

SEAC *communications*

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PRESIDENT'S MESSAGE

analytical *adj* \ˈa-nə-ˈli-tik-əl\

1. examining things very closely and thoroughly;
2. skilled in analysis;
3. reasoning from parts or relationships (vocabulary-vocabulary.com)

Analytical describes the dissection of a puzzle by attention to details and careful reasoning. Analytical is a perspective on science. Analytical is a path to rigorous science. Rigorous science endures.

Members of the Society *for* Electroanalytical Chemistry are, at least in principle, invested in an analytical approach to their electrochemistry. This is a major strength of the Organization: members who couple rigorous reasoning and detailed observations to resolve important questions and establish enduring science.

Analytical methods, of thought and experiment, have evolved over the centuries, but the basic educational process of apprenticeship has continued from the Middle Ages. It is incumbent on electrochemical practitioners and teachers to promote an analytical approach, a rigorous approach, to science.

The ACS Committee on Professional Training commits to promote rigor in the undergraduate chemistry curriculum (CPT Newsletter Winter 2011):

Rigorous learning environments require that students acquire skills in critical thinking and problem solving, and are able to synthesize knowledge and apply it to new situations.

This approach is analytical. Practice of electroanalytical chemistry engenders commitment to rigorous, analytical thinking and thereby promotion of science.

In this issue--

President's Message

Pittcon 2012

- Charles N. Reilley and Young Investigator Awards Symposium
- Other SEAC activities at Pittcon
- Electrochemistry Sessions at Pittcon

Student Travel Award Winners

Award Nominations—Deadline Fast Approaching

New SEAC Officers

Meetings to Come

Postdoctoral/Senior Staff Fellows

- CUNY (Michael Mirkin)

Award Announcement

Member News

- Joseph Wang
- George W. Luther III
- Anne Andrews
- Joseph Hupp
- Olivier Chastel
- Wunmi Sadik
- Phil Buhlmann

Welcome New & Lifetime Members

How Easy it is to Become a SEAC Member

SEAC meets annually at PittCon to practice and promote analytical methods of thought and experiments. This year, SEAC activities are largely on Monday, 12 March 2012, when the Charles N. Reilley Award Symposium is held. This year, Debra Rolison of the Naval Research Labs is the Reilley Awardee and Lane Baker of Indiana University is the Young Investigator Awardee. Please join us in Room 206A at 2:00 PM for the Reilley Award Symposium. A brief annual business meeting follows. Please join us at the Ming Court to congratulate the Awardees at the reception.

Johna Leddy

PITTCON 2012—MARCH 11–15

Charles N. Reilley and Young Investigator Awards Symposium

The highlight of SEAC activities at Pittcon will be the presentation of the 2012 C. N. Reilley Award to Debra Rolison of the Advanced Electrochemical Materials section at the Naval Research Laboratory and the Young Investigator Award to Lane Baker of Indiana University. The symposium in their honor has been arranged by Hector Abruna, Cornell University and will be held 2:00 to 5:25 PM on Monday, March 12, 2012, in Room 206A of the Orange County Convention Center.

- 2:00 PM Introductory Remarks – Hector Abruna
- 2:05 PM Presentation of the 2012 Charles N. Reilley Award to Debra Rolison
- 2:10 PM What Electroanalysis Tells Us About Technologically Relevant Nanomaterials, Debra Rolison, Advanced Electrochemical Materials Section, Naval Research Laboratory
- 2:45 PM Transport in 30-Nanometer Wide Electrochemical Cells, Henry White University of Utah
- 3:20 PM New Methods of Using “Density” in Analysis, George Whitesides, Harvard University
- 3:55 PM Recess
- 4:10 PM Presentation of the 2012 Young Investigator Award to Lane Baker
- 4:15 PM Measuring Gaps and Spaces with Ion Conductance Microscopy, Lane Baker, Indiana University
- 4:50 PM Self-Powered Microelectrochemical Devices, Richard M. Crooks, The University of Texas at Austin

Other SEAC activities at Pittcon

The brief Annual Business Meeting will follow the awards symposium for ~ 10 minutes. Please plan to stay for the meeting, as it is required of all tax-exempt organizations. Prospective members and guests are welcome to attend the business meeting.

The reception for awardees Debra Rolison and Lane Baker will be held on Monday, March 12 from 5:30 to 7 at Ming Court, 9188 International Drive, Orlando, FL. The reception is open to all and reservations are not necessary. Hors d'oeuvres will be provided with a cash bar.

The Reilley Award dinner will be held immediately following the reception (7-9 pm), again at the Ming Court. The **dinner is open to members and guests, but advance reservations are required**. For reservations, please contact SEAC Activities Chair, Shelley Minter (minter@chem.utah.edu) by **February 28, 2012**. The charge for the banquet is \$50/person. If you attend the dinner, please bring the dinner fee in **cash** or **check**, because we will not be able to pay with separate credit cards.

The Board of Directors Meeting is Monday, March 12 from 11:30 a.m. to 1:30 p.m. in Room **WB1** show office on the third floor of the West Building at the Orange County Convention Center. The meeting is open to current and former Board Members, Officers and Committee Members. . A light meal will be served during this working lunch session (approximately \$20). If you plan to attend, please contact Johna Leddy (johna-leddy@uiowa.edu) by **5 pm March 5th for your lunch reservation**. If any Member has concerns or suggestions for the Society, please contact SEAC President Johna Leddy (johna-leddy@uiowa.edu), so they may be addressed during the Board Meeting.

Electrochemistry Sessions at Pittcon (Including Poster Sessions)

SUNDAY AFTERNOON, MARCH 11, 2012

- New Advances in Electrochemical Neurotransmitter Detection, Room 311B, 1:00 PM
- Electrochemistry Inorganic, Room 311C, 1:00 PM

MONDAY MORNING, MARCH 12, 2012

- Pittsburgh Conference Achievement Award (Christy Haynes is recipient), Room 300, 8:00 AM
- Extreme Electrochemistry - Electrochemistry in Microstructures and Nanostructures, Room 206B, 8:00 AM
- Accessing Extracellular Fluid, Room 311B, 8:00 AM
- *Poster Session* Electrochemistry I, Red Area on Exposition Floor, Aisles 1300-1500, authors present 10:00 AM–12:00 PM

MONDAY AFTERNOON, MARCH 12, 2012

- Charles N Reilley and Young Investigator Awards – SEAC, Room 206A, 2:00 PM
- Electrochemistry Methodology I, Room 311C, 2:00 PM

TUESDAY MORNING, MARCH 13, 2012

- Analyzing Chemical Markers of Brain Injury and Disease: Clinical Horizons, Room 311B, 8:00 AM
- *Poster Session* Electrochemistry II, Red Area on Exposition Floor, Aisles 1300-1500, authors present 10:00 AM–12:00 PM

TUESDAY AFTERNOON, MARCH 13, 2012

- Measurement Tools for Reactive Oxygen and Nitrogen Species - Understanding the Good and the Bad, Tuesday Afternoon, Room 206A, 2:00 PM
- Analysis of Neurochemical Systems I, Room 311B, 2:00 PM
- Electrochemistry for Biological Applications, Room 311C, 2:00 PM
- Ultrasensitive Measurements of Exocytosis from Unique Cell Systems, RM 310B, 2:00 PM

WEDNESDAY MORNING, MARCH 14, 2012

- Carbon Nanotubes in Electrochemistry, Room 311B, 8:00 AM
- Ionophore-based Chemical Sensors I, Room 311A, 8:00 AM
- Electrochemistry, Room 311C, 8:00 AM
- *Poster Session* Electrochemistry III, Red Area on Exposition Floor, Aisles 1300-1500, authors present 10:00 AM–12:00 PM

WEDNESDAY AFTERNOON, MARCH 14, 2012

- Ionophore-based Chemical Sensors II, Room 311A, 2:00 PM
- Electrochemistry Methodology II, Room 311C, 2:00 PM
- Bioanalytical Neurochemistry Room 311B, 2:00 PM

THURSDAY MORNING, MARCH 15, 2012

- Analysis of Neurochemical Systems II, Room 311B, 8:00 AM
- *Poster Session* Electrochemistry IV, Red Area on Exposition Floor, Aisles 1300-1500, 11:30 AM–1:30 PM
- *Poster Session* Ionophore-based Chemical Sensors, Red Area on Exposition Floor, Aisles 1300-1500, 11:30 AM–1:30 PM

THURSDAY AFTERNOON, MARCH 15, 2012

- Electrochemical Imaging in Neurochemistry with Microelectrodes and Nanoelectrodes, Room 206A, 2:00 PM

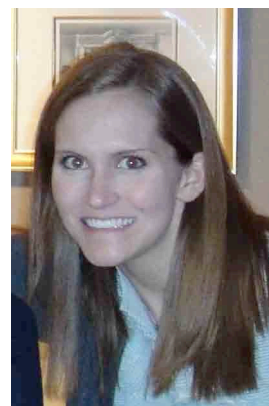
STUDENT TRAVEL AWARD WINNERS

And a round of applause for the students chosen to receive travel awards to present their work at Pittcon this year. The SEAC Graduate Student Travel Grants, sponsored by CH Instruments (Peixin He), Pine Instruments (Frank Dalton), Metrohm Autolab B.V. (Maarten Van Brussels), Gamry Instruments (Pete Peterson) and Ametek-AMT Scientific Instruments (Ari Tampasis) are awarded to promising graduate students to offset the cost of travel to the Pittsburgh Conference to deliver an oral presentation in a Conference symposium. Recipients of SEAC travel awards for Pittcon 2012 are:

Alessa Gambardella (Mentor: Royce W. Murray, University of North Carolina at Chapel Hill)
Alicia Johnson (Mentor: R. Scott Martin, Saint Louis University)
Secil Koseoglu (Mentors: Christy L. Haynes and Phil Buhlmann, University of Minnesota)
Stefanie A. Bragg (Mentor: Zi-Ling (Ben) Xue, University of Tennessee-Knoxville)
Xiongwu Kang (Mentor: Shaowei Chen, University of California Santa Cruz)

Congratulations to all of them! If you happen to meet any of our sponsors in person, please give them a warm thank you.

Alessa Gambardella (Mentor: Royce W. Murray, University of North Carolina at Chapel Hill). At Pittcon 2012 in Orlando, Alessa will discuss her current research in a presentation entitled “Iridium Oxide (IrO_x) Nanoparticles as Catalysts for Water Oxidation”. Alessa’s research focuses on studying IrO_x nanoparticles, which have shown to be promising candidates for catalyzing water oxidation at low overpotentials; water oxidation is a key component in the process of splitting water for renewable energy. Her work aims to determine how these catalytic nanoparticles can be influenced and how the nanoparticles are catalytically involved in water oxidation to ultimately understand why these nanoparticles are good catalysts. Through modifying the surrounding environment and surface chemistry of these nanoparticles (the structure of which is unknown), Alessa has begun to electrochemically characterize these nanoparticles—whose redox reactions involve a proton-coupled electron transfer—both freely diffusing in solution and attached to electrodes as films. Her most recent work manipulates the nanoparticle electron transfer kinetics through attaching the nanoparticles to self-assembled monolayers of varying chain lengths.



Alicia Johnson (Mentor: R. Scott Martin, Saint Louis University) will present “Integration of Microchip Electrophoresis with Electrochemical Detection Using an Epoxy-Based Molding Method to Embed Multiple Electrode Materials” at Pittcon 2012 on Wednesday afternoon in the Detection Strategies for Microfluidic Devices session. Alicia’s research focuses on the separation and detection of neurotransmitters such as dopamine and norepinephrine that are depleted in Parkinson’s Disease. Alicia has developed a fabrication method to embed multiple electrode materials into an epoxy substrate that can be used for microchip electrophoresis with electrochemical detection. Integration of on-chip peristaltic pumps and injection valves can be utilized to monitor and detect cellular release and allows the cells to be on-chip but isolated from the high voltage electrophoresis channel. A similar fabrication approach can be used to encapsulate electrodes and fluidic tubing within a polystyrene base, which is more biologically compatible. Microchannels can be imprinted onto the polystyrene substrate to allow for on-chip cell culture and cell content can be detected amperometrically *via* the polystyrene-encapsulated electrodes. Outside of lab, Alicia enjoys running and spending time outdoors.





Secil Koseoglu (Mentors: Christy L. Haynes and Phil Buhlmann, University of Minnesota) Secil will present her work on “Dynamain Effects on Platelet Secretion is Revealed by Carbon-Fiber Microelectrode Amperometry” at Pittcon 2012. Platelets are critical cells in hemostasis and thrombosis, and understanding the fundamentals of platelet secretion has both diagnostic and therapeutic value. During platelet secretion, fusion of granule membranes with the plasma membrane results in the release of granule contents. Fusion pore formation and stability is one of the key factors that regulate platelet secretion. Secil studies the in platelets by monitoring serotonin release from platelet δ -granules using carbon-fiber microelectrode amperometry (CFMA), which

enables both quantal and kinetic analysis of the secretion events of single platelets with sub-millisecond time resolution. In the work she will present at Pittcon 2012, she showed that in addition to their importance in endocytosis, dynamain proteins also regulate platelet secretion through controlling the fusion pore expansion.

Stefanie A. Bragg (Mentor: Zi-Ling (Ben) Xue, University of Tennessee-Knoxville) Stefanie will deliver two oral presentations on “Highly sensitive detection of aqueous Cr(VI) using flower-like surface self-assembly of gold nanoparticles” and “Electrochemical detection of chromium based on a novel sol-gel/single-walled carbon nanotube hybrid material.” She has worked on novel approaches to electroanalysis of metals and sample pretreatment of biological and environmental samples. Chromium (III) complexes have been shown as an alternative therapy for diabetic patients, so there is an increasing need to monitor these levels in biological samples. She has optimized the pretreatment of blood and incorporated this technique for the detection of chromium using the two separate electrode systems previously mentioned. Both have shown high selectivity and low detection limits. In particular, the gold nanoparticle electrode has a detection limit of 2.9 ng L^{-1} . Stefanie currently serves as the president of her departmental society. Outside of the lab, she enjoys hiking, reading, cooking, and crafting.



Xiongwu Kang (Mentor: Shaowei Chen, University of California Santa Cruz) – Xiongwu presented his work “Alkyne-Stabilized Ruthenium Nanoparticles” at Pittcon 2012. Metal-ligand interfacial bonding interactions have been recognized as an important parameter in regulating the optical and electronic properties of nanoparticle materials. In this presentation, ruthenium nanoparticles were stabilized by the self-assembly of terminal alkynes onto “bare” Ru colloid surface. The formation of a Ru-vinylidene ($\text{Ru}=\text{C}=\text{CH}-\text{R}$) interfacial bonding linkage was proposed by an interfacial tautomeric rearrangement process and confirmed by the specific reactivity of the nanoparticles with imine derivatives at the metal-ligand interface. In sharp contrast, no reactivity was observed with ruthenium nanoparticles functionalized with alkynide derivatives (i.e., deprotonated alkynes). This was manifested in ^1H NMR, photoluminescence and electrochemical measurements where a ferrocenyl imine was used as the labeling probe. Notably, the resulting nanoparticles could also undergo olefin metathesis reactions with vinyl-terminated molecules. The impacts of this metal-ligand interfacial bond on the optical and electronic properties of the nanoparticles were then examined by using electrochemical and near-infrared spectroscopic measurements, where the conjugated metal-ligand interfacial bonding interactions were found to facilitate interparticle charge transfer, in particular with short alkyne ligands.



AWARD NOMINATIONS—DEADLINE FAST APPROACHING

Award nominations should be submitted as a single pdf file to Prof. Mark Meyerhoff (Department of Chemistry, University of Michigan, Ann Arbor, MI 48109; mmeyerho(at)umich.edu). For further information see <http://electroanalytical.org/awards.html#submission>

Charles N. Reilley Award

The *Charles N. Reilley Award in Electroanalytical Chemistry* is given in memory of one of the most distinguished analytical chemists of the 20th century. Reilley's interests were both fundamental and broad; he made seminal contributions not only to electroanalysis, but also optical spectroscopy, NMR, chromatography, data analysis, instrumentation, and surface analysis. The signature of his research was to decline empiricism, seeking a basic understanding of measurements and detection schemes. Reilley recognized that measuring things is at the heart of modern chemistry. Reilley is central in the history of the Society for Electroanalytical Chemistry, which was formed following his death in 1981, as a vehicle for managing the award.

Nominations for the Reilley Award should include a letter of nomination describing the individual's significant contributions to electroanalytical chemistry, at least two seconding letters of support, and a curriculum vita for the individual. All nomination materials will be retained by SEAC. Once nominated, any individual will be considered for the Reilley Award for three years without being renominated. The submission of any additional supporting information or a renomination is welcome at any time. However, **the decision for the 2012 Award will be based upon the material that is available to the Award Committee by the 5 March 2012.**

SEAC Young Investigator Award

For the *SEAC Young Investigator Award* nominees must be within ten years of obtaining their Ph.D. or other terminal degree at the time of nomination. Candidates may be nominated by any member of SEAC. Nominations should include a letter describing the individual's promise in the area of electroanalytical chemistry, at least one seconding letter of support, and curriculum vitae for the individual. All nomination materials will be retained by SEAC. Candidates for the YI Award must be renominated each year during their period of eligibility. **Nominations for the 2012 YI award are due by 5 March 2012.**

NEW SEAC OFFICERS

The most recent SEAC election confirmed Adrian Michael as new president, J. Faye Rubinson as secretary, and Petr Vanysek as treasurer. Adrian will serve July 1, 2012 – June 30, 2013 as president-elect, July 1, 2013 – June 30, 2015 as president, and July 1, 2015 – June 30, 2016 as past-president. The Secretary and Treasurer terms are from July 1, 2012 – June 30, 2014. The new members of the board for 2012–2017 are Greg Swain, Rose Ann Clark, and Stephen Maldonado.

Adrian Michael is a Professor of Chemistry at the University of Pittsburgh. His PhD work was with Jay Justice at Emory. He postdoc'ed with Mark Wightman at Indiana and Adam Heller at UT Austin before moving to Pittsburgh in 1990. His electroanalytical main focus is microelectrodes for neurochemistry, including in vivo applications of FSCV and enzyme:redox polymer modified carbon fibers. He has taught graduate courses in electroanalytical and biological chemistry and undergraduate courses in



quantitative analysis, instrumental analysis, and general chemistry (including Honors general chemistry). He is a member of NIH's Neurotechnology review panel. He received the Young Investigator Award, for which he is enormously grateful to SEAC. He is a former member of SEAC's BOD and a current member of Pittcon's Organizing Committee.

J. Faye Rubinson is an Assistant Professor in the Department of Pharmacology and Physiology at Georgetown University. After completing her Ph.D. under the supervision of Prof. Harry B. Mark, Jr., at University of Cincinnati, she carried out postdoctoral work with Dr. Barbara K. Burgess at the CF Kettering Research laboratory on nitrogenase structure and function. She served on the Board of Directors of SEAC from 2005-2010, during which she served on the Nominations committee. She also served as the Associate Editor, then Editor, of *SEAC Communications* from 2008-2011. Her electrochemical research interests lie in two areas. The first focus is on development of improved electrodes for neurological applications, particularly those based on conducting polymer electrodes. The second is on development of electrodes based on copolymers of conducting polymers plus electropolymerizable metal-tetraazaannulene complexes. These have implications for several areas, ranging from carbon dioxide and oxygen reduction to carbohydrate detection.

Petr Vanýsek is a Professor in the Department of Chemistry and Biochemistry at Northern Illinois University. After completing his Ph.D. under the supervision of Prof. Jiri Koryta, at Czechoslovak Academy of Sciences, he did his postdoctoral work at the University of North Carolina with Richard P. Buck. He served on the Board of Directors of SEAC from 2003-2008, and he was the Secretary for ECS 2004-2008. He is the President of the Federation of Materials Societies for 2011-2012. At NIU, he is the Director of Graduate Studies for his department. His research interests are in electroanalytical chemistry, spanning from sensors to the studies of liquid/liquid interfaces as well as in electrochemical instrumentation, namely impedance measurements and their proper interpretation.



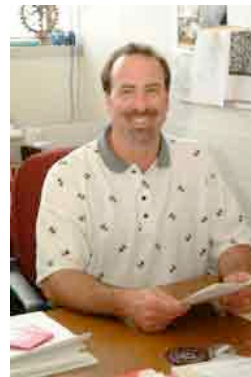
Rose Ann Clark is a Professor of Chemistry at Saint Francis University. She has focused her efforts on improving undergraduate education through early introduction of students into research. She is also part of a team of chemists and engineers at Saint Francis working to improve STEM education in Central PA by providing K-12 teacher training through the universities Science Outreach Center. Dr. Clark has been recognized for excellence in undergraduate teaching and research by receiving the Pittsburgh Regional Undergraduate Leadership Excellence Award sponsored by Duquesne University and the Centennial Award for Excellence in Teaching sponsored by Iota Sigma Pi (National Honor Society for Women in Chemistry). She received a B. S. in chemistry from the University of North Carolina–Wilmington, a Ph. D. in analytical chemistry from the North Carolina State University under the direction of Edmond F. Bowden, and an NSF postdoctoral fellowship to work with Andrew Ewing at the Pennsylvania State University. Dr. Clark's research focuses on protein electrochemistry and characterizing biocompatible electrode surfaces.



Stephen Maldonado is an Assistant Professor in the Department of Chemistry at the University of Michigan, where he is also a member of the Applied Physics Program and the Michigan Memorial Phoenix Energy Institute. He received a B.S. in Chemistry from the University of Iowa in 2001 and a Ph.D. in Chemistry from the University of Texas at Austin in 2006 under the direction of Keith J. Stevenson. He was a postdoctoral fellow at the California Institute of Technology in the laboratory of Nathan S. Lewis. His research interests are broadly in the areas of photoelectrochemical energy conversion/storage, heterogeneous charge-transfer at semiconductor nanostructures, and surface passivation for corrosion protection, chemical sensing, and electrocatalysis.



Greg Swain is a Professor of Chemistry at Michigan State University. He conducted his Ph.D. research in electroanalytical chemistry under the direction of Professor Theodore Kuwana at the University of Kansas from 1987-1991. He was an NSF/JSPS Postdoctoral Fellow at Tohoku University (Sendai, Japan) from 1992-1993 working with Professor Kingo Itaya. He joined the Department of Chemistry at Utah State University in 1994 and remained there until the move to Michigan State University in 2000. Research in the Swain group is interdisciplinary with the following current projects: (i) the study of structure-function relationships of diamond, diamond-like carbon and mixed sp²/sp³ composite electrodes, (ii) optically transparent diamond electrodes for use in UV/Vis and IR spectroelectrochemical measurements, (iii) boron-doped and chemically-modified nanodiamond powders for use in energy storage and conversion devices, separations and imaging, (iv) in vitro electroanalytical measurements of neuromuscular signaling abnormalities in the vasculature and gastrointestinal tract of humans and animal models of hypertension and obesity, and (v) mechanisms behind the corrosion protection provided by various conversion coatings on aerospace metal alloys. He served on the SEAC Board of Directors from 2000-2005. He is a member of the Neuroscience Program and holds adjunct appointments in the Departments of Chemical Engineering, and Pharmacology and Toxicology. He is currently Editor-in-Chief of Diamond and Related Materials.



MEETINGS TO COME

Meetings of interest to our SEAC members abound during the coming year, with symposia being organized by some among us. (Detail on these provided below the table.)

| Meeting | When | Where | Link for More Information |
|--|------------------------|--|---|
| Pittcon 2012 | 2012, March 11–16 | Orlando, FL, USA | http://www.pittcon.org/ |
| 92th Annual Meeting of the Chemical Society of Japan | 2012, March 28–29 | Keio University, Yokohama, Japan | http://www.chemistry.or.jp/nenkai/92haru/index.html |
| American Chemical Society Spring Meeting | 2012, March 25–29 | San Diego, CA, USA | http://portal.acs.org/ |
| SIBAE 2012—XX Congresso da Sociedade Iberoamericana de Eletroquímica | 2012, March 25–30 | Fortaleza, Brazil | http://nanofael.dq.ufscar.br/sibae/ |
| 18 th Australian Electrochemistry Symposium (preceding 10 th ISE Spring Meeting) | 2012, April 15 | Perth, Australia (University Club of WA) | “New approaches to Nanostructuring electrodes for electroanalysis and energy storage.” Contact Damien Arrigan (D.Arrigan@curtin.edu.au) for further details. |
| 10th ISE Spring Meeting | 2012, April 16–19 | Perth, Australia | http://www.ise-online.org/annmeet/next_meetings.php |
| 221st ECS Meeting | 2012, May, 6–11 | Seattle, WA, USA | http://www.electrochem.org/meetings/biannual/fut_mtgs.htm |
| 11th ISE Spring Meeting | 2012, May 23–25 | Washington DC, USA | http://www.ise-online.org/annmeet/next_meetings.php |
| 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 |
| 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 |
| 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 |
| American Chemical Society Fall Meeting | 2013, Sept. 8–12 | Indianapolis, IN, USA | http://portal.acs.org/ |
| 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 |

| Meeting | When | Where | Link for More Information |
|--|----------------------|-------------------------------|---|
| Faraday Discussion 2013 - Electroanalysis at the Nanoscale | 2013, July 1–3 | Durham, UK | (Contact: Richard Compton) |
| 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 |

JOB OPENINGS

City University of New York - Queens College

One or two NSF-funded postdoctoral positions are available at the City University of New York - Queens College. The initial appointments will be for one year, and the positions are renewable upon mutual consent. Successful candidates will be involved in quantitative studies of electrochemical processes at nanointerfaces. This work requires skills in nanoelectrochemistry or/and scanning electrochemical microscopy (SECM). Some experience in studies of living cells or electrochemical processes involving metal nanoparticles would be useful.

Possible research projects include: (i) Amperometric and potentiometric nanosensors for experiments in biological cells. (ii) Investigation of nucleation/growth phenomena at nanoelectrodes. (iii) Resistive-pulse experiments with nanopipettes and the SECM. (iv) Processes involving single nanoparticles on surfaces and in living cells. (iv) Charge-transfer reactions at nanointerfaces. Please respond to mmirkin@qc.cuny.edu with professional vita, list of publications, and list of professional references with email addresses.

AWARD ANNOUNCEMENT

DropSens has announced the International DropSens Award to the Best Research Work in Applied Electroanalytical Chemistry. Awarded with a prize of 3000 Euros, all international individual or group entries can apply. Deadline for submitting entries is set on the 15th of April 2012. (www.dropsens.com)

NEWS FROM MEMBERS

Professor **Joseph Wang** (University of California - San Diego, USA) has been designated Doctor Honoris Causa in Chemistry by the University of Alcalá, Spain. Wang receives this unique distinction due to his reputation as a researcher of the highest standard. The ceremony was in the 16th-century Paraninfo of Alcala University on 24 November 2011. (<http://www.micruxfluidic.com/news/2011/news18.html>)

George W. Luther, III was selected to be a Fellow of the American Association for the Advancement of Science (2012). The letter from Alan I. Leshner (CEO AAAS) indicated that he was being honored for “distinguished service in applications of electrochemistry to elucidate biogeochemical processes in marine environments and towards defining element speciation in marine waters and sediments.” George is Maxwell P. and Mildred H. Harrington Professor of Marine Chemistry at the University of Delaware.

Anne Andrews, University of California, Los Angeles, is reporting that as of January, 2012, she is serving as Associate Editor of ACS Chemical Neuroscience (<http://pubs.acs.org/journal/acncdm>). She would like to encourage SEAC members to submit their top manuscripts on neuroscience-related research to the journal. They can request that she handle their manuscripts.

Joseph T. Hupp has been named the 2012 recipient of the ACS Division of Analytical Chemistry Award in Electrochemistry. He was also elected fellow of the American Association for the Advancement of Science (AAAS), in honor for exceptional accomplishments in experimental physical, inorganic and materials chemistry, with an emphasis on chemistry that is relevant to our energy future. He is a Morrison Professor of Chemistry and a senior science fellow in the Materials Science Division and the Chemical Sciences and Engineering Division at Argonne National Lab. Details of his current research can be found at the Hupp Group Website (<http://chemgroups.northwestern.edu/hupp/>).

After a record-breaking 541 days without a government, Belgium got finally, early December 2011, a new government. **Olivier Chastel**, a former PhD student of Prof. Jean-Michel Kauffmann (1987-1993) at the Université libre de Bruxelles (ULB) has been nominated as the minister of budget: a difficult position in these days of budget restrictions in many European countries! It is quite scarce that a chemist (pharmacist) reaches this position; it is also quite unusual that the minister is an analyst! We can remember that Erne Pungor, who led the Institute of General and Analytical Chemistry at the Technical University of Budapest between 1970-1990, was minister in charge of scientific affairs in Hungary (1990-94). The current Belgian government is a complex coalition of several parties made up of Flemish and Walloon Socialists, Liberals and Christian Democrats and Olivier Chastel is a member of the liberal party. He was former state secretary of European affairs (2008-10) and minister in charge of cooperation and development (2011). See one of his papers: *Olivier Chastel*, Jean Michel Kauffmann, Gaston J. Patriarche, Gary D. Christian Hydrophobic stripping voltammetry using a lipid-modified glassy carbon electrode *Anal. Chem.*, 1989, 61 (2), pp 170–173.

Megan Sassin from the Surface Chemistry Branch of the Naval Research Laboratory has been selected as one of ten inaugural winners for the "WCC Rising Star Award" from the Women Chemists Committee of the American Chemical Society. This award acknowledges the significant contributions she has made in the field of electrochemical capacitors. She will be formally recognized at a symposium honoring the "WCC Rising Star" recipients at the 243rd National Meeting of the American Chemical Society in San Diego, CA in March 2012.

Wunmi Sadik, professor of chemistry and director of the Center for Advanced Sensors & Environmental Systems (CASE) at the State University of New York at Binghamton was elected to the College of Fellows of the American Institute for Medical and Biological Engineering (AIMBE): The College of Fellows is comprised of the top two percent leaders in science and engineering including medical and biological engineers, research directors, innovators, and successful entrepreneurs. Wunmi was elected for her research and development of nano-bioanalytical detection platforms for environmental diagnostics and biological monitoring.



After lamenting for years that there was no ideal text on ionophore-based ion-selective electrodes for new graduate students and other newcomers to the field, **Phil Buhlmann** has written along with graduate student **Li Chen** a text that discusses the state of the art of ISEs, including the extension of detection limits from micro- to subpicomolar concentrations, improvements of selectivities by many orders of magnitude, and major advancements in biocompatibility and long-term stabilities. It introduces the basic concepts of ISE theory that replaced the empirical approach of the early ISE history and describes the recently developed concepts for the most efficient use of these ionophores and ISEs. The text shows not only how ionophores are used in modern potentiometry to develop new ISEs, but it also illustrates how ionophore-based potentiometry provides the tools to determine thermodynamic properties of ionophores such as stoichiometries and stabilities of their complexes using only minimum

amounts of ionophore. (<http://www.chem.umn.edu/groups/buhlmann/SupraMolec.html>; Ion-Selective Electrodes With Ionophore-Doped Sensing Membranes. In *Supramolecular Chemistry: From Molecules to Nanomaterials*; Steed, A. W., Ed, Gale P., Ed; John Wiley & Sons, Ltd: New York, 2012; Vol. 5, 2539.)



SEAC members Gangli Wang, Rick McCreery, and Stacy Duvall at the electrochemistry Gordon Research Conference.

WELCOME OUR NEW MEMBERS AND LIFETIME MEMBERS

Please welcome our new student and regular members and congratulate three lifetime members for completing their dues. Thank you all!

New Student Members

Subbiah Alwarappan, University of South Florida
Johnna Birbeck, Wayne State University.
Megan Dorris, University of Kansas
Ubong Eduok, University of Uyo, Nigeria
Trish Hredzak-Showalter, University of Delaware
Madiha Khalid, Wayne State University
Krysti Knoche, University of Iowa
Mohamed Marei, University of Louisville
Rafael Masitas, University of Louisville
Lingjiao Qi, North Carolina State University
Rachel Saylor, University of Kansas
Michael Smith, Eaton, OH
Dhanuka Wasalathanthri, University of Connecticut
Anna Weber, Indiana University

New Regular Members

Royce Dansby-Sparks, North Georgia College & State University
Joseph Parker, US Naval Research Laboratory
Megan Sassin, US Naval Research Laboratory

Lifetime Membership Completed

George Luther, III, University of Delaware

Grace Muna, Indiana University - South Bend

Leslie Sombers, North Carolina State University

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.