

# SEAC *communications*

Volume 29, Number 1, February 2013

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## PRESIDENT'S MESSAGE

Gentlefolks:

SEAC will meet at PittCon 2013 in the Philadelphia Convention Center, 18-20 March. The Reilley Award Symposium will honor the 2013 Reilley Awardee Andy Ewing and the Young Investigator Awardee Bo Zhang. Andy is honored for his work to extend electroanalytical methods to small volumes at the scale of cells and in live fruit fly brains, for electrochemical detection in electrophoresis, and for electrochemical separation from cells and analysis of individual nanometer transmitter vesicles. Bo is honored for his promising work with nanoelectrodes to study electrocatalysis at nanoparticles and for nanoscale imaging of neuronal communications. The other speakers in the Reilley Award Symposium are Henry White, Jeanne Pemberton, Mark Wightman, and Allen Bard.

Please join SEAC for the *SEAC Reilley Award Symposium* and brief annual business meeting in Room 114 on Monday, 2:00 to 5:15 PM. After the Award Symposium, the SEAC Reception is at Maggiano's Little Italy (corner of 12th and Filbert) from 5 to 7 PM. The SEAC dinner will follow at the same location at 7 PM. (Dinner is \$55 and reservations should be submitted to Shelley Minter (minter@chem.utah.edu) by 5 March.) On Tuesday, there are morning (8 to 11) and afternoon (2 to 5) SEAC symposia in Room 118A. In the morning, *Pivotal Ideas in Electroanalysis* will be presented by Bill Heineman, Rick McCreery, Shelley Minter, Mark Meyerhoff, and Pete Kissinger. In the afternoon, Dave Cliffel and Steve Maldonado have organized *SEAC Highlighting Young Investigators* that includes Michael Johnson, Leslie Sombers, Rebecca Lai, Ryan White, Anne Co, and Shanlin Pan. Wednesday morning is *SEAC Posters: Electroanalysis*, held in 204ABC from 10 to noon.

On an important note, this year marks the 30<sup>th</sup> Reilley Award Symposium. SEAC was formed by Bill Heineman (the first President), Joe Maloy (the second President), Pete Kissinger (the fourth

President), and Larry Faulkner (the Treasurer for the first four Presidents) to administer the Charles N. Reilley Award, an award instituted to honor the memory of one of the great modern analytical chemists. BASi has generously provided resources annually to support the Award. The Reilley Endowment was formed to collect revenues so that the Award can be self sustaining. The original target was \$100k and the Endowment has averaged growth of about \$2k per year, so that we are still \$30k below the goal and the Award is not yet self sustaining. Once the Award is endowed, resources will be freed to support other activities of the Society.

Thus, this year at the 30<sup>th</sup> Reilley Award Symposium, a campaign is inaugurated to raise resources for the Reilley Endowment so as to make SEAC's Reilley Award self sustaining. Members of the Board of Directors will

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#### How Easy it is to Become a SEAC Member

be contacting all the constituents and sponsors of SEAC to contribute to this effort. If you would like to make a contribution to the Reilley Endowment or have ideas as to how to encourage others to contribute to the Reilley Endowment, please contact me, Jon Kirchhoff, Petr Vanysek, Faye Rubinson, Adrian Michael, or any Board member. Or, make a contribution on-line at <http://www.electroanalytical.org> or by mail to Petr Vanýsek, Department of Chemistry and Biochemistry, Northern Illinois University, DeKalb, IL 60115. Contributions are tax deductible.

SEAC supports scientific inquiry and supports its members and students in various ways. Thank you for your support and see you in Philadelphia!

Johna Leddy

## Note From the Treasurer: 2013 Dues

Thank you to all who paid their 2012 dues! It is now, however, time for **2013 dues**.

Over the next few weeks, I will be sending letters to those who are not already Lifetime members to let you know your dues status. You can return your payment to me at the address on your reminder OR you can pay through Paypal via the link on our website at

<http://electroanalytical.org/membership.html>

Faye Rubinson, Treasurer

## We Lost You!

Emails for the following members do not seem to be correct. If you have a current email for them, please send them a note telling them to write Faye Rubinson ([jfr@georgetown.edu](mailto:jfr@georgetown.edu)) with their updated emails to avoid any missed messages.

Ahmed Badawy  
Anupama Aggarwal  
Benjamin Duhart  
Bridget Mahon  
Bruce Henne  
Chaim Yarnitzky  
Daniel Eves  
Daniel Gagescu  
Deniz Ege  
Schildkraut  
Duane Weisshaar  
Edward Zachowski

Eiichi Shoji  
Eleni Bitziou  
Emrah Cilinc  
Frederique Deiss  
HSiang-Pin Chang  
Hua Dong  
Imee Arcibal  
Jingyuan Chen  
John Waraska  
Juerg Reust  
Koichi Aoki  
Larry Faulkner

Malonne Davie  
Mark Anderson  
Melissa Meaney  
Michel Prudent  
Milind Nagale  
Miloslav Pravda  
Mitsugi Senda  
Nedime Durust  
Noboru Oyama  
Rachel Behren  
Raymond Gajan  
Rosemary Feeney

Solomon Levine  
Sue Myers  
Susanna Kevra  
Swati Modi  
Tokuji Ikeda  
UnMei Pan  
Victoria Alvarado  
Yu Qin

## SEAC is on Facebook, Google+, and Twitter



For those who are stealthy enough to survive without a smart phone: The above are QR codes, the barcodes for smart phones. From left to right: Facebook, Google+, and Twitter, brought to you by Anne Regel, PhD candidate at the University of Kansas, who manages the SEAC Facebook and Google+ pages.

# PITTCON 2013—MARCH 17–21

## *Charles N. Reilley and Young Investigator Awards Symposium*

The highlight of SEAC activities at Pittcon will be the presentation of the 2013 C. N. Reilley Award to Andy Ewing of Chalmers University and the University of Gothenburg, Sweden, and the Young Investigator Award to Bo Zhang of the University of Washington. The symposium in their honor has been arranged by Henry White, University of Utah and will be held 2:00 to 5:10 PM on Monday, March 18, 2012, in Room 114 of the Pennsylvania Convention Center, Philadelphia PA.

- 2:00 PM Introductory Remarks – Henry White
- 2:05 PM Presentation of the 2012 Charles N. Reilley Award to Andrew Ewing by Henry White, University of Utah
- 2:10 PM Electrochemical Measurements of Transmitters in Flies, at Cells, and From Transmitter Vesicles, Andrew Ewing, Chalmers University and University of Gothenburg
- 2:45 PM Advances in Fast-Scan Cyclic Voltammetry for Detection of Neurotransmitters, R. Mark Wightman, University of North Carolina at Chapel Hill
- 3:20 PM A New Take on an Old Concept: Electrochemical Interface Studies by the Technique 'Formerly Known As' Emersion, Jeanne E. Pemberton, University of Arizona, Anoma Mudalige
- 3:55 PM Presentation of the 2013 Young Investigator Award to Bo Zhang, University of Washington, by Henry White, University of Utah
- 4:00 PM Fluorescence-Enabled Electrochemistry and Single-Cell Imaging, Bo Zhang, University of Washington, Joshua Guerrette, Stephen Percival, Jonathan Cox
- 4:35 PM Analysis Through Electrochemistry of Single Particles, Allen J. Bard, University of Texas at Austin, Aliaksei Boika, Jun Hui Park

## *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 **SEAC Award Reception** will be from **5–7 PM** at **Maggiano's Little Italy** at the corner of 12<sup>th</sup> and Filbert in Philadelphia (about a block from the convention center, depending on which doors you leave from; #1 on the map on the right) on Monday, March 18, 2013. Dinner will follow at exactly 7 PM at the same restaurant. No reservations are needed for the reception and all are welcome. Dinner will cost \$55 per person (paid to the treasurer at the dinner in either cash or check - no credit cards accepted). There will be a cash bar at both the reception and the dinner. Reservations are needed for the dinner. Please RSVP for the dinner to Shelley Minter ([minter@chem.utah.edu](mailto:minter@chem.utah.edu)) by March 5th at the latest.



The **Board of Directors Meeting** is **Monday, March 18 from 11:30 a.m. to 1:30 p.m. in Room 303A** of the 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 (\$24). If any Member has concerns or suggestions for the Society, please contact SEAC President Johna Leddy ([johna-leddy@uiowa.edu](mailto:johna-leddy@uiowa.edu)), so they may be addressed during the Board Meeting.

### ***Electrochemistry Sessions at Pittcon (Including Poster Sessions)***

#### **MONDAY MORNING, MARCH 18, 2013**

- Electrochemistry of Living Cells, Room 124, 8:00 AM
- *Poster Session* Electrochemistry, Exposition Floor, Aisles 1600-2100, authors present 10:00 AM–12:00 PM

#### **MONDAY AFTERNOON, MARCH 18, 2013**

- Charles N Reilley and Young Investigator Awards – SEAC, Room 114, 2:00 PM
- Single Molecule Characterization with Nanofluidic Devices, Room 122A, 2:00 PM
- Graphene for Biosensing Applications, Room 203B, 2:00 PM
- Bioanalytical: Electrochemistry, Room 115C, 2:00 PM
- Bioanalytical: Tissues and Cells, Room 119B, 2:00 PM
- Electrochemistry: Electrodes and Interfaces, Room 120B, 2:00 PM

#### **TUESDAY MORNING, MARCH 19, 2013**

- Advances in Blood Glucose Monitoring, Room 117, 8:00 AM
- SEAC - Pivotal Ideas in Electroanalysis, Room 118A, 8:00 AM
- Biomedical: Sensors, Room 116, 8:00 AM

#### **TUESDAY AFTERNOON, MARCH 19 2013**

- SEAC - Highlighting Young Investigators, Tuesday Afternoon, Room 118A, 2:00 PM
- Electroanalytical Chemistry Applied To Neurochemical Problems, Room 120A, 2:00 PM
- Electrochemistry: Bioanalytical and Neurochemical Applications, Room 120B, 2:00 PM

#### **WEDNESDAY MORNING, MARCH 20, 2013**

- Dynamic Monitoring of Neurochemicals—A Journey Throughout the Body, Room 123, 8:00 AM
- Ionophore-based Chemical Sensors I, Room 121A, 8:00 AM
- *Poster Session* SEAC Posters: Electroanalysis, 204ABC, authors present 10:00 AM–12:00 PM

#### **WEDNESDAY AFTERNOON, MARCH 20, 2013**

- Ionophore-based Chemical Sensors II, Room 121A, 2:00 PM
- Voltammetric and Other Electroanalytical Techniques, Room 203B, 2:00 PM

#### **THURSDAY MORNING, MARCH 21, 2013**

- Electrochemistry at Nanoscale Structures, Room 121A, 8:00 AM

#### **THURSDAY AFTERNOON, MARCH 21, 2013**

- *Poster Session* Electroanalytical Applications, Room 204ABC, 1:00 AM–3:00 PM (all posters mounted by 10:00 AM)

## 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*

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 submission of any additional supporting information or a renomination is welcome at any time, however, the decision for the 2014 Award will be based upon the material that is available to the Award Committee by the **March 11, 2013** (extended due to late timing of Pittcon).

### *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 a 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 2014 YI award are due by the **March 11, 2013** (extended due to late timing of Pittcon).

## MEETINGS TO COME

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

<b>Meeting</b>	<b>When</b>	<b>Where</b>	<b>Link for More Information</b>
7th Workshop on Scanning Electrochemical Microscopy and Related Techniques	2013, Feb 17–21	Ein Gedi, Israel	<a href="http://chem.ch.huji.ac.il/SECM-2013/index.html">http://chem.ch.huji.ac.il/SECM-2013/index.html</a>
Electrochemistry (ZINC)	2013, Feb 25–28	Canary Islands, Spain	<a href="http://www.zingconferences.com">http://www.zingconferences.com</a>
12 <sup>th</sup> ISE Spring Meeting	2013, March 17–21	Bochum, Germany	<a href="http://www.ise-online.org/annmeet/next_meetings.php">http://www.ise-online.org/annmeet/next_meetings.php</a>
Pittcon 2013	2013, March 17–22	Philadelphia, PA, USA	<a href="http://www.pittcon.org/">http://www.pittcon.org/</a>
XIX Brazilian Symposium of Electrochemistry and Eletroanalytical	2013, April 1–5	Campos do Jordao, Brazil	<a href="http://eventos.ufabc.edu.br/xixsibee/">http://eventos.ufabc.edu.br/xixsibee/</a>
American Chemical Society Spring Meeting	2013, April 7–11	New Orleans, LA, USA	<a href="http://portal.acs.org/">http://portal.acs.org/</a>
13 <sup>th</sup> ISE Spring Meeting	2013, April 8–11	Pretoria, South Africa	<a href="http://www.ise-online.org/annmeet/next_meetings.php">http://www.ise-online.org/annmeet/next_meetings.php</a>
223rd ECS Meeting	2013, May 12–17	Toronto, Ontario, Canada	<a href="http://www.electrochem.org/meetings/biannual/fut_mtgs.htm">http://www.electrochem.org/meetings/biannual/fut_mtgs.htm</a>
ElecNano 5, The nano-scale and electroanalysis: surface nanostructuration, nanobiological systems, coupled methods, micro-systems	2013, May 15–17	Bordeaux, France	<a href="http://www.elecnano.fr">http://www.elecnano.fr</a>
9th International Symposium on Electrochemical Impedance Spectroscopy	2013, June 16–21	Okinawa, Japan	<a href="http://www.rs.tus.ac.jp/eis2013/index.html">http://www.rs.tus.ac.jp/eis2013/index.html</a>
Faraday Discussion 2013 - Electroanalysis at the Nanoscale	2013, July 1–3	Durham, UK	(Contact: Richard Compton)
American Chemical Society Fall Meeting	2013, Sept. 8–12	Indianapolis, IN, USA	<a href="http://portal.acs.org/">http://portal.acs.org/</a>
64 <sup>th</sup> Annual ISE Meeting	2013, September 8–13	Santiago de Querétaro, Mexico	<a href="http://annual64.ise-online.org/">http://annual64.ise-online.org/</a>
224th ECS Fall meeting	2013, Oct. 27–Nov. 1	San Francisco, CA, USA	<a href="http://www.electrochem.org/meetings/biannual/fut_mtgs.htm">http://www.electrochem.org/meetings/biannual/fut_mtgs.htm</a>
Pittcon 2014	2014, March 2–6	Chicago, IL, USA	<a href="http://www.pittcon.org/">http://www.pittcon.org/</a>
American Chemical Society Spring Meeting	2014, March 16–20	Texas TX, USA	<a href="http://portal.acs.org/">http://portal.acs.org/</a>
14 <sup>th</sup> ISE Topical Meeting	2014, March 28–31	Nanjing, China	<a href="http://www.ise-online.org/annmeet/next_meetings.php">http://www.ise-online.org/annmeet/next_meetings.php</a>
15 <sup>th</sup> ISE Topical Meeting	2014, April 27–30	Niagara Falls, Canada	<a href="http://www.ise-online.org/annmeet/next_meetings.php">http://www.ise-online.org/annmeet/next_meetings.php</a>
225th ECS Spring meeting	2014, May. 11–16	Orlando FL, USA	<a href="http://www.electrochem.org/meetings/biannual/fut_mtgs.htm">http://www.electrochem.org/meetings/biannual/fut_mtgs.htm</a>
2014 Matrafured International Conference on Electrochemical Sensors	2014, June 15–20	Near Budapest, Hungary	Robert Gyurcsanyi < <a href="mailto:robertgy@mail.bme.hu">robertgy@mail.bme.hu</a> >



<b>Meeting</b>	<b>When</b>	<b>Where</b>	<b>Link for More Information</b>
American Chemical Society Fall Meeting	2014, Aug. 10–14	San Francisco CA, USA	<a href="http://portal.acs.org/">http://portal.acs.org/</a>
65 <sup>th</sup> Annual ISE Meeting	2014, August 31–September 5	Lausanne, Switzerland	<a href="http://www.ise-online.org/annmeet/next_meetings.php">http://www.ise-online.org/annmeet/next_meetings.php</a>
226th ECS Fall meeting	2014, October 5–11	Cancun, Mexico	<a href="http://www.electrochem.org/meetings/biannual/fut_mtgs.htm">http://www.electrochem.org/meetings/biannual/fut_mtgs.htm</a>
Pittcon 2015	2015, March 8–14	New Orleans, LA, USA	<a href="http://www.pittcon.org/">http://www.pittcon.org/</a>
66 <sup>th</sup> Annual ISE Meeting	2015, October 4–9	Taipeh, Taiwan	<a href="http://www.ise-online.org/annmeet/next_meetings.php">http://www.ise-online.org/annmeet/next_meetings.php</a>

## JOB OPENINGS

### ***Andas Inc.: Post-Doc with Extensive Chemistry Background Needed for Quantum Capacitance Varactors in Wireless Sensing Applications***

A fully funded start-up company named Andas Inc. working with licensed technology from the University of Minnesota is looking to hire a full-time post-doc for a year-long project focused on the functionalization of graphene and its pairing to an established wireless sensing device. As the lead/solo researcher on this project, the candidate will work under the loose guidance of an electrical engineer with expertise in microelectronics and a chemist with electrochemical sensor expertise. Candidate must be willing to work independently in a driven matter with oversight coming from the co-founders of the company. Goals of the year-long project include the functionalization of graphene and pairing the sensor technology with a wireless near-field communication system to create a sensitive and specific wireless sensing device.

The position will be paid with negotiable benefits, and the company will grant full publication rights. Candidate will work in an established Nanofabrication Center and graphene testing facility with separate office space. The work accomplished by the candidate will produce the “proof of concept” necessary for the company to take its product to the development stage. Ultimately the product will be a mass-marketed device that will have many different fields of use. Fabrication, layout software and circuitry experience are all highly encouraged for both the functionalization and electronic pairing steps. Interviews and the hiring process will begin as soon as possible and this project will necessitate a move to Minneapolis.

Further detail with specifics of the project can be obtained by contacting Joe Jensen (co-founder of the company) at [jjensen0927@gmail.com](mailto:jjensen0927@gmail.com) Feel free to contact him with any questions beforehand. If interested in applying, please attach a resume and cover letter.

## NEWS FROM MEMBERS

**Allen J. Bard** and **John B. Goodenough**, both faculty members at The University of Texas at Austin, were among twelve eminent researchers named by President Obama as the next recipients of the National Medal of Science. The National Medal of Science is highest honor bestowed by the United States Government upon scientists and engineers. The recipients will receive their awards at a White House ceremony in early 2013.



Allen Bard has been on the chemistry faculty at UT since 1958, and now holds the Hackerman-Welch Regents Chair in Chemistry and is Director of the Center for Electrochemistry. John Goodenough joined the faculty of UT's Cockrell School of Engineering in 1986, and now holds the Virginia H. Cockrell Centennial Chair in Engineering. Both are well known for their contributions to electrochemistry and electrochemical systems.

"I am proud to honor these inspiring American innovators," President Obama said. "They represent the ingenuity and imagination that has long made this Nation great—and they remind us of the enormous impact a few good ideas can have when these creative qualities are unleashed in an entrepreneurial environment."

The National Medal of Science was created by statute in 1959 and is administered for the White House by the National Science Foundation. Awarded annually, the Medal recognizes individuals who have made outstanding contributions to science and engineering. A committee of Presidential appointees selects nominees on the basis of their extraordinary knowledge in and contributions to chemistry, engineering, computing, mathematics, or the biological, behavioral/social, and physical sciences.



Credit:  
The National Medal of Science

<http://www.cm.utexas.edu/news/allen-bard-receives-national-medal-of-science>

**George W. Luther III**, College of Earth, Ocean, and Environment, University of Delaware, has been selected to be a Fellow of the American Geophysical Union (2012). The citation indicated "for his pioneering research in redox reactions, trace element speciation, and development of novel *in situ* electrochemical methods".



## ROYCE W. MURRAY HONORARY SYMPOSIUM AND PLENARY LECTURE AT SERMACS 2012

The 64<sup>th</sup> Southeastern Regional Meeting of the American Chemical Society (SERMACS 2012) convened November 14-17, 2012 at the Raleigh Convention Center in Raleigh, North Carolina. The conference, **chaired by Charlie Goss**, had over 2300 attendees and almost 1400 abstracts. It featured 3 special conferences, 26 invited symposia, 93 oral sessions, 43 poster sessions, a vendor exhibition with 52 booths, a graduate school fair with 24 exhibitors, workshops, awards receptions, and several networking events. **Keynoting the event was long-time SEAC member, Royce W. Murray, Kenan Professor of Chemistry at the University of North Carolina, Chapel Hill.** Royce's Plenary Lecture on "Nanoparticle science and its analytical chemistry" was moderated by special guest and current Editor-in-Chief of *Analytical Chemistry*, Jonathan V. Sweedler, Eiszner Family Chair in Chemistry at Illinois, and presented to a packed auditorium after a day-long Symposium held in his honor.



**Pictured (from left):** Charlie Goss, Royce Murray, Jonathan Sweedler

The "**Symposium Honoring Royce W. Murray**" was co-organized by Mark Wightman and Lloyd Horne and featured lectures by many of Royce's current and former graduate students and post-docs. Those presenting talks included Alessa Gambardella, Joseph Roberts, Joseph Tracy, Gangli Wang, Amala Dass, Leslie Sombers, Michael Heien, Radha Pyati, Jeffrey Long, Frank Zamborini, David Cliffel, Robin McCarley, Stephen Creager, and Jonathan Sweedler. The Honorary Symposium was sponsored by Pine Instruments (Frank Dalton), Gamry Instruments (Christopher Beasley), CH Instruments (Peixin He), and the ACS Division of Analytical Chemistry (Thom Rossi and Cynthia Larive).

After Royce's Plenary Lecture, invited Symposium speakers and guests joined Royce for some good ol' North Carolina barbeque at *The Pit* in downtown Raleigh, NC. Some pictures from the event are below:



***Pictured (from left), 2<sup>nd</sup> row:*** Jeffrey Long, David Cliffel, Mark Wightman, Joseph Tracy, Michael Heien, Jonathan Sweedler, Dr. and Mrs. Stephen Creager, Radha Pyati, Robin McCarley, Jamie Shetzline, Frank Dalton, Joel Heisler, Li Sun, ***1<sup>st</sup> row:*** Lloyd Horne, Leslie Sombers, Alessa Gambardella, Katherine Michaux, Tessa Carducci, Royce W. Murray, Frank Zamborini, Gangli Wang, Jiyoung Park, Jing Min Oh, Amala Dass, Kwok-Fan Chow.

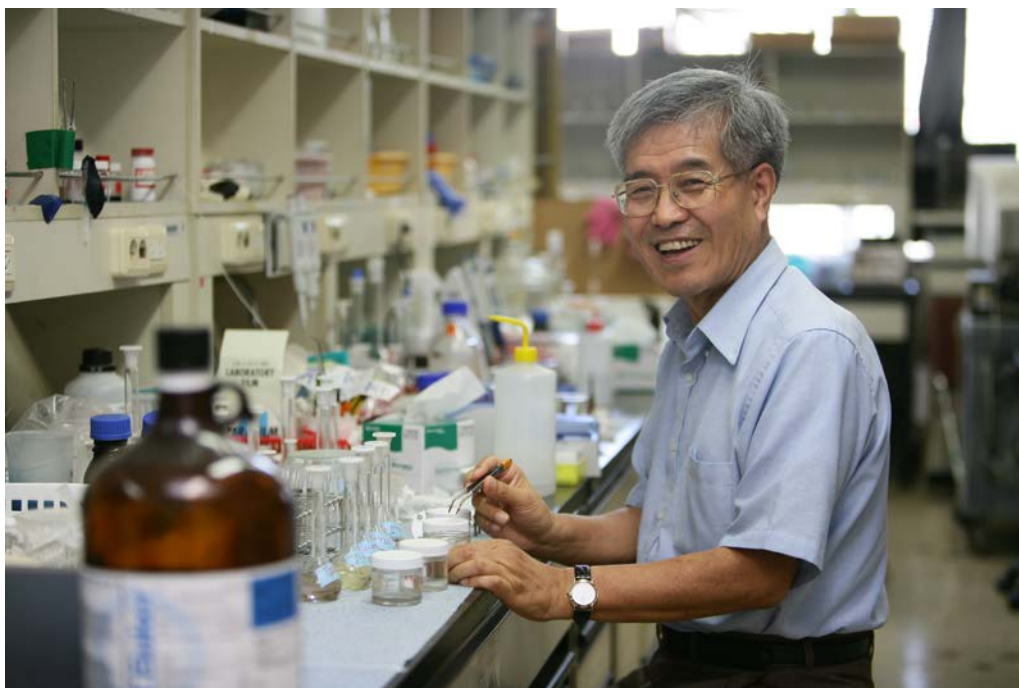


***Pictured (above and directly below):*** Robin McCarley, Frank Dalton, Joseph Tracy, Amala Dass, David Cliffel, Radha Pyati, Joel Heisler



***Pictured (above, from left):*** Alessa Gambardella, Katherine Michaux, Jeffrey Long, Tessa Carducci, and Kwok-Fan Chow.

## PROFESSOR SU-MOON PARK (1941 - 2013)



Prof. Su-Moon received his undergraduate chemistry degree from Seoul National University in 1964. Immediately after college he worked in Korea for the Choong-Ju Fertilizer Corp. (1964 - 1967) and the Yong-Nam Chemical Co. (1967 - 1970). During this period he spent much of his free time studying, with the dream and end goal of someday pursuing further degrees in the United States. In due course he moved to the U.S. and received an M.S. degree in organic chemistry from Texas Tech University in 1972 and then completed his Ph.D. in 1975 with Prof. Allen J. Bard in the field of electrochemistry.

During his Ph.D. studies Su-Moon was an exemplary graduate student. He was part of a group investigating the mechanisms and applications of electrogenerated chemiluminescence (ECL), a technique in which light is generated from electron transfer reactions of reactants in an electrochemical cell. ECL later became an important analytical method in clinical chemistry for immunoassays and is still widely used. Su-Moon's work involved the generation of excited state complexes, called exciplexes,  $(AD)^{\wedge}$ . He was the first to demonstrate that exciplexes could be produced electrochemically by reaction of  $A^{-}$  and  $D^{+}$  to form  $(AD)^{\wedge}$  and that such reactions could be observed in solvents with high dielectric constants where formation of  $(AD)^{\wedge}$  by the usual approach of reaction of  $A^{*}$  and  $D$  was not possible. His work resulted in his Ph.D. dissertation entitled "Exciplexes in Electrogenerated Chemiluminescence" and four research papers in peer-reviewed journals.

In 1975, Su-Moon packed his bags in Austin and drove across West Texas to join the chemistry faculty at the University of New Mexico in Albuquerque. He remained at UNM for 20 years, and it was during this period that he established his international reputation as an electrochemist and raised his three children. At UNM he published nearly 150 peer-reviewed scientific articles in the best national and international journals in his field. Starting at the beginning of his independent career and continuing until his death, he was a leader in the study of electrically conducting polymers. During his earliest days at New Mexico he also developed his interest in in-situ spectroelectrochemistry and impedance spectroscopy; methodologies he pioneered and which he subsequently applied to other electrochemical systems and materials. Indeed, his careful experimental studies, usually framed with the appropriate theory, of fundamental electrochemical process in the 1990s have had an important impact on our understanding of energy storage materials, corrosion, and organic electrochemistry. As an assistant professor, one of us (Crooks) had the privilege of being Su-Moon's colleague at UNM, and they held

joint weekly research group meetings for four years. It is difficult to imagine a better senior colleague (in every way), particularly for a new academic scientist finding his way, than Su-Moon.

Su-Moon was not all business. Indeed, he was a man of many talents and interests. While in Albuquerque, he spent hours tending to his vegetable garden. He was a runner before running was cool and could be observed jogging around his neighborhood in the evenings (not so easy at 5000 feet!). He also enjoyed the intricacies of American football, and in particular his favorite team, the Dallas Cowboys. Whenever a conference or symposium took him to a state with an NFL football team, he would return with that team's jersey for his young son, Ilsun. Summers were spent on coast-to-coast tours of the USA with his wife and children in the family station wagon. Wherever he was, Su-Moon had a knack for discovering the best fishing spots and the most scenic hiking routes.

In 1995 Su-Moon returned to Korea, where he joined the faculty of Pohang University of Science and Technology (POSTECH). He continued his studies of conducting polymers during this period, but he expanded his research into the fields of chemical sensing, electrochemistry in ionic liquids, and development of new electroanalytical methods. In addition to his scientific research, he contributed his administrative talents to POSTECH as Department Chair, Dean of Sciences, Director of the POSTECH Basic Sciences Research Institute, and Director of the Center for Integrated Molecular Systems. He was Editor-in-Chief of *Bulletin of the Korean Chemical Society* from 1999-2003 and President of the Korean Electrochemical Society from 2004-2005. Throughout this period he continued to teach, and in 2005 was recognized with the award for best teacher from the POSTECH chemistry department.

In 2009, Su-Moon moved to Ulsan National Institute of Science & Technology (UNIST) as Chaired Professor in the Interdisciplinary School of Green Energy and Director of the World Class University (WCU) program. His contributions to research, administration of scientific research, mentoring of his junior colleagues, and teaching continued until his death.

Su-Moon was a member of the American Chemical Society, the Electrochemical Society, the Korean Chemical Society, the Korean Electrochemical Society, Phi Lambda Upsilon, and Phi Kappa Phi. He was a Fellow of Korea Academy of Science & Technology. During his life, he was honored with the T. K. Rhee Award of the Korean Chemical Society (2000); the Q. W. Choi Award in electrochemistry from the Korean Chemical Society (2001); The Khwarizmi International Award from the Iranian Research Organization for Science and Technology and UNESCO (2008); and the Sudang Prize from the Sudang Foundation (2010). He was recognized as one of the Highly Cited Researchers in Materials Science by ISI-Thomson Scientific and as one of the 25 most prolific authors for the *Journal of the Electrochemical Society*. He published more than 300 peer-reviewed scientific articles and book chapters and was awarded 12 patents. He coauthored two books: S.-M. Park and C.-H. Pyun, "*Microcomputers in Laboratories*" (1989); and W. Paik and S.-M. Park, "*Electrochemistry – Science and Technology of Interfaces and Electrode Processes*" (2001). He presented more than 400 scientific lectures around the world.

Although he had a great passion for research, study, and expanding the knowledge of his field of electrochemistry, Su-Moon's greatest love and passion were for his family: his wife, Sunhee; daughters Hyesun and Minsun; and his son and daughter-in-law: Ilsun and Eliza. He often entertained his family with his singing and dancing, which would always bring laughter. He regaled his children with tall tales from his own youth, and encouraged them to be imaginative free thinkers. He found time for long family vacations, maintained a wonderful garden, and kept up his evening runs. He always enjoyed conferences and traveling more when his wife, Sunhee, was able to accompany him, and in 45 years of marriage he never once forgot her birthday or wedding anniversary. His passion for his students was a very close second to that of his family. Despite his many other professional responsibilities, he found time to meet with his students to discuss their professional and personal concerns. He cared about people around him and wanted them to enjoy a life as happy and fulfilling as his own. Indeed, Su-Moon was a bit of an amateur philosopher. He said "No man grows by himself. A man is delicately raised by absorbing benefits from people and their society. Once he is grown up, he has to return those benefits to the society and is obliged to grow another him by doing the same things. This is the way of making the world better generation by generation." Su-Moon was a humble and highly respected man, and yet his influence on those who knew him was profound.

On January 15, 2013, Prof. Su-Moon Park was laid to rest in Chungju, South Korea, on the hillside where he played as a child, overlooking the house where he was born, next to his mother. He will be

missed. However, for those of us who had the honor to call him father, husband, friend, colleague, or mentor, it is easy to close our eyes and see the honorable professor in a neat and humble suit with grey hair, warm smile, soft but persuasive voice, and compassionate eyes. There stands Prof. Su-Moon Park.

Ilsun Park  
Allen J. Bard  
Richard M. Crooks  
Byoung-Yong Chang

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