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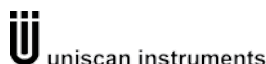
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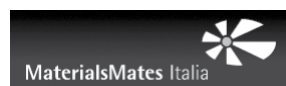
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Exhibitions Hours

Monday:	10:30-20:00
Tuesday:	09:30-20:00
Wednesday:	09:30-12:00
Thursday:	09:30-18:30
Friday:	09:30-12:00

International Society of Electrochemistry
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Switzerland
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Printed in Japan

The 62nd Annual Meeting of the International Society of Electrochemistry

Electrochemical Frontiers in
Global Environment and Energy
11-16 September, 2011, Niigata, Japan

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Welcome Address

On behalf of the Executive Committee of ISE, the Organizing Committee and Symposium Organizers, we warmly welcome you to Niigata City and look forward to your participation in the 62nd Annual Meeting of the ISE, “*Electrochemical Frontiers in Global Environment and Energy*”, from September 11th to 16th, 2011.

Niigata City has long prospered as a town at the mouth of the longest river in Japan, the Shinano River. The elegance of the old days still remains in this city full of charm, with a wealth of tradition, culture, and the arts. It is blessed with surroundings of great natural beauty, including the Sea of Japan, the Shinano River, and the Echigo Mountains. With a variety of products from the sea, bounty from the land, and sake (Japanese rice wine) from local breweries, many delights await you.

Japan has a strong tradition in electrochemistry and has been contributing to scientific and industrial progress. Japan hosted previous ISE meetings in 1989 in Kyoto and in 1998 in Kitakyushu.

Six months have passed since the earthquake and tsunami waves struck the northeast region of Japan on March 11th, 2011. We, the people of Japan, would like to express our sincerest gratitude and deepest appreciation to everyone for the outpouring of support we received. On behalf of the Local Organizing Committee, we deeply appreciate the encouragement and cooperation to hold the 62nd Annual Meeting of the ISE in Japan as scheduled and the attendance of our colleagues around the world. The success of the ISE meeting should be a small but important step towards the reconstruction of Japan.

This Meeting, with 14 different symposia and a special session celebrating the International Year of Chemistry (IYC) 2011, shows the development of our Society and covers both traditional and new areas of electrochemistry. The main theme “*Electrochemical Frontiers in Global Environment and Energy*” is both relevant and challenging to the many changes affecting the world today. All Scientific Divisions of ISE are included, and the symposia will also emphasize links between fundamental and applied aspects in each particular domain of research.

We welcome all electrochemists and invite you to communicate, to generate new research ideas and to establish links to bring them to fruition.

The support and cooperation of Niigata City and Niigata Prefecture towards the holding of this meeting are greatly appreciated.

Tetsuya Osaka and Toshiyuki Momma
Chair and Secretary General, Organizing Committee,
ISE Annual Meeting 2011

Organizing Committees

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Masahiro Watanabe (*University of Yamanashi*)
Masayoshi Watanabe (*Yokohama National University*)
Takeshi Yamauchi (*Niigata University*)
Sachio Yoshihara (*Utsunomiya University*)

Symposium Organizers

Symposium 1: Electroanalytical Chemistry for Environmental Protection and Monitoring

Salvatore Daniele (Coordinator), University of Venice, Italy
Fumio Mizutani, University of Hyogo, Japan
Katsuaki Shimazu, Hokkaido University, Japan

Symposium 2: Molecular Aspects of Electrochemical Phenomena in Ionic Liquids and Other Non-conventional Media

Masayoshi Watanabe (Coordinator), Yokohama Nat. Univ., Japan
Alan Bond, Monash University, Australia
Daren Caruana, University College London, UK
Rika Hagiwara, Kyoto University, Japan

Symposium 3: Electrochemical Micro & Nanosystem Technologies

Chee-Seng Toh (Coordinator), National University Singapore
Patrik Schmuki, University Erlangen-Nuremberg, Germany
Yasuhiro Fukunaka, Waseda University, Japan
Achim Walter Hassel, Johannes Kepler University, Linz, Austria
Takayuki Homma, Waseda University, Japan
Tetsuya Osaka, Waseda University, Japan

Symposium 4: Bioelectrochemistry for Environmental Applications and Health Monitoring

Woonsup Shin (Coordinator), Sogang University, Korea
Fred Lisdat, Wildau University, Germany
Tadashi Matsunaga, Tokyo University AT, Japan
Hideaki Matsuoka, Tokyo University AT, Japan

Symposium 5: Bioelectrochemistry for Energy Transformation

Marcin Opallo (Coordinator), Polish Academy of Science, Poland
Lo Gorton, Lund University, Sweden
Kenji Kano, Kyoto University, Japan
Evgeny Katz, Clarkson University, USA

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Masayuki Morita (Coordinator), Yamaguchi University, Japan
Takayuki Doi, Kyoto University, Japan
Kwang Bum Kim, Yonsei University, Korea
Zempachi Ogumi, Kyoto University, Japan
Wataru Sugimoto, Shinshu University, Japan
Martin Winter, University Muenster, Germany

Symposium 7: Fuel Cells: Materials, Properties and Mechanisms

Robert Kostecki (Coordinator), Lawrence Berkeley National Lab, USA
Alejandro A. Franco, CEA, Grenoble, France
Teruhisa Horita, AIST, Japan
Anthony Kucernak, Imperial College London, UK
Hiroyuki Uchida, Yamanashi University, Japan
Masahiro Watanabe, Yamanashi University, Japan

Symposium 8: Electrochemical Energy Storage and Conversion

Ryoji Kanno (Coordinator), Tokyo Institute of Technology, Japan
Elzbieta Frackowiak, Poznan University, Poland
Daniel Scherson, Case Western Reserve University, USA

Symposium 9: Corrosion and Surface Treatments

Hiroki Habazaki (Coordinator), Hokkaido University, Japan
Shinji Fujimoto, Osaka University, Japan
Roland Oltra, Université de Bourgogne, Dijon, France
Sannakaisa Virtanen, University Erlangen-Nuremberg, Germany

Symposium 10: Metallization for Microelectronics, Photonics and Energy Conversion Devices

Thomas P. Moffat (Coordinator), NIST, USA
Masanori Hayase, Tokyo University of Science, Japan
Hideo Honma, Kanto Gakuin University, Japan
Yosi Shacham-Diamand, Tel-Aviv University, Israel

Symposium 11: Green Electrochemical Processing

Sudipta Roy (Coordinator), Newcastle University, UK
Sachio Yoshihara, Utsunomiya University, Japan
Giovanni Zangari, University Virginia, USA

Symposium 12: Redox Properties of Environmentally Significant Molecules and Complexes

Jiri Ludvik (Coordinator), J. Heyrovsk Institute, Czech Republic
Toshio Fuchigami, Tokyo Institute of Technology, Japan
Patrizia Mussini, University of Milan, Italy
Shigeru Nishiyama, Keio University, Japan

Symposium 13: Kinetics and Mechanisms of Electrode Reactions: Studies by Spectroscopy, Theory and New Advanced Methods

Andrea Russell (Coordinator), University Southampton, UK
Enrique Herrero, University Alicante, Spain
Kei Murakoshi, Hokkaido University, Japan

Symposium 14: General Session

Susumu Kuwabata (Coordinator), Osaka University, Japan
Takeshi Abe, Kyoto University, Japan

IYC 2011 Special session celebrating the International Year of Chemistry 2011

Organizers: Christopher Brett and Takashi Kakiuchi

This session, to celebrate the International Year of Chemistry, will be held on the afternoon of September 15th and is intended to show the importance and relevance of electrochemical science and technology in society in the past, present and future - in industry, energy, environment and health. The special IYC session will comprise a series of invited lectures highlighting recent advances and new applications of electrochemistry.

Tutorial Lectures

Location: Room 301

Sunday, 11 September, 2011

15:00 to 15:55

Session I

Quantitative SNIFTIRS and PMIRRAS Studies of Adsorbates at Electrode Surfaces

Jacek Lipkowski

University of Guelph, Canada

16:05 to 17:00

Session II

Electrocatalytic Reactions Revealed by Time-Resolved Surface-Enhanced Infrared Absorption Spectroscopy (SEIRAS)

Masatoshi Osawa

Hokkaido University, Japan

Plenary Lectures

Location: Snow Hall

Monday, 12 September, 2011

09:30 to 10:30

Ulrich Stimming

(Technische Universität München, München, Germany)

Electrochemical Energy Technology - System Aspects and Molecular Processes

Tuesday, 13 September, 2011

08:30 to 09:30

Richard Alkire

(University of Illinois, Urbana, USA)

Earth, Water, Air and Fire: Elemental Challenges for Well-Engineered Electrochemical Systems

Wednesday, 14 September, 2011

08:30 to 09:30

Jean-Marie Tarascon

(Université Picardie Jules Verne, Amiens, France)

F-based Polyanionic Structural Frameworks and their Use in Li-ion Batteries

Thursday, 15 September, 2011

08:30 to 09:30

Tadashi Matsunaga

(Tokyo University of Agriculture & Technology, Tokyo, Japan)

Bioelectrochemistry for Health, Environment and Energy

Friday, 16 September, 2011

08:30 to 09:30

Klaus-Dieter Kreuer

(Max-Planck-Institut FKF, Stuttgart, Germany)

New Electrolytes for Fuel Cells and Batteries

ISE Prize Winners 2011

Electrochimica Acta Gold Medal



Ulrich Stimming, *Technische Universität München, Germany*

09:30 to 10:30, Monday, 12 September, 2011, Plenary

Electrochemical Energy Technology - System Aspects and Molecular Processes

Brian Conway Prize for Physical Electrochemistry



Shi-Gang Sun, *Xiamen University, China*

14:30 to 15:10, Thursday, 15 September 2011, Symposium 13

In-situ FTIR Reflection Spectroscopy and its Studies of Electrochemical Reactions

Tajima Prize



Shelley Minteer, *University of Utah, Salt Lake City, USA*

10:10 to 10:30, Tuesday, 13 September, 2011, Symposium 5

Enzymatic and Organelle-based Bioelectrocatalysis

Oronzio and Niccolò De Nora Foundation Prize of ISE on Applied Electrochemistry



Marian Chatenet, *Grenoble-INP, LEMPI, France*

15:50 to 16:30, Thursday, 15 September, 2011, Symposium 7

Electrocatalysis in low-temperature fuel cells; From the limitations of PEMFC to the promises of DBFC

Oronzio and Niccolò De Nora Foundation Prize of ISE on Environmental Electrochemistry



Ignacio Sirés Sadornil, *University of Barcelona, Spain*

14:30 to 14:50, Tuesday, 13 September, 2011, Symposium 11

A Pilot Plant for the Decontamination of Water by the Solar Photoelectro-Fenton Process. The case of a Steroid Hormone

and



Minghua Zhou, *Nankai University, Tianjin, China*

10:30 to 10:50, Tuesday, 13 September, 2011, Symposium 11

Green Electrochemical Processes for Environmental Remediation

Oronzio and Niccolò De Nora Foundation Young Author Prize



Katarzyna Szot, *Polish Academy of Sciences, Warsaw, Poland*

17:50 to 18:10, Monday, 12 September, 2011, Symposium 5

Carbon Nanoparticle Film Electrodes with Bilirubin Oxidase as Biocathodes for Zinc-Dioxygen Hybrid Cell

Electrochimica Acta Travel Award Winners

Laurence Hardwick

Debbie Sylvester

ISE Travel Award Winners

Leigh Aldous

Adriana Ispas

Grzegorz Lota

Karl Mayrhofer

Alessandro Minguzzi

Liza Rassaei

Paramaconi Benito Rodríguez Perez

Special Meetings

Monday, 12 September, 2011

Opening Ceremony

09:00 to 09:30, > Snow Hall

Monday, 12 September, 2011

Division Officers Meeting- Luncheon Meeting

12:45 to 13:45, > Room 303+304

Monday, 12 September, 2011

Regional Representatives Meeting - Luncheon Meeting

12:45 to 13:45, > Room 306+307

Tuesday, 13 September, 2011

Council Meeting -Luncheon Meeting

12:45 to 13:45, > Room 303+304

Thursday, 15 September, 2011

General Assembly

12:20 to 13:20, > Marine Hall

Division Luncheon Meetings

13:30 to 14:15

Division 1 Analytical Electrochemistry, > Room 201

Division 2 Bioelectrochemistry, > Room 301

Division 3 Electrochemical Energy Conversion And Storage, > Room 302

Division 4 Electrochemical Materials Science, > Room 303+304

Division 5 Electrochemical Process Engineering and Technology, > Room 306+307

Division 6 Molecular Electrochemistry, > Room 203+204

Division 7 Physical Electrochemistry, > Room 202

Friday, 16 September, 2011

Closing Ceremony

12:30 to 12:50, > Marine Hall

See room locations on back cover

Overall Schedule by day

	Sunday 11-9	Monday 12-9	Tuesday 13-9	Wednesday 14-9	Thursday 15-9	Friday 16-9
08:00-08:30		Registration opens	Registration opens			
08:30-09:00						
09:00-09:30		Opening Ceremony	Plenary Session	Plenary Session	Plenary Session	Plenary Session
09:30-09:50						
09:50-10:10		Plenary Session	Oral Presentations	Oral Presentations	Oral Presentations	Oral Presentations
10:10-10:30						
10:30-10:50						
10:50-11:10			Coffee Break	Coffee Break	Coffee Break	Coffee Break
11:10-11:30						
11:30-11:50		Oral Presentations	Oral Presentations	Oral Presentations	Oral Presentations	Oral Presentations
11:50-12:10				Oral Presentations		
12:10-12:20						
12:20-12:30						
12:30-13:20	13:00 Registration opens	Lunch 12:45 Division & Regional Rep. Meetings	Lunch 12:45 Council Meeting		12:20 General Assembly Lunch	Closing Ceremony
13:20-14:10				Excursions	13:30 Division Meetings	
14:10-14:30						
14:30-14:50						
14:50-15:10						
15:10-15:30		Oral Presentations	Oral Presentations		Oral Presentations	
15:30-15:50						
15:50-16:10						
16:10-16:30						
16:30-16:50		Coffee Break	Coffee Break		Coffee Break	
16:50-17:10						
17:10-17:30						
17:30-17:50	17:00 Welcome Reception	Oral Presentations	Oral Presentations		Oral Presentations	
17:50-18:10						
18:10-18:30	Registration closes					
18:30-18:50						
18:50-19:10		Poster Presentations & Exhibitor Reception	Poster Presentations & Reception		19:00 Banquet	
19:10-19:30						
19:30-20:00						

Poster Session 1

Symposium 1, 2, 3, 4, 5, 6, 14

Poster set-up Monday 08:30-12:00 *See poster locations map on page 150*

Poster take-down Tuesday 14:00

Poster Presentations: Monday, 12 September: 18:30-20:00 ➤ Wave Market

Poster Session 2

Symposium 7, 8, 9, 10, 11, 12, 13

Poster set-up Tuesday 14:30-17:00 *See poster locations map on page 150*

Poster take-down Thursday 18:00

Poster Presentations: Tuesday, 13 September: 18:30-20:00 ➤ Wave Market

General Information

The Registration Desk and the ISE DESK are located in the Atrium of the conference center Toki Messe.

Registration Hours during the Meeting

Sunday, 11 September	13:00-18:30
Monday, 12 September	08:00-18:00
Tuesday, 13 September	08:00-18:00
Wednesday, 14 September	08:30-12:00
Thursday, 15 September	08:30-18:00
Friday, 16 September	09:00-11:00

On site Registration Fees

Regular (ISE non-members)	76'500 Yen		695 Euros
Regular ISE members	65'500 Yen		595 Euros
Student (ISE non-members).....	35'500 Yen		320 Euros
Student ISE members.....	30'000 Yen		270 Euros

Regular and Student Registration fees include: Admission to all scientific and exhibition sessions, three lunches (Monday, Tuesday and Thursday), welcome reception and exhibition reception, coffee breaks, conference bag, program book and abstract CD-ROM.

Lunches

Lunch will be provided in the conference center Toki Messe, Wave Market Hall B.

Monday, Tuesday and Thursday	12:30-14:10
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Coffee Breaks

Mornings Tuesday to Friday	10:50-11:10
Afternoons (except Wednesday and Friday)	16:30-16:50

Internet Service

Free wireless internet service is provided in the Toki Messe, Wave Market Hall B.

Publications

A special issue of the Society's journal, *Electrochimica Acta*, is planned based on selected original contributions made at the conference. Selection will be made by an international editorial Committee comprising the following Guest Editors, one for each of the Symposia in which the meeting is articulated:

Symposium 1 Salvatore Daniele, Symposium 2 Masayoshi Watanabe, Symposium 3 Achim W Hassel, Symposium 4 Woonup Shin, Symposium 5 Evgeny Katz, Symposium 6 Masayuki Morita, Symposium 7 Alejandro A Franco, Symposium 8 Elzbieta Frackowiak, Symposium 9 Sannakaisa Virtanen, Symposium 10 Yosi Shacham-Diamand, Symposium 11 Giovanni Zangari, Symposium 12 Jiri Ludvik, Symposium 13 Andrea E Russell

The action of the editorial Committee will be co-ordinated by Sergio Trasatti, Editor-in-Chief of *Electrochimica Acta*.

The Special Issue will accommodate ca. 130 papers. **Submission only on invitation of one of the Guest Editors. Deadline for submission: 01 December 2011.**

Accompanying Persons

Accompanying persons do not have to register but are not allowed to attend the lectures.

Social Program

Sunday, 11 September, 17:00-20:00 in Toki Messe, Wave Market Hall B

Welcome Reception

Monday, 12 September, 18:30-20:00 in Toki Messe, Wave Market Hall B

Exhibitor and Poster Reception

Tuesday, 13 September, 18:30-20:00 in Toki Messe, Wave Market Hall B

Poster Reception

Wednesday, 14 September

Excursions

You can choose among four different excursions that will be organized on Wednesday afternoon, 14 September, 2011. English speaking tour guides will be present on all excursions.

Feel the Niigata culture

Departure at 13:30, Return at 18:00, Price per person: 8,000 JPN, 70 EURO

This tour starts with a river cruise and lunch on the longest river in Japan, the Shinano River. You will experience the Niigata culture, craft shops, local products and delicacies by visiting the Niigata Furusato Village. And you will have the opportunity to discover the 1300-year-old Yahiko shrine and see the cultural artifacts including Japanese swords and calligraphy.

Boat ride and visit of a traditional wealthy farmer property

Departure at 13:30, Return at 17:40, Price per person: 9,800 JPN, 87 EURO

This tour starts with a relaxing one-hour river boat ride down the Agano River. You will enjoy the beautiful canyon of Aga counted as one of the 100 most beautiful sceneries in Japan. Thereafter, you will visit the Northern Culture Museum which exhibits a traditional farmer property. You will experience the dignified simplicity of a wealthy landowner's house of the olden days.

Sake brewery and hot spring

Departure at 13:30, Return at 18:00, Price per person: 12,500 JPN, 109 EURO

Visit the 200-year old Ichishima Sake Brewery and taste the internationally awarded Japanese sake produced with a technique developed through 200 years of brewing tradition. And enjoy a relaxing bath at the Tsukioka Onsen hot spring famous for its beauty enhancement and anti-aging effects.

Guided walks through Niigata City

Departure at 13:30, Return at 15:30, Price per person: 4,000 JPN, 35 EURO

Three walking tours (in different areas of the city) will be organized with English-speaking tour guides.

Thursday, 15 September, 19:00 in Hotel Nikko, Room Toki-A and Toki-B

Banquet

Price per person: 6,500 JPN, 57 EURO

Exquisite Japanese food will be served including famous Japanese sake. Some other meal options will also be prepared for international guests. During the evening you will enjoy the performance by Furumachi Geigi, local traditional Japanese dancers, followed by local traditional singers and Japanese traditional stringed instruments players.

Oral presentation program



Monday 12 September 2011 - Morning

MONDAY AM

Plenary

Location: Snow Hall

Chaired by: Mark E. Orazem

09:30 to 10:30 **Electrochimica Acta Gold Medal**

Ulrich Stimming (Department of Physics, Technical University of Munich, Garching, Germany)

Electrochemical Energy Technology - System Aspects and Molecular Processes

Symposium 2: Unusual Electrochemical Phenomena in Ionic Liquids and Related Systems

Location: Room 301

Chaired by: Masayoshi Watanabe

10:50 to 11:30 **Keynote**

Takashi Kakiuchi (Department of Energy and Hydrocarbon Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan)

How Unique are Ionic Liquids in Electrochemistry?

11:30 to 11:50 **Invited**

Frank Endres (Chair of Interface Processes Clausthal, University of Technology, Clausthal-Zellerfeld, Germany), Natalia Borisenko, Sherif Zein El Abedin, Robert Hayes, Rob Atkin

The interface ionic liquids / electrodes: Potential dependent solvation layers

11:50 to 12:10 **Invited**

Bing-Wei Mao (Chemistry Department, Xiamen University, Xiamen, China), Jia-Wei Yan, Yu-Zhuan Su, Xiao Zhang, Meng Zhang, Yun-Xin Zhong

In-situ STM and AFM Characterization of Au-Ionic Liquid Interfaces

12:10 to 12:30

Yasuyuki Yokota (Department of Chemistry, Graduate School of Engineering Science, Osaka University, Toyonaka, Japan), Tomohiro Harada, Akihito Imanishi, Ken-ichi Fukui

Ionic Liquid / Graphite Interfaces Probed by FM-AFM: The Formation of Stable Layered Structures

Symposium 5: Bioelectrochemistry for Energy Transformation

Location: Room 203+204

Chaired by: Marcin Opallo and Wolfgang Schuhmann

10:50 to 11:10 **Invited**

Keith Baronian (School of Biological Sciences, University of Canterbury, Christchurch, New Zealand), Frankie J. Rawson, Andrew J. Gross, David J. Garrett, Alison J. Downard

Progress with Eukaryote Microbial Fuel Cells; Fundamental considerations

11:10 to 11:30

Carole Baffert (CNRS/ Université de Provence, Marseille, France), Luca Bertini, Thomas Lautier, Claudio Greco, Katerina Sybirna, Pierre Ezanno, Emilien Etienne, Philippe Soucaille, Patrick Bertrand, Hervé Bottin, Isabelle Meynial-Salles, Luca De Gioia, Christophe Léger

CO and O₂ inhibition of iron-only hydrogenases: Diffusion along the substrate channel and reaction mechanism studied by protein film voltametry

11:30 to 11:50

Wolfgang Schuhmann (Analytische Chemie - Elektroanalytik & Sensorik, Ruhr-Universität Bochum, Bochum, Germany)

Optimization of Os-Complex Modified Electrodeposition Polymers for Biofuel Cells. Improving Stability and Electron-Transfer Properties

11:50 to 12:30 **Keynote**

Jurg Keller (Advanced Water Management Centre, The University of Queensland, Brisbane, Australia), Yang Mu, Stefano Freguia, Korneel Rabaey

Bioelectrochemical Processes – The Potential beyond Energy Generation

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Location: Room 201

Chaired by: Robert Kostecki and Kuniaki Tatsumi

10:50 to 11:30 **Keynote**

Robert Kostecki (LBNL, Berkeley, USA), L. Hardwick, M. Kerlau, J. Lei, I. Lucas, M. Marcinek, F. McLarnon, V. Sethuraman, N. Norberg

Degradation Phenomena in Li-ion Batteries

11:30 to 11:50 **Invited**

Kuniaki Tatsumi (Research Institute for Ubiquitous Energy Devices, AIST, Ikeda, Japan), Masahiro Shikano, Yoshiyasu Saito, Shinji Koike, Hiroyuki Kageyama, Hikari Sakaebe, Hironomi Kobayashi

Study on Interphase between Electrolytes and Positive Electrodes for Lithium-ion Rechargeable Batteries

11:50 to 12:10

Shen Ye (Catalysis Research Center, Hokkaido University, Sapporo, Japan), Huijin Liu, Le Yu, Naoaki Kuwata, Masatoshi Osawa, Junichi Kawamura, Shen Ye

Molecular Structure on the LiCoO₂/Electrolyte Interface Probed by Nonlinear Vibrational Spectroscopy

12:10 to 12:30

Tsukasa Hirayama (Nanostructures Research Laboratory, Nagoya, Japan), Kinuka Tanabe, Kazuo Yamamoto, Yasutoshi Iriyama, Zempachi Ogumi

Li-ion profiling of an all-solid-state Li-ion battery by electron holography

Symposium 7a: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells, fundamental processes, materials and architectures, modeling, PEFC: Catalysts and MEAs, Polymer electrolyte membranes

Location: Snow Hall A

Chaired by: Nenad Markovic and Masahiro Watanabe

11:10 to 11:50 **Keynote**

Nenad Markovic (Argonne National Laboratory, Argonne, USA), Dusan Strmcnik, Chao Wang, Dusan Tripkovic, Bostjan Genorio, Kensaku Kodama, Ramahandran Subbaraman, Arvydas Paulikas, Dennis van der Vliet, Vojislav Stamenkovic

Fuel cells- just a dream of future reality

11:50 to 12:10

Andy Wain (National Physical Laboratory, Teddington, United Kingdom), Alan Turnbull

Electrochemical Scanning Probe Microscopy for Micro- and Nanoscale Characterisation of Electrocatalyst Activity

12:10 to 12:30

Johnson Lee (School of Chemistry, University of Nottingham, Nottingham, United Kingdom), Rebecca Walker, Darren Walsh

Screening of Fuel Cell Electrocatalysts: Activity and H₂O₂ Detection during O₂ Electroreduction

Symposium 7b: Fuel Cells: Materials, Properties and Mechanisms

Direct FCs, PEM and AFC, SOFCs

Location: Snow Hall B

Chaired by: Teruhisa Horita and Nenad Markovic

11:10 to 11:30

Hidetaka Watanabe (Graduate School of Environmental Studies, Tohoku University, Sendai, Japan),
Shinichi Hashimoto, Koji Amezawa, Tatsuya Kawada

Simplified Method for Evaluation of Effective Reaction Zone in Ni-GDC Cermet Anode for SOFC

11:30 to 11:50

Alexander Kromp (Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany), André Leonide, André Weber, Ellen Ivers-Tiffée

Performance Analysis of Anode-Supported SOFC under Reformate-Operation

11:50 to 12:10

Inyu Park (Fuel Cells and Hydrogen Technology, Seoul, Korea), Junghee Kim, Dongwook Shin

Sinterability and Electrochemical Properties of Cu-doped $\text{BaCe}_{0.8}\text{Sm}_{0.2}\text{O}_{3-\delta}$ proton conductor by citric-nitrate method

12:10 to 12:30

Hyungkuk Ju (School of Environmental Science and Engineering, Gwangju Institute of Science and Technology (GIST), Gwangju, Korea)

Effect of Liquid Sn/Transition Metal Mixtures for Improved Electrochemical Performance of Ni-GDC Anode in Direct Carbon Fuel Cell

Symposium 8a: Electrochemical Energy Storage and Conversion

Basic science of battery capacitor and fuel cells, Novel materials for electrochemical device

Location: Marine Hall

Chaired by: Ryoji Kanno

10:50 to 11:10 **Invited**

Christopher Johnson (Argonne National Laboratory, Argonne, USA)

Na-ion Batteries

11:10 to 11:30 **Invited**

Shinichi Komaba (Department of Applied Chemistry, Tokyo University of Science, Shinjuku, Japan), Naoaki Yabuuchi, Wataru Murata, Toru Ishikawa, Junichi Iwatete, Yuta Matsuura

High Capacity Na-Ion Batteries

11:30 to 11:50

Minato Egashira (Graduate School of Science and Engineering, Yamaguchi University, Ube, Yamaguchi, Japan), Takahito Asai, Tomoyo Tanaka, Nobuko Yoshimoto, Masayuki Morita

Electrochemical Properties of Sodium Ion Conducting Electrolyte Containing Ionic Liquid

11:50 to 12:30 **Keynote**

Claude Delmas (Université Bordeaux 1, Bordeaux, France), C. Didier, M. Guignard, S. Ito, I. Saadoune, F. Weill, J. Darriet

Reversible sodium deintercalation from layered NaVO_2

Symposium 11: Green Electrochemical Processing

Location: Room 302

Chaired by: Sudipta Roy and Sachio Yoshihara

10:50 to 11:10 **Invited**

Marco Villa (CSGI and Dept P&T, Un. Bergamo, Dalmine, Italy), Paolo Nelli, Rachele Pesenti, Paolo Salvi, Mario Berrettoni, Stefania Marini, Giovanni Zangari, Yohannes Kiros

Non-noble metal catalysts for electrochemical energy conversion and hydrogen storage schemes

11:10 to 11:30

Yolanda Álvarez Gallego (Separation and Conversion Technologies, Flemish Institute for Technological Research (VITO), Mol, Belgium), Deepak Pant, Philippe Vermeiren, Karolien Vanbroekhoven, Ludo Diels

Development of Electrodes for Cogeneration of Chemicals and Electricity

11:30 to 11:50

Servane Haller (IRDEP Chatou France EDF R&D Chimie Paristech CNRS UMR7174, Chatou, France)

Electrodeposition of Cu₂O layers and analysis of their optoelectronic and structural properties for application in low-cost photovoltaic devices.

11:50 to 12:10 **Invited**

Hiroshi Inoue (Applied Chemistry, Osaka Prefecture University, Sakai, Japan), Toshiki Yamazaki, Takayuki Kitamura, Motoki Shimada, Masanobu Chiku, Eiji Higuchi

Electrochemical Hydrogen Production from Ammonia Borane in Methanol Solution

12:10 to 12:30

Jusol Choi (World Class University (WCU) Program of Chemical Convergence for Energy & Environment (C2E2), School of Chemical and Biological Engineering, College of Engineering, Seoul National University, Seoul, Korea), Yongsug Tak, Jeyong Yoon

Pure Oxidant Generation in Solid Polymer Electrolyte System

Symposium 12: Redox Properties of Environmentally Significant Molecules and Complexes

Location: Room 303+304

Chaired by: Toshio Fuchigami and Siegfried R. Waldvogel

10:50 to 11:10 **Invited**

Jiri Ludvik (J. Heyrovsky Institute of Physical Chemistry, Dept. of Molecular Electrochemistry, Prague 8, Czech Republic), Tomas Mikysek

Electrochemical Investigation of the Imidazole Based “push-pull” Type Molecules with a Systematically Extended π -conjugated Bridge

11:10 to 11:30 **Invited**

Munetaka Oyama (Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan)

Design of Metal Nanoparticle-Attached Indium Tin Oxide Electrodes for Electrocatalytic Redox Reactions

11:30 to 11:50

Zdenek Samec (J. Heyrovsky Institute of Physical Chemistry of ASCR, Prague 8, Czech Republic), Antonín Trojánek, Jan Langmaier, Stanislav Zalis

Thermodynamic Driving Force Effects on the Oxygen Reduction Catalyzed by a Metal-Free Porphyrin

11:50 to 12:30 **Keynote**

Shunichi Fukuzumi (Department of Material and Life Science, Graduate School of Engineering, Osaka University, Suita, Japan)

Artificial Photosynthesis and Catalytic Systems

Symposium 13: Kinetics and Mechanisms of Electrode Reactions: Studies by Spectroscopy, Theory and New Advanced Methods

Location: Room Toki-A

Chaired by: Andrea Russell

10:50 to 11:30 **Keynote**

Angel Cuesta (Instituto de Química Física “Rocasolano”, CSIC, Madrid, Spain), Gema Cabello, Fabian Hartl, María Escudero-Escribano, Cristina Vaz-Domínguez, Claudio Gutiérrez, Ludwig Kibler, Masatoshi Osawa

The Mechanism of Formic Acid Electrooxidation on Metal Electrodes

11:30 to 11:50

Frode Seland (Norwegian University of Science and Technology, NTNU, Trondheim, Norway), Per Kristian Dahlstrøm, David A. Harrington, Dmitry Bokach, Piotr Ochal, Reidar Tunold, Svein Sunde

Electrooxidation of small organic molecules at Pt based electrodes

11:50 to 12:10 **Invited**

Masatoshi Osawa (Catalysis Research Center, Hokkaido University, Sapporo, Japan), Gabor Samjeske, Jiyong Joo, Taro Uchida, Marc Koper

Galvanostatic Electro-Oxidation of CO Adsorbed on Pt Studied by Time-Resolved Surface-Enhanced Infrared Spectroscopy

12:10 to 12:30

Cai Wen-Bin (Shanghai Key Laboratory for Molecular Catalysis and Innovative Materials, Department of Chemistry, Shanghai, China), Zhang Li-Na

Surface enhanced IR Spectroscopy Investigation on CO Adsorbed at Pt Electrode in Ionic Liquid

Monday 12 September 2011 - Afternoon

Symposium 2: Unusual Electrochemical Phenomena in Ionic Liquids and Related Systems

Location: Room 301

Chaired by: Takashi Kakiuchi

14:30 to 14:50 **Invited**

Angel Torriero (Institute for Technology Research and Innovation, Deakin University, Melbourne, Australia)
Nonadditivity of Faradaic Currents and Modification of Double Layer Capacitance in the Voltammetry of Mixtures of Solutes in Ionic Liquids

14:50 to 15:10

Karmen Lust (Institute of Chemistry, University of Tartu, Tartu, Estonia), Liis Siinor, Carolin Siimenson, Vladislav Ivanistsev, Anton Ruzanov, Enn Lust
Double Layer Structure at the Bi(hkl) - and Cd(hklf) - Electrolyte Interfaces

15:10 to 15:30

John Owen (School of Chemistry, University of Southampton, Southampton, United Kingdom), Thomas Esterle, Matthew Roberts, Danni Sun, Phil Bartlett
The Dynamic Capacitance of an Ionic Liquid Confined in a Mesoporous Electrode

15:30 to 15:50

Debbie Silvester (Department of Chemistry, Curtin University, Perth, Australia), Eva Alvarez de Eulate, Damien Arrigan
Ion Transfer Electrochemistry at Room Temperature Ionic Liquid (RTIL)/Water Microinterfaces

15:50 to 16:30 **Keynote**

Alexei Kornyshev (Department of Chemistry, Faculty of Natural Sciences, Imperial College London, London, United Kingdom)
Electrical double layer in ionic liquids: From fundamentals to applications

16:30 to 16:50

Coffee Break

16:50 to 17:10 **Invited**

Yasushi Katayama (Department of Applied Chemistry, Faculty of Science and Technology, Keio University, Yokohama, Japan), Yusuke Kawahara, Yuichi Toshimitsu, Yoshinori Yamato, Takashi Miura
Redox Reactions of Transition Metal 2,2'-Bipyridine Complexes in Amide-type Ionic Liquids

17:10 to 17:30

Atsushi Unemoto (Institute of Multidisciplinary Research for Advanced Materials, Sendai, Japan), Yoshiki Iwai, Satoshi Mitani, Seung-Wook Baek, Seitaro Ito, Takaaki Tomai, Junichi Kawamura, Itaru Honma
Dynamics and electrical conductivity of quasi-solidified lithium-ion conducting ionic liquid at oxide particle surface

17:30 to 17:50

Naoki Tachikawa (Department of Chemistry and Biotechnology, Yokohama National University, Yokohama, Japan), Kazuki Yoshida, Kaoru Dokko, Masayoshi Watanabe
Electrochemical Deposition and Dissolution of Li Electrode in Molten Glyme-Li Salt Complex Electrolytes

17:50 to 18:10

Darren Walsh (School of Chemistry, University of Nottingham, Nottingham, United Kingdom), Soon Yee Liew, Andinet Ejigu, Peter Licence
Ionic Liquid Electrolytes for Dye-sensitized Solar Cells

18:10 to 18:30

Fei Xu (Grad. School of Energy Science, Kyoto University, Kyoto, Japan), Kazuhiko Matsumoto, Rika Hagiwara
Anisotropically conductive 1-alkyl-3-methylimidazolium fluorohydrogenate ionic liquid crystals

Symposium 5: Bioelectrochemistry for Energy Transformation

Special session in honour of Prof. Tokuji Ikeda

Location: Room 203+204

Chaired by: Lo Gorton

14:10 to 14:50 **Keynote**

Tokuji Ikeda (Fukui Pref. Univ., Fukui, Japan)

Bioelectrochemical studies based on enzyme-electrocatalysis

14:50 to 15:10

Lo Gorton (Department of Biochemistry and Structural Biology, Lund, Sweden), Christopher Schulz, Roland Ludwig

Influence of Metal Cations on the Turnover Rate of Cellobiose Dehydrogenase

15:10 to 15:30 **Invited**

Yuichi Tokita (Sony Corporation, Atsugi, Japan)

Recent Progress of Sony's Biofuel Cell

15:30 to 15:50

Shuji Fujita (Core Device Development Group, Sony Corporation, Kanagawa, Japan), Ryuhei Matsumoto, Yoko Watanabe, Hideki Sakai, Yuichi Tokita, Seiya Tsujimura, Osamu Shirai, Kenji Kano

Enzymatic electrochemical reaction in liposome with glucose transport antibiotics

15:50 to 16:30 **Keynote**

Isao Taniguchi (President, Kumamoto University, Kumamoto, Japan)

Direct Electrochemistry of Metalloenzymes and Preparation of Practical Bio-fuel Batteries

16:30 to 16:50

Coffee Break

16:50 to 17:30 **Keynote**

Plamen Atanassov (Center for Emerging Energy Technologies, Chemical & Nuclear Engineering Dept., University of New Mexico, Albuquerque, USA)

Enzymatic Biofuel Cells: Explorations and Designs

17:30 to 17:50 **Invited**

Nicolas Mano (CRPP- UPR 8641, Pessac, France), Victoria Flexer, Nicolas Brun, Rénal Backov

Engineering Electrode Materials for Efficient Biofuel Cells

17:50 to 18:10 **Oronzio and Niccolò De Nora Foundation Young Author Prize**

Katarzyna Szot (Department of Electrode Processes, Institute of Physical Chemistry, PAS, Warsaw, Poland), Robert Lynch, Adam Lesniewski, Wojciech Nogala, Marcin Opallo, Joanna Niedziolka-Jonsson, Frank Marken

Carbon Nanoparticle Film Electrodes with Bilirubin Oxidase as Biocathodes for Zinc-Dioxygen Hybrid Cell

18:10 to 18:30 **Invited**

Matsuhiko Nishizawa (Tohoku University, Sendai, Japan), Takeo Miyake, Syuhei Yoshino, Kengo Haneda

Microfabricated Miniature Biofuel Cells with Nanoengineered Enzyme Electrodes

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Location: Room 201

Chaired by: Takayuki Doi and Martin Winter

14:30 to 15:10 **Keynote**

Yoshiharu Uchimoto (Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan), Toyoki Okumura, Yuki Orikasa, Masatsugu Oishi, Hajime Tanida, Hajime Arai, Zempachi Ogumi, Tomoya Uruga

In-situ Electrochemical XAFS Study on Interfacial Phenomena between Electrode and Electrolyte

15:10 to 15:30

Masaki Yamagata (Kansai University, Suita, Japan), Yukiko Matsui, Naoyuki Shiotani, Keiko Koga, Toshinori Sugimoto, Manabu Kikuta, Tetsuya Higashizaki, Michiyuki Kono, Masashi Ishikawa

High-performance Lithium-ion Battery Based on Ionic Liquids with Bis(fluorosulfonyl)imide

15:30 to 15:50

Seitaro Ito (Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan), Atsushi Unemoto, Hideyuki Ogawa, Satoshi Mitani, Seung-Wook Baek, Takaaki Tomai, Itaru Honma

Nano-hybrid electrolytes with solidified ionic liquids and their application to all solid state lithium battery

15:50 to 16:10

Hikaru Sano (Research Institute for Ubiquitous Energy Devices, National Institute of Advanced Industrial Science and Technology (AIST), Ikeda, Japan), Senoh Hiroshi, Hikari Sakaebe, Hajime Matsumoto

Cation and Anion Effect on Electrodeposition Behavior of Lithium Metal in Room Temperature Ionic Liquids

16:10 to 16:30

Tetsuo Nishida (Kyoto University, Kyoto, Japan), Kei Nishikawa, Yasuhiro Fukunaka

Optical Observation of Li Dendrite Growth in Ionic Liquid

16:30 to 16:50

Coffee Break

16:50 to 17:10 **Invited**

Petr Novak (Paul Scherrer Institute, Villigen PSI, Switzerland)

Re-visiting the SEI: Everything is Much More Complex than Believed in the Past

17:10 to 17:30 **Invited**

Soo-gil Park (Chungbuk National University, Cheongju, Korea), Jong-hwan Choi, Chang-soo Jin, Jeong-sik Kim

Improving C-rate Characteristic of anode material on CNT deposited surface of MCMB

17:30 to 17:50

Toru Ishikawa (Department of Applied Chemistry, Tokyo University of Science, Tokyo, Japan), Wataru Murata, Yuta Matsuura, Naoaki Yabuuchi, Atsushi Ito, Yasuhiko Ohsawa, Shinichi Komaba

Hard Carbon Negative Electrodes for Rechargeable Na-Ion Batteries: Dependency of Their Performance on Electrolyte Solution

17:50 to 18:10

Aaron Fisher (Department of Chemical and Biomolecular Engineering, University of Maryland, College Park, USA), Mian Khalid, Matthew Widstrom, Peter Kofinas

Dry Polymer Electrolytes with Sulfur Based Ionic Liquids for Lithium Batteries

MONDAY PM

Symposium 7a: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells, fundamental processes, materials and architectures, modeling,
PEFC: Catalysts and MEAs, Polymer electrolyte membranes

Location: Snow Hall A

Chaired by: Nicolas Alonso-Vante and Kazunari Sasaki

14:10 to 14:30

Mitsuru Wakisaka (Fuel Cell Nanomaterials Center, University of Yamanashi, Kofu, Japan), Yu Udagawa, Hiroyuki Uchida, Masahiro Watanabe

Structural Effects on the Mechanism of Oxygen Reduction Reaction at Pt Single-Crystal Electrodes in HF Solution Studied by EC-XPS

14:30 to 14:50

Jun Omura (University of Yamanashi, Kofu, Japan), Hiroshi Yano, Masahiro Watanabe, Hiroyuki Uchida

Electrochemical Quartz Crystal Microbalance Analysis of Oxygen Reduction Reaction on Pt-Co Alloy Electrodes

14:50 to 15:10

Eiji Higuchi (Department of Applied Chemistry, Graduate School of Engineering, Osaka Prefecture University, Osaka, Japan), Kiyoaki Hayashi, Masanobu Chiku, Hiroshi Inoue

Preparation of Au Core/Pt Shell Catalysts and Their Electrocatalytic Activity for Oxygen Reduction Reaction

15:10 to 15:30

Henri Perez (CEA, Gif sur Yvette, France), Gregory March, Florence Volatron, Xi Cheng, Cécile Reynaud, Martine Mayne, Mathieu Pinault, Arnaud Etcheberry

Determination of O₂ diffusion area and stability evaluation on porous structures based on carbon nanotubes and capped platinum electrocatalyst

15:30 to 15:50

Ryosuke Jinnouchi (Toyota Central R&D Labs., Inc., Nagakute, Japan), Kensaku Kodama, Tatsuya Hatanaka, Yu Morimoto

Mean Field Model of Oxygen Reduction Reaction based on First Principles Calculations

15:50 to 16:10

Sangaraju Shanmugam (School of Advanced Science and Engineering, Waseda University, Department of Energy Systems Engineering, Daegu Gyeongbuk Institute of Science and Technology, Tokyo, Japan), Toshiyuki Momma, Tetsuya Osaka

Enhanced Oxygen Reduction Activity and Stability of Pt Supported on Nitrogen-doped Carbon Nanocapsules

16:10 to 16:30

Nicolas Alonso-Vante (Lab. Electrocatalyse, UMR-CNRS 6503, University of Poitiers, Poitiers, France), Beatriz Ruiz Camacho, Claudia Morais, Miguel Angel Valenzuela

Carbon Monoxide Surface Probe of Oxide-Carbon Composites as Supports of Pt nanoparticles

16:30 to 16:50

Coffee Break

16:50 to 17:10

Kazunari Sasaki (Kyushu University (International Research Center for Hydrogen Energy), Fukuoka, Japan), Fumiaki Takasaki, Kohei Kanda, Yuma Takabatake, Shingo Hayashi, Zhiyun Noda, Yusuke Shiratori, Akari Hayashi, Shunsuke Taniguchi

SnO₂-supported Carbon-free PEFC Electrocatalysts with Durability against Voltage Cycling

17:10 to 17:30

Frederic Maillard (LEPMI/CNRS, Saint Martin d'Heres, France), Laetitia Dubau, Julien Durst, Marian Chatenet, Laure Guétaz, Johan André, Elisabeth Rossinot

Formation of "hollow" Pt nanoparticles during PEMFC operation

17:30 to 17:50

Sayoko Shironita (Department of Materials Science and Technology, Nagaoka University of Technology, Niigata, Japan), Akira Kishi, Minoru Umeda

Electrochemical Degradation of Pt Particle Prepared by Mask Scratch and Electrodeposition for *ex-situ* SEM Observation

17:50 to 18:10

Alex Yanson (Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands), Paramaconi Rodriguez, Nuria Garcia-Araez, Frans Tichelaar, Rik Mom, Marc Koper

Cathodic corrosion – A quick, clean and versatile method for the synthesis of metallic nanoparticles

18:10 to 18:30

Na Zhang (Department of Applied Chemistry, Harbin Institute of Technology, Harbin, China), Sheng Zhang, Hui Liu, Fandong Kong, Geping Yin

Improved Stability and Activity for Oxygen Reduction on SnO₂/C Supported Pt Electrocatalysts

Symposium 7b: Fuel Cells: Materials, Properties and Mechanisms

Direct FCs, PEM and AFC, SOFCs

Location: Snow Hall B

Chaired by: Tatsumi Ishihara and Enn Lust

14:30 to 15:10 **Keynote**

Nigel Brandon (Earth Science and Engineering, London, United Kingdom)

Solid oxide fuel cell anodes – factors influencing performance and durability

15:10 to 15:30

Gang Chen (North Japan Research Institute for Sustainable Energy, Aomori, Japan), Guoqing Guan, Yutaka Kasai, Abuliti Abudula

Rapid degradation phenomenon of Ni-CGO anode at a high current density with high fuel utilization

15:30 to 15:50

Tae Ho Shin (Dept. Applied Chemistry, Fukuoka, Japan), Shintaro Ida, Tatsumi Ishihara

Modified Oxide Anode for High-Performance Direct Hydrocarbon-type SOFC

15:50 to 16:10

Young-Wan Ju (Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Fukuoka, Japan), Shintaro Ida, Toru Inagaki, Tatsumi Ishihara

Reoxidation tolerance of Ni-Fe bimetal supported SOFC using LSGM thin film electrolyte

16:10 to 16:30

Kazunari Sugihara (Ehime University, Matsuyama, Japan), Makiko Asamoto, Syuhei Yamaguchi, Hidenori Yahiro

Effect of Ni crystallite size on Ni/SDC anode performance in SOFC

16:30 to 16:50

Coffee Break

16:50 to 17:10

Anne Hauch (Fuel Cells and Solid State Chemistry Division, Risø DTU, Technical University of Denmark, Roskilde, Denmark)

Impedance spectroscopy characterization of high performing SOFC with Ni/ScYSZ anode

17:10 to 17:30

Tuyen Tran Quang (Department of Mechanical Engineering, Kyushu University, Fukuoka City, Japan), Yusuke Shiratori, Kazunari Sasaki

Study on Biodiesel-fueled Solid Oxide Fuel Cells

17:30 to 17:50

Yi-Hsuan Lee (Department of Energy and Hydrocarbon Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan), Hirofumi Sumi, Hiroki Muroyama, Toshiaki Matsui, Koichi Eguchi

Influence of carbon deposition and removal in anode on cell performance in internal reforming operation of SOFCs

17:50 to 18:10

Yu Inagaki (Graduate School of Engineering, Tohoku University, Sendai, Japan), Kensuke Kubota, Fumitada Iguchi, Syuji Tanaka, Noriko Sata, Masayoshi Esashi, Hiroo Yugami

Low-temperature operating micro-SOFC with perovskite-type proton conductive electrolytes

18:10 to 18:30

Naoyuki Hatada (Department of Materials Science and Engineering, Kyoto University, Kyoto, Japan),
Kazuaki Toyoura, Yoshitaro Nose, Tetsuya Uda

Thermal Stability of LaP_3O_9 and $\text{LaP}_5\text{O}_{14}$ Proton Conductors

Symposium 8a: Electrochemical Energy Storage and Conversion

Basic science of battery capacitor and fuel cells, Novel materials for electrochemical device

Location: Marine Hall

Chaired by: Elzbieta Frackowiak and Soshi Shiraishi

14:30 to 14:50 **Invited**

Stephen Lipka (University of Kentucky Center for Applied Energy Research, Lexington, USA), Illayathambi Kunadian, Rong Chen, Christopher Swartz

High-performance, Biomass-derived Capacitive Carbons

14:50 to 15:10 **Invited**

François Béguin (CRMD CNRS, University, Orléans, France), Laurent Demarconnay, Giang Gao

C/C electrochemical capacitors operating at 2 V in neutral aqueous media

15:10 to 15:30

Soshi Shiraishi (Department of Chemistry and Chemical Biology, Graduate School of Engineering, Gunma University, Kiryu, Japan), Takafumi Yamaguchi, Kaori Imai, Kenji Orito, Koji Hoshino, Kei-ichi Kurata, Eiko Kanda

Application of Foamed Al Current Collector for Electric Double Layer Capacitors

15:30 to 15:50

Robert Francke (Department of Organic Chemistry, Johannes Gutenberg-University, Mainz, Germany), Dario Cericola, Rüdiger Kötz, Siegfried R. Waldvogel

Novel Electrolytes for Electrochemical Double-layer Capacitors

15:50 to 16:10

Grzegorz Lota (Poznan University of Technology, Institute of Chemistry and Technical Electrochemistry, Poznan, Poland)

Electrode/Electrolyte Interactions as a Source of Capacitance in Electrochemical Capacitors

16:10 to 16:30

Krzysztof Fic (Institute of Chemistry and Technical Electrochemistry, Poznan University of Technology, Poznan, Poland), Grzegorz Lota, Elzbieta Frackowiak

Novel Type of Supercapacitor Based on Nonlinear Chemical Oscillator

16:30 to 16:50

Coffee Break

16:50 to 17:10

Torop Janno (IMS Lab., Institute of Technology, University of Tartu, Tartu, Estonia)

Flexible Supercapacitor-like Actuator with Carbide-derived Carbon Electrodes

17:10 to 17:30

Raul Berenguer (Institute of Multidisciplinary Research for Advanced Materials, Kyotani Lab., Tohoku University, Sendai, Japan), Itoi Hiroyuki, Emilia Morallón, Diego Cazorla-Amorós, Hirotomo Nishihara, Takashi Kyotani

High Electrochemical Capacitance Performance on Zeolite-Templated Carbon Electrodes

17:30 to 17:50

Ying-Hui Lee (Department of Chemical Engineering, Hsin-Chu, Taiwan)

N-doped carbon from collagen for electrochemical energy storage/conversion systems

17:50 to 18:10

Heisi Kurig (Institute of Chemistry, University of Tartu, Tartu, Estonia), Alar Jänes, Enn Lust
Selection of Ionic Liquids as Electrical Double-Layer Capacitor Electrolytes

18:10 to 18:30

Nae-Lih Wu (Chemical Engineering Department, National Taiwan University, Taipei, Taiwan)
Cycling Stability and Widening Operating Voltage Window of Aqueous Manganese Oxide Supercapacitors

Symposium 10: Metallization for Microelectronics, Photonics and Energy Conversion Devices

Location: Room 306+307

Chaired by: Honma Hideo and Yosi Shacham-Diamand

14:30 to 15:10 **Keynote**

Masanobu Izaki (Toyohashi University of Technology, Graduate School of Engineering, Faculty of Mechanical Engineering, Toyohashi-shi, Japan)

Electrochemical Preparation of Oxide Semiconductors and the Photovoltaic Devices

15:10 to 15:30

Fangyang Liu (Central South University, Changsha, China), Zhian Zhang, Liangxing Jiang, Yi Li, Yanqing Lai, Jie Li, Yexiang Liu

Single-step electrodeposition of $\text{Cu}_2\text{ZnSnSe}_4$ thin film from aqueous solution

15:30 to 15:50

Jin Kawakita (Nano-Electronics Materials Unit, National Institute for Materials Science, Tsukuba, Japan), Yuki Fujikawa, Yukihiro Sakamoto, Toyohiro Chikyow

Charge Energy Level of Conductive Organic Polymer

15:50 to 16:10

Huichao He (College of Chemistry and Chemical Engineering, Chongqing University College of Material Science and Engineering, Chongqing University, Chongqing, China), Yunhuai Zhang, Peng Xiao, Shujuan Yu, Feila Liu

Preparation of Zn/TiO_2 Nano-composite by Pulsed Electrodeposition and its Photoelectrochemical Properties

16:30 to 16:50

Coffee Break

16:50 to 17:30 **Keynote**

John Stickney (The University of Georgia, Department of Chemistry, Athens, USA)

Electrodeposition of PV Materials Using Atomic Layer Deposition

17:30 to 17:50

Hiroshi Miyake (Kansai University, Suita, Japan), Fumihiro Inoue, Ryohei Arima, Tomohiro Shimizu, Shoso Shingubara

All-wet TSV Process Using Electroless Barrier and Seed Layers with Pd Nanoparticle Catalyst

Symposium 11: Green Electrochemical Processing

Location: Room 302

Chaired by: Hiroshi Inoue and Giovanni Zangari

14:30 to 14:50

Shintaro Ida (Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Fukuoka, Japan), Keisuke Yamada, Hidehisa Hagiwara, Tatsumi Ishihara

Photoelectrochemical Hydrogen Production from Water without External Applied Voltage Using p-Type and n-Type Oxide Semiconductor Electrodes

14:50 to 15:10 **Invited**

Takayuki Homma (Applied Chemistry, Waseda University, Tokyo, Japan), Takanari Ouchi, Naofumi Shimano
High Coercivity Magnetic Thin Films Deposited from Simplified Electroless Bath System

15:10 to 15:30

Naray Pewnim (Chemical Engineering and Advanced Materials, Newcastle upon Tyne, United Kingdom), Sudipta Roy

Electrochemical Investigation of Copper-Tin Codeposition from Methanesulfonate Electrolytes

15:30 to 15:50

Wen-Ta Tsai (Department of Materials Science and Engineering, National Cheng Kung University, Tainan, Taiwan), Yan-Chi Chuang, Shih-Yi Chiu

Materials Characteristics and Corrosion Performance of Heat-treated Ni-P Alloy Coatings Electrodeposited from an Emulsified Supercritical CO₂ Bath

15:50 to 16:10 **Invited**

Hiroshi Irie (Clean Energy Research Center, University of Yamanashi, Kofu, Yamanashi, Japan), Kazuhide Kamiya, Kazuhito Hashimoto

Electrochemical and Spectroscopic Characterizations of Cu(II)-Grafted Titanium Dioxide Photocatalyst

16:10 to 16:30

Jiang Li (Materials & Structures Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Bin Yin, Toshio Fuchigami, Shinsuke Inagi, Hideo Hosono, Setsuro Ito

A new electrode of 12CaO•7Al₂O₃ electride for electrochemical reactions

16:30 to 16:50

Coffee Break

16:50 to 17:10 **Invited**

Ichiro Koiwa (Department of Applied Material and Life Science, Faculty of Engineering, Kanto Gakuin University, Yokohama-shi, Japan)

Magnetic Force-based Microarray Chip for Medical Care Prepared by Plating Method

17:10 to 17:30 **Invited**

Toshihiro Kuzuya (Division of Mechanical Systems and Materials Engineering, Graduate School of Engineering, Muroran Institute of Technology, Muroran, Japan)

Recovery of Rare Metals and Lithium from Spent Li-Ion Battery Using a Carbothermic Reduction

17:30 to 17:50

Soojin Shim (World Class University (WCU), Program of Chemical Convergence for Energy & Environment (C2E2), School of Chemical and Biological Engineering, Seoul National University (SNU), Seoul, Korea), Jeyong Yoon

Properties of PbO₂ electrode affecting various oxidants evolution

17:50 to 18:10

Tsuyoshi Ochiai (Kanagawa Academy of Science and Technology, Kawasaki City, Japan), Kazuya Nakata, Taketoshi Murakami, Yuko Morito, Shunsuke Hosokawa, Akira Fujishima

Development of an Photocatalysis-Plasma Hybrid Reactor for Environmental Purification

18:10 to 18:30

Aleksandar Zeradjanin (Anal. Chem. - Elektroanalytik & Sensorik Ruhr-, Universität Bochum, Bochum, Germany), Wolfgang Schuhmann

Utilization of the catalyst layer at gas evolving electrodes - Interplay of morphology, surface area and homogeneity of the coating

Symposium 12: Redox Properties of Environmentally Significant Molecules and Complexes

Location: Room 303+304

Chaired by: Jiri Ludvik and Shigeru Nishiyama

14:30 to 14:50

Mahito Ato (Department of Environment and System Sciences, Yokohama National University, Yokohama, Japan), Nakabayashi Koji, Fumihiro Amemiya, Toshio Fuchigami, Kenji Machida, Sekihiro Takeda, Kenji Tamamitsu

A New Approach for the Preparation of a Highly Clear and Transparent Nanoemulsion under Surfactant-Free Conditions Using Tandem Acoustic Emulsification

14:50 to 15:10 **Invited**

Włodzimierz Kutner (Cardinal Stefan Wyszyński University in Warsaw, Warsaw, Poland), Agnieszka Pietrzyk-Le, Huynh Huynh, Chandra K. C. Bikram, Francis D'Souza

A Systematic Approach to Fabrication of Chemical Sensors for Biogenic Amines Featuring Recognition Units of Molecularly Imprinted Polymers

15:10 to 15:30 **Invited**

Zhiyong Wang (Department of Chemistry, Univ Sci & Technol China, Hefei, China)

Direct Electrochemical Imidation of Aliphatic Amines via an Anodic Oxidation

15:30 to 15:50

Yoshio Hisaeda (Department of Chemistry and Biochemistry, Graduate School of Engineering, Kyushu University, Fukuoka, Japan), Keishiro Tahara, Hisashi Shimakoshi, Akihiro Tanaka

Redox Behavior and Electrochemical Catalytic Function of B12-Hyperbranched Polymer

15:50 to 16:30 **Keynote**

Siegfried R. Waldvogel (Institute for Organic Chemistry, Johannes Gutenberg University Mainz, Mainz, Germany)

Electrochemical Synthesis on Boron-doped Diamond

16:30 to 16:50

Coffee Break

16:50 to 17:10

Hisanori Senboku (Faculty of Engineering, Hokkaido University, Sapporo, Japan), Natsuko Kobayashi, Yusuke Yamauchi, Shoji Hara

Electrochemical Carboxylation of Flavones

17:10 to 17:30

Carlos Frontana (Centro de Investigación y Desarrollo Tecnológico en Electroquímica, SC, Pedro Escobedo, Mexico), Ana I. Pérez-Jiménez

Which is the Influence of the Position of the Substituent in Selfprotonation Pathways? Reassessing the Role of the Ortho Effect

17:30 to 17:50 **Invited**

Katsuyoshi Hoshino (Graduate School of Advanced Integrated Science, Chiba University, Chiba, Japan)

Dinitrogen fixation using titanium oxide/conducting polymer composite systems

17:50 to 18:10

Guobao Xu (The State Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China), Shuang Han, Lianzhe Hu, Haijuan Li

Tris(2,2'-bipyridyl)ruthenium (II) Electrogenated Chemiluminescence of Some New Coreactants

18:10 to 18:30

Irena Hoskovicová (Institute of Chemical Technology Prague, Prague, Czech Republic)

Electrochemical Reduction and Oxidation of Cr(0) and Fe(0) Aminocarbene Complexes

Symposium 13: Kinetics and Mechanisms of Electrode Reactions: Studies by Spectroscopy, Theory and New Advanced Methods

Location: Room Toki-A

Chaired by: Juan M. Feliu

14:30 to 14:50

Shengli Chen (Department of Chemistry, Wuhan University, Wuhan, China), Qianfan Zhang, Yu Sun, Fan Yang, Yu Dai, Yuwen Liu

A Combined Theoretical and Experimental Study on the Particle Size Effects of Pt in Hydrogen Electrocatalysis

14:50 to 15:10 **Invited**

Lin Zhuang (College of Chemistry and Molecular Sciences, Wuhan University, Wuhan, China), Bing Huang, Li Xiao, Juntao Lu

The d-band center is not enough: Efforts toward better descriptor for adsorption bonds

15:10 to 15:30

Ifan Stephens (Center for Individual Nanoparticle Functionality, Technical University of Denmark (DTU), Kgs. Lyngby, Denmark), Alexander Bondarenko, Francisco Perez-Alonso, Federico Calle-Vallejo, Lone Bech, Tobias Johansson, Jan Rossmeisl, Ib Chorkendorff

Tuning the activity of Pt(111) for oxygen reduction by subsurface alloying

15:30 to 15:50

Andrea Russell (Department of Chemistry, University of Southampton, Southampton, United Kingdom), Stephen Price, Jonathon Speed, Peter Richardson, Anna Wise

In-situ EXAFS of Au/C nanoparticle electrocatalysts modified by upd Cu

15:50 to 16:30 **Keynote**

Marc Koper (Leiden University, Leiden, Netherlands)

The low-temperature electrochemical reduction of carbon dioxide: Fischer-Tropsch by electrons?

16:30 to 16:50

Coffee Break

16:50 to 17:10

Petr Krtil (J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic), Maki Okube, Jonathan Mueller, Valery Petrykin, Sudha Venkatachalam, Timo Jacob

Surface segregation of the Au₄Pd nanoparticulate alloys triggered by electrocatalytic reactions

17:10 to 17:30 **Invited**

Nagahiro Hoshi (Department of Applied Chemistry and Biotechnology, Graduate School of Engineering, Chiba University, Chiba, Japan), Masashi Nakamura, Chikara Yoshida, Yuta Yamada

High Speed AFM of the Dissolution of Shape-controlled Pt Nanoparticles in Acidic Solution

17:30 to 17:50

Gorachand Dutta (Department of Chemistry, Pusan National University, Busan, Korea), Haesik Yang, Kyungmin Jo

Enhancement of the Electrocatalytic Activities of Au Nanoparticles and Their Decrease with Aging

17:50 to 18:10

Yuwen Liu (Department of Chemistry, Wuhan University, Wuhan 430072, China), Qianfan Zhang, Shengli Chen

Theoretical Consideration of Electron Transfer on Nanometer-sized Electrodes

18:10 to 18:30

Edmund Dickinson (Physical and Theoretical Chemistry Laboratory, University of Oxford, Oxford, United Kingdom), Richard Compton

Faradaic current and the double layer: How do they affect each other?

Tuesday 13 September 2011 - Morning

Plenary

Location: Snow Hall

Chaired by: Tetsuya Osaka

08:30 to 09:30

Richard Alkire (University of Illinois, Urbana, USA)

Earth, Water, Air and Fire: Elemental Challenges for Well-engineered Electrochemical Systems

Symposium 2: Unusual Electrochemical Phenomena in Ionic Liquids and Related Systems

Location: Room 301

Chaired by: Frank Endres

09:50 to 10:30 **Keynote**

C. Austen Angell (Chemistry and Biochemistry, Tempe, USA), Younes Ansari, Kazuhide Ueno

Separating Acidity from Ionicity in Protic Ionic Liquids: Superacidic and Superprotonic Ionic Liquids

10:30 to 10:50

Eunan Marley (School of Chemistry and Chemical Engineering, Queens University Belfast, Belfast, United Kingdom), Laura Diaconu, Rachid Barhdadi, Andrew Doherty

Equilibria and Kinetics in Ionic Liquids – An Electrochemical Perspective

10:50 to 11:10

Coffee Break

11:10 to 11:30 **Invited**

Stefano Passerini (Institute of Physical Chemistry, University of Muenster, Muenster, Germany), Miriam Kunze, Monika Schonhoff, Martin Winter

Is Cation Self-aggregation in Pyrrolidinium-based Ionic Liquids Unavoidable?

11:30 to 11:50

Seiji Tsuzuki (Nanosystem Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan), Matsumoto Hajime, Shinoda Wataru, Mikami Masuhiro

Effects of Conformational Flexibility on Diffusion of Ions in Ionic Liquids

11:50 to 12:10

Muhammed Shah Miran (Department of Chemistry and Biotechnology, Yokohama National University, Yokohama, Japan), Hiroshi Kinoshita, Tomohiro Yasuda, Md. Abu Bin Hasan Susan, Masayoshi Watanabe

Protic Ionic Liquids with Excellent Thermal Stability and High Ionicity from an Organic Super-strong Base

12:10 to 12:30

Hiroshi Abe (Materials Science and Engineering, National Defense Academy, Yokosuka, Japan), Masami Aono, Yukihiro Yoshimura

Impedance Spectroscopic Study in Room Temperature Ionic Liquid-water Mixtures

Symposium 3: Electrochemical Micro & Nanosystem Technologies

Location: Room Toki-A

Chaired by: Achim Walter Hassel

09:50 to 10:30 **Keynote**

Philippe Allongue (Physique de la Matière Condensée CNRS, Palaiseau, France), Fouad Maroun, Nicolas Tournerie, Andreas Engelhardt, Rafael Novak

Surface Magnetism at the Electrochemical Interface: Challenges and Opportunities

10:30 to 10:50

Alexander Mozalev (Brno University of Technology, Faculty of Electrical Engineering and Communication, Brno, Czech Republic), Hiroki Habazaki, Jaromir Hubalek

The superhydrophobic properties of self-organized nanostructured surfaces derived from anodically oxidized Al/Nb and Al/Ta metal layers

10:50 to 11:10

Coffee Break

11:10 to 11:30 **Invited**

Giovanni Zangari (CESE and Department of Material Science and Engineering, University of Virginia, Charlottesville, USA)

Electrodeposition of Au-Ni and Ag-Ni alloys

11:30 to 11:50

Jan Clausmeyer (Ruhr Universität Bochum, Center for Electrochemical Science, Bochum, Germany), Joerg Henig, Nicolas Plumeré, Wolfgang Schuhmann

Electrochemical Deprotection and Activation of Michael Acceptors for Electrode Microstructuring

11:50 to 12:10

Alexander Vaskevich (Department of Materials and Interfaces, Weizmann Institute of Science, Rehovot, Israel), Alexander Tesler, Tali Sehayek, Israel Rubinstein

Application of Localized Surface Plasmon Resonance (LSPR) Spectroscopy to the Study of Metal Electrodeposition on the Nanoscale

12:10 to 12:30

Achim Walter Hassel (Institute for Chemical Technology of Inorganic Materials, Linz, Austria)

Combinatorial Corrosion Screening of Zinc Alloys

Symposium 5: Bioelectrochemistry for Energy Transformation

Location: Room 203+204

Chaired by: Fred Lisdat and Shelley Minteer

09:50 to 10:10 **Invited**

Fred Lisdat (Biosystems Technology, Technical University Wildau, Wildau, Germany), Franziska Wegerich, Gero Göbel, Paola Turano, Marco Allegrozzi, Helmut Möhwald

Different approaches for coupling bilirubin oxidase to electrodes

10:10 to 10:30 **Invited / Tajima Prize**

Shelley Minteer (University of Utah, Salt Lake City, USA)

Enzymatic and Organelle-based Bioelectrocatalysis

10:30 to 10:50 **Invited**

Serge Cosnier (CNRS, Grenoble University, Grenoble- Cedex 9, France)

Recent Advances in Composite Biomaterials for the Development of Biofuel Cells

10:50 to 11:10

Coffee Break

11:10 to 11:50 Keynote

Shaojun Dong (State Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Changchun, China)

Some Aspects of Biofuel Cells and Self-Powered Logic Biosensors

11:50 to 12:10 Invited

Sergey Shleev (Biomedical Laboratory Science and Technology, Malmö, Sweden), Wang Xiaojun, Magnus Falk, Roberto Ortiz, Johan Bobacka, Roland Ludwig, Mikael Bergelin, Lo Gorton

Mediatorless sugar/oxygen enzymatic fuel cells based on gold nanoparticles-modified electrodes

12:10 to 12:30 Invited

Lanqun Mao (Beijing National Laboratory for Molecular Sciences, Key Laboratory of Living Biosystems, Institute of Chemistry, The Chinese Academy of Sciences, Beijing, China)

Enzymatic Biofuel Cells: Challenges and Opportunities

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Location: Room 201

Chaired by: Jun-ichi Yamaki

09:50 to 10:30 Keynote

Jun-ichi Yamaki (Institute for Materials Chemistry and Engineering, Kyushu University, Kasuga, Japan), Liwei Zhao, Mingjiong Zhao, Seung-Hee Han, Yuichi Hirakawa, Shigeto Okada

Safety and Thermal Stability of Li-Ion Batteries

10:30 to 10:50 Invited

Xuejie Huang (Institute of Physics, Chinese Academy of Sciences, Beijing, China), Yu He, Hong Li, Yanhong Wang, Xiqian Yu

Si-based Anode Materials for Li-ion Batteries

10:50 to 11:10

Coffee Break

11:10 to 11:30

Hiroyuki Usui (Applied Chemistry Course, Department of Chemistry and Biotechnology, Graduate School of Engineering, Tottori University, Tottori, Japan), Toshikazu Masuda, Masahiro Shimizu

Thick-film anodes of Si-based materials in ionic liquids for Li-ion batteries

11:30 to 11:50

Morihiro Saito (Department of Molecular Chemistry and Biochemistry, Doshisha University, Kyotanabe-shi, Japan), Tomoyuki Yamada, Chihiro Yodoya, Akika Kamei, Masato Hirota, Toshio Takenaka, Akimasa Tasaka, Minoru Inaba

Effects of Thickness on the Negative Electrode Properties of Si Thin Flakes for Lithium Ion Batteries

11:50 to 12:10

Michel Rosso (Laboratoire PMC, Ecole Polytechnique-CNRS, Palaiseau, France), Abdelhak Cheriet, Larbi Touahir, Jean-Noël Chazalviel, Nour-Eddine Gabouze, Catherine Henry de Villeneuve, François Ozanam, Ionel Solomon

Thin Layer Amorphous Silicon/Carbon-based Anodes For Lithium-ion Batteries

12:10 to 12:30

Nae-Lih Wu (Chemical Engineering Department, National Taiwan University, Taipei, Taiwan)

Comparative Study on Dimensional Deformation of Sn and SnSb Alloying Anodes for Li-ion Batteries as Revealed by *In-situ* Transmission X-ray Microscopy

Symposium 7a: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells, fundamental processes, materials and architectures, modeling,
PEFC: Catalysts and MEAs, polymer electrolyte membranes

Location: Snow Hall A

Chaired by: Atsushi Ohma and Günther Scherer

10:10 to 10:30

Viktor Hacker (Graz University of Technology, Institute of Chemical Engineering and Environmental Technology, Graz, Austria), Immanuel Mayrhuber, Astrid Stadlhofer, Reinhard Strasser

Degradation of PEMFCs operated under Fuel Starvation Conditions

10:30 to 10:50

Shigenori Mitsushima (Chemical Energy Laboratory, Yokohama National University, Yokohama, Japan), Kazuki Shinkoda, Koichi Matsuzawa, Ken-ichiro Ota

Solubility and permeability of Pt ion in polymer electrolyte

10:50 to 11:10

Coffee Break

11:10 to 11:30

Christophe Chauvin (Faculty of Textile Science and Technology, Shinshu University, Nagano, Japan), Takahiro Saida, Qingfeng Liu, Wataru Sugimoto

Effects of RuO₂ Nanosheet on Activity and Durability of Pt and Pt/Carbon Catalyst

11:30 to 11:50

Masanori Hara (Fuel Cell Nanomaterials Center, University of Yamanashi, Kofu, Japan), Junji Inukai, Byungchan Bae, Kenji Miyatake, Masahiro Watanabe

Water Distribution inside Electrolyte Membrane in Operating PEFC Using Micro-Raman Spectroscopy

11:50 to 12:30 **Keynote**

Günther Scherer (Electrochemistry Laboratory, Paul Scherrer Institut, Villigen, Switzerland), Hendrik Schulenburg, Bernhard Schwanitz, Rüdiger Kötz, Annette Foelske, Anastasia Savouchkina, Lorenz Gubler, Nicolas Linse, Hicham Ben Youcef, Frank Wallasch, Alexander Wokaun

Polymer Electrolyte Fuel Cells Materials Research Aspects Studied at Paul Scherrer Institut

Symposium 7b: Fuel Cells: Materials, Properties and Mechanisms

Direct FCs, PEM and AFC, SOFCs

Location: Snow Hall B

Chaired by: Koji Amezawa and Anne Hauch

10:10 to 10:30

Takayuki Sugimoto (Department of Integrated Sciences in Physics and Biology, College of Humanities and Sciences, Nihon University, Tokyo, Japan), Takuya Hashimoto

Crystal structure and electrical conductivity of proton conductor, Ba_{0.6}Sr_{0.4}Zr_{1-y}Y_yO_{3-δ}

10:30 to 10:50

Pilwon Heo (Energy Lab, Samsung Advanced Institute of Technology, Yongin, Korea), Taeyoung Kim, Jinsu Ha, Sangkyun Kang, Kyoung-Hwan Choi, Hyuk Chang

Intermediate-temperature Fuel Cells with Amorphous Sn_{0.9}In_{0.1}P₂O₇ Thin Film Electrolytes

10:50 to 11:10

Coffee Break

11:10 to 11:50 **Keynote**

Alan Atkinson (Department of Materials, Imperial College, London, United Kingdom)

Mechanical Issues in Solid Oxide Fuel Cells

11:50 to 12:10

Donglin Han (Department of Materials Science and Engineering, Kyoto University, Kyoto, Japan), Kyosuke Kishida, Kozo Shinoda, Yoshitaro Nose, Haruyuki Inui, Tetsuya Uda

Evaluation of Site Occupancy of Y in Barium Zirconate by Powder X-ray Diffraction Based on Anomalous Dispersion Effect

12:10 to 12:30

Kazuhide Nakao (Department of Hydrogen Energy Systems, Graduate School of Engineering, Kyushu University, Fukuoka, Japan), Teppei Ogura, Takayoshi Ishimoto, Michihisa Koyama

Molecular Dynamics Study for the Sintering of Ni Anode in Solid Oxide Fuel Cell

Symposium 8a: Electrochemical Energy Storage and Conversion

Basic science of battery capacitor and fuel cells, Novel materials for electrochemical device

Location: Marine Hall

Chaired by: Shinichi Komaba and Daniel Scherson

09:50 to 10:10 **Invited**

Marnix Wagemaker (Faculty of Applied Sciences, Delft University of Technology, Delft, Netherlands), Swapna Ganapathy, Wouter J.H. Borghols, Ernst R.H. van Eck, Arno P.M. Kentgens, Ugo Lafont, Erik M. Kelder, Fokko M. Mulder

Surface storage in nano-sized spinel $\text{Li}_4\text{Ti}_5\text{O}_{12}$: DFT calculations versus experiments, and transport of Li-ions over the SEI on nano anatase TiO_2

10:10 to 10:30 **Invited**

Yuichi Ikuhara (Institute of Engineering Innovation, The University of Tokyo, Tokyo, Japan)

Direct Observation of Li ions in Li Battery Cathode Materials by STEM

10:30 to 10:50

Keigo Aso (Department of Applied Chemistry, Graduate School of Engineering, Osaka Prefecture University, Sakai, Osaka, Japan), Akitoshi Hayashi, Masahiro Tatsumisago

Fabrication of all-solid-state lithium secondary batteries using nanosized NiS active materials and $\text{Li}_2\text{S-P}_2\text{S}_5$ solid electrolytes

10:50 to 11:10

Coffee Break

11:10 to 11:50 **Keynote**

Linda Nazar (Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada), Scott Evers, Guang He, Tae-eun Yim

Advances in the Li-S Battery and Challenges for its Future Development

11:50 to 12:10

Sang-Bok Ma (Samsung Advanced Institute of Technology (SAIT), Yongin-Si, Korea), Young-Gyoon Ryu, Victor Roev, Dong-Joon Lee, Dong-Min Im

Metal Oxide/Carbon Nanocomposite for Li-Air Battery

12:10 to 12:30

Tao Zhang (Department of Chemistry, Tsu, Japan), Nobuyuki Imanishi, Atsushi Hirano, Yasuo Takeda, Osamu Yamamoto

Alkaline Aqueous Lithium/Air Rechargeable Batteries

Symposium 10: Metallization for Microelectronics, Photonics and Energy Conversion Devices

Location: Room 306+307

Chaired by: Thomas Moffat

09:50 to 10:10 **Invited**

Shuehlin Yau (Department of Chemistry, National Central University, Jhongli, Taiwan)

In-situ STM of 3-mercaptopropanesulfonate Adsorbed on Pt(111) Electrode and its Effect on the Electrodeposition of Copper

10:10 to 10:30

Azhagurajan Mukkannan (WPI Research Center Initiative Advanced Institute for Materials Research (WPI-AIMR), Tohoku University, Sendai, Japan), Youn-Geun Kim, Abishek Lahiri, Kingo Itaya

In-situ Observation of Electrodeposition and Dissolution of Au Single Crystal Electrode with LCM-DIM

10:30 to 10:50 **Invited**

Walther Schwarzacher (H. H. Wills Physics Laboratory, University of Bristol, Bristol, United Kingdom), Sarah Ward Jones

Potential Control of Electrodeposit Composition Profiles

10:50 to 11:10

Coffee Break

11:10 to 11:30

Tatsuro Matsuoka (Tokyo University of Science, Noda-shi, Chiba-ken, Japan), Keiichi Otubo, Yuki Onishi, Kenji Amaya, Masanori Hayase

Inverse Analysis of Accelerator Distribution in Copper TSV Filling

11:30 to 11:50 **Invited**

Yair Ein-Eli (Materials Engineering, Haifa, Israel), David Starosvetsky, Nina Sezin

Seedless Copper Electroplating on Ta from a "Single" Electrolytic Bath

11:50 to 12:10 **Invited**

Naoki Okamoto (Department of Chemical Engineering, Osaka Prefecture University, Sakai, Japan), Megumi Miyamoto, Takafumi Fukumoto, Masaki Hirota, Yusuke Niwa, Takeyasu Saito, Kazuo Kondo

Cu filled through-hole electrode for ZnS using high adhesive strength Ni-P thin film

12:10 to 12:30

Thomas Moffat (NIST, Gaithersburg, USA), Yihua Liu, Liang-Yueh Ou Yang, Daniel Josell, Daniel Wheeler

Superconformal Film Growth: Challenges and Opportunities

Symposium 11: Green Electrochemical Processing

Location: Room 302

Chaired by: Ichiro Koiwa and Sachio Yoshihara

09:50 to 10:10 **Invited**

Masatsugu Morimitsu (Department of Environmental Systems Science, Doshisha University, Kyotanabe, Japan)

Smart Anodes, MSATM, for Energy Efficient and Environmentally Friendly Metal Electrowinning

10:10 to 10:30 **Invited**

Dihua Wang (School of Resource and Environmental Sciences, Wuhan, China), Huayi Yin, Donald R. Sadoway

High temperature electrochemical pathways for green iron

10:30 to 10:50 **Invited / Oronzio and Niccolò De Nora Foundation Prize of ISE on Environmental Electrochemistry**

Minghua Zhou (College of Environmental Science and Engineering, Nankai University, Tianjin, China)

Green Electrochemical Processes for Environmental Remediation

10:50 to 11:10

Coffee Break

11:10 to 11:30

Francois Lapique (CNRS. Labor. Reactions and Chemical Engineering, Nancy, France)

Design of cells for the electrolytic reduction of hematite to iron based on current density distributions

11:30 to 11:50

Luis F. D'Elia Camacho (PDVSA Intevep, Los Teques, Venezuela), Dheivy Acevedo, Jorge A. Moncada, Zogehil Puentes

Electrochemically assisted demetallisation of vanadyl meso-tetraphenylporphyrin by using atomic hydrogen

11:50 to 12:10

Daisuke Suzuki (Vantec Co., Ltd., Nasushiobara, Japan), Ryu Miyamoto, Yoshifusa Ishikawa, Sachio Yoshihara

The cathodic performance of electrodeposited nickel-tungsten-sulfur alloy for alkaline water electrolysis

12:10 to 12:30

Andre Savall (Laboratoire de Génie Chimique, CNRS, Université de Toulouse, Toulouse, France), Nouredine Belhadj Tahar

Electrochemical removal of phenol in alkaline solution by anodic polymerization

Symposium 12: Redox Properties of Environmentally Significant Molecules and Complexes

Location: Room 303+304*Chaired by: Włodzimierz Kutner and Seiji Suga*09:50 to 10:30 **Keynote****Yves Le Mest** (UMR 6521 CNRS UBO, BREST, France)A Challenge: Rationalization of the Cavitand Effects on the Redox, Ligation and O₂ Reactivity of Calix[6]arene-based Mimics of Cu Mononuclear Enzymes

10:30 to 10:50

Koichi Mitsudo (Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan), Yumiko Nakagawa, Jun-ichi Mizukawa, Hideo Tanaka, Seiji Suga, Ryoichi Akaba

Electro-reductive Intramolecular Cyclization of Aryl Halides Promoted by Fluorene Derivatives

10:50 to 11:10

Coffee Break

11:10 to 11:30 **Invited****Masayoshi Watanabe** (Department of Chemistry & Biotechnology, Yokohama National University, Yokohama, Japan), Kazuki Yoshida, Seiji Tsuzuki, Shiro Seki, Kaoru Dokko

Anomalous Oxidative-stability and Charge Transport of Glyme-lithium Salt Equimolar Complexes

11:30 to 11:50

M. Fatma Guedes da Silva (Universidade Lusofona de Humanidades e Tecnologias, ULHT Lisbon, Lisbon, Portugal), Xianmei Shang, Elizabete C.B.A. Alegria, Qingshan Li, Maxim L. Kuznetsov, Xianggao Meng, Armando J.L. Pombeiro

Electrochemical behavior, theoretical study and antitumor activity of organotin(IV) complexes bearing cyclopentanecarboxylato ligands

11:50 to 12:10 **Invited****Hideki Hakamata** (Department of Analytical Chemistry, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, Hachioji, Japan), Fumiyo Kusu

Electrode Oxidation of Cholesterol for Sterol Determination in Biological Samples

12:10 to 12:30 **Invited****Armando J.L. Pombeiro** (Instituto Superior Técnico, Universidade Técnica de Lisboa, Lisbon, Portugal)

Electron-Transfer in Coordination Compounds: Redox Potential and Selected ET-induced Reactions

Tuesday 13 September 2011 - Afternoon

Symposium 1: Electroanalytical Chemistry for Environmental Protection and Monitoring

Location: Room 203+204

Chaired by: Hasuck Kim and Katsuaki Shimazu

14:30 to 15:10 Keynote

Hasuck Kim (Department of Energy Systems Engineering, Daegu, Korea), Kyungmin Chun, Yeon-Joo Kang, Jeong-Wook Oh, Yang Rae Kim, Jong Seung Kim

Electrochemical Recognition of Optically Active Compounds Based on Molecular Interaction

15:10 to 15:30 Invited

Wang Erkang (State Key Laboratory of Electroanalytical Chemistry, Changchun, China), Wang Jiahai

Electrochemiluminescence(ECL) and Its Solid-state Detector

15:30 to 15:50 Invited

Tomoyuki Yasukawa (Graduate School of Material Science, University of Hyogo, Hyogo, Japan)

Particle manipulation with dielectrophoresis to develop rapid and sensitive immunosensing for pesticides

15:50 to 16:10 Invited

Yukari Sato (National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan), Kyoko Yoshioka, Teiichi Murakami, Mutsuo Tanaka, Osamu Niwa

Enhanced Recognition of Proteins and Peptides Based on Densified Hybrid Monolayers

16:10 to 16:30

Yasushi Hasebe (Department of Life Science and Green Chemistry, Saitama Institute of Technology, Fukaya, Japan), Yue Wang, Yasushi Hasebe

Flow-amperometric biosensor for toxins using myoglobin-adsorbed carbon-felt based on inhibitory effects on bioelectrocatalytic reduction of oxygen

16:30 to 16:50

Coffee Break

16:50 to 17:30 Keynote

Yasuaki Einaga (Department of Chemistry, Keio University, Yokohama, Japan), Stephane Fierro, Takeshi Watanabe, Kazumi Akai, Mikito Yamanuki

Recent development on electrochemical analysis using boron-doped diamond electrodes

17:30 to 17:50 Invited

Katsuaki Shimazu (Faculty of Environmental Earth Science, Hokkaido University, Sapporo, Japan), Yasuhiro Domi, Kentaro Ikeura, Kazuma Okamura

Electrochemical Sensing of Inorganic Anions Based on Their Strong Inclusion in Thiol-Derivatized- β -Cyclodextrin on Au

17:50 to 18:10 Invited

Hyodo Takeo (Graduate School of Engineering, Nagasaki University, Nagasaki, Japan), Choei Ishibashi, Kazunari Kaneyasu, Hiroyuki Yanagi, Yasuhiro Shimizu

Electrochemical Gas Sensors Using an Anion-conducting Polymer as an Electrolyte

18:10 to 18:30

Tomoaki Sato (Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Kasuga-shi, Japan), Michael Breedon, Norio Miura

Solid-state Electrochemical Gas Sensor for Selective Detection of Aromatic Hydrocarbons at ppb Levels

Symposium 2: Unusual Electrochemical Phenomena in Ionic Liquids and Related Systems

Location: Room 301

Chaired by: Rika Hagiwara

14:30 to 14:50 **Invited**

Takeo Ohsaka (Department of Electronic Chemistry, Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama, Japan), Dilani Nilushika, Mohamed Ismail Awad, Takeyoshi Okajima

Preparation of RTIL Composite Polymer Electrolyte Membrane-modified Electrode for Superoxide Generation in Aqueous Media

14:50 to 15:10

Katsuhiko Tsunashima (Department of Materials Science, Wakayama National College of Technology, Wakayama, Japan), Atsuko Kawabata, Masahiko Matsumiya, Shun Kodama

Physical and electrochemical properties of bis(fluorosulfonyl)amide-based phosphonium ionic liquids

15:10 to 15:30

Kazuhiko Matsumoto (Graduate School of Energy Science, Kyoto University, Kyoto, Japan), Takeshi Enomoto, Rika Hagiwara

Properties of Difluorophosphate and Fluorosulfate Ionic Liquids as Electrolytes

15:30 to 15:50

Keigo Kubota (Advanced Industrial Science and Technology (AIST), Research Institute for Ubiquitous Energy Devices, Ikeda, Japan), Hajime Matsumoto

Effect of Structural Asymmetry on Phase Behavior on Alkali Metal Perfluorosulfonylamides

15:50 to 16:10

Yasuhisa Ikeda (Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology, Tokyo, Japan), Toshinari Ogura, Arai Tsuyoshi

Electrochemical and Spectroelectrochemical Studies on Uranyl(VI) Species in 1-Ethyl-3-methylimidazolium-based Ionic Liquids

16:10 to 16:30

Tom Stockmann (Chemistry Department, The University of Western Ontario, London, Canada), Jing Zhang, Clara Wren, Zhifeng Ding

Hydrophobic phosphonium ionic liquid characterization for nuclear metal waste extraction

16:30 to 16:50

Coffee Break

16:50 to 17:30 **Keynote**

Susumu Kuwabata (Department of Applied Chemistry, Graduate School of Engineering, Osaka University, Suita, Japan), Akihito Imanishi, Ken-ichi Okazaki, Shu Seki, Tsukasa Torimoto

Utilization of Room-temperature Ionic Liquid as a New Medium under Vacuum Conditions

17:30 to 17:50 **Invited**

Marcin Opallo (Institute of Physical Chemistry PAS, Warsaw, Poland), Wojciech Adamiak, Galyna Shul, Anna Celebanska, Adam Lesniewski, Joanna Niedziolka-Jonsson, Mengjuan Li, Masanori Satoh, Jingyuan Chen

Electrochemical Processes at Ionic Liquid Modified Electrodes: Ionic Liquid Films and Ionic Liquid Stabilized Gold Nanoparticles

17:50 to 18:10

Stijn Mertens (Department of Chemistry, KU Leuven, Heverlee, Belgium), Christian Vollmer, Alexander Held, Michael Walter, Christoph Janiak, Thomas Wandlowski

Quantised Charging of Metal Clusters in an Ionic Liquid

18:10 to 18:30

Tsukasa Torimoto (Graduate School of Engineering, Nagoya University, Nagoya, Japan), Toshimasa Suzuki, Ken-ichi Okazaki, Shushi Suzuki, Tamaki Shibayama, Susumu Kuwabata

Preparation of Hollow Indium Oxide Particles in Ionic Liquids via Sputter Deposition Technique

Symposium 3: Electrochemical Micro & Nanosystem Technologies

Location: Room Toki-A

Chaired by: Takayuki Homma

14:10 to 14:30 **Invited**

Sudipta Roy (School of Chemical Engineering and Advanced Materials, Newcastle upon Tyne, United Kingdom), Todd Green, Tri Widayatno

Electrochemical Microfabrication without Photolithography - A Sustainable Electronics Manufacturing Process

14:30 to 14:50

Farid Harraz (Advanced Materials Department, Central Metallurgical Research and Development Institute (CMRDI), Cairo, Egypt), Aliaa Salem

Electrochemical growth of conducting polymers into porous silicon templates

14:50 to 15:10

Sachiko Ono (Dept. of Applied Chemistry, Faculty of Engineering, Kogakuin University, Tokyo, Japan), Yuji Kuroda, Yasutada Imamura, Hidetaka Asoh

Cell Activation Characteristics on Structurally Controlled Surface of Aluminum

15:10 to 15:30

Takashi Yanagishita (Applied Chemistry, Tokyo Metropolitan University, Tokyo, Japan), Kazuyuki Nishio, Hideki Masuda

Fabrication of Antireflection Structures by Nanoimprinting Using Anodic Porous Alumina

15:30 to 15:50

Hidetaka Asoh (Department of Applied Chemistry, Faculty of Engineering, Kogakuin University, Tokyo, Japan), Kousuke Fujihara, Sachiko Ono

Silicon Nanohole Arrays Fabricated Using Anodic Porous Alumina Mask and Metal-assisted Chemical Etching

15:50 to 16:10

Patrik Schmuki (WW4-LKO, Erlangen, Germany)

Recent Advances on TiO₂ nanotubes Synthesis

16:30 to 16:50

Coffee Break

16:50 to 17:10

Kazuhiro Manseki (Graduate School of Engineering, Environmental and Renewable Energy System (ERES) Division, Gifu, Japan), Yousuke Kondo, Takayuki Ban, Takashi Sugiura, Tsukasa Yoshida

Rapid synthesis of nanostructured titania crystals from colloidal layered titanates and their application for dye-sensitized solar cells

17:10 to 17:30

Tsukasa Yoshida (Graduate School of Engineering, Gifu University, Gifu, Japan), Lina Sun, Tomohiro Sekiya, Yasuaki Kimikado, Shigeo Hori, Toshimasa Suzuki, Takashi Sugiura

Electrochemical Self-assembly towards Inorganic/Organic Nano-heterojunction Solar Cells

17:30 to 17:50

Akinori Konno (Graduate School of Science and Technology, Shizuoka University, Hamamatsu, Japan), Edirisinghage V. A. Premalal

Improved performance in dye-sensitized solid-state solar cells by enhancing the penetration of cuprous iodide

17:50 to 18:10

Ichiro Tanabe (Institute of Industrial Science, University of Tokyo, Tokyo, Japan), Kazuki Matsumara, Yoko Sakai, Nobuyuki Sakai, Tetsu Tatsuma

Photoelectrochemical orientation control of upright Ag nanoplates on TiO₂

18:10 to 18:30

Fumiaki Amano (Catalysis Research Center, Hokkaido University, Sapporo, Japan), Min Tian, Aicheng Chen, Bunsho Ohtani

Photoelectrochemical Properties of Tungsten Oxide Film Electrodes with Plate-like Structures

Symposium 4: Bioelectrochemistry for Environmental Applications and Health Monitoring

Location: Room 306+307

Chaired by: Fred Lisdat and Elisabeth Lojou

14:30 to 15:10 **Keynote**

David Waldeck (Chemistry Department, University of Pittsburgh, Pittsburgh, USA)

Fundamental Studies of Electron Tunneling and Transport between Biomolecules and Electrodes

15:10 to 15:30 **Invited**

Jyh-Myng Zen (Department of Chemistry, National Chung Hsing University, Taichung, Taiwan)

Application and Characterization of Chemical Functionality on Carbon Surfaces

15:30 to 15:50

Venkata Chelikani (Faculty of Agriculture and Life Sciences, Christchurch, New Zealand), Frankie J. Rawson, Alison J. Downard, Ravi Gooneratne, Gotthard Kunze, Neil Pasco, Keith H. R. Baronian

Evidence of direct electron transfer from Oestrogen Binding Protein

15:50 to 16:10

Gilbert Nöll (Faculty IV, Department of Chemistry and Biology, Organic Chemistry, Siegen University, Siegen, Germany)

Direct and Mediated Electron Transfer at Cellobiose Dehydrogenase Modified Anodes and Applications in Biosensors and Biofuel Cells

16:10 to 16:30

Yasuo Yoshimi (Department of Applied Chemistry, Shibaura Institute of Technology, Tokyo, Japan), Hiroto Arawaka, Naoko Matsumoto

A Fluorescent Voltage Imaging for Detection of Response in Aplysia Central Nervous System toward Electric Stimulation

16:30 to 16:50

Coffee Break

16:50 to 17:30 **Keynote**

Kazuhito Hashimoto (Dept. of Appl. Chem. Univ. Tokyo, Tokyo, Japan)

Electrochemistry of Living Current Generating Bacterium

17:30 to 17:50 **Invited**

Renata Bilewicz (Dept. of Chemistry, University of Warsaw, Warsaw, Poland), Krzysztof Stolarczyk, Ewa Nazaruk, Kamila Zelechowska, Maciej Karaskiewicz, Jan Biernat, Jerzy Rogalski

Arylated carbon nanotubes for efficient direct electron transfer in enzyme based modified electrodes

17:50 to 18:10

Mikito Yasuzawa (Department of Chemical Science and Technology, Tokushima, Japan), Hiroki Takaoka, Kazuaki Edagawa

Preparation and *in vivo* Measurement of a Fine Needle Type Flexible Glucose Sensor

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Location: Room 201

Chaired by: Bing-Joe Hwang and Xingjiang Liu

14:30 to 14:50 **Invited**

Bing-Joe Hwang (Nano-Electrochemistry Laboratory Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Ming-Yao Cheng, Cheng-Liang Hwang, Chun-Jen Pan, Ju-Hsiang Cheng, Yun-Sheng Ye, John F. Rick, Tse-ming Chiu

Glucose-mediated Hydrothermal Synthesis of High Performance Sn-based Carbon Nanocomposite

14:50 to 15:10 **Invited**

Xingjiang Liu (National Key Lab. of Power Sources, Tianjin Institute of Power Sources, Tianjin, China)

R&D of Next-Generation Electrochemical Power Source for EV & ESS Based on National Project

15:10 to 15:30

Yoshitsugu Sone (Japan Aerospace Exploration Agency, Chuo-ku, Sagamihara, Japan), Junichiro Kawaguchi

The Performance of the Lithium Cells under Micro-Gravity Conditions: Lessons Learned from the Operation of the Interplanetary Spacecraft 'HAYABUSA'

15:30 to 15:50

Yukinori Koyama (Office of Society-Academia Collaboration for Innovation, Kyoto University, Kyoto, Japan), Hajime Arai, Isao Tanaka, Yoshiharu Uchimoto, Zempachi Ogumi

Theoretical Analysis of Co K-edge XANES for LiCoO₂ and CoO₂ with Variety of Structures

15:50 to 16:10

Yasuhiko Ohsawa (Nissan Research Center, Nissan Motor Co., Ltd., Yokosuka, Japan), Atsushi Ito, Yuichi Sato, Masaharu Hatano, Hideaki Horie

Crystal Structure and Reaction Mechanism for Li-rich Solid-solution Cathode Material (Li₂MnO₃-LiMO₂)

16:10 to 16:30

Naoaki Yabuuchi (Department of Applied Chemistry, Tokyo Univ. of Science, Tokyo, Japan), Naoaki Yabuuchi, Masataka Kajiyama, Yuta Kawamoto, Ryo Hara, Shinichi Komaba

Metastable Lithium-excess Layered Manganese Oxides as Positive Electrodes for Rechargeable Li-ion Batteries

16:30 to 16:50

Coffee Break

16:50 to 17:10 **Invited**

Kanamura Kiyoshi (Department of Applied Chemistry, Graduate School of Urban Environmental Sciences, Tokyo Metropolitan University, Tokyo, Japan), Yu Morita, Hirokazu Munakata

Evaluation of Electrochemical Properties of LiMn₂O₄ by Single Particle Measurement

17:10 to 17:30 **Invited**

Yong Yang (Department of Chemistry, Xiamen, China)

The investigation of polyanion compounds as high-capacity cathode materials for Li-ion batteries

17:30 to 17:50

Alexander Skundin (Frumkin Institute of Physical Chemistry and Electrochemistry of the RAS, Moscow, Russia), Tatiana Kulova

Electrodes of Lithium-ion Batteries: Diagnostics of Degradation Mechanism

17:50 to 18:10

Yusuke Asari (Central Research Laboratory, Hitachi Ltd., Hikigun, Japan), Yuji Suwa, Tomoyuki Hamada, Van An Dinh, Jun Nara, Takahisa Ohno

Formation Mechanisms of Lithium Vacancy in Olivine Positive

18:10 to 18:30

Noshin Omar (Vrije Universiteit, Brussel, Belgium), Mohamed Daowd, Jean-Marc Timmermans, Peter Van den Bossche, Thierry Coosemans, Joeri Van Mierlo

Assessment of Second Life of Lithium Iron Phosphate-based Batteries

Symposium 7a: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells, fundamental processes, materials and architectures, modeling,
PEFC: Catalysts and MEAs, Polymer electrolyte membranes

Location: Snow Hall A

Chaired by: Zhong Sheng (Simon) Liu and Hiroyuki Uchida

14:10 to 14:50 Keynote

Takashi Moriya (Honda R&D Co., Ltd., Haga-gun, Japan)

Fuel Cell Electric Vehicle Development in Honda

14:50 to 15:10

Steve Baranton (Laboratory of Catalysis in Organic Chemistry, Electrocatalysis Group, UMR 6503 CNRS, Université de Poitiers, Poitiers, France), Martin Weismann, Christophe Coutanceau

Surface modification of carbon substrates for the improvement of PEMFC active layers

15:10 to 15:30

Takuya Masuda (Global Research Center for Environmental and Energy Based on Nanomaterials Science (GREEN), National Institute for Materials Science(NIMS), Tsukuba, Japan)

Potential Dependent Adsorption/Desorption of Nafion on Au Electrode

15:30 to 15:50

Anusorn Kongkanand (Electrochemical Energy Research Lab, General Motors R&D, Honeoye Falls, USA)

Measurements of Interfacial Transport in Thin Ionomer Films

15:50 to 16:10

Yoshinori Suzue (Nissan Research Center, Nissan Motor Co., Ltd., Kanagaza, Japan), Alejandro Franco, Ali Kachmar, Tetsuya Mashio, Atsushi Ohma, Kazuhiko Shinohara

Multiscale Modeling of Ionomer Adsorption on Pt Nanoparticles: Mechanisms and Consequences on the PEMFC ORR

16:10 to 16:30

Kazuyuki Sato (Nissan Research Center, Nissan Motor Co., Ltd., Yokosuka-shi, Japan), Motoaki Kawase, Yuichiro Tabuchi, Atsushi Ohma

The Impact of Pt Reduction in Catalyst Layers on the MEA Performance under High Current Density

16:30 to 16:50

Coffee Break

16:50 to 17:30 Keynote

Zhong Sheng (Simon) Liu (NRC Institute for Fuel Cell Innovation, Vancouver, Canada)

Mass Transport in PEMFC: From Composition/Fabrication to Performances

17:30 to 17:50

Christopher Zalitis (Imperial College London, London, United Kingdom), Anthony Kucernak

Preparation of Ultrathin Catalyst Layers for Fundamental PEMC Studies

17:50 to 18:10

Hiroshi Iden (Nissan Research Center, Nissan Motor Co., Ltd., Yokosuka, Japan), Tetsuya Mashio, Atsushi Ohma, Kazuhiko Shinohara

Local Gas Transport in Catalyst Layers of PEM Fuel Cell I. Experimental Characterization

18:10 to 18:30

Andrzej Wieckowski (University of Illinois, Urbana, USA)

Oxygen reduction reaction (ORR) for Fuel Cells

Symposium 7b: Fuel Cells: Materials, Properties and Mechanisms

Direct FCs, PEM and AFC, SOFCs

Location: Snow Hall B

Chaired by: Jochen Joos and Kazunari Sasaki

14:30 to 14:50

Haruo Kishimoto (National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan), Keiji Yashiro, Taro Shimonosono, Manuel E. Brito, Katsuhiko Yamaji, Teruhisa Horita, Harumi Yokokawa, Junichiro Mizusaki

In-situ Analysis on the Electrical Conductivity Degradation of NiO-doped YSZ Electrolyte by Micro-Raman Spectroscopy

14:50 to 15:10

Toshio Suzuki (National Institute of Advanced Industrial Science and Technology, Nagoya, Japan)

Fabrication and Characterization of Micro Flat-tube Solid-oxide Fuel Cells

15:10 to 15:30

Koji Amezawa (Graduate School of Environmental Studies, Tohoku University, Sendai, Japan), Takuto Kushi, Yuta Kimura, Kazuhisa Sato, Fumitada Iguchi, Atsushi Unemoto, Shin-ichi Hashimoto, Hiroo Yugami, Tatsuya Kawada

Mechanical Properties of Stabilized Zirconia under SOFC Operation Conditions

15:30 to 15:50

Jochen Joos (Institut für Werkstoffe der Elektrotechnik (IWE), Karlsruhe Institut für Technologie (KIT), Karlsruhe, Germany), Moses Ender, Thomas Carraro, Andre Weber, Ellen Ivers-Tiffée

D Microstructure Analysis and Modeling of LSCF Cathodes for Solid Oxide Fuel Cells

15:50 to 16:10

Mi-Young Oh (Graduate School of Environmental Studies, Tohoku University, Sendai, Japan), Atsushi Unemoto, Shin-ichi Hashimoto, Koji Amezawa, Tatsuya Kawada

Chemical stabilities of $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_{3-\delta}$ as an SOFC cathode

16:10 to 16:30

Shin-Ichi Hashimoto (Graduate School of Environmental Studies, Environment and Energy System Dynamics, Tohoku University, Sendai, Japan), Yasuhiro Fukuda, Melanie Kuhn, Kazuhisa Sato, Keiji Yashiro, Junichiro Mizusaki, Yuta Kimura, Koji Amezawa, Tatsuya Kawada

Thermal and chemical lattice change of $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{1-y}\text{Fe}_y\text{O}_{3-\delta}$

16:30 to 16:50

Coffee Break

16:50 to 17:10

Junji Hyodo (Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Fukuoka, Japan), Shintaro Ida, Tatsumi Ishihara

Improved Oxide Ionic Conductivity in $\text{Pr}_2\text{Ni}_{0.75}\text{Cu}_{0.25}\text{Ga}_{0.05}\text{O}_{4+d}-\text{Sm}_{0.2}\text{Ce}_{0.8}\text{O}_{1.9}$ (PNCG-SDC) Laminated Film

17:10 to 17:30

Enn Lust (Institute of Chemistry, University of Tartu, Tartu, Estonia), Indrek Kivi, Kadi Tamm, Priit Möller, Erik Anderson, Rait Kanarbik, Heisi Kurig, Mihkel Vestli, Gunnar Nurk

Solid Oxide Fuel Cells Based on Supporting Porous Anode, Bi-layered Electrolyte and $\text{Pr}_{1-x}\text{Sr}_x\text{CoO}_{3-\delta}$ Cathodes

17:30 to 17:50

Takuya Hashimoto (College of Humanities and Sciences, Nihon University, Tokyo, Japan), Eiki Niwa, Chie Uematsu

Fundamental Property as SOFC Cathode Material of $\text{LaNi}_{0.6}\text{Fe}_{0.4}\text{O}_3$ Prepared by Pechini Method

17:50 to 18:10

Atsushi Hirano (Department of Chemistry, Faculty of Engineering, Mie University, Tsu, Japan), Nobuyuki Imanishi, Yasuo Takeda, Mitsuharu Tabuchi

The influence of Fe and Mo ordering on $\text{Sr}_2\text{FeMoO}_{6-\delta}$ to electrochemical properties

Symposium 8a: Electrochemical Energy Storage and Conversion

Basic science of battery capacitor and fuel cells, Novel materials for electrochemical device

Location: Marine Hall

Chaired by: Yasushi Idemoto and Shiro Seki

14:30 to 14:50

Nicolas Penin (ICMCB-CNRS, Université Bordeaux, Pessac, France), Henri Groult, S. Neveu, Christian Julien, Alain Demourgues, Damien Dambournet, Alain Tressaud, Tsuyoshi Nakajima, S. Komaba, Naoaki Kumagai

Transition metal nano-fluorides as active electrodes for Li-ion battery

14:50 to 15:10

Chin-Shu Cheng (Industrial Technology Research Institute, Hsinchu, Taiwan)

Is water an additive in lithium ion battery?

15:10 to 15:30

Nanda Gunawardhana (Adv. Research Center, Saga Univ., Saga, Japan), Nikolay Dimov

High Temperature Battery Performance: Evaluate the Stable Film Forming Additives at 60 °C

15:30 to 15:50

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

Self-polymerized membrane derivative of branched additive for internal short protection of high safety lithium ion battery

15:50 to 16:10

Seong Mu Jo (Nanohybrid Research Center, Korea Institute of Science and Technology, Seoul, Korea), Hoon Seok, Bum Jin Park, Dong Young Kim, Cheolmin Park

Noble electrospun composite membrane composed of multicore-shell nanofibers as a separator with high thermal stability for advanced lithium battery

16:10 to 16:30

Shiro Seki (Central Research Institute of Electric Power Industry (CRIEPI), Komae, Japan), Katsuhito Takei, Hajime Miyashiro, Masayoshi Watanabe

Electrolyte Properties of Glyme-LiN(SO₂F)₂ Complex for Lithium-ion Secondary Batteries

16:30 to 16:50

Coffee Break

16:50 to 17:10

Michael Wagner (Department of Chemistry, The George Washington University, Washington, USA)

High Rate Low Temperature Hollow Carbon Nanosphere Based Lithium Ion Battery Anodes

17:10 to 17:30

Kim Min-Sik (Department of Advanced Materials Chemistry, Korea University, Jochiwon, Korea), Jung Ho Kim, Daesoo Yang, Yun Kyung Kim, Jong-Sung Yu

High Li storage capacity demonstrated by hollow mesoporous carbon with hierarchical nanoarchitecture

17:30 to 17:50

Tsutomu Takamura (School of Chemical Engineering & Technology Harbin Institute of Technology, Harbin, China), Junji Suzuki, Kyoichi Sekine

Unusual Behavior of Li during Polarization in Electrochemical Cell

17:50 to 18:10

Shogo Esaki (Sharp Corporation, Tenri, Japan), Takeshi Yao, Motoaki Nishijima, Kohei Hiroe, Hiroshi Tsubouchi

Cycle Performance of "Nano Inclusion" Formed LiMn₂O₄ Cathode for Lithium Ion Battery

18:10 to 18:30

Omar Mendoza (Department of Materials Science and Technology, Nagaoka University of Technology, Nagaoka, Japan), Yuki Nishikawa, Hiroaki Ishikawa, Akira Nakazawa

Activation Energy Evaluation of Different Cathode Materials Used in Li-ion Secondary Cells

Symposium 9: Corrosion and Surface treatments

Location: Room 303+304

Chaired by: Hiroki Habazaki and Sannakaisa Virtanen

14:30 to 14:50

Nazatul Sukiman (Department of Materials Engineering, Clayton, Australia), Nick Birbilis, Rudy Buchheit
Corrosion maps for aluminium alloys: Defining property space and the role of microstructure and chemistry in corrosion

14:50 to 15:10

Yoshiyuki Oya (Technical Research Div, Furukawa-sky Aluminum Corp., Fukaya, Japan), Yoichi Kojima
Intergranular corrosion susceptibility of Al-Mn-Cu alloys, heat-treated after simulated brazing

15:10 to 15:30

Tahani Suliman (Corrosion and Protection Centre, School of Materials, The University of Manchester, Manchester, United Kingdom), E. V. Koroleva, G.E. Thompson
Study of Al and AA1050 alloy microstructures in alkaline solution using the SECM technique

15:30 to 15:50

Sungmo Moon (Korea Institute of Materials Science, Changwon, Korea), Byungjo Kim, Cheolnam Yang, Yongsoo Jeong
Improvement of Adhesion of TiO₂ Nanotubes Prepared by Anodic Oxidation on Ti

15:50 to 16:30 **Keynote**

Kemal Nisancioglu (Norwegian University of Science and Technology, Trondheim, Norway), Juan Tan, Anawati
Oxidation of Aluminum Containing Group IIIA-VA Elements during Cooling in Water after Heat Treatment

16:30 to 16:50

Coffee Break

16:50 to 17:10

Anawati (Dept. Applied Chemistry, Faculty of Engineering, Kogakuin University, Tokyo, Japan), Hiroaki Tanigawa, Hidetaka Asoh, Takuya Ohno, Masahiro Kubota, Sachiko Ono
Effect of Mechanical Milling on Corrosion Resistance and Biocompatibility of Titanium-Hydroxyapatite Composites

17:10 to 17:30

Michael Teka Woldemedhin (Johannes Kepler University, Linz, Austria), Dierk Raabe, Achim Walter Hassel
Microelectrochemistry of Ti-Nb beta-titanium alloy

17:30 to 17:50 **Invited**

Sannakaisa Virtanen (University of Erlangen-Nuremberg, Institute of Surface Science and Corrosion, Erlangen, Germany)
Biodegradable Magnesium: Corrosion, surface modification and biocompatibility

17:50 to 18:10

Dong Hyuk Shin (Hanyang Univ., Ansan, Korea), In Jun Hwang, Ki Ryong Shin, Byung Uk Lee, Bongyoung Yoo
Characterization of Oxide Layer on AZ91 Mg Alloy in Electrolyte Containing NH₄VO₃ via Plasma Anodizing

18:10 to 18:30

Guang-Ling Song (Chemical Sciences and Materials Systems, GM Global R&D, Warren, USA), Zhiming Shi
Electrochemical Corrosion of Anodised Magnesium Alloys

Symposium 11: Green Electrochemical Processing

Location: Room 302

Chaired by: Sudipta Roy

14:30 to 14:50 **Invited / Oronzio and Niccolò De Nora Foundation Prize of ISE on Environmental Electrochemistry**

Ignacio Sirés Sadornil (Laboratori d'Electroquímica dels Materials i del Medi Ambient, Departament de Química Física, Facultat de Química, Universitat de Barcelona, Barcelona, Spain), Ana Zapata, Manuel Ignacio Maldonado, Sixto Malato, Enric Brillas

A pilot plant for the decontamination of water by the solar photoelectro-Fenton process: The case of a steroid hormone

14:50 to 15:10

Jing Shao (Risø National Laboratory for Sustainable Energy, Technical University of Denmark, Roskilde, Denmark)

Optimization of the Electrochemical Cell with an Adsorption Layer for NO_x Removal

15:10 to 15:30 **Invited**

Geir Martin Haarberg (Norwegian University of Science and Technology, Trondheim, Norway), Saijun Xiao, Arne Petter Ratvik, Tommy Møkkelbost

Depolarized gas anodes for electrowinning of aluminium in cryolite-alumina melts

15:30 to 15:50

Sergi Garcia-Segura (Departament de Química Física, Universitat de Barcelona, Barcelona, Spain), Enric Brillas, Conchita Arias, Francesc Centellas, Pere L. Cabot, Jose A. Garrido, Rosa M. Rodríguez

Decolorization of monoazo, diazo and triazo dyes by electro-Fenton: A comparative study

15:50 to 16:10

Arseto Yekti Bagastyo (Advanced Water Management Centre, The University of Queensland, St. Lucia, Australia), Jelena Radjenovic, Yang Mu, Rene Rozendal, Damien Batstone, Korneel Rabaey

Electrochemical Treatment of Reverse Osmosis Membrane Concentrates

Wednesday 14 September 2011 - Morning

Plenary

Location: Snow Hall

Chaired by: Zempachi Ogumi

08:30 to 09:30

Jean-Marie Tarascon (Univ. Picardie Jules Verne, Amiens, France), Prabeer Barpanda, Mohamed Ati, Gwen Rousse, Jean-Noel Chotard, Brent Melot, Nadir Recham, Michel Armand, Marine Reynaud

F-based Polyanionic Structural Frameworks and Their Use in Li-ion Batteries

Symposium 1: Electroanalytical Chemistry for Environmental Protection and Monitoring

Location: Room 203+204

Chaired by: Salvatore Daniele and Guy Denuault

09:50 to 10:30 **Keynote**

Guy Denuault (University of Southampton, Southampton, United Kingdom), Laila Al Shandoudi, Robin Pascal

Fast Amperometric Determination of Dissolved Oxygen with Microelectrodes

10:30 to 10:50 **Invited**

Alexander Kuhn (University of Bordeaux, Pessac, France), Matthias Heim, Veronika Urbanova, Karel Vytras, Stephane Reculosa, Serge Ravaine, Nicolas Mano, Blaise Yvert

Development of porous electrodes for electroanalytical applications

10:50 to 11:10

Coffee Break

11:10 to 11:30

Kazunori Sato (Department of Environmental Engineering, Nagaoka, Japan), Shinichi Munemura, Teoh Wah Tzu, Hiroshi Nishiyama, Saito Nobuo, Yasunobu Inoue

Photoelectrodeposition of Heavy Metal Ions from an Aqueous Solution on a Ceria-Lanthania Oxide Dispersed with α -FeOOH Fine Particles

11:30 to 11:50

Kou Nakata (Faculty of Environmental Earth Science, Hokkaido University, Sapporo, Japan), Farhana Rima, Masatoshi Osawa, Katsuaki Shimazu

Infrared Absorption Spectroscopic Studies of Nitrate, Nitrite and Nitric Oxide Adsorbed on Platinum Electrodes

11:50 to 12:10

Romeu C. Rocha-Filho (Department of Chemistry, S. Carlos Federal University, S. Carlos, Brazil), Gabriel F. Pereira, Sonia R. Biaggio, Nerilso Bocchi

Electrochemical Detection and Degradation of Bisphenol A Using Boron-doped Diamond Electrodes

12:10 to 12:30

Bozidar Ogorevc (Analytical Chemistry Laboratory, National Institute of Chemistry, Ljubljana, Slovenia), Samo Hocevar

New Metallic Film Electrodes as a Frontier in Advanced Electrochemical Stripping Analysis

Symposium 2: Unusual Electrochemical Phenomena in Ionic Liquids and Related Systems

Location: Room 302

Chaired by: Daren Caruana

09:50 to 10:30 **Keynote**

Philip Bartlett (University of Southampton, Southampton, United Kingdom), David Cook, Wenjin Zhang, William Levason, Gill Reid, Andrew Hector, David Smith, Je Ke, Michael George, Jeremy Sloan

Supercritical Fluids as Electrolytes for Electrodeposition

10:30 to 10:50

Matthew Li (Department of Chemistry, University College London, London, United Kingdom), Julian Evans, Asterios Gavrilidis, Daren Caruana

Mitigation of harmful gasses in a combustion system, using a corona discharge

10:50 to 11:10

Coffee Break

11:10 to 11:30

Aleksey Lisenkov (Department of Ceramics and Glass Engineering, University of Aveiro, Aveiro, Portugal), Andrei Salak, Sergey Poznyak, Mikhail Zheludkevich, Mario Ferreira

Oxide Films on Al and Ti Prepared by Powerful Pulsed Discharge Oxidation in Distilled Water and Hydrogen Peroxide

11:30 to 11:50

Bernhard Gollas (Institute for Chemistry and Technology of Materials, Graz University of Technology, Graz, Austria), Luciana Vieira, Adam Whitehead

Zinc Electrodeposition from Choline Chloride-based Deep Eutectic Electrolytes

11:50 to 12:10

Akimasa Tasaka (Department of Applied Chemistry, Graduate School of Engineering, Doshisha University, Kyotanabe, Japan), Yuki Iida, Tomoyuki Shiono, Akihiro Ooishi, Masaharu Uno, Yoshinori Nishiki, Tsuneto Furuta, Morihiro Saito, Minoru Inaba

Electrolytic Production of NF_3 Using Boron-doped Diamond (BDD) Anode in a Molten $\text{NH}_4\text{F} \cdot 2\text{HF}$

12:10 to 12:30

Ryuta Fukui (Department of Applied Chemistry, Faculty of Science and Technology, Keio University, Yokohama, Japan), Yasushi Katayama, Takashi Miura

Effects of cations on electrochemical behavior of cobalt in amide-type ionic liquids

Symposium 3: Electrochemical Micro & Nanosystem Technologies

Location: Room Toki-A

Chaired by: Patrik Schmuiki

09:50 to 10:30 **Keynote**

Salvatore Daniele (Molecular Science and Nanosystems, University Cà Foscari Venice, Venice, Italy), Dario Battistel, Giancarlo Battaglin

Generation and characterisation of conducting micro patterns on ceramic thin films by the use of Scanning Electrochemical Microscopy (SECM)

10:30 to 10:50

Jana D. Abou Ziki (Department of Mechanical & Industrial Engineering Concordia University, Montreal, Canada), Rolf Wuthrich

Micro-patterning Glass Surfaces by Glow Discharge Electrolysis

10:50 to 11:10

Coffee Break

11:10 to 11:30

Ryoichi Aogaki (Polytechnic University, Sagamihara, Japan), Kentaro Motomura, Ryoichi Morimoto, Atsushi Sugiyama, Iwao Mogi, Miki Asanuma, Makoto Miura, Yoshinobu Oshikiri, Yusuke Yamauchi

Measuring Method for the Lifetime of Ionic Vacancy with Cyclotron MHD Electrode

11:30 to 11:50

Yutaka Kaneko (Graduate School of Informatics, Kyoto University, Kyoto, Japan), Yasuaki Hiwatari, Katsuhiko Ohara, Fujio Asa

Kinetic Monte Carlo Simulation System for Electrochemical Fabrication of 3D Micro-Architectures

11:50 to 12:10

Masahiro Kunimoto (Department of Applied Chemistry, Waseda University, Tokyo, Japan), Hiromi Nakai, Takayuki Homma

DFT Analysis on Orbital Interaction between Hypophosphite Ion and Metal Surfaces in Electroless Deposition Process

12:10 to 12:30

Tamio Ikeshoji (WPI-AIMR, Tohoku University, Sendai, Japan), Minoru Otani, Ikutaro Hamada

Interface structure and reversible electron transfer reaction on positively charged platinum surface: First principles molecular dynamics simulation

Symposium 4: Bioelectrochemistry for Environmental Applications and Health Monitoring

Location: Room 306+307

Chaired by: Renata Bilewicz and Alison Downard

09:50 to 10:30 **Keynote**

Christophe Léger (CNRS Laboratory of Bioenergetics and Engineering of Proteins, Marseille, France)

Electrochemical studies of hydrogenases

10:30 to 10:50 **Invited**

Elisabeth Lojou (Bioénergétique et Ingénierie des protéines, CNRS, Marseille, France), Alexandre Ciaccafava, Pascale Infossi, Marie Thérèse Giudici-Orticoni

Role of the hydrophobic transmembrane helix on H₂ oxidation by the immobilized hydrogenase from *Aquifex aeolicus*

10:50 to 11:10

Coffee Break

11:10 to 11:30

Hiroshi Aoki (National Institute of Advanced and Industrial Science and Technology (AIST), Ibaraki, Japan), Masaki Torimura, Hiroaki Tao

Label-free and Signal-on DNA Detection Using Ferrocene and Cyclodextrin-Terminated Gene Probes

11:30 to 11:40

Seonghwan Kim (School of Chemical and Biological Engineering, College of Engineering, Seoul National University (SNU), Seoul, Korea), Taeyoung Kim, Guiduk Yu, Kyusoon Shin, Jeyong Yoon

Monitoring of initial biofilm formation using interdigitated array electrode

11:40 to 11:50

Daichi Nagae (Department of Biotechnology, Graduate School of Engineering, Tokyo University of Agriculture & Technology, Tokyo, Japan), Wakako Tsugawa, Kazushige Mori, Koji Sode

Construction of glucose sensor strip employing engineered PQQGDH with minimized maltose effect

11:50 to 12:00

Kenji Kakubori (Department of Biotechnology, Graduate School of Engineering, Tokyo University of Agriculture & Technology, Tokyo, Japan), Mayumi Yamada, Katsutoshi Kojima, Wakako Tsugawa, Koji Sode

Direct electron transfer type continuous glucose monitoring system employing cross-linked FAD glucose dehydrogenase

12:00 to 12:10

Yosi Shacham-Diamand (Department of Physical Electronics, School of Electrical Engineering, Faculty of Engineering, Tel Aviv University, Tel-Aviv, Israel), Shimshon Belkin, Amihay Freeman, Hadar Ben-Yoav
Electrochemical Low Profile Whole-cell Biochips

12:10 to 12:20

Ping Yu (Beijing National Laboratory for Molecular Sciences, Key Laboratory of Living Biosystems, Institute of Chemistry, The Chinese Academy of Sciences, Beijing, China)
In vivo Electroanalytical Chemistry and Beyond

12:20 to 12:30

Anthony Veloso (Physical and Environmental Sciences, University of Toronto at Scarborough, Toronto, Canada), Vladimir Zaplishny, Svetlana Mikhaylichenko, Kagan Kerman
Electrochemical Study of Multi-target Inhibitors against Alzheimer's Disease

12:30 to 12:40

Atsuro Tatsumi (Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, Tokyo, Japan), Takahiro Fukaya, Yoshihiko Nonaka, Koji Sode, Kazunori Ikebukuro
Detection of VEGF using aptamer labeled with FADGDH fused zinc finger protein

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Location: Room 201

Chaired by: Dominique Guyomard and Yong Yang

09:50 to 10:10

Kazuo Yamamoto (Japan Fine Ceramics Center, Nagoya, Japan), Yasutoshi Iriyama, Toru Asaka, Tsukasa Hirayama, Hideki Fujita, Katsumasa Nonaka, Koji Miyahara, Yuji Sugita, Zempachi Ogumi
In-situ Observation Using Electron Holography of Electric Potential Distribution in All-Solid-State Li batteries

10:10 to 10:30

Daisuke Asakura (Energy Technology Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan), Masashi Okubo, Yoshifumi Mizuno, Tetsuichi Kudo, Haoshen Zhou
Fabrication of defectless Prussian blue analogues for high-capacity electrode materials

10:30 to 10:50

Sun-il Mho (Division of Energy Systems Research, Ajou University, Suwon, Korea), Joo-Seong Kim, Quang-Thao Ta, In-Hyeong Yeo
Inorganic Crystalline and Conducting Polymer Composite Film Cathodes for Li Batteries

10:50 to 11:10

Coffee Break

11:10 to 11:50 **Keynote**

Dominique Guyomard (IMN/CNRS, Nantes, France), M. Cuisinier, J.F. Martin, N. Dupre, A. Yamada, R. Kanno
Characterization of Air-exposed LiFePO₄ Nano-powders for Li-ion Batteries

11:50 to 12:10

Hironobu Minowa (NTT Energy and Environment Systems Laboratories, Atsugi, Japan), Masahiko Hayashi, Keiichi Saito
Electrochemical properties of manganese-based oxide electrocatalysts for air electrodes of lithium-air batteries

12:10 to 12:30

Tatsumi Ishihara (Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Fukuoka, Japan), Arjun Kumar Thapa, Yuiko Hata, Shintaro Ida
Mesoporous Metal Oxide for Air Electrode of Rechargeable Li-air Battery

Symposium 7a: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells, fundamental processes, materials and architectures, modeling,
PEFC: Catalysts and MEAs, Polymer electrolyte membranes

Location: Snow Hall A

Chaired by: Shin-ichi Yamazaki and Eiichi Yasumoto

10:10 to 10:50 **Keynote**

Eiichi Yasumoto (Panasonic Corporation, Moriguchi City, Japan), Yoichiro Tsuji, Hideo Ohara

Challenge for Expanding the Market of PEFC Co-generation Systems in Panasonic and Activities of National Projects

10:50 to 11:10

Coffee Break

11:10 to 11:30

Shin-ichi Yamazaki (Research Institute for Ubiquitous Energy Devices, National Institute of Advanced Industrial Science and Technology (AIST), Ikeda, Japan), Masaru Yao, Zyun Siroma, Naoko Fujiwara, Tsutomu Ioroi, Kazuaki Yasuda

CO electro-oxidation by Rh porphyrins: Effects of porphyrin structures on the activity

11:30 to 11:50

Tatsuhiko Okada (Tsukuba Fuel Cell Laboratory, Inc., Tsukuba, Japan), Mutsumasa Kyotani, Shin-iti Kimura, Satoshi Matsushita, Kazuo Akagi

New Porous Carbon GDL Materials for Fuel Cells Made from Japanese Paper

11:50 to 12:10

Masaya Kozakai (Hitachi, Ltd., Ibaraki, Japan), Tsutomu Okusawa, Kenji Date

Comparison of Flow-field Patterns in Proton Exchange Membrane Fuel Cells

12:10 to 12:30

Tetsuya Mashio (Advanced Materials Laboratory, Nissan Research Center, Nissan Motor Co., Ltd., Kanagawa, Japan), Hiroshi Iden, Atsushi Ohma, Kazuhiko Shinohara

Local Gas Transport in Catalyst Layers of PEM Fuel Cell II. Mathematical Model

Symposium 7b: Fuel Cells: Materials, Properties and Mechanisms

Direct FCs, PEM and AFC, SOFCs

Location: Snow Hall B

Chaired by: Pawel J. Kulesza and Mikhail Tsyppin

10:10 to 10:30

Dae Jong You (Energy Lab, Emerging Tech. Research Center, Samsung Advanced Institute of Technology, Samsung Electronics Co. Ltd, Gyeonggi-do, Korea), Sang Hoon Joo

Design and preparation of the platinum supported on ordered mesoporous carbon on the high performance for direct methanol fuel cell

10:30 to 10:50

Wei-Hua Yang (Chemistry Department, Xiamen, China), Hong-Hui Wang, Jian-Long Lin, Zhi-You Zhou

Enhanced Catalytic Activity of Pt-PbO₂ nanomaterials towards Ethanol Oxidation for Fuel Cell Applications

10:50 to 11:10

Coffee Break

11:10 to 11:30

Zhaoxiong Xie (State Key Laboratory for Physical Chemistry of Solid Surfaces and Department of Chemistry, Xiamen University, Xiamen, China), Lei Zhang, Jiawei Zhang, Zhiyuan Jiang, Qin Kuang, Dingqiong Chen, Shuifen Xie, Lansun Zheng

Wet Chemical Synthesis and the Enhanced Electrocatalytic Performance of Concave Pt and Pd Nanocrystals with High-index Facets

11:30 to 11:50

Zhang Han-Xuan (Shanghai Key Laboratory for Molecular Catalysis and Innovative Materials, and Department of Chemistry, Shanghai, China)

Towards the Understanding of the Deactivation of Formic Acid Electrooxidation at Pd Electrodes

11:50 to 12:10

Mikhail Tsyppkin (Department of Materials Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway), Jose Gomez de La Fuente, Nataliya Aleshchenko, Oleg Shishilov, Vitaly Flid, Anatoly Berenblyum, Svein Sunde

Core-shell (M@Pd) electrocatalysts for formic acid oxidation in fuel cells

12:10 to 12:30

Pawel J. Kulesza (University of Warsaw, Department of Chemistry, Warsaw, Poland), Iwona A. Rutkowska, Sylwia Zoladek, Krzysztof Miecznikowski, Piotr J. Barczuk, Adam Lewera, Malgorzata Glowienka

Nanostructured Catalytic Electrodes for Low-temperature Alcohol Fuel Cells: Activation of Noble Metal Centers through Modification with Metal Oxo Species

Symposium 8a: Electrochemical Energy Storage and Conversion

Basic science of battery capacitor and fuel cells, Novel materials for electrochemical device

Location: Marine Hall

Chaired by: Yuichi Ikuhara and Christopher Johnson

09:50 to 10:10 **Invited**

Yasushi Idemoto (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Noda-shi, Japan), Naoto Kitamura

Change in Crystal Structure of Cathode Material for Lithium Ion Battery during Charge of Coin Cell Observed by *Ex Situ* Time-of flight Neutron Diffraction

10:10 to 10:30

Kei Kubota (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Masaaki Hirayama, Masao Yonemura, Ryoji Kanno, Yuichiro Imanari, Kenji Nakane

Electrochemical Properties of Li_2MnO_3 Reduced by Metal Hydrides

10:30 to 10:50

Yunpeng Gu (Department of Advanced Materials Science, University of Tokyo, Kashiwa, Japan), Kouji Taniguchi, Ryosuke Tajima, Shin-ichi Nishimura, Atsuo Yamada, Hidenori Takagi

Cathode Performance of a New Spinel Oxide LiRh_2O_4

10:50 to 11:10

Coffee Break

11:10 to 11:30 **Invited**

Atsuo Yamada (The University of Tokyo, Tokyo, Japan), Shin-ichi Nishimura

New Lithium Iron Pyrophosphate $\text{Li}_2\text{FeP}_2\text{O}_7$ as 3.5 V Class Cathode Material for Lithium-ion Battery

11:30 to 11:50

Manickam Minakshi (Minerals and Energy School of Chemistry and Mathematical Sciences, Perth, Australia), Pritam Singh

Olivine-Type $\text{LiCo}_{0.5}\text{Ni}_{0.5}\text{PO}_4$ Cathode for Aqueous Batteries

11:50 to 12:10

Yu-Guo Guo (Institute of Chemistry, Chinese Academy of Sciences (CAS), Beijing, China), Fei-Fei Cao, Li-Jun Wan

Better Lithium-ion Batteries with Nanocable-like Electrode Materials

12:10 to 12:30

Minoru Mizuhata (Department of Chemical Science and Engineering, Graduate School of Engineering, Kobe University, Kobe, Japan), Yuki Mori, Alexis Bienvenu Bélécé

Electrochemical and Ion-exchange Properties of Ni-Al Layered Double Hydroxide Fabricated by the Liquid Phase Deposition Method

Symposium 8b: Electrochemical Energy Storage and Conversion

Electrode reaction mechanism, Simulation and modelling

Location: Room 301

Chaired by: Hironori Kobayashi and Tsuyoshi Sasaki

09:50 to 10:10

Kazuki Yoshida (Department of Chemistry and Biotechnology, Yokohama National University, Yokohama, Japan), Mizuho Tsuchiya, Naoki Tachikawa, Kaoru Dokko, Masayoshi Watanabe

Transport Phenomena and Limiting Current Density in Fused Glyme-Li salts Complexes

10:10 to 10:30

Zhen-Ji Han (Department of Applied Chemistry, Tokyo University of Science, Tokyo, Japan), Masahiro Murase, Naoaki Yabuuchi, Yasushi Katayama, Takashi Miura, Shinichi Komaba

Improved Electrochemical Performance of Si / Graphite Electrodes by Neutralized Poly(Acrylic Acid) Binders

10:30 to 10:50

Tsuyoshi Sasaki (Paul Scherrer Institut, Villigen, Switzerland), Vikram Godbole, Claire Villevieille, Yoshio Ukyo, Petr Novák

In-situ investigation of inhomogeneous reactions perpendicular to current collector by using two-layer electrodes

10:50 to 11:10

Coffee Break

11:10 to 11:30

Seungwon Park (Department of Fundamental Energy Science, Graduate School of Energy Science, Kyoto University, Kyoto, Japan), Masaya Oda, Takeshi Yao

Relaxation Structure Analysis of γ -Fe₂O₃ for Li insertion

11:30 to 11:50

Loïc Simonin (CEA-LITEN, Grenoble, France), Jean-François Colin, Vincent Ranieri, Jean-Frédéric Martin, Lise Daniel, Carole Bourbon, Sébastien Patoux

Structural Characterization of High Capacity Layered Oxides

11:50 to 12:10

Hironori Kobayashi (AIST, Ikeda, Osaka, Japan), Toyoki Okumura, Masahiro Shikano, Hiroyuki Kageyama, Kuniaki Tatsumi, Yuki Takenaka, Yoshinori Arachi

Crystal and Electronic Structures of the Layered Li₂MO₃-LiMO₂ Materials in Li de-intercalation process

12:10 to 12:30

Fujimoto Takahiro (Office of Society-Academia Collaboration for Innovation, Kyoto University, Kyoto, Japan)

Study on reaction mechanism of Li₂MnO₃-LiMO₂ cathode materials by soft XAS (X-Ray absorption spectroscopy)

Symposium 9: Corrosion and Surface treatments

Location: Room 303+304

Chaired by: Shinji Fujimoto and Nadine Pébère

09:50 to 10:30 **Keynote**

Tooru Tsuru (Graduate School of Science and Engineering, Tokyo Institute of Technology, Tokyo, Japan)
Corrosion Resistance and Sacrificial Actions of New Surface Treated Steels and Alloy Coatings

10:30 to 10:50

Luis Frederico P. Dick (Lab. Processos Eletroquímicos & Corrosão, Depto. Metalurgia, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil)
SVET Study of the Corrosion of HD Zn-based Coatings under Simultaneous Progressive Straining

10:50 to 11:10

Coffee Break

11:10 to 11:30 **Invited**

Roland Oltra (CNRS-Universite de Bourgogne, Dijon, France), Bruno Vuillemin, Florian Thebault, Anh Quang Vu, Christian Allely, Kevin Ogle, Takeshi Yao
Self-healing on galvanized steel cut-edges: From basic Zn coating to Zn-alloyed coatings

11:30 to 11:50

Ying Chen (Department of Interface Chemistry and Surface Engineering, Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), Paul Schneider, Andreas Erbe
Electrochemical treatment of Zn: An *in-situ* spectroscopic ellipsometry investigation

11:50 to 12:10

Eiji Tada (Graduate School of Engineering and Resource Science, Akita University, Akita, Japan), Ryota Shimizu
An EQCM Study of Zinc corrosion in Aqueous NaCl and Na₂SO₄ Solutions

Thursday 15 September 2011 - Morning

Plenary

Location: Snow Hall

Chaired by: Shaojun Dong

08:30 to 09:30

Tadashi Matsunaga (Tokyo University of Agriculture & Technology, Tokyo, Japan)
Bioelectrochemistry for Health, Environment and Energy

Symposium 3: Electrochemical Micro & Nanosystem Technologies

Location: Room Toki-A

Chaired by: Takahiro Sawaguchi

09:50 to 10:10 **Invited**

Lee Yook Heng (School of Chemical Sciences and Food Technology, Faculty of Science and Technology, University Kebangsaan Malaysia (UKM), Bangi, Malaysia), Abdulmalek Hassan Ridyah
Fabrication of Screen-printed DNA Biosensor for the Amperometric Detection of Carrageenan

10:10 to 10:30

Christopher Brett (Departamento de Quimica Faculdade de Ciencias e Tecnologia, Universidade de Coimbra, Coimbra, Portugal), Madalina Barsan, Edilson Pinto
Layer-by-layer self-assembled construction of modified electrodes for electrochemical sensor applications

10:30 to 10:50

Woonsup Shin (Department of Chemistry and Interdisciplinary Program of Integrated Biotechnology, Sogang University, Seoul, Korea), Jong Myung Lee, Rajaram Krishna Nagarale, Samuel Jaeho Shin, Enhua Zhu, Chang Hwan Kim, Adam Heller
Non-gassing Electroosmotic Pump Based on Ag/Ag₂O Electrode and Its Application in Drug Infusion System

10:50 to 11:10

Coffee Break

11:10 to 11:30

Chee-Seng Toh (Division of Chemistry and Biological Chemistry, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore, Singapore)
Towards Energy Efficient Sensors and Biosensors

11:30 to 11:50

Hiroyuki Kudo (Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Chiyoda-ku, Japan), Mingxing Chu, Takahiro Arakawa, Yoshitaka Hiranuma, Kohji Mitsubayashi
Soft Contact-Lens Biosensor for *in-situ* Monitoring of Glucose in Tears

11:50 to 12:10

Hitoshi Shiku (Graduate School of Environmental Studies, Tohoku University, Sendai, Japan), Junya Suzuki, Kosuke Ino, Tomokazu Matsue
Electrochemical gene expression analysis on single-cell array devices

Symposium 4: Bioelectrochemistry for Environmental Applications and Health Monitoring

Location: Room 306+307

Chaired by: Chenzhong Li

09:50 to 10:30 **Keynote**

Eiichi Tamiy (Department of Applied Physics, Osaka University, Suita, Japan)

Nanostructured metals based biosensors for medical applications

10:30 to 10:50 **Invited**

Taek Dong Chung (Department of Chemistry, Seoul National University, Seoul, Korea)

Nanoporous Electrochemistry for Biosensors and Neural Probes

10:50 to 11:10

Coffee Break

11:10 to 11:30

Liza Rassaei (MESA+ Institute for Nanotechnology, University of Twente, Enschede, Netherlands), Edgar G. Goluch, Klaus Mathwig, Pradyumna Singh, Shuo Kang, Serge G. Lemay

Nanoelectrochemistry of Enzyme Kinetics in Nanofluidic Thin Layer Cell

11:30 to 11:50

Aminur Rahman (Graduate School of Analytical Science and Technology (GRASST), Chungnam National University, Daejeon, Korea), Rashida Akter, Choong Kyun Rhee

A Multiple-nonenzymatic Label Amplified Electrochemical Immunosensor

11:50 to 12:10

Chia-Liang Sun (Chang Gung University, Tao-Yuan, Taiwan), Hsin-Hsien Lee, Ching-Tang Chang

The simultaneous electrochemical detection of ascorbic acid, dopamine and uric acid using graphene-based nanomaterials

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Location: Room 201

Chaired by: Daniel Bélanger and Katsuhiko Naoi

09:50 to 10:30 **Keynote**

Katsuhiko Naoi (Tokyo University of Agriculture & Technology, Tokyo, Japan)

NanoHybrid Capacitor : The Next-generation Li-ion Based Supercapacitor

10:30 to 10:50 **Invited**

Masashi Ishikawa (Dept. of Chemistry and Materials, Kansai University, Suita, Japan), Shigeaki Yamazaki, Masaki Yamagata

High-Performance Electrochemical Capacitors with Specific Interfacial Designs

10:50 to 11:10

Coffee Break

11:10 to 11:30 **Invited**

Daniel Bélanger (Chimie, Montréal, Canada), Grégory Pognon, Martin Weissmann, Charles Cougnon, Thierry Brousse

Chemical modification of carbons for application in electrochemical capacitors

11:30 to 11:50

Bo Hye Kim (Department of Polymer & Fiber System Engineering, Chonnam National University, Gwangju, Korea), Kap Seung Yang

Solvent Induced Porosity Control of Carbon Nanofiber Web for Supercapacitors

11:50 to 12:10

Ayar Al-zubaidi (Department of Material Science and Engineering, Nagoya Institute of Technology, Nagoya, Japan), Tomohiro Matsushita, Shinji Kawasaki

Relation between the CV Shape and the Tube Structure of Single-walled Carbon Nanotube EDLC Electrode

Symposium 7a: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells, fundamental processes, materials and architectures, modeling,
PEFC: Catalysts and MEAs, Polymer electrolyte membranes

Location: Snow Hall A

Chaired by: Hiroshi Fukunaga and Jun Maruyama

10:10 to 10:30

Yoshiro Ohgi (Green Hydrogen Research Center, Yokohama National University, Yokohama, Japan), Akimitsu Ishihara, Koichi Matsuzawa, Shigenori Mitsushima, Ken-ichiro Ota, Masashi Matsumoto, Hideto Imai

Fine structure analysis of partially oxidized zirconium carbonitrides as PEFC cathode

10:30 to 10:50

Mitsuharu Chisaka (Department of Electrical and Electronic Information Engineering, Toyohashi University of Technology, Toyohashi, Japan), Yuta Suzuki, Tomohiro Iijima, Yoji Sakurai

Mass activity enhancement of hafnium oxynitride catalyst for polymer electrolyte membrane fuel cell cathodes

10:50 to 11:10

Coffee Break

11:10 to 11:30

Mohammad Abdelkareem (Chemical and Environmental Engineering, Kiryu, Japan), Takuya Tsujiguchi, Nobuyoshi Nakagawa

TiO₂ and Carbon-TiO₂ Nanofibers as ORR Active Catalyst

11:30 to 11:50

Alan Maigne (Nippon Gatan, Tokyo, Japan), Ryota Yuge

EELS analysis of charge transfer involving single wall carbon nanohorns

11:50 to 12:10

Hiroshi Fukunaga (Materials and Chemical Engineering Course, Division of Chemistry and Materials, Faculty of Textile Science and Technology, Shinshu University, Ueda City, Japan)

Oxygen Reduction Reaction of Silk-derived Activated Carbon for PEFC cathode

THURSDAY AM

Symposium 7b: Fuel Cells: Materials, Properties and Mechanisms

Direct FCs, PEM and AFC, SOFCs

Location: Snow Hall B

Chaired by: Michael Eikerling and Hiromitsu Takaba

10:10 to 10:30

Michael Eikerling (Department of Chemistry, Simon Fraser University, Burnaby, Canada), Ata Roudgar, Swati Vartak

Concerted Mechanism of Interfacial Proton Transport in Polymer Electrolyte Membranes

10:30 to 10:50

Hiromitsu Takaba (Department of Chemical Engineering, Tohoku University, Sendai, Japan), Ryo Nagumo, Ryuji Miura, Ai Suzuki, Hideyuki Tsuboi, Nozomu Hatakeyama, Akira Miyamoto

Atomistic Image of Hydrocarbon type Polymer Electrolyte Realizing High Proton-conductivity and Durability

10:50 to 11:10

Coffee Break

11:10 to 11:30

Yoong-kee Choe (National Institute of Advanced Industrial Science & Technology, Tsukuba, Japan), Eiji Tsuchida, Neil Henson, Takahiro Ohkubo, Yu Seung Kim

Effects of Functional Groups in Polymer Electrolyte Membranes on Fuel Cell Performance: A Molecular Simulation Study

11:30 to 11:50

Takaya Ogawa (Chemical Resources Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Takanori Tamaki, Hidenori Ohashi, Hiroshi Ushiyama, Koichi Yamashita, Takeo Yamaguchi

Theoretical Studies of Proton Transfer on Surface of Strong Acidic Nanoparticles for Polymer Electrolyte Fuel Cells

11:50 to 12:10

Takayoshi Ishimoto (Frontier Energy Research Division, INAMORI Frontier Research Center, Kyushu University, Fukuoka, Japan), Shixue Liu, Michihisa Koyama

Theoretical Study on Chemical Degradation in Polymer Electrolyte Fuel Cell

Symposium 8a: Electrochemical Energy Storage and Conversion

Basic science of battery capacitor and fuel cells, Novel materials for electrochemical device

Location: Marine Hall

Chaired by: Ladislav Kavan

09:50 to 10:10 **Invited**

Ladislav Kavan (J. Heyrovsky Institute of Physical Chemistry, Prague 8, Czech Republic), Jun Ho Yum, Michael Graetzel

Optically Transparent Cathode for Dye Sensitized Solar Cells Based on Graphene Nanoplatelets

10:10 to 10:30

Tomofumi Hamamura (Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan), Joanne Ting Dy, Koichi Tamaki, Jotaro Nakazaki, Satoshi Uchida, Takaya Kubo, Hiroshi Segawa

Dye-sensitized Solar Cells using Ethynyl-linked Porphyrin Trimers : Control of Dye Adsorption and Nanostructure

10:30 to 10:50

Chih-Yu Hsu (Institute of Chemistry, Academia Sinica, Taipei, Taiwan), Wei-Ting Chen, Yung-Chung Chen, Yung-Sheng Yen, Jiann T. Lin

P-Type Semiconductor NiO Electrodes with D- π -A organic dyes for Dye-Sensitized Solar Cells

10:50 to 11:10

Coffee Break

11:10 to 11:30

Shogo Mori (Faculty of Textile Science and Technology, Shinshu University, Ueda, Japan), Takayuki Uchiyama, Junichi Ogawa, Masayoshi Ohta, Nagatoshi Koumura, Kohjiro Hara, Kazumichi Obuchi, Naruhiko Masaki, Mustumi Kimura

Interfacial charge transfer in Dye-sensitized solar cells prepared with various redox couples

11:30 to 11:50

Yongfang Li (Institute of Chemistry, Chinese Academy of Sciences, Beijing, China), Maojie Zhang, Xia Guo

D-A Copolymer Photovoltaic Materials Containing Thiazolothiazole or Bithiazole Acceptor Unit

11:50 to 12:10

S. Basu (Dept. of Chemical Eng., Indian Institute of Technology Delhi (I.I.T. Delhi), New Delhi, India), Keith Scott, Vinod Kumar

An efficient bimetallic Ru(x)Nb(1-x)O₂ electro catalyst at the anode side of proton exchange membrane water electrolyzer (PEMWE)

Symposium 8b: Electrochemical Energy Storage and Conversion

Electrode reaction mechanism, Simulation and modelling

Location: Room 301

Chaired by: Isao Tanaka and Marnix Wagemaker

09:50 to 10:10 **Invited**

Takeshi Abe (Graduate School of Engineering, Kyoto University, Kyoto, Japan)

Lithium-ion Transfer at Electrode/Ionic Liquid Interface

10:10 to 10:30 **Invited**

Masaaki Hirayama (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan)

Surface structure of intercalation electrodes

10:30 to 10:50

Yuki Orikasa (Kyoto University, Graduate School of Human and Environmental Studies, Kyoto, Japan),
Daiko Takamatsu, Shinichiro Mori, Hisao Yamashige, Kenji Sato, Takahiro Fujimoto, Yu Takanashi,
Masatsugu Oishi, Haruno Murayama, Hajime Tanida, Hajime Arai, Tomoya Uruga, Yoshiharu Uchimoto,
Zempachi Ogumi

X-Ray Absorption Spectroscopic Study on Electrode / Electrolyte Hetero-interface of LiCoO₂ Positive Electrode

10:50 to 11:10

Coffee Break

11:10 to 11:30

Craig A. J. Fisher (Nanostructures Research Laboratory, Japan Fine Ceramics Center, Nagoya, Japan),
Shijian Zheng, Rong Huang, Taro Hitosugi, Hiroki Moriwake, Akihide Kuwabara, Yumi H. Ikuhara, Hideki
Oki, Yuichi Ikuhara

Interfaces in Li-ion Battery Material LiCoO₂ and Their Effect on Electrochemical Performance

11:30 to 11:50

Mark Orazem (University of Florida, Gainesville, USA), Salim Erol, Richard Muller

The Impedance Response of LiCoO₂ Batteries after Overcharge and Over-discharge

11:50 to 12:10

Masatsugu Oishi (Kyoto University, Office of Society-Academia Collaboration for Innovation, Kyoto,
Japan), Hisao Yamashige, Yu Takanashi, Takahiro Fujimoto, Kenji Sato, Daiko Takamatsu, Yuki Orikasa,
Haruno Murayama, Hajime Tanida, Hajime Arai, Yoshiharu Uchimoto, Zempachi Ogumi

In-situ XAFS Observation of Electrical Potential Distribution in Lithium Ion Cathode Electrodes

Symposium 9: Corrosion and Surface treatments

Location: Room 303+304

Chaired by: Atsushi Nishikata

09:50 to 10:30 **Keynote**

En-Hou Han (Corrosion Center, Institute of Metal Research, Chinese Academy of Sciences, Shenyang,
China)

Corrosion Electrochemistry and Surface Film Properties of Stainless Steel in High Temperature Pressurized Water

10:30 to 10:50 **Invited**

Nadine Pébère (CIRIMAT / UMR CNRS 5085, Toulouse, France), Sabrina Marcelin

Effect of Cl⁻ ions and pH on the corrosion resistance of martensitic stainless steel

10:50 to 11:10

Coffee Break

11:10 to 11:50 Keynote

Hyuk Sang Kwon (Dept. of Materials Science and Engineering, Korea Advanced Institute of Science and Technology, DaeJeon, Korea)

Effects of Ni on the Localized Corrosion and Repassivation Kinetics of Fe-20Cr- x Ni ($x = 0\sim 20$ wt. %) Stainless Steels

11:50 to 12:10

Eiji Akiyama (National Institute for Materials Science, Tsukuba, Japan), Songjie Li, Yuuji Kimura, Kaneaki Tsuzaki, Nobuyoshi Uno

Hydrogen Embrittlement Behavior of a 1700 MPa-Class Ultrahigh Strength Steel Containing Hydrogen Traps

Symposium 13: Kinetics and Mechanisms of Electrode Reactions: Studies by Spectroscopy, Theory and New Advanced Methods

Location: Room 203+204

Chaired by: Zhong-Qun Tian

09:50 to 10:30 Keynote

Juan M. Feliu (Universidad de Alicante, Alicante, Spain), Alexander Björling, Ana M. Gómez-Marín

Electrochemical activation and surface disordering of platinum

10:30 to 10:50 Invited

Toshihiro Kondo (Ochanomizu University, Tokyo, Japan), Kohei Uosaki

In-situ Investigation on the Structures at Electrode/Electrolyte Interfaces by Surface X-Ray Scattering

10:50 to 11:10

Coffee Break

11:10 to 11:30 Invited

Hoydoo You (Argonne National Lab, Argonne, USA), Michael Pierce, Vladimir Komanicky

Surface Dynamics Measurements with Coherent Surface X-Ray Scattering

11:30 to 11:50

Daniel Scherson (Department of Chemistry, Case Western Reserve University, Cleveland, USA), Adriel Jebin Jacob Jebaraj

The oxidation of hydroxylamine on single and polycrystalline gold in aqueous electrolytes

11:50 to 12:10 Invited

Kensaku Kodama (Fuel Cell System Lab., Toyota Central R&D Labs., Inc., Nagakute, Japan), Ryosuke Jinnouchi, Tomoyuki Nagai, Tatsuya Hatanaka, Yu Morimoto, Dusan Strmcnik, Vojislav Stamenkovic, Nenad Markovic

Experimental Estimation of Reaction Order of Oxygen Reduction Reaction on Pt(111) Single Crystal

Symposium 14: General Session

Location: Room 302

Chaired by: Jingyuan Chen and Tadaharu Ueda

09:50 to 10:10

Isao Shitanda (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Hiroyuki Kiryu, Masayuki Itagaki

Investigation of Screen-printed Reference Electrode Structure for Long-term Stability

10:10 to 10:30

Jingyuan Chen (Department of Applied Physics, University of Fukui, Fukui, Japan), Chaofu Zhang, Koichi Aoki

Voltammetry of Ferrocenyl Derivatives at Glass-coated Platinum Nano-electrodes

10:30 to 10:50

Matteo Duca (Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands), Paramaconi Rodriguez, Marta Figueiredo, Victor Climent, Alexei Yanson, Juan Feliu, Marc Koper

Direct nitrite reduction at Pt(100) and Pt cubic nanoparticles: Unveiling the universal pathway to N₂

10:50 to 11:10

Coffee Break

11:10 to 11:30

Tadaharu Ueda (Faculty of Science, Kochi University, Kochi, Japan), Miho Ohnishi, Jun-ichi Nambu, Daisuke Kaneno, Si-Xuan Guo, John Boas, Alan Bond

Detailed electrochemical study on Keggin- and Wells-Dawson- type Vanadium-substituted Polyoxometalates

11:30 to 11:50

Dong Wang (Institute of Chemistry, CAS, Beijing, China), Bo Cui, Ting Chen, Li-Jun Wan

Potential driven phase transition in the self-assembled monolayers of N-heteroaromatic thiols on Au(111) electrode: An electrochemical scanning tunneling microscopy study

11:50 to 12:10

Masato Tominaga (Graduate School of Science and Technology, Kumamoto University, Kumamoto, Japan), Hideki Baba

Molecular Weight Effect of Poly-L-lysine on Redox Reaction of Ferritin Immobilized onto the Modified ITO Electrode

Thursday 15 September 2011 - Afternoon

Symposium 3: Electrochemical Micro & Nanosystem Technologies

Location: Room Toki-A

Chaired by: Chee-Seng Toh

14:10 to 14:30 **Invited**

Keiichi Kaneto (LSSE, Kyushu Institute of Technology, Kitakyushu, Japan), Kazuo Tominaga
Electrochemical Actuation of Conducting Polymers in Ionic Liquids

14:30 to 14:50

Tim Albrecht (Imperial College London, Department of Chemistry, London, United Kingdom), Mariam Ayub, Azadeh Bahrami, Michael Cecchini, Fatma Dogan, Joshua B. Edel, Aleksandar Ivanov, Emanuele Instuli, Deapen Japrun, Phillippa Nuttall, Agnieszka Rutkowska
Sensing individual biomolecules with solid-state nanopores - Electrochemical aspects

14:50 to 15:10

Jean Gamby (Laboratoire Interfaces et Systemes Electrochimiques LISE - UPR15 du CNRS, Paris, France), Bernard Tribollet, Mathilde Faure
Monitoring of enzymatic hydrolysis of phosphate biomolecules in microchannel walls using a contact free impedance method

15:10 to 15:30

Takahiro Sawaguchi (Biomedical Research Institute, Advanced Industrial Science and Technology (AIST), Tsukuba, Japan), Soichiro Yoshimoto
Electrochemical Formation of Cu-Corrone Adlayer on Au(111)

15:30 to 15:50

Teruaki Fuchigami (Department of Innovative and Engineered Materials, Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama, Japan), Ryo Kawamura, Yoshitaka Kitamoto, Masaru Nakagawa, Yoshihisa Namiki
Magnetic nanoparticles/polymer porous magnetic capsule designed for cancer therapy

15:50 to 16:10

Margarita Miranda Hernandez (Centro de Investigación en Energía UNAM, Temixco, Mexico), Raciél Jaimes López, Luis Lartundo, Ignacio González Martínez
Characterization of anodic deposit formed on Pb-Ag electrodes in sulphate electrolytes containing Mn(II), Ca²⁺, Cl⁻ and Mg²⁺ ions

16:10 to 16:30

Tero Jalkanen (Institute of Advanced Energy, Kyoto University, Uji, Japan), Jarno Salonen, Kazuhiro Fukami, Tetsuo Sakka, Yukio Ogata
Preparation of Multistopband Mesoporous Silicon Rugate Filters for Gas Sensing Purposes

16:30 to 16:50

Coffee Break

Symposium 4: Bioelectrochemistry for Environmental Applications and Health Monitoring

Location: Room 306+307

Chaired by: Taek Dong Chung and Christophe Léger

14:30 to 14:50 **Invited**

Jenny Emnéus (Dept. of Micro and Nanotechnology, Technical University of Denmark, Lund, Denmark), K. Zor, M. Vergani, E. Landini, I. Vedarethinam, D. Sabourin, G. Ferrari, M. Dimaki, R. Raiteri, W.E. Svendsen, M. Carminati, V. Coman, M. Skolimowski, P. Skafte-Pedersen, A. Ghio, U. Wollenberger, Z. Keresztes, R. Raiteri, M. Sampietro, M. Dufva, A. Heiskanen

Real Time Monitoring of Cellular Dynamics Using a Microfluidic Cell Culture System with Integrated Electrode Array and Potentiostat

14:50 to 15:10 **Invited**

Chenzhong Li (Nanobioengineering/Bioelectronics Lab, Department of Biomedical Engineering, Florida International University, Miami, USA), Pratikkumar Shah, Shradha Prabhulkar

Single Cell Level Biomarker Analysis Using Nano/Micro Sensors

15:10 to 15:30

Kumi Y. Inoue (R&D Center of Excellence of Integrated Microsystems, Tohoku University, Sendai, Japan), Satoko Takahashi, Kosuke Ino, Tomokazu Matsue, Hitoshi Shiku

Zymogen-based Biosensors and Its Application for Highly Sensitive Endotoxin Detection on a Chip Device

15:30 to 15:50

Dai Kato (National Institute of @Advanced Industrial Science and Technology, Tsukuba, Japan), Keisuke Goto, Mayuri Komoriya, Shigeru Hirono, Osamu Niwa

Direct Electrochemical Detection of DNA Molecules by Using a Sputtered Nanocarbon Film

15:50 to 16:10

Judith Rishpon (Tel-Aviv University, Tel-Aviv, Israel)

Application of Bacteriophages in Electrochemical Identification and Quantification of Bacteria

16:10 to 16:30

Yasuhiko Sasaki (Department of Biotechnology, Graduate School of Engineering, Tokyo University of Agriculture and Technology, Tokyo, Japan), Jihoon Kim, Rei Toda, Wakako Tsugawa, Koji Sode

Electrochemical detection of oligomeric status of amyloid forming protein, alpha-synuclein

16:30 to 16:50

Coffee Break

16:50 to 17:10 **Invited**

Alison Downard (Department of Chemistry, University of Canterbury, Christchurch, New Zealand), Frankie Rawson, David Garrett, Donal Leech, Keith Baronian

A Nanostructured Electrode Functionalised with Osmium Bipyridine Complexes for Whole Cell Biosensing

17:10 to 17:30

S. Zahra Bathaie (Dept. Clin. Biochem, Tarbiat Modares University, Tehran, Iran), Mojdeh Yousef Elahi, S. Ghasemi, Mir Fazlollah Mousavi

G-quadruplex immobilization on carbon nanotube modified glassy carbon electrode and investigation of its interaction with spermine

17:30 to 17:50

Jacek Lipkowski (Department of Chemistry, University of Guelph, Guelph, Canada)

Atomic Force Microscopy Studies of a Floating-bilayer Lipid Membrane on a Au(111) Surface Modified with a Hydrophilic Monolayer

17:50 to 18:10

Dorota Matyszewska (Faculty of Chemistry, University of Warsaw, Warsaw, Poland), Slawomir Sek, Renata Bilewicz

Interactions of Anticancer Drugs with Model Thiolipid Layers

18:10 to 18:30

Hanna Radecka (Institute of Animal Reproduction and Food Research of Polish Academy of Sciences, Olsztyn, Poland)

Biosensors for Controlling Food, Environmental and Medical Samples

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Location: Room 201

Chaired by: Akitoshi Hayashi and Kwang Bum Kim and Masayuki Morita

14:30 to 15:10 **Keynote**

Ruediger Koetz (Paul Scherrer Institut, Villigen, Switzerland), Dario Cericola, Annette Foelske-Schmitz, Moritz Hantel, Daniel Weingarth

Roads to High Energy Electrochemical Capacitors

15:10 to 15:30

Kerli Tõnurist (Institute of Chemistry, University of Tartu, Tartu, Estonia), Thomas Thomberg, Alar Jänes
Specific performance of supercapacitors based on different porous and fibrous membrane materials

15:30 to 15:50

Sathish Marappan (Tohoku University, Sendai, Japan), Satoshi Mitani, Takaaki Tomai, Atsushi Unemoto, Itaru Honma

MnO₂ assisted chemical polymerization of aniline on graphene as electrode materials for electrochemical supercapacitors

15:50 to 16:10

Afriyanti Sumboja (School of Materials Science and Engineering, Nanyang Technological University, Singapore, Singapore), Ushula Mengesha Tefashe, Gunther Wittstock, Pooi See Lee

Probing the kinetics properties of MnO₂ with Scanning Electrochemical Microscope for Supercapacitor Application

16:10 to 16:30

Junichi Miyamoto (Tokyo University of Agriculture and Technology, Koganei, Japan), Akiko Ishikawa, Shunzo Suematsu, Kenji Tamamitsu, Katsuhiko Naoi

“Nanohybrid Capacitor” Utilizing nc-Li₄Ti₅O₁₂ Compositing with Single-walled Carbon Nanotube

16:30 to 16:50

Coffee Break

16:50 to 17:10

Junwoo Park (Department of Chemistry and Biotechnology, Yokohama National University, Yokohama, Japan), Kento Yamauchi, Naoki Tachikawa, Kaoru Dokko, Masayoshi Watanabe

Li-S Batteries with Ionic Liquid Electrolytes

17:10 to 17:30

Zhian Zhang (School of Metallurgical Science and Engineering, Changsha, China), Zhaofeng Deng, Yanqing Lai, Jie Li, Fangyang Liu, Liangxing Jiang

The Electrochemical Properties of Lithium/Sulfur Cell Using Sulfur-VGCF Composite Materials

17:30 to 17:50

Atsushi Fukunaga (Graduate School of Energy Science, Kyoto University, Kyoto, Japan), Toshiyuki Nohira, Rika Hagiwara, Shoichiro Sakai, Koji Nitta, Shinji Inazawa

Sodium Secondary Batteries Using Binary Molten (Na,K)FSA

17:50 to 18:10

Akitoshi Hayashi (Department of Applied Chemistry, Osaka Prefecture University, Sakai, Osaka, Japan), Kousuke Noi, Masahiro Tatsumisago

Preparation of Na⁺ ion conducting glass-ceramics in the system Na₂S-P₂S₅

18:10 to 18:30

Atsushi Inoishi (Department of Automotive Science, Graduate School of Integrated Frontier Science, Kyushu University, Fukuoka, Japan), Tatsumi Ishihara, Shintaro Ida

Rechargeable Fe-air battery using LaGaO₃ oxide ion conductor for electrolyte

Symposium 7a: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells, fundamental processes, materials and architectures, modeling,
PEFC: Catalysts and MEAs, Polymer electrolyte membranes

Location: Snow Hall A

Chaired by: Shigenori Mitsushima and Chen-Hao Wang

14:30 to 14:50

Yoshihisa Harada (Department of Applied Chemistry, School of Engineering, The University of Tokyo, Bunkyo-ku, Japan), Masaki Kobayashi, Hideharu Niwa, Masaharu Oshima, Yuta Nabae, Masa-aki Kakimoto, Jun-ichi Ozaki, Takashi Ikeda, Kiyoyuki Terakura, Seizo Miyata

In-Situ Soft X-ray Emission Spectroscopy of Carbon Alloy Cathode Catalysts for Polymer Electrolyte Fuel Cells

14:50 to 15:10

Hisao Kiuchi (Department of Applied Chemistry, The University of Tokyo, Tokyo, Japan), Makoto Saito, Masaki Kobayashi, Yoshihisa Harada, Masaharu Ohmura, Masayuki Chokai, Yuta Nabae, Shigeki Kuroki, Takashi Ikeda, Kiyoyuki Terakura, Seizo Miyata

Characteristics of Oxygen Adsorption on Carbon-based Catalysts Revealed by *in-situ* X-ray Photoemission Spectroscopy

15:10 to 15:30

Yusuke Hiraike (Department of Applied Chemistry, The University of Tokyo, Tokyo, Japan), Yoshihisa Harada, Masaharu Oshima, Masayuki Chokai, Yuta Nabae, Shigeki Kuroki, Masa-aki Kakimoto, Takashi Ikeda, Kiyoyuki Terakura, Seizo Miyata

Iron-catalyzed activation of carbon alloy cathode catalysts

15:30 to 15:50

Feng Li (Department of Electronic Chemistry, Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama, Japan), Yuta Nabae, Takeyoshi Okajima, Masa-aki Kakimoto, Seizo Miyata, Takeo Ohsaka

Oxygen Reduction Reaction Activity of Pt-Electrodeposited Carbon Alloy Catalyst

15:50 to 16:10

Chen-Hao Wang (Department of Materials Science and Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Sun-Tang Chang, Kuei-Hsien Chen, Li-Chyong Chen

High performance of nitrogen-containing corrin-based catalyst for PEM Fuel Cell

16:10 to 16:30

Justus Masa (Analytische Chemie, Ruhr-Universität Bochum, Bochum, Germany)

Systematic selection and design of metalloporphyrin based oxygen reduction catalysts by tuning the donor-acceptor intermolecular hardness

16:30 to 16:50

Coffee Break

16:50 to 17:10

Jun Maruyama (Environmental Technology Research Division, Osaka Municipal Technical Research Institute, Osaka, Japan), Tsutomu Shinagawa, Zyun Siroma, Atsushi Mineshige

One-pot Physical-chemical Vapor Deposition for Formation of Carbon Thin Film with Catalytic Activity for Cathodic Oxygen Reduction

17:10 to 17:30

Nobuyoshi Koshino (Tsukuba Laboratory, Sumitomo Chemical Co., Ltd., Tsukuba, Japan), Hideyuki Higashimura, Tatsuhiko Okada

Novel Oxygen Reduction Electro-catalysts Based on Planar Dinuclear Complexes for PEFC

17:30 to 17:50

Ali Ehsani (Chemistry, Tehran, Iran), M.G Mahjani, M'Jafarian

P-type conducting polymer/multi-walled carbon nanotubes composite electrocatalyst in fuel cell

17:50 to 18:10

Sanjeev Mukerjee (Department of Chemistry and Chemical Biology, Northeastern University, Boston, USA), Nagappan Ramaswamy, Michael Bates

Reasons for Kinetic Facility of Oxygen Reduction and Development of Non-Precious Cathode Catalysts for Alkaline Membrane Fuel Cell

Symposium 7b: Fuel Cells: Materials, Properties and Mechanisms

Direct FCs, PEM and AFC, SOFCs

Location: Snow Hall B

Chaired by: Marian Chatenet and Kenji Miyatake

14:30 to 14:50

Tatsuya Nakajima (Chemical Resources Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Takanori Tamaki, Hidenori Ohashi, Takeo Yamaguchi

Consideration of Performance Decrement of PEFCs Containing Hydrocarbon Polyelectrolyte in Electrodes Based on Polymer Properties

14:50 to 15:10

Yoshio Nosaka (Department of Materials Science and Technology, Nagaoka University of Technology, Nagaoka, Japan), Kenji Ohtaka, Kazuki Ohno, Atsuko Nosaka

Detection of OH radicals generated in polymer electrolyte membranes of fuel cells

15:10 to 15:30

Pisit Kiatkittikul (Graduate School of Energy Science, Kyoto University, Kyoto, Japan), Ryosuke Taniki, Kazuhiko Matsumoto, Toshiyuki Nohira, Rika Hagiwara, Yoshinobu Tsujii, Takashi Morinaga, Takaya Sato

Dialkylpyrrolidinium Fluorohydrogenate Ionic Liquid-polymer Composite Membranes for a Non-humidified Fuel Cell

15:30 to 15:50

Tomohiro Yasuda (Department of Chemistry and Biotechnology, Yokohama National University, Yokohama, Japan), Kaoru Dokko, Masayoshi Watanabe

Investigation of Fuel Cell Electrode Reactions in Protic Ionic Liquids

15:50 to 16:30 **Keynote / Oronzio and Niccolò De Nora Foundation Prize of ISE on Applied Electrochemistry**

Marian Chatenet (Laboratoire d'Electrochimie et de Physicochimie des Matériaux et des Interfaces (Grenoble-INP/LEPMI), Saint Martin d'Hères, France), Belen Molina Concha, Laetitia Dubau, Elodie Guilminot, Julien Durst, Frédéric Maillard

Electrocatalysis in low-temperature fuel cells; From the limitations of PEMFC to the promises of DBFC

16:30 to 16:50

Coffee Break

16:50 to 17:10

Hirohisa Tanaka (Daihatsu Motor Co., Ltd. Frontier Technology R&D Division, Ryuo, Gamo, Japan), Susumu Yamaguchi, Yasunari Maekawa

A key concept for a Pt-free, zero-emission vehicle powered by a liquid-feed fuel cell

17:10 to 17:30

Eriko Nishino (Frontier Technology R&D Division, Daihatsu Motor Co. Ltd., Gamo, Japan), Keita Fukasawa, Byungchan Bae, Kenji Miyatake, Masahiro Watanabe, Susumu Yamaguchi, Koji Yamada, Hirohisa Tanaka

Aromatic Anion Exchange Membranes for Precious Metal Free Hydrazine Fuel Cells

17:30 to 17:50

Satoshi Suzuki (Advanced Research Laboratories, Tokyo City University, Setagaya-ku, Japan), Masayuki Nagai

Anion Exchange Membrane Fuel Cell Using Silicone-based Electrolyte Membrane

17:50 to 18:10

Han Zhang (Chemical Resources Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Hidenori Ohashi, Takanori Tamaki, Takeo Yamaguchi

Investigations of Water Movement and Performance of Solid State Alkaline Fuel Cells

18:10 to 18:30

Anthony Kucernak (Imperial College London, Department of Chemistry, London, United Kingdom), Fabrice Bidault

MEA Development Based on Porous Silver Electrodes for Alkaline Anion Exchange Membrane Fuel Cells

Symposium 8b: Electrochemical Energy Storage and Conversion

Electrode reaction mechanism, Simulation and modelling

Location: Room 301

Chaired by: Yuki Orikasa

14:30 to 14:50 **Invited**

Kazunori Takada (International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan)

Cathode/Electrolyte Interface in Solid-state Lithium Battery with Sulfide Electrolyte

14:50 to 15:10 **Invited**

Isao Tanaka (Department of Materials Science and Engineering, Kyoto University, Kyoto, Japan), Akifumi Matsumoto, Yukinori Koyama, Atsuto Seko, Atsushi Togo

Superionic Transition of Bismuth Oxide by Systematic Density Functional Theory Calculations

15:10 to 15:30

Hisatsugu Yamasaki (Toyota Motor Corporation, Battery Research Division, Higashifuji Technical Center, Susono, Shizuoka, Japan), Akio Mitsui, Yuki Kato

Analysis of Li-ion diffusion pathway in the $\text{Li}_2\text{S-P}_2\text{S}_5$ system by molecular dynamics simulation

15:30 to 15:50

Laurence Hardwick (School of Chemistry, University of St. Andrews, St. Andrews, United Kingdom), Stefan Freunberger, Zhangquan Peng, Yuhui Chen, Nicholas Drewett, Fanny Barde, Peter Bruce

Electrochemical and Chemical Processes in the Rechargeable Li- O_2 Cell

15:50 to 16:10

Toshiya Saito (Toyota Motor Europe NV/SA, Zaventem, Belgium), Hidetaka Nishikori, Marko Senf, Lothar Dunsch

In-situ detection of the superoxide radical in Li-air battery

16:10 to 16:30

Kai-Hsiang Yen (Corporate Research, Underwriters Laboratories Inc., Taiwan, Taipei, Taiwan), Mahmood Tabaddor, Carl Wang

A Method for Calculating Blast Pressure of Failed Lithium-ion Cells with C-H-O Solvents

16:30 to 16:50

Coffee Break

16:50 to 17:10

Kyung Su Kim (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Hidekazu Ido, Kouta Suzuki, Sou Taminato, Mamoru Komo, Hiroaki Minamishima, Kazuhisa Tamura, Jun'ichiro Mizuki, Jin-young Son, Masaaki Hirayama

Surface structural analysis of $\text{Li}_3\text{PO}_4/\text{Li}_4\text{Ti}_5\text{O}_{12}$ thin film electrode

17:10 to 17:30

Daiko Takamatsu (Kyoto University, Kyoto, Japan), Takayuki Nakatsutsumi, Shinichiro Mori, Yuki Orikasa, Hisao Yamashige, Kenji Sato, Takahiro Fujimoto, Yu Takanashi, Masatsugu Oishi, Haruno Murayama, Hajime Tanida, Hajime Arai, Yoshiharu Uchimoto, Zempachi Ogumi

In-situ Total Reflection Fluorescence XAS Study of Li_xCoO_2 / Organic Electrolyte Interface

17:30 to 17:50

Takanashi Yu (Office of Society-Academia Collaboration for Innovation, Kyoto University, Kyoto, Japan)

The development of interface film's estimation by hard X-ray photoemission spectroscopy (HXPES) as $\text{Li}_{1-x}\text{CoO}_2$ of lithium ion secondary battery

17:50 to 18:10

Nbouya Sakai (Graduate School of Engineering, Toin University of Yokohama, Yokohama, Japan), Masashi Ikegami, Tutomu Miyasaka, Takuro Murakami

TiO_2 -Coated ZnO Photoelectrodes for Dye-sensitized Solar Cells with Controlled Back Electron Transfer

18:10 to 18:30

Takenori Tamura (Graduate School of Engineering, Toin University of Yokohama, Yokohama City, Japan), Masashi Ikegami

A quasi-solid dye-sensitized solar cell with polyvinyl alcohol-based electrolytes

Symposium 9: Corrosion and Surface treatments

Location: Room 303+304

Chaired by: Hyuk Sang Kwon and Roland Oltra

14:30 to 14:50 **Invited**

Masayuki Itagaki (Tokyo University of Science, Noda, Japan), Isao Shitanda, Kunihiro Watanabe

Anodic Dissolution Mechanisms of Copper and Copper-alloys Investigated by Channel Flow Electrode

14:50 to 15:10

Toshiaki Ohtsuka (Div. of Materials Science and Engineering, Faculty of Engineering, Hokkaido University, Sapporo, Japan), Yuki Sasaki, Atsushi Hyuno

Potential Modulation Reflectance of Passivated Type 304 Stainless Steel

15:10 to 15:30

Artjom Maljusch (Analytische Chemie - Elektroanalytik & Sensorik, Bochum, Germany), Ceylan Senöz, Michael Rohwerder, Wolfgang Schuhmann

An integrated SKP-SECM system: Design, development, optimization and first applications

15:30 to 15:50 **Invited**

Kazuhisa Azumi (Graduate School of Engineering Hokkaido University, Sapporo, Japan)

Concept and Application of Coupling Current Mapping in a Non-uniform Corrosion

15:50 to 16:10

Shinji Fujimoto (Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Suita, Osaka, Japan), Rock-Hoon Jung

Passive Films Formed on Austenitic Stainless Steels under Humid Atmospheric Environments

16:10 to 16:30 **Invited**

Atsushi Nishikata (Department of Chemistry and Materials Science, Tokyo, Japan), Tooru Tsuru

Atmospheric Corrosion Monitoring of Weathering Steel by Electrochemical Impedance Technique

16:30 to 16:50

Coffee Break

16:50 to 17:10

Masahiro Seo (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Koji Fushimi, Yoshitaka Aoki, Hiroki Habazaki, Masayuki Inaba, Mitsutoshi Yokomizo, Takazumi Hayakawa, Takenori Nakayama

In-situ X-ray Absorption Spectroscopy of Pb Species Adsorbed on Ni in Acidic Perchlorate Solution

17:10 to 17:30

Janson Chen (Corrosion and Protection, The University of Manchester, Manchester, United Kingdom), Stuart Lyon

Computational modeling of electrochemistry inside a single water droplet

17:30 to 17:50 **Invited**

Victor Safonov (Department of Electrochemistry, Faculty of Chemistry, Moscow State University, Moscow, Russia), Ludmila Vykhodtseva, Larisa Fishgoit, Konstantin Kalmykov, Olga Safonova, Pieter Glatzel

Electrodeposition of Amorphous (Nanocrystalline) Alloys Based on Fe, Ni and Co from Hypophosphite-containing Electrolytes and a New Approach to Studying Their Composition and Structure

17:50 to 18:10

Song-Zhu Chu (Dept. of Research & Development, Mitsubishi Shindoh Co. Ltd., Aizuwakamatsu, Japan), Michiyo Odashima, Takahiro Okita, Takashi Tamakawa, And Jun-Ichi Kumagai

Corrosion Resistance of Multilayered Sn/Ag Electroplating on Cu Alloys for Automotive Connectors

18:10 to 18:30

Jonas Höglström (Department of Materials Chemistry, Uppsala University, Uppsala, Sweden), Matilda Hanson, Andrej Furlan, Ulf Jansson, Leif Nyholm

Characterization of Amorphous Chromium Carbide Thin Films of Different Compositions

Symposium 13: Kinetics and Mechanisms of Electrode Reactions: Studies by Spectroscopy, Theory and New Advanced Methods

Location: Room 203+204

Chaired by: Kensaku Kodama

14:30 to 15:10 **Keynote / Brian Conway Prize for Physical Electrochemistry**

Shi-Gang Sun (Department of Chemistry, Xiamen University, Xiamen, China)

In-situ FTIR reflection spectroscopy and its studies of electrochemical reactions

15:10 to 15:30

Nuria Garcia-Araez (FOM Institute AMOL, Amsterdam, Netherlands), Paramaconi Rodriguez, Huib Bakker, Marc Koper

Potential-dependent water adsorption on gold revisited: A SEIRAS study

15:30 to 15:50

Simantini Nayak (Max-Planck-Institut für Eisenforschung GmbH, Dusseldorf, Germany), P. Ulrich Biedermann, Martin Stratmann, Andreas Erbe

In-situ Electrochemical ATR-IR Investigation of the Oxygen Reduction on Germanium

15:50 to 16:10

Maria Escudero-Escribano (Institute of Physical Chemistry Rocasolano, Csic, Madrid, Spain), Paola Quaino, Germán J. Soldano, Wolfgang Schmickler, Angel Cuesta

Adsorption phenomena on cyanide-modified Pt(111): Experiment and theory at the electrochemical interface

16:10 to 16:30

Paramaconi Rodriguez (Leiden Institute of Chemistry, Leiden University, Leiden, Netherlands), Youngkook Kwon, Marc T. M. Koper

From poison to promoter: A new role for carbon monoxide in the oxidation of methanol on a gold electrocatalyst

16:30 to 16:50

Coffee Break

16:50 to 17:10 **Invited**

Zhong-Qun Tian (State Key Laboratory of Physical Chemistry of Solid Surfaces and College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China), Yi-Fan Huang, Jian-Feng Li, Song-Bo Li, De-Yin Wu, Bin Ren

A new mechanism of the enhanced Raman scattering on electrode surfaces in the negative potential region

17:10 to 17:30

Katsuyoshi Ikeda (Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Japan), Kohei Uosaki

Sphere-plane coupled gap-mode enhanced Raman spectroscopy at well-defined catalytic metal surfaces

17:30 to 17:50

Per Kristian Dahlstrøm (Department of Materials Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway), David A. Harrington, Frode Seland

Modelling CO oxidation at a platinum disk in CO saturated sulphuric acid solution

17:50 to 18:10

Alessandro Minguzzi (Dipartimento di Chimica Fisica ed Elettrochimica, Università degli Studi di Milano, Milan, Italy), Dario Battistel, Joaquin Rodriguez-Lopez, Fu-Ren F. Fan, Alberto Vertova, Salvatore Daniele, Sandra Rondinini, Allen J. Bard

Electrocatalysts for oxygen evolution reaction: Innovative investigation methods for screening and mechanisms

18:10 to 18:30

Kei Murakoshi (Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Japan), Fumika Nagasawa, Mai Takase, Hideki Nabika

Polarized Surface-enhanced Raman Scattering Measurement on a Small Number of Molecules at a Gap of Metal Nanodimer

Symposium 14: General Session

Location: Room 302

Chaired by: Tatsuro Goda

14:30 to 14:50

Tatsuro Goda (Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo, Japan), Yuji Miyahara

Label-free and Thermo-responsive Detection of ATP by Nanoconformational Switching of Hairpin Aptamers

14:50 to 15:10

Deng Kai Yang (Department of Bio-Industrial Mechatronics Engineering, National Taiwan University, Taipei, Taiwan), Lin Chi Chen

Effect of Target Protein's Net Electric Charge on Electrochemical Aptameric Sensing

15:10 to 15:30

Suthisa Leasen (Physics Department, Science Faculty, Mahidol University, Bangkok, Thailand)

Utilizing Scanning Electrochemical Microscopy and Electrochemical Impedance Spectroscopy for DNA Sensing Platform Investigation

15:30 to 15:50

Michael Ahlers (Institute of Pure and Applied Chemistry, University of Oldenburg, Oldenburg, Germany), Izabella Brand

Electric Field Induced Changes in a Protein Film on a Gold Surface - A Model Study

15:50 to 16:10

Wang Zonghua (Laboratory of Fiber Materials and Modern Textile, The Growing Base for State Key Laboratory, College of Chemical and Environment Engineering, Qingdao University, Qingdao, China), Jie Tang

Nafion/Quercetin/Graphene Modified Electrode for Selective Determination of Dopamine

16:10 to 16:30

Doungkamon Phihusut (School of Environmental Science and Engineering, Gwangju, Korea), Jaeyoung Lee, Sunghyun Uhm

Electrospun Fiber of Reduced Graphene Oxide-Polyacrylonitrile Composite for Capacitive Deionization Application

16:30 to 16:50

Coffee Break

16:50 to 17:10

Taiki Nobeshima (Graduate School of Advanced Integration Science, Chiba University, Chiba, Japan), Kazuki Nakamura, Norihisa Kobayashi

Strong Emission and Quick Response Electrochemiluminescence Cell Based on AC-driven Electrochemical Reaction

17:10 to 17:30

Yuichi Watanabe (Graduate School of Advanced Integration Science, Chiba University, Chiba, Japan), Yukie Ibata, Kazuki Nakamura, Norihisa Kobayashi

Reaction Mechanism of the Electrochemically Driven Reflective-emissive Dual-mode Display Cell

17:30 to 17:50

Meilin Dai (Department of Crystalline Materials Science, Graduate School of Engineering, Nagoya University, Nagoya, Japan), Ken-ichi Okazaki, Akihiko Kudo, Susumu Kuwabata, Tsukasa Torimoto

Synthesis of ZnS-AgInS₂ Solid Solution Nanoparticles with Water Compatibility and Controllable Band Gap

17:50 to 18:10

Masaaki Kishida (Department of Chemistry, School of Science, The University of Tokyo, Tokyo, Japan), Shoko Kume, Hiroshi Nishihara

Reversible Redox and Photoisomerization Behaviors of Benzodimethyldihydropyrene-modified Electrode

18:10 to 18:30

Asami Funatsi (Graduate School of Science and Technology, Kumamoto University, Kumamoto, Japan), Yuki Nojiri, Masayo Sakata, Takaaki Taniguchi, Yasumichi Matsumoto

Photoluminescence and Electrochemical Properties of Inorganic Organic Hybrid Nanosheets by Surface Modifying Method

Special session celebrating the International Year of Chemistry 2011

Location: Marine Hall

15.00-15.05

Introduction C. Brett and T. Kakiuchi

15:05 to 15:30

Kazuyuki Tatsumi (Research Center for Materials Science, Nagoya University, Nagoya, Japan)

IUPAC and the International Year of Chemistry

15:30 to 16:00

Zempachi Ogumi (SACI, Kyoto University, Kyoto, Japan)

Rechargeable Batteries and Their Role in Green Energy Systems

16:00 to 16:30

Francois Lapique (CNRS - Laboratory Reactions and Chemical Engineering, Nancy, France)

Industrial and engineering aspects of electrochemistry through a couple of examples

16:20 to 16:50

Coffee Break

16:50 to 17:20

Romeu C. Rocha-Filho (Department of Chemistry, S. Carlos Federal University, S. Carlos, Brazil)

Electrochemistry and the Environment: Achievements and Challenges

17:20 to 17:50

Alison J. Downard (MacDiarmid Institute for Advanced Materials and Nanotechnology, University of Canterbury, Christchurch, New Zealand)

Opportunities at the Interface of Electrochemistry and Nanotechnology

17:50 to 18:20

Tomomkazu Matsue (Advanced Institute of Materials Research, Tohoku University, Sendai, Japan)

Bioelectrochemistry: Fundamentals and Applications

Friday 16 September 2011 - Morning

Plenary

Location: Snow Hall

Chaired by: Masahiro Watanabe

08:30 to 09:30

Klaus-Dieter Kreuer (Max-Planck-Institut FKF, Stuttgart, Germany)
New Electrolytes for Fuel Cells and Batteries

Symposium 3: Electrochemical Micro & Nanosystem Technologies

Location: Toki-A

Chaired by: Farid Harraz

09:50 to 10:10

Youn-Geun Kim (WPI-AIMR, Tohoku University, Sendai, Japan), Abhishek Lahiri, Rui Wen, Mukkannan Azhagurajan, Kingo Itaya
Application of the Optical Microscopy for Evaluation of Electrode Processes with Atomic Scale

10:10 to 10:30

Fethi Bedioui (CNRS 8151 Chimie ParisTech, Paris, France), Sophie Griveau, Christian Girard, Megan Coates, Tebello Nyokong, Hichem El Amri
Azidoaniline-based electropolymer as a molecular building block for functionalisation of conductive surfaces by click chemistry

10:30 to 10:50

David Cook (School of Chemistry, University of Southampton, Southampton, United Kingdom), P. N. Bartlett, D. C. Smith, M. George, M. M. Perdjon-Abel, M. Nestoridi, W. Zhang, F. Cheng, K. Mallik, J. Ke, J. Hyde
Electroplating of Metal and Semiconductor Nanorods from Supercritical Fluids

10:50 to 11:10

Coffee Break

11:10 to 11:30

Hideaki Komiyama (Chemical Resources Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Motonori Komura, Tomokazu Iyoda, Kaori Kamata
Domain-selective Electropolymerization through PEO Nanocylinders in PEO-b-PMA(Az) Template for Conducting Polymer Nanowire Array

11:30 to 11:50

Tebello Nyokong (Department of Chemistry, Rhodes University, Grahamstown, South Africa)
Characterization of conjugates of phthalocyanines with carbon nanotubes and quantum dots on electrode surfaces

11:50 to 12:10

Thomas Suter (Empa Materials Science & Technology, Dübendorf, Switzerland), Patrik Schmutz
Electrochemical Studies on Noble Nanoscale Particles of Pure Magnesium

12:10 to 12:30

Qijin Chi (Department of Chemistry and NanoDTU, Technical University of Denmark, Kgs. Lyngby, Denmark), Nan Zhu, Jens Ulstrup
Molecule-like Redox Activity and Size-dependent Electrocatalysis of Inorganic Hybrid Nanoparticles

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Location: Room 201

Chaired by: Thierry Brousse and Wataru Sugimoto

09:50 to 10:10 **Invited**

John R. Miller (JME, Inc., Shaker Heights, USA), Ronald A. Outlaw, Steven Z. Shi, Brian C. Holloway
Performance of Vertically-oriented Graphene Nanosheet Double-layer Capacitors with Ionic Liquid Electrolyte

10:10 to 10:30 **Invited**

Kwang Bum Kim (Department of Material Science and Engineering, Yonsei University, Seoul, Korea), Jin Go Kim, Hyun Kyung Kim, Ji Young Kim
Reduced Graphite Oxide and Its Nanocomposites for Electrochemical Capacitor Applications

10:30 to 10:50 **Invited**

Elzbieta Frackowiak (Poznan University of Technology, Poznan, Poland), Krzysztof Fic, Grzegorz Lota
Enhanced Pseudocapacitance of High-energy Capacitor Operating in Conjugated Redox Couple Solutions

10:50 to 11:10

Coffee Break

11:10 to 11:30 **Invited**

Thierry Brousse (LGMPA-Polytech Nantes, University of Nantes, Nantes cedex 3, France), Raul Lucio Porto, Jean-Baptiste Ducros, Renaud Frappier, Christophe Aucher, Saïd Bouhtiyia, Jean-François Pierson, Fabien Capon, Franck Tessier, François Cheviré
Metal nitrides as pseudo-capacitive materials

11:30 to 11:50 **Invited**

Chi-Chang Hu (Department of Chemical Engineering, National Tsing Hua University, Hsin-chu, Taiwan), Kuo-Hsin Chang, Ya-Ling Liu, Chih-I Chang
Microstructure tuning of tungsten oxides prepared by microwave-assisted solvothermal processes for asymmetric supercapacitors

11:50 to 12:10

Wataru Sugimoto (Shinshu University, Faculty of Textile Science and Technology, Ueda, Japan), Hisato Kato, Takahiro Saida, Katsutoshi Fukuda, Yoshio Takasu
Pseudo-capacitor Properties of Ruthenium Oxide Nanosheet Thin Films Prepared by Layer-by-Layer Deposition

12:10 to 12:30

Andrew Hector (Department of Chemistry, University of Southampton, Southampton, United Kingdom), Benjamin Gray, John Owen
Effect of surface treatment on charge storage at the surface of metal nitrides

Symposium 7a: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells, fundamental processes, materials and architectures, modeling,
PEFC: Catalysts and MEAs, Polymer electrolyte membranes

Location: Snow Hall A

Chaired by: Koichiro Asazawa and Sanjeev Mukerjee

10:10 to 10:30

Tomokazu Sakamoto (Frontier Technology R&D Division, Daihatsu Motor Co. Ltd., Gamo, Japan),
Koichiro Asazawa, Ulises Martinez, Barr Halevi, Plamen Atanassov, Kazuya Yamaguchi, Noritaka Mizuno,
Hirohisa Tanaka

Electrooxidation of hydrazine hydrate using Ni–La catalyst for anion exchange membrane fuel cells

10:30 to 10:50

Hyangmi Jung (Chemical Resources Laboratory, Department of Environmental Chemistry and Engineering,
Tokyo Institute of Technology, Yokohama, Japan), Takanori Tamaki, Hidenori Ohashi, Takeo Yamaguchi

Influence of physical states of water on properties of anion exchange membranes for fuel cells

10:50 to 11:10

Coffee Break

11:10 to 11:30

Koichiro Asazawa (Daihatsu Motor Co., LTD., Gamo, Japan), Hirohisa Tanaka, Daiju Matsumura, Kazuhisa
Tamura, Yasuo Nishihata, Hideaki Kasai, Plamen Atanassov

Me–N–C ORR electrocatalysts for liquid-feed fuel cells using an anion-exchange membrane

11:30 to 11:50

Maryam Bayati (Chemistry, Liverpool, United Kingdom), Matej Halasa, David J. Schiffrin

Electrochemical Generation of Hydrogen Peroxide on Metal Nanoparticles

11:50 to 12:10

Amin Aziznia (Fuel Cells & Applied Electrochemistry Laboratory, Dept. of Chemical and Biological
Engineering, The University of British Columbia, Vancouver, Canada), Colin W. Oloman, Elod L. Gyenge

A Novel Swiss-roll Mixed-reactant Fuel Cell

12:10 to 12:30

Jung-Shun Tsai (Yuh-Ing Junior College of Health Care and Management, Kaohsiung, Taiwan), Hong-Hua
Chen, Min-Hsing Chang

Effects of composition in cathode microporous layer on the performance of a proton exchange membrane
fuel cell under different air inlet relative humidity

Symposium 8a: Electrochemical Energy Storage and Conversion

Basic science of battery capacitor and fuel cells, Novel materials for electrochemical device

Location: Marine Hall

Chaired by: Masaaki Hirayama

09:50 to 10:10

Sangkook Mah (Energy Lab, Samsung Advanced Institute of Technology, Yongin-Si, Korea), Ryounghee
Kim, Jin-Hwan Park, Seok-Gwang Doo

Silicon / Metal Oxide Composite Anode Material for Lithium Ion Batteries

10:10 to 10:30

Andrew Gewirth (Department of Chemistry, University of Illinois, Urbana, USA), Brandon Long, Hadi
Tavassol

Anisotropic Li Incorporation into Semiconductor Electrodes: Strain, SEI and Nanoparticles

10:30 to 10:50

Hiroto Nishihara (Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan), Takashi Suzuki, Hiroyuki Itoi, Raúl Berenguer-Betrián, Shinichiro Iwamura, Takashi Kyotani

Electrochemical Synthesis of Si Nanocrystals in Carbon Nanocapsules and Their Performance as Lithium-ion Battery Anode

10:50 to 11:10

Coffee Break

11:10 to 11:30

Yosuke Ishii (Department of Materials Science and Engineering, Nagoya Institute of Technology, Nagoya, Japan), Koki Okamura, Tomohiro Matsushita, Shinji Kawasaki

In-Situ X-ray Diffraction Investigation of Lithium Intercalation Process on TiO₂(B) Electrode

11:30 to 11:50

Marketa Zukalova (JHIPCH AS CR, Prague, Czech Republic), Milan Bousa, Barbora Laskova, Jan Prochazka, Alison Chou, Ladislav Kavan

Polycrystalline TiO₂ Anatase with a Large Proportion of Crystal Facets (001): Lithium Insertion Electrochemistry

11:50 to 12:10

Neng-Fei Yu (Chemistry Department, Xiamen, China), Na Tian, Zhi-You Zhou

Fine-tuning the surface structure and catalytic activity of Pd nanocrystals by electrochemistry

12:10 to 12:30

Amel Tabet-Aoul (INRS-Energie, Matériaux et Télécommunications, Varennes, Canada)

Advances in the development of free-standing nanostructured anode catalysts for direct ethanol fuel cells

Symposium 8b: Electrochemical Energy Storage and Conversion

Electrode reaction mechanism, Simulation and modelling

Location: Room 301

Chaired by: Laurence Hardwick and Kazunori Takada

09:50 to 10:10

Alejandro A. Franco (CEA (Atomic and Alternative Energies Commission of France) - LITEN/DEHT/ Laboratory of Components for Fuel Cells and Electrolyzers, and of Modeling (LCPEM), Grenoble, France), Luiz Fernando Lopes Oliveira, Christian Jallut

Electrochemical and Transport Mechanisms in PEMWEs: New Insights from a Multiscale Modeling Study

10:10 to 10:30

Etsushi Tsuji (Division of Materials Chemistry, Hokkaido University Faculty of Engineering, Sapporo, Japan), Ken-ichi Fukui, Akihito Imanishi

Influence of Surface Roughening of Rutile TiO₂ Single Crystal on Photocatalytic Activity for Oxygen Evolution in Acidic and Alkaline Solutions

10:30 to 10:50

Philippe Mandin (LIMATB - Université de Bretagne Sud, Lorient, France), Zine Derhoumi, Hervé Roustan

Two-phase Electrolysis Modelling and Experimental Study

10:50 to 11:10

Coffee Break

11:10 to 11:30

Xiaoquan Lu (College of Chemistry & Chemical Engineering, Northwest Normal University, Lanzhou, China)

Photoelectrochemical Study Based on the Functionalized-metalporphyrin

Symposium 9: Corrosion and Surface Treatments

Location: Room 303+304

Chaired by: Hiroki Habazaki and Mikhail Zheludkevich

09:50 to 10:10

Bernard Tribollet (LISE-UPR 15 du CNRS, Paris cedex 05, France), Sylvain Amand, Marco Musiani, Mark Orazem, Nadine Pébère, Vincent Vivier

A Model for CPE Behaviour of a Coated Electrode

10:10 to 10:30

Frank Uwe Renner (Max-Planck-Institut Eisenforschung, Dusseldorf, Germany), Genesis Ngwa Ankah, Aparna Pareek, Julia Lengsfeld, Asif Bashir, Markus Valtiner

Influence of Thiol-films on dealloying of Cu₃Au

10:30 to 10:50

Hisasi Takenouti (LISE-UPMC UPR 15 du CNRS, Paris Cedex 05, France), Wafaa Qafsaoui, Hubert Perrot, Martin W. Kendig

Corrosion inhibition of copper in 3% NaCl by 1-pyrrolidine dithiocarbamate

10:50 to 11:10

Coffee Break

11:10 to 11:50 **Keynote**

Mikhail Zheludkevich (DECV, CICECO, University of Aveiro, Aveiro, Portugal)

Self-healing Coatings for Corrosion Protection of Metallic Materials

11:50 to 12:10

Kazuyuki Nishio (Department of Applied Chemistry, Tokyo Metropolitan University, Tokyo, Japan), Hideki Masuda

Formation of nanoporous film by anodization of gold in carboxylic acid

12:10 to 12:30

Hiroaki Tsuchiya (Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Osaka, Japan), Takahiro Suzumura, Shinji Fujimoto

Self-ordering Pore Formation on Stainless Steels

Symposium 13: Kinetics and Mechanisms of Electrode Reactions: Studies by Spectroscopy, Theory and New Advanced Methods

Location: Room 203+204

Chaired by: Angel Cuesta and Andrea Russell

09:50 to 10:30 **Keynote**

YuYe J. Tong (Chemistry Department, Georgetown University, Washington, USA)

In-situ Spectroelectrochemical Investigations of Pt-based Electrocatalysts

10:30 to 10:50 **Invited**

Kenichi Ataka (Experimental Molecular Biophysics, Department of Physics, Freie Universität Berlin, Berlin, Germany), Joachim Heberle

Function of Membrane Protein Monolayer Formed on the Electrode Surface Studied by *in-situ* Vibrational Spectroscopy

10:50 to 11:10

Coffee Break

11:10 to 11:30

Manuela Rueda (Department of Physical Chemistry, University of Seville, Seville, Spain), Francisco Prieto, Antonio Rodes, Jose Manuel Delgado

The Influence of pH on the Adsorption of Adenine on Gold Electrodes: An *in-situ* Infrared Spectroscopy Study

11:30 to 11:50

Rong Huang (College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China), Deyin Wu, Zhongqun Tian

Adsorption and Electrochemical Oxidation of Adenine on Silver Electrodes

11:50 to 12:10

Helmut Baltruschat (University of Bonn, Bonn, Germany), Sabine Wezislá, Nikolay Podgaynyy

Influence of molecule orientation on molecular friction: Pyridine at Au(111)

12:10 to 12:30

Kamba Nomura (FC-Cubic TRA, Koto-ku, Japan), Narumi Ohta, Ichizo Yagi

In-situ Investigation of Adsorption of Perfluoroalkyl Sulfonic Acids on Au by SEIRA Spectroscopy

Symposium 14: General Session

Location: Room 302

Chaired by: Kenji Kiyohara and Marco Musiani

09:50 to 10:10

Kenji Kiyohara (National Institute of Advanced Industrial Science and Technology (AIST), Ikeda, Japan), Hiroshi Shioyama, Takushi Sugino, Kinji Asaka

Phase Transition in Porous Electrodes

10:10 to 10:30

Kenichi Shimizu (Department of Chemistry, Umeå, Sweden), Jean-François Boily, Andrei Shchukarev, Philipp Kozin

Cryogenic X-ray photoelectron spectroscopy and electrochemical impedance study of electrolyte ion adsorption at the hematite/water interface

10:30 to 10:50

Aleksandr Simonov (Boreskov Institute of Catalysis, SB RAS, Novosibirsk, Russia), Olga Cherstiouk, Sergey Vassiliev, Vladimir Zaikovskii, Alexander Filatov, Nina Rudina, Elena Savinova, Galina Tsirlina

Platinum on smooth carbon supports at low loading: Morphology controlled by electrodeposition kinetics

10:50 to 11:10

Coffee Break

11:10 to 11:30

Marco Musiani (IENI CNR, Padova, Italy), Enrico Verlato, Sandro Cattarin, Nicola Comisso, Arianna Gambirasi, Lourdes Vazquez-Gomez

Preparation of Pd-modified Ni Foam Electrodes and Their Use as Anodes for the Oxidation of Alcohols in Basic Media

11:30 to 11:50

Leigh Aldous (Department of Chemistry, University of Oxford, Oxford, United Kingdom), Richard G. Compton

The Electrochemistry of Hydrazine/Formic Acid Mixtures – Enhanced Molecular Hydrogen Storage and Fuel Cell Output Possibilities

11:50 to 12:10

Nico Cousens (Imperial College London, London, United Kingdom), Anthony Kucernak, Monica Marinescu, Alexei Kornyshev

Ultra-low Voltage Electrowetting of ITIES

12:10 to 12:30

Petra Bele (Department of Physics E19, Technische Universität München, Garching, Germany)

Noise and Geometric Distortion Corrected Imaging Plate Detector System for Transmission Electron Microscopy Imaging

Poster presentation program



Symposium 1: Electroanalytical Chemistry for Environmental Protection and Monitoring

Nanomaterials for Sensors Platform

s01-P-001

Yusuke Kaji (Osaka University, Suita, Japan), Taro Uematsu, Torimoto Tsukasa, Susumu Kuwabata

Mapping concentration profiles of an electrode reaction by employing semiconductor nanoparticles ZnS-AgInS₂

s01-P-002

Rasaq Olowu (Department of Chemistry, University of the Western Cape, Cape Town, South Africa), Priscilla Baker, Emmanuel Iwuoha

Electrochemical Multichannel Transduction of Poly(propylenethiopenoimine)-co-poly(3,4-ethylenedioxythiophene) Aptameric Nanobiosensor for Estrogenic Endocrine Disruptors

s01-P-003

Huan Tran Ngoc (Hanyang University, Seoul, Korea), Hoeil Chung

Gold nanodendrite structure for diverse electrochemical measurements

s01-P-004

Feifei Zhang (Laboratory of Fiber Materials and Modern Textile, The Growing Base for State Key Laboratory, Qingdao University, Tsukuba, Japan), Zonghua Wang, Jie Tang

A Novel Sensor of Poly (vinyl alcohol) Incorporated Multiwalled Carbon Nanotube for Voltammetric Determination of Cu (II)

s01-P-005

Xuena Zhu (Nanobioengineering/Bioelectronics Lab, Department of Biomedical Engineering, Florida International University, Miami, USA)

Whole Cell Based Electrical Sensing Device for Bacteria Analysis

New Sensing Devices

s01-P-006

Mistral Jen-Lin Chang (Department of Chemistry, National Chung Hsing University, Taichung, Taiwan), Guor-Tzo Wei

Development and Application of Screen-printed Ionic Liquid Thin Layered Carbon Electrode for Use as Electrochemical Sensors

s01-P-007

Xinran Cheng (Department of Analytical Chemistry, University of Toronto, Toronto, Canada), Anthony Veloso, Angela Hong, Kagan Kerman

DNA-based Mercury Sensor Using Screen-printed Electrochemical Chips

s01-P-008

Ryo Matsuoka (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Nada, Japan), Takeshi Kondo, Makoto Yuasa

Superoxide anion radical sensor using GC electrode dual-modified with heparin mimic and polymerized iron porphyrin

s01-P-009

Katsuhiko Nishiyama (Graduate School of Science and Technology, Kumamoto University, Kumamoto, Japan), Shota Tajima, Takafumi Sato, Masumi Tachikawa, Eriko Noguchi, Hiroaki Matsuura, Nobuo Nakano, Yasuo Seto

Development of Electrochemical Gas Sensor for Blister Agents Using Sputtered Gold Electrode on Permeable Membrane

s01-P-010

Reza Ojani (Analytical Chemistry Department, University of Mazandaran, Babolsar, Iran), Jahan-Bakhsh Raoof, Ebrahim Zarei, Seyed Naser Azizi, Maryam Abrishamkar

A Novel Voltammetric Sensor for Dopamine and Uric Acid Based on New Microwave Assisted Synthesized MFI Type Zeolite Modified Electrode

s01-P-011

Hironori Sakamoto (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Noda, Japan), Takeshi Kondo, Isao Shitanda, Masayuki Itagaki, Makoto Yuasa

Construction of BDD electrode by screen printing method

s01-P-012

Hirotao Seino (Department of Pure and Applied Chemistry, Tokyo University of Science, Noda, Japan), Takeshi Kondo, Makoto Yuasa

Superoxide anion radical sensor using BDD electrode modified with iron tetraphenylporphyrin complex

s01-P-013

Chihiro Suzuki (Department of Applied Chemistry, Tokyo University of Science, Tokyo, Japan), Naoaki Yabuuchi, Shintaro Kanazawa, Taku Hasegawa, Shinichi Komaba

All-Solid-State Ion-Selective Electrodes Using Alkali Insertion Materials as Inner Contacting Layers with Poly(vinyl chloride) Membrane

s01-P-014

Mami Yamaguchi (Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Kasuga-shi, Japan), Michael Breedon, Sri Anggraini, Norio Miura

Mixed-potential-type YSZ-based Gas Sensor Aiming at Selective Detection of Hydrogen

s01-P-015

Yongchun Zhu (Chemistry Shenyang Normal University, Shenyang, China)

A novel amperometric biosensor based on secretion of whole living cells of petals for detection of urea

Simple and Reliable Pretreatment/Measurement System

s01-P-016

Yuki Ito (Graduate School of Engineering, Hamamatsu, Japan)

Photoelectrochemical behavior of iron oxide under visible light irradiation

s01-P-017

Margarita Miranda Hernandez (Centro de Investigación en Energía UNAM, Temixco, Mexico), Sandra Jazmín Figueroa Ramírez

Study of the adsorption of CO in different copper electrodes

s01-P-018

Tatsuo Noda (Applied Life Sciences, Graduate School of Agriculture, Kyoto University, Kyoto, Japan), Katsumi Hamamoto, Seiya Tsujimura, Osamu Shirai, Kenji Kano

Fabrication of a thin-ring electrode by Au sputtering and integrated with counter and reference electrodes

s01-P-019

Eva Samcova (Department of Biochemistry, Cell and Molecular Biology, Charles University in Prague, Third Faculty of Medicine, Prague 10, Czech Republic), Petr Tuma, Klara Malkova, Karel Stulik

Highly Rapid Monitoring of Mono- and Disaccharides in Drinks, Foodstuffs and Foodstuff Additives by Capillary Electrophoresis with Contactless Conductivity Detection

Late Registrations

s01-P-020

Mokarrom Hossain (Department of Chemistry, Kyungpook National University, Daegu, Korea), Min Jeong Kwon, Sebin Kim, Hye Jin Lee

Multiplexed Detection of Organophosphate Nerve Agents with a microhole-Liquid/Gel Interface

Symposium 2: Unusual Electrochemical Phenomena in Ionic Liquids and Related Systems

Charge Transport

s02-P-001

Ming-Yu Yen (Department of Chemical Engineering, National Tsing Hua University, HsinChu, Taiwan), Min-Chien Hsiao, Shu-Hang Liao, Po-I Liu, Han-Min Tsai, Chen-Chi M. Ma, Nen-Wen Pu, Ming-Der Ger

Preparation of graphene/multi-walled carbon nanotube hybrid and its use as photoanodes of dye-sensitized solar cells

Electron Transfer

s02-P-002

Atif Elahi (University College London, Department of Chemistry, London, United Kingdom), Toks Fowowe
Electron Transfer at the Solid/Gas Interface

s02-P-003

Runbang Tao (Department of Energy Sciences, Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama, Japan), Takahiro Tomita, Keiko Waki

Study on the Al-doped ZnO Nanorod Array Electrode for Dye-sensitized Solar Cells (DSSC)

Ionic Liquid

s02-P-004

Masami Aono (National Defense Academy, Kanagawa, Japan), Yukitaka Tomita, Yusuke Imai, Takahiro Takekiyo, Yukihiro Yoshimura, Hiroshi Abe

pH Effect in Room Temperature Ionic Liquid- H₂O mixture

s02-P-005

Takashi Ichii (Department of Materials Science and Engineering, Kyoto University, Kyoto, Japan), Motohiko Fujimura, Masahiro Negami, Kuniaki Murase, Hiroyuki Sugimura

High-resolution Imaging of Ionic Liquid/Solid Interfaces Using Frequency Modulation Atomic Force Microscopy

s02-P-006

Hidemi Inoue (Department of Applied Chemistry, Graduate School of Engineering, Doshisha University, Kyotanabe, Japan), Tomohiro Isogai, Takaaki Nakai, Morihiro Saito, Minoru Inaba, Akimasa Tasaka

Relationship among Ionic Conductivity, Viscosity and Self-diffusion Coefficient in Some Room Temperature Molten Fluorides

s02-P-007

Jan Langmaier (J. Heyrovsky Institute of Physical Chemistry of ASCR, Prague, Czech Republic), Zdenek Samec

Ion Selectivity of the Polarized Hydrophobic Ionic Liquid-Water Interfaces

s02-P-008

Akifumi Kurachi (Faculty of Education and Human Sciences, Yokohama National University, Yokohama, Japan), Masahiko Matsumiya, Katsuhiko Tsunashima, Shun Kodama

Electrodeposition of dysprosium metal in phosphonium cation-based ionic liquids

s02-P-009

Eunan Marley (School of Chemistry and Chemical Engineering, Queens University Belfast, Belfast, United Kingdom), Andrew Doherty

Substituent and medium effects on the electrocarboxylation of aromatic ketones in ionic liquid

s02-P-010

Hajime Matsunaga (Graduate School of Engineering Hokkaido University, Sapporo, Japan), Mikito Ueda

Development of Al-Cl₂ cell in EMIC-AlCl₃ ionic liquid

s02-P-011

Stijn Mertens (Department of Chemistry, KU Leuven, Heverlee, Belgium), Koen Binnemans, Steven De Feyter

Pinning Down the Zero Charge State : Metal Cluster Charging in Ionic Liquids

s02-P-012

Hiro Minamimoto (Osaka University, Suita, Japan), Tetsuya Tsuda, Akihito Imanishi, Shu Seki, Susumu Kuwabata

Fabrication of 3D Micro/Nano-Structures Using Room-temperature Ionic Liquid and Focused Ion Beam

s02-P-013

Shinya Nishino (Center for Research and Development of Higher Education, The University of Tokyo, Tokyo, Japan), Takeo Fujiwara, Hisatsugu Yamasaki, Satoru Yamamoto, Susumu Yamamoto, Takeo Hoshi

Quantum Molecular Dynamics Simulation of the Ionic Liquid PP13-TFSA Doped with LiTFSA

s02-P-014

Souichi Ohta (Department of Environmental Engineering for Symbiosis, Faculty of Engineering, Soka University, Tokyo, Japan), Akio Shimizu, Naohiro Hatano, Takahiro Takekiyo, Hiroshi Abe, Yukihiro Yoshimura

Concentration dependences of the pD of imidazolium-based room temperature ionic liquid–water mixtures

s02-P-015

Liis Siinor (Institute of Chemistry, University of Tartu, Tartu, Estonia), Carolin Siimenson, Karmen Lust, Enn Lust

Electrochemical characteristics of Bi(111) | 1-Ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl) imide at different temperatures

s02-P-016

Takahiro Takekiyo (Department of Applied Chemistry, National Defense Academy, Yokosuka, Japan), Naohiro Hatano, Kumiko Yamazaki, Hiroshi Abe, Yukihiro Yoshimura

Conductivity of [bmim][PF₆]-H₂O Mixed Solutions

s02-P-017

Ryosuke Taniki (Graduate School of Energy Science, Kyoto University, Kyoto, Japan), Kazuhiko Matsumoto, Rika Hagiwara

Physicochemical properties of new RTILs composed of spiro-based cations and fluorohydrogenate anions

s02-P-018

Yuichi Toshimitsu (Department of Applied Chemistry, Faculty of Science and Technology, Keio University, Kanagawa, Japan), Yasushi Katayama, Takashi Miura

Electrode Reaction of Ruthenium Bipyridine Complexes in Amide-type Ionic Liquids

s02-P-019

Mizuho Tsuchiya (Department of Chemistry and Biotechnology, Yokohama National University, Yokohama, Japan)

Glyme-lithium salt complexes for lithium secondary batteries

s02-P-020

Katsuhiko Tsunashima (Department of Materials Science, Wakayama National College of Technology, Wakayama, Japan), Shinpei Yamamoto, Yoshihito Kunugi, Shun Kodama

Physical and electrochemical characterization of room-temperature phosphonium ionic liquids based on cyano-containing anions

s02-P-021

Kumiko Yamazaki (Department of Applied Chemistry, National Defense Academy, Yokosuka, Japan), Naohiro Hatano, Hiroshi Abe, Akio Shimizu, Takahiro Takekiyo, Yukihiro Yoshimura

Possibility of a RTIL-type Protein Biosensor: pD Change of Protein in the RTIL-Water Mixed Solutions

s02-P-022

Kazuki Yoshii (Osaka University, Suita, Japan), Masakatsu Kawabata, Tetsuya Tsuda, Tsukasa Torimoro, Susumu Kuwabata

Platinum Nanoparticle-supported Carbon Nanotube Composite in Room-temperature Ionic Liquid

s02-P-023

Ping Yu (Beijing National Laboratory for Molecular Sciences, Key Laboratory of Living Biosystems, Institute of Chemistry, The Chinese Academy of Sciences, Beijing, China)

Electrochemical and Electroanalytical Applications of Ionic Liquids

Symposium 3: Electrochemical Micro & Nanosystem Technologies

Device Applications

s03-P-001

Shigeo Hori (Graduate School of Engineering, Gifu University, Gifu, Japan), Shingo Kawakata, Toshimasa Suzuki, Tsukasa Yoshida

Nanostructure control in electrodeposition of ZnO/eosinY hybrid thin films

s03-P-002

Tokuhiisa Kawawaki (Institute of Industrial Science, University of Tokyo, Meguro-ku, Tokyo, Japan), Yukina Takahashi, Tetsu Tatsuma

Enhancement of dye-sensitized photocurrents by gold nanoparticles coated with thin TiO₂ films

s03-P-003

Emiko Kazuma (Institute of Industrial Science, The University of Tokyo, Tokyo, Japan), Nobuyuki Sakai, Tetsu Tatsuma

Photoelectrochemical drawing of invisible images on TiO₂ loaded with Ag nanorods

s03-P-004

Yasuaki Kimikado (Environmental and Renewable Energy System Division, Gifu, Japan), Keigo Ichinose, Tsukasa Yoshida

Electroluminescent device employing electrodeposited porous crystalline ZnO

s03-P-005

Atsushi Kogo (Institute of Industrial Science, The University of Tokyo, Tokyo, Japan), Yukina Takahashi, Nobuyuki Sakai, Tetsu Tatsuma

Photocurrent Enhancement of Au₂₅-Modified TiO₂ Electrodes by Embedded Gold Nanoparticles

s03-P-006

Gabriel Loget (Institut des Sciences Moléculaires, Université Bordeaux 1, Pessac, France), Zahra Fattah, Dodzi Zighah, Laurent Bouffier, Alexander Kuhn

Propulsion of nano- and microobjects using bipolar electrochemistry

s03-P-007

Fumisato Ozawa (Tohoku University, Sendai, Japan), Kosuke Ino, Hitoshi Shiku, Tomokazu Matsue

Fabrication of cell biochip by negative DEP patterning

s03-P-008

Satoshi Tominaka (International Center for Materials Nanoarchitectonics, National Institute for Materials Science (NIMS), Tsukuba, Ibaraki, Japan), Kohei Uosaki

Au(111) microelectrode prepared by lithography, evaporation and annealing

s03-P-009

Jeong-jin Yang (Chungbuk National University, Cheongju, Korea), Soo-kyung Hong, Soo-jin Yun, Han-joo Kim

Electrochemical Characteristics of Coated Carbon on Metal Oxide for Capacitive Deionization

s03-P-010

Yuzuri Yasuda (Environmental and Renewable Energy System Division, Graduate School of Engineering, Gifu University, Gifu, Japan), Tohru Fujiyoshi, Asdim, Shinji Higashijima, Hidetoshi Miura, Masaki Matsui, Tsukasa Yoshida

Novel double anchor indoline dyes with high efficiency and stability for ZnO solar cells

Electrochemical Surface Engineering

s03-P-011

Megan Coates (Department of Chemistry, Rhodes University, Grahamstown, South Africa), Edith Antunes, Hichem Elamari, Christian Girard, Sophie Griveau, Fethi Bedioui, Tebello Nyokong

Surface Functionalisation of Electrode Surfaces Using Electrochemical Grafting, Electropolymerisation and Azide-Alkyne Click Chemistry

s03-P-012

Vesna Cvetković (Chemistry Department, Faculty of Sciences and Mathematics, University of Pristina, K. Mitrovica, Serbia), Niko Jovičević, Jovan Jovičević

Mg-Au Surface Alloy Formation by Magnesium Underpotential Deposition on Au from Nitrate Melts

s03-P-013

Vesna Cvetković (Chemistry Department, Faculty of Sciences and Mathematics, University of Pristina, K. Mitrovica, Serbia), Niko Jovičević, Jovan Jovičević

Nanoscale Magnesium Oxides Deposited onto Vitreous Carbon from Nitrate Melts

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Keigo Ichinose (Graduate School of Engineering, Center of Innovative Photovoltaic Systems (CIPS), Environmental and Renewable Energy System (ERES) Division, Gifu, Japan), Tsukasa Yoshida

Factors determining heteroepitaxial electrodeposition of ZnO on GaN bulk single crystals

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Takeshi Ito (Kanagawa Industrial Technology Center, Yokohama, Japan), Masayuki Kunimatsu, Masayasu Soga, Yasuo Hirabayashi, Yoshiaki Agawa, Koji Suzuki

Characteristics of Pt Nanoparticles Dispersed GC Electrode Prepared by Arc Plasma Deposition

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Shunsuke Kotaka (Department of Applied Chemistry, Faculty of Engineering, Kogakuin University, Hachioji, Tokyo, Japan), Hidetaka Asoh, Sachiko Ono

Fabrication of GaAs Pore Arrays with High Aspect Ratio by Anodic Etching through Photoresist Mask

s03-P-017

Cheng Ping Lin (Department of Applied Chemistry, Waseda University, Tokyo, Japan), Mikiko Saito, Takayuki Homma

Fabrication and initial deposition analysis of electroless Ni alloy nanoimprinting mold replicated from SAM modified nanopatterns

s03-P-018

Kenji Sakamaki (Department of Chemistry, Fukushima National College of Technology, Fukushima, Japan), Shun Unayama, Kanako Oyake, Manami Usuba, Minako Ito

Visible-light Responsive Fe₂O₃ Semiconductor Utilizing Non-linear Current Oscillation Reaction

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Akinori Shoji (Department of Materials Science and Technology, Niigata University, Niigata, Japan), Tatsuya Ueno, Hideyuki Kabaki, Masayuki Yagi

Visible-light assisted water oxidation by a nanoporous antimony sulfide / titanium oxide electrode

s03-P-020

Ulrich Stimming (Institute of Advanced Study (IAS), Technische Universität München, Garching, Germany), Tine Brülle, Wenbo Ju, Philipp Niedermayr

Investigation of size-dependent catalytic activity of electrochemically deposited gold nanoparticles supported on HOPG and diamond surfaces

s03-P-021

Tatsuya Ueno (Department of Materials Science and Technology, Faculty of Engineering & Center for Transdisciplinary Research, Niigata University, Niigata, Japan), Akinori Shoji, Debraj Chandra, Masayuki Yagi

Photoelectrochemical properties of antimony selenide deposited on nanoporous titanium dioxide in an aqueous solution

s03-P-022

Tomoko Urata (Institute of Advanced Energy, Kyoto University, Uji, Japan), Naoto Takeda, Kazuhiro Fukami, Tetsuo Sakka, Yukio H. Ogata

Effect of solvent polarity on stable macropore growth in p-type silicon

s03-P-023

Kazumasa Yaori (Department of Materials Science and Chemistry, Graduate School of Engineering, University of Hyogo, Himeji, Japan), Naoki Fukumuro, Sinji Yae, Hitoshi Matsuda

EQCM Study on Electrodeposition of Pt from Chloro Complex Solution

Energy/Data Storage Devices

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Ali Ehsani (Chemistry, Tehran, Iran), M.G. Mahjani, M Jafarian

Poly ortho aminophenol/TiO₂ nanocomposite: Electrosynthesis and electrochemical application

s03-P-025

Youhei Konishi (Department of Applied Chemistry, Waseda University, Tokyo, Japan), Atsushi Takami, Takanari Ouchi, Takayuki Homma

Fabrication of electrodeposited Co-Pt nano dot arrays and analysis of its initial deposition process

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M. F. Mousavi (Chem. Dept., Tarbiat Modares University, Tehran, Iran)

Preparation of different morphologies of nano structured lead dioxide and their application as cathode material in lead acid battery

s03-P-027

M. F. Mousavi (Chem. Dept., Tarbiat Modares University, Tehran, Iran)

Study of Supercapacitive Behavior of Hybrid Graphite Oxide/Self-doped Polyaniline/MnO₂ Nanocomposite

Fabrication Methods

s03-P-028

Maniya Aghasibeig (Department of Mechanical & Industrial Engineering, Concordia University, Montreal, Canada), Anis Allagui, Rolf Wuthrich

Synthesis of Nickel Oxide Nano-structures by Glow Discharge Electrolysis

s03-P-029

Raissa El-Haddad (Department of Mechanical & Industrial Engineering, Concordia University, Montreal, Canada), Jana Abou Ziki, Rolf Wuthrich

Gas Film Life-time During Glow Discharge Electrolysis

s03-P-030

Takenori Goda (Material Research Laboratory, Toppan Technical Research Institute, Toppan Printing Co., Ltd, Sugito-Machi, Japan), Yuka Akimoto, Tomokazu Iyoda

Ultra-high density In/Au nanorod array fabricated by electroplating through block copolymer template film

s03-P-031

Ignacio Gonzalez (Universidad Autonoma Metropolitana Unidad Iztapalapa, Mexico City, Mexico), Prospero Acevedo Peña

EIS Characterization of porous films formed during the potentiostatic anodization of Ti in Ethyleneglycol/0.2 M NH₄F

s03-P-032

Tomoyuki Hamada (Department of Innovative and Engineered Materials, Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama, Japan), Yoshitaka Kitamoto

Fabrication of gold nanoshells for biomedical applications

s03-P-033

Takeshi Irisako (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe

Fabrication of Micro Channel Flow Electrochemical Cell by Screen Printing

s03-P-034

Jin Won Kim (School of Environmental Science and Engineering, Gwangju, Korea)

Potential transition metal oxalate and oxides nanostructures fabricated by chemical anodization for electrochemical characterization

s03-P-035

Ryo Koda (Institute of Advanced Energy, Kyoto University, Uji, Japan), Tomoko Urata, Kazuhiro Fukami, Tetsuo Sakka, Yukio H. Ogata

Electrodeposition of platinum into chemically-modified microporous silicon substrates

s03-P-036

Hiroshi Matsubara (Nagaoka University of Technology, Nagaoka, Japan), Daisuke Hashimoto, Hideyuki Hayashizaki, Hiroshi Nishiyama, Kazunori Hodouchi

Copper-nanodiamond Composite Film Fabricated by Plating Method

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Tomio Nagayama (Kyoto Municipal Institute of Industrial Technology and Culture, Kyoto, Japan), Takayo Yamamoto, Toshihiro Nakamura, Yasushi Mizutani, Shin Noguchi, Yuuta Natori, Tadashi Kurashina

Fabrication of the fine metal mask having the low thermal expansion coefficient by using the Fe-Ni alloy electroforming process

s03-P-038

Hyunwoong Seo (Graduate School of Information Science and Electrical Engineering, Kyushu University, Fukuoka, Japan), Min-Kyu Son, Hee-Je Kim, Masaharu Shiratani

Analysis and application of an electrical dye-adsorption process to dye-sensitized solar modules

s03-P-039

Mitsuhiro Shamoto (Department of Materials Chemistry, Yamaguchi University, Ube, Japan), Kazuaki Tomono
Electrochemical Fabrication of Thin Films of Layered Manganese Oxide with Extra Large Interlayer Space

s03-P-040

Peng Xiao (College of Physics Chongqing University, Chongqing, China), Yunhuai Zhang, He Huichao, Yu Shujuan

Filling metal nanoparticles into titania nanotubes array by pulse electrodeposition method

s03-P-041

Takayo Yamamoto (Kyoto Municipal Institute of Industrial Technology and Culture, Kyoto, Japan), Tomio Nagayama, Toshihiro Nakamura, Yasushi Mizutani

Thermal expansion properties of Invar alloy electrodeposits

Fuel cells

s03-P-042

Chunyi Chen (Department of Chemical and Materials Engineering, Chang Gung University, TaoYuan, Taiwan), Dylan Lin, Andrew S. Lin

The fabrication of gold nano-clusters and gold-platinum alloy nano-clusters on carbon substrates by using pulse-electrodeposition methods

Micro Reactors

s03-P-043

Hikaru Tateishi (Graduate School of Science and Technology, Kumamoto University, Kumamoto, Japan), Yusuke Watanabe, Kazuto Hatakeyama, Satoru Amano, Takaaki Taniguchi, Shinya Hayami, Shintaro Ida, Michio Koinuma

Photoreaction of Graphene Oxide Nanosheet in Water

Sensor Devices

s03-P-044

Md. Rajibul Akanda (Department of Chemistry, Pusan National University, Busan, Korea), Kyungmin Jo, Haesik Yang

Phosphatase- and Redox Cycling-based Immunosensor for Ultrasensitive Detection of Troponin I in Serum

s03-P-045

Ahmet Celiktas (School of Chemistry, University of Southampton, Southampton, United Kingdom)

Application of Reproducible SERS Immunoassay on Nanostructured Gold

s03-P-046

Takuya Hiraide (Department of Innovative Engineered Materials, Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama, Japan), Yositaka Kitamoto

Fabrication of a bio-sensing system with tunneling magnetoresistive sensors

s03-P-047

Ino Kosuke (Graduate School of Environmental Studies, Tohoku University, Sendai, Japan), Wataru Saito, Masahiro Koide, Hitoshi Shiku, Tomokazu Matsue

Addressable Electrode Array Device Incorporated with IDA Electrodes for Multi-point Detection

s03-P-048

Chien-Hung Lien (Department of Chemical Engineering, National Tsing Hua University, Hsin-Chu, Taiwan), David Shan-Hill Wang, Yi-Da Tsai

Microstructure control of bismuth deposits for electrochemical sensing of Sn²⁺

s03-P-049

Fred Lisdat (University of Applied Sciences, Wildau Biosystems Technology, Wildau, Germany), Sven Christian Feifel

Interprotein electron transfer in silica nanoparticle/cytochrome c multilayer architectures

s03-P-050

Takaaki Masaki (Tokyo Institute of Technology, Yokohama, Japan), Tomoaki Ueda, Masanori Abe, Yoshitaka Kitamoto

Magnetic sensor for cancer diagnosis by detecting superparamagnetic nanoparticle-markers

s03-P-051

M. F. Mousavi (Chem. Dept., Tarbiat Modares University, Tehran, Iran)

Electrochemical DNA biosensor based on carbon nanotubes GCE for studies of interaction between three different sequences of DNA and spermidine

s03-P-052

M. F. Mousavi (Chem. Dept., Tarbiat Modares University, Tehran, Iran)

Preparation of a DNA-polypyrrole nanofiber electrode and study of its interaction with two different salicylate derivatives

s03-P-053

Takuya Nakanishi (Department of Applied Chemistry, Waseda University, Tokyo, Japan), Md. Zaved Hossain Khan, Shigeki Kuroiwa, Yoichi Hoshi, Tetsuya Osaka

Effect of Surface Modification of Indium Tin Oxide Electrode on Its Potential Response to Tryptophan

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László Péter (Research Institute for Solid State Physics and Optics, Hungarian Academy of Sciences, Budapest, Hungary), Bence G. Tóth, Imre Bakonyi

Electrodeposition of Ni-Co/Cu Multilayers and Their Magnetoresistance Study

s03-P-055

Mustafa Sen (Graduate School of Environmental Studies, Sendai, Japan), Kosuke Ino, Tomokazu Matsue, Hitoshi Shiku

Electrochemical Mammalian Cell Based Gene-expression Assay Combining Secreted Alkaline Phosphatase (SEAP) Reporter System with Microengraving Method

s03-P-056

Yanbai Shen (Graduate School of Environmental Studies, Nagoya University, Nagoya, Japan), Takashi Takeuchi, Takashi Hibino

Design of a highly sensitive and responsive electrode for diesel particulate matter monitoring

s03-P-057

Anne Walter (Department of Chemistry, Division of Analytical and Technical Chemistry, University of Rostock, Rostock, Germany), Gerd-Uwe Flechsig, Fanny Langschwager

DNA at nanostructured heatable gold wire electrodes

s03-P-058

Sanghwa Yoon (Department of Materials Engineering, Hanyang University, Ansan, Kyeonggi-do, Korea)

Oxygen re-adsorption of single ZnO nanobridge UV detector by Joule self heating under UV illumination

s03-P-059

Hamid Reza Zare (Department of Chemistry, Yazd University, Yazd, Iran), Fatemeh Chatraei

Application of an Acetaminophen Ruthenium Oxide Nanoparticles Sensor for the Simultaneous Determination of Ascorbic Acid, Dopamine and N-Acetyl-L-Cysteine

s03-P-060

Hamid Reza Zare (Department of Chemistry, Yazd University, Yazd, Iran), Zahra Ghanbari, Navid Nasirizadeh

Electrocatalytic Oxidation of Ascorbic Acid and Simultaneous Voltammetric Determination of Ascorbic Acid, Acetaminophen and Tryptophan at Ruthenium Oxide Nano-scale Islands Modified Electrode Surface

Structure/Function Relationships

s03-P-061

Fred Lisdat (Biosystems Technology, Technical University of Applied Sciences Wildau, Wildau, Germany), Artur Fandrich

Switchable electrode surface: Temperature study on polymer modified gold electrodes

s03-P-062

Nobufumi Matsuo (Department of Nano-science and Nano-engineering, Waseda University, Tokyo, Japan),
Yeol Kyo Choi, Chiaki Kobayashi, Chunzhi Cui, Dong June Ahn, Takayuki Homma

I-V Characterization of Molecular Architecture Change in Polydiacetylene Supramolecules

s03-P-063

Makoto Miura (Polytechnic College Akita, Odate, Japan), Yoshinobu Oshikiri, Ryoichi Aogaki

Measurement of Ionic Vacancy in the Reduction of Copper Chloride by Gravity Electrode

s03-P-064

Yoshinobu Oshikiri (Yamagata College of Industry & Technology, Yamagata, Japan), Makoto Miura, Ryoichi Aogaki

Possibility of the Measurement of Vacancy Size in a Redox Reaction by Gravity Electrode

s03-P-065

Atsushi Sugiyama (Faculty of Science and Engineering, Waseda University, Tokyo, Japan), Ryoichi Morimoto,
Tetsuya Osaka, Iwao Mogi, Yusuke Yamauchi, Ryoichi Aogaki

Lifetime Measurement of Ionic Vacancy in Ferricyanide-Ferrocyanide Redox Reaction by Cyclotron MHD Electrode

Late Registrations

s03-P-066

Eun Ji Nam (Department of Chemistry, Kyungpook National University, Daegu Korea), Eun Ji Kim,
Hye Jin Lee

Highly-sensitive Electrochemical Analysis of Proteins using Aptamer Coated Gold Nanoparticles and Enzyme Reactions

Symposium 4: Bioelectrochemistry for Environmental Applications and Health Monitoring

Bioelectrochemistry

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Yoshie Fujimori (R&D Dept., NBC Meshtec Inc., Hino, Japan), Tetsuya Sato, Tomokazu Nagao, Taishi Hayata, Eri Mazuyama, Tsuruo Nakayama, Mikio Nakayama

A Novel anti-viral property of copper(I) iodide particles with inactivation activity against influenza virus

s04-P-002

Yuichiro Ido (Department of Bioengineering and Robotics, Tohoku University, Sendai, Japan), Daisuke Takahashi, Takeo Miyake, Kuniaki Nagamine, Matsuhiko Nishizawa

Conducting Polymer Microelectrodes Printed on Hydrogel for Electrical Stimulation of Contractile Muscle Tissues

s04-P-003

Mariwo Ikeuchi (Department of Environmental Biology and Chemistry, Graduate School of Science and Engineering for Research, University of Toyama, Toyama, Japan)

One-step Binding Assay by Magnetic Microbead-based Sequestration Electrochemistry for Cholera Toxin

s04-P-004

Ayako Iwaoka (Graduate School of Science and Technology, Kumamoto University, Kumamoto, Japan), Shingo Sakamoto, Masato Tominaga

Electrochemical Oxidation Reaction of NADH at Single-walled Carbon Nanotubes

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Yoshiharu Matsumae (Graduate School of Environmental Studies, Tohoku University, Sendai, Japan), Kosuke Ino, Hitoshi Shiku, Tomokazu Matsue

Single-cell imaging using menadione and ferricyanide

s04-P-006

Modupe Ogunlesi (Chemistry Department, University of Lagos, Lagos, Nigeria), Wesley Okiei, Sulaiman Akanmu, Modupe Ojetunde, Isaac Njoku

Cyclic Voltammetric Determination of Values of Peak Current of Mixtures of Haemoglobins S and F and Possible Applications in Sick Cell Therapy

s04-P-007

Nozomi Shionoiri (Department of Biotechnology, Tokyo University of Agriculture and Technology, Koganei, Japan), Tetsuya Sato, Yoshie Fujimori, Tsuruo Nakayama, Yoshihiko Sunaga, Tsuyoshi Tanaka, Tadashi Matsunaga

Inactivation of feline calicivirus using copper compound nanoparticles

s04-P-008

Ludek Strasak (Center for Dental and Craniofacial Research, Faculty of Medicine, Masaryk University, Brno, Czech Republic)

Adsorption of different bacterial strains on metal surfaces

s04-P-009

Mami Takahashi (Department of Biotechnology, Tokyo University of Agriculture and Technology, Koganei, Japan), Atsushi Arakaki, Tsuyoshi Tanaka, Tadashi Matsunaga

Development of influenza virus gene detection technique based on localized heating of magnetic nanoparticles

s04-P-010

Mai Takeda (Department of Bioengineering and Robotics, Tohoku University, Sendai, Japan), Kuniaki Nagamine, Takeo Miyake, Makoto Kanzaki, Matsuhiko Nishizawa

Microparticle-patterned hydrogel sheet for a contractile skeletal muscle cell based bioassay

s04-P-011

Hirosuke Tatsumi (Shinshu Univ., Matsumoto, Japan), Tatsuya Ueda

Ion Transfer Voltammetry of Tryptamine, Serotonin, and Tryptophan at the Nitrobenzene/Water Interface

s04-P-012

Hyewon You (Department of Chemistry Education, Seoul National University, Seoul, Korea), Ji-Hoon Yang, Hun-Gi Hong

Simultaneous Determination of Caffeine Using a Nafion-Graphene Modified Electrode by Square-wave Stripping Voltammetry

s04-P-013

Minghua Zhou (College of Environmental Science and Engineering, Nankai University, Tianjin, China), Huanhuan He, Tao Jin, Hongyu Wang

Novel Microbial Carbon Capture Cells for Simultaneous Wastewater Purification and Bioenergy Generation

s04-P-014

Yuanshu Zhou (Tohoku University, Sendai, Japan), Kosuke Ino, Hitoshi Shiku, Tomokazu Matsue

Respiration activity assay on multicellular spheroid array device

Biosensors

s04-P-015

Kaori Asano (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe

Electrochemical Response of Bienzyme-containing Microcapsule Immobilized Electrode

s04-P-016

Daisuke Baba (Applied Chemistry, Tokyo, Japan), Yasuhiro Seiko, Hong Zhang, Atsushi Arakaki, Takuya Nakanishi, Tadashi Matsunaga, Tetsuya Osaka

Evaluation on death of cancer cells through uptake into cells and heating of magnetite nanoparticles synthesized with spermine

s04-P-017

Fethi Bedioui (CNRS 8151, Chimie ParisTech, INSERM 1022, Université Paris Descartes, Paris, France), Loan To Thi Kim, Aurelie Girard, Sophie Griveau, Laurent Griscom, Florence Razan

Micro-ring Disc Ultramicroelectrodes Array for Direct Detection of No-release from S-Nitrosoglutathione

s04-P-018

Ming Soon Cheng (Division of Chemistry and Biological Chemistry, School of Physical and Mathematical Sciences, Nanyang Technological University, Nanyang Link, Singapore), Jia Shin Ho, Binh T. T. Nguyen, Chee-Seng Toh

A Membrane-based Electrochemical Nanobiosensor for Microbes Detection

s04-P-019

Mary Cromhout (Department of Biochemistry, Microbiology and Biotechnology Rhodes University, Grahamstown, South Africa)

Probing the Biocompatibility of Metallophthalocyanines Using Quartz Crystal Microbalance with Dissipation

s04-P-020

Gerd-Uwe Flechsig (Dept. of Chemistry, University of Rostock, Rostock, Germany), Martin Jacobsen, Maren Mix, Heiko Duwensee

Reactivity of osmium tetroxide labels in electrochemical DNA and RNA detection

s04-P-021

Yasushi Hasebe (Department of Life Science and Green Chemistry, Saitama Institute of Technology, Fukaya, Japan), Yue Wang

Highly sensitive bioelectrocatalytic flow-detector for hydrogen peroxide based on a direct electrochemistry of chemically modified horseradish peroxidase on carbon-felt

s04-P-022

Hironobu Hatanaka (Graduate School of Material Science, University of Hyogo, Hyogo, Japan), Tomoyuki Yasukawa, Fumio Mizutani

Dielectrophoretic cell manipulation for rapid detection of surface antigens

s04-P-023

Sho Hideshima (Research Institute for Science and Engineering, Waseda University, Shinjuku-ku, Tokyo, Japan), Takahiro Nakamura, Ryosuke Sato, Shigeki Kuroiwa, Tetsuya Osaka

Detection of Proteins in Physiological Condition Using Field Effect Transistor Biosensor

s04-P-024

Masahito Hosokawa (Department of Biotechnology, Tokyo University of Agriculture & Technology, Koganei, Japan), Taishi Hayata, Takayuki Yoshikawa, Tomoko Yoshino, Tadashi Matsunaga

Size- and deformability-based isolation of circulating tumor cells using a microcavity array

s04-P-025

Md. Zaved Hossain Khan (Department of Applied Chemistry, School of Science and Engineering, Waseda University, Tokyo, Japan), Takuya Nakanishi

Monolayer-modified ITO Electrode for the Sensitive Detection of Serotonin, Melatonin, and Their Precursors/Metabolites

s04-P-026

Jingjian Li (College of Chemistry and Molecular Engineering, Peking University, Beijing, China), Rui-Guo Cao, Ge Fang, Bin Zhu, Dongsheng Xu, Dongsheng Xu

Detection of Trace Hg^{2+} by Graphene Oxide Modified Glass Carbon Electrodes

s04-P-027

Fred Lisdar (Biosystems Technology, University of Applied Sciences Wildau, Wildau, Germany), Johannes Tanne, Wolfgang Parak

Light-controlled enzyme sensor based on CdSe/ZnS quantum dots

s04-P-028

Yusuke Miyamoto (Department of Biotechnology, Graduate School of Engineering, Tokyo University of Agriculture & Technology, Tokyo, Japan), Eri Nibe, Sengsu Kim, Stefano Ferri, Wakako Tsugawa, Koji Sode

Novel Enzyme Sensor for Glycated Protein Biosensing Employing Fructosamine 6-Kinase

s04-P-029

Kuniaki Nagamine (Graduate School of Engineering, Tohoku University, Sendai, Japan), Makoto Kanzaki, Matsuhiko Nishizawa

Combinable cell-micropatterned hydrogel sheet for bioassay

s04-P-030

Chi-Hua Nieh (Division of Applied Life Sciences, Graduate School of Agriculture, Kyoto University, Kyoto, Japan), Seiya Tsujimura, Osamu Shirai, Kenji Kano

Creatinine Biosensor Based on Reductive H_2O_2 Detection Using Pentacyanoferrate-bound Polymer

s04-P-031

Yoshihiko Nonaka (Department of Biotechnology & Life Science, Tokyo University of Agriculture and Technology, Koganei, Japan), Atsuro Tatsumi, Takahiro Hukaya, Koji Sode, Kazunori Ikebukuro

In silico maturation of VEGF-binding aptamer for electrochemical VEGF-detection system with aptamer sandwich

s04-P-032

Tatsuya Saeki (Department of Biotechnology, Tokyo University of Agriculture and Technology, Koganei, Japan)

Development of cell counting system based on CMOS sensor integrated with microcavity array

s04-P-033

Abdollah Salimi (University of Kurdistan, Sanandaj, Iran)

Electrochemical Detection of Tumor Necrosis Factor (TNF) Based on Immobilization of ssDNA on the Surface of Nickel Oxide Nanoparticles Modified Glassy Carbon Electrode

s04-P-034

Rostam Shaabani (Chemistry Department, Firoozabad Branch, Islamic Azad University, Firoozabad, Iran), S. Ahmad Mozaafari

Selective Accumulation and Determination of the Dopamine on the Surface of Gold Electrode Modified by SAMs Method with Cysteamine-SWCN

s04-P-035

Saori Tanaka (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe

Wavelet Transformation for Multicomponent Analysis Based on Electrochemical Biosensor

s04-P-036

Huihui Wang (Faculty of Marine Technology, Tokyo University of Marine Science and Technology, Tokyo, Japan), Takuya Yokoyama, Hitoshi Ohnuki, Hideaki Endo, Mitsuru Izumi

Label-free Impedance Biosensor of Avidin-Biotin Interaction Using Interdigitated Microelectrodes

s04-P-037

Ching-Chou Wu (Institute of Bio-Industrial Mechatronics Engineering, National Chung Hsing University, Taichung, Taiwan)

A Microfluidic Chip Integrated with the Array of Dissolved-Oxygen Ultramicroelectrodes for Evaluating Respiration Rate of Patterned Cells

s04-P-038

Yasuo Yoshimi (Department of Applied Chemistry, Shibaura Institute of Technology, Tokyo, Japan), Kuniaki Sato, Masanori Ohshima

Development of a Heparin Sensor Using a Gate Effect of Molecularly Imprinted Polymer

s04-P-039

Tian Zhang (Department of Science of Environment and Mathematical Modeling, Doshisha University, Kyotanabe, Japan), Naoki Osada, Kazuyuki Hashimoto, Masatsugu Morimitsu

A Novel Method to Detect H₂O₂ with IrO₂-based Catalysts for Biosensing Applications

Symposium 5: Bioelectrochemistry for Energy Transformation

Bioelectrocatalysis

s05-P-001

Takashi Kuwahara (Department of Bioengineering, Faculty of Engineering, Nagaoka University of Technology, Nagaoka, Japan), Mizuki Kondo, Masato Shimomura

Effects of surface modification of electrodes on electrochemical oxidation of ascorbic acid

s05-P-002

Fred Lisdat (Biosystems Technology, Wildau University of Applied Sciences, Wildau, Germany), David Sarauli, Chenggang Xu, Birgit Dietzel, Konstanze Stiba, Silke Leimkühler, Burkhard Schulz

Gold Electrodes Modified with Substituted Polyanilines: Interactions with Biomolecular Systems

s05-P-003

Shoichi Matsuda (Department of Applied Chemistry, School of Engineering, The University of Tokyo, Tokyo, Japan), Huan Liu, Shuji Nakanishi, Kazuhito Hashimoto

Electrode potential dependence of metabolic activity in anode-respiring bacteria

s05-P-004

Christoph Wettstein (Technical University of Applied Sciences Wildau, Wildau, Germany), Helmuth Moehwald, Fred Lisdat

Coupling of pyrroloquinoline quinone-dependent glucose dehydrogenase (PQQ-GDH) with (CytC/DNA)-multilayer electrodes

Biophotoelectrochemistry

s05-P-005

Naoya Sawamura (Waseda University, Shinjuku, Japan), Takeyoshi Wada, Kiyotaka Hara, Toru Asahi

The New Technique of ATP Synthesis in Cultured Mammalian Cells: Mitochondria-specific Expression of Archaeobacterial Rhodopsin

Enzymatic Biofuel Cells

s05-P-006

Yasuyuki Hamano (Applied Life Sciences, Graduate School of Agriculture, Kyoto University, Kyoto, Japan), Seiya Tsujimura, Osamu Shirai, Kenji Kano

Improved performance of gas diffusion bio-cathode

s05-P-007

Keigo Haneda (Department of Bioengineering and Robotics, Tohoku University, Sendai, Japan), Syuhei Yoshino, Takeo Miyake, Matsuhiko Nishizawa

Direct power generation from biochemical energy sources in living organisms

s05-P-008

Hiroshi Kobayashi (Graduated School of Engineering, Tohoku University, Sendai, Japan), Ryo Nagumo, Ryuji Miura, Ai Suzuki, Hideyuki Tsuboi, Nozomu Hatakeyama, Hiromitsu Takaba, Akira Miyamoto

A Computational Chemistry Study on the Performance of Mediator for Biofuel Cell

s05-P-009

Ewa Nazaruk (Chemistry Department, University of Warsaw, Warsaw, Poland), Maciej Karaskiewicz, Jan Biernat, Renata Bilewicz

Enzymatic biofuel cell based on nanostructured carbon electrodes

s05-P-010

Takanori Tamaki (Chemical Resources Laboratory, Tokyo Institute of Technology, Yokohama, Japan), Tomoharu Sugiyama, Haruki Fujimoto, Hidenori Ohashi, Takeo Yamaguchi

Toward the Retention of Enzyme Activity in High-surface-area Electrode Made of Redox Polymer Grafted Carbon Black for Biofuel Cells

s05-P-011

Seiya Tsujimura (Graduate School of Agriculture, Kyoto University, Kyoto, Japan), Masafumi Asahi, Osamu Shirai, Kenji Kano

Oxygen biocathode using protein-engineered multicopper oxidases

s05-P-012

Hiroki Yanai (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe

Electrochemical Impedance Study of Glucose Oxidase Modified Carbon Cryogel Electrode

s05-P-013

Syuhei Yoshino (Department of Bioengineering and Robotics, Tohoku University, Sendai, Japan), Keigo Haneda, Takeo Miyake, Takeo Yamada, Kenji Hata, Matsuhiko Nishizawa

High Power Biofuel Cells with Self-regulating Enzyme-nanotube Ensemble Films

Microbial Biofuel Cells

s05-P-014

Deepak Pant (Separation & Conversion Technologies, VITO - Flemish Institute for Technological Research, Mol, Belgium), Yolanda Alvarez Gallego, Gilbert Van Bogaert, Ludo Diels, Karolien Vanbroekhoven

Development and Characterization of Low-cost, Gas Porous Electrodes Based on Different Carbon Compositions and Binder Types for Use in Bioelectrochemical Systems

Symposium 6: New Generation Batteries and Electrochemical Capacitors

Battery

s06-P-001

Mysore Venkatachalapathy Ananth (Lithium Battery Group, Electrochemical Power Sources Division, Central Electrochemical Research Institute, Karaikudi, India), P. Kavitha, M. Raju, T. Premkumar, P. Periasami
Investigations on SnSb based intermetallics as anode material for lithium ion batteries

s06-P-002

S. Basu (Dept. of Chemical Eng. I.I.T. Delhi, New Delhi, India)
Modelling of Vanadium Oxide Redox Flow Battery

s06-P-003

Hamdi Ben Yahia (Research Institute for Ubiquitous Energy Devices, National Institute of Advanced Industrial Science and Technology (AIST), Ikeda, Japan)
Crystal Structure and Electrochemical Properties of the New Fluorophosphate $\text{LiNaCo[PO}_4\text{]F}$

s06-P-004

Katarzyna Ciosek (Department of Materials Chemistry, Uppsala University, Uppsala, Sweden), Sara Malmgren, Maria Hahlin, Håkan Rensmo, Kristina Edström
Film-forming additives and a unique PES depth profiling of Li-ion battery interfaces

s06-P-005

Yair Ein-Eli (Materials Engineering, Haifa, Israel), Gil Cohn
A Remarkable Impact of Water on Silicon - Air Battery

s06-P-006

Alejandro A. Franco (CEA (Atomic and Alternative Energies Commission of France) - LITEN/DEHT/ Laboratory of Components for Fuel Cells and Electrolyzers, and of Modeling (LCPEM), Grenoble, France), Valentina Vetere, Luiz Fernando Oliveira Lopes, Benjamin Deguilhem, Slimane Laref, Seng Kian Cheah, Sylvain Passot, Romain Coulon, Pascal Schott, Daiane Damasceno Borges, Rodrigo Ferreira de Morais
New Insights on Li-ion Batteries Operation from a PEM Fuel Cells Multiscale Modeling Experience

s06-P-007

Shintaro Fujiimoto (Department of Materials Science and Chemical Engineering, Shizuoka University, Hamamatsu, Japan), Yuta Takeshita, Sudoh Masao
Application to Metal-Air Battery and the Characteristic Evaluation of Air Diffusion Cathode for Alkali Electrolysis

s06-P-008

Yoshiyuki Igarashi (Tokyo University of Agriculture and Technology, Koganei, Japan), Hideto Watanabe, Junpei Yasuhara, Manami Hiraga, Jun-ichi Miyamoto, Katsuhiko Naoi
Sub-nano Tunnel-structured Manganese Oxide Exhibiting Extremely Large Reversible Lithium Storage (2200 mAh g^{-1})

s06-P-009

Kazunori Kasahara (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe
Electrochemical Impedance Spectroscopy Analysis on Zinc Air Battery

s06-P-010

Won Keun Kim (Dept. of Materials Science and Engineering, KAIST, Daejeon, Korea), Wonhee Ryu, Dongwook Han, Sungjin Lim
Effects of Cl^- doping on the Electrochemical Performances of $\text{LiMn}_{1.5}\text{Ni}_{0.5}\text{O}_4$ Cathode Material for Li-ion Batteries

s06-P-011

Dino Klotz (Karlsruhe Institute of Technology (KIT)/Institut für Werkstoffe der Elektrotechnik (IWE), Karlsruhe, Germany), Michael Schoenleber, Jan Philipp Schmidt, Ellen Ivers-Tiffée
Complete Characterization of Lithium-ion Cells by Impedance Spectroscopy Combined with Time Domain Measurements

s06-P-012

Guanrao Liu (School of Materials Science and Engineering, Beijing University of Aeronautics and Astronautics, Beijing, China), Ruoxu Lin

TiO₂ nanorods arrays directly grown on copper substrates for lithium secondary batteries

s06-P-013

Kuniaki Murase (Department of Materials Science and Engineering, Kyoto University, Kyoto, Japan), Izuru Sasaki, Takashi Ichii, Yoshiharu Uchimoto, Hiroyuki Sugimura

Enhancement of the Anodic Dissolution of Magnesium in Hydrophobic Ionic Liquids in the Presence of Trace Water

s06-P-014

Tetsuya Okado (Kyoto University, Kyoto, Japan), Takashi Kamijo, Kazuya Kai, Yuki Orikasa, Tomokazu Fukutsuka, Hiroshi Kageyama, Takeshi Abe, Yoshiharu Uchimoto

Reaction Mechanism of MnO₂ Nanosheets Cathode Material for Mg Secondary Battery by X-ray Absorption Spectroscopic Studies

s06-P-015

Noshin Omar (Vrije Universiteit Brussel, Brussel, Belgium), Mohamed Daowd, Monzer Al Sakka, Jean-Marc Timmermans, Grietus Mulder, Peter Van den Bossche, Thierry Coosemans, Joeri Van Mierlo

Evaluation of Fast Charging on Battery Life Cycle Performances: Lithium Iron Phosphate

s06-P-016

Shahid Rasul (Research Center for Advanced Science and Technology (RCAST), The University of Tokyo, Tokyo, Japan), Shinya Suzuki, Shu Yamaguchi, Masaru Miyayama

Layered and tunnel structured MnO₂/Acetylene black composite cathodes for Mg-ion rechargeable batteries

s06-P-017

Ken Sakaushi (IFW Dresden, Institute for Complex Materials, Dresden, Germany), Jürgen Thomas, Helmut Ehrenberg, Stefan Kaskel, Jürgen Eckert

Aqueous Solution Routes as an Eco-efficient Synthesis Process for Electrode Materials of Li-ion Batteries

s06-P-018

Taichi Satoh (Department of Chemistry and Biotechnology, Yokohama National University, Yokohama, Japan), Naoki Tachikawa, Kaoru Dokko, Masayoshi Watanabe

Rate-determining Step of Mg Deposition/Dissolution in Phenylmagnesium Bromide/ Tetrahydrofuran Solution

s06-P-019

Hiroshi Senoh (National Institute of Advanced Industrial Science and Technology (AIST), Ikeda, Japan), Masaru Yao, Zyun Siroma, Yasuda Kazuaki, Hikaru Sano, Hikari Sakaebe

Benzoquinone and Its Derivatives as Positive Electrode Materials

s06-P-020

Satoshi Shibutani (Office of Society-Academia Collaboration for Innovation, Kyoto University, Kyoto, Japan), Takayuki Doi, Takeshi Abe, Zempachi Ogumi

Effects of surface modification on degradation suppression of lithium cobalt oxide thin-film electrodes

s06-P-021

Satoshi Uchida (Department of Chemistry and Materials Engineering, Faculty of Chemistry Materials and Bioengineering, Kansai University, Suita, Japan), Masaki Yamagata, Masashi Ishikawa

Synthesis of LiFePO₄/C cathode material by high-frequency induction heating

s06-P-022

Bei Wang (Centre for Clean Energy Technology, School of Chemistry and Forensic Science, University of Technology Sydney, Sydney, Australia), Dawei Su, Guoxiu Wang

Solvothermal Synthesis of SnO₂/graphene Nanocomposites with an Enhanced Lithium Storage Capacity in Lithium Ion Batteries

s06-P-023

Songrui Wang (National Key Lab of Power Sources, Tianjin Institute of Power Sources, Tianjin, China), Lili Lu, Xingjiang Liu

Simulation on Thermal Behavior of LiCoO₂/C and LiFePO₄/C Lithium Ion Cells

s06-P-024

Stephan Weinberger (Graz University of Technology, Institute of Chemical Engineering and Environmental Technology, Graz, Austria), Gerd Rabenstein, Viktor Hacker, Katja Fröhlich, Fay Duff, Franz Bernd Wede, Susanne Schutting, Waltraud Taucher-Mautner, Damijan Movrin, Janewit Pitayataratorn

New Electrode Materials for the Rechargeable Zinc-air Battery

s06-P-025

Ming-Zhe Xue (Institute of Physical Chemistry, University of Muenster, Muenster, Germany), Richard Kloepsch, Andrea Balducci, Martin Winter, Stefano Passerini

Benchmarking Battery Materials - Effect of the Conductive Additive Content on the Composite Electrode Properties

s06-P-026

Tomokazu Yamane (Office of Society-Academia Collaboration for Innovation, Kyoto University, Kyoto-shi, Japan), Akiyoshi Nakata, Toshiro Hirai, Zempachi Ogumi

Effect of Zinc Surface Modification on Electrochemical Properties for Alkaline Zn-based Secondary Battery

s06-P-027

Mieko Yanagawa (Department of Materials Science and Chemical Engineering, Shizuoka University, Hamamatsu, Japan), Daiyu Kodama, Yoshiumi Kohno, Yasuhisa Maeda, Hiroyuki Hanyu, Masatoshi Sakurai

The electrochemical response of the cell consisting of Ce^{3+} , Ce^{4+} /boron-doped diamond and Zn^{2+}/Zn

Capacitor

s06-P-028

Qian Cheng (National Institute for Materials Science, Tsukuba, Japan), Jie Tang, Han Zhang, Norio Shinya, Lu-Chang Qin

Graphene and Carbon Nanotube Composite Electrodes for Supercapacitors

s06-P-029

Shoji Ikuta (Faculty of Textile Science and Technology, Shinshu University, Ueda, Japan), Noriaki Ishigaki, Katsutoshi Fukuda, Wataru Sugimoto

Electrophoretic Deposition of Aqueous Ruthenium Oxide Nanosheet Colloid

s06-P-030

Kim In-Tae (Graduate School of Science and Engineering, Yamaguchi Univ., Ube, Japan), Minato Egashira, Nobuko Yoshimoto, Masayuki Morita

Alkali-treated Soft Carbon for Positive Electrode of Electric Double-layer Capacitors

s06-P-031

Ryota Inoue (Materials Chemistry, Yamaguchi University, Ube, Japan), Kazuaki Tomono

A Hybrid Capacitor Composed of Nanostructured Manganese Oxide Film

s06-P-032

Yasuo Karasawa (Faculty of Textile Science and Technology, Shinshu University, Ueda, Japan), Katsutoshi Fukuda, Wataru Sugimoto

Evaluation of the Pseudo-capacitive Contribution of RuO_2 Nanosheets Derived from $\alpha\text{-NaFeO}_2$ type NaRuO_2

s06-P-033

M. A. Kiani (Institute for NanoScience & Nanotechnology, Sharif University of Technology, Tehran, Iran)

Wide-potential-window Supercapacitor Based on Ordered $\text{MnO}_2/\text{CMK}^{-3}$ Nanocomposite in Aqueous Medium

s06-P-034

Bo-Hye Kim (Alan G. MacDiarmid Energy Research Institute, Chonnam National University, Gwangju, Korea), So Yeun Kim, Kap Seung Yang

Supercapacitor performance of porous carbon nanofiber composites prepared by electrospinning polymethylhydrosiloxane (PMHS)/polyacrylonitrile (PAN) blend solutions

s06-P-035

Teruaki Kotoda (Department of Materials Science and Chemical Engineering, Shizuoka University, Hamamatsu, Japan), Hiroaki Yamano, Tsuyoshi Takikawa, Masao Sudoh

Prediction of Structure Factors of Electric Double Layer Capacitor by Porous Electrode Theory

s06-P-036

Ann Laheäär (Institute of Chemistry, University of Tartu, Tartu, Estonia), Alar Jänes, Enn Lust
Lithium bis(oxalato)borate (LiBOB) as an electrolyte for supercapacitors

s06-P-037

Jing-Mei Li (National Tsing Hua University, Hsinchu, Taiwan), Kuo-Hsin Chang, Chi-Chang Hu
Microwave-assisted Hydrothermal Synthesis of Vanadium Oxides for Supercapacitors: The Key Factor of Existence of Lithium-ion

s06-P-038

Sho Makino (Faculty of Textile Science and Technology, Shinshu University, Ueda, Japan), Ryota Mukai, Yusuke Yamauchi, Wataru Sugimoto
Synthesis and Pseudocapacitive Behavior of Ordered Mesoporous RuO_x Thin Film and Application to Micro-supercapacitor Using IDA Electrode

s06-P-039

Takahiro Mitsui (Faculty of Textile Science and Technology, Shinshu University, Ueda, Japan), Kazuki Higurashi, Jun Sato, Katsutoshi Fukuda, Wataru Sugimoto
Electrochemical Properties of Reduced Graphite Oxide Nanosheet Electrodes Prepared by Layer-by-Layer Assembly

s06-P-040

Naoko Miyashita (R&D/H.C. Starck GmbH, Goslar, Germany)
Ultra Thin Tantalum Capacitor Based on Paste Technology

s06-P-041

Keigo Okamura (Materials Chemistry, Yamaguchi University, Ube, Japan), Kazuaki Tomono
Capacitive Behavior of the Composite Electrodes Consisting of Mn-Mo Mixed Oxide and CNT

s06-P-042

Wataru Sugimoto (Shinshu University, Faculty of Textile Science and Technology, Ueda, Japan), Noriaki Ishigaki, Katsutoshi Fukuda, Yoshio Takasu
Fabrication of ITO-free, flexible ruthenium oxide nanosheet electrodes by electrophoretic deposition

s06-P-043

Masahiro Tokita (Graduate School of Science and Engineering, Yamaguchi University, Ube, Japan), Minato Egashira, Nobuko Yoshimoto, Masayuki Morita
Capacitor Performance of Various Fibrous Nano-carbon Electrodes

s06-P-044

Kazuaki Tomono (Materials of Chemistry, Graduate School of Science and Engineering, Yamaguchi University, Ube, Japan), Ryota Yamaguchi, Ryota Inoue, Mitsuhiro Shamoto, Masaharu Nakayama
Intercalation of Azobenzene into the Interlayer Space of Multilayered Manganese Oxide

s06-P-045

Noboru Yoshida (Graduate School of Engineering, The University of Tokyo, Tokyo, Japan), Shin-ichi Nishimura, Yuki Yamada, Yojiro Oba, Masato Ohnuma, Atsuo Yamada
New application of small angle X-ray scattering: Redox-active nano-RuO₂ dispersed in hydrous phase

Hybrid

s06-P-046

Chang-hae Choi (Chungbuk National University, Cheongju, Korea), Jae-young Shin, Han-joo Kim
The Electrochemical Properties and Effect of Li-doping on Activated Carbon for Lithium Ion Capacitor

s06-P-047

Kentaro Kuratani (National Institute of Advanced Industrial Science and Technology (AIST), Osaka, Japan), Hiroshi Senoh, Masaru Yao, Nobuhiko Takeichi, Tetsu Kiyobayashi
Conductivity of Nonaqueous Solutions of Perchlorate Salts at High Concentrations

Lithium

s06-P-048

Mariko Eguchi (Materials Science & Chemical Engineering, Shizuoka University, Naka-ku, Hamamatsu, Shizuoka, Japan), Shinji Nakanishi, Hiroyuki Yamaguchi, Tatsuo Fujinami, Yasutaka Tanaka
Novel liquid electrolyte with nitrile compound possessing high oxidation potential

s06-P-049

Naoki Fukuda (Materials Science and Engineering, Kyoto University, Kyoto, Japan), Kuniaki Murase, Takashi Ichii, Hiroyuki Sugimura

Electrochemical Lithiation of Stoichiometric Cu_6Sn_5 and Cu_3Sn Layers Prepared by Potentiostatic Reduction-Diffusion Method

s06-P-050

Satomi Fukuya (Department of Frontier Materials and Function Engineering, Graduate School of Engineering, Iwate University, Morioka, Japan), Koichi Ui, Yoshihiro Kadoma, Naoaki Kumagai, Yuki Umekage, Ramanujam Kumaresan, Minoru Mizuhata

SnO_2 Nano-particle Prepared by Liquid Phase Deposition Method as Negative Electrode for Lithium Secondary Batteries

s06-P-051

Tomoko Hayakawa (Materials Science & Chemical Engineering, Shizuoka University, Naka-ku, Hamamatsu, Shizuoka, Japan), Akira Kishimoto, Yasutoshi Iriyama, Yasutaka Tanaka, Tatsuo Fujinami

Electrochemical property of liquid electrolytes consisting of boric and carbonate esters with surface-modified electrode

s06-P-052

Soon-Kie Hong (Division of Energy Systems Research, Suwon, Korea), Joo-Seong Kim, Won Il Cho, Sun-il Mho

Morphology-Controlled LiMn_2O_4 and $\text{Li}(\text{Ni},\text{Mn})_2\text{O}_4$ Electrodes for Li-ion Batteries

s06-P-053

Lim Hyunseob (Department of Chemistry, POSTECH and Byon IRU, ASI, RIKEN, Wako, Japan)

Graphene-nanoparticle composite for high performance Li-air battery electrode

s06-P-054

Hikaru Inagaki (Faculty of Engineering, Shinshu University, Nagano, Japan), Katsuya Teshima, Masato Hozumi, Takuya Sakaguchi, Keiichi Kohama, Shuji Oishi

Flux Growth of High-quality Oxide Crystals for All-solid-state Lithium Ion Rechargeable Batteries

s06-P-055

Soshi Kawamura (Department of Frontier Materials and Function Engineering, Graduate School of Engineering, Iwate University, Morioka, Japan), Koichi Ui, Yoshihiro Kadoma, Naoaki Kumagai

Fabrication of Binder-free SnO_2 Nanoparticle Film Prepared by Electrophoretic Deposition Method as Negative Electrode for Lithium Secondary Batteries

s06-P-056

Kiwamu Kawarai (Department of Frontier Materials and Function Engineering, Graduate School of Engineering, Iwate University, Morioka, Japan), Koichi Ui, Yoshihiro Kadoma, Naoaki Kumagai

Preparation of Ni-Sn Alloy Film as Negative Electrode for Lithium Batteries by Pulse Electrodeposition Method

s06-P-057

Toshinari Koketsu (Department of Fundamental Energy Science, Graduate School of Energy Science, Kyoto University, Kyoto, Japan), Toshiyuki Nohira, Rika Hagiwara, Koichi Ui, Naoaki Kumagai

Application of Mixed Alkali Metal TFSA Intermediate Temperature Ionic Liquid to Li Metal Secondary Battery

s06-P-058

Sun-il Mho (Division of Energy Systems Research, Ajou University, Suwon, Korea), Hung-Cuong Dinh, In-Hyeong Yeo, Won Il Cho

Electrochemical Performance of Morphology Controlled LiMnPO_4 by Surfactants

s06-P-059

Alessandro Minguzzi (Dipartimento di Chimica Fisica ed Elettrochimica, Università degli Studi di Milano, Milan, Italy), Giuseppe Cappelletti, Cristina Locatelli, Piercarlo Mustarelli, Nerino Penazzi, Sandra Rondinini, Alberto Vertova

New electrocatalyst for Li/Air cathode batteries: MnO_2 via hydrothermal method

s06-P-060

Hideyuki Morimoto (Department of Chemistry and Chemical Biology, Gunma University, Graduate School of Engineering, Kiryu, Japan), Hiroki Watanabe, Shin-ichi Tobishima

Electrochemical Properties of Iron Oxides as Negative Electrodes for Lithium Secondary Batteries

s06-P-061

Masahiro Murase (Department of Applied Chemistry, Tokyo University of Science, Tokyo, Japan), Zhen-ji Han, Naoaki Yabuuchi, Shinichi Komaba

Electrochemical Properties of Si-based Negative Electrodes with Natural Polymer Binders

s06-P-062

Hiroki Nara (Department of Applied Chemistry, Waseda University, Tokyo, Japan), Kazuaki Matsuda, Tetsuya Osaka, Toshiyuki Momma

Block copolymer modification of sulfur cathode interface for lithium secondary batteries

s06-P-063

Yuki Niwata (Department of Frontier Materials and Functional Engineering, Graduate School of Engineering, Iwate University, Morioka, Japan), Koichi Ui, Daisuke Fujii, Kadoma Yoshihiro, Naoaki Kumagai

Analysis of Electrochemical Reaction on Graphite Negative Electrode Coated with Polyacryl Acid

s06-P-064

Manabu Ochida (Office of Society-Academia Collaboration for Innovation, Kyoto University, Kyoto, Japan), Shigetaka Tsubouchi, Hiroe Nakagawa, Yasuhiro Domi, Takayuki Doi, Takeshi Abe, Zempachi Ogumi

Influence of Mn dissolution on degradation of surface film formed on the edge plane of HOPG in Li-ion batteries

s06-P-065

Yoshimi Ohzawa (Department of Applied Chemistry, Aichi Institute of Technology, Toyota, Japan), Yoko Hata, Tsuyoshi Nakajima, Alexander M. Panich, Alexander I. Shames

Structural and Electrochemical Characteristics of Natural Graphite Coated with Pyrocarbon Using Pressure-Pulsed Chemical Vapor Infiltration Technique

s06-P-066

Yoshimi Ohzawa (Department of Applied Chemistry, Aichi Institute of Technology, Toyota, Japan), Takahiro Kasugai, Tsuyoshi Nakajima, Henri Groult

Pyrocarbon-coating on Carbonized Wood for Anode of Lithium-ion Secondary Battery Using Pressure-pulsed Chemical Vapor Infiltration Technique

s06-P-067

Naoya Okada (Department of Applied Chemistry, Graduate School of Urban Environmental Sciences, Tokyo Metropolitan University, Tokyo, Japan), Hirokazu Munakata, Kiyoshi Kanamura

Design of Domain Structure for 3DOM Sn-Ni Alloy Anode

s06-P-068

Shikito Onoda (Materials Science & Chemical Engineering, Shizuoka University, Naka-ku Hamamatsu Shizuoka, Japan), Tomohiro Horino, Yasutoshi Iriyama, Yasutaka Tanaka, Tatsuo Fujinami

Charge-discharge behaviors of carbonate ester electrolytes containing alkoxyboroxine

s06-P-069

Mitsutoshi Otaki (Graduate School of Advanced Science and Engineering, Waseda University, Tokyo, Japan), Seiichi Aoki, Tokihiko Yokoshima, Hiroki Nara, Toshiyuki Momma, Tetsuya Osaka

High Capacity Silicon Anode Electrodeposited from Organic Electrolyte for Li-ion Battery

s06-P-070

Nerino Penazzi (Dip. SMIC - Politecnico di Torino, Turin, Italy), Jijeesh R. Nair, Claudio Gerbaldi, Silvia Bodoardo, Carlo Novarese, Claudio Capiglia

Extrasoft Methacrylate-based Polymer Electrolytes for Li-ion Batteries by Thermal Polymerisation

s06-P-071

Zhen Quan (Department of Materials Science and Engineering, Nagoya Institute of Technology, Nagoya, Japan)

Electrochemical Property of LiCoO₂ Nanoparticle Coated on Carbon Materials

s06-P-072

Jan Philipp Schmidt (Institut für Werkstoffe der Elektrotechnik (IWE), Karlsruher Institut für Technologie (KIT), Karlsruhe, Germany), Jan Richter, Dino Klotz, Ellen Ivers-Tiffée

Fast Identification of the Insertion Potentials of Li-ion Battery Electrodes by a Mathematical Transformation of OCV-Curves

s06-P-073

Hiromitsu Takaba (Department of Chemical Engineering, Tohoku University, Sendai, Japan), Ryo Nagumo, Ryuji Miura, Ai Suzuki, Hideyuki Tsuboi, Hatakeyama Nozomu, Akira Miyamoto

Multi-scale Modeling of Lithium-air Battery to Reveal Relationship between Cathode Structure and Battery Performance

s06-P-074

Keita Takahashi (Faculty of Engineering, Mie University, Tsu, Japan), Junichirou Ohmura, Paul Johnson, Dongmin Im, Dong Joon Lee, Tao Zhang, Nobuyuki Imanashi, Atsushi Hirano, Michael Phillipps, Yasuo Takeda, Osamu Yamamoto, Nigel Sammes

Electrical conductivity enhancement of NASICON-type lithium conducting solid electrolytes, $\text{Li}_{1.4}\text{Ti}_{1.6}\text{A}_{10.4}(\text{PO}_4)_3$, by a grain boundary modification

s06-P-075

Eiji Tatsukawa (Department of Chemistry and Chemical Engineering, Division of Material Engineering and Material Sciences, Graduate School of Natural Science & Technology, Kanazawa University, Kanazawa City, Japan), Kousuke Shimizu, Kazuhiro Tamura

Improvement of Galvanostatic Discharge Characteristics Simulated by Particle-scale Diffusion Model with Li Concentration Dependence

s06-P-076

Jun Towada (Department of Frontier Materials and Function Engineering, Graduate School of Engineering, Iwate University, Morioka, Japan), Yoshihiro Kadoma, Naoaki Kumagai, Eiichi Narita, Koichi Ui

Electrochemical Characteristics of the Graphite Electrodes in Amide Type Ionic Liquid Electrolyte

s06-P-077

Shinya Uematsu (Nagoya Institute of Technology, Nagoya, Japan), Quan Zhen, Tomohiro Kume, Noriyuki Sonoyama

Electrochemical Property of Bi-capped Keggin type Polyoxometalate as the Cathode Material of Lithium Battery

s06-P-078

Hong Wang (Institute of Electrochemical and Energy Technology, Department of Chemical Engineering, Shanghai Jiao Tong University, Shanghai, China), Xiao-Zhen Liao, Xiao-Wei Yang, Yu-Shi He, Zi-Feng Ma

A Novel $\text{Co}(\text{phen})_2/\text{C}$ Catalyst for the Oxygen Electrode in Rechargeable Lithium Air Batteries

s06-P-079

Lianbang Wang (College of Chemical Engineering and Material Science, Zhejiang University of Technology, Hangzhou, China), Pinjie Zhang, Shuoshuo Wei, Chunan Ma

Deposited Tin Alloy Composites Used in Lithium-ion Batteries

s06-P-080

Lianbang Wang (College of Chemical Engineering and Material Science, Zhejiang University of Technology, Hangzhou, China), Xiaotan Wu, Pinjie Zhang, Tugen Xu, Chunan Ma

Low-cost LiFePO_4/C Composite Prepared by Sol-gel Technique

s06-P-081

Lina Wang (Advanced Science Institute (ASI) RIKEN, The Institute of Physical and Chemical Research, Wako-shi, Saitama, Japan), Hye Ryung Byon

A new type of electrolyte for lithium-air battery

s06-P-082

Nae-Lih Wu (Chemical Engineering Department, National Taiwan University, Taipei, Taiwan)

Impact of Current Collector on High-rate Performance of Li-ion Battery Electrodes

s06-P-083

Gui-Liang Xu (Chemistry Department, Xiamen, China), Jun-Tao Li, Ling Huang

Single-crystalline Co_3O_4 octahedra and its excellent lithium storage property

s06-P-084

In-Hyeong Yeo (Department of Chemistry, Dongguk University, Seoul, Korea), Hung-Cuong Dinh, Quang-Thao Ta, Sun-il Mho

High Rate Performance of Conducting Polymer Coated LiFePO_4 Cathode

s06-P-085

Kazuomi Yoshima (Department of Applied Chemistry, Graduate School of Urban Environmental Sciences, Tokyo Metropolitan University, Tokyo, Japan), Hirokazu Munakata, Kiyoshi Kanamura

Fabrication of 3D Patterned Electrodes for Micro Lithium Ion Batteries

s06-P-086

Nobuko Yoshimoto (Graduate School of Science and Engineering, Yamaguchi University, Ube, Japan), Naotoshi Niwa, Atsushi Okamoto, Minato Egashira, Masayuki Morita

Application of Aluminum Foil Prepared by Electroplating to the Current Collector of the Positive Electrode for Lithium Ion Batteries

s06-P-087

Takahashi Yuuki (Department of Applied Chemistry, Graduate School of Engineering, Osaka Prefecture University, Sakai, Osaka, Japan), Aso Keigo, Hayashi Akitoshi, Tadanaga Kiyoharu, Tatsumisago Masahiro

Ionothermal Synthesis of Lithium Ion Conducting $\text{LiTi}_2(\text{PO}_4)_3$ Particles

s06-P-088

Zhen Zhou (Institute of New Energy Material Chemistry, Key Laboratory of Advanced Energy Materials Chemistry (MOE), Nankai University, Tianjin, China), Yu Jing, Panwen Shen

Core-Shell $\text{Fe}_3\text{C}@\text{C}$ Nanocomposites as Anode Materials for Li Ion Batteries

Late Registrations

s06-P-089

Kenro Mitsuda (Mitsubishi Electric Corporation, Advanced Technology R&D Center, Electric Power Storage Device Project Group, Amagasaki, Japan), Makiko Kise, Shigeru Aihara, Shoji Yoshioka

Study on a Hybrid Device of a Lithium-ion Capacitor and a Lithium-ion Battery

s06-P-090

Bo-Wen Huang (Department of chemical engineering, Shanghai Jiao Tong University Shanghai), Xianxia Yuan, Zi-Feng Ma

Comparative study of catalysts for oxygen electrode in rechargeable Lithium-Air batteries

Symposium 7: Fuel Cells: Materials, Properties and Mechanisms

Fuel cells

s07-P-001

Koichi Asano (Central Research Institute of Electric Power Industry, Yokosuka, Japan), Yoshihiro Kozawa, Yoshihiro Mugikura, Takao Watanabe

Proton-conducting fuel cells using $\text{BaCe}_{0.9}\text{Y}_{0.1}\text{O}_{3-\alpha}$ thin film on dense Pd substrate fabricated by UV-MOD

s07-P-002

Byungchan Bae (Fuel Cell Nanomaterials Center, Kofu City, Japan), Takayuki Hoshi, Daigo Hirayama, Masahiro Watanabe

Highly Sulfonated Multiblock Poly(arylene ether) Membranes for Fuel Cell Applications via Sulfonated Oligomers

s07-P-003

Javier Barroso (Departamento de Ingeniería Química y del Medio Ambiente, Universidad del País Vasco (UPV-EHU), San Sebastián, Spain)

Ethanol, bioethanol and co electro-oxidation by amorphous alloys with only 0.6% atomic of platinum

s07-P-004

Enric Brillas (Departament de Química Física, Universitat de Barcelona, Barcelona, Spain), Amado Velazquez-Palenzuela, Francesc Centellas, José A. Garrido, Conchita Arias, Rosa M. Rodríguez, Pere L. Cabot

Carbon-supported Pt Nanoparticles Modified by Forced Deposition of Ru for Carbon Monoxide, Methanol and Ethanol Oxidation in Polymer Electrolyte Fuel Cells

s07-P-005

Tamara C. Blanco (Universidad del País Vasco E.U. Politécnica de Donostia, San Sebastián, Dpto. de Ingeniería Química y del Medio Ambiente, San Sebastián, Spain), Angel R. Pierna

Effect of Co and Rh co-catalysts on NiNbPt-based amorphous anodes for DEFC

s07-P-006

Marian Chatenet (Laboratoire Electrochimie et de Physicochimie des Materiaux et des Interfaces (Grenoble-INP/LEPMI), Saint Martin d'Hères, France), Laetitia Dubau, Julien Durst, Frederic Maillard, Johan André, Elisabeth Rossinot

Heterogeneities of aging within a PEMFC MEA

s07-P-007

Aki Hasegawa (Graduate School of Advanced Science and Engineering, Waseda University, Tokyo, Japan), Hiroki Nara, Toshiyuki Momma, Tetsuya Osaka

AC Impedance Analysis on Reaction Distribution in Cathode Catalyst Layers of PEFCs

s07-P-008

Satoki Hirakata (Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi, Kofu, Japan), Makoto Uchida, Hiroyuki Uchida, Masahiro Watanabe

Effect of Pore Diameter and Hydrophilic Layer in Gas Diffusion Layers for PEFC Cold Start Performance

s07-P-009

Yoshiyuki Honda (Department of Chemistry & Biotechnology, Yokohama National University, Yokohama, Japan), Shin-ichiro Nakamura, Tomohiro Yasuda, Masayoshi Watanabe

Fabrication of Sulfonated Polyimide / Protic Ionic Liquid Composite Membrane as Electrolyte for Non-humidified Intermediate Temperature Fuel Cell

s07-P-010

Jong-Eun Hong (Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Fukuoka, Japan), Young-Wan Ju, Toru Inagaki, Shintaro Ida, Tatsumi Ishihara

Effects of Additives on Sintering Property of Lanthanum-doped Ceria as Buffer Layer for Doped Lanthanum Gallate Electrolyte

s07-P-011

Teruhisa Horita (ETRI/AIST, Tsukuba, Japan), Taro Shimonosono, Dohyung Cho, Haruo Kishimoto, Katsuhiko Yamaji, Harumi Yokokawa, Manuel Brito

Imaging of Oxide Ionic Diffusions at Cathode/Electrolyte Interfaces in Solid Oxide Fuel Cells

s07-P-012

Daichi Imamura (Japan Automobile Research Institute, Tsukuba, Japan), Yoshiyuki Matsuda, Yoshiyuki Hashimasa, Motoaki Akai

Oxidation of carbon monoxide under the PEFC operating condition

s07-P-013

Naoki Inoue (Clean Energy Research Center, University of Yamanashi, Kofu, Japan), Makoto Uchida, Hiroyuki Uchida, Masahiro Watanabe

SiO₂-containing Catalyst Layers for PEFCs Operating under Low Humidity

s07-P-014

Jun Kawaji (Hitachi Research Laboratory, Hitachi, Ibaraki, Japan), Shuichi Suzuki, Takaaki Mizukami, Kenji Yamaga

Evaluation of Surface Energy Components of Binder for PEFC Electrode by Using Contact Angle Analysis

s07-P-015

Junhyuk Kim (School of Mechanical Engineering, Pusan National University, Busan, Korea)

The Effect of Various Dopants (Vanadium, Niobium and Tantalum) in TiO₂ as Supports for PEMFCs

s07-P-016

Yuta Kimura (Graduate School of Environmental Studies, Tohoku University, Sendai, Japan), Takuto Kushi, Shinichi Hashimoto, Satoshi Watanabe, Koji Amezawa, Tatsuya Kawada, Yasuhiro Fukuda, Atsushi Unemoto, Keiji Yashiro, Junichiro Mizusaki, Kazuhisa Sato, Toshiyuki Hashida

Effects of Temperature and Oxygen Partial Pressure on Mechanical Properties of La_{0.6}Sr_{0.4}Co_{1-y}Fe_yO_{3-δ}

s07-P-017

Michael Kornely (Institut für Werkstoffe der Elektrotechnik (IWE), Karlsruher Institut für Technologie (KIT), Karlsruhe, Germany), Andre Leonide, Andre Weber, Ellen Ivers-Tiffée

Limiting Factors in SOFC Performance by Cathode Flowfield Design

s07-P-018

HyukSang Kwon (Dept. of Materials Science and Engineering, Korea Advanced Institute of Science and Technology, DaeJeon, Korea)

Fast On-board Hydrogen Production from Hydrolysis of Al-Fe alloys, and Its Application to Proton Exchange Membrane Fuel Cell

s07-P-019

Ye Lin (School of Materials Science and Engineering, Beijing University of Aeronautics and Astronautics, Beijing, China), Shaohui Yan, He Li

Improved Electro-chemical Activity of Pt/CNT Nano-composites Doped by Tin Oxide for Methanol Oxidation

s07-P-020

Yoshihiro Mugikura (Central Research Institute of Electric Power Industry, Yokosuka, Japan), Koichi Asano

Quantitative analysis of potential cycle test as acceleration test of PEFC

s07-P-021

Kohei Oba (Graduate School of Engineering, Tohoku University, Sendai, Japan), Yuu Sugawara, Ryusuke Mihara, Noriko Sata, Yuki Nagao, Fumitada Iguchi, Hiroo Yugami

Study of Methanol Fueled Single-chamber SOFC for Intermediate-temperature Operation

s07-P-022

Toshiaki Ohtsuka (Div. of Materials Science and Engineering, Faculty of Engineering, Hokkaido University, Sapporo, Japan), Yoshikazu Sugawara, Mikito Ueda

Oxygen Reduction of Pd Electrodes Covered by Platinum Monolayers

s07-P-023

Yoshiki Okajima (Department of Materials Science and Chemical Engineering, Shizuoka University, Hamamatsu, Japan), Sachi Niimi, Tomohiro Kurozumi, Masayuki Fujishiro, Masao Sudoh

Direct Methanol Alkaline Fuel Cell with Anion Conductive Membrane Prepared by Plasma Polymerization

s07-P-024

Takeou Okanishi (Living Environment Development Center, Panasonic Corporation, Moriguchi City, Japan), Yoko Sakiyama, Yoichiro Tsuji, Byungchan Bae, Kenji Miyatake, Makoto Uchida, Masahiro Watanabe

Effect of PEFC operation conditions on durability of sulfonated poly(arylene ether sulfone ketone) multiblock membrane

s07-P-025

Yuki Oriksa (Kyoto University, Graduate School of Human and Environmental Studies, Kyoto, Japan), Hiroyoshi Aoki, Saito Morihiro, Inaba Minoru, Yoshiharu Uchimoto

In-situ X-ray Absorption Spectroscopic Study on Platinum Core-Shell Catalytic Activity for PEFC

s07-P-026

Himeko Orui (NTT Energy and Environment Systems Laboratories, Atsugi, Japan), Reiichi Chiba, Kazuhiko Nozawa, Hajime Arai, Ryoji Kanno

Investigation of high temperature stability of nickel-zirconia cermets with added Al₂O₃

s07-P-027

SeokHee Park (Fuel Cell Research Center, Korea Institute of Energy Research, Daejeon, Korea), Youngwoo Choi, Sungdae Yim, Changsoo Kim, Seung Bin Park

Improved performance of H₂/air alkaline membrane fuel cells by optimized water management

s07-P-028

Ryotaro Sakai (Applied Chemistry, Osaka Prefecture University, Sakai, Japan), Masanobu Chiku, Eiji Higuchi, Hiroshi Inoue

Activity and Durability for Oxygen Reduction Reaction of Pd Core/Pt Shell Nanoparticles-loaded Carbon Black Catalysts

s07-P-029

Kazunari Sasaki (International Research Center for Hydrogen Energy, Kyushu University, Fukuoka, Japan), Kengo Haga, Tomoo Yoshizumi, Daisuke Minematsu, Hiroaki Yoshitomi, Kota Miyoshi, Runru Liu, Chie Uryu, Yuya Tachikawa, Toshihiro Oshima, Shunsuke Taniguchi, Yusuke Shiratori

Chemical Durability of SOFCs

s07-P-030

Iori Shimada (Department of Environment Systems, Graduate School of Frontier Sciences, The University of Tokyo, Kashiwa, Japan), Yoshito Oshima, Junichiro Otomo

Reaction Mechanism of Ethanol Electro-oxidation at Intermediate Temperatures

s07-P-031

Hidenobu Shiroishi (Tokyo National College of Technology, Hachioji, Japan), Gaku Teramoto, Itaru Kato, Morihiro Saito

Development of FeCo-Modified Multi-walled Carbon Nanotubes for Oxygen Reduction Catalyst in Acid Media

s07-P-032

Yoshitsugu Sone (Japan Aerospace Exploration Agency, Chuo-ku, Sagamihara, Japan), Shimada Takanobu, Kato Atsushi, Takahashi Atsushi, Yoshida Tetsuya

Charge and Discharge Performance of the Unitized-type Regenerative Fuel Cell for the Closed Environment

s07-P-033

Gaetano Squadrito (CNR-ITAE, Messina, Italy), Giosuè Giaccoppo, Roberto Montanini

Mapping of contact pressure distribution within PEFC: Comparison between Tekscan sensors and Fuji films

s07-P-034

Kikuchi Takayuki (Department of Materials Science and Chemical Engineering, Shizuoka University, Hamamatsu, Japan), Kei Mochizuki, Masao Sudoh, Hironori Hadano, Yoshiaki Ishiguro

Fuel Cell Type CO Sensor in Wide Range from 30 °C to 200 °C Using Polybenzimidazole (PBI) Membrane

s07-P-035

Akihide Toge (Dept. Molecular Chemistry and Biochemistry, Doshisha University, Kyotanabe, Japan), Yokono Takashi, Takashi Yokono, Morihiro Saito, Hideo Daimon, Akimasa Tasaka

Electrochemical Properties of Cubic and Cuboctahedral Pt Nanoparticle Catalysts

s07-P-036

Tatsuya Tsurumura (Graduate School of Science and Engineering, Yamaguchi University, Ube, Japan), Yoshimoto Nobuko, Egashira Minato, Morita Masayuki

Electrocatalytic Activity of Platinum Deposited on Tungsten Oxide for Anodic Oxidation of Alcohols

s07-P-037

Jing Xie (Automotive Science/Kyushu University, Fukuoka, Japan), Young Wan Ju, Tatsumi Ishihara
Composite oxide of $\text{Pr}_{1.91}\text{Ni}_{0.71}\text{Cu}_{0.24}\text{Ga}_{0.05}\text{O}_4\text{-Ba}_{0.5}\text{La}_{0.5}\text{CoO}_3$ for the active cathode of SOFCs

s07-P-038

Tohru Yamamoto (Central Research Institute of Electric Power Industry (CRIEPI), Yokosuka, Japan), Kenji Yasumoto, Masahiro Yoshikawa, Yoshihiro Mugikura, Yoshiyuki Izaki
Performance evaluation technology for long term durability and reliability of SOFCs

Fundamental Processes

s07-P-039

Rubens Chiba (Centro de Ciência e Tecnologia de Materiais - CCTM (Materials Technology and Science Center), Instituto de Pesquisas Energéticas e Nucleares, IPEN (Nuclear and Energy Research Institute), São Paulo, Brazil), Reinaldo Vargas, Marco Andreoli, Emanuel Melo, Sidney Domingues, Margarida Saeki, Emília Seo

Electrochemical and Microstructural Characterizations of the Strontium-doped Lanthanum Manganite Cathode on Ytria-stabilized Zirconia Electrolyte

s07-P-040

Naoko Fujiwara (Research Institute for Ubiquitous Energy Devices, National Institute of Advanced Industrial Science & Technology (AIST), Ikeda, Osaka, Japan), Zyun Siroma, Shin-ichi Yamazaki, Hiroshi Senoh, Tsutomu Ioroi, Kazuaki Yasuda

Direct Fuel Cells Using Hypophosphite as Fuels

s07-P-041

Andrew Gewirth (Department of Chemistry, University of Illinois, Urbana, USA), Matthew Thorum, Claire Turnow

Advanced Copper Coordination Complexes for Electrochemical Reduction of Oxygen

s07-P-042

Daiki Hattori (Fuel Cell Nanomaterials Center, University of Yamanashi, Kofu, Japan), Hara Masanori, Junji Inukai, Byungchan Bae, Kenji Miyatake, Masahiro Watanabe

High-resolution Imaging of Proton Conductive Area on Sulfonated Multiblock Copolymer Membrane

s07-P-043

Yohei Hyuga (Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi, Kofu, Japan), Mitsuru Wakisaka, Hiroyuki Uchida, Masahiro Watanabe

Facile Preparation and Electrochemical Behavior of Pt-Co(111) Single-crystal Electrodes Studied by *In-Situ* STM

s07-P-044

Shin-ichiro Imabayashi (Department of Applied Chemistry, Faculty of Engineering, Shibaura Institute of Technology, Tokyo, Japan), Akira Eguchi, Akihiko Kawano

Influence of Oxygen Partial Pressure on Platinum Dissolution in Acidic Media

s07-P-045

Atsuko Y. Nosaka (Department of Chemistry, Nagaoka University of Technology, Nagaoka, Japan), Yoshio Nosaka

The Deterioration Mechanism of Membranes for PEFCs by Contaminated Metal Ions

Materials and Architectures

s07-P-046

Merit Bodner (Institute of Chemical Engineering and Environmental Technology, Graz University of Technology, Graz, Austria), Viktor Hacker

Ni-based electrocatalysts for alkaline direct ethanol fuel cells

s07-P-047

Tomoya Hayashi (Graduate School of Advanced Science and Engineering, Waseda University, Tokyo, Japan), Tokihiko Yokoshima, Toshiyuki Momma, Tetsuya Osaka

Formation of Mesoporous Pd-Co Cathode Catalyst on Carbon Paper by Wet Process for DMFC

s07-P-048

Min-Chien Hsiao (Department of Chemical Engineering, National Tsing Hua University, Hsinchu, Taiwan),
Shu-Hang Liao, Ming-Yu Yen, Chih-Chun Teng, Chen-Chi M. Ma

Polypropylene-grafted Multi-walled Carbon Nanotubes Reinforced Polypropylene Composite Bipolar
Plates in Proton Exchange Membrane Fuel Cells

s07-P-049

Eneli Härk (Institute of Chemistry, University of Tartu, Tartu, Estonia), Kersti Vaarmets, Rutha Jäger, Jaak
Nerut, Heisi Kurig, Indrek Tallo, Enn Lust

Preparation of the Pt-Ru Catalysts onto Different Carbide Derived Micromesoporous Carbon Supports and
Electroreduction of Oxygen

s07-P-050

Yuki Iijima (Department of Materials Science, Graduate School of Engineering, Tohoku University, Sendai,
Japan), Ryota Takahashi, Kenichi Matsumoto, Yoshinori Yamada, Takehiro Hayashi, Naoto Todoroki, Toshimasa
Wadayama

Oxygen reduction reaction activity and stability for Ni/Pt(111) model catalyst surfaces prepared by MBE

s07-P-051

Takahiro Ikejiri (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo
University of Science, Noda, Japan), Takeshi Kondo, Makoto Yuasa

Relation of Electronic Structure with Oxygen Reduction Activity of Cobalt-Polypyrrole Catalyst Prepared
with Chelate-Polymerization Method

s07-P-052

Toshiaki Ina (Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan),
Takayuki Nakao, Yuki Orikasa, Hajime Tanida, Tomoya Uruga, Koji Amezawa, Atsushi Mineshige, Yoshiharu
Uchimoto

Oxygen Chemical Potential Profile of SOFC Cathode by *in-situ* Depth Resolved XAS Measurement

s07-P-053

Daiju Kubo (Department of Applied Chemistry, Graduate School of Engineering, Osaka Prefecture University,
Sakai, Osaka, Japan), Kiyoharu Tadanaga, Akitoshi Hayashi, Masahiro Tatsumisago

Hydroxide Ion Conductivity of Ni-Al Layered Double Hydroxides for Alkaline Fuel Cell

s07-P-054

Keiji Kunimatsu (Fuel Cell Nanomaterials Center University of Yamanashi, Kofu, Japan), Byungchan Bae,
Keiji Miyatake, Masahiro Watanabe, Hiroyuki Uchida

ATR-FTIR study of water in Nafion membrane combined with proton conductivity measurements during
hydration/dehydration cycle

s07-P-055

Xiaolin Lang (College of Chemical Engineering and Materials Science, Hangzhou, China), Xiaolin Lang,
Chunan Ma, Youqun Chu, Meiqin Shi

Microwave Heated Synthesis of Pt/WC and Its Electrocatalytic Activity for Methanol Electrooxidation

s07-P-056

Jun-Tao Li (Chemistry Department, Xiamen, China), Juan Hu, Jin-Yu Ye, De-Hao Chen, Li Tian

Rapid Cyclic Voltammetric Preparation of Pt Nanocrystals and Their High Electrocatalytic Performance

s07-P-057

Bo Liang (National Institute of Advanced Industrial Science and Technology, Nagoya, Japan), Toshio Suzuki,
Koichi Hamamoto, John David Cater, Toshiaki Yamaguchi, Yoshinobu Fujishiro, Masanobu Awano, Brian J.
Ingram

Effect of the Adding of Ferrum in Nickel/GDC Anode Tube Supported Solid Oxide Fuel Cell

s07-P-058

Weiming Liu (College of Chemical Engineering and Materials Science, Hangzhou, China), Meiqin Shi, Youqun
Chu, Chunan Ma

Pt-WC/RGO composite as a high performance catalysts for methanol electrooxidation

s07-P-059

Qingfeng Liu (Faculty of Textile Science and Technology, Shinshu University, Ueda, Japan), Christophe
Chauvin, Takahiro Saida, Wataru Sugimoto

Oxygen Reduction Reaction (ORR) Activity and Durability of Nanosheet Modified Platinum Catalyst
Investigated Using Model Electrodes

s07-P-060

Stephen Lyth (Kyushu University, International Institute for Carbon-Neutral Energy Research, Fukuoka, Japan),
Nazrul Islam, Yuta Nabae, Shigeki Kuroki, Masa-aki Kakimoto, Seizo Miyata

Electrochemical Oxygen Reduction on Nitrogen-doped Graphene Cathode Catalysts

s07-P-061

Natalia Mayorova (Frumkin Institute of Physical Chemistry and Electrochemistry of the RAS, Moscow, Russia), Olga Khazova

Catalytic Properties of Platinum Thin Layers in Oxygen Reduction Reaction

s07-P-062

Alessandro Minguzzi (Dipartimento di Chimica Fisica ed Elettrochimica, Università degli Studi di Milano, Milan, Italy), Silvia Ardizzone, Maria Luisa Foresti, Massimo Innocenti, Cristina Locatelli, Fabio Meroni, Sandra Rondinini, Alberto Vertova

Pt free metal and metal oxides electrocatalysts for the oxygen reduction reaction in alkaline conditions

s07-P-063

Yoshitatsu Misu (Graduate School of Advanced Science and Engineering, Waseda University, Tokyo, Japan), Tokihiko Yokoshima, Toshiyuki Momma, Tetsuya Osaka

Formation of PtRu anode catalyst by electrodeposition on porous PtCu for on-chip direct methanol fuel cell

s07-P-064

Takaaki Mizukami (Hitachi Ltd., Hitachi, Japan), Masaya Kozakai, Mineo Washima, Takaaki Sasaoka

Development of Light Weight Metal Bipolar Plate by Ti/Al-alloy/Ti Clad with Practical Size for PEFC

s07-P-065

Takuya Mori (Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan), Kazuki Komori, Kenji Kikuchi, Masahiro Maruo, Zempachi Ogumi

Effects of decomposition catalysts of hydrogen peroxide on durability and degradation mechanism of Nafion[®]

s07-P-066

Song-Yul Oh (Department of Environmental and Life Sciences, Toyohashi University of Technology, Toyohashi, Japan), Go Kawamura, Atsunori Matsuda, Hiroyuki Muto

Anhydrous Proton Conductivities of CsH₂PO₄-C₅H₅N₅O Composites Prepared by Mechanochemical Treatment

s07-P-067

Patrick Reinhard (International Research Center for Hydrogen Energy, Kyushu University, Fukuoka, Japan), Akari Hayashi, Kazunari Sasaki

Exploration of Electrochemical Reactions Occurring at Pt/M (M = Cu, Co) within Carbon Nano-space-Application to Electrode Materials for PEFC -

s07-P-068

Taro Shimonosono (Energy Technology Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan), Haruo Kishimoto, Katsuhiko Yamaji, Do-Hyung Cho, Fangfang Wang, Manuel E. Brito, Teruhisa Horita, Harumi Yokokawa

Degradation of the Electrical Conductivity of Ni-doped Yttria-stabilized Zirconia Electrolyte under the Operating Condition of Solid Oxide Fuel Cell – Effect of Loading –

s07-P-069

Fangfang Wang (National Institute of Advanced Industrial Science and Technology, AIST, Ibaraki, Japan), Katsuhiko Yamaji, Do-Hyung Cho, Taro Shimonosono, Haruo Kishimoto, Manuel E. Brito, Teruhisa Horita, Harumi Yokokawa

Impact of P(SO₂) on Electrode Performance for La_{0.8}Sr_{0.2}Co_{0.2}Fe_{0.8}O₃ Cathode

s07-P-070

Jie-Wei Yin (Institute of Electrochemical and Energy Technology, Department of Chemical Engineering, Shanghai Jiao Tong University, Shanghai, China), Yi-Mei Yin, Ya-Qin Guo, Ze Tong, Zi-Feng Ma

Effect of Nb Doping on Double-Perovskite Oxides Sr₂CrMoO_{6.8} as Anode for SOFC

s07-P-071

Bin Yu (College of Chemical Engineering and Materials Science, Hangzhou, China), Bin Yu, Meiqin Shi, Xiaoling Lang, Chunan Ma

Various Structured TiO₂ Loaded with WC and Pt for the electro-oxidation of methanol

Modeling

s07-P-072

Rodrigo Ferreira de Moraes (CEA (Atomic and Alternative Energies Commission of France) - LITEN/DEHT/Laboratory of Components for Fuel Cells and Electrolyzers, and of Modeling (LCPEM), Grenoble, France), Seng Kian Cheah, Romain Coulon, Sylvain Passot, Daiane Damasceno Borges, Alejandro A. Franco

Sleepy PEM Fuel Cells or the Impact of the Pre-CcS

s07-P-073

Kei Morohoshi (Toyota Motor Corporation, Susono, Japan), Masaaki Konishi

Elastic analysis of fuel cell polyelectrolyte membrane from coarse-grained molecular dynamics simulations

s07-P-074

Hiroyuki Tominaga (Graduate School of Bio-applications and Systems Engineering, Tokyo University of Agriculture and Technology, Koganei, Tokyo, Japan), Wataru Ikeda, Masatoshi Nagai

Active Site Structure of Nitrided Graphite as a Cathode Catalyst in a Fuel Cell

Direct FCs

s07-P-075

Takuya Tsujiguchi (Department of Chemical and Environmental Engineering, Graduate School of Engineering, Gunma University, Kiryu, Japan), Takanori Iwakami, Soshi Hirano, Nobuyoshi Nakagawa

Relationship between Mass Transport and Performance Degradation in the Direct Formic Acid Fuel Cell

PEM and AFC

s07-P-076

Quynh Hoa Le (Department of Applied Physics, Graduate School of Engineering, Osaka University, Osaka, Japan), Mundelanji C. Vestergaard, Hiroyuki Yoshikawa, Masato Saito, Eiichi Tamiya

Effect of functionalized MWCNTs supporting matrices on enhancing ethanol oxidation at Pt-based catalysts

SOFCs

s07-P-077

Jiratchaya Ayawanna (Department of Materials Science, School of Science, Mae Fah Luang University, Chiang Rai, Thailand), Kazunori Sato, Darunee Wattanasiriwech, Suthee Wattanasiriwech

Effect of Preparation Conditions on the Microstructure and Electrical Conductivity of Ni-GDC Anode for SOFCs

Symposium 8: Electrochemical Energy Storage and Conversion

Basic Science of Battery Capacitor and Fuel Cells

s08-P-001

Prabeer Barpanda (Department of Chemical System Engineering, The University of Tokyo, Tokyo, Japan), Tian Ye, Sho Furutsuki, Daisuke Shimizu, Sai-C Chung, Shin-ichi Nishimura, Atsuo Yamada

Novel Two-Step Aqueous Citrate-Nitrate Combustion Synthesis of LiMBO_3 and $\text{Li}_2\text{MP}_2\text{O}_7$ (M=Fe/Mn)

s08-P-002

Craig A. J. Fisher (Nanostructures Research Laboratory, Japan Fine Ceramics Center, Nagoya, Japan), Shijian Zheng, Rong Huang, Yoshinari Makimura, Yoshio Ukyo, Tsukasa Hirayama, Yuichi Ikuhara

Grain Boundary Changes in $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ Positive Electrode Material during the First Cycle

s08-P-003

Chihiro Hayashi (Applied Chemistry, Tokyo, Japan), Fumiaki Kato, Kenichi Oyaizu, Hiroyuki Nishide

Dye Sensitized Solar Cell Using Poly(TEMPO-substituted norbornene) and Their Charge Storage Performance

s08-P-004

Süheda Isikli (Electrochemical Processes Unit IMDEA Energy Institute, Móstoles, Spain) Raúl Díaz

Composite supercapacitor electrodes through surface adsorption of an organic redox couple on carbon

s08-P-005

Libin Kang (Beihang University, Beijing, China)

Modified Silicon Thin Film Anode Based on Cu-Ni Nanopillar-arrays for Lithium-ion Batteries

s08-P-006

Tsukasa Kawaguchi (Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe, Yukio Honkawa, Yoichi Kojima

Characterization of Current Collector/Cathode Active Material Interface of Li-ion Rechargeable Batteries by Electrochemical Impedance Spectroscopy

s08-P-007

Takuya Matsuyama (Department of Applied Chemistry, Graduate School of Engineering, Osaka Prefecture University, Sakai, Osaka, Japan), Atsushi Sakuda, Akitoshi Hayashi, Masahiro Tatsumisago

Preparation of titanium sulfide thin film electrodes by the PLD method for all-solid-state lithium batteries with $\text{Li}_2\text{S-P}_2\text{S}_5$ solid electrolytes

s08-P-008

Hazuki Otsuka (Applied Chemistry, Osaka Prefecture University, Sakai, Japan), Masanobu Chiku, Eiji Higuchi, Hiroshi Inoue

Effect of Pretreatment on Structural Change in Charging of Co(OH)_2 -Coated Ni(OH)_2 Positive Electrode for Ni-MH Batteries

s08-P-009

Fu Ming Wang (Graduate Institute of Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Hsin-Yi Wang, Jun-Ming Chen, Yu-Run Lin, Bing-Joe Hwang

Multistage constant current for fast-charging Li-ion battery with enhanced long cycle life

s08-P-010

Wen-Wen Zhao (Applied Chemistry, Saga University, Saga, Japan), Gentoku Kido, Shingo Taguchi, Kazuki Hara, Hideyuki Noguchi

Neutralization of graphene oxide and its application into electric double layer capacitor

Novel Materials for Electrochemical Device

s08-P-011

Prabeer Barpanda (University of Tokyo, Tokyo, Japan), Jean-Noel Chotard, Charles Delacourt, Marine Reynaud, Michel Armand, Jean-Marie Tarascon

Designing Solid Electrolytes by Improving the Li-ionic Conductivity of Insulating Ceramics by Novel Ionic Liquid Grafting Technique

s08-P-012

Qian Cheng (National Institute for Materials Science, Tsukuba, Japan), Jie Tang, Han Zhang, Norio Shinya, Lu-Chang Qin

Polyaniline Coated Electro-etched Carbon Fiber Cloth Electrodes for Supercapacitors

s08-P-013

Raul Diaz (Electrochemical Processes Unit, IMDEA Energy Institute, Móstoles, Spain), María Gisela Orcajo, Juan Ángel Botas, Guillermo Calleja, Jesús Palma

Metal Organic Frameworks for Supercapacitors

s08-P-014

Zhijia Du (School of Materials Science and Engineering, Beihang University, Beijing, China)

Improved Electrochemical Performance of Sn–Ni Alloy Nanorods Supported by Nanocone Arrays

s08-P-015

Jaanus Eskusson (University of Tartu, Tartu, Estonia), Alar Jänes, Enn Lust

Physical and Electrochemical Characteristics of TiC-derived Carbon Based Non-aqueous Supercapacitors

s08-P-016

Keizo Furukawa (Graduate School of Engineering, University of Tokyo, Tokyo, Japan), Noboru Yoshida, Takeyuki Ishimi, Kazuya Sasaki, Atsuo Yamada

Synthesis and conversion electrode reaction of rutile-type $(\text{Mo}_x\text{Ru}_{1-x})\text{O}_2$

s08-P-017

Jun-ya Hishii (Graduate School of Science and Engineering Yamaguchi University, Ube, Japan), Nobuko Yoshimoto, Takeshi Kakibe, Minato Egashira, Masayuki Morita

Electrochemical Behavior of Magnesium in Mixed Ionic Liquids Containing Methylmagnesiumbromide

s08-P-018

Bing-Joe Hwang (Nano-Electrochemistry Laboratory, Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Ju-Hsiang Cheng, Fu-Ming Wang

Performance LiFePO_4 Coated by Nitrogen-doped Carbon for Lithium-ion Battery

s08-P-019

Yumi Ikuhara (Japan Fine Ceramics Center, Nanostructures Research Laboratory, Nagoya, Japan), Shijian Zheng, Rong Huang, Hiroki Moriwake, Akihide Kuwabara, Craig Fisher, Hideki Oki, Yuichi Ikuhara

Interface Structure of LiMn_2O_4 Thin Film Synthesized by Chemical Solution Deposition Method

s08-P-020

Alar Jänes (University of Tartu, Tartu, Estonia), Thomas Thomberg, Heisi Kurig, Indrek Tallo, Enn Lust

Characterization of Electrical Double Layer Capacitors Based on Different Carbide Derived Carbon Electrodes

s08-P-021

Yoshihiro Kadoma (Iwate University, Morioka, Japan), Tatsuya Akahira, Tsubasa Fukuda, Koichi Ui, Naoaki Kumagai

Effects of Hydrothermal Synthetic Conditions of Hollandite-type MnO_2 on the Electrochemical Properties

s08-P-022

Hidemaru Kakizaki (Shinshu University, Matsumoto, Japan), Takashi Kimoto, Teruo Hinoue

A New-type Photoelectric Cell Using a Photochemical Reaction of Fullerene

s08-P-023

Noritoshi Nambu (Department of Life Science and Sustainable Chemistry, Faculty of Engineering, Tokyo Polytechnic University, Atsugi, Japan), Ryosuke Takahashi, Dan Kobayashi, Keita Suzuki, Masahiro Takehara, Makoto Ue, Yukio Sasaki

Physicochemical Properties of Fluoroethylene Carbonate and Performance of Electric Double-Layer Capacitors at High Concentrations of Electrolyte

s08-P-024

Varagunapandiyan Natarajan (Department of Chemical Engineering, Indian Institute of Technology, New Delhi, India), Keith Scott, Suddhasatwa Basu

Synthesis and Characterization of $\text{Ru}_x\text{Ta}_{1-x}$ Oxides for Oxygen Evolution Reaction: Effect of Electrolyte and Temperature

s08-P-025

Yukina Niibori (Department of Applied Chemistry, Waseda University, Shinjuku, Japan), Hiroyuki Nishide, Kenichi Oyaizu

Synthesis of Polyacetylene Bearing Anthraquinone and its Application to Anode-active Material for Rechargeable Air Battery

s08-P-026

Takeo Ohsaka (Dept. of Electronic Chem., Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama, Japan), Muhammad Tanzirul Alam, Md. Mominul Islam, Takeyoshi Okajima

Electrical Double Layer Structure in Ionic Liquids

s08-P-027

Takumi Okuyama (Department of Applied Chemistry, Waseda University, Tokyo, Japan), Akitomo Kikuchi, Fumiaki Kato, Kenichi Oyaizu, Hiroyuki Nishide

Dye Sensitized Solar Cell Using Organic Redox Mediators

s08-P-028

Morihiro Saito (Department of Molecular Chemistry and Biochemistry, Kyotanabe-Shi, Japan), Takuya Kenko, Tatsuya Takakuwa, Hideo Daimon, Akimasa Tasaka, Minoru Inaba, Yoshihiro Kadoma, Naoaki Kumagai, Hidenobu Shiroishi, Takeo Hatai, Jun Kuwano

Novel Manganese Oxide-based Cathode Catalysts for Anion-exchange Membrane Fuel Cells

s08-P-029

Hiroshi Senoh (National Institute of Advanced Industrial Science and Technology (AIST), Ikeda, Japan), Zyun Siroma, Naoko Fujiwara, Shin-Ichi Yamazaki, Kazuaki Yasuda, Nobuhiko Takeichi, Kentaro Kuratani, Masaru Yao, Tetsu Kiyobayashi

Cogeneration of Electricity and Hydrogen Using Lithium Alanate

s08-P-030

Aleksandr Simonov (Boreskov Institute of Catalysis, SB RAS, Novosibirsk, Russia), Anton Popov, Alesya Bobrovskaya, Svetlana Cherepanova, Pavel Simonov, Valentin Parmon

Influence of composition of Bi-Pd nanoparticles on their catalytic activity towards hydrogen electrooxidation

s08-P-031

Aleksandr Simonov (Boreskov Institute of Catalysis, SB RAS, Novosibirsk, Russia), Pavel Pyrjaev, Pavel Simonov, Svetlana Cherepanova, Dmitry Zyuzin, Boris Moroz, Valery Bukhtiyarov, Valentin Parmon

Enhanced catalytic activity in hydrogen electrooxidation and CO-tolerance of carbon-supported palladium carbides

s08-P-032

Wataru Tomita (Department of Applied Chemistry, Waseda University, Tokyo, Japan), Naoki Sano, Kenichi Oyaizu, Hiroyuki Nishide

Synthesis of Polyviologen by Electropolymerization and its Performance on Photo-charge Separation

s08-P-033

Mikhail Tsyppkin (Department of Materials Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway), Lars-Erik Owe, Svein Sunde

Size effects in IrO₂ nanoparticle electrocatalysis of the oxygen-evolution reaction

s08-P-034

Kohei Uosaki (International Center for Materials Nanoarchitectonics (MANA), National Institute for Materials Science, Tsukuba, Japan), Alessandra Pacula

Novel Composites Containing Nitrogen-doped Nanostructured Carbon and Cobalt as Electrocatalysts for Oxygen Reduction Reaction

s08-P-035

Hong-Hui Wang (Chemistry Department, Xiamen, China), Zhi-You Zhou, Na Tian, Yu-Jiao Lai

Synthesis of Platinum-Gold Nanoparticle Netlike Assembly and its Enhanced ORR Catalytic Activity

s08-P-036

Fu Ming Wang (Graduate Institute of Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan), Eric Kristia Putra, Ju-Hsiang Cheng, Bing-Joe Hwang

Nitrogen-doped carbon-coating for enhanced performance of LiFePO₄ for Lithium Secondary Battery

s08-P-037

Xiaomeng Wu (Beihang University, Beijing, China), Shichao Zhang, Lili Wang
Coaxial Bimodal SnO₂/TiO₂ Nanotubes Array for Electrochemical Energy Storage

s08-P-038

Yalan Xing (School of Materials Science and Engineering, Beijing, China), Shichao Zhang, Yefei Feng, Lei He
Application of Nanoporous Copper Prepared by Dealloying in Li-ion Battery

s08-P-039

Kento Yamauchi (Department of Chemistry and Biotechnology, Yokohama National University, Yokohama, Japan), Eriko Takashima, Jun-Woo Park, Naoki Tachikawa, Kaoru Dokko, Masayoshi Watanabe
Electrochemical reaction of sulfur electrode in glyme-Li salt complexes

s08-P-040

Akane Yanagihara (Department of Applied Chemistry, Waseda University, Tokyo, Japan), Hiroyuki Nishide, Kenichi Oyaizu
Design of n-type radical polymers for totally organic batteries

s08-P-041

Yang Yang (Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama, Japan), Masaaki Hirayama, Ryoji Kanno
Synthesis and Characteristics of LiMn_{1-x}Fe_xPO₄(OH) (0 ≤ x ≤ 0.3) for Lithium Battery Cathodes

s08-P-042

Ke Ye (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Yoshitaka Aoki, Shinji Nagata
Enhanced Thermal Stability and Proton Conductivity of Anodic ZrO₂-WO₃ Nanofilms by Incorporation of Silicon Species

s08-P-043

Daisuke Yoshikawa (Department of Frontier Materials and Functional Engineering, Graduate School of Engineering, Morioka, Japan), Norio Suzuki, Yoshihiro Kadoma, Koichi Ui, Kumagai Naoaki
Electrode Property of Li excess Li_{4.3}Ti₅O₁₂/C Prepared by Spray-drying Method

s08-P-044

Lan Zhang (School of Material Science and Engineering, Beijing University of Aeronautics and Astronautics, Beijing, China)
Preparation and electrochemical properties of polysulfide polypyrrole

Electrode Reaction Mechanism

s08-P-045

Kuan-Zong Fung (Materials Science and Engineering, Tainan, Taiwan), Chung-Ta Ni, Yu-Cheng Su, Chih-Ying Shen, Kai-Yun Yang
Role of Al substitution on Structure and Conduction properties of NASICON and Perovskite-type Li Solid Electrolytes

s08-P-046

Junya Iino (Department of Pure & Applied Chemistry, Faculty of Science & Technology, Tokyo University of Science, Noda, Japan), Naoto Kitamura, Yasushi Idemoto
Influences of Ultrasonic-Wave Treatments on Electrode Property and Crystal Structure of LiNi_{0.6}Co_{0.2}Mn_{0.2}O₂ as a Cathode Active Material for Li Ion Battery

s08-P-047

Takeshi Kobayashi (Central Research Institute of Electric Power Industry, Komae, Japan), Kumi Shono, Masato Tabuchi, Yo Kobayashi, Hajime Miyashiro
Improved cycling capacity retention of all solid-state lithium polymer battery using 4 V-class electrode

s08-P-048

Takehiro Maeda (Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan), Yuki Orikasa, Masatsugu Oishi, Haruno Murayama, Hajime Arai, Eiichiro Matsubara, Yoshiharu Uchimoto, Zempachi Ogumi
Dynamics Consideration of the LiFePO₄/FePO₄ Phase Transition Studied by Time Resolved X-ray Diffraction

s08-P-049

Titus Masese (Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan), Toshiaki Ina, Yuki Orikasa, Masatsugu Oishi, Hajime Arai, Yoshiharu Uchimoto, Zempachi Ogumi

In-situ X-ray absorption Spectroscopic Study of the Charge and Discharge Mechanism in $\text{Li}_2\text{FeSiO}_4$

s08-P-050

Tomoki Miyagawa (Department of Materials Science and Technology, Faculty of Engineering & Center for Transdisciplinary Research, Niigata University, Niigata, Japan), Xiaohong Zhang, Masayuki Yagi

Catalytic water oxidation by cobalt nanocluster prepared using cobalt(III) complexes as a precursor

s08-P-051

Hosang Park (Department of Chemical and Biological Engineering and WCU program of Chemical Convergence for Energy & Environment (C2E2), Seoul National University, Seoul, Korea), Sangjin Park, Ji Heon Ryu

In-situ characterization of irreversible reactions involved in Li_2NiO_2 electrode

s08-P-052

Sangjin Park (Department of Chemical and Biological Engineering and WCU Program of Chemical Convergence for Energy & Environment (C2E2), Seoul National University, Seoul, Korea), Sun Hyung Jurng, Ji Heon Ryu

Electrochemical detection of lithium plating on negative electrode

s08-P-053

Seungwon Park (Department of Fundamental Energy Science, Graduate School of Energy Science, Kyoto University, Kyoto, Japan), Kyohei Kameyama, Takeshi Yao

Phase Change Analysis with Time for Li inserted Li_xFePO_4

s08-P-054

Daisuke Shimizu (Graduate School of Engineering, Bunkyo-Bu, Japan), Naoya Furuta, Shin-Ichi Nishimura

Electrochemical Behavior and Reaction Mechanisms of $\text{LiMn}_y\text{Fe}_{1-y}\text{P}_2\text{O}_7$

s08-P-055

Kouta Suzuki (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Masaaki Hirayama, Kyungsu Kim, Sou Taminato, Mamoru Komo, Hiroaki Minamishima, Ryoji Kanno, Jin-Young Son, Kazuhisa Tamura, Jun Eichiro Mizuki

Surface Structural Changes of LiMn_2O_4 During Electrochemical Reaction

s08-P-056

Sou Taminato (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Masaaki Hirayama, Kouta Suzuki, Kyungsu Kim, Mamoru Komo, Hiroaki Minamishima, Ryoji Kanno, Kazuhisa Tamura, Jun-Ichiro Mizuki

Interfacial Reactions and Lithium Intercalation Mechanism in Li_2RuO_3

s08-P-057

Misako Tochiwara (Graduate School of Advanced Science and Engineering, Waseda University, Tokyo, Japan), Hiroki Nara, Toshiyuki Momma, Tetsya Osaka

Micro-FT-IR Analysis of Electrode Surface of Commercial Li-ion Battery in Charged State

s08-P-058

Hisao Yamashige (Office of Society-Academia Collaboration for Innovation, Kyoto University, Kyoto, Japan), Masatsugu Oishi, Yu Takanashi, Takahiro Fujimoto, Kenji Sato, Daiko Takamatsu, Yuki Orikasa, Haruno Murayama, Hajime Tanida, Hajime Arai, Yoshiharu Uchimoto, Zempachi Ogumi

Micro XAFS Study on the Relaxation of Potential Distribution of LFP and LCO Electrodes

s08-P-059

Xiaohong Zhang (Department of Materials Science and Technology, Faculty of Engineering & Center for Transdisciplinary Research, Niigata University, Niigata, Japan), Tomoki Miyagawa, Masayuki Yagi

Photochemical water oxidation under visible light using a cobalt nanocluster catalyst

Simulation and Modelling

s08-P-060

Sai Cheong Chung (Department of Chemical System Engineering, The University of Tokyo, Tokyo, Japan),
Prabeer Barpanda, Shinichi Nishimura, Yuki Yamada, Atsuo Yamada

Polymorphs of LiFeSO_4F and LiMnSO_4F as studied by *ab initio* method

s08-P-061

Jeongbin Lee (Department of Chemical Engineering, Ajou University, Suwon, Korea), Ui Seong Kim, Chee
Burm Shin, Sungtae Kim, Jeongwoo Lee

Modeling the behaviors of a valve-regulated lead-acid battery during dynamic charge-discharge operations

s08-P-062

John R. Miller (JME, Inc., Shaker Heights, USA)

Activated Carbon/Aqueous Electrolyte Pseudocapacitance Observed at Potentials Below NHE

s08-P-063

Kazuhiro Okamura (Kyoto University, Kyoto, Japan)

Stress and Strain Calculation Associated with Lithium Insertion/Extraction Reaction for Spherical
Multicrystalline Active Material

s08-P-064

Seungmin Ryu (Department of Chemical Engineering, Ajou University, Suwon, Korea), Jaeshin Yi, Chee Burm
Shin, Seung Ho Yu, Won Il Cho

Modeling the effect of cathode composition of a LiFePO_4 battery on the discharge behavior

s08-P-065

Junyoung Yi (Department of Chemical Engineering, Ajou University, Suwon, Korea)

Two-dimensional thermal modeling of a lithium-ion battery during charge

Late Registrations

s08-P-066

Zhumabay Bakenov (Department of Chemical Engineering, University of Waterloo), Yongguang Zhang, Yan
Zhao, Takayuki Fukada, Pu Chen

Low-cost S/C composite cathodes for lithium batteries with enhanced electrochemical performance

s08-P-067

Yu Haijun (Energy Technology Research Institute, National Institute of Advanced Industrial Science and
Technology (AIST), Tsukuba, Japan), Wang Yarong, He Ping, Asakura Daisuke, Hosono Eiji, Zhou Haoshen

Electrochemical properties and structure of $0.5\text{Li}_2\text{MnO}_3\text{-}0.25\text{LiMn}_{0.5}\text{Ni}_{0.5}\text{O}_2\text{-}0.25\text{LiMn}_{0.33}\text{Ni}_{0.33}\text{Co}_{0.33}\text{O}_2$
prepared by solid state reaction and co-precipitation method

Symposium 9: Corrosion and Surface Treatments

Chemical and Electrochemical Surface Treatments

s09-P-001

Yun-II Choi (Department of Materials Science and Engineering, Nagoya University, Japan), Kensuke Kuroda, Masazumi Okido

Electrochemical Modification of Passive Film by Applying Pulse Potential between Passive and Active Region of AZ31 Mg Alloy in 1 M NaOH Solution

s09-P-002

Sangho Chung (School of Environmental Science & Engineering GIST, Gwangju, Korea), Jin Won Kim, Jae Kwang Lee

Improved capacitance of activated carbon cloth via TiO₂ atomic layer deposition

s09-P-003

Kuan-Zong Fung (Department of Material Science and Engineering, National Cheng Kung University, Tainan, Taiwan), Yu-Cheng Su, Chung-Ta Ni, Chi-Yang Liu

The Effects of Different Surface Treatment Methods of Pure Titanium Substrate on Hydrophilic Characteristics

s09-P-004

Yuki Hanyu (Institute of Multidisciplinary Research for Advanced Materials (TAGEN), Sendai, Japan), Itaru Honma

A Stable Electrochemically Active Copper Interface for Room-temperature Ionic Liquid Via Surface Modification to Metal-organic Charge-Transfer Complex

s09-P-005

Shizuka Hariyama (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Mikito Ueda, Toshiaki Ohtsuka

Electroplating temperature for Al plating on Mg alloy in AlCl₃-EMIC ionic liquid

s09-P-006

Toshihiro Hayashi (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe, Kazuhiko Noda, Ikuro Yamaoka

Evaluation of Chemical Conversion Treatments with Oxoacid Salts for Steels

s09-P-007

Chie Higaki (Kogakuin University, Hachioji, Japan), Hidetaka Asoh, Sachiko Ono

Dielectric Property of Anodic Oxide Film Formed on Niobium in Acid Electrolyte Containing Organic Solvent

s09-P-008

Shin-Ichiro Imabayashi (Department of Applied Chemistry, Faculty of Engineering, Shibaura Institute of Technology, Tokyo, Japan), Tomohiro Takahata, Kenta Bamba, Yugo Ooki, Takashi Ohsaka

Role of glycerol in iridium electrodeposition reactions

s09-P-009

Koju Iwasaki (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe, Shuichi Kitagawa, Yoshito Fujii

Preparation of Oil-containing Polyamide Nanocapsule Composite Nickel Coating

s09-P-010

Ikuhiro Kato (Kanto Gakuin University, Yokohama, Japan), Yoshinori Murakami, Hideto Watanabe, Hideo Honma

Development of Electro Pd-P Plating Bath for PPF Process

s09-P-011

Toshihiro Nakamura (Kyoto Municipal Institute of Industrial Technology and Culture, Kyoto, Japan), Yoji Nakai, Mototsugu Sato, Tomio Nagayama, Takayo Yamamoto, Yasushi Mizutani, Hidemi Nawafune

Contact Resistance of Thin Gold Overlay on Cu-Sn Alloy Electrodeposits from an Environmentally Friendly Noncyanide Sulfosuccinate Bath

s09-P-012

Akimasa Tasaka (Department of Applied Chemistry, Graduate School of Engineering, Doshisha University, Kyotanabe, Japan), Yuhki Kotaka, Atsushi Oda, Tetsuro Tojo, Morihiro Saito, Minoru Inaba

Reactive Ion Etching of Single-crystalline 4H-SiC Using NF_3 and NF_3/Ar Gas Plasmas

s09-P-013

Tetsuya Tsuda (Graduate School of Engineering, Osaka University, Suita, Japan), Yuichi Ikeda, Susumu Kuwabata, Walter E. Cleland Jr., Charles L. Hussey, Gery R. Stafford

Electroplating of Al-W Alloy in Lewis Acidic $\text{AlCl}_3\text{-EtMeImCl}$ Room-temperature Ionic Liquid

s09-P-014

Akihiro Yabuki (Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan)

Self-healing capability of porous polymer film with corrosion inhibitor inserted for corrosion protection

s09-P-015

Shu Yang (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Etsushi Tsuji, Yoshitaka Aoki, Hiroki Habazaki

Anodizing of Magnesium in Hot Phosphate-glycerol Electrolyte

Corrosion of Metals And Alloys

s09-P-016

Gema Cabello (Instituto de Química Física Rocasolano, CSIC, Madrid, Spain), Gary P. Funkhouser, Juanita Cassidy, Angel Cuesta

Inhibition of the corrosion of Fe- and Ni-containing alloys by CO in concentrated HCl at high temperature and pressure

s09-P-017

Koji Fushimi (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Ken-Ichiro Matsushita, Kazunari Miyamoto, Yasuchika Hasegawa

Anisotropic corrosion of polycrystalline iron in H_2SO_4

s09-P-018

Min Gu (State and Local Joint Engineering Laboratory of Methane Drainage in Complex Coal Gas Seam, Chongqing University, Chongqing, China), Yungui Du

Corrosion of carbon steel in MEA/polyamines solution for CO_2 capture

s09-P-019

Youhei Hirohata (Graduate School of Engineering, Shibaura Institute of Technology, Tokyo, Japan), Kazuhiko Noda, Hideki Katayama, Hiroyuki Masuda

Surface Reaction of Metal in Atmospheric Corrosion Environment

s09-P-020

Yukio Honkawa (Furukawa-Sky Aluminum Corp., Fukaya City, Japan), Yoichi Kojima

Effect of additive elements on corrosion behaviors for aluminum in weak alkaline solution at high temperature

s09-P-021

Yongmin Hyun (Hongik University, Yeongi, Korea), Heesan Kim, Youngho Kim

Effect of Silicon on Intergranular Corrosion Resistance of Ti-stabilized 11% Cr Ferritic Stainless Steels

s09-P-022

Wataru Murakami (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Mikito Ueda, Toshiaki Ohtsuka

Development of Zn-Mg alloy coating by PVD

s09-P-023

Kuniyasu Omote (Department of Pure and Applied Chemistry, Tokyo University of Science, Noda, Japan), Tadashi Shinohara, Hideki Katayama, Hiroyuki Masuda, Isao Shitanada, Masayuki Itagaki

Influence of rainfall on atmospheric corrosion behavior of carbon steel

s09-P-024

Kyohei Otani (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Masatoshi Sakairi, Akira Kaneko

Effect to Kind of Cations to Corrosion Behavior of A3003-H24 in Model Tap Water

s09-P-025

Tomoaki Saida (Research & Development Division, Nippon Metal Industry Co., Ltd, Hekinan-Shi, Japan),
Takuya Yamamoto, Katsuaki Sato, Kensuke Kuroda, Masazumi Okido

Pitting Corrosion Resistance of Austenitic Stainless Steels on the Cut Edge Surface

s09-P-026

Suguru Sakugawa (Tokyo University of Science, Noda-shi, Chiba-ken, Japan), Nozomu Kotake, Masanori Hayase

Observation of Copper Dissolution under Laminar Chloride Solution Flow in a Microfluidic Channel

s09-P-027

Yusuke Sato (Graduate School of Chemical Science and Engineering, Hokkaido University, Sapporo, Japan),
Kazuhisa Azumi

Application of multichannel electrode method to corrosion monitoring of painted steel under wet and dry cycling

s09-P-028

Natsumi Shida (Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Suita, Osaka, Japan), Sayaka Miyabe, Shinji Fujimoto

Galvanic Corrosion of Metallic Biomaterials in Osteoblast-like Cell Culture

s09-P-029

Muhammad Zaimi (Graduate School of Engineering, Shibaura Institute of Technology, Tokyo, Japan),
Kazuhiko Noda

Electroless Nickel Ternary Alloy on Pure Iron Substrate

Electrochemical Techniques for Corrosion Study

s09-P-030

Salvatore Daniele (Department of Physical Chemistry, University Cà Foscari Venezia, Venice, Italy), Yaiza González-García, Dario Battistel, Ricardo Souto

In-situ scanning electrochemical microscopy (SECM) detection of metal dissolution during zinc corrosion by means of mercury microelectrode tips

s09-P-031

Fakiha Heakal (Chemistry Department, Faculty of Science, Cairo University, Giza, Egypt)

Electrochemical Behavior of AZ91D Magnesium Alloy in Phosphate Solutions of Different pH

s09-P-032

Kazuya Inoue (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe

Effects of Temperature and Humidity on Electrochemical Migration of Silver Wiring Electrode Analyzed by Electrochemical Impedance Spectroscopy

s09-P-033

Taiki Kinoshita (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Masayuki Itagaki, Isao Shitanda, Kunihiro Watanabe

Corrosion Detection by Multi-transfer Functions Including Magnetic Impedance

s09-P-034

Kiyoshi Sakurai (Graduate School of Engineering, Kanto-Gakuin University, Yokohama, Japan), Yoshifumi Urano, Tsugito Yamashita

Electrochemical Evaluation of Inhibitor film on Nickel Plating Film

s09-P-035

Kengo Seki (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Noda, Japan), Isao Shitanda, Masayuki Itagaki, Hideki Katayama, Hiroyuki Masuda

Nondestructive Evaluation of Organic Coated Steel by Surface Potential Measurement

s09-P-036

Shogo Takagi (Graduate School of Engineering, Hokkaido University, Sapporo, Japan), Masatoshi Sakairi

Development of μ -electrochemical technique for detection of permeated hydrogen generated by corrosion

s09-P-037

Hua Zhu (Lab of Material and Environment Electrochemistry, Wuhan, China), Dihua Wang

The polarization behavior of separate PANI film electrode and its corrosion protection effect for ferrous metals

Growth and Breakdown of Passive and Anodic Films

s09-P-038

Kotaro Doi (Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Suita, Osaka, Japan), Sayaka Miyabe, Shinji Fujimoto

Electrochemical Behavior of Metallic Biomaterials During Rapid Straining in Simulated Body Fluid Environment

s09-P-039

Hiroki Habazaki (Faculty of Engineering, Hokkaido University, Sapporo, Japan), Shu Yang, Yoshiaki Taguchi, Yoshitaka Aoki, Masanobu Teraoka, Tsuji Etsushi

Formation of Porous Anodic Oxide Films on Valve Metals in Hot Phosphate-glycerol Electrolyte

s09-P-040

Atsushi Hyono (Division of Materials Sciences and Engineering, Faculty of Engineering, Hokkaido University, Sapporo, Japan), Kenji Yamanaka, Mikito Ueda, Toshiaki Ohtsuka

In-situ observation of heterogeneity on thin titanium passive oxide film by micro-ellipsometry

s09-P-041

Kenji Sakamaki (Fukushima National College of Technology, Fukushima, Japan), Yoichi Kamo

Self-assembled TiO₂ Nanoarchitecture Fabricated by Anodization in Halogen-free Electrolytes

s09-P-042

Nan Sheng (Div. Materials Sci. and Eng., Graduate School of Eng., Hokkaido Univ., Sapporo, Japan), Toshiaki Ohtsuka

Formation Process of polypyrrole film on zinc covering AZ91D alloy

Modeling of Corrosion and Surface States

s09-P-043

Takehiro Imai (Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, Chiba, Japan), Yasunari Hatada, Isao Shitanda, Masayuki Itagaki, Kunihiro Watanabe

Effect of multidimensional current distribution in a porous electrode on impedance

Symposium 10: Metallization for Microelectronics, Photonics and Energy Conversion Devices

Electrodeposition

s10-P-001

Kunihito Baba (Kanto Gakuin University, Yokohama, Japan), Sayaka Arashiro, Yoshiyuki Nishimura, Christopher Cordonier, Hideo Honma

Pattern Formation by Anisotropic Electroless Plating Using Selective UV Irradiation Pretreatment

s10-P-002

Iskander Beisembetov (Kazakh-British Technical Universitet, Almaty, Kazakhstan), Bagdaulet Kenzhaliev, Margarita Dergacheva, Kazhmukhan Urazov

Current collectors for energy conversion devices prepared by the electrodeposition method

s10-P-003

Christopher Cordonier (Kanto Gakuin University, Yokohama, Japan), Tsugito Yamasita, Hideo Honma

Surface Analysis of Additive Influence on Electro-deposition of Copper in Via-filling Using an Electrochemical Probe (SECM)

s10-P-004

Margarita Dergacheva (Institute of Organic Catalysis and Electrochemistry, Almaty, Kazakhstan), Iskander Beisembetov, Bagdaulet Kenzhaliev, Kazhmukhan Urazov

Current collectors for energy conversion devices prepared by the electrodeposition method

s10-P-005

Andrew Gewirth (Department of Chemistry University of Illinois, Urbana, USA), Jeremy Hatch, Mark Willey

Quaternary Ammonium Levelers for Cu Through Silicon Via Plating

s10-P-006

Min Gu (Chongqing University, Chongqing, China)

Preparation TeO_x - SiO_2 composite film with excellent third-order nonlinearities by electrochemically induced sol-gel method

s10-P-007

Chihiro Mochizuki (Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi, Kofu, Japan), Hiroyuki Isshiki, Masami Shibata

The structural changes with heating in the electrodeposited Pd-Ni-P metallic glass films

s10-P-008

Kazufumi Murata (Department of Mechanical Engineering, Toyohashi University of Technology, Toyohashi, Japan), Junji Sasano, Masanobu Izaki

Characterization of Electrodeposited ZnO Hybrid Diode with Evaporated C60

s10-P-009

Yoshiaki Ouya (Graduate School of Engineering, Kanto Gakuin University, Yokohama, Japan), Kenji Wakasugi, Kaori Urasaki, Tsugito Yamashita

Behavior of Nickel Deposition from Nickel Citrate Bath Containing a Small Amount of Metallic Impurities

s10-P-010

Keisuke Sakabe (Department of Materials Science and Chemistry, Graduate School of Engineering, University of Hyogo, Himeji, Japan), Susumu Sakamoto, Naoki Fukumuro, Shinji Yae, Hitoshi Matsuda

Electroless Deposition of Adhesive Cu Film on Si Using Metal Nanoanchors

s10-P-011

Yosi Shacham-Diamand (Electrical Engineering Physical Electronics, Tel Aviv University, Tel Aviv, Israel), Yelena Sverdlov

Electroless copper alloys for ULSI and MEMS applications

s10-P-012

Yosi Shacham-Diamand (Electrical Engineering Physical Electronics, Tel Aviv University, Tel Aviv, Israel), Rakefet Ofek-Almog, Yelena Sverdlov

Electrochemically Deposited Multilayered Copper/Polymer Flexible Conductor

s10-P-013

Shinya Sugiyama (Toyohashi University of Technology, Toyohashi, Japan), Hironori Komaki, Junji Sasano, Shigeru Niki, Masanobu Izaki

Preparation of Zn(O,S) film by chemical bath deposition and characterization of the CIGS solar cell

s10-P-014

Ryogen Tsuruya (Department of Materials Science and Technology, Faculty of Engineering & Center for Transdisciplinary Research, Niigata University, PRESTO, Japan Science and Technology Agency (JST), Niigata, Japan), Masashi Kajita, Naoto Abe, Masayuki Yagi

Chromium-electrodeposited titanium dioxide electrode as the visible-light-driven photoanode for water oxidation

Interconnects

s10-P-015

Masashi Kajita (Department of Materials Science and Technology, Faculty of Engineering & Center for Transdisciplinary Research, Niigata University, Niigata, Japan), Masayuki Yagi, Kosei Ouchi

Enhancement of visible-light-induced oxygen evolution at a nano-porous WO₃ film by the addition of cobalt ions into an electrolyte solution

Symposium 11: Green Electrochemical Processing

Green Electrochemistry

s11-P-001

Xue Dong (Graduate School of Environmental Studies, Nagoya University, Nagoya, Japan), Kota Tsuneyama, Takashi Hibino

A Nano-sized Electrochemical Reactor for Propane+NO+O₂ Reaction

s11-P-002

Takatoshi Hara (Department of Applied Material and Life Science, Faculty of Engineering, Kanto Gakuin University, Yokohama-shi, Japan), Tatsuya Tomita, Yuki Watanabe, Akira Hashimoto, Hiroshi Takanashi

Effect of Complexing Agent Concentration on Mo Content of Electroplated Cu-Mo Alloy Films

s11-P-003

Takuya Matsumoto (Toyohashi University of Technology, Toyohashi, Japan), Junji Sasano, Masanobu Izaki

Chemical Formation of Biocompatible Calcium Phosphate Coating from Aqueous Solution

s11-P-004

Natalia Mayorova (A.N. Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow, Russia), Vitali Grinberg

The Use of Vegetable Oils for Electrocatalytic Synthesis of Hydrocarbons

s11-P-005

Fereydoun Mohammadi (Iran Polymer and Petrochemical Institute, Tehran, Iran), Fatemeh Karimi, Seyed Nezameddin Ashrafizadeh

Effects of Process Conditions on the Yield of Adiponitrile and By-products Using a Membrane Electrosynthesis Cell

s11-P-006

Tatsunosuke Nakada (Department of Applied Material and Life Science, Faculty of Engineering Kanto Gakuin University, Yokohama-shi, Kanagawa, Japan), Junki Oshikiri, Hiroshi Umemoto, Akira Hashimoto, Ichiro Koiwa

Effect of Degreasing Agent on Adhesion Force between Electroless Ni-P and SiN Substrate

s11-P-007

Watanabe Nobuaki (Institute of Science and Technology, Kanto Gakuin University, Yokohama, Japan), Deguchi Kazuki, Umemoto Hiroshi, Koiwa Ichiro

Influence of the memory effect on Raman scattering in positive electrode of Ni-MH batteries

s11-P-008

Zhijun Qiu (College of Chemical Engineering and Materials Science, Hangzhou, China), Fengming Zhao, Xiushan Zhu, Fei Yan, Chunan Ma

Properties of DSA for the evolution of O₂ and its application in electrochemical synthesis of succinic acid

s11-P-009

Hiroshi Umemoto (Department of Applied Material and Life Science, Faculty of Engineering, Kanto Gakuin University, Yokohama-shi, Japan), Kazuki Deguchi, Sasaki Yasushi, Yamashita Tsugito, Koiwa Ichiro, Watanabe Nobuaki, Yabe Kazuhiro, Sumita Atsushi, Nakamura Takaharu

Influence of the memory effect on XPS spectra in positive electrode of Ni-MH batteries

s11-P-010

Huayi Yin (School of Resource and Environmental Sciences, Wuhan, China), Diyong Tang, Hua Zhu, Yu Zhang, Xin Wang, Dihua Wang

Electrochemically splitting iron oxides to iron and oxygen in molten carbonate using a cost affordable inert anode

s11-P-011

Minoru Yonekawa (Tokyo National College of Technology, Hachioji, Japan), Hazuki Matsumoto, Shinjiro Hayashi, Hidenobu Shiroishi, Masayuki Kunimatsu, Itaru Kato, Ryo Shoji

Development of Recycling Process for PEFC Catalysts Using Electrochemical Methods

s11-P-012

Hongyan Zeng (College of Chemical Engineering and Materials Science, Hangzhou, China), Yinghong Zhu, Lingling Wu, Chunan Ma

Electrochemical Oxidation of *P*-Methoxytoluene in Ionic Liquid Media

Green Electrodeposition

s11-P-013

Jongwon Kim (Gwangju Institution of Science and Technology, Gwangju, Korea), Jin Won Kim, Sangho Chung, Jae Kwang Lee, Jaeyoung Lee

Refining of highly concentrated sodium hydroxide solution by electrowinning

s11-P-014

Giovanni Zangari (Department of Materials Science and Engineering, University of Virginia, Charlottesville, USA), Lok-kun Tsui

Photoelectrochemistry of TiO₂ Nanotubes Modified by Cu₂O and Fe₂O₃

Green Materials

s11-P-015

Bernhard Gollas (Institute for Chemistry and Technology of Materials, Graz University of Technology, Graz, Austria), Andreas Luegger, Jakob Zidar

Electrodeposition of Zinc-bismuth Alloys for Bearings

s11-P-016

Kenji Sakamaki (Department of Chemistry, Fukushima National College of Technology, Fukushima, Japan), Hirofumi Fujisawa, Ikuro Shike, Eri Yokota, Yuka Sagawa

Autocatalytic Preparation of Nano-Semiconductors for Solar Energy Conversion

s11-P-017

Takashi Sugiura (Graduate School of Engineering, Gifu University, Gifu, Japan), Tiansheng Zhang, Masayoshi Miura

Photoelectrochemical Characterization of GaN Particulate Electrode Synthesized by the Reaction of Ga with LiNH₂

Green Processes

s11-P-018

Enric Brillas (Department de Química Física, University of Barcelona, Barcelona, Spain), Abdellatif El Ghenymy, Conchita Arias, José A. Garrido, Rosa M. Rodríguez, Francesc Centellas, Pere L. Cabot

Mineralization of the Antibiotic Sulfamethazine by Electro-Fenton and Photoelectro-Fenton Processes

s11-P-019

Luis F. D'Elia Camacho (PDVSA Intevep, Los Teques, Venezuela), Z. Puentes, G. Muñoz, J. Moncada, Y. Davila

Diesel and naphtha electrochemically assisted desulphurisation by using atomic hydrogen

s11-P-020

Luis F. D'Elia Camacho (PDVSA Intevep, Los Teques, Venezuela), I. Machin

Electrochemically assisted hydrotreating by using atomic hydrogen: Philosophical evolution of the kinetic modelling

s11-P-021

Sergi Garcia-Segura (Department de Química Física, University of Barcelona, Barcelona, Spain), Lucio Cesar Almeida, Nerilso Bocchi, Enric Brillas

MCPA mineralization by solar photoelectro-Fenton using a flow plant with a Pt/air-diffusion cell coupled with a compound parabolic collector. Optimization by response surface methodology

s11-P-022

Junil Kang (World Class University (WCU) Program of Chemical Convergence for Energy & Environment (C2E2), School of Chemical and Biological Engineering, College of Engineering, Seoul National University, Seoul, Korea), Seonghwan Kim, Joon Shin, Jung-Ik Ha, Jejong Yoon

Effective energy recovery in capacitive deionization process

s11-P-023

Francois Lapicque (CNRS. Labor. Reactions and Chemical Engineering, Nancy, France)

Treatment of mixed wastewaters by electrocoagulation: A method for evidence of possible interaction

s11-P-024

Francois Lapicque (CNRS. Labor. Reactions and Chemical Engineering, Nancy, France)

A continuous electrocoagulation cell for both metal dissolution and settling of the solid formed

s11-P-025

Kang Min Lee (Department of Metallurgy and Materials Engineering, Hanyang University, Ansan, Korea), You Chan Jung, Bongyoung Yoo, Dong Hyuk Shin

Synthesis of Titania Film on Aluminum Alloy Processed by Plasma Electrolytic Oxidation for Photovoltaic Applications

s11-P-026

Chunan Ma (College of Chemical Engineering and Materials Science, Hangzhou, China), Fengming Zhao, Youqun Chu, Xinbiao Mao, Yinghua Xu

Industrialization development of a clean production process of succinic acid by electrolysis at 3000 t/a

s11-P-027

Junki Osikiri (Department of Applied Material and Life Science, Faculty of Engineering, Kanto Gakuin University, Yokohama-shi, Japan), Tatsunosuke Nakada, Hiroshi Umemoto, Akira Hashimoto

Effect of Complexing Agents of Electroless Ni-P Plating Bath on Metallization to SiN Substrate

s11-P-028

Romeu C. Rocha-Filho (Department of Chemistry, S. Carlos Federal University, S. Carlos, Brazil), José Mario Aquino, Pablo Cañizares, Cristina Sáez, Manuel A. Rodrigo

Electrochemical Mineralization of the Reactive Red 141 Dye on a Si/BDD Anode Assessed by Experimental Design

s11-P-029

Ignasi Sirés (Laboratori d'Electroquímica dels Materials i del Medi Ambient, Departament de Química Física, Facultat de Química, University of Barcelona, Barcelona, Spain), Serena Randazzo, Onofrio Scialdone, Enric Brillas

Hydroxyl radicals at the anode and in the bulk for the remediation of water containing organochlorinated pollutants. Elucidation of the reaction pathways

Symposium 12: Redox Properties of Environmentally Significant Molecules and Complexes

Coordination Compounds

s12-P-001

Irena Hoskovicová (Institute of Chemical Technology Prague, Prague, Czech Republic), Radka Metelková, Tomas Tobrman, Jiri Ludvik

Influence of Heterocyclic Substituent on Electronic Structure of Chromium(0) Aminocarbene Complex

s12-P-002

Satoshi Iwano (Department of Applied Physics and Chemistry, The University of Electro-Communications, Chofu, Japan), Takashi Hirano, Shojiro Maki, Haruki Niwa

Luciferase effect for emission wavelength on firefly bioluminescence

s12-P-003

Michihiro Nishikawa (Department of Chemistry, School of Science, The University of Tokyo, Tokyo, Japan), Shoko Kume, Hiroshi Nishihara

Cu(II)/(I) Redox Control by Photo-driven Molecular Rotor

s12-P-004

Hirosato Yamazaki (Department of Materials Science and Technology, Faculty of Engineering & Center for Transdisciplinary Research, Niigata University, Niigata, Japan), Morihiko Yoneyama, Masayuki Yagi

Substituent effects on redox properties, core structures and heterogeneous catalytic activities of μ -oxo manganese complexes for water oxidation

Electrosynthesis

s12-P-005

Kajiyama Daichi (Department of Chemistry, Faculty of Science and Technology, Keio University, Yokohama, Japan), Inoue Keisuke, Saitoh Tsuyoshi, Ishikawa Yuichi, Nishiyama Shigeru

Synthesis of alkaloids skeletons using electrochemical methodology

s12-P-006

Kohei Hosoi (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Tatsuya Kubo, Shinsuke Inagi, Toshio Fuchigami

Successive Mediator Application of *o*-Carborane in Electrocatalytic Reduction

s12-P-007

Shinsuke Inagi (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Yutaka Ishiguro, Toshio Fuchigami

Post-halogenation of Conducting Polymers by Electrochemical Method

s12-P-008

Yutaka Ishiguro (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Shinsuke Inagi, Toshio Fuchigami

Gradient Patterning of Conducting Polymers by Using Bipolar Electrochemistry

s12-P-009

Yuki Kawabata (Keio University, Yokohama, Japan), Yu Naito, Tsuyoshi Saitoh, Yuichi Ishikawa, Shigeru Nishiyama

The synthetic study of *O*-methylthalibrine using anodic oxidation

s12-P-010

Hirofumi Maekawa (Nagaoka University of Technology, Nagaoka, Japan), Taro Murakami, Ikuzo Nishiguchi

Carboxylation of Ethyl Cinnamate by Electron Transfer from Magnesium and Synthesis of Diethyl Phenylsuccinate

s12-P-011

Toshiki Nokami (Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan), Naoki Musya, Tatsuya Morofuji, Takafumi Suehiro, Jun-ichi Yoshida

Electrochemical Synthesis of Dendritic Molecules

s12-P-012

Yohei Okada (Department of Applied Life Science, Tokyo University of Agriculture and Technology, Fuchu, Tokyo, Japan)

Electron Transfer-induced Intermolecular[2 + 2] Cycloaddition Reactions Based on the Aromatic “Redox Tag” Strategy

s12-P-013

Carolyn Regembrecht (Johannes Gutenberg-Universität Mainz, Mainz, Germany), Siegfried R. Waldvogel

Electrochemical Treatment of Lignin

s12-P-014

Takahiro Sawamura (Department of Electronic Chemistry, Tokyo Institute of Technology, Yokohama, Japan), Shinsuke Inagi, Toshio Fuchigami

Selective Electrochemical Fluorination Using Alkali Metal Fluorides

s12-P-015

Takenori Sumi (Department of Chemistry, Faculty of Science and Technology, Keio University, Yokohama, Japan), Keisuke Natsui, Tsuyoshi Saitoh, Takashi Yamamoto, Yuichi Ishikawa, Yasuaki Einaga, Shigeru Nishiyama

Synthetic Study of Bioactive Natural Products by Means of Anodic Oxidation Using BDD Electrode

Redox Properties and Mechanisms

s12-P-016

Qamar Abbas (Institute of Inorganic Chemistry, Graz University of Technology, Graz, Austria), Leo Binder

Electrochemistry of ferrocene in choline chloride-based binary mixture

s12-P-017

Yosuke Asano (Graduate School of Advanced Integrated Science, Chiba University, Chiba, Japan), Toshiki Komatsu, Katsuyuki Murashiro

Capacitance studies of cobalt compound nanowires prepared via electrodeposition

s12-P-018

Jana Bulícková (Department of Molecular Electrochemistry, J. Heyrovsky Institute of Physical Chemistry of ASCR, v.v.i., Prague 8, Czech Republic), Miroslav Gál, Magdaléna Hromadová, Viliam Kolivoska, Lubomír Pospisil

Stabilization of Fullerene C₆₀ in the Aqueous Dispersion

s12-P-019

Jana Bulícková (Department of Molecular Electrochemistry, J. Heyrovsky Institute of Physical Chemistry of ASCR, v.v.i., Prague 8, Czech Republic), Romana Sokolová, Ilaria Degano, Sárka Ramesova, Magdaléna Hromadová, Jan Fiedler, Michal Valasek

The Oxidation of Flavonoids in Nonaqueous Solution

s12-P-020

Karine Groenen-Serrano (Laboratoire de Génie Chimique, Université de Toulouse, CNRS, Toulouse, France), Elsa Weiss-Hortala, Pascal Lacroix, Andre Savall

A surprising effect of perchloric acid in maleic acid electro-oxidation on boron-doped diamond anode

s12-P-021

Tomoya Hakamata (Department of Materials Science and Technology, Faculty of Engineering & Center for Transdisciplinary Research, Niigata University, Niigata, Japan), Masanari Hirahara, Manabu Komi, Keisuke Inaba, Hirokazu Yamazaki, Masayuki Yagi

Redox Properties Controlled by Stoichiometric Photoisomerization of Mononuclear Ruthenium (II) Monoquo Complexes

s12-P-022

Yusuke Kano (Department of Applied Chemistry, Osaka Prefecture University, Sakai, Japan), Kazuhiko Mizuno, Hiroshi Ikeda

DFT Study of Silole-fused TME Biradicals Generated by Photoinduced Electron-transfer Reactions

s12-P-023

Yves Le Mest (UMR 6521 CNRS UBO, Brest, France), Christophe Orain, Nicolas Le Poul, Antoine Gomila, Nathalie Cosquer, Jean-Michel Kerbaol, Olivia Reinaud, Françoise Conan

Surface addressing of azido-terminated modified SAMs on gold by self-induced “electroclick”

s12-P-024

Alan Liska (J. Heyrovsky Institute of Physical Chemistry, Dept. of Molecular Electrochemistry, Prague 8, Czech Republic), Albert Fry, Jiri Ludvik

Electrochemical Investigation of Poly-nitrocalix-[4]-arenes and Their Models

s12-P-025

Jiri Ludvik (J. Heyrovsky Institute of Physical Chemistry, Dept. of Molecular Electrochemistry, Prague 8, Czech Republic), Ludmila Simkova, Jiri Klima, Lothar Dunsch, Evgenia Dmitrieva

Electrochemical and Spectrometric Study of 2,2-dinitroethene-1,1-diamine in Aprotic Solvents

s12-P-026

Ana Isabel Pérez Jiménez (CIDETEQ, SC, Pedro Escobedo, Mexico)

Influence of the “ortho effect” in the modulation of the properties of electrochemically controlled hydrogen bonding

Symposium 13: Kinetics and Mechanisms of Electrode Reactions: Studies by Spectroscopy, Theory and New Advanced Methods

Electrocatalysis

s13-P-001

Nagahiro Hoshi (Department of Applied Chemistry and Bio-technology, Graduate School of Engineering, Chiba University, Chiba, Japan), Aya Hitotsuyanagi, Masashi Nakamura

Active Site for the Oxygen Reduction Reaction on the High Index Planes of Pt: *n*(111)-(100) Series

s13-P-002

Ta-Jen Huang (Department of Chemical Engineering, National Tsing Hua University, Hsinchu, Taiwan)

Electro-catalytic Conversion for NO_x Emission Control of Automotive Lean-burn Engines

s13-P-003

Risa Imai (Department of Applied Chemistry and Biotechnology, Graduate School of Engineering, Chiba University, Chiba, Japan), Masashi Nakamura, Nagahiro Hoshi, Osami Sakata

Structure of Monolayer Porphyrins Adsorbed on Single Crystal Electrode of Au

s13-P-004

Jiyong Joo (Catalysis Research Center, Hokkaido University, Sapporo, Japan), Taro Uchida, Marc Koper, Masatoshi Osawa

Surface-enhanced Infrared Study of CO Electro-oxidation on Pt in Alkaline Media

s13-P-005

László Péter (Research Institute for Solid State Physics and Optics, Hungarian Academy of Sciences, Budapest, Hungary), Katalin Neuróhr, Attila Csik, Kálmán Vad, György Molnár

Reverse composition depth profile analysis of various electrodeposited alloys

s13-P-006

Zhong-Qun Tian (State Key Laboratory of Physical Chemistry of Solid Surfaces and College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China), Ping-Ping Fang, Yong-Li Zheng, Bing-Sheng Yin, Sai Duan, Xiao-Dong Lin, Bin Ren, De-Yin Wu, Yan-Xia Chen, Christian Amatore

Enhanced Electrocatalytic Activity of Au-Core Pd-Shell Pt-Cluster Nanoparticles with Different Surface Facets Studied by SERS, TEM and DFT

s13-P-007

Taro Uchida (Catalysis Research Center, Hokkaido University, Sapporo, Japan), Akira Yamakata, Yoichi Sasaki, Masatoshi Osawa

Mechanism of Hydrogen Evolution Reaction Catalyzed by 4,4'-Bipyridine Adsorbed on Metal Electrodes: A Combined Infrared and Dft Calculation Study

Kinetics

s13-P-008

Muthukrishnan Azhagumuthu (Department of Bio-Industrial Mechatronics Engineering National Taiwan University, Taipei, Taiwan)

Kinetic Study of Self-assembled Thrombin Binding DNA-Aptamer on Gold Surface Using Convolution Potential Sweep Voltammetry

s13-P-009

Shaun Cook (Newcastle University, Newcastle Upon Tyne, United Kingdom), Benjamin Horrocks

Electron Transfer Rates at a Metal and a Semi-metal

s13-P-010

Per Kristian Dahlstrøm (Department of Materials Science and Engineering, Norwegian University of Science and Technology, Trondheim, Norway), David A. Harrington, Frode Seland

A Dynamic Electrochemical Impedance Spectroscopy Study of Methanol Oxidation at Elevated Temperatures

s13-P-011

Noriaki Koizumi (FutureOpinion Ltd., Nerimaku, Tokyo, Japan)

Positive Approach to Differences in Standard Rate Constants of Aromatic Compounds Measured by GDP and FR Methods at Same Aprotic Solutions: Frequency Dependence of Standard Rate Constants

s13-P-012

Noriaki Koizumi (FutureOpinion Ltd., Nerimaku, Tokyo, Japan)

Differences in Double Layer Effect on Standard Rate Constants of Aromatic Compounds Measured by GDP and FR Methods at Same Aprotic Solutions

s13-P-013

Zhaohua Li (College of Chemical Engineering and Materials Science, Hangzhou, China), Youqun Chu, Chunan MaProcess Parameters and Kinetics of $\text{Ce}^{4+}/\text{Ce}^{3+}$ Redox Couple on Pt Electrode in Sulfuric Acid

s13-P-014

Shino Satoh (Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Hokkaido, Japan), Katsuyoshi Ikeda, Kei Murakoshi

Photo-induced electron transfer in layered metalloporphyrin ultrathin films

s13-P-015

Wolfgang Schuhmann (Center for Electrochemical Sciences, Ruhr-Universität Bochum, Bochum, Germany), Balázs Berkes, Artjom Maljusch

Simultaneous impedance and gravimetric measurements for the characterization of electrode/electrolyte interfaces

s13-P-016

Hiroyuki Ueda (Graduate School of Science and Technology, Kumamoto University, Kumamoto, Japan), Soichiro Yoshimoto, Katsuhiko Nishiyama

Electrochemical Characterization on the Structural Stability of Porphyrin Adlayers Formed on Au(111)

s13-P-017

Linling Wu (College of Chemical Engineering and Materials Science, Hangzhou, China), Yinghong Zhu, Hongyan Zeng, Chunan Ma

The Electrooxidation Behavior of P-Methyl Anisole in Graphite Electrode

s13-P-018

Soichiro Yoshimoto (Priority Organization for Innovation and Excellence, Kumamoto University, Kumamoto, Japan), Ryo Taguchi, Katsuhiko Nishiyama

Formation of 2D Adlayer Consisting of Terpyridine Derivative and Metal Ions

s13-P-019

Jingxian Yu (School of Chemistry and Physics, The University of Adelaide, Adelaide, Australia), Joe Shapter, Andrew AbellElectron Transfer through α -Peptides Attached to Single-walled Carbon Nanotube Array/Silicon Electrodes: A Mechanistic Transition

Spectroelectrochemistry

s13-P-020

Tomohiro Higashi (Graduate School of Science and Technology, Nagasaki University, Nagasaki, Japan), Takamasa SagaraAdsorption Layer Electrochemistry of Diphenyl Viologen at a Au(111) Surface: Effect of Coexistent Cl^- ion

s13-P-021

Kazuhide Kamiya (Department of Applied Chemistry, School of Engineering, The University of Tokyo, Tokyo, Japan), Etsushi Tsuji, Akihito Imanishi, Kazuhito Hashimoto, Shuji NakanishiBistability in the surface dipole of silicon: An *in-situ* electrochemical MIR-FTIR study

s13-P-022

Jian-Long Lin (Department of Chemistry, Xiamen University, Xiamen, China), Jie Ren, Zhi-You Zhou*In-situ* FTIR studies of electrooxidation of glycolate, glyoxal and glyoxylate on a Pd electrode in alkaline media

s13-P-023

Hidenori Noguchi (Global Research Center for Environmental and Energy Based on Nanomaterials Science (GREEN), National Institute for Materials Science (NIMS), Tsukuba, Japan), Mikio Ito, Katsuyoshi Ikeda, Kohei Uosaki

Substrate Dependent Structure of Aryl Isocyanides Studied by Surface Vibrational Spectroscopy

s13-P-024

Zhangquan Peng (School of Chemistry, St. Andrews, Fife, United Kingdom), Stefan A. Freunberger, Yuhui Cheng, Nick Drewett, Peter G. Bruce

In-situ Spectroelectrochemical Investigation of Oxygen Reactions in Nonaqueous Rechargeable Lithium-air Batteries

s13-P-025

Takamasa Sagara (Graduate School of Engineering, Nagasaki University, Nagasaki, Japan), Machiko Shimoda, Yasunari Fukuda

Gold and Silver Nano-particles on Organic Thin Films on Au and ITO Electrodes: Cross Linking and Reactivity

s13-P-026

Masayo Shibata (Ochanomizu University, Department of Chemistry, Tokyo, Japan), Takara Sakurai, Takuya Masuda, Kohei Uosaki, Toshihiro Kondo

Structural Studies on Electrodeposition Process of Pt Ultrathin Layer on Au(111) Electrode Surface

s13-P-027

Mai Takase (Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Hokkaido, Japan), Hideki Nabika, Kei Murakoshi

Observation of Site Switching of Adsorbed Molecule using *in-situ* Surface Enhanced Raman Spectroscopy

s13-P-028

Li Tian (Chemistry, Xiamen, China), Jun-Tao Li, Chun-Hua Zhen

In-situ FTIR studies of C1 molecule adsorption on Pt single crystal electrodes

s13-P-029

Noriko Umezawa (Ochanomizu University, Department of Chemistry, Tokyo, Japan), Gernot Friedbacher, Toshihiro Kondo

Preparation of Atomically Flat Au(111) Surfaces from a Commercially Available Au(111) Disk

s13-P-030

Deyin Wu (College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, China), Ran Pang, Yifan Huang, Sai Duan, Zhongqun Tian

Surface Structures and Photo-induced Hydrogen Evolution Reactions of Interfacial Hydrated Protons on Silver and Gold Cathodes

s13-P-031

Nannan You (College of Chemical Engineering and Materials Science, Hangzhou, China), Chunan Ma, Meichao Li

Electrochemical Dechlorination Reaction of 3-Chlorobenzoic Acid

Theoretical Modelling

s13-P-032

Alejandro A. Franco (CEA (Atomic and Alternative Energies Commission of France) - LITEN/DEHT, Laboratory of Components for Fuel Cells and Electrolyzers, and of Modeling (LCPEM), Grenoble, France), Rodrigo Ferreira de Moraes, Philippe Sautet, David Loffreda

ORR in Pt(111) and Pt₃Ni(111)-based PEMFC Cathodes: New Mechanistic Insights from a Multiscale Kinetic Modeling Framework

s13-P-033

Yoshiyuki Kubota (Power Engineering Research and Development Center, Research and Development Department, The Kansai Electric Power Co., Inc., Amagasaki, Japan)

Lithium diffusion around step edge of graphite from first principles calculations

s13-P-034

Sangaranarayanan M. V. (Department of Chemistry, Indian Institute of Technology, Madras, Chennai, Chennai, India)

Phenomenological Analysis of Underpotential Deposition of Metals

s13-P-035

Carl-Albrecht Schiller ((Zahner-elektrik, Kronach, Germany), Franz Richter, Norbert Wagner

The Appearance of Unexpected Reactance Contributions in Systems Dominated by the Resistance – The Nature of Inductive and Capacitive Behaviour in Low Frequency Impedance Spectra of Corroding Electrode

Symposium 14: General Session

Bioelectrochemical Systems

s14-P-001

Sebojka Komorsky-Lovric (Ruder Boskovic Institute, Zagreb, Croatia), Ivana Novak

Abrasive stripping square-wave voltammetry of fruits and vegetables

s14-P-002

Milivoj Lovric (Department for Marine and Environmental Research, "Rudjer Boskovic" Institute, Zagreb, Croatia), Sebojka Komorsky-Lovric

Theory of square-wave voltammetry of two-step electrode reaction using an inverse scan direction

Electrocatalysis

s14-P-003

Nayif Rasheedi (Research & Dev Center, Advance Materials Group, Dhahran, Saudi Arabia), Ahmad Hammad, Zuki Yusuf

Effect of charge carriers at different concentration on HDS of crude fraction by *in situ* electrochemically generated hydrogen

Electrochemistry

s14-P-004

Qamar Abbas (Institute of Inorganic Chemistry, Graz University of Technology, Graz, Austria), Leo Binder, Kenneth Rasmussen

Electrodeposition of molybdenum from choline chloride based binary mixture

s14-P-005

Raul Berenguer (Institute of Multidisciplinary Research for Advanced Materials, Kyotani Lab., Tohoku University, Sendai, Japan), Emilia Morallón, César Quijada, Zakaria Tabti

Electrochemical Modification of Different Activated Carbon Materials and the Influence on Their Surface Chemistry and Electrochemical Properties

s14-P-006

Sung-Ting Chung (Department of Materials Science and Engineering, National Cheng Kung University, Tainan, Taiwan), Shih-Yi Chiu, Yan-Chi Chuang, Wen-Ta Tsai

Electrodeposition of Ni-Al₂O₃ Composite Coatings from Emulsified Supercritical CO₂ Baths

s14-P-007

Shohei Hayashi (Department of Materials Science and Engineering, Kyoto University, Kyoto, Japan), Sho Maruyama, Hidehiro Sekimoto, Yoshitaro Nose, Tetsuya Uda

Prevention of Carbon Contamination in Titanium Oxide Electrolysis by Vacuuming

s14-P-008

Chih-Yu Hsu (Institute of Chemistry, Academia Sinica, Taipei, Taiwan), Kuan-Yu Shen, Chih-Wei Hu, Li-Chi Chang, Kuo-Chuan Ho

Layer-by-layer Electrochromic Thin Films Composed of PEDOT:PSS and P3HT

s14-P-009

Chih-Yu Hsu (Institute of Chemistry, Academia Sinica, Taipei, Taiwan), Li-Chi Chang, Chih-Wei Hu, Kuan-Yu Shen, Kuo-Chuan Ho

Synthesis of Electrochromic Copolymer Based on Poly(3,4-ethylenedioxythiophene) and Poly(indole-6-carboxylic acid)

s14-P-010

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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 2900 individual members, from 70 countries, and is organized in 40 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 (<http://www.ise-online.org/geninfo/history.php>).

Why you should become an ISE member

There are many reasons for joining the International Society of Electrochemistry. Individual ISE members can obtain:

- reduced subscription rates for the official journal of the Society (*Electrochimica Acta*) and several other important journals: *Journal of Electroanalytical Chemistry*, *Electrochemistry Communications*, *Bioelectrochemistry*, *Corrosion Science*, *Journal of Power Sources*, *Journal of Applied Electrochemistry*, *Electroanalysis* and *Journal of Solid State Electrochemistry*.
- reduced registration fees at ISE Meetings
- access to the "members restricted area" of the ISE website
- access to the full membership directory which contains the addresses of all the members of ISE
- support from the Millennium Fund and the Presidential Fund
- updated information on ISE activities

Young members can apply for the *Electrochimica Acta* Travel Awards for Young Electrochemists.

ISE members participate fully in the Society's activities which are aimed at advancing electrochemical science and technology, disseminating scientific and technological knowledge, promoting international cooperation in electrochemistry, and maintaining a high professional standard among its members.

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: http://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. M. Musiani, e-mail: m.musiani@ieni.cnr.it. The individual membership fee for the calendar year 2012 is 40 Euro (10 Euro for age below 30). 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 constituting 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.

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.

Publications Committee

The Publication Committee, a standing committee of ISE, acts as an advisory board to the Executive Committee on publication matters.

ISE Executive Committee



President

M. Orazem, Gainesville, FL (2011-2012)

Representation of ISE. Chairperson of Executive Committee, Council and General Assembly.

President Elect

H. Kim, Seoul, Korea (2011-2012)

Chairperson of Committee of Division Officers. Coordination of scientific program of future Annual Meetings, supervision of Division Officers' activities.

Immediate Past President

A.R. Hillman, Leicester, UK (2011-2012)

Chairperson of Executive Committee in the absence of the President.

Vice Presidents

Ch. Amatore, Paris, France (2011-2013)

Responsible for relations with other Societies.

H. Nishihara, Tokyo, Japan (2011-2013)

Responsible for Regional Sections.

R. McCreery, Edmonton, Canada (2009-2011)

Responsible for Educational Activities.

E.J. Calvo, Buenos Aires, Argentina (2009-2011)

Responsible for Corporate and Corporate Sustaining Members.

Secretary General

Position to be elected (2012-2014)

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. Scientific matters not handled by the President or President Elect.

Tasks in collaboration with ISE Office

Ensuring that constitution, bylaws, guidelines, schedules etc. are observed. Preparation of Annual Reports. Collection of information for newsletters and coordination of actions.

ISE Meetings

Coordination of Meetings (location, time, topics). Representative of Executive Committee and advisor to Local Organising Committees for nonscientific matters (location, facilities, control of financial planning, schedule, publicity).

Treasurer

B. Tribollet, Paris, France (2011-2013)

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 and Topical ISE Meetings.

Executive Secretary

M. Musiani, Padova, Italy (2009-2013)

Responsible for maintaining the ISE calendar, assisting with organizing 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: A. Bond, Past Chair: S. Daniele, Chair Elect: A. Downard, Vice-Chairs: F. Bedioui and C.-S. Toh

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: A. Kuhn, Past Chair: L. Gorton, Chair Elect: E. Katz, Vice-Chairs: E. Ferapontova and W. Shin

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: E. Frackowiak, Past Chair: M. Winter, Chair Elect: D. Jones, Vice-Chairs: R. Kostecki and S. Passerini

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: P. Schmuki, Past Chair: T. Moffat, Chair Elect: M. Ryan, Vice-Chairs: S. Brankovic and M. Vorotyntsev

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: T. Homma, Past Chair: F. Walsh, Chair Elect: F. Lapicque, Vice-Chairs: K. Bouzek and G. Zangari

Division 6 – MOLECULAR ELECTROCHEMISTRY

Structural and mechanistic aspects of electrode processes of inorganic, metallorganic and organic substances; synthetic applications.

Chair: J. Ludvik, Past Chair: M. Opallo, Chair Elect: M. Goulart, Vice-Chairs: J. Wadhawan and M. Watanabe

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: E. Savinova, Past Chair: M. Koper, Chair Elect: M. Eikerling, Vice-Chairs: H. Varela and L. Zhuang

New Topics Committee

The New Topics Committee identifies interesting and relevant scientific and technological subjects not covered by the ISE Divisions. It has tasks similar to those of a Division, except that it may have several and changing technical priorities.

Chair: H. Abruña, Past Chair: T. Matsue, Chair-Elect: T. Jacob



Regional Representatives

Argentina:	M.E. Martins	2009-2011	2nd term
Australia	J. Gooding	2011-2013	1st term
Austria:	W. Kautek	2010-2012	1st term
Belgium:	C. Buess-Herman	2010-2012	1st term
Brazil:	R. Rocha Filho	2009-2011	2nd term
Canada:	A. Chen	2010-2012	1st term
Chile:	M.S. Ureta	2010-2012	2nd term
China:	Z. Liu	2010-2012	1st term
Croatia:	S. Komorsky-Lovric	2009-2011	1st term
Czech Republic:	M. Hromadova	2010-2012	1st term
Denmark:	Q. Chi	2009-2011	2nd term
Estonia:	A. Jänes	2011-2013	2nd term
Finland:	R.-M. Latonen	2011-2013	1st term
France:	N. Pébère	2011-2013	1st term
Germany:	G. Wittstock	2009-2011	2nd term
Greece:	S. Bebelis	2010-2012	1st term
Hungary:	L. Peter	2011-2013	1st term
Iran:	M.F. Mousavi	2010-2012	2nd term
Ireland:	E. Marsili	2010-2012	1st term
Israel:	A. Vaskevich	2011-2013	1st term
Italy:	R. Seeber	2010-2012	2nd term
Japan:	T. Matsue	2011-2013	1st term
Korea:	I.-H. Yeo	2010-2012	1st term
Lithuania:	R. Ramanauskas	2011-2013	2nd term
Mexico:	M.M. Davila Jimenez	2009-2011	2nd term
Netherlands:	M. van Brussel	2010-2012	1st term
Norway:	S. Sunde	2010-2012	1st term
Poland:	P. Kulesza	2010-2012	2nd term
Portugal:	L.M. Abrantes	2009-2011	2nd term
Romania:	L. Muresan	2009-2011	1st term
Russia:	A. Nekrasov	2010-2012	2nd term
Serbia:	A. Dekanski	2011-2013	1st term
South Africa:	K. Ozoemena	2010-2012	1st term
Spain:	C. Müller	2011-2013	2nd term
Sweden:	F. Björefors	2010-2012	1st term
Switzerland:	C. Comninellis	2010-2012	1st term
Ukraine:	O. Linyucheva	2010-2012	1st term
United Kingdom:	T. Albrecht	2011-2013	1st term
USA:	P. Vanysek	2009-2011	2nd term
Venezuela:	J. Mostany	2010-2012	1st term



Corporate and Corporate Sustaining Members of ISE

ALUAR - Aluminio Argentino
Amararaja Batteries LTD
Ametek - Advanced Measurement Technology
Apple Inc
Asahi Glass Co. Ltd
Ashai Kasei Chemicals Co. Ltd.
BASF AG, Abt. GCI/E
Bio-Logic SAS
Centre for Electrochemical Technologies
CIDETEC
DropSens, S.L.
Gamry Instruments
Johnson Controls Hybrid and Recycling GmbH
Metrohm Autolab BV
Nissan Motor Co Ltd
Permascand AB
Sensolytics GmbH
Tanaka Kikinzoku Kogyo K.K.
Uniscan Instruments
Valence Technology Inc.
Zahner-elektrik GmbH & Co KG

Central Electrochemical Research Institute, India
CNR - Istituto per l'Energetica e le Interfasi, Padova, Italy
DECHEMA e.V., Germany
Indian Society for ElectroAnalytical Chemistry (ISEAC)
Laboratory of Physical Chemistry and Electrochemistry, Finland
Paul Scherrer Institut, Switzerland
Technical Faculty Bor, Serbia

Co-operation with other Societies

ISE is an Associated Organization of IUPAC and has co-operation agreements with:

- Bioelectrochemical Society (The)
- Chinese Society of Electrochemistry
- Deutsche Gesellschaft für Galvano- und Oberflächentechnik (DGO)
- Electrochemical Division of the Italian Chemical Society
- Electrochemical Society (The)
- Electrochemical Society of Japan
- Electrochemistry and Electroanalytical Division of the Brazilian Chemical Society
- Electrochemistry Group of the French Society of Chemistry
- European Federation of Corrosion
- European Association for Chemical and Molecular Sciences
- Fachgruppe Angewandte Elektrochemie der Gesellschaft Deutscher Chemiker
(Section Applied Electrochemistry of the Society of German Chemists)
- Korean Electrochemical Society
- Mexican Electrochemical Society
- Sociedad Iberoamericana de Electroquímica



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** and **Sergio Trasatti**, former Presidents of the Society.

Three Honorary Members were appointed in the year 2005: **Ron Armstrong**, former Editor-in-Chief of *Electrochimica Acta* for 18 years, **Elton Cairns** and **Dieter Landolt**, former Presidents of the Society,

One Honorary Member was appointed in the year 2011: **Sharon Roscoe**, former Secretary General of the Society.

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 with it automatic life-time ISE membership.

The present Fellows of ISE are:

H. Abruña	E. Gileadi	J. McBreen
A. Aldaz	H. Girault	R. Nichols
R. Alkire	R. Guidelli	T. Osaka
C. Amatore	J. Heinze	D. Schiffrin
D. Aurbach	R. Hillman	W. Schmickler
P. Bartlett	G. Inzelt	B. Scrosati
J. O'M. Bockris	T. Kakiuchi	U. Stimming
A. Bond	H. Kim	S. Sun
E. Cairns	D. Kolb	Z. Tian
C. Comninellis	A. Kornyshev	J. Ulstrup
R. Compton	O. Lev	P. Unwin
S. Cosnier	J. Lipkowski	K. Uosaki
P. Delahay	D. Macdonald	C. Vayenas
W. Fawcett	P. Marcus	M. Watanabe
J. Feliu	R.A. Marcus	A. Wieckowski
C. Gabrielli	N. Markovic	G. Wilson



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.

Frumkin Memorial Medal

The Frumkin Memorial 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.

Prix Jacques Tacussel

The Prix Jacques Tacussel may be awarded every two years to a person who has made important contributions to an electrochemical technique.

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.

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.

Hans-Jürgen Engell Prize

The Hans-Jürgen Engell Prize may be awarded annually to a young electrochemist on the basis of published work in the field of corrosion, electrodeposition or 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 Prize for Environmental Electrochemistry

The ISE Prize for Environmental Electrochemistry may be awarded annually to a scientist of less than 35 years of age on January 1 of the year of the award, for recent application-oriented achievements in the field of environmental electrochemistry.

ISE Prize for Applied Electrochemistry

The ISE Prize for Applied Electrochemistry may be awarded annually to a scientist of less than 35 years of age on January 1 of the year of the award, for recent achievements in the field of applied 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 Meeting Sponsorship

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 ISE Meeting, Divisional Meetings (organized by one or several ISE Divisions) and National or Regional meetings (organized by one or several National ISE Sections), 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.

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: <http://ise-online.org/sponsmeet/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.

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SP-240

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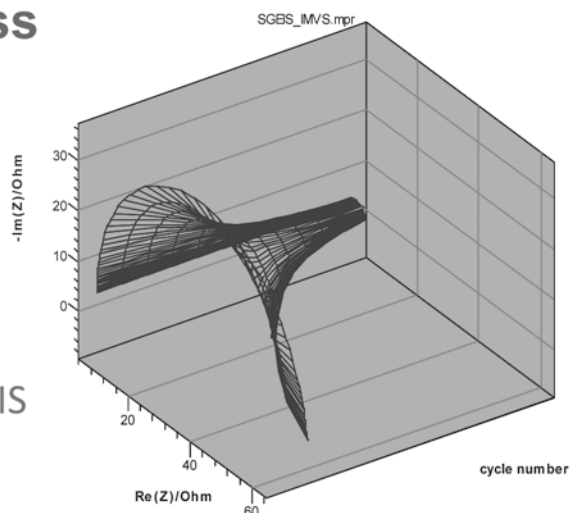
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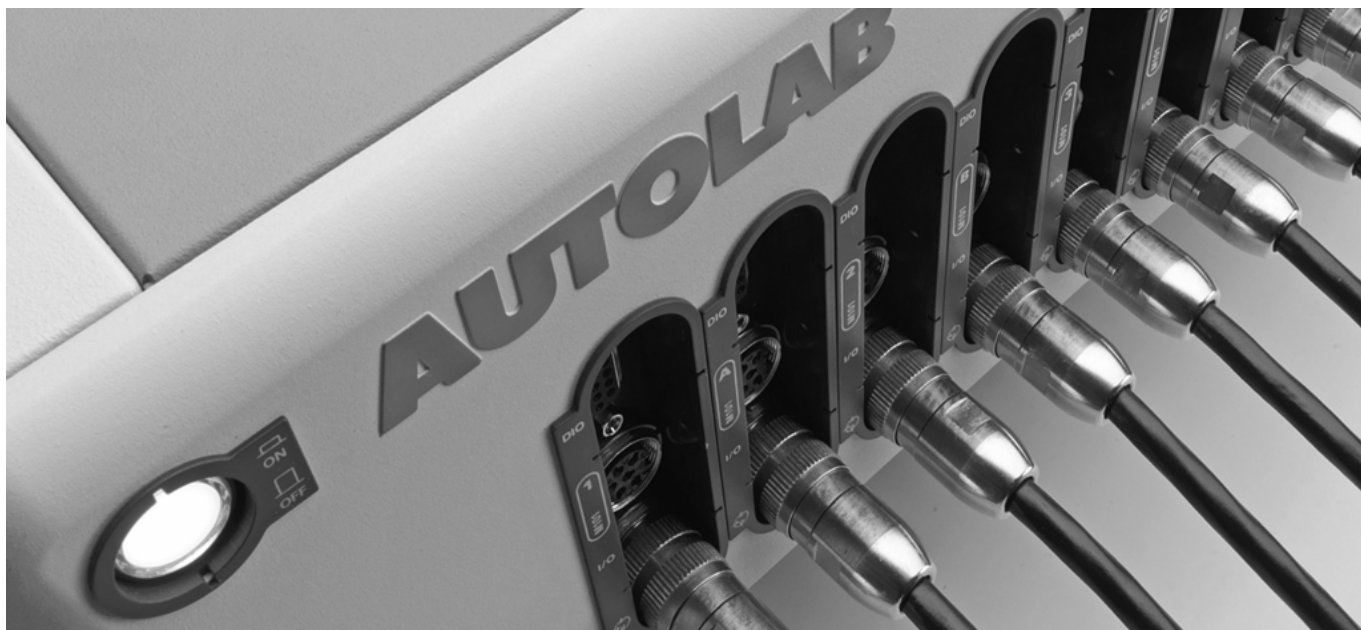
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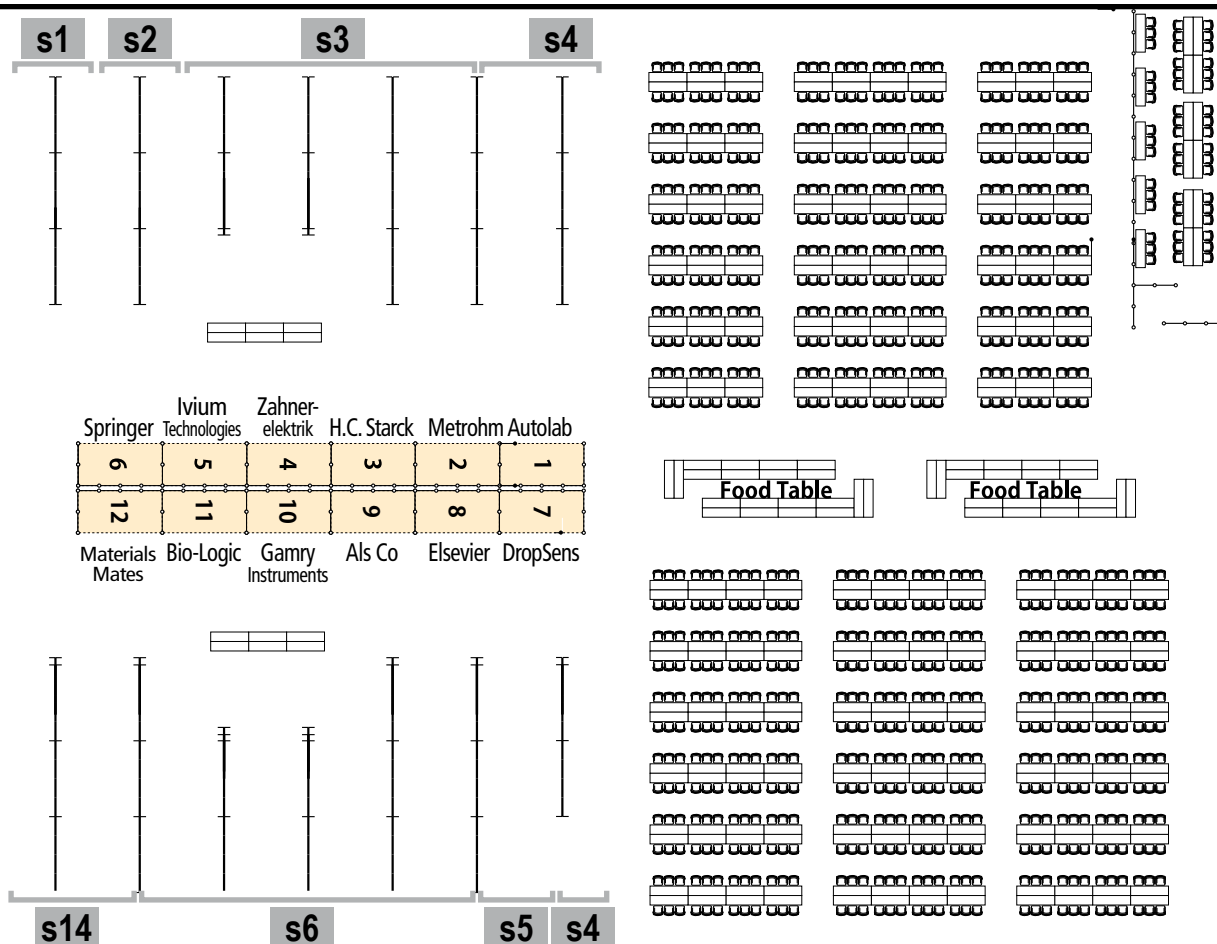
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* Compatible modules: BA, EQCM, MUX, pX1000 and FRA32M

Monday Poster presentations Session I



Tuesday Poster presentations Session II

