

SEAC *communications*

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PRESIDENT'S MESSAGE

Gentlefolks:

The Reilley Award Symposium was held on Monday, 12 March, at PittCon 2012. The Reilley Awardee, Debra Rolison, Head of the Advanced Electrochemical Materials Section at the U.S. Naval Research Laboratories, and the Young Investigator Awardee, Lane Baker, Assistant Professor of Chemistry at Indiana University, were honored. The Symposium was organized by the one who nominated the Reilley Awardee, Hector (Tito) Abruña of Cornell University. Talks were presented by Awardee Rolison on "What Electroanalysis Tells Us About Technologically Relevant Nanomaterials" as well as by Henry White, University of Utah, on "Transport in 30-Nanometer Wide Electrochemical Cells," and George M. Whitesides, Harvard University on "New Methods of Using 'Density' in Analysis". Young Investigator Awardee Baker spoke about "Measuring Gaps and Spaces with Ion Conductance Microscopy," and Dick Crooks, University of Texas, who nominated Baker, spoke about "Self-Powered Microelectrochemical Devices". The symposium was well attended and is available as a webcast at

<http://www.pittcon.org/technical/charlesreilley.php>

As is traditional in Orlando, the Reilley Award Reception and dinner were held at the Ming Court, where students and Student Travel Grant Awardees enjoyed the festivities. Congratulations to the Awardees and thanks to those who made nominations.

It is also a time of transition for SEAC in the interval after the Reilley Award Symposium. It is the time when members retire from the Board and new members join the Board. Our thanks to Cindy Zoski, Robin McCarley, and Keith Stevenson for their service on the Board from 2007–2012. And welcome to the newly elected Board Members, Rose Ann Clark, Steve Maldonado, and Greg Swain.

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How Easy it is to Become a SEAC Member

A very special thanks to our retiring Secretary, Jon Howell, for his many years of effective oversight of the Organization. It is the Secretary who actually runs the Organization, and Jon has done a more than outstanding job of keeping SEAC on track. Thank you, Jon. Our newly elected Secretary, Faye Rubinson, is enthusiastically welcomed (and now forewarned). Faye has served as Editor of the Newsletter and is well informed about SEAC operations. The activities of the SEAC Committees grow and the commitment of the Committee Chairs is gratefully acknowledged. There are some novel plans evolving for PittCon 2013, the 30th anniversary of the first Reilley Symposium. Please be on the look out for upcoming SEAC Newsletters with further details.

Johna Leddy

NEW NEWSLETTER STUDENT EDITOR

The first student editor of this newsletter is Xu U. Zou, whose contributions you will find in upcoming newsletters. Note that **SEAC continues to seek nominations for additional student editors** to join the newsletter editorial board. The intention is to assure that graduate students' points of view and interests are appropriately represented in the newsletter. The primary job of a student editor is to contribute at least once or twice a year to the SEAC newsletter with a news item, preferably items of special interest to students and postdocs. So don't be afraid; the job is not too onerous.

Student editors are invited to join the annual SEAC board meeting, and during their tenure as graduate student editor their SEAC membership fee is waived. Send nominations or self-nominations to SEAC Communications editor Phil Buhlmann (buhlmann@umn.edu).

Xu U. Zou (University of Minnesota) received his bachelor degree in Chemistry from Beijing Normal University, China, and is a third year graduate student in the Department of Chemistry at the University of Minnesota (advisor Phil Buhlmann). Xu is working on solid contact ion-selective electrodes and the development of current pulse-operated reference electrodes that eliminate conventional liquid junctions. As we all know, reference electrodes play an important role in guaranteeing accurate and precise measurements. For measurements in real life samples, one of the most serious limitations—especially of miniaturized reference electrodes—is the conventional liquid junction, which is subject to clogging from sample components. In addition, salt bridges eventually run out of electrolyte.



Xu's approach eliminates the liquid junction by applying current pulses to polymeric ion-doped membrane to generate a potential at the interface to the sample that is independent of the composition of the sample solution.

PITTCON 2013

Abstract deadline: 8/10

SEAC will again be sponsoring a poster session at PITTCON 2013. In addition to the research presented, we will recognize the contributions of our Student Travel Award winners. Make sure that you designate any poster abstracts for the SEAC poster session. To do so, write on the first line of the abstract "for SEAC poster session."

SEAC will also hold its Reilley and Young Investigator Award Symposium (Henry White organizing). More details on the awardees Andrew Ewing (Reilley) and Bo Zhang (Young Investigator) and the Pittcon 2013 program will appear in upcoming issues.

There will also be a session Pivotal Ideas in Electroanalysis (Johna Leddy organizing and seeking input) and a session Highlighting Young Investigators (organized by Steve Maldonado and David Cliffl).

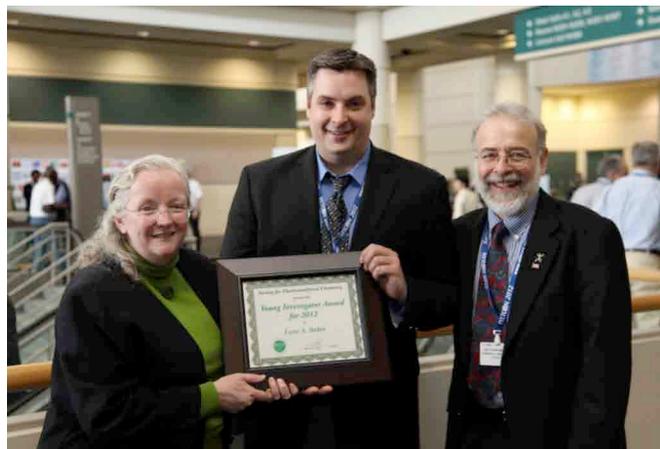


WRAP-UP PITTCON 2012

Charles N. Reilly and Young Investigator Awards Symposium



From left to right: Henry White (U. Utah), George Whitesides (Harvard), Johna Leddy (U. Iowa), Debra Rolison (U.S. Naval Research Laboratories), Hector (Tito) Abruña (Cornell), Lane Baker (Indiana), Dick Crooks (U. Texas).



Board of Directors Meeting

The complete minutes of the meeting will be approved at the next BOD meeting. What follows here is, therefore, only a brief summary and does not represent a complete list of items discussed.

President Johna Leddy called the meeting to order after most BOD members passed the most difficult challenge of the day, i.e., finding the meeting room. The service of the departing secretary Jon Howell and the board members Cindy Zoski, Robin McCarley, and Keith Stevenson was recognized and the new board members Rose Clark, Steven Maldonado, and Greg Swain were introduced. Hardly any

introduction was required for President-Elect Adrian Michael, Secretary J. Faye Rubinson, and Treasurer Petr Vanýsek, whose terms start July 1, 2012. On behalf of the Society, Johna thanked our corporate sponsors BASi, CH Instruments, Gamry Instruments, Metrohm Autolab, Pine Research Instruments, Princeton Applied Research, PITTCON, and Thermo Fisher Scientific. The five travel award winners were announced (for their names and bios, see the March issue of *SEAC Communications*).

Petr Vanysek presented the report for the fiscal year 2011, and the 2013 budget was approved. All committee chairs agreed to continue to serve. The committee chairs reported on activities in the Membership, Nominations, Awards, Finance, Activities, Web Site and Newsletter Committees. Phil Buhlmann drew attention to the new regional editors Eric Bakker and Francisco J. Ibañez and the first student editor, Xu U. Zou from Minnesota. Sam Kounaves' excellent service as web master was acknowledged.

The Nominating Committee, chaired by Kathy Ayers, received an excellent list of nominees from the SEAC membership for elections for this year's officers, with more nominees for the board of directors than usual. Having a large number of nominees makes the committee's job easier, so please continue to provide your input! A call for nominations for the next election will be announced in October.

Brainstorming about Pittcon 2013 and the 30 year-anniversary of SEAC in 2013 included the aspects of promoting SEAC to graduate students and creative fundraising. The possibility of a timed run in Philadelphia was discussed but Phil's suggestion of a tower race met little enthusiasm. Another suggestion to include graduated students more into SEAC activities was the creation of a Facebook page, an activity that might also involve the *SEAC Communications* student editor(s).

Annual Business Meeting and Reception

The annual business meeting of the Society took place on Monday, March 12, following the Reilley Award Symposium. The minutes from the prior year were approved and a summary of the results from the BOD meeting was presented. The meeting was adjourned and celebration followed at the Ming Court restaurant.



At the Reilley reception, left to right: Takashi Ito (Kansas State), Lane Baker (Indiana), Keith Stevenson (U. Texas), Frank Zamborini (U. Louisville), and Dick Crooks (U Texas). In the background: Steve Weber (U. Pittsburgh) and Phil Buhlmann (U. Minnesota). Photo credit goes to Rafael Masitas.





Bob and Judy Ensman and Adrian Michael.

And last but not least, two SEAC reception pictures coming from our regional editor Francisco, who would like to take the opportunity to thank Frank Zamborini for letting him work in his lab this March before Pittcon.



Grandparents, parents, and grandchildren!
Sorry Dr. Crooks.



Current and former students of Frank Zamborini: Tulashi,
Rafael, and Francisco.

MEETINGS TO COME

Meetings of interest to our SEAC members abound during the coming year, with symposia being organized by some among us.

Meeting	When	Where	Link for More Information
Gordon Conference Bioelectrochemistry	2012, July 1–6	Lucca (Barga), Italy	http://www.grc.org/programs.aspx?year=2012&program=bioelec
Gordon Conference Electrodeposition	2012, July 29-August 3	New London, NH, USA	http://www.grc.org/programs.aspx?year=2012&program=elecdep
American Chemical Society Fall Meeting	2012, August 19–23	Philadelphia, PA, USA	http://portal.acs.org/
63rd Annual ISE Meeting	2012, August 19-24	Prague, Czech Republic	http://www.ise-online.org/annmeet/next_meetings.php
Monitoring Molecules in Neuroscience	2012, Sept. 16–20	London, UK	http://www.monitoringmolecules.org/2012/
Electrochemistry 2012	2012, Sept. 17–19	Munich, Germany	http://www.gdch.de/vas/tagungen/gdchvas.htm
PRIME 2012 (ECS 222nd Meeting)	2012, October 7–12	Honolulu, HI, USA	http://www.electrochem.org/meetings/guidelines/plan_cal.htm
Electrochemistry (ZINC)	2013, Feb 25–28	Canary Islands, Spain	http://www.zingconferences.com
Pittcon 2013	2013, March 17–22	Philadelphia, PA, USA	http://www.pittcon.org/
American Chemical Society Spring Meeting	2013, April 7–11	New Orleans, LA, USA	http://portal.acs.org/
223rd ECS Meeting	2013, May 12–17	Toronto, Ontario, Canada	http://www.electrochem.org/meetings/biannual/fut_mtgs.htm
12 th ISE Spring Meeting	2013, March 17–21	Bochum, Germany	http://www.ise-online.org/annmeet/next_meetings.php
13 th ISE Spring Meeting	2013, April 8–11	Pretoria, South Africa	http://www.ise-online.org/annmeet/next_meetings.php
9th International Symposium on Electrochemical Impedance Spectroscopy	2013, June 16–21	Okinawa, Japan	http://www.rs.tus.ac.jp/eis2013/index.html
Faraday Discussion 2013 - Electroanalysis at the Nanoscale	2013, July 1–3	Durham, UK	(Contact: Richard Compton)
American Chemical Society Fall Meeting	2013, Sept. 8–12	Indianapolis, IN, USA	http://portal.acs.org/
64 th Annual ISE Meeting	2013, September 8–13	Santiago de Querétaro, Mexico	http://annual64.ise-online.org/
224th ECS Fall meeting	2013, Oct. 27–Nov. 1	San Francisco, CA, USA	http://www.electrochem.org/meetings/biannual/fut_mtgs.htm
Pittcon 2014	2014, March 2–6	Chicago, IL, USA	http://www.pittcon.org/
American Chemical Society Spring Meeting	2014, March 16–20	Texas TX, USA	http://portal.acs.org/
14 th ISE Topical Meeting	2014, March 28–31	Nanjing, China	http://www.ise-online.org/annmeet/next_meetings.php
15 th ISE Topical Meeting	2014, April 27–30	Niagara Falls, Canada	http://www.ise-online.org/annmeet/next_meetings.php
225th ECS Spring meeting	2014, May. 11–16	Orlando FL, USA	http://www.electrochem.org/meetings/biannual/fut_mtgs.htm

Meeting	When	Where	Link for More Information
American Chemical Society Fall Meeting	2014, Aug. 10–14	San Francisco CA, USA	http://portal.acs.org/
65 th Annual ISE Meeting	2014, August 31–September 5	Lausanne, Switzerland	http://www.ise-online.org/annmeet/next_meetings.php
226th ECS Fall meeting	2014, October 5–11	Cancun, Mexico	http://www.electrochem.org/meetings/biannual/fut_mtgs.htm
Pittcon 2015	2015, March 8–14	New Orleans, LA, USA	http://www.pittcon.org/

10th International Symposium on Pharmaceutical Sciences (ISOPS-10)

Mehmet Gumustas from Ankara University points us to the 10th International Symposium on Pharmaceutical Sciences (ISOPS-10), which will be held in Ankara, June 26-29, 2012. Invited electrochemists include Ari Ivaska (Finland), Ana Maria Oliveira Brett (Portugal), Aziz Amine (Morocco), Christopher M.A. Brett (Portugal), Karel Vytras (Czech Republic), and Sotiris Soturopoulos (Greece). (<http://www.isops10.com/>)

Monitoring Molecules in Neuroscience: 14th International Conference

This conference will be held in London around the campus of Imperial College London on September 16th – 20th, 2012. The meeting will bring together researchers who are on the cutting edge of development of electrochemical tools for neurochemical measurement in



vivo with those who are interested in using these techniques to study important neuroscience problems including real-time clinical monitoring of the brain. Techniques covered will include in vivo biosensors, in vivo electrochemical sensors, microdialysis and molecular imaging. The meeting will have daily plenary lectures from international experts in the field, plenary methods sessions and parallel applications sessions. There will also be a vibrant poster sessions and a Conference banquet in spectacular surrounding in Greenwich. Abstract submission for oral and poster sessions opens early May 2012 and will close 29th June 2012. For more details see <http://www.monitoringmolecules.org/2012/>

This meeting will be followed by **COSBID 2012** as a satellite meeting on Friday 21st September. All those interested in recent results from the CoOperative Study on Brain Injury Depolarisations group (www.COSBID.org) and their implications for critical care of brain injury patients are welcome to register and attend both meetings, or just the COSBID satellite.





North Carolina Section of the ACS

SERMACS 2012

Catalyzing Sustainable Innovation

14-17 November 2012

Raleigh Convention Center, Raleigh, North Carolina



Southeastern Regional Meeting
of the American Chemical
Society

Get your chemistry and travel plans ready for SERMACS 2012! Program highlights include plenary lectures, over 20 invited symposia, general sessions, poster sessions, and special events. Of particular interest to SEAC members will be symposia featuring the following topics.

- Surface modifications for catalysis and energy
- Chemistry and Applications of 'Smart' Molecules and Materials
- Recent advances in micro- and nanofabrication
- Next Generation Energy
- Dye-sensitized solar cells
- Photochemistry
- Chemistry of Bio-Nano Interfaces



as well as a plenary lecture by **SEAC luminary Royce Murray**. Let your work shine in the state-of-the-art Raleigh Convention Center. Relax in the new and elegant Raleigh Marriot City Center hotel. Enjoy traditional North Carolina hospitality at the vibrant downtown restaurants, museums, music venues, sports events, and other diverse cultural attractions. Explore the Research Triangle area, whose many companies and universities are leaders in catalyzing sustainable innovation. (<http://www.sermacs.2012.org>)

2013 Workshop on Electrochemistry at Austin, Texas

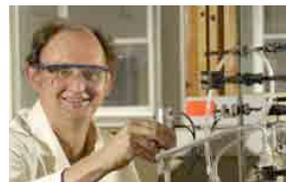
Each year in Austin, Texas, the Workshop on Electrochemistry brings together experts in fields of engineering, materials, and electrochemistry to focus on topics in a few important areas of research. Participants address specific challenges in the field, exchange ideas and information, and catch up with colleagues from around the world. The workshop is hosted by the Center for Electrochemistry, and the date for the fifth annual Workshop has been set for February 9-10, 2013. Specific topics will be announced later this year, and more information is available at <http://cec.cm.utexas.edu/annual-electrochemistry-workshop>.

These exclusive workshops feature scientists and researchers from top universities, national laboratories, and electrochemical industries discussing cutting-edge electrochemical science, and addressing issues with respect to the mechanisms of electron transfer. Each workshop features technical presentations and posters from several different perspectives covering areas ranging from electrocatalysis, electrochemical sensors, and electroanalysis. The workshops are held at the AT&T Executive Education and Conference Center on the campus of the University of Texas at Austin. The meeting venue includes state-of-the-art technology and communication services, comfortable accommodations, high speed internet access, digital TV programming, and access to the fitness center.

The workshop location is near to the many recreational and cultural attractions of the Austin Hill Country. The Austin campus is the site of 17 libraries and several world-class museums, and just a short walk or ride away from central Austin attractions: the Bob Bullock Texas History Museum, the Texas State Capitol, Congress Avenue, and the 6th Street and Warehouse shopping and entertainment districts. Known as "The Live Music Capital of the World," Austin is a vibrant mix of Texas friendliness and cosmopolitan sophistication, with opportunities for outdoor recreation activities.

REPORT FROM AUSTRALIA

Submitted by regional editor Alan M. Bond



April 2012 was an exciting month in Electrochemistry with two major meetings held back to back in Perth over the period April 15 to 18. The Royal Australian Chemistry Institute Electrochemistry Division held its 18th Australian Symposium at Curtin University on Sunday April 15. Our prestigious Bruno Breyer Medal was awarded to Professor **Joe Wang** from San Diego who gave an outstanding lecture describing advances with his nanomachines. Professor **Justin Gooding** from the University of New South Wales was awarded the Stokes Medal (senior award in Australian Electrochemistry). The SEAC Australian correspondent was proud to present the inaugural A.M. Bond Medal to Dr. **Jie Zhang** from Monash University (see photograph below of the presentation). This new Medal is for outstanding early career electrochemists in Australia. Almost 100 electrochemists were present at this meeting.

The 10th ISE Spring Meeting was held at University of Western Australia from April 15 to 19 and attracted almost 300 delegates of whom 200 were from overseas. It is a long time since an International Electrochemistry meeting has been held in Australia and it was fantastic to have our community meet with a large contingent of distinguished visitors. The theme for the meeting was "New Approaches to Nanostructuring Electrodes for Electroanalysis and Energy Storage" and we hope this occasion will inspire the new generation of electrochemists in Australia to expand our activities at both national and international levels.

REPORT FROM SOUTH AMERICA

Submitted by regional editor Francisco J. Ibañez



Now is the turn to make some comments about the XX Conference SIBAE 2012*, which took place from 25 to 30 March in Fortaleza Brasil. There were several researchers from our group (*Scanning Probe Microscopy and Surface Physical Chemistry Group*, web: <http://nano.quimica.unlp.edu.ar/>) who attended and presented their research. One of them was Pablo Fernandez, a recent Postdoctoral Fellow who joined our lab here in La Plata, Buenos Aires. He presented an oral talk about the synthesis, characterization, and applications of PVP-protected Pt nanoparticles. He studied the catalytic activity of the as-prepared Pt NPs and, after electrochemically removing part of the organic material, their use in a direct methanol fuel cell (DMFC) application. Another member of the group, Maria Elena Vela (Full Professor) presented an exhaustive characterization (XPS, SEM, AFM, EDS) of electro-deposited Ni-W alloy grains. In addition, Ernesto J. Calvo (Full Professor at University of Buenos Aires, UBA) gave a plenary lecture entitled *Applications of LbL Self-Assembled Polyelectrolyte Multilayers for Electrocatalysis*. Pablo and Maria Elena commented that the environment was quite diverse and great for exchanging ideas. There were researchers from all over South America, including Mexico, Chile, and Uruguay.



Science in Brasil has been dramatically growing, both in terms of the number researchers and infrastructure. The government has focused on science as the only way of developing high technology for society. Argentina, is following similar steps. The number of researchers has increased after suffering obscure years of scientific decadency during dictatorial governments from 1976 until 1983. After the recovery of democracy, administrations—some more than others—have done great efforts to

increase the number of researchers and to foster science all over the country. However, we still need to build more infrastructure and to create common places for the scientific community through conferences in different fields of research, including electrochemistry. I hope in the near future we will be able to give more international talks and be able to receive people from South and North America in order to enrich our science here.

**<http://nanofael.dq.ufscar.br/sibae/>*

NEWS FROM MEMBERS

After his first retirement from The University of Tokyo in 2007, regional SEAC newsletter editor **Yoshio Umezawa** was for five years professor at Musashino University in Tokyo. His affiliation with Musashino U. ended this year, and as of April 1 his official address for correspondence is as professor emeritus of The University of Tokyo (omezawa@chem.s.u-tokyo.ac.jp). He continues to serve the community, serving for example on editorial boards of several journals. We wish him a great second retirement.



George Wilson will be receiving at the Philadelphia ACS Meeting in August the J. Calvin Giddings Award for Excellence in Education, presented by the ACS Division of Analytical Chemistry. Congratulations!



*Retirements: **Andrzej Wieckowski** (left) and **Alexander Scheeline** (right; both Department of Chemistry, University of Illinois). As Alex writes: "The State University Retirement System told both of us we would be fools not to retire, and we are not fools."*



"Where are they now?" Wieckowski Ph.D. student and short-term Scheeline post-doc **Rachel Behrens** is now post-docking with Carol Korzeniewski at Texas Tech.



The Executive Committee of the Electrochemical Society has appointed a new Interim Editor of the EST Editorial Board **Petr Vanýsek**. As such, Petr serves as Editor of the Journal of the Electrochemical Society and the new journal, ECS Electrochemistry Letters. At Northern Illinois University, Petr is a Full Professor of Analytical Chemistry and serves as the Director of Graduate Studies. Not only has Petr been very active in ECS affairs, but he has held there several high level positions. One of his most important roles was as Secretary to ECS (2004-2008). At the time of Petr serving as Secretary, he was the Officer responsible for ECS publications. Petr also has devoted a great deal of time to two of the ECS technical Divisions: the Physical and Analytical Electrochemistry Division (Secretary/Treasurer, 2003-2005; Vice-Chair, 1994-1996) and the Sensor Division, (Chair, 1996-1998). Petr is also of course active in SEAC, presently as the Treasurer.



A 2012 Annual Merit Review Award from the DOE Hydrogen and Fuel Cells Program recognizes the invaluable contributions that Dr. **Katherine Ayers**, director of research at Proton OnSite, and Dr. Monjid Hamdan, senior program manager at Giner, Inc., have made to the DOE Hydrogen and Fuel Cells Program in the field of hydrogen production through electrolysis. Both Dr. Hamdan and Dr. Ayers have been instrumental in the research and development of polymer electrolyte membrane (PEM) electrolyzer cells, stacks, and systems that have consistently met Program goals in reducing the cost of hydrogen production. Through their efforts, the projected capital cost of PEM electrolyzer stacks has been reduced by 80% in the last several years. This impressive accomplishment has been achieved through innovations at the cell, stack, and system levels—including reduced catalyst loading, optimized flow fields, and reduced part counts. In addition to their important technical contributions, both Dr. Ayers and Dr. Hamdan have contributed significantly as leaders in the Electrolysis Working Group, providing invaluable expertise and guidance to the Program in its efforts to establish future targets for electrolysis technology. (http://www.hydrogen.energy.gov/annual_review12_awards.html)



HOW EASY IT IS TO BECOME A SEAC MEMBER

Any individual with an interest in electroanalytical chemistry is invited to join SEAC. Regular one-year membership dues are \$30. Student dues are \$10. Dues are payable on January 1 of each year. A lifetime membership option is available for \$300, payable either as a lump sum or in three annual, nonrefundable installments of \$100.

To become a new member of SEAC, go to <http://electroanalytical.org/membership.html> and fill out the downloadable membership form or pay on-line.