

Dear friends and colleagues, dear members:

At the end of each year it is traditional to circulate a newsletter to all members. I am therefore delighted to have this opportunity to bring you up to date with the activities of ISE during 2011, the first year of my term of office as President. It has been a demanding year, due to both global and societal events. The catastrophic earthquake and tsunami that hit Japan on 11 March, severely affected the lives of our Japanese colleagues engaged in the organization of the 62nd Annual Meeting. Sharon Roscoe, one of the most experienced and active members of the Executive Committee, was forced to resign from Secretary General, for reasons of health, and since March we have all missed her contribution to the collegial work of the EC. Nevertheless, I feel that I can report that 2011 was another very successful year for our Society: two well-attended meetings of excellent scientific quality were held in Turku, Finland and Niigata, Japan; we reinforced the infrastructure of the Society by appointing Kathleen Vionnet as Meetings Liaison Officer, and that of the Society Journal by extending the number of Associate Editors; the Impact Factor of *Electrochimica Acta*, the number of Regional Sections and the Society membership attained new maxima.

Scientific Meetings

Following a tradition initiated in 2003, ISE organized two major scientific meetings in 2011. The 9th Spring Meeting in Turku, was the first ISE Meeting ever organized in Finland. The 62nd Annual Meeting in Niigata, Japan marked the return of ISE to this country, 13 years after the Annual Meeting held in Kitakyushu in 1998. Both meetings contributed to strengthening the image of ISE as a Society actively pursuing scientific excellence in electrochemical research and technology, and generated some financial surplus that, as usual, will be shared amongst the Regions hosting the meetings, the Divisions involved in the Spring Meeting organization and the ISE central funds.

Annual Meeting

The 62nd Annual ISE Meeting, held at the Toki Messe Niigata Convention Center, named after the *toki*, or Japanese Crested Ibis (*Nipponia nippon*), attracted 1242 participants from 43 countries. Niigata City is located on the Sea of Japan, at the estuary of the Shinano River, the longest in the country. 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.

The main theme of the Meeting was “Electrochemical Frontiers in Global Environment and Energy”, which is both relevant and challenging to the many changes affecting the world today. The wide scope of all the ISE Divisions’ activities was very well covered.

At the Opening Ceremony, chaired by Toshiyuki Momma, Secretary General of the Organizing Committee, the participants were welcomed by Tetsuya Osaka, Chair of the Organizing Committee, Tadashi Matsunaga, President of The Electrochemical Society of Japan, and myself as ISE President. Then, the 2010 ISE Award were presented to the winners.

The scientific contributions from the participants were extensive and of excellent quality. The five plenary lectures were presented by Ulrich Stimming (Germany) as the *Electrochimica Acta* Gold Medal Winner, Richard Alkire (USA), Jean-Marie Tarascon (France), Tadashi Matsunaga (Japan), and Klaus-Dieter Kreuer (Germany). The award winners who presented their work in Niigata included Shi-Gang Sun (Brian Conway Prize for Physical Electrochemistry), Shelley Minter (Tajima Prize), Marian Chatenet (Oronzio and Niccolò De Nora Foundation Prize of ISE on Applied Electrochemistry), Ignacio Sirés Sadornil and Minghua Zhou (joint winners of the Oronzio and Niccolò De Nora Foundation Prize of ISE on Environmental Electrochemistry), and Katarzyna Szot (Oronzio and Niccolò De Nora Foundation Young Author Prize). In total the program included 5

plenary lectures, 50 keynote lectures, 496 oral communications and 579 posters, distributed among 14 Symposia. A special session celebrating the International Year of Chemistry was held to show the past, present and future importance of electrochemical science and technology in society, industry, energy, environment and health. Two excellent tutorial lectures were presented on Sunday afternoon: “Quantitative SNIFTIRS and PMIRRAS studies of adsorbates at electrode surfaces” by Jacek Lipkowski, and “Electrocatalytic reactions revealed by time-resolved surface-enhanced infrared absorption spectroscopy (SEIRAS)” by Masatoshi Osawa. Both were extremely successful, each with more than 140 attendees.

The participants could also enjoy many social activities during the week. The Welcome Reception on Sunday evening and the two Exhibitor and Posters Receptions on Monday and Tuesday evening were greatly successful, with a large participation. Many participants took part in excursions, on Wednesday afternoon. The banquet, on Thursday evening, took place at Hotel Nikko Niigata with the participation of more than 320 persons. After a short ceremony to break open the lid of the *sake* barrel by a wooden mallet, *sake* was served to participants. The participants then enjoyed traditional Japanese dances and exquisite Japanese food including *sushi* and *tempura*.

In relation with the main theme of the Meeting, the Local Organizing Committee presented electric vehicle (EV), plug-in hybrid electric vehicle (PHEV) and fuel cell vehicle (FCV). The participants could enjoy a five-hundreds-meter test ride of EV and FCV at the truck yard surrounding TOKI MESSE. On the occasion of the IYC 2011, the Local Organizing Committee also presented Marie Curie International Contest of Battery on Sunday afternoon, in cooperation with The Electrochemical Society of Japan.

During the conference, the usual executive meetings of the Society were held: Regional Representatives' Meeting, Division Officers' Meeting, Council Meeting and General Assembly. Each of the seven Divisions of ISE held a luncheon meeting in which the members were asked to provide input and suggestions for future activities, especially at the forthcoming Annual Meetings.

We are extremely proud that our Society was able to organize such a successful meeting only six months after the earthquake and tsunami waves that struck the northeast region of Japan on March 11. I feel deeply indebted to Tetsuya Osaka and Toshiyuki Momma, respectively Chair and Secretary General of the Organizing Committee, to their team and to the personnel of the ISE Office who completed their task on a time scale much shorter than the usual one, due to the forcedly delayed deadline for abstract submission. Our thanks are due also to The Electrochemical Society of Japan (ECSJ), The Committee of Battery Technology, ECSJ, Japan Association of Chemical Sensors, ECSJ, The Committee of Capacitor Technology, ECSJ, by Tokyo Ohka Foundation for The Promotion of Science and Technology, Niigata City and Niigata Prefecture.

The 63rd Annual Meeting will take place in Prague, Czech Republic on 19-24 August, 2012. Its theme will be “Electrochemistry for Advanced Materials, Technologies and Instrumentation”. I do hope that a large number of ISE members will participate in this event to present their work, discuss the latest advances in our discipline, create new contacts and refresh old ones. In subsequent years, the ISE Annual Meeting will continue to move around the world: to Santiago de Querétaro, Mexico (2013); to Lausanne, Switzerland (2014); to Taipei (2015) and thereafter to other exciting venues yet to be decided, so please consult the Society web site regularly.

Spring Meeting

The 9th Spring Meeting was held at the Mauno Koivisto Centre in Biocity, Turku, Finland, from May 8 to May 11, 2011. The theme of the meeting was “**Electrochemical Sensors: From Nanoscale Engineering to Industrial Applications**”, which attracted 223 participants from 35 countries. The

Meeting was organized jointly by ISE Division 1 (Analytical Electrochemistry) and ISE Division 5 (Electrochemical Process Engineering and Technology). The program included 4 keynote lectures, 12 invited lectures, 58 oral presentations, more than 100 posters and an instrument exhibition.

The Opening ceremony on Sunday evening, May 8, was followed by a Special session celebrating the International Year of Chemistry (IYC 2011). In this session, the importance and success of electrochemistry was highlighted by Christopher Brett (Portugal). Christian Amatore (France) described then how electrochemistry helped to reveal the biomedical properties of Egyptian black makeup. After these enlightening presentations the evening was concluded with a Welcome reception sponsored by the City of Turku.

In the following three days, keynote lectures were given by Michael Mirkin (USA) "Nanoscale electrochemical sensors prepared by electrodeposition", Justin Gooding (Australia) "Nanoparticle architectures for improving selectivity and sensitivity of electrochemical affinity biosensors", Jiri Janata (USA) "Work function potentiometric sensors" and Ritu Katakya (UK) "Chiral sensing and its significance". Each of the parallel sessions started with an invited lecture (30 min) followed by oral presentations (20 min). Invited lectures were given by Gordon Wallace (Australia), Richard Baldwin (USA), Richard G. Compton (UK), Serge Zhuiykov (Australia), Andrzej Lewenstam (Finland), F. Xavier Rius (Spain), Dermot Diamond (Ireland), Eric Bakker (Switzerland), Robert E. Gyurcsanyi (Hungary) and Li Niu (China). Poster sessions were held on Monday and Tuesday. The poster prize (300 €) was awarded to Takeshi Irisako from Tokyo University of Science (Japan).

The delegates were fortunate to enjoy excellent Spring weather during the whole conference, including Tuesday evening when the conference dinner was held at Restaurant "Naantalin Kaivohuone" in the old town of Naantali by the sea.

I would like to thank Johan Bobacka, Chair of the Organizing Committee, and his team of local organizers and student helpers. Financial support from the City of Turku, Elsevier, Fortum Foundation, IJ Cambria Scientific LTD, Neste Oil Corporation, Outotec Oy, Research Institute of Åbo Akademi Foundation, Thermo Fisher Scientific Oy, Åbo Akademi Process Chemistry Centre and Åbo Akademi University is gratefully acknowledged.

In the future, Spring Meetings will be called Topical Meetings, to recognize the seasonal differences between Northern and Southern hemispheres. In 2012, the ISE will have two Spring/Topical Meetings, in Perth, Australia on "**Electrochemical Science and Technology in the Solution of Real Life Problems – New Approaches to Nanostructuring Electrodes for Electroanalysis and Energy Storage**" and in Washington DC, USA on "**Theoretical and Computational Electrochemistry**", combined with the ISE Training School on Theoretical and Computational Electrochemistry. An exciting list of destinations for the following years will include Bochum, Germany and Pretoria, South Africa in 2013, and Nanjing, China and Niagara Falls, Canada in 2014.

Sponsored Meetings

Many international meetings were sponsored in 2011 by the ISE Divisions or by the Executive Committee, as indicated below.

- The 14th Annual Meeting of the Israel Analytical Chemical Society, 7-8 February, Tel Aviv, Israel, Division 1
- 4th ISEAC International Discussion Meet on Electrochemistry and its Applications, 7-10 February, Division 1
- 241st National American Chemical Society Meeting: Graduate Student Symposium, 28 March, Anaheim, USA, Executive Committee

- 10th Intl. Symposium on Passivity of Metals and Semiconductors, 10-14 April, Florianopolis, Brazil, Division 4
- XXI Int. Symposium on Bioelectrochemistry and Bioenergetics of the Bioelectrochemical Society, 8-12 May, Cracow, Poland, Division 2
- Electrochemistry in nano structuration of substrates and Energy, 23-26 May, Paris, France, Executive Committee
- 9th International Microsymposium on Electrochemical Impedance Analysis, 2-5 June, Otok Sv. Andrija/Rovinj, Croatia, Division 7
- 2nd International Symposium on Enhanced Electrochemical Capacitors, 12-16 June, Poznan, Poland, Division 3
- 9th European Symposium on Electrochemical Engineering, 19-23 June, Chania, Greece, Division 5
- Journées d'électrochimie, 4-8 July, Grenoble, France, Executive Committee
- Conducting polymers - Formation, structure, properties, and applications, 75th PPM, 10-14 July, Prague, Czech Republic, Division 4
- 10th Symposium on Electrokinetic Remediation, 17-20 July, , Utrecht, The Netherlands, Division 5
- 43rd IUPAC World Chemistry Congress, 30 July-7 August, Puerto Rico, San Juan, Division 2
- Electrochem Horizons', 5-6 September , Bath, United Kingdom, Executive Committee
- XXXII Reunion del Grupo de Electroquímica de la RSEQ, 7-9 September , Murcia, Spain, Executive Committee
- Renewable Energy and Materials Tailoring, 18-19 September , Kyoto University, Kyoto, Japan, Division 4 and 5
- European Materials Research Society Fall Meeting, 19-23 September , Warsaw, Poland, Division 3
- The 6th Ukrainian Congress on Electrochemistry, 20-23 September , Dnepropetrovsk, Ukraine, Executive Committee
- 9th Electrochemistry Meeting in Turkey, 25-29 September , Izmir (Cesme), Turkey, Executive Committee
- The 5th International Workshop on Surface Modification for Chemical and Biochemical Sensing, SMCBS, 4-8 November, Lochow, Poland, Division 2
- International Workshop: Polymers at Electrodes – A Quarter of a Century later, 6-9 November, Bad Schandau, Germany, Division 6
- Fray International Symposium on Metals and Materials Processing in a Clean Environment, 28 November-1 December 1st, Cancun, Mexico, Division 4 and 5
- ISEAC International Symposium cum Workshop on Electrochemistry, 7-10 December, Goa, India, Executive Committee
- The 6th International Conference of the Africa Materials Research Society, 11-16 December, Victoria Falls, Zimbabwe, Executive Committee
- Advanced Electrochemical Energy Symposium, 28-30 December, Hong Kong, China, Division 3

Fellows

Six new ISE Fellows were appointed in 2011 in recognition of their scientific achievements. They are: Takashi Kakiuchi, Nenad Markovic and Ulrich Stimming, who were presented their medals during the General Assembly held in Niigata, Alan Bond, William Ronald Fawcett and Patrick Unwin, who were

not able to attend this year's Annual Meeting and will therefore receive their medals at a future meeting.

Awards

Nine ISE Prizes were awarded in 2011, to recognize the scientific work of outstanding scientists and promising young researchers. The winners were announced in Niigata.

- The Frumkin Memorial Medal was awarded to Dieter Kolb, University of Ulm, Germany, for his many seminal contributions in the application of physical techniques to Electrochemistry.
- The Prix Jacques Tacussel was awarded to Kingo Itaya, Tohoku University, Sendai, Japan, for his pioneering development of atomic-resolution in-situ scanning tunnelling microscopy for electrochemistry.
- The Katsumi Niki Prize for Bioelectrochemistry was awarded to Wolfgang Schuhmann, Ruhr-Universität Bochum, Germany, for his outstanding contributions to a wide range of areas in bioelectrochemistry.
- The Alexander Kuznetsov Prize for Theoretical Electrochemistry was awarded to Wolfgang Schmickler, University of Ulm, Germany, for his groundbreaking contribution to the theory of electrode reactions, electrical double layer and interfacial thermodynamics.
- The Tajima Prize was awarded to Hogan Yu, Simon Fraser University, Burnaby, British Columbia, Canada, for his outstanding scientific activity in the field of surface electrochemistry.
- The Hans-Jürgen Engell Prize was awarded to Jamil Elias, EMPA, Thun, Switzerland, for his studies on electrodeposition of nanostructured metals and semiconductors.
- The ISE Prize for Environmental Electrochemistry was awarded to Cristina Saez, Universidad de Castilla La Mancha, Ciudad Real, Spain, in recognition of her contributions to the development of electrochemical technology for the treatment of waste streams from industrial processes.
- The ISE Prize for Applied Electrochemistry was awarded to Frédéric Maillard, LEPMI/CNRS, Grenoble, France for his prominent achievements on polymer electrolyte fuel cells.
- The Oronzio and Niccolò De Nora Foundation Young Author Prize was awarded to Meng Li, Brookhaven National Laboratory, Upton, NY, United States, author of the article "Ethanol oxidation on the ternary Pt–Rh–SnO₂/C electrocatalysts with varied Pt:Rh:Sn ratios".

Nominations and applications for the ISE Prizes 2012 are invited and must be submitted to the ISE Office between February 1st and May 1st, 2012.

Two Electrochimica Acta Travel Awards for Young Electrochemists 2011, offered by Elsevier and aimed at encouraging the participation of young scientists in the ISE Annual Meeting, were awarded to Laurence Hardwick, University of St Andrews, United Kingdom and Debbie Silvester, Curtin University, Perth, Australia. Seven ISE Travel Awards were awarded to Paramaconi Benito Rodriguez Perez, Leiden Institute of Chemistry, Netherlands; Karl Mayrhofer, Max-Planck-Institut für Eisenforschung, Germany; Alessandro Minguzzi, University of Milan, Italy; Grzegorz Lota, Poznan University of Technology, Poland; Leigh Aldous, University of Oxford, United Kingdom; Liza Rassaei, University of Twente, Netherlands; Adriana Ispas, Technische Universität Ilmenau, Germany. Most of the awardees presented their work in Niigata.

Two Electrochimica Acta Travel Awards and up to eight ISE Travel Awards will be made in 2012, to enable young researchers to participate in the 63rd Annual Meeting, in Prague.

Society Journal

Electrochimica Acta, the Journal of our Society, continues to grow, thanks to the competent and passionate work of the Editor-in-Chief, Sergio Trasatti and of the Editorial Board comprising Tomokazu Matsue and Andrzej Wieckowski (Editors), Nick Birbilis, Rüdiger Kötz and Pawel Kulesza and Sotirios Sotiropoulos (Associate Editors). This excellent team will be further reinforced in 2012, with the appointment of additional Associate Editors. The Impact Factor of *Electrochimica Acta* has shown further progress, attaining a historical maximum at 3.642 for 2010 compared to 3.325 for 2009, 3.078 for 2008, 2.848 for 2007, 2.955 for 2006 and 2.453 for 2005.

Executive Committee

The Executive Committee members elected in 2010, Hasuck Kim (President Elect, 2011-2012), Christian Amatore and Hiroshi Nishihara (Vice Presidents, 2011-2013) and Bernard Tribollet (Treasurer, 2011-2013), started their service in 2011 and brought new energies and new ideas to the Society. June 2011, two Vice Presidents, Susana Cordoba de Torresi and Marc Koper, were elected, to replace Ernesto Calvo and Richard McCreery who will leave the Executive Committee on December 31st, 2011.

Just a few days ago, the ISE membership has elected Manuela Rueda, University of Seville, Spain, to the position of Secretary General of the Society. In June 2012, the President Elect who will succeed Hasuck Kim will be elected. I invite you all to participate, in due time, in these online elections.

Divisions

The ISE Divisions, chaired in 2011-2012 by A. Bond (Division 1), A. Kuhn (Division 2), E. Frackowiak (Division 3), P. Schmuki (Division 4), T. Homma (Division 5), J. Ludvik (Division 6) and E. Savinova (Division 7), and the New Topics Committee chaired by H. Abruña, continue to have a leading role in the scientific life of the Society, particularly in the establishment of symposia at forthcoming Annual Meetings and in the choice of topics for the Topical Meetings. I am also glad to report that some divisions have been active in awarding prizes for the best posters presented at ISE meetings, and that Division 2 has created its Facebook page. The Division Officers are now busy preparing their annual reports on the divisional activities during 2011 and these reports will be published on the Society website in the near future. The Divisional Boards will be requested to nominate Chair Elect candidates, during the spring 2012, in order to enable the Society to hold divisional elections during the autumn. As divisional members, if you have good ideas on topics for symposia, and on Division Chair Elect candidates, may I encourage you to communicate these to your Division Officers.

Regional Sections

A Regional Section was re-constituted in Bulgaria, after eight years during which the local membership had been below the necessary threshold, and Z. Stoyanov was elected as Regional Representative of his country for the term 2012-2014. Regional Representatives of 8 other sections were recently elected. S. Komorsky-Lovric (Croatia) and L. Muresan (Romania) were re-elected for a second term. A. E. Bolzán (Argentina), E. A. Ticianelli (Brazil), Q. Li (Denmark), H. Baltruschat (Germany), C. Frontana (Mexico), J. M. Palma Correia (Portugal) and V. F. Lvovich (USA) will each serve their first term in the period 2012-2014. I wish to thank the former Regional Representatives for their activities on behalf of ISE and to 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 ISE and the local electrochemical communities, will be of primary importance.

Committees

The term of Manuela Rueda as member of the Scientific Meetings Committee (SMC) ended on December 31st, 2011. She will be replaced by Johan Bobacka who will serve on the SMC for three years (2012-2014). Romeu Rocha will Chair the SMC in 2012, the last year of his term.

December 31st, 2011 also marked the end of the term of Juan Feliu as a member of the Publication Committee (PC). The Executive Committee has appointed Masayoshi Watanabe to serve for the term 2012-2014.

In the Fellows Nominating Committee (FNC), Digby Macdonald was appointed to replace Richard Alkire, whose term ended on December 31st, 2011. Shi-Gang Sun will chair the committee in 2012.

I wish to thank Manuela, Juan and Richard for their numerous valuable contributions to the activity of the ISE committees. It may often be difficult to quantify these contributions, but experience has shown that when an activity is successful, the origins of this success can be traced back to some innovation and effort shown by an imaginative Committee member.


Membership

In 2011, the Society membership reached the number of 2994 active members, the highest ever, compared with 2686 in 2010, 2330 in 2009, 2114 in 2008, 1910 in 2007 and 1682 members in 2006. Although the ISE priority is scientific excellence, not size, this growth encourages the Executive Committee to think that the Society, its meetings, its journal and all its other activities are increasingly appreciated by the electrochemical community worldwide.

As this letter indicates, we have had a busy and eventful year. The success of the ISE is the result of efforts by many talented and dedicated individuals, and we are deeply grateful for each person's contribution. It is customary, at the beginning of a New Year, to resolve to take actions which will enhance our lives. In addition to resolving to get more exercise and to spend more time with our families, I suggest that we make a resolution this year to increase our involvement and commitment to the ISE. For those of us who direct research activities of students, I suggest we take the opportunity to encourage each of our students to become members of ISE. Let us resolve to suggest ISE membership as well to our non-ISE colleagues who are working in electrochemical fields. The ISE is a community that provides a framework for exchange of scientific ideas and for meeting other scientists with similar interests. Let us resolve to engage with our respective Regions and Divisions by suggesting topics or offering to help organize symposia and meetings.

It has been an honor and a privilege to serve as your ISE President, and I look forward to working with you in the coming year. I wish you all a successful and happy New Year!

Sincerely,



Mark Orazem

ISE President 2011-2012

Gainesville, January 4, 2012