

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 2009. This has been the first year of my term of office as President and I have been continually impressed with the volume, diversity and quality of the science with which our Society has been involved. My aim here is to communicate this to you, along with an impression of the energy, achievements and intellectual innovation generated by the membership.

Scientific Meetings

Following now well-established tradition, ISE organised two major scientific meetings in 2009. The 7th Spring Meeting in Szczyrk, Poland was the first Spring Meeting organized in Eastern Europe. The 60th Annual Meeting in Beijing, China marked the return of ISE to this country, 14 years after the 46th Annual Meeting held in Xiamen. Both the Spring Meeting and the Annual Meeting were scientifically very successful and contributed to strengthening the image of ISE as a Society actively pursuing scientific excellence in electrochemical research and technology. Furthermore, both meetings generated a financial surplus that will be shared between the Regions hosting the meetings, the Divisions involved in the Spring Meeting organization and the ISE central funds. The latter component will be invested in future activities, including sponsorship of other scientific meetings of interest to members – more on these below - and with particular regard for the benefit of younger members.

Annual Meeting

The 60th Annual Meeting of ISE was held on August 16 to 21 at Peking University, Beijing, China. The theme of the meeting was “**Emerging Trends and Challenges in Electrochemistry**” to emphasize the role of electrochemistry in contemporary science and its impact on vital issues of everyday life, such as energy needs and the environment. The meeting attracted 1308 participants from 55 different countries, thus approaching the record attendance of the previous year’s Annual Meeting in Seville, Spain. Not surprisingly, a large number of participants originated from Asia (864), but many delegates also travelled from Europe (338). Besides the host country, from which there were 527 delegates, the largest groups of participants were those from Japan (118), Korea (114), Germany (57), United Kingdom (53), France (37) and USA (36). This large and geographically disperse participation was extremely welcome and was testament to the growth and strength of electrochemistry in the region.

At the Opening Ceremony, chaired by Zhongfan Liu, the delegates were welcomed by Chunli Bai (President of the Chinese Chemical Society), Qifeng Zhou (President of Peking University), Li-Jun Wan (co-chair of the Organizing Committee), and by myself. Then, the ISE 2008 Award winners received their certificates.

The scientific programme was quantitatively and qualitatively very rich. Plenary lectures were presented by Alan J. Heeger (*Nobel Prize for Chemistry in 2000*) “*Plastic Solar cells: Self-Assembly of Bulk Heterojunctions*”, Philip N. Bartlett who delivered the *Electrochimica Acta* Gold Medal lecture entitled “*Molecular Electrochemistry: Modification, Mediation and Design of Electrode Surfaces*”, Shi-Gang Sun “*Electrochemically Shape-Controlled Metal Nanoparticle Electrocatalysts of Open Surface Structure and High Performance*”, Zempachi Ogumi “*Lithium Ion Batteries for Green Energy Systems*”, and Dieter M. Kolb “*Electrochemical Surface Science: The Present and Future*”. Award lectures were delivered by Frieder Scheller “*Contributions to Electro Enzyme Technology*”, Juan Feliu “*The Role of Anion Adsorption in Electrocatalysis*”, Ismael Diez-Pérez “*In situ Probing Fe Passivity and Breakdown by ECSTM/ECTS*”, Agnieszka Kapalka “*A DEMS Study of the Electrochemical Oxidation of Organic Compounds on Boron-doped Diamond Electrodes*”, and Adam Z. Weber “*Impact of Gas-Diffusion Layer Wettability on Polymer-Electrolyte-Fuel-Cell Performance*”. The programme was completed by 56 keynote lectures, around 600 oral presentations and 700 poster presentations, distributed among ten Symposia. The recent tradition of offering free tutorial lectures to the delegates, especially directed towards the younger ones, was continued. The topics treated in the

tutorial courses, on Sunday 16 August, were “*Nanoscopic Processes in Fuel Cells*”, with lectures by Ulrich Stimming and Masahiro Watanabe, and “*Principles and Applications of Diffusion at Ultramicroelectrodes*”, delivered by Christian Amatore, who lectured for the full 3 hours to cover for Andrew Ewing who was unable to attend the meeting.

The traditional excursions took place on the afternoon of Wednesday 19 August. Three options were offered: The Great Wall, with a visit to the 600-year-old Badaling Fortification in Yanqing County in northwest Beijing, a very representative example of the Ming sections of the Great Wall; the Forbidden City, which occupies an area of over 720,000 square meters in central Beijing, with its imperial palace of the Ming and Qing dynasties; an Acrobatic Show, with a rich display of lighting, music, action and costume. The banquet took place at the “Beijing Friendship Hotel” and offered to hundreds of delegates a wide selection of delicious Chinese dishes and an unforgettable show.

During the conference, ISE held meetings pertaining to the organization of the Society: the Regional Representatives’ Meeting, the Division Officers’ Meeting, the Council Meeting and the General Assembly. During the General Assembly the 2009 ISE Award winners were announced and the new ISE Fellows were inducted. Most, although not all, Divisions of ISE held well-attended luncheon meetings at which the members were asked to provide input and suggestions for future activities, especially at the forthcoming Annual Meetings. We welcome this input of ideas.

On behalf of all ISE members, I wholeheartedly thank Zhongfan Liu and Lijun Wan, co-chairs of the Organizing Committee, and all the excellent staff they assembled, from the General Secretaries Yongfang Li and Jin Zhang to the enthusiastic and effective student helpers, for their generous effort and enthusiasm that resulted in a memorable scientific and organizational success.

The 61st Annual Meeting will take place in Nice, France, from September 26th to October 1st, 2010. Its theme will be “**Electrochemistry from Biology to Physics**”. I do hope that a large number of ISE members will participate in this event, and possibly in its satellite meetings, to present their work and to discuss the latest advances in our discipline. In subsequent years, the ISE Annual Meeting will continue to move around the world: to Niigata, Japan (2011); to Prague, Czech Republic (2012); to Santiago de Querétaro, Mexico (2013); to Lausanne, Switzerland (2014); and thereafter to other exciting venues yet to be decided, so please consult the Society web site regularly.

Spring Meeting

The 7th Spring Meeting, “**Recent Advances in Electrocatalysis and Photoelectrocatalysis**” was held in Szczyrk, Poland, on 22 to 25 March 2009. Szczyrk is a picturesque mountain resort (with skiing facilities) lying in the Silesian Beskid Mountains located in the southern part of Poland. The meeting was organized in the “*Orle Gniazdo*” (in English: *Eagle’s Nest*) conference-recreation centre located almost at the top of a mountain. From the hotel rooms, there was an impressive charming view of *Skrzyczne* - the highest peak of Silesian Beskid Mountains – covered with 3 meters of snow. Interestingly, although this was formally a Spring Meeting, the visual “white out” effect of heavy snowfall did give a wintery impression. The cold environment contrasted sharply with the warm welcome and the heated scientific debates of the captive audience.

This 7th ISE Spring Meeting was sponsored by the Society’s Division 3 (Electrochemical Energy Conversion and Storage) and Division 7 (Physical Electrochemistry) and attracted over 200 participants, mostly from Europe and North America. It comprised a welcome session on Sunday March 22nd, a plenary session dedicated to Prof. Zbigniew Galus on March 23rd and parallel sessions in the remaining days. Overall almost 100 oral presentations (including keynote lectures) and over 100 posters were presented.

The 7th Spring Meeting provided an interdisciplinary forum for discussion of new results and major achievements in the science and technology of electrocatalysis, bioelectrocatalysis and photoelectrocatalysis. Typical session topics covered fundamental and applied aspects of fabrication and characterization of novel electrocatalytic systems including nanostructured materials, experimental and theoretical studies of their properties, mechanisms and dynamics of charge propagation, reactivity (e.g. towards oxygen reduction, oxidation of alcohols or with respect to inert reactants of analytical importance) as well as applications to fuel cells, hydrogen generation and

photodegradation (e.g. water splitting under illumination, hydrogen generation, photooxidation of a large variety of organic compounds), and chemical sensing.

We are all indebted to Pawel Kulesza, Chair of the Organizing Committee, and to his colleagues for faultless organization and a most friendly welcome.

The 8th Spring Meeting, “**Advances in Corrosion Science for Lifetime Prediction and Sustainability**” will take place in Columbus, Ohio, USA on 2 – 5 May, 2010, with the contribution of ISE Division 4. Registration is now open.

Sponsored Meetings

Many international meetings were sponsored in 2009 by the ISE Divisions or by the Executive Committee, as indicated below.

- The 12th Annual Meeting of the Israel Analytical Chemical Society; 20-21 January 2009, Tel Aviv, Israel (Division 1)
- Biophysics & Bioelectrochemistry for Medicine; 6-9 May 2009, Cisnadioara, Sibiu County, Romania (Division 2)
- XXth Symposium of the International Society of Bioelectrochemistry; 10-14 May 2009, Sibiu, Romania (Division 2)
- 2nd International Symposium on Surface Imaging/Spectroscopy at the Solid/Liquid Interface; 31 May - 3 June 2009, Cracow, Poland (Divisions 4 and 7)
- Electrochemistry in ... Functional Molecules and Materials; 7-10 June 2009, Tübingen, Germany (Divisions 1 and 6)
- First International Symposium on Enhanced Electrochemical Capacitors; June - 2 July 2009, Nantes, France (Division 3)
- Journées d'Électrochimie 2009; 6-10 July 2009, Sinaia, Romania (Divisions 1 and 6)
- International Workshop on Electrochemistry of Electroactive Materials; 14-19 July 2009, Szczyrk, Poland (Division 1)
- XXX Reunion del Grupo de Electroquímica de la Real Sociedad española de Química y XI Encuentro Iberico de Electroquímica; 17-23 July 2009, Adeje, Tenerife, Canary Islands, Spain (Executive Committee)
- International Fischer Symposium Main Topic 2009: "Electrochemistry and Microscopy"; 26-31 July 2009, Benediktbeuern, Germany (Divisions 3 and 4)
- 4th International Conference on Polymer Batteries and Fuel Cells; 2-6 August 2009, Yokohama, Japan (Division 3)
- 42nd IUPAC Congress: Chemistry Solutions; 2-7 August 2009, SECC, Glasgow, UK (Executive Committee)
- International Symposium on Frontiers of Electrochemical Science and Technology; 12-15 August 2009, Xi'an, China (Executive Committee)
- 5th International Fuel Cell Workshop; 22-25 August 2009, Kofu, Japan (Division 4)
- International Symposium on Electrochemistry for Energy Conversion and Storage; 22-24 August 2009, Wuhan-Three Gorges, China (Division 3)
- International Symposium on Nanoelectrochemistry and Spectroelectrochemistry; 23-26 August 2009, Xiamen, China (Division 6)
- EUROCORR 2009; 6-10 September 2009, Nice, France (Division 4)
- 5th European Summer School on Electrochemical Engineering; 6-11 September 2009, Almagro, Ciudad Real, Spain (Division 5)
- Electrochem 2009; 16-17 September 2009, Manchester, UK (Executive Committee)
- Eurointerfinish 2009; 23-24 September 2009, Bremen, Germany (Divisions 4 and 5)

- Electrocatalysis at the Nanoscale: Theory and Modeling; 4-8 October 2009, Ulm, Germany (Executive Committee)
- 8th Electrochemistry Meeting in Turkey; 8-11 October 2009, Antalya, Turkey (Executive Committee)
- The 4th International Workshop on Surface Modification for Chemical and Biochemical Sensing, SMCBS 2009; 6-10 November 2009, Przegorzaly, Poland (Division 2)
- International Symposium on ElectroChemical Machining Technology; 26-27 November 2009, Dresden, Germany (Executive Committee)
- 10th International symposium on Kinetics in Analytical Chemistry; 2-4 December 2009, Cape Town, South Africa (Executive Committee)
- Modern Electroanalytical Methods 2009; 9 December 2009, Prague, Czech Republic (Division 1)

The effectiveness of this means providing ISE support for scientific meetings is reflected in the presence of 15 future ISE sponsored meetings on the Society web site – a number which will no doubt have grown between the time of writing this newsletter and its appearance.

Fellows

Six new ISE Fellows were appointed in 2009 in recognition of their scientific achievements. They are: Antonio Aldaz, Gyorgy Inzelt, Hasuck Kim, Philippe Marcus, Wolfgang Schmickler and Andrzej Wieckowski. Although some of them were unable to participate in the General Assembly held in Beijing, where their appointment was announced, all the new Fellows received sincere applause from the ISE members. Those who were absent will be presented with their medals at an ISE meeting in the near future.

Awards

Eight ISE Prizes were awarded in 2009 to recognize the scientific work of outstanding scientists and promising young researchers. The winners were announced in Beijing.

- The Frumkin Memorial Medal was awarded to Oleg A. Petrii, Moscow State University, Russia, for his many contributions to the field of fundamental electrochemistry.
- The Prix Jacques Tacussel was awarded to Olaf Magnussen, Christian-Albrechts-Universität, Kiel, Germany, for his impressive work in high-tech electrochemical instrumental techniques.
- The Katsumi Niki Prize for Bioelectrochemistry was awarded to Serge Cosnier, Université Joseph Fourier, Grenoble, France, due to his outstanding contributions to bioelectrochemistry mainly in the field of enzyme based and affinity biosensors, nanostructured materials, conducting polymers in bioelectroanalytical devices.
- The Tajima Prize was awarded to Patrice Simon, Université Paul Sabatier, Toulouse, France, for his outstanding research on nanostructured materials for energy storage systems, including supercapacitors and Li-ion batteries, which has made a strong impact in both the fundamental and applied electrochemical communities.
- The Hans-Jürgen Engell Prize was awarded to Karl Mayrhofer, Technische Universität München, Germany, for materials science studies of Pt and Pt alloy electrocatalysts.
- The Oronzio and Niccolo De Nora Foundation Prize of ISE on Environmental Electrochemistry was awarded to Carlos Martinez-Huitle, Universidade Federal do Rio Grande do Norte, Brazil, for his research work on the utilization of electrochemical techniques in industry for the protection of the environment.
- The Oronzio and Niccolò De Nora Foundation Prize of ISE on Applied Electrochemistry was jointly awarded to Dan Brett, UCL, London, UK, for his excellent record of research accomplishments in the field of batteries and fuel cells, and to Charles Delacourt, Université de Picardie Jules Verne, Amiens, France, for his excellent and consistent work on Li-ion battery cathode materials.

- The Oronzio and Niccolò De Nora Foundation Young Author Prize was awarded to Chih-Yu Hsu, National Taiwan University, Taiwan, author of the article "A study of ion exchange at the poly(butyl viologen)-electrolyte interface by SECM", published in *Electrochimica Acta* 53 (2008) 6244–6251 (co-authors V.S. Vasantha and Kuo-Chuan Ho).

Nominations and applications for the ISE Prizes 2010, which will include a new award, the “Alexander Kuznetsov Prize for Theoretical Electrochemistry”, are invited and must be submitted to the ISE Office between February 1st and May 1st, 2010.

The *Electrochimica Acta* Travel Awards for Young Electrochemists 2009, offered by Elsevier and aimed at favouring the participation of young scientists in the Beijing Annual Meeting, were awarded to Petra Cameron (United Kingdom), Nelson Crespilho (Brazil) and Nuria Garcia Araez (Spain). Two Travel Awards will be made in 2010, to enable young researchers to participate in the 61st Annual Meeting, in Nice.

Society Journal

The overall situation of *Electrochimica Acta*, the Journal of our Society, is truly excellent. Its Impact Factor has shown further progress, attaining a historical maximum at 3.078 for 2008, compared to 2.848 for 2007, 2.955 for 2006 and 2.453 for 2005. The Journal attracts an ever-increasing number of manuscripts, effectively handled by an Editorial Board formed by Sergio Trasatti (Editor-in-Chief), Tomokazu Matsue and Andrzej Wieckowski (Editors) and Sotirios Sotiropoulos (Associate Editor). The rising standard of the journal means that the overall rejection rate is now about 58%, and 69% if special issues are excluded.

Executive Committee

As of January 1st 2009, Ernesto J. Calvo and Richard McCreery, the new Vice Presidents elected the previous year, took up the responsibility for Corporate Members and for Educational Activities, respectively, replacing Masahiro Watanabe and Mark Orazem (who became President Elect). No election was required to take place in 2009, so the Executive Committee will maintain the same composition for two consecutive years, which is unusual. Instead, 2011 will be a year of major changes since the terms of office of 5 members of the Executive Committee will be completed on December 31st, 2010. Thus, in June 2010 there will be elections for President Elect, Secretary General, Treasurer and two Vice Presidents. I invite you all to participate in these online elections.

Divisions

Since January 1st 2009, the ISE Divisions have been chaired by S. Daniele (Division 1), L. Gorton (Division 2), M. Winter (Division 3), T. Moffat (Division 4), F. Walsh (Division 5), C. Amatore (Division 6) and M. Koper (Division 7); the New Topics Committee is chaired by T. Matsue. These colleagues, with the support of their divisional boards, will have a leading role in the scientific life of the Society. A particularly high profile task is the establishment of symposia at forthcoming Annual Meetings. As divisional members, if you have good ideas on topics for symposia, may I encourage you to communicate these to your Division Officers. The Divisions are also expected to contribute significantly to the choice of topics for the ISE Spring Meetings which, so far, were proposed mainly by Regional Sections or by the Executive Committee. In return, the supporting Division receives a part of the Spring Meeting surplus to support their other activities. The Division Officers are now busy preparing their annual reports on the divisional activities and these will be published on the Society website in the near future.

Regional Sections

Regional Representatives of 20 sections were recently elected, or are about to be elected. M.S. Ureta (Chile), R. Seeber (Italy) and A. Nekrasov (Russia) were re-elected for a second term. Z. Liu (China),

M. Hromadova (Czech Republic), B. Wilson (Finland), M. S. Bebelys (Greece), S. Sunde (Norway) and F. Björefors (Sweden) will each serve their first term in the period 2010-2012. Elections are in progress in Austria, Belgium, Canada, Iran, Ireland, Korea, Netherlands, Poland, Switzerland, Ukraine, and Venezuela; when the results are known these will be made available on the Society website. 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. Perusal of the list of Sponsored Meetings will also make it clear that the Regional Representatives continue to play an important role in the identification and support of these meetings.

Committees

The term of Philip Bartlett as member of the Scientific Meetings Committee ended on December 31st, 2009. He will be replaced by Romeu Rocha-Filho who will serve for three years (2010-2012).

The same date also marked the end of the term of Peter Pickup as Chair of the Publication Committee (PC). The Executive Committee decided to appoint Rüdiger Kötz, already a PC member, as the new Chair, and to appoint Dennis Evans as PC member. Both of them will serve for the term 2010-2012.

In the Fellows Nominating Committee (FNC), David Schiffrin was appointed to replace Claude Deslouis whose term ended on December 31st, 2009.

I wish to thank Phil, Peter and Claude 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 2009, the Society membership reached the number of 2330 active members, the highest ever, compared with 2114 in 2008, 1910 in 2007 and 1682 members in 2006. 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.

We will greatly miss some friends and colleagues whom we used to meet at ISE conferences, and who left us in the past twelve months. They will be remembered by the whole electrochemical community.

At the end of my first year as President of the Society I am delighted to report that ISE is in excellent health and, through the efforts of members, grows stronger every year. Through its scientific and educational activities, ISE is set to make positive and substantive contributions to our scientific discipline and, through these, to society at large. I have greatly enjoyed the opportunity to meet so many more members during this past year and I look forward to meeting you all at ISE meetings during the coming year. May I end by offering my thanks to all those colleagues who have contributed to the life of the Society. I wish you all a peaceful holiday season and a successful New Year.

Robert Hillman, ISE President 2009-2010

Leicester, January 2010