)*, Huu Duc Luong, Yoshitaka Tateyama

First-principles molecular dynamics study for Na cluster formation and Na-ion diffusion in hard carbon pores

10:00 to 10:15

Anna Kobets *(Department of Chemistry and Material Science, Aalto University, Espoo, Finland)*, Seyedabolfazl Mousavihashemi, Virpi Siipola, Taina Rauhala, Filipp Obrezkov, Jaana Vapaavuori, Tanja Kallio

Plant-Based Biocarbon Materials for Sodium-Ion Batteries

10:15 to 10:30

Grainne Gilleece *(Department of Engineering, Durham University, Durham, United Kingdom)*, Dagou Zeze, Natasha Shirshova, Ensieh Hosseini

Graphene Quantum-Dot Based Nanostructured Electrodes For Advanced Sodium-Ion Batteries

10:30 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

Symposium 5b New battery chemistries

Room: **Gutenberg A**

Chaired by Matteo Bianchini & Sonia Dsoke

09:30 to 09:45 ***Invited***

Noha Sabi *(HTMR, HTMR/UM6P, Ben Guerir, Maroc)*, Krishnaveni Palanisamy, Sven Daboss, Christine Kranz

Understanding the Surface Properties-Performance of Aluminum Foil as Negative Electrode for Rechargeable Aluminum Batteries

09:45 to 10:00

Jule Meier-Merziger *(Institute of Energy Technologies - IET-1, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Yasin Emre Durmus, Ansgar Kretzschmar, Luc Raijmakers, Roghayeh Alizadeh, Hermann Tempel, Rüdiger-Albert Eichel

Optimization of Separators in Aluminum-Ion-Batteries: Influence of material properties and pore structure on the performance and lifetime

10:00 to 10:15

Franziska Jach *(Energy Materials and Test Devices / Group Battery Materials, Fraunhofer IISB, Erlangen, Germany)*, Ngoc Tram Nguyen, Fatjon Maxharraj, Charan Mukundan, Max Bamberg, Martin Eckert, Marius H. Wetzel, Peter Marcinkowski, Jana Gatz, Granit Jashari, Kristian Nikolowski, Gero Frisch, Ulrike Wunderwald

Aluminum Graphite Dual Ion Batteries: Cathode Development from Intercalation Studies to Electrode Upscaling

10:15 to 10:30

Helene Lillevestre Langli *(Department of Materials Science and Engineering, Norwegian University of Science and Technology - NTNU, Trondheim, Norway)*, Henrik Wold, Andreas Erbe, Ann Mari Svensson

Non-Active Materials for Aluminium-Carbon Battery Cathodes

10:30 to 11:00

Coffee Break Sponsored by ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters Sponsored by ***BioLogic - Science Instruments***

WEDNESDAY AM

Symposium 6a Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Kongress-Saal**

Chaired by María Escudero-Escribano & Ifan Stephens

09:30 to 09:45 ***Invited***

F. Pelayo García de Arquer *(arquerlab, ICFO, Barcelona, Spain)*

Active Interface Management in Water-based Electrolysis towards Improved Performance

09:45 to 10:00

Yan Ding *(College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China)*

Low-Ir Catalyst Based on Highly Conductive TiO_2 for Efficient and Stable Proton Exchange Membrane Water Electrolysis

10:00 to 10:15

Mareike Sonder *(Institute for Applied Materials-Electrochemical Technologies, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Rui Huang, Philipp Röse, Paolo Ciocci, Jan-Dierk Grunwaldt, Ulrike Krewer

Iridium-Cerium-Oxide Electrocatalysts with Enhanced Performance for the Oxygen Evolution Reaction in PEM Water Electrolysis

10:15 to 10:30

Georgios Stavroglou *(Chemistry, University of Copenhagen, Copenhagen, Denmark)*, Adrian Frandsen, Henrik Kristoffersen, Katrine Svane, Jan Rossmeisl

A Design Principle for Active Titanium Sites in Rutile Oxide Catalysts for Acidic Oxygen Evolution Reaction

10:30 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

WEDNESDAY AM

Symposium 6b Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: Gutenberg D

Chaired by Chang Hyuck Choi & Aaron Marshall

09:30 to 10:00 ***Keynote***

Chang Hyuck Choi *(Department of Chemistry, Pohang University of Science and Technology -POSTECH, Pohang, Korea)*

Comparative Study on Online Degradation Monitoring of Fuel Cell Cathodes at Solid-Liquid and Solid-Liquid-Gas Interfaces

10:00 to 10:15

Alina Tlaneci Anzaldo Grundler *(Institute of Engineering Thermodynamics, Deutsches Zentrum für Luft und Raumfahrt, Stuttgart, Germany)*, Thomas Jahnke, Arnulf Latz

Lattice Boltzmann Simulation of PEMFC Catalyst Degradation through Electrochemical Ostwald Ripening

10:15 to 10:30

Florian Wilhelm *(Fuel Cell Stacks - ECB, ZSW, Ulm, Germany)*, Eva Fensterle, Jürgen Hunger, Frank Rabsahl, Christian Kolle Christensen, Adam Benson, Rami Al-Khamissi, Marine Tregaro, Sylvie Escribano, Joachim Scholta

Local and Global in-situ Analysis of Aging Effects During a Fuel Cell Stack Durability Test

10:30 to 10:45 ***Invited***

Iryna Zenyuk *(Chemical and Biomolecular Engineering, University of California Irvine, Irvine, USA)*, Obeen Kwon, Cliffton Wang, Yu Morimoto

Understanding Performance and Durability of Amorphous and Crystalline IrO_x Catalysts for Proton Exchange Membrane Water Electrolysis

10:45 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

Symposium 8 Corrosion, coatings, and nanostructures for a sustainable future

Room: Meeting 2A

Chaired by Kuniaki Murase & Isao Shitanda

09:30 to 10:00 ***Keynote***

Monica Santamaria *(Dipartimento di Ingegneria, Università di Palermo, Palermo, Italy)*, Davide Pupillo, Vincenzo Verro, Maria Lucia Lazzara, Salvatrice Dinolfo, Francesco Di Franco

Electrochemical processes on metallic bioimplants for tuning their corrosion resistance and for providing specific functionalities

10:00 to 10:15 ***Invited***

Luca Magagnin *(Chemistry, Materials and Chemical Engineering G. Natta, Politecnico di Milano, Milan, Italy)*, Federico Lissandrello, Yara Rosa Propato, Roberto Bernasconi, Luca Magagnin

Next Generation Phosphate Coatings: Paving the Way to Sustainability

10:15 to 10:30

Sachio Yoshihara *(Department of Fundamental Engineering, School of Engineering, Utsunomiya University, Utsunomiya, Japan)*

Etching Process Analysis in the Field of Electronics Packaging

10:30 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

Symposium 9 Durability of materials for energy conversion and storage: Mechanism, mitigation and performance

Room: **Dijon**

Chaired by Svitlana Pylypenko & Mireille Turmine

09:30 to 10:00 ***Keynote***

Annick Hubin *(Sustainable Materials Engineering, Vrije Universiteit Brussel, Brussel, Belgium)*, Alexandre Roelens, Giulia Serafino, Meisam Dabiri Havigh, Tewelde Hailay Gebregeorgis, Nestor Calabia Gascon, Benny Wouters, Xinhua Zhu, Mesfin Haile Mamme

Towards more sustainable materials for energy storage devices using a combined modelling and operando experimental approach

10:00 to 10:15

Hongyi Li *(Institute for Materials Research, Tohoku University, Sendai, Japan)*, Tetsu Ichitsubo

Degradation Mechanisms and Durability Enhancement of Aluminum-Foil Anodes for Rechargeable Lithium Batteries

10:15 to 10:30

Janka Friese *(Fuel Cells, Fraunhofer Institut für Solare Energiesysteme, Freiburg, Germany)*, Steve Dietze

Characterization of PEM Fuel Cell Stacks: Insights on Flow Distribution and Degradation via EIS and Galvanostatic Methods

10:30 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

Symposium 10 Green electrochemistry for a sustainable world

Room: Meeting 1

Chaired by Teresa Andreu

09:30 to 09:45

Christoph Mueller *(Energy Solutions, GRILLO Zinc Powder GmbH, Duisburg, Germany)*

Rethinking zinc: A grey element for a sustainable future.

09:45 to 10:00

Alena Neudert *(Electrochemical Process Engineering, University of Bayreuth, Bayreuth, Germany)*, Steffen Zappe, Fridolin Röder, Christina Roth

Competition between Fe Reduction and Hydrogen Evolution in Hybrid all-Fe Redox Flow Batteries

10:00 to 10:15

Claudio Maria Pecoraro *(Engineering department, University of Palermo, Palermo, Italy)*, Francesco Di Franco, Marianna Bellardita, Vittorio Loddo, Monica Santamaria

Photoelectrolysis of biomass containing solutions to produce H_2 and HVA chemicals using large area photoanodes prepared by valve metals anodizing

10:30 to 10:45

Amirhossein Farzi *(Chemical Engineering, McGill University, Montreal, Canada)*, Ali Seifitokaldani

Tailoring Cu-Sn Ratios for Enhanced Electrochemical Conversion of CO to C_{2+} Products

10:45 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

WEDNESDAY AM

Symposium 11 Electrochemical technologies for energy and industrial electrosynthesis at scale

Room: Meeting 2B

Chaired by Ignasi Sirés

09:30 to 10:00 ***Keynote***

Manuel Andrés Rodrigo Rodrigo *(Chemical Engineering, FCyTQ. UCLM, Ciudad Real/13004, Spain)*, Cristina Saez, Justo Lobato, Pablo Cañizares, Carmen Maria Fernandez Marchante, Engracia Lacasa, Alberto Rodríguez-Gómez

Revolutionizing sustainability with innovations in electrochemical engineering

10:00 to 10:15

Patricio J, Espinoza-Montero *(Chemistry, Pontificia Universidad Católica del Ecuador, Quito, Ecuador)*, Leonardo E. Navarrete-Cevallos

Photochemical Degradation of Microplastics on BDD/$BiVO_4$ Photoanode Electrode Coupled to Hydrogen Production.

10:15 to 10:45

Federico Calle-Vallejo *(Advanced Materials and Polymers, University of the Basque Country, San Sebastián - Donostia, Spain)*

Gas-phase Errors in Computational Electrocatalysis

10:45 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

Symposium 12 Molecular spectro-photo-electrochemistry and electrosynthesis

Room: **Zagreb A**

Chaired by Jirí Ludvík

09:30 to 10:00 ***Keynote***

Shinsuke Inagi *(Department of Chemical Science and Engineering, Institute of Science Tokyo, Yokohama, Japan)*

Electricity-Less Electrochemical Reactions Driven by Streaming Potential

10:00 to 10:15 ***Invited***

Jeanet Conradie *(Chemistry, University of the Free State, Bloemfontein, South Africa)*

Can Density Functional Theory Methods Accurately Compute Redox Potentials of Osmium(II)-polypyridines?

10:15 to 10:30

Robert Francke *(Electrochemistry & Catalysis, Leibniz Institute for Catalysis, Rostock, Germany)*, Adrian Prudlik, Anton Scherkus, Aija Gudkova, He Zeng, Ole Albrecht

Concepts for Sustainable Organic Electrosynthesis

10:30 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

Symposium 13 Mechanisms in molecular electrochemistry for (bio-)catalysis, (bio-)sensing and electronics

Room: Meeting 3B

Chaired by Federico Polo & Silvia Voci

09:30 to 10:00 ***Keynote***

Nianqiang Wu *(Chemical Engineering, University of Massachusetts Amherst, Amherst, USA)*

Charge and Energy Transfer Processes in Photoelectrochemical Catalysis and Bio-sensing

10:00 to 10:15 ***Invited***

Christian Nijhuis *(Molecules and Materials, University of Twente, Enschede, Netherlands)*

Computing electrically driven dynamic switches

10:15 to 10:30 ***Invited***

Alain Walcarius *(LCPME, CNRS - Université de Lorraine, Villers-les-Nancy, France)*, Mahmoud Rahal, Neus Vilà, Cheryl Karman, Christelle Despas, Mariela Brites Helu, Jaafar Ghanbaja, Akshay Silswal, Gediminas Jonusauskas, Nathan McClenaghan, Anish Lazar, Emmanuel Oheix, Bénédicte Lebeau, Malik Sebbat, Morgan Cormier, Jean-Philippe Goddard

Towards Electrochemical Regeneration of Redox Photocatalysts?

10:30 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

WEDNESDAY AM

Symposium 14 Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: Gutenberg C

Chaired by Olaf Brummel & Peng Chen

09:30 to 09:45

Matthias May *(Institute of Physical and Theoretical Chemistry, Universität Tübingen, Tübingen, Germany)*, Erica A. Schmitt, Margot Guidat, Maximilian Diecke, Marco Flieg, Max Nusshör, Vibhav Yadav, Holger Euchner, Matthias M. May

The quest to understand and control the electrochemical interfaces of complex III-V-based multi-junction photoelectrodes for solar water splitting

09:45 to 10:00

Jan Paul Menzel *(Department of Chemistry, Yale University, New Haven, USA)*, Wanjae Dong, Zetian Mi, Victor Batista

Mechanistic Insights into Photoelectrochemical Conversion at the Electrode Interface through Computational Modelling

10:00 to 10:15

Olaf Brummel *(Interface Research and Catalysis, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany)*, Evanie Franz, Georg Fickenscher, Erik Schulze, Daniel Krappmann, Anna Weidlich, Tobias Luchs, Andreas Dreuw, Andreas Hirsch, Jörg Libuda

Electroswitchable Noble-Metal-Free Catalysis for Molecular Solar Thermal Systems

10:15 to 10:45

Peng Chen *(Department of Chemistry and Chemical Biology, Cornell University, Ithaca, USA)*

Sub-particle optical microscopy of particulate photoelectrodes

10:45 to 11:00

Coffee Break *Sponsored by* ***HIDEN Analytical***

11:00 to 12:30

Session 2, Posters *Sponsored by* ***BioLogic - Science Instruments***

Thursday 11 September 2025 - *Morning*

Plenary

Room: **Kongress-Saal**

Chaired by Christina Roth

08:15 to 09:15

Hubert Girault *(ISIC, EPFL, Lausanne, Switzerland)*

Electrochemistry. A science with many potentials

Symposium 1 Electroanalysis: From fundamentals towards smart devices

Room: **Zagreb B**

Chaired by Cecilia Cristea & Maria Cuartero

09:30 to 10:00 ***Keynote***

Karolien De Wael *(Bioscience Engineering, Groenenborgerlaan 171, Antwerp, Belgium)*

Novel Bio(inspired) (photo)Electrochemical Sensing Strategies

10:00 to 10:15

Valentina Pifferi *(Department of Chemistry, Università degli Studi di Milano, Milan, Italy)*, Luigi Falciola, Daniele Fumagalli, Wafa Aidli, Serena Arnaboldi, Sara Grecchi

Bimodal and enantiomeric (photo)electrochemical analysis of Tryptophan by MWCNTs and BT_2T_4 modified electrodes

10:15 to 10:30

Franziska Kühling *(School of Mathematics and Science, Institute of Chemistry, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany)*, Gunther Wittstock

New Insights on Bipolar Electrochemistry of Microstructures

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

THURSDAY AM

Symposium 2 Bioelectrochemistry from fundamentals to sustainable applications

Room: **Dijon**

Chaired by Ariel Furst & Nicolas Plumere

09:30 to 10:00 ***Keynote***

Caroline Ajo-Franklin *(BioSciences, Rice University, Houston, USA)*

Fast, Multichannel, Simple Electrochemical Sensors using Synthetic Biology

10:00 to 10:15 ***Invited***

Ross Milton *(Dept. of Inorganic and Analytical Chemistry, University of Geneva, Geneva, Switzerland)*

Towards Applied Electroenzymatic Hydrogen Production

10:15 to 10:30

Alexander Kuhn *(Institute of Molecular Science, University of Bordeaux, Pessac, France)*, Ruchao Gao, Sabrina Bichon, Sebastien Gounel, Gerardo Salinas, Lin Zhang, Nicolas Mano

Enzyme-modified Graphene Monolayers for the Direct Transformation of Biochemical Energy into Motion

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

Symposium 3 Electrochemical and bioelectrochemical synthesis of small molecular products

Room: **Meeting 3A**

Chaired by Paolo Bollella & Carlo Santoro

09:30 to 10:00 ***Keynote***

Shelley Minteer *(Chemistry, Missouri University of Science and Technology, Rolla, USA)*

Bioelectrocatalytic Nitrogen Reduction to Value Added Products

10:00 to 10:15

Nicolas Plumere *(TUM Campus Straubing, Uferstrasse 53, Straubing, France)*

Scaling Hydrogenase Production for Electrochemical Applications

10:15 to 10:30 ***Invited***

Roland Marschall *(Physical Chemistry III, University of Bayreuth, Bayreuth, Germany)*

Nanostructured Fe-based Electrocatalysts for Solar Energy Conversion

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

Symposium 4 Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg B**

Chaired by Nella Vargas-Barbosa

09:30 to 10:00 ***Keynote***

Marnix Wagemaker *(Storage of Electrochemical Energy, Delft University of Technology, Delft, Netherlands)*

Trends in liquid and solid electrolyte research

10:00 to 10:15 ***Invited***

Michal Leskes *(Molecular Chemistry and Materials Science, Weizmann Institute of Science, Rehovot, Israel)*

Tracking Dendrites and Solid Electrolyte Interphase Formation in Composite Electrolyte using Solid State NMR Spectroscopy

10:15 to 10:30 ***Invited***

Hye Ryung Byon *(Chemistry, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea)*

Immobile Anion Groups-Driven Li Ion Diffusion in Covalent Organic Frameworks

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

THURSDAY AM

Symposium 5 New battery chemistries

Room: **Watford**

Chaired by Rebeca Marcilla

09:30 to 09:45

Rino Ichikawa *(School of Advanced Science and Engineering, Waseda University, Shinjuku-ku, Japan)*, Yuta Igarashi, Kosuke Kawai, Atsushi Okazawa, Satoshi Kajiyama, Masashi Okubo

Morphological Control of Prussian Blue Analogues for Sodium-ion Battery Cathodes

09:45 to 10:00

Li Li *(Department of Chemistry, University of Bayreuth, 95447, Bayreuth, Germany)*

Investigation of Na-excess cation-disordered rocksalt cathodes: $Na_{1+x}Fe_{1-2x}Nb_xO_2$ (x=0.2, 0.25, 0.3)

10:00 to 10:15

Dumindu Pasan Siriwardena Thanaweera Achchige *(Department of Chemistry - Ångström; Structural Chemistry, Uppsala University, Uppsala, Sweden)*, Jan Felix Schuster, Lasse Dettmann, Wessel W. A. van Ekeren, Andrew J. Naylor, Reza Younesi

The Usability of EMC-Containing Binary Non-Aqueous Electrolyte Solvents for Commercial-Scale Prussian White and Hard Carbon Full-Cell Systems in Sodium-ion Batteries.

10:15 to 10:30

Youssef Salhi *(Solid State Chemistry, Instituto de Ciencia de Materiales de Barcelona ICMAB-CSIC, Bellaterra (Barcelona), Spain)*, Deyana S. Tchitchekova, Alexandre Ponrouch

Enhancing SEI Stability in Sodium-Based Batteries Through Electrolyte Design

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

Symposium 6 Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Kongress-Saal**

Chaired by Caiwu Liang & Aaron Marshall

09:30 to 09:45

Jong Hoon Joo *(Department of Environment and Energy Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea)*, Taeyun Kim, Jinsil Lee

In-situ Measurement of Surface Exchange Reactions and Oxygen Vacancy Concentration in Perovskite Oxide Electrode

09:45 to 10:00

Xuegeng Yang *(Institute of Fluid Dynamics, Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Dresden, Germany)*, Hannes Rox, Robert Baumann, Fabian Ränke, Andrés Fabián Lasagni, Kerstin Eckert

Advancing Alkaline Water Electrolysis by Electrode Surface Engineering and Bubble Management

10:00 to 10:15

Muhammad Adil Riaz *(Department of Chemical Engineering, University College London, London, United Kingdom)*, Panagiotis Trogadas, David Aymé-Perrot, Marc-Olivier Coppens

Designing nature-inspired electrodes for efficient management of gas bubbles in water electrolysers

10:15 to 10:30

Karl-Ander Kasuk *(Chemistry, University of Tartu, Tartu, Estonia)*, Michalis Metaxas, TingTing Mo, Jaak Nerut, Enn Lust, Vitali Grozovski, Anthony Kucernak

Best Practices for Ultra-Low Loading Electrochemical Characterisation Methods for Advanced Electrocatalyst Evaluation

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

Symposium 7 High power devices: Electrodes and electrolytes, limiting factors or assets for power capability?

Room: Meeting 3B

Chaired by Marta Sevilla

09:30 to 10:00 ***Keynote***

Veronica Augustyn *(Materials Science and Engineering, North Carolina State University, Raleigh, USA)*

Structural dynamics during electrochemical ion insertion into a shear-phase tungsten oxide

10:00 to 10:15 ***Invited***

Chi-Chang Hu *(Department of Chemical Engineering, National Tsing Hua University, Hsin-Chu city, Taiwan)*, Yu-Chun Chen, Liang-Chieh Tseng, Yun Lin, Chen-Wei Tai, Hsiang-Sheng Wei

Electrochemical Activation and Microstructure Transformation of Alkali-Treated Soft Carbons for Lithium-ion Capacitors

10:15 to 10:30

Andrea Balducci *(Institute for Technical and Environmental Chemistry, Friedrich Schillr University Jena, Jena, Germany)*, Indrajit Patil, Fabian Kreth, Bartosz Nowacki

The impact of alternative conducting salts on the electrochemical behavior of electrochemical capacitors

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

THURSDAY AM

Symposium 8 Corrosion, coatings, and nanostructures for a sustainable future

Room: Meeting 2A

Chaired by Hiroki Habazaki & Vincent Vivier

09:30 to 10:00 ***Keynote***

Kuniaki Murase *(Department of Materials Science and Engineering, Kyoto University, Kyoto, Japan)*

Electrochemical Deposition of Metals Using Hydrate Melt-Based Electrolytes

10:00 to 10:15

Tetsuya Tsuda *(Department of Materials Science, Chiba University, Chiba, Japan)*, Go Matsui, Hasumi Kamemoto, Susumu Kuwabata

Al-Mg Alloy Deposition in Chloroaluminate Ionic Liquids with $MgCl_2$ - Effect of LiCl Addition

10:15 to 10:30

Vincent Vivier *(Laboratoire de Réactivité de Surface, CNRS - Sorbonne Université, Paris, France)*, Yuelin Xie, Antoine Miche, Mireille Turmine

Tailored Electrodeposition of Ni-Co and Cu-Zn-Ni-Co Thin Films from Ionic Liquids: Composition Control, Nanoporosity, and Applications

*10:30 to 11:00 Coffee Break Sponsored by **Illumion***

11:00 to 12:00 General Assembly

*12:30 to 14:00 Lunch Break Sponsored by **easyXAFS***

Symposium 10a Green electrochemistry for a sustainable world

Room: **Meeting 1**

Chaired by Rafael Trócoli

09:30 to 10:00 ***Keynote***

Volker Presser *(Energy Materials, INM - Leibniz Institute for New Materials, Saarbrücken, Germany)*

Electrochemical Lithium-ion Qeparation

10:00 to 10:15

Corentin Bourdiol *(LITEN, CEA, Grenoble, France)*, Emmanuel Billy, Adrien Boulineau, Sylvain Franger

Lithium selective recovery with Electrochemical Ion Pumping for Li-ion batteries recycling

10:15 to 10:30

Mengxi Wen *(LRGP, Université de Lorraine, Nancy, France)*, Stéphane Raël, François Lapicque, Caroline Bonnet, Melika Hinaje, Fadi Sharif

Electrochemical Reduced Model of Lithium-ion Batteries Describing Solid and Electrolyte Diffusion Dynamics for Real-Time Embedded Transport Applications

*10:30 to 11:00 Coffee Break Sponsored by **Illumion***

11:00 to 12:00 General Assembly

*12:30 to 14:00 Lunch Break Sponsored by **easyXAFS***

Symposium 10b Green electrochemistry for a sustainable world

Room: **Gutenberg A**

Chaired by José L. Nava & Clara Santato

09:30 to 09:45

Alex van Silfhout *(Environmental Modelling Sensing and Analysis, TNO Netherlands Organisation for Applied Scientific Research, Utrecht, Netherlands)*, Cody van Beek-Hagemans, Marnix Paul, Lotte Metz, Henk de Weerd, Eda Yilmaz, Devin Boom

Electrochemically Assisted, Circular Recovery of Critical Materials from PCB Waste

09:45 to 10:00

José Manuel Ramos Villaseñor *(Organic Chemistry, National Autonomous University of Mexico, Mexico City, Mexico)*, Jessica Sotelo Gil, Bernardo Antonio Frontana Uribe

Exploring electrochemistry in the renewable solvent dihydrolevoglucosenone (DLG or Cyrene®)

10:00 to 10:15

Martín Muñoz-Morales *(Chemical Engineering Department, Universidad de Castilla La Mancha, Albacete, Spain)*, Julio A. Gutiérrez-González, Alvaro Ramírez, J.Kennedy Chenwi Minang, Ester López-Fernández, José Villaseñor, Javier Llanos

Electrohydrolysis Pretreatment as Key for Improvement Biogas production from Common Reed Wastes

10:15 to 10:30

Bilal Zeghum *(Department of Chemistry, CNRS, University of Montpellier, Montpellier, France)*

Electro-production of Ammonia Using Transition Metal Catalysts

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

Symposium 12 Molecular spectro-photo-electrochemistry and electrosynthesis

Room: **Zagreb A**

Chaired by Robert Francke

09:30 to 10:00 ***Keynote***

Michael Busch *(Department of Engineering Sciences and Mathematics, Luleå University of Technology, Luleå, Sweden)*

Mechanistic Insights into Electrochemical CO_2 Reduction over Porphyrin and Phthalocyanine Catalysts

10:00 to 10:15

Longxiang Liu *(Department of Materials, Oxford University, Oxford, United Kingdom)*, Robert Weatherup

In-situ Spectroelectrochemical Characterization of the Dynamic Evolution of Cu-N-C Model Catalyst in Nitrate Reduction Reaction

10:15 to 10:30

José H. Zagal *(Department of Chemistry of Materials, Univesity of Santiago de Chile, Santiago, Chile)*, Laura Scarpetta-Pizo, Ricardo Venegas, Luis Acuña, Ingrid Ponce

Electrochemical Hardness. A Reactivity Descriptor for Electrocatalysis of Molecular Catalysts. The Case for ORR.

10:30 to 11:00 Coffee Break Sponsored by ***Illumion***

11:00 to 12:00 General Assembly

12:30 to 14:00 Lunch Break Sponsored by ***easyXAFS***

Symposium 14a Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Gutenberg C**

Chaired by Olaf Magnussen

09:30 to 10:00 ***Keynote***

Núria López *(Institute of Chemical Research of Catalonia, ICIQ-CERCA, Spain)*

Understanding dynamics in electrocatalysis

10:00 to 10:15

Ayman A. El-Zoka *(Department of Materials, Imperial College London, London, United Kingdom)*, Mary Ryan, Ayman A El-Zoka, Oliver Waszkiewicz

Advancements in Cryogenic Atom Probe Tomography for Studying Copper-Liquid Interfaces in Acidic Environments at the Atomic-Scale

10:15 to 10:30

Matthias Leitner *(Department of Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Francesc Valls Mascaró, Andrea Auer, Julia Kunze-Liebhäuser

Electrochemical CO Oxidation on Cu Single Crystals

*10:30 to 11:00 Coffee Break Sponsored by **Illumion***

11:00 to 12:00 General Assembly

*12:30 to 14:00 Lunch Break Sponsored by **easyXAFS***

Symposium 14b Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Meeting 2B**

Chaired by Rik Mom

09:30 to 09:45

Georgios Katsoukis *(Chemical Engineering, University of Twente, Enschede, Netherlands)*, Guido Mul

From classic to cutting-edge: IR reflection-absorption spectroscopy for studying the electrochemical reduction of small molecules

09:45 to 10:00

Romualdus Enggar Wibowo *(Young Investigator Group Electrochemical Conversion of CO_2, Helmholtz Zentrum Berlin für Materialien und Energie GmbH, Berlin, Germany)*, Tamino Bosse, Raul Garcia-Diez, Anna Efimenko, Mihaela Gorgoi, Marcus Bär, Matthew T. Mayer

Investigating Interfacial Phenomena During Electro-Swing CO_2 Capture via Electrochemically Mediated Amine Regeneration by a Combination of In Situ Soft and Hard X-ray Absorption Spectroscopy

10:00 to 10:15

Leon Jacobse *(Interface Science, Fritz Haber Institute of the Max Planck Society, Berlin, Germany)*, Matias Herran, Philippe Allongue, Arno Bergmann, Beatriz Roldan Cuenya

Resolving Structural Dynamics of Cu(111) and its Effect on CO_2 Electroreduction using Epitaxial Thin Films

10:15 to 10:30

Mengmeng Yang *(Chemistry, The University of New South Wales, Sydney, Australia)*,Chuan Zhao

Interface Induced Low-coordination Copper Sites for Selective CO_2 Electroreduction to Ethylene.

*10:30 to 11:00 Coffee Break Sponsored by **Illumion***

11:00 to 12:00 General Assembly

*12:30 to 14:00 Lunch Break Sponsored by **easyXAFS***

Thursday 11 September 2025 - *Afternoon*

Symposium 1 Electroanalysis: From fundamentals towards smart devices

Room: **Zagreb B**

Chaired by Laurent Thouin & Emilia Witkowska Nery

14:00 to 14:15 ***Invited***

Joohoon Kim *(Department of Chemistry, Kyung Hee University, Seoul, Korea)*

Light-Guided Electrochemiluminescence Imaging: A Novel Electroanalytical Tool for Spatiotemporal Visualization of Photoelectrochemical Processes on Hematite

14:15 to 14:30

Irina Terrero Rodríguez *(LCPME, Université de Lorraine - CNRS, Nancy, France)*, Mariela Brites Helú, Fabienne Quilès, Luke O'Keeffe, Laurence Mathieu, Hélène Lacroute, Grégoire Herzog

A Flow Cell Platform for Studying Biofilm Formation on Electrochemical Sensors in situ Using Raman Hyperspectral Imaging and Epifluorescence Microscopy

14:30 to 14:45

Somayyeh Bozorgzadeh *(Precision Electrochemical Nanosensor Group, Tyndall National Institute, Cork, Ireland)*, Alan O'Riordan

Highly Efficient Coreactant-Free Electrochemiluminescence Sensing Platform with Multiplexed Interdigitated Spiral Microelectrodes

14:45 to 15:00

Luca Maria Berger *(Physics, Technical University of Munich, Garching, Germany)*, Johannes Dittloff, Xingye Yang, Stefan A. Maier, Katharina Krischer, Andreas Tittl, Ian D. Sharp, Verena Streibel

Combined Resonant and Non-Resonant Surface-Enhanced Infrared Absorption Spectroelectrochemistry

15:00 to 15:15

Laurent Thouin *(Chemistry department, ENS - CNRS, Paris, France)*, Yumeng Ma, Catherine Sella

Electrochemiluminescence in Microfluidics: Influence of the Operating Regimes of Platinum Microchannel Electrodes on the Tris(2,2'-bipyridyl)ruthenium(II)/Tripropylamine System

15:15 to 15:30

Renato Gil *(Water Quality Group, INL-International Iberian Nanotechnology Laboratory, Braga, Portugal)*, Olesia Dudik, Samuel Silva, Álvaro Geraldes, João Piteira, Raquel Queirós

IBatSens: Next-Generation Potentiometric Sensing of Lithium and Sodium Ions in Battery Recycling Processes

15:30 to 15:45

Evgeny Smirnov *(Infochemistry, ITMO University, Saint-Petersburg, Russia)*, Ilya Korolev, Anna Botnar, Arina Pavlova, Ksenia Maleeva, Valentina Minisheva, Grigori Ovinov, Ekaterina Skorb

Miniaturized Printable Potentiometric Ion-Selective Electrodes Based on Carbon Fiber and $Ti_3C_2T_x$ MXene Nanoflakes for Ca^{2+} Detection

15:45 to 16:00

Eduardo Mathias Richter *(Institute of Chemistry, Federal University of Uberlandia, Uberlândia, Brazil)*, Marina Di-Oliveira, Mariana C. Marra, Raquel G. Rocha, Teodoro R. Terra, Rodrigo A. A. Muñoz

A robotic lab-generated reagentless plasma system: A rapid and effective approach for surface activation of screen-printed electrodes

16:00 to 16:30

Coffee Break *Sponsored by* ***Spectro Inlets Aps***

16:30 to 16:45

Maria Cuartero *(Department of Chemistry, KTH, Stockholm, Sweden)*, Yujie Liu, Nuria Martinez, Gregorio Laucirica, Gaston Crespo

Thin-Layer Concepts in Electroanalysis. Towards Calibration-free Detections

16:45 to 17:00

Siwar Jebril *(Chemistry, University Paris Saclay, Versailles, France)*, Gianluca Visagli, Muriel Bouttemy, Mathieu Fregnaux, Arnaud Etchberry, Anne-Marie Goncalves

Development of a Capacitance-Based Electrochemical Sensor Using Polyphosphazene-Modified n-InP for Sensitive Detection of Hydroquinone

17:00 to 17:15

Águeda Molinero-Fernandez *(UCAM-SENS, UCAM, Guadalupe, Murcia, Spain)*

Electrochemical Microneedle Sensors: Pivotal Tools for Smart Agriculture

17:15 to 17:30

Nafiz Biswas *(Chemistry, University of Warwick, Coventry, United Kingdom)*, Katherine J Levey, Tania L Read, Julie V Macpherson

Surface Bound Proton Coupled Electron Transfer: A Modeling Approach for pH Sensor Optimization

17:30 to 17:45

Yumi Yoshida *(Faculty of Molecular Chemistry and Engineering, Kyoto Institute of Technology, Kyoto, Japan)*, Takeshi Nakata, Junko Kojima, Kenichi Uchiyama, Shingo Sotoma, Kohji Maeda, Yumi Yoshida

All-solid-state coulometric potassium ion sensor

17:45 to 18:00

Gabriel Meloni *(Chemistry, University of São Paulo, São Paulo, Brazil)*, Luiz Felipe, Rafael Santos

Theory in practice: Testing the limits of the Randles-Ševčík equation

Symposium 2 Bioelectrochemistry from fundamentals to sustainable applications

Room: **Dijon**

Chaired by Caroline Ajo-Franklin, Wlodzimierz Kutner & Fred Lisdat

14:00 to 14:15 ***Invited***

Ievgen Mazurenko *(Laboratory of Bioenergetics and Protein Engineering (BIP), CNRS, Aix-Marseille University, Marseille, France)*, Umberto Contaldo, Santucci Paolo, Lojou Elisabeth

Electrochemical Insights into Cuprous Oxidation by CueOs: The Role of the Met-Rich Domain

14:15 to 14:30

Renata Bilewicz *(Chemistry, University of Warsaw, Warsaw, Poland)*, Michalina Zaborowska-Mazurkiewicz, Ewa Nazaruk, Mostafa Torabi

Membrane Proteins Incorporated in Liquid-crystalline Lipid Filmsand Nanoparticles – Activity and Inhibition Studies

14:30 to 14:45

Felipe Conzuelo *(Institute of Chemical and Biological Technology, Nova University Lisbon, Oeiras, Portugal)*

Enzyme-Modified Microelectrodes for the Local Investigation of Bioelectrochemical Reactions

14:45 to 15:00

Justyna Bozek *(Institute of Chemistry, Carl von Ossietzky Universität, Oldenburg, Germany)*, Izabella Brand, Patryk Bielski, Karl-Wilhelm Koch

Electrochemical Characterization of Floating Lipid Bilayers for Transmembrane Protein Studies

15:00 to 15:15

Margot Jacquet *(Centre of New Technologies, University of Warsaw, Warsaw, Poland)*, Miriam Izzo, Piotr Wróbel, Marcin Strawski, Rafal Jurczakowski, Massimo Trotta, Joanna Kargul

Space-Confined Mediators as a New Tool for Efficiently Wiring Biomachineries

15:15 to 15:30

Elena Daboss *(Institute of Analytical and Bioanalytical Chemistry, Ulm University, Ulm, Germany)*, Sven Daboss, Christine Kranz

Prussian Blue Based Micro(bio)sensors in Power Generation Mode: a New Mode for Scanning Electrochemical Microscopy

15:30 to 15:45

Laura Opdam *(BIP, CNRS, Marseille, France)*, Marta Meneghello, Chloé Guendon, Andrea Fasano, Aurore Bailly, Jade Chargelegue, Christophe Léger, Vincent Fourmond

Investigating the Gas Channel Selectivity of Carbon Monoxide Dehydrogenase with Protein Film Electrochemistry

15:45 to 16:00

Mohammad Rizwan *(Department of Inorganic and Analytical Chemistry, University of Lodz, Lodz, Poland)*, Konrad Rudnicki, Slawomira Skrzypek, Lukasz Poltorak

Indirect Detection of Acid Phosphatase at The Macroscopic Electrified Liquid-Liquid Interface

16:00 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45

Alexander Oleinick *(UMR 8228 Chimie Physique et Chimie du Vivant, CNRS, Paris, France)*, Alexander Oleinick, Reina Dannaoui, Ren Hu, Lihui Hu, Zhong-Qun Tian, Irina Svir, Wei-Hua Huang, Christian Amatore

Single Cell Amperometry at Excitable Cells: Modeling and Quantitative Analysis of Amperometric Spikes

16:45 to 17:00

Noya Loew *(Department of Pure and Applied Chemistry, Tokyo University of Science, 2641 Yamazaki, Noda, Chiba, Japan)*, Masaki Mizuno, Yuji Shimizu, Yusuke Hashimoto, Hikari Watanabe, Isao Shitanda, Masayuki Itagaki

Finite Element Simulations for Designing Micropatterned Electrodes in Strip-Type Biosensors

17:00 to 17:15

Stefano Gianvittorio *(Department of Industrial Chemistry, University of Bologna, Bologna, Italy)*, Marco Malferrari, Stefania Rapino, Horst Pick, Domenica Tonelli, Andreas Lesch

Sustainable One-step Fabrication of Metal Thin Film Bioelectrochemical Sensors by Combined Inkjet-Printing and Light-Induced Photochemical Synthesis

17:15 to 17:30

Hassan Hamidi *(Nanotechnology, Tyndall National Institute, University College Cork, Cork, Ireland)*, Daniela Iacopino

Laser Induced Graphene Based Enzymatic Biofuel Cells for Lactate Sensing

17:30 to 17:45

Jonas Honacker *(Professorship for Electrobiotechnology, TU Munich Campus Straubing, Straubing, Germany)*, Alaa Oughli, Kannasoot Kanokkanchana, Tobias Vöpel, Nicolas Plumere

Point-of-Use Phosphate Sensing for Agricultural Application

17:45 to 18:00

Verdiana Marchianò *(Pharmacy, University of Bari, Bari, Italy)*, Angelo Tricase, Claudio Pellegrini, Eleonora Macchia, Luigi Gentile, Patrizia Nadia Hanieh, Noemi Fiaschini, Antonio Rinaldi, Luisa Torsi, Paolo Bollella

Self-standing Polydopamine-based Hydrogel Electrodes for Glucose Edible Enzymatic Biosensors

18:00 to 18:15

Luiza Wasiewska *(MNS, Tyndall National Institute, Cork, Ireland)*, Ben Norton, Sofia Teixeira

Exploring the use of bioplastics for printing sustainable electrochemical sensors and their applications

18:15 to 18:30

Elise Daems *(A-PECS, Department of Bioscience Engineering, University of Antwerp, Antwerp, Belgium)*, Sandra Tejerina Miranda, Mats Nilsson, Kevin Ariën, Karolien De Wael

A Novel Rolling Circle Amplification-Mediated Photoelectrochemical Detection Methodology for Zika Virus

Symposium 3 Electrochemical and bioelectrochemical synthesis of small molecular products

Room: **Meeting 3A**

Chaired by Christian Durante, David Sebastian & Petra de Jongh

14:00 to 14:15

Petra de Jongh *(Debye Institute, Utrecht University, Utrecht, Netherlands)*, Maaike Vink-van Ittersum, Erik Betz-Guttner, Peter Ngene

Ordered porous Ag-based electrodes with tailored porosity and Cu distribution - Understanding impact porosity and atomic distribution on CO_2 electroreduction product selectivity

14:15 to 14:30

Bashir Eid *(Analytical Chemistry, Ruhr-Universität Bochum, Bochum, Germany)*, Bashir Eid, Ridha Zerdoumi, Thomas Quast, Wolfgang Schuhmann

Online Electrochemical Mass Spectrometry (OLEMS) for Screening of Gas Diffusion Electrodes for the Electrochemical CO_2 Reduction Reaction

14:30 to 14:45

Hiroki Yoshismura *(SANKEN, The University of Osaka, Ibaraki, Japan)*, Shunsuke Hayase, Asuka Morinaga, Ryansu Sai, Yasuyuki Kondo, Yu Katayama, Yuki Yamada

Understanding the Cation Effect for Electrochemical Carbon Dioxide Reduction Reaction under Highly Concentrated Electrolyte

14:45 to 15:00

Katharina Trapp *(Electrochemical Energy Systems Laboratory, ETH Zürich, Zürich, Switzerland)*, Maria R Lukatskaya

The Role of Anions in the Electrochemical CO_2 Reduction: Metal Catalyst Dependence

15:00 to 15:15

Henri Pelzer *(Chemical Enginering, TU Delft, Delft, Netherlands)*, Nikita Kolobov, David Vermaas, Thomas Burdyny

Water Management in MEA Cells for CO_2 Electrolysis under Industry-Relevant Temperatures

15:15 to 15:30

Chen Jia *(School of Chemistry, University of New South Wales, Sydney, Australia)*, Chuan Zhao

Fluorine doping-assisted reconstruction of isolated Cu sites for CO_2 electroreduction towards multicarbon products

15:30 to 15:45

Ruirui Liu *(School of Chemistry, The University of New South Wales, Sydney, Australia)*, Chuan Zhao

Ordered Hierarchical Porous Single-Atom Ni Catalysts with Confined Ionic Liquids for Enhanced Mass Transfer in CO_2 Electroreduction

15:45 to 16:00

Gerard Prats Vergel *(Chemical Engineering, TU Delft, Delft, Netherlands)*, Huan Mu, Nikita Kolobov, Jasper Biemolt, David Vermaas, Thomas Burdyny

Carbon Crossover Strikes Again: The Reason Why Reverse-Bias Bipolar Membranes Fail to Replace PGM Anodes in CO_2 Electrolysers

16:00 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45

Max J. Hülsey *(School of Natural Sciences, Technische Universität München, Garching bei München, Germany)*

Hydronium ions inhibit CO_2 reduction on coinage metals

16:45 to 17:00

Jasper Biemolt *(Department of Chemistry, Technical University Berlin, Berlin, Germany)*, Michael Filippi, Peter Strasser

How Ion and Water Transport in Anion Exchange Membrane Zero-Gap CO_2 Electrolyzers Are Highly Interconnected

17:00 to 17:15

Pablo Lozano-Reis *(Theoretical Catalysis and Electrochemistry, Universität Duisburg-Essen, Essen, Germany)*, Kai S. Exner

Selectivity Trends for CO_2 Reduction Reaction over $Ti_3C_2T_x$ MXene from First Principles: The Key Role of Less-Stable Intermediate States

17:15 to 17:30

Esma Khatun *(Chemistry and Biochemistry, Analytical Chemistry II, Ruhr-University Bochum, Bochum, Germany)*, Christoph J. Bondue, Kristina Tschulik

Aldehyde or Carboxylic acid: Measuring selectivity of electrochemical oxidation of aliphatic alcohols through RRDE and Raman spectro-electrochemical studies

17:30 to 17:45

Maria Rodrigues Pinto *(Department of Physics, Technical University of Denmark, Kongens Lyngby, Denmark)*, Brian Seger

ATR-SEIRAS Studies of Butadiene Electrocarboxylation in Aprotic Media

17:45 to 18:00

Swantje Pauer *(Institute for Applied Materials-Electrochemical Technologies, Karlsruhe Institute of Technology - KIT, Karlsruhe, Germany)*, Rafael Garduño-Ibarra, Philippe Vernoux, Philipp Röse, Ulrike Krewer

Dynamic Kinetic Modeling and Analysis of 5-Hydroxymethylfurfural Oxidation and $Ni(OH)_2$/NiOOH Transitions on Nickel Anodes

18:00 to 18:15

Lejing Li *(Faculty of Chemistry and Biochemistry, Bochum, Germany)*

Coupling Anodic H_2O_2 Generation with Cyclohexanone Ammoximation: Mechanistic Insights from Scanning Electrochemical Microscopy

18:15 to 18:30

Leonardo Domenico De Angelis *(Departamento de Química Fundamental, University of São Paulo, São Paulo, Brazil)*, Lucas D. Germano, Rafael L. Romano, Fabio H. B. Lima, Diego C. de Araújo, Mariana C. O. Monteiro, Beatriz R. Cuenya, Susana I. Córdoba de Torresi

Plasmonic Contributions to the CO_2 Reduction Reaction: An In Situ IR Spectroelectrochemical Study

Symposium 4 Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg B**

Chaired by Isidora Cekic-Laskovic

14:00 to 14:15

Steen B. Schougaard *(Département de Chimie and NanoQAM, Université du Québec à Montréal, Montreal, Canada)*

Methods to Examine Dynamic Processes in Metal-ion Batteries

14:15 to 14:30

Aravind Unni *(Institute of Applied Materials-Electrochemical Technologies, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Ulrike Krewer, Janika Wagner-Henke, Hao-En Lai, Perla Balbuena

Kinetic Monte Carlo Insights into the Native SEI Formation in LiFSI/DME Electrolytes for Li-Metal Anodes

14:30 to 14:45

Marius Muhle *(Institute of Chemistry, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany)*, Nelly Nembot, Gunther Wittstock

Scanning Electrochemical Microscopy and X-Ray Photoelectron Spectroscopy of Battery Interfaces

14:45 to 15:00

Lasse Dettmann *(Department of Chemistry - Ångström Laboratory, Uppsala University, Uppsala, Sweden)*, Florian Gebert, Habtom Desta Asfaw, Maria Hahlin, Andrew J. Naylor

Pre-passivated Electrodes to Enable Non-flammable Electrolytes for Lithium-ion Batteries

15:00 to 15:15

Xinhua Zhu *(Department Materials and Chemistry, Vrije Universiteit Brussel, Brussels, Belgium)*, Joan Roca Busacker, Rodrigo Lopez Baez, Oussama Maach, Daniel Torres Morillo, Stanislav Trashin, Annick Hubin, Jon Ustarroz

Probing the Heterogeneity of Cathode Materials in Li-ion Batteries Using Scanning Electrochemical Cell Microscopy

15:15 to 15:30

Pablo Maria Delfino *(Scientific Instrumentation and Process Technology, Luxembourg Institute of Science and technology, Esch sur Alzette, Luxembourg)*

Lithium Tracing on Li-Ion Battery Electrodes by Focused Ion Beam-Secondary Ion Mass Spectrometry: A Multiscale Analysis Approach

15:30 to 15:45

Teppei Ohno *(Chemistry and Life Science, Yokohama National University, Yokohama, Japan)*, Yosuke Ugata, Naoaki Yabuuchi

Localized high-concentration electrolytes with non-fluorinated apolar diluents

15:45 to 16:00

Leon Skarjan *(Center for Energy and Environmental Sciences, Paul Scherrer Institute, Villigen-PSI, Switzerland)*, Xiaolong Zhang, Jong Min Lee, Thomas Justus Schmidt, Markus Strobl, Sigita Trabesinger, Pierre Boillat

High-sensitivity isotope-enhanced imaging of lithium battery interphases by neutron capture methodology

16:00 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45

Yuqing Liu *(Physics, National University of Singapore, Singapore)*, Stephen G. Dale, Chorng Haur Sow, Puneet Gupta

Constructing High-Ionic-Conductivity Composite Electrolytes with Improved Interface Stability by Rapid Laser Processing for All-Solid-State Batteries

16:45 to 17:00

Kotaro Yoshida *(School of Materials and Chemical Technology, Institute of Science Tokyo, Yokohama, Japan)*, Janis Eckhardt, Sascha Kremer, Felix Schug, Leonardo Merola, Atsunori Ikezawa, Takeyoshi Okajima, Jürgen Janek, Hajime Arai

Investigation of the Current Constriction Effect at the Interfaces between Sulfide Solid Electrolytes

17:00 to 17:15

Mohamed Amine Choukatli *(Electrochemistry and Materials, IFP Energy Nouvelles, Solaize, France)*, Didier Devaux, Cyril Garnero, Niki Halttunen, Fannie Alloin

Assessment of the Ionic Transport at the Crosslinked Polymer/β-Li_3PS_4 Interface

17:15 to 17:30

Hun Kim *(Energy Engineering, Hanyang University, Seoul, Korea)*

High-Areal-Capacity All-Solid-State Li-S Batteries Eabled by Dual-Phase Electrolyte Architecture

17:30 to 17:45

Léa Flores *(Battery materials laboratory, Université Grenoble Alpes, CEA LITEN, Grenoble, France)*, Jean-Frédéric Martin, Pierre Toudret, Pierre-Alain Bayle, Sébastien Martinet

From comprehensive study of highly concentrated lithium-ion aqueous electrolytes to aqueous prototype

17:45 to 18:00

Taku Sudoh *(Department of Chemistry and Life Science, Yokohama National University, Yokohama, Japan)*, Takashi Goto, Yosuke Ugata, Kazuhide Ueno

Polymer-assisted Deep Supercooling of Li Salt: An Approach to Single Li-ion Conducting Liquid Electrolytes

18:00 to 18:15

Tom Rocca *(Department of Chemistry, Université Paris Cité, Paris, France)*, Benoît Limoges, Véronique Balland

Investigating competition between reversible H^+ and Li^+ insertion in anatase TiO_2

18:15 to 18:30

Shahan Atif *(Materials Research Centre, IISc Bangalore, IISc Bangalore, India, Bangalore, India)*

High-Performance Lithium Storage via Conversion Mechanism in Double Perovskite Anode

Symposium 5a New battery chemistries

Room: **Watford**

Chaired by Jean Le Bideau & Fabio La Mantia

14:00 to 14:15

Jean Le Bideau *(Institut des Matériaux de Nantes Jean Rouxel, Nantes Université, Nantes, France)*, Marin Chartier, Nicolas Demarthe, Boluwatife Igbaroola, Thierry Brousse, Patrick Gerlach, Camille Douard

Enhanced ions diffusion at the polymer – ionic liquid interface within biphasic solid-liquid ionogel

14:15 to 14:30

Jonathan Bäthge *(R&D, E-Lyte Innovations GmbH, Kaiserslautern, Germany)*, Mirco Ruttert, Ralf Wagner, Kolja Beltrop

Mitigating challenges of layered oxide sodium-ion pouch cells: Novel electrolyte additive for suppressing sodium plating and prolonging cycle life at high cut-off voltages

14:30 to 14:45

Muhammad Nouman Aslam *(Institute of Technical and Environmental Chemistry, Friedrich Schiller University Jena, Jena, Germany)*, Yiyue Lu, Christian Leibing, Maider Zarrabeitia, Andrea Balducci

A high-performance laboratory-scale sodium ion battery containing low fluorinated, sustainable electrolyte

14:45 to 15:00

Niki Halttunen *(Electrochemistry and material chemistry, IFP Energies Nouvelles, Solaize, France)*, Fy Maminoronirina, Alexandre Gibert, David Pasquier

Chloride conducting single-ion polymer electrolytes: challenges in synthesis and electrochemical characterization.

15:00 to 15:15

Julie Lam Chen *(Department of Chemistry and Physics of Materials, Paris-Lodron University of Salzburg, Salzburg, Austria)*, Daniela Söllinger, Simone Pokrant

Toward aqueous full Na-ion batteries: Vanadium-based electrodes in a highly concentrated electrolyte

15:15 to 15:30

Neeraj Sharma *(School of Chemistry, UNSW (University of New South Wales), Sydney, Australia)*, Jian Peng, Jimmy Wu, Matthew Teusner, Lilian Andrew

Sustainability in Lithium-ion and Next Generation Batteries

15:30 to 15:45

Yoshiki Yokoyama *(Graduate School of AppliedChemistry and Chemical Engineering, Kogakuin University, Hachioji-shi, Japan)*, Masayoshi Watanabe, Shiro Seki

Basic Physicochemical Properties of Ether-based Molecular Anchoring Diluent Electrolytes for Sodium Ion Batteries

15:45 to 16:00

Hao Guo *(Department of Chemistry, University of Bayreuth, Bayreuth, Germany)*, Michael Häfner, Helen Grüninger, Matteo Bianchini

Structure and Ionic Conductivity of Halide Solid Electrolytes based on $NaAlCl_4$ and Na_2ZnCl_4

16:00 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45 ***Invited***

Fabio La Mantia *(Energy Storage and Energy Conversion Systems, University of Bremen, Bremen, Germany)*, Lucia Sorrill, Sara Sfiligoi, Giorgia Zampardi

Aqueous Zinc-Ion Pouch Cells based on Manganese Hexacyanoferrate: A Sustainable Alternative for Stationary Energy Storage

16:45 to 17:00

Jiøí Cervenka *(Department of Thin Films and Nanostructures, FZU - Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic)*

Advancing Aqueous Zinc-Ion Batteries Using Additive-Based Electrolyte Strategies

17:00 to 17:15

Oliver Fitz *(Electrical Energy Storage, Fraunhofer Institute for Solar Energy Systems, Freiburg, Germany)*, Nathanael Brandt, Nico Bertram, Florian Wagner, Eric Tröster

Enabling Zinc-Ion Batteries with Acidic Aqueous Electrolytes for Stationary Energy Storage: Challenges of the Reaction Mechanism

17:15 to 17:30

Shengyang Huang *(School of Chemical Engineering, Sungkyunkwan University, Suwon, Korea)*, Ho Seok Park

Molecularly engineered multifunctional imide derivatives for practical Zn metal full cells

17:30 to 17:45

Tim Klotz *(Production Engineering, University of Bremen, Bremen, Germany)*, Giorgia Zampardi, Fabio La Mantia

Optimization of Zinc Electrodeposition for Aqueous Battery Applications Through Electroplated Indium Substrates

17:45 to 18:00

Haocheng Guo *(Helmholtz Institute Ulm, Karlsruhe Institut für Technologie, Ulm, Germany)*

Nanoconfinement chemistry regulates solvent co-intercalation in bi-layered vanadium oxides for zinc-ion batteries

18:00 to 18:15

Shivangi Mehta *(Chemistry, Indian Institute of Technology, Ropar, India, Ropar, India)*, Dr. Tharamani C. N., Sukhjot Kaur, Man Singh, Mukesh Kumar

Unleashing ultrahigh capacity and lasting stability: aqueous zinc-sulfur batteries

18:15 to 18:30

Junehyuk Son *(Nanotechnology and Advanced Materials Engineering, Sejong Battery Institute, Seoul, Korea)*, Seung-Taek Myung

Passivation and Degradation Mechanisms of Stainless Steel Current Collectors in Aqueous Zinc-Ion Batteries

Symposium 5b New battery chemistries

Room: **Gutenberg A**

Chaired by Toshihiko Mandai & Noha Sabi

14:00 to 14:30 ***Keynote***

Maximilian Fichtner *(Solid State Chemistry, Helmholtz-Institute Ulm - HIU, Ulm, Germany)*, Sibylle Riedel, Zhenyou Li, Liping Wang, Christian Bäucker, Adam Reupert, Zhirong Zhao-Karger

Multivalent ion batteries – recent progress and challenges

14:30 to 14:45 ***Invited***

Zhirong Zhao-Karger *(Helmholtz Institute Ulm - HIU, Karlsruhe Institute of Technology - KIT, Eggenstein-Leopoldshafen, Germany)*

Electrolyte Advancements for Rechargeable Magnesium and Calcium Batteries: Bridging Chemistry and Electrochemistry

14:45 to 15:00

Reona Iimura *(IMRAM, Tohoku university, Sendai, Japan)*, Reona Iimura, Toshihiko Mandai, Manuel Smeu, Masaki Matsui, Itaru Honma, Hiroaki Kobayashi

A Highly Robust Tunnel-Structured Oxide Cathodes for Rechargeable Multivalent Batteries

15:00 to 15:15

Zhenyou Li *(Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences, Qingdao, China)*

Cathode Materials for Rechargeable Alkaline-Earth Metal Batteries

15:15 to 15:30

Darya Snihirova *(Institute of Surface Science, Helmholtz-Zentrum Hereon, Geesthacht, Germany)*, Yulong Wu, Darya Snihirova, Tim Würger, Linqian Wang, Christian Feiler, Daniel Höche, Sviatlana Lamaka, Mikhail Zheludkevich

Machine learning-guided discovery of high-efficiency electrolyte additives for aqueous magnesium-air batteries

15:30 to 15:45

Sibylle Riedel *(Electrochemical Energy Storage, Helmholtz Institute Ulm (HIU) , Ulm, Germany)*, Laurin Kahnt, Liping Wang, Christian Bäucker, Julia Ivanisenko, Maximilian Fichtner, Zhirong Zhao-Karger

How the Processing of Calcium-Metal Anodes affects the Electrochemical Performance

15:45 to 16:00

Namkyeong Lee *(Energy engineering, Hanyang University, Seoul, Korea)*

Ion-Conducting Polymer Layer for Stabilizing Magnesium Metal Anodes in Rechargeable Magnesium Batteries

16:00 to 16:30

Coffee Break *Sponsored by* ***Spectro Inlets Aps***

16:30 to 16:45

Eliana Fuentes-Mendoza *(Institut für Angewandte Materialien – Energiespeichersysteme, Karlsruher Institut für Technologie, karlsruhe, Germany)*, Angelina Sarapulova, Fabian Jeschull, Sonia Dsoke

Unveiling the charge storage and degradation mechanism of CoSe Based Material as Positive Electrodes for Aluminum Batteries

16:45 to 17:00

Hagar K. Hassan *(Institute of Electrochemistry, Ulm University, Ulm, Germany)*, Omar W. Elkhafif, Zhenyu Guo, Yuanzhu Zhao, Maria-Magdalena Titirici, Timo Jacob

Mg Dendrite Formation and Suppression in Ionic Liquid-based Mg-Ion Batteries

17:00 to 17:15

Hafiz Ahmad Ishfaq *(Department of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia)*, Carolina Cruz Cardona, Elena Tchernychova, Jan Bitenc, Robert Dominko, Sara Drvarič Talian

Fluorinated Solvent Additive for Stable Magnesium Metal Battery Electrolytes

17:15 to 17:30

Xiatong Ye *(Ichitsubo Laboratory, Institute for Materials Research, Tohoku University, Sendai, Japan)*, Hongyi Li, Norihiko L. Okamoto, Tetsu Ichitsubo

Electrode-electrolyte Interface Stabilization for Room-Temperature Rechargeable Magnesium Batteries with Oxide Cathodes

17:30 to 17:45

Omar Falyouna *(Research Center for Energy and Environmental Materials, National Institute for Materials Science, Tsukuba, Japan)*, Omar Falyouna, Dedy Setiawan, Toshihiko Mandai

Layered $FeOOCH_3$ as a New Potential Cathode Material for Rechargeable Magnesium Batteries

17:45 to 18:00

Deyana Tchitchekova *(Solid State Chemistry, Institute of Materials Science of Barcelona, Bellaterra, Spain)*, Muath Radi, Taniya Purkait, Alejandro R. Goñi, Robert Markowski, Charlotte Bodin, Cécile Courrèges, Rémi Dedryvère, Alexandre Ponrouch

Parameters Affecting Mg Electrodeposition in Rechargeable Mg Batteries

18:00 to 18:15

Maryam Nojabaee *(Electrochemical Energy Technology, German Aerospace Center – DLR, Stuttgart, Germany)*

Insight into Plausible Processes in Impedance Response of Magnesium Metal Based Batteries

Symposium 6a Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Kongress-Saal**

Chaired by Claude Lamy & Paramaconi Rodriguez

14:00 to 14:15

Claude Lamy *(Chemistry, ICGM, UMR 5253 CNRS-Université Montpellier, Montpellier, France)*, Gilles Taillades

Some Critical Considerations on the Energy Efficiencies of Different Water Electrolysis Technologies Working under Low Temperature or High Temperature Conditions

14:15 to 14:30

Karuppasamy Dharmaraj *(Electrocatalysis: Synthesis to Devices Group, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin, Germany)*, Aline Alencar Emerenciano, Marcel Handke, Iver Lauermann, Michelle Browne

Sputtered Ni Thin Films as Low-Loading Catalysts for Hydrogen Production in Anion Exchange Membrane Electrolyzers

14:30 to 14:45

Ieva Barauskienė *(Department of Physical and Inorganic Chemistry, Kaunas University of Technology, Kaunas, Lithuania)*, Kristina Bočkutė, Titas Chimičius, Eugenijus Valatka, Giedrius Laukaitis

Investigation of Ni, Co and Cu-Doped Iron Oxide Coatings for AEM Electrolysis

14:45 to 15:00

Elisabetta Campedelli *(Chemical Sciences Department, University of Padova, Padova, Italy)*, Alessandro Longato, Enrico Squizzato, Nicola Caoduro, Marco Mazzucato, Mattia Parnigotto, Christian Durante

Advancing Stability Test on PGM-free AEMWE: High-level Analysis of Electrochemical Impedance Spectroscopy for the Loss Mechanisms Diagnosis

15:00 to 15:15

Arianna Economou *(Mechanical and Industrial Engineering, University of Toronto, Toronto, Canada)*, Aimy Bazylak

Elucidating the Effects of Electrolyte Molarity on the Electrochemical Activity of Porous Transport Electrodes for Anion Exchange Membrane Water Electrolyzers

15:15 to 15:30

Julie Guehl *(ICPEES, Université de Strasbourg, Strasbourg, France)*, José Martinez Rosales, Feina Xu, Gaël Maranzana, Eric Sibert, Elena Savinova, Tristan Asset, Alexandr Oshchepkov

Electrodeposited Ni@NiO_x/C Cathodes for High-Performing Precious Metal-Free Anion Exchange Membrane Water Electrolyzers

15:30 to 15:45

Corinna Harms *(Electrochemical Energy Technology, Deutsches Zentrum für Luft- und Raumfahrt e.V. - DLR, Oldenburg, Germany)*, Lukas Mues, Konstantin Rücker, Michael Braun, Julian Lorenz

From Electrocatalysts to Membrane Electrode Assemblies in Anion Exchange Membrane Water Electrolysis

15:45 to 16:00

Miha Hotko *(Department of Materials Chemistry, National institute of chemistry, Ljubljana, Slovenia)*, Aleš Marsel, Marjan Bele, Nejc Hodnik

Influence of Membrane Types on the Activity and Durability of Nickel Catalysts for Water Splitting

16:00 to 16:30

Coffee Break *Sponsored by* ***Spectro Inlets Aps***

16:30 to 16:45

Gareth Keeley *(DEHT, CEA, Grenoble, France)*

Modification of Membranes to Prevent Gas Permeation in Anion Exchange Membrane Water Electrolysis

16:45 to 17:00

Egle Latvyte *(Centre for Manufacturing and Materials, Coventry University, Coventry, United Kingdom)*, Thais T. Guaraldo, Prabukumar Chinnusamy, Oliver Curnick, Hugh Hamilton, Patricia Sutton, John E. Graves

Ni-rich Metal Organic Frameworks Membrane Electrode Assemblies for Anion Exchange Membrane Electrolysers

17:00 to 17:15

Laura Titheridge *(Department of Chemical and Process Engineering, University of Canterbury, Christchurch, New Zealand)*, Campbell Tiffin, Glen McClea, Aaron Marshall

A Novel Catalyst Coated Membrane Fabrication Process for High Performance Anion Exchange Membrane Water Electrolysers

17:15 to 17:30

Pierre Toudret *(LITEN, Univ. Grenoble Alpes, CEA, Grenoble, France)*

Optimization of cathode design for improved performance in anion exchange membrane water electrolysis in “dry cathode” operation

17:30 to 17:45

Hegoi Urretabizkaia *(Tecnologías de Hidrógeno, TECNALIA Research and Innovation, Donostia/San Sebastián, Spain)*, Nerea Casado, Daniele Mantione, Daniela Minudri

Enhancing Alkaline Stability in AEM Water Electrolysis: Synthesis and Development of Hydrophobic PDADMAC Derivatives

17:45 to 18:00

Ameya Ranade *(Chemical Energy, Dutch Institute for Fundamental Energy Research, Eindhoven, Netherlands)*, Susanta Bera, Remco H.M. Timmer, Hans J.N. van Eck, Mihalis N. Tsampas

Nanostructuring Ni-Based Porous Transport Layers for Anion Exchange Membrane Water Electrolysis

18:00 to 18:15

Paramaconi Rodriguez *(Hydrogen electrochemical technologies, CIC energigune, Vitoria, Spain)*, Nerea Azcona-Aliende, Nerea Fernandez, Laura Sanchez, Lorenzo Fallarino, Rosalia Cid, Yang Zhang, Francisco Bonilla, Federico Calle-Vallejo

Unlocking Efficient and Durable Alloy Catalysts for HER and OER in Mildly Alkaline Anion Exchange Membrane Electrolysers

18:15 to 18:30

Nikan Afsahi *(ITODYS UMR 7086, Universsité Paris Cité, Paris, France)*, Zhu Zhang, Manas Ranjan Panda, Mainak Majumder, Naimeh Naseri, Jean-François Lemineur, Frédéric Kanoufi

Resolving the pH Dependence of Catalyzed Hydrogen Evolution at the Nanoscale via Reflective Microscopy

Symposium 6b Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Gutenberg D**

Chaired by Frédéric Maillard & Soren B. Scott

14:00 to 14:15

Michael Eppler *(Corporate Research, Robert Bosch GmbH, Renningen, Germany)*, Matthias Hanauer, Thomas Kadyk, Michael Eikerling

New frontiers in State-of-the-Art PEMFC Modeling: Insights from a Comprehensive Transient Experimental Validation

14:15 to 14:30

Quentin Meyer *(School of Chemistry, UNSW, , Australia)*, Chuan Zhao

How to Make Fuel Cells Cheaper and More Efficient

14:30 to 14:45

Sven Nösberger *(Chemistry, Biochemistry and Pharmaceutical Sciences, University of Bern, 3012, Switzerland)*, Ahmad Tirmidzi, Gustav K. H. Wiberg, Matthias Arenz

Machine Learning-Guided Exploration of Parameters Influencing Pt/C ORR Catalyst Layer Performance

14:45 to 15:00

Christopher Schreiber *(Department of Engineering, University of Yamanashi, Kofu, Japan)*, Junji Inukai

Fluctuation of Power Generation Accompanied by that of Oxygen Partial Pressure on Surface of the GDL inside Polymer Electrolyte Fuel Cell Operated at Elevated Temperatures under Back Pressure

15:00 to 15:15

Edson A Ticianelli *(Department of Physical Chemistry, Institute of Sao Carlos - up, Sao Carlos, Brazil)*, Rapher D. Moreira-Santos, Alain Sakita, Valdecir Paganin

Effects of Assembling and Operating Conditions on the Performance and CO Tolerance of PEMFCs with Different Membranes

15:15 to 15:30

Florian M. Chabot *(Advanced power and energy program, University of California Irvine, Irvine, USA)*, Patrick Yang, Jack T. Lang, Nadia E. Tolouei, Dilworth Y. Parkinson, Iryna V. Zenyuk

Compression of PEMWE studied by micro x-ray computed tomography and electrochemistry

15:30 to 15:45

Patrick Fortin *(Sustainable Energy Technology, SINTEF, Trondheim, Norway)*, Erlind Mysliu, Hamid Zamanizadeh, Alejandro Barnett, Sebastian Proch, Andrew Belleti, Niklas Lindahl

Innovative Components for High Performance Proton Exchange Membrane Water Electrolysis

15:45 to 16:00

Congfan Zhao *(School of Mechanical Engineering, Shanghai Jiao Tong University, Shanghai, China)*, Xiaohui Yan, Shuiyun Shen, Junliang Zhang

Boosting Nanobubble Transport to Optimize PEMWE Performance

16:00 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45

Frédéric Maillard *(LEPMI, CNRS, Saint Martin d'Hères, France)*, Clément Atlan, Corentin Chatelier, Apinya Ngoipala, Kyle Olson, Arnaud Viola, Ewen Bellec, Michael Grimes, Minaam Qamar, Matous Mrovec, Steven Leake, Joël Eymery, Tobias Schülli, Matthias Vandichel, Marie-Ingrid Richard

Beyond the surface: Investigating hydrogen absorption and strain in palladium nanoparticles with BCDI

16:45 to 17:00

Luca Camuti *(Nanochemistry, Max Planck Institute for Solid State Research, Stuttgart, Germany)*, Luca Camuti, Se-Ho Kim, Filip Podjaski, Bettina V. Lotsch, Siyuan Zhang

Phase-stable palladium hydride derived from $PdCoO_2$ for sustainable hydrogen evolution reaction

17:00 to 17:15

Nicolas Schlegel *(Department of Chemistry and Nano-Science Center, University of Copenhagen, Copenhagen, Denmark)*, Ina Reichmann, Tim Kunzmann, Serhiy Cherevko, Karl J. J. Mayrhofer, Matthias Arenz, Kirsten M. Ø. Jensen

Structure-Property Relations in Pt(MnFeCoNiCu) High-Entropy Alloy Catalysts

17:15 to 17:30

Menglong Liu *(Chemistry, Biochemistry and Pharmaceutical Sciences, University of Bern, Bern, Switzerland)*, Divyansh Gautam, Christian Clausen, Ahmad Tirmidzi, Gustav Wiberg, Jan Rossmeisl, Matthias Arenz

Electrochemical Synthesis of High Entropy Nanoparticles and the Exploration of the AgAuPd composition space for the oxygen reduction reaction

17:30 to 17:45

Jiasheng Lu *(Department of Chemistry, Technische Universität Berlin, Berlin, Germany)*, Carlos Augusto Campos Roldan, Thomas Merzdorf, Lujin Pan, Sören Selve, Johannes Schmidt, Jakub Drnec, Deborah Jones, Fabio Dionigi, Peter Strasser

Structural Ordering Boosted by Zn-doping PtV Nanoparticles for Oxygen Reduction Reaction in PEMFC

17:45 to 18:00

Aleš Marsel *(Department of Materials Chemistry, National institute of Chemistry, Ljubljana, Slovenia)*, Miha Hotko, Marjan Bele, Gregor Kapun, Nejc Hodnik

Identical Location SEM in Gas Diffusion Electrode for Studying Stability of Pt-based ORR Catalyst

18:00 to 18:15

Elena Colombo *(Department of Energy, Politecnico di Milano, Milano, Italy)*, Francesco Verducci, Livio Cultrera, Manon Lutz, Matthew Coats, Daniele Mora, Colin Butrico, Svitlana Pylypenko, Andrea Casalegno, Andrea Baricci

The Effect of Additive Cerium Ions on the Performance and Degradation of Cathode Catalyst Layer in PEM Fuel Cells for Transport Applications

18:15 to 18:30

Andrea Baricci *(Dipartimento di Energia, Politecnico di Milano, Milano, Italy)*, Daniele Mora, Elena Colombo, Andrea Casalegno

Hydrogen Limiting Current Test as a Diagnostic Tool for PEM Fuel Cell Cathode Catalyst Layer Mass Transport Ageing Under High Operating Temperature

Symposium 10 Green electrochemistry for a sustainable world

Room: **Meeting 1**

Chaired by Claudia Weidlich

14:00 to 14:15

Yuka Yamada *(Secondary Batteries Research-Domain, Toyota Central R&D Labs., Inc., Nagakute, Japan)*, Yasuhito Kondo, Azusa Tsukigase, Hiroki Kondo

Underwater Ultrasonic Stripping Technology of LIB Cathodes for Direct Recycling

14:15 to 14:30

Alejandro López-Chías *(Department of Inorganic Chemistry and Chemical Engineering, University of Córdoba, IQUEMA, Córdoba, Spain)*, Rafael Trócoli, Alvaro Caballero

Electrochemical Lithium Recovery from Lithium-Ion Batteries Spent via Selective Extraction

14:30 to 14:45

Valeria Blanco *(Solid State Chemistry, Institute of Materials Science of Barcelona, Bellaterra, Spain)*

Bio-derived SiO_x Anodes from Diatom Silica via Green Magnesiothermic Reduction for Sustainable Lithium-ion Batteries

14:45 to 15:00

Federico Mascetti *(Chemistry department ''Giacomo Ciamician'', Alma Mater Studiorum-Università di Bologna, Bologna, Italy)*, Antunes Staffolani, Francesca Soavi, Francesco Capodarca, Andrea Trebbi

Sustainable and Direct Recovery of Lithium-Ion Battery Cathodes and Anodes using a Green Solvent

15:00 to 15:15

Rafael Trocoli *(Química Inorgánica e Ingeniería Química, IQUEMA, Universidad de Córdoba, Cordoba, Spain)*, Victoria Carnero-Roldán, Alejandro López-Chías, Fabio La Mantia

Battery-based technologies for metal recovery from battery spent

15:15 to 15:30

Victoria Carnero-Roldán *(Electrical Energy Storage Department, Fraunhofer Institute - IFAM, Bremen, Germany)*, Victoria Carnero-Roldán, Cleis Santos

Critical Raw Material Recovery from Battery Recycling Aqueous Sources by a Fully Automated Electrochemical Setup

15:30 to 15:45 ***Invited***

Clara Santato *(Engineering Physics, Montreal, Canada)*

Redox Natural Materials for (Photo-assisted) Energy Storage

15:45 to 16:00

Paula Barbosa *(CICECO-Aveiro Institute of Materials, University of Aveiro, Aveiro, Portugal)*, Sónia Santos, Ana Barros-Timmons, Sónia Ventura, Filipe Figueiredo

Biopolymer Electrolyte Membranes for Application in Electrochemical Energy Devices

16:00 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45

Nicolas Demarthe *(Center for Energy and Environmental Chemistry, Friedrich Schiller Universität, Jena, Germany)*, Rashid Mirmasoomi, Johannes Schenk, Martin Oschatz, Andrea Balducci

New carbon-based electrode made of local and recycled lignin, combined with sustainable electrolytes for greener batteries and EDLCs

16:45 to 17:00

Jerzy J. Jasielec *(Department of Mechanical and Materials Engineering, University of Turku, Turku, Finland)*, Lauri Karttunen, Sami Jouttijärvi, Johannes Niskanen, Hugo Huerta, Samuli Ranta, Kati Miettunen

Batteries Used in Home Energy Management System: The Impact of Battery Degradation and Scheduling Strategies

17:00 to 17:15

Uzair Naveed Chishti *(Department of Chemistry and Biosciences, Karlsruhe Institute of Technology - Helmholtz Institute Ulm, Ulm, Germany)*, Mahdi Karimi Jafari, Alberto Varzi

Sustainable Binders for Hard Carbon Anodes in Sodium-Ion Capacitors

17:15 to 17:30 ***Invited***

Paola Granados Mendoza *(Projects and Technology, HyCC, Amersfoort, Netherlands)*, Hans Veenkamp, Hans Wiggenhauser, Dirk Ullmer, Fatemeh Razmjooei

Scaling High-Pressure Electrolysis: Advancing Green Hydrogen for Industrial Decarbonization

17:30 to 17:45

Shingi Yamaguchi *(Research Center for Advanced Science and Technology, The University of Tokyo, Meguro, Japan)*, Tatsuoki Kono

Effect of High Fluctuation from Renewable Electricity on Hydrogen Production by Water Electrolysis

17:45 to 18:00

Lewis MacDonald *(Chemical and Process Engineering, University of Strathclyde, Glasgow, United Kingdom)*, William Johnson, Luke Wilson, Stephen Lyth, Graham Smith, Dipak Shinde, Jun Li, Edward Brightman

Hydrogen Production From Waste Biomass Conversion Using Polyoxometalates/Metal Salt Redox Mediators

18:00 to 18:15

Maria Cuartero *(Electrochemical Processes Unit, IMDEA Energy, Madrid, Spain)*, Julio Lado, Cristina Adán, Victor Dato, Sergio Luján, Jesus Martin-Borja, Victor Bellon, Francisco Fueyo-Gonzalez, Enrique Garcia-Quismondo, Jesus Palma

Low-Cost Sol-Gel Oxide Coatings for Boosting Green Hydrogen Generation in Urea Fuel Cells

18:15 to 18:30

Erwan Bertin *(Chemistry, St Francis Xavier University, Antigonish, Canada)*, Noah Ruscica, Craig Bennett

Electrooxidation of Urea on Ni_xCu_{100-x} Nanoparticles Prepared by Pulsed Laser Ablation in Liquids

Symposium 12 Molecular spectro-photo-electrochemistry and electrosynthesis

Room: **Zagreb A**

Chaired by Elodie Anxolabéhère-Mallart, Paul Low & Naoki Shida

14:00 to 14:30 ***Keynote***

Elodie Anxolabéhère-Mallart *(Institut Parisien de Chimie Moléculaire UMR8232, Sorbonne Université, Paris, France)*, Julien Bonin, Claire Fave, Marc Robert

Electrochemistry and spectroscopies operando for reaction monitoring in molecular catalysis. Application to CO_2 reduction and O_2 activation.

14:30 to 15:00

Cyrille Costentin *(DCM, Univ Grenoble Alpes, Grenoble, France)*

Self-modulation and Self-protection Mechanisms in Molecular Catalysis of Electrochemical Reactions

15:00 to 15:15 ***Invited***

Naoki Shida *(Department of Chemistry & Life Science, Yokohama National University, Yokohama, Japan)*

Switching Selectivity: Single-Carbon Insertion via Electrochemically Generated Distonic Radical Cations

15:15 to 15:30

Jirí Ludvík *(Molecular Electrochemistry and Catalysis, J. Heyrovský Institute of Physical Chemistry, ASCR, Prague 8, Czech Republic)*

Electrochemistry of Tetraaza Macrocyclic Ligands and their Cu(II) Complexes for Medical Use

15:30 to 15:45 ***Invited***

Nicolas Kaeffer *(Laboratoire d'Innovation Moléculaire et Applications, CNRS / University of Strasbourg / Université de Haute-Alsace, Strasbourg, France)*, Gabriel Durin, Mijung Lee, Martina Aliz Pogany, Christian Kahl, Thomas Weyhermüller, Anne-Christine Kick, Markus Hölscher, Walter Leitner

Molecular Complexes in Electroreductions: Accommodating Electrons and Substrates

15:45 to 16:00

Christophe Bucher *(Laboratoire de Chimie-UMR CNRS 5182, Ecole Normale Supérieure de Lyon, Lyon, France)*, Théo Personeni, Barbara Rialland, Idir Benaissa, Soukaina Bennaamane, Lhoussain Khrouz, Andrea Mulas, Marie Fustier-Boutignon, Eric Clot, Nicolas Mézailles

Mechanistic Investigations of the Electrochemical Activation of Dinitrogen by Nitrido-Molybdenum Complexes

16:00 to 16:15

Ingrid Ponce *(Environmental Sciences, University of Santiago de Chile, Santiago, Chile)*, Ana María Méndez-Torres, Luis Acunña-Saavedra, Ruben Onñate, Benjamín Sánchez-Allende, Elizabeth Imbarack, José H. Zagal

Switch Behavior Detected by Multiscale Approach in Functional Redox Building Blocks: Pyridinium Isomers and Perfluorinated Iron Phthalocyanine

16:15 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45 ***Invited***

Paul Low *(School of Molecular Sciences, Univesity of Western Australia, Crawley, Australia)*

Electron Transfer Within and Through Molecules

16:45 to 17:00

Eisuke Sato *(Division of Applied Chemistry, Okayama University, Okayama, Japan)*, Tomohiro Nakahama, Yuika Nomura, Seiji Suga

Anodic Oxidation Promoted Selective Cyclization towards Total Synthesis of Monoterpene Indole Alkaloids

17:00 to 17:15

James Y. Becker *(Chemistry, Ben-Gurion University of the Negev, Beer Sheva, Israel)*, Galina Temstin Krayz, Shmuel Bittner, Anand Dhiman

Electrochemistry of Diquinonyl Amines with Unprecedented Observed Linear Correlation

17:15 to 17:30

Mahito Atobe *(Department of Chemistry and Life Science, Yokohama National University, Yokohama, Japan)*, Juno Sato, Naoki Shida

Electrochemical Amido Bond Formation by Chemoselective Oxidation of Hemiaminals at Au Electrocatalyst

17:30 to 17:45

Laurent Ruhlmann *(Institut of Chemistry, University of Strasbourg, Strasbourg, France)*, Samer Dawoud, Ning Jiang, Yiming Liang, Jingjing Wang, Yanzi Lin, Vasilica Badets, Corinne Boudon

Photo(electro)switchable molecular materials: a journey from molecular design to applications

17:45 to 18:00

Abdirisak A. Isse *(Department of Chemical Sciences, University of Padova, Padova, Italy)*, Giovanni Lissandrini, Alessandro Zampieri, Felix Schnaubelt, Khidong Kim, Krzysztof Matyjaszewski, Christian Durante, Marco Fantin

Electrochemical Removal of Halogen End Groups from Polymers

18:00 to 18:15

Mieczyslaw Lapkowski *(Department of Electronic Materials, Centre of Polymer and Carbon Materials, Zabrze, Poland)*

Electrochemical synthesis and characterization of conducting polymers based on protonated perimidine, 1H-perimidine and 1H,3H-perimidine

18:15 to 18:30

Susana Cordoba de Torresi *(Instituto de Quimica, Universidade de São Paulo, São Paulo, Brazil)*

Using Plasmonics To Boost The Electrochemical Detection Of Analytes

Symposium 13 Mechanisms in molecular electrochemistry for (bio-)catalysis, (bio-)sensing and electronics

Room: **Meeting 3B**

Chaired by Hye Jin Lee & Federico Polo

14:00 to 14:30 ***Keynote***

Katherine Willets *(Chemistry, Temple University, Philadelphia, USA)*

Optical Studies of Single Plasmonic Nanostructures in Electrochemical Environments

14:30 to 14:45 ***Invited***

Neso Sojic *(ISM, University of Bordeaux, Bordeaux, France)*, Julie Descamps, Yiran Zhao, Gabriel Loget

Photo-induced electrochemiluminescence sensing and imaging at semiconductor surfaces

14:45 to 15:00

Silvia Voci *(Institut Lavoisier de Versailles, UVSQ, University Paris-Saclay, Versailles, France)*, Gianluca Visagli, Lotfi Abdelkader Benali Karroubi, Anne-Marie Gonçalves

New Mechanistic Insights in 2D-InP Semiconductor Architectures at a Molecular Level by Optically-Correlated Electrochemistry

15:00 to 15:15

Kaoru Hiramoto *(Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, Sendai, Japan)*, Manlaibaatar Narantsetseg

Electrochemiluminescence Thin Film Coating for the Imaging of Reactive Oxygen Species from Neuronal Spheroids

15:15 to 15:30

Hye Jin Lee *(Chemistry, Kyungpook National University, Daegu, Korea)*, Chelladurai Karuppiah

Nanocomposite-driven voltammetric biosensors for small molecules

15:30 to 15:45

Yuliya Silina *(Biochemistry, Saarland University, Saarbrücken, Germany)*

One-Step Electrodeposition of Sensing Layers Containing Oxidases and their Application in the Development of Amperometric Biosensors

15:45 to 16:00

Chiara Mariani *(Chemistry G. Ciamician, University of Bologna, Bologna, Italy)*, Alessandro Fracassa, Paolo Pastore, Sara Bogialli, Francesco Paolucci, Giovanni Valenti, Alessandra Zanut

Singling Out the Electrochemiluminescence Profile in Microelectrode Arrays

16:00 to 16:30

Coffee Break *Sponsored by* ***Spectro Inlets Aps***

SpectroInlets
Enabling real-time analysis

16:30 to 16:45 ***Invited***

Frederic Kanoufi *(ITODYS, Universite Paris Cite, CNRS, Paris, France)*, Nikan Afsahi, Louis Godeffroy, Jean-François Lemineur

Watching Electrocatalysis through Bubbles and Droplets

16:45 to 17:00

Corinne Lagrost *(ISCR, Univ Rennes-CNRS, Rennes, France)*, Quentin Lenne, Yann R. Leroux, Alice Mattiuzzi, Ivan Jabin, Jonathan Hamon

ORR Electrocatalysis: Playing with the Interface at the Molecular Level

17:00 to 17:15

Luiza Aguiar do Nascimento *(LIMS, La Trobe University, Melbourne, Australia)*, Kilian Fraysse, Kevin Krause, Cameron L. Bentley, Rosanne Guijt, Paul Stoddart, Simon Moulton, Saimon M. Silva, George W. Greene

Electrosynthesis of large area 2D conducting polymer films

17:15 to 17:30

Bertold Rasche *(Institute of Inorganic Chemistry, University Stuttgart, Stuttgart, Germany)*, Felix Hiege, Iuliia Neumann, Volodymyr Baran, Kristina Tschulik

Operando XRD Study of the Ni-Se Electrodeposition and its Behaviour under OER Conditions

17:30 to 17:45

Christine Vautrin-Ul *(Laboratory ICMN, CNRS/University of Orléans, Orléans, France)*, Thinhinane Hamadachi, Yves Pain, Christophe Coillot, Jimmy Nicolle, Mohamed-Ramzi Ammar, Marylène Vayer, Jean-Manuel Decams, Vincent Astié, Sylvie Contreras

Study of the local properties of epitaxial graphene on silicon carbide by scanning electrochemical microscopy coupled with AFM

17:45 to 18:00

Moksh Madan *(Chair of Analytical Chemistry II, Ruhr University Bochum, Bochum, Germany)*, Mahnaz Azimzadeh Sani, Martin Schwensow, Kristina Tschulik

Acidic Water Oxidation on Iridium Oxide: Single-Particle Insights into pH and Anion Effects

18:00 to 18:15

Alenzo Murray *(Chemistry Department, University of The Western Cape, Bellville, South Africa)*, Giovanni Valenti, Francesco Paolucci, Francis Muya, Priscilla Baker

A Conductive Metal-Organic Framework-Modified Electrode for Sensitive Electrochemiluminescent Detection of Spermine

18:15 to 18:30

Ana María Méndez-Torres *(Materials Engineering Research Center, FINARQ, Central University of Chile, Santiago, Chile)*, Rubén Oñate, Laura Scarpetta-Pizo, Luis Acuña-Saavedra, Erika Lang, Romina Lorca, Elizabeth Imbarack, Francisca Salas-Sepúlveda, Horacio Poblete, Ingrid Ponce

Wires versus Molecular Cable as Axial Ligands in Self-assembled Iron Phthalocyanine Systems for their Use in Reactions of Energy Interest

Symposium 14a Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Gutenberg C**

Chaired by Ruth Knibbe & Yaolin Xu

14:00 to 14:15

Yaolin Xu *(Department of Applied Physics, Aalto University, Espoo, Finland)*

Unveiling The Nanoscale Dynamics of Battery Materials and Interfaces with Advanced X-ray and Electron Spectro-/Microscopy

14:15 to 14:30

Julius Tiongson *(Institute of Frontier Materials, Deakin University, Waurn Ponds, Australia)*, Luke O'Dell, Maria Forsyth

Understanding Ion Interactions and Dynamics in Ionic Liquid Electrolytes using Nuclear Magnetic Resonance Spectroscopy for Li/Na-ion Battery Applications

14:30 to 14:45

Jack Swallow *(Materials, University of Oxford, Oxford, United Kingdom)*, Robert Weatherup

Understanding Interfacial Reactions in Li-ion Batteries using X-ray Spectroscopy Combined with Spectral Simulations

14:45 to 15:00

Matthias Golomb *(School of Chemistry and Chemical Engineering, University of Surrey, Guildford, United Kingdom)*, Neubi Xavier, Qiong Cai

High-Throughput Data-Driven Electrolyte Design to Enable Lithium Metal Batteries

15:00 to 15:15

Julian Ulrich *(Institute for Applied Materials, Electrochemical Technologies, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, André Weber, Ulrike Krewer

Understanding Ion-Transfer Kinetics with Nonlinear Frequency Response Analysis

15:15 to 15:30

Théo Sombret *(Laboratoire CARMeN, Université de Rouen Normandie, Mont-Saint-Aignan, France)*, Egon Kherchiche, Julien Maillard, Antonin Gajan, Oliver Hvidsten, Mona Abdelgaid, Kristin Persson, Kamila Kazmierczak, Mauricio Araya, Pierre Giusti, Carlos Afonso

Advanced molecular characterization of passivation layers in lithium-ion batteries by FTICR imaging mass spectrometry

15:30 to 15:45

Egon Kherchiche *(CARMeN, University of Rouen - CARMeN / Saft, Bordeaux, France)*, Theo Sombret, Antonin Gajan, Julien Maillard, Carlos Afonso, Pierre Giusti

Understanding Interfacial Mechanisms of Li-Ion Batteries Using High-Resolution Mass Spectrometry: Effect of Lithium Difluoro Phosphate as an Electrolyte Additive

15:45 to 16:00

Santhana Eswara *(Advanced Instrumentation for Nano-Analytics (AINA), Luxembourg Institute of Science and Technology, Belvaux, Luxembourg)*, Sayantan Sharma, Tom Wirtz

Operando microscopy for the investigation of electrochemical interfaces: correlation of structural, chemical and electrochemical evolution of materials using secondary ion mass spectrometry imaging

16:00 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45

Ruth Knibbe *(School of Mechanical & Mining Engineering, University of Queensland, Brisbane, Australia)*

Anode Storage Mechanisms in Sodium Batteries

16:45 to 17:00

Oliver Löhmann *(Institute for Electrochemical Energy Storage, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Pouya Partovi-Azar, Sebastian Risse

Multi-spectroscopic analysis of lithium-sulfur batteries

17:00 to 17:15

Pronoy Dutta *(Department of Chemistry and Physics of Materials, University of Salzburg, Salzburg, Austria)*, Gregor Zickler, Christian Prehal

Understanding the Effects of Polysulfide Solubility on Quasi-Solid-State S/Li_2S Conversion in Lithium-Sulfur Batteries

17:15 to 17:30

Laurin Derr *(Institute of Physical Chemistry, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Steffen Braun, Krishnaveni Palanisamy, Christine Kranz, Rolf Schuster

Time-dependent entropy production during sodiation of hard carbon battery anodes

17:30 to 17:45

Alexandre Roelens *(Materials and Chemistry, Vrije Universiteit Brussel, Brussels, Belgium)*, Annick Hubin, Mesfin Haile Mamme

Modelling Approach to Assess Electrochemical Compatibility of Electrode/Solid Polymer Electrolyte Interface in All-Solid-State Battery

17:45 to 18:00

Angelina Sarapulova *(Innovative Battery Materials, Fraunhofer ISE, Freiburg, Germany)*, Angelina Sarapulova, Benan Oguz, Robby Mathew, Jonathan Delaney, Fabio Maroni, Gyeongwan Jo, Maider Zarrabeitia, Sourav Baiju, Bibin Jose, Payam Kaghazchi, Mario Marinaro, Sonia Dsoke

The Electrochemical Mechanism and Density Functional Theory (DFT) Calculations for $Na_7V_4(P_2O_7)_4(PO_4)$(NVPP) Material as a Positive Electrode in Sodium-Ion Batteries

18:00 to 18:15

Hyemin Kim *(Surface Science, Helmholtz-Zentrum Hereon, Geesthacht, Germany)*, Prokopios Georgopanos, Adrian Fortuin, Denis Kramer, Mikhail Zheludkevich, Daniel Höche

Anion-Dissociating Co-Solvation Behavior of Acetonitrile and DME in Mg-ion battery system studied with DFT approach

18:15 to 18:30

Xiaoting Yin *(State Key Laboratory of Physical Chemistry of Solid Surfaces, Xiamen University, China)*, Jia-Wei Yan, Bing-Wei Mao, Jian-Feng Li, Yu Gu

Unraveling the energy storage mechanism in graphene-based nonaqueous electrochemical capacitors by gap-enhanced Raman spectroscopy

Symposium 14b Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Meeting 2B**

Chaired by Katharina Doblhoff-Dier & Leon Jacobse

14:00 to 14:15

Ulrike Kramm *(Chemistry, Technical University of Darmstadt, Darmstadt, Germany)*, Nicole Segura Salas, Debolina Misra, Parviz Azimov, Nils Heppe, Vinod Paidi, Hendrik Haak, Pascal Theis, Lanjie Jiang, Viktoriia Saveleva, Ilya Sergeev, Vera Krewald

CO_2 Reduction Reaction on FeNC catalysts – What can we learn from a combined analysis of in situ X-ray absorption spectroscopy and nuclear forward scattering?

14:15 to 14:30

Sejin Park *(Seoul National University, Seoul, Korea)*, Yun Jeong Hwang, Jang Yong Lee, Da Hye Won

Understanding the Ionomer Effects on CO_2 Reduction through IR Spectroscopy

14:30 to 14:45

Mariangela Biggiero *(Inorganic Chemistry and Catalysis, Utrecht University, Utrecht, Netherlands)*, Hugo P. Iglesias van Montfort, Vaishnavi Ganesh, Kirill A. Lomachenko, Tom Burdyny, Brian Rawls, Florian Meirer, Ward van der Stam, Annelie Jongerius, Bettina Baumgartner, Bert M. Weckhuysen

Quasi-simultaneous in situ XAS-XRD investigation of the InBi-C electrocatalyst's activation and regeneration for CO_2 reduction in a gas diffusion electrode

14:45 to 15:00

Wei Wang *(Department of Applied Science and Technology, Politecnico di Torino, Turin, Italy)*, Mattia Salomone, Michele Re Fiorentin, Francesca Risplendi, Giancarlo Cicero

Predicting Selectivity and Activity of Dilute Cu-Based Bimetallic Alloys for C_2 Formation Using Constant Potential Modelling

15:00 to 15:15

Charlie Ruffman *(Physics, University Of Auckland, Auckland, New Zealand)*, Krista Steenbergen, Nicola Gaston

Dynamic Liquid Metals as Catalysts for Selective CO_2 Reduction

15:15 to 15:30

Hsuan-Yu Chen *(International Graduate Program of Molecular Science and Tech, National Taiwan University, Taipei City, Taiwan)*, Heng-Liang Wu

Mechanistic Insights into the Formation of CO and HCOOH during Electrochemical CO_2 Reduction Reaction

15:30 to 15:45

JinYu Ye *(Chemistry, Xiamen University, Xiamen, China)*, Nan Fang, JiaFeng Du, YinYi Ma, ZhaoHui Wang, ZhiYou Zhou, ShiGang Sun

Interface Modulation Mechanism of Copper Electrocatalysts for CO_2 Reduction Reaction via 1-Octanethiol Self-Assembling

15:45 to 16:00

Ya-Wei Zhou *(Helmholtz Young Investigator Group, Helmholtz Center Berlin for Materials and Energy, Berlin, Germany)*, Beatriz Roldan Cuenya, Christopher Seiji Kley

Carbonate anions and radicals induce interfacial water ordering and proton relays in CO_2 electroreduction on gold

16:00 to 16:30

Coffee Break Sponsored by ***Spectro Inlets Aps***

16:30 to 16:45

Amandine Brige *(ICPEES, Université de Strasbourg - CNRS, Strasbourg, France)*, Mathieu Gervais, Paul Chassagne, Antoine Bonnefont, Angel Bochs-Cruz, Fabrice Bournel, Jean-Jacques Gallet, Elena Savinova, Alexandr Oshchepkov, Tristan Asset

Exploring the electrode-electrolyte interface of a nickel electrocatalyst during hydrogen oxidation/evolution reactions

16:45 to 17:00

Simon Leisibach *(Physics, Technical University of Munich, Garching, Germany)*, Katharina Krischer, Simon Schiedeck

Au/TiO_2 and Pt/TiO_2 Dual-Site Catalysts for the Alkaline Hydrogen Evolution Reaction

17:00 to 17:15

Simon Ospina Velez *(Theory and Computation of Energy Materials - IET-3, Forschungszentrum Jülich, Jülich, Germany)*, Oliver Trost, Nils Bruch, Luca Marie Sicking, Tobias Binninger, Kristina Tschulik, Michael Eikerling

Modeling Molecular Hydrogen Transport and Bubble Dynamics in a Nanoconfined Electrolyte

17:15 to 17:30

Peng Li *(College of Chemistry and Molecular Sciences, Wuhan University, Wuhan, China)*, Ya-Ling Jiang, Yana Men, Yu-Zhou Jiao, Shengli Chen

Kinetic Cation Effect in Alkaline Hydrogen Electrocatalysis Is a Matter of Proton Transfer in the Electric Double Layer

17:30 to 17:45

Maximilian Schalenbach *(Institute of Energy Technologies - IET-1, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Rebekka Tesch, Piotr Kowalski, Hermann Tempel, Rüdiger-A. Eichel

The Role of the d-Band Structure and Adsorption Sites for the Electrocatalytic Hydrogen Evolution on AuPt Alloys

17:45 to 18:00

Shengli Chen *(Department of Chemistry, Wuhan University, Wuhan, China)*, Yaling Jiang, Peimeng Qiu, Qinghua Liu, Peng Li

Electric-Double-Layer Mechanism of Surface Oxophilicity to Regulate Hydrogen Electrocatalytic Kinetics in Base

18:00 to 18:15

Karen van den Akker *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Marc Koper, Rik Mom

Minimizing the Influence of Metal Contaminations During HER Studies in Alkaline Media

18:15 to 18:30

Julia Fernández-Vidal *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*

Unveiling Dual Roles of Organic Cations in Alkaline Hydrogen Evolution Reaction: A Wolf in Sheep's Clothing

Symposium 15 Artificial intelligence for electrochemistry

Room: **Meeting 2A**

Chaired by Alejandro A. Franco & Jianzhong Wu

14:00 to 14:30 ***Keynote***

Zhong-Qun Tian *(State Key Laboratory of Physical Chemistry of Solid Surfaces, Xiamen University, Xiamen, China)*, Jing-Hua Tian, Hai-Long Wang, Shao-Ping Wu, Hai-Sheng Su, Si-Yuan Ma, Wei-Wei Wang, Fujie Tang, Cheng Wang, Wen-Jing Hong, Jun Cheng

How Can AI Transform the Research Paradigm in Electrochemical Innovation?

14:30 to 14:45 ***Invited***

Alejandro A. Franco *(Laboratoire de Réactivité et de Chimie des Solides - LRCS, Université de Picardie Jules Verne & CNRS, Amiens, France)*

Digital Modeling for the Inverse Design of Battery Manufacturing

14:45 to 15:00

Christian Prehal *(Department of Chemistry and Physics of Materials, University of Salzburg, Salzburg, Austria)*, Jean-Marc von Mentlen, Ayca Senol-Güngör, Pronoy Dutta, Vanessa Wood

Quantifying nanoscale conversion pathways in Li-S batteries through cryo-TEM and ML-assisted operando small-angle neutron scattering

15:00 to 15:15

Nooshin Zeinali Galabi *(Chemistry, McGill University, Montreal, Canada)*, Chenghao Liu, Marc Kamel, Yoshua Bengio, Eric McCalla

Accelerating High-throughput Experimental Development of Li-ion Battery Cathodes with Advanced Machine-learning Models

15:15 to 15:30

Ken Sakaushi *(Research Center for Energy and Environmental Materials, National Institute for Materials Science, Tsukuba, Japan)*, Miao Wang, Wenqin Peng

Aiming to Understand Microscopic Electrode Process by Human-AI Collaboration

15:30 to 15:45 ***Invited***

Albert C. Aragonès *(Physical Chemistry, University of Barcelona, Barcelona, Spain)*, S. Cuscó, D. Balas, Albert C. Aragonès

Machine learning and single-molecule trapping: hitting the jackpot in (bio)molecular transport

15:45 to 16:15

Coffee Break *Sponsored by* ***Spectro Inlets Aps***

SpectroInlets
Enabling real-time analysis

16:15 to 16:30 ***Invited***

Mariana Rossi *(LM Group, MPI for the Structure and Dynamics of Matter, Hamburg, Germany)*, Krystof Brezina

Modeling thermal quantum rates of surface-mediated water splitting using machine learning

16:30 to 16:45 ***Invited***

Jianzhong Wu *(Department of Chemical and Environmental Engineering, University of California, Riverside, Riverside, USA)*

Physics-Informed Learning of In-Operando Capacitance in Heteroatom-Doped Carbon Electrodes

16:45 to 17:00

Ozlem Ozcan *(Material and Surface Technologies, Bundesanstalt für Materialforschung und -prüfung, Berlin, Germany)*, Mert Ozan, Cemal Hekim, Dirk Rohde, Annica Wetzel

Optimization of the Electrodeposition of Alloy Thin Films with Complex Chemistries Using a Material Acceleration Platform (MAP)

17:00 to 17:15 ***Invited***

Yizhou Zhu *(Department of Materials Science and Engineering, Westlake University, Hangzhou, China)*

When Machine Learning Force Fields Fail Expectations: Lessons We Learned from $Li_7La_3Zr_2O_{12}$

17:15 to 17:30 ***Invited***

Byungchan Han *(Chemical & Biomolecular Engineering, Yonsei University, Seoul, Korea)*

Computational Design of Energy Materials Using First-principles Calculations and Machine Learning Techniques

17:30 to 17:45

Zhu Meng *(Department of Chemical Engineering, Imperial College London, London, United Kingdom)*, Jiaze Sun, Mark Turner, Caiwu Liang, Sarah Haigh, Magda Titirici, Ifan Stephens, Camille Petit

Benchmarking IrO_x electrocatalysts for oxygen evolution reaction: automated and high-throughput protocols in RDE systems

17:45 to 18:00 ***Invited***

Maria Chan *(Center for Nanoscale Materials, Argonne National Laboratory, Lemont, USA)*

Theory-informed, AI-guided characterization for battery materials

Friday 12 September 2025 - *Morning*

Plenary

Room: **Kongress-Saal**

Chaired by Ulrike Krewer

08:15 to 09:15

Guenter Schmid *(SE TI SES PRM, Siemens Energy Global GmbH & Co. KG, Erlangen, Germany)*, Ladislaus Dobrenizki, Stefan Hoeyng, Thomas Bagus, Rafael D. Oliveira, Peter Geskes

Scaling and Production Ramp-up, the Major Challenges for the Hydrogen Economy

Symposium 1 Electroanalysis: From fundamentals towards smart devices

Room: **Zagreb B**

Chaired by Gabriel Meloni

09:30 to 10:00 ***Keynote***

Joaquín Rodríguez-López *(Chemistry and Beckman Institute, University of Illinois Urbana-Champaign, Urbana, USA)*, Michael Pence, Gavin Hazen, Zirui Wang, Raghuram Gaddam

Automated Electroanalysis Via The Electrolab: Building a Versatile Platform Towards High-Throughput and Self-Driving Electrochemistry

10:00 to 10:15

Yang Liu *(College of Science and Engineering, James Cook University, Townsville, Australia)*, Seyed Oveis Mirabootalebi, Gideon Vos, Mostafa Rahimi Azghadi

Machine Learning–Assisted Electrochemical Sensing of Nitrate

10:15 to 10:30

Emilia Witkowska Nery *(Advanced biomaterials and technologies for health, Institute of Physical Chemistry Polish Academy of Sciences, Warsaw, Poland)*, Krzysztof Durka, Gonzalo Angulo, Hector Rodriguez, Sanat-Kumar Mahankudo, Martyna Durka

Miniaturized Cell for Spectroelectrochemical Studies at the Liquid-liquid Interface

10:30 to 11:00

Coffee Break *Sponsored by* ***Park Systems Europe***

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 2 Bioelectrochemistry from fundamentals to sustainable applications

Room: **Dijon**

Chaired by Christophe Léger & Ievgen Mazurenko

09:30 to 09:45

Rafal Bialek *(Professorship for Electrobiotechnology, Campus Straubing, Technical University of Munich, Straubing, Germany)*

In situ imaging of oxygen-protective reaction fronts in biohybrid redox-active hydrogel thin films

09:45 to 10:00

Mahiro Omori *(Itagaki/Shitanda Laboratory, Tokyo University of Science, 2641 Yamazaki, Noda City, Chiba Prefecture, Japan)*, Ichiro Shimizu, Mitsuru Hanasaki, Tsutomu Mikawa, Kayo Suzuki-Nagata, Hikari Watanabe, Isao Shitanda, Masayuki Itagaki

Development of LOx and BOD Ink using Aqueous Binder and Porous Carbon for Screen-printed Biodevices

10:00 to 10:15

María J. Sáenz-Espinar *(Materials Institute of the University of Alicante, University of Alicante, San Vicente del Raspeig, Spain)*, Francisco Huerta, Francisco Montilla

Biofunctionalization of Electrodes: Electrochemical Biosensor based on ALP Inhibition for Environmental Monitoring

10:15 to 10:30

Wassim El Housseini *(Kummer Institute Center for Resource Sustainability, Minteer Lab - Missouri University of Science and Technology, rolla, USA)*, Rokas Gerulskis, Nibedita Behera, Zach Nguyen, Long Luo, Shelley D.Minteer

Electroenzymatic Strategies for Efficient and Stereoselective Hydrogen Isotope Exchange in Drug-Like Molecules

10:30 to 11:00

Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Antoine Vautier *(Institut des Sciences Chimiques de Rennes, Université de Rennes, Rennes, France)*, Frédéric Barrière, Florence Geneste, James Behan

Development of a bioelectrode coupled to organic redox species used in redox flow batteries

11:15 to 11:30

Ludmila Moranova *(Research Centre for Applied Molecular Oncology, Masaryk Memorial Cancer Institute, Brno, Czech Republic)*, Johana Strmiskova, Nasim Izadi, Sarka Sevcikova, Aneta Fried, Martin Bartosik

Electrochemical Bioassays for Cancer Biomarker Detection in Clinical Samples

11:30 to 11:45

Pawel Rutecki *(Department of Chemistry, Gdańsk University of Technology, Gdańsk, Poland)*, Anna Dettlaff, Pawel Niedzialkowski, Michal Sobaszek, Robert Bogdanowicz

Tailoring Carbonous Electrode Surface Modification Strategies for Impedimetric Detection of Microcystin Biotoxins in Freshwater Systems

11:45 to 12:00

Mohammed Ali Saif Al-Shaibani *(Electrochemical Energy Conversion, Max-Planck-Institute Magdeburg, Magdeburg, Germany)*, Saksham Verma, Luka Zivkovic, Tanja Vidakovic-Koch

Direct Electrochemical Regeneration of 1,4-NADH: Mechanistic Insights and Optimization Using Carbon-Based Electrodes

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 4 Lithium-ion batteries: From liquid to solid state

Room: **Gutenberg B**

Chaired by Bernard Lestriez

09:30 to 09:45

Vito Di Noto *(Department of Industrial Engineering, University of Padua, Padua, Italy)*, Keti Vezzù, Enrico Negro, Gioele Pagot

Polymer-based Electrolytes for Lithium Batteries and Beyond: New Materials and Conductivity Mechanisms

09:45 to 10:00

Olli Sorsa *(VTT Technical Research Centre of Finland, Espoo, Finland)*, Zhaokun Wu, Johanna Hiitola-Keinänen, Rafal Sliz, Hannu Rummukainen, Taina Rauhala, Mikko Mäkelä, Riikka Suhonen, Marja Vilkman

Mixture Models and Machine Learning as Tools in the Optimization of Solid-State Polymer Electrolytes for Solid-State Batteries

10:00 to 10:15

Julia Amici *(Department of Applied Science and Technology, Politecnico di Torino, Torino, Italy)*, Mattia Longo, Daniele Versaci, Carlotta Francia, Silvia Bodoardo

Crosslinked Gel Polymer Electrolytes for Li-O_2 Batteries Based on Biorenewable Organogels

10:15 to 10:30

Kewei Cai *(Institute for Frontier Materials, Deakin University, Burwood, Australia)*, Maria Forsyth, Fangfang Chen

Super-Fast Ion Conduction in Phosphonium-Based PolyIL-in-Salt Systems For Solid-state Lithium Metal Batteries

10:30 to 11:00

Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Stefan Freunberger *(Institute of Science and Technology Austria, Klosterneuburg, Austria)*, Soumyadip Mondal

New insights into the mechanisms of solid-state and solid-liquid-solid Li-sulfur electrochemistry

11:15 to 11:30

Roberto Manuel Torresi *(Instituto de Química, Universidade de São Paulo, São Paulo, Brazil)*, Breno Luiz de Souza, Heloise M. Sintaku

Covalent-Sulfur Polymer Positive Electrode for Enhanced Stability in Lithium-Sulfur Batteries

11:30 to 11:45

Delvina Japhet Tarimo *(Energy Materials, INM – Leibniz Institute for New Materials, Saarbrücken, Germany)*, Francisco García-Soriano, Alen Vizintin, Christian Prehal, Volker Presser

Influence of porous structure, sulfur loading, and cathode/solid electrolyte interphase formation using carbonate and ether-based electrolyte for lithium-sulfur batteries

11:45 to 12:00

Martina Gerle *(Institute of Engineering Thermodynamics, German Aerospace Center - DLR eV, Stuttgart, Germany)*, Robin Moschner, Timo Danner, Kathrin Küster, Peter Michalowski, Arno Kwade, Andreas Friedrich, Maryam Nojabaee

Sulfurized Polyacrylonitrile (SPAN) Cathodes in Lithium-Sulfur Batteries: Investigating the Influence of Cathode Microstructure and Electrolyte System on Electrochemical Performance

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 5a New battery chemistries

Room: **Watford**

Chaired by Giuseppe Elia & Zuzana Vlčková Živcová

09:30 to 09:45 ***Invited***

Giuseppe Elia *(Department of Applied Science And Technology - DISAT, Politecnico di Torino, Torino, Italy)*, Hamideh Darjazi, Matteo Milanesi, Hiba Ali, Alessandro Piovano, Silvia Porporato, Giuseppina Meligrana, Claudio Gerbaldi

Addressing key challenges in the development of Zn-based electrochemical storage systems

09:45 to 10:00

Arun Kumar *(Department of Thin Films and Nanostructures, Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic)*, Chaitanyakrishna Kamaja, Jiøí Cervenka

Mitigating Phase Dissolution in Vanadium Pentoxide Cathodes for Long-Life Aqueous Zinc-Ion Batteries

10:00 to 10:15

Dino Tonti *(Institute of Materials Science of Barcelona - ICMAB, Spanish National Research Council - CSIC, Bellatera, Spain)*, Cheng Liu, Siavash Khabazian, Yan Gao, Vlad Martin Diaconescu, Krzysztof Matlak, Lorenzo Stievano, Andrea Sorrentino, Laura Simonelli

Cathode and cell mechanisms in Rechargeable Aqueous Zn-MnO_2 Batteries

10:15 to 10:30

Yasin Emre Durmus *(Fundamental Electrochemistry - IET-1, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Hans Kungl, Hermann Tempel, Rüdiger-A. Eichel

Boosting Zinc Anode Activity in Near-Neutral Zinc-Air Batteries Through EDTA Electrolyte Additive

10:30 to 11:00

Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Masaki Okada *(Office of Institutional Advancement and Communications, Kyoto University, Uji, Japan)*

Reversibility of electrolytic manganese dioxide positive electrode in alkaline aqueous solution

11:15 to 11:30

Yitao He *(Department of Thin Films and Nanostructures, FZU - Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic)*, Jiøí Cervenka

Suspension Electrolyte for Aqueous Dual-Ion Batteries

11:30 to 11:45

Zuzana Vlčková Živcová *(Department of Electrochemical Materials, J. Heyrovský Institute of Physical Chemistry of the CAS, Prague, Czech Republic)*, Petr Cech, Andy Taylor, Martin Jindra, Rene Pfeifer, Jiøí Cervenka, Otakar Frank

Electrochemical and in situ Raman Spectroelectrochemical Study of p- and n-type Doped Diamond Electrodes in Water-in-Salt Electrolytes

11:45 to 12:00

Lucia Sorrill *(Production Engineering, University of Bremen, Bremen, Germany)*

Application of Design of Experiment for Understanding the Influence of Experimental Parameters on Zn-ions Batteries Anodes

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 5b New battery chemistries

Room: **Gutenberg A**

Chaired by Maximilian Fichtner & Zhirong Zhao-Karger

09:30 to 10:00 ***Invited***

Toshihiko Mandai *(Research Center for Energy and Environmental Materials, National Institute for Materials Science, Tsukuba, Japan)*

Overview of Mg Electrochemistry in Non-Ethereal Electrolytes

10:00 to 10:15

Takeshi Kobayashi *(Energy Transformation Research Laboratory, Central Research Institute of Electric Power Industry, Yokosuka, Japan)*, Toshiharu OHNUMA

Oxide-typed all-solid-state sodium-ion battery with long cycling performance

10:15 to 10:30

Soutam Panja *(Helmholtz Institute Ulm - HIU, Ulm University, Ulm, Germany)*, Anantha Padmanabhan Gopikuttan, Amr Radwan, Maximilian Fichtner

Visualizing the effects of the cathode composite microstructure and pressure on the performance of all-solid-state chloride-ion batteries

10:30 to 11:00

Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Sergio Federico Mayer *(Liten/DEHT/STB-L2PC, CEA-Grenoble, Grenoble, France)*, Laureline Lecarme, Claire Villevieille, Jean-Baptiste Ducros

Optimizing the synthesis of Na_3PnS_4 (Pn = P, Sb) sodium solid electrolytes

11:15 to 11:30

Xiangyu Zhao *(College of Materials Science and Engineering, Nanjing Tech University, Nanjing, China)*, Tianchen Xia, Yulin Xu, Xiaodong Shen

Construction of Chloride-Ion Solid-State Electrolytes and Their Ionic Conduction Mechanisms

11:30 to 11:45

George Hasegawa *(Institute of Materials & Systems for Sustainability, Nagoya University, Nagoya, Japan)*

The Kinetics of Na-ion Transfer at Hard Carbon/NASICON Interface in All-Solid-State Batteries

11:45 to 12:00

Kentaro Yamamoto *(Faculty of Engineering, Nara Women's University, Nara, Japan)*, Yanchang Wang, Hisao Kiuchi, Toshiyuki Matsunaga, Hidenori Miki, Hideki Iba, Kazuhiko Maeda, Yoshihisa Harada, Hiroshi Kageyama, Yoshiharu Uchimoto

High-Capacity Cathodes Enabled Using Excess Fluoride-Ion Insertion/Extraction for All-solid-state Fluoride-Ion Batteries

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 6a Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Kongress-Saal**

Chaired by Marco Altomare & Meimei Yang

09:30 to 09:45

Marco Altomare *(Dept. Chemical Engineering, MESA+ Institute for Nanotech., University of Twente, Enschede, Netherlands)*

Solid-state dewetting to design model nanoparticle electrodes

09:45 to 10:00

Aleksandr Samarin *(LEPMI, University Grenoble Alpes, Grenoble, France)*, Eric Sibert, Marian Chatenet, Antoine Bonnefont

Electrochemically-driven evolution of Pt(hkl)-ionomer interface

10:00 to 10:15

Katinka Boterman *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Marc Koper

Graphene-Covered Pt(111): A Tunable, CO-Tolerant Hydrogen Oxidation Catalyst

10:30 to 11:00

Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Annika Neufischer *(Department of Engineering Sciences and Mathematics, Luleå University of Technology, Luleå, Sweden)*, Mayank Pal, Annika Neufischer, Michael Busch

The Mechanism Matters – An Insight into the Oxygen Evolution Reaction on Iridium Oxide

11:15 to 11:30

Tomoya Nagao *(Graduate School of Chemical Sciences and Engineering, Hokkaido University, Sapporo, Japan)*, Sho Kitano, Mana Iwai, Koji Fushimi, Hiroki Habazaki

Structural Transition and OER Performance of Anodized Alloy Electrocatalysts for Alkaline Water Electrolysis Revealed by In-situ Raman Spectroscopy

11:30 to 11:45

Miao Wang *(Research Center for Energy and Environmental Materials, National Institute for Materials Science, Tsukuba, Japan)*, Ken Sakaushi

Revealing the Role of Local pH Mismatch in Water Molecule Oxidation Kinetics at the Electrified Electrode-Electrolyte Interface

11:45 to 12:00

Keisuke Obata *(Department of Chemical System Engineering, The University of Tokyo, Tokyo, Japan)*, Takeshi Nishimoto, Kazuki Harada, Masaaki Yoshida

Boosting Hydrogen Evolution via Adsorption of Phosphate Anions on Copper-Molybdenum Electrocatalysts at Non-Extreme pH

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 6b Hydrogen production and conversion: Advances in water electrolysis and fuel cells

Room: **Gutenberg D**

Chaired by Andrea Baricci & Cindy Tseng

09:30 to 09:45

Vojtech Domin *(Department of Inorganic Technology, University of Chemistry and Technology, Prague, Czech Republic)*, Roman Kodym, Martin Prokop, Tomas Bystron, Karel Bouzek

Experimental and Mathematical Modelling Study of Pt-based Catalyst Degradation in a High-Temperature PEM Fuel Cell

09:45 to 10:00

Marek Mooste *(Institute of Chemistry, University of Tartu, Tartu, Estonia)*, Dana Schonvogel, Julia Müller-Hülstede, Julia G. Buschermöhle, Tanja Zierdt, Killian Fuhrmann, Peter Wagner, Michaela Wilhelm, Kaspar Andreas Friedrich

Fe and Co Doped ZIF-8 and Polymer Derived Ceramics Nanocarbon Composite Catalysts for Oxygen Reduction at HT-PEMFC Cathode

10:00 to 10:15

Jan Dismas Buriánek *(Inorganic Technology, UCT Prague, Praha, Czech Republic)*, Martin Prokop, Tomas Bystron, Martin Vesely, Lukas Kolacny, Bruna Ferreira Gomes, Matija Gatalo, Luka Pavko, Nejc Hodnik, Martin Paidar, Miran Gaberscek, Karel Bouzek

Stability and ORR Activity of the new Pt-Co and Pt-Ni Alloy Catalysts under High-temperature PEM Fuel Cells Conditions

10:15 to 10:30

Nick Semrau *(Chair of Chemical Process Engineering, RWTH Aachen University, Aachen, Germany)*, Wibke Zängler, Matthias Wessling, Robert Keller

Effect of Natural Gas Impurities on Electrochemical Hydrogen Compression and Strategies for Mitigation

10:30 to 11:00 Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Josef Schefold *(Low Carbon Hydrogen Systems, EIFER, European Institute for Energy Research, Karlsruhe, Germany)*, Aline Léon

Steam Electrolysis with Thin Electrolyte Supported Solid Oxide Cells: 10 000 Hours Stable Operation at -1.2 A cm^{-2} Current Density

11:15 to 11:30

Wenjamin Moschkowitsch *(Chemistry, Technische Universität Darmstadt, Darmstadt, Germany)*, Sanja Jankovic, Wenjamin Moschkowitsch

Nickel-Copper Oxide Aerogels for Ammonia Oxidation Reaction

11:30 to 11:45

Nicola Seraphim *(Chemsitry, Technion, Haifa, Israel)*, Alex Baranov, Noa Soffer-Lugassy, Dario Dekel, Daniel N. Niblett, David Eisenberg

Emergent Phenomena in Porous Particles

12:15 to 12:45 Closing Ceremony with Poster Awards

Symposium 7 High power devices: Electrodes and electrolytes, limiting factors or assets for power capability?

Room: **Meeting 3B**

Chaired by Simon Fleischmann & Juan Luis Gómez-Urbano

09:30 to 10:00 ***Keynote***

Hiroki Habazaki *(Faculty of Engineering, Hokkaido University, Sapporo, Japan)*, David Quintero, Takumi Ambe, Mana Iwai, Sho Kitano, Koji Fushimi, Kazuhiro Nagahara, Atsushi Tanaka, Kanji Machida, Shunzo Suematsu, Hidenori Okuzaki, Kazunori Hasegawa

Fabrication of Conducting Polymer Solid Capacitors with High Withstand Voltages and High-Frequency Characteristics

10:00 to 10:15 ***Invited***

Scott Donne *(Chemistry, University of Newcastle, Callaghan, Australia)*

The Nature of the Electrified Interface in Electrochemical Capacitors -- Factors Affecting Interfacial Capacitance

10:15 to 10:30

Wan-Yu TSAI *(IEMN, UMR CNRS 8520, Lille University, Villeneuve d'Ascq, France)*, Nina Balke

Probing Local Electrochemistry through Operando AFM

10:30 to 11:00

Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Desirée Leistenschneider *(Institut für Technische Chemie und Umweltchemie, Friedrich-Schiller-Universitaet Jena, Jena, Germany)*, Zehui Guo, Marius Hermesdorf, Martin Oschatz

Studying the carbon/electrolyte interface in electric double-layer capacitors in carbon/carbon nitride hybrid materials

11:15 to 11:30

Wataru Sugimoto *(Institute for Aqua Regeneration, Shinshu University, Ueda, Japan)*, Ryota Saito, Keisuke Muramatsu

Pseudocapacitance of $(Mn,Ir)O_2$ Birnessite: Bulk versus Nanosheet

11:30 to 11:45

Louis Godeffroy *(Nanoscale Solid-Liquid Interfaces, Helmholtz-Zentrum Berlin, Berlin, Germany)*, Marc Brunet Cabré, Namrata Sharma, Lua Henderson, Christian Schröder, Zoé Dessoliers, Kim McKelvey, Paula Colavita, Tristan Petit

Revealing Delocalized Electrochemistry in MXene Flakes via Scanning Transmission X-ray Microscopy

11:45 to 12:00

Monica Giovannucci *(Department of Chemistry, University of Bologna, Bologna, Italy)*, Monica Giovannucci, Elisabetta Petri, Alessandro Brilloni, Eva-Maria Heigl, Andreas Zauner, Estanis Oyarbide Usabiaga, Francesca Soavi

Passive VRFB-SC Integration: Performance, Cost and Environmental Benefits Analyses

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 10 Green electrochemistry for a sustainable world

Room: **Meeting 1**

Chaired by Ignasi Sirés & Zhihong Ye

09:30 to 09:45

Clement Trellu *(Laboratoire Geomateriaux et Environnement, University Gustave Eiffel, Champs-sur-Marne, France)*, My-Dung Jusselme, Quentin Hermant, Aminata Fissirou, Benoît Vasseur, Marcos Oliveira, Nihal Oturan, Mehmet Oturan, Julien Le Roux

Assessment of EAOPs for Quaternary Treatment of Wastewaters Using Advanced Analytical Tools

09:45 to 10:00

Paola Tirira *(Departament de Ciència de Materials i Química Física, Universitat de Barcelona, Barcelona, Spain)*, Panagiota Petsi, Konstantinos V. Plakas, Ignasi Sirés

Enhanced Sustainability of H_2O_2 Production and Antibiotic Removal in a Filter-Press Cell using a Gas-Diffusion Cathode Fabricated from Wood Scrap

10:00 to 10:15

Shilin Yang *(School of Environment, Harbin Institute of Technology, Harbin, China)*, Jingyu Miao, Nannan Hou, Shan Qiu, Fengxia Deng

Engineering Localized Alkalinity and Oxygen Enrichment for Efficient Acidic O_2-to-H_2O_2 Electroreduction via Carbon-Based Triphase Interfaces

10:15 to 10:30

Frank Marken *(Department of Chemistry, University of Bath, Bath, United Kingdom)*

Intrinsically Microporous Polymers in Electrochemical Processes

10:30 to 11:00

Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Chongyang Jiang *(Department of Chemical Engineering, University of Groningen, Groningen, Netherlands)*, Peter J. Deuss, Dulce M. Morales

Co_9S_8/Ni Electrocatalyst for Efficient Conversion of Complex Carbohydrate Mixtures from Biorefineries

11:15 to 11:30

Martí Molera *(Enginyeria Electrònica i Biomèdica, Universitat de Barcelona, Barcelona, Spain)*, Mohammed Amazian, Maria Sarret, Teresa Andreu

Thermal Effects on Glycerol Oxidation Flow Cell Electrolysis

11:30 to 11:45

José Luis Olloqui-Sariego *(Physical Chemistry, University of Seville, Sevilla, Spain)*

Insight into MOF-derived Electrodes for Electrocatalytic Biomass Valorization

11:45 to 12:00

Christian M. Pichler *(Institute of Applied Physics, TU Wien, Vienna, Austria)*, Richard Buchinger, Sabrina Bischof, Georg Gübitz

Cascade processes for chemical recycling of composite polymer waste streams

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 12 Molecular spectro-photo-electrochemistry and electrosynthesis

Room: **Zagreb A**

Chaired by Mahito Atobe & José H. Zagal

09:30 to 10:00 ***Keynote***

Hai-Chao Xu *(Chemistry, Xiamen University, Xiamen, China)*

Molecular Photoelectrocatalysis

10:00 to 10:15

Marco Fantin *(Departmento of Chemical Sciences, University of Padova, Padova, Italy)*, Tobia Casadei, Elena Cortese, Edoardo Bigolin, Alberto Piccoli, Abdirisak Ahmed Isse

Electro-photo-catalysis: Merging One Electron and One Photon in the Same Reaction Pathway

10:15 to 10:30

Federico Polo *(Department of Molecular Sciences and Nanosystems, Ca' Foscari University of Venice, Venice, Italy)*, Beatrice Polido, Mattia Reato, Giulia Moro, Neso Sojic, Matteo Mauro

Designing a Novel and Bright Alternative for Electrochemiluminescence Applications: Heterobimetallic Ir^{III}-M^{I} (M^{I} = Au, Cu) Complexes

10:30 to 11:00

Coffee Break *Sponsored by* ***Park Systems Europe***

11:00 to 11:15

Ning Jiang *(UMR 8228 CPCV, Département de Chimie, PSL - Ecole Normale Supérieure, Paris, France)*, Carolina Chieffo, Blaise Dumat, Jean-Maurice Mallet, Eric Labbé, Olivier Buriez

Electrochemical and Chemical Switching of Fluorescence Emission in Ferrocene-Rhodamine Dyads

11:15 to 11:30

Ludmila Šimková *(Molecular Electrochemistry and Catalysis, J. Heyrovský Institute of Physical Chemistry of the CAS, Prague, Czech Republic)*

A Comparative (Spectro)Electrochemical Study of Flavin Derivatives

11:30 to 11:45

Guillaume Longatte *(Institut of Molecular Sciences, UMR CNRS, University of Bordeaux, Pessac, France)*, Xin Wu, Héloïse Delval, Pierre Pompignac, Bertrand Goudeau, Alice Dauphin, Laurent Bouffier

A fluorometric study of diffusion(-convection) limited electrochemical processes using a bimodal fluorochromic dye : HPTS

11:45 to 12:00

Alessandro Fracassa *(Department of Chemistry, University of Bologna, Bologna, Italy)*, Claudio Santo, Chiara Mariani, Natasha Adamson, Steven Blom, Egan Doeven, Timothy Connell, David Hayne, Emily Kerr, Sara Knezevic, Andrea Fiorani, Yasuaki Einaga, Frederic Kanoufi, Francesco Paolucci, Neso Sojic, Paul Francis, Giovanni Valenti

Overcoming Kinetic Barriers of Remote Electrochemiluminescence via Ir(III)-driven Catalytic Coreactant Oxidation

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 13 Mechanisms in molecular electrochemistry for (bio-)catalysis, (bio-)sensing and electronics

Room: **Meeting 3A**

Chaired by Valentina Pifferi & Federico Polo

09:30 to 10:00 ***Keynote***

Sabrina Antonello *(Chemical Sciences, University of Padova, PADOVA, Italy)*

Gold Nanoclusters as Tunable Electrochemical Platforms

10:00 to 10:15

Steffen Hardt *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Lars J.C. Jeuken, Marc T.M. Koper

Monitoring Local-pH Effects in Polymer-Coated Gold Electrodes: Accelerating Hydrogen Evolution in Near-Neutral pH Conditions

10:15 to 10:30

Barbara Palys *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Kacper Jedrzejewski, Krystian Pupel

Polyaniline-Functionalized Gold Nanoparticles on Screen-Printed Electrodes: A Redox-Active SERS Probe

10:30 to 11:00

Coffee Break Sponsored by ***Park Systems Europe***

11:00 to 11:15

Daniele Fumagalli *(Dipartimento di Chimica, Università degli Studi di Milano, Milano, Italy)*, Shreyas Harsha, Marco Altomare, Valentina Pifferi, Luigi Falciola

Designing Gold-based Electrodes for the Future: Sensitivity, Stability, and Bimodality

11:15 to 11:30

Valentina Iacono *(Dipartimento di Fisica e Astronomia "E.Majorana", University of Catania, Catania, Italy)*, Antonino Scandurra, Luca Pulvirenti, Guglielmo Guido Condorelli, Francesco Ruffino, Salvo Mirabella

One Pot LASER-driven Functionalization of Cu Nanoparticles and Optimization for Alpha-Synuclein Electrochemical Biosensing

11:30 to 11:45

Antoine Baron *(IEMN, CNRS, Lille, France)*, Corentin Scholaert, Enrique Hernandez Balaguera, David Guérin, Paul Moustiez, Yannick Coffinier, Fabien Alibart, Sébastien Pecqueur

Interplay between Electrochemical Thermodynamics and Electrophoretic Kinetics in Conducting Polymer Morphogenesis to Process and Store Information

11:45 to 12:00

Cyrille Sébert *(Physics and Astronomy, KU Leuven, Leuven, Belgium)*, Irene Taurino, André Vantomme, Ewald Janssens, Cyrille Sébert

Noble Metal Nanocatalysts for Non-Enzymatic Glucose Sensing: Resistance to Chloride Poisoning in Au and Pt Systems

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 14a Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Gutenberg C**

Chaired by Christoph Bondü & Travis Jones

09:30 to 09:45

Christian Leppin *(Analytical Chemistry II - Shape-dependent Electrochemistry, Ruhr University Bochum, Bochum, Germany)*, Ravindra Shashindra, Oliver Röth, Julia Linnemann

Dual-Modality Fast EQCM-D and Operando Raman Spectroscopy – Real-Time Insights into Electrochemical Interfaces of Layered Oxides

09:45 to 10:00

Juan Su *(CNRS, Laboratoire Interfaces et Systèmes Electrochimiques, Sorbonne Université, Paris, France)*, Catherine Debiemme-Chouvy, Laure Fillaud, Alain Pailleret, Hubert Perrot

Charge Storage Mechanism of FeOOH/MnO_2/MWCNTs Ternary Composites via Advanced EQCM Tools

10:00 to 10:15

Iryna Ivanko *(Electrochemical materials, J. Heyrovský Institute of Physical Chemistry of the CAS, v. , Prague, Czech Republic)*, Martin Jindra, Resma Mohan, Otakar Frank, Matej Velicky

Electrolyte gating for controlled Fermi level modulation in graphene

10:15 to 10:30

Tony Ermacora *(Laboratoire de Chimie, ENS de Lyon, Lyon, France)*, Laureline Treps, Carine Michel, Stephan Steinmann

Grand-canonical DFT study of electrocatalysis: Mechanistic insights into 5-hydroxymethylfurfural oxidation on NiOOH(0001) surface

10:30 to 11:00

Coffee Break *Sponsored by* ***Park Systems Europe***

11:00 to 11:15

Christoph Bondü *(Fakultät für Chemie und Biochemie, Ruhr-Universität Bochum, Bochum, Germany)*, Yannick Weidemann, Kristina Tschulik

Hydrogen Evolution During Electrochemical Aldehyde Oxidation: A Phenomenon Seemingly Defying Thermodynamics

11:15 to 11:30

Rafael Vicente *(Institute of Chemistry, University of Campinas, Campinas, Brazil)*, Itamar Neckel, Pablo Fernández

Using Coherent Diffraction Imaging to probe single particle dynamics during the electrooxidation of glycerol

11:30 to 11:45

Alan Gibson *(Department of Chemistry, University of Aberdeen, Aberdeen, United Kingdom)*, Angel Cuesta

The Electro-oxidation of Glycerol on Pt: Metal Cations Mediate Pt Oxidation Only in the Presence of Glycerol

11:45 to 12:00

Silvia Favero *(Nanoelectrocatalysis and Sustainable Chemistry, ICN2, Barcelona, Spain)*, Magda Titirici, Yu Katayama, Marìa Escudero Escribano

*CO Formation in Electro-oxidation Reactions Elucidated by In-situ Spectroscopy Investigations

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 14b Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

Room: **Meeting 2B**

Chaired by Ian Burgess & Olaf Magnussen

09:30 to 09:45 ***Invited***

Ian Burgess *(Chemistry, University of Saskatchewan, Saskatoon, Canada)*

Electrochemical Surface Enhanced Infrared Absorption Spectroscopy (SEIRAS) and Computational Studies of Small Molecule Oxidation on Ni-based Electrocatalysts

09:45 to 10:00

Enrique Herrero *(Instituto de Electroquímica, Universidad de Alicante, Alicante, Spain)*, Adolfo Ferre-Vilaplana, Pepe Jordá-Faus, Rosa M. Arán-Ais

Electrochemical Nitrate Reduction on Pt and PtPd Alloys: Mechanistic Insights from Single-Crystal Studies

10:00 to 10:15

Christian Durante *(Chemical Sciences, University of Padova, Padova, Italy)*, Silvio Reginato, Francesco Cazzadori, Alessandro Facchin

EC-STM Investigation of NO_x Reduction Reaction on Iron-Octaethylporphyrin Adsorbed on Au(111)

10:15 to 10:30

Alessandro Facchin *(TUM School of Natural Sciences, Technical Univeristy Munich, Garching, Germany)*, Friedrich Esch

ORR Electrocatalysis of Fe-Octaethylporphyrin under the FAST Electrochemical Scanning Tunnelling Microscope

10:30 to 11:00

Coffee Break *Sponsored by* ***Park Systems Europe***

11:00 to 11:15

Kees Kolmeijer *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Rik Mom, Grégory Schneider

Resolving Structure-Function Relationships of Nitrogen-Doped Graphene for the Oxygen Reduction Reaction by Operando X-ray Spectroscopy

11:15 to 11:30

Christian Rodenbücher *(Institute of Energy Technologies - IET-4, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Verena Theußl, Federico Parisi, Piotr M. Kowalski, Carsten Korte

Atomistic Investigations of Protic Ionic Liquids as Novel Electrolytes for Intermediate-Temperature Fuel Cells

11:30 to 11:45

Yuhuan Wang *(ITODYS,UMR7086, Université Paris Cité, PARIS, France)*, Jean-Marc Noël, Laurianne Wojcik, Viasheslav Shkirkiy, Frédéric Kanoufi, Nicolas Le Poul

How radical scavengers can be used to decipher and control oxygen reduction mechanism at polycrystalline platinum

11:45 to 12:00

André Olean-Oliveira *(Chemical Energy Conversion, Max Planck Institute, Mülheim an der Ruhr, Germany)*, Najeeb Hasnain, Ricardo Martínez-Hincapiéa, Ulrich Hagemann, Adarsh Jain, Doris Segets, Ioannis Spanos, Viktor Colić

Surface Chemistry and Alkali Metal Effects on Hydrogen Peroxide Production at Carbon Electrodes

12:15 to 12:45

Closing Ceremony with Poster Awards

Symposium 15 Artificial intelligence for electrochemistry

Room: **Meeting 2A**

Chaired by Andrea Grisafi & Chao Zhang

09:30 to 10:00 ***Keynote***

Annabella Selloni *(Chemistry, Princeton University, Princeton, USA)*

Insight into the Electrical Double Layer at Oxide-Electrolyte Interfaces from Machine Learning Simulations

10:00 to 10:15 ***Invited***

Andrea Grisafi *(Physicochimie des Électrolytes et Nanosystèmes Interfaciaux, Sorbonne Université, CNRS, Paris, France)*, Mathieu Salanne.

Machine Learning of Electronic Charge Densities in the Simulation of Electrochemical Interfaces

10:15 to 10:45

Coffee Break *Sponsored by* ***Park Systems Europe***

10:45 to 11:00 ***Invited***

Ryosuke Jinnouchi *(Emerging Electrification Research Division, Toyota Central R&D Labs., Inc., Nagakute, Japan)*, Saori Minami

Machine Learning Force Field Molecular Dynamics for Predicting Electrochemical Reaction Free Energies

11:00 to 11:15 ***Invited***

Philipp Schienbein *(Lehrstuhl für Theoretische Chemie II, Ruhr-Universität Bochum, Bochum, Germany)*

IR Spectroscopy and Electric Field Simulations Enabled by the Atomic Polar Tensor Neural Network

11:15 to 11:30

Feng Wang *(AI4EC Lab, Tan Kah Kee Innovation Laboratory, Xiamen, China)*, Yu-Hang Tang, Ze-Bing Ma, Yu-Cheng Jin, Jun Cheng

Soaring Chemical Space of Battery Electrolytes Using Universal Machine Learning Potential

11:30 to 11:45 ***Invited***

Stefan Wippermann *(Physics, Philipps-University Marburg, Marburg, Germany)*, Florian Deißenbeck, Sudarsan Surendralal, Mira Todorova, Jörg Neugebauer

From Mean to Motion: Capturing Potential Dynamics in Ab initio Electrochemical Simulations

11:45 to 12:00 ***Invited***

Chao Zhang *(Department of Chemistry - Ångström Laboratory, Uppsala University, Uppsala, Sweden)*, Zhan-Yun Zhang, Rocío Mercado

Machine learning-accelerated electrolyte modelling and design

12:15 to 12:45

Closing Ceremony with Poster Awards

Notes

Poster presentation program

Poster Symposia

Symposium 01	Electroanalysis: From fundamentals towards smart devices
Symposium 02	Bioelectrochemistry from fundamentals to sustainable applications
Symposium 03	Electrochemical and bioelectrochemical synthesis of small molecular products
Symposium 04	Lithium-ion batteries: From liquid to solid state
Symposium 05	New battery chemistries
Symposium 06	Hydrogen production and conversion: Advances in water electrolysis and fuel cells
Symposium 07	High power devices: Electrodes and electrolytes, limiting factors or assets for power capability?
Symposium 08	Corrosion, coatings, and nanostructures for a sustainable future
Symposium 09	Durability of materials for energy conversion and storage: Mechanism, mitigation and performance
Symposium 10	Green electrochemistry for a sustainable world
Symposium 11	Electrochemical technologies for energy and industrial electrosynthesis at scale
Symposium 12	Molecular spectro-photo-electrochemistry and electrosynthesis
Symposium 13	Mechanisms in molecular electrochemistry for (bio-)catalysis, (bio-)sensing and electronics
Symposium 14	Experimental and theoretical methods for atomistic understanding of electrochemical interfaces
Symposium 15	Artificial intelligence for electrochemistry
Symposium 16	General Session – Hidden treasures – diversity of electrochemistry

Notes

Session 1, Posters & Drinks *Sponsored by* ***GAMRY***

Monday 8 September

18:00 to 20:00

Poster set-up: **Monday,** *from* **09:00** *to* **16:30**
Poster take-down: ***before*** **Tuesday, 12:00**

Symp#	*Placement*	*Floor*	*Plan*	*Presentations*
S04	Foyer 3	*Level 0*	*p.166*	*p.190-203*
S05	Westfoyer	*Level 1*	*p.168*	*p.203-215*
S07	Nordfoyer	*Level 1*	*p.167*	*p.234-238*
S08	Nordfoyer	*Level 1*	*p.167*	*p.239-244*
S09	Westfoyer	*Level 1*	*p.168*	*p.245-249*
S10	Foyer 3	*Level 0*	*p.166*	*p.250-260*
S16	Galerie	*Level 2*	*p.169*	*p.285-292*

Session 2, Posters *Sponsored by* ***BioLogic***

Wednesday 10 September

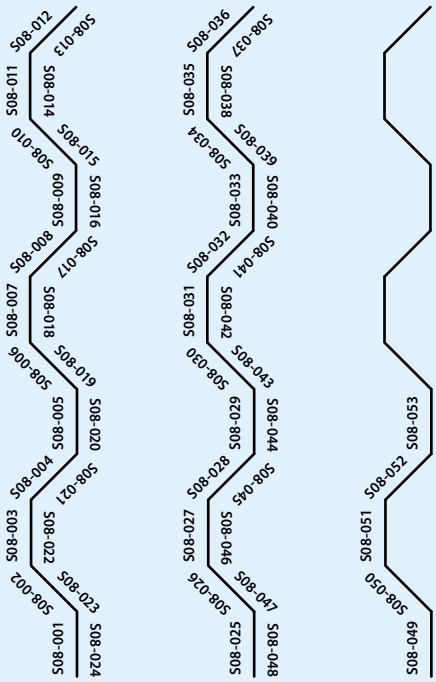
11:00 to 12:30

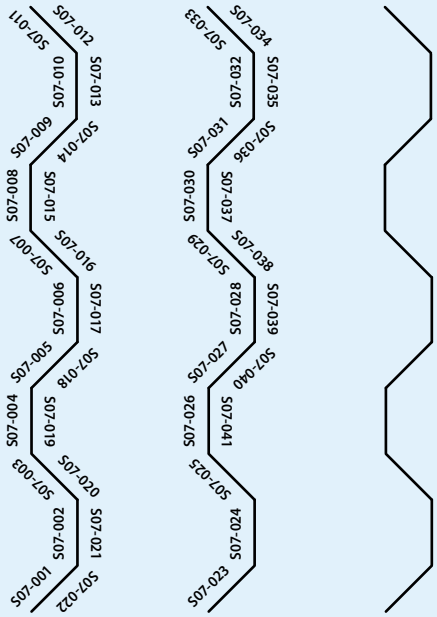
Poster set-up: **Tuesday,** *from* **13:00** *to* **19:00**
Poster take-down: ***before*** **Thursday, 12:00**

Symp#	*Placement*	*Floor*	*Plan*	*Presentations*
S01	Nordfoyer	*Level 1*	*p.167*	*p.170-178*
S02	Westfoyer	*Level 1*	*p.168*	*p.178-182*
S03	Nordfoyer	*Level 1*	*p.167*	*p.182-189*
S03	Westfoyer	*Level 1*	*p.168*	*p.189-190*
S06	Foyer 3	*Level 0*	*p.166*	*p.216-234*
S09	Westfoyer	*Level 1*	*p.168*	*p.245-249*
S11	Galerie	*Level 2*	*p.169*	*p.261-265*
S12	Foyer 3	*Level 0*	*p.166*	*p.266-269*
S13	Galerie	*Level 2*	*p.169*	*p.269-272*
S14	Westfoyer	*Level 1*	*p.168*	*p.272-283*
S15	Westfoyer	*Level 1*	*p.168*	*p.283-285*

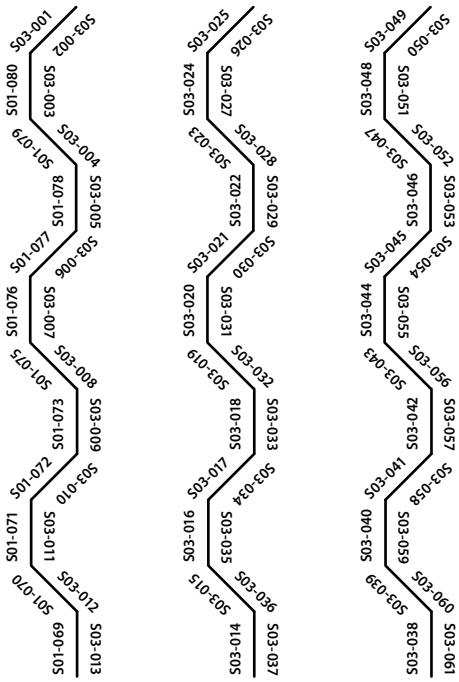
Level 0 - Foyer 3 Wednesday - Symposia 6 & 12

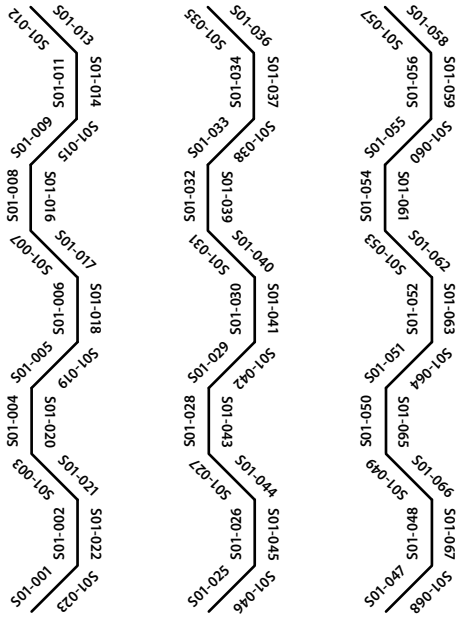
Level 0 - Foyer 3 Monday - Symposia 4 & 10





Level 1 - Nordfoyer
Monday - Symposia 7 & 8





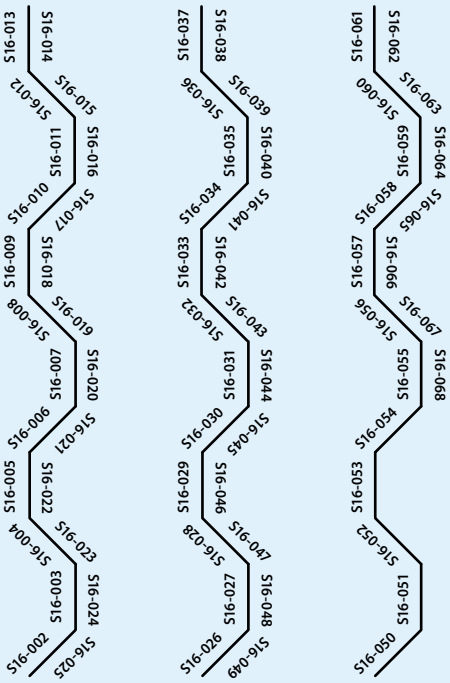
Level 1 - Nordfoyer
Wednesday - Symposia 1 & 3*

***S03-001 – S03-061**

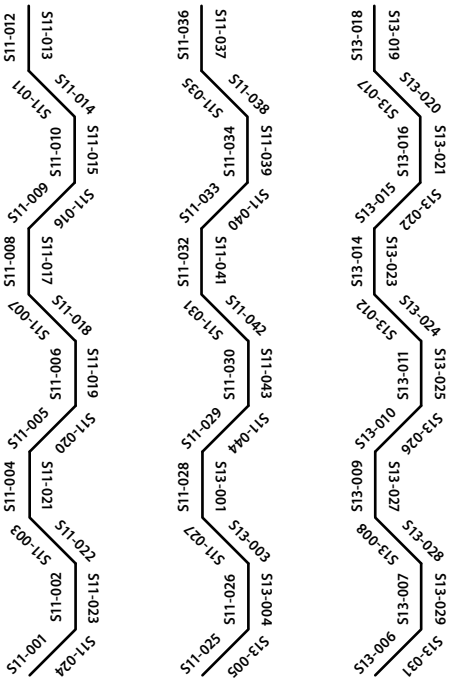
Level 1 - Westfoyer
Monday - Symposia 5 & 9

Level 1 - Westfoyer
Wednesday - Symposia 2, 3*, 14 & 15

*S03-062 – S03-076



Level 2 - Galerie
Monday - Symposium 16



Level 2 - Galerie
Wednesday - Symposia 11 & 13

Symposium 01 Electroanalysis: From fundamentals towards smart devices

S01-001

Lucio Angnes *(Departamento de Química Fundamental, Universidade de São Paulo, São Paulo, Brazil)*, Mayara O. Silva, Thawan G. Oliveira

Quantification of minoxidil in hair products using a glassy carbon electrode modified by gold electrodeposition

S01-002

Anjuman Nesa Anju *(Advanced Engineering, Yamagata University, Yonezawa, Japan)*, Areef Billah, Gulsanarasathi Kazi, Fumihiko Hirose, Bashir Ahmmad

Enhanced Amperometric Detection of Paracetamol Using Zirconia-Doped Bismuth Vanadate Embedded in a Chitosan Matrix

S01-003

Seol Baek *(Department of Chemistry, Sookmyung Women's University, Seoul, Korea)*, Salvador Gutierrez-Portocarrero, Rokas Gerulskis, Shelley Minteer, Sean German, Henry White

Local CO_2 Detection Using Carbonate Ion-Selective Microelectrodes for Formate Dehydrogenase Activity Measurements

S01-004

Nafiz B Biswas *(Chemistry, University of Warwick, Coventry, United Kingdom)*, Tania L Read, Katherine J Levey, Julie V Macpherson

Assessment of Internal Reference Redox Molecules for Overcoming Reference Electrode Drift in Voltammetric pH Measurements

S01-005

Amanda Cameron *(Discipline of Chemistry, University of Newcastle, Callaghan, Australia)*, Scott Donne

Deconvoluting the Deconvolution: Step Potential Electrochemical Spectroscopy (SPECS) and Electrochemical Impedance Spectroscopy (EIS)

S01-006

Maciej Cieplak *(Functional Polymers, Institute of Physical Chemistry PAS, Warsaw, Poland)*, Dominik Korol, Kostiantyn Nikiforow, Pawel Borowicz, Piyush Sharma

Chemosensing on Cost-Effective Substrates – a Flexible Chemosensor for Selective Metronidazole Detection

S01-007

Paula C. R. Corsato *(Brazilian Nanotechnology National Laboratory, Brazilian Center for Research in Energy and Materials, Campinas, Brazil)*, Paula C. R. Corsato, Christian O. Silva, Juliana N. Y. Costa, Pedro H. N. da Silva, Maria H. O. Piazzeta, Angelo L. Gobbi, Flávio M. Shimizu, Iris R. S. Ribeiro, Renato S. Lima

Ultradense electrochemical chips, microfluidics, and machine learning: a promising platform for anticancer drug susceptibility testing

S01-008

Estefania Costa-Rama *(Physical and Analytical Chemistry, University of Oviedo, Oviedo, Spain)*, Pablo Rioboó-Legaspi, Maria Cerrato-Alvarez, Ana Fernández-Quesada, María Teresa Fernández-Abedul

Carbon-Modified Sewing Pins as Electrodes: Application to On-Site ELISA Readout

S01-009

Cecilia Cristea *(Department of Analytical Chemistry, University of Medicine and Pharmacy Cluj-Napoca, Cluj-Napoca, Romania)*, Maria-Bianca Irimes, Alexandra Pusta, Paul Martian, Maria Suciu, Mihaela Tertis, Radu Oprean

Electrochemical Dual-Target Aptasensor for Simultaneous Detection of Inflammatory Cytokines in Biological Fluids

S01-011

Van Anh Dam *(BIOSYS, Imec the Netherlands, Eindhoven, Netherlands)*, Marcel Zevenbergen, Alwin Verschueren, Jos Oudenhoven

Solid-Contact Ion-Selective Electrodes for Clinical Analyses

S01-012

Anna Dettlaff *(Chemistry, Gdansk University of Technology, Gdansk, Poland)*, Pawel Rutecki, Michal Sobaszek, Jacek Beldowski, Grzegorz Siedlewicz

Highly Sensitive Detection of Nitroaromatic Compounds on Dendrite-Like Carbon Nanowall Electrodes in Real-life Marine Samples

S01-013

Anna Dettlaff *(Chemistry, Gdansk University of Technology, Gdansk, Poland)*, Pawel Rutecki, Michal Sobaszek, Robert Bogdanowicz

Differential Pulse Voltammetric Detection of Famoxadone Using Microwave Plasma-Assisted CVD-Grown Boron-Doped Carbon Nanowalls

S01-014

Inti Espinoza Ramos *(Department of Chemistry, Uppsala University, Uppsala, Sweden)*, Ziyin Guo, Rebecca Clulow, Boyang Su, Qi Zhao, Frederik Holm Gjørup, Annika Ahlberg Tidblad, Leiting Zhang

Unveiling Chemomechanical Degradation in Aqueous Batteries with Online Acoustic Emission Sensing

S01-015

Omolola Esther Fayemi *(Chemistry, North-West University, Mafikeng, South Africa)*

Determination of SSY in food at an Ag nanoparticle-based electrochemical sensor

S01-016

Bogdan Feier *(Department of Analytical Chemistry, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania)*

Electrochemical Sensor Based on Molecularly Imprinted Polymer for Antibiotic Detection

S01-017

Tabata Feijoó *(Institute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil)*, Luis David Loor-Urgilés, Jussara Câmara Cardozo, Amanda D. Gondim, Elisama V. dos Santos, Carlos A. Martínez-Huitle

Unveiling Electroanalytical Insights into Textile Dye Decolorization in Real Water Samples

S01-018

Cinthya Felix Navarro *(Departamento de Investigación en Polímeros y Materiales, Universidad de Sonora, Hermosillo, Mexico)*, Amed Gallegos Tabanico, Jorge Jimenez Canale, Hisila del Carmen Santacruz Ortega, Jose Andrei Sarabia Sainz

Electrochemical Immunosensor for Rapid Detection of Rattlesnake (Crotalus spp.) Venom

S01-019

Beatriz Fernandes *(Department of Chemistry and Molecular Physics, Universidade de São Paulo, São Carlos, Brazil)*, Rafael Buoro

Neutral Red Redox Polymer/Graphene Quantum Dots Composite Prepared in Natural Deep Eutectic Solvents for Sulfanilamide Sensing

S01-020

Aneta Fried *(RECAMO, Masaryk Memorial Cancer Institute, Brno, Czech Republic)*, Ludmila Moranova, Martin Bartosik

Novel in vitro Detection Methods of Human Cytomegalovirus in Oncology Patients

S01-021

Daniele Fumagalli *(Dipartimento di Chimica, Università degli Studi di Milano, Milano, Italy)*, Valentina Pifferi, Luigi Falciola

Metal and TiO_2: A Synergistic Approach for Reliable Analyte Quantification

S01-022

Gabriele Giagu *(Chemistry "G.Ciamician", University of Bologna, Bologna, Italy)*, Andreas Lesch, Giovanni Valenti, Francesco Paolucci

Development of an Inkjet-Printed Graphene Acid-Based Sensing Platform for Endometriosis Biomarkers

S01-023

Renato Gil *(Water Quality Group, INL-International Iberian Nanotechnology Laboratory, Braga, Portugal)*, Samuel Silva, Marília dos Santos, Álvaro Geraldes, João Piteira, Raquel Queirós, Begoña Espiña

Fully Automated Ion Analyzer for In-Situ Potentiometric Determination of Nitrate and Nitrite in Seawater: A Pilot-Scale Application in Recirculating Aquaculture Systems

S01-025

Mikael Gullstrand *(Chemistry, KTH, Royal Institute of Technology, Stockholm, Sweden)*

Insights into Various Electrochemical Synthesis Protocols for Conducting Polymers towards the Tuning of the Film Characteristics

S01-026

Jiawei Hu *(School of Materials and Chemical Technology, Institute of Science Tokyo, Tokyo, Japan)*, Shinsuke Nagata, Hideo Notsu, Mami Miyoshi, Yasuko Takeda, Kan Hatakeyama-Sato, Teruaki Hayakawa, Yuta Nabae

Mechanistic Insight into Co/N/C Catalysts for ORR via the Nabae Model: A Two-Plus-Two Electron Pathway

S01-027

Jayani Upeksha Halpegama *(Chemistry, Australian centre for nanomedicine, University of New South Wales, Sydney, Australia)*, Yuanqing Ma, M.A. Kristine Tolentino, Ying Yang, Essam Dief, Elvis Pandzic, Richard D. Tilley, J. Justin Gooding

Electrochemical Control for Single-Molecule Biosensing with Super-Resolution Imaging

S01-028

Leonardo Hasimoto *(Brazilian Nanotechnology National Laboratory -LNNano, Brazilian Center for Research in Energy and Materials -CNPEM, Campinas, Brazil)*, Murilo Santhiago, Charles S. Henry

Stretchable Laser-induced Graphene Electrodes for Lactate Monitoring in Sweat

S01-029

Aranzazu Heras *(Department of Chemistry, Universidad de Burgos, Burgos, Spain)*, Martin Perez-Estebanez, Luis Romay, Natalia Perez, Sara Orcajo, Alvaro Colina

EC-SOERS substrates electrogenerated in neutral media

S01-030

Seongjun Hong *(Chemistry, Kwangwoon University, Seoul, Korea)*, Sebin Oh, Eunhyeong Kim, Eunchul Park, Yang-Rae Kim

Development of an Integrated Multi-Channel NPK Ion Sensor in Hydroponic Nutrient Solutions

S01-031

Bartlomiej Hurny *(Department of Inorganic and Analytical Chemistry, University of Lodz, Lodz, Poland)*, Katarzyna Szwabinska, Karolina Kwaczynski, Agnieszka Gabryelczyk, Agnieszka Swiderska-Mocek, Grzegorz Kowalski, Lukasz Póltorak

eDIW – 3D printable Ink for electrochemical applications

S01-032

Chiydem Hyusein *(Institute of Physical Chemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria)*, Ralitsa Peneva, Vessela Tsakova

Hydrazine Detection on Ag-Pd Modified Carbon Screen-Printed Electrodes

S01-033

Gennadiy Itov *(Schulich Faculty of Chemistry, Technion - Israel Institute of Technology, Haifa, Israel)*, Thierry Slot, Yair Shahaf, David Eisenberg

Development of analytical methods for quantification of N-cycle species.

S01-034

Nadica Ivosevic Denardis *(Division for Marine and Environmental Research, Rudjer Boskovic Institute, Zagreb, Croatia)*, Sasa Micin, Sanja Martinez, Maja Levak Zorinc, Borislav N. Malinovic, Vedrana Spada

Voltametric Characterization of Polyphenols in Wine Using a Carbon-based Electrode Modified with TiO_2 Nanoparticles

S01-035

Dominik G. Jammal *(Electrochemistry, HyLab, Sines, Portugal)*, Marta Silva, Maria Beira, Kostadin Petrov, Cristina M. Cordas, Margarida M. Gonçalves, Rui P.P.L. Ribeiro

Electrochemical Nitrogen Reduction Reaction: Exploring Metal Synergies in Catalyst Development

S01-036

Jaymi January *(Chemistry, University of the Western Cape, Cape Town, Western Cape, South Africa)*, Jan Gettemans, Emmanuel Iwuoha

Immuno-Nanobody Electrochemiluminescent Sensing of SARS-CoV-2 Spike Protein Biomarker

S01-037

Anjali John *(Chemistry, Coventry, United Kingdom)*, Anna Dettlaff, Joshua J Tully, Julie V Macpherson

Free-Standing Boron Doped Diamond Slot Electrodes For Applications In UV-Vis Spectroelectrochemistry

S01-038

Sorai Kanno *(Graduate School of Maritime Sciences, Kobe University, Kobe-shi, Japan)*

Reactivation of Polyphenols with 1,3-benzenediols

S01-039

Masoud Khazaei *(Pharmacy and Pharmaceutical Sciences, Monash University, Melbourne, Australia)*, Jann Harberts, Azadeh Nilghaz, Michael Shola David, Kenneth Galbraith, Muamer Dervisevic, Victor Cadarso, Nicolas Voelcker

Micropillar Array-Based Microfluidic Device for Electrochemical Monitoring of Cell Culture Health

S01-040

Fu-Hsiang Ko *(Department of Materials Science and Engineering, National Yang Ming Chiao Tung University, Hsinchu, Taiwan)*

Noninvasive Diagnostic Sensor with Low Power and Biocompatibility for Detection of Chloride Ions

S01-041

Andrzej Krempinski *(Department of Inorganic and Analytical Chemistry, University of Lodz, Lodz, Poland)*, Emilia Powalka, Lukasz Póltorak, Konrad Rudnicki

Brilliant Blue G electroanalysis at the polarized liquid-liquid interface

S01-042

Seung-Ryong Kwon *(Department of Chemistry, Gyeongsang National University, Jinju, Korea)*, Yerin Bang

Potential-Gated Wetting and Dewetting in Nanochannels for Mass Transport Control

S01-043

Abdelatif Laroui *(Department of Inorganic and Analytical Chemistry, University of Lodz, Lodz , Poland)*

Nano-impacts at Electrified Liquid|Liquid micro-Interface

S01-044

Sumin Lim *(Sustainable Energy Materials, Technical University of Munich, Straubing, Germany)*, Pallabi Bhuyan, Guilherme Vilalba Fortunato, Karthik Davuluri, Marc Ledendecker

Design of a channel flow cell for degradation and performance studies of an electrocatalyst

S01-045

Dhesmon Lima *(Department of Chemistry and Physics, Mount Saint Vincent University, Halifax, Canada)*, Marianna Kovtun, Sarah Mulla, Cherif Matta

Enhanced Electrocatalytic Oxidation of Cannabinoids Mediated by a Graphene Quantum Dot–Cobalt Phthalocyanine Nanocomposite

S01-046

Wiktoria Lipinska *(Centre for Plasma and Laser Engineering, Institute of Fluid-Flow Machinery Polish Academy of Sciences, Gdansk, Poland)*, Szymon Dudziak, Jakub Rysz, Katarzyna Siuzdak

Electrochemical Sensor Based on Copper Oxide-Modified TiO_2 Nanotubes for Adrenaline Detection

S01-047

Paul Cristian Martian *(Analytical Chemistry, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania)*, Mihaela Tertis, Catalin Constantin Anghel, Daniel Florin Bogosel, Dan Alexandru Toc, Carmen Costache, Lucian Barbu-Tudoran, Anamaria Blaga Petrean, Niculina Daniela Hadade, Cecilia Cristea

Novel Cationic Covalent Organic Framework applied for Chloramphenicol detection

S01-048

Jorge Martínez Guerra *(Chemistry/ Analytical Chemistry, Autonomous Metropolitan University, Ciudad de México, Mexico)*

Electroanalytical characterization of nitrogenous bases: guanine and adenine on a poly(β-cyclodextrin) modified glassy carbon electrode under multiple damping conditions

S01-049

Oliver Matys *(Department of Chemistry, University of Bath, Bath, United Kingdom)*, Benjamin Kersh-Hunt, Megan Lee, Harry Brooks, Marco Caffio, Tony James, Stephen Parker, Frank Marken

Capacitive Sensing with Graphene Foam Electrodes

S01-050

Luis Felipe Miranda *(Postgratuate Program of Chemical Engineering, Federal University of Rio Grande do Norte, Natal, Brazil)*, Karen Magalhães, Luis Loor-Urgilés, Tabata Zambrano, Maiara Ferreira, Edney Galvão, Carlos Martínez-Huitle, Elisama dos Santos

Carbon felt electrodes for low-cost redox-active species in sustainable electrochemical battery

S01-051

Tijana Mutic *(Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade, Serbia)*, Vesna Stankovic, Sladana Durdic, Aleksandar Mijajlovic, Georgia Sourkouni, Christos Argirusis, Jasmina Vidic, Dalibor Stankovic

Simple hydrothermal synthesis of Ce@NiFe-LDH nanoparticles for electrochemical determination of pesticide Amitrole

S01-052

Tijana Mutic *(Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade, Serbia)*, Vesna Stankovic, Sladana Durdic, Aleksandar Mijajlovic, Georgia Sourkouni, Christos Argirusis, Jasmina Vidic, Dalibor Stankovic

Development of Ce-doped Ho_2O_3 sensitive and selective sensor for determination of anesthetic Tetracaine

S01-053

Linathi Ndzuzo *(Chemistry, University of the Western Cape, Cape Town, South Africa)*, Francis, Muya Ntumba, Priscilla Baker

Development and Characterization of a PVA-PEDOT: PSS Hydrogel for Humidity Sensing Applications.

S01-054

Watinee Nunthkigoson *(School of Energy Science and Engineering,, Vidyasirimedhi Instituteof Science and Technology, Rayong, Thailand)*, Watinee Nunthkigoson, Natthaphong Kaewwan, Sopon Butcha, Marisa Ketkaew, Alexander Kuhn, Chularat Wattanakit

Electrochemical discrimination of cannabidiol (CBD) and tetrahydrocannabinol (THC) at molecular-encoded Pt/Ir alloy surfaces

S01-055

Miloš Ognjanovic *(Department of Condensed Matter Physics, VINCA Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia)*, Miloš Ognjanovic, Dalibor Stankovic, Slaðana Durðiæ, Filip Vlahovic, Nataša Terzic Jovanovic, Pavle Stojkovic, Vesna Stankovic

Design of an Electrochemical Sensor for Glyphosate Detection Using Molecularly Imprinted Polymer Coating on MOF-Modified Glassy Carbon Electrode

S01-056

Andre Olean-Oliveira *(Chemical Energy Conversion, Max Planck Institute, Mülheim an der Ruhr, Germany)*, Ali Raza Khan, Blaž Toplak, Mohaned Hammad, Hartmut Wiggers, Da Xing, Harry Hoster, Doris Segets, Viktor Coliæ

Influence of Support Materials on the Electrochemical Performance of Lanthanum Cobalt Oxide toward the Oxygen Evolution Reaction

S01-057

Alexander Oleinick *(UMR 8228 Chimie Physique et Chimie du Vivant, CNRS, Paris, France)*, Alexander Oleinick, Giovanni Pireddu, Irina Svir, Christian Amatore

Quantitative Characterization of Diffusion Competition Between Active Sites in Electrochemical Random Arrays

S01-058

Thiago Paixao *(Institute of Chemistry, University of Sao Paulo , Sao Paulo , Brazil)*, Thaisa Baldo, Diele Araujo, Charles Henry

Flow Control in Laminate Capillary-Driven Microfluidic Electrochemical Devices by Sponges for Viscous Solution Analysis

S01-059

Sujeong Park *(Department of Chemistry, Seoul National University, Seoul, Korea)*, Ji Yong Kim, Samuel Jaeho Shin, Taek Dong Chung

Unveiling Electroorganic Reactions by Tracking Intermediates via Spectroelectrochemistry in a Thin-Layer Electroanalysis Microchip

S01-060

Johisner Penagos Llanos *(Química de los Materiales, Universidad de Santiago de Chile, Santiago, Chile)*, Bryan Pichún, Isidora Alfaro, Rodrigo Segura

Development of an Innovative Electrochemical Sensor with Hydrothermally Synthesized Nanocomposites for the Determination of Arsenic (III).

S01-061

Ralitsa Peneva *(Institute of Physical Chemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria)*, Boryana Gourinova, Chiydem Hyusein, Vessela Tsakova

Carbon Screen Printed Electrodes for Electrochemical Sensing of Acetaminophen

S01-062

Gilvana Pereira Siqueira *(Chemistry Institute, Federal University of Uberlândia, Uberlândia, Brazil)*, Gilvana P. Siqueira, Raquel G. Rocha, Amanda B. Nascimento, Eduardo M. Richter, Rodrigo A. A. Muñoz

Handheld Plasma Pen for the Surface Treatment of Additively Manufactured Electrodes: Improved Capsaicin Voltammetric Detection

S01-063

Raquel Queiros *(Energy and Environment, International Iberian Nanotechnology Laboratory, Braga, Portugal)*, Samuel Silva, Marília Barreiros dos Santos

Autonomous electrochemical sensing system for heavy metal monitoring in urban runoff water

S01-064

Raquel Queiros *(Energy and Environment, INL, Braga, Portugal)*, Tiago Moura, Nuno Santos, Laura M. Salonen

Hybrid Nanostructured Electrochemical Sensor for Microcystin-LR Determination in Water

S01-065

Lucía Quintana *(Chemistry of Materials, Carbon Science and Technology Institute, Oviedo, Spain)*, Lucía Quintana, Adrián Vigil, Marcos Granda, Patricia Alvarez, Rosa Menéndez, Zoraida González

Impact of ink formulation on the performance of graphene-based and inkjet-printed electrochemical sensors

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Vilma Ratautaite *(Department of Nanotechnology, Center for Physical Sciences and Technology , Vilnius, Lithuania)*, Ernestas Brazys, Enayat Mohsenzadeh, Greta Zvirzdine, Raimonda Boguzaite, Deivis Plausinaitis, Arunas Ramanavicius

Molecularly Imprinted Polymer-Modified Electrochemical Sensor for Low Molecular Weight Compounds

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Barbara Repič *(Electronic Ceramics Department, Jožef Stefan Institute, Ljubljana, Slovenia)*, Gregor Marolt, Danjela Kuscer

Screen-Printed Graphite-Glass, Glassy Carbon and Carbon Black Electrodes for Miniature Electrochemical Sensors

S01-068

Pablo Rioboó-Legaspi *(Department of Physical and Analytical Chemistry, Universidad de Oviedo, Oviedo, Spain)*, Estefanía Costa-Rama, María Teresa Fernández Abedul

A tube cap-based electrochemical cell for integrated electrobioanalysis

S01-069

Alicia Ruiz *(Materials Department, Fundación Tecnológica Advantx - FUNDITEC, 28049–Madrid, Spain. Departamento de Tecnología Química y Ambiental, E.S.C.E.T., Universidad Rey Juan Carlos, Móstoles, 28933 Madrid, Spain)*, Damián Pérez-Quintanilla, Antonio Jesús Fernández-Ropero, Jose Ignacio Lozano

Postharvest Storage Diseases in Potatoes: Detection Strategies Using Conductive 2D MOFs for Electrochemical VOCs Sensing

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Aude Salamé *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Bonho Koo, Marc Koper

Differential Electrochemical Mass Spectrometry to Elucidate the Mechanism of Non-Aqueous Electrochemical Reactions

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Rodrigo Segura *(Química de los materiales, Universidad de Santiago de Chile, Santiago, Chile)*, Johisner Penagos, Bryan Pichun, Isidora Alfaro

Anodic stripping voltametric detection of Cd(II) and Pb(II) ions using a glassy carbon electrode modified single-walled carbon nanohorns (GC/SWCNHs)

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Irina Terrero Rodríguez *(LCPME, Université de Lorraine - CNRS, Nancy, France)*, Mariela Brites Helú, Fabienne Quilès, Luke O'Keeffe, Laurence Mathieu, Hélène Lacroute, Grégoire Herzog

A Flow Cell Platform for Studying Biofilm Formation on Electrochemical Sensors in situ Using Raman Hyperspectral Imaging and Epifluorescence Microscopy

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Dario Torricelli *(UCAM-SENS, Universidad Católica San Antonio de Murcia, Murcia, Spain)*, Dario Torricelli, Daniel Rojas, Gastón Crespo, María Cuartero

3D Printing of Complete Potentiometric Cells: Toward Real-World Applications of 3D-Printed Sensors.

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Christine Vautrin-Ul *(Laboratory ICMN, CNRS-University of Orléans, Orléans, France)*, Yves Pain, Thinhinane Hamadachi, Aïda Bensebaa, Christophe Coillot, Jimmy Nicolle, Mohamed-Ramzi Ammar, Vincent Astié, Jean-Manuel Decams, Sylvie Contreras

Functionalisation of CVD and Epitaxial Graphene Electrodes by Electropolymerization of Molecularly Imprinted Polymers for Sensing of Isoproturon

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Qikun Wei *(Department of Chemistry, KTH Royal Institute of Technology, Stockholm, Sweden)*, Daniel Rojas, Águeda Molinero-Fernández, Gastón Crespo, Maria Cuartero

3D-Printed Hollow Microneedles for pH Sensing: A Modular Electrode Approach

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Haesik Yang *(Department of Chemistry, Pusan National University, Busan, Korea)*, Gyeongho Kim

Alternative Redox Labels Using Ferrocenyl Compounds for Robust and Versatile Electrochemical Aptamer-Based Sensors

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Edward Zamudio Trejo *(UCAM-SENS, Universidad Católica San Antonio de Murcia, Murcia, Spain)*, María Cuartero, Gastón Crespo, Eduardo Laborda

Experimental and Theorical Study of the behavior of an Adamantane Os(II) Compound as Ion-to-Electron Transducer in Voltammetric Ion-Selective Electrodes

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Qunyan Zhu *(Engineering Research Center for Nanomaterials, Henan University, Kaifeng, China)*, Qunyan Zhu, Huahua Dong, Kaige Qv, Wensheng Yang, Lin Zhang

Construction of Closed Bipolar Electrochemiluminescence Sensor Based on MOF-Derived Au/CoO-Modified Carbon Cloth for Uric Acid Detection

S01-080

Adil Sghiouri Idrissi *(Materials Science, Energy, and Nano-engineering Department, Mohammed VI Polytechnic University, Ben Guerir, Morocco., Ben Guerir, Maroc)*, Yassine SEFFAR Jones ALAMIa

Nitrogen-Doped ZIF-8-Derived Carbons for Energy-Efficient Ammonia Removal via Flow-Through Capacitive Deionization

S01-081

Manuela López-Tenés *(Laboratorio de Biomateriales, Instituto de Química Biológica, Facultad de Ciencias, Universidad de la República, 11400 Montevideo, Uruguay)*, S. A. Maccióa, S. N. Robledo, J. González, S. Botasini, G. D. Pierini, E. Méndez

Absolute calibration-free quantitation of electroactive species on screen-printed electrodes under limited diffusion conditions

Symposium 02 Bioelectrochemistry from fundamentals to sustainable applications

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Fhysmélia Albuquerque *(Instituto de Química de São Carlos, Universidade de São Paulo, São Carlos, Brazil)*, Rodrigo Iost, Gabriel Fonseca, Venkatkarthick Radhakrishnan, Jessica Pacheco, Fabio Lima, Frank Crespilho

Hydrogel-Immobilized Cobalt Porphyrin for HER and ORR in Bioinspired Microenvironments

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Thaisa Baldo *(Chemistry, Colorado State University, Fort Collins, USA)*, Thaisa Baldo, Bethany Unruh, Jason Boes, Matthew Lynd, David Dandy, Brian Geiss, Charles Henry

Electrochemical Magneto-Immunoassay for Sensitive HIV-1 p24 Antigen Detection in Serum Samples

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Filipe Camargo Dalmatti Alves Lima *(Campus Matão, Federal Institute of São Paulo (IFSP), Matão, Brazil)*, Ayaz Hassan, Frank N. Crespilho

Modeling Charge Transfer in EndoIII-DNA: A Data-Driven Computational Approach

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Leonardo Castaneda-Losada *(Chemistry, University of Cambridge, Cambridge, United Kingdom)*, Erwin Reisner

Photo-Biocatalytic Resolution of Racemic Alcohols

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Sithisak Chanthalavong *(Inorganic Functional Materials and Nanomaterials, Institute for Inorganic and Analytical Chemistry, Freiburg im Breisgau, Germany)*, Victoria Davis, Stefan Frielingsdorf, Qiwei Hu, Patrick Elsäßer, Bizan N. Balzer, Oliver Lenz, Ingo Zebger, Anna Fischer

Ultrathin Film Antimony-Doped Tin Oxide Prevents [NiFe]Hydrogenase Inactivation at High Electrode Potentials

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Jessica Crivelaro Pacheco *(chemistry, São Carlos Institute of Chemistry, University of São Paulo , São Carlos, Brazil)*, Luana Cristina Italiano Faria, Chao Chi Kuo, Ariel Furst, Frank Nelson Crespilho

Bioinspired complex in formate dehydrogenase for formate production from CO_2

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Gustavo Echeveste Salazar *(Nanoprobes and nonoswitches, Institute for Bioengineering of Catalonia, Barcelona, Spain)*, Montserrat Sales-Mateo, Núria Camarero, Marina Giannotti, Pau Gorostiza

Electrochemical Tunneling Spectroscopy Study of Charge Transport in the Redox Protein Plastocyanin, its pH Dependence, and Copper Ion Role

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Pulmu Eloranta *(Department of Chemistry, University of Turku, Turku, Finland)*, Rahul Yewale, Laura T. Wey, Yagut Allahverdiyeva, Pia Damlin

Hierarchically Engineered AP-VPP PEDOT Electrodes for Green Energy

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Alexandre Folador *(Energy and Environment Laboratory (LEMA)., Federal University of Santa Catarina , Florianópolis, Brazil)*, Daniela Della Roca, Victor Pedott, Sílvio Weschenfelder, Regina Moreira

Effect of pH on the electrochemical degradation of naphthenic acids present in oil- and grease-contaminated saline water

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Steffen Hardt *(Leiden Institute of Chemistry, Leiden University, Leiden , Netherlands)*, Dawit Tedros Filmon, Rafal Bialek, Darren Buesen, Michelle Judaeva, Oliver Trost, James Birrell, Vincent Fourmond, Christophe Léger, Nicolas Plumeré

Bidirectional Catalysis for Protection of Polymer-Embedded [FeFe]-Hydrogenase from O_2 under Intermittent Hydrogen Evolution

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Kosuke Ino *(Graduate School of Engineering, Tohoku University, Sendai, Japan)*, Ayaka Ogihara, Yoshinobu Utagawa, Hiroya Abe, Hitoshi Shiku

Scanning Electrochemical Microscopy for Analyzing Organoids Embedded in Extracellular Matrix Hydrogels

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Luana Cristina Italiano Faria *(São Carlos Institute of Chemistry, University of Sao Paulo, São Carlos, Brazil)*, Frank Nelson Crespilho

Quinone-based Bioinspired Battery With Iota-carrageenan Hydrogel

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Nanaha Kanazawa *(Department of Pure and Applied Chemistry, Tokyo University of Science, Noda-shi, Japan)*, Naoji Matsuhisa, Noya Loew, Tsutomu Mikawa, Kayo Suzuki-Nagata, Hikari Watanabe, Isao Shitanda, Masayuki Itagaki

Visualizable Fully Screen-printed Self-powered Paper-based Lactate Biosensor with PEDOT/PSS as Electrochromic Element

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Masaru Kato *(Faculty of Environmental Earth Science, Hokkaido University, Sapporo, Japan)*, Sayuki Oka, Yoshito Nishiyama, Shogo Hoshino, Ichizo Yagi

Enantioselective Adsorption of Metalloenzymes onto Amino Acid-Modified Gold Electrodes

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Dario Lacalamita *(Dipartimento di Chimica, Università degli Studi di Bari "Aldo Moro", Bari, Italy)*, Paolo Stufano, Jefferson Honorio Franco, Rossella Labarile, Massimo Trotta, Alessandra Tacca, Matteo Grattieri, Gianluca Maria Farinola

Purple bacteria-based photocathode for green hydrogen production

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Fei Li *(School of Life Science and Technology, Xian Jiaotong University, Xi'an, China)*, Yuxiang Zhao, Yulin Liu, Yan Zhou

Effects of Mechanical Microenvironment on Cell Characteristics Investigated by Scanning Electrochemical Microscopy

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Fred Lisdat *(Biosystems Technology, Technical University of Applied Sciences Wildau, Wildau, Germany)*, Daniel Schäfer

Interaction of PQQ-GDH with PEDOT

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Ruoyi Liu *(Bioénergétique et Ingénierie des Protéines (BIP), CNRS, Aix-Marseille University, Marseille, France)*, Elisabeth Lojou, Anne de Poulpiquet, Ievgen Mazurenko

Modeling Catalytic Cyclic Voltammetry of a Redox Enzyme in a Weakly Buffered Electrolyte Using COMSOL Multiphysics®

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Elisabeth Lojou *(BIP, CNRS, Marseille, France)*, Vita Saska, Paolo Santucci, Anne de Poulpiquet, Umberto Contaldo, Ievgen Mazurenko

Impact of the structure and composition of CueO Met-rich domains on enzymatic O_2 electroreduction

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Abdullah M. Abudayyeh *(CNRS Laboratoire de Chimie et de Biochimie Pharmacologiques, University Paris Cite, Paris, France)*

Guest-Exchange Electrochemistry in Cavitary Cobalt (II)-TMPA Funnel Complexes

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Marco Malferrari *(Dept. of Chemistry "Giacomo Ciamician", University of Bologna - Alma Mater Studiorum, Bologna, Italy)*, Marco Malferrari, Camilla Galli, Carlotta Ronchi, Gabriele Tullii, Francesco Falciani, Camilla Marzuoli, Maria Rosa Antognazza, Elisa Di Pasquale, Stefania Rapino

Modulation of Cardiomyocyte Metabolism Revealed by Scanning Electrochemical Microscopy

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Rosa Maria Matteucci *(Dipartimento di Ingegneria Elettrica e dell'Informazione, Politecnico di Bari, Bari, Italy)*, Umberto Mattia, Pierluigi Lasala, Federica Rizzi, Jefferson Honorio Franco, Paolo Stufano, Antonella Milella, Maria Lucia Curri, Elisabetta Fanizza, Matteo Grattieri

Improving Stability of Microbial Bio-photoelectrodes through Functionalized CeO_2 Nanoparticles as ROS Scavengers

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Aswathi Mechoor *(School of Life and Environmental Sciences, Deakin University, Geelong Waurn Ponds, Australia)*, Sheela Berchmans, Na Kong, Vipul Gupta, Ganesh Venkatachalam, Wenrong Yang

Bimetallic MOF as a Peroxidase Mimic and Immobilization Matrix for Electrochemical Cholesterol Sensing

S02-024

Aleksandar Mijajlovic *(Department of Analytical Chemistry, Faculty of Chemistry, University of Belgrade, Belgrade, Serbia)*, Dalibor Stankovic

Electrochemical Spore Detection: A Novel La_2O_3/rGO-Based Aptasensor for Rapid and Sensitive Biosensing

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Ilaria Palchetti *(Department of Chemistry, University of Florence, FIRENZE (FIRENZE) TOSCANA, Italy)*, Patrick S. Sfragano, Ronald J. Clarke, Francesco Tadini-Buoninsegni

A Solid-Supported-Membrane-Based Bioelectrochemical Approach: from the Analysis of Membrane Binding to the Investigation of Membrane Transporters

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Andres Felipe Quintero Jaime *(Chemical Science, University of Limerick, Limerick, Ireland)*, Micheal D. Scanlon

Electrocatalytic Activity of Bilirubin Oxidase at an Electrified Liquid|Liquid Interface

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Pablo Rioboó-Legaspi *(Department of Physical and Analytical Chemistry, Universidad de Oviedo, Oviedo, Spain)*, Cristina Alvarez-Alvarez, Carmen García-Cabo, Lorena Benavente, Sergio Calleja, Estefanía Costa-Rama, María Teresa Fernández Abedul

Electrochemical Vertical Flow Immunoassay (eVFIA) for the determination of Glial Fibrillary Acidic Protein (GFAP)

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Adalgisa Rodrigues De Andrade *(Chemistry, Faculty of Philosophy Sciences and Letters at Ribeirao Preto, Ribeirão Preto, Brazil)*, Luiz Felipe Venezuela Cabanas, Ana Clara Bonizol Zani, Valeria Reginatto

Recycling Ammonia in a Bioelectrochemical Systems

S02-029

Adalgisa Rodrigues De Andrade *(Chemistry, Faculty of Philosophy Sciences and Letters at Ribeirão Preto, Ribeirão Preto, Brazil)*, Ana Clara Bonizol Zani, João Carlos de Souza, Valeria Reginatto

Boosting Bioelectrocatalysis in MFCs: Neutral Red Film Enhances Electron Transfer in Clostridium pasteurianum

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Montserrat Sales Mateo *(Nanoprobes and Nanoswitches, Institute for Bioengineering of Catalonia (IBEC), Barcelona, Spain)*, Gustavo A. Echeveste Salazar, Núria Camarero, Marina I. Giannotti, Pau Gorostiza

Role of the Copper Ion and Protons in the Activity of the Redox Protein Plastocyanin Studied by Voltammetry and Impedance Spectroscopy

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Chawin Srisomwat *(Department of Chemistry, Thammasat Uniersity, Pathum Thani, Thailand)*

Electrochemical Aptasensor for One-Step and Label-Free Detection of Salivary Cortisol Using Polyaniline-Modified Screen-Printed Graphene Electrode Integrated With Battery-Free NFC Potentiostat

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María J. Sáenz Espinar *(Materials Institute of the University of Alicante, University of Alicante, San Vicente del Raspeig, Spain)*, Laura Medina-Carbonell, Francisco Huerta, Francisco Montilla

Detection of Enzyme Inhibitors in Marine Environments through the Functionalization of Silica-Coated Magnetic Nanoparticles

S02-033

Yassin Temerk *(Chemistry Department, Assiut University, Assiut, Egypt)*, Mohamed Ibrahim Ibrahim

Electrochemical studies and Thermodynamic Characterization of the interaction of Phosphodiesterase 5 Inhibitors with Antihypertensive drugs using Development of Nanomaterial -Based Electrochemical Sensors

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Csongor Tibor Urban *(ZMB, Department of Physics and Astronomy, KU Leuven, Leuven, Belgium)*, Soroush Bakhshi Sichani, Minne Paul Lettinga, Patrick Wagner

Towards a Hot-Wire Thermal Chemosensor for Molecular Detection

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Shuting Zhang *(KIT, HIU Helmholtz-Institute Ulm, Ulm, Germany)*, Stefano Passerini, Robert Leiter, Wenbo Wang, Lukas Pfeiffer, Simon Fleischmann, Peter Axmann

Understanding Sodium Storage Mechanisms on optimized hard carbon anode materials for Sodium-ion batteries

S02-036

Jimin Cao *(TUM Campus Straubing for Biotechnology and Sustainability, Technical University of Munich, Straubing, Germany)*

Electron Mediator Engineering for Electrochemical Driving Enzyme-catalyzed Assist in Carbon Dioxide Reduction

Symposium 03 Electrochemical and bioelectrochemical synthesis of small molecular products

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Higor Alves *(Chemical Engineering Department, Universidade Federal de São Carlos, São Carlos, Brazil)*, Eduardo Dias, Caue Ribeiro, Janaina Gomes

Bimetallic Copper Catalysts for the Electrochemical Transformation of Carbon Dioxide into High-Value Products

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Andrea Antonello *(Chemical Science, University of Padua, Padova, Italy)*, Diego Boin, Marco Fantin, Abdirisak Ahmed Isse

Tuning Nitrogen Content in Doped Mesoporous Carbon Supports for Enhanced Selectivity in CO_2 Electroreduction on Sn Nanoparticles

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Elena Antoniono *(ChemE, Delft University of Technology, DELFT, Netherlands)*, Thomas Burdyny

Heterogenized Molecular Catalysts Active Area Determination Using Cyclic Voltammetry: Limitation and Best Practices

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Eleonora Astolfi *(Department of Chemistry "Giacomo Ciamician", University of Bologna, Bologna, Italy)*

Nanostructured and multi-functional catalysts for the electrochemical reduction of CO_2

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Mina Attia *(Electrochemical Process Engineering, University of Bayreuth, Bayreuth, Germany)*, Chen Zhao, Christina Roth

Effect of Different Current Modes in Dynamic Hydrogen Bubble Templating on Cu Foams Morphology and CO_2 Reduction Activity

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Mohd Monis Ayyub *(Department of Physics, Technical University of Denmark, Kongens Lyngby, Denmark)*

Electrochemical CO_2 reduction at ultracold conditions

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Sebastian Becker *(Department Chemie, Johannes Gutenberg-Universität Mainz, Mainz, Germany)*, Dominik Wördehoff, Dominik Weis, Simon Horsinka, Siegfried Waldvogel, Pol Besenius

Electrochemical Dechlorination of Poly(vinyl chloride) for the Synthesis of Cyclic Acetals

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Katrin Bickel *(Institute for Physical Chemistry, Fritz-Haber-Weg 2, Karlsruhe, Germany)*, Steffen Braun, Luise Kink, Rolf Schuster

Entropy change accompanying the oxidation and reduction of TEMPO

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Roel Bisselink *(Wageningen Food and Biobased Research, Wageningen University and Research, Wageningen, Netherlands)*, Jacco van Haveren, Harry Bitter

On the interaction of the anodic and cathodic reactions and its influence on the conversion of levulinic acid into valeric acid

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Sayani Biswas *(Department of Chemistry and Materials Science, Aalto University, Espoo, Finland)*, Daniel Martín-Yerga, Andreas Johansson

Electrocatalytic Glucose Oxidation Using Chiral Gold Nanorods

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Sebastian Bodwell *(Chemistry, Theoretical Catalysis and Electrochemistry, Universität Duisburg-Essen, Essen, Germany)*, Pablo Lozano-Reis, Kai S. Exner

Investigating the Activity of in-situ Formed Dual-Atom-Catalyst (DAC) Structures on Ti_3C_2Tx (X = O or OH) MXenes toward CO_2RR

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Jule Burmeister *(Institut of Engeneering Thermodynamics, Deutsches Zentrum für Luft- und Raumfahrt e. V. (DLR), Stuttgart, Germany)*, Julian Seiler, Steffen Rehse, Henrike Niehoff, Julia Müller-Hülstede, Dana Schonvogel, Dennis Kopljar, Andreas K. Friedrich

Development of PFAS-free silver-based Gas Diffusion Electrodes for electrochemical CO_2 reduction

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Hinka Caparrotti *(Biochemical Departement, University of Saarland, Saarbrücken, Germany)*

Tuning the Electrocatalytic Activity of Electrodeposited Nanoparticles through Cysteamine Modification

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Miyeon Chang *(Institute of Chemistry and Chemical Engineering, EPFL, Lausanne, Switzerland)*, Suhwan Yoo, Wenchao Ma, Hubert Girault, Yun Jeong Hwang, Xile Hu

Cation Dehydration by Surface-Grafted Phenyl Groups for Enhanced C_2+ Production in Cu-catalyzed Electrochemical CO_2 Reduction

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Nina Chen *(Van't Hoff Institute for Molecular Sciences, University of Amsterdam, Diemen, Netherlands)*, Connor Deacon-Price

Influence of Water Content in CO_2 Reduction Reaction on a Cu electrode in Organic Solvent

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Nina Chen *(Van't Hoff Institute for Molecular Sciences, University of Amsterdam, Diemen, Netherlands)*, Connor Deacon-Price

Influence of Water Content in CO_2 Reduction Reaction on a Cu electrode in Organic Solvent

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Po-Chung Chien *(Chemistry, RPTU Kaiserslautern-Landau, Kaiserslautern, Germany)*, Florian A. Breitschaft, Harald Kelm, Siegfried R. Waldvogel, Georg Manolikakes

Electrochemical 3-Component Synthesis of Alkenesulfonates from Cinnamic Acids, SO_2 and Alcohols

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Dennis Ciliak *(Electrochemical Energy Systems Laboratory, ETH Zurich, Zurich, Switzerland)*, Dario Gomez Vazquez, Katharina Trapp, Maria R. Lukatskaya

Understanding the origin and effects of local pH in water-in-salt systems

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Madara Darzina *(OSM group, Latvian Institute of Organic synthesis, Riga, Latvia)*, Aigars Jirgensons

Electrochemical Formation of Oxazolines by 1,3-Oxyfluorination of Non-activated Cyclopropanes

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Zeyu Feng *(Electrosynthesis, Max-Planck-Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Siegfried Waldvogel

Electrochemical Hofmann Rearrangement for N-N Bond Formation: From Urea to Hydrazides

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Thalita Ferreira Da Silva *(São Carlos Institute of Chemistry, University of São Paulo, São Carlos, Brazil)*, Larissa Tavares Cardoso, Thalita Ferreira da Silva, Marcos Roberto de Vasconcelos Lanza

Designing La_2CuO_4/Printex L6 Composites: A Characterization-Guided Strategy for Enhanced CO_2 Electroreduction

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Shilong Fu *(Process & Energy, Delft University of Technology, Delft, Netherlands)*, Min Li, Ahmed Mohsen Ismail, Boaz Izelaar, Ruud Kortlever

Co-reduction of Carbon Dioxide and Nitrate for Urea Synthesis: Influence of Operational Parameters

S03-023

Marius Funke *(Chemical and Biological Engineering, FAU Erlangen-Nürnberg / Power-to-X Technologies, Fürth, Germany)*, Marius Funke, Bastian J.M. Etzold

Design and Validation of a Novel Pressure Electrolysis Reactor for Electrochemical Hydroamination of Lignin-Derived Oligomers

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Maria Gomez-Mingot *(Laboratoire de Chimie des Processus Biologiques, College de France, Paris, France)*, Yutzil Segura-Ramirez, Carlos M. Sánchez-Sánchez, Marc Fontecave

Molecular catalysts for CO_2 Reduction from Flue Gas Simulated Streams

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Qing Gong *(IAM-ET, KIT, Karlsruhe, Germany)*, Nils Näser, Bastian J. M. Etzold, Philipp Röse

CO_2 Reduction Reaction in Acetonitrile: Mechanistic Insights into Cyanoacetic Acid Formation

S03-026

Davide Gramigni *(Department of Chemistry "G. Ciamician, Alma Mater Studiorum - University of Bologna, Bologna, Italy)*, Alessia Pollice, Massimo Marcaccio, Giovanni Valenti, Francesco Paolucci

pH-dependent study of Ni-based graphene-supported nanoparticles for the Oxygen Evolution Reaction

S03-027

Lukas Herrmann *(Institute of Chemistry, Martin Luther University Halle-Wittenberg, Halle (Saale), Germany)*, Michael Bron

Investigation of the Electrochemical CO_2 Reduction Reaction on Gold Nanoparticles Supported on Well-defined Magnéli Phases

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Xuehuai Hou *(IET-1, Forschungszentrum Jülich, Jülich, Germany)*, Burkhard Hecker, Marco Münstermann, Deniz Dogan, Hermann Tempel, Rüdiger-A. Eichel

Applying an optimization strategy for CO_2 reduction in a standard modular test cell designed for high-throughput (HT) experimentations

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Yeongbae Jeon *(Chemistry, Seoul National University, Seoul, Korea)*, Dongwoo Shin, Kijung Yong, Yun Jeong Hwang

Tailoring the Solid Electrolyte Interphase with Silver for Efficient Li-Mediated Nitrogen Reduction

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Till Kahlstorf *(Department of Materials Chemistry for Catalysis, Helmholtz-Zentrum-Berlin, Berlin, Germany)*, Prashanth Menezes, Jan Niklas Hausmann

Understanding electrochemical and non-faradaic reaction pathways of copper catalyzed aldehyde oxidation in hybrid water splitting for anodic hydrogen production

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Pamela Khawandi *(ELCAT Applied Engineering, University of Antwerp, Wilrijk, Belgium)*, Nick Daems, Luis F. Leon-Fernandez, Tom Breugelmans

Understanding the Interplay Between Reaction Conditions to Enhance Urea Electrosynthesis on Ag Electrode

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Youyoung Kim *(Department of Environment and Energy Engineering, Gwangju Institute of Science and Technology(GIST), Buk-gu, Korea)*

Investigation of CuP_2 as a non-precious metal catalyst for electrochemical CO_2 reduction reation.

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Sebastian Kissel *(Waldvogel - Electrosynthesis, Max Planck-Institute for Chemical , Mülheim an der Ruhr, Germany)*, Prof. Dr. Siegfried R. Waldvogel

Electrochemical reductive deuteration of oxalic esters – a simple and scalable method

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Thomas Lange *(Institute of Technical Chemistry, University of Stuttgart, Stuttgart, Germany)*, Maximilian Schmidt, Michael Minas, Elias Klemm

Preparation of gas diffusion electrodes by pulse electrodeposition of Cu for the electrochemical CO_2 reduction towards C_2 products

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Kelly Lim-Trinh *(Professorship of Electrobiotechnology, Technical University of Munich , Straubing, Germany)*, Nicolas Plumeré, Dawit Filmon Tedros, André Pick

External Coupling of Enzymatic Redox Reactions

S03-036

Na Liu *(Elektrochemie & Katalyse, Leibniz-Institut für Katalyse e. V., Rostock, Germany)*, Wen Ju, Sebastian Wohlrab, Robert Francke

A Molecular Copper Catalyst for Electrochemical Conversion of CO_2 to C_{2+} Products

S03-037

Enrico Lunghi *(Electrosynthesis, Max Planck Institute for Chemical Energy Conversion, Mühleim an der Ruhr, Germany)*, Prof. Dr. Siegfried R. Waldvogel

Electrochemical Dehydration of Sulfonic Acids to their Anhydrides

S03-038

Chaoqun Ma *(CE-NECC, Helmholtz-Zentrum Berlin, Berlin, Germany)*, Alexander Arndt, Wankai Tang, Matthew Mayer

Pulsed Potential in Electrochemical CO_2 Reduction on Ag: Insights from Surface Restructuring and Specific Adsorption

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Muhammad Adib Abdillah Mahbub *(Chemistry and Biochemistry, Ruhr University bochum, Bochum, Germany)*, Muhammad Adib Abdillah Mahbub, Wolfgang Schuhmann

Electrochemical CO_2 Reduction to CO or Formate Using Low-Concentration CO_2 Sources

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Primaggio Mantovi *(Fundamental Chemistry, University of São Paulo, São Paulo, Brazil)*, Leonardo de Angelis, Jean da Cruz, Maykon Souza, Susana Torresi, Liane Rossi, Fabio de Lima, Roberto Torresi

Driving the Pathway of CO_2RR by Controlling Water Concentration in Ionic Liquids

S03-041

Nik Maselj *(Department of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia)*, Jan Trputec, Martin Šala, Kristina Mervič, Ivan Maric, Francisco Ruiz-Zepeda, Marjan Bele, Vasko Jovanovski, Nejc Hodnik, Primož Jovanovič

Exploring Electrocatalytic Selectivity in Furfural Hydrogenation via Pd–TiON Metal Support Interactions

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Sora Nakasone *(RCSEC, Graduate School of Engineering Science, The University of Osaka, Toyonaka, Japan)*, Asato Inoue, Ryo Kurihara, Takashi Harada, Shuji Nakanishi, Kazuhide Kamiya

Ampere-Level Carbon Monoxide Electroreduction to Multi-Carbon Products: A Comparative Study with CO_2 Reduction

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Markus Nilsson *(Department of Chemistry and Molecular Biology, Univeristy of Gothenburg, Gothenburg, Sweden)*, Michael Busch, Elisabet Ahlberg

Electrochemical Investigation of a Dinucleating Ligand for Diiron Chemistry

S03-044

Nils Näser *(Chemical and Biological Engineering, FAU Erlangen-Nürnberg / Power-to-X Technologies, Fürth, Germany)*, Nils Näser, Hans-Joachim Kohnke, Camila Kisukuri, Henning Bonart, Philipp Röse, Bastian J.M. Etzold

Laplacian pressure-controlled gas diffusion electrodes for organic electrosynthesis

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Saerom Park *(Sustainable Catalytic Processes, Fraunhofer IGB BioCat, Straubing, Germany)*, Daina Ninan, Dhananjai Pangotra, Paul Stockmann, Arne Roth, Luciana Vieira

Electrochemical Upgrade of Monoterpenes

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Barbara Pavlovic *(Electrosynthesis, Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Christoph Heubel, Michael Kurz, Siegfried R. Waldvogel, Maria Mendez, Sven Ruf

Single step synthesis of β- and γ- arylated unnatural amino acids by electrochemistry

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Albin Petrén *(Chemistry & Chemical Engineering, Chalmers University of Technology, Gothenburg, Sweden)*

Scalable and efficient organic polymeric electrodes for electrochemical synthesis

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Ashin Paul Philip *(Electrochemistry & Catalysis, Leibniz Institute for Catalysis, Rostock, Germany)*, Trang Pham, Annette Enrica Surkus, Wen Ju, Robert Francke

Electrocatalytic Glucose Oxidation on Transition Metal Oxide-based Catalysts

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Alessia Pollice *(Dept. of Chemistry "Giacomo Ciamician", Alma Mater Studiorum - University of Bologna, Italia, BO, Italy)*, Miriam Moro, Michele Cacioppo, Maurizio Prato, Paolo Fornasiero, Michele Melchionna, Giovanni Valenti, Francesco Paolucci

Enhanced Electrochemical CO_2 Reduction Using CeO_2@CNHs Nanoflowers: Influence of Synthesis Method and Gas Diffusion Electrode Integration

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Ruby Susan Raju *(Chemistry and Chemical Engineering, Chalmers University of Technology, Gothenburg, Sweden)*, Albin Petren, Yixu Wang, Jessica Vasquez, Megan Westwood

Zap! Crackle! React! - Towards the Development of Efficient Polymeric Electrodes for Electrosynthesis

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Negar Sabouhanian *(Chemistry, University of Guelph, Guelph, Canada)*, Jacek Lipkowski, Aicheng Chen

Electrochemical and Spectroscopic Insights into CO_2 Reduction to Formate/Formic Acid on Bimetallic Bi-based Catalysts

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Alina Schmalz *(Structure Analysis, Federal Institute for Materials Research and Testing, Berlin, Germany)*

Enhanced Electrochemical Nitrate Reduction to Ammonia by Isostructural MOF-derived Alloy

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Caroline Schneider *(Institute for Inorganic and Analytical Chemistry, Albert-Ludwigs-Universität Freiburg, Freiburg, Germany)*, Caroline Schneider, Esmael S. Balaghi, Niklas Ortlieb, Sima Heidari, Patrick Elsaesser, Christopher S. Allen, Anna Fischer

Fe-N-C electrocatalysts for electrochemical ammonia production: What can they do and cannot do?

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Zhun Shi *(Chemistry, UNSW, Sydney, Australia)*, Chuan Zhao

Boosting selective oxidation of methane to formic acid by in-situ generated H_2O_2 from electrocatalytic ORR under mild conditions

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Yeong Joo Sin *(Department of Chemistry Education, Graduate School of Korea National University of Education, Cheongju-si, Korea)*

Patterned Nanoporous Gold Electrodes with Enhanced Mass Transport and Their Applications

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Jeroen Smaak *(Catalysis and Surface Science, Leiden Institute of Chemistry, Leiden, Netherlands)*, Nicola Aust, Marc Koper

Effect of Electrode Material on Overpotential of CO_2 Reduction to Oxalate in N,N-Dimethylformamide

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Noa Soffer-Lugassy *(Schulich Faculty of Chemistry, Technion - Israel Institute of Technology, Haifa, Israel)*, David Eisenberg

Does non-planarity affect electro-oxidation on Fe-N4-C?

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José Solla-Gullón *(Institute of Electrochemistry, University of Alicante, San Vicente del Raspeig, Alicante, Spain)*, Elena Bujedo-Saiz, Beatríz Ávila-Bolívar, Ailen Peña-Rodríguez, Kevin Fernández-Caso, Martí Molera, Guillermo Díaz-Sainz, Ángel Irabien, Vicente Montiel, Teresa Andreu, Manuel Álvarez-Guerra, Jonathan Albo, Jesús Iniesta

Advances in the electrochemical reduction of CO_2 into Formic Acid-Formate

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Suanto Syahputra *(Chemistry, Aix-Marseille Université, CNRS, MADIREL (UMR 7246), Marseille, France)*, Suanto Syahputra, Suhas Chandrasekaran, Emanuela Sgreccia, Maria Luisa Di Vona, Florence Vacandio, Philippe Knauth

Catalytic Electrodes from Pine Needle Hydrochar and Anion Exchange Ionomer for Sustainable Oxygen Reduction

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Sonam Gyaljen Tamang *(Institute of Applied Materials–Electrochemical Technologies, Karlsruhe Institute of Technology, Karlsruhe , Germany)*, Paul Neugebauer, Philipp Röse, Ulrike Krewer

Experimental Investigation on Methoxylation of N-formylpyrrolidine on Glassy Carbon Anodes

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Campbell Tiffin *(Department of Chemical and Process Engineering, University of Canterbury, Christchurch, New Zealand)*, Aaron Marshall

Towards a Model Gas Diffusion Electrode for Electrochemical CO_2 Reduction

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Mostafa Torabi *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Michalina Zaborowska-Mazurkiewicz, Elzbieta Jablonowska, Konstanty Zdunek, Agnieszka Więckowska, Renata Bilewicz

Highly Controlled Two-Dimensional Self-Assembly of Gold Nanoclusters for Electrocatalytic CO_2 Conversion

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Sara Torabi *(Institut für Chemie, Carl von Ossietzky Universität Oldenburg , Oldenburg, Germany)*

The Electrochemical Iodination of Electron-Deficient Arenes

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Jingyi Wang *(Department of Chemistry, Technische Universität Berlin, Berlin, Germany)*, Jingyi Wang, Wen Ju, Robert Francke, Peter Strasser

Exploring cation effects on NiNC single metal atom electrocatalysts for the CO_2-to-CO Conversion

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Lasse Wichmann *(Department of Chemical Engineering, University of Twente, Enschede, Netherlands)*, Max Goeltz, Lukas Cino, Guido Mul, Stefan Rosiwal, Hanadi Ghanem, Georgios Katsoukis, Marco Altomare

Electrochemical CO_2 reduction on Boron Doped Diamond under defined hydrodynamic conditions

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Boby Wilson *(IGTE, Universität Stuttgart, Stuttgart, Germany)*, Julian Seiler, Jule Burmeister, Alia Alalia, Mila Manolova, Seniz Sörgel, Elias Klemm, Dennis Kopljar, Kaspar Andreas Friedrich

Multilayer GDEs for long-term stable acidic CO_2 reduction to formic acid

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Yan Xie *(TUM Campus Straubing für Biotechnologie und Nachhaltigkeit, Technology University of Munich, Straubing, Germany)*, Nicolas Plumeré, Leonardo Castañeda-Losada

Bioelectrocatalytic NADP+ regeneration for biotransformation

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Linfeng Yang *(Elektrochemie & Katalyse, Leibniz Institute for Catalysis, Rostock, Germany)*, Na Liu, Wen Ju, Robert Francke

Counter Ion Effects on the Electrocatalytic Performance of a Molecular Copper Complex for Electrochemical CO_2 Reduction

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Hongyuan Yang *(Materials Chemistry for Catalysis, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Jan Niklas Hausmann, Prashanth W. Menezes

Alloying Pt with Ni to Facilitate the Ethylene Glycol Electrooxidation into Glycolic Acid

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Vladislav Ivanistsev *(Institute of Chemistry, University of Tartu, Tartu, Estonia)*, Iuliia Vetik, Nikita Žoglo, Akmal Kosimov, Ritums Cepitis, Veera Krasnenko, Vitali Grozovski, Nadezda Kongi

Electrochemical CO_2 capture with metal-organic frameworks: A missing link between ambient CO_2 and CO_2RR

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Hanzhi Ye *(Department of Chemical Engineering, South Kensington Campus London SW7 2AZ, UK, London, United Kingdom)*, Giulia Tarantino, Ceri Hammond, Javier Garcia-Martinez, Hui Luo, Ifan E L Stephens, Magda Titirici

Glycerol Electrochemical Oxidation towards Lactic acid Production

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Donghyun Yoon *(Environment and Energy Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea)*, Jaeyoung Lee

Enhanced CO_2 Electroreduction to C_2+ Products on Ag-Cu_2O Catalyst in a Catholyte-free Electrochemical Cell System

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Youli Yu *(Department of Materials, Imperial College London, London, United Kingdom)*, Yifeng Wang, Hanzhi Ye, Santosh Kumar, Pilar Ferrer, George Held, Magda Titirici, Reshma R Rao

Operando Mechanistic Study of Glycerol Electro-oxidation on $Ni(OH)_2$/NiOOH electrodes

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Roba Zein *(ICMN, CNRS, Orléans, France)*

Development of electrochemical sensor based on glassy carbon electrode modified with molecularly imprinted polymer for nitrosamines detection

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Thalita Da Silva *(São Carlos Institute of Chemistry, University of São Paulo, São Carlos, Brazil)*, Thalita Ferreira da Silva, Larissa Tavares Cardoso, Marcos Roberto de Vasconcelos Lanza

Interfacial Insights Into the Efficient Electroconversion of CO_2 to CO using Cu-based Catalysts Supported on Printex L6 Carbon

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Caiwu Liang *(Chemistry, Imperial College London, London, United Kingdom)*, Lucas Garcia Verga, Reshma Rao, James Durrant

Key role of oxidising species in Electrocatalytic Water Oxidation

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Yao Yao *(Department of Chemistry, Great Bay University, Dongguan, China)*, Ernest Pahuyo Delmo, Minhua Shao

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Ibtissam Adanouj *(Battery and Hydrogen Technologies Unit, European Commission, DG Joint Research Centre, Petten, Netherlands)*, Ibtissam Adanouj, Andreas Podias, Matthias Bruchhausen, Andreas Pfrang, Natalia Lebedeva

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Jehad Ahmed *(Fundamental Electrochemistry (IET-1), Forschungszentrum Jülich GmbH, Jüich, Germany)*, Kwangnam Kim, Liwen Wan, Jordan Barr, Tsai Chih-Long, Zhizhen Qin, Anna Domgans, Anna Windmüller, Julian Borowec, Roland Schierholz, Florian Hausen, Hermann Tempel, Rüdiger Eichel

The effect of cobalt substitution into LLZTO on microstructure, electrochemical performance, and mechanical properties.

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Pedro Alonso Sánchez *(Multifunctional Magnetic Molecular Materials (M4), Aragon Nanoscience and Materials Institute (INMA)*, Zaragoza, Spain)

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Pesesse Antoine *(DEHT, CEA LITEN, Grenoble, France)*, Marie Eve Yvenat, Eric De Vito, Chavillon Benoit

Lubricant based roll pressing: a robust preparation technique for Li metal anode protection in dry room conditions

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Ryuki Asada *(Physics and Engineering, Nagoya Institute of Technology, Nagoya, Japan)*, Reona Miyazaki

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Elsun Azizov *(Electrochemistry and Energy Conversion, University of Strasbourg, ICPEES, UMR 7515, Strasbourg, France)*

Bio-sourced electrode materials for all-carbon supercapacitors and Li ion capacitors

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Changjiang Bai *(chemie, Humboldt-Universität zu Berlin, Berlin, Germany)*, Katherine Mazzio, Philipp Adlehelm

CuFeS2 as a Cathode Active Material in All Solid-State Batteries

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Jiri Bana *(Department of Electrical and Electronic Technology, Brno University of Technology, Brno, Czech Republic)*, Antonín Šimek, Tomáš Kazda

Composite Anodes Based On Recycled Graphite And Silicon

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Klemens Bremmel *(Institut für Technische Thermodynamik, Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart, Germany)*, Gautam Sreedevi Jacob, Ana Fernández, Álvaro Doñoro, Lukas Köbbing, Alberto Blázquez, Maryam Nojabaee, Birger Horstmann, Dennis Kopljar, Kaspar Andreas Friedrich

Comprehensive insights into the influence of SEI characteristics on electrochemical behaviour of silicon anodes by combining simulation, single particle- and electrode-level measurements

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Dominic Bresser *(Helmholtz Institute Ulm (HIU), Karlsruhe Institute of Technology (KIT), Ulm, Germany)*

Nanoparticulate Nb_2O_5 Synthesized via Flame Spray Pyrolysis as Lithium-Ion Anode

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Edward Brightman *(Department of Chemical & Process Engineering, University of Strathclyde, Glasgow, United Kingdom)*, Calvin N. Turner, Niall Dalton, Pasidu Pallawela, Stuart D. Robertson, Edward Brightman, Thomas Leckie

Mitigating the effects of polysulfide shuttle through catholyte additives in lithium polysulfide flow batteries

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Francesco Capodarca *(Department of chemistry Giacomo Ciamician, Università di Bologna, Bologna, Italy)*, Antunes Staffolani, Francesca Soavi

An investigation on lithium metal battery separators and electrolytes

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Luis F. Chazaro-Ruiz *(Division de Ciencias Ambientales, Instituto Potosino de Investigacion Cientifica y Tecnologica, San Luis Potosi, Mexico)*, Miguel A. Sosa-Olvera, Jennifer Laverde, Diana Lopez, Javier A. Arcibar-Orozco, Rene Rangel-Mendez

Effect of morphology, texture and chemical composition of sulfur-impregnated carbon materials on the specific capacity of Li-S batteries

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Yuanbo Chen *(Institute of Energy Technologies (IET-4), Forschungszentrum Jülich GmbH, Jülich, Germany)*, Carsten Korte, Christian Rodenbücher, Jiangshui Luo

Molecular-Level Insights into Li+ Solvation Sheath and Self-Diffusion Coefficient in Pyrrolidinium-Based Ionic Liquid Electrolytes: Effects of Lithium Salt and Co-solvent

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Min Seo Cho *(Graduate School of Convergence Technology and Energy, Tech University of Korea, Siheung-si, Korea)*

Electrochemical Analysis for Detecting Physical Defects in Lithium-Ion Batteries

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Min Seo Cho *(Graduate School of Convergence Technology and Energy, Tech University of Korea, Siheung-si, Korea)*, Kang Min Park

Optimization of $FePO_4$ Precursor Synthesis via Precipitation for $LiFePO_4$ Positive Electrode Materials in Lithium-Ion Batteries

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Antonio De Marco *(Chemistry, Università di Bologna, Bologna, Italy)*, Antonio De Marco, Quentin Deville, Catia Arbizzani

Synthesis and characterization of Mn-based Li-excess rocksalt cathodes for Ni and Co free Li-ion batteries

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Julio César Espinosa-Angeles *(Helmholtz Institute Ulm (HIU), Karlsruhe Institute of Technology (KIT), Ulm, Germany)*, Dominic Bresser

Towards an In-Depth Understanding of (Transition Metal-Doped) Tungsten Oxide for Li-Ion Anodes

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Hinata Fujimura *(Chemistry and Life Science, Yokohama Natiional Univ., Yookohama, Japan)*, Yosuke Ugata, Naoaki Yabuuchi

Development of long-lived and high-temperature tolerant lithium-ion batteries with stoichiometric $LiNiO_2$

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Mizuki Fukuda *(Department of Materials Science, Chiba University, Chiba, Japan)*, Dorian Unbehauer, Tetsuya Tsuda

Electrochemical Impedance Spectroscopy Analysis for Ionic Liquid-Coated Li Conductive Solid Oxide Electrolyte

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Kuan-Zong Fung *(Materials Science and Engineering, National Cheng Kung University, Tainan, Taiwan)*, Shu-Yi Tsai, Yu-Hsuan Chen, Yu-Fan Chen

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Xiaokun Ge *(Institute for a Sustainable Hydrogen Economy (INW), Forschungszentrum Jülich GmbH, Jülich, Germany)*, Xiaokun Ge, Lukas Köbbing, Andreas Kuhlmann, Maryam Nojabaee, Birger Horstmann, Jimun Yoo, Hans-Georg Steinrück

Connecting SEI Structure and Chemistry to Electron-Ion Transport Mechanisms and Rates Using Redox Probes

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Alessandro Gregucci *(Dipartimento di Chimica "Giacomo Ciamician", Università di Bologna, Bologna, Italy)*, Fabio Maroni, Antunes Staffolani, Francesca Soavi, Mario Marinaro

Investigation of Silicon-Rich Anodes Under Low-Temperature Conditions

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Monja Gronenberg *(Materials Science and Engineering, CAU Kiel, Kiel, Germany)*, Deik Petersen, Jürgen Carstensen, Mozaffar Abdollahifar, Rainer Adelung

Insights into the Kinetics of the SEI-formation on an all-Silicon Anode

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Leo Gräber *(Helmholtz Institute Ulm (HIU), Karlsruhe Institute of Technology (KIT), Ulm, Germany)*, Vittorio Marangon, Dominic Bresser

Fluorine-Free Single-Ion Conducting Polymer Electrolytes for Lithium-Metal Batteries

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Laurence Hardwick *(Chemistry, Stephenson Institute for Renewable Energy, University of Liverpool, Liverpool, United Kingdom)*, Alex R. Neale, Elliot Coulbeck, Dan Saccomando, Laurence J. Hardwick, Thukshan Samarakoon

Multicycle Operando Pressure Measurements Enable Assessment of Redox Mediator Efficacy in Lithium-Oxygen Batteries

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Florian Hausen *(Institute of energy Technologies (IET-1), Forschungszentrum Jülich, Jülich, Germany)*, Beatrice Wolff, Peter Jakes, Josef Granwehr, Rüdiger-A. Eichel

Insights into the evolution of functional layers in batteries by local mechanical information

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Tilo Held *(Chair of Electrochemical Process Engineering, University of Bayreuth, Bayreuth, Germany)*, Wiebke Hagemeier, Daniel Leykam, Christina Roth

Degradation Mechanisms in Spray-coated Alternating Silicon-Carbon Thin Film Anodes for Lithium-Ion Batteries

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Minato Hino *(Graduate school of Science and Engineering, Seikei University, Saitama city, Japan)*, Shota Azuma, Ryotaro Tani, Fumisato Ozawa, Morihiro Saito

Flexible Electrolyte Sheets Using Sulfonated Cellulose Nanofiber for Sheet-type All-Solid-State Batteries

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Shweta Hiwase *(Macromolecular Chemistry II, BayBatt, University of Bayreuth, Bayreuth, Germany)*

UV- polymerized dual-ion and single-ion conducting solid polymer electrolytes on electrospun PAN nonwoven for lithium metal batteries

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Ling Huang *(Chemistry, Xiamen University, Xiamen, China)*, Ya-Ping Deng, Huayu Huang, Shi-Gang Sun, Ling Huang

Simultaneously Promoting Li Anode and NCM Cathode in Li Metal Batteries through Constructing Artificial Interfaces

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Lekshmi Jegan *(Department of Thin Films and Nanostructures, FZU – Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic)*, Thanh Tuan Pham, Jiri Cervenka

Stabilizing the Nano silicon Anode-Electrolyte Interface for High-Performance Lithium-Ion Batteries

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Hye-Rim Kang *(Chemical engineering, Dong-A University, Busan, Korea)*, Jin-Hwi Kim, Jeom-Soo Kim

Effect of $LiTaO_3$ Coating on Single-crystal $LiNi_{0.8}Co_{0.1}Mn_{0.1}O_2$ Cathode Materials in All-Solid-State-Batteries

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Hyun Chul Kim *(Chemical Engineering, Sungkyunkwan University, Suwon, Korea)*, Jun Su Kim

Gradient Design for 3D Lithium Anode

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Junghoon Kim *(LiB Materials Research Center, POSCO Holdings, Incheon, Korea)*

Cost-Effective and Environmentally Sustainable Synthesis of LFP Cathode Materials Using Low-Cost Resources

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Min Ju Kim *(Chemical Engineering, SUNGKYUNKWAN UNIVERSITY, Suwon, Korea)*, Ho Seok Park

Enhancing Lithium-Sulfur Batteries' Performance with rGO/PIL/MXene Quantum Dots Modified Separator

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Hyun Chul Kim *(School of Chemical Engineering, Sungkyunkwan University, Suwon-si, Korea)*, Jun Su Kim, Hao Fu

Gradient Design of 3D Lithium Anodes

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Hun Kim *(Energy Engineering, Hanyang University, Seoul, Korea)*

Hierarchical Nanowire Host Material-Based All-Solid-State Sulfur Batteries for High Sulfur Utilization

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Doohun Kim *(Next Generation Battery Research Center, Korea Electrotechnology Research Institute, Seongsan-Gu, Changwon-Si, Korea)*, Jae-Hyun Park, Jinhyeok Heo, Junghwan Sung, You-Jin Lee, Jun-Woo Park, Seungwook Eom

Rational Design of Advanced Interlayers as Polysulfide Barriers in Lithium–Sulfur Batteries

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Jin-Hwi Kim *(Chemical engineering, Dong-A University, Busan, Korea)*, Hye-Rim Kang, Jeom-Soo Kim

Surface Modification of Ni-Rich Cathodes for Mitigating Interfacial Degradation in Sulfide-Based All-Solid-State Batteries

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Yasuyuki Kondo *(SANKEN, The University of Osaka, Ibaraki, Japan)*, Haruna Nakajima, Yu Katayama, Nao Kobayashi, Shinya Otani, Akinori Tani, Shigeaki Yamazaki, Yuki Yamada

Electrolyte Li+ Chemical Potential Dominates Graphite Negative Electrode Reactions in Lithium-ion Batteries

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Lukasz Kondracki *(Center for Energy and Environmental Sciences, Paul Scherrer Institute, Villigen, Switzerland)*, Janne-Petteri Niemelä, Dominika Baster, Mario El Kazzi, Ivo Utke, Sigita Trabesinger

Artificial SEI and Electrolyte Additives: A Synergistic Path to Better Silicon Electrode Performance

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Ken Kurashima *(Research Center for Solar Energy Chemistry, Osaka University, 1-3 Machikaneyama, Toyonaka, Japan)*

Effect of Ce(III) Additives on Positive Electrode Reactions in Li-O_2 Secondary Batteries: Overvoltage Reduction and Mechanistic Divergence

S04-044

Ruben-Simon Kühnel *(Laboratory Materials for Energy Conversion, Empa, Dübendorf, Switzerland)*, Sanja Renka, Graham Kimbell, Sufu Liu, Corsin Battaglia

Carbonate Electrolytes for Lithium-Ion Batteries with Silicon-Graphite Anode

S04-045

Sabrina Lang *(Institute for Applied Materials, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany)*, Lukas Hennerici, Dominik Kramer, Diana Avadanii, Mario Linz, Jaroslaw Kita, Ralf Moos, Reiner Mönig

Void Formation, Growth, and Shrinkage in Lithium Metal in contact with an LLZO Electrolyte

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Ye-Won Lee *(Chemical Engineering, Dong-A University, Busan, Korea)*, Min-Chae Jeong, Kyung-Tae Yeo, Jeom-Soo Kim

Effect of Precursor Morphology on the Synthesis of Single-body $LiNi_{0.91}Co_{0.045}Mn_{0.045}O_2$ Cathode Material

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Christian Leibing *(Institute for Technical and Environmental Chemistry, Friedrich Schiller University Jena, Jena, Germany)*, Amalie Skurtveit, Alexey Y. Koposov, Andrea Balducci

Glyoxylic-Acetal-Based Electrolytes for Alloy-Type Anodes in Lithium-Ion Batteries

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David Lepage *(Centre d'excellence en électrification des transports, Hydro-Québec, Varennes, Canada)*, Jean-Christophe Daigle, Charlotte Mallet, Ki Seok Koh, Myunghun Cho, Nicolas Dumaresq, Abdelbast Guerfi, Chisu Kim

Functionalized polymeric additives based on 2,3-dimethoxybenzene for lithium-ion batteries.

S04-049

Deyuan Li *(School of Chemical Engineering and Technology, Tianjin University, Tianjin, China)*, Dongfang Yu, Yizhou Zhu, Chunpeng Yang

High Configuration Entropy Promises Electrochemical Stability of Chloride Electrolytes for High-Energy All-Solid-State Batteries

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Jong-Heon Lim *(Chemical engineering, Dong-A University, Busan, Korea)*, Hyo-Bin Ryu, Min-Beom Kim, Jeom-Soo Kim

Correlation Between Particle Morphology and Electrochemical Behavior in $LiNi_{0.7}Co_{0.1}Mn_{0.2}O_2$ Cathode Materials

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Yite Liu *(Department of Chemistry, Fudan University, Shanghai, China)*, Tao Huang, Aishui Yu

Electrochemically Induced Interface by LiBOB to Enhance Cycling Performance of $LiFe_{0.4}Mn_{0.6}PO_4$ Cathode for Lithium-Ion Batteries

S04-052

Yanchen Liu *(Department of Chemistry, Humboldt-Universität zu Berlin, Berlin, Germany)*

A Partially Disordered Crystallographic Shear Block Structure as Fast-charging Anode Material for Lithium-ion Batteries

S04-053

Wei-Ren Liu *(Department of Chemical Engineering, Chung Yuan Christian University, Taoyuan, Taiwan)*

$Li_{1.3}Al_{0.3}Ti_{1.7}(PO_4)_3$ Solid Electrolytes Synthesized by a Microwave-assisted Hydrothermal Reaction for Li all-solid-state Battery Applications

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Kevin Llopart *(Chemical Sciences DIvision, ORNL, Oak Ridge, USA)*, Robert Sacci

Exploring Entropy Favored Ionic Diffusion in $Li_{1.75}ZrCl_{4.75}O_{0.5}$ (LZCO) through Li Aliovalent and Halide Doping

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Mattia Longo *(DISAT, Politecnico di Torino, Turin, Italy)*, Matteo Gandolfo, Leire Meabe, Maria Martinez, Daniela Fontana, Julia Amici

In-situ UV cured deep eutectic solvent-based gel polymer electrolyte for Li metal batteries

S04-056

Paula Lorson *(Institute for Applied Materials, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Paula Lorson, Marc Kamlah

Studying the Influence of Phase-Separation of Active Materials on the Cell Performance with the Help of a P2D Model on the Example of $LiFePO_4$

S04-057

Teresa Marramaque *(Department of Chemical and Biological Engineering, Faculty of Engineering, University of Porto, Porto, Portugal)*, Paula Dias, Miguel Duarte, Adélio Mendes

Electrochemical Flow Cell for Continuous Recovery of Valuable Metals from Spent Lithium-Ion Batteries

S04-058

Seyedalireza Mirbagheri *(Dipartimento di Chimica, Materiali e Ingegneria Chimica, Politecnico di Milano, Milan, Italy)*, Federico Lissandrello, Eugenio Gibertini, Elena Lopez Pazos, Luca Magagnin

Ultrafast Electrolytic Deposition of Li_3PO_4 on Cu Foil as a Solid Electrolyte Interphase (SEI) Stabilizer for Anode-Free Lithium Batteries.

S04-059

Ryoma Mochida *(Graduate School of Applied Chemistry and Chemical Engineerin, Kogakuin University, Hachioji-shi, Japan)*, Rintaro Mogi, Rino Masui, Yoshiki Yokoyama, Takuya Nakagawa, Mari Kawabuchi, Hirofumi Yasuda, Yuichi Aihara, Shiro Seki

Properties and Functions of "Ionic Clay": A Novel Li-Ion Conductive Solid Electrolyte with Oxide-Based Inorganics and Low-Melting Mixed Salts

S04-060

Shoayb Mojtahedi *(Department of Chemistry "Giacomo Ciamician", University of Bologna, BOLOGNA, Italy)*, Antunes Staffolani, Elisa Maruccia, Mauro Serafin, Fulvio Pastore, Francesca Soavi

Eco-Friendly Manufacturing of Lithium-Ion Battery Electrode via a Semi-Dry Coating Process

S04-061

Xiao Mu *(Laboratory of Advanced Materials, Fudan University, Shanghai, China)*, Tao Huang

Ultrastable Monodisperse Resin-Based Spherical Si-C Materials with Micropore Confined Growth of Silicon Nanoclusters for Lithium-Ion Battery Anodes

S04-062

Souhaila N'mar *(IFPEN, IFP Energies Nouvelles, Rueil-Malmaison, France)*, Marc Fleury, Carlos Nieto

Combining NMR Cryoporometry and Diffusion studies on Ion Exchange Membranes

S04-063

Peter Ngene *(Chemistry, Utrecht University, Utrecht, Netherlands)*, Jonas D. Hehn, Laura E. de Kort, Petra E. de Jongh

All-solid-state Lithium and Sodium Batteries based on Interface-engineered complex hydride Nanocomposite Solid Electrolytes

S04-064

Teppei Ohno *(Chemistry and Life Science, Yokohama National University, Yokohama, Japan)*, Yosuke Ugata, Naoaki Yabuuchi

Efficient synthesis of zero volume change V-based positive electrode materials and applications for sheet-type all-solid-state batteries with low stack pressure

S04-065

Yuri Oi *(Graduate School of Humanities and Sciences, Nara Women's University , Nara, Japan)*, Kentaro Yamamoto

Elucidation of Degradation Mechanism of $LiNbO_3$-Coated $LiNi_{0.5}Co_{0.2}Mn_{0.3}O_2$ Cathode at High Potential in All-Solid-State Batteries

S04-066

Mariela Ortiz *(Electrical Energy Storage Department, Iberian Centre for Research in Energy Storage, Cáceres, Spain)*, Venkatesh Vedavyas, Juan Pérez

Structural and Electrochemical Studies of Carbonized Biomass

S04-067

Irene Ostroman *(Materials Science, Università degli studi di Milano-Bicocca, Milano, Italy)*

Oxidized MAX phases-based nanocomposites for alkaline-ion battery electrodes: electrochemical behavior and multi-approach TEM investigation

S04-068

Fumisato Ozawa *(Department of Science and Technology, Seikei University, Tokyo, Japan)*, Mirei Hirai, Shota Azuma, Akihiro Nomura, Morihiro Saito

Effect of Combining Highly Oxygen Permeable Membrane with CNT Cathode of Li-Air Battery

S04-069

Alexandra Pamperin *(Institute for Applied Materials, Karlsruher Institute of Technology, Karlsruhe, Germany)*, Alexandra Pamperin, Marc Kamlah

Using particle scale homogenization in granular cathode material to investigate the influence of intragranular cracks on effective transport properties

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Seong-Eun Park *(Battery Engineering, Hanyang University, Seoul, Korea)*

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Rossella Petruzzelli *(Department of Chemistry 'Giacomo Ciamician', University of Bologna, Bologna, Italy)*, Rossella Petruzzelli, Giampaolo Lacarbonara, Silvia Bodoardo, Rita Magri, Catia Arbizzani

Towards Eco-Friendly Lithium-Ion Batteries: Optimizing Chitosan as a Binder for Graphite Anodes

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Anusha Pradhan *(SANKEN, Osaka University, Osaka, Japan)*, Yasuyuki Kondo, Yu Katayama, Kouki Oka, Yuki Yamada

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Rafael Tomey Prieto *(Multifunctional Nanocomposites Group (MNG), Imdea material institute, Getafe, Spain)*, Rafael Tomey Prieto, Sergio Pinilla, Juan Jose Vilatela, Soheila Ebrahimi Koodehi

High-Performance Thick Cathodes with CNT Conductive Networks for Next-Generation Lithium-Ion Batteries

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Zhizhen Qin *(Department of Chemstry, RWTH Aachen University, Jülich, Germany)*, Jehad Ahmed, Sebastian Speer, Dmitri L. Danilov, Roland Schierholz, Sven Jovanovic, Anna Windmüller, Yu Shicheng, Chih-Long Tsai, Hermann Tempel, Rüdiger-A Eichel, Peter H.L. Notten

Impact of oxygen vacancies in LCO to the electrochemical performance of Garnet-based all-solid-state Li-metal batteries.

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Luc Raijmakers *(Institute of Energy Technologies (IET-1), Forschungszentrum Jülich, 52425 Jülich, Germany)*, Haider Ali, Anna Windmüller, Hermann Tempel, Boryann Liaw, Peter Notten, Rüdiger -A Eichel

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Manuel Reiter *(Department of Mechanical and Process Engineering, ETH Zurich, Zurich, Switzerland)*, Maria R. Lukatskaya

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Sylvain Rey *(CEA, LITEN, DEHT, Université Grenoble Alpes, Grenoble, France)*, Justin Bouvet, Eric Woillez, Willy Porcher

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Hyo-Bin Ryu *(Chemical engineering, Dong-A University, Busan, Korea)*, Jong-Heon Lim, Min-Jeong Jo, Jeom-Soo Kim, Dong-Ha Lim

The Tendency of Precursors According to Chelating Agent in Co-precipitation Method in $NaNFM111O_2$ Cathode Materials for Sodium-ion Batteries

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Mizuki Sakai *(Graduate School of Engineering, Nagoya Institute of Technology, Nagoya, Japan)*, Reona Miyazaki, Takehiko Hihara

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Kaisei Sano *(Graduate School of Engineering, Nagoya institute of Technology , Nagoya, Japan)*, Reona Miyazaki, Takehiko Hihara

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Antía Santiago-Alonso *(Applied Physics, ABCR Labs / Universidade de Santiago de Compostela, Santiago de Compostela, Spain)*, Juan J. Parajó, María Villanueva, Josefa Salgado

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Filiz-Pinar Seren *(Institute for Applied Materials (IAM), Karlsruhe Institute of Technology (KIT)*, Eggenstein-Leopoldshafen, Germany)

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Zhandos Shalabayev *(Energy storage systems laboratory, National laboratory Astana, Astana, Kazakhstan)*, Zhandos Shalabayev, Batukhan Tatykayev, Zhumabay Bakenov, Almagul Mentbayeva

Electrospun Semi-Transparent Lithium-Ion Battery with ITO-Coated Glass Substrate

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Vladislav Y. Shevtsov *(Functional Polymeric and Particulate Materials Unit, Luxembourg Institute of Science and Technology (LIST), Esch-sur-Alzette, Luxembourg)*, Francesco Gambino, Juan A. Guerrero Teran, Jérémy Odent, Claudio Gerbaldi, Alexander S. Shaplov

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Jinha Shim *(Department of Applied Chemistry, Hanyang University, Ansan, Korea)*

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Jae Ho Shin *(Chemical Engineering, Sungkyunkwan University, Suwon-si, Gyeonggi-do, Korea)*

Improving dispersibility of electrode components by ionic cellulose in lithium-ion battery

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Hui-Tae Sim *(Chemical engineering, Hanyang univeristy, Seoul, Korea)*, Myung-Keun Oh, Chae-Young Kim, Ji-Back Cho, Seong-Ho Kang, Yun-Sun Cho, Seong-Jin Park, Dong-Won Kim

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Pankaj C. Solanki *(Institute of Energy Technologies, Forschungszentrum Jülich GmbH, Jülich , Germany)*, Luc H.J. Raijmakers, Hermann Tempel, Peter H.L. Notten, Rüdiger -A. Eichel

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Hayashi Soma *(Engineering, Nagoya Institute of Technology, Nagoya, Japan)*, Miyazaki Reona

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Ju-Sung Song *(chemical engineering, Hanyang university, Seoul, Korea)*, Ji-Wan Kim, Hee-Joo Choi, HeeSu Kim, Dong-Won Kim

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Elisabeth Springl *(TUMint.Energy Research GmbH, Technische Universität München, Garching, Germany)*

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Goutham N. Srinivas *(Institue of Chemistry, Humboldt Universität zu Berlin, Berlin, Germany)*, Goutham N. Srinivas, Katherine A. Mazzio, Changjiang Bai, Elmar Kataev, Marcus Bär, Philipp Adelhelm

Lithium-Rich Copper Sulfides as Cathode Active Materials in All-Solid-State Lithium-Ion Batteries

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Michael K. Steinhoff *(Institute of Energy Technologies IET-1, Forschungszentrum Jülich, Jülich, Germany)*, Anna Domgans, Jehad Ahmed, Roland Schierholz, Davis Thomas Daniel, Nabi Aghdassi, Anna Windmüller, Luc Raijmakers, Hermann Tempel, Shicheng Yu, Rüdiger-A. Eichel

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Teja Stüwe *(Institute of Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Victoria Greussing, Engelbert Portenkirchner

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Shuo Sun *(College of Materials Science and Engineering,, Nanjing Tech , Nanjing, China)*, Xiangyu Zhao

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Wan-Yu Tsai *(IEMN, UMR CNRS 8520, Lille University, Villeneuve d'Ascq, France)*, Xi Chelsea Chen, Kyra Owensby, Ritu Sahore, Katie Browning, Sergiy Kalnaus, Andrew S. Westover

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Ryuki Taguchi *(Graduate School of AppliedChemistry and Chemical Engineering, Kogakuin University, Hachioji-shi, Japan)*, Moe Araki, Ayana Ito, Shiro Seki

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Lorenzo Tamboia *(Department of Applied Science and Technology, Politecnico di Torino, Torino, Italy)*, Giorgio Montinaro, Elisa Ravesio, Julia Amici, Carlotta Francia, Silvia Bodoardo, Federico Bella, Daniele Versaci

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Batukhan Tatykayev *(Institute of Batteries, Nazarbayev University, Astana, Kazakhstan)*, Alina Toktamyssova, Almagul Mentbayeva, Zhumabay Bakenov, Natalya Khan

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Khai Shin Teoh *(Institute for Technical and Environmental Chemistry, Friedrich Schiller Universität Jena, Jena, Germany)*, Massimo Melchiorre, Francesco Ruffo, Juan Luis Gómez Urbano, Andrea Balducci

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Maciej Tobis *(Helmholtz Institute of Ulm (HIU), Karlsruhe Institute of Technology (KIT), Ulm, Germany),* Maciej Tobis, Simon Fleischmann

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Rafael Tomey *(Multifunctional Nanocomposites Group, IMDEA materials, Getafe, Spain)*, Afshin Pendashteh, Juan Jose Vilatela

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David Trochta *(Department of Electrical and Electronic Technology, Brno University of Technology, Brno, Czech Republic)*, Ondrej Klvač, Jan Glembek, Libor Novák, Bihag Anothumakkool, Tomáš Kazda

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Yu Wang *(Institute of Inorganic and Analytical Chemistry, University of Freiburg, Freiburg, Germany)*

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Anna Lena Woeste *(Electrochemistry and Electroplating Group, Technische Universität Ilmenau, Ilmenau, Germany)*, Michael Stich, Andreas Bund

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Weishan Wu *(Institute of Chemistry, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany)*, Dmitry Momotenko

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Dongmei Xie *(chemical engineering, Hanyang university, Seoul, Korea)*, Leiwu Tian, Jiwan Kim, Jusung Song, Dongwon Kim

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Xintong Xu *(Chemistry, Fudan Univeristy, Shanghai, China)*, Aishui Yu, Tao Huang

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Yasuaki Yamamoto *(EP Business Unit, JEOL Ltd, Akishima, Tokyo, Japan)*, Kota Yanagihara, Tatsuhito Kimura, Aya Izumi, Atsunori Matsuda, Reiko Matsuda, Kazuhiro Hikima, Yoshikazu Sasaki

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Wen Yang *(Institute of Energy Technologies (IET-4), Forschungszentrum Jülich GmbH, Juelich, Germany)*, Christian Rodenbuecher, Jiangshui Luo, Carsten Korte

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Sang Jun Yeo *(Graduate School of Convergence Technology and Energy, Tech University of Korea, Siheung-si, Korea)*, Jeong Yeon Lee

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Amogne Workie Yibeltal *(Chemistry and Bioscience, Helmholtz Institute Ulm (HIU) - KIT, Ulm, Ethiopia)*, Luigi Faggiano, Jianneng Liang, Alberto Varzi

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Geon Woo Youn *(Graduate School of Convergence Technology and Energy, Tech University of Korea, Siheung-si, Korea)*, Bong Jin Kim

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Jong-Sung Yu *(Energy Science and Engineering, Deagu Gyeongbuk Institute of Science and Technology, Daegu, Korea)*, Jong Hun Sung, DongHyun Lee

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Haoyang Yuan *(Chemistry, Fudan University, Shanghai, China)*, Tao Huang, Aishui Yu

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Jeongsik Yun *(Energy and Chemical Engineering Department, Incheon National University, Incheon, Korea)*, Jaewon Park, Young Je Kwon, Kie Yong Cho

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Nico Zamperlin *(Solid State Ionics - Ceramic Electrolytes, CIC energiGUNE, Vitoria-Gasteiz, Spain)*, Ander Orue Mendizabal, Ville Kekkonen, Rosalia Cid, Arianna Pesce, Manar Cheddadi, Pedro López-Aranguren

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Vahid Abbasi *(Mechanical and Materials Engineering, University of Turku, Turku, Finland)*, Pekka Peljo

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Suhyeon Ahn *(Research&Development, Energy11, Wanju, Korea)*

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Roghayeh Alizadeh *(Institute of Energy and Climate Research (IET-1), Forschungszentrum Jülich GmbH, Jülich, Germany)*, Luc H.J. Raijmakers, Kudakwashe Chayambuka, Jule Meier-Merziger, Yasin Emre Durmus, Hermann Tempel, Rüdiger-A Eichel

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Amina Amarray *(MSN department, UM6P university, Benguerir, Maroc)*, Hiba Elfallah, Mohamed Aqil, Jones Alami, mouad Dahbi

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Max Bamberg *(Energiematerialien und Testbauelemente, Fraunhofer Gesellschaft IISB, Freiberg, Germany)*, Martin Wenger, Martin Eckert, Ulrike Wunderwald, Franziska Jach

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Dominika Baster *(Laboratory for Battery Science (LBS) | PSI, Paul Scherrer Institute, Villigen PSI, Switzerland)*, Thorsten Schmitt, Adam Clark, Teguh Asmara, Yuan Wei, Zhen Tao, Juliana Falqueto, Mario El Kazzi

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Olivia Basu *(Anorganische und Analytische Chemie, Albert-Ludwigs-Universität Freiburg, Freiburg, Germany)*, Nathanael Brandt, Yannik Altaner, S Esmael Balaghi, Caroline Schneider, Maria Belen Camarada, Daniel Biro, Anna Fischer

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Ishita Biswas *(Solid State Chemistry Department, ICMAB-CSIC, Bellaterra Barcelona, Spain)*, M. Rosa Palacin, Ashley P Black

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Reinder Bouma *(Chemistry, University of Groningen, Groningen, Netherlands)*, Edwin Otten

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Karim Boutamine *(R&D, Unbound Potential GmbH, Thalwil, Swaziland)*, Lukas Binder, David P. Taylor, Federico Paratore, Anetta Platek-Mielczarek

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Fabian Brandes *(Heinrich-Blasius-Institute, Hamburg University of Applied Sciences, Hamburg, Germany)*, Max Poxleitner, Andreas Arlt, Alexander Gunesch, Simon Fischer, Antonio Chica, Thorsten Struckmann

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Nathanael Brandt *(Battery Cell Technology, Fraunhofer Institute for Solar Energy Systems, Freiburg im Breisgau, Germany)*, Oliver Fitz, Sonia Dsoke, Kai Peter Birke

High resolution local pH-tracking in Zinc-Manganese Dioxide Batteries

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Steffen Braun *(Karlsruhe Institute of Technology, Institute of physical chemistry, Karlsruhe, Germany)*, Rolf Schuster, Katrin Bickel

Reaction Entropy of zinc metal deposition from concentrated, aqueous zinc halide solutions

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Eva Bräutigam *(Institute of Organic Chemistry II and Advanced Materials, Ulm Univeristy, Ulm, Germany)*, Birgit Esser

Poly(3-vinyl-N-methylphenoxazine) as Positive Electrode Material in Aluminum Batteries

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Jonathan Bäthge *(R&D, E-Lyte Innovations GmbH, Kaiserslautern, Germany)*, Mirco Ruttert, Ralf Wagner, Kolja Beltrop

Charge Endpoint Slippage and Coulombic Efficiency Loss with TMS Compounds in Sodium-Ion batteries: Redox Reactions at the Separator-Electrolyte Interface and their Role in Gas Suppression

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Maria Belen Camarada *(Cluster of Excellence livMatS @ FIT, University of Freiburg, Freiburg, Germany)*, Alex Rützler, Jan Büttner, Jan Oechsler, S. Esmael Balaghi, Sven Küspert, Niklas Ortlieb, Leonhardt Manegold, Anna Fischer

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Cristina Castanon De Pascual-Teresa *(Institute for Chemistry- Electrochemistry department, Humboldt Universität zu Berlin, Berlin , Germany)*, Konstantin Köster, Neelam Yadav, Philipp Adelhelm, Payam Kaghazchi

Advancing layered oxides cathode materials for Sodium-Ion Batteries: Unlocking the potential of Sodium- and Manganese-rich O_3 structures.

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Sai Venkata Akhil Kumar Challuri *(Applied Electrochemistry, Fraunhofer Institute for Chemical Technology, Pfinztal, Germany)*, Arghyadeep De, Jens Tubke, Jens Noack

Design and Implementation of a Test Stand for Temperature-Dependent Performance Analysis of Iron/Iron Redox Flow Batteries.

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Himanshu Chauhan *(Department of Chemical Engineerig, IIT Roorkee, Roorkee, India)*

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Zhao Chen *(Chemistry, University of New South Wales, Sydney, Australia)*

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Adélaïde Clavelin *(Na-based batteries, CIC energiGUNE, Vitoria-Gasteiz, Spain)*, Marcus Fehse, Montserrat Galceran Mestres, Damien Saurel

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Rupanker Das *(Institute of Energy Systems and Energy Economics, Ruhr West University of Applied Sciences, Bottrop, Germany)*, Julian Tornow

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Antonio De Marco *(Chemistry, Università di Bologna, Bologna, Italy)*, Antonio De Marco, Giampaolo Lacarbonara, Catia Arbizzani

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Ya-Ping Deng *(Chemistry, Xiamen University, Xiamen, China)*, Yeze Liu, Ling Huang, Shi-Gang Sun

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Abhishek Dharmesh *(Chemical Engineering, IIT Roorkee, Roorkee, Roorkee, India)*, Suyash Kapil, Poonam Rani, Ashwini Kumar Sharma

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Luciano Di Mari *(IET-4, Forschungszentrum Jülich, Jülich, Germany)*, Carsten Korte, Christian Rodenbücher

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Anna Domgans *(Institute for Energy Technologies (IET-1), Forschungszentrum Jülich, Jülich, Germany)*, Sebastian Speer, Frederik Zantis, Tobias Braun, Kristian Schaps, Chih-Long Tsai, Luc Raijmakers, Anna Windmüller, Rüdiger-A. Eichel

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Yigit Durmus *(Institute of Energy Systems and Energy Economics, Ruhr West University of Applied Sciences, Bottrop, Germany)*, Julian Tornow

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Marius Engler *(Electrochemistry and Electroplating Group, Technische Universität Ilmenau, Ilmenau, Germany)*, Michael Stich, Christoph Baumer, Andreas Bund

Developing a test bench for the in-situ characterization of electrolytes and materials for iron-based redox flow batteries

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Nastaran Farrahi *(Chemistry and Materials Science, Aalto University, Espoo, Finland)*, Tanja Kallio

Tuning Structural Stability of Mn-Based P2-Type Sodium-Ion Cathodes via Formation Cycle Optimization

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Valerio C.a. Ficca *(Dept. of Energy Technologies and Renewable Sources (TERIN), ENEA Casaccia Research Centre, Rome, Italy)*, Giorgia Greco

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Leon Focks *(Yusuf Hamied Department of Chemistry, University of Cambridge, Cambridge, United Kingdom)*, Christopher A. O'Keefe, Tetiana Voitenko, Camilla Tacconis, Mohammed Zabara, Michael Ryan Hansen, Clare P. Grey

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Zhengyuan Gao *(College of Materials Science and Engineering, Nanjing Tech University, Nanjing, China)*, Xiangyu Zhao

TiO_2–TiN Heterostructure Modified Separator with Built-in Electric Field for Enhancing Kinetics of Magnesium–Sulfur Batteries

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Fatemeh Geramipour *(Solid State Chemistry, Institute of Materials Science of Barcelona, Barcelona, Spain)*, Deyana Stoytcheva Tchitchekova, Alexandre Ponrouch

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Camélia Ghimbeu *(Institut de Sciences des Matériaux de Mulhouse, CNRS, Mulhouse, France)*, Khoi Trinh, Adrian Beda

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Neeha Gogoi *(Laboratory of Battery Science, Paul Scherrer Institute, Forschungsstrasse 111, Viligen, Switzerland)*, Sigita Trabesinger

Multifunctional Polymeric Cathode Coatings for Improved Lithium–Sulfur Battery Performance

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Ziyin Guo *(Department of Chemistry – Ångström Laboratory, Uppsala University, Uppsala, Sweden)*, Inti Espinoza Ramos, Rebecca Clulow, Frederik Holm Gjørup, Erik Berg, Leiting Zhang

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George Hasegawa *(Institute of Materials & Systems for Sustainability, Nagoya University, Nagoya, Japan)*

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Román Healy Corominas *(Chemistry, Humboldt-Universität zu Berlin, Berlin, Germany)*, Katherine Mazzio, Amanda Opis Basilio, Karsten Holldack, Stefano Tagliaferri, Kallol Ray, Philipp Adelhelm

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Ramtin Hessam *(Institute for Frontier Materials, Deakin University, Melbourne, Australia)*, Matthew Boot-Handford, Montserrat Galcerán, Maria Forsyth, Patrick C. Howlett, Youssof Shekibi, Robert Kerr

Investigating a sustainable approach for the conversion of Triphylite-$NaFePO_4$ Na-ion Cathode Materials from Different $LiFePO_4$ sources

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Takumi Hiasa *(Device Center, Murata Manufacturing Co., Ltd., Kyoto, Japan)*, Shin-ichi Katayama, Nobuyuki Nagaoka, Toshikazu Yasuda, Ryuhei Matsumoto, Koichiro Hinokuma

Aqueous Lithium-Ion Battery with Cathode/Anode Dual Electrolytes Separated by Perfluorosulfonic Acid Membrane

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Kota Hirahara *(Graduate school ofApplied Chemistry and Chemical Engineering, Kogakuin University, Hachioji, Japan)*, Yoshiki Yokoyama, Masayoshi Watanabe, Shiro Seki

Development of evaluation method for designing electrolytes suitable for sodium-ion batteries

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Nozomi Hirakuni *(Chemistry and Life-Science, Yokohama National University, Yokohama, Japan)*, Yosuke Ugata, Naoaki Yabuuchi

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Paul Conrad Hoffmann *(Institut für Elektrochemie, Universität Ulm, Ulm, Germany)*, Thomas Diemant, Iván Villalva-Mejorada, Timo Jacob, Hagar K. Hassan

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Ricky Huang *(School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney, Australia)*, Robert Patterson, Neeraj Sharma

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Hayato Ikeda *(Graduate School of AppliedChemistry and Chemical Engineerin, Kogakuin University, Hachioji, Japan)*, Moe Araki, Junichi Sakabe, Tetsuya Asano, Naoki Suzuki, Shiro Seki

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Eunmi Im *(Institue of Energy and Climate Research (IET-1), Forschungszentrum Jülich GmbH, Jülich, Germany)*, Yasin Emre Durmus, Hermann Temple, Rüdiger-A. Eichel

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Jiwon Jeong *(Chemical Biological Engineering, Seoul National University, Seoul, Korea)*, Eunbin Park, Seung-Ho Yu

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Chaitanyakrishna Kamaja *(Thin Film and Nanostructures Departmen, Institute of Physics of the Czech Academy of Sciences (FZU), Prague, Czech Republic)*, Arun Kumar, Umer Waqas, Hirenkumar Kanchanbhai Machhi, Yitao He, Martina Nádherná, Jiøí Cervenka

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Yudai Kaneda *(engineering, Nagoya Institute of Technology, Nagoya, Japan)*, Reona Miyazaki, En Yagi, Toshihiro Yoshida, Takahiro Tomita

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Fukushima Keita *(Engineering, Nagoya Institute of Technology, Nagoya, Japan)*, Miyazaki Reona

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Nico Kokott *(Institute of Organic Chemistry II and Advanced Materials, Ulm University, Ulm, Germany)*, Nico Kokott, Eva Bräutigam, Thomas Diemant, Birgit Esser

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Bonho Koo *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Marc Koper

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Jaesub Kwon *(Materials Science and Engineering, Pohang University of Science and Technology , Pohang, Korea)*, Jaehyun Kim, Jong-Heon Lim, Kyoung Eun Lee, Janghyuk Moon, Kyu-Young Park, Yong-Tae Kim

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Adina Landström *(Chemical Engineering, KTH Royal Institute of Technology , Stockholm, Sweden)*, István Furó, Rakel Wreland Lindström, Göran Lindbergh

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Qiujun Li *(Department of Mechanical and Materials Engineering, University of Turku, Turku, Finland)*, Chanez Maouche, Maxime Artault, Gabriel Gonzalez, Pekka Peljo

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Adrián Licari *(Departamento de Química Inorgánica e Ingeniería Química, Universidad de Cordoba, Cordoba, Spain)*, Jesús M. Blázquez-Moreno, Francisco J. Morales-Calero, Antonio Cobos-Luque, Andrés M. Raya, Rocío Rincón, Almudena Benítez, Álvaro Caballero

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Zhouyuntong Liu *(Department of Mechanical Engineering, The University of Hong Kong, Hong Kong, China)*, Yuchen Li, Xuanlai Fang

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Ping Liu *(Helmholtz Institute Ulm, Karlsruhe Institute of Technology, Ulm, Germany)*, Dominic Bresser

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Alejandro López-Chías *(Department of Inorganic Chemistry and Chemical Engineering, University of Córdoba, IQUEMA, Córdoba, Spain)*, Omar Saad-Molina, Alvaro Bonilla, Larisha Cisnero-Reyes, Juan Luis Gómez-Cámer, Álvaro Caballero, Carlos Martí-Gastaldo

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Pedro Pablo Machado Pico *(Department of Chemistry, University of Sapienza, Rome, Italy)*, Jorge Montero, Akiko Tsurumaki, Maria Assunta Navarra, Stefano Passerini

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Andrijana Marojevic *(Departmant of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia)*, Andrijana Marojevic, Tjaša Pavčnik, Olivera Lužanin, Robert Dominko, Jan Bitenc

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Antonio Martinez-Bejarano *(Electrochemical Processes Unit, IMDEA-Energy Institute, Madrid, Spain)*, Paula Navalpotro, Vikram Singh, Nagaraj Patil, Ruben Rubio-Presa, Edgar Ventosa, Rebeca Marcilla

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Eduardo Martínez González *(Department of Chemistry and Materials Science, School of Chemical Engineering, Aalto University, Espoo, Finland)*, Rosa Tirronen, Vahid Abbasi, Pekka Peljo

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Naoki Matsui *(Research Center for All Solid State Battery, Institute of Science Tokyo, Yokohama, Japan)*, Kazuhiro Mori, Takashi Saito, Kousuke Noi, So Fujinami, Youngwha Park, Takeshi Tojigamori, Kota Suzuki, Takeshi Abe, Ryoji Kanno

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Sergio Federico Mayer *(Liten/DEHT/STB-L2PC, CEA-Grenoble, Grenoble, France)*, Marta Mirolo, Emmanuelle Suard, Laureline Lecarme, Claire Villevieille, Jean-Baptiste Ducros

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Nikhil Medhavi *(Electrochemical Processes Unit, IMDEA Energy Institute, Madrid, Spain)*, Hakan Bildirir, Nagaraj Patil, Rebeca Marcilla

Boosting Overall Performance in Polymer||$Ni(OH)_2$ Alkaline Rechargeable Batteries: The Role of Anthraquinone-Based Conjugated Microporous Polymer Anode and Hybridization

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Daniel Metzger *(Institute of Physical Chemistry, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Franziska Karcher, Sibylle Riedel, Zhirong Zhao-Karger, Rolf Schuster

Microcalorimetric studies on magnesium deposition from $Mg[B(hfip)_4]_2$/DME electrolyte solutions

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Xiangping Min *(Department of Chemistry, Humboldt University of Berlin, Berlin, Germany)*, Sai Gourang Patnaik, Philipp Adelhelm

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Arpita Mishra *(Chemical Engineering, Indian Institute of Technology, Bombay, Mumbai, India)*, Bharatkumar Suthar, Arindam Sarkar

Non-Aqueous Dual-ion Electrolyte for rechargeable Zinc battery

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Reona Miyazaki *(Graduate School of Engineering, Nagoya Institute of Technology, Nagoya, Japan)*, En Yagi, Yusuke Harazono, Natsuki Ito, Toshihiro Yoshida, Takahiro Tomita

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Isabel Morhenn *(Institute of Organic Chemistry II and Advanced Materials, Ulm University, Ulm, Germany)*, Birgit Esser

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Chiara Morini *(Department of chemistry, Humboldt University, Berlin, Germany)*, Dawid Kasprzak, Gustav Graeber

Advancing potassium–sulfur batteries: Sulfur conversion mechanisms and electrochemical performance

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Martina Nadherna *(Department of Thin Films and Nanostructures, FZU - Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic)*, Tomas Chvojka, Jiri Michalek, Jiri Cervenka

Comparative study of "Water-in-salt" electrolyte and polymer based systems for post lithium batteries

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Yuxiang Niu *(Department of Chemistry, National University of Singapore, Singapore, Singapore)*, Wei Chen

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Katharina Nuss *(Institute of Inorganic Chemistry, Julius-Maximilians-University Würzburg, Würzburg, Germany)*, Roland Graf, Tanja Knuplez, Maik Finze, Guinevere Giffin

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Atsushi Okazawa *(School of Advanced Science and Engineering, Waseda University, Tokyo, Japan)*, Takayuki Kakuchi, Keisuke Akahori, Masashi Okubo

Multi-Componentization of Active Materials For Redox Flow Batteries

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Mariela Ortiz *(Electrical Energy Storage Department, Iberian Centre for Research in Energy Storage, Cáceres, Spain)*, Tushar Pandit, Juan Pérez

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Edwin Otten *(Stratingh Institute for Chemistry, University of Groningen, Groningen, Netherlands)*, Wenlong Tang, Jelte Steen, Jurjen Hettinga, Johan Hjelm

'Innocent' Hexafluorophosphate Salts Induce Capacity Fade in Non-Aqueous Redox Flow Batteries

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Maria Laura Para *(Y-TEC, YPF-TECNOLOGIA SA, Beriso, Argentina)*, Lucas Mardones, Sofia Gomez, Melina Cozzarin, Emiliano Alarcon, Jorge Acosta, Jorge Enrique Thomas, Fabio Saccone

Influence of Silica Textural Properties as Sulphur Support for Li-S Batteries

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Eunbin Park *(School of Chemical and Biological Engineering, Seoul National University / Institute for Basic Science, Seoul, Korea)*, Young-Hoon Lee, Seung-Ho Yu

Facile Engineering of Tellurium-Modified Interface for Highly Stable Zinc Anode

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Sreelakshmi Paruvayakode *(Chemical Engineering, Indian Institute of Technology Madras , Chennai, India)*, Ramanathan Srinivasan

Aluminum Alloy Based Seawater Battery for Long Endurance Application: Design and Optimisation

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Elisabetta Petri *(Department of Chemistry "G.Ciamcian", University of Bologna, Bologna, Italy)*, Sara El Yamani, Elyes Bel Hadj Jrad, Francesco Capodarca, Antonio Primante, Andrea Contin, Francesca Soavi

Biochar-Derived Electrodes for Enhanced Performance in Vanadium Redox Flow Batteries

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Rossella Petruzzelli *(Department of Chemistry 'Giacomo Ciamician', University of Bologna, Bologna, Italy)*, Rossella Petruzzelli, Giampaolo Lacarbonara, Catia Arbizzani

Study of charge/discharge cycles of Copper-Based Redox Flow Batteries by Near-Infrared Spectroscopy

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Engelbert Portenkirchner *(Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Sebastian Liebl, Christoph Griesser, Daniel Werner

An all-organic aqueous Na-ion battery utilizing pigment molecules for exceptional rate capability and extended cycle life

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Xiquan Qi *(College of Materials Science and Engineering, Nanjing Tech University, Nanjing, China)*, Xingyu Gao, Kangjie Xu, Xiangyu Zhao

Hybrid Carbon Coating Modified Separator for High-Performance Quinone Organic Cathode of Rechargeable Magnesium Batteries

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Yao Qin *(Helmholtz Institute Ulm, Karlsruhe Institute of Technology , ULM, Germany)*, Fuhua Yang, Jodie A Yuwono, Alberto Varzi

Dehydroxylated Polyvinyl Alcohol Separator Enables Fast Kinetics in Zinc-Metal Batteries

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Aritra Rakshit *(Institute of Electrochemistry, Ulm University, Ulm, Germany)*, Aya Mohamed, Paul Hoffmann, Marta Mirolo, Timo Jacob, Hagar K. Hassan

Studying Ionic Conductivity Variations in Na_3OBH_4 Antiperovskites

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Alejandro Ramo-Irurre *(Solid State Chemistry, Institute of Materials Science of Barcelona (ICMAB-CSIC), Bellaterra, Spain)*, Ashley Black, Carlos Frontera, Rosa Palacin

Ca^{2+} electrochemical intercalation in $Fe[Fe(CN)_6]_{1-y}$ Berlin Green

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Luigi Jacopo Santa Maria *(Department of Physical Chemistry, Justus-Liebig University Gießen, giessen, Germany)*, René Rekers, Felix Schnaubelt, Daniel Wagner, Kilian Vettori, Anja Bielefeld

Exploring the Link Between Microstructure and Charge Transport Properties in Cathode Composites for Sodium Solid-State Batteries.

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Winni Schwedland *(Institut für Chemie, Humboldt-Universität zu Berlin, Berlin, Germany)*, Philipp Adelhelm

Boosting Sodium-Ion Battery Performance Beyond the Material-Level: Unveiling the Hidden Powers of Pulsed Current Charging

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Julian Seiler *(Institut für Technische Thermodynamik, Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart, Germany)*, Jan Kuttler, Dennis Kopljar, Andreas Friedrich

Influence of the Electrolyte on the Performance of bifunctional Gas Diffusion Electrodes for Zinc Air Batteries

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Arianna Sette *(Department of Chemistry and Biosciences - KIT, Helmholtz Institute Ulm - KIT, Ulm, Germany)*, Alberto Varzi

Electrodeposition of Na on Al Current Collectors and the Effect of Sodiophilic Layers for Anode-less Sodium Batteries

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Keiji Shimoda *(Ritsumeikan Grobal Innovation Research Organization, Ritsumeikan University, Kusatsu, Japan)*, Kousuke Noi, Takeshi Abe

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Vinícius D. Silva *(Institute of Chemistry, University of São Paulo, São Paulo, Brazil)*, Roberto M. Torresi

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Marcell Szabo *(School of Chemistry, University of New South Wales , Sydney, Australia)*, Marcell Szabo, Lisa Djuandhi, Matthew Teusner, Jitendra Mata, Neeraj Sharma

Small and Ultra Small Angle Neutron Scattering as Powerful Tools for Investigating Sulfur-Based Copolymers Applied as Cathode Materials in Lithium-Sulfur Batteries

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Julita Tabor *(Mechanical and Process Engineering, ETH Zurich, Zurich, Switzerland)*, Dario Gomez Vazquez, Travis P. Pollard, Oleg Borodin, Maria R. Lukatskaya

Optimizing Aqueous Zn Metal Batteries: Understanding Co-Salt Effects on Zn^{2+} Transference and Deposition

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Julian Tornow *(Institute of Energy Systems and Energy Economics, Ruhr West University of Applied Sciences, Bottrop, Germany)*, Yigit Durmus, Rupanker Das, Dominic Blümlein, Sven Höch

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Rafael Trócoli *(Química Inorgánica e Ingeniería Química, IQUEMA - Universidad de Córdoba, Córdoba, Spain)*, Marta Ramírez, Victoria Carnero-Roldán, Ángela Fernández-Merino, Adrián Licari, Giorgia Zampardi, Fabio La Mantia

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Eric Tröster *(Freiburger Materialforschungszentrum (FMF), Albert-Ludwigs-Universität Freiburg, Freiburg im Breisgau, Germany)*, Angelina Sarapulova, Sonia Dsoke, Jiří Cervenka, Martina Nádherná

High-Voltage Aqueous Zinc-Hybrid-Ion Batteries

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Mireille Turmine *(Laboratoire de Réactivité de Surface, Sorbonne Université/CNRS, Paris, France)*, Ekaterina Kurchavova, Junxian Zhang, Fermin Cuevas, Mickaël Mateos, Judith Monnier, Vincent Vivier

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Arno Villalbi *(Electrochemistry, , Grenoble, France)*, David Riasetto, Kavita Kumar

Investigation of pH fluctuations in water-in-salt electrolytes

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David Villalva *(Insitute of Electrochemistry, Ulm University, Ulm, Germany)*, Hagar K. Hassan, Edilso Reguera, Timo Jacob

Engineering PVA-Ionic Liquid-Based Solid Polymer Electrolytes for Na+ and Mg^2+ Batteries

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Ngoc Thuan Vo *(Solid State Chemistry, Institut de Ciència de Materials de Barcelona, ICMAB-CSIC, Bellaterra, Spain)*, Livia Grguric, Tjaša Pavčnik, Jan Bitenc, Alexandre Ponrouch

Toward anode-free calcium-metal batteries: on the influence of current collector materials, morphology and surface chemistry

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Umer Waqas *(Department of Thin Films and Nanostructures, FZU-Institute of Physics of the Czech Academy of Science, Prague, Czech Republic)*, Yitao He, Chaitanyakrishna Kamaja, Jiří Cervenka

Unlocking the Potential of ε-MnO_2 as a Cathode Material for Aqueous Zn-ion Battery

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Tobias Wasserrab *(Organic Chemistry II, Ulm University, Ulm, Germany)*, Birgit Esser

Pyrrolo[3,2-b]pyrrole Polymers as Cathode Material for Organic Batteries

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Daniel Weindl *(School of Natural Sciences, Technische Universität München, Garching, Germany)*

Polyethylene Oxide-based Na+ solid polymer electrolytes via Electrospinning

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Zhiyang Xue *(College of Materials Science and Engineering, Nanjing Tech University, Nanjing, China)*, Peng Wang, Xiangyu Zhao

Carbon/Nitrogen-Based Electrodes Synergized with Gel Electrolyte Engineering Enable Long-Cycle-Life Halogen Ion Batteries

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Hirohisa Yamada *(Depatment of Chemical Engineering, National Institute of Technology, Nara College, Yamato-Koriyama, Nara, Japan)*, Misaki Neshige, Katsuhiko Tsunashima, Takashi Morinaga, Yohtaro Inoue

Effect of Phosphonium Ionic liquid Impregnation on Pt/MPC Catalysts for ORR

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Chunpeng Yang *(School of Chemical Engineering and Technology, Tianjin University, Tianjin, China)*

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Vladyslav Yatsenko *(FKKT/Department of Materials Chemistry, University of Ljubljana/National Institute of Chemistry, Ljubljana, Slovenia)*, Svit Menart, Klemen Pirnat, Robert Dominko

Organic cathode materials with pyrazine and quinone motifs for Zn- and Li-organic batteries

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Masaaki Yoshikawa *(Office of Institutional Advancement and Communications, Kyoto University, Uji, Japan)*

Porous Carbons for Novel Zn-Anode Rechargeable Battery

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Ying Zhang *(Interface Modelling, Institute of Surface Science, Helmholtz-Zentrum Hereon, Geesthacht, Germany)*, Hyemin Kim, Mikhail Zheludkevich, Daniel Höche

Exploring Effects of Microstructural Defects in Mg-Bi Based Anodes for Advanced Mg-Ion Batteries by First-Principles Modeling

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Zhe Zhu *(School of Science, University of New South Wales, Sydney, Australia)*, Chuan Zhao

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Byeonghun Oh *(Research & Development, energy11, Wanju-gun, Korea)*

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Masato Oura *(Science and Technology, Seikei University, Musashino-Shi, Japan)*, Shota Azuma, Akihiro Nomura, Fumisato Ozawa, Morihiro Saito

MnO_2 Nanosheet/RuO_2/KB Composite Electrocatalyst for Air Electrode of Rechargeable Li-Air Batteries

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Gazal Gupta *(Centre for Automotive Research and Tribology (CART), IIT Delhi, New Delhi, India)*, Amit Gupta, Deepak Kumar

Exploring Chevrel phased $Mo_{5.5}W_{0.5}S_8$ as a Cathode Material for Mg-ion Batteries

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Kexing Cai *(Shanghai Jiao Tong University, University, Shanghai, China)*

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Andreas Bán *(VDEh-Betriebsforschungsinstitut GmbH, Düsseldorf, Germany)* Tarek Khalil, Karl Wegner

Coating of Fe_2O_3 Particles with CuO by Pulsation Reactor and study the effect of thermal post-treatment in Forming gas on coated Particles for Iron slurry/Air Batteries application

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Maximilian Albers *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Marc Koper

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Aline Alencar Emerenciano *(Chemical Division-Electrocatalysis: Synthesis to Devices, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Karuppasamy Dharmaraj, Michelle Browne

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Achim Alkemper *(Surface Science Laboratory - Materials- and Earth Sciences, Technical University of Darmstadt, DARMSTADT, Germany)*, Qingyang Wu, Marcus Einert, Jan Philipp Hofmann

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Isak Almyren *(Physics, Chalmers University of Technology, Gothenburg, Sweden)*, Nils Rieger, Björn Wickman

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Na An *(Department of Materials Chemistry for Catalysis, Helmholtz-Zentrum Berlin, Berlin, Germany)*, J. Niklas Hausmann, Prashanth W. Menezes

Unexpected Bismuth Leaching and Iron Impurity Incorporation Reconstruct NiBi3 into an Active Oxygen Evolution Electrocatalyst

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Shahan Atif *(Materials Research Centre, IISc Bangalore, IISc Bagalore, India, Bangalore, India)*

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Shinie Awulachew *(Faculty of Chemistry, University of Duisburg-Essen, Essen, Germany)*, Kai S. Exner

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In-Ho Baek *(Materials science and engineering, Pohang University of Science and Technology, Pohang, Korea)*, Sang-Mun Jung, Yong-Tae Kim

Cathodic Protection System against a Reverse-Current after Shut-Down in Zero-Gap Alkaline Water Electrolysis

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Debabrata Bagchi *(Materials Chemistry Group for Thin Film Catalysis – CatLa, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*

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Ibrahem O. Baibars *(School of Chemistry, The University of New South Wales, Sydney, Australia)*

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Paula Barione Perroni *(Technical Chemistry III, University of Duisburg Essen, Duisburg, Germany)*, Anam Asghar, Torsten Schmidt, Corina Andronescu

A Comparative Study of Purification Protocols of Impurities in KOH and Their Impact on AEMWE

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Francesco Bartoli *(IET-1, Forschungszentrum Jülich, Jülich, Germany)*, Andrei Salavei, Kiran Kiran, Tobias Hilche, Kristina Fröhlich, Leander Treutlein, Niklas Wolf, André Karl, Eva Jodat, Rüdiger-A Eichel

Optimization of Blade Coating Processes for the Production of Large Scale PEMEC MEAs with Low Iridium Loading

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Maria Beira *(Hydrogen Production, HyLab- Green Hydrogen Collaborative Laboratory, Sines, Portugal)*, Bruna Pedro, Kostadin Petrov, Dominik Jammal, Dorin Miscenco, Cristina Cordas, Rui Ribeiro

Visually Deconvoluting Impedance Contributions in PEM Electrolyzers: How Cell Position within the Stack Affects its Performance

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Elyes Bel Hadj Jrad *(Department of Chemistry "Giacomo Ciamician", University of Bologna, Italy, Italy)*, Michele Zanoni, Elisabetta Petri, Chiara Gualandi, Francesca Soavi

Properties and Electrochemical Behavior of Proton-Exchange Membranes using Nanofiber-Reinforced Composites

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Felix Benz *(IET-4, Forschungszentrum Jülich, Jülich, Germany)*

The Microporous Layer as a Mechanical Buffer between the Fiber Gas Diffusion Layer and the Nafion Membrane in PEM Fuel Cells

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Camilla Nicol Bonacina *(Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan)*, Shingi Yamaguchi, Tatsuoki Kono

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Pau Bosch-Jimenez *(Circular Economy for decarbonization, Leitat, Terrassa, Spain)*, Marian Garcia, Sandra Martínez-Crespiera, Giovanna Massobrio, Anna Ramunni, Anna Testolin, Francesco Cartasegna, Paolo Costa, Marco Miola, Arash Nemati, Henrik Lund Frandsen

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Julia G. Buschermöhle *(Institute of Engineering Thermodynamics, German Aerospace Center (DLR), Oldenburg, Germany)*, Julia Müller-Hülstede, Tanja Zierdt, Dana Schonvogel, Michael Wark

Innovative Catalyst Design: Fe-Sn-N-C Catalysts for Improved ORR Activity in PEM Fuel Cells

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Tomas Bystron *(Department of Inorganic Technology, University of Chemistry and Technology Prague, Prague, Czech Republic)*, Tereza Bautkinova, Martin Prokop, Zbynek Pientka, Vaclav Pokorny, Karel Bouzek

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Sabrina Campagna Zignani *(DIITET CNR, CNR-ITAE, MESSINA, Italy)*, Marta Fazio, Mariarosaria Pascale, Chiara Alessandrello, Claudia Triolo, Maria Grazia Musolino, Saveria Santangelo

Producing green hydrogen by alkaline water electrolysis using high-entropy materials

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Jiangming Cao *(Faculty of Mechanical and Civil Engineering, Helmut-Schmidt University, Hamburg, Germany)*, Denis Kramer

First principles calculations of borides alloy

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Anqi Cao *(School of Chemistry, University of Edinburgh, Edinburgh, United Kingdom)*

2D Conductive MOFs for Water Electrocatalysis

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Nicholas Carboni *(Chemistry, Sapienza University of Rome, Rome, Italy)*

Composite Anion Exchange Membranes Added with Functionalized Graphene Oxide for Water Electrolyzer Applications

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Conor Cassidy *(Chemistry, Maynooth University, Maynooth, Ireland)*, Daniele da Silva Alves, Carmel Breslin, Eithne Dempsey

Iron Nickel Boride Bifunctional Electrocatalysts for Water Splitting at Porous Electrodes

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Raúl Castellano Perdomo *(Chemistry, Aarhus University, Aarhus, Denmark)*, Andreas Dueholm Bertelsen, Bo Brummerstedt Iversen

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Sara Cavaliere *(ICGM, University of Montpellier, Montpellier, France)*, Carlos A. Campos-Roldán, Rachelle Alalam, Hazar Guesmi, Jean-Sébastien Filhol, Raphaël Chattot, Pierre-Yves Blanchard, Jacques Rozière, Deborah Jones

Active and Stable Pt-Cr Intermetallic Electrocatalysts for the Acidic Oxygen Reduction Reaction

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Eric A. Chadwick *(Mechanical & Industrial Engineering, University of Toronto, Toronto, Canada)*, Tim Dörenkamp, Jens Eller, Volker P. Schulz, Aimy Bazylak

Operando [mu]CT analysis of porous flow fields for improved liquid water management in polymer electrolyte membrane fuel cells

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Raegan Chambers *(Institute of Chemistry, University of Tartu , Tartu, Estonia)*, Kaarel Kisand, Heiki Erikson, Kaido Tammeveski

Platinum Nanoparticles Supported on Nitrogen-Doped Mesoporous Carbon as Electrocatalyst for Oxygen Reduction Reaction in Acid Media

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Chun-Yi Chen *(Materials and Structures Laboratory, Institute of Science Tokyo , Yokohama, Japan)*, Tso-Fu Mark Chang, Masato Sone, Yung-Jung Hsu

Plasmonic Au@Cu7S_4 Yolk@Shell Nanocrystals for Photocatalytic Hydrogen Production

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Tzu Hsuan Chiang *(Dept. of Energy Engineering, National United University, Miaoli, Taiwan)*, J.C. Zhuang

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Fabian Liedtke *(IET-4, Forschungszentrum Jülich, Jülich, Germany)*, Christian Rodenbücher, Carsten Korte, Verena Theußl

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Cedric Marth *(Process Engineering of Electrochemical Systems, TU Darmstadt, Darmstadt, Germany)*, John Linkhorst

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David Rodríguez López *(Energía y Química Sostenibles, Instituto de Catálisis y Petroleoquímica - CSIC, Madrid, Spain)*, María Retuerto Millán, José Luis Gomez De La Fuente, Sergio Rojas Muñoz

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Elena Markevich *(Chemistry, Bar Ilan University, Ramat Gan, Israel)*

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Akshaya Sidharth Sidharthan *(Center for Energy and Environmental Chemistry Jena, Friedrich Schiller University Jena, 07743 Jena, Germany)*, Andrea Hainthaler, Pablo Badillo, Andrea Balducci

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Kavin Teenakul *(Research Group Applied Electrochemistry & Catalysis, University of Antwerp, Antwerp, Belgium)*, Jonas Hereijgers

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Jinwei Tu *(Department of Chemistry, Humboldt University oif Berlin, Berlin, Germany)*, Jinwei Tu, Yanan Sun, Phlipp Adelhelm

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Laisa Candido Maia *(Labcorr - Corrosion Laboratory from COPPE/UFRJ, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil)*, José Antônio Ponciano Gomes

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Silvia Cere *(Applied Ellectrochemistry, INTEMA- University of Mar del Plata-CONICET, Mar del Plata, Argentina)*, Melina Hankovits, Julieta Merlo, Leonardo Rico, Ana Velia Druker, Josefina Ballarre

Functionalized FeMnCSi alloy for biodegradable orthopedic implants

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Silvia Cere *(Applied Electrochermistry, INTEMA-University of Mar del Plata-CONICET, Mar del Plata, Argentina)*, Rocío Moreno, María Florencia Tano de la Hoz, María Rosa Katunar, Diego Fernandino, Sviatlana Lamaka

Mg alloy plates vs. wires: the influence on the corrosion resistance in HBSS electrolyte

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Mercedes Paulina Chávez Díaz *(Physics, Centro de Estudios Científicos y Tecnológicos No. 7 del IPN, CIUDAD DE MEXICO, Mexico)*, Román Cabrera Sierra

Hydroxyapatite Electrochemical Deposition on Globular and Lamellar Microstructures of the Ti_6Al_4V Alloy Heat Treated for Medical Applications

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Xijun Cui *(Department of Chemistry, Université Libre De Bruxelles, Bruxelles, Belgium)*, Xinhua Zhu, Reynier Revilla, Souheil Mourtada, Jon Ustarroz

The Influence of Chloride-induced Corrosion on Localized Nickel Electrodeposition

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Rafaël Daban *(Laboratoire d'Etude de la Corrosion Aqueuse, CEA , Gif sur yvette , France)*, Elise Duquesne, Catherine Guerre, Nathalie Gruet

Study of the potential interest of a molybdate and phosphate mixture as an aqueous corrosion inhibitor for carbon steel.

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Silviu Iulian Drob *(Electrochemistry and Corrosion, Institute of Physical Chemistry "Ilie Murgulescu", Bucharest, Romania)*, Silviu Iulian Drob

The Influence of Temperature on the Corrosion Speed of Zirconium Immersed in Artificial Saliva

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Belén Díaz *(Materials Engineering, , Vigo, Spain)*

Conversion vs. Electrochemical Phosphating: Effect of the Zn Content, Time and pH

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Christos Englezos *(Faculty of Science and Technology, MESA+ Institute for Nanotechnology, University of Twente, Enschede, Netherlands)*, Georgios Katsoukis, Bastian Mei

Mitigating CO poisoning of platinum electrodes for efficient electrochemical hydrogen oxidation in hydrogen compression applications

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Polina Evstigneeva *(School of Mathematics and Sciences, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany)*

Towards Electrochemical 3D Printing of Multimetallic Catalyst Architectures for Tunable CO_2 Reduction

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Natsumi Fujiwara *(Department of Pure and Applied Chemistry, Tokyo University of Science, Noda-shi, Japan)*, Naoji Matsuhisa, Noya Loew, Hikari Watanabe, Isao Shitanda, Masayuki Itagaki

Development of a Self-Powered Flexible Flood Sensor using Liquid Metal and PEDOT/PSS Films

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Darius Gahr *(IET-1, Forschungszentrum Jülich, RWTH Aachen, Jülich, Germany)*, Burkhard Hecker, Hermann Tempel, Rüdiger-A. Eichel

Galvanic Deposition of Copper Selenide Structures with Adjustable Composition on Porous Carbon Paper

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Oumaïma Gharbi *(Laboratoire de Réactivité de Surface, CNRS / Sorbonne Université, Paris, France)*, Christophe Méthivier, Ekaterina Kurchavova, Mireille Turmine, Vincent Vivier

Environmentally Friendly Ionic Liquids for Corrosion Protection: Inhibition Mechanism and Synergism.

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Elvira Gomez *(Ciencia de Materials i Quimica Fisica, Universitat de Barcelona, Barcelona, Spain)*, Pol Vilariño, Jordi Rigual, Albert Serrà

Electrocatalytic Valorization of Biomass-Derived Levulinic Acid into Green Platform Chemicals Using Ni-Based Catalysts

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Elvira Gomez *(Ciencia de Materials i Quimica Fisica, Universitat de Barcelona, Barcelona, Spain)*, Laura Huidobro, Albert Serrà, Mikhael Bechelany

ALD-Engineered SnO_2- or TiO_2-Coated Electrodeposited BiOI Thin Films for Enhanced Light-Driven Mineralization of Pollutants

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Christophe Hitz *(Hydro-Québec Research Institute, Hydro-Québec, Varennes, Canada)*, Robert Lacasse, Pierre-Antony Deschênes, Isabelle Montplaisir, Alexandre Lapointe, Carlo Baillargeon, Nicolas Dumaresq

Passivation Behavior of Martensitic Stainless Steel of Hydraulic Turbine Runners after Surface Treatment

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Rui Huang *(Department of Chemistry, Xiamen University, Xiamen, China)*, Rui Huang, Chunhua Zhen, Ruiyi Ji, Zhengchao An, Yanxia Jiang, Shigang Sun

Study on the Mechanism of New PPA Levelling Agent in Acid Electronic Copper Plating

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Manoj Prabhakar Jothi Manickam *(Corrosion, Max Planck Institute for Sustainable Materials, Düsseldorf, Germany)*, Maximilian Steinhorst, Teja Roch, Michael Rohwerder

Development of novel coatings to enhance corrosion resistance of metallic bipolar plates

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Karuna Aurel Kanes (Institute of Chemistry, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany)

Electrochemical Nano-Additive Manufacturing – Fabricating Metallic Structures Below 100 nm in Aqueous Media

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Haruki Katori *(Department of Materials Science and Engineering, Kyoto University, Kyoto, Japan)*, Timo Weintraut, Steffen Schroeder, Anja Henss, Kiho Nishioka, Kazuhiro Fukami, Kuniaki Murase

Hydrogen Isotope-Effect on Trivalent Chromium Electroplatingfrom Chloride Based Hydrate Melt

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Georgios Katsoukis *(Chemical Engineering, University of Twente, Enschede, Netherlands)*, Dalia Leon-Chaparro, Minh Nguyen, Christoph Baeumer, Guido Mul

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Leona Komparic *(Department of Chemistry, KTH, Stockholm, Sweden)*, Paula Sebastián Pascual

Nanostructural Electrodeposition for Organic Oxidation Reactions

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Mikolaj Kozak *(Department of Physical Chemistry and Electrochemistry, Jagiellonian University, Krakow, Poland)*, Agnieszka Brzózka, Leszek Zaraska

Electrodeposition – a powerful technique for nanostructured electrode preparation

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Dragana Lazic *(Department for Materials and Protection, Military Technical Institute, Belgrade, Serbia)*, Andjela Simovic, Jelena Ladjarevic, Stevan Stupar, Aleksandar Citic

Corrosion Inhibition of Low-carbon Steel by New HeterocyclicCompound in Hydrochloric Acid Medium

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Erli Lin *(Department of Materials Function and Design, Nagoya Institute of Technology, Nagoya, Japan)*, Kohei Okumura, Jiacheng Liu, Peng Wang, Takehiko Hihara, Xiaopei Li, ZhengMing Sun, Song-Zhu Kure-Chu

Formation and Corrosion Resistance of $MgO\text{-}SiO_2\text{-}(W,Ni)O_x$ Composite Oxide Films on Mg Alloys through Hybrid Anodization

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Federico Lissandrello *(Dipartimento di Chimica, Materiali e Ingegneria Chimica, Politecnico di Milano, Milano, Italy)*, Linda Prinz, Luca Magagnin

Electrodeposition of Manganese Phosphate Coatings for Wear Resistance Applications

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Jil Meyers *(Heterogeneous Catalysis, Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, Germany)*, Ozgül Agbaba, Ferdi Schüth

Transition Metal Carbides as Filler Materials for Coated Metallic Bipolar Plates in PEM Fuel Cells

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Ujwal Mukkati Praveena *(Department of Industrial Engineering, University of Trento, Trento, Italy)*, Michele Fedel, Stefano Rossi

Epoxy Nanocomposite coatings incorporating Graphene Nanoribbons and Sebacate intercalated Layered Double Hydroxides: A novel approach for enhanced anticorrosion performance.

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Charu Negi *(Interface Chemistry and Surface Engineering, Max-Planck-Institute for Sustainable Materials, Düsseldorf, Germany)*, Patrick Keil, Ivan Cole, Michael Rohwerder

Unveiling the Processes at the Interface of the Delaminated Organic Coatings

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Nebojša Nikolic *(Department of Electrochemistry, University of Belgrade, ICTM, Belgrade, Serbia)*, Nebojša Nikolic, Jelena Lovic, Nikola Vukovic, Predrag Živkovic

Morphology Analysis of Hydrogen Evolution Reaction in the Zn-air Batteries

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Yuri Okamoto *(Pure and Applied Chemistry, Tokyo University of Science, Noda, Japan)*, Noya Loew, Kuniaki Nagamine, Hikari Watanabe, Naoji Matsuhisa, Isao Shitanda, Masayuki Itagaki

In-situ Electrochemical Measurement of Metals Using a Three-electrode Sticker Device with a Gel Electrolyte

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Keisuke Okamoto *(Materials Science and Engineering, Institute of Science Tokyo, Yokohama, Japan)*, Tomoyuki Kurioka, Tso-Fu Mark Chang, Masato Sone

Evaluation of the Electrocatalytic Properties of Atomic-size Au Clusters Decorated PANI Derivative Electrodes toward Alcohol Oxidation

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Vicente Pascual Llorens *(CBH; Department of Chemistry, Biochemistry and Health, KTH Royal Institute of Technology, Stockholm, Sweden)*, Albert Serrà Ramos, Paula Sebastián Pascual

Electrochemical strategies for tailoring high index (n10) facets on polycrystalline and monocrystalline copper surfaces

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Davide Pupillo *(CNR-ITAE, Institute for Advanced Energy Technologies "Nicola Giordano", Messina, Italy)*, Giosuè Giacoppo, Monica Santamaria, Orazio Barbera

Corrosion resistance of 3D printed Triply Periodic Minimal Surface (TPMS) structures for Proton Exchange Membrane Fuel Cells

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Nishtha Saxena *(Chemistry, Western University, London, Canada)*, Emmanuel Mena-Morcillo, Mehran Behazin, Peter Keech, Samantha Michelle Gateman

Investigating Localized Corrosion of Copper Coatings using Scanning Electrochemical Cell Microscopy

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Praveenraj Selvaraj *(Department of Chemical Engineering and Bioengineering, FAU Erlangen-Nürnberg, Fürth, Germany)*, N. Näser, H.-J. Kohnke, C. Kisukuri, H. Bonart, P. Röse, B.J.M. Etzold

Electrodeposition of Plain and Porous Ag Catalyst Layer on Meshes as Electrodes for Organic Electrosynthesis

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Bilgehan Murat Sesen *(Interface Chemistry and Surface Engineering, Max Planck Institute for Sustainable Materials, Düsseldorf, Germany)*, Arulkumar Ganapathi, Manoj Prabhakar, Michael Rohwerder

Mapping Hydrogen Activity at High Local Resolution by Scanning Kelvin Probe Techniques

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Simon Sprengel *(Electrochemical Nanotechnology, Institute of Chemistry, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany)*, Julian Hengsteler, Albert Ripoll, Muhammad Zadeh, Weishan Wu, Andrei Zotov, Peng Zeng, Daniel Torres, Jon Ustarroz, Tomaso Zambelli, Dmitry Momotenko

Electrochemical Additive Manufacturing: Advancing Meniscus-Confined Electrodeposition to Multi-Material Fabrication

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Devika Sudhakumar *(Department of Material Science and Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany)*, Hanadi Ghanem, Rudolf Borchardt, Manuel Zulla, Stefan M Rosiwal

Electrochemical Oxidation of Methyl Orange Dye Using iDDE: A Comparative Study with BDD/Nb

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Daniel Torres *(ChemSIN, Université Libre de Bruxelles, Bruxelles, Belgium)*, Jon Ustarroz

A Localized Multimicroscopy Approach for Studying Active Site Distribution During Electrodeposition

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Anna Ullrich *(Electrochemical Sensors and Energy Storage, TU Chemnitz, Chemnitz, Germany)*, Florin L. Hambeck, Raphael Kohlstedt, Francesca Sgarbi Stabellini, Karin Leistner

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Marcela Vazquez *(Eectroquímica Aplicada, Instituto de Investigaciones en Ciencia y Tecnología de Mate, Mar del Plata, Argentina)*, Trinidad Fernandez, María Alejandra Frontini, Raúl Procaccini, Marcela Vazquez, María Beatriz Valcarce

Viability of Lowering Nitrite Dosage in Concrete by Pretreating Reinforcement Bars with Silicate Ions

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Peng Wang *(Department of Materials Function and Design, Nagoya Institute of Technology, Nagoya, Japan)*, Erli Lin, Shun Itatsu, Soya Miwa, Jiacheng Liu, Takehiko Hihara, ZhengMing Sun, Song-Zhu Kure-Chu

Effects of Organic Additives on Microstructures and Electrochemical Performance of Nanoporous TiO_2-TiO-TiN Composite Films Formed in Nitric-Based Aqueous Electrolytes

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Pierrick Merlin *(ISAS/DRMP/S2CM/LECNA, CEA, Gif-sur-Yvette, France)*, Jean-Marc Borgard, Romain Chanson, Alexis Fallet, Benoit Gwinner, Fabien Rouillard, Nathanaelle Schneider

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Mark Aarts *(Leiden Institute of Chemistry, Universiteit Leiden, Leiden, Netherlands)*, Jamie Trindell, Xiaoting Chen, Selwyn Hanselman, Davide Pavesi, Nakkiran Arulmozhi, Marc Koper

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Fatma Ceyda Adali *(Chemical and Biological Engineering, FAU Erlangen-Nürnberg Power-to-X Technologies, Fürth, Germany)*, Julia Hoffmann, Fatma Ceyda Adali, Bastian J. M. Etzold

Optimization of Mechanical Durability of NiFeOOH Catalyst Layers on Nickel Mesh for Efficient Alkaline Electrolysis

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Iratxe Aguado-Ruiz *(Materials Science and Physical Chemistry, University of Barcelona, Basauri, Spain)*, Federico Calle-Vallejo, Ricardo Urrego-Ortiz

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Andrea Antonello *(Chemical Science, University of Padua, Padova, Italy)*, Ermanno Pierobon, Marco Fantin, Abdirisak Ahmed Isse

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Cristhian Berríos *(Ciencias del Ambiente, Facultad de Química y Biología, Universidad de Santiago de Chile, Santiago, Chile)*, Nancy Mendoza, Francisco Herrera

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Stanko Brankovic *(ECE, University of Houston, Houston, USA)*, Peter Quaye, Nafiseh Amiri

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Daniele Callegari *(Physical Chemistry, University of Pavia, Pavia, Italy)*

Spray Drying Synthesis of Single Crystal $LiNi_{0.5}Mn_{1.5}O_4$ with Enhanced Electrochemical Performance

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Antra Choubey *(Department of Chemical Engineerig, IIT Roorkee, Roorkee, India)*

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Cristian Eduardo Cortes Aguillon *(Chemistry, Universidad de Los Andes, Bogota , Colombia)*

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Fateme Ebrahimi *(Inorganic Chemistry, Stuttgart university, Stuttgart, Germany)*, Mohammad Mazloum-Ardakani, Mohammad Javad Khatami, Bertold Rasche

Electrochemical Behavior of a Nickel-Based Schiff Base Complex on Carbon Felt Electrodes

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Katherine Encalada Flores *(Process and Energy, Delft University of Technology, Delft, Netherlands)*, Ruud van Ommen, Ruud Kortlever

Ultrathin Overlayers for Anode Protection in Offshore Green Hydrogen Production via Saline Water Electrolysis

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Marc Fleury *(Earth Sciences and Environmental Technologies, IFP Energies nouvelles, Rueil-Malmaison, France)*, Martin Petit, Souleyman Drabo

Study of ageing mechanism of lithium ion battery from SEI studies.

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Adrian Fortuin *(Computational Materials Design, Helmut Schmidt University, Hamburg, Germany)*, Jiangming Cao, Mohau Chokoe, Karabo Nemutshili, Chao Peng, Kathija Shaik, Jochen Petersen, Denis Kramer

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Katja Frenzel *(X-Ray Spectrometry, Physikalisch-Technische Bundesanstalt, Berlin, Germany)*, Philipp Hönicke, Adrian Jonas, Lena Mathies, Thamara Ruellas, Marco Agostini, Sergio Brutti, Burkhard Beckhoff

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Giuseppe Greco *(Innovation Engineering, University of Salento, Lecce, Italy)*, Tilmann Neubert, Antonella Giuri, Aurora Rizzo, Claudio Mele, Martin Oschatz, Carola Esposito Corcione

Development of Exfoliated Graphene-PEDOT:PSS Nanocomposites for High-Performance Supercapacitor Electrodes

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Péter Gyenes *(Department of Chemistry, University of Copenhagen, Copenhagen, Denmark)*, Ida Kær Mønge, Jan Rossmeisl, Rebecca Katharina Pittkowski

Durable and Active High-Entropy Alloy Nanoparticles for Alkaline Oxygen Reduction Reaction

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Laurin Hensen *(IET-1: Fundamental Electrochemistry, Forschungszentrum Jülich, Jülich, Germany)*, Maximilian Schalenbach, Hermann Tempel, Rüdiger-A. Eichel

Measuring hydrogen diffusion, solubility, and permeability of polymers

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Miftakhul Huda *(Department of Chemical Systems Engineering, Graduate School of Engineering, Nagoya University, Nagoya, Japan)*

Durability of Platinum-Palladium Bimetallic Nanorods Supported on Single-walled Carbon Nanotubes as Cathode Catalyst of Fuel Cell

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Sven Hörnig *(Electrochemical Process Engineering, University of Bayreuth, Bayreuth, Germany)*, Christoph Bauer, Rameshwori Loukrakpam, Marie Bergmann, Maryam Hasheminzhad, Shail Shah, Bruna Ferreira Gomes, Carlos Lobo, Rhett Kempe, Christina Roth

Synthesis of Polymer Derived Nanostructured Platinum Catalysts as Electrode Materials for the Oxygen Reduction Reaction

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Carolin Sophie Igel *(Helmholtz-Institute Erlangen Nürnberg (HI ERN), FZ Jülich, Erlangen, Germany)*, Gabriel C. da Silva, Serhiy Cherevko

Exploring the Dissolution Stability of NiFe-based Electrocatalysts in Alkaline Media

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Deborah Jones *(CNRS ICGM, CNRS, Montpellier, France)*, Marta Zaton, Jacques Rozière, Sara Cavaliere, Nicolas Donzel, Marc Dupont, Frédéric Lecoeur

Durable Membrane Materials for Aviation Fuel Cells

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Komalpreet Kaur *(Department of Chemical Sciences, Indian Institute of Science Education and Research (IISER), Mohali, India)*, Ujjal K. Gautam

Mitigating Oxidative Poisoning in Oxophilic Pd for Enhanced Methanol Electrocatalysis

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Tomáš Lapka *(Department of Mathematics, Informatics and Cybernetics, University of Chemistry and Technology, Prague, Czech Republic)*, Petr Mazúr, Fatima Hassouna

Flexible supercapacitors from polypyrrole nanotubes, their carbonized analogs and cellulosic substrates

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Seunghoon Lee *(Chemistry, POSTECH, Pohang, Korea)*, Chang Hyuck Choi

Critical Role of Electrolyte Composition in Stabilizing Cuδ+ in Oxide-Derived Cu for CO_2 Electrolysis

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Qijun Li *(Inorganic Functional Materials and Nanomaterials, Uni-freiburg, Institute for Inorganic and Analytical Chemist, Freiburg im Breisgau, Germany)*, Taiisia Berestok, Maria Belén Camarada, Niklas Ortlieb, Anna Fischer

Micro-Mesoporous Nitrogen-Doped Carbon Nanospheres as Scaffolds for Lithium-Sulfur Battery Cathodes with Excellent Capacity Retention

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Ante Matošin *(Department of Materials Chemistry, National Institute of Chemistry, Ljubljana, Slovenia)*, Primož Jovanovic, Léonard Moriau, Francisco Ruiz-Zepeda, Marjan Bele, Nejc Hodnik

Activity and Stability Analysis of Pt-Co Nanoalloy Fuel Cell Electrocatalyst Supported on a Hybrid $TiON_x$/rGO Substrate

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Glen Mcclea *(Chemical and Process Engineering, PhD student, Department of Chemical and Process Engineering,, Christchurch, New Zealand)*, Aaron T. Marshall, Pitambar Poudel

Thermally Modified Ionic Liquid Spray Coated Carbon/Graphite Felt Electrodes for Vanadium Redox Flow Battery

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Karen Palabral *(Department of Chemistry - Ångstrom Laboratory, Uppsala Univerisity, Uppsala, Bolivia)*, Mario Valvo, Edgar Cardenas, Gustavo Garcia, Daniel Brandell

Urea-based Sol-Gel Synthesis of the $LiNi_{0.5}Mn_{1.5}O_4$ Li-ion Battery Cathode Material

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Marijana Pantovic Pavlovic *(Dept. of Electrochemistry, Institute of Chemistry, Technology & Metallurgy, Belgrade, Serbia)*, Katarina Božic, Vladimir Panic, Srecko Stopic, Katarina Pantovic Spajic, Miroslav Pavlovic

Less Iridium, More Efficiency: Smart Catalyst Design for Oxygen Evolution Reaction

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Miroslav Pavlovic *(Department of Electrochemistry, Institute of Chemistry, Technology and Metallurgy, Belgrade, Serbia)*, Marijana Pantovic Pavlovic, Katarina Božic, Srecko Stopic, Katarina Pantovic Spajic, Vladimir Panic

Beyond Precious Metals: Engineering Cost-Effective Core–Shell Catalysts for Oxygen Evolution

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Malgorzata Plachta *(Department of Physical Chemistry and Electrochemistry, Jagiellonian University, Krakow, Poland)*, Leszek Zaraska

New Insights into Electrodeposition of Tin Dioxide: Structural Control and Applications in Energy Conversion

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Diego F Quintero Pulido *(Energy, Mobility and Climate Battery and Hydrogen, European Commission-Joint Research Centre Petten, Petten, Netherlands)*, Matthias Bruchhausen

Development of minimum performance requirements for portable primary batteries of general use

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Nico Remmler *(Institute of Chemistry, Martin Luther University Halle-Wittenberg, Halle (Saale), Germany)*, Michael Bron

Systematic Investigations on the Degradation Behaviour of Carbon-based Electrode Materials for the Application in Vanadium Redox Flow Batteries

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Beatrice Ricciardi *(Grupo de Conversión de Combustibles (GCC), Instituto de Carboquímica (CSIC)*, Zaragoza, Spain), Cinthia Alegre, David Sebastián, María Jesús Lázaro, Laura Álvarez-Manuel

Comparative Study of Oxygen Electrocatalysis in Rotating Disk Electrode (RDE) and Gas Diffusion Electrode (GDE) Configurations

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Juan Sanchez-Monreal *(TT-ECE, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Stuttgart, Germany)*, Jens Mitzel, Christophe Vacquier, Pawel Gazdzicki

PEMFC Hybrid System Optimization Methodology: Application to the Heavy-Duty Transport Case

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Johanna Schröder *(Institute for Chemical Technology and Polymer Chemistry, Karlsruhe Institute of Technology , Karlsruhe, Germany)*, Elisa L. Ponte, Mario U. González-Rivas, Milenia Rojas Mendoza, Ryan T. Hannagan, Alannah M. Hallas, Thomas F Jaramillo

Promising Alkaline Water Electrolysis Performance with Reduced Co Contents in First Row Transition Metal High-Entropy Oxides

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Atut Reni Septiana *(Materials, University of Manchester, Manchester, United Kingdom)*, Beatriz Mingo, Maria Perez-Page

Impact of Incorporating Layered Double Hydroxide into Nafion-Based Membranes for Redox Flow Battery Applications

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Huiying Sheng *(Joint Research Group Operando Battery Analysis -CE-GOBA- Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Philipp Adelhelm, Sebastian Risse

Real-Time Morphological Evolution of Lithium Metal Anodes in Lithium-Sulfur Full Cells

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Katarzyna Siuzdak *(Centre for Plasma and Laser Engineering, Gdansk, Poland)*

Durability by Design: SILAR-Fabricated Heterojunctions for Long-Lived Photoelectrochemical and OER Applications

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Sotiris Sotiropoulos *(Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece)*, Aikaterini Touni

Highly active and Stable Ir-Ru Anodes for Oxygen Evolution prepared by Galvanic Replacement of Ni-coated Ti Substrates

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Doebner Von Tumacder *(Department of Conducting Polymers, Institute of Macromolecular Chemistry, Prague, Czech Republic)*, Zuzana Morávková, Fika Fauzi, Afshin Dianatdar, Adrivit Mukherjee, Ranjita K. Bose, Patrycja Bober

Electrochemical supercapacitors based on polypyrrole coated thermally activated carbon cloth

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Philippe Vernoux *(IRCELYON, CNRS, Villeurbanne, France)*, Rohib Rohib, Jesús González-Cobos, Mathieu Prévot, Antoinette Boreave, Valérie Meille

Sn-doped Pt as efficient and stable anode for isopropanol electrooxidation

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Nazerke Zhumasheva *(National Laboratory Astana, Nazarbayev University, Astana, Kazakhstan)*, Mukhammed Kenzhebek, Batukhan Tatykayev, Almagul Mentbayeva, Zhumabay Bakenov, Fail Sultanov

Biomass-Derived Graphene-like Carbon-Titanium Nitride for Lithium-Sulfur Battery Separators

S09-044

Gabriel C. Da Silva *(Chemistry Department, Federal University of Viçosa, Viçosa, Brazil)*, Ramon F. Pinto, Tuani C. Gentil, Pâmella S. Rodrigues, Serhiy Cherevko

Antimony Content in IrO_x/ATO catalysts: Impact on Oxygen Evolution Activity and Dissolution Stability

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Gabriel C. Da Silva *(Chemistry Department, Federal University of Viçosa, Viçosa, Brazil)*, Xianxian Xie, Ivan Khalakhan, Serhiy Cherevko

Stability of Pt-Coated Titanium for the Application in the Porous Transport Layer of Proton Exchange Membrane Water Electrolyzer

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Ozan Üstün *(Mathematics, Informatics and Cybernetics, University of Chemistry and Technology, Prague (VŠCHT), Prague, Czech Republic)*, Ozan Üstün, Tomáš Lapka, Fatima Hassouna

Development of core-shell zeolitic imidazolate frameworks-based flexible supercapacitors with enhanced performance via electrically conducting polymers

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Adil Sghiouri Idrissi *(Materials Science, Energy, and Nano-engineering Department, Mohammed VI Polytechnic University, Ben Guerir, Morocco., Ben Guerir, Maroc)*, Yassine Seffar Aqil Mohamed, Khalifa Hesham Jones Alamia

Recovery of Spent Activated Carbon via Acidic and Alkaline Reactivation as a Sulfur Host for Lithium–Sulfur Batteries

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Muwafaq A Rabeea *(School of chemistry, University of Leicester , Leicester , United Kingdom)*

Electrodeposition of iron and neodymium from high water content eutectic solvents

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Hayder Al Jaafari *(School of Chemistry, University of Leicester , Leicester, United Kingdom)*

Potentiometric water sensor for deep eutectic solvents containing choline chloride and ethylene glycol

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Bilal Aladerah *(Physics, Khalifa University, Abu Dhabi, United Arab Emirates)*, Nirpendra Singh

Two-dimensional TM–Tp MOFs as Promising Catalysts for Sustainable Ammonia Production through Electrochemical Nitric Oxide Reduction

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Reem Alshehhi *(Chemical Engineering, Khalifa University, Abudhabi, United Arab Emirates)*, Khalid AlAli, Faisal AlMarzooqi, Shubra Lalwani

High Entropy Oxysulfide Electrocatalyst for Ammonia Oxidation Reaction

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Amina Amarray *(MSN department, UM6P university, Benguerir, Maroc)*, Lamia BOUTAJANOUIT, Nezha BOUCHADOUR, Mouad DAHBI

Innovative Strategies for the Sustainable Recycling of Spent LIBs

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Teresa Andreu *(Materials Science and Physical Chemistry, Universitat de Barcelona, Barcelona, Spain)*, Martí Molera, Cristian Fàbrega, Maria Sarret

Optimizing Photoelectrochemical Glycerol Oxidation: Impact of Operational Conditions and Selective contacts.

S10-007

Leticia Anahi Azpeitia *(INIFTA, National University of La Plata, La Plata, Argentina)*, Sofia Tsunoda, Maria José Rodriguez Presa, Claudio Gervasi, Agustin Bolzán

Tailoring Tin Electrodeposits in Deep Eutectic Solvents

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Jianing Bao *(Chemistry, Technical University of Darmstadt, Darmstadt, Germany)*, Jianing Bao, Felix Reinauer, Kai Schuchmann, Ulrike Kramm

Energy storage in iron: Influence of electrode orientation on deposited iron layers

S10-009

Paula Barbosa *(CICECO-Aveiro Institute of Materials, University of Aveiro, Aveiro, Portugal)*, Ana Barros-Timmons, Filipe Figueiredo

Sustainable Polymer Electrolytes: Poly(lactic acid) and Imidazolium Ionic Liquid Membranes for Electrochemical Applications

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Sally Brooker *(Chemistry, University Of Otago, Dunedin, New Zealand)*, Kieran DeMonte, Michael Bennington, Aaron Marshall

Conversion of CO_2 into formate and acetate by an immobilized dicopper macrocyclic electrocatalyst

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Sopon Butcha *(Chemistry, Thammasat University, Pathum Thani, Thailand)*, Sopon Butcha, Pitchayanin Paiplod, Pongthanawat Khemthong

Insight Electrochemical Behaviors of Carbons Derived from Biomass for Sustainable Energy Storage Systems

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Sharon Chen *(Clean Energy Innovation Research Center, National Research Council of Canada, Mississauga, Canada)*

Development of Water-soluble Redox Mediators for Electrochemical Carbon Capture

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Uzair Naveed Chishti *(Department of Chemistry and Biosciences, Karlsruhe Institute of Technology - Helmholtz Institute Ulm, Ulm, Germany)*, Mahdi Karimi Jafari, Alberto Varzi

Sustainable Binders for Hard Carbon Anodes in Sodium-Ion Capacitors

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Subin Choi *(chemistry and nanoscience, Ewha womans university, seoul, Korea)*

Tailoring the product selectivity of electrochemical CO_2 reduction at copper-tin composite oxide nanofibers

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Thays De Souza Lima *(Phisical Chemistry, University of São Paulo, São Paulo, Brazil)*, Mauro Coelho dos Santos, Manuel Andrés Rodrigo, Artur De Jesus Motheo

A ternary catalyst 5Nb:1Ce:1La applied in hydrogen peroxide electrogeneration

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Malte Deters *(Electrosynthesis, MPI CEC, Mülheim an der Ruhr, Germany)*

Oxidative Cleavage of Biogenic Double Bonds to Mono- and Dicarboxylic Acids

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Detlef Diesing *(Environmental Microbiology and Biotechnology, Universtiy of Duisburg Essen, Essen, Germany)*, Robert Rameker, Alexander Rostek, Rainer U. Meckenstock

Assessing electrochemical properties of sedimentswith cyclic voltammetry: A simple conceptualinterpretation of cyclic voltammograms

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Oussama Djorf *(Chemistry of Surfaces, Intefaces and Nanomaterials (ChemSIN), Université Libre de Bruxelles (ULB)*, Brussels, Belgium), Oussama Djorf, Fousséni Soma, Moussa Bougouma, Thomas Doneux

Gold leaching in Deep Eutectic Solvents and other Chloride-Rich media

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Subhabrata Dutta *(Department of Electrosynthesis, Max-Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Rok Narobe, Siegfried R. Waldvogel

Electrochemical Hydrogenation of Aza-heterocycles

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Luigi Falciola *(Department of Chemistry, Università degli Studi di Milano, MILANO, Italy)*, Valentina Pifferi, Wafa Aidli, Giuseppe Cappelletti, Mariangela Longhi, Chiara Ingrosso, Maria Lucia Curri, Francesca Migliorini, Ilaria Palchetti, Serena Laschi, Patrick Sfragano, Francesca Spatafora, Luigi Falciola

UPcycling SOOT for Sustainable Nanocomposites-Based Electroanalytical Sensors

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Wasif Farooq *(Department of Chemical Engineering, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia)*, Ayu Sri Wahyuni, Muthumariappan Akilarasan, Muhammad Nawaz Tahir

A Novel CuCo $(OH)_2$/Layered Double Hydroxide (LDH) as an Electrocatalyst for the Conversion of 5-Hydroxymethylfurfural into 2,5-Furandicarboxylic Acid

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Sergio Fernández-Velayos *(Departamento de Química Física Aplicada, Universidad Autónoma de Madrid, Madrid, Spain)*, Jorge Sánchez-Marcos, Eva Mazarío

Manufacturing of 3D Printed Electrodes and Catalysts for H_2O_2 Production and Activation for Water Remediation

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Màxim Gibert-Vilas *(PRocédés biOtechnologiques au Service de l'Environnement, INRAE, Antony, France)*, Màxim Gibert-Vilas, Yannick Fayolle, Jason Richard, Jiaxin Yang, Marc Cretin, Marc Heran, Geoffroy Lesage

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Jean Paul Gonzalez-Arcos *(Organic and Inorganic Chemistry Department, University of the Basque Country UPV/EHU, Leioa, Spain)*, Verónica Palomares, Alexander Lopez-Urionabarrenechea

Effect of ether versus carbonate-based electrolytes on biowaste derived hard carbons for Na-ion batteries

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Anastasios Orestis Grammenos *(Colloid Chemistry, Max Planck Institute of Colloids and Interfaces, Potsdam, Germany)*, Kobe Scherpereel, Rémi André, Markus Antonietti, Mateusz Odziomek

Single Atom Catalysts for Organic Electrosynthesis: Influence of the metal atom on performance, efficiency & selectivity

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Philipp Hawe *(Chair for electrochemical process engineering, Universität Bayreuth, Bayreuth, Germany)*, Carl-Eric Hartwig, Christina Roth, Ralf Moos

Modular Cell Design for Operando XAS: Parameter Transfer and Cu/Ag bimetallic electrocatalyst investigation in CO_2 reduction

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Lázara Hernández Ferrer *(Fundamental Chemistry, Institute of Chemistry / University of São Paulo, São Paulo, Brazil)*, Leandro A. Faustino, Paulo Filho Marques de Oliveira, Susana Inés Córdoba de Torresi

Exploring the electroconversion of nitrogen to ammonia using a non-conventional electrolyte

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Robert Hillman *(School of Chemistry, University of Leicester, Leicester, United Kingdom)*, Nicholas Ross, Jennifer Hartley, Xiao Su, Riccardo Candeago, Ching-Hsiu Chung, Maximilian Skoda

Electrochemically Switched Ion-Exchange For Fluoride Extraction From Water: Neutron Reflectivity Determination of Ion and Solvent Spatial Dynamics

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Shogo Hirose *(Faculty of Engineering, Hokkaido University, 060-8628 Sapporo, Japan)*, Hisayoshi Matsushima, Mikito Ueda

Electrochemical behavior of Mg ions in $AlCl_3$-NaCl-KCl molten salt

S10-030

Fan Ji *(School of Vehicle and Mobility, Tsinghua University, Beijing, China)*, Mingye Yang, Tiantian Wang, Yangwanqing Yu, Fuyuan Yang

Economic and Efficient Energy Supply for Remote Areas: Integration and Optimization Strategies for Electricity, Hydrogen, and Heat

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William Johnson *(Chemical and Process Engineering, University of Strathclyde, Glasgow, United Kingdom)*, Lewis MacDonald, Luke Wilson, Stephen Lyth, Jun Li, Dipak Shinde, Graham Smith, Edward Brightman

Hydrogen Production From Waste Biomass Conversion Using Polyoxometalates/Metal Salt Redox Mediators

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Patrycja Kolbusz *(Academic Centre for Materials and Nanotechnology, AGH University of Science and Technology, Kraków, Poland)*

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Christian Krumbiegel *(Electrosynthesis, Max-Planck-Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Siegfried R. Waldvogel

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Marcin Kulinski *(Center of New Technologies, University of Warsaw, Warsaw, Poland)*, Joanna Kargul, Margot Jacquet

Viologen-Based Smart Material for Water Detoxification

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Birte Kulle *(IET-1, Forschungszentrum Jülich GmbH, Jülich, Germany)*, Bernhard Schmid, Hermann Tempel, Rüdiger Eichel

CO_2 Gas Transport in Gas Diffusion Layers – Understanding Transport Limitations through Simulations

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Je-Nam Lee *(Advanced Batteries Research Center, Korea Electronics Technology Institute, Seongnam-Si, Korea)*, Sang-Gil Woo

Investigation on the Cathode Fabrication using Environmentally Friendly Solvent with Fluorine-free Binder

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Lukas Lentz *(Applied electrochemistry, Fraunhofer Institute for Chemical Technology, Pfinztal, Germany)*, Robin Kunkel

Advantages of Oxidation and Reduction in Paired Electrolysis for Biobased Monomers from Divanillin-Based Compounds

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Jarrn-Horng Lin *(Materials Science, National University of Tainan, Tainan, Taiwan)*

Spent coffee grounds derived hard carbon used as anode for high-performance sodium-ion batteries

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Wiktoria Lipinska *(Centre for Plasma and Laser Engineering, Institute of Fluid-Flow Machinery Polish Academy of Sciences, Gdansk, Poland)*, Emerson Coy, Stefania Wolff, Justyna Gumieniak, Agnieszka Kramek, Katharina E. Dehm, Simon P. Hager, Ryan W. Crisp, Katarzyna Grochowska, Katarzyna Siuzdak

Towards Sustainable Energy Production: Semitransparent and Transparent TiO_2 Nanotube Electrodes Functionalized with Metal Sulfides

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Luis D, Loor-Urgilés *(Institute of chemistry, Federal University Rio grande do norte, Natal, Brazil)*, Tabata Natasha Feijoó Zambrano, Jussara Câmara Cardozo, Amanda D. Gondim, Mildred Quintana, Elisama V. dos Santos, Carlos A. Martínez-Huitle

Hybrid-photoelectroelectrocatalytic Azo Dye Degradation and Hydrogen Co-generation Process Employing Ti/Bi2WO6 as Photoanode

S10-041

Maria Lucas *(Department of Organic and Inorganic Chemestry, University of the Basque Country UPV/EHU, Bilbao, Spain)*, Verónica Palomares, Eider Goikolea

Sustainable Anode Materials from Iberian Biomass Wastes for Lithium and Sodium-ion Capacitors

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Daniel Lörch *(Institute for physical and theoretical chemistry, University of Tübingen, Tübingen, Germany)*, Miriam Übele, Aya G. A. Mohamed, Peter Bogdanoff, Holger Euchner, Matthias M. May

Electrochemical CO_2 Reduction to Solid Carbon – Interfacial Catalyst Accumulation in Liquid Metal Matrices

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Anna Mangini *(DISAT-Department of Applied Science and Technology, Politecnico di Torino, Turin, Italy)*, Jon Bjarke Valbaek Mygind, Sara Garcia-Ballesteros, Marco Armandi, Ib Chorkendorff, Federico Bella

Statistical Analysis of the Lithium-Mediated Ammonia Electrosynthesis Process Towards the Electrolyte Optimization

S10-044

Bisher Maqdasi *(Chemical Engineering, Khalifa University, Abu Dhabi, United Arab Emirates)*, Khalid Al-Ali, Emad Alhseinat, Jorge Rodríguez

Ammonia Recovery from Wastewater: Reviewing Technologies with a Focus on Capacitive Deionization

S10-045

Emma Mast *(School of Sustainable Engineering and the Built Environment, Arizona State University, Tempe, USA)*, Carlos Sanchez, Maria Gomez-Mingot, Sergi Garcia-Segura

The rapid electrocatalytic oxidation of ammonia via a Cu/Ag electrocatalyst synthesized by a spontaneous galvanic replacement reaction

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Marta Mirolo *(Structure of Materials, ESRF - The European Synchrotron, Grenoble, France)*

ReMade@ARI: a pioneering project for characterization of materials in the Circular Economy

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Shoayb Mojtahedi *(Department of Chemistry "Giacomo Ciamician", University of Bologna, Bologna, Italy)*, Salan Xierzati, Federico Mascetti, Andrea Vitale, Simone D'Agostino, Chiara Samorì, Alessandro Girolamo Rombolà, Daniele Cespi, Fabrizio Passarini, Antunes Staffolani, Ncholu Manyala, Francesca Soavi

Recycling Lithium and Cobalt from Spent Lithium Cobalt Oxide Cathodes: An Environmentally Sustainable Approach for Metal Recovery Using Direct Recycling Techniques

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Leonardo Mongin Boasquevisque *(Department of Chemistry, Federal University of Espirito Santo, Vitoria, Brazil)*, Mariangela Longhi, Marcos Benedito Jose Geraldo de Freitas

Recycling Spent Li-Ion Batteries to Produce Oxygen Evolution Reaction Catalysts based on Ni, Mn and Co Oxides

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Sung Oh Moon *(Chemical engineering, SungKyunKwan University, Suwon, Korea)*, Ho Seok Park

BPQD/PIL/NCNT composite for bifunctional oxygen electrocatalysis in rechargeable Zinc-Air batteries

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Rodrigo Muñoz *(Institute of Chemistry, Federal University of Uberlandia, Uberlandia, Brazil)*, Gilvana Siqueira, Maria Souza, Isabella Silva, Raquel Rocha, Robert Crapnell, Eduardo Richter, Craig Banks

Circular electrochemistry: Sustainable electrochemical sensing platforms enabled by additive manufacturing

S10-051

Taichi Nakagami *(Engineering, Hokkaido University, Kita-13, Nishi-8, Kita-ku, Sapporo-shi, Hokkaido, Japan)*, Hisayoshi Matsushima, Masao Miyake, Tetsuya Tsuda, Mikito Ueda

Electrochemical properties of chloride-bromide mixture molten salts

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Rok Narobe *(Electrosynthesis, MPI cec, Mülheim an der Ruhr, Germany)*, Marcel N. Perner, María de Jesus Gálvez-Vázquez, Conrad Kuhwald, Martin Klein, Peter Broekmann, Sina Rösler, Bertram Cezanne, Siegfried R. Waldvogel

Electrochemical Hydrogenation of Nitriles at Nickel Foam Cathode

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Tilmann J. Neubert *(Institute for Technical and Environmental Chemistry, Friedrich-Schiller-University Jena, Jena, Germany)*, Tilmann J. Neubert, Keven Walter, Maximilian M. Hielscher, Siegfried R. Waldvogel, Kannan Balasubramanian, Hans G. Börner

From Fabrication to Recycling: Electrosynthesis and Electrochemical Debonding of Mussel-Inspired Adhesives

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Hyung-Suk Oh *(Clean Energy Research Center, Korea Institute of Science and Technology (KIST), Seoul, Korea)*

Breaking Current Limits in CO_2 Electrolysis via Silica-Hydroxide Cycling Strategy

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Chidinma J. Oluigbo *(Chemistry, University of New South Wales, Kensington, Australia)*, Agus R. Poerwoprajitno, Yuhan Xie, Samuel V. Somerville, Ingemar Persson, Zeno R. Ramadhan, Soshan Cheong, Liming Dai, Dale L. Huber, J.Justin Gooding

How to Tune the Ru-Ni Active Sites for Enhanced Biomass Oxidation Activity

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Jueon Park *(Chemistry, Kangwon National University, Chuncheon, Korea)*

Effects of the Surfactants on Pt/C Catalysts for Electrochemical Toluene Hydrogenation

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Nicolas Perciani De Moraes *(Institute of chemistry, Instituto de Química de São Carlos - USP, São Carlos, Brazil)*, Julio Cesar Lourenço, Robson da Silva Rocha, Liana Alvares Rodrigues, Marcos Roberto de Vasconcelos Lanza

Combining the power of H_2O_2-based processes with heterogeneous photocatalysis for the degradation of sulfamerazine

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Nicolas Perciani De Moraes *(Institute of chemistry, Instituto de Química de São Carlos - USP, São Carlos, Brazil)*, Julio Cesar Lourenço, Robson da Silva Rocha, Liana Alvares Rodrigues, Marcos Roberto de Vasconcelos Lanza

Improving the H_2O_2 electrogeneration selectivity of biomass-based carbon xerogels through modification with $NaNbO_3$

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Carlos Pereira *(Chemistry and Biochemistry, Porto University - FCUP, Porto, Portugal)*, Ana Brandão, Thacilla Menezes, Renata Costa

Advanced Photocatalytic and Electrochemical Approaches for the Degradation of Leather Industry Waste: A Sustainable Solution for Environmental Remediation

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Gilvana Pereira Siqueira *(Chemistry Institute, Federal University of Uberlândia, Uberlândia, Brazil)*, Gilvana P. Siqueira, Agata Rodak, Raquel G. Rocha, Mateusz Cieslik, Eduardo M. Richter, Krzysztof Formela, Jacek M. Ryl, Rodrigo A. A. Muñoz

Sustainable Electrochemical Platforms from Recycled Tire Rubber for Monitoring the Pesticide Carbendazim Using Additive Manufacturing

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Marcel Perner *(Electrosynthesis, Max Planck Institute for Chemical Energy Conversion, Mülheim , Germany)*, Rok Narobe, Maria de Jesus Gálvez-Vázquez, Conrad Kuhwald, Martin Klein, Peter Broekmann, Sina Rösler, Bertram Cezanne, Siegfried R. Waldvogel

Electrochemical Hydrogenation of Nitriles at Nickel Foam Cathode

S10-062

Eric Pertermann *(Department for Electrosynthesis, Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Claudia Kammler, Siegfried R. Waldvogel

Synthesis of Indazoles by Electrochemical Reduction of o-Nitro Benzylamines

S10-063

Ionela-Cristina Petcu *(Faculty of Chemical Engineering and Biotechnologies, University of Science and Technology POLITEHNICA, Bucharest, Romania)*, Ana T. S. C. Brandao, Iuliana Mihalache, Lucia Monica Veca, Oana Brancoveanu, Cosmin Romanitan, Carlos Pereira, Liana Anicai, Cristina Busuioc, Sabrina Patricia State

Green electrochemical synthesis of TiO_2 and Ag-TiO_2 nanoparticles for photocatalytic and antibacterial applications

S10-064

Eva Plut *(Electrosynthesis, Max-Planck-Insitute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Tomas Horsten, Nicola C. Aust, Siegfried R. Waldvogel

Cathodic Reductions of Biomass-derived Aldehydes

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Mark Melvin Pradja *(Chemical Technology, DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany)*, Anna M. Dorfmüller, Jonathan Z. Bloh, Christian Modrzynski

Continuous Leaching of Cathode Materials from Spent Lithium-Ion Batteries through Electrogenerated Peroxydisulfate

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Federica Proietto *(Department of Engineering, University of Palermo, Palermo, Italy)*, Claudia Prestigiacomo, Flavia Gianfolcaro, Emanuela Nigrelli, Paola Meli, Fabio D'Agostino, Alessandro Galia, Onofrio Scialdone

Electrochemical Remediation of Contaminated Real Marine Sediments under very Low Electric Fields: Case Study on the Remediation of Marine Sediment from Bagnoli Bay

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Maria Grazia Rubanu *(Ingegneria Meccanica, Chimica e dei Materiali, Università degli studi di Cagliari, Cagliari, Italy)*, Laura Mais, Nicola Melis, Annalisa Vacca, Michele Mascia

Hydrogen-Mediated Electrodeposition of Highly Porous Ni-Cu Alloy Electrodes: A Study of Their Electrocatalytic Performance for Wastewater Treatment

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Sergio Sanz Calvo *(Institute of Energy and Technology - IET-1, Forschungszentrum Jülich, Jülich, Germany)*, Konstantin von Foerster, Bastian Rutjens, Henning Weinrich, Bernhard Schmid, Urbain Nzotcha, Hermann Tempel, Rüdiger-A. Eichel

The Effect of the Anion Exchange Membrane in the Electrochemical Production of Electrolyte-Free Formic Acid

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Carl Hendric Scharf *(Institute of Experimental and Applied Physics, Kiel University, 24098, Germany)*, Jing Tian, Jochim Stettner, Konrad Dyk, Anastasiia Kotova, Sebastian Reinke, Julia Linnemann, Fouad Maroun, Olaf Magnussen

Operando X-ray Diffraction Studies of Co Oxide Model Catalysts during Alcohol Oxidation and Oxygen Evolution Reaction

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Jennifer Schmidt *(Dept. of Chemistry, Johannes Gutenberg University, Mainz, Germany)*, Dandan Gao

3D Printed Electrodes for Electrochemical Hydrodehalogenation of chlorinated organic compounds

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Karolina Schwarzová-Pecková *(Department of Analytical Chemistry, Charles University, Faculty of Science, Prague, Czech Republic)*, Andrew Taylor, Jan Fischer, Hana Dejmková, Martin Šefčík, Anton Lytvynenko, Jan Hrabovský, Pawel Lochynski

Engineering Boron Doped Diamond Surfaces for Efficient Degradation of Xenobiotics

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Onofrio Scialdone *(Ingegneria, Università degli Studi di Palermo, Palermo, Italy)*

Electrochemical remediation of contaminated soil and sediments under very low electric fields

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Ignasi Sirés *(Departament de Ciència de Materials i Química Física, Universitat de Barcelona, Barcelona, Spain)*, Oscar M. Cornejo, José A. Padilla, Roger Oriol, Pol Barcelona, Elena Xuriguera

3D-Printed Steel-Based Electrodes for Nitrate Electroreduction

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José Solla-Gullón *(Institute of Electrochemistry, University of Alicante, San Vicente del Raspeig, Alicante, Spain)*, Vicente Montiel, Alfonso Sáez, Miguel A. Montiel, Eduardo Expósito, Francisco Gallud, Jesús Iniesta

Circular Economy Applied to Nitrate Removal: Hydrogen Generation and Waste Recovery in Drinking Water (LIFE ELEKTRA)

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Kyungsun Song *(Climate Change Response Research Division, Korea Institute of Geoscience & Mineral Resources (KIGAM), Daejeon, Korea)*

Electrochemical Production of Sodium Hydroxide from Post-Carbonation Brine for CO_2 Sequestration

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Muhammad Nawaz Tahir *(Chemistry department, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia)*, Maryum Ali, Muthumariappan Akilarasan, Wasif Farooq

$CoFe_2O_4$@S-C_3N_4 as Electrocatalysts: Synergistic Enhancement in Electrochemical Oxidation of 5-Hydroxymethylfurfural to 2,5-Furandicarboxylic Acid

S10-077

Ahmad Tayyebi *(Centro Singular de Investigación en Química Biolóxica e Mate, , Santiago de Compostela, Spain)*, Maria Gimenez Lopez

Electrocatalytic Reforming of Soluble Biomass and Plastic-Derived Waste Using Composition-Tunable Cu-Pd Bimetallic Structures for Value-Added Products

S10-078

Paola Tirira *(Departament de Ciència de Materials i Química Física, Universitat de Barcelona, Barcelona, Spain)*, Ivan Díaz, Nuria López-Vinent, Ignasi Sirés

Electrochemical Advanced Oxidation of a Corticosteroid at Neutral pH using Fe(III)-DTPA Complex and Toxicity Monitoring

S10-079

Nadežda Traškina *(Chemical Engineering and Technology, Center for Physical Sciences and Technology, Vilnius, Lithuania)*, Linas Vilčiauskas, Jurgis Pilipavičius

Understanding the Electrochemical Behaviour of $ZnMn_2O_4$

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Ming-Han Tsai *(Institute of Environmental Engineering, National Yang Ming Chiao Tung University, Hsinchu, Taiwan)*, Shu-Ju Chao, Chi-Chang Hu, Chihpin Huang

Novel Cu(200)/Ti Cathode and the Control of Working Potential by Optimized Cell Configuration for the Enhancement of N_2 Selectivity in Direct Ammonia Electrolysis

S10-081

Eseoghene Umukoro *(Department of Chemistry, Obafemi Awolowo University, Ile-Ife, Nigeria)*, Azeez Olayiwola Idris, Olawumi Sadare, Shohreh Azizi, Malik Maaza

Dendrimer-Carbon Nanocomposite-Based Electrochemical Detection of Sulphamethazole Antibiotics

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Akshay Rajeshbhai Vaghasiya *(Department of applied electrochemistry, Fraunhofer Institute for Chemical Technology ICT, Pfinztal, Germany)*, Lukas Lentz, Frank Kaulfuß, Robin Kunkel

Comparative Electrochemical Study of Amorphous Carbon-Coated Electrodes and Boron-Doped Diamond Electrodes for Green Oxidant Generation

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Shaurya Verma *(Chemical Engineering, Indian Institute of Technology Roorkee (IIT Roorkee), Roorkee, India)*

Single-Atom Catalyst Supported Graphene-based Framework for Electrochemical Reduction of Carbon Dioxide

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Punvinai Vinaisuratern *(Department of Material Science and Engineering, Institute of Science Tokyo, Yokohama, Japan)*, Tomoyuki Kurioka, Tso-Fu Mark Chang, Masato Sone

Evaluation of Redox Behavior of Ferrocene in Supercritical Carbon Dioxide-Water Emulsified Electrolytes

S10-085

Jiaqi Wang *(Department of Chemical and Metallurgical Engineering, Aalto University, ESPOO, Finland)*, Lasse Murtomäki, Daniel Martin-Yerga

Electrocatalytic Hydrogenation and Hydrodeoxygenation of Lignin-Derived Guaiacol Using Rhodium Nanoparticles Supported on Ti_3C2T_x

S10-086

Claudia Weidlich *(Applied Electrochemistry, DECHEMA-Forschungsinstitut, Frankfurt, Germany)*, Robin Kupec

Electrochemical degradation of halogenated pollutants

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Stefania Wolff *(Institute of Fluid-Flow Machinery, Polish Academy of Sciences, Gdansk, Poland)*, Wiktoria Lipinska, Katharina Dehm, Simon Hager, Ryan Crisp, Natalia Wójcik, Katarzyna Siuzdak

$CuInS_2$ Quantum Dot-Titanium Nanotube Heterostructure: Junction for Light-Driven Electrochemical Applications

S10-088

Huizhong Wu *(Departament de Ciència de Materials i Química Física, Universitat de Barcelona, Barcelona, Spain)*, Lele Zhao, Ruiheng Liang, Yujie Chen, Xiuwu Zhang, Jingyang Liu, Ignasi Sirés, Minghua Zhou

Enhanced Tetracycline Degradation and Power Generation in a Photocatalytic Fuel Cell using a $Bi_4O_5I_2/TiO_2$ NTAs Heterojunction and Peroxymonosulfate Activation

S10-089

Shilin Yang *(School of Environment, Harbin Institute of Technology, Harbin, China)*, Shilin Yang, Yue Cheng, Min Ge, Shan Qiu, Fengxia Deng

Interfacial O_2 Accumulation via Hierarchical Hydrothermal Carbon Interface Microenvironment Engineering for High-Rate H_2O_2 Electrosynthesis in Acidic Media

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Jaeeun Yi *(Chemistry, Kangwon National University, Chuncheon , Korea)*

Protic Ionic Liquids as Ionomers for Electrochemical Hydrogenation

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Dimitrios Zagoraios *(Chemical Energy, DIFFER - Dutch Institute For Fundamental Energy Research, 5600 HH Eindhoven, Netherlands)*, Mihalis N. Tsampas

Exsolution Concept for Biomass Valorization: The Case of LSMNi for Glucose Electro-oxidation

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Viktoriia Zemtsova *(LEPMI, CNRS, Grenoble, France)*, Alexandr Oshchepkov, Elena Savinova, Tristan Asset

In situ spectroscopic investigation of Urea Oxidation Reaction pathways on Ni and NiFe catalysts

S10-093

Maximiliano Andres Zensich *(MEET Batterieforschungszentrum, University of Münster, Münster, Germany)*, Erick Reynoso Frausto, Marie Heidler, Alexandros Tsoufios, Simon Wiemers-Meyer, Martin Winter, Sascha Nowak

Delamination of Black Mass from Cathodes of Commercial LFP Batteries at End of Life: An Approach for the Direct Recycling of LFP Particles.

S10-094

Dayu Zhu *(school of chemistry, Monash university, melbourne, Australia)*, Hsi-wen Wu, Wye-Khay Fong, Rico Tabor, Jie Zhang

The Ratio of sp^2 and sp^3 Hybridized Carbon Determines the Performance of Carbon-based Catalysts in H_2O_2 Electrosynthesis from O_2

S10-095

Giovanni Zuccante *(Material Science U5, University of Milan-Bicocca, Milan, Italy)*, Carlo Santoro, Ignasi Sirés

Lignin Waste Upcycling via Cathodic Hydrogen Peroxide Production

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Julius Wetzel *(Department of Chemistry, Johannes Gutenberg University, Mainz, Germany)*

Redox Mediating Polyoxometalates for Electrosynthetic Applications

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Yacine Djerroud *(Centre national de la recherche scientifique (CNRS), Institut de recherches sur la catalyse et l'environnement, Villeurbanne - Lyon, France)*, Jie Yu, Frederic Dappozze, Chantal Guillard, Philippe Vernoux, Jesús González-Cobos

Photoelectrocatalytic valorization of glycerol with zinc oxide photoanode

S10-098

Feifan Li *(School of Chemistry and Chemical Engineering, Shanghai JiaoTong University, Shanghai, China)*, Kexing Cai, Lei Li

Direct regeneration of lithium iron phosphate cathode materials for spent lithium-ion batteries

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Kgotla Katlego Masibi *(Material Research Department, iThemba Laboratory for Accelerator-Based Sciences, National , Cape Town, South Africa)*, Malik Maaza

Green synthesized Silver Nanoparticles Supported on Polypyrrole for the Electrochemical Detection of Heavy Metal Ions

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Esmael Balaghi *(Chemistry, University of Freiburg, Freiburg im Breisgau, Germany)*, Michael Greenwood, Heba Elgamodi, Dhruv Trivedi, Hamza Annath, Diego Gianolio, Manfred E. Schuster, Marc G. Willinger, Kathryn Toghill, Rounack Kundu, Zeljka Krpetic, Rosa Arrigo, Anna Fischer

Analysis of Particle Dynamics in_In-situ Electrochemical Liquid TEM

S11-002

Tim Brands *(Institute of Chem. and Electrochem. Process Engineering, Clausthal University of Technology, Clausthal-Zellerfeld , Germany)*, Thomas Turek

Investigating the Hydrophobicity of Gas Diffusion Electrodes in Electrochemical CO_2 Reduction through Permeate Flow Measurements

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Mehmet Ugur Coskun *(Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Nina Plankensteiner, Thomas Schwab, Julia Kunze-Liebhäuser

Direct CO_2 capture and electro conversion to CO from amine wash electrolyte solution

S11-004

Balamurugan Devadas *(Faculty of Applied Engineering, University of Antwerp, Antwerpen, Belgium)*, Shankar Ramakrishnan, Yu zhang, Nick Daems, Saravanan Adhimoorthy, Tom Breugelmans

Improvement of anodic half-cell reaction for CO_2 electrolysis in zero-gap single cell

S11-005

Ndeye Fatou Diop *(Physics, University of Pretoria, Pretoria, South Africa)*

Facile Synthesis of Ni-combined ZIF-67-Sased Bimetallic MOFs For Energy Storage Applications

S11-006

Fatemeh Ebrahimi *(Inorganic Chemistry, Stuttgart University, Stuttgart, Germany)*, Elham Kouhestanian, Fatemeh Ebrahimi, Niloofar Naseri Jahromi, Bertold Rasche, Maryam Ranjbar

Effect of synthesis methods for the nano-sized barium cerate perovskite on the supercapacitor properties

S11-007

Simon Emken *(Institute of Energy Technologies (IET-1), Forschungszentrum Jülich, Jülich, Germany)*, Alexander Bauer, Eva Jodat, André Karl, Rüdiger-A. Eichel

The critical Role of Binders in the Ag-based Electrolysis of CO_2 to CO with flowing aqueous Electrolyte

S11-008

Kevin Fernández-Caso *(Process & Energy Department, Delft University of Technology, Delft, Netherlands)*, Ahmed Mohsen Ismail, Jurrian Peteers, Ruud Kortlever

Exploring the effect of temperature on the stability of copper electrode-based catholyte-fed CO_2 electrolyzers

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Alexander Flick *(Inorganic Materials & Catalysis, Eindhoven University Of Technology, Eindhoven, Netherlands)*, Antoni Forner Cuenca, Emiel Hensen

Towards Electrochemical Fischer-Tropsch Synthesis: Electrochemical CO Reduction at Elevated Temperature and Pressure

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Shilong Fu *(Process & Energy, Delft University of Technology, Delft, Netherlands)*, Min Li, Ahmed Mohsen Ismail, Ruud Kortlever

Understanding and Mitigating SO_2-Induced Deactivation during CO_2 Electrolysis to CO

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Raphael Gratzl *(CCUS, Net Zero Emission Labs GmbH, Rohrdorf, Germany)*, Alexander Beck, Bastian Etzold

iCCE - intensified Carbon Capture and Electrolysis

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Emilie Guillier *(IRCELYON, CNRS, Villeurbanne, France)*, Laurence Retailleau, Mathieu Prévot, Philippe Vernoux

Electrocatalytic Oxidation of 5-HMF in Near-neutral Conditions over Ru/C Catalyst

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Carl Eric Hartwig *(Electrochemical Process Engineering | Functional Materials, University of Bayreuth, Bayreuth, Germany)*, Jan Tschernoster, Philipp Hawe, Ralf Moos, Christina Roth

Challenges of CO_2 Crossover in CO_2RR Flow Cells Achieving High Current Density

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Kyo Sik Hwang *(Convergence Research Center of Sector Coupling & Integration, Korea Institute of Energy Research, Jeju, Korea)*, Ji-Hyoung Han, Namjo Jeong

Operational Efficiency Optimization of Continuous Bipolar Membrane Electrodialysis for Ammonia Nitrogen Recovery in Wastewater Treatment

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Yellaswamy Kadamanchi *(Department of Energy Science And Engineering, Indian Institute of Technology Bombay, Mumbai, India)*, Dayadeep Monder

Carbon Electrode and Membrane Properties Change During Long-term Cycling of The Vanadium Redox Flow Battery (VRFB)

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Sravan Kumar Kilaparthi *(Department of Chemical Engineering, University of Castilla-La Mancha, Ciudad Real, Spain)*, Rudy Crisafulli, Ana Raquel de la Osa, Paula Sánchez, Antonio de Lucas-Consuegra

A Nickel Coated Stainless Steel Catalyst for the Simultaneous Production of Hydrogen and Value-Added Chemicals via Glucose Electrolysis

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Ryo Kurihara *(RCSEC, Graduate School of Engineering Science, The University of Osaka, Toyonaka, Japan)*, Takashi Harada, Shuji Nakanishi, Kazuhide Kamiya

Electrochemical CO_2 Reduction to Multicarbon Products in Aqueous Electrolytes Containing Tetraalkylammonium Cations

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Ana Elisa Lejtman *(Chemistry, Technion, Haifa, Israel)*, David Eisenberg

Investigating the Effect of Nickel Hydroxide Phases on the Oxidation of Small Molecules for Energy Conversion

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Maria Isabel Leon Sotelo *(ELEC, PostDoc, Mol, Belgium)*, Savitha Thayumanasundaram, Xochitl Dominguez-Benetton

Simulation study of a gas-diffusion electrocrystallization process for PGMs recovery.

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Lewis Macdonald *(Chemical and Process Engineering, University of Strathclyde, Glasgow, United Kingdom)*, William Johnson, Stephen Lyth, Edward Brightman

Production of a fully 3D printed flow cell and electrolyser for rapid prototyping and tailored experimentation

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Luca Magagnin *(Chemistry, Materials and Chemical Engineering G. Natta, Politecnico di Milano, Milan, Italy)*, Eleonora Natale, Federico Lissandrello, Luca Magagnin

Highly Reversible and Energy-dense Zinc/Permanganate Flow Battery Enabled by 3D Metal Foam Electrodes

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Karen Magalhães *(Postgraduate Program in Chemical Engineering, Federal University of Rio Grande do Norte, Natal, Brazil)*, Luis Felipe Miranda, Luis Loor-Urgilés, Tabata Zambrano, Maiara Ferreira, Edney Galvão, Carlos Martínez-Huitle, Elisama dos Santos

Modeling and optimization of higher-efficient system for the co-generation of hypochlorite ions and hydrogen low carbon

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Thomas Mairegger *(Physical Chemistry, University of Innsbruck/Net Zero Emission Labs, Innsbruck, Austria)*, Alexander Beck, Julia Kunze-Liebhäuser

Integrating fundamental aspects for industrial CO_2 conversion – Acid-based electroreduction to Formic Acid

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Carlos A Martínez-Huitle *(Institute of Chemistry, Federal University of Rio Grande do Norte, Natal, Brazil)*, Maiara Barbosa Ferreira, Gerffeson Almeida Moura, Herbet Lima Oliveira, Amanda D. Gondim, Livia N. Cavalcanti, Fabíola Correia de Carvalho, Edney R. Viana Pinheiro Galvão, Marco A. Quiroz, Elisama Vieira Dos Santos

Hybrid-Integrated Electrochemical System for Wastewater Treatment with Simultaneous Production of Clean Energy

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Valtteri Oksanen *(Chemical and Polymer Synthesis, VTT Technical Research Centre of Finland, Espoo, Finland)*, Kiia Malinen, Tao Hu, Alexander Reznichenko, Tom Wirtanen

TEMPO-Mediated Paired Electrosynthesis of Ethylene Glycol from Formaldehyde and Methanol at High Current Densities

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Martin Paidar *(Department of Inorganic Technology, University of Chemistry and Technology, Prague, Prague, Czech Republic)*, Vojtech Masojidek, Ludek Jelinek

Production of Demineralized Water for Water Electrolysis

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Dhananjai Pangotra *(BioCat, Fraunhofer IGB, Straubing, Germany)*, Maximilian Göltz, Ege Ündar, Kaiyue Lou, Stefan Rosiwal, Arne Roth, Luciana Vieira

Boron-Doped Diamond for the Scalable and Efficient Anodic H_2O_2 Production

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Kavita Shivanagoud Patil *(Applied Electrochemistry and catalysis (ELCAT), University of antwerp, Antwerp, Belgium)*, Nick Daems, Tom Breugelmans

Rational electrode improvement towards enhanced CO production via direct electrochemical bicarbonate conversion

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Roese Philipp *(Institute for Applied Materials-Electrochemical Technologies, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Inga Dorner, Ulrike Krewer

Model-based Analysis of Operation and Design Parameters of Silver Gas Diffusion Electrodes for Electrochemical CO_2 Reduction

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Nina Plankensteiner *(Decarbonisation & Sector Coupling, K1-MET GmbH, Linz, Austria)*, Debabrata Bagchi, Hongyuan Yang, Prashanth Menezes, Mehmet Ugur Coskun, Julia Kunze-Liebhäuser, Irmela Kofler

Coupling of the cathodic CO_2 reduction with PET-derived anodic ethylene glycol oxidation in a zero-gap electrolyzer

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Akash Raman *(Department of Chemical Engineering, University of Twente, Enschede, Netherlands)*, Adam Vass, Hanadi Ghanem, Stefan Rosiwal, Tanja Franken, Regina Palkovits, Guido Mul, Mihalis Tsampas, Georgios Katsoukis, Marco Altomare

Proof-of-Concept of Methane Oxidation on Boron-Doped Diamond Anodes in a Zero-Gap PEM Cell

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Marlon Ritz *(Institute for Applied Materials-Electrochemical Technologies, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Elisabeth Oldenburg, Philipp Röse, Ulrike Krewer

Transport-Related Performance Limitations and Selectivity Losses in the Electrosynthesis of Hydrogen Peroxide

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Alicia Ruiz *(Materials, Chemical and Environmental Technology, FUNDITEC, Rey Juan Carlos University, Madrid, Móstoles, Spain)*, Antonio Jesús Fernández-Ropero, José Ignacio Lozano

Optimization and Scalability of Two-Electron Water Reduction using C-fiber paper as Electrode Assisted by an Unexplored Stabilizer

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Shilpa Santhosh *(IIUCNN, Mahatma Gandhi University, Kottayam, India)*, Aathilingam Vijayaprabhakaran, Ditty Dixon, Murugavel Kathiresan, Nandakumar Kalarikkal

MXene-Supported Ag/Co_3O_4 Bifunctional Nanocomposite for Water-Splitting Application and Production of NaOCl

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Shilpa Santhosh *(IIUCNN, Mahatma Gandhi University, Kottayam, India)*, Aathilingam Vijayaprabhakaran, Ditty Dixon, Murugavel Kathiresan, Nandakumar Kalarikkal

MXene-Supported Ag/Co_3O_4 Bifunctional Nanocomposite for Water-Splitting Application and Production of NaOCl

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Mark Sassenburg *(SPES, TNO, Rijswijk, Netherlands)*

From ants to plants: Upscaling electrochemical CO_2-to-formate/formic acid production and the implications on relevant conditions.

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Adrienn Szirmai *(Department of Physical Chemistry and Materials Science, University of Szeged, Szeged, Hungary)*, Attila Kormányos, Balázs Endrödi, Csaba Janáky

Electrocatalytic oxidation of crude glycerol on noble metal and non-noble metal catalysts

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Lorenzo Tamboia *(Department of Applied Science and Technology, Politecnico di Torino, Torino, Italy)*, Anna Mangini, Noemi Pirrone, Lorenzo Sibella, Daniele Versaci, Sara Garcia Ballesteros, Federico Bella

Electrolytes for Ammonia Production in the SuN_2rise ERC-StG Project

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Marcos Torres Rogel *(Chemical Engineering, Biotechnology and Materials, Universidad de Chile, Santiago de Chile, Chile)*, Daniel Peña Torres, Melanie Colet Lagrille

Dynamic Simulation of an Electrolysis Plant for Green Hydrogen Production in the Atacama Desert

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Asuman Unal *(Chemisty, Cankiri Karatekin University, Cankiri, Turkey)*, Abdullah Yildiz, Volkan Eyupoglu

Electrochemical Coating of PEDOT/Nimow/GO Composites: Exploring the Electrochemical Properties of the Resultant Composite Films

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Lydia Weseler *(Institute of Chem. and Electrochem. Process Engineering, Clausthal University of Technology, Clausthal-Zellerfeld, Germany)*, Thomas Turek

Operating Membrane Electrode Assemblies for Electrochemical CO_2 Reduction to CO at Enhanced Temperatures

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Jakub Zabrzycki *(Faculty of Chemical and Process Engineering, Warsaw University of Technology , Warsaw, Poland)*, Marta Mazurkiewicz-Pawlicka, Pawel Gierycz, Anna Mechler

Novel Ni-Cu-based Electrocatalysts: Boosting Ammonia Oxidation in Low-Temperature DAFCs

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Zhangjie Zhai *(Faculty of Chemistry and Biochemistry, Ruhr-Universität Bochum, Bochum, Germany)*

Exploring Carbon Materials for the Electrochemical Water Oxidation to H_2O_2

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Elisama Vieira Dos Santos *(School of Science and Technology, Federal University of Rio Grande do Norte, NATAL, Brazil)*, Ozanira S. Maciel, Jussara C. Cardozo, Tabata Natasha Feijoó Zambrano, Luis D. Loor-Úrgilés, Suely S. L. Castro, Maria Valnice Boldrin Zanoni, Danyelle M. Araújo, Carlos A. Martínez-Huitle, Elisama Vieira Santos

Eco-friendly electrochemical integrated-hybrid method for the degradation of caffeine and the generation of green hydrogen

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Tobia Casadei *(Department of Chemical sciences, Univesity of Padova, Padova, Italy)*, Alberto Piccoli, Abdirisak Ahmed Isse, Marco Fantin

Rapid Electrochemical Assessment of Excited-State Quenching Dynamics

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Tobia Casadei *(Department of Chemical sciences, Univesity of Padova, Padova, Italy)*, Abdirisak Ahmed Isse, Marco Fantin

Electro-photochemical Control of a Radical Polymerization

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Davide Cesca *(Electrosynthesis, Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany)*, Siegfried Waldvogel

Anodic Desulfurization of Heterocyclic Thiones – A Synthesis to Imidazoles and Analogues

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Jeanet Conradie *(Chemistry, University of the Free State, Bloemfontein, South Africa)*, Marrigje Marianne Conradie

Electrochemical Adventures of [FeIII(β-diketonato)3]: A DFT and Experimental Perspective

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Sebastiano Darè *(Dipartimento di Scienze Chimiche, Università di Padova, Padova, Italy)*, Melvin Raulin, Federico Begato, Andrea Antonello, Alessandro Altinier, Abdirisak A. Isse, Marco Fantin, Cristiano Zonta

Caging an Atom Transfer Radical Polymerization Catalyst

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Anna Maria Dorfmüller *(Chemical Technology, Dechema-Forschungsinstitut, Frankfurt am Main, Germany)*, Mark Melvin Pradja, Christian Modrzynski, Markus Stöckl, Jonathan Zacharias Bloh

Electrosynthesis of Peroxides and Peracids – Methods for Selective Quantification of Different Peroxide Species in Complex Mixtures

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Beicao Feng *(Sustainable Electrochemistry, DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany)*, Dirk Holtmann, Jonathan Z. Bloh, Markus Stöckl

Improved Gas Diffusion Electrode for the Electrochemical Synthesis of Peroxides and Peracids

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Laís G. Vernasqui *(Electrochemical Process Engineering, University of Bayreuth, Bayreuth, Germany)*, Suelem S. Soares, Bruna F. Gomes, Carlos M. S. Lobo, Camila A. Escanio, Bianca A. Kawata, Evaldo J. Corat, Christina Roth

In situ/operando X-ray Absorption Spectroscopy for the Study of Polyaniline@X^{+2} (X= Cu, Co) Composites

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Martijn Hoving *(Stratingh Institute for Chemistry, University of Groningen, Groningen, Netherlands)*, Ben L. Feringa

Mix-and-Match Tuning of Redox-Switchable Overcrowded Alkenes

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Claire Hugon *(LCPME, Université de Lorraine, CNRS, Villers-lès-Nancy, France)*, Emilie Mourey, Neus Vilà, Liang Liu

Optical Imaging Electrochemical Reactivity through an Electrochromic Counter Electrode

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Ying Kong *(Lehrstuhl für Technische Chemie, Ruhr-Universität Bochum, Bochum, Germany)*, Darshini Saravanan, Mohamed El Idrissi, Jonathan Pöttker-Menke, Zhangjie Zhai, Bastian Mei

Ferroelectric Modification of Semiconductor for Photoelectrochemical Biomass Valorization

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Ervin Kovács *(Institute of Materials and Environmental Chemistry, HUN-REN Research Centre for Natural Sciences, Budapest, Hungary)*, Zhining Xu, Thao Lam Thi Da, Gábor Turczel, Béla Iván

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Anna Lielpetere *(Organic Synthesis Methodology group, Latvian Institute of Organic Synthesis, Riga, Latvia)*, Luiza Lote Irbe, Aigars Jirgensons

Designing Redox Polymer Films for Organic Electrosynthesis

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Patrizia Romana Mussini *(Dipartimento di Chimica, Università degli Studi di Milano, Milano, Italy)*, Ivan Bassanini, Massimiliano Meli, Chiara Tognoli, Riccardo De Simone, Anna Sparatore, Silvia Araneo, Chiara Margolfo, Alberto Vertova, Rebecca Galbiati

Electrochemistry of Riminophenazines with High Antiproliferative Activity

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Celine Naddour *(DCM, Université Grenoble Alpes, grenoble, France)*, Sylvie Chardon-Noblat, Cyrille Costentin

Effect of Substituents and Role of a Proton Donor in the Electroreductive Cleavage of N-O Bond Catalyzed by Metal Complexes

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Paul Neugebauer *(Institute of Applied Materials - Electrochemical Technologie, Karlsruhe Institute of Technology, Karlsruhe, Germany)*, Sonam Tamang, Philipp Röse, Ulrike Krewer

The Reaction Regime of N-Formylpyrrolidine Oxidation in Methanol and it's Influence on Synthesis Performance

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Ekitomo Oh *(Chemistry, Keio University, Yokohama, Japan)*, Takashi Yamamoto, Yasuaki Einaga

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Yushi Ohno *(Department of Chemical Science and Engineering, Institute of Science Tokyo, Yokohama, Japan)*, Tsukasa Ehara, Kosuke Sato, Shinsuke Inagi

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Yasuyuki Okumura *(Division of Applied Chemistry, Okayama University, Okayama, Japan)*, Koichi Mistudo

Synthesis of Sultams via Sulfonamidyl Radicals Generated by Electrooxidation of Hydrogen Bonding Complexes

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Jesús Palacios-Ramírez *(Chemistry, Centro de Investigación y de Estudios Avanzados del IPN, Gustavo A. Madero, Mexico)*, Felipe González

Association and proton transfer during the electroreduction of Nitrobenzene: Mechanistic proposal and voltametric simulations

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Andres Felipe Quintero Jaime *(Chemical Sciences, University of Limerick, Limerick, Ireland)*, Kamil Cywinski, Angelika Holzinger, Jessica Chaparro Garnica, Emilia Morallon, Michael Freund, Micheal D. Scanlon

Electropolymerization of PEDOT/Polyoxometalate Composite Thin Films at a Polarizable Liquid|Liquid Interface and Exploring their Application as Supercapacitor Materials

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Samuel Jaeho Shin *(CO_2 & Energy Research Center, Korea Research Institute of Chemical Technology, Daejeon, Korea)*, Su Bin Roh, Kwan-Young Lee, Ji Hoon Park, Minju Park

Hydrogenation of Unsaturated Bonds via Electrolytic Palladium Membrane Reactor and its Mechanistic Investigation

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Kohei Taniguchi *(Department of Chemical Science and Engineering, Institute of Science Tokyo, Yokohama, Japan)*, Kosuke Sato, Shinsuke Inagi

Organic Electrochemical Transistors Based on Conjugated Polymers Containing the Phosphonate Groups at the Main Chains

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Thiago Vasconcelos De Barros Ferraz *(Department of Physical Chemistry, São Carlos Institute of Chemistry - USP, São Carlos, Brazil)*, Richard Kramer Campen, Hamilton Varela, Yujin Tong

Surface Interactions between CO, Cl-, and OH- during Ethanol Electro-oxidation on Platinum in Alkaline Seawater-like Electrolytes Probed by In Situ Vibrational SFG

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~~**Seiti Venturini** *(Technical Chemistry III, Universität Duisburg Essen, Duisburg, Germany)*, Filippo Pedrini, Shaheen Bhuyan, Pankaj Bharali, Ignacio Sanjuán, Corina Andronescu~~

~~Electrochemical oxidation of glycerol over Co-Ni sulfide surface analyzed via DEMS and HPLC in alkaline medium~~

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Laís Vernasqui *(Electrochemical Process Engineering, University of Bayreuth, Bayreuth, Germany)*, Suelem S. Soares, Bruna F. Gomes, Carlos M. S. Lobo, Camila A. Escanio, Bianca A. Kawata, Evaldo J. Corat, Christina Roth

Composite Electrodes for Suppressing Hydrogen Evolution in Vanadium Redox Flow Batteries

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Yan B. Vogel *(Chemical Engineering, Delft University of Technology, Delft, Netherlands)*, Arjan J. Houtepen

Opportunities and Challenges for Spectroelectrochemistry in Studying Semiconductor Nanomaterials

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Siyi Wang *(Department of Chemical Science and Engineering, Institute of Science Tokyo, Yokohama, Japan)*, Kohei Taniguchi, Kosuke Sato, Shinsuke Inagi

Electrochemical Post-modification of Polystyrene via Aromatic C-H Iodination

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De-Yin Wu *(College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China)*, Ting-Wei Weng, Yu-Bei Zhang, Yuan-Fei Wu, Jian-Zhang Zhou, Zhong-Qun Tian

Electrochemical Surface-Enhanced Raman Spectroscopy for Kinetics of Surface Plasmonic Photoelectrochemical Reactions on Silver Nanoparticle-Modified Electrodes of Silver and Gold

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Magdalena Zawadzka *(Faculty of Chemistry, Silesian University of Technology, Gliwice, Poland)*, Pawel Wagner, Mieczyslaw Lapkowski, Sandra Pluczyk-Malek

The influence of the type of metal cation on the electrochemical and spectroelectrochemical properties of porphyrin derivatives

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Kosovare Zullufi *(Chemistry, TU Darmstadt, Darmstadt, Germany)*, Kosovare Zullufi, Jonas Spielmann, Pascal Theis, Nicole Segura Salas, Hendrik Haak, Wenjamin Moschkowitsch, Sandeep Yadav, Joerg J. Schneider, Ulrike I. Kramm

Deciphering the contribution of Fe oxide nanoparticles vs FeN_4 moieties in the oxygen reduction reaction of iron and nitrogen doped carbon catalysts

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Annemijn Van Koten *(Electrosynthesis, Max-Planck-Institut fur chemische Energiekonversion, Mülheim an der Ruhr, Germany)*, Enrico Lunghi, Siegfried Waldvogel

The Electrochemical Dehydration of Carboxylic Acids

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Odilon Wamba-Tchio *(ICP, Université Paris-Saclay, CNRS, Orsay, France)*, Alain Walcarius, Israël Mbomekallé, Neus Vilà

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Noah Al-Shamery *(Dept. of Chemistry/School of MSE, University of Warwick/NTU Singapore, Coventry, United Kingdom)*, Dimitrios Valavanis, Bethanie Dean, Paul Wilson, Pooi See Lee, Patrick R. Unwin

Optimizing Microscale Polymer Fabrication via Scanning Electrochemical Cell Microscopy (SECCM) for Functional Nanostructures

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Dan Bizzotto *(Chemistry, University of British Columbia, Vancouver, Canada)*, Gilberto Martinez-Blanco, Daina Baker, Baptiste Py, Francesco Ciucci

Estimating the distribution in the rate of electron transfer of MB labelled DNA SAMs from EIS using Distribution of Differential Capacity (DDC) analysis

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Judith Bohnacker *(Institute of Electrochemistry, Ulm University, Ulm, Germany)*, Mohamed M. Elnagar, Ludwig A. Kibler, Timo Jacob

Electrocatalytic Hydrogen Peroxide Reduction at Au@ZnO Electrodes with Tunable Oxygen Vacancies and Prussian Blue Modification

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Moritz Bätcher *(Institute of Chemistry, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany)*, Jens Christoffers, Gunther Wittstock

Immobilization of Redox Protein Cryptochrome 4a on Solid Functionalized Surfaces

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Ti-Chieh Chuang *(Biomechatronics Engineering, National Taiwan Univ. Taipei, Taiwan)*, Lin-Chi Chen

Molecular Weight Effect of Plasticizer on Sensitivity Degradation of a PVC-based Solid-Contact Ion-Selective Electrode

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Alvaro Colina *(Chemistry, Universidad de Burgos, Burgos, Spain)*, Miguel Jimenez-Munoz, Luis Romay, Martin Perez-Estebanez, Tamas Zagoni, Ede Bodoki, Aranzazu Heras

Enhancement of the Raman signal using controlled current pulses

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Enrico Daviddi *(Chemistry, Université paris Cité, Paris, France)*, Nathaly Ortiz Peña, Louis Godeffroy, Nikan Afsahi, Jean-François Lemineur, Frédéric Kanoufi, Damien Alloyeau, Jean-Marc Noël

Multi-microscopy in situ study of the effect of TEM electron beam on the electro precipitation of Ni and Co species in HER conditions

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Marco Fantin *(Department of Chemical Sciences, University of Padova, Padova, Italy)*, Andrea Antonello, Mattia Brocchini, Giovanni Lissandrini, Abdirisak Ahmed Isse

Hemin as a Recyclable Electrocatalyst for Atom Transfer Radical Polymerization

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Marta Feroci *(Fundamental and Applied Sciences for Engineering (SBAI), Sapienza University, Rome, Italy)*, Matteo Bonomo, Martina Bortolami, Antonella Curulli, Paola Di Matteo, Beatrice Simonis, Alessandro Trani, Fabrizio Vetica, Giuseppe Zollo

L-Pro functionalized carbon nanoclusters inducing an enantioselective voltammetric response to Trp and Tyr

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Marta Feroci *(Fundamental and Applied Sciences for Engineering (SBAI), Sapienza University, Rome, Italy)*, Martina Bortolami, Paola Di Matteo, Alessandro Trani, Rita Petrucci, Antonella Curulli

Simultaneous determination of theophylline and caffeine in natural matrices based on glassy carbon electrode modified with carbon dots and chitosan

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Gabriele Giagu *(Chemistry "G.Ciamician", University of Bologna, Bologna, Italy)*, Chiara Mariani, Alessandro Auditore, Antonino Licciardello, Giovanni Valenti, Francesco Paolucci

Electrochemiluminescence imaging with Nanostructured electrode: A Platform for Enhanced Performance

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Kacper Jędrzejewski *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Oliwier Misztal, Janusz Cukras, Krystian Pupel, Barbara Palys

Possibilities of Analyzing Electrochemical Processes of Molecules Using EC-SERS on the Example of JC-1 Dye Aggregation

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Hyunro Kim *(Center for Advanced Biomolecular Recognition, Korea Institute of Science and Technology, Seoul, Korea)*, Hyunro Kim, Sungwook Park, Kwan Hyi Lee

Electrochemical Sensing of Neurotransmitters via MOF-Enhanced EG-FET Biosensor

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Kwan Hyi Lee *(Center for Advanced Biomolecular Recognition, Korea Institute of Science and Technology, Seoul, Korea)*, Hyung Joon Park, Sungwook Park, Kwan Hyi Lee

AI-Enhanced Electrochemical Biosensing: A Dual-Stage Approach for Bladder Cancer Detection

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Abdullah M. Abudayyeh *(Institut de la Matière Condensée et des Nanosciences (IMCN), Université catholique deLouvain-, Louvain-la-Neuve, Belgium)*

Effect of Second Coordination Sphere (SCS) on Electrocatalytic Reduction of CO_2 by Rhenium-based catalyst

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Levannie Mabuti *(Department of Engineering Sciences and Mathematics, Luleå University of Technology, Luleå, Sweden)*, Michael Busch

Computational Insights Into Electrochemical CO_2 Reduction Over Molecular Dual Atom Catalysts (DACs)

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Emie Marin *(Department of Chemistry, Colorado State University, Fort Collins, USA)*

Multifunctional Surface Modification of Laser-Induced Graphene Electrodes for Enhanced Label-Free Immunosensing Applications

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Claudia Martínez Asenjo *(Department of Chemistry, Università di Bologna, Bologna, Italy)*, Alessandro Fracassa, Francesco Paolucci, Giovanni Valenti

Enhanced Electrochemiluminescence for Bead-based Immunoassays

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Jun Maruyama *(Environmental Technology Research Division, Osaka Research Institute of Industrial Science and Tech, Osaka, Japan)*, Shohei Maruyama, Tsutomu Shinagawa, Akira Takatsuki, Noriko Yoshizawa, Masataka Inoue, Natsuki Imai, Koichi Matsuo, Tani Fumito, Hirotomo Nishihara, Hideki Tanaka

Hollow-needle-like Nanocarbon with Electrochemical Chiral Discriminating Ability

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Tomas Mockaitis *(Nanotechnology, Center for Physical Sciences and Technology, Vilnius, Lithuania)*, Ryota Shikuwa, Kaoru Hiramoto, Inga Morkvenaite-Vilkonciene, Hitoshi Shiku, Kosuke Ino

Visualization of Diffusive Biocompounds as Co-Reactants in Cell Spheroids via Electrochemiluminescence Microscopy with $[Ru(bpy)3]^{2}+$

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Martín Muñoz Morales *(Chemical Engineering Department, University of Castilla-La Mancha, Ciudad Real, Spain)*, Jorge Comendador, Alvaro Ramirez-Vidal, Javier Llanos, Ester López-Fernández

Exploring Residual Biomass for the Development of Electrochemical Sensors

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Hirohisa Nagatani *(Faculty of Chemistry, Institute of Science and Engineering, Kanazawa University, Kanazawa, Japan)*, Naoto Fujimura, Nao Yamamoto

Spectroelectrochemical Analysis of Bis-MPA-COOH Dendrimer as a Stimuli-Responsive Drug Carrier at Liquid|Liquid Interfaces

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Hyung Joon Park *(Center for Advanced Biomolecular Recognition, Korea Institute of Science and Technology (KIST), Seoul, Korea)*, Sungwook Park, Kwan Hyi Lee

Exosomal Multi-Marker Biosensor Integrated Explainable AI-Based Prostate Cancer Screening System

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Krystian Pupel *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Kacper Jędrzejewski, Sylwia Zoladek, Marcin Palys, Barbara Palys

Gold Nanoparticles Shape and Graphene Oxide Defects as Key Factors for Ultrasensitive H_2O_2 Detection in Hybrid Electrocatalytic Systems

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Ruby Susan Raju *(Chemistry and Chemical Engineering, Chalmers University of Technology, Gothenburg, Sweden)*, Albin Petren, Yixu Wang, Jessica Vasquez, Megan Westwood

Towards Safer Organic Electrochemical Transistors for Bioelectronic Applications

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Mohamed G. Saadeldin *(Professorship for Electrobiotechnology, Technical University of Munich, Straubing, Germany)*, Huijie Zhang, Darren Buesen, Jonas Honacker, Hamzah Elfaitory, Jakob Burger, Vincent M. Friebe, Tobias Vöpel, Alaa A. Oughli, Nicolas Plumeré

A Universal Oxygen Scavenger for Oxidase-based Biosensors

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Jessica Smith-Osorio *(Department of Chemical Sciences and Bernal Institute, University of Limerick, Limerick, Ireland)*, Alonso Gamero-Quijano, Micheál D Scanlon

Electrodeless Interfacial Synthesis of PEDOT/Methyl β-Cyclodextrin Composite Thin Films

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Juliana Naomi Yamauti Costa *(Brazilian Nanotechnology National Laboratory, Brazilian Center for Research in Energy and Materials, Campinas, Brazil)*, Olivia Carr, Laís Cristine Lopes, Maria Helena de Oliveira Piazzetta, Angelo Gobbi, Paulo Roberto Bueno, Renato Sousa Lima

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Symposium 14 Experimental and theoretical methods for atomistic understanding of electrochemical interfaces

POSTERS

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Kensuke Akamatsu *(Department of Nanobiochemistry, Konan University,, Kobe, Japan)*, Shunsuke Yamada, Yohei Takashima, Takaaki Tsuruoka

Interfacial Kinetic Analysis for Electrodeposition of Binary Alloy Films through Polyelectrolyte Membrane

S14-002

Julien Allegre *(Laboratoire Interdisciplinaire de Physique, Université Grenoble Alpes, Saint-Martin-d'Hères, France)*, Benjamin Cross, Romain Lhermerout

Electromechanical couplings in nanoconfined electrolytes

S14-003

Pupak Amini *(Phsycis, University of Limerick, Limerick, Ireland)*, Robert Lynch

Surface and Structural Analysis Using Raman, XRD and FT-IR of Glassy Carbon Electrodes Treated in VIV/VV Electrolytes

S14-004

Athira Anil *(Chemistry and Chemical Engineering, Chalmers University, Gothenburg, Sweden)*, Martin Kapuscinski, Harish Gudla, Prabahar Kuppamuthu, Irina Terekhina, Priyanka Nehla, Tapati Sarkar, Mats Johnsson, German Salazar-Alvarez

Operando Study of the Temporal Evolution of Cu-Pt Catalyst Composition During Glycerol Electrooxidation

S14-005

Paul Aronstein *(Applications, easyXAFS LLC, Renton, USA)*, Zachary Lebens-Higgins, William Holden, Devon Mortensen

Laboratory-Based X-ray Emission Spectroscopy (XES)for Determination of Oxidation State and Ligand Species

S14-006

Elena Atanasova *(Institute of chemical technology of inorganic materials, Johannes Kepler University Linz, Linz, Austria)*

Interfacial Atomic-scale Dynamics for Intrinsic Defect Engineering of Anodic Memristors

S14-007

Bernardo Ballotta *(School of Physics, Trinity College Dublin, Dublin, Ireland)*, Harry Dunne, Stephen Dooley

Unraveling the Complex Kinetics of Electrochemical CO_2 Reduction: A Multiphysics Perspective

S14-008

Saeid Behjati *(Chemistry, Leiden University, Leiden, Netherlands, Netherlands)*, Marc Koper

In Situ EC-STM Study of a Roughening Gold Single-Crystal Electrode Surface by Oxidation-Reduction Cycles in Perchloric Acid

S14-009

Svenja Both *(Institute of Engineering Thermodynamics, German Aerospace Center (DLR), Stuttgart, Germany)*, Andrey D. Poletayev, Timo Danner, Arnulf Latz, M. Saiful Islam

Studying surface degradation of charged Ni-based Li-ion battery cathodes using machine-learning interatomic potentials

S14-010

Filipe Camargo Dalmatti Alves Lima *(Campus Matão, Federal Institute of São Paulo (IFSP), Matão, Brazil)*, Rafael N. P. Colombo, Frank N. Crespilho, Wanderlã L. Scopel, Rodrigo G. Amorim

Functionalization-Driven Modulation of Charge Transport in Graphene: An Atomistic Insight into Electrochemical Interfaces

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Amanda Cameron *(Discipline of Chemistry, University of Newcastle, Callaghan, Australia)*, Scott Donne

Boltzmann Analysis of Interfacial Capacitance

S14-012

Jens Carthäuser *(Department of Chemistry, Martin Luther University Halle-Wittenberg, Halle (Saale), Germany)*, Maximilian Hamann, Michael Bron, Matthias Steimecke

Raman-coupled Microelectrochemical Investigations of Carbon Model Electrodes in the Positive Half-Cell Reaction of the all-Vanadium Redox Flow Battery

S14-013

Veronica Celorrio *(Physical Sciences, Diamond Light Source, Didcot, United Kingdom)*, David Rios-Ruiz, Veronica Celorrio, Armando Ibraliu, Pablo Arévalo-Cid, María Victoria Martínez-Huerta

Tuning electrocatalytic CO_2 reduction with atomically dispersed Cu in N,P co-doped carbon: Structure-Activity insights from in situ XAS

S14-014

Nicole Ceribelli *(Materials Science, University of Milano-Bicocca, Milano, Italy)*, Yang Shao-Horn, Livia Giordano

Unraveling Molecular Trends in Oxidative H Abstraction on the Positive Electrode of Li-ion Batteries

S14-015

Paul Chassagne *(ICPEES, University of Strasbourg/CNRS, Strasbourg, France)*, Mathieu Gervais, Amandine Brige, Eloïse Devaux, Gilles Ulrich, Elena R. Savinova, Pascal Didier, Julien Massue, Tristan Asset

Mapping pH Variations in the Local Reaction Environment Using Operando Fluorescence Confocal Microscopy

S14-016

Junsic Cho *(Department of Chemistry, Pohang University of Science and Technology (POSTECH), Pohang, Korea)*, Chang Hyuck Choi

Tuning Water at the Electrode–Electrolyte Interface to Stabilize Carbon in Harsh Electrochemical Environments

S14-017

Jeonghee Choi *(Chemical and Biological Engineering, Seoul National University, Seoul, Korea)*, Hayeong Park, Minsung Kim, Suseok Wee, Dabin Shin, Eunjin Kim, Minji Chung, Joon Hak Oh

Gradient Rigid Island Structures for Stretchable Devices via Controlled Photochemical Architectures

S14-018

José Octavio Contreras Sánchez *(Department of Civil and Environmental Engineering, Universidad de Guanajuato, Guanajuato, Mexico)*, Tame González Cruz, Israel Quiros Rodríguez, Gilberto Carreño Aguilera, Jorge Luis Morales Martínez, Juan Manuel Navarro Céspedes

Simplified Mathematical Modeling for the Optimization of Water Treatment by Electrocoagulation

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Lauren Cork *(Physics, Chalmers University of Technology, Göteborg, Sweden)*, Aleksandar Matic, Jan Jamroz, Björn Wickman

Using EQCM-D for understanding metal plating and stripping processes- relevant to batteries

S14-020

Sara Dale *(Department of Physics, University of Bath, Bath, United Kingdom)*

In-situ Raman Spectroscopy of MoS_2 Ionic Liquid Field Effect Transistors

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Federico Dattila *(Department of Applied Science and Technology (DISAT), Politecnico di Torino, Torino, Italy)*, Alessia Fortunati, Mario Gallone, Federica Zammillo, Hilmar Guzmán, Núria López, Simelys Hernández

Descriptors for Electrochemical CO_2 Reduction in Imidazolium-Based Electrolytes

S14-022

Zoé Dessoliers *(Chemical Energy - Nanoscale Solid-Liquid Interfaces, Helmholtz Zentrum berlin, Berlin, Germany)*, Louis Godeffroy, Mailis Lounasvuori, Namrata Sharma, Arsène Chemin, Philipp Adelhelm, Tristan Petit

Impact of surface chemistry and organic electrolytes on Na+ intercalation in Ti3C2Tx MXene: a chemical imaging study

S14-023

Juliana Valentina Diaz-Reyes *(Chemical Sciences, University of Limerick, Limerick, Ireland)*, Nicolás Rojas-Sanabria, Micheál Scanlon, Marco Fidel Suárez-Herrera

Modelling Differential Capacitance of the Electric Double Layer at Polarisable Liquid|Liquid Interfaces

S14-024

Jiafeng Du (State Key Laboratory of Physical Chemistry of Solid Surfaces, Xiamen University, Xiamen, China)

Unraveling CO-Tolerance Mechanism in Proton Exchange Membrane Fuel Cells via Operando Infrared Spectroscopy

S14-025

Audunn Elvarsson *(Physics, Chalmers University of Technology, Gothenburg, Sweden)*, Sofia Reiner, Julia Maibach

Improving XPS Analysis Methods for Studying the SEI in Li-ion Batteries

S14-026

David Fertig *(Institute of Physics, Norwegian University of Life Sciences, Ås, Norway)*, Mathijs Janssen

Charging dynamics of electric double layer capacitors including beyond-mean-field electrostatic correlations

S14-027

Marco Flieg *(Institute of physical and theoretical chemistry, University Tübingen, Tübingen, Germany)*, Margot Guidat, Matthias May

Direct Observation of Potential-Dependent Surface State Formation at an Electrochemical Interface via the Optical Anisotropy

S14-028

Nicci L. Fröhlich *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Hanna Sjö, Marc T. M. Koper

Fundamental Understanding of the Electrochemical Properties of a Polycrystalline Platinum Electrode

S14-029

Arulkumar Ganapathi *(Interface Chemistry and Surface Engineering, Max Planck Institute for Sustainable Materials GmbH, Düsseldorf, Germany)*, Martin Rabe, Michael Rohwerder

Probing Hydrogen Electrode Formation on Dry Noble Metals Covered with Thin Water Layer Using Kelvin Probe Method

S14-030

Christoph Griesser *(Department of Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Sergio Díaz-Coello, Francesc Valls-Mascaró, Julia Kunze-Liebhäuser

Electrochemical Near Ambient Pressure XPS to study the electrified solid/liquid interface

S14-031

Jonas Grings *(Chemistry, Technische Universität Berlin, Berlin, Germany)*, Jessica Liane Huebner, Silke Behrens, Peter Strasser

Using Hydrogen Peroxide Production as a Case Study to Determine Unifying Concepts between Thermo- and Electrocatalysis

S14-032

Greta Grossman *(Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Milena Martins, Alenka Krizan, Andrijana Marojevic, Jan Bitenc, Dusan Strmcnik, Marc T M Koper

Adlayer Formation in the Double Layer Region of Au(111) in Acetonitrile-based Electrolytes

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Vitali Grozovski *(Institute of Chemistry, University of Tartu, Institute of Chemistry, Tartu, Estonia)*, Anastasiya Ivashyna, Anita Portnova, Jaak Nerut, Enn Lust

Dynamic Electrochemical Characterisation of Prussian Blue Analogue and Bismuth Nanopowder Micro-Mesoporous Carbon Composites for Capacitive Deionisation using Alternating Current Cyclic Voltammetry

S14-034

Mingjun Gu *(Laboratoire de Chimie, ENS de Lyon, Lyon, France)*, Carine Michel, Stephan N. Steinmann

Electrostatically Embedded QM/MM Study of the Potential-Dependent Reorientation of Pyridine on Au(111)

S14-035

Lara Elisabeth Handle *(Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Sergio Diaz-Coello, Julia Kunze-Liebhäuser

Tuning the Alkaline Hydrogen Evolution Reaction by Irreversible Adsorption of Metal Hydroxides on Cu(hkl)

S14-036

Changbin Im *(Institute of Electrochemistry, Ulm University, Ulm, Germany)*, Timo Jacob

Unveiling the Role of Microstructural Features in Polymeric Carbon Nitrides: Reaction Energetics and Mechanistic Insights into HER and ORR via Advanced First-Principles Modeling

S14-037

Akihito Imanishi *(Graduate School of Engineering Science, The University of Osaka, Osaka, Japan)*, Kosei Yoshimoto, Ken-ichi Fukui

Influence of Domain Structure of Ionic Liquid on Diffusion Behavior of Ag+ Ions: Analysis Based on Hopping Diffusion Model

S14-038

Zetong Jia *(Department of Chemistry, College of Chemistry and Chemical E, Xiamen University, Xiamen, China)*, Tao Wang, Xinxin Zhuang

Long-Range Ordered Pt(100) Facets Govern Methane Electrooxidation via Interfacial Solvent Restructuring

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Alexander Klasen *(Park Systems, Park Systems Europe GmbH, Mannheim, Germany)*, Andrea Cerreta

Measuring Local Electrochemical Properties with Scanning Probe Microscopy

S14-040

Johannes Kochs *(Institute of Energy Technologies (IET-1), Forschungszentrum Juelich GmbH, Juelich, Germany)*, Armin Römer, Michael Schatz, Matthias Streun, Sven Jovanovic, Philipp Schleker, Rüdiger-Albert Eichel, Josef Granwehr

Localized determination of pH values by nuclear magnetic resonance during operation of an electrochemical cell

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Ida Kær Mønge *(Department of Chemistry, University of Copenhagen, Copenhagen, Denmark)*, Jordy Eggebeen, Marc Koper, Rebecca Pittkowski

Electrolytes in Action: Unraveling Cation Size Effects and Structural Dynamics in NiFe-Layered Double Hydroxides for OER Performance

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Alfred Larsson *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Andrea Grespi, Karen van den Akker, Auden Ti, Alexander Imre, Estephania Lira, Mahesh Ramakrishnan, Justus Just, Rik Mom, Marc Koper, Lindsay Merte, Edvin Lundgren

Platinum Oxidation Hinders the Oxygen Reduction Reaction

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Laura Laverdure *(Department of Engineering Sciences and Mathematics, Luleå University of Technology, Luleå, Sweden)*, Karoliina Honkala

Effects of pH and Potential on Pt-Catalyzed Glycerol Oxidation

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Robert Leiter *(Helmholtz Institute Ulm (HIU), Karlsruhe Institute of Technology (KIT), Ulm, Germany)*, Mennatalla Elmanzalawy, Maciej Tobis, Jaehoon Choi, Simon Fleischmann

Electron Microscopy Characterization of Battery Materials, Interfaces and Interphases

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Aleksei Leontev *(ChemSIN – Chemistry of Surfaces, Interfaces and Nanomaterils, Université libre de Bruxelles, Brussels, Belgium)*, Monica Parpal Gimenez, Mohamed El Marini, Stefan Merkens, Alejandro Gomez Perez, Jon Ustarroz Troyano

Pressure-Driven Reduction of Bulging in Electrochemical TEM as a Strategy to Improve Resolution and Reduce Radiolytic Impact

S14-046

Katherine Levey *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Nicci Fröhlich, Lucas de Kam, Steffen Hardt, Marc Koper

Understanding the Constant Phase Element Behaviour of the Double Layer Capacitance of Pt(111)

S14-047

Katherine Levey *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Anjali John, Joshua Tully, Julie Macpherson

Optimising Transmission UV–Vis Spectroelectrochemical Measurements by Combining Experimental Insight with 3D Continuum Modelling

S14-048

Mingren Liu *(Energy Materials Research Department, INM – Leibniz Institute for New Materials, Saarbrücken, Germany)*, Mingren Liu, Guanzheng Wu, Mei Yang, Tobias Heil, Yun Zhao, Zheng Fang, Qing Qin, Volker Presser

Electron-rich Niobium Oxide Subnanoclusters Boosting Charge Transfer for Highly Reversible Na-S Batteries

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Jinwen Liu *(Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands)*, Katharina Doblhoff-Dier, Marc Koper

A Two-Dimensional Electric Double Layer Model: Double layer Capacitance and Potential of Zero Charge

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Julius Lonnes *(Theory Department, Fritz-Haber-Institut der MPG, Berlin, Germany)*, Nicolas G. Hörmann, Karsten Reuter

Deciphering Electrochemical Barriers: Hammond's Postulate in Electrochemistry

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August Luure *(Institute of Chemistry, University of Tartu, Tartu, Estonia)*, Heigo Ers, Liis Siinor

Adsorption of Porphyrins on Bismuth – Ionic Liquid Interface

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Oliver Löhmann *(Institute for Electrochemical Energy Storage, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany)*, Philipp Hönicke, Daniel Grötzsch, Sijia Cao, Katja Frenzel, Rebeca Fortes-Martin, Simone Vadilonga, Sebastian Risse

SoTeXS @ BESSY II: Towards a Multimodal Operando Platform for Electrochemical Systems

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Amir Mahdian *(Department of chemistry and material science, School of chem, Aalto University, Espoo, Finland)*, Arsalan Hashemi, Kari Laasonen

Redox Flow Batteries: Improving Predictive Accuracy through Computational Calibration

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Noel Marks *(Faculty of Chemistry, University of Duisburg-Essen, Essen, Germany)*, Kai S. Exner

Investigation of Oxygen Reduction Reaction on Single-Atom Centers of MXenes

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Melissa Marks *(Department of Chemistry, University of Copenhagen, Copenhagen, Denmark)*, Ida Mønge, Rebecca Pittkowski

Structural Changes in NiFeCoCuMn Layered Double Hydroxides During Oxygen Evolution, Followed Operando with Simultaneous Diffraction, Total Scattering and X-ray Absorption

S14-056

Lena K. Mathies *(X-Ray Spectrometry, Physikalisch-Technische Bundesanstalt, Berlin, Germany)*, Lena K. Mathies, Adrian Jonas, Ioanna Mantouvalou, Katja Frenzel, Mirco Ruttert, Philipp Hönicke, Burkhard Beckhoff

Understanding SEI formation and subsequent evolution upon cycling in LIB combining ex-situ and operando methodology

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Daria Mazur *(Laboratory of Computational Physics, HSE University, Moscow, Russia)*

Modeling Of Electric Double Layer On a Metal-electrolyte Interface In The Framework Of Self-consistent Field Theory

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Jan Paul Menzel *(Department of Chemistry, Yale University, New Haven, USA)*, Victor Batista

Simulating Photoinduced Charge Transfer across the Electrode Interface

S14-059

Totan Mondal *(Faculty of Chemistry, University of Duisburg-Essen, Essen, Germany)*, Kai S. Exner

Electrochemical Ammonia Oxidation on Single-Atom Centers of MXenes: Deciphering N-N Coupling Pathways and Activity Trends

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Soumyadip Mondal *(n/a, Institute of Science and Technology Austria (ISTA), Klosterneuburg, Austria)*, Stefan A Freunberger

Marcus-type kinetics controls singlet and triplet oxygen evolution from superoxide

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Kayvan Moradi *(Department of Chemistry and Nanoscience Center, University of Jyväskylä, Jyväskylä, Finland)*, Marko Melander

The surface chemistry of Au(111) and Au(100) electrodes under oxygen reduction and evolution potentials

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Kayvan Moradi *(epartment of Chemistry and Nanoscience Center, University of Jyväskylä, Jyväskylä, Finland)*, Marko Melander

The surface chemistry of Au(111) and Au(100) electrodes under oxygen reduction and evolution potentials

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Toni Moser *(Physical Chemistry, University of Innsbruck , Innsbruck, Austria)*, Francesc Valls Mascaro, Andrea Auer, Julia Kunze-Liebhäuser

EC-STM Study of Electrochemical Oxidation and Reduction of Au(111)

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Jorge Ontaneda *(Faculty of Chemistry, University of Duisburg-Essen, Essen, Germany)*, Kai S. Exner

Fundamental Insights into the Nitrogen Oxidation Reaction over Pd-Based Electrodes

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Mailde S. Ozório *(Department of Chemistry, University of Copenhagen, København, Denmark)*, Marcus F. Nygaard, Jan Rossmeisl

Surface-Induced Strain Enhances the Oxygen Reduction Reaction in Binary Alloy Catalysts

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Mayank Pal *(Department of Engineering Sciences and Mathematics, Luleå University of Technology, Luleå, Sweden)*, Annika Neufischer, Michael Busch

The Influence of Inert Ion Doping on the Reactivity of Metal Oxides

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Monica Parpal Gimenez *(SURF – Research Group Electrochemical and Surface Engineerin, Vrije Universiteit Brussel, Bruxelles, Belgium)*, Layrton José Souza da Silva, Sorour Semsari Parapari, Saso Sturm, Jon Ustarroz

Direct Observation of Electrochemical Nucleation, Growth, and Dissolution Processes at the Nanoscale via In-situ TEM

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Efe Mehmet Peker *(Materials Chemistry, Bundesanstalt für Materialforschung und-prüfung (BAM), Berlin, Germany)*, Annica Wetzel, Julia Witt, Ozlem Ozcan

Kinetic Monte Carlo Simulations of Cu Electrodeposition Using Embedded Atom Method (EAM) and Crystal Orbital Hamilton Population (COHP) Analysis

S14-069

Johannes Rietbrock *(Materials, Imperial College London, London, United Kingdom)*, Matthew Spry, Yu Katayama, Alexey Krasavin, Anatoly Zayats, Fang Xie, Johannes Lischner, Ifan Stephens

Gaining insights into electrolyte oxidation during electrochemical ammonia synthesis using surface enhanced infra-red spectroscopy.

S14-070

Joan Roca Busacker *(Sustainable Materials Engineering, Vrije Universiteit Brussel, Ixelles, Belgium)*, Xinhua Zhu, Annick Hubin

Multiscale Approach for Spinel Cathode Materials Characterization for Performance Prediction

S14-071

Giovanni Rossetto *(Department of Chemistry and Pharmacy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany)*, Daniel Schauermann, Evanie Franz, Julien Steffen, Rosamaria Marrazzo, Silvia Leonardi, Laura Meda, Andreas Görling, Olaf Brummel, Jörg Libuda

An In-situ IR Spectroscopy Study of N-methylphtalimide as Anolyte for Organic Redox Flow Batteries

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Debashrita Sarkar *(Chemical Energy, Dutch Institute for Fundamental Energy Research, Eindhoven, Netherlands)*, Crizaldo Mempin

Operando infrared spectroscopy for investigating the photoelectrochemical water oxidation mechanism on haematite

S14-073

Lucas Andreas Scheibel *(Department of Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Andrea Auer

Development of a Combined Electrochemical AFM/STM System Using qPlus Sensors

S14-074

Fabian Schröfel *(Institute for Experimental and Applied Physics, Kiel University, Kiel, Germany)*, Chaolong Yang, Knud Schröter, Olaf Magnussen

Adsorbate Diffusion Studies With a Newly-Developed Electrochemical Video STM

S14-075

Knud Schröter *(Institute for Experimental und Applied Physics, Kiel University, Kiel, Germany)*, Fabian Schröfel, Matthias Greve, Karsten Tarhouni, Olaf Magnussen

Implementation of a Video STM for Studies of Electrochemical Interfaces

S14-076

Finn Schröter *(IEAP, Kiel University, Kiel, Germany)*, Jan Ole Fehrs, Barbara Schröder, Andrea Sartori, Pol Salles Perramon, Jakub Drnec, Olaf Magnussen

Interfacial water layering on Pt(111) around the potential of zero charge studied by in situ Surface X-ray Diffraction

S14-077

Marco Schönig *(Catalysis and Surface Chemistry, Leiden University, Leiden, Netherlands)*, Nicci Fröhlich, Rolf Schuster, Marc Koper

Disentangling electrolyte effects on the 110-related peaks of polycrystalline Pt

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Soren B. Scott *(Chemistry, University of COpenhagen, Copenhagen, Denmark)*

ixdat: Towards a universal tool for in-situ experimental data

S14-079

Giulia Serafino *(Materials and Chemistry (MACH), Vrije Universiteit Brussel Faculteit IR, Brussels, Belgium)*, Xinhua Zhu, Fernand Gauthy, Annick Hubin

Operando XPS coupled with Operando ORP-EIS to study interfaces Solid-State Li-ion Batteries

S14-080

Diwakar Singh *(Theoretical Catalysis and Electrochemistry, University of Duisburg-Essen, Essen, Germany)*, Kai S. Exner

Electrochemically formed Single-Atom Centers of MXenes for the Selective Electrochemical Reduction of Nitrogen to Ammonia

S14-081

Jing Sun *(UMR 5256, CNRS, IRCELYON, Lyon, France)*, Jing Sun, Zhengke Tu, Yacine Djerroud, Zhigang Yan, Masahiro Kunimoto, Takayuki Homma, Jesús González-Cobos, Philippe Vernoux

Electrooxidation of C1 to C3 Alcohols on Nickel Foil:In-situ Infrared and Raman Spectroscopy Studies

S14-082

Akihiro Suzuki *(Engineering, University of Yamanashi, Kofu, Yamanashi, Japan)*, Akihiro Suzuki, Akiyoshi Kuzume

In situ Raman spectroscopy to understand the interfacial dynamics of Nickel hydroxide during the hydrogen evolution reaction

S14-083

Yemin Tao *(Materials, Imperial College London, London, United Kingdom)*, Tomohiko Utsunomiya, Haiting Yu, Caiwu Liang, Yifeng Wang, Mary Ryan, If an Stephens, James Durrant, Yu Katayama, Aliaksandr Bandarenka, Reshma Rao

Investigating Cation-Dependent Water Oxidation Kinetics on Iridium-Based Oxides

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Yuki Tsuda *(Chemistry, Keio University, Yokohama, Japan)*, Takashi Yamamoto, Yasuaki Einaga

Characterization of Diamond Electrodes Surface Treated by Oxidation/Reduction Reactions

S14-085

Zhengke Tu *(Department of Advanced Science and Engineering, Waseda University, Tokyo, Japan)*, Jing Sun, Anne Bonhommé, Stephane Loridant, Masahiro Kunimoto, Philippe Vernoux, Jesús González Cobos, Takayuki Homma

Observation of Organic Molecules Electrooxidation on Ni-based Catalyst Using In-situ SERS Spectroscopy

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Ricardo Urrego-Ortiz *(Materials Science and Physical Chemistry, University of Barcelona and IQTC, Barcelona, Spain)*, Federico Calle-Vallejo

Enhanced DFT predictions of halogens using periodic properties

S14-087

Helena Valle Casara *(Institute of Physical Chemistry, University of Hamburg, Hamburg, Germany)*, Sonja Blaseio, Jochen Klein, Guoyu Shi, Katsuyoshi Kakinuma, Mehtap Oezaslan

Unravelling high Stability of Ir/Nb-doped SnO_2 Catalysts for OER using Operando Quick-XAS

S14-088

Francesc Valls Mascaró *(Department of Physical Chemistry, University of Innsbruck, Innsbruck, Austria)*, Francesc Valls Mascaró, Matthias Leitner, Andrea Auer, Julia Kunze-Liebhäuser

Electrochemical Oxidation of Cu(111)

S14-089

Diego Veloza-Diaz *(Institut für Physik, Johannes Gutenberg-Universität, Mainz, Germany)*, Friederike Schmid, Robinson Cortes-Huerto

Multiscale Framework for Electrode-Electrolyte Simulations

S14-090

Andrew Wain *(Electrochemistry Group, National Physical Laboratory, Teddington, United Kingdom)*, Rudra Samajdar, Oliver Rodriguez, Yundong Zhou

Metrology Considerations in Operando Raman Spectroscopy of Battery Materials: Towards Best Practice

S14-091

Zhenyu Wang *(Department of Computational Materials Design, Max Planck Institute for Sustainable Materials, Düsseldorf, Germany)*, Mira Todorova, Christoph Freysoldt, Jörg Neugebauer

SolShell – a toolkit for analyzing solvation dynamics from molecular dynamics trajectories

S14-092

Tao Wang *(College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China)*

Probing the mechanism of cation-enhanced CO_2 reduction on copper in acidic media

S14-093

Jules Wolff *(ICPEES - Electrochemistry and Energy conversion, University of Strasbourg, Strasbourg, France)*, Laurent Ruhlmann, Antoine Bonnefont, Alain Chaumont, Tristan Asset

Cations Effect on Pt Electrodes in Alkaline HER Conditions Studied by Molecular Dynamics at Constant Potentials

S14-094

Jianzhong Wu *(Department of Chemical and Environmental Engineering, University of California, Riverside, Riverside, USA)*

Unveiling Double Layer Effects in Electrocatalytic CO_2 Reduction

S14-095

Shunsuke Yamada *(Department of Nanobiochemistry, Konan University, Kobe, Japan)*, Yohei Takashima, Takaaki Tsuruoka, Kensuke Akamatsu

Electrodeposition of nickel though ion transport in polyelectrolyte membranes

S14-096

Jimun Yoo *(Institute for a Sustainable Hydrogen Economy (INW), Forschungszentrum Jülich, Jülich, Germany)*, Regina Palkovits, Hans-Georg Steinrück

Electrochemical Promotion in Thermocatalytic Dehydrogenation

S14-097

Jinrong Zhang *(BIP, CNRS, Marseille, France)*, Christophe Léger, Vincent Fourmond

Analytical Treatment of the Reversible-Enzyme-Redox-Film-Electrode Systems

S14-098

Pei Zhao *(Department of Chemistry, University of Warwick, Coventry, United Kingdom)*, Daniel Houghton, Richard Beanland, Julie Macpherson

Atomic Resolution Observations of the Electrochemical Dissolution of Gold Nanoparticles in the Presence of Chloride

S14-099

Laurens De Jong *(Leiden Institute of Chemistry, Universiteit Leiden, Leiden, Netherlands)*, Irene Groot, Marc Koper

The electric double layer from a different perspective: Study of the Pt-H_2O Interface under ultrahigh vacuum conditions

S14-100

Iris Van Den Bosch *(Inorganic Materials Science, University of Twente, Enschede, Netherlands)*, Christian van Weerdenburg, Edwin Dollekamp, Nini Pryds, Christoph Baeumer

Effect of Deposition Template on Model System High Entropy Oxide for the Oxygen Evolution Reaction

Symposium 15 Artificial intelligence for electrochemistry

S15-001

Manuel Bauer *(Electrical Energy Storage, Fraunhofer Institute for Solar Energy Systems ISE, Freiburg, Germany)*, Lukas A. Dold, Lea Eisele, Ingo Krossing, Daniel Biro

Preliminary Results of Machine Learning-based Prediction of Novel Electrolyte Additives for Lithium-Ion-Batteries and High-Throughput Testing

S15-002

Christoph Baumer *(Electrochemistry and Electroplating Group, Technische Universitaet Ilmenau, Ilmenau, Germany)*, Andreas Bund

Investigation of Process-Structure-Property Relationships for Decorative Chromium Layers from a Chromium(III) Electrolyte

S15-003

Jiaxin Li *(School of Chemical Engineering and Technology, Tianjin University, Tianjin, China)*, Jinglang Zhang, Qilong Wang, Chunpeng Yang

Large Language Model and Representation Learning Assisted Exploration of Metal–Organic Frameworks Solid-State Electrolytes

S15-004

Steven Linfield *(Department of Electrode Processes, Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland)*, Damian Gierek, Emilia Witkowska-Nery

Using the high-frequency acquisition of electrochemical data to improve machine learning-assisted analysis of under-sampled systems

S15-005

Alexander Lohmann *(Electrosynthesis, Max Plannk Institute for chemical endergy conversion, Mülheim an der Ruhr, Germany)*, Siegfried R. Waldvogel

Automated Optimization of the Synthesis of Alkyl Arenesulfonates in an Undivided Electrochemical Flow Cell

S15-006

Hamidreza Nateghi *(Theory and Computation of Energy Materials (IET-3), Forschungszentrum Jülich GmbH, Aachen, Germany)*, Hamidreza Nateghi, Farideh Abdollahi, Kourosh Malek, Thomas Kadyk, Michael Eikerling

Hybrid Modeling Framework for Predicting Catalyst Layer Degradation in PEMFCs

S15-007

Klara Neumayr *(Chemistry and Physics of Materials, Paris-Lodron-University of Salzburg, Salzburg, Austria)*, Klara Neumayr, Pronoy Dutta, Sven Dunkel, Lorenz Gruber, Christian Prehal

Harnessing Data-Driven Strategies for Experimentation and Optimization of Zinc-Metal Anodes in AZBs

S15-008

Mert Ozan *(Material and Surface Technologies, Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin, Germany)*, Özlem Özcan, Franziska Hess, Ahmad Rashid Hazem, Matthias Dimper, Salmin Sediqi, Annica Wetzel, Julia Witt

Optimization of Electroplating Processes of Alloy Films using a Material Acceleration Platform (MAP)

S15-009

Marcin Palys *(Faculty of Chemistry, University of Warsaw, Warsaw, Poland)*, Marek Kowski

An Improvement to Equivalent Circuit Analysis of Experimental Data That Uses a Genetic Algorithm

S15-010

Sébastien Pecqueur *(IEMN, CNRS, Lille, France)*, Louis Routier, Milan Toledo-Nauto, David Guérin, Paul Moustiez, Antoine Baron, Kamal Lmimouni, Yannick Coffinier, Bilel Hafsi

Electropolymerization on a Circuit Board for Closed-Loop Sensing-Arrays Manufacture-&-Readout: When Sensors learn by Growing

S15-011

Muhammad Saleh *(Theoretical Physics of electrified liquid-solid interface, Ruhr-University Bochum, Bochum, Germany)*, Marialore Sulpizi, Clotilde S Cucinotta, Alexander Lozovoi

Atomistic Simulation of Defective Platinum - Water Interface with Deep Potential Neural Networks

S15-012

Yu-Hang Tang *(College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China)*, Feng Wang, Jun Cheng

Microscopic-Level insights into structural and chemical evolution of electrolyte/electrode interphase in Li-ion batteries via machine learning molecular dynamics

S15-013

Ahmad Tirmidzi *(Chemistry, Biochemistry and Pharmaceutical Sciences, University of Bern, Bern, Switzerland)*, Matthias Arenz, Vladislav A. Mints

Investigating Particle Swarm Optimization as an alternative to Bayesian Optimization in High Entropy Alloy Research

S15-014

Zihan Yan *(Department of Materials Science and Engineering, Westlake University, Hangzhou, China)*, Yizhou Zhu

Impact of Lithium Nonstoichiometry on Ionic Diffusion in Tetragonal Garnet-type $Li_7La_3Zr_2O_{12}$

S15-015

Jackie Yik *(Department of Chemistry - Ångström Laboratory, Uppsala University, Uppsala, Sweden)*, Jackie Yik, Carl Hvarfner, Jens Sjölund, Leiting Zhang, Erik J. Berg

Data-driven Bayesian Optimization Coupled Robotic Experimentation: Aqueous Multi-additive Electrolyte Design for Zinc-ion Batteries

S15-016

Qi You *(College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China)*, Yan Sun, Feng Wang, Jun Cheng, Fujie Tang

Decoding the Competing Effects of Dynamic Solvation Structures on NMR Chemical Shifts of Battery Electrolytes via Machine Learning

Symposium 16 General Session - Hidden treasures - diversity of electrochemistry

S16-002

Vivien Andrieux *(Institut of Organic Chemistry II and Advanced Materials, Ulm University, Ulm, Germany)*, Christophe Bucher, Denis Frath, Thomas Gibaud, Birgit Esser

Electrochemical control of structuring π-π interactions for new high performance self-assembled organic materials

S16-003

Leticia Anahi Azpeitia *(INIFTA, National University of La Plata, La Plata, Argentina)*, Sofia Tsunoda, Agustín Bolzán, Maria José Rodriguez Presa, Claudio Gervasi

Selection of Graphene Oxides to be used in the Preparation of Extended-area Electrocatalytic Electrodes

S16-004

Cristhian Berríos *(Ciencias del Ambiente, Facultad de Química y Biología, Universidad de Santiago de Chile, Santiago, Chile)*, Nancy Mendoza, Francisco Herrera

Use of Ti/TiO_2 and Ti/TiO_2 Electrodes Modified With NiO and MoO_3 for Degradation of Oxytetracycline and Oxolinic Acid by Electrocatalysis and Photoelectrocatalysis

S16-005

Tamino Bosse *(Chemical Energy, Helmholtz-Zentrum Berlin, Berlin, Germany)*

Investigating the Influence of O_2 towards Electrochemically Mediated Amine Regeneration (EMAR) for CO_2 Capture

S16-006

Wen-Bin Cai *(Department of Chemistry, Fudan University, Shanghai, China)*, Xianxian Qin, Wen-Bin Cai

Disentangling Heterogeneous Thermocatalytic Formic Acid Dehydrogenation from an Electrochemical Perspective

S16-007

Yue Cheng *(State Key Laboratory of Urban Water Resource and Environment, Harbin Institute of Technology, Harbin, China)*, Shilin Yang, Jun Nan

Unveiling electron transfer and radical transformation pathways in coupled piezo-catalysis and activated persulfate for complex pollutant removal

S16-008

Danny Chhin *(Chemistry, McGill University, Montreal, Canada)*, Xueqing Wang, Marco Bortoli, Anju Manickoth, Luis Blancafort, Janine Mauzeroll, Jean-Philippe Lumb

Elucidating the Electrochemical Properties of Eumelanin

S16-009

Mouad Dahbi *(Materials Science,Energy and Nano-engineering Department, Mohammed VI Polytechnic University, Ben Guerir, Maroc)*, Marwa Tayouri Mohamed Aqil

Controllable Synthesis of Porous $LiFePO_4$/C Microspheres via a One-Step Co-Precipitation Process for High-Performance Lithium-Ion Batteries

S16-010

Juliana De Almeida *(Chemical Engineering, Federal University of São Paulo, São Paulo, Brazil)*, Juliana De Almeida, Christiane de Arruda Rodrigues

Simultaneous electrosynthesis of Ni–Zn binary metal–organic frameworks on a ternary oxide nanotubular layer

S16-011

Vitória Dibo *(Faculty of Science, University of Porto, Porto, Portugal)*, Cristina Delerue-Matos, Simone Morais, Álvaro Torrinha

Development of a Zeolitic-Imidazole Framework Carbon Sensor forDetection of Bisphenol A in the Environment

S16-012

Vitória Dibo *(Faculty of Science, University of Porto, Porto, Portugal)*, Cristina Delerue-Matos, Simone Morais, Álvaro Torrinha

Carbon Fibre Transducer for the Determination of Venlafaxine in Environmental Water

S16-013

Anahita Emminghaus *(Institute of Inorganic Chemistry, University of Stuttgart, Stuttgart, Germany)*, Bastian Kannen, Bertold Rasche*

Electrochemical Investigation of the V-Se Phase System

S16-014

Rebecca Erkes *(IET-1 - Fundamental Electrochemistry, Forschungszentrum Jülich, Jülich, Germany)*, Rebecca Erkes, Jehad Ahmed, Krzysztof Dzieciol, Yasin Emre Durmus, Hermann Tempel, Anna Windmüller, Luc Raijmakers, Rüdiger-A. Eichel

Connecting the Dots: Combining Tomography and Diffraction Techniques to Investigate Nucleation Behavior on Zn-Metal Electrodes

S16-015

Florymar Escalona-Durán *(Institute of Chemistry, University of São Paulo, São Carlos, Brazil)*, Florymar Escalona-Durán, Carlos Henrique Magalhães Fernandes, Willyam Róger Padilha Barros, Manuel Andrés Rodrigo Rodrigo, Marcos Roberto de Vasconcelos Lanza

UVC/e-H_2O_2 technology using gas diffusion electrodes with low La loadings on Printex L6 for the removal of emerging contaminants

S16-016

Raul Felisardo *(Department of Molecular Chemistry and Physics, São Carlos Institute of Chemistry, University of São Paulo, São Carlos, Brazil)*, Raul Felisardo, Florymar Durán, Carlos Fernandes, Gessica Santos, Manuel Rodrigo, Marcos Lanza

Enhancing H_2O_2 electro-generation through statistical planning for the treatment of different aquatic matrices contaminated by emerging contaminants

S16-017

Cinthya Felix Navarro *(Departamento de Investigación en Polímeros y Materiales, Universidad de Sonora, Hermosillo, Mexico)*, Amed Gallegos Tabanico, Jorge Jimenez Canale, Hisila del Carmen Santacruz Ortega, Jose Andrei Sarabia Sainz

Electrochemical Immunosensor for Rapid Detection of Rattlesnake (Crotalus spp.) Venom

S16-018

José Ferreira *(Physical Organic Chemistry, Radboud University, Nijmegen, Netherlands)*, Jeroen Michiels, Marty Herregraven, Peter Korevaar

Electrochemical growth of dynamic conductive networks, mediated by supramolecular myelin filaments

S16-019

Irene Giusti *(Department of Industrial Engineering, University of Bologna, Bologna, Italy)*, Marella De Santis, Alfredo Liverani, Luca Piancastelli

Different Approaches in Lithium-Ion 4680 Cell Numerical Simulation: Electrochemical-Thermal-Structural Coupling

S16-020

Franz Glaubitz *(Institute of Biochemistry, University of Greifswald, Greifswald, Germany)*, Valentin Mirceski, Uwe Schröder

Advancing Multi-frequency Electrochemical Faradaic Spectroscopy as a Novel Electroanalytical Technique

S16-021

Andreas Greul *(Institute of Chemical Technology of Inorganic Materials, Johannes Kepler University, Linz, Austria)*, Manuel Hofinger, Christoph Kleber, Achim Walter Hassel

The Influence of Mouthwash Solutions on the Corrosion of Titanium Dental Implants

S16-022

Sang-Hyeon Ha *(3rd R&D Institute - 6th Directorate, Agency for Defense Development, Daejeon, Korea)*, Sang-hyeon Ha, Hyun-ki Yoon, Joon-ho Lee, Jaein Lee, Ahn-tae Young, Yusong Choi

Manufacturing process of lithium anode using the Isotropic Capillary Impregnation Method for thermally activated batteries

S16-023

Heung Yong Ha *(Center for Energy Storage Research, Korea Institute of Science and Technology, Seoul, Korea)*, Jaewon Kim, Syed B. H. Rizvi, Byoungwoo Won, Kibong Lee, Heung Yong Ha

Performance Improvement of Brine Electrolyzers Producing HCl and NaOH

S16-024

Angelika Holzinger *(Institute of Physical Chemistry (IChF), Polish Academy of Sciences (PAN)*, Warsaw, Poland), Shayon Bhattacharya, Magdalena Wiloch, Martin Jönsson-Niedziólka

Adsorption of Aβ Peptides at the Liquid-Liquid Interface

S16-025

Katsuki Hori *(Department of Applied Chemistry and Biochemistry, National Institute of Technology, Wakayama College, Gobo, Japan)*, Shoki Nawate, Mitsuhiro Matsumoto, Yusuke Tsuchida, Katsuhiko Tsunashima, Hirohisa Yamada

Dependence of Cation Structures on Electrochemical Polymerization of Aniline in Phosphonium Ionic Liquids

S16-026

Marzieh Sadat Hosseini *(Fashion and Textiles, RMIT , Melbourne, Australia)*, Shadi Houshyar, Xin Wang, Rajiv Padhye

Development of Paper-Based Nanosensors for Iron Ion Detection in Water Using Gold Nanoparticles

S16-027

Itsuki Ikeda *(Konan University, Graduate School of Natural Science, Okamoto 8-9-1, Higashinada-ku, Kobe city, Japan)*, Kosuke Katagiri, Takashi Kakiuchi, Masahiro Yamamoto, Itsuki Ikeda

The solubility of new ionic liquids with (nonafluorobutanesulfonyl)(trifluoromethanesulfonyl) amide anion in water and its application to ionic liquid salt bridge

S16-028

Benjamin Janotta *(Fundamental Electrochemistry (IET-1), Forschungszentrum Jülich, Jülich, Germany)*, Maximilian Schalenbach, Hermann Tempel, Rüdiger-A. Eichel

Inconsistencies in the Debye-Hückel Theory related to the Statistic Foundation and Permittivity

S16-029

Takashi Kakiuchi *(Central Office, pH Science and Technology Laboratory, Wakayama, Japan)*, Ryo Aoyama, Chiharu Ammo, Takeru Kubomoto, Masahiro Yamamoto

The Phase-boundary Potential across the Interface between the Ionic Liquid Salt Bridge and an Aqueous Electrolyte Solution

S16-030

Ryo Kotsubo *(Pure and Applied Chemistry, Tokyo University of Science, Noda, Japan)*, Keiichi Komatsuki, Noya Loew, Hikari Watanabe, Isao Shitanda, Masayuki Itagaki

Determination of the Gelation Point of Methylcellulose using the Rheo-impedance Measurement Method

S16-031

Lena K. Mathies *(X-Ray Spectrometry, Physikalisch-Technische Bundesanstalt, Berlin, Germany)*, Lena K. Mathies, Katja Frenzel, Adrian Jonas, Philipp Hönicke, Sebastian Risse, Burkhard Beckhoff

A systematic beam damage study on solid state electrolytes for LiS batteries

S16-032

Yoshua Moore *(Electrobiotechnology, Technical University of Munich, Straubing, Germany)*, Darren Buesen, Chao Bao, Xialong Chen, Linying Shang, Babak Rezaei, Stephan Keller, Jenny Zhang, Nicolas Plumeré

Characterising Porous Electrodes with Diffusional Voltammetry

S16-033

Sara Natalia Moya Betancourt *(Department of Chemical Sciences, Bernal Institute, University of Limerick, Limerick, Ireland)*, Nicolás Rojas-Sanabria, Alonso Gamero-Quijano, Micheál D. Scanlon

Impact Electrochemistry of Gold Nanoparticles on a PEDOT Film Electrosynthesized at a Liquid|Liquid Interface

S16-034

Itamar Neckel *(Brazilian Synchrotron Light Laboratory (LNLS), Brazilian Center for Research in Energy and Materials, Campinas, Brazil)*, Itamar Neckel, Keyla Teixeira Santos, Pablo Fernandez

Sample Environments For Electrochemistry In Situ, and Operando Experiments at The Brazilian Synchrotron Light Source (Sirius)

S16-035

In-Hyun Nam *(Mineral Resources Division, Korea Institute of Geoscience and Mineral Resources (KIGAM), Daejeon, Korea)*, Gyuhye Kim, Jungho Ryu

Study on MCDI Cell Efficiency Improvement and Scale-up for the Development of an Electrochemical Cesium Adsorption/Desorption Pretreatment System in Seawater

S16-036

Junji Nunomura *(Research & Development Center, UACJ Corporation, Nagoya, Japan)*, Hisayoshi Matsushima, Yoshihiko Kyo, Yoichi Kojima, Mikito Ueda

Anodic dissolution of Al–Zn alloys in Lewis acidic AlCl3–EmImCl ionic liquids

S16-037

Taynara Oliveira Silva *(Department of Chemistry, University of Bath, Bath, United Kingdom)*, Taynara Oliveira Silva, Géssica de Oliveira Santiago Santos, Marcos Roberto de Vasconcelos Lanza, Luís Augusto Martins Ruotolo, Frank Marken

Utilization of a Polyaniline-Activated Carbon Gas Diffusion Electrode for Hydrogen Peroxide Electrogeneration in Ciprofloxacin Degradation

S16-038

Sébastien Pecqueur *(IEMN, CNRS, Lille, France)*, Paul Moustiez, David Guérin, Antoine Baron

Electrochemistry on a Chip to Manufacture Microsensors: Technological Limitations for Electropolymerization Downscaling

S16-039

Guilhem Pignol *(Zemos, Ruhr Universitat Bochum, Bochum, Germany)*, Kristina Tschulik

Study of electron transfer in Aluminium Alloy Oxide pores by SECCM

S16-040

Nadine Pébère *(CIRIMAT-ENSIACET, Université de Toulouse, Toulouse, France)*, Nicolas Caussé, Eric Dantras, Deni Jero

Molecular relaxation and plasticization of polyamide films in NaCl solutions: analysis by electrochemical and broadband dielectric spectroscopies

S16-041

Paramaconi Rodriguez *(Electrochemical Hydrogen Technologies, CIC energiGUNE, Miñano, Spain)*, Miriam Romera

Electrochemical Assessment of Solid Gallium and its Comparison with Liquid GaIn Eutectic Alloy in Alkaline Media

S16-042

Jungho Ryu *(Mineral Resources Division, KIGAM, Daejeon, Korea)*, Ashish B. Kanase, Mahadeo A. Mahadik, Ruturaj P. Patil, Jum Suk Jang

Electrochemical Cs Ion Exchange Using Copper Hexacyanoferrates Prepared with Varying Citrate Concentrations

S16-043

Gessica Santos *(Department of Molecular Chemistry and Physics, University of São Carlos, São Carlos, Brazil)*, Bruna Monte, Gessica Santos, Fausto Bimbi-Junior, Taynara Silva, Willyam Barros, Marcos Lanza

A feasibility analysis of carbon felt as gas diffusion electrode: a case study for norfloxacin degradation

S16-044

Ryo Sato *(Division of Science and Engineering, Tokyo Denki University, Hatoyama, Japan)*, Terumasa Kuge, Shuji Nakanishi, Yoshiharu Mukouyama

Corrosion Potential Oscillation of Iron in Nitric Acid Solutions: Mechanistic Study through Numerical Simulation

S16-045

Ryo Sato *(Division of Science and Engineering, Tokyo Denki University, Hatoyama, Japan)*, Terumasa Kuge, Shuji Nakanishi, Yoshiharu Mukouyama

Mechanism of Corrosion Potential Oscillation of Iron in $H_3PO_4 + H_2O_2$ Solutions

S16-046

Ryo Sato *(Division of Science and Engineering, Tokyo Denki University, Hatoyama, Japan)*, Terumasa Kuge, Yoshiharu Mukouyama

Developments of alternating current battery composed of iron electrodes

S16-047

Micheál D. Scanlon *(Department of Chemical Sciences, Bernal Institute, University of Limerick (UL), Limerick, Ireland)*, Iván Robayo-Molina, Jessica L. Smith-Osorio, José A. Manzanares

A Numerical Model of Dynamic Photocurrent Responses from Photoactive Films at a Polarizable Liquid|Liquid Interface

S16-048

Mareike Schmidt *(Technische Chemie 1, TU Darmstadt, Darmstadt, Germany)*, Bastian Etzold

Selective water electrolysis for control of the oxygen concentration in organoid growth media

S16-049

Priscila Seveur *(Professorship of Electrobiotechnology, Technische Universität München- Campus Straubing, Straubing, Germany)*

Electrochemical (oligo)peptide synthesis

S16-050

Shivam Shukla *(Technical Chemistry III, Universität Duisburg-Essen, Duisburg, Germany)*, Alejandro Esteban Perez Mendoza, Dana Schellenburg, Sven Reichenberger, Semjon Mooraj, Tobias Steege, Carl Hendric Scharf, Olaf Magnussen, Zwahr Christoph, Stephan Barcikowski, Corina Andronescu

Exploring OER Activity Using Scanning Electrochemical Cell Microscopy on Fe-Doped Cobalt Oxide Spinel via Ultrashort Pulsed Laser Interference Patterning

S16-051

Julia Sinisi *(Nanochemistry, Max Planck Institute, Stuttgart, Germany)*, Gabriel A. A. Diab, Stefan Repp, Titus Ekabat, Bettina V. Lotsch

Mapping K-PHI's Reversible pH Transition

S16-052

Katarzyna Siuzdak *(Centre of Plasma and Laser Engineering, , Gdansk, Poland)*, Dujearic-Stephane Kouao, Agnieszka Kramek, Justyna Gumieniak, Emerson Coy

Cyclic Voltammetry-Assisted Etching for Controlled Morphology of MXenes

S16-053

Emil Skrentny *(Institute for a Sustainable Hydrogen Economy (INW), Forschungszentrum Jülich GmbH, Jülich, Germany)*, Marten Huck, Andreas Kuhlmann, Artem Saleev, Ferit Sit, Steffen Tober, Fabian Wilde, Hans-Georg Steinrück

Battery Electrolyte Characterization via operando Quantification of Salt Concentration Profiles upon Cell Polarization using X-ray Absorption Radiography

S16-054

Thierry Slot *(Schulich Faculty of Chemistry, Technion - Israel Institute of Technology, Haifa, Israel)*, Yair Shahaf, David Eisenberg

Ammonia from Air: plasma-catalytic NOx production

S16-055

Jessica Lorena Smith Osorio *(Department of Chemical Sciences and Bernal Institute, University of Limerick, Limerick, Ireland)*, Alonso Gamero-Quijano, Micheál D Scanlon

Electrosynthesis of PEDOT/Methyl β-Cyclodextrin Composite Thin Films at the Interface Between Two Immiscible Electrolyte Solutions

S16-056

Raira Souza De Santana Castro *(Chemistry and molecular physics, São Paulo University, São Carlos, Brazil)*, Raira Souza de Santana Castro, Gessica O. S. Santos, Marcos R. V. Lanza

Recycled alkaline battery derived-mixed metal oxide anodes for enhanced photoelectrochemical oxidation of venlafaxine

S16-057

Pascal Stump *(DCBP, Universität Bern, Bern, Switzerland)*, Matthias Arenz, Rebecca Pittkowski

Synthesis and Characterization of Supported High Entropy Alloy Nanoparticles for the Oxygen Reduction Reaction Using Extended X-Ray Absorption Fine Structure

S16-058

Miguel Tavares *(LAQV REQUIMTE, ISEP; FCUP, Porto, Portugal)*, Cristina Delerue-Matos, Simone Morais, Álvaro Torrinha

Electrochemical sensor based on a copper metal organic framework for detection of metformin in environmental samples

S16-059

Miguel Tavares *(LAQV Requimte, ISEP; FCUP, Porto, Portugal)*, Álvaro Torrinha, Cristina Delerue-Matos, Simone Morais

Gemfibrozil Sensing through a highly effective Fe-BTC Metal-Organic Framework Sensor

S16-060

Bryan Andres Tiban Anrango *(Department of Chemical Engineering, University of Castilla - La Mancha, Ciudad Real, Spain)*, Cristina Navas, Victor Valenzuela, Mar Reyes, Antonio Manzaneda, Andres Rascon, Juan Garcia, Rosana Salazar, Juan Palomares-Ruis, Manuel Andres Rodrigo, Cristina Saez

Understanding the oxidative degradation of herbicides with electrochemically produced hydrogen peroxide and ozone: Analysis of herbicide removal and the impact on the biodiversity of agricultural soils from Spanish olive groves

S16-061

Bryan Andres Tiban Anrango *(Department of Chemical Engineering, University of Castilla - La Mancha, Ciudad Real, Spain)*, Jesus Fernandez-Cascan, Joaquin Guadaño, Cristina Saez, Manuel Andres Rodrigo

Implementing electrokinetic remediation at field scale: Remediation of an industrial soil contaminated with organochlorine compounds.

S16-062

Katsuhiko Tsunashima *(Department of Applied Chemistry and Biochemistry, National Institute of Technology, Wakayama College, Gobo, Japan)*, Yuko Sahara, Yuito Uenaka, Seiya Kikuchi, Hidekatsu Hotta, Yusuke Tsuchida, Hirohisa Yamada

Preparation and Physicochemical Properties of Quaternary Phosphonium Salts Based on a Cyclic Amide Anion

S16-063

Haruna Tsunegi *(Department of Pure and Applied Chemistry, Tokyo University of Science, Noda-shi, Japan)*, Yoshifumi Yamagata, Yuichi Takasaki, Keisuke Miyamoto, Kazutake Takada, Noya Loew, Hikari Watanabe, Isao Shitanda, Masayuki Itagaki

Evaluation of changes in electrical conductivity in the phase transition behavior of poly(N-isopropylacrylamide) gel with changes in temperature using Rheo-Impedance measurement method

S16-064

Gianluca Visagli *(Chemistry, Paris-Saclay University, Versailles, France)*, Lotfi Benali Karroubi, Silvia Voci, Mathieu Frégraux, Arnaud Etchberry, Anne-Marie Gonçalves

Revolutionizing semiconductor interfaces: dielectric behavior in passivated undoped n-InP via polyphosphazene films in liquid ammonia

S16-065

Sunghwan Won *(Department of Chemistry, Seoul National University, Seoul, Korea)*, Dongmin Park, Yousung Jung, Hyunwoo Kim, Taek Dong Chung

Photoelectrocatalytic Radical–Radical Coupling: Achieving Selective Trifluoromethylation through Balanced Oxidation Kinetics

S16-066

Hyun-Ki Yoon *(3rd R&D Institute - 6th Directorate, Agency for Defense Development, Daejeon, Korea)*, Hyun-ki Yoon, Sang-hyeon Ha, Joon-ho Lee, Jaein Lee, Ahn-tae Young, Yusong Choi

Vision-based analysis method for internal lithium anode state and characteristics of thermally activated batteries

S16-067

Maximiliano Andrés Zensich *(MEET Batterieforschungszentrum, University of Münster, Münster, Germany)*, Andreas Grauvogl, Julius Buchmann, Simon Wiemers-Meyer, Martin Winter, Sascha Nowak

Treatment of Process Water from Lithium Battery Recycling Using Supercritical CO_2 Extraction: Removal of Organic Substances and Recovery of Critical Metals

S16-068

Angelo Tricase *(Pharmacy - Pharmaceutical Science, University of Bari, Bari, Italy)*, Verdiana Marchianò, Giulio Roscini, Nicoletta Ditaranto, Cinzia Di Franco, Matteo Piscitelli, Eleonora Macchia, Gaetano Scamarcio, Luisa Torsi, Paolo Bollella

Lock-and-Key Sensing: Polydopamine-based Molecularly Imprinted Polymers for Ultrasensitive PAH Detection

Notes

Notes

ISE Society Information

The International Society of Electrochemistry

The International Society of Electrochemistry (ISE) was founded in 1949 by leading European and American electrochemists to serve the growing needs of electrochemistry. At that time only a handful of scientists were members of the society – known as CITCE (Comité International de Thermodynamique et Cinétique Electrochimiques). Since then ISE has evolved and comprises now more than 3600 active members, from 77 countries, and is organized in 44 Regional Sections. Both industrialised and developing countries from all five continents are represented. ISE is, therefore, a truly world-wide organisation. ISE is a non-profit-making organisation with its seat in Lausanne, Switzerland.

The International Society of Electrochemistry (ISE) is devoted to the advancement of electrochemical science and technology through the promotion of international contacts and the dissemination of scientific knowledge. For this ISE organises Annual and Topical Meetings which are held in different countries each year and which cover a wide range of current topics in fundamental and applied electrochemistry. The activities of ISE include the sponsoring of regional meetings, and of special meetings of limited participation devoted to particular subjects. A scientific journal, Electrochimica Acta, is edited by ISE and supplied to its members at a special rate. Individuals, non-profit organisations, industrial companies and learned societies may become members of ISE. The administration of ISE is done by an Executive Committee, periodically elected by all members. The Regional Representatives together with the Division Officers form the ISE Council which advises the Executive Committee. The scientific activities of ISE are grouped into Scientific Divisions. They are organised and co-ordinated by the Committee of Division Officers headed by the President Elect. Upon joining ISE each member indicates his/her divisional interests.

The history of the International Society of Electrochemistry (ISE) is described in a series of articles published in Volume 45 of Electrochimica Acta and available on the web site of the Society (www.ise-online.org/ise-about/ISE-history.php).

Why you should join ISE

ISE membership provides a number of advantages which can be summarized as follows:

- Individual members can get reduced subscription rates for the following journals:
  Electrochimica Acta,
  Journal of Electroanalytical Chemistry,
  Electrochemistry Communications,
  Bioelectrochemistry,
  Journal of Power Sources,
  Journal of Applied Electrochemistry,
  Electrocatalysis,
  Journal of Solid State Electrochemistry for personal use.
  There is a also a **Discounted Package** available consisting of the Journal of Electroanalytical Chemistry, Electrochemistry Communications, and Bioelectrochemistry (online).
- Reduced registration fees at ISE Meetings
- Access to the "members restricted area" of the ISE website
- Access to the full membership directory with all members addresses

How to become an ISE member

Becoming an ISE member is simple: you will find a Membership Application Form on the Society web site (at the address: **https://members.ise-online.org/members/new_members.php**), which you can fill in and submit online. In the application form you will have to select up to three Divisions and indicate two sponsoring ISE members. Should it be difficult for you finding these sponsors, please write to the Executive Secretary of the Society - Dr. Petr Krtil, e-mail: petr.krtil@jh-inst.cas.cz

Membership fees

Individual yearly membership fees are 50 EUROS for members above 30 years of age, and 15 EUROS for members of age 30 or less and for Emeritus members. Once your application is accepted, the ISE Office will contact you for the payment of the Membership dues.

ISE Organization

Executive Committee

The Executive Committee is entrusted with the management of the Society.

ISE Office

The ISE Office performs all administrative tasks related to the operation of the Society. It is located in Switzerland, and managed by an Executive Secretary.
The ISE Office serves as the primary contact for members and non-members.

Division Officers

The scientific activities of ISE are grouped into seven Scientific Divisions and a New Topics Committee. The divisions are headed by a Chairperson assisted by a Past Chair, a Chair Elect and two Vice Chairs. Their role is to promote and represent the scientific interests of the division and its members, for example through contributing to the organization of Annual, Topical and other Society meetings.

Regional Representatives

In each country or group of countries having fifteen members or more, a national or regional section of ISE may be formed. Each section has a Regional Representative.

Council

The ISE Council is an Advisory Body. The voting members of the Council consist of three Officers from each Division and all the Regional Representatives. All persons constituing the Council are elected by the members of the Society.

Scientific Meetings Committee

The Scientific Meetings Committee plans and oversees the organization and sponsorship of scientific meetings within the broad field of electrochemistry.

Rakel Wreland Lindstrom, *Chair*
Plamen Atanassov, *observer ex-officio as President*
Andrea Russell, *ex-officio as President Elect*
Monica Santamaria, *ex-officio as Treasurer*
Francesca Soavi, *ex-officio as Secretary General*
Silvia Cere
Vincent Vivier
Raphael Berger, *non-voting member, representative of the ISE office*
Petr Krtil, *observer ex-officio as Executive Secretary*

Fellows Nominating Committee

The Fellows Nominating Committee is a standing committee which proposes names to the Executive Committee for the title of ISE Fellow. It is also responsible for identifying candidates for honorary membership.

Maria Forsyth, *Institute for Frontier Materials, Deakin Unviersity, Australia (2022-2026)*
Hubert Gasteiger, *TUM, Germany (2023-2027)*
Bingwei Mao, *Xiamen University, China (2023-2027)*
Mark Orazem, *University of Florida, USA (2024-2028)*
José Zagal, *University of Santiago de Chile (2025-2029)*

Inclusive Excellence Committee

The ISE Inclusive Excellence Committee promotes inclusion across all ISE activities, from meetings to awards. It supports diverse applicant pools and advises the Executive Committee on strategies for equity and inclusivity.

Shelley Minteer – *University of Utah – USA*
Katrin Domke – *University of Duisburg-Essen – Germany*
Patrick Unwin – *University of Warwick – United Kingdom*
Yungchia Chen – *Georgia Institute of Technology – USA*

ISE Executive Committee

President

Plamen Atanassov, Irvine, USA (2025-2026)
Representation of ISE. Chairperson of Executive Committee, Council and General Assembly.

President Elect

Andrea Russell, Southampton, UK (2025-2026)
Chairperson of Committee of Division Officers. Coordination of scientific program of future Annual Meetings, supervision of Division Officers' activities.

Immediate Past President

Katharina Krischer, Munich, Germany (2025-2026)
Chairperson of Executive Committee in the absence of the President.

Vice Presidents

Take Dong Chung, Seoul, Korea (2024-2026)
Responsible for ISE educational activities

Shelley Minteer, Salt Lake City, USA (2023-2025)
Responsible for regional sections

Wataru Sugimoto, Ueda, Japan (2024-2026)
Responsible for value for members

Enrique Herrero, Alicante, Spain (2025-2027)
Responsible for communication and external relationships

Secretary General

Francesca Soavi, Bologna, Italy (2024-2026)

General tasks
Ensuring continuity and efficiency of scientific policy. Coordination of tasks of Vice Presidents. Identification of new developments in electrochemistry and possible new scientific and nonscientific activities. The President or President-Elect does not handle scientific matters.

Tasks in collaboration with ISE Office
Ensuring that the constitution, bylaws, guidelines, schedules, etc are observed. Preparation of Annual Reports. Collection of information for newsletters and coordination of actions.

Annual and Topical ISE Meetings
Coordination of Meetings (Location, time, topics). Representative of the Executive Committee and advisor to Local Organising Committees for nonscientific matters (Location, facilities, control of financial planning, schedule, publicity).

Treasurer

Monica Santamaria, Palermo, Italy (2023-2025)

Responsible for the administration and the management of the assets and property of the Society, preparation of budgets and financial reports, financial planning, investment policy, supervision of financial matters of Annual ISE Meetings.

Executive Secretary

Petr Krtil, Prague, Czech Republic (2024-2025)

Responsible for maintaining the ISE calendar, assisting with organising the business and financial arrangements for Annual and Topical Meetings, organising committee appointments, assisting the Secretary General with Society elections, recruiting new members, and co-ordinating Executive Committee meetings. Drafts ISE documents, acts as web page editor, maintains ISE archives and records, and serves as the contact person for members (particularly at ISE meetings).

Scientific Divisions of ISE

Division 1 – ANALYTICAL ELECTROCHEMISTRY

Experimental and theoretical aspects of the analytical process in which electrochemistry has a role, including sample collection / processing, separation, and species identification and quantitation.
Chair: ***Maria Cuartero Botia****, Past Chair:* ***Guy Denuault****, Chair Elect:* ***Emilia Witkowska Nery****,*
Vice-Chairs: ***Guobao Xu****,* ***Gabriel Negrao Meloni****.*

Division 2 – BIOELECTROCHEMISTRY

Aspects of electrochemistry and electroanalysis characterizing biological processes at the molecular level and relevant to the mechanisms of biological regulation of cells.
Chair: ***Carlo Santoro****, Past Chair:* ***Ilaria Palchetti****, Chair Elect:* ***Donal Leech****,*
Vice-Chairs: ***Janice Limson****,* ***Felipe Conzuelo****.*

Division 3 – ELECTROCHEMICAL ENERGY CONVERSION AND STORAGE

Experimental and theoretical aspects of electrochemistry in which the goal is the interconversion of energy between different forms or the storage of energy, including the processes themselves and materials used for these purposes.
Chair: ***Sonia Dsoke****, Past Chair:* ***Thierry Brousse****, Chair Elect:* ***Sara Cavaliere****,*
Vice-Chairs: ***Rebecca Marcilla****,* ***Yu Katayama****.*

Division 4 – ELECTROCHEMICAL MATERIALS SCIENCE

Aspects of materials science in which electrochemistry is part of the synthesis, processing, surface treatment, corrosion, characterization or modeling of new or existing materials, or in which electrochemistry is the user of such materials.
Chair: ***Carmen Perez****, Past Chair:* ***Hiroki Habazaki****, Chair Elect:* ***Samantha Gateman****,*
Vice-Chairs: ***Jon Ustarroz****,* ***Isao Shitanda***

Division 5 – ELECTROCHEMICAL PROCESS ENGINEERING AND TECHNOLOGY

Experimental and theoretical aspects and applications of electrochemistry in which engineering issues play a significant role, including scale-up and reactor design.
Chair: ***Carlos Ponce de Leon****, Past Chair:* ***Carlos Alberto Martinez Huitle****, Chair Elect:* ***Ignacio Sirés Sadornil****,*
Vice-Chairs: ***Ricardo Salazar****,* ***Eileen Yu****.*

Division 6 – MOLECULAR ELECTROCHEMISTRY

Aspects of organic and inorganic electrochemistry, in which the emphasis is on molecular processes, including the understanding of mechanism and the role of structure.
Chair: ***Ismael Diez Perez****, Past Chair:* ***Jose Zagal****, Chair Elect:* ***Eva Nichols****,*
Vice-Chairs: ***Josh Hihath****,* ***Jiří Ludvík****.*

Division 7 – PHYSICAL ELECTROCHEMISTRY

Experimental, theoretical and computational aspects of electrochemistry, alone or in conjunction with other methods, relevant to interfaces and conductive media; this shall include physicochemical nature, structure and dynamics from the molecular to the macroscopic level.
Chair: ***Mark Symes****, Past Chair:* ***Katrin F. Domke****, Chair Elect:* ***Julia Kunze-Liebhauser****,*
Vice-Chairs: ***Jun Cheng****,* ***Clotilde Cuccinotta****.*

Regional Representatives

Argentina	Silvia Ceré	2024-2026	2nd term
Australia-New Zealand	Ruth Knibbe	2024-2026	1st term
Austria	Andrea Auer	2025-2027	1st term
Belgium	Deepak Pant	2025-2027	1st term
Brazil	Lucia Mascaro	2024-2026	2nd term
Bulgaria	Vessela Tsakova	2024-2026	2nd term
Canada	Steen Schougaard	2025-2027	1st term
Chile	Ana Maria Mendez-Tores	2025-2027	2nd term
China	Lin Zhuang	2023-2025	1st term
Croatia	Nadica Ivosevic DeNardis	2024-2026	2nd term
Czech Republic	Tomas Navrátil	2025-2027	2nd term
Denmark	Xinxin Xiao	2024-2026	1st term
Estonia	Jaana Lilloja	2025-2027	2nd term
Finland	Pekka Peljo	2023-2025	2nd term
France	Olivier Buriez	2023-2025	1st term
Germany	Tana Vidakovic-Koch	2024-2026	1st term
Greece	Antonis Karantonis	2025-2027	2nd term
Hungary	Csaba Janaky	2023-2025	1st term
India	Ashis Kumar Satpati	2023-2025	2nd term
Ireland	Micheál Scanlon	2025-2027	2nd term
Israel	Malachi Noked	2023-2025	1st term
Italy	Christian Durante	2025-2027	2nd term
Japan	Tetsu Tatsuma	2023-2025	1st term
Korea	J. Lee	2025-2027	2nd term
Lithuania	Jurga Juodkazyte	2023-2025	2nd term
Mexico	Margarita Miranda Hernandez	2024-2026	2nd term
Netherlands	Marta Costa Figueiredo	2025-2027	1st term
Poland	Krzysztof Fic	2025-2027	2nd term
Portugal	Alexandre Bastos	2024-2026	1st term
Romania	Cecilia Cristea	2024-2026	2nd term
Russia	Oleg Kozaderov	2025-2027	1st term
Serbia	Jelena Bajat	2023-2025	2nd term
South Africa	Omotayo Arotiba	2025-2027	2nd term
Spain	Maria Escudero Escribano	2023-2025	1st term
Sweden	Björn Wickman	2025-2027	2nd term
Switzerland	Matthias Arenz	2025-2027	2nd term
Taiwan	Chi-Chang Hu	2025-2027	2nd term
Turkey	Burak Ulgut	2023-2025	2nd term
Ukraine	Volodymyr Khomenko	2025-2027	1st term
United Kingdom	Mark Symes	2023-2025	1st term
USA	Adam Weber	2023-2025	1st term

Corporate Sustaining Members

Corporate Sustaining Members are industrial and commercial (profit-making) organizations. As a Corporate Sustaining Member you can nominate one or two person(s) as your representative(s).

Corporate Sustaining representatives have the following advantages:

- One representative receives an online access to the ISE journal Electrochimica Acta without further charge.
- They can participate in Annual ISE Meetings at reduced registration fees.
- They are invited to co-operate with the divisions, to give proposals and advice on division symposia.
- They are informed about the activities of ISE and about Annual, Topical and Special ISE Meetings and division symposia on new developments in science and technology.
- They can be elected as Society officers

Advertising

- A list of the Corporate Sustaining Members is published regularly in Electrochimica Acta and on the web pages.

Annual Meeting

- Special sessions will be organised for electrochemical and electroanalytical instrumentation.
- You can contact regional groups *via* Regional Representatives.
- Business meeting places will be offered during Annual ISE Meetings for contacts between people from science and industry to discuss issues such as job recruiting, co-operation in applied research, announcement of research frameworks, negotiation of research contracts etc.

For further information please contact the ISE Office. Corporate Sustaining Membership fee: 500 EUROS

Corporate Members

Corporate Members are teaching institutions, non-profit-making research organizations and learned societies. As a Corporate Member you can nominate a person as your representative who will have the following advantages:

- One representative receives an online access to the ISE journal Electrochimica Acta without further charge.
- They can participate in Annual ISE Meetings at reduced registration fees.
- They are invited to co-operate with the divisions, to give proposals and advice for division symposia.
- They are informed about the activities of ISE and about Annual and Special ISE Meetings and division symposia on new developments in science and technology.
- They can be elected as Society officers.

Corporate Membership fee: 300 EUROS

- AMETEK • Gamry Instruments • Ionode Pty Ltd • Magneto Special Anodes BV •
- Metrohm Autolab BV • PalmSens BV • Paul Scherer Institute • Permascand • Scribner Associates, Inc
- Sensolytics GmbH • Tanaka Kikinzoku Kogyo K.K. • Zahner-elektrik GmbH & Co KG

Co-operation with other Societies

ISE is an Associated Organization of IUPAC and has co-operation agreements with:

- Bioelectrochemical Society • Chinese Society of Electrochemistry •
- Deutsche Gesellschaft für Galvano- und Oberflächentechnik (DGO) •
- Electrochemical Division of the Italian Chemical Society • Electrochemical Society •
- Electrochemical Society of Japan •
- Electrochemistry and Electroanalytical Division of the Brazilian Chemical Society •
- Electrochemistry Group of the French Society of Chemistry •
- Electrochemistry Interest Group of the RSC • European Federation of Corrosion •
- Fachgruppe Elektrochemie der Gesellschaft Deutscher Chemiker •
- Korean Electrochemical Society • Mexican Electrochemical Society • Royal Society of Chemistry •
- Sociedad Iberoamericana de Electroquimica • Society for Electroanalytical Chemistry (The) •

ISE Honorary Members

Honorary Members are appointed by the Executive Committee, after consultation with the Council, primarily in recognition of their contribution to ISE. The total number at any time is limited to ten.

The first Honorary Member of ISE, appointed in the year 2003, was **Otmar Dossenbach**, Treasurer of the Society for 21 years (1980-2000) and Executive Secretary for 2 years (2001-2002). Two new Honorary Members were appointed in the year 2004: **Roger Parsons**, former President of the Society (1981-1982) who passed away on 4th January 2017, and **Sergio Trasatti**, former President of the Society (1989-1990) and Editor-in Chief of Electrochimica Acta (2003-2013) who passed away on 13th June 2021.

Three Honorary Members were appointed in the year 2005: **Ron Armstrong**, former Editor-in-Chief of Electrochimica Acta for 18 years, and two former Presidents of the Society, **Dieter Landolt** (1987-1988) and **Elton Cairns** (1999-2000). In the year 2011, **Sharon Roscoe** was appointed Honorary Member for her valued contribution as Secretary General. She passed away on December 9th, 2015. **Marco Musiani** was appointed Honorary Member in 2019 for his extraordinary service in the capacity of Executive Secretary supporting the Society during its unprecedented growth between 2003 and 2018. **Thierry Lenzin** was appointed Honorary Member in 2020 for his valued contribution as ISE Office Manager between 2001 and 2019. **Rob Hillman** was appointed Honorary Member in 2024 for his extraordinary service rendered to the Society in the capacity of Secretary General (1999-2005), ISE President (2009-2010) and Editor in Chief of Electrochimica Acta (2014-2024).

ISE Fellows

In recognition of their scientific or technical contributions to electrochemistry, the Society may confer on individual members the distinction of ISE Fellowship. Such ISE Fellows are appointed by the Executive Committee after consultation with the Council. The appointment does not carry automatic life-time ISE membership:

Hector Abruña
Radoslav Adzic
Richard Alkire
Philippe Allongue
Christian Amatore
Plamen Atanassov
Doron Aurbach
Philip N. Bartlett
Martin Bazant
R. Jürgen Behm
Daniel Bélanger
Nick Birbilis
Alan Bond
Thierry Brousse
Elton Cairns
Aicheng Chen
Christos Comninellis
Richard Compton
Serge Cosnier
Chunhai Fan
*W. Ron Fawcett**
Juan Feliu
Mario Ferreira
Maria Forsyth
Elzbieta Frackowiak
Claude Gabrielli
Hubert Gasteiger
Eliezer Gileadi
Hubert Girault
Yury Gogotsi
*John B. Goodenough**
Justin Gooding
Lo Gorton
Rolando Guidelli
Philippe Hapiot
Jürgen Heinze
Robert Hillman
Bing Joe Hwang
György Inzelt
Kingo Itaya
Yasuhiko Ito
Huangxian Ju
Anny Jutand
Takashi Kakiuchi
Arkady Karyakin
Evgeny Katz
Hasuck Kim
Marc Koper
Alexei Kornyshev
Katharina Krischer
Alexander Kuhn
Claude Lamy
Ovadia Lev
Jacek Lipkowski
Yi-Tao Long
Digby Macdonald
Douglas R. MacFarlane
Daniel Mandler
Bing-Wei Mao
Philippe Marcus
Rudolf A. Marcus
Frank Marken
Nenad Markovic
*Jim McBreen**
Richard McCreery
Shelley D. Minteer
Angela Molina
Sanjeev Mukerjee
Richard Nichols
Petr Novak
Mark E. Orazem
Tetsuya Osaka
Masatoshi Osawa
Stefano Passerini
Emanuel Peled
José Pingarron
Bin Ren
Zdenek Samec
Robert Savinell
Elena Savinova
David Schiffrin
Wolfgang Schmickler
Patrik Schmuki
Fritz Scholz
Wolfgang Schuhmann
Bruno Scrosati
Yang Shao-Horn
Ashok Shukla
Patrice Simon
Ulrich Stimming
Peter Strasser
Shi-gang Sun
Yang-Kook Sun
Zhongqun Tian
Jens Ulstrup
Patrick Unwin
Kohei Uosaki
Costas Vayenas
Alain Walcarius
Li-Jun Wan
Guoxiu Wang
Masahiro Watanabe
Stanley Whittingham
George Wilson
Martin Winter
Yongyao Xia
Akira Yoshino
Gleb Yushin
José Zagal
Piotr Zelenay
Jiujun Zhang

**Passed away*

Society Awards

Electrochimica Acta Gold Medal The Electrochimica Acta Gold Medal may be awarded every two years to the person judged to have made the most significant contribution to electrochemistry in recent years.

ISE Prize for Electrochemical Energy Conversion and Storage of Division 3 in Honour of Bruno Scrosati The ISE Prize for Electrochemical Energy Conversion and Storage of Division 3 in Honour of Bruno Scrosati, supported by Division 3 "Electrochemical Energy Conversion and Storage", may be awarded annually to a scientist who has made important (lifetime) contribution to experimental or theoretical aspects of electrochemistry in which the goal is the interconversion of energy between different forms or the storage of energy, including the processes themselves and materials used for these purposes.

Frumkin Medal The Frumkin Medal may be given once every two years. It recognises the outstanding contribution of a living individual over his/her life in the field of fundamental electrochemistry.

Katsumi Niki Prize for Bioelectrochemistry The Katsumi Niki Prize for Bioelectrochemistry may be awarded every two years to a scientist who has made an important contribution to the field of bioelectrochemistry.

Bioelectrochemistry Prize of ISE Division 2 The Bioelectrochemistry Prize of ISE Division 2 may be awarded every two years to a scientist who has made an important contribution to the field of bioelectrochemistry.

Brian Conway Prize for Physical Electrochemistry The Brian Conway Prize for Physical Electrochemistry may be awarded every two years, in recognition of the most successful achievements in Physical Electrochemistry in recent years.

Alexander Kuznetsov Prize for Theoretical Electrochemistry The Kuznetsov Prize is awarded every two years to a living individual who has made groundbreaking contribution to the theory of electrochemical phenomena.

Jaroslav Heyrovsky Prize for Molecular Electrochemistry The Jaroslav Heyrovsky Prize for Molecular Electrochemistry, supported by ISE Division 6, may be awarded annually to a scientist who has made an important contribution to the field of molecular electrochemistry in the last 5 years.

Zhaowu Tian Prize for Energy Electrochemistry The Zhaowu Tian Prize for Energy Electrochemistry may be awarded annually to a scientist of less than 40 years of age on January 1st of the year of the award, in recognition of her/his recent achievements in the field of electrochemistry for energy.

Tajima Prize The Tajima Prize recognises the contributions made by younger electrochemists. Candidates must be less than 40 years old. An award may be made every year. The decision of the Award Committee will be based on published work.

ISE-Prize for Electrochemical Materials Science The ISE-Prize for Electrochemical Materials Science is awarded annually to a young person for contributions in the field of electrochemical material science, including corrosion, electrodeposition and surface treatment.

Oronzio and Niccolò De Nora Foundation Young Author Prize The Oronzio and Niccolò De Nora Foundation Young Author Prize may be awarded annually to a scientist of less than 30 years for the best paper published in the ISE society journal in the calendar year preceding the award.

ISE-Elsevier Prize for Experimental Electrochemistry The ISE-Elsevier Prize for Experimental Electrochemistry may be awarded annually to a person who has made an important contribution to experimental electrochemistry.

ISE-Elevier Prize for Green Electrochemistry The ISE-Elsevier Prize for Green Electrochemistry may be awarded annually to a scientist of less than 35 years of age on January 1st of the year of the award, for recent application-oriented achievements in the field of environmental electrochemistry.

ISE-Elsevier Prize for Applied Electrochemistry The ISE-Elsevier Prize for Applied Electrochemistry may be awarded annually to a scientist of less than 35 years of age on January 1st of the year of the award, for recent achievements in the field of applied electrochemistry.

Early Career Analytical Electrochemistry Prize of ISE Division 1 The Early Career Analytical Electrochemistry Prize of ISE Division 1, sponsored by OrigaLys, may be awarded annually to a scientist of less than 35 years of age on January 1st of the year of the award in recognition of her/his recent achievements in Analytical Electrochemistry.

Electrochimica Acta and ISE Travel Award for Young Electrochemists The Electrochimica Acta Travel Awards for Young Electrochemists are aimed at favouring the participation of young electrochemists in the ISE Annual Meetings. The applicants must be ISE members. They must have obtained their Ph.D. not earlier than 6 years before the deadline for applications.

ISE Sponsored Meeting Information

What is an ISE sponsored meeting?

You may have noticed that scientific meetings in the field of electrochemistry are often labelled "ISE sponsored Meeting". What does this mean? In addition to organizing its own meetings, such as the Annual and Topical Meetings, ISE may sponsor other international scientific meetings in the area of electrochemistry. ISE sponsorship is intended to be a sign of quality for the meeting.

What are the requirements for ISE sponsorship?

ISE requires that the scientific quality of the meeting reaches the standard of its own meetings. It is desirable that the advisory board consists of ISE members, as far as possible. The meeting must be open to all ISE members.

Who decides?

The decision is normally taken by the officers of the ISE Division in whose field of interest the topic of the meeting lies. ISE Division Officers should be involved in the organisation of the meeting. The ISE Executive Committee decides on the sponsorship for meetings of general interest.

What are the obligations of the organizers?

The organizers have to publicise the ISE sponsorship in all the official documents related to the meeting (announcements, program, website etc.). At the meeting, a representative of ISE must be allowed to say a few words on behalf of the Society, and ISE must have the opportunity to advertise. After the meeting, the organizers should submit a short report to ISE to be published on the ISE website.

What do the organizers receive from ISE?

ISE publishes announcements and reports of ISE sponsored meetings on its website. The ISE Office can organize, free of charge, mailings to all, or a group of ISE members. In appropriate cases, there may be a special issue of Electrochimica Acta associated with these meetings. Decisions about special issues are made by the Editor-in-Chief.

What about money?

ISE sponsorship of a meeting does not necessarily include a financial contribution from ISE. The sponsoring Division(s) may use its funds to support such a meeting. The level of financial contribution will be determined by the Division(s), but a typical sum may be 500 Euros.

How to apply for ISE sponsorship?

If you would like to have the scientific meeting you are organizing sponsored by ISE, please send an e-mail to the ISE Office, at least one year in advance of the time of the meeting, and attach a completely filled in sponsor request form. This form can be found on the ISE website at: https://www.ise-online.org/ise-sponsoring/sponsoring-info.php. The decision will be taken by the Officers of the sponsoring Division(s), or by the Executive Committee, and the ISE Office will inform the applicant.

ISE Regional Student Meetings

Graduate Students who are members of ISE and intend to organize a Regional Student Meeting can apply for ISE financial support. Applications submitted by Graduate Students jointly with their supervisors or with other senior members of the staff of their university are also acceptable, but it is expected that the students will be engaged in the organizational aspects of the meeting as much as possible. Regional Student Meetings are typically one-day meetings involving graduate students active in the geographic area where the meeting takes place. The format of the meeting (oral presentations, posters, discussion sessions, other) is autonomously decided by the organizers who will be responsible for securing a venue and collecting registrations. No registration fee should be requested, if financially possible. When the Regional Student Meeting is associated to a larger ISE-sponsored meeting taking place in the same venue, the application must provide clear indication on the connections between the two events and must clearly describe the independent activities reserved to student participants. No later than one month after the meeting, the organizer(s) will send to the ISE Office a report on the event, including the names and the e-mail addresses of the participants. The student participants will be invited to apply for ISE membership. A report giving an overview of the meeting, accompanied by suitable pictures if available, will be posted on the ISE website under Student Activities.

Applications for ISE support must be sent by e-mail to the ISE Office, with a copy to the Regional Representative of the country where the meeting is organized, 3-12 months before the meeting date, using the application form. The local ISE Regional Representative, if requested, will assist the potential meeting organizer in the preparation of the application. Applications will be analyzed by a committee consisting of (i) ISE Immediate Past President (ii) ISE Secretary General, (iii) ISE Treasurer, (iv) ISE Vice President responsible for Educational Activity and (v) ISE Vice President responsible for Regional Sections. The response will be communicated to the applicant and to the relevant Regional Representative no later than 1 month after the application submission.

The maximum financial support will be 600 €; the expected use of the funds must be specified in the application. Co-sponsoring by other Societies and/or institutions is possible.

General Conference Information

Registration Hours during the Meeting

The registration will take place at **Gutenberg Foyer (Level 1)**

Sunday, 7 September	13:00-17:00
Monday, 8 September	08:00-18:00
Tuesday, 9 September	08:00-18:00
Wednesday, 10 September	08:00-11:00
Thursday, 11 September	09:00-17:00
Friday, 12 September	09:00-11:00

On Site Registration Fees

Regular registration fee	860 EUROS
Registration fee for ISE members	740 EUROS
Student registration fee	450 EUROS
Student registration fee for ISE members	390 EUROS
Regular and Student Registration fees include: Admission to all scientific and exhibition sessions, three lunches (Monday, Tuesday and Thursday), receptions, coffee breaks, conference bag.	
Program book	10 EUROS
Tutorial lectures	10 EUROS
Banquet	**Sold out** ~~110 EUROS~~

Lunches

Lunch will be provided in **Rheinfoyer, Gutenberg Foyer,** and **Foyers 1 & 2**

Monday	12:30-14:00
Tuesday	12:30-14:00
Thursday	12:30-14:00

Coffee Breaks

Coffee Breaks will be situated in **Rheinfoyer, Gutenberg Foyer,** and **Foyers 1 & 2**

Monday, Tuesday, Wednesday, Thursday and Friday Mornings	10:30-11:00
Monday, Tuesday and Thursday Afternoons	16:00-16:30

Internet Service

WiFi for mobile phones, tablets, and laptops will be accessible within the Conference Center.

Photography and recording during presentations

Photography and recording is not permitted during the meeting activities (tutorials, plenary lectures, oral and keynote presentations and/or poster sessions) without the explicit, written consent from ISE.

Day-by-Day Week Schedule 7 - 12 September 2025

Sunday 7		Monday 8	Tuesday 9	Wednesday 10	Thursday 11	Friday 12
	08:15-09:15	Plenary Lecture	Plenary Lecture	Plenary Lecture	Plenary Lecture	Plenary Lecture
	09:30-09:45 09:45-10:00 10:00-10:15 10:15-10:30	Orals	Orals	Orals	Orals	Orals
	10:30-11:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
	11:00-11:15 11:15-11:30 11:30-11:45 11:45-12:00 12:00-12:15 12:15-12:30	Orals	Orals	Session 2 Posters 11:00-12:30	General Assembly 11:00-12:00	Orals Closing Ceremony 12:15-12:45
Registration 13:00	12:30 to 14:00	Lunch Div.+Reg. Rep. 12:40-13:30 Lunch	Lunch Council Meeting 12:40-13:30 Lunch	Excursions	Lunch Division Meetings 12:40-13:30 Lunch	
Tutorials 13:30-16:45	14:00-14:15 14:15-14:30 14:30-14:45 14:45-15:00 15:00-15:15 15:15-15:30 15:30-15:45 15:45-16:00	Orals	Orals		Orals	
	16:00-16:30	Coffee Break	Coffee Break		Coffee Break	
Opening Ceremony	16:30-16:45 16:45-17:00 17:00-17:15 17:15-17:30 17:30-17:45 17:45-18:00	Orals	Orals		Orals	
Welcome Reception 18:00-20:00	18:00-18:15 18:15-18:30 18:30-18:45 18:45-19:00 18:00-19:00 19:00-20:00	Session 1 Posters & Drinks 18:00-20:00			Banquet 19:30	