

## Division News

### Division Officer Slates Announced

New officers for the 2009-2011 term have been nominated for the following Divisions. All election results will be reported in the winter 2009 issue of *Interface*.



#### Electrodeposition Division

##### Chair

Christian Bonhôte, Hitachi Global Storage Technologies Japan, Ltd.

##### Vice-Chair

Hariklia (Lili) Deligianni, IBM

##### Secretary

Giovanni Zangari, University of Virginia

##### Treasurer (one to be elected)

Lisa Podlaha-Murphy, Northeastern University  
Stanko Brankovic, University of Houston

##### Junior Member-at-Large (one to be elected)

Natasja Vasiljevic, University of Bristol  
Philippe M. Vereecken, IMEC



#### Energy Technology Division

The Energy Technology Division held elections for the offices of Chair, Vice-Chair, and Secretary prior to the ECS spring meeting in San Francisco (see the summer 2009 issue of *Interface* for the results). The election for the office of Treasurer will be held, by online ballot, prior to the ECS fall meeting in Vienna. An e-mail will be sent to all members of the Energy Technology Division to enable them to vote.

##### Treasurer (one to be elected)

Scott Calabrese Barton, Michigan State University  
Walter van Schalkwijk, EnergyPlex Corp.  
Adam Z. Weber, Lawrence Berkeley National Laboratory  
Jim Zheng, Florida State University



#### High Temperature Materials Division

##### Chair

Enrico Traversa, Universita di Roma, "Tor Vergata"

##### Senior Vice-Chair

Jeff Fergus, Auburn University

##### Junior Vice-Chair

Timothy Armstrong, Carpenter Technology

##### Secretary/Treasurer

To be announced



#### Luminescence and Display Materials Division

##### Chair

Kailash Mishra, Osram Sylvania

##### Vice-Chair

John Collins, Wheaton College

##### Secretary/Treasurer

Holly Comanzo, GE Global Research Center

## Corporate Member News

### Spotlight on Faraday Technology Inc.



**FARADAY TECHNOLOGY, INC.**

**FARADAY TECHNOLOGY INC.** ([www.FaradayTechnology.com](http://www.FaradayTechnology.com)) was founded in 1991 to develop and commercialize novel electrochemical technologies based on pulse/pulse reverse electrolytic processes. Electrochemical technology areas of interest include: (1.) electrodeposition of copper, trivalent chromium, and tin; (2.) electropolishing of stainless steel semiconductor valves, nickel-titanium stents, and niobium materials; (3.) through-mask etching for internal cooling channels, and microfluidic devices; (4.) electrophoretic deposition of thermal barrier coatings, varactor materials for RF filters; (5.) corrosion services; and (6.) customized electrochemical cells and apparatus.

Faraday embraces the concept of open innovation and plays an important role in the innovation ecosystem as a bridge between the fundamental electrochemical knowledge generated from universities and Federal laboratories and large companies with market channels and technology needs. Faraday works with its strategic partners to move technology from proof of concept/laboratory feasibility conducted in Faraday's laboratory facilities through  $\alpha$ -scale prototype demonstration of manufacturing and engineering readiness in Faraday prototype facilities to  $\beta$ -scale validation at Faraday's strategic partners' facilities. The resulting intellectual property is transferred to the strategic partner via exclusive or non-exclusive license or patent acquisition. Faraday has approximately 22 issued U.S. patents, four foreign patents, and additional patents pending. Faraday was recently acquired and is a subsidiary of Physical Sciences Inc. of Andover, MA and collectively employs 180 staff, of whom about 95 hold PhDs.

In the **NEXT** issue of  
**INTERFACE**

- The issue will feature work being done by members of the **LUMINESCENCE AND DISPLAY MATERIALS DIVISION**.
- There will be coverage of the **216<sup>th</sup> ECS MEETING IN VIENNA, AUSTRIA**, (October 4-9), including highlights from The ECS Lecture, given by Martin Stratmann; the "XYZ" Lecture by David Shoesmith; the Olin Palladium Award Lecture by Dieter Kolb; the Carl Wagner Award Address by Henry White; and from the SOFC XI and the EUROCVD 17 symposia.
- A new symposium, **ELECTROCHEMISTRY IN MEDICINE AND BIOMEDICAL APPLICATIONS**, scheduled for the 217<sup>th</sup> ECS Meeting in Vancouver, Canada (April 25-30, 2010) will be showcased.

## ECS Welcomes New Staff



**KARLA T. STEIN** joined ECS in March as the new Director of Membership and Development, bringing a wealth of development experience from her 12 years in leadership roles in non-profit healthcare. She has served as an Executive Director with the American Cancer Society, a Senior Vice-President of Major Gifts with The American Heart Association, and most recently as a Vice-President with the Robert Wood Johnson

Hamilton Hospital Foundation. In these various capacities she has been responsible for establishing major gift and planned giving programs that included the development of Gift Advisory Councils, prospect research and identification, solicitation, establishing cultivation and stewardship activities, grant writing, volunteer development including a Young Professionals Group, board governance, donor relations, event planning, public relations, and brand awareness. Prior to entering the non-profit field, Karla was an International Sales Director for Lenox China & Crystal, Inc. for over a decade where she did market research and established the Lenox brand in Japan, Europe, Bermuda, and the Caribbean. She has had experience in registering the Lenox trademark internationally and most recently the Grounds for Healing® certificate of registration for the hospital foundation.

In her new role at ECS, Karla will be focusing on elevating the global membership and establishing a major gift and planned giving program. Student relations will also be

a priority and Karla will be working to augment student membership; increase funding that will support the expansion of the Student Chapters and student awards; increase the amount and number of the travel grants, summer fellowships, and internships; as well as provide a more enriching student program at the ECS meetings. In addition, she will be working collaboratively with the Divisions and Sections to champion their efforts to elevate their membership and symposium fundraising initiatives.

Karla is a native of Indianapolis, Indiana and a business graduate from the University of Evansville. She resides in Lawrenceville, New Jersey and has two sons that live in Richmond, Virginia.



**LAUREN GERMANO** joined ECS in August 2008 as the Administrative Assistant to the Membership & Development Department. In addition to supporting the Director and Assistant Director of Membership & Development, her responsibilities include maintenance of member, nonmember, student, and donor profiles, processing of dues renewal invoices and new membership applications, as well as enthusiastically

responding to the needs of our ECS callers and visitors. A native of Pennsylvania, Lauren currently resides in Pennington, New Jersey.



## websites of note

by Zoltan Nagy

### Electrochemical Technology in Microelectronics

The applications of electrochemical technology to microelectronics are expanding rapidly. As the dimensions of the features of microelectronic components have decreased, associated materials effects, interfacial effects, and molecular-scale interactions have become increasingly important for electrochemical metal deposition and removal. Several papers in this site focus on those aspects.

- *IBM J. Res. & Dev.*, Vol. 49, No. 1, January 2005
- <http://www.research.ibm.com/journal/rd49-1.html>

### Electrochemistry of the Nerve Impulse

All you ever wanted to know about electrochemical mechanism of the nervous system. You can learn about "axons," which are responsible for the transmission of information between different points of the nervous system—their function is analogous to the wires that connect different points in an electric circuit. Membrane potentials, action potentials, ionic pathways, ion channels, reversal potentials, voltage clamps, and capacitive currents are all explained in detail.

- F. Bezanilla, University of Chicago
- <http://nerve.bsd.uchicago.edu/med98a.htm>

### Famous Electrochemists

A large collection of short biographies, illustrated with many pictures, of electrochemists and scientists in related fields. The collection starts in the 1500s and extends to this time. Over one hundred are listed, and unfortunately details are not available for all. Numerous further links are provided in every case, making this site a very extensive historical collection.

- Evgeny Katz, Clarkson University
- <http://people.clarkson.edu/~ekatz/scientists/electrochemists.htm>

### About the Author

**ZOLTAN NAGY** is a semi-retired electrochemist. After 15 years in a variety of electrochemical industrial research, he spent 30 years at Argonne National Laboratory carrying out research on electrode kinetics and surface electrochemistry. Presently he is at the Chemistry Department of the University of North Carolina at Chapel Hill. He welcomes suggestions for entries; send them to [nagyz@email.unc.edu](mailto:nagyz@email.unc.edu).

## Highlights from IC4N-2009, Rhodes, Greece



**CONSTANTIN POLITIS** (IC4N co-Chair), **MICHAEL GRAETZEL** (Plenary Speaker), **KRISHNAN RAJESHWAR** (Plenary Session Chair), **RON ELSENBAUMER** (UTA VP Research), and **STATHIS MELETIS** (IC4N Chair)

The second international conference, "From Nanoparticle & Nanomaterials to Nanodevices & Nanosystems" (IC4N) was held June 28-29 on the Island of Rhodes (the Island of Knights) in Greece. The Aegean Nanoscience and Nanotechnology Workshop, sponsored by the National Science Foundation, was also held at the same venue on July 2 and 3.

The IC4N was co-sponsored by ECS and the conference had many member attendees and symposia organizers including Krishnan Rajeshwar (Editor of *Interface*), Claude Levy-Clement, Joachim Lewerenz, Trung Van Nguyen, and others. Professor Michael Grätzel of Ecole Polytechnique Fédérale de Lausanne (EPFL) kicked off the conference with a plenary talk entitled, "Mesoscopic Systems for Solar Energy Conversion and Storage." Professor Stathis Meletis

(Chair of the Materials Science & Engineering Department of the University of Texas at Arlington) organized this conference (as well as its predecessor in Halkidiki last year) and more than 70 experts from around the world delivered keynote and invited talks. The conference topics (covered in ten symposia) included: Fundamentals of Nanoscale Materials (Theory/Simulation/Experiments); Functional Nanomaterials; Nanoclusters; Nanoparticles; Self-Assembly at the Nanoscale; Nanofabrication and Nano Manufacturing; Nanotechnology Applications and Implications (Bio/Energy/Environment/Human Health/Cultural); Nano-electronics and Nanophotonics; and Nanoscale Sensors and Devices.

The Workshop that followed the conference on Thursday and Friday engendered vigorous discussions on the above topics and effectively addressed nano-themes of interest. These discussions followed invited speakers setting up the stage with reviews of the state-of-the-art and outstanding issues in each field. The winners of the Best Poster Awards were Mee-Na Park (Myongji University, Korea), for "Improvement of Height Uniformity of ZnO Nanowire Arrays by Using Electropolishing Method;" and Spiridon Pappas (University of Patras, Greece), for "Photoluminescence Performance of SiO<sub>2</sub> Thin Films Produced by Reactive RF Sputtering." Each of these winners received \$1,000.

The ECS Student Poster Award winner was Mohamed Gharbi (University of Houston), for "The Origins of Electromechanical Indentation Size Effect in Ferroelectrics." This winner received one year of ECS student membership; registration waiver to the 217<sup>th</sup> ECS Meeting in Vancouver, Canada on April 25-30, 2010; and a \$1,000 travel grant to attend this meeting.

All in all, both the 2<sup>nd</sup> IC4N and the workshop were a resounding success and all indications are that this meeting series will continue to be held every summer in the Greek isles.

## ECS Cosponsored Conferences for 2009

*In addition to the regular ECS biannual meetings, ECS, its Divisions, and Sections cosponsor meetings and symposia of interest to the technical audience ECS serves. The following is a list of the cosponsored meetings for 2009. Please visit the ECS website for a list of all co-sponsored meetings.*

- **Microelectronic Technology and Devices (SB Micro 2009)**, August 31-September 3, 2009, Natal, Brazil, [www.lasic.ufrn.br/chiponthedunes2009/](http://www.lasic.ufrn.br/chiponthedunes2009/)
- **BATTERIES 2009 - The International Power Supply Conference and Exhibition**, September 30-October 2, 2009, Cannes-Mandelieu, France, [www.batteriesevent.info](http://www.batteriesevent.info)
- **6<sup>th</sup> International Conference on Electromagnetic Processing of Materials (EPM 2009)**, October 19-23, 2009, Dresden, Germany, [www.epm2009.de](http://www.epm2009.de)
- **2009 Fuel Cell Seminar & Exposition**, November 16-20, 2009, Palm Springs, CA, USA, [www.fuelcellseminar.com](http://www.fuelcellseminar.com)

*To learn more about what an ECS co-sponsorship could do for your conference, including information on publishing proceeding volumes for co-sponsored meetings, or to request an ECS co-sponsorship of your technical event, please contact [ecs@electrochem.org](mailto:ecs@electrochem.org).*

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