

Dear friends, colleagues and ISE members:

Following our tradition, I'm delighted to circulate the yearly President's Newsletter, summarizing the activities of our Society in 2020. It is the last letter I'm sending as the ISE President, since my term is now coming to an end.

2020 has been a very unusual year. The Covid-19 pandemic which struck in 2020 has strongly affected our society's activities on a fundamental level and many of us were forced to re-prioritize our lives. I have to admit that my term of service was rather extraordinary due to this unprecedented pandemic that has brought huge challenges to ISE. Despite adverse circumstances, our Society was not crushed down but remained active mainly thanks to the enthusiasm and firm support of its members. I was gratified by the outcome and must express my deep gratitude to all who have contributed to get our Society through 2020. In particular I would like to thank members of the Executive Committee (EC) and ISE Office, for their valuable time, team work and efforts throughout the year which included over 30 online meetings and numerous communications.

Scientific Meetings

The Covid-19 pandemic had its most pronounced impact on scientific meetings originally planned for 2020. Out of concerns for the health of delegates, the EC was forced to cancel both Topical Meetings which should have been held in Tainan and Salt Lake City. The epidemiological situation also prevented us from organising the 71st Annual Meeting in Belgrade in the usual form. In response to an escalating situation the EC and Organizing Committee had several detailed discussions in last March and April, with the result that the meeting was transformed into an online event - the first virtual event organized in the ISE's history. A Virtual Special Issue of *Electrochimica Acta* for the Belgrade online meeting is being finalized as you read these lines. In the following, I summarize the key points of the report we received from the Organizing Committee Co-chairs, which is also available on the ISE website.

Annual Meeting

The 71st Annual Meeting of the International Society of Electrochemistry (ISE) took place virtually in a modified form between August 31st and September 4th 2020. The scientific program comprised a two-day core meeting, featuring plenary lecturers, selected Keynote and ISE Award winning speakers. The remaining three days were devoted to individual Symposia the number of which was reduced from the originally planned 22 to 18.

Following a short Opening Ceremony when the delegates were welcomed by the conference co-chairs and ISE President the core meeting was opened by a plenary lecture from the Nobel laureate of 2019, M. Stanley Whittingham (Binghamton University, USA) on the Theme: "Lithium Batteries: From an Idea to Domination. What's Next?" Two further plenary lecturers featured on the same day were delivered by Vojislav Stamenković (Argonne National Laboratory, USA): "Electrochemical Interfaces for Energy Conversion and Storage" and Sharon Hammes-Schiffer (Yale University, USA): "Proton-Coupled Electron Transfer in Electrochemistry". Three more plenary lectures followed on the second day of the meeting and were given by Hector Abruña (Cornell University, USA), who presented the Frumkin Medal award plenary lecture on "Energy Conversion and Storage: Novel Materials and Operando Methods", Yi Cui (Stanford University, USA) who spoke on "Understanding and Designing of Materials and Interface for High Energy Batteries" and Nick Birbilis, (Australian

National University, College of Engineering and Computer Science, Australia) focusing on “Corrosion of emerging materials”.

Two Tutorial lectures were available online even before the beginning of the Annual meeting. These lectures dealt with “Electrochemical thin film growth, fundamentals and applications” given by Stanko Brankovic (University of Houston, USA) and Natasa Vasiljevic (University of Bristol, UK) and with “Solving research problems by means of scanning electrochemical microscopy (SECM) and related techniques” delivered by Gunther Wittstock (University of Oldenburg, Germany) and Wolfgang Schuhmann (Ruhr-University Bochum, Germany). The “Electrochimica Acta Author workshop” was given by Robert Hillman, Editor in Chief of *Electrochimica Acta* and Professor at the University of Leicester.

Owing to the great effort and enthusiasm of the Symposium organizers and strong support from the electrochemical community we succeeded in maintaining a high level of the scientific program which in total featured 58 keynote lectures and 303 oral presentations. The scientific program was further complemented by 1003 posters, covering all topics of the originally planned 22 Symposia. The best posters presented by students were selected for ISE Best Poster Awards; the names of the award winners are available at the ISE web page.

The meeting was attended by 1878 registered participants from 63 countries/regions. The largest number of participants was from Germany (229), followed by China (211), United Kingdom (120), France (108), USA (103), Italy (100), Spain (81) and Brazil (81). It needs to be stressed that this unexpectedly high participation was facilitated by the registration fee policy adopted specially for the Belgrade online meeting to enable the participation of colleagues who otherwise would face significant hardships to attend the meeting. Although the Belgrade online meeting was very different from its original conception and was prepared in a rather short time, the feeling of sharing the results, discoveries and diverse approaches in electrochemistry despite being unable to meet in person was highly rewarding. The outcome was a unique experience for all participants and a positive experience for future ISE meetings.

This first online ISE Annual Meeting is similar to the first new scientific experiment. So the outcome cannot be perfect but overall it was highly successful. I gratefully thank all public and private institutions providing support which provided support, the co-chairs of the Organizing Committees, Jelena Bajat and Alexandar Dekanski, all Symposia organizers and participants. The success of this meeting would not have been possible without the dedicated effort and competence of the staff of the ISE Office- Raphael Berger and Gil Bourgeois as well as the ISE Task force that was the driving engine for the Belgrade Online- principally Marc Koper and Gunther Wittstock.

It is sad to note that the ISE activities in 2021 will still be affected by the pandemic. The ISE, however, remains committed to its goal of promoting electrochemical science and technology. The ISE also remains committed to its core principle of ensuring equal access to its activities for electrochemists of all countries and all continents. To provide the necessary predictability EC decided to postpone the 28th Topical Meeting on “Challenges in Molecular Electrochemistry and Surface Reactivity” to Fall 2022. The pandemic situation in the Czech Republic also prevents the on-site organization of the 29th Topical meeting on “Energy and water: electrochemistry in securing the sustainable society development.” Following the success of Belgrade online, the meeting will be organized as an online event between April 18-21, 2021. The 72th Annual Meeting on “Electrochemistry toward Excellence”, 30 August-4 September 2021, Jeju, Korea is so far planned as a regular meeting format with a strong

online component to provide the means of participation also for those of our colleagues who are not able to travel internationally in September 2021. Detailed information is available in the web sites of each meeting, accessible from the ISE homepage. I look forward to meeting you all at ISE meetings in 2021.

Sponsored Meetings

The raging of the Covid-19 pandemic also severely affected ISE sponsored activities. The ISE sponsored only 15 meetings in 2020. We are ready to resume our sponsoring activities once the Covid-19 related restrictions are lifted throughout the world. The rules for ISE sponsoring as well as an exhaustive list of the sponsored events may be found on the website of the Society (<https://www.ise-online.org/ise-sponsoring/past-sponsored.php>).

ISE Fellows

Four new ISE Fellows were appointed in 2020 in recognition of their outstanding scientific achievements. They are Plamen Atanassov, Alexander Kuhn, Nick Birbilis and Yi-Tao Long. I congratulate each one of them. The ISE Fellowship has developed into one of the most prestigious recognitions of the scientific excellence. This is attested by the number of nominations the ISE receives every year. However, it is rather disheartening to see the gender imbalance among the nominated candidates, which does not reflect the structure of our membership. I would like to encourage, therefore, nomination of eminent scientists from underrepresented groups, notably excellent female electrochemists, for this recognition.

Awards

Twelve ISE Prizes were awarded in 2020 and announced during the Belgrade online meeting.

- The Electrochimica Acta Gold Medal was awarded to Christian Amatore, Ecole Normale Supérieure, Paris, France, for his substantial, excellent and broad contributions to electrochemistry, encompassing ultramicroelectrodes and microelectrode arrays, rigorous studies of mechanistic electrochemistry, nanoelectrochemistry, and in vivo electrochemistry.
- The ISE-Elsevier Prize for Experimental Electrochemistry was awarded to Hector Abruna, Cornell University, USA, for the contributions to advanced in-situ techniques provided a possibility to 'decode' the previous thermodynamic considerations and hypotheses concerning the structure of complex charged interfaces and induced the development of electrocatalysis research at atomic/molecular level.
- The Bioelectrochemistry Prize of Division 2 of ISE was awarded to Shelley Minteer, University of Utah, USA, in recognition of her outstanding contribution to the field of bioelectrocatalysis and biofuel cells.
- The Brian Conway Prize for Physical Electrochemistry was awarded to Peter Strasser, Technical University Berlin, Germany, for his work contributing to understanding of electrocatalytic interfaces

with technologically relevant consequences namely the development of lattice strain-controlled precious-metal catalysts with core-shell or shape-controlled architecture.

- The Jaroslav Heyrovsky Prize for Molecular Electrochemistry was awarded to Justin Gooding, University of New South Wales, Australia, for his exceptionally creative and inspiring contributions to both fundamental and applied molecular electrochemistry, by developing clever molecular constructs on electrode surfaces that enable molecular-level control of actors involved in challenging electron transfer processes, ranging from single-molecule electrochemistry, to silicon-based electrochemistry, to frontier molecular electroanalysis for biology and medicine.
- The Tajima Prize was awarded to Carlo Santoro, University of New Mexico, USA, for his outstanding researches on bioelectrochemistry, environmental engineering, and energy conversion and storage systems.
- The ISE Prize for Electrochemical Materials Science was awarded to Jilei Liu, Hunan University, China, for his principal contribution to development of $\text{Li}^+/\text{Na}^+/\text{K}^+$ ion batteries, aqueous rechargeable alkaline batteries and electrochemical capacitors as well as advanced battery characterization.
- The Zhaowu Tian Prize for Energy Electrochemistry was awarded Qiang Zhang, Tsinghua University, China, for innovative work on Li metal anodes.
- The ISE-Elsevier Prize for Green Electrochemistry was awarded to Elisama Vieira Dos Santos, Federal University de Rio Grande do Norte, Brazil, for her excellent contributions to the study of electrochemical processes for soil and wastewater remediation.
- The ISE-Elsevier Prize for Applied Electrochemistry was awarded to Sergio Garcia-Segura, Arizona State University, USA, in recognition of his excellent research in the field of water treatment.
- The Early Career Analytical Electrochemistry Prize of ISE Division 1 was awarded to Cameron L. Bentley, University of Manchester, UK, for original contributions to nanoscale electrochemistry for the analysis of important phenomena related to electrocatalysis, materials science and nanoscience.
- The Oronzio and Niccolò De Nora Foundation Young Author Prize 2020 was awarded to Beatriz Mingo, University of Manchester, UK for her article "Incorporation of halloysite nanotubes into forsterite surface layer during plasma electrolytic oxidation of AM50 Mg alloy", published in *Electrochimica Acta* on March 10th 2019 (Volume 299, 10 March 2019, Pages 772-788).

Nominations and applications for the 2021 ISE Prizes will be invited and must be submitted to the ISE Office between February 1st and May 1st, 2021.

Three *Electrochimica Acta* Travel Awards for Young Electrochemists, sponsored by Elsevier, and seven ISE Travel Awards, aimed at encouraging the participation of young scientists in the 71st ISE Annual Meeting, were awarded to Kang Minkyung, Ivan Stosevski, Julia Alvarez Malmagro, Alex Neale, Emily Kerr, Paula Sebastian-Pascual, Jhonys Freitas, Carla Santana Santos, Enrico Verlato, and Eleonora Pargoletti. Due to the moving the 71st Annual Meeting online the awardees will be allowed to use their awards for the 72nd Annual Meeting in Jeju. The same number of Travel Awards will be made in 2021, to enable young researchers to participate in the 72nd Annual Meeting, in Jeju, Korea.

Society Journal

The composition of the Board of Editors of *Electrochimica Acta* during the past 12 months has been Robert Hillman (Editor-in-Chief), Sergio Trasatti (Special Issues Editor), Philippe Allongue, Gary Attard, Nick Birbilis, Aicheng Chen, Elena Ferapontova, Laurence Hardwick, Deborah Jones, Robert Kostecki, Rüdiger Kötz, Pawel Kulesza, Tomokazu Matsue, Angela Molina, Sotiris Sotiropoulos, Shi-Gang Sun and Jiang-Ping Tu. The year 2020 turns to be also the last year of service of Tomokazu Matsue and of Sergio Trasatti, who will retire as the Editor of the Special Issues at the end of this year. Sergio Trasatti's duties will be taken up by Sotiris Sotiropoulos.

Sergio Trasatti was one of the pilots of our Society for many years. Sergio served the ISE in various capacities including ISE Presidency (1989-1990). He is in fact also one of the ISE Honorary members. Sergio also made great impact on our Society journal and as Editor in Chief (2003-2013) he laid out the fundamentals of the journal's current success. His contributions to our Society have been numerous and the ISE is and will remain grateful to Sergio for the role he has played in the ISE for decades. The ISE is honoured that it can count Sergio among its members.

The Impact Factor of the Society journal for currently rests at 6.216, up from 5.383 reported last year and above the journal's impact factor recorded in all previous years. This result confirms and improves the strength and position of *Electrochimica Acta* among electrochemical journals; there are just two other electrochemistry-focused journals with comparable impact factors. It is important to note that *Electrochimica Acta* was able to adjust to the Covid-19 triggered situation without losing its competitive edge. Despite the lower general activity in the field, largely in the first half of 2020, the journal was able to attract a sufficient number of good quality submissions and to process them through the peer review process in regular production times. It attests the position of the journal not only amongst its authors but in the electrochemical community in general as large numbers of our colleagues accept reviewer assignments. The usage of the journal as projected from the number of downloads remained stable in 2020. There were slight drops in access from some geographic areas, attributable to off-campus operations enforced by the Covid-19 pandemic. Despite the adverse situation with the organization of scientific meetings in 2020, *Electrochimica Acta* published six Virtual Special Issues which collected papers presented at the Society Meetings in 2019. The journal plans to produce Virtual Special Issues also in 2021 when the Special Issues produced for the meetings planned/organized for 2020 will be complemented by several topic-oriented Special issues. These outcomes demonstrate that the journal is not merely in a stable position, but on an upward trajectory. This allows us to look to the future with optimism.

Divisions

The Division Officers supported by Division members, play a central role in the life of the Society, by promoting scientific activities in their respective fields, preparing and implementing the scientific programs of the symposia of meetings of the Society, and organising divisional activities at Annual Meetings. In accordance with the two year cycle the Society held the election of Division Officers in 2020. Based on the outcome of the elections the ISE Divisions from 1 to 7 will be respectively chaired by Luigi Falciola, Elisabet Lojou, Andrea Balducci, Vincent Vivier, Manuel Rodrigo, Magdalena Hromadova and Shen Ye. Hubert Girault will chair the New Topics Committee.

Regional Sections

In the calendar year 2020, the ISE had 44 recognized Regional Sections. The reports on the activities of most Regional Sections are available on the website of the Society (https://www.ise-online.org/ise-committees/RRreports/RR_Reports_2020).

Elections of Regional Representatives for the term 2021-2023 were held in 11 Regions. Debbie Silvester Dean (Australia/New Zealand), Silvia Ceré (Argentina), Vessela Tsakova (Bulgaria), Lucia Mascaro (Brazil), Nadica Ivosevic DeNardis (Croatia), Maria Escudero Escribano (Denmark), Ulrike Krewer (Germany), Margarita Miranda Hernandez (Mexico), Cecilia Cristea (Romania) and Hsisheng Teng (Taiwan) will serve as Regional Representatives in 2021-2023.

I gratefully thank the former Regional Representatives for their activities on behalf of ISE and I congratulate the new ones on their election. Their active participation in the life of the Society, especially in recruiting new members and in maintaining and strengthening the links between the ISE and the local electrochemical communities, is of primary importance.

Executive Committee

Elections were held in spring 2020, to renew four positions in the Executive Committee. Katharina Krischer was elected as President Elect and accordingly will serve on the Executive Committee in the period 2021-2026. Andrea Russell and Takayuki Homma will serve as the Vice-Presidents in 2021-2023. Tim Albrecht has been re-elected as the Secretary General and will serve his second term between 2021-2023. I am pleased to welcome them and I am sure that they will greatly contribute to the future activities of our Society. I am grateful to Deborah Jones, Nadine Pebere and Woonsup Shin who agreed to stand as candidates and, although not elected, received large numbers of votes. The term of service of Phil Bartlett (The Elect-President, President, Immediate Past President 2015-2020) and of Deborah Jones and Allison Downard (ISE Vice Presidents 2018-2020) comes to its end. We all are deeply indebted to them for their excellent service to the Society.

The elections of a Vice President (2022-2024) will take place during the spring of 2021. A Nominating Committee chaired by Marc Koper (as the President), comprising Daniel Belanger, Mihaela Ungureanu, Wolfgang Schuhmann and Zhong-Qun Tian (as the Immediate Past President), will select the candidates.

Other Committees

The term of Nadine Pebere as member of the Scientific Meetings Committee (SMC) ended on 31st December 2020. Enrique Herrero will replace her and will serve on the SMC for 3 years (2021-2023). David Williams will chair the SMC in 2021, the final year of his term.

In the Fellows Nominating Committee (FNC), Shelley Minter was appointed to replace Elena Savinova, whose ordinary five-year term ended on 31st December 2020. Hasuck Kim will chair the committee in 2021. I wish to thank Nadine and Elena, for their numerous valuable contributions to the activity of the ISE committees, Shelley and Enrique for agreeing to serve. The activity of the

“Working Party for Diversity” will continue in 2021. Stimulating nominations of female candidates to ISE awards and ISE Fellowship will be one of their main tasks. The Working Party will be chaired by Francesco Paolucci and will comprise Shelley Minter and Elena Ferapontova.

Membership

This year ISE recorded 3854 active members (including 15% students and 4% retired members), which is the second highest number in the ISE history. This number is remarkable given the fact that the Society was forced to restrict its operations to online activities. The ISE membership recruited from 80 countries and regions, which is the highest number of regions in the ISE history. I am confident that further growth will be possible in the near future. The geographical distribution of the members is very sensitive to the location of the Annual Meeting, but about a half of the members are typically from Europe. The membership fees for 2021 have been maintained at the 2019 level, i.e. 50 € for ordinary members and 15 € for young and emeritus members. ISE will continue to collect the experience and improve the service capability to our members through various online activities including not only the successful annual and topic meetings but also effective communication and education platforms. I hope you will continue to enjoy the benefits of ISE membership and contribute to the further development of our Society.

May I end this detailed letter, that provides a comprehensive picture about ISE activities, with my best wishes to ISE and my able successor, Marc Koper. I am confident that under his leadership, ISE will continue to innovate and advance. Finally, I wish you all a healthy, peaceful and happy New Year!

Sincerely yours,



Zhong-Qun Tian

ISE President 2019-2020

Xiamen, December 31st, 2020