



**INTERNATIONAL SOCIETY OF ELECTROCHEMISTRY**  
associated organization of IUPAC

**President: Prof. Juan M. Feliu**

Dear friends and colleagues, dear members,

With the present newsletter I wish to update you all on the events that have characterised the life of ISE in 2005, a very positive year, in my opinion.

***Scientific Meetings***

Both the Spring Meeting and the Annual Meeting have been very successful, thanks to excellent organisation and large attendance. Let me start from the Annual Meeting, the one with a longer tradition and a wider scope.

Annual Meeting: The 56<sup>th</sup> Annual Meeting of the ISE was held, for the first time in ISE history, in Korea. The host city was Busan, the second largest city of the country and one of the most active ports in Asia. The main theme of the Meeting, held from September 25<sup>th</sup> to 30<sup>th</sup>, 2005 was “**Electrochemistry for the Next Generation**”, to stress the central role that electrochemistry is expected to play in the next decades in critical areas of science and technology, such as energy, environment and health. The Local Organizing Committee, to which I had the pleasure to collaborate, was coordinated by Hasuck Kim and Seung Mo Oh and comprised outstanding electrochemists from both Korea and neighbouring Asian countries. A very high degree of comfort was offered to all participants by the BEXCO convention center, which provided one of the most modern and suitable venues experienced to date for ISE meetings. As BEXCO was scheduled to host the APEC summit involving political leaders of the Pacific countries some weeks after the ISE meeting, rigorous safety measures were deployed during the whole ISE meeting, so that Hasuck Kim could rightly claim that the 56<sup>th</sup> Annual Meeting was the safest in ISE history!

The scientific programme was arranged in 8 Symposia. Among them, 7 symposia corresponded to ISE Divisions and the 8<sup>th</sup> symposium, “Young Electrochemist Session”, was aimed at offering a privileged stage to the “next generation” of electrochemists. Some of the larger Divisions preferred to split their activity in sub-symposia. Thus, Division 3 organised sub-symposia on Batteries [3A], Fuel Cells [3B] and Electrochemical Capacitors and Hybrid Power Sources [3C], while Division 4 organised sub-symposia on Electrochemical Technologies for Electronics [4A], Corrosion and Surface Treatments [4B] and Nanostructured Materials [4C].

Tutorial courses were held on Sunday afternoon: Electrochemical Sensors (speakers: William R. Heineman and Phillip Buhlmann) and Copper Metallization (speakers: Takayuki Ohba and Yosi Shacham-Diamand). Since both of them were very successful, tutorial courses will be part of the program of next year’s Annual Meeting and probably will be continued with future meetings.

The program included 5 Plenary Lectures:

- A. Hamnett, Recent Insights into Physical Electrochemistry and Electrocatalysis
- M. Watanabe, Development and Evaluation of Electrocatalysts for Fuel Cells

- I. Willner, Electrochemistry and Photoelectrochemistry with Biomolecule-functionalized Electrodes
- P. Alivisatos, Electrical Studies of Single Nanocrystal Tetrapods
- S.-M. Park, Novel Approach to a Complete Description of an Electrochemical System.

All of them attracted a large and interested audience. The scientific program was completed by almost 1150 other communications presented as keynotes, oral contributions or posters. During the conference, the 2005 ISE Prize winners were announced and the 2004 ISE Prizes were presented to the winners. These prizes included the first Katsumi Niki Prize for Bioelectrochemistry, awarded to Jan Ulstrup. The Meeting was attended by 1101 participants from 41 countries, and attracted 26 technical exhibitors.

The social events included a Get-Together Party, an Opening Ceremony, a Welcome reception with a concert, an Excursion to Gyeongju City and a Banquet with Korean national music and dances. I am sure all the participants will join me in expressing our gratitude to Hasuck Kim and his excellent team who converted the challenge of our first meeting in Korea into a great success.

The 57<sup>th</sup> Annual Meeting will take place in Edinburgh, UK, August 27<sup>th</sup> to September 1<sup>st</sup>, 2006. Its theme will be “Innovative Electrochemistry, Enterprising Science”.

Spring Meeting: Bioelectrochemistry 2005, the 3rd Spring Meeting of the ISE, organized jointly with the XVIII International Symposium on Bioelectrochemistry and Bioenergetics of the Bioelectrochemical Society (BES), took place June 19<sup>th</sup> to 24<sup>th</sup>, 2005 in the Auditorium of the University of Coimbra, Coimbra, Portugal. The Conference featured all aspects of the highly interdisciplinary area of bioelectrochemistry and bioenergetics, with contributions from biophysics, biotechnology and medical biophysics, and brought together 350 scientists from 36 countries all over the World.

The conference themes were presented in 5 plenary lectures, 10 invited lectures, the Giulio Milazzo Prize Lecture, 90 oral contributions, 62 posters with 3 minutes oral presentation, and 209 posters, during 5 days of scientific sessions in an intensive scientific programme. Each day, the programme opened with a Plenary Lecture in the main Auditorium. Due to the high number of oral contributions, two parallel sessions took place for the duration of the Conference.

The Bioelectrochemical Society Giulio Milazzo Prize was awarded to E. Neumann who presented the lecture “Molecular electric and magnetic field reception - Analytical access to cellular field effects”. The five Plenary Lectures were presented by R. Guidelli, I. Willner, A.V. Greg, A. Gerhardt and R.T. Kennedy.

Special issues, based on the best papers presented at the Conference, will be published in Bioelectrochemistry, the BES official journal, and Electrochimica Acta, the ISE official journal. All participants were invited to submit a full paper, which was subject to the normal peer-review process.

The social events included a welcome reception followed by an Organ Concert in the Chapel of the University of Coimbra, a visit to the “Biblioteca Joanina” of the University of Coimbra, followed by the Conference excursion to Conimbriga Roman Ruins, and the excursion dinner in Lousã; the Conference Banquet took place in S. Marcos Palace.

I feel indebted to Ana Maria Oliveira Brett who organised Bioelectrochemistry 2005 in an impeccable way and to all the participants who made this conference a big success.

The 4<sup>th</sup> Spring Meeting, “**Nanoscale Electrochemical Materials Science. Fabrications,**

**Characterisation and Applications**” will be organised at the National University of Singapore, April 17<sup>th</sup> to 20<sup>th</sup>, 2006.

Sponsored Meetings: Several international meetings were sponsored by the ISE in 2005.

- 4<sup>th</sup> Baltic Conference on Electrochemistry  
March 13-16, 2005, Greifswald, Germany, Division 4 and Executive Committee
- Asian Conference on Electrochemistry  
May 10-12, 2005, Shanghai, China, Executive Committee
- Theodor Grotthus Electrochemistry Conference  
June 5 - 8, 2005, Vilnius, Lithuania, Executive Committee, Divisions 4 and 7
- The 9<sup>th</sup> International Symposium on the Passivation of Metals and Semiconductors, and the Properties of Thin Oxide Layers  
June 27<sup>th</sup> – July 1<sup>st</sup>, 2005, Paris, France, Division 4
- 1st ECHEMS Meeting  
June 30 - July 3, 2005, Venice, Italy, Division 6
- Carbon 2005 - An International Conference on Carbon  
July 3 - 7, 2005, Gyeongju, Korea, Division 3
- 3<sup>rd</sup> Gerischer-Symposium  
July 6 - 8, 2005, Berlin, Germany, Division 7
- European Corrosion Congress 2005  
September 4 - 8, 2005, Instituto Superior Técnico, Lisbon, Portugal, Division 4
- Electrochemistry 2005  
September 4, 2005, Newcastle upon Tyne, Division 3
- 4<sup>th</sup> International Fuel Cell Workshop 2005  
September 23-24, 2005, Kofu, Japan, Division 3
- 8<sup>th</sup> International Frumkin Symposium “Kinetics of Electrode Processes”  
18-22 October, 2005, Moscow, Russia, Division 3 and 7

### *Agreements*

Last year, ISE signed three agreements, very different in nature, but all of primary importance for the development of our Society.

Agreement with Elsevier. The agreement with the publisher of the Society’s journal, *Electrochimica Acta*, has been renewed to cover the period 2006-2010. The extension of its duration to five years shows that both partners intend to maintain a stable and fruitful cooperation over a long time period. Thanks to this agreement, ISE members will maintain and improve their right to subscribe to Elsevier journals at favourable rates and the Society will continue to receive a yearly financial support from the publisher. An important novelty in the ISE-Elsevier agreement is the institution of the *Electrochimica Acta* Travel Awards for Young Electrochemists, aimed at favouring the participation of young scientists in the Annual Meetings.

Agreements with FontisMedia. Besides the renewal of the ISE Office agreement, decided in 2004 and which came into effect last spring, a second agreement with FontisMedia was signed for the management of the Annual and Spring Meetings. Among other tasks, FontisMedia will take care of receiving registrations and payments, and preparing flyers, brochures and books of abstracts. With this agreement ISE moves toward direct control of its Annual and Spring Meetings, aimed at offering meetings of a consistently high quality to its members and to all participants.

Agreement with the Electrochemical Society of Japan (ECSJ). A cooperation agreement between ISE and ECSJ was signed in Lausanne by Tetsuya Osaka (ISE Vice President and President of ECSJ) and myself. This agreement is intended to intensify the co-operation between ISE and ECSJ, especially through the exchange of information and the organisation of common meetings. The Executive Committees of both Societies had a joint meeting in Busan where a simplified procedure was established for ECSJ members wishing to join ISE.

### ***Amendments to Constitution***

A major event of last year was the approval of the amendments to ISE Constitution proposed by the Executive Committee. These amendments, by establishing that the Executive Committee members offer their time and efforts as unpaid officers, and in the case of disbandment of the Society that the remaining assets will be transferred to analogous public-benefit institutions, enabled our Society to be recognised by the Swiss authorities as a not-for-profit organization operating under Swiss law, formally exempted from the (potential) duty to pay taxes in Switzerland.

### ***Fellows and Honorary Members***

Six new Fellows (J. Heinze, J. Lipkowski, J. McBreen, D. Schiffrin, C. Vayenas and M. Watanabe) and three new Honorary Members (R. Armstrong, E. Cairns and D. Landolt) were appointed last year. All of them are well known to the ISE membership, and to the whole electrochemical community, for their scientific quality and service to the Society.

The Executive Committee policy is to continue to appoint Fellows, to gradually increase the number to 5 % of the membership.

### ***Awards***

Nine ISE Prizes were awarded in 2005 to outstanding scientists and promising young researchers.

The Tajima Prize was awarded to Shaowei Chen, Santa Cruz, California, USA, for ground breaking work on the electrochemical characterization of surface ensembles of nanoparticles.

The Prix Jacques Tacussel was awarded to Masatoshi Osawa, Sapporo, Japan, who developed Surface-Enhanced Infrared Absorption Spectroscopy and applied it to the fundamental adsorption and reactions on the electrode.

Two joint winners shared the Hans-Jürgen Engell Prize: Shuji Nakanishi, Osaka, Japan, for his excellent work in the field of electrodeposition, and Dev Chidambaram, Upton, NY, USA, for his excellent work in the field of Corrosion and Surface Treatment and the use of advanced surface analytical techniques for corrosion studies.

The Oronzio De Nora Foundation Young Author Prize went to M. Arun Prasad, Madras, India, author of the paper "Formulation and analysis of a simple analytical expression for irreversible electron transfer processes in linear sweep voltammetry and its experimental verification" published in *Electrochim. Acta.*, 49 (2004) 2569.

The Klaus-Jürgen Vetter Prize for Electrochemical Kinetics was awarded to Gunther Wittstock, Oldenburg, Germany, who combined very effectively AFM, SECM and ultramicroelectrodes for imaging reaction rates with high local resolution on organic films and enzyme covered electrodes.

Boris B. Damaskin, Moscow State University, Russia, was awarded the ISE Frumkin Memorial Medal for his outstanding contributions to the quantitative understanding of the electrical double layer at electrode/electrolyte interfaces and the effects of adsorption on its properties.

The Oronzio De Nora Foundation Prize of ISE on Electrochemical Energy Conversion was awarded to Wataru Sugimoto, Nagano, Japan, for his research on hydrous ruthenium oxides for supercapacitors and on the kinetics of methanol oxidation on fuel cell electrocatalysts.

The Oronzio De Nora Foundation Prize of ISE on Electrochemical Technology and Engineering went to Marco Panizza, Genova, Italy, for his internationally acknowledged scientific production on innovative electrode materials and on electrocatalysis in electrochemical incineration of organic pollutants in aquatic media.

The Katsumi Niki Prize for Bioelectrochemistry, was awarded to Rolando Guidelli, Florence, Italy, for his synthesis of state-of-the-art physical electrochemistry with comprehensive studies of biological and biomimetic lipid membrane systems on solid electrode substrates, including studies of membrane-bound enzyme and other protein function.

I would like to congratulate all the winners and also express my gratitude to all our colleagues that participate in the different Award Committees.

Eight of the above awardees will give lectures at the 57<sup>th</sup> Annual Meeting in Edinburgh, UK.

Six ISE prizes will be awarded in 2006. Nominations and applications are invited and must be submitted to the ISE Office between February 1<sup>st</sup> and May 1<sup>st</sup> 2006.

### ***Society Journal***

As of January 2005, the Editorial Board of *Electrochimica Acta* comprises 3 Editors: Sergio Trasatti (Editor-in-Chief), Tomokazu Matsue, and Andrzej Wieckowski.

A new on-line submission system, named EES (Elsevier Editorial System) has been available since early April 2005, and the Editors find that it alleviates their job to a considerable extent. Direct submission by e-mail, still preferred by a few authors, will be discouraged and, finally not allowed at all.

The Impact Factor of *Electrochimica Acta* for 2004 (citation in 2004 of papers published in 2003 and 2002) has been 2.341, compared to 1.996 for 2003, which shows a very significant increase.

### ***Executive Committee***

A profoundly renewed Executive Committee ran the Society in 2005. Sharon Roscoe (Secretary General), Luis Alberto Avaca and Francesco Di Quarto (Vice Presidents) were all in the first year of their first term, and all immediately proved to be able to provide the Society with new ideas and tireless dedication. The term of two Vice Presidents, Phil Bartlett and Tetsuya Osaka, ended on December 31<sup>st</sup>, 2005. I wish to thank them for their wise and competent contributions to the work of the Executive Committee, where they were responsible for the educational activities and the relations with corporate members, respectively. I am sure that they will continue to offer their enthusiastic participation to the activities of our Society. Masahiro Watanabe and Mark Orazem were elected last summer, to re-fill the vacancies left by Tetsuya and Phil. I wish to welcome them in the Executive Committee and look forward to working with them.

### ***Divisions***

After the election of Chairs and Chairs Elect held in the Autumn 2004, and the

election/appointment of Vice Chairs, the Divisional Boards in charge for the term 2005-2006 started their work. Two Past Chairs elected to the Executive Committee (Sharon Roscoe, Division 1, and Francesco Di Quarto, Division 4) had to resign from the respective Divisional Boards and were replaced by Hasuck Kim and Waldfried Plieth, respectively.

Each Division has been provided with a space in the ISE web site, which can be used for the publication of reports and news, under the exclusive responsibility of the Divisional Boards. Hopefully, the divisional pages will be an effective tool for the communication between Divisional Boards and Division members.

### ***Regional Sections***

New Regional Representatives of 11 sections (Argentina, Brazil, Croatia, Denmark, France, Germany, Japan, Mexico, Portugal, Romania and USA) have been recently elected or are about to be elected in the next few weeks. I wish to express my thanks to former regional representatives for their activity and my congratulations to the new ones for their election. Their active participation in the life of the Society, especially in the process of recruiting new members, will be of primary importance.

### ***Committees***

The Scientific Meeting Committee was activated. Rob Hillman, former Secretary General of the Society, was appointed Chair, for the term 2005-2007. It was decided that the President Elect, Secretary General and Treasurer will be the other ex-officio members of the SMC, for the duration of their term. The SMC tasks include re-writing the guidelines for meetings organisation and proposing to the Executive Committee the future strategies for meetings organisation.

The Publication committee was entirely renewed. The new members are Peter Pickup (Chair), Susanna Cordoba de Torresi, Robert Dryfe and Minoru Inaba. I am confident that, thanks to their contribution, the quality of the Society's publications, including the web site, will be further improved.

Daniel Scherson was appointed Chair Elect of the New Topics Committee for the term 2005-2006. On January 1<sup>st</sup>, 2007 he will replace Joachim Maier as NTC Chair.

In the Fellows Nominating Committee, Jacek Lipkowski was appointed to replace Waldfried Plieth whose term ended on December 31<sup>st</sup>, 2005.

### ***Membership***

The Society membership has significantly increased in 2005. At the end of last year we had more than 1400 active members. Several factors have contributed to the enlargement of our membership: the recruitment action directed to the corresponding authors of papers published in *Electrochimica Acta*, the very successful Spring and Annual Meetings, the incisive action of some Regional Representatives. I invite you all to promote the image of our Society with colleagues and co-workers. I am convinced that the quality and quantity of the advantages offered by ISE to its members increases every year, while the membership dues are maintained as low as ever.

I believe that our Society has grown significantly last year. At the end of such a successful year, I cannot forget the saddest news we had: some of our friends and colleagues, who occupied outstanding positions in ISE, received its awards or simply participated with enthusiasm in its

activities, left us. W. Schultze, A. Despic, B. Conway, M. Breiter, M. Chemla, J. Amblard, L. Gierst all passed away, but they will remain in our memory.

The second year of my term as President has just started. My wish is that it will be peaceful and successful year for you all.

**Alicante, Spain, January 7, 2006**

**Juan M. Feliu, ISE President 2005-2006.**