Regional Reports 2016

Regional Section	Report
Argentina:	YES
Australia-New Zealand	YES
Austria:	YES
Belgium:	YES
Brazil:	YES
Bulgaria:	YES
Canada:	NO
Caribbean Region	YES
Chile:	YES
China:	YES
	YES
Croatia:	
Czech Republic	YES
Denmark:	YES
Estonia:	YES
Finland:	YES
France:	YES
Germany:	YES
Greece:	YES
Hungary:	YES
India:	YES
Iran:	YES
Ireland:	YES
Israel:	YES
Italy:	YES
Japan:	NO
Korea:	YES
Lithuania:	YES
Mexico:	YES
Netherlands:	YES
Norway:	YES
Poland:	YES
Portugal:	NO
Romania:	YES
Russia:	YES
Serbia:	YES
South Africa:	YES
Spain:	YES
Sweden:	YES
Switzerland:	YES
Taiwan:	YES
Turkey:	NO
Ukraine:	YES
United Kingdom:	YES
USA:	YES



Report of activities: Argentine section of ISE

Prepared for the Meeting of Regional Representatives of ISE, 67th Annual Meeting, The Hague, Netherlands, August 2016

Membership

We have suffered a slow decrease in membership during the last three years but it has apparently attained a plateau. Nowadays, there are 32 ISE members in the Argentine section. The strong devaluation of our currency could be a reason for this decrease. Although I sent personal emails to all the members that were not paying the fee, I got very few answers. I hope that the proximity of the next topical meeting in Argentina will renew the interest to become of return as a member of ISE. We are working on this.

Activities

Unfortunately I could not assist to the last Annual Meeting in Taiwan, but during the last year we have been working hard on the preparation of the 20th Topical Meeting, that will take place in Buenos Aires from 19th to 22nd March, 2017 with the subject "Advances in Lithium and Hydrogen Electrochemical Systems for Energy Conversion and Storage". The organisation committee includes Ezequiel Leiva, as co-chair, Deborah Jones, Robert Kostecki, Yan Yao and Candace Chan. The venue will be at the Auditoriums of the Pontifical Catholic University of Argentina. We expect that the arrival of this ISE Meeting to Argentina will motivate, particularly young people, to join our society.

Best regards,

Agustín E. Bolzán Regional Representative for Argentina

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Report of the ISE Regional Representative for Australia & New Zealand 2016

Dr. Conor Hogan

Membership

The number of Australia & New Zealand ISE members has increased since last year and now stands at 99.

Activities

The 19th ISE Topical Meeting was held in Auckland, New Zealand on 17- 20 April 2016. <u>http://topical19.ise-online.org/index.php</u> The conference was a great success both in terms of the quality of the scientific discourse and the attendance. The conference was preceded by a one-day student focussed conference (which was also very successful). This was co-organised by the Electrochemical Division of the Royal Australian Chemical Institute, the New Zealand Institute of Chemistry and the ISE. *The 20th Australia/New Zealand Electrochemistry Symposium (20ANZES) and ISE Satellite Student Regional Symposium on Electrochemistry.*

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	Graz, 2016-07-18

Report of the ISE Regional Representative for Austria 2016

Membership

Several new research groups working in electrochemistry have recently been established at Austrian Universities. As a result, the number of Austrian ISE members has increased from 26 in January 2016 to 37 at the time of this report.

Activities

An International Workshop "Bioelectrochemistry and more…" organized by CEST and AIT was held in Wiener Neustadt on June 13/14, 2016. The 26th EUCHEM Conference on Molten Salts and Ionic Liquids with a significant fraction of electrochemical contributions took place July 3-8, 2016 in Vienna. The 9th International Summer School on Polymer Electrolyte Fuel Cells organized by Graz University of Technology, Austria in co-operation with Yokohama National University, Japan will take place in Graz from August 28 to September 3, 2016. The 2nd Graz Battery Days "Next Generation Materials and Systems–Truth and Consequences" will be held in Graz, September 27-28, 2016.

<u>Other</u>

Dr. Bernhard Gollas was elected as the ISE Regional Representative for Austria in December 2015 for the term 2016-2018.

Dr. Bernhard Gollas



Tom Breugelmans

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DATE 01 August 2016 SUBJECT

ISE Report from the Belgian Regional Representative prepared for the 67th Annual Meeting of ISE in Den Haag, the Netherlands

Members

Since 2011, the number of members is at least 40. The last years, this number has increased with currently 59 active persons registered as Belgian members.

The interest and evolution in comparison to 2015 of the Belgian members in the different divisions is given here:

- Division 1: Analytical Electrochemistry: from 11 members to 21 members
- Division 2: Bio-electrochemistry: from 13 members to 18 members
- Division 3: Electrochemical Energy Conversion And Storage: from 15 members to 26 members
- Division 4: Electrochemical Materials Science: from 18 members to 27 members
- Division 5: Electrochemical Process Engineering And Technology: from 10 members to 21 members
- Division 6: Molecular Electrochemistry: from 6 members to **10 members**
- Division 7: Physical Electrochemistry: from 13 members to 18 members

Activities

- Each year, the Dutch and Belgian electrochemistry community gathers for the annual meeting of the working group on electrochemistry of the Koninklijke Nederlandse Chemische Vereniging (KNCV). This one day symposium, which benefits from financial support from the ISE provides a common meeting ground for fundamental and applied electrochemistry experts from both countries. In 2015, the symposium, on the theme of Electrochemistry for quality of life, was held at the University of Wageningen, the Netherlands, on November 6th. This year, the symposium will be organized at the Delft University of Technology, the Netherlands and the theme will be *Electroanalysis*. A presentation about the ISE and its activities will be given at this meeting.
- 2. Belgian ISE members have organized two Satellite meetings proceeding the annual ISE meeting in The Hague:
 - the **second Summer Meeting On Bio-Electrochemistry (SMOBE-2016)**, which was held from **17 to 19 August 2016** in Antwerp, Belgium.
 - the **11th International Symposium on Electrochemical Micro & Nanosystem Technologies** (EMNT2016), which took place from **17th of August untill 19th of August**. The symposium

was a co-organisation between (SURF-VUB, CHANI-ULB, CTE-TUDelft, UMons and ART-UAntwerpen). The main theme of EMNT2016 was reliable electrochemical data at the micro and nanoscale for Energy, Environment, and Health, encompassing fundamental and applied research related to electrochemical systems, fabrication technologies and modelling.

Yours Sincerely,

Prof. Tom Breugelmans

Report of the ISE Regional Representative of Brazil 2016

A - Membership

The number of ISE members has grown from 62 in December 2011 to 90 in July 2012, 110 in July 2013, remaining more or less constant after that and reaching 107 members in July 2014, 120 in September 2015, and finally 119 in August 2016.

B - Activities

1) Forthcoming meeting: Regional Brazilian event concerning Environmental Electrochemistry to be held in Natal, between 05 and 07th October, 2016.

This meeting includes several oral communications by renowned speakers (international and national scientists) and undergraduate/graduate students that are studying the application of electrochemical technologies for environmental protection.

The meeting is named "4th ISE Satellite Regional Symposium on Electrochemistry -Environmental Electrochemistry Meeting" (4a Semana de Eletroquímica Ambiental) and the objective is to promote the interest for the electrochemical approaches for different environmental applications.

The ISE will support this meeting with 600 Euros

Sincerely yours, Hamilton Varela Institute of Chemistry of São Carlos University of São Paulo POBox 780, CEP: 13560-970 São Carlos, SP, Brazil varela@iqsc.usp.br **BULGARIAN ACADEMY OF SCIENCES**



INSTITUTE OF ELECTROCHEMISTRY AND ENERGY SYSTEMS "ACADEMICIAN EVGENI BUDEVSKI"

1113 Sofia, "Acad. G. Bonchev" Str., bl.10 Director: Prof. E. Slavcheva, DSc Tel.: +359 2 8722543; +359 879 110 720 Fax: +359 2 8722544 E-mail: <u>eslavcheva@iees.bas.bg</u>; <u>iees@iees.bas.bg</u>

BULSTAT 000662089

Report of activities: Bulgarian section of ISE

prepared for the Meeting of Regional Representatives of ISE, 67th Annual Meeting, Hague, The Netherlands, August 2016

Membership:

The ISE membership stands at 15 members in 2016, which is with one member more than in 2015.

Scientific activity:

In 2015 the members of the Bulgarian Section participated in several of the ISE sponsored meetings and served as reviewers for the ISE journal Electrochemical Acta. Electrochemical Society organized an ISE-sponsored meeting - 5th Regional.

One meeting with possible ISE sponsorship is planned for 2017 "Sofia Electrochemical Days"2017 (SED). It is dedicated to 50th anniversary of the leading Bulgarian research organization in the field of fundamental and applied electrochemistry – "Acad. Evgeni Budevski" Institute of Electrochemistry and Energy Systems – Bulgarian Academy of Sciences and hopefully will be supported by the ISE.

Sofia, 19th of August 2017



Evelina Slavcheva ISE Regional Representative for Bulgaria

ISE-Caribbean Regional Section Annual Report 2015/ 2016

1. Election of the Regional Representative of ISE for the term 2016-2018

After consult to ISE Caribean Region active members about the election of Regional Representative of ISE for the term 2016-2018, 12 members from a total of 14 voted for the re-election of Dr. Jorge A. Calderón as regional representative. The consult was made by e-mail from 12th November to 12th December 2016.

2. Members for country

Currently, there are the following members of Caribbean Regional Section: Colombia: 8 Venezuela: 3 Puerto Rico: 4

3. Activities for country

3.1. Colombia:

- The 1th Symposium of the Applied Electrochemistry: Materials and Corrosion was held in the "Universidad Santiago de Cali", Cali 04-05 April 2016.

- The II Colombian Electrochemistry Congress took place in the Bucaramanga city from 04 to 07 October 2016. It was attended by around 180 people came from every regions of the country.

- During the II Colombian Electrochemistry Congress, the Colombian Electrochemistry Association was stablished. The bylaws of the Colombian Electrochemistry Association were approved during the first general assemble constituted by 48 members.

- 3.2. Puerto Rico:No activities were reported

3.3. Venezuela:

In the year 2016, the XXIX National Meeting of Electrochemistry was held at Simón Bolívar University, Caracas, Venezuela, from November 9 to 11, with the participation of 90 people from the areas of chemistry, chemical engineering and materials from different Venezuelan universities and institutions. The congress was chaired by Dra. Lorean Madriz from the Universidad Simón Bolívar, Caracas - Venezuela. In the congress, there were 36 oral (undergraduate and graduate students) and four plenary lectures by renowned professors such as Prof. Benjamín Scharifker, Prof. Ronald Vargas, Prof. Pedro Matheus and Prof. José Martínez.

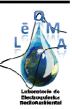
I hope meet you and my colleagues of the Caribbean region in Providence (USA) during the 68th ISE Annual Meeting.

Best regards.

D. Sc. Jorge Andrés Calderón G. Representative of the ISE Caribbean Region Universidad de Antioquia Medellín, Colombia



Universidad Santiago de Chile Facultad de Química y Biología Laboratorio de Electroquímica MedioAmbiental Departamento de Química de los Materiales



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Dr. Ricardo Salazar González Profesor Asistente e-mail: ricardo.salazar@usach.cl

International Society of Electrochemistry Annual ISE report of Chile – 2016

1.- Currently, there are 30 ISE members in Chile (July, 2016).

2.- At the end of 2015, the choice of RR of Chile was conducted, and was elected for a second term Dr. Ricardo Salazar of the University of Santiago, Chile.

3.- In January 2016, was realized the XXXII Conference Chilean Chemistry (XXXII Jornadas Chilenas de Química) together with the Latin-American Meeting of Chemistry (CLAQ) in Concepción, Chile.

4.- In January 2016, was realized the Third Summer School of Electrochemistry in the University of Santiago of Chile, were 40 students from Chile and Latin-America participated in class and laboratories. The lectures were given by professors of the University of Santiago of Chile, and laboratories were given by young professors, postdocs and phD students. This year we had the participation of two foreign professors: Dr. Carlos Martinez Huitle (Brazil) and Juan Peralta Hernandez (Mexico). Sponsors: ISE, DEQ & SChQ, Melvyn Becerra (Autolab) and Agencias RubioyGras (CHInstrument).

> Ricardo Salazar González Regional Representative of Chile

15th July, 2016





Annual ISE report of China (2015-2016)

Members:

ISE Regional Representative of China actively encourages the Chinese scientists in the field of the electrochemistry and the relative fields to become the ISE member through the website of CSE (the Chinese Society of Electrochemistry) and WeChat. The current number of ISE members in China is 378.

Activities:

In July 1-4, 2016, ISE Regional Representative of China organized two sessions in the 30th annual meeting of Chinese Chemical Society (CCS), namely "Electrochemical Materials" and "Chemical Power Sources". More than 1000 participants attended two sessions.

ISE regional group applied to organize the ISE Annual Meeting (AM) 2022 in China, and also greatly supported Professor Zhong-Qun Tian in Xiamen University to elect the ISE President Elect (term 2017-2018)

ISE regional group is also actively encouraging the Chinese scientists to attend the 67th ISE Annual Meeting, The Hague 2016. More than 160 participants from China will attend the meeting.

July 18th, 2016

Yong-yao Xia ISE Regional Representative of China



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Zagreb, July 22th, 2016.

International Society of Electrochemistry

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ISE - ANNUAL REPORT FOR CROATIA 2015/2016

Membership

The current number of ISE members in Croatia is 29. Since last report the number has increased by one. The new members on the list are 4 PhD students.

Activities

1. Unfortunately, no one from Croatia did not participated at **66th Annual Meeting of the International Society of Electrochemistry** in Taipei, due to the distance and high travel cost.

2. Four members will actively participate at **67th Annual Meeting of the International Society of Electrochemistry** in Hague with two oral presentations and three poster presentations.

3. The 5th ISE Satellite Student Regional Symposium on Electrochemistry took place at Ruđer Bošković Institute (July 2016) where 21 participants (young scientists, PhD students and undergraduate students) took part in oral presentations. This traditional Student Regional



Symposium was supported by *ISE* (<u>http://pierre.fkit.hr/ise-ssrse2016</u>). Also, few students from Serbia, Bosnia and Herzegovina, Slovenia and Algeria participated in this Meeting.

4. In February 2016 some members actively participated in Open Door Days organised by Faculty of Chemical Engineering and Technology, University of Zagreb, where Laboratory of Electrochemistry was presented to the public and to the future students. (https://www.fkit.unizg.hr/?@=20tba)

Marijana Kraljić Roković ISE-RR of Croatia



Miroslav Fojta Institute of Biophysics of the CAS Kralovopolska 135, CZ-612 65, Brno, Czech Republic Tel: +420 541 517 197 E-mail: fojta@ibp.cz

August 19, 2016

REPORT 2016 of the ISE Regional Representative – Czech Republic

Assoc. Prof. RNDr. Miroslav Fojta, PhD. has been elected as the ISE Regional Representative for the term 2016-2017.

Membership

Current status of the membership from the Czech Republic is 45 members. Since 2012 the number of ISE members from the Czech Republic has never decreased below 40, typically it was oscillating around 45 with a maximum in 2015 (52). PhD students have been an important target group for 2016 similarly as in previous years. Recruitment of new ISE members and/or membership renewal has naturally been attempted during national conferences or international conferences organized in the Czech Republic, particularly those sponsored by the ISE (see below).

Activities

Main activities in 2013 have been connected with preparation of three sponsored international electrochemical meetings:

XXVI Modern Electrochemical Methods

23-27 May 2016, Jetrichovice (near Decin), Czech Republic

Hydrogen Days 2016

6 - 8 April 2016, Prague, Czech Republic

Advanced Batteries, Accumulators and Fuel Cells

to be held on 28 - 31 August 2016, Brno, Czech Republic

These meetings provided/will provide good opportunity for students to learn more about the ISE society and membership advantages.

Prepared by: Miroslav Fojta Regional Representative Czech Republic



Regional Representative Meeting ISE Annual Meeting 2016

14. July 2016

Annual Regional Report of Denmark

By the date of reporting there are 41 ISE active members in Denmark, the same number as last year.

Through the year, the Danish ISE members have continued to be active in a range of activities within the field of electrochemistry. These include the annual meeting and workshops of the Danish Electrochemical Society and the Danish Battery Society, with active participation of the ISE members.

Professor Mogens Mogensen, the ISE member from the Department of Energy Conversion and Storage, Technical University of Denmark, was appointed fellow of the Electrochemical Society 2015.

Qingfeng Li dr.techn., professor The ISE Representative in Denmark

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UNIVERSITYoFTARTU

INSTITUTE OF CHEMISTRY

ISE REPORT 2016

ISE Membership

By the date of reporting there are 33 ISE members in Estonia, increased by 2 since the last report (August 2015).

Activities and conferences

Several Estonian electrochemists attended the 66th ISE Annual Meeting in Tapei, Taiwan (4-9 October, 2015) and in the 18th Topical Meeting of the ISE, held in Gwangu, South Korea (8-11 March, 2016).

A number of the ISE members of Estonia have been participating actively in several other international conferences and meetings related to the topics of electrocatalysis, energy storage and conversion, nanoscience and technology, neutron scattering, and electrochemistry as follows:

Chemistry & Chemical Technology 2016, International Conference of Lithuanian society of chemistry, April 28-29, 2016, Vilnius, Lithuania;

5th International Conference on Advanced Capacitors 23-27 May 2016, Otsu, Japan;

229th ECS Meeting, 29 May – 2 June, 2016 | San Diego, CA, USA;

6th Baltic Electrochemistry Conference (BEC2016): Electrochemistry of Functional Interfaces and Materials, 15-17 June 2016, Helsinki, Finland;

26th EUCHEM Conference on Molten Salts and Ionic Liquids, 3-8 July 2016 in Vienna, Austria;

The international conference "Neutrons for Energy", 18-22 July 2016, Bad Reichenhall, Germany

Meeting organization and membership

The Estonian ISE community is planning to organize the next Baltic Electrochemistry Conference (BEC) in Tartu, Estonia. Therefore, it is hoped that a number of the members of the ISE will increase over the coming year(s). The young scientists are encouraged to become part of the International Society of Electrochemistry community.

My sincerest apologies for not be able to attend the ISE meeting in the Hague.

Tartu, August 2016

Eneli Härk, PhD ISE Regional Representative of Estonia Institute of Chemistry University of Tartu Ravila 14a, 50411 Tartu Tel. +372 513 1425 eneli.hark@ut.ee University of Tartu

University of Tartu INSTITUTE OF CHEMISTRY Ravila 14A 50411 Tartu ESTONIA



ISE REPORT 2016 from the Regional Representative Finland

Members

The number of ISE members within Finland is currently 27 – which is a slight decrease on the previous year. This change is a result of a number of members (particularly at the Post-Doctoral level) who have arrived or left to pursue career opportunities outside of the Finnish region.

Activities

The 6th Baltic Electrochemistry Conference (BEC'16) that was recently held in Helsinki brought together over 160 delegates from 29 countries with representatives from as far afield as the USA and Mexico to China and Japan as well as all the Baltic Nations. The programme comprised of a total of 44 oral and 80 poster presentations that addressed a diverse range of topical issues from energy storage solutions like flow cell batteries, new nanoparticle sized catalytic materials for fuel cell applications to liquid-liquid interfaces for solar energy conversion and photodynamic therapies.

Additionally, there were a number of specially invited talks including a Plenary Lecture by Prof Christian Amatore, Ecole Normale Supérieure-PSL Research University, France (Seeing, Measuring and Understanding Vesicular Exocytosis of Neurotransmitters with "Artificial Synapses") and keynotes by Prof. Guido Grundmeier, University of Paderborn, Germany (Nanocrystalline ZnO Films on Engineering Metals), Prof. Patrik Schmuki, University of Erlangen, Germany (Self-organized TiO2 nanotube arrays: Latest features and applications) and Prof. Juan Feliu University of Alicante, Spain (From hydrogen and anion adsorption to interfacial acid-base properties at model Pt(111) electrodes).

Furthermore - in addition to the Plenary Speaker - thanks to the funds provided by the ISE, the Organisation Committee was able to help reduce the price for young researchwhich resulted in nearly 40% of the total attendees being Ph.D ers, students. Many of these students took the opportunity to get involved in scientific discussions with more senior members of the electrochemistry community and more than a few to time to tell the organisers of the new opportunities this conference has created for their future studies.

Future Plans

A special issue of Electrochimica Acta based on the papers presented at BEC is currently in preparation and it is intended that all attendees will be contacted in the near future to encourage them to join the ISE. In addition, the success of the conference means that the Section may have some left over funding that can possibly be used to help local student members attend future ISE sponsor conferences. Furthermore, as my first term is coming to an end this year there will be an election for the next Regional Representative.

Unfortunately, I will not be able to attend the ISE meeting in Netherlands, for which I send my sincerest apologies.

Dr.Ben Wilson, Regional Representative, Finland (ben.wilson@aalto.fi)









Centre Inter universitaire de Recherche et d'Ingénierie des Matériaux

ISE Annual report 2016 (France)

MEMBERSHIP

France has now **260 members** (265 members in 2015, 233 members in 2014).

ACTIVITIES

In collaboration with the "Electrochemistry" sub-division of Société Chimique de France (President of the sub-division: Hubert Perrot, LISE, Paris) preparation of "Journées d'Electrochimie" (French conference on Electrochemistry) which will be held in Bordeaux in June 2017.

SPONSORED MEETINGS

The following congresses held in France were sponsored this year:

1- Electrospinning for Energy conference (<u>www.elen2016.eu</u>)

Dates: 22-24 June 2016

Location: Montpellier

ELEN 2016 was specifically oriented to the application of nanofibres issued from electrospinning in energy conversion and storage devices.

Invited speakers: II-Doo KIM, Korea Advanced Institute of Science and Technology, Korea; Peter PINTAURO, Vanderbilt University, USA; Renaud Demadrille, CEA, France. **Organisers (chairs): Deborah Jones and Sara Cavaliere (Montpellier).**

2 grants offered to graduate students + 3 awarded posters.

2- 2nd International Meeting on Electrogenerated Chemiluminescence (ECL'2016) (<u>http://ecl2016.sciencesconf.org/</u>).

Dates: 29-31 August 2016

Location: Bordeaux

The conference is a satellite meeting of the $\rm 67^{th}$ ISE annual meeting.

The meeting addresses fundamental aspects, recent developments, bioanalytical and commercialized applications of ECL in medical diagnostics.

Invited speakers: L. J. Blum, University of Lyon, France; H. Cui, University of Science and Technology Mefei, China; Z. Ding, University of Western Ontario, Canada; P. S. Francis, Deakin University, Australia; R. J. Forster, Dublin City University, Eire.

Organisers (chairs): Neso Sojic, Bordeaux (France) and Francesco Paolucci, Bologna (Italy).

3- Journées toulousaine d'Electrochimie (JTE 2016) (national meeting)

Date: 12 July 2016

Location: Toulouse

The book of Pr. Allen Bard was offered to the PhD students presenting an oral communication.

Organiser (chair): Mathieu Gibilaro (Toulouse).

4- The European Corrosion Congress (EUROCORR 2016) (<u>http://www.eurocorr.org/</u>).
 Dates: 11-15 September 2016
 Location: Montpellier
 EUROCORR 2016 will cover all aspects of corrosion science and engineering, from mechanisms to industrial applications. EUROCORR is the major corrosion congress in Europe and one of the major corrosion conferences in the world. It will attract over

800 participants, including many European ISE members (from division 4 in particular), and the opportunity will be taken to attract additional ISE membership. **Chair: Philippe Marcus (Paris).**

5- **30**th **anniversary of the French group of** Bioelectrochemistry (<u>http://www.bioelectrochimie-gfb.org</u>).

Dates: 20-23 September 2016

Location: Marseille

The meeting will celebrate the 30th anniversary of the French Group of Bioelectrochemistry (GFB).

Plenary speakers: S. Cosnier, P. Allongue, F. Bedioui, M. Fontecave and M.P. Rolls. **Organizer (chair): Christophe Innocent (Montpellier).**

21 July 2016 Nadine Pébère, Regional Representative for France 2nd term ends in 2016



Rheinische

Baltruschat

Friedrich-Wilhelms- Institut für Physikalische Universität Bonn und Theoretische Chemie

Prof. Dr. Helmut Elektrochemie

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Bonn, 02.08.2016

ISE Report 2015-2016 - Germany

Membership: 252 (from 209 members on September 28th 2015 and 223 on July 25th 2014).

past ISE and ISE Sponsored meetings (since the last ISE meeting):

International Conference on Capacitive Deionization and Electrosorption Saarbrücken, 26-29 October 2015

ISE sponsored Meetings to come in 2016:

universität bonn · Prof. Dr. H. Baltruschat · 53012 Bonn

International Conference on Advances in Semiconductors and Catalysts for Photoelectrochemical Fuel Production (SolarFuel16), Berlin, 5-6 September 2016

ELECTROCHEMISTRY 2016, Goslar, 26-28 September 2016

4th Ertl Symposium on Chemical Processes on Solid Surfaces: Water at Interfaces, Berlin, 11-13 October 2016

planned:

10. German BioSensorsymposium, 20.3.2017 -23.3.2017

Meeting of the section "Elektrochemie" of the GdCh within the conference "GdCh-Wissenschaftsforum", Berlin, 10. - 14. September 2017

Helmut Baltruschat





Report 2016 of the ISE Regional Representative – Greece prepared for the Meeting of the ISE Regional Representatives to be held during the 67th Annual Meeting of the ISE annual meeting in Hague, The Nederlands, 21-26 August, 216

1. Membership

• The number of ISE members in Greece are slightly less in 2015 reaching 27 members. Their preferences in the activities of the different ISE Divisions are as follows (3 of them have not expressed specific preferences):

- Division 1, Analytical Electrochemistry (7)
- Division 2, Bioelectrochemistry (1)
- Division 3, Electrochemical Energy Conversion and Storage (15)
- Division 4, Electrochemical Materials Science (13)
- Division 5, Electrochemical Process Engineering and Technology (10)
- Division 6, Molecular Electrochemistry (5)
- Division 7, Physical Electrochemistry (11)
- Efforts to recruit new members continue, especially targeting young scientists.

2. Activities

There was no participation from Greece at the ISE meeting in Taipei due most probably to the high cost of the trip to Taipei.

• Professor S. Sotiropoulos (Aristotle University of Thessaloniki, Greece) continued acting as one of the Editors of Electrochimica Acta.

• Professor C. G. Vayenas (University of Patras, Greece), ISE Fellow, continued acting as one of the Editors of Modern Aspects of Electrochemistry, Patras, Greece.

Patras, Greece, 20 July, 2016

Dr Stylianos G. Neophytides Research Director Institute of Chemical Engineering Scienses (ICE/HT) Foundation of Research and Technology (FORTH) Email: <u>neoph@iceht.forth.gr</u> Tel: +30 2610 965265

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Report of activities: Hungarian section of ISE

prepared for the Meeting of Regional Representatives of ISE, 67rd Annual Meeting, The Hague, The Netherlands, August 2015

1. ISE members from Hungary

The ISE membership from Hungary was nearly stagnant during the last year, similarly to the situation in the earlier period. Now we have 14 Hungarian ISE members. These people belong to traditional research groups dealing with electrochemistry. In the last couple of year, we witnessed the restructuring of the community profile. While elderly and retired members do not tend to renew their membership, students belonging to electrochemical research groups join ISE for the period while their research affiliation makes it reasonable. Unfortunately, young researchers going abroad fall out of the attention of the regional representative and the national electrochemical community often loose them. Despite the regular calls for the members of the Hungarian electroanalytical research groups, they could not be involved in the ISE membership, and these groups tend to work in a segregated manner. It is expected that within a few years, the elderly colleagues without any employment will end their ISE membership and young colleagues will not be able to maintain the current level of membership.

2. Scientific activity

Although the annual ISE meeting is generally regarded by Hungarian colleagues as one of the most prestigious electrochemistry symposium, the number of delegates is generally small. After 2016 when no Hungarian ISE member could attend the meeting in Taiwan, 3 people can attend the annual meeting in 2016. The reason for the small number of attendees is merely financial.



Hungarian Academy of Sciences

3. Meeting organization

The Hungarian ISE community is facing the organization of two important meetings in 2017: – The Hungarian ISE community has submitted a proposal for organizing one of the topical meetings in 2017 in Szeged, Hungary. The proposal was evaluated by the relevant ISE body and the proposal was finally accepted. The meeting title is: "(*Photo)electrochemistry of semiconductors at the nanoscale: from fundamental aspects to practical applications*" and the date of the meeting will be 23-26 April 2017. The contracts concerning the meeting have been arranged and approved by ISE. The advisory board has been formed and the list of the invited speakers has been practically finalized. The local organizing committee comprises the following people (in alphabetic order): Balázs Endrődi (University of Szeged), György Inzelt (Eötvös Loránd University), Csaba Janáky (University of Szeged – Hungarian Academy of Sciences), Tamás Pajkossy (Electrochemistry Committee of the Hungarian Academy of Sciences), László Péter (Regional ISE representative), Csaba Visy (University of Szeged)

– Also in 2017, the Hungarian electrochemistry community will organize the 6th Regional Symposium of Electrochemistry – South-East Europe (RSE-SEE). Since RSE-SEE is traditionally an ISE-sponsored meeting, the organizers will soon contact the Society to discuss the support conditions. The venue of the event has been selected near the Lake Balaton and will soon be announced publicly.

Budapest, 15 August 2016

László Péter Scientific advisor Head of the Electrodeposited Nanostructures Group Department of Complex Fluids, Institute for Solid State Physics and Optics Wigner Research Centre for Physics, Hungarian Academy of Sciences

P. O. Box 49, 1525 Budapest, Hungary Konkoly-Thege Miklós út 29-33, 1121 Budapest, Hungary Phone/Fax: +36 1 392 2768 E-mail: szfki@szfki.hu Web: wigner.mta.hu

<u>Regional Report of India for ISE Annual Meeting in The Hague, The Netherlands</u> <u>July 2016</u>

1. ISE Members from India

I was elected on December 21, 2013 as Regional Representative of India for the period 2014-2016. The total number of ISE Members was 29 in July 2014. The importance of ISE and the benefits of the ISE membership (e.g., Electrochimica Acta and ISE Travel Awards for Young Researchers) were also addressed by Prof. Christopher Brett from Coimbra, Portugal to the Indian participants of the ISEAC International Discussion Meet, 11th ISEAC-DM-2014, held at Amritsar during February 20-25, 2014 organised by Indian Society for ElectroAnalytical Chemistry (ISEAC). Presently, there are 31 members, which is quite close to previous number. Several electrochemistry groups working in India are being informed of the benefits of joining ISE. Individuals are being contacted through emails also. One of the reasons is the limited funds availability with research scholars and other researchers. We would suggest some of them with active interest in electrochemistry and real funding difficulties, to approach ISE for assistance through ISE President's fund to pay for annual membership fee. An analysis of the interest of these 31 ISE members from India showed that 15, 16, 14, 3, 4 and 9 ISE members from India expressed their interest in the programs of Division 1(ANALYTICAL ELECTROCHEMISTRY), Division 3(ELECTROCHEMICAL ENERGY CONVERSION AND STORAGE), Division 4 (ELECTROCHEMICAL MATERIALS SCIENCE), Division 5 (ELECTROCHEMICAL PROCESS ENGINEERING AND TECHNOLOGY), Division 6 (MOLECULAR *ELECTROCHEMISTRY*), and Division 7 (PHYSICAL ELECTROCHEMISTRY), respectively. Some members are interested in the activities of more than one Division of ISE.

2. Activities in India during the Reporting Period

16 abstracts were shortlisted during 11th ISEAC-DM-2014 held at Amritsar, by an international expert committee evaluating the posters as well as oral presentations. Of these, complete manuscripts of 15 abstracts were brought out as a Special Issue of "Electroanalysis" entitled "Electrochemistry in India" with Prof. Suresh Kumar Aggarwal, President, ISEAC as the Guest Editor, with the support and cooperation of Prof. Joseph Wang (Chief Editor of Electroanalysis), and the international reviewers.

Indian Society of ElectroAnalytical Chemistry (ISEAC) with its headquarters at Fuel Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai was to organize 12th ISEAC-DM-2015 in Kochi during January 2015. However, some reasons beyond the control of ISEAC executive committee members forced to postpone this event. Now we are organising *12th ISEAC-DM-2016* in Mumbai in December 2016. This is preceding the ISAEST-11 Conference at Chennai during December 8-10, 2016.

One of the Indian ISE members, Dr Ruma Gupta, from FCD, BARC, attended the 65th Annual Meeting of ISE held at Lausanne, Switzerland during 31 August- 5 September 2014. Two other Indian colleagues Dr. V. Ganesan from BHU, Varanasi (ISE Member),

and **Dr. Subir Kumar Ghosh from BARC, Mumbai** attended this ISE Meeting. None of the ISEAC life-members could attend the 66th Annual Meeting of ISE at Taipei, Taiwan in 2015. However, the ISE website shows that one Indian participant *Balwinder Kaur from IIT, Ropar* got the best Poster Prize in this meeting. One of the main reasons for poor participation from India is the large number of International Conferences in various fields, large number of applicants applying for funding support to various Government funding agencies, and limited money available with these Government funding agencies to provide support to participate in various Conferences.

3. Activities Planned in India for 2016-17

It is proposed to hold the event "12th ISEAC Discussion Meet (12thISEAC-DM-2016)" on December 7, 2016 at Mumbai. Detailed information about this International event is available on ELAC Discussion Group on "facebook" as well as final program will be posted on the ISEAC website (www.iseac.org). It is proposed to invite internationally known experts in different areas of electrochemistry.

All efforts will be made to increase the number of ISE members from India in future. We will also encourage the needy scientists to approach ISE for membership fee support from ISE Presidential fund. ISEAC also provides partial funds to its life-members for participation in the International Annual Meetings of ISE. Hopefully, the Indian participation will improve in 68th ISE Meeting at Providence, RI, USA (2017), 69th ISE at Bologna in Italy (2018) and 70th ISE at Durban, South Africa.

FROM:



Prof. Suresh Kumar Aggarwal ISE Regional Representative of India President, ISEAC, Mumbai, India Email: <u>skaggr2002@gmail.com</u> Tel: (0091) 9892578865 (Available on whatisapp and viber)

Report of the ISE Regional Representative for I.R. Iran

A- Membership

Up to 2016, 26 Iranian scientists are active in different ISE sections.

B- Activities

The Iranian electrochemists have participated in several international and national conferences on electrochemical topics including:

- 1- 17th Iranian Chemical Congress, Aug. 29-31, 2015, Semnan University, Semnan, Iran; by Iranian Chemical Soc.
- 2- 17th Iranian Chemical Society Conference (with a separate section in electrochemistry), 2-4 Sept. 2015, Semnan University, Iran.
- 3- The 66th Annual Meeting of the International Society of Electrochemistry, 4-9 October 2015, Taipei, Taiwan.

C-Published articles

Based on Scopus reports 1151 papers have been published in 2015 by Iranian scientist in the field of electrochemistry (<u>https://www-scopuscom.scopeesprx.elsevier.com/results/results.uri?sort=plf-</u> <u>f&src=s&sid=E5279226F14AA35AFD15C13E55EECEA4.ZmAySxCHIBxx</u> <u>TXbnsoe5w%3a930&sot=a&sdt=a&sl=58&s=AFFILCOUNTRY%28iran%2</u>

<u>9+AND+PUBYEAR+%3d+2015+AND+Electrochemistry&origin=searchad</u> vanced&editSaveSearch=&txGid=0)

This is huge increase in the Iranian publication in electrochemical methods vs. 2014 (about 250%). Seven of them are book chapters and twenty-five of them are Reviewer. From the published papers, them, fourty seven papers in 2015 are published in Electrochimica Acta and more than 6000 chemistry articles by Iranian researchers have been published in ISI indexed Journals.

Isfahan, July 11, 2016 Ali A. Ensafi Regional Representative of I. R. IRAN



ISE Ireland Regional Representative Annual Report (2015-2016)

Members.

The number of ISE members in Ireland has remained unchanged at 22 over the past year with all seven universities and one of the Institutes of Technology represented. Division 4, Electrochemical Materials Science with 16 members has the largest affiliation. Post graduate students account for approximately one third of the membership.

Activities.

In my first year as ISE Regional Representative I intend to utilise the outreach activities of Tyndall National Institute, The Science Foundation Ireland funded <u>CONNECTcentre.ie</u> research centre and other research and teaching programmes such as <u>MakerDojo.ie</u> to promote electrochemistry, the ISE and member benefits.

Ireland has a thriving electrochemistry community which is growing through the increased focus nationally on nanotechnology and materials research. I expect ISE membership and engagement to increase with participation in national and international electrochemistry based workshops and conferences. Later this year we intend to initiate a Student Meeting to encourage interaction among the electrochemistry groups in Ireland.

At the Annual Meeting in the Hague there will be 4 talks and 5 posters from ISE members in Ireland.

Sincerely,

Dr. James Rohan Electrochemical Materials & Energy Tyndall National Institute University College Cork Ireland tyndall.ie tyndall.ie/content/electrochemical-materials-and-energy connectcentre.ie



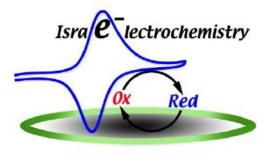


THE IBY AND ALADAR FLEISCHMAN FACULTY OF ENGINEERING PROFESSOR NOAM ELIAZ CHAIR, DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING DIRECTOR, THE BIOMATERIALS AND CORROSION LABORATORY הפקולטה להנדסה ע"ש איבי ואלדר פליישמן פרופסור נעם אליעז ראש המחלקה למדע והנדסה של חומרים ראש המעבדה לביו-חומרים וקורוזיה

ISE Report from the Israeli Regional Representative June 2016

Members

Presently there are 20 Israeli ISE members, most of them from academia. This number reflects a minor increase from 19 members in 2015. The number of electrochemists in the academy including graduate students is estimated to be over 120.



Honors

4 of the ISE members in good standing are ISE Fellows

(Aurbach, Gileadi, Lev, Mandler). This respectable number (out of 73 ISE Fellows overall) reflects the achievements of Israeli electrochemists.

Activities

The activity in electrochemistry in Israel keeps growing constantly and attracts the academia as well as industry. Several recent recruits of new faculty in academia are in this area. The annual meeting of electrochemistry is called Israelectrochemistry and is held every year at a different University. These meetings are usually supported by the Baruch Zinger Foundation, which awards a few prizes for the best lecture and poster presentations. The 2015 meeting was held on October 15th at Ben-Gurion University of the Negev.

In addition to the annual meeting, a few industry oriented meetings are organized by Shmuel De-Leon Energy Ltd. (<u>www.sdle.co.il</u>).

The program of IMEC-17 – The 17th Israel Materials Engineering Conference that was held on February 1-2 at Bar-Ilan University included many contributions from the electrochemistry community.

During 2013 a new center – Israel National Research Center for Electrochemical Propulsion (INREP) – was established. The center combines forces on the development of new materials, new concepts and new analytical methodologies, as well as functioning prototypes.

Prof. Noam Eliaz

ISE Annual Report 2016 – Italy

ISE membership. Despite constant promotion of membership renewal and new recruiting, the number of members remained somewhat below those of the last two years, presumably due to low participation and recruiting at the annual ISE Meeting 2015. At the date of this report the membership has reached, however, a comfortable number of **119 active members**. A positive effect on the membership might result from a (hopefully) large participation to the ISE Meeting in The Hague. The effort to recruit new members is focused on the authors of papers published in Electrochimica Acta, new PhD students and young scientists.

Participation to ISE operative bodies. Marco Musiani (CNR – Padova), Executive Secretary for the term 2014-2018; Francesco Paolucci (University of Bologna), Chair of Division 6 (Molecular Electrochemistry) for the years 2015-2016; Francesca Soavi (University of Bologna), Vice-Chair of Division 3 (Electrochemical Energy Conversion and Storage) for the years 2015-2016.

Sponsored Meetings. ISE sponsorship has been granted to the following Congresses in 2016:

- 1. International Meeting on Ionic Liquids for Electrochemical Devices (ILED 2016), 11-13 July 2016, Rome (Italy), sponsored by Division 3;
- 2. The International Conference on "Supramolecular Assembly: towards Novel Functional Materials and Devices" (MOLARMEET 2016), 6-10 September 2016, Lecce (Italy), sponsored by Division 6;
- 3. Giornate dell'Elettrochimica Italiana Annual Meeting of the Electrochemistry Division of the Italian Chemical Society, 11-14 September 2016, Gargnano-Brescia (Italy), sponsored by the Executive Committee;
- 4. 2nd E3 Mediterranean Symposium: Electrochemistry for Environment and Energy, 14-16 September 2016, Gargnano-Brescia (Italy), sponsored by the Executive Committee.

LECCO

ISE Activities. The preparation activity of the **69th Annual ISE Meeting (2-7 September 2018, Bologna, Italy)** has proceeded with the definition of the Organizing Committee that will include 5 Italian Members: Salvatore Daniele (Venice), Francesco Di Quarto (Palermo), Marco Musiani (co-chair, Padua), Francesco Paolucci (co-chair, Bologna), Sandra Rondinini (Milan).

Some essential data, including the important dates and deadlines, the full composition of the Organizing Committee and the main Scientific Themes, will be presented in occasion of the First Announcement at the **67th Annual ISE Meeting**, The Hague, Netherlands.

July 12th, 2016

Sandro Cattarin, Regional Representative of Italy

PADOVA

GENOVA

MILANO

LECCO

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ISE REPORT 2016 from Korea

Changes

In-Hyeong Yeo at Dongguk University finished 6 years service (two terms) as a regional representative. The regional members of ISE and the members of the Korean Electrochemical Society appreciate the endeavor efforts done by In-Hyeong Yeo to visualize Korean electrochemists to the international society. Woonsup Shin, myself, followed the role from 2016. I served ISE as a chair and a vice-chair of Bioelectrochemistry division and am currently vice-president of the Korean Electrochemical Society.

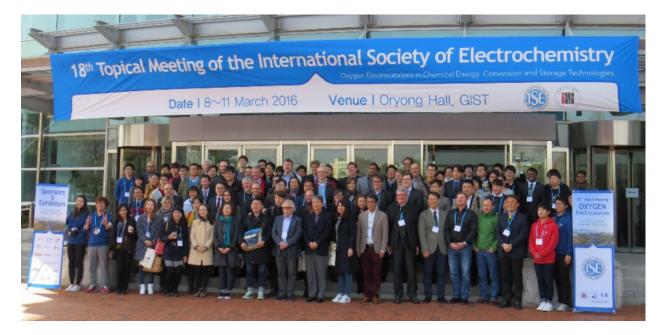
Members

The number of ISE members from Korea as of today is 262. It was 176 at the end of 2015. Wow! We are trying to help them to participate actively in the activities of ISE.

Activities

1. ISE topical meeting in Gwangju, Korea from March 8th (Tue) to 11th (Fri)

was organized by Jaeyoung Lee and Bongjin Simon Moon with the topic of "Oxygen Electrocatalysis in Chemical Energy Conversion and Storage Technologies". 7 keynote, 19 invited, 43 oral lectures and 103 posters were presented. The number of participants was 214.



2. The host of 2021 ISE annual meeting in Korea

Korea hosted the ISE annual meeting in 2021. The Korean Electrochemical Society fully supported the hosting. We had a start-up meeting last week to discuss the organization and future plan.

3. The Spring Korean Electrochemical Society Meeting in April 8-10, 2016

KECS spring meeting was held at Kim Daejoong Exhibition Convention Center, Gwangju, Korea. The meeting was successful with 700 participants covering all disciplines of electrochemisty from fundamentals to applications.

I am looking forward to seeing you all soon in Den Haag!

July 27, 2016 Woonsup Shin, Regional Representative of Korea Department of Chemistry/ BioMedical Engineering, Sogang University, Seoul, Korea.



State research institute Center for Physical sciences and Technology

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International Society of Electrochemistry

ISE ANNUAL REPORT LITHUANIA

Vilnius, 12-07-2016

Members

The number of the members in the ISE regional group remained the same - 22.

Activities

ISE regional group took part in organisation of the **international conference "Chemistry and Chemical Technology 2016"** (C&CT2016), devoted to the 210th anniversary of the Electrolysis Theory by Theodor von Grotthuss. It was the **ISE supported** conference. Special Issue of *Electrochimica Acta* is devoted to this conference. Information about the conference is on the conference website http://cct2016.ftmc.lt. **260 scientists from 13 countries** (Lithuania, Poland, Turkey, Finland, Russia, Ukraine, Germany, Belarus, Estonia, Latvia, Sweden, Moldavia, and India) took part in C&CT2016, moreover, almost half of the participants were young researchers. The first day was dedicated to Electrochemistry, while the second day was for other chemical sciences. The newest research was presented in the plenary lectures by known European Electrochemists, former or current ISE Regional Representatives from Estonia, Germany, Lithuania, Poland, and Sweden.

Proposal for organizing ISE Topical Meeting in 2019 is under preparation and it will be send to the Scientific Meetings Committee before the Annual Meeting in The Hague. Rasa Pauliukaite was a member of the Scientific Committees of the 6th Baltic Electrochemistry Conference organised in Helsinki, Finland, which is also the *ISE sponsored meeting*, and of the 4th Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences " IC-ANMBES 2016".

Publications by ISE regional group members:

1 oral and 5 poster presentations in the *ISE Annual Meeting in Taipei* last year;
2 plenary lectures and 26 poster presentations the ISE sponsored conference "Chemistry and Chemical Technology 2016" in Vilnius (Lithuania);

1 oral and 3 poster presentations in the 6th Baltic Electrochemistry Conference (Finland); 1 oral presentation in the ISE sponsored conference, the 16th International Conference on Electroanalysis (ESEAC 2016) in Bath (UK);

2 presentations will be presented in the ISE Annual Meeting in The Hague;

1 paper was published in Electrochimica Acta by ISE members in 2015-2016. We expect more publications in Special Issues this year.

Future perspectives

ISE Regional group plans to recruit new members, organise national and international events and attend ISE and ISE sponsored meetings. Election of Regional Representative will be organised at the end of 2016.

ISE Regional Representative, Lithuania Deputy Director

Vidmantas Remeikis

Chief researcher Dr. Rasa Pauliukaité Department of Nanoengineering Center for Physical Sciences and Technology Savanorių pr. 231, LT-02300 Vilnius Lithuania

Email: pauliukaite@ftmc.lt Phone +370 5 2644866



Dr. Carlos Eduardo Frontana-Vázquez

Centro de Investigación y Desarrollo Tecnológico en Electroquímica, S. C. Tel. 52-442-211-6000 Ext 7849, Fax. 52-442-211-6001 Pedro Escobedo, Querétaro, August 15th, 2016

REPORT OF THE ISE REGIONAL REPRESENTATIVE – MEXICO

As of today, August 16th, 2016, the region has 64 members. This number is keeping steady after a surge provoked by the 64th Annual Meeting in Queretaro, which gathered a large number of attendants. Also, one ISE-sponsored event took place: MicroEchem 2015 "Second Summer School in Molecular Electrochemistry", with a total of 35 participants, among lecturers and students. Also, an ISE Regional Student Meeting was organized (the third one), with about 20 students. These activities complemented those typically organized by the Mexican Electrochemical Society.

I look forward to see you in further meetings and also provide as much assistance as possible for the development of our society.

Sincerely,

Dr. Carlos Eduardo Frontana Vázquez Centro de Investigación y Desarrollo Tecnológico en Electroquímica, S. C, México

ISE Report 2016 from the Regional Representative the Netherlands

(Prepared for the ISE Regional Representatives meeting to be held during the 67^{th} Annual Meeting of the ISE, August $21^{st} - 26^{th}$, 2016, Den Haag, The Netherlands)

Members

The number of members within the Netherlands in last year has more than doubled (in 2015, we had 30 members and this year we have 62 members thanks to ISE meeting in the Hague). A number of scientists based in the Netherlands have been contacted directly to become a member.

The interest of the Dutch ISE members in the different divisions is given here (listed from high to lower interest):

- Division 3: ELECTROCHEMICAL ENERGY CONVERSION AND STORAGE (15)
- Division 4: ELECTROCHEMICAL MATERIALS SCIENCE (15)
- Division 7: PHYSICAL ELECTROCHEMISTRY (11)
- Division 5: ELECTROCHEMICAL PROCESS ENGINEERING AND TECHNOLOGY (8)
- Division 1: ANALYTICAL ELECTROCHEMISTRY (7)
- Division 2: BIOELECTROCHEMISTRY (3)
- Division 6: MOLECULAR ELECTROCHEMISTRY (2)

Activities

A presentation about the 67th Annual Meeting was given during the General Assembly on Thursday, October 8th, 2015.

Dr. Liza Rassaei replaced Maarten van Brussels for the position of ISE national representative of the Netherlands in December 2015.

KNCV Symposium

Each year, the Dutch and Belgian electrochemistry community gathers for the annual meeting of the working group on electrochemistry of the *Koninklijke Nederlandse Chemische Vereniging* (KNCV). This one day symposium, which benefits from financial support from the ISE provides a common meeting ground for fundamental and applied electrochemistry experts from both countries.

In 2015, the symposium was organized at the University of Wageningen, the Netherlands and the theme was Electrochemistry for Quality of Life. A presentation

about the activities of the Society and the upcoming 67th Annual Meeting was given at that meeting.

This year, the symposium will be organized at the Delft University of Technology, the Netherlands and the theme will be *Electroanalysis*. A presentation about the ISE and its activities will be given at this meeting.

July 20th, 2016 Liza Rassaei Delft University of Technology, the Netherlands



International Socierty of Electrochemistry

Summary report on Norwegian ISE activities in 2015/2016

Membership

The number of Norwegian members of the ISE, 15, is relatively modest and has an obvious potential to be expanded. Most of the Norwegian members are from Trondheim (11 are associated with Norwegian University of Science and Techanology), while Oslo has at present only a marginal representation (just 2 members). Expansion of the Norwegian membership, first of all via growth of the membership in Oslo area, will be targeted in the coming term.

Even though a modest number of the members, the publication activity in journals focused on electrochemistry, including a Society Journal Electrochimica Acta and such journals as Journal of Power Sources and Journal of Electroanalytical Chemistry is high.

Other

Further to the traditional for Norway activities related to electrolysis (aluminium production) and corrosion protection of the installations utilized by the offshore oil and natural gas production facilities, recently we have observed growth of the funding allocated to the studies of the rechargeable batteries, mostly for Li-ion, but also for the metal hydride batteries. The focus on use of silicon based composites as an anode material meets a strong interest and support from the silicon producer Elkem. One important recently approved national project is a Center for environment-friendly energy research Mobility Zero Emission Energy Systems where Institute for Energy Technology, Norwegian University of Science and Technology, University of Oslo and Sintef joined forces in the R&D on the Li-ion and metal hydride batteries (7 years project, 2016-2023).

August 19, 2016

Reginal representative Norway Volodymyr Yartys, Prof. Institute for Energy Technology and Department of Materials Science and Engineering Norwegian University of Science and Technology Trondheim, Norway volodymyr.yartys@ife.no

Volalymy Vartys.

Regional Reports 2016

Regional Section	Report
Argentina:	YES
Australia-New Zealand	YES
Austria:	YES
Belgium:	YES
Brazil:	YES
Bulgaria:	YES
Canada:	NO
Caribbean Region	NO
Chile:	YES
China:	YES
	YES
Croatia:	
Czech Republic	YES
Denmark:	YES
Estonia:	YES
Finland:	YES
France:	YES
Germany:	YES
Greece:	YES
Hungary:	YES
India:	YES
Iran:	YES
Ireland:	YES
Israel:	YES
Italy:	YES
Japan:	NO
Korea:	YES
Lithuania:	YES
Mexico:	YES
Netherlands:	YES
Norway:	YES
Poland:	YES
Portugal:	NO
Romania:	YES
Russia:	YES
Serbia:	YES
South Africa:	YES
Spain:	YES
Sweden:	YES
Switzerland:	YES
Taiwan:	YES
Turkey:	NO
Ukraine:	NO
United Kingdom:	YES
USA:	YES



Report of activities: Argentine section of ISE

Prepared for the Meeting of Regional Representatives of ISE, 67th Annual Meeting, The Hague, Netherlands, August 2016

Membership

We have suffered a slow decrease in membership during the last three years but it has apparently attained a plateau. Nowadays, there are 32 ISE members in the Argentine section. The strong devaluation of our currency could be a reason for this decrease. Although I sent personal emails to all the members that were not paying the fee, I got very few answers. I hope that the proximity of the next topical meeting in Argentina will renew the interest to become of return as a member of ISE. We are working on this.

Activities

Unfortunately I could not assist to the last Annual Meeting in Taiwan, but during the last year we have been working hard on the preparation of the 20th Topical Meeting, that will take place in Buenos Aires from 19th to 22nd March, 2017 with the subject "Advances in Lithium and Hydrogen Electrochemical Systems for Energy Conversion and Storage". The organisation committee includes Ezequiel Leiva, as co-chair, Deborah Jones, Robert Kostecki, Yan Yao and Candace Chan. The venue will be at the Auditoriums of the Pontifical Catholic University of Argentina. We expect that the arrival of this ISE Meeting to Argentina will motivate, particularly young people, to join our society.

Best regards,

Agustín E. Bolzán Regional Representative for Argentina

TE: 54-221-4257291 / 4257430 FAX: 54-221-4254642 E-mail: aebolzan@inifta.unlp.edu.ar

Report of the ISE Regional Representative for Australia & New Zealand 2016

Dr. Conor Hogan

Membership

The number of Australia & New Zealand ISE members has increased since last year and now stands at 99.

Activities

The 19th ISE Topical Meeting was held in Auckland, New Zealand on 17- 20 April 2016. <u>http://topical19.ise-online.org/index.php</u> The conference was a great success both in terms of the quality of the scientific discourse and the attendance. The conference was preceded by a one-day student focussed conference (which was also very successful). This was co-organised by the Electrochemical Division of the Royal Australian Chemical Institute, the New Zealand Institute of Chemistry and the ISE. *The 20th Australia/New Zealand Electrochemistry Symposium (20ANZES) and ISE Satellite Student Regional Symposium on Electrochemistry.*

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	DVR: 008 1833 UID: ATU 574 77 929
	Graz, 2016-07-18

Report of the ISE Regional Representative for Austria 2016

Membership

Several new research groups working in electrochemistry have recently been established at Austrian Universities. As a result, the number of Austrian ISE members has increased from 26 in January 2016 to 37 at the time of this report.

Activities

An International Workshop "Bioelectrochemistry and more…" organized by CEST and AIT was held in Wiener Neustadt on June 13/14, 2016. The 26th EUCHEM Conference on Molten Salts and Ionic Liquids with a significant fraction of electrochemical contributions took place July 3-8, 2016 in Vienna. The 9th International Summer School on Polymer Electrolyte Fuel Cells organized by Graz University of Technology, Austria in co-operation with Yokohama National University, Japan will take place in Graz from August 28 to September 3, 2016. The 2nd Graz Battery Days "Next Generation Materials and Systems–Truth and Consequences" will be held in Graz, September 27-28, 2016.

<u>Other</u>

Dr. Bernhard Gollas was elected as the ISE Regional Representative for Austria in December 2015 for the term 2016-2018.

Dr. Bernhard Gollas



Tom Breugelmans

Faculty of Applied Engineering

Campus Drie Eiken Universiteitsplein 1 2610 Wilrijk - Belgium

tom.breugelmans@uantwerp.be

DATE 01 August 2016 SUBJECT

ISE Report from the Belgian Regional Representative prepared for the 67th Annual Meeting of ISE in Den Haag, the Netherlands

Members

Since 2011, the number of members is at least 40. The last years, this number has increased with currently 59 active persons registered as Belgian members.

The interest and evolution in comparison to 2015 of the Belgian members in the different divisions is given here:

- Division 1: Analytical Electrochemistry: from 11 members to 21 members
- Division 2: Bio-electrochemistry: from 13 members to 18 members
- Division 3: Electrochemical Energy Conversion And Storage: from 15 members to 26 members
- Division 4: Electrochemical Materials Science: from 18 members to 27 members
- Division 5: Electrochemical Process Engineering And Technology: from 10 members to 21 members
- Division 6: Molecular Electrochemistry: from 6 members to **10 members**
- Division 7: Physical Electrochemistry: from 13 members to 18 members

Activities

- Each year, the Dutch and Belgian electrochemistry community gathers for the annual meeting of the working group on electrochemistry of the Koninklijke Nederlandse Chemische Vereniging (KNCV). This one day symposium, which benefits from financial support from the ISE provides a common meeting ground for fundamental and applied electrochemistry experts from both countries. In 2015, the symposium, on the theme of Electrochemistry for quality of life, was held at the University of Wageningen, the Netherlands, on November 6th. This year, the symposium will be organized at the Delft University of Technology, the Netherlands and the theme will be *Electroanalysis*. A presentation about the ISE and its activities will be given at this meeting.
- 2. Belgian ISE members have organized two Satellite meetings proceeding the annual ISE meeting in The Hague:
 - the **second Summer Meeting On Bio-Electrochemistry (SMOBE-2016)**, which was held from **17 to 19 August 2016** in Antwerp, Belgium.
 - the **11th International Symposium on Electrochemical Micro & Nanosystem Technologies** (EMNT2016), which took place from **17th of August untill 19th of August**. The symposium

was a co-organisation between (SURF-VUB, CHANI-ULB, CTE-TUDelft, UMons and ART-UAntwerpen). The main theme of EMNT2016 was reliable electrochemical data at the micro and nanoscale for Energy, Environment, and Health, encompassing fundamental and applied research related to electrochemical systems, fabrication technologies and modelling.

Yours Sincerely,

Prof. Tom Breugelmans

Report of the ISE Regional Representative of Brazil 2016

A - Membership

The number of ISE members has grown from 62 in December 2011 to 90 in July 2012, 110 in July 2013, remaining more or less constant after that and reaching 107 members in July 2014, 120 in September 2015, and finally 119 in August 2016.

B - Activities

1) Forthcoming meeting: Regional Brazilian event concerning Environmental Electrochemistry to be held in Natal, between 05 and 07th October, 2016.

This meeting includes several oral communications by renowned speakers (international and national scientists) and undergraduate/graduate students that are studying the application of electrochemical technologies for environmental protection.

The meeting is named "4th ISE Satellite Regional Symposium on Electrochemistry -Environmental Electrochemistry Meeting" (4a Semana de Eletroquímica Ambiental) and the objective is to promote the interest for the electrochemical approaches for different environmental applications.

The ISE will support this meeting with 600 Euros

Sincerely yours, Hamilton Varela Institute of Chemistry of São Carlos University of São Paulo POBox 780, CEP: 13560-970 São Carlos, SP, Brazil varela@iqsc.usp.br **BULGARIAN ACADEMY OF SCIENCES**



INSTITUTE OF ELECTROCHEMISTRY AND ENERGY SYSTEMS "ACADEMICIAN EVGENI BUDEVSKI"

1113 Sofia, "Acad. G. Bonchev" Str., bl.10 Director: Prof. E. Slavcheva, DSc Tel.: +359 2 8722543; +359 879 110 720 Fax: +359 2 8722544 E-mail: <u>eslavcheva@iees.bas.bg</u>; <u>iees@iees.bas.bg</u>

BULSTAT 000662089

Report of activities: Bulgarian section of ISE

prepared for the Meeting of Regional Representatives of ISE, 67th Annual Meeting, Hague, The Netherlands, August 2016

Membership:

The ISE membership stands at 15 members in 2016, which is with one member more than in 2015.

Scientific activity:

In 2015 the members of the Bulgarian Section participated in several of the ISE sponsored meetings and served as reviewers for the ISE journal Electrochemical Acta. Electrochemical Society organized an ISE-sponsored meeting - 5th Regional.

One meeting with possible ISE sponsorship is planned for 2017 "Sofia Electrochemical Days"2017 (SED). It is dedicated to 50th anniversary of the leading Bulgarian research organization in the field of fundamental and applied electrochemistry – "Acad. Evgeni Budevski" Institute of Electrochemistry and Energy Systems – Bulgarian Academy of Sciences and hopefully will be supported by the ISE.

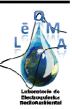
Sofia, 19th of August 2017



Evelina Slavcheva ISE Regional Representative for Bulgaria



Universidad Santiago de Chile Facultad de Química y Biología Laboratorio de Electroquímica MedioAmbiental Departamento de Química de los Materiales



ALAMEDA LIBERTADOR BERNARDO O'HIGGINS 3363 - CASILLA 40 SANTIAGO 1 - CHILE FONO: 56 (2) 2718 1178

Dr. Ricardo Salazar González Profesor Asistente e-mail: ricardo.salazar@usach.cl

International Society of Electrochemistry Annual ISE report of Chile – 2016

1.- Currently, there are 30 ISE members in Chile (July, 2016).

2.- At the end of 2015, the choice of RR of Chile was conducted, and was elected for a second term Dr. Ricardo Salazar of the University of Santiago, Chile.

3.- In January 2016, was realized the XXXII Conference Chilean Chemistry (XXXII Jornadas Chilenas de Química) together with the Latin-American Meeting of Chemistry (CLAQ) in Concepción, Chile.

4.- In January 2016, was realized the Third Summer School of Electrochemistry in the University of Santiago of Chile, were 40 students from Chile and Latin-America participated in class and laboratories. The lectures were given by professors of the University of Santiago of Chile, and laboratories were given by young professors, postdocs and phD students. This year we had the participation of two foreign professors: Dr. Carlos Martinez Huitle (Brazil) and Juan Peralta Hernandez (Mexico). Sponsors: ISE, DEQ & SChQ, Melvyn Becerra (Autolab) and Agencias RubioyGras (CHInstrument).

> Ricardo Salazar González Regional Representative of Chile

15th July, 2016





Annual ISE report of China (2015-2016)

Members:

ISE Regional Representative of China actively encourages the Chinese scientists in the field of the electrochemistry and the relative fields to become the ISE member through the website of CSE (the Chinese Society of Electrochemistry) and WeChat. The current number of ISE members in China is 378.

Activities:

In July 1-4, 2016, ISE Regional Representative of China organized two sessions in the 30th annual meeting of Chinese Chemical Society (CCS), namely "Electrochemical Materials" and "Chemical Power Sources". More than 1000 participants attended two sessions.

ISE regional group applied to organize the ISE Annual Meeting (AM) 2022 in China, and also greatly supported Professor Zhong-Qun Tian in Xiamen University to elect the ISE President Elect (term 2017-2018)

ISE regional group is also actively encouraging the Chinese scientists to attend the 67th ISE Annual Meeting, The Hague 2016. More than 160 participants from China will attend the meeting.

July 18th, 2016

Yong-yao Xia ISE Regional Representative of China



University of Zagreb Faculty of Chemical Engineering and Technology



Marulićev trg 19, HR-10000 Zagreb Tel: +385 1 4597 281 Fax: +385 1 4597 260 E-mail: office@fkit.hr www.fkit.hr

Zagreb, July 22th, 2016.

International Society of Electrochemistry

Dr. sc. Marijana Kraljić Roković Department of Electrochemistry Phone: +385 1 4597 112 E-mail: mkralj@fkit.hr

ISE - ANNUAL REPORT FOR CROATIA 2015/2016

Membership

The current number of ISE members in Croatia is 29. Since last report the number has increased by one. The new members on the list are 4 PhD students.

Activities

1. Unfortunately, no one from Croatia did not participated at **66th Annual Meeting of the International Society of Electrochemistry** in Taipei, due to the distance and high travel cost.

2. Four members will actively participate at **67th Annual Meeting of the International Society of Electrochemistry** in Hague with two oral presentations and three poster presentations.

3. The 5th ISE Satellite Student Regional Symposium on Electrochemistry took place at Ruđer Bošković Institute (July 2016) where 21 participants (young scientists, PhD students and undergraduate students) took part in oral presentations. This traditional Student Regional



Symposium was supported by *ISE* (<u>http://pierre.fkit.hr/ise-ssrse2016</u>). Also, few students from Serbia, Bosnia and Herzegovina, Slovenia and Algeria participated in this Meeting.

4. In February 2016 some members actively participated in Open Door Days organised by Faculty of Chemical Engineering and Technology, University of Zagreb, where Laboratory of Electrochemistry was presented to the public and to the future students. (https://www.fkit.unizg.hr/?@=20tba)

Marijana Kraljić Roković ISE-RR of Croatia



Miroslav Fojta Institute of Biophysics of the CAS Kralovopolska 135, CZ-612 65, Brno, Czech Republic Tel: +420 541 517 197 E-mail: fojta@ibp.cz

August 19, 2016

REPORT 2016 of the ISE Regional Representative – Czech Republic

Assoc. Prof. RNDr. Miroslav Fojta, PhD. has been elected as the ISE Regional Representative for the term 2016-2017.

Membership

Current status of the membership from the Czech Republic is 45 members. Since 2012 the number of ISE members from the Czech Republic has never decreased below 40, typically it was oscillating around 45 with a maximum in 2015 (52). PhD students have been an important target group for 2016 similarly as in previous years. Recruitment of new ISE members and/or membership renewal has naturally been attempted during national conferences or international conferences organized in the Czech Republic, particularly those sponsored by the ISE (see below).

Activities

Main activities in 2013 have been connected with preparation of three sponsored international electrochemical meetings:

XXVI Modern Electrochemical Methods

23-27 May 2016, Jetrichovice (near Decin), Czech Republic

Hydrogen Days 2016

6 - 8 April 2016, Prague, Czech Republic

Advanced Batteries, Accumulators and Fuel Cells

to be held on 28 - 31 August 2016, Brno, Czech Republic

These meetings provided/will provide good opportunity for students to learn more about the ISE society and membership advantages.

Prepared by: Miroslav Fojta Regional Representative Czech Republic



Regional Representative Meeting ISE Annual Meeting 2016

14. July 2016

Annual Regional Report of Denmark

By the date of reporting there are 41 ISE active members in Denmark, the same number as last year.

Through the year, the Danish ISE members have continued to be active in a range of activities within the field of electrochemistry. These include the annual meeting and workshops of the Danish Electrochemical Society and the Danish Battery Society, with active participation of the ISE members.

Professor Mogens Mogensen, the ISE member from the Department of Energy Conversion and Storage, Technical University of Denmark, was appointed fellow of the Electrochemical Society 2015.

Qingfeng Li dr.techn., professor The ISE Representative in Denmark

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UNIVERSITYoFTARTU

INSTITUTE OF CHEMISTRY

ISE REPORT 2016

ISE Membership

By the date of reporting there are 33 ISE members in Estonia, increased by 2 since the last report (August 2015).

Activities and conferences

Several Estonian electrochemists attended the 66th ISE Annual Meeting in Tapei, Taiwan (4-9 October, 2015) and in the 18th Topical Meeting of the ISE, held in Gwangu, South Korea (8-11 March, 2016).

A number of the ISE members of Estonia have been participating actively in several other international conferences and meetings related to the topics of electrocatalysis, energy storage and conversion, nanoscience and technology, neutron scattering, and electrochemistry as follows:

Chemistry & Chemical Technology 2016, International Conference of Lithuanian society of chemistry, April 28-29, 2016, Vilnius, Lithuania;

5th International Conference on Advanced Capacitors 23-27 May 2016, Otsu, Japan;

229th ECS Meeting, 29 May – 2 June, 2016 | San Diego, CA, USA;

6th Baltic Electrochemistry Conference (BEC2016): Electrochemistry of Functional Interfaces and Materials, 15-17 June 2016, Helsinki, Finland;

26th EUCHEM Conference on Molten Salts and Ionic Liquids, 3-8 July 2016 in Vienna, Austria;

The international conference "Neutrons for Energy", 18-22 July 2016, Bad Reichenhall, Germany

Meeting organization and membership

The Estonian ISE community is planning to organize the next Baltic Electrochemistry Conference (BEC) in Tartu, Estonia. Therefore, it is hoped that a number of the members of the ISE will increase over the coming year(s). The young scientists are encouraged to become part of the International Society of Electrochemistry community.

My sincerest apologies for not be able to attend the ISE meeting in the Hague.

Tartu, August 2016

Eneli Härk, PhD ISE Regional Representative of Estonia Institute of Chemistry University of Tartu Ravila 14a, 50411 Tartu Tel. +372 513 1425 eneli.hark@ut.ee University of Tartu

University of Tartu INSTITUTE OF CHEMISTRY Ravila 14A 50411 Tartu ESTONIA



ISE REPORT 2016 from the Regional Representative Finland

Members

The number of ISE members within Finland is currently 27 – which is a slight decrease on the previous year. This change is a result of a number of members (particularly at the Post-Doctoral level) who have arrived or left to pursue career opportunities outside of the Finnish region.

Activities

The 6th Baltic Electrochemistry Conference (BEC'16) that was recently held in Helsinki brought together over 160 delegates from 29 countries with representatives from as far afield as the USA and Mexico to China and Japan as well as all the Baltic Nations. The programme comprised of a total of 44 oral and 80 poster presentations that addressed a diverse range of topical issues from energy storage solutions like flow cell batteries, new nanoparticle sized catalytic materials for fuel cell applications to liquid-liquid interfaces for solar energy conversion and photodynamic therapies.

Additionally, there were a number of specially invited talks including a Plenary Lecture by Prof Christian Amatore, Ecole Normale Supérieure-PSL Research University, France (Seeing, Measuring and Understanding Vesicular Exocytosis of Neurotransmitters with "Artificial Synapses") and keynotes by Prof. Guido Grundmeier, University of Paderborn, Germany (Nanocrystalline ZnO Films on Engineering Metals), Prof. Patrik Schmuki, University of Erlangen, Germany (Self-organized TiO2 nanotube arrays: Latest features and applications) and Prof. Juan Feliu University of Alicante, Spain (From hydrogen and anion adsorption to interfacial acid-base properties at model Pt(111) electrodes).

Furthermore - in addition to the Plenary Speaker - thanks to the funds provided by the ISE, the Organisation Committee was able to help reduce the price for young researchwhich resulted in nearly 40% of the total attendees being Ph.D ers, students. Many of these students took the opportunity to get involved in scientific discussions with more senior members of the electrochemistry community and more than a few to time to tell the organisers of the new opportunities this conference has created for their future studies.

Future Plans

A special issue of Electrochimica Acta based on the papers presented at BEC is currently in preparation and it is intended that all attendees will be contacted in the near future to encourage them to join the ISE. In addition, the success of the conference means that the Section may have some left over funding that can possibly be used to help local student members attend future ISE sponsor conferences. Furthermore, as my first term is coming to an end this year there will be an election for the next Regional Representative.

Unfortunately, I will not be able to attend the ISE meeting in Netherlands, for which I send my sincerest apologies.

Dr.Ben Wilson, Regional Representative, Finland (ben.wilson@aalto.fi)









Centre Inter universitaire de Recherche et d'Ingénierie des Matériaux

ISE Annual report 2016 (France)

MEMBERSHIP

France has now **260 members** (265 members in 2015, 233 members in 2014).

ACTIVITIES

In collaboration with the "Electrochemistry" sub-division of Société Chimique de France (President of the sub-division: Hubert Perrot, LISE, Paris) preparation of "Journées d'Electrochimie" (French conference on Electrochemistry) which will be held in Bordeaux in June 2017.

SPONSORED MEETINGS

The following congresses held in France were sponsored this year:

1- Electrospinning for Energy conference (<u>www.elen2016.eu</u>)

Dates: 22-24 June 2016

Location: Montpellier

ELEN 2016 was specifically oriented to the application of nanofibres issued from electrospinning in energy conversion and storage devices.

Invited speakers: II-Doo KIM, Korea Advanced Institute of Science and Technology, Korea; Peter PINTAURO, Vanderbilt University, USA; Renaud Demadrille, CEA, France. **Organisers (chairs): Deborah Jones and Sara Cavaliere (Montpellier).**

2 grants offered to graduate students + 3 awarded posters.

2- 2nd International Meeting on Electrogenerated Chemiluminescence (ECL'2016) (<u>http://ecl2016.sciencesconf.org/</u>).

Dates: 29-31 August 2016

Location: Bordeaux

The conference is a satellite meeting of the $\rm 67^{th}$ ISE annual meeting.

The meeting addresses fundamental aspects, recent developments, bioanalytical and commercialized applications of ECL in medical diagnostics.

Invited speakers: L. J. Blum, University of Lyon, France; H. Cui, University of Science and Technology Mefei, China; Z. Ding, University of Western Ontario, Canada; P. S. Francis, Deakin University, Australia; R. J. Forster, Dublin City University, Eire.

Organisers (chairs): Neso Sojic, Bordeaux (France) and Francesco Paolucci, Bologna (Italy).

3- Journées toulousaine d'Electrochimie (JTE 2016) (national meeting)

Date: 12 July 2016

Location: Toulouse

The book of Pr. Allen Bard was offered to the PhD students presenting an oral communication.

Organiser (chair): Mathieu Gibilaro (Toulouse).

4- The European Corrosion Congress (EUROCORR 2016) (<u>http://www.eurocorr.org/</u>).
 Dates: 11-15 September 2016
 Location: Montpellier
 EUROCORR 2016 will cover all aspects of corrosion science and engineering, from mechanisms to industrial applications. EUROCORR is the major corrosion congress in Europe and one of the major corrosion conferences in the world. It will attract over

800 participants, including many European ISE members (from division 4 in particular), and the opportunity will be taken to attract additional ISE membership. **Chair: Philippe Marcus (Paris).**

5- **30**th **anniversary of the French group of** Bioelectrochemistry (<u>http://www.bioelectrochimie-gfb.org</u>).

Dates: 20-23 September 2016

Location: Marseille

The meeting will celebrate the 30th anniversary of the French Group of Bioelectrochemistry (GFB).

Plenary speakers: S. Cosnier, P. Allongue, F. Bedioui, M. Fontecave and M.P. Rolls. **Organizer (chair): Christophe Innocent (Montpellier).**

21 July 2016 Nadine Pébère, Regional Representative for France 2nd term ends in 2016



Rheinische

Baltruschat

Friedrich-Wilhelms- Institut für Physikalische Universität Bonn und Theoretische Chemie

Prof. Dr. Helmut Elektrochemie

Römerstr. 164 53117 Bonn Germany Tel.: +49 228/73-4162 Sek. +49 228/73-2922 Fax: +49 228/73-4540 Baltruschat@uni-bonn.de www.echemie.unibonn.de

Bonn, 02.08.2016

ISE Report 2015-2016 - Germany

Membership: 252 (from 209 members on September 28th 2015 and 223 on July 25th 2014).

past ISE and ISE Sponsored meetings (since the last ISE meeting):

International Conference on Capacitive Deionization and Electrosorption Saarbrücken, 26-29 October 2015

ISE sponsored Meetings to come in 2016:

universität bonn · Prof. Dr. H. Baltruschat · 53012 Bonn

International Conference on Advances in Semiconductors and Catalysts for Photoelectrochemical Fuel Production (SolarFuel16), Berlin, 5-6 September 2016

ELECTROCHEMISTRY 2016, Goslar, 26-28 September 2016

4th Ertl Symposium on Chemical Processes on Solid Surfaces: Water at Interfaces, Berlin, 11-13 October 2016

planned:

10. German BioSensorsymposium, 20.3.2017 -23.3.2017

Meeting of the section "Elektrochemie" of the GdCh within the conference "GdCh-Wissenschaftsforum", Berlin, 10. - 14. September 2017

Helmut Baltruschat





Report 2016 of the ISE Regional Representative – Greece prepared for the Meeting of the ISE Regional Representatives to be held during the 67th Annual Meeting of the ISE annual meeting in Hague, The Nederlands, 21-26 August, 216

1. Membership

• The number of ISE members in Greece are slightly less in 2015 reaching 27 members. Their preferences in the activities of the different ISE Divisions are as follows (3 of them have not expressed specific preferences):

- Division 1, Analytical Electrochemistry (7)
- Division 2, Bioelectrochemistry (1)
- Division 3, Electrochemical Energy Conversion and Storage (15)
- Division 4, Electrochemical Materials Science (13)
- Division 5, Electrochemical Process Engineering and Technology (10)
- Division 6, Molecular Electrochemistry (5)
- Division 7, Physical Electrochemistry (11)
- Efforts to recruit new members continue, especially targeting young scientists.

2. Activities

There was no participation from Greece at the ISE meeting in Taipei due most probably to the high cost of the trip to Taipei.

• Professor S. Sotiropoulos (Aristotle University of Thessaloniki, Greece) continued acting as one of the Editors of Electrochimica Acta.

• Professor C. G. Vayenas (University of Patras, Greece), ISE Fellow, continued acting as one of the Editors of Modern Aspects of Electrochemistry, Patras, Greece.

Patras, Greece, 20 July, 2016

Dr Stylianos G. Neophytides Research Director Institute of Chemical Engineering Scienses (ICE/HT) Foundation of Research and Technology (FORTH) Email: <u>neoph@iceht.forth.gr</u> Tel: +30 2610 965265

> Stadiou str., Rio P.O. Box 1414 GR 265 04 Patras, Greece Tel. +30 2610 965300 Fax +30 2610 990987 Email: admin@iceht.forth.gr

www.iceht.forth.gr



Report of activities: Hungarian section of ISE

prepared for the Meeting of Regional Representatives of ISE, 67rd Annual Meeting, The Hague, The Netherlands, August 2015

1. ISE members from Hungary

The ISE membership from Hungary was nearly stagnant during the last year, similarly to the situation in the earlier period. Now we have 14 Hungarian ISE members. These people belong to traditional research groups dealing with electrochemistry. In the last couple of year, we witnessed the restructuring of the community profile. While elderly and retired members do not tend to renew their membership, students belonging to electrochemical research groups join ISE for the period while their research affiliation makes it reasonable. Unfortunately, young researchers going abroad fall out of the attention of the regional representative and the national electrochemical community often loose them. Despite the regular calls for the members of the Hungarian electroanalytical research groups, they could not be involved in the ISE membership, and these groups tend to work in a segregated manner. It is expected that within a few years, the elderly colleagues without any employment will end their ISE membership and young colleagues will not be able to maintain the current level of membership.

2. Scientific activity

Although the annual ISE meeting is generally regarded by Hungarian colleagues as one of the most prestigious electrochemistry symposium, the number of delegates is generally small. After 2016 when no Hungarian ISE member could attend the meeting in Taiwan, 3 people can attend the annual meeting in 2016. The reason for the small number of attendees is merely financial.



Hungarian Academy of Sciences

3. Meeting organization

The Hungarian ISE community is facing the organization of two important meetings in 2017: – The Hungarian ISE community has submitted a proposal for organizing one of the topical meetings in 2017 in Szeged, Hungary. The proposal was evaluated by the relevant ISE body and the proposal was finally accepted. The meeting title is: "(*Photo)electrochemistry of semiconductors at the nanoscale: from fundamental aspects to practical applications*" and the date of the meeting will be 23-26 April 2017. The contracts concerning the meeting have been arranged and approved by ISE. The advisory board has been formed and the list of the invited speakers has been practically finalized. The local organizing committee comprises the following people (in alphabetic order): Balázs Endrődi (University of Szeged), György Inzelt (Eötvös Loránd University), Csaba Janáky (University of Szeged – Hungarian Academy of Sciences), Tamás Pajkossy (Electrochemistry Committee of the Hungarian Academy of Sciences), László Péter (Regional ISE representative), Csaba Visy (University of Szeged)

– Also in 2017, the Hungarian electrochemistry community will organize the 6th Regional Symposium of Electrochemistry – South-East Europe (RSE-SEE). Since RSE-SEE is traditionally an ISE-sponsored meeting, the organizers will soon contact the Society to discuss the support conditions. The venue of the event has been selected near the Lake Balaton and will soon be announced publicly.

Budapest, 15 August 2016

László Péter Scientific advisor Head of the Electrodeposited Nanostructures Group Department of Complex Fluids, Institute for Solid State Physics and Optics Wigner Research Centre for Physics, Hungarian Academy of Sciences

P. O. Box 49, 1525 Budapest, Hungary Konkoly-Thege Miklós út 29-33, 1121 Budapest, Hungary Phone/Fax: +36 1 392 2768 E-mail: szfki@szfki.hu Web: wigner.mta.hu

<u>Regional Report of India for ISE Annual Meeting in The Hague, The Netherlands</u> <u>July 2016</u>

1. ISE Members from India

I was elected on December 21, 2013 as Regional Representative of India for the period 2014-2016. The total number of ISE Members was 29 in July 2014. The importance of ISE and the benefits of the ISE membership (e.g., Electrochimica Acta and ISE Travel Awards for Young Researchers) were also addressed by Prof. Christopher Brett from Coimbra, Portugal to the Indian participants of the ISEAC International Discussion Meet, 11th ISEAC-DM-2014, held at Amritsar during February 20-25, 2014 organised by Indian Society for ElectroAnalytical Chemistry (ISEAC). Presently, there are 31 members, which is quite close to previous number. Several electrochemistry groups working in India are being informed of the benefits of joining ISE. Individuals are being contacted through emails also. One of the reasons is the limited funds availability with research scholars and other researchers. We would suggest some of them with active interest in electrochemistry and real funding difficulties, to approach ISE for assistance through ISE President's fund to pay for annual membership fee. An analysis of the interest of these 31 ISE members from India showed that 15, 16, 14, 3, 4 and 9 ISE members from India expressed their interest in the programs of Division 1(ANALYTICAL ELECTROCHEMISTRY), Division 3(ELECTROCHEMICAL ENERGY CONVERSION AND STORAGE), Division 4 (ELECTROCHEMICAL MATERIALS SCIENCE), Division 5 (ELECTROCHEMICAL PROCESS ENGINEERING AND TECHNOLOGY), Division 6 (MOLECULAR *ELECTROCHEMISTRY*), and Division 7 (PHYSICAL ELECTROCHEMISTRY), respectively. Some members are interested in the activities of more than one Division of ISE.

2. Activities in India during the Reporting Period

16 abstracts were shortlisted during 11th ISEAC-DM-2014 held at Amritsar, by an international expert committee evaluating the posters as well as oral presentations. Of these, complete manuscripts of 15 abstracts were brought out as a Special Issue of "Electroanalysis" entitled "Electrochemistry in India" with Prof. Suresh Kumar Aggarwal, President, ISEAC as the Guest Editor, with the support and cooperation of Prof. Joseph Wang (Chief Editor of Electroanalysis), and the international reviewers.

Indian Society of ElectroAnalytical Chemistry (ISEAC) with its headquarters at Fuel Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai was to organize 12th ISEAC-DM-2015 in Kochi during January 2015. However, some reasons beyond the control of ISEAC executive committee members forced to postpone this event. Now we are organising *12th ISEAC-DM-2016* in Mumbai in December 2016. This is preceding the ISAEST-11 Conference at Chennai during December 8-10, 2016.

One of the Indian ISE members, Dr Ruma Gupta, from FCD, BARC, attended the 65th Annual Meeting of ISE held at Lausanne, Switzerland during 31 August- 5 September 2014. Two other Indian colleagues Dr. V. Ganesan from BHU, Varanasi (ISE Member),

and **Dr. Subir Kumar Ghosh from BARC, Mumbai** attended this ISE Meeting. None of the ISEAC life-members could attend the 66th Annual Meeting of ISE at Taipei, Taiwan in 2015. However, the ISE website shows that one Indian participant *Balwinder Kaur from IIT, Ropar* got the best Poster Prize in this meeting. One of the main reasons for poor participation from India is the large number of International Conferences in various fields, large number of applicants applying for funding support to various Government funding agencies, and limited money available with these Government funding agencies to provide support to participate in various Conferences.

3. Activities Planned in India for 2016-17

It is proposed to hold the event "12th ISEAC Discussion Meet (12thISEAC-DM-2016)" on December 7, 2016 at Mumbai. Detailed information about this International event is available on ELAC Discussion Group on "facebook" as well as final program will be posted on the ISEAC website (www.iseac.org). It is proposed to invite internationally known experts in different areas of electrochemistry.

All efforts will be made to increase the number of ISE members from India in future. We will also encourage the needy scientists to approach ISE for membership fee support from ISE Presidential fund. ISEAC also provides partial funds to its life-members for participation in the International Annual Meetings of ISE. Hopefully, the Indian participation will improve in 68th ISE Meeting at Providence, RI, USA (2017), 69th ISE at Bologna in Italy (2018) and 70th ISE at Durban, South Africa.

FROM:



Prof. Suresh Kumar Aggarwal ISE Regional Representative of India President, ISEAC, Mumbai, India Email: <u>skaggr2002@gmail.com</u> Tel: (0091) 9892578865 (Available on whatisapp and viber)

Report of the ISE Regional Representative for I.R. Iran

A- Membership

Up to 2016, 26 Iranian scientists are active in different ISE sections.

B- Activities

The Iranian electrochemists have participated in several international and national conferences on electrochemical topics including:

- 1- 17th Iranian Chemical Congress, Aug. 29-31, 2015, Semnan University, Semnan, Iran; by Iranian Chemical Soc.
- 2- 17th Iranian Chemical Society Conference (with a separate section in electrochemistry), 2-4 Sept. 2015, Semnan University, Iran.
- 3- The 66th Annual Meeting of the International Society of Electrochemistry, 4-9 October 2015, Taipei, Taiwan.

C-Published articles

Based on Scopus reports 1151 papers have been published in 2015 by Iranian scientist in the field of electrochemistry (<u>https://www-scopuscom.scopeesprx.elsevier.com/results/results.uri?sort=plf-</u> <u>f&src=s&sid=E5279226F14AA35AFD15C13E55EECEA4.ZmAySxCHIBxx</u> <u>TXbnsoe5w%3a930&sot=a&sdt=a&sl=58&s=AFFILCOUNTRY%28iran%2</u>

<u>9+AND+PUBYEAR+%3d+2015+AND+Electrochemistry&origin=searchad</u> vanced&editSaveSearch=&txGid=0)

This is huge increase in the Iranian publication in electrochemical methods vs. 2014 (about 250%). Seven of them are book chapters and twenty-five of them are Reviewer. From the published papers, them, fourty seven papers in 2015 are published in Electrochimica Acta and more than 6000 chemistry articles by Iranian researchers have been published in ISI indexed Journals.

Isfahan, July 11, 2016 Ali A. Ensafi Regional Representative of I. R. IRAN



ISE Ireland Regional Representative Annual Report (2015-2016)

Members.

The number of ISE members in Ireland has remained unchanged at 22 over the past year with all seven universities and one of the Institutes of Technology represented. Division 4, Electrochemical Materials Science with 16 members has the largest affiliation. Post graduate students account for approximately one third of the membership.

Activities.

In my first year as ISE Regional Representative I intend to utilise the outreach activities of Tyndall National Institute, The Science Foundation Ireland funded <u>CONNECTcentre.ie</u> research centre and other research and teaching programmes such as <u>MakerDojo.ie</u> to promote electrochemistry, the ISE and member benefits.

Ireland has a thriving electrochemistry community which is growing through the increased focus nationally on nanotechnology and materials research. I expect ISE membership and engagement to increase with participation in national and international electrochemistry based workshops and conferences. Later this year we intend to initiate a Student Meeting to encourage interaction among the electrochemistry groups in Ireland.

At the Annual Meeting in the Hague there will be 4 talks and 5 posters from ISE members in Ireland.

Sincerely,

Dr. James Rohan Electrochemical Materials & Energy Tyndall National Institute University College Cork Ireland tyndall.ie tyndall.ie/content/electrochemical-materials-and-energy connectcentre.ie



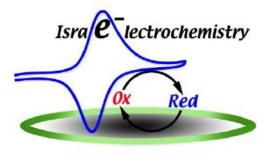


THE IBY AND ALADAR FLEISCHMAN FACULTY OF ENGINEERING PROFESSOR NOAM ELIAZ CHAIR, DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING DIRECTOR, THE BIOMATERIALS AND CORROSION LABORATORY הפקולטה להנדסה ע"ש איבי ואלדר פליישמן פרופסור נעם אליעז ראש המחלקה למדע והנדסה של חומרים ראש המעבדה לביו-חומרים וקורוזיה

ISE Report from the Israeli Regional Representative June 2016

Members

Presently there are 20 Israeli ISE members, most of them from academia. This number reflects a minor increase from 19 members in 2015. The number of electrochemists in the academy including graduate students is estimated to be over 120.



Honors

4 of the ISE members in good standing are ISE Fellows

(Aurbach, Gileadi, Lev, Mandler). This respectable number (out of 73 ISE Fellows overall) reflects the achievements of Israeli electrochemists.

Activities

The activity in electrochemistry in Israel keeps growing constantly and attracts the academia as well as industry. Several recent recruits of new faculty in academia are in this area. The annual meeting of electrochemistry is called Israelectrochemistry and is held every year at a different University. These meetings are usually supported by the Baruch Zinger Foundation, which awards a few prizes for the best lecture and poster presentations. The 2015 meeting was held on October 15th at Ben-Gurion University of the Negev.

In addition to the annual meeting, a few industry oriented meetings are organized by Shmuel De-Leon Energy Ltd. (<u>www.sdle.co.il</u>).

The program of IMEC-17 – The 17th Israel Materials Engineering Conference that was held on February 1-2 at Bar-Ilan University included many contributions from the electrochemistry community.

During 2013 a new center – Israel National Research Center for Electrochemical Propulsion (INREP) – was established. The center combines forces on the development of new materials, new concepts and new analytical methodologies, as well as functioning prototypes.

Prof. Noam Eliaz

ISE Annual Report 2016 – Italy

ISE membership. Despite constant promotion of membership renewal and new recruiting, the number of members remained somewhat below those of the last two years, presumably due to low participation and recruiting at the annual ISE Meeting 2015. At the date of this report the membership has reached, however, a comfortable number of **119 active members**. A positive effect on the membership might result from a (hopefully) large participation to the ISE Meeting in The Hague. The effort to recruit new members is focused on the authors of papers published in Electrochimica Acta, new PhD students and young scientists.

Participation to ISE operative bodies. Marco Musiani (CNR – Padova), Executive Secretary for the term 2014-2018; Francesco Paolucci (University of Bologna), Chair of Division 6 (Molecular Electrochemistry) for the years 2015-2016; Francesca Soavi (University of Bologna), Vice-Chair of Division 3 (Electrochemical Energy Conversion and Storage) for the years 2015-2016.

Sponsored Meetings. ISE sponsorship has been granted to the following Congresses in 2016:

- 1. International Meeting on Ionic Liquids for Electrochemical Devices (ILED 2016), 11-13 July 2016, Rome (Italy), sponsored by Division 3;
- 2. The International Conference on "Supramolecular Assembly: towards Novel Functional Materials and Devices" (MOLARMEET 2016), 6-10 September 2016, Lecce (Italy), sponsored by Division 6;
- 3. Giornate dell'Elettrochimica Italiana Annual Meeting of the Electrochemistry Division of the Italian Chemical Society, 11-14 September 2016, Gargnano-Brescia (Italy), sponsored by the Executive Committee;
- 4. 2nd E3 Mediterranean Symposium: Electrochemistry for Environment and Energy, 14-16 September 2016, Gargnano-Brescia (Italy), sponsored by the Executive Committee.

LECCO

ISE Activities. The preparation activity of the **69th Annual ISE Meeting (2-7 September 2018, Bologna, Italy)** has proceeded with the definition of the Organizing Committee that will include 5 Italian Members: Salvatore Daniele (Venice), Francesco Di Quarto (Palermo), Marco Musiani (co-chair, Padua), Francesco Paolucci (co-chair, Bologna), Sandra Rondinini (Milan).

Some essential data, including the important dates and deadlines, the full composition of the Organizing Committee and the main Scientific Themes, will be presented in occasion of the First Announcement at the **67th Annual ISE Meeting**, The Hague, Netherlands.

July 12th, 2016

Sandro Cattarin, Regional Representative of Italy

PADOVA

GENOVA

MILANO

LECCO

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ISE REPORT 2016 from Korea

Changes

In-Hyeong Yeo at Dongguk University finished 6 years service (two terms) as a regional representative. The regional members of ISE and the members of the Korean Electrochemical Society appreciate the endeavor efforts done by In-Hyeong Yeo to visualize Korean electrochemists to the international society. Woonsup Shin, myself, followed the role from 2016. I served ISE as a chair and a vice-chair of Bioelectrochemistry division and am currently vice-president of the Korean Electrochemical Society.

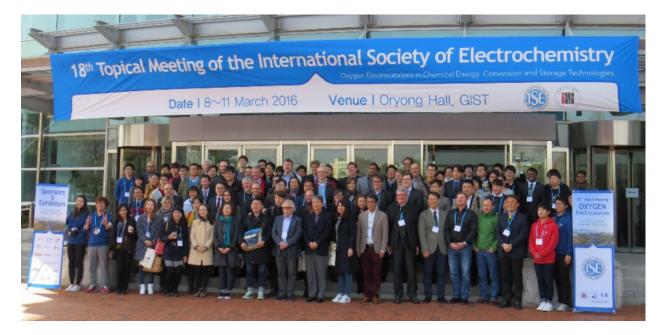
Members

The number of ISE members from Korea as of today is 262. It was 176 at the end of 2015. Wow! We are trying to help them to participate actively in the activities of ISE.

Activities

1. ISE topical meeting in Gwangju, Korea from March 8th (Tue) to 11th (Fri)

was organized by Jaeyoung Lee and Bongjin Simon Moon with the topic of "Oxygen Electrocatalysis in Chemical Energy Conversion and Storage Technologies". 7 keynote, 19 invited, 43 oral lectures and 103 posters were presented. The number of participants was 214.



2.The host of 2021 ISE annual meeting in Korea

Korea hosted the ISE annual meeting in 2021. The Korean Electrochemical Society fully supported the hosting. We had a start-up meeting last week to discuss the organization and future plan.

3. The Spring Korean Electrochemical Society Meeting in April 8-10, 2016

KECS spring meeting was held at Kim Daejoong Exhibition Convention Center, Gwangju, Korea. The meeting was successful with 700 participants covering all disciplines of electrochemisty from fundamentals to applications.

I am looking forward to seeing you all soon in Den Haag!

July 27, 2016 Woonsup Shin, Regional Representative of Korea Department of Chemistry/ BioMedical Engineering, Sogang University, Seoul, Korea.



State research institute Center for Physical sciences and Technology

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International Society of Electrochemistry

ISE ANNUAL REPORT LITHUANIA

Vilnius, 12-07-2016

Members

The number of the members in the ISE regional group remained the same - 22.

Activities

ISE regional group took part in organisation of the **international conference "Chemistry and Chemical Technology 2016"** (C&CT2016), devoted to the 210th anniversary of the Electrolysis Theory by Theodor von Grotthuss. It was the **ISE supported** conference. Special Issue of *Electrochimica Acta* is devoted to this conference. Information about the conference is on the conference website http://cct2016.ftmc.lt. **260 scientists from 13 countries** (Lithuania, Poland, Turkey, Finland, Russia, Ukraine, Germany, Belarus, Estonia, Latvia, Sweden, Moldavia, and India) took part in C&CT2016, moreover, almost half of the participants were young researchers. The first day was dedicated to Electrochemistry, while the second day was for other chemical sciences. The newest research was presented in the plenary lectures by known European Electrochemists, former or current ISE Regional Representatives from Estonia, Germany, Lithuania, Poland, and Sweden.

Proposal for organizing ISE Topical Meeting in 2019 is under preparation and it will be send to the Scientific Meetings Committee before the Annual Meeting in The Hague. Rasa Pauliukaite was a member of the Scientific Committees of the 6th Baltic Electrochemistry Conference organised in Helsinki, Finland, which is also the *ISE sponsored meeting*, and of the 4th Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences " IC-ANMBES 2016".

Publications by ISE regional group members:

1 oral and 5 poster presentations in the *ISE Annual Meeting in Taipei* last year;
2 plenary lectures and 26 poster presentations the ISE sponsored conference "Chemistry and Chemical Technology 2016" in Vilnius (Lithuania);

1 oral and 3 poster presentations in the 6th Baltic Electrochemistry Conference (Finland); 1 oral presentation in the ISE sponsored conference, the 16th International Conference on Electroanalysis (ESEAC 2016) in Bath (UK);

2 presentations will be presented in the ISE Annual Meeting in The Hague;

1 paper was published in Electrochimica Acta by ISE members in 2015-2016. We expect more publications in Special Issues this year.

Future perspectives

ISE Regional group plans to recruit new members, organise national and international events and attend ISE and ISE sponsored meetings. Election of Regional Representative will be organised at the end of 2016.

ISE Regional Representative, Lithuania Deputy Director

Vidmantas Remeikis

Chief researcher Dr. Rasa Pauliukaité Department of Nanoengineering Center for Physical Sciences and Technology Savanorių pr. 231, LT-02300 Vilnius Lithuania

Email: pauliukaite@ftmc.lt Phone +370 5 2644866



Dr. Carlos Eduardo Frontana-Vázquez

Centro de Investigación y Desarrollo Tecnológico en Electroquímica, S. C. Tel. 52-442-211-6000 Ext 7849, Fax. 52-442-211-6001 Pedro Escobedo, Querétaro, August 15th, 2016

REPORT OF THE ISE REGIONAL REPRESENTATIVE – MEXICO

As of today, August 16th, 2016, the region has 64 members. This number is keeping steady after a surge provoked by the 64th Annual Meeting in Queretaro, which gathered a large number of attendants. Also, one ISE-sponsored event took place: MicroEchem 2015 "Second Summer School in Molecular Electrochemistry", with a total of 35 participants, among lecturers and students. Also, an ISE Regional Student Meeting was organized (the third one), with about 20 students. These activities complemented those typically organized by the Mexican Electrochemical Society.

I look forward to see you in further meetings and also provide as much assistance as possible for the development of our society.

Sincerely,

Dr. Carlos Eduardo Frontana Vázquez Centro de Investigación y Desarrollo Tecnológico en Electroquímica, S. C, México

ISE Report 2016 from the Regional Representative the Netherlands

(Prepared for the ISE Regional Representatives meeting to be held during the 67th Annual Meeting of the ISE, August 21st – 26th, 2016, Den Haag, The Netherlands)

Members

The number of members within the Netherlands in last year has more than doubled (in 2015, we had 30 members and this year we have 62 members thanks to ISE meeting in the Hague). A number of scientists based in the Netherlands have been contacted directly to become a member.

The interest of the Dutch ISE members in the different divisions is given here (listed from high to lower interest):

- Division 3: ELECTROCHEMICAL ENERGY CONVERSION AND STORAGE (15)
- Division 4: ELECTROCHEMICAL MATERIALS SCIENCE (15)
- Division 7: PHYSICAL ELECTROCHEMISTRY (11)
- Division 5: ELECTROCHEMICAL PROCESS ENGINEERING AND TECHNOLOGY (8)
- Division 1: ANALYTICAL ELECTROCHEMISTRY (7)
- Division 2: BIOELECTROCHEMISTRY (3)
- Division 6: MOLECULAR ELECTROCHEMISTRY (2)

Activities

A presentation about the 67th Annual Meeting was given during the General Assembly on Thursday, October 8th, 2015.

Dr. Liza Rassaei replaced Maarten van Brussels for the position of ISE national representative of the Netherlands in December 2015.

KNCV Symposium

Each year, the Dutch and Belgian electrochemistry community gathers for the annual meeting of the working group on electrochemistry of the *Koninklijke Nederlandse Chemische Vereniging* (KNCV). This one day symposium, which benefits from financial support from the ISE provides a common meeting ground for fundamental and applied electrochemistry experts from both countries.

In 2015, the symposium was organized at the University of Wageningen, the Netherlands and the theme was Electrochemistry for Quality of Life. A presentation

about the activities of the Society and the upcoming 67th Annual Meeting was given at that meeting.

This year, the symposium will be organized at the Delft University of Technology, the Netherlands and the theme will be *Electroanalysis*. A presentation about the ISE and its activities will be given at this meeting.

July 20th, 2016 Liza Rassaei Delft University of Technology, the Netherlands



International Socierty of Electrochemistry

Summary report on Norwegian ISE activities in 2015/2016

Membership

The number of Norwegian members of the ISE, 15, is relatively modest and has an obvious potential to be expanded. Most of the Norwegian members are from Trondheim (11 are associated with Norwegian University of Science and Techanology), while Oslo has at present only a marginal representation (just 2 members). Expansion of the Norwegian membership, first of all via growth of the membership in Oslo area, will be targeted in the coming term.

Even though a modest number of the members, the publication activity in journals focused on electrochemistry, including a Society Journal Electrochimica Acta and such journals as Journal of Power Sources and Journal of Electroanalytical Chemistry is high.

Other

Further to the traditional for Norway activities related to electrolysis (aluminium production) and corrosion protection of the installations utilized by the offshore oil and natural gas production facilities, recently we have observed growth of the funding allocated to the studies of the rechargeable batteries, mostly for Li-ion, but also for the metal hydride batteries. The focus on use of silicon based composites as an anode material meets a strong interest and support from the silicon producer Elkem. One important recently approved national project is a Center for environment-friendly energy research Mobility Zero Emission Energy Systems where Institute for Energy Technology, Norwegian University of Science and Technology, University of Oslo and Sintef joined forces in the R&D on the Li-ion and metal hydride batteries (7 years project, 2016-2023).

August 19, 2016

Reginal representative Norway Volodymyr Yartys, Prof. Institute for Energy Technology and Department of Materials Science and Engineering Norwegian University of Science and Technology Trondheim, Norway volodymyr.yartys@ife.no

Volalymy Vartys.

ISE Poland representative report

Membership

There is 137 members of ISE from Poland.

Activities

Renata Bilewicz is serving as Chair of Division 2.

Two Meetings with possible ISE sponsorship are planned for 2017:

9th Workshop on Scanning Electrochemical Microscopy and Related Techniques (Chair Wojciech Nogala), 13-17.08.2017 Smrock-Dwor (near Warsaw).

8th International Workshop on Surface Modification for Chemical and Biochemical Sensing SMCBS'2017, (Chairs Wlodzimierz Kutner, Marcin Opallo) November 2017.

Others

After elections Magdalena Skompska (University of Warsaw) was replaced by Marcin Opallo (Institute of Physical Chemistry, Polish Academy of Sciences).

Marcin Opallo

ISE Report from the Romanian Regional Representative Prepared for the 67th Annual ISE Meeting in The Hague

Members

Currently, Romania has 36 ISE members, increased by 1 since the 66th Annual Meeting of ISE in Taipei, Taiwan. Efforts to recruit new members continue, especially targeting young scientists.

The interest of the Romanian members in the different divisions is given here:

- Division 1: Analytical Electrochemistry - 25 members (increased by 3 members)

- Division 2: Bioelectrochemistry – 22 members (increased by 4 members)

- Division 3: Electrochemical Energy Conversion and Storage - 6 members

- Division 4: Electrochemical Materials Science - 18 members (decreased by 3 members)

- Division 5: Electrochemical Process Engineering and Technology – 6 members (decreased by 3 members)

- Division 6: Molecular Electrochemistry – 11 members (increased by 1 member)

- Division 7 Physical Electrochemistry - 11 members

Activities

The most of the activities related to electrochemistry are performed in universities and research organizations possessing Physical Chemistry and Materials Science specialties. Generally, they consist in:

- Preparation and publication of papers in ISE journals (El. Acta,) or other ones which are specific to their R&D activities, including materials science, sensors/biosensors, medicine, renewable energy, etc (Ceramics Intl,)

-PhD theses in the field of Applied Electrochemistry: Luminita Fritea (joint programme thesis UMF Cluj, Romania-University Rhone Alpes Grenoble, France), Anca Florea ((joint programme thesis UMF Cluj Romania-University Claude Bernad Lyon, France), Iuliana MOLDOVEANU, Livia Alexandra GUGOASA, Ramona GEORGESCU, Cristina-Andreea AMARANDEI, Cătălina CIOATES (NEGUT)

- Participation of ISE members at ISE sponsored meetings, respectively: International Fischer Symposium, 7-11 June 2015, Lübeck, Germany ("Investigation of Ni-Mo and Co-Mo alloys electrodeposition involving choline chloride based ionic liquids," S. Costovici, T. Visan, L. Anicai)

- Participation of ISE members at other meetings involving electrochemical topics: EastForum 2015, 25 - 26 June 2015, Lund Sweden, organized by European Academy of Surface Technology ("Electrodeposition of Co and CoMo Alloys Coatings using Choline Chloride Based Ionic Liquids – Evaluation of Corrosion Behaviour ", L. Anicai, S. Costovici, A. Cojocaru, T. Visan); Romanian International Conference of Chemistry and Chemical Engineering, RICCCE 19, September 2015, Sibiu, Romania ("Corrosion performance of electrochemically obtained Ni-Mo and Co-Mo alloys coatings involving ionic liquids analogues", L. Anicai, S.Costovici, T. Visan)

- Writing specific chapters of electrochemistry books (S. Lupu*, P.C. Balaure, C. Lete, C. Mihailciuc, Biocomposite nanomaterials for electrochemical biosensors, in Handbook of Nanoelectrochemistry, Eds: Mahmood Aliofkhazraei, Abdel Salam Hamdy Makhlouf; Springer International Publishing, 29 pg, ISBN: 978-3-319-15207-3 (Online); doi: 10.1007/978-3-319-15207-3_39-1; 2015; invited chapter; S. Lupu*, C. Lete, B. Lakard, J.-Y. Hihn, D. Sanchez–Molas, F.J. del Campo, Electrochemical deposition and patterning of composite nanomaterials for electrochemical sensors and biosensors, in Comprehensive Guide for Nanocoatings Technology, Volume 4: Application and Commercialization, Ed.: Mahmood Aliofkhazraei, Nova Science Publishers, pp. 359-406, ISBN: 978-1-63482-648-8; 2015, invited chapter, C. Cristea, A. Florea, M. Tertiş R. Săndulescu, Chapter 6- Immunosensors in Biosensors - Micro and Nanoscale Applications, Ed. Intech, 2015, p. 165-202; R. Săndulescu, M. Tertiş, C. Criste, E. Bodoki, Chapter 1- New Materials for the Construction of Electrochemical Biosensors in Biosensors - Micro and Nanoscale Applications, Ed. Intech, 2015, p. 1-36.); - Reviewers for ISE and other electrochemistry related publications

- R&D activities as components of nationally funded research projects on electrochemistry subjects; the funds are provided either by the Romanian Ministry of Education and Research (under the frame of the National Program PN II 2014-2010, other components of Structural Funds Programs) involving Calls for Proposals at national level, or by private entities.

- International research projects on electrochemistry subjects, such as: M - ERA Net, H2020, NATO. During 2015, an exchange of PhD students under the frame of a M Era Net project took place between electrochemical groups of UPB-CSSNT and University of Porto (Prof. A.F. Silva); 2 new projects under the frame of M Era Net program have been awarded and financed, dealing with electrochemical topics (surface coatings involving ionic liquid electrolytes, nanofoams for supercapacitors and hydrogen production from water electrolysis). Most of the team members are ISE members.

The Romanian electrochemists are also involved in **international research networks** in cooperations with: France, Argentina (project New generation of temporary and permanent implants based on alloy with non toxic elements and innovative controlled micro and nano surface layers with biomimetic and antibacteriostatic properties), Portugal (R&D projects awarded under M_Era Net Programme in the field of applied electrochemistry: High performance nanostructured coatings using ionic liquids based on choline chloride – NANOCOATIL with Porto University), Germany (New materials and devices based on conducting polymers and their composites), etc.

There is an intense students **exchange in doctoral and post doctoral programs** (as well as ordinary students in Erasmus Socrates programs) with France (Université Claude Bernard Lyon 1, Université Joseph Fourier Grenoble, etc.), Portugal, Spain (University of Cadiz), etc. Parts of the scientists involved in electrochemistry from Romania are members of Romanian Society of Electrochemistry (Societatea de electrochimie din Romania). This society has not regular meetings, but it is involved in all significant international events organized in Romania. The Romanian electrochemists are also gathered with the occasion of general meetings in chemistry, usually organized by Romanian universities or by the Romanian Society of Chemistry.

There are some small meetings on electrochemistry organized in Romania which became including the francophone workshop NOUVEAUX MATÉRIAUX POUR LA traditional. RECONNAISSANCE ELECTROCHIMIQUE DES MINERAUX ET DES ESPÈCES BIOLOGIQUES acronyme « NOMARES » (New materials for electrochemical recognition of mineral and biological species), with the support of Association Universitaire de la Francophonie. In 2016 the 4th edition of this symposium will be held in IASI, Romania, with the occasion of the traditional 3rd International Conference on Analytical Chemistry in 28 (RO-ICAC) August 31. 2016 (http://roicac.acadiasi.ro/workshop-nomares/). In May 20, 2016, in Bucharest has been organized the Workshop MICROBIOSENS - "New methodologies and advanced nanomaterials for electrochemical biosensors", the chair being Prof. Dr. HDR Stelian Lupu, University Politehnica of Bucharest (http://www.microbiosens.ro/index.php/workshop). The workshop was organized in May 20, 2016, in the Laboratory of Analytical Chemistry from University Politehnica of Bucharest under the framework of the national research project: "Electrochemical micro-biosensors based on electrodes and microelectrodes arrays modified with composite materials", project no. PN-II-ID-PCE-2011-3-0271, director Prof.Dr.HDR Stelian Lupu. The financial support was provided by the Romanian National Authority for Scientific Research (CNCS - UEFISCDI). The workshop was devoted to the development of electrochemical biosensors and analytical methodologies for monitoring of biologically active compounds and organic pollutants including studies on advanced nanomaterials and composite materials, new electrochemical deposition methods, metal nanoparticles and their electrocatalytic activity toward alcohol oxidation, screen printed electrodes based biosensors for food quality control, drug delivery systems, EPR spectroscopy, alginate-encapsulated human pancreatic cancer cells for development of mouse models, and sonogel carbon electrode materials. The application of novel electrochemical preparation methods based on the use of sinusoidal voltages has been demonstrated. 34 participants from Romania (31) and Spain (3), including undergraduate and graduate students, researchers and university teachers, have attended the workshop. The workshop included 9 key note lectures of high scientific level followed by fruitful discussions. Experimental demonstration on the use of sinusoidal voltages in biosensors' development has been performed. The transfer of the developed novel preparation procedure to sonogel carbon based electrodes for biosensors technology was carried out in collaboration with two researchers and one PhD student from the University of Cadiz, Spain.

Others

Active members from the Romanian Society of Electrochemistry have contributed to the dissemination of various aspects of electrochemistry and electrochemical methods within the community of chemists and chemical engineers by publishing featured articles in the Bulletin of the Romanian Society of Chemistry including topics on electrochemical sensors and biosensors, new electrode materials and their electroanalytical applications.

Prof.Dr. Eng. Eleonora-Mihaela UNGUREANU

Mungareann

Regional Representative of Romania Department of Inorganic Chemistry, Physical Chemistry and Electrochemistry Faculty of Applied Chemistry and Material Science University "Politehnica" of Bucharest 1-7 Gheorghe Polizu Str., 011061, Sector1, Bucharest, code: 011061, ROMANIA , Room E 201 C FAX: +4021 7607834; Phone:+ 4021 402 39 77; 4021 402 38 55 E-mail: <u>eleonoramihaelaungureanu@gmail.com</u>, em_ungureanu2000@yahoo.com

REPORT 2015-2016 of the ISE section in Russia

Membership

Within the period of 2011-2015 the Russian section of ISE consisted of 50 to 60 members. The actual number is 53.

Activities

Main research activities of the section in the period from August 2015 till August 2016 were in the area of pure and applied electrochemistry.

Member of the section, Yu. V. Pleskov, has been awarded with the Frumkin Memorial Medal in 2015. His award lecture will take place during the 67th Annual Meeting of ISE.

M. A. Vorotyntsev is actually a vice-chair of Division 4 of ISE as well as the Deputy Editor-in-Chief of the Russ. J. Electrochem.

G. A. Tsirlina is a member of the Editorial Board of J. Electroanal. Chem. and an Associate Editor of J. Solid State Electrochem.

M. A. Vorotyntsev has been one of the Guest Editors of the special issue of Electrochimica Acta "ISE-2014", 2015, vol. 179. He is actually the Guest Editor of the special issue "EEM-2016" in Electrochimica Acta (in the course of preparation).

A number of Russian ISE members are actually members of the Editorial Board of the Russ. J. Electrochem. as well as serve as reviewers for Electrochimica Acta and other international electrochemical journals.

Several participants from the Russian section participated in the 66th ISE Meeting in Taipei, Taiwan where they delivered both oral and poster presentations.

A great number of participants from the Russian section will take part in the 67th Annual ISE Meeting-2016 in Den Haag, The Netherlands with oral and poster presentations. M. A. Vorotyntsev is serving as an Organizer of Symposium 10 "Electroactive, Functionalized and Nanostructured Materials and Composites: Modern Trends in Synthesis and Applications" within this ISE Meeting.

The principal conference of Russia in the area of electrochemistry: 10th International Frumkin Symposium on Electrochemistry took place in Moscow in October 21-23, 2015. This conference gathered about 300 participants including numerous foreign electrochemists. Plenary lectures were delivered by C. Amatore, D. Aurbach, R. G. Compton, J. Ulstrup and J. Zimmerman. Several hundreds of oral and poster presentations were delivered within 5 sections: 1) fundamental aspects of electrochemistry, 2) electrochemistry of functional materials, 3) electrochemical energetics, 4) (bio)electrocatalysis: from biosensors to biofuel cells, 5) bioelectrochemistry, organized by their committees chaired by V. A. Safonov, M. A. Vorotyntsev, T. L. Kulova, A. A. Karyakin and Yu. A. Chizmadzev.

A special Frumkin issue based on selected presentations at this symposium is in the process of preparation for publication in Russ. J. Electrochem. (over 35 overview and research papers)

ISE members of the Institute for Problems of Chemical Physics RAS (IPCP RAS, Chernogolovka, Moscow region), of the M. V. Lomonosov Moscow State University, of the A. N. Frumkin Institute of Physical Chemistry and Electrochemistry (IPCE RAS, Moscow) and of the Institute of General and Inorganic Chemistry (IGIC RAS, Moscow) have been participating actively in preparation and realization of several national and international conferences:

1. International Conference "Ion transport in organic and inorganic membranes". Sochi, Russia, May 2016;

2. 13th Meeting "Fundamental Problems of Solid State Ionics", Chernogolovka, Russia, June 2016

3. The 6th Baltic Electrochemistry Conference: Electrochemistry of Functional Interfaces and Materials (BEC-16), Helsinki, Finland, June 2016

4. XIV International conference "Topical Problems of Energy Conversion in Lithium Electrochemical Systems", Suzdal, Russia, September 2016 (under preparation)

5. Young scientists' school on electrochemical energy storage, Suzdal, Russia, September 2016 (under preparation)

Members of the section also participated in other international electrochemical conferences within the period from September 2015 to August 2016, in particular

- 18th Topical Meeting of the International Society of Electrochemistry "Oxygen Electrocatalysis in Chemical Energy Conversion and Storage Technologies", Gwangju, South Korea, 8-11 March 2016;

- Fifth Regional Symposium on Electrochemistry – South East Europe (RSE- SEE) in Pravets, Bulgaria, June 7-11, 2015, sponsored by ISE;

- 10th National Conference "Physicochemical problems of renewable power", St. Petersburg, Russia, November 2015;

- XX Mendeleev Congress on General and Applied Chemistry, Ekaterinburg, Russia, September 2016 (under preparation);

- 11th National Conference "Physicochemical problems of renewable power", St. Petersburg, Russia, November 2016 (under preparation);

- The 3rd Asian School-Conference on Physics and Technology of Nanostructured Materials (ASCO NANOMAT), Vladivostok, Russia, August 2015;

- European Corrosion Congress (Eurocorr) 2015, Graz, Austria, September 2015;

- III international conference "Fundamental aspects of corrosion material science and protection of metals against corrosion", Moscow, Russia, April 2016;

- 10th International Symposium on Electrochemical Impedance Spectroscopy, Toxa, Spain, June 2016;

- 26th International Ocean and Polar Engineering Conference (ISOPE-2015), Rodos, Greece, June-July 2016.

- XXI international conference on phosphorus chemistry, Kazan, Russia, June 2016;

- Advances in Functional Materials (AFM), Jeju, South Korea, August 2016 (to be held).

Young electrochemists took active part in the specialized Youth Forum "Lomonosov-2016" (only for university and PhD students), which took place in Moscow, April 2016.

Each year the electrochemistry chair of the Moscow State University organizes in October the A. N. Frumkin Hearings (chaired in 2015 by E. V. Antipov) with several invited lectures devoted to various areas of electrochemistry and related disciplines, including invitations of top Russian and foreign electrochemists (D. Aurbach, Israel and V. M. Mirsky, Germany in 2015).

The Russian section of ISE also participated actively in the "Young researcher competition" at IPCP PAS, Chernogolovka.

Since 2013 a new forum for discussions of modern trends and problems in electrochemistry among Russian electrochemists has been developing: "Moscow Region Seminar on Electrochemistry", Academician A. R. Khokhlov being its Coordinator, M. A. Vorotyntsev serving as its Academic Secretary. The choice of lecturers at the seminar is managed by its counsel. 25 presentations of top Russian and foreign electrochemists have already taken place at this seminar, see the site: <u>http://seminar-elchem.msu.ru/</u> for the further information.

Mikhail A. Vorotyntsev ISE Regional Representative - Russia UNIVERSITY OF BELGRADE Institute of Chemistry, Technology and Metallurgy Department of Electrochemistry 12 Njegoševa Str., PAK 125213 Belgrade, Serbia Phone: +381 11 Exchanges 3640 230 Director: 3640 227, fax: 3640 234



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http://www.ihtm.bg.ac.rs E-mail: ihtm@ihtm.bg.ac.rs

ISE Regional Representative of Serbia - 2015/2016 Report

Currently there are 25 ISE members from Serbia. This is a decrease compared to the previous year. There are two basic reasons for this: on the one hand, parts of the senior researchers are retired (unfortunately, a few members were passed away), and on the other hand, some research institutions there were no funds to pay membership fees. However, the number of young researchers among ISE members from Serbia remained significant, about one-third.

ACTIVITIES

1. 66th Annual Meeting of the International Society of Electrochemistry, held in Taipei, Taiwan, October 4th to October 9th, 2015

Unfortunately, because of the distance and the high cost of travel, no one from Serbia did not participate. However, thanks to the Book of abstracts available on the website of ISE, we were able to be up to date with the presented research results.

XVII-YuCorr - September 8-11, 2015, and
 XVIII-YuCorr - April 12-15, 2016, both held on Tara Mountain, Serbia, organized by the Serbian Society of Corrosion and Materials Protection – UISKoZaM.
 More than 50 contributions were presented on both meetings, by the author from more than 10 countries, mostly from the region: <u>http://sitzam.org.rs/YUCORR/Program_XVII_YuCorr.pdf</u> and

http://sitzam.org.rs/YUCORR/XVIII YuCorr-Knjiga radova Proceedings.pdf

- **3.** Third Conference of Young Chemists of Serbia, October 24, 2015, Belgrade, Serbia More than 120 papers of doctoral and post-doctoral students, including several from electrochemistry, were presented.
- **4. 6**th **ISE Satellite Student Regional Symposium on Electrochemistry**, 8 July 2016, Zagreb, Croatia Among about 20 participants, three PhD students from Serbia have presented their works.
- 5. Meetings of the Electrochemical Division of the Serbian Chemical Society
 - June 18, 2015

Lecture: **Dr. Irena Ciglenečki-Jušić,** Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb, Croatia, *Nanoparticles of metal sulphides in the aquatic environment: electrochemical, nanogravimetric, STM, AFM and DLS research*

December 15, 2015

Lectures:

Dr Ivana Jevremović, Innovation Centre of Faculty of Technology and Metallurgy, University of Belgrade, *Application of organic inhibitor for preventing corrosion of low carbon steel in the presence of CO*₂

Mila Krstajić, research associate, Institute of Chemistry, Technology and Metallurgy - Department of Electrochemistry, University of Belgrade, Synthesis, characterization and application of Pt catalyst of defined shape deposited on carbon support

Coordination and planning of activities during 2016 related to the organization of the 71st ISE Annual Meeting u Belgrade in 2020.



- January 29, 2016
 - Lectures:

Dr Tadeja Kosec, Slovenian National Building and Civil Engineering Institute Laboratory for Metals, Corrosion and Anticorrosion Protection, *Corrosion of steel in concrete*

- Nina Gartner, Slovenian National Building and Civil Engineering Institute Laboratory for Metals, Corrosion and Anti–Corrosion Protection, *Monitoring of steel corrosion in concrete environment*
- 6. Lecture Ceremonial Hall of Serbian Academy of Sciences and Arts Professor Robert SINCLAIR, Stanford University, *In situ high resolution electron microscopy studies of material reactions, at the atomic level*
- 7. 53rd Meeting of the Serbian Chemical Society, Kragujevac, Serbia, June 10-11, 2016 (<u>http://www.shd.org.rs/53SHD</u>), organized by the Serbian Chemical Society Electrochemical Section of the Meeting: 1 oral and 4 poster presentations

Aleksandar Dekanski Dekanski@ihtm.bg.ac.rs http://elchem.ihtm.bg.ac.rs



Faculty of Natural Science Chemistry Department

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20 July 2016

REGIONAL REPORT SOUTH AFRICA

67th Annual meeting of ISE, The Hague, Netherlands 21-26 August 2016

Change of Leadership:

The new regional representative for South Africa (and Africa), Prof. Priscilla G L Baker, has been elected and commenced duties in 2016. Prof Baker has served as division officer for electroanalytical Chemistry (2013-2016) and was part of the organising committee of the 14th ISE topical meeting in Nanjing, China, 29 March - 1 April 2014. She is also chairperson of the electrochemistry division of the South African Chemical Institute (SACI, 2006-present). As ISE South Africa, we wish to express our collective appreciation for the pioneering work done by Prof Kenneth Ozoemena as the first regional representative of South Africa, following its recognition as an official region of ISE activities.

Membership:

The membership total has grown to a steady 70 members and our members have strongly supported the activities of ISE through participation in ISE topical and annual meeting for 2015/2016.

Activities:- Participation at ISE events:

 (i) 16th ISE Topical meeting, 22-26 March 2015 Angra dos Reis, Brazil: *Mr Abdulhakeem Bello* (University of Pretoria) *Ms Omolola E. Fayemi* (North-West University) Ntsoaki Mphuthi (North West University), Prof Omotayo Arotiba (University of Johannesburg)

(ii) 17th Topical meeting: 31 May - 3 June 2015, Saint-Malo, France

Dr Sergey Grigoriev (North-West University)

(iii) 66th Annual meeting, 4-9 October, 2015, Taipei, Taiwan

A total of 8 presentations by South African ISE members ,were included in the scientific programme of the Taipei 2016 meeting, as follows: *Dr Chinwe Ikpo* (University of the Western Cape), *Ms Candice Rassie* (University of the Western Cape), *Prof. Kenneth Ozoemena* (CSIR, Pretoria), *Prof Emmanuel Iwuoha* (University of the Western Cape), *Prof Priscilla GL Baker* (University of the Western Cape), *Mr Lindsay Wilson* (University of the Western Cape), *Prof Omotayo Arotiba* (University of Johannesburg).

(i) 18th ISE Topical Meeting – Gwangju, South Korea, March 8-11, 2016

Ms Colleen Jackson (University of Cape Town)

(ii) 19th ISE Topical Meeting- Auckland, New Zealand, 17-20 April 2016:

Dr Farshad Barzegar (University of Pretoria) Prof Emmanuel Iwuoha (University of Western Cape, Cape Town)

ISE sponsored events:

The ISE sponsored ESEAC conference (12 - 16 June 2016, The Assembly Rooms, Bath, UK) was supported by three active ISE members who participated in the scientific programme i.e. *Dr Fanelwa Ajayi, Dr Chinwe Ikpo* and *Prof E Iwuoha*.

ISE sponsored events in AFRICA

We would like to recognise and appreciate the support of ISE in hosting the following meetings in Africa:

- (i) 2nd African conference/workshop (an international conference on all aspects of nanotechnology), 4-7 July 2016, Nsukka, Nigeria. **Division 1 and 4**
- (ii) Catalysis Society of South Africa Conference 2015, 15-19 November 2015, Kleinmond, South Africa. **Division 3**

2016 Annual meeting

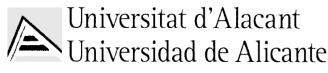
67th Annual meeting of ISE, The Hague, Netherlands, 21-26 August 2016

We are happy to report that 18 regional members (South Africa) will be participating in the 67th Annual meeting of ISE, The Hague, Netherlands, 21-26 August 2016: *Kumar Raju, Ezo Nxusani, Dudzile Nkosi, Lisebo Phelane, Priscilla Baker, Omotayo Arotiba, Lance Ho, Francis Muya, Janice Limson, Keagan Pokpas, Candice Rassie, Lindsay Wilson, Chinwe Ikpo, Abd Baleg, Meryck Ward, Gbenga Peleyeju, Eseoghene Umukoro and Jeanet Conradie.*

Sincerely,

Yours sincere Prof. Priscilla

PROF PRISCILLA BAKER REGIONAL REPRESENTATIVE FOR SOUTH AFRICA



Instituto Universitario de Electroquímica Institut Universitari d'Electroquímica

Members

According to the Member Directory of ISE, the number of members from Spain is currently 115 coming from Universities, Research Institutes of CSIC, Technological centers and Spin-offs. The number has been stable during the last years. All the Spanish co-authors of papers published in Electrochimica Acta during 2015-2016 which are not members of the society have been contacted publicizing the benefits of the ISE (using the information provided by the Executive Secretary of the ISE, Prof. Marco Musiani). **Activities**

-The ISE-sponsored XXXVII Annual Meeting of the Electrochemistry Group of the Spanish Royal Society of Chemistry (RSEQ) attended by more than 200 people, was hold in Alicante between July 17th and 20th 2016. It was organized by Prof. Antonio Rodes (chair) and Dr. José Solla (Secretary), all of them from the University of Alicante. Plenary lectures were given by Prof. Jorge Mostany (Venezuela), Prof. Manuel Rodrigo (Spain), Prof. Encarnación Lorenzo (Spain) and Peter Strasser (Germany).

-During the Meeting, 10 PhD students defended their Thesis Plan and 12 Master students presented their Master Research work in Electrochemistry. The registration fees of all these students were sponsored by the ISE-Spanish Group.

- The interuniversity master degree on electrochemistry - *"Electrochemistry: Science and Technology"* had his four edition. 15 students registered for this edition of the master degree. The compulsory part of the degree took place in Alicante during January and February 2016. It is coordinated by Prof. Vicente Montiel (University of Alicante) and it is offered in 9 different Spanish universities

- 1 new students entered during the 2015/2016 academic year in the interuniversity PhD program on electrochemistry - *"Electrochemistry: Science and Technology".* The program is offered in 11 Spanish Universities and has the certification of excellence from the Spanish Ministry of Education.

Hewer.

August 1st, 2016 Enrique Herrero Spain ISE Regional Representative Universidad de Alicante.



ISE Annual report 2016 (Sweden) for the RR meeting in Hague 2016.

Membership:

The number of members is stable at 44 (45 last years and 41 in 2014).

The ISE members of Sweden are spread over the country, from Lund and Malmö Universities in the south via Gothenburg University and Chalmers, Stockholm University and KTH, Uppsala University to Umeå University in north. In addition, several industrial electrochemists are participating from different companies. Most of the members are active in the fields of energy storage and conversion, bioelectrochemistry or analytical electrochemistry and attend regularly ISE meetings and other conferences on topics related.

Unfortunately, tax rules in Sweden force the members to pay a significant part of the membership fee privately and therefore several of the members have declared to leave the society in the continuation.

Activities:

ISPE 16, International Symposium on Polymer Electrolytes,

15-19 August 2016, Uppsala, Sweden, www.delegia.com/ispe2016 sponsered by ISE.

Others:

Biosensors 2016, 26th Anniversary World Congress on Biosensors 25-27 May 2016, Gothenburg, Sweden (not supported by ISE).

6th hfc Nordic conference 2016.

26-27th of October 2016, Sandviken, Sweden (not supported by ISE).

Rakel Wreland Lindström, PhD□ Regional representative ISE Sweden

Associate Professor Applied Electrochemistry, School of Chemical Science and Engineering, KTH Royal Institute of Technology, Sweden

tel +46 (0)8 7906615 email: wreland@kth.se



Dept. of Chemistry and Biochemistry, Freiestrasse 3, CH-3012 Bern

ISE Regional Representatives

b UNIVERSITÄT BERN

Department of Chemistry and Biochemistry

PD Dr. Peter Broekmann Lecturer/group leader

Phone.: +41 (0)31 631 4317 E-Mail: peter.broekmann@dcb.unibe.ch

Bern, 26/07/2016

2016 Report of the ISE Regional Representative for Switzerland

(Prepared for the ISE Representatives Meeting at the 67th Annual Meeting of the ISE in The Hague, The Netherlands)

Membership:

The ISE membership currently stands at 77. New members are being solicited on an ongoing basis by directly contacting authors who publish in Electrochimica Acta and who have an address in Switzerland.

Activity:

We have organized a Satellite meeting of the 67^{th} Annual Meeting of the ISE which is dedicated to CO_2 conversion (http://villars2016.dcb.unibe.ch/index.html). More than 100 participants from 18 countries worldwide will attend our International Summer School in Villars-sur-Ollon (Switzerland).

With best regards,

lik hood



Regional Representative Meeting ISE Annual Meeting 2016, the Hague

Annual ISE Regional Report of Taiwan

August 18, 2016

Regional Representation of Taiwan has been established in the end of 2014. ISE active members from Taiwan increase dramatically from less than 10 people in 2013 to more than 218 members by the date of reporting. In 2016, several local activities have been engaged or planed. They are summarized below.

- A one-day workshop took place on January 15, 2015 at the National Taiwan University of Science and Technology. Current development status of fuel cell technologies and lithium ion batteries were introduced. Short lecturers were presented by local companies and research institutions respectively. The purpose of the event was envisaged to facilitate the dialogues between universities and companies, so as to speed up more knowledge and technology transfer between research teams and companies.
- 2. In July, we submitted the hosting and preparation of the 66th ISE Annual Meeting to "Taiwan MICE Award", which was established to encourage MICE organizers' to be innovative, improve service quality, and implement environmental principles as exemplary models for Taiwan's MICE industry. The competition is organized by the Bureau of Foreign Trade from the Ministry of Economic Affairs, Taiwan. The 66th ISE annual meeting obtained NT2.5M subvention from the Bureau of Foreign Trade and we believe that the meeting has created a lot of more impacts and benefits to local MICE and tourist industries. The 66th AM has entered the finals and Prof. Wei-Nien Su did a final presentation on August 17.
- 3. The International Conference of Green Energy Technologies (ICGET) is taking place from 9/21-9/23. Currently there are 12 plenary and invited speeches, given by international (US, China, India, Singapore, Germany, Japan, etc.) and local scholars from various institutions. More than 40 oral speeches have been accepted

and more than 100 poster presentations are expected. A student poster competition is also planned.

4. Following the Cross-Strait electrochemisty meeting in 2015, electrochemical professionals from Taiwan and China decide to continue cooperation by having the forthcoming Cross-Strait conference in University of Science and Technology of China (Hefei, China) this October.

These summarize electrochemistry related events in Taiwan in 2016.

Sincerely,

Ching to 0

Prof. Bing Joe Hwang

ISE Taiwan Representative Sustainable Energy Development Center National Taiwan University of Science and Technology The Electrochemical Society of Taiwan (ECSTw) #43, Sec. 4, Keelung Rd., Taipei, Taiwan bjh@mail.ntust.edu.tw ISE Annual Meeting 2016, The Hague - Regional Representatives Meeting

United Kingdom (Regional Representative: Dr Tim Albrecht, 2nd term ends in 2016)

Annual report, ISE UK Regional Section (2015-2016)

Over the last year, the ISE has continued to be involved in a range of annual, local student meetings in an effort to publicize the Society and its activities. This included several regional meetings in different parts of the country (partly student-run), e.g. the "Great Western" Electrochemistry Meeting, the Midlands Electrochemistry Meeting and the Butler Regional Meeting in Glasgow. All these meetings were well-attended - they have typically about 30-50 student participants and a poster session, as well as a small number of plenary talks from established academics. The UK national electrochemistry meeting Electrochem takes place in Leicester this year (17-19 August) and is supported by the ISE as well.

The formal collaboration between the ISE and the RSC Electrochemistry Interest Group is ongoing, with rather active exchange of information, mutual advertising and so forth. At the time of writing this report, the active ISE membership in the Regional Group is 189, slightly down from 202 last year, but similar to the years before (188 and 172, respectively).

Finally, the UK Regional Group is also actively involved in other activities of the Society with Prof. Mary Ryan (Imperial) as the Past Chair of Division 4, Prof. Andrea Russell (Southampton) as Chair of Division 7 and Prof. Patrick Unwin (Warwick) as Chair of the New Topics Committee. Prof. Phil Bartlett (Southampton) is "President Elect" of the Society (2015/16).

Yours sincerely,

Tim Albrecht



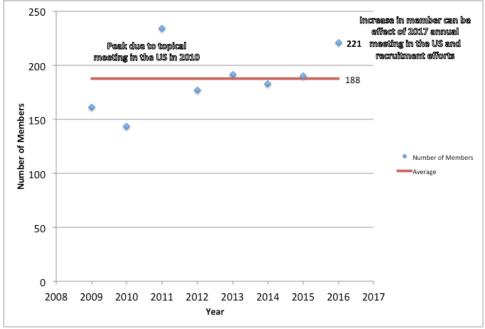
CENTER FOR ELECTROCHEMICAL ENGINEERING RESEARCH (CEER) 182 Mill Street Athens, OH 45701 P: 740.331.4401 E: ceer@ohio.edu W: www.ohio.edu/engineering/ceer/

July 11, 2016

ISE Annual Report Meeting 2016 - USA

Memberships

United States has currently 221 members; this represents an increase when compared to the average number of members over the past eight years (2009-2016). The increase in the number of members could be due to the upcoming annual meeting in Providence USA as well as a combination of the recruitment efforts. Recruitment of members is taking place on an ongoing basis by directly emailing colleagues and authors who published in Electrochimica Acta. Also, by co-sponsoring meetings, such as the fuel cells Gordon Research Conference (August 2016)



Activities

1. Providence 2017 Annual Meeting. The US group, under the leadership of Sanjeev Mukerjee (Northeastern University), Mark Orazem (University of Florida), and Plamen Atanassov (University of New Mexico) -co-chairs for the annual meeting, has continued working on the planning and organization of the 2017 Annual Meeting that will take place in Providence Rhode Island. Nineteen symposia topics were submitted by the divisions and approved. Members of the 2017 annual meeting include:

- Plamen Atanassov, Albuquerque, NM, USA (co-Chair)
- Philip N. Bartlett, Southampton, UK
- Gerardine Botte, Athens, OH, USA
- Ignacio Gonzalez, Mexico, Mexico
- E. Jennings Taylor, Englewood, OH, USA
- Hasuck Kim, Daegu, South Korea
- Daniel Little, Santa Barbara, CA, USA

- Shelley Minteer, Salt Lake City, UT, USA
- Sanjeev Mukerjee, Boston, MA, USA (co-Chair)
- Mark E. Orazem, Gainesville, FL, USA (co-Chair)

2. Co-sponsoring of meetings. We have co-sponsored the Fuel Cells Gordon Research Conference. This meeting was organized by ISE members Adam Z. Weber & Plamen Atanassov (Chairs). The meeting will take place on August 7-12, 2016. The focus of the meeting is on the next generation of durable, high-performance components and fuel cells, including modeling, diagnostics, and materials development advancements. It is expected that approximately 160 participants will be at the meeting with attendees from US, Europe, and Asia.

Gerardine G. Botte, PhD, Regional Representative for the USA University Distinguished Professor and Russ Professor of Chemical and Biomolecular Engineering Director of Center for Electrochemical Engineering Research, Ohio University

ISE Report from the Romanian Regional Representative Prepared for the 67th Annual ISE Meeting in The Hague

Members

Currently, Romania has 36 ISE members, increased by 1 since the 66th Annual Meeting of ISE in Taipei, Taiwan. Efforts to recruit new members continue, especially targeting young scientists.

The interest of the Romanian members in the different divisions is given here:

- Division 1: Analytical Electrochemistry - 25 members (increased by 3 members)

- Division 2: Bioelectrochemistry – 22 members (increased by 4 members)

- Division 3: Electrochemical Energy Conversion and Storage - 6 members

- Division 4: Electrochemical Materials Science - 18 members (decreased by 3 members)

- Division 5: Electrochemical Process Engineering and Technology – 6 members (decreased by 3 members)

- Division 6: Molecular Electrochemistry – 11 members (increased by 1 member)

- Division 7 Physical Electrochemistry - 11 members

Activities

The most of the activities related to electrochemistry are performed in universities and research organizations possessing Physical Chemistry and Materials Science specialties. Generally, they consist in:

- Preparation and publication of papers in ISE journals (El. Acta,) or other ones which are specific to their R&D activities, including materials science, sensors/biosensors, medicine, renewable energy, etc (Ceramics Intl,)

-PhD theses in the field of Applied Electrochemistry: Luminita Fritea (joint programme thesis UMF Cluj, Romania-University Rhone Alpes Grenoble, France), Anca Florea ((joint programme thesis UMF Cluj Romania-University Claude Bernad Lyon, France), Iuliana MOLDOVEANU, Livia Alexandra GUGOASA, Ramona GEORGESCU, Cristina-Andreea AMARANDEI, Cătălina CIOATES (NEGUT)

- Participation of ISE members at ISE sponsored meetings, respectively: International Fischer Symposium, 7-11 June 2015, Lübeck, Germany ("Investigation of Ni-Mo and Co-Mo alloys electrodeposition involving choline chloride based ionic liquids," S. Costovici, T. Visan, L. Anicai)

- Participation of ISE members at other meetings involving electrochemical topics: EastForum 2015, 25 - 26 June 2015, Lund Sweden, organized by European Academy of Surface Technology ("Electrodeposition of Co and CoMo Alloys Coatings using Choline Chloride Based Ionic Liquids – Evaluation of Corrosion Behaviour ", L. Anicai, S. Costovici, A. Cojocaru, T. Visan); Romanian International Conference of Chemistry and Chemical Engineering, RICCCE 19, September 2015, Sibiu, Romania ("Corrosion performance of electrochemically obtained Ni-Mo and Co-Mo alloys coatings involving ionic liquids analogues", L. Anicai, S.Costovici, T. Visan)

- Writing specific chapters of electrochemistry books (S. Lupu*, P.C. Balaure, C. Lete, C. Mihailciuc, Biocomposite nanomaterials for electrochemical biosensors, in Handbook of Nanoelectrochemistry, Eds: Mahmood Aliofkhazraei, Abdel Salam Hamdy Makhlouf; Springer International Publishing, 29 pg, ISBN: 978-3-319-15207-3 (Online); doi: 10.1007/978-3-319-15207-3_39-1; 2015; invited chapter; S. Lupu*, C. Lete, B. Lakard, J.-Y. Hihn, D. Sanchez–Molas, F.J. del Campo, Electrochemical deposition and patterning of composite nanomaterials for electrochemical sensors and biosensors, in Comprehensive Guide for Nanocoatings Technology, Volume 4: Application and Commercialization, Ed.: Mahmood Aliofkhazraei, Nova Science Publishers, pp. 359-406, ISBN: 978-1-63482-648-8; 2015, invited chapter, C. Cristea, A. Florea, M. Tertiş R. Săndulescu, Chapter 6- Immunosensors in Biosensors - Micro and Nanoscale Applications, Ed. Intech, 2015, p. 165-202; R. Săndulescu, M. Tertiş, C. Criste, E. Bodoki, Chapter 1- New Materials for the Construction of Electrochemical Biosensors in Biosensors - Micro and Nanoscale Applications, Ed. Intech, 2015, p. 1-36.); - Reviewers for ISE and other electrochemistry related publications

- R&D activities as components of nationally funded research projects on electrochemistry subjects; the funds are provided either by the Romanian Ministry of Education and Research (under the frame of the National Program PN II 2014-2010, other components of Structural Funds Programs) involving Calls for Proposals at national level, or by private entities.

- International research projects on electrochemistry subjects, such as: M - ERA Net, H2020, NATO. During 2015, an exchange of PhD students under the frame of a M Era Net project took place between electrochemical groups of UPB-CSSNT and University of Porto (Prof. A.F. Silva); 2 new projects under the frame of M Era Net program have been awarded and financed, dealing with electrochemical topics (surface coatings involving ionic liquid electrolytes, nanofoams for supercapacitors and hydrogen production from water electrolysis). Most of the team members are ISE members.

The Romanian electrochemists are also involved in **international research networks** in cooperations with: France, Argentina (project New generation of temporary and permanent implants based on alloy with non toxic elements and innovative controlled micro and nano surface layers with biomimetic and antibacteriostatic properties), Portugal (R&D projects awarded under M_Era Net Programme in the field of applied electrochemistry: High performance nanostructured coatings using ionic liquids based on choline chloride – NANOCOATIL with Porto University), Germany (New materials and devices based on conducting polymers and their composites), etc.

There is an intense students **exchange in doctoral and post doctoral programs** (as well as ordinary students in Erasmus Socrates programs) with France (Université Claude Bernard Lyon 1, Université Joseph Fourier Grenoble, etc.), Portugal, Spain (University of Cadiz), etc. Parts of the scientists involved in electrochemistry from Romania are members of Romanian Society of Electrochemistry (Societatea de electrochimie din Romania). This society has not regular meetings, but it is involved in all significant international events organized in Romania. The Romanian electrochemists are also gathered with the occasion of general meetings in chemistry, usually organized by Romanian universities or by the Romanian Society of Chemistry.

There are some small meetings on electrochemistry organized in Romania which became including the francophone workshop NOUVEAUX MATÉRIAUX POUR LA traditional. RECONNAISSANCE ELECTROCHIMIQUE DES MINERAUX ET DES ESPÈCES BIOLOGIQUES acronyme « NOMARES » (New materials for electrochemical recognition of mineral and biological species), with the support of Association Universitaire de la Francophonie. In 2016 the 4th edition of this symposium will be held in IASI, Romania, with the occasion of the traditional 3rd International Conference on Analytical Chemistry in 28 (RO-ICAC) August 31. 2016 (http://roicac.acadiasi.ro/workshop-nomares/). In May 20, 2016, in Bucharest has been organized the Workshop MICROBIOSENS - "New methodologies and advanced nanomaterials for electrochemical biosensors", the chair being Prof. Dr. HDR Stelian Lupu, University Politehnica of Bucharest (http://www.microbiosens.ro/index.php/workshop). The workshop was organized in May 20, 2016, in the Laboratory of Analytical Chemistry from University Politehnica of Bucharest under the framework of the national research project: "Electrochemical micro-biosensors based on electrodes and microelectrodes arrays modified with composite materials", project no. PN-II-ID-PCE-2011-3-0271, director Prof.Dr.HDR Stelian Lupu. The financial support was provided by the Romanian National Authority for Scientific Research (CNCS - UEFISCDI). The workshop was devoted to the development of electrochemical biosensors and analytical methodologies for monitoring of biologically active compounds and organic pollutants including studies on advanced nanomaterials and composite materials, new electrochemical deposition methods, metal nanoparticles and their electrocatalytic activity toward alcohol oxidation, screen printed electrodes based biosensors for food quality control, drug delivery systems, EPR spectroscopy, alginate-encapsulated human pancreatic cancer cells for development of mouse models, and sonogel carbon electrode materials. The application of novel electrochemical preparation methods based on the use of sinusoidal voltages has been demonstrated. 34 participants from Romania (31) and Spain (3), including undergraduate and graduate students, researchers and university teachers, have attended the workshop. The workshop included 9 key note lectures of high scientific level followed by fruitful discussions. Experimental demonstration on the use of sinusoidal voltages in biosensors' development has been performed. The transfer of the developed novel preparation procedure to sonogel carbon based electrodes for biosensors technology was carried out in collaboration with two researchers and one PhD student from the University of Cadiz, Spain.

Others

Active members from the Romanian Society of Electrochemistry have contributed to the dissemination of various aspects of electrochemistry and electrochemical methods within the community of chemists and chemical engineers by publishing featured articles in the Bulletin of the Romanian Society of Chemistry including topics on electrochemical sensors and biosensors, new electrode materials and their electroanalytical applications.

Prof.Dr. Eng. Eleonora-Mihaela UNGUREANU

Mungareann

Regional Representative of Romania Department of Inorganic Chemistry, Physical Chemistry and Electrochemistry Faculty of Applied Chemistry and Material Science University "Politehnica" of Bucharest 1-7 Gheorghe Polizu Str., 011061, Sector1, Bucharest, code: 011061, ROMANIA , Room E 201 C FAX: +4021 7607834; Phone:+ 4021 402 39 77; 4021 402 38 55 E-mail: <u>eleonoramihaelaungureanu@gmail.com</u>, em_ungureanu2000@yahoo.com

REPORT 2015-2016 of the ISE section in Russia

Membership

Within the period of 2011-2015 the Russian section of ISE consisted of 50 to 60 members. The actual number is 53.

Activities

Main research activities of the section in the period from August 2015 till August 2016 were in the area of pure and applied electrochemistry.

Member of the section, Yu. V. Pleskov, has been awarded with the Frumkin Memorial Medal in 2015. His award lecture will take place during the 67th Annual Meeting of ISE.

M. A. Vorotyntsev is actually a vice-chair of Division 4 of ISE as well as the Deputy Editor-in-Chief of the Russ. J. Electrochem.

G. A. Tsirlina is a member of the Editorial Board of J. Electroanal. Chem. and an Associate Editor of J. Solid State Electrochem.

M. A. Vorotyntsev has been one of the Guest Editors of the special issue of Electrochimica Acta "ISE-2014", 2015, vol. 179. He is actually the Guest Editor of the special issue "EEM-2016" in Electrochimica Acta (in the course of preparation).

A number of Russian ISE members are actually members of the Editorial Board of the Russ. J. Electrochem. as well as serve as reviewers for Electrochimica Acta and other international electrochemical journals.

Several participants from the Russian section participated in the 66th ISE Meeting in Taipei, Taiwan where they delivered both oral and poster presentations.

A great number of participants from the Russian section will take part in the 67th Annual ISE Meeting-2016 in Den Haag, The Netherlands with oral and poster presentations. M. A. Vorotyntsev is serving as an Organizer of Symposium 10 "Electroactive, Functionalized and Nanostructured Materials and Composites: Modern Trends in Synthesis and Applications" within this ISE Meeting.

The principal conference of Russia in the area of electrochemistry: 10th International Frumkin Symposium on Electrochemistry took place in Moscow in October 21-23, 2015. This conference gathered about 300 participants including numerous foreign electrochemists. Plenary lectures were delivered by C. Amatore, D. Aurbach, R. G. Compton, J. Ulstrup and J. Zimmerman. Several hundreds of oral and poster presentations were delivered within 5 sections: 1) fundamental aspects of electrochemistry, 2) electrochemistry of functional materials, 3) electrochemical energetics, 4) (bio)electrocatalysis: from biosensors to biofuel cells, 5) bioelectrochemistry, organized by their committees chaired by V. A. Safonov, M. A. Vorotyntsev, T. L. Kulova, A. A. Karyakin and Yu. A. Chizmadzev.

A special Frumkin issue based on selected presentations at this symposium is in the process of preparation for publication in Russ. J. Electrochem. (over 35 overview and research papers)

ISE members of the Institute for Problems of Chemical Physics RAS (IPCP RAS, Chernogolovka, Moscow region), of the M. V. Lomonosov Moscow State University, of the A. N. Frumkin Institute of Physical Chemistry and Electrochemistry (IPCE RAS, Moscow) and of the Institute of General and Inorganic Chemistry (IGIC RAS, Moscow) have been participating actively in preparation and realization of several national and international conferences:

1. International Conference "Ion transport in organic and inorganic membranes". Sochi, Russia, May 2016;

2. 13th Meeting "Fundamental Problems of Solid State Ionics", Chernogolovka, Russia, June 2016

3. The 6th Baltic Electrochemistry Conference: Electrochemistry of Functional Interfaces and Materials (BEC-16), Helsinki, Finland, June 2016

4. XIV International conference "Topical Problems of Energy Conversion in Lithium Electrochemical Systems", Suzdal, Russia, September 2016 (under preparation)

5. Young scientists' school on electrochemical energy storage, Suzdal, Russia, September 2016 (under preparation)

Members of the section also participated in other international electrochemical conferences within the period from September 2015 to August 2016, in particular

- 18th Topical Meeting of the International Society of Electrochemistry "Oxygen Electrocatalysis in Chemical Energy Conversion and Storage Technologies", Gwangju, South Korea, 8-11 March 2016;

- Fifth Regional Symposium on Electrochemistry – South East Europe (RSE- SEE) in Pravets, Bulgaria, June 7-11, 2015, sponsored by ISE;

- 10th National Conference "Physicochemical problems of renewable power", St. Petersburg, Russia, November 2015;

- XX Mendeleev Congress on General and Applied Chemistry, Ekaterinburg, Russia, September 2016 (under preparation);

- 11th National Conference "Physicochemical problems of renewable power", St. Petersburg, Russia, November 2016 (under preparation);

- The 3rd Asian School-Conference on Physics and Technology of Nanostructured Materials (ASCO NANOMAT), Vladivostok, Russia, August 2015;

- European Corrosion Congress (Eurocorr) 2015, Graz, Austria, September 2015;

- III international conference "Fundamental aspects of corrosion material science and protection of metals against corrosion", Moscow, Russia, April 2016;

- 10th International Symposium on Electrochemical Impedance Spectroscopy, Toxa, Spain, June 2016;

- 26th International Ocean and Polar Engineering Conference (ISOPE-2015), Rodos, Greece, June-July 2016.

- XXI international conference on phosphorus chemistry, Kazan, Russia, June 2016;

- Advances in Functional Materials (AFM), Jeju, South Korea, August 2016 (to be held).

Young electrochemists took active part in the specialized Youth Forum "Lomonosov-2016" (only for university and PhD students), which took place in Moscow, April 2016.

Each year the electrochemistry chair of the Moscow State University organizes in October the A. N. Frumkin Hearings (chaired in 2015 by E. V. Antipov) with several invited lectures devoted to various areas of electrochemistry and related disciplines, including invitations of top Russian and foreign electrochemists (D. Aurbach, Israel and V. M. Mirsky, Germany in 2015).

The Russian section of ISE also participated actively in the "Young researcher competition" at IPCP PAS, Chernogolovka.

Since 2013 a new forum for discussions of modern trends and problems in electrochemistry among Russian electrochemists has been developing: "Moscow Region Seminar on Electrochemistry", Academician A. R. Khokhlov being its Coordinator, M. A. Vorotyntsev serving as its Academic Secretary. The choice of lecturers at the seminar is managed by its counsel. 25 presentations of top Russian and foreign electrochemists have already taken place at this seminar, see the site: <u>http://seminar-elchem.msu.ru/</u> for the further information.

Mikhail A. Vorotyntsev ISE Regional Representative - Russia UNIVERSITY OF BELGRADE Institute of Chemistry, Technology and Metallurgy Department of Electrochemistry 12 Njegoševa Str., PAK 125213 Belgrade, Serbia Phone: +381 11 Exchanges 3640 230 Director: 3640 227, fax: 3640 234



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ISE Regional Representative of Serbia - 2015/2016 Report

Currently there are 25 ISE members from Serbia. This is a decrease compared to the previous year. There are two basic reasons for this: on the one hand, parts of the senior researchers are retired (unfortunately, a few members were passed away), and on the other hand, some research institutions there were no funds to pay membership fees. However, the number of young researchers among ISE members from Serbia remained significant, about one-third.

ACTIVITIES

1. 66th Annual Meeting of the International Society of Electrochemistry, held in Taipei, Taiwan, October 4th to October 9th, 2015

Unfortunately, because of the distance and the high cost of travel, no one from Serbia did not participate. However, thanks to the Book of abstracts available on the website of ISE, we were able to be up to date with the presented research results.

XVII-YuCorr - September 8-11, 2015, and
 XVIII-YuCorr - April 12-15, 2016, both held on Tara Mountain, Serbia, organized by the Serbian Society of Corrosion and Materials Protection – UISKoZaM.
 More than 50 contributions were presented on both meetings, by the author from more than 10 countries, mostly from the region: <u>http://sitzam.org.rs/YUCORR/Program_XVII_YuCorr.pdf</u> and

http://sitzam.org.rs/YUCORR/XVIII YuCorr-Knjiga radova Proceedings.pdf

- **3.** Third Conference of Young Chemists of Serbia, October 24, 2015, Belgrade, Serbia More than 120 papers of doctoral and post-doctoral students, including several from electrochemistry, were presented.
- **4. 6**th **ISE Satellite Student Regional Symposium on Electrochemistry**, 8 July 2016, Zagreb, Croatia Among about 20 participants, three PhD students from Serbia have presented their works.
- 5. Meetings of the Electrochemical Division of the Serbian Chemical Society
 - June 18, 2015

Lecture: **Dr. Irena Ciglenečki-Jušić,** Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb, Croatia, *Nanoparticles of metal sulphides in the aquatic environment: electrochemical, nanogravimetric, STM, AFM and DLS research*

December 15, 2015

Lectures:

Dr Ivana Jevremović, Innovation Centre of Faculty of Technology and Metallurgy, University of Belgrade, *Application of organic inhibitor for preventing corrosion of low carbon steel in the presence of CO*₂

Mila Krstajić, research associate, Institute of Chemistry, Technology and Metallurgy - Department of Electrochemistry, University of Belgrade, Synthesis, characterization and application of Pt catalyst of defined shape deposited on carbon support

Coordination and planning of activities during 2016 related to the organization of the 71st ISE Annual Meeting u Belgrade in 2020.



- January 29, 2016
 - Lectures:

Dr Tadeja Kosec, Slovenian National Building and Civil Engineering Institute Laboratory for Metals, Corrosion and Anticorrosion Protection, *Corrosion of steel in concrete*

- Nina Gartner, Slovenian National Building and Civil Engineering Institute Laboratory for Metals, Corrosion and Anti–Corrosion Protection, *Monitoring of steel corrosion in concrete environment*
- 6. Lecture Ceremonial Hall of Serbian Academy of Sciences and Arts Professor Robert SINCLAIR, Stanford University, *In situ high resolution electron microscopy studies of material reactions, at the atomic level*
- 7. 53rd Meeting of the Serbian Chemical Society, Kragujevac, Serbia, June 10-11, 2016 (<u>http://www.shd.org.rs/53SHD</u>), organized by the Serbian Chemical Society Electrochemical Section of the Meeting: 1 oral and 4 poster presentations

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20 July 2016

REGIONAL REPORT SOUTH AFRICA

67th Annual meeting of ISE, The Hague, Netherlands 21-26 August 2016

Change of Leadership:

The new regional representative for South Africa (and Africa), Prof. Priscilla G L Baker, has been elected and commenced duties in 2016. Prof Baker has served as division officer for electroanalytical Chemistry (2013-2016) and was part of the organising committee of the 14th ISE topical meeting in Nanjing, China, 29 March - 1 April 2014. She is also chairperson of the electrochemistry division of the South African Chemical Institute (SACI, 2006-present). As ISE South Africa, we wish to express our collective appreciation for the pioneering work done by Prof Kenneth Ozoemena as the first regional representative of South Africa, following its recognition as an official region of ISE activities.

Membership:

The membership total has grown to a steady 70 members and our members have strongly supported the activities of ISE through participation in ISE topical and annual meeting for 2015/2016.

Activities:- Participation at ISE events:

 (i) 16th ISE Topical meeting, 22-26 March 2015 Angra dos Reis, Brazil: *Mr Abdulhakeem Bello* (University of Pretoria) *Ms Omolola E. Fayemi* (North-West University) Ntsoaki Mphuthi (North West University), Prof Omotayo Arotiba (University of Johannesburg)

(ii) 17th Topical meeting: 31 May - 3 June 2015, Saint-Malo, France

Dr Sergey Grigoriev (North-West University)

(iii) 66th Annual meeting, 4-9 October, 2015, Taipei, Taiwan

A total of 8 presentations by South African ISE members ,were included in the scientific programme of the Taipei 2016 meeting, as follows: *Dr Chinwe Ikpo* (University of the Western Cape), *Ms Candice Rassie* (University of the Western Cape), *Prof. Kenneth Ozoemena* (CSIR, Pretoria), *Prof Emmanuel Iwuoha* (University of the Western Cape), *Prof Priscilla GL Baker* (University of the Western Cape), *Mr Lindsay Wilson* (University of the Western Cape), *Prof Omotayo Arotiba* (University of Johannesburg).

(i) 18th ISE Topical Meeting – Gwangju, South Korea, March 8-11, 2016

Ms Colleen Jackson (University of Cape Town)

(ii) 19th ISE Topical Meeting- Auckland, New Zealand, 17-20 April 2016:

Dr Farshad Barzegar (University of Pretoria) Prof Emmanuel Iwuoha (University of Western Cape, Cape Town)

ISE sponsored events:

The ISE sponsored ESEAC conference (12 - 16 June 2016, The Assembly Rooms, Bath, UK) was supported by three active ISE members who participated in the scientific programme i.e. *Dr Fanelwa Ajayi, Dr Chinwe Ikpo* and *Prof E Iwuoha*.

ISE sponsored events in AFRICA

We would like to recognise and appreciate the support of ISE in hosting the following meetings in Africa:

- (i) 2nd African conference/workshop (an international conference on all aspects of nanotechnology), 4-7 July 2016, Nsukka, Nigeria. **Division 1 and 4**
- (ii) Catalysis Society of South Africa Conference 2015, 15-19 November 2015, Kleinmond, South Africa. **Division 3**

2016 Annual meeting

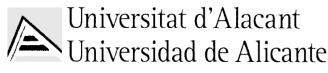
67th Annual meeting of ISE, The Hague, Netherlands, 21-26 August 2016

We are happy to report that 18 regional members (South Africa) will be participating in the 67th Annual meeting of ISE, The Hague, Netherlands, 21-26 August 2016: *Kumar Raju, Ezo Nxusani, Dudzile Nkosi, Lisebo Phelane, Priscilla Baker, Omotayo Arotiba, Lance Ho, Francis Muya, Janice Limson, Keagan Pokpas, Candice Rassie, Lindsay Wilson, Chinwe Ikpo, Abd Baleg, Meryck Ward, Gbenga Peleyeju, Eseoghene Umukoro and Jeanet Conradie.*

Sincerely,

Yours sincere Prof. Priscilla

PROF PRISCILLA BAKER REGIONAL REPRESENTATIVE FOR SOUTH AFRICA



Instituto Universitario de Electroquímica Institut Universitari d'Electroquímica

Members

According to the Member Directory of ISE, the number of members from Spain is currently 115 coming from Universities, Research Institutes of CSIC, Technological centers and Spin-offs. The number has been stable during the last years. All the Spanish co-authors of papers published in Electrochimica Acta during 2015-2016 which are not members of the society have been contacted publicizing the benefits of the ISE (using the information provided by the Executive Secretary of the ISE, Prof. Marco Musiani). **Activities**

-The ISE-sponsored XXXVII Annual Meeting of the Electrochemistry Group of the Spanish Royal Society of Chemistry (RSEQ) attended by more than 200 people, was hold in Alicante between July 17th and 20th 2016. It was organized by Prof. Antonio Rodes (chair) and Dr. José Solla (Secretary), all of them from the University of Alicante. Plenary lectures were given by Prof. Jorge Mostany (Venezuela), Prof. Manuel Rodrigo (Spain), Prof. Encarnación Lorenzo (Spain) and Peter Strasser (Germany).

-During the Meeting, 10 PhD students defended their Thesis Plan and 12 Master students presented their Master Research work in Electrochemistry. The registration fees of all these students were sponsored by the ISE-Spanish Group.

- The interuniversity master degree on electrochemistry - *"Electrochemistry: Science and Technology"* had his four edition. 15 students registered for this edition of the master degree. The compulsory part of the degree took place in Alicante during January and February 2016. It is coordinated by Prof. Vicente Montiel (University of Alicante) and it is offered in 9 different Spanish universities

- 1 new students entered during the 2015/2016 academic year in the interuniversity PhD program on electrochemistry - *"Electrochemistry: Science and Technology".* The program is offered in 11 Spanish Universities and has the certification of excellence from the Spanish Ministry of Education.

Hewer.

August 1st, 2016 Enrique Herrero Spain ISE Regional Representative Universidad de Alicante.



ISE Annual report 2016 (Sweden) for the RR meeting in Hague 2016.

Membership:

The number of members is stable at 44 (45 last years and 41 in 2014).

The ISE members of Sweden are spread over the country, from Lund and Malmö Universities in the south via Gothenburg University and Chalmers, Stockholm University and KTH, Uppsala University to Umeå University in north. In addition, several industrial electrochemists are participating from different companies. Most of the members are active in the fields of energy storage and conversion, bioelectrochemistry or analytical electrochemistry and attend regularly ISE meetings and other conferences on topics related.

Unfortunately, tax rules in Sweden force the members to pay a significant part of the membership fee privately and therefore several of the members have declared to leave the society in the continuation.

Activities:

ISPE 16, International Symposium on Polymer Electrolytes,

15-19 August 2016, Uppsala, Sweden, www.delegia.com/ispe2016 sponsered by ISE.

Others:

Biosensors 2016, 26th Anniversary World Congress on Biosensors 25-27 May 2016, Gothenburg, Sweden (not supported by ISE).

6th hfc Nordic conference 2016.

26-27th of October 2016, Sandviken, Sweden (not supported by ISE).

Rakel Wreland Lindström, PhD□ Regional representative ISE Sweden

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Department of Chemistry and Biochemistry

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Bern, 26/07/2016

2016 Report of the ISE Regional Representative for Switzerland

(Prepared for the ISE Representatives Meeting at the 67th Annual Meeting of the ISE in The Hague, The Netherlands)

Membership:

The ISE membership currently stands at 77. New members are being solicited on an ongoing basis by directly contacting authors who publish in Electrochimica Acta and who have an address in Switzerland.

Activity:

We have organized a Satellite meeting of the 67^{th} Annual Meeting of the ISE which is dedicated to CO_2 conversion (http://villars2016.dcb.unibe.ch/index.html). More than 100 participants from 18 countries worldwide will attend our International Summer School in Villars-sur-Ollon (Switzerland).

With best regards,

lik hood



Regional Representative Meeting ISE Annual Meeting 2016, the Hague

Annual ISE Regional Report of Taiwan

August 18, 2016

Regional Representation of Taiwan has been established in the end of 2014. ISE active members from Taiwan increase dramatically from less than 10 people in 2013 to more than 218 members by the date of reporting. In 2016, several local activities have been engaged or planed. They are summarized below.

- A one-day workshop took place on January 15, 2015 at the National Taiwan University of Science and Technology. Current development status of fuel cell technologies and lithium ion batteries were introduced. Short lecturers were presented by local companies and research institutions respectively. The purpose of the event was envisaged to facilitate the dialogues between universities and companies, so as to speed up more knowledge and technology transfer between research teams and companies.
- 2. In July, we submitted the hosting and preparation of the 66th ISE Annual Meeting to "Taiwan MICE Award", which was established to encourage MICE organizers' to be innovative, improve service quality, and implement environmental principles as exemplary models for Taiwan's MICE industry. The competition is organized by the Bureau of Foreign Trade from the Ministry of Economic Affairs, Taiwan. The 66th ISE annual meeting obtained NT2.5M subvention from the Bureau of Foreign Trade and we believe that the meeting has created a lot of more impacts and benefits to local MICE and tourist industries. The 66th AM has entered the finals and Prof. Wei-Nien Su did a final presentation on August 17.
- 3. The International Conference of Green Energy Technologies (ICGET) is taking place from 9/21-9/23. Currently there are 12 plenary and invited speeches, given by international (US, China, India, Singapore, Germany, Japan, etc.) and local scholars from various institutions. More than 40 oral speeches have been accepted

and more than 100 poster presentations are expected. A student poster competition is also planned.

4. Following the Cross-Strait electrochemisty meeting in 2015, electrochemical professionals from Taiwan and China decide to continue cooperation by having the forthcoming Cross-Strait conference in University of Science and Technology of China (Hefei, China) this October.

These summarize electrochemistry related events in Taiwan in 2016.

Sincerely,

Ching to 0

Prof. Bing Joe Hwang

ISE Taiwan Representative Sustainable Energy Development Center National Taiwan University of Science and Technology The Electrochemical Society of Taiwan (ECSTw) #43, Sec. 4, Keelung Rd., Taipei, Taiwan bjh@mail.ntust.edu.tw ISE Annual Meeting 2016, The Hague - Regional Representatives Meeting

United Kingdom (Regional Representative: Dr Tim Albrecht, 2nd term ends in 2016)

Annual report, ISE UK Regional Section (2015-2016)

Over the last year, the ISE has continued to be involved in a range of annual, local student meetings in an effort to publicize the Society and its activities. This included several regional meetings in different parts of the country (partly student-run), e.g. the "Great Western" Electrochemistry Meeting, the Midlands Electrochemistry Meeting and the Butler Regional Meeting in Glasgow. All these meetings were well-attended - they have typically about 30-50 student participants and a poster session, as well as a small number of plenary talks from established academics. The UK national electrochemistry meeting Electrochem takes place in Leicester this year (17-19 August) and is supported by the ISE as well.

The formal collaboration between the ISE and the RSC Electrochemistry Interest Group is ongoing, with rather active exchange of information, mutual advertising and so forth. At the time of writing this report, the active ISE membership in the Regional Group is 189, slightly down from 202 last year, but similar to the years before (188 and 172, respectively).

Finally, the UK Regional Group is also actively involved in other activities of the Society with Prof. Mary Ryan (Imperial) as the Past Chair of Division 4, Prof. Andrea Russell (Southampton) as Chair of Division 7 and Prof. Patrick Unwin (Warwick) as Chair of the New Topics Committee. Prof. Phil Bartlett (Southampton) is "President Elect" of the Society (2015/16).

Yours sincerely,

Tim Albrecht

Membership:

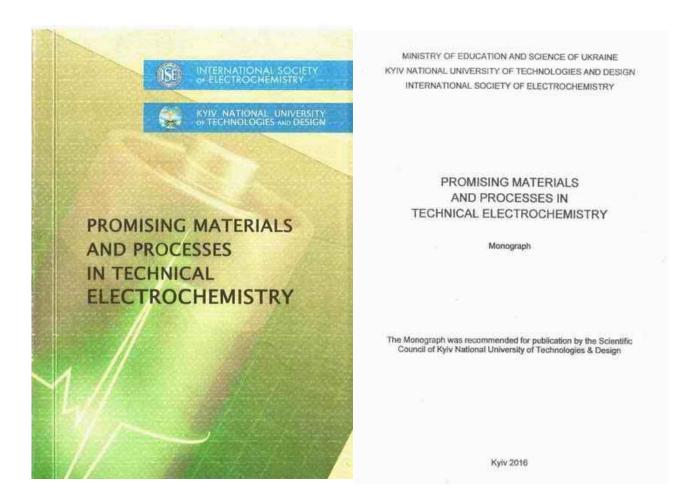
Membership in ISE has not changed in 2016. Difficulty in expanding the Ukrainian section of the ISE include the following:

- among the older generation of scientists in electrochemistry are ISE members all people who are now or previously seen sense in this;
- among young people have not yet managed to find someone willing to take even minimal steps and expense to become a member of ISE, because even financial assistance from ISE to participate in conferences doesn't help their main goal of traveling abroad to study and work, and for those who want to stay in Ukraine, the cost of membership in ISE does not look any reasonable.

If you set a goal to increase the number of members of the ISE among young people in the absence of financial expenses, you probably can promise young members of ISE letters of recommendation with the support of their requests for continued education at universities in Europe, for example, if they have publications in leading scientific journals of Europe and participation at least in one of the ISE conference in absentia (better without the last condition).

Scientific activity:

Under the auspices and sponsorship of the ISE the "ISE Satellite Student Regional Symposium on Electrochemistry -1^{st} ISE Regional Student Meeting in Ukraine" was hold in May, 2016 in Kyiv. In this meeting was attended by 129 authors, scientific works which were published as a monograph, which important pages was scanned and shown below.



Monograph has been recommended by the Scientific Council of Kyiv National University of Technologies and Design (KNUTD) for the wide range of lectors, scientists, PhD students, holders of a master's degree and students of Universities, engineers and technicians of various electrochemical enterprises (Protocol No 8 of 27.04.2016)

Editor's Board: V. Z. Barsukov – Prof.Dr., head of department for KNUTD, ISE member

member, Yu. V. Borysenko – PhD, senior lecturer for KNUTD; O. I. Buket – PhD, senior lecturer for National Technical University of Ukraine "Kyiv Polytechnic Institute", ISE Regional representative for Ukraine; V. G. Khomenko – PhD, Postdoc for KNUTD.

Reviewers

O. V. Linyucheva – Prof.Dr., head of department for National Technical University of Ukraine "Kyiv Polytechnic Institute", ISE member; O. A. Pud – Prof.Dr., head of department for Institute of Bioorganic Chemistry and Petrochemistry of the National Academy of Sciences of Ukraine, ISE member.

P26 Promising Materials and Processes in Technical Electrochemistry: Monograph / V. Z. Barsukov, Yu. V. Borysenko, O. I. Buket, V. G. Khomenko; editor-in-chief V. Z. Barsukov. Kyiv.: KNUTD, 2016. – 284 page

ISBN 978-966-7972-61-5

ISBN 978-966-7972-61-5 The promising materials and processes have been considered in such directions of technical electrochemistry as electrochemical power sources, electroplating, corrosion protection, electrochemical sensors, modern electrochemical and related technologies. A state of art in these directions of science and technologies of XXI century and progress in general development of science and technologies of XXI century and promotes to creation of essentially new types of production and technologies. Monograph has been recommended for scientists, lectors, PhD students, engineers and technicians. UDC 621.35(477)

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ISBN 978-966-7972-61-5

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Перспектиции матеріали та процеси в технічній елект

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Promising Materials and Processes in Technical Electrochemistry

INTRODUCTION

Under the auspices and sponsorship of the International Society of Electrochemistry (ISE) the 'ISE Satellite Student Regional Symposium on Electrochemistry - 1st ISE Regional Student Meeting in Ukraine* was held in May, 2016 in Kyiv.

Such an important to Ukraine scientific event has initiated the preparation of this collective monograph, which considers the modern problems and promising ways for their solving in the following directions of Technical Electrochemistry: Electrochemical power sources (part 1), Electroplaling (part 2), Corrosion protection (part 3), Electrochemical sensors (part 4), Modern electrochemical and related technologies (part 5). (part 5)

(part o). The state of art in the above mentioned directions of Technical Electrochemistry determines substantially the progress in general development of science and technologies of the XXI century and just now promotes creation of essentially new types of equipment and technologies.

now promotes creation or essentially new types or equipment and technologies. As examples, including those described in this monograph, it is possible to note the following developments: materials for effective lithium-ion accumulators and hybrid supercapacitors for electrical vehicles; non-platinum catalysts for fuel cells, which could be useful for eco-friendly "hydrogen power engineering", electrochemical sensors for spike monitoring toxic substances; effective coatings which can protect metals against corrosion as well as people and electronic equipment technologies for synthesis of nanowires and nanorods; electrochromic materials for "smart windows", which could regulate the amount of light and heet inside premises, etc.

materials for "smart windows", which could regulate the amount of light and heat inside premises, etc. At the next page there is the list of all 129 authors of this collective monograph in alphabetical order. The papers written by these authors are shown in parentheses according the Content. The monograph could be useful for a wide range of lecturers, scientists, post-graduates, holders of a master's degree and students of Universities, engineers and technicians of various electrochemical entermina enternises

Prof.Dr. V. Barsukov

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імпульси змінного струму. Цей спосіб знеболення під час операцій широко використовується за кордоном. Сьогодні значна частка фармахологічних досліджень побудована на фундаментальних відкриттях електрофізіології, які застосовуються для скринінту нейролептичних та знеболюючих препарятів, що блокують певні мембранні функції. Значні перспективи «кива електрика» має в енергетичній галузі, тому що добування дешевої, екологічно чистої енергії – це, мабуть, одна з основних цілей пюдства на найближні роки.	Barsukov Viacheslav Z. Borysenko Yulia V. Buket Olexander I. Khomenko Volodymyr G.
Перелік посилань [1] Дмитрієва Н. В. Системна електрофізіологія / Н.В. Дмитрієва. – М.: Сайно-Пресс, 2008. – 256 с. [2] Косток П.Г. Біофізика / П.Г. Косток, В.П. Зима, І. С. Магура, М.С. Мірошниченко, М. Ф. Шуба. – К. ВПЦ КНУ, 2008. – 567 с. [3] Allaby M. A. Dictionary of Zoology (Oxford Quick Reference). 4th Edition/ M. A. Allaby. – Oxford, 2014. – 704 р. [4] Jensen M.O. Principles of conduction and hydrophobic gating in K° channels / M.O. Jensen, D.W. Borhani, D.E. Shaw Proc. Natl. Acad. Sci. USA. 2010. – 126 р.	PROMISING MATERIALS AND PROCESSES IN TECHNICAL ELECTROCHEMISTRY Monograph
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One meeting with possible ISE sponsorship is planned for 2017 "ISE Satellite Student Regional Symposium on Electrochemistry – 2^{st} ISE Regional Student Meeting in Ukraine" in the NTUU "Igor Sikorsky KPI" and hopefully will be supported by the ISE.

Kyiv, 19th of December 2016

Oleksandr Buket

ISE Regional Representative for Ukraine



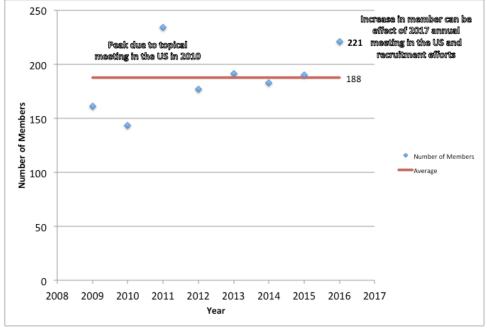
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ISE Annual Report Meeting 2016 - USA

Memberships

United States has currently 221 members; this represents an increase when compared to the average number of members over the past eight years (2009-2016). The increase in the number of members could be due to the upcoming annual meeting in Providence USA as well as a combination of the recruitment efforts. Recruitment of members is taking place on an ongoing basis by directly emailing colleagues and authors who published in Electrochimica Acta. Also, by co-sponsoring meetings, such as the fuel cells Gordon Research Conference (August 2016)



Activities

1. Providence 2017 Annual Meeting. The US group, under the leadership of Sanjeev Mukerjee (Northeastern University), Mark Orazem (University of Florida), and Plamen Atanassov (University of New Mexico) -co-chairs for the annual meeting, has continued working on the planning and organization of the 2017 Annual Meeting that will take place in Providence Rhode Island. Nineteen symposia topics were submitted by the divisions and approved. Members of the 2017 annual meeting include:

- Plamen Atanassov, Albuquerque, NM, USA (co-Chair)
- Philip N. Bartlett, Southampton, UK
- Gerardine Botte, Athens, OH, USA
- Ignacio Gonzalez, Mexico, Mexico
- E. Jennings Taylor, Englewood, OH, USA
- Hasuck Kim, Daegu, South Korea
- Daniel Little, Santa Barbara, CA, USA

- Shelley Minteer, Salt Lake City, UT, USA
- Sanjeev Mukerjee, Boston, MA, USA (co-Chair)
- Mark E. Orazem, Gainesville, FL, USA (co-Chair)

2. Co-sponsoring of meetings. We have co-sponsored the Fuel Cells Gordon Research Conference. This meeting was organized by ISE members Adam Z. Weber & Plamen Atanassov (Chairs). The meeting will take place on August 7-12, 2016. The focus of the meeting is on the next generation of durable, high-performance components and fuel cells, including modeling, diagnostics, and materials development advancements. It is expected that approximately 160 participants will be at the meeting with attendees from US, Europe, and Asia.

Gerardine G. Botte, PhD, Regional Representative for the USA University Distinguished Professor and Russ Professor of Chemical and Biomolecular Engineering Director of Center for Electrochemical Engineering Research, Ohio University