

SEAC *communications*

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PRESIDENT'S MESSAGE

Gentle folks:

Thanks go to Dick Durst, now immediate past president of the Society for Electroanalytical Chemistry, for his excellent service as President of the Organization for the last two years. We also thank Carol Korzeniewski, past Chair of Membership, Rick Van Duynes, and Mary Beth Williams for their service on the Board. We welcome the new Board members, David Cliffler, David Cunningham, and Jill Venton. We look forward to acknowledging Dick and our past Board members for all their efforts at the Pittcon 2012.

Pittcon meets next at the Orange County Convention Center, Orlando, Florida, from 11 to 15 March 2012. The O'Reilly symposium is planned for March 12, 2:00 PM. The Reilley Awardee this year is Deborah Rolison and the Young Investigator Awardee is Lane Baker. Both are excellent choices. Thanks to the Awards Committee and its Chair, Mark Meyerhoff, as well as Tito Abruna and Dick Crooks for nominating the Awardees. Excellent talks are planned for the Reilley Symposium. Festivities will continue at the reception following the symposium.

In other news, Finally, I encountered an article *Mistakes in Scientific Studies Surge* on the front page of the Wall Street Journal on 10 August 2011. It was reported, "Since 2001, while the number of papers published in research journals has risen 44%, the number retracted has leapt more than 15-fold, data compiled for The Wall Street Journal by Thomson Reuters reveal." Much of our research is government supported. Such headlines detract from public respect for scientists that in turn can impact resources devoted to the research enterprise. Many retractions arise because of insufficient and inappropriate use of statistics to vet the results. Consider the humble standard deviation. Our electroanalytical ancestors appreciated and respected its power. When standard deviations are reported and shown on plots, there is evidence of an analytical chemist. Standard deviation means several things.

- There are replicates and the experimentalist is willing to report them.
- Limits of detection can be found. Weighted regressions are possible.
- Statistics have been developed to assess the quality of the measurements. Confidence grows with decreasing standard deviation, absolute or relative as the case may be.
- The quality of the fit of a model to the data is assessed. If the standard deviation is sufficiently small, then the model is adequately tested.

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- Standard deviation measures the entropy of the system.
- Standard deviation tells the reader that the experimentalist is sufficiently committed to the science to take the time to do it right. The experimentalist is willing to hold the data up to careful scrutiny.

Consider the power of the standard deviation. The standard deviation is often the difference between a persuasive argument and not. Promote appreciation of the standard deviation. Use the standard deviation to ensure the quality of the data, the model, and the science.

We look forward to seeing you at Pittcon 2012. If you have any ideas as to ways to better promote electroanalytical chemistry, please forward to members of the Board of Directors or attend the Board meeting in March in Orlando.

CALL FOR NOMINATIONS OF SEAC NEWSLETTER STUDENT EDITORS

As one of several efforts of SEAC to involve graduate students and postdocs in society activities, SEAC is seeking nominations for 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, preferentially with special interest to students and postdocs. So don't be afraid; the job is not too onerous.

The student editor is 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).

To all faculty: Please encourage your students to nominate themselves. Preference will be given to candidates who are graduate students at the time of their nomination, but candidates who become postdocs during their tenure as student editors may continue to serve as long as they are active contributors to the newsletter. Nominations will be accepted until the positions are filled.

REGIONAL SEAC COMMUNICATIONS EDITORS

Resignation of Regional Editor Karl Cammann

After many years as SEAC Newsletter's regional editor for Europe, Karl Cammann is resigning. Read below Karl's resignation message to SEAC members; as you can see, he leaves us with a question to ponder. Karl, thank you for your service.

After retiring from my chair at the University of Muenster and as head of the Institute for Chemical and Biochemical Sensor Research (ICB, now a profit-oriented GmbH), I left the academic world and I want also to resign as regional editor of the SEAC news, which I always read with great enthusiasm, giving me nice memories of all my electroanalytical colleagues and good friends. Especially unforgotten for me is an extensive discussion with R.P. Buck over ISE theories at an "Oktoberfest" in Munich in the 70s, at which several litres of beer stimulated our minds...and the title "Fountain Chemist" given to me from M. Meyerhoff when we met in the lab of G.A. Rechnitz at SUNY Buffalo, 1975,...

Ending a career (also as an electroanalytical chemist, working already in the late 50s with self-built potentiostats used for controlled potential coulometry of ultra-traces of iron and chromium together in one assay at the Max-Planck-Institute for Ferrous Research) I wanted to look back and searched for my H-factor. What a surprise: The most cited paper is according to my judgement a rather weak and boring paper. Papers which I had classified as important and thus mentioned in job applications were less cited! Is there anyone with similar experience? Is the H-factor a good indication of achievements?

Best wishes from aboard a sailboat with a staff of 2 dogs and 3 cats (saved from starving) in the Ionian Sea and good luck to our Society, Karl Cammann

New Regional Editors

We are happy to report that Eric Bakker has agreed to take over the role of regional editor for Europe, which was formerly held by Karl Cammann. Moreover, we have newly also a regional editor for South America, Francisco J. Ibañez. Thank you both for your willingness to serve.

Eric Bakker received his Ph.D. at ETH Zurich and spent 14 years in the United States where he was a faculty member at Auburn University and subsequently Purdue University. He was as professor and institute director at Curtin University of Technology in Perth, Western Australia between 2007 and 2010 before moving to his current position as professor of analytical chemistry at the University of Geneva. Eric's research interests are in electroanalysis, chemical sensors, ion-selective electrodes, fluorescent and luminescent chemical sensors, microscopy, and materials synthesis. He received the SEAC young investigator in 2001 and served on the board of directors of SEAC between 2005 and 2010.



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Francisco J. Ibañez obtained his Bachelor's degree in Chemical Engineering in 2000 at the *Universidad Tecnológica Nacional (UTN)*, Mendoza, Argentina. After graduation, he got a scholarship to study in Hiroshima, Japan. Then, he joined Prof. F. P. Zamborini's group at the University of Louisville, KY, USA, where he obtained a PhD in Chemistry in 2007 and performed research one more year as a Postdoctoral Research Associate in the same group. He was then invited to return to Argentina to join the group of *Nanoscropy and Surface Physical Chemistry* of Dr. R. C. Salvarezza at the *Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA)*, La Plata, Buenos Aires. His research involves the use of nanoparticles, the study of their electronic properties, and their use in sensing and energy storage applications.



Contact info: Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas, Universidad Nacional de La Plata, CONICET, Diagonal 113 and 64 St., La Plata, Buenos Aires

REILLEY AND YOUNG INVESTIGATORS AWARDS 2013

Time to start thinking about nominations for the 2013 Reilley and Young Investigator Awards. The Reilley Award recognizes an active researcher who has made a major contribution to the theory, instrumentation, or applications of electroanalysis. The Young Investigator Award recognizes accomplishments by researchers who are within the first ten years of their career.

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 vitae 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 decision for the 2013 Award will be based upon the material that is available to the Award Committee by the 1st of March 2012.**

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 a curriculum vita 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 2013 YI award are due by**

the 1st of March 2012. Nominations should be sent to Mark Meyerhoff at mmeyerho@umich.edu. A reminder will appear in our February newsletter. In the meantime, further details can be found at electroanalytical.org

STUDENT TRAVEL AWARDS PITTCON 2012...

Students – get those applications ready! SEAC Graduate Student Travel Grants 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. The presentation should be on a topic related to their Dissertation or Thesis, and in some area or application of electroanalytical chemistry. Because the costs in various venues of the Conference may vary, the amount of the award will be determined by SEAC and will be between \$250 and \$500. The value of all of the awards in any one year will be equivalent, but it may vary from year to year. The award will not exceed the reasonable cost of advance-purchase economy airfare and reasonable expenses for lodging, nor the awardee's actual expenses. In order to spread the travel money as equitably as possible, not more than two awardees will be selected from any one research group and no more than three awards will be made to students from any one educational institution. **Nominations for travel grants are due to the SEAC awards committee chair by January 20th.** The nomination shall consist of the student's current graduate transcript, a copy of the abstract submitted to the Pittsburgh Conference, a complete resume including publication list, and a letter of recommendation from the student's research advisor. The advisor's letter should include a statement of approximate graduation date and a short description of the student's speaking ability.

A candidate shall be considered for an award for travel to Pittcon meetings occurring up to one year after the student's Ph.D. defense. Previous awardees will not be eligible for further consideration.

Award nominations should be submitted as a single pdf file to Mark Meyerhoff

Mark E. Meyerhoff
Philip J. Elving Professor of Chemistry
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... AND MORE ABOUT PITTCON 2012

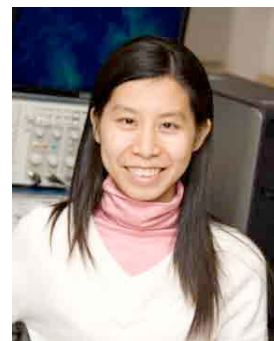
More about Pittcon 2012 in the February issue of the SEAC Communications. At this time, take note of the following message from Shelley Minter:

I have booked Ming Court (9188 International Drive) for the SEAC Awards Dinner. The reception will be Monday March 12, 2012 at 5:30pm-7pm, and the dinner will be from 7pm-9pm. Dinner will be \$50 per person payable at the event by cash or check. No reservation is needed for the reception, but reservations are required for dinner. All reservations should be made with me at minter@chem.utah.edu by February 20th, 2012. Thanks! Shelley.

TRAVEL GRANT WINNERS PITTCON 2011

Five students were awarded travel grants to present their work at Pittcon 2011. This year's awardees were Ms. Chiao-Chen Chen (Dept. of Chemistry, Indiana University, advisor: Lane A. Baker), Ms. Melissa Maurer-Jones (Dept. of Chemistry, University of Minnesota; Christy Haynes), Ms. Leyda Z. Lugo-Morales (Dept. of Chemistry, N. Carolina State University; Leslie Sombers), Mr. Paul Walsh (Dept. of Chemistry, University of North Carolina-Chapel Hill; Mark Wightman), and Ms. Trisha Vickrey (Dept. of Chemistry, University of Virginia; Jill Venton).

Chiao-Chen Chen (Mentor: Lane A. Baker, Indiana University) – “Factors Affect Quantitative Measurements of Ion Currents through Nanoporous Membranes with Scanning Ion Conductance Microscopy (SICM)” Chiao-Chen’s research focuses on the study of ion transport properties in the nanometer scale. The transport of ions plays key roles in a diverse number of fields, such as functions of biological ion channels and examinations with electrochemical sensors. Although macroscopic measurement of electric conductivity has been routinely used to study ion transport properties, techniques which are able to provide microscopic measurements of localized ion transport are still limited. She has extended the application of scanning ion conductance microscopy (SICM) to map localized ion transport in the nanometer scale. In addition, factors which influence image quality and quantitation of ion currents measured with SICM have been evaluated. So far her work has demonstrated that SICM is able to identify active ion transport pathways on a porous membrane with heterogeneous surface features. SICM controlled under different operation modes can provide distinctive advantages. With non-modulated mode, more accurate ion current magnitude can be determined; however, distance-modulated mode is more beneficial for surface mapping. This work demonstrates that SICM is a promising tool to investigate the nanoscale transport properties of more complicated systems such as ion channels on cell membranes or membranes in fuel cells.



Leyda Z. Lugo-Morales (Mentor: Leslie A. Sombers, North Carolina State University) – Leyda presented her work on “A Glucose Oxidase Voltammetric Microsensor for Real-time *In Vivo* Glucose Measurements” at Pittcon which focused on the description of a biosensor capable of quantifying rapidly fluctuating levels of non-electroactive molecules with high sensitivity and selectivity. Using glucose oxidase (GOx) as a model hydrogen peroxide (H_2O_2)-producing enzyme, an ideal enzyme-modified voltammetric microelectrode for the detection of changes in glucose concentration *in vitro* and *in vivo* was developed and characterized. The enzyme immobilization method employed consists of the encapsulation of GOx molecules within a chitosan hydrogel matrix. The GOx-chitosan membrane was electrodeposited on a carbon fiber surface which was used as the sensing substrate. Fast scan cyclic voltammetry was employed for the quantification of enzymatically-produced H_2O_2 upon consumption of glucose at the electrode surface. This innovative technology will be employed for the encapsulation of any H_2O_2 -producing enzyme to perform new and exciting studies of subsecond molecular dynamics *in vivo*.



Melissa Maurer-Jones (Mentor: Christy Haynes, University of Minnesota) – Melissa presented her work on “Fundamental Study of Cellular Response after Exposure to TiO_2 Nanoparticles” at the 2011 Pittcon meeting in Atlanta. With the increased anthropogenic production of nanomaterials, it is critical to understand the implications for exposure to nanoparticles so that we can design and use them safely. Melissa’s project focuses on understanding the impacts TiO_2 nanoparticles have on cellular communication. More specifically, the project she presented at Pittcon entails using carbon-fiber microelectrode amperometry to study perturbations in exocytosis from mast cells after nanoparticle exposure. In a



second project, she is studying the cellular communication between bacteria cells upon exposure to TiO_2 . Interestingly, the data reveal minimal changes in cellular viability but that the nanoparticles perturb cell communication. Outside of the lab, Melissa enjoys to bicycle and cook.

Trisha Vickrey (Mentor: Jill Venton, University of Virginia). Trisha presented her work “Measurement of Dopamine Transporter Activity in the Larval *Drosophila* CNS.” Her research involves developing two methods to monitor dopamine clearance in an intact, *Drosophila* larval central nervous system using fast scan cyclic voltammetry at an implanted carbon fiber microelectrode. In one method, endogenous dopamine release is optically evoked in *Drosophila* genetically modified to express Channelrhodopsin2, a blue light activated cation channel. In another method, clearance can be examined by exogenously applying picoliter volumes of dopamine. Kinetic constants for the transporter can be determined by fitting the decay portion of the electrochemical traces. Using both methods dopamine clearance is significantly decreased following treatment with cocaine, a dopamine transporter inhibitor and drug of abuse. This effect is also seen in mammals. Thus, Trisha’s study further validates the use of *Drosophila* as a model system to study dopamine regulation and the role of the dopamine transporter in the underlying mechanisms of drug addiction. Outside of lab, Trisha has an eclectic mix of hobbies including blacksmithing, lino printing, playing guitar, weightlifting, orienteering and adventure racing.



Paul Walsh (Mentor Mark Wightman, University of North Carolina at Chapel Hill). Paul gave a talk at PITTCOON which focused on his work in the adrenal gland entitled “Distinguishing Splanchnic Nerve and Chromaffin Cell Stimulation in Mouse Adrenal Slices.” Often times, biological tissue is electrically stimulated in order to evoke release of chemical messengers such as epinephrine and norepinephrine. The parameters of this electrical stimulation such as intensity and duration have a profound effect on how the tissue reacts. As it turns out, higher intensity and longer duration stimulations of adrenal gland tissue evokes non-physiological release of epinephrine and norepinephrine since both the splanchnic nerve which innervates the gland as well as the electrically excitable chromaffin cells are activated by these stimulations. Pharmacological manipulations of the tissue confirmed this observation. Paul isn’t just interested in the adrenal gland and also does work in brain and spinal cord slices studying neurotransmitters such as dopamine, adenosine, and serotonin. Paul is also the separations specialist in the Wightman Lab and does HPLC of tissue samples to look at neurotransmitter levels in the brain in drug treated, or genetically manipulated animals. Paul also enjoys playing tennis with his USTA league team and running marathons with his lab-mates.



TED KUWANA HONORED WITH ACS DISTINGUISHED SERVICE AWARD

Contribution by Ellen Kuwana, daughter of Ted Kuwana

Fifty-two years after receiving his PhD from the University of Kansas, Dr. Kuwana was honored by the American Chemical Society with an Award for Distinguished Service in the Advancement of Analytical Chemistry. The Waters Corporation presented the award in Denver on August 29th, 2011.

Ted retired in 2002 from KU as an Emeritus Distinguished Professor of Chemistry and held the Regents Distinguished Professorship from 1985 until his retirement in 2002. He and his students conducted research in the development and application of electroanalytical and optical methods to analytical and bioanalytical problems. He has received numerous awards for his contribution to the fields of spectroelectrochemistry, bioelectroanalytical chemistry and chemically modified electrodes.

Born and raised on an Idaho potato farm, Ted (“TK”) was often told by university students, “You speak good English.” Instead of explaining that he was from the U.S., he would simply reply, “Thanks, so do you!”

His first-generation (“Issei”) Japanese parents had both passed away from cancer by the time Ted was 12. The six siblings struggled to run the farm and go to school during the hard times of World War II, often facing discrimination as Japanese-Americans.

Ted’s mother’s wish was for TK, the youngest, to get an education. Toward the end of high school, looking through college catalogs starting with “A,” he found Antioch College in Ohio, which had a work-study program. One could work for a semester, and that job paid for a semester of college. Thus, he was able to complete college despite his lack of financial support.

While at Antioch, TK joined the ACS, giving a paper for his professor on their research. He was 23 years old. After a Master’s degree at Cornell University, a PhD at KU as Ralph Adams’ first graduate student, and a short stint in industry in California, he did post-doctoral work at the California Institute of Technology. His first teaching position was at the University of California Riverside, where he met Jane Bader, a chemistry graduate student who became his wife and the best grant editor ever.

He taught at Case Western Reserve and Ohio State until Professor Tak Higuchi persuaded him to return to KU to direct the newly formed Center for Bioanalytical Research (1985-1989). He also served on state boards for advanced technology and economic development.

He chaired an NSF-supported workshop on curriculum development in the Analytical Sciences that led to the development of the Analytical Sciences Digital Library (www.asdlib.org), which went online in 2002. He served as Founding Editor of this group until his retirement and currently serves as the Managing Director. “I’m more or less a figurehead since all the work is done by a hard working, creative group of editors with Cindy Larive as Editor-in-Chief,” TK said.

TK expected much of his students, and is proud of their many accomplishments. He appreciated how many former students attended this award ceremony, and was especially proud of the wide variety of exciting research in far-reaching fields in their talks at a symposium in his honor [see list of symposium speakers, below].



Before the award ceremony, former students and colleagues celebrated TK's 80th birthday at a lovely brunch hosted by Dr. Eddie Seo (post-doc at KU with Dr. Adams, ca. 1965) and his wife Alice. KU Professors Craig and Sue Lunte organized a festive dinner.

In attendance were: TK's wife Jane Kuwana and daughter Ellen Kuwana. His son Eric Kuwana was not able to attend. Former students and colleagues there were: Michael Weber, Terry Hu, David Weiss, George Wilson, Phillips and Camille Bradford, as well as former students and colleagues from Ohio State and Case Western Reserve.

Susan Lunte and **Cindy Larive** organized and presided at the symposium honoring the Analytical Chemistry Distinguished Service Award: *Celebrating Ted Kuwana's Half-century of Service to the Analytical Sciences*. Symposium speakers included the following:

W. R. Heineman (University of Cincinnati): Spectroelectrochemistry: From thin layer cells to sensors

Nick Winograd (Penn State): Nanoscale chemical imaging of biomaterials with mass spectrometry

Neal R. Armstrong (and Scott S. Saavedra) (University of Arizona): Interface science of emerging organic solar cell platforms: Electrochemical and spectroelectrochemical approaches to the characterization of interfacial charge transfer processes

Steven A. Soper (University of North Carolina): Analysis of single cells and single molecules using capacitance measurements: applications in biology and medicine (he also received an ACS Award in Chemical Instrumentation sponsored by Dow Chemical)

Marc D. Porter (University of Utah): Detection of biomolecules by colorimetric solid phase extraction

Greg M. Swain (Michigan State University): Transmission spectroelectrochemistry: From then to now.

P.S. by the editor, in regard to Ted congratulating others on their English skills: Ted also enjoys himself royally on trips to Japan when he is introduced (by Japanese researchers) to ignorant non-Japanese researchers who do their very best to converse with Ted in Japanese—as happened to this SEAC editor-to-be back in the early 1990s.

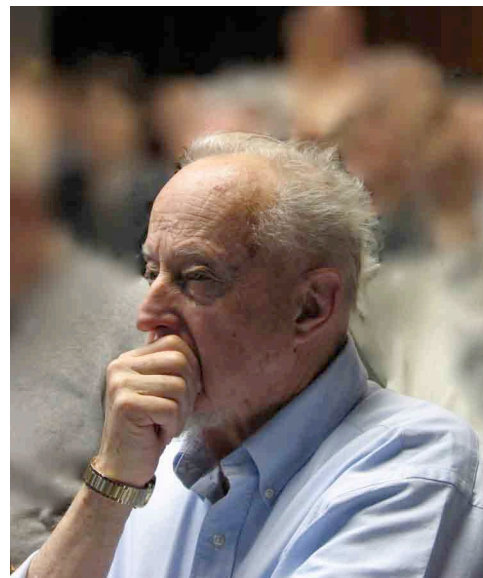
IN MEMORIAM CHARLES N. REILLY AWARDEE RICHARD P. BUCK

Charles N. Reilly awardee **Richard P. Buck** passed away in July 2011. **Erno Lindner** from the Department of Biomedical Engineering, The University of Memphis, wrote the following obituary. It will be included in an upcoming special issue of *Electroanalysis* with contributions from the *Matrafured 2011—International Conference on Electrochemical Sensors*, the most recent of a series of conferences that Buck attended numerous times. The conference organizers are dedicating this special issue, which is scheduled to be published in February 2012, to the memory of Buck. We thank *Electroanalysis* editor-in-chief Joseph Wang for letting us include Erno's reminiscences in the SEAC Newsletter.

RICHARD P. BUCK

Professor Richard (Dick) P. Buck, one of the greatest electrochemists of our time, died in Palo Alto, California, his family at his side, a few days before his 82nd birthday. He was born July 29, 1929 in Los Angeles and grew up in San Marino, California. He received his B.S. (1950) and M.S. (1951) from Caltech, and his Ph.D. from MIT (1954). Before he joined the faculty of the Department of Chemistry at the University of North Carolina at Chapel Hill as an associate professor in 1967, he worked in industry in California (California Research Corporation 1954-61; Bell & Howell Research Center 1961-65, and Beckman Instruments 1965-67). He became a full professor in 1975 and remained at Chapel Hill until his retirement in 2001.

Dr. Buck made enormous contributions to the field of electroanalytical chemistry and fundamental electrochemistry with over 400 publications and became a leading scientist in the field of electrochemical sensors. Dr. Buck was a theoretician who supported his theory with elegant experiments and translated his conclusions into practical applications. As a theoretician he worked on delineation of charge transfer kinetics at electrode/membrane interfaces, interpretation of membrane transport processes, and elucidation of ion-selective electrodes response mechanism. As an experimentalist, he introduced impedance spectroscopy for ion-selective membrane electrode studies. As a scientist interested in the practical applications, Dr. Buck pioneered the development of microfabricated sensor arrays on flexible Kapton substrates and performed the first in-vivo ion activity and metabolite measurements within living heart tissue.



Throughout his career, his peers recognized the high quality and wealth of his scholarly activity with several awards. In 1994, when we celebrated his 65th birthday, two journals, *Talanta* [1] and the *Journal of Electroanalytical Chemistry* [2], dedicated special issues in honor of his highly esteemed accomplishments. In 2001 he received the Charles N. Reilly Award, the highest honor of the Society of Electroanalytical Chemistry.

In the special issue of *Electroanalytical Chemistry* I had the honor to write the accolade about his achievements and influence on generations of young and established scientists all over the world who were fortunate to know him, work with him, or learn from his papers. At the end of my tribute, I provided an annotated list of Dr. Buck's publications until 1994. I thought his papers would speak better on his behalf than I could by summarizing all the significant contributions that made him one of the eminent authorities in the field of ion-selective electrodes. I selected this approach because it allowed me to write more about the person RICHARD P. BUCK, with all capital letters, who was one of the last renaissance men in our highly specialized world of science. Here, again, I use these pages to share with you more about his life work, of which his professional work was but one aspect.

Besides being an outstanding scientist Dr. Buck was an accomplished pianist who was one of the lead pianists at the Bohemian Club of San Francisco. He was also an expert in musical history with broad knowledge of classical and popular music and the arts in general. His personality captivated and influenced all of us who had the pleasure of calling him a friend. His honest, almost childlike, interest in understanding everything about the history and culture of the countries he visited as a part of his extensive collaborations, from modern music to the details of the mechanism of ion-selective electrode responses, made him seem eternally young; in this way, he is a role model for the next generations. The openness with which he approached and accepted modern arts or different views and enjoyed the pleasure of discovery helped many of us to overcome our own preconceptions and fuelled our enthusiasm for active, inspired research.

This openness of Dr. Buck brought him to Hungary in 1975. At that time very few scientists from the West supported the East-European scientific community with their presence. This first visit grew into exceptionally successful collaborations throughout Dr. Buck's career. Indeed, Dr. Buck's pioneering efforts in building collaborations and providing opportunities for young scientists was officially recognized when he was one of the five representatives of a U.S. delegation at the 20th Anniversary Celebration Party of the signing of the National Science Foundation – Hungarian Academy of Sciences collaboration.

From 1977 until 2005 Dr. Buck regularly attended the Matrafured conferences as one of the distinguished plenary or keynote speakers. Before this year's conference, I tried to call him several times, but I could not reach him. I knew that many of his friends who would be among the attendees would be interested to hear about him. Indeed, several of the participants asked about him, recalled fun memories of him, and expressed their hopes to see him again, probably at the next Matrafured conference. He was a man whom everybody remembers with a smile. After my return to the U.S., I tried to contact him again without success. I wanted to chat with him about our fun times in Hungary, listening to his stories about music, movies, books, his projects at the Bohemian Club, etc., and to convey the good wishes from many of his friends who asked me to do so and make plans for the future. Dr. Buck was my friend for 35 years. I wanted to tell him about my family back in Hungary and in the U.S. and to learn how his wife Mary Ann and children, Nan, Kenny and Meg were doing. Unfortunately, when I had one more chance to see him, we could not speak. But a gentle press of his hand acknowledged that he was pleased to hear my news.

Dr. Buck was a great man and a highly respected teacher, scholar, and researcher. In whatever capacity he touched our lives, he will remain in our memories forever. His name is written in all capital letters in the history book of the Matrafured conferences and in our hearts. The notation to write his name in all capital letters is from the novel "The Paul Street Boys" by Ferenc Molnar. It expresses the greatest honor of a gang of kids can bestow upon the main character of the book, their passing friend. Dr. Buck was one of the main personalities of the Matrafured conferences. In the name of all of the participants of this and previous Matrafured conferences, and on behalf of all of his friends around the world, I wish to express our greatest honor by writing his name in all capital letters.

Erno Lindner, Department of Biomedical Engineering, The University of Memphis

1. Thomas, J.D.R., *A practically minded mechanistic and theoretical electrochemist: Richard P. Buck*. *Talanta*, 1994. **41**(6): p. 837-841.
2. Lindner, E., *Richard P. Buck an analytical chemist who plays sweet music in electrochemistry*. *J. Electroanal. Chem.*, 1994. **378**: p. 1-15.

MEETINGS TO COME

Meetings of interest to our SEAC members abound during the coming year. If you are aware of any other upcoming events that should be listed, let the editor know for the next newsletter.

Meeting	When	Where	Link for More Information
Gordon Conference Electrochemistry	2012, January 8–13	Ventura, CA, USA	http://www.grc.org/programs.aspx?year=2012&program=elecchem
Zingg Electrochemistry Conference 2012	2012, Feb. 8–12	Puerto Calero, Spain	http://www.zinggconferences.com/z.cfm?c=67
Fourth Annual Workshop on Electrochemistry	2012, Feb. 11–12	Univ. of Texas at Austin, TX	http://cec.cm.utexas.edu/electrochemistry-workshop-2012
7th Annual International Electromaterials Science Symposium	2012, Feb. 15–17	Deakin Univ., Geelong, Australia	http://electromaterials.edu.au/events/UOW105366
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/

Meeting	When	Where	Link for More Information
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)
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

SIBAE 2012—XX Congresso da Sociedade Iberoamericana de Eletroquímica

An important biennial conference for electrochemists in the South America region, organized by the “SIBAE” (*Sociedad Iberoamericana de Electroquímica, Ibero-american Society of Electrochemistry*). For more information, visit the following link: <http://nanofael.dq.ufscar.br/sibae/>. The 2012 conference will be held March 25–30 in Fortaleza, a town located in northern Brazil. The spirit of this conference, as announced in the invitation letter, is to invite people from the region and all over places in order to establish research collaborations among all different areas of electrochemistry.

Fourth Annual Workshop on Electrochemistry, Univ. of Texas at Austin February 11-12, 2012

Electrodeposition Session – Keith Stevenson, Moderator; Jay Switzer, Missouri University of Science & Technology; Tom Moffat, National Institutes of Standards and Technology; Christine Orme, Lawrence Livermore National Laboratory

Industrial Electrochemistry Session – Jeremy Meyers, Moderator; Mike Perry, United Technologies Corp.; Jay Whitacre, Aquion; Steven Yu, 3M

Bioelectrochem/Electrochemical Biosensors Session – Allen Bard, Moderator; Jim Rusling, University of Connecticut; Benoit Limoges, University of Paris 7; Bruce Logan, Pennsylvania State University

Electroanalytical Session – Dick Crooks, Moderator; Henry White, University of Utah; Shigeru Amemiya, University of Pittsburgh; Pat Unwin, University of Warwick

MEETING REPORTS

XVIII Electrochemical and Electroanalytical Brazilian Symposium

Contribution by Regional Editor for South America Francisco J. Ibañez

The past 28th of August took place the “XVIII Electrochemical and Electroanalytical Symposium” hosted by the beautiful city of *Gonçalves* in the State of *Rio Grande do Sul, Brazil*. The city was founded by Italian immigrants, and over the years the city received more immigrants from all over Europe. The city possesses nice vineyards and interesting recreational and tourist areas. The Symposium was organized by Professor Luís Federico Dick from the Federal University of Rio Grande do Sul, Department of Metallurgy. Along with a crew of collaborators, they made possible a successful Symposium. It is worth to mention that the “XVIII Electrochemical and Electroanalytical Symposium” has grown dramatically in number of attendees and research abstracts. For instance, from its beginning in 1978 until now the number of research presentations has increased from 10 to almost 650, indicating the growing interest in electrochemistry in Brazil.

There were several areas of research including energy conversion and storage, surface treatments, corrosion, sensors and biosensors, and electrochemistry of nanostructured materials, just to mention a few. The main areas of research focused on electrocatalysis, sensors and biosensors, and nanomaterials according to the large number of publications in those areas. For instance, the number of papers presented on sensors and biosensors greatly exceeded other areas of electrochemistry. The symposium welcomed researchers from overseas and South American countries such as Argentina, Chile, and Uruguay. There were two colleagues from our institution (*Institute of Theoretical and Applied Physical-Chemistry at University of La Plata, La Plata, Argentina*) that attended and presented their research based on carbon-based xerogels for their use as supercapacitors and FTIR studies of glycerol electro-oxidation on carbon supported Pt nanoparticles. They commented that the environment was diverse and amenable to the exchange of ideas and beginning collaborations.



Matrafured 2011–International Conference on Electrochemical Sensors

The Matrafured'11 International Conference on Electrochemical Sensors was held June 19-24, 2011, in Dobogókő, Hungary. While the conferences of this series started with a dominant focus on ion-selective electrodes, the discovery of optodes—based on the same ionophores as ISEs but generating an optical signal—and the continuous implementation of new materials as well as the integration of electrochemical sensors in flow systems rapidly and naturally broadened the topic of these conferences to other electroanalytical and biosensing principles. At this year's conference an additional effort was made to further bridge between the traditional topics and various other fields in terms of applications, technologies and materials. Highlighted topics included voltammetry and coulometry with ISEs, emerging nanostructures for sensing (autonomous nanomotors, nanotubes, nanoparticles, nanopores, nanocapsules), environmental and diagnostic applications of electrochemical sensors, monitoring of oxidative stress and neurotransmitter release, and 3D chemical imaging and multiplexed sensing. This was facilitated by almost 20 invited speakers—well known personalities of electrochemistry, chemical and biosensing, environmental as well as life sciences—including C. Amatore (France), E. Bakker

(Switzerland), A. Bond (Australia), P. Buhlmann (USA), R. Crooks (USA), R. De Marco (Australia), A. Ewing (Sweden), G.-U. Flechsig (Germany), M. Gratzl (USA), R. Gyurcsanyi (Hungary), E. Hall (UK), E. Lindner (USA), T. Lindfors (Finland), M. Meyerhoff (USA), W. Qin (China), X. Rius (Spain), Z. Samec (Czech Republic), J. Wang (USA), and B. Wehrli (Switzerland). This single session conference brought together more than 110 academic and industrial participants from 25 countries and 4 continents. A special issue of *Electroanalysis* is scheduled for February 2012 and will include a more detailed description of the conference and 23 original articles from conference participants.



Gordon Research Conference on Environmental Nanotechnology

The 1st Gordon Research Conference on ENVIRONMENTAL NANOTECHNOLOGY was held at Waterville Valley Resort, NH, from May 29 to June 3, 2011. The scientific theme of the conference was to highlight the impact of engineered nanomaterials on human health and the environment. The conference chair was Omowunmi Sadik, SUNY-Binghamton and Nora Savage of USEPA was the co-chair. The scientific program consisted of key leading researchers and experts in the field (<http://www.grc.org/programs.aspx?year=2011&program=environano>). This inaugural GRC on Environmental Nanotechnology was well-attended with 157 participants from academia, industry, and government laboratories; among these were national and foreign scientists, senior researchers, young investigators, as well as students. The high level technical program including the steering committee was selected from major national universities, government labs, and research institutions. The conference contributors included the National Science Foundation, National Institutes of Health, US-Environmental Protection Agency, Occupational Safety and Health Administration, American Chemistry Council, Water Research Foundation, and Oregon Nanoscience & Microtechnologies Institute (ONAMI).

JOB OPENINGS

University of Connecticut: Postdoctoral Fellowships In Bioanalytical Science

Two NIH-supported postdoctoral fellowships are anticipated for highly motivated, creative researchers at the University of Connecticut (Storrs, CT) in bioanalytical science research beginning as early as December, 2011.

Project 1 involves device and methods development for metabolic toxicity screening using voltammetry and LC-MS (see, Zhao, Schenkman, Rusling, High Throughput Metabolic Toxicity Screening Using Magnetic Bicolloid Reactors and LC-MS/MS, *Anal. Chem.*, **2010**, 82, 10172–10178; and Pan, Zhao, Schenkman, J. F. Rusling, Evaluation of Electrochemiluminescent Metabolic Toxicity Screening Arrays Using a Multiple Compound Set, *Anal. Chem.*, **2011**, 83, 2754–2760. This project requires a thorough knowledge of organic chemistry and familiarization with metabolic enzymes, along with skills in methods

development, microfluidics, biochemistry, electrochemistry and electrochemiluminescence. Prior experience with LC-MS is a definite advantage. This is a collaborative project with Prof. John Schenkman at the Uconn Health Center.

Project 2 involves new devices and validation of assays for ultrasensitive detection of panels of cancer biomarker proteins (see Chikkaveeraiah, Mani, Patel, Gutkind, Rusling, Microfluidic electrochemical immunoarray for ultrasensitive detection of two cancer biomarker proteins in serum, *Biosensors & Bioelectron.* **2011**, *26*, 4477– 4483 and Rusling, Kumar, Gutkind, Patel. Measurement of Biomarker Proteins for Point-of-Care Early Detection and Monitoring of Cancer, *Analyst*, **2010**, *135*, 2496–2511). This project requires advanced research skills in antibody arrays, analytical methods development, nanoscience, electrochemistry, surface plasmon resonance, microfluidics, statistics, and biochemistry. This project is a collaboration with nanomaterials scientists, and laboratory and clinical cancer researchers.

Both positions require a Ph.D. in Chemistry, Biochemistry or a related bioscience, as well as high level skills in English communication and writing. Postdoctoral fellows will be expected to write papers, reports, and research proposals. They will be expected to mentor one or more graduate or undergraduate researchers, work in a co-operative team environment, interact productively with collaborators, and participate in laboratory management. The University of Connecticut is New England's premier public research University with a student population approaching 30,000. It is located in a lovely semi-rural setting close to Boston and New York. <http://chemistry.uconn.edu/>

Applications should send by email a 2-page professional resume, names and email addresses of 3 professional references, and a list of publications to Professor James F. Rusling, University of Connecticut, Chemistry Department, Storrs, CT email: james.rusling@uconn.edu, website: <http://web.uconn.edu/rusling/>

University of Maryland Baltimore County: Postdoctoral Research Associate Position

A postdoctoral position is available at the University of Maryland Baltimore County (UMBC) for an individual with a Ph.D. in chemistry, biochemistry, bioanalytical chemistry or related fields. The position will focus on the development of a sensing platform for the detection of small molecule gliotransmitters using nanometer-scale electrodes. Priority will be given to individuals with research experience in mammalian tissue culture, analytical measurements of single cells, electrochemistry, and/or patch clamping. A cover letter highlighting relevant skills and goals, a CV and contact information for at least two references can be mailed to Prof. Ryan White, Department of Chemistry and Biochemistry, University of Maryland Baltimore County, 1000 Hilltop Circle, Baltimore, MD 21250 or emailed in a single pdf file to rjwhite@umbc.edu. The position start date is flexible and the position will remain open until filled. *UMBC is an Equal Opportunity/Affirmative Action employer, and applications from women, minorities and individuals with disabilities are especially encouraged.*

University of Brighton, Brighton, UK: Postdoctoral Position in Electroanalytical Chemistry

One postdoctoral position supported by the EPSRC for one year is available in the Centre for Biomedical and Health Sciences Research at the University of Brighton to work on developing sensors for monitoring neurotransmitters within the gastrointestinal tract. Candidate must have a Ph.D. in chemistry, chemical biology or related field and strong background in electrochemistry. Candidates who have experience of biological sensor monitoring and sensor fabrication techniques will be highly desirable. Interested applicants should e-mail Dr. Patel (b.a.patel@brighton.ac.uk) for further information regarding the application process. It is anticipated that this position will commence on 1st March 2012.

MEMBER NEWS

David Cunningham reports that he has accepted a faculty position in the Department of Chemistry at Eastern Kentucky University (EKU) starting this fall semester. EKU is located in the Bluegrass of Central Kentucky about 25 miles down I-75 from Lexington. The University has about 16,000 students and a strong undergraduate program in Forensic Science (~300 majors!) within the Chemistry Department. The University's commitment to the chemistry program is currently very strong with the department moving into a newly constructed building later this year. He is looking forward to teaching, supporting the forensic science program, and helping students with their first research experiences. Moreover, he has begun consulting for both start-up and established companies in the areas of analytical and health care products.

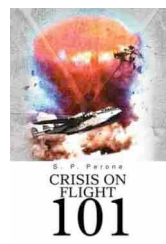
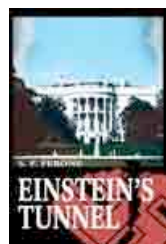
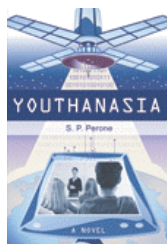
Andy Gilicinski (PhD '87 with Dennis Evans at Wisconsin) is now Vice President of Product Development at Georgia-Pacific in Neenah, WI, responsible for innovation and product portfolio for all G-P's consumer products businesses. He moved to Appleton, returning to Wisconsin a mere 24 years after leaving as a newly minted electrochemist entering industry.

Christy Haynes, Department of Chemistry, University of Minnesota, has been chosen to receive the 2012 Pittsburgh Conference Achievement Award from the Society for Analytical Chemists of Pittsburgh. She is being honored for her contributions to the field of bioanalytical and nanoparticle chemistry. She will be honored at a special symposium at Pittcon 2012.

ACS has named 213 distinguished scientists as 2011 ACS Fellows. The Fellows Program, which began in 2009, recognizes and honors members of the American Chemical Society who have made significant contributions to the science and provided excellent service to the society. The fellows represent 33 ACS technical divisions and 83 local sections and reflect a wide range of disciplines and geographic locations. We are happy to report that SEAC members **Ted Kuwana** (University of Kansas), **Patricia Mabrouk** (Northeastern University), and **Debra Rolison** (Naval Research Laboratory) are on the list of ACS Fellows (<http://pubs.acs.org/cen/acsnews/89/8932acs2.html>).

At the meeting of The Electrochemical Society, held in May 2011 in Montreal, Canada, it was announced that **Dennis G. Peters** (Department of Chemistry, Indiana University) will be the 2012 recipient of the Manuel M. Baizer Award in Organic Electrochemistry. At next May's meeting of the Society in Seattle, there will be a two-day symposium in his honor as well as an award reception on the evening of Wednesday, May 9, 2012.

Pete Kissinger brings to our attention that **Sam P. Perone** gave on 27 September 2011 the Amy-Mellon Lecture in Analytical Chemistry at Purdue University. After taking early retirement in 1999, Perone has been an independent consultant in the San Francisco Bay Area and has devoted his spare time to the writing of fiction. To date, he has published seven novels: *The StarSight Project* (2002), *Crisis on Flight 101* (2003), *Einstein's Tunnel* (2004), *Murder Almighty* (2005), *Judgment Day* (2006), *Youthanasia* (2009), and an illustrated children's novel, *Star of the Future* (2010). Five of his novels have been honored in Book of the Year competitions. He is currently completing a memoir entitled, *Turned On! Campus Life in the 1960s*.



Peixin He is sending us the following photo of his wife Xiaoming, **Larry Faulkner**, and himself in front a very appropriately named building—watch yourself. The University of Texas at Austin’s Larry R. Faulkner Nanoscience and Technology (FNT) Building was named in honor of the former university president in recognition of his leadership in bringing the university’s nanotechnology program to national prominence. The 82,463-square-foot building was completed in 2006. SEAC lifetime member Larry Faulkner was president of The University of Texas at Austin from April 1998 through January 2006. He received his doctor’s degree in chemistry from the university in 1969 and worked in the lab of Professor Allen Bard. He is the co-author with Bard of the prominent text “Electrochemical Methods: Fundamentals and Applications.”
(<http://www.utexas.edu/news/2011/10/26/faulkner>)



NEW BOOKS

ELECTROANALYTICAL METHODS IN PHARMACEUTICAL ANALYSIS AND THEIR VALIDATION, Sibel A. Ozkan, October 2011, 350 pp, ISBN: 978-0-9664286-7-4

With their high sensitivity and appropriateness for measuring redox reactions, electroanalytical methods are ideal for pharmaceutical analysis. This book covers the most widely used methods and instrumentation. Extensive tables reference specific applications. A long concluding chapter on validation discusses method development, required parameters, and calculations. For pharmaceutical chemists; researchers in R&D, food, environmental, and regulatory laboratories; and post-graduate students in these disciplines.

A SPECIAL THANK YOU TO OUR LIFETIME MEMBERS

At the end of the year, we would like to extend our special thanks to the 158 members you have become SEAC lifetime members over the years or have supported SEAC in 2011 with a lifetime membership installment:

Hector Abruna, Victoria Alvarado, Christian Amatore, Larry Anderson, Fred Anson, Koichi Aoki, Katherine Ayers, Leonidas Bachas, Antje Baeumner, Lane Baker, Eric Bakker, Richard Baldwin, Carleton Barbour, Allen Bard, Rebecca Barlag, C. LeRoy Blank, Henry Blount III, Alan Bond, Lawrence Bottomley, Edmond Bowden, Anna Brajter-Toth, Merlin Bruening, Craig Bruntlett, Philippe Buhlmann, Karl Cammann, Hsiang-pin Chang, Jingyuan Chen, Shaowei Chen, Kuang Cheng, Gary Christian, Rose Clark, David Cliffl, Kristin Cline, Robert Corn, Louis Coury, Stephen Creager, Richard Crooks, David Cunningham, Malonne Davies, Howard Dewald, Matthew Doyle, Benjamin Duhart, Richard Durst, C. Michael Elliott, Royce Engstrom, Robert Ensmann, Dennis Evans, Andrew Ewing, Larry Faulkner, Michael Freund, Ingrid Fritsch, Masamichi Fujihira, Ying-Sing Fung, Daniel Gagescu, Raymond Gajan, Andrew Gilicinski, Hubert Girault, Joseph Gordon, Charles Goss, Erin Gross, David Hatchett, Fred Hawkridge, William Heineman, Adam Heller, Bruce Henne, Charles Henry, Roland Hirsch, Jonathon Howell, Tai-Sung Hsi, Ben Hui, Brian Humphrey, Joseph Hupp, Robert Ianniello, Akio Ichimura, Tokuji Ikeda, Mark Imisides, Anthony Kammerich, Jean-Michel Kauffmann, Jacob Ketter, Susanna Kevra, Jon Kirchhoff, Peter Kissinger, Carol Korzeniewski, Samuel Kounaves, Theodore Kuwana, William LaCourse, Peter Lay, Thomas Layloff, Johna Leddy, Chi-Woo Lee, Solomon Levine, Andrzej Lewenstam, Jeffrey Long, Craig Lunte, Susan Lunte, George Luther, III, Leslie Lyons, Christine MacTaylor, Joseph Maloy, R. Scott Martin, Gregory Martinchek, Richard McCreery, Mark Meyerhoff, Adrian Michael, Shelley Minter, Grace Muna, Royce Murray, Janet Osteryoung, Noboru Oyama, Andrew Palus, Steven Petrovic, David Pierce, Marc Porter, Radha Pyati, Yu Qin, Juerg Reust, Norman Reynolds, Jr., Mark Richter, Thomas Ridgway, Mary Robbins, Robert Rodgers, Debra Rolison, Niina Ronkainen, Marc Rothstein, Judith Rubinson, James Rusling, Michael Ryan, Omowunmi Sadik, Deniz Ege Schildkraut, Frank Schultz, Caroline Scolari, Mitsugi Senda, Brenda Shaw, Karl Sienerth, Wayne Silk, Andrzej Sobkowiak, Bernd Speiser, Keith Stevenson, Timothy Strein, Dennis Tallman, Isao Taniguchi, Yoshio Umezawa, Jill Venton, Stephen Weber, Duane Weisshaar, John Westall, Henry White, R. Mark Wightman, George Wilson, David Wipf, Ziling (Ben) Xue, Chaim Yarnitzky, Edward Zachowski, Frank Zamborini, Xiangqun Zeng, Xueji Zhang, Cynthia Zoski, Glenn Zoski

If you do not find yourself on the list, why not consider a SEAC lifetime membership as a new year's resolution for 2012?

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. For all students the first year of membership is free.