

SEAC *communications*

Volume 16, Number 3, September 2000

Editor

Debra R. Rolison

Surface Chemistry, Code 6170
Naval Research Laboratory
Washington, D.C. 20375-5342
rolison(at)nrl.navy.mil

Regional Editors

Alan Bond

Monash University
Clayton, Victoria
3168 Australia
a.bond(at)sci.monash.edu.au

Karl Cammann

Westfälische Wilhelms Universität
D-4400 Münster, Germany
cammann(at)uni-muenster.de

Yoshio Umezawa

University of Tokyo
Tokyo (Hongo) 113 Japan
omezawa(at)chem.s.u-tokyo.ac.jp

SEAC Web Editor

Samuel Kounaves

Department of Chemistry
Tufts University
Medford, MA 02155
skounave(at)tufts.edu



The Society for Electroanalytical Chemistry - 111 Loren Place, West Lafayette, IN 47906

Available on the WWW at <http://seac.tufts.edu>

President's Message

Chymericall figments, Platonicall Ideaes, Cabballistical fancies

This quotation, from 1652 (Gaule, *Magastrom*) helps to define the word "idea" in the Oxford English Dictionary. I want to raise for discussion some issues concerning analytical chemists and analytical chemistry, that is, the ownership of ideas.

Are there real firsts? The question has been asked and answered a number of times. There is without doubt a distribution of uniquenesses accompanying a set of ideas, for example a year's worth of papers in electroanalytical chemistry. Very few papers would reach the architectural standard implied by this quotation, also from the OED: (1670-98 Lassels, *Voy. Italy*, 123) "This was the first Cupola in Europe, and therefore the more admirable for having no Idea after which it was framed." In some ways, the most satisfying papers are those that explain, without speculation, something important or controversial. I could cite a number of examples of that, but the one that comes to mind is Rick McCreery's unraveling of the carbon surface's role in electron transfer reactions at its surface.

Should we patent our good ideas? Certainly, there are instances where this might be warranted, but I am not convinced that the current atmosphere within the Intellectual Property (IP) offices of Universities is healthy. Business is in the money business, Universities should be in the education business. While there is no doubt that money is important to the University, its role is to cultivate scholarship, free discussion (thus, tenure), and to educate students. The circumstances under which patenting might be the right thing is when a PI has a portfolio of ideas and results that she will spin off into a small company, outside the University, which may grow, creating jobs and income while providing a product or service. I think that there is little call to protect single, tightly circumscribed entities (ideas) in order to protect the idea in case some company in the future might care to enter into a licensing agreement.

Who should be the primary beneficiary of our research in Universities? This wonderful line from Swift, who wrote of little people, also

helps to define the word "idea" in the OED, and reminds us that it is the students who should be the primary beneficiary of our efforts: (1713 Swift, *Cadenus & Vanessa*, 555) "Ideas came into her mind So fast, his lessons lagg'd behind." I have recently talked to several people, researchers in Universities and Industry, as well as Industrial scientists who hold positions as University Affairs Officer. They speak with one voice, inveighing against the philosophy of current IP offices within Universities. The prevailing philosophy seems to be to attempt to own that which is produced within the University. It makes sense superficially, but when it reaches the point that research liaisons fall through because IP offices will not alter language to give to industry the fruits from the funds that they planted in a research lab, then it doesn't make sense. Deals that fall through prevent students from doing exciting research that coincidentally must have a large economic relevance.

Isn't it dangerous to allow Industry to control the research at a University, and perhaps to prevent publication? Yes, it is. But it is not a fair extrapolation from the "collaboration" scenario to the "industrial control" scenario. In my experience, industrial scientists have remarkable vision, and market data, so that they know what technical developments can really make a difference. Further, they come to University labs, not to call the shots but to get help from experts and colleagues. And, of course, they, the industrial scientists, are products of the University, so they understand the value of open inquiry and publication. By working together, a University scientist can be taught the vision of the industrial scientist, and see where her science fits into technical goals. The industrial scientist can be retaught some fundamentals. The students learn, publish, make technical achievements, and will attract the attention of potential employers.

What can we do? I don't really know. I do know that academic scientists must not let the IP office decide on whether or not to accept research money into our programs. It is we that should manage the collaboration so that freedom of inquiry and the ability to publish rapidly is a natural part of any agreement. If we, the PIs and students, are willing to give away rights to anything that is discovered in the process of our research, in return for

financial support and the agreement to publish, who is the IP office to interfere?

Other items:

- ❖ Pittcon is loaded to the gills with electrochemistry. The symposium program should be posted soon, but look for symposia of relevance by Osteryoung (nanomaterials), Michael (*in vivo*), Bakker (organized contributed sessions on sensors), Bard (scanning electrochemical microscopy), Bard (Pittsburgh Award Winner), and of course,



the Charles N. Reilley Award Symposium in honor of **Dick Buck** (above), and SEAC's Young Investigator, **Eric Bakker** (below).



- ❖ New people: Please welcome Prof. **Harry Mark** as the new Nominating Committee Chair, and Prof. **Rick Baldwin** as the new Membership Chair.

Steve Weber

Editorial

When El Prez Weber and I respectively sat down to ponder and pontificate in these early days of autumn, Steve and I were, it seems, fishing out of related streams—completely without malice or coordinated effort aforesought!

Namely—industry, scientific research, and scientists. Over the past few months, those SEAC Surfers with up-to-date e-addresses in my e-notification list have received a number of messages that list openings for variously flavored electro-bio-analytical postdoctoral or research positions at sundry academic enterprises. These notices seem to have been welcomed by the intended recipients—primarily graduate students. SEAC also has direct evidence of a satisfied “customer”—check out **Jim Rusling**'s letter in “From the (E-)Mail Bag”, found elsewhere in the issue, as he describes his successful search, thanks to SEAC, for a postdoctoral associate.

Notice how I avoided using the term “advertisement” when I described notifying my e-list of these post-graduate openings—but Prof. Rusling did not avoid the “a” word.

My question to the membership: is it now time to open these and related e-notices to include job opportunities that arise in industrial, small business, and dot-com concerns? Such directed ads for career homes in the non-academic milieu must be of equal, if not greater, interest to graduate students and postdoctoral associates. Excellent—SEAC thereby extends the services offered to its members. But many companies would gladly pay to fish in such a well-stocked pond.

Are such *ad hoc* advertisements something SEAC should disseminate for free? ... post for free, but only on a membership-coded level of the SEAC website (*i.e.*, no grand, global e-notification courtesy of Your Editor)? ... or post for a fee?

Tell me—tell your Board of Directors—what you want to see happen. Or I will play it by ear, the way I always do...

Enjoy your autumn—in the lab and out.

Debra Rolison

—SEAC Photo *Flash* —<http://seac.tufts.edu/awards.html>

2000 SEAC AWARD WINNERS CAPTURED IN ELECTRONIC PERPETUITY!

—Official Photos of the Pittsburgh Conference [Photo credit: Roy Engelbrecht Photography]—



Henry White, Recipient of the 2000 C. N. Reilley Award and Professor of Chemistry at the University of Utah, accepts his award from SEAC President, **Steve Weber**.



Merlin Bruening (Michigan State University), the recipient of SEAC's Y2k Young Investigator Award, accepts his award citation from SEAC President, **Steve Weber**.



The presenters, awardees and speakers of the 2000 C. N. Reilley Award Symposium (L to R): Dick Crooks, Steve Weber, Henry White, Allen Bard, Merlin Bruening, and Royce Murray.

—Remember—We are back at Party-Central—New Orleans—for Pittcon® 2001 (4-9 March 2001)—Be there to witness El Prez Steve Weber similarly honoring Dick Buck, our C. N. Reilley Awardee for 2001, and Eric Bakker, our Y2k+1 Young Investigator!...

—more web-based electrochemistry—

In message Wed, 28 Jun 2000 12:10:03 -0400, Dr Chris Rundle <chris.rundle@nico2000.net> writes:

The Nico2000 Ltd. website contains a wealth of information about ion-selective electrode theory and practice, including a 12,000 word Beginner's Guide to ISE Measurement, a 6,000 word Glossary of terms and formulae used in ISE work, and numerous analytical details for specific applications. Please visit our website at: www.nico2000.net.

Submission of Award Nominations

SEAC established and administers the Charles N. Reilley Memorial Award and the SEAC Young Investigator Award. Sponsored by Bioanalytical Systems, Inc., 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 a researcher who is within the first seven years of their career. This award is sponsored by Ensmann Instrumentation. In conjunction with the presentation of these awards, SEAC arranges an Award Symposium and an informal reception in honor of the Awardees at the Pittsburgh Conference. In this way, SEAC serves as the focal point for analytical chemists who wish to exchange ideas about electroanalytical chemistry at the conference.

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 three years, but submission of any additional supporting information or a renomination is welcome. **The decision for the 2002 Reilley Award will be based upon the material that is available to the Award Committee by 1 March 2001.**

Young Investigator Award

Nominees for the SEAC Young Investigator Award, sponsored by Cypress Systems, must be within seven 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. Once nominated, any individual will be considered for this award for

three years, but the submission of any additional supporting information or a renomination is welcome. **The decision for the 2002 Award will be based upon the material that is available to the Award Committee on the 1st of March 2001.**

Graduate Student Travel Award

Nominations are now closed for the SEAC Graduate Student Travel Grant, sponsored by PerkinElmer Instruments, to offset the cost of travel to the Pittsburgh Conference 2001 by promising graduate students to deliver an oral presentation in a Conference symposium. The winners will be announced in the next issue.

Requests for further information or submissions of nominations should be directed to:

Professor Richard M. Crooks

SEAC Awards Committee
Department of Chemistry; P. O. Box 30012
Texas A&M University
College Station TX 77842-3012

Tel: 409-845-5629 Fax: 409-845-1399
Email: crooks(at)tamu.edu

Kudos to Alanah Fitch!!

Loyola University Chicago has selected **Alanah Fitch**, Professor of Chemistry, as one of six winners of the Loyola Faculty Scholars Award for 2000. The Loyola Faculty Scholars are chosen on the basis of their demonstrated excellence in both teaching and research and for their contributions to advance the mission of the university. Each Faculty Scholar receives a cash award annually for the next three academic years and retains the title "Loyola Faculty Scholar" for the remainder of their tenure at Loyola. The faculty winners were selected from a list of forty-three who were nominated by their peers and reviewed by a panel, all of whom hold endowed professorships at the university.

—**Congratulate Alanah at:** [fitch\(at\)loyola.edu](mailto:fitch@loyola.edu)

OOOUR CONTINUING AND HIGHLY POPULAR SEAC FEATUREOO — **Name That Electrochemical Nerd * !!**



Pictured above is last issue's entrant in "*Name that Electrochemical Nerd*". The mystery man is none other than **Garry Rechnitz**, Professor of Chemistry at the University of Hawaii.

And again we have some elbowing with respect to the winner of the latest reprint from the latest EN.

First in (Thu, 1 Jun 2000 15:20:19 -0700), still giddy from (sort-of) winning last's issue's "Loser-Electrochemist" contest was **Dick Crooks** with: "Nerd—**Bob Osteryoung**?!"

[—Wrong!—]

Winging in on Sun, 4 Jun 2000 at 15:31:12 -0500 with a more seasoned response was **Al Bard**. "I'm a little tempted to add to Steve's view of the reviewing process from an editor's viewpoint, if I ever get the time. Oh yes, your EN is Garry Rechnitz."

And losing to the clock (and AJB), but winning major points for doing his homework:

In message 22 Jun 2000 13:34:04 -0700,
Steve Ragsdale writes:

To: [garry\(at\)gold.chem.hawaii.edu](mailto:garry(at)gold.chem.hawaii.edu)
Cc: [rolison\(at\)nrl.navy.mil](mailto:rolison(at)nrl.navy.mil)

Dear Garry (a.k.a. Newest Electrochemical Nerd)—I can identify you as the current *SEAC Communications*' Electrochemical Nerd.

What an amazing coincidence! This morning I read through some of the pioneering work you did in the '60s on the theory of the glass electrode response. Shortly thereafter, I picked-up the current issue of *SEAC Communications* and when I turned to "Name that Electrochemical Nerd", Eureka!!! That has to be Garry Rechnitz!!! When can I expect to receive the personally autographed photo? Sincerely,

Steve

—Steve... let me know if you get that autographed photograph... —

—Pictured below is this issue's entrant in "Name that Electrochemical Nerd". Again, the first correct guess (as determined by directly contacting the pictured-herein EN—*this ain't fine print, folks!*) will win an autographed copy of the EN's latest reprint.—



—...and please send in your candidates (and mystery photographs) for next issue's entrant in "*Name That Electrochemical Nerd*"!!—

* a.k.a. "*Loser-Electrochemist!*", see *SEAC Communications*, 1998, 14(1).

Plan your attendance accordingly!—Pacifichem / 14-19 December 2000 / Honolulu, HI

Symposium on Electrochemical Sciences—organized by Koichi Aoki and Maggie Ciszowska

Poster Session: Sunday, 17 December 2000 / 7:30 p.m. / Renaissance Ilikai

Monday, 18 December 2000—Renaissance Ilikai

8:05 Designing hierarchical structures to improve the rate and activity of electrode processes—D.R. Rolison, M.L. Anderson, R.M. Stroud (*Naval Research Laboratory*)

8:25 Scanning electrochemical microscopy (SECM): Voltammetric ion-selective micropipette electrodes for probing ion transfer at bilayer lipid membranes—S. Amemiya, A.J. Bard (*University of Texas at Austin*)

8:40 Electrogenerated chemiluminescence: Reaction mechanisms and applications—M. Wightman, E. McDonald, A. Slaterbeck, R. Maus, S. Forry (*UNC-Chapel Hill*)

9:00 Electrochemical event of single redox latex particles—K. Aoki, T. Lei (*Fukui University*)

9:20 Electrocatalysis at aluminum electrode modified with Mn hexacyanoferrate(III) film—A. Eftekhari, K.N. Toosi (*University of Technology*)

9:35 Photocatalytic degradation of organic compounds on crystallized TiO₂ thin film—S. Rengakuji, Y. Nakamura (*Toyama University*)

9:50 Electron-conductor separating oil-water (ECSOW) system: a new strategy for characterizing electron-transfer processes at the oil/water interface—T. Osakai, N. Akagi, H. Hotta, J. Ding (*Kobe University*)

10:10 The effect of double layer on cell performance of PEFC—Yuh-Jyh Lin, Min-Cheng Yang (*National Cheng-Kung University*)

10:25 Preparation and Characterization of Thermoresponsive Polymeric Gels: Studies with Electroactive Probes—M. Ciszowska, S.C. Petrovic, W. Zhang, W. Hyk (*Brooklyn College*)

10:45 Polyelectrolyte theory for single and double helical charge arrays—G.S. Manning (*Rutgers University*)

1:05 Are alternating current, square wave and pulse transient methods of voltammetry inherently different? The Fourier transform perspective—A.M. Bond (*Monash University*)

1:25 Electrochemical characterization of bioelectrocatalytic systems for bio-fuel cells and

bioelectrochemical reactors—K. Kano, H. Tatsumi, K. Takagi, M. Torimura, S. Tsujimura, T. Ikeda (*Kyoto University*)

1:45 The steady state response at enzyme-modified microcylinder electrodes—M. Somasundrum, K. Aoki (*Fukui University*)

2:05 Potential-induced enantioselective uptake of amino acid into molecularly-imprinted overoxidized polypyrrole—T. Nagaoka, D. Bhavana (*Yamaguchi University*)

2:20 Electroanalytical investigation of ion concentration around the growing root of bean seedling—T. Takamura, Y. Nakajima, S. Takeuchi, H. Matsuzaki (*Petoca, Ltd.*)

2:35 Origin of super-Nernstian potentiometric Response of anion-selective polymeric membrane electrodes based on M(III)-metalloporphyrins—M.E. Meyerhoff, E.D. Steinle, P. Buhlmann, S. Amemiya, E.J. Malinowska, J. Niedziolka (*Univ. of Michigan*)

2:55 Surface modification and electrochemical properties of homoepitaxial diamond electrode—T. Kondo, Y. Einaga, I. Yagi, D.A. Tryk, A. Fujishima (*University of Tokyo*)

3:10 Electrochemical and probe microscopic analysis of self-assembled monolayer of alkanethiol having carboxyl or amino group—S. Kuwabata, H. Munakata, H. Yoneyama (*Osaka University*)

3:50 Contribution of charging current in reductive desorption of self-assembled alkanethiol monolayers—T. Kakiuchi (*Kyoto University*)

4:05 Voltammetric studies and surface analysis of metalloproteins at electrodes modified with alkanethiol self-assembled monolayers—R.J. Sanedrin, M. Satjapipat, A. Baca, F. Zhou (*CalState-Los Angeles*)

4:20 Electroanalytical application of self-assembled monolayer with quinone-derivatized calix[4]arene-disulfide—H. Kim, T. Dong Chung, J. Park (*Seoul National University*)

<http://www.acs.org/meetings/pacific2000/>

Plan your attendance accordingly! Part Deux!!

**2001 Gordon Research Conference on Electrochemistry
14-19 January 2001
Ventura, CA**

Our Theme: If Charge Moves, It's Electrochemistry!

Chair: Debra Rolison (Naval Research Laboratory) [rolison\(at\)nrl.navy.mil](mailto:rolison(at)nrl.navy.mil)
Chair of Vice: Henry White (University of Utah) [white\(at\)atlas.chem.utah.edu](mailto:white(at)atlas.chem.utah.edu)

14 January 2001 Energy Transduction via Biological Charge in Motion

Sun p.m. Discussion Leader: Tayhas Palmore [University of California-Davis]

1930-2100 Carlo Montemagno [Cornell University] *Engineering Life into Nanofabricated Systems*

2100-2300 Chair's Reception: Part Deux

15 January 2001 "Field" Day

Mon a.m. Discussion Leader: Johna Leddy [University of Iowa]

0900-1000 Nicholas Leventis [University of Missouri-Rolla] *Magnetohydrodynamic Voltammetry with Disk Millielectrodes*

1000-1120 Coffee Break/Poster Session I

1120-1155 Mike Elliott [Colorado State University] *Effects of Magnetic Fields on Photogenerated Charge-Separated States of Donor-Chromophore-Acceptor Supramolecular Assemblies*

1155-1230 Ralph Nuzzo [U of Illinois-Urbana] *Driven Assembly of Electroactive Microstructures*

1700-1800 Social Hour/Poster Session I

Mon p.m. Discussion Leader: Carol Korzeniewski [Texas Tech]

1930-2030 Geri Richmond [U of Oregon] *Hydrogen Bonding at Water Surfaces: Some Surprisingly Weak Interactions*

2030-2130 Eric Stuve [U of Washington] *Ionization of Water in High Electric Fields at and near a Metal (Electrode) Surface*

16 January 2001 Electrochemistry||Materials

Tues a.m. Discussion Leader: Nick Abbott [University of Wisconsin-Madison]

0900-1000 George Whitesides [Harvard University] *Electrochemical Generation of Functional Structures*

1000-1110 Coffee Break/Poster Session II

1110-1145 Rebecca Jackman [MIT] *Microfluidic Reactors for Electrosynthesis*

1145-1230 Werner Kuhr [UC-Riverside] *Electrochemically Based Computer Memories*

1700-1800 Social Hour/Poster Session II

Tues p.m. Discussion Leader: Dick Buck [UNC-CH]
 1930-2015 Eric Bakker [Auburn University] *What's New with Ions at Electrified Interfaces?*
 2015-2100 Sossina Haile [Caltech] *The Search for Improved Solid-State Proton Conductors*
 2100-2145 Dick Crooks [Texas A&M] *Single File in a Single Pore*

17 January 2001 New Efforts in Electrochemical Power Sources

Wed a.m. Discussion Leader: Kathy Pomykal [Eveready]
 0900-1000 Marc Koper [Eindhoven University] *Theoretical and Experimental Investigations of the Electrooxidation of Fuels*
 1000-1110 Coffee Break/Poster Session III
 1110-1150 Viola Birss [U of Calgary] *Sol-Gel-Derived Ion-Insertion Materials for Batteries And Ultracapacitors*
 1150-1230 Robert Savinell [Case Western Reserve University] *Microfabricated Miniature Fuel Cells*
 1700-1800 Social Hour/Poster Session III

Wed p.m. Open Session/Mayhem—Ring Leader: Henry White [University of Utah]

18 January 2001 Home Stretch

Thu a.m. Nanoelectronics and Electrochemistry
 Discussion Leader: Dan Feldheim [NCSU]
 0900-1000 Mark Ratner [Northwestern University] *The Theory of Electron and Charge Transport in Nanoscopic Wires*
 1000-1110 Coffee Break/Poster Session IV
 1110-1150 Tom Mallouk [Pennsylvania State University] *Nanowires: Synthesis, Characterization, and Assembly*
 1150-1230 Cliff Kubiak [University of California–San Diego] *Chemically Gating Current Flow Through Molecular Nanostructures*
 1700-1800 Social Hour/Poster Session IV

Thu p.m. Electrochemistry in Unusual Media
 Discussion Leader: John Turner [NREL]
 1930-2030 Daren Caruana [University College, London] *Electrochemistry in Flames*
 2030-2110 Michael McKubre [SRI] *Electrochemical Effects in Aircraft Fuel Tank Explosions*
 2130-0600 WETS PARTY!!!!

—For further information and to register, check out:
<http://www.grc.uri.edu/programs/2001/elechem.htm>

Title IX Editorial—One Woman's Response—One Woman's Reply

—**Editor's Note:** In the last issue of *SEAC Communications*, [2000, 16(2)], **Anna Farrenkopf** of the Oregon Graduate Institute (affarren@ccalmr.ogi.edu) wrote about how she—a postdoctoral associate—is one of the go-to persons when faculty and students at the OGI have a women-in-science issue. She also mentors young female students as part of the OGI program AWSEM [Advocates for Women in Science, Engineering, and Mathematics]. Anna's essay catalyzed the following, anonymous, response—

Debra—The direct download link was a brilliant solution. Thank you. (**Thanks, Sam!**)

Though all of the articles were interesting (and applicable, since I am often a reviewer and got my Ph.D. writing digital simulations), the article by **Anna Farrenkopf** really hit home.

I recently had dinner with a friend who is a female pharmaceuticals professor. Her experience is that she does not have the access that her male counterparts have to industrial sources of funding, so she does not receive the resources they do, so her research is more basic and intuitive but with less use of expensive instrumentation, so her research is not seen as "state-of-the-art", which decreases her chance for access to industrial sources of funding. In addition, though she has difficulty getting her counterparts to participate in collaborative efforts with other departments in her university, her collaborative efforts are used to illustrate the benefits of her department when her chairman finds it convenient (especially when wooing new sources of funding).

This all reminds me of a time I was searching for my major professor. One professor wanted to know how I felt about intimacy with my major professor. Another yelled at me for being on time to the interview. And a third told me that dating would distract me so I should not date while working for him. Being exceptionally tenacious, these instances did not deter me from pursuing an advanced degree, but I know they did deter other women.

I also want to point out that there are still work-place issues in industrial settings. I recently heard a manager tell a group of men and women who have commitments at home, that the young single males in the group did not have to collaborate with the married co-workers unless everyone makes the commitment to be at work until 10:00 p.m. on weeknights and every Saturday and Sunday. Also, there are still instances of managers saying that promotions have been given to a man because he is the breadwinner, even though the woman is more qualified. There are also numerous times that I am the only female at meetings of up to 30 people. At a recent trade meeting, I was one of three females in a room of 100 people. In addition, there is a manager of a group who will not invite his direct report to his poker games because she is female, even though he invites her subordinates to the game.

These things are not made up. They are real. They undermine the authority and position of women so that they cannot continue to advance. Also, it is just as bad, if not worse, for Black and Latino scientists.

And so, I write this note anonymously because I need to work within the system on work-place issues. Thank you for giving me an opportunity to express these issues, which should be important to all of us.

—I wish I could say that this is the only horror story sent my way since my guest editorial was published in C&EN in March, but NOOOOOO!!!! I have heard from astronomers and plant physiologists and oceanographers and physicists and engineers and molecular biologists and Canadian chemists and German chemists and numbers beyond counting of American chemists and they all say that they, too, have THE SAME PROBLEM. This solidarity across scientific discipline and venue is exceedingly demoralizing... but also a call to action for men and women who want to see science become an enterprise in which the talents of all her practitioners flourish in the service of science and society.—

SEAC on the Move!

Or is that Moo-vin' On??



—**Keith Stevenson** (the one wearing the sunglasses), has bid Joe Cool (*a.k.a.* Professor **J.T. Hupp**) and Northwestern U adieu and writes from Austin where he has just joined the Dept of Chemistry at the University of Texas as an Assistant Professor of Analytical Chemistry.

Debra—Despite rumors, I have not moved to Texas to join the Benny Hinn Ministries. As you can see, I have already

started to adapt to the Austin lifestyle with the purchase of new transportation. I'm not sure if it's wise to buy a horse before the hat, but ol' Neptune was a good deal!

PS: One thing is for sure... there are Murphy's laws for moving and they are true. See Sheila Moss' Humor Columnist website at :

<http://www.humorcolumnist.com/murphymove.htm>

In my paraphrased version below, law number 6 is especially true!

1. No matter how many boxes you have, you will never have enough.
2. The abundance of friends that promise to help, suddenly become deathly ill the day you are moving.
3. Whatever it is that you need at the last minute, it's in the bottom of the box that has already been taped shut.
4. You will always find something you have been looking for for years and now you no longer need it.
5. The thing that gets broken will always be the irreplaceable heirloom—never the cheap crap.

6. Regardless of how long the drought has been going on, it will always rain on the day you move.
7. No matter how large the new place is, it will shrink before you move in.
8. No matter how far in advance you reserve the rental truck, it won't be available at the time you've requested it.

—*Cheese-and-rice, Keith! The least that Horseshoe Henry[†] could have done for his CARP[†] was to see to it that he started his life in the professorate with the appropriate hat!! May we suggest something similar to that modeled by the man himself in the following: “(Almost) Still Life—Hat, Fish, Loser-Electrochemist”. —*



...Keith clearly needs electrochemical volunteers to keep Neptune exercised... Contact him at:

[stevenson\(at\)mail.cm.utexas.edu](mailto:stevenson@mail.cm.utexas.edu)

...and send your haute couture ideas to Professor White at:

[white\(at\)atlas.chem.utah.edu](mailto:white(at)atlas.chem.utah.edu)

† See: *SEAC Communications* 1997, 13(4).

—**Andrew Slaterbeck** has vamoosed from UNC-CH and the realm of Ex-EI Prez **Mark Wightman** to join the faculty at the University of Central Florida. Contact Andrew at:

aslaterb@mail.ucf.edu

—**Philippe Buhlmann** writes from Japan, where he is finishing his work in the Dept of Chemistry at the University of Tokyo. As of 14 September 2000, he will have a new address as part of his welcome-to-Minnesota package as a new Assistant Professor in the Dept of Chemistry at the University of Minnesota in Minneapolis. Phillippe can be reached at:

buhlmann@chem.umn.edu

—**Jason Ritchie** writes [Thu, 14 Sep 2000 17:12:21 -0500]: Hi Debra—well it looks like my continuous career movement further and further into the south land has finally come to a steady-state condition with a tenure-track job here in Mississippi (California to Texas to North Carolina to MS). I can be reached at:

jritchie@olemiss.edu

—**Shelley Minter** has left the magnetic pole of Iowa (Johna Leddy's lab at the University of Iowa) for a position in the Dept of Chemistry at Saint Louis University in (yes, you guessed it!) Saint Louis. Contact Shelley at:

minteers@slu.edu

Shelley adds [Tue, 19 Sep 2000 09:50:24 -0500]: Debra—The blurb looks great to me. And the only inappropriate photos I have from Iowa, I am saving for blackmail purposes. Ha! Hope all is going well. My equipment is beginning to arrive, so everyday is Christmas in Saint Louis.

—**Dave Cliffel** writes [Tue, 26 Sep 2000 17:35:19 -0500]: Debra—I have ventured forth from Royce Murray's lab at Chapel Hill to Vanderbilt University in Nashville, TN as an assistant professor of analytical chemistry. Nashville is nearly the geographic center of a triangle of all three universities that have brought me to this point: Dayton, UT-Austin, and then UNC-Chapel Hill. Despite the country music reputation and the Democratic Presidential committee headquarters, Nashville seems quite livable. I can be found at:

d.cliffel@vanderbilt.edu

—**Jeffrey Long** has escaped from standard-issue postdoc shackles and endured the eight-month, "streamlined", U.S. governmental hiring process to become a staff scientist in the Advanced Electrochemical Materials section at the Naval Research Laboratory in Washington, DC. J. Webster can be reached at:

jwlong@ccf.nrl.navy.mil



—*your tax dollars at work!*—

From the (E-)Mailbag

—The members rattle their electrons—

In message Sat, 3 Jun 2000 21:05 -0400,
Bob Rodgers writes:

Debra and fellow SEACers—I have been using a free service from "mind-it" to track when pages, like the SEAC page, change. Since Webmeister Sammy-the-K has been pretty good about putting announcements of new news (is there another kind?) on the homepage, I point "Mind-it" at the SEAC homepage and it sends me email when that page has changed. I generally point it at the "What's New" page of a website & trust the Webmeister to keep that up to date; see: <http://minder.netmind.com/>. That would give **Jim Anderson** the nudge he needs to go check the SEAC page, without our editor having to send a million (OK, 800) emails! Regards.

P.S.: You can see an easy sign-up box in action on:

<http://members.home.net/rsrogers/whatsnew.htm>

Bob
Research Solutions & Resources
Princeton, NJ
bob.rodgers@ConsultRSR.com

—... thanks, Bob... my mail server and I will take all the aid and comfort we can get!—

In message Thu, 8 Jun 2000 12:15 -0700,
Henry White writes:

Hey, Debra—Here's some electrochemical humor for the male SEAC readers...

—What is the difference between a battery and a woman?

— A battery has a positive side.

Hank
white@atlas.chem.utah.edu

—... ah, but not for long...—

In message Mon, 12 Jun 2000 11:50 -0400,
Spencer Hochstetler writes:

Re: A picture in the June 2000 issue of *SEAC Communications*

Dear Debra—As a third grader, I was asked about animal research. I replied in writing to the poll that at some point I thought that scientists should also begin to do research on themselves if the results were "so important". Now, 19 years later—after having done animal research myself under Ex-El Prez **R. Mark Wightman**—I'm glad to see that some of my third-grade mind's statements are finally coming true!! I wish I could have been at that party!

Spencer Hochstetler, Ph.D.
Eastman Chemical Company
Analytical Chemistry Research Laboratory
spencer@eastman.com

—the party resumes in January 2001... —

In message Mon, 10 Jul 2000 11:10 -0400,
James Rusling writes:

Debra—Thanks for sending out our postdoctoral advertisement last month via your SEAC electrochemistry mailing. I received a number of responses from which I found 4 or 5 very good candidates. This was much better than I had done in January with my own limited email list. Thanks again for providing a very valuable service to the electrochemistry community. Best wishes.

Jim

Department of Chemistry
University of Connecticut, Storrs
jrusling@nucleus.chem.uconn.edu

—excellent, Jim... glad that the members could help so well and so fast—

—Two members SHAKE, RATTLE, and ROLL their electrons—

In message Thu, 3 Aug 2000 15:20 -0500,
Pete Kissinger writes:

Debra and Henry—this January's GRC looks like a super program. One of the best in YEARS. Gosh, I might even try to apply. It has been over 10 years since I last went, even though I had gone to 15 in a row at one point. **Would they let me in?**

Your theme [If Charge Moves—I'ts Electrochemistry] fits one of my themes: mass spectrometry IS electrochemistry...

We've also been having some fun connecting 4 channel thin-layer cells to electrospray MS/MS for LCECECECECMSMSMS, a little hard to pronounce... I can't do sensible business all the time....

Cheers and well done! Pete
[pete\(at\)bioanalytical.com](mailto:pete(at)bioanalytical.com)

In message Fri, 4 Aug 2000 09:32 -0700,
Henry White writes:

Pete—I think this is a great meeting schedule, too. All Debra's doing... I'm a sideline cheerleader, quietly paying attention. I do hope you attend. Henry

[white\(at\)atlas.chem.utah.edu](mailto:white(at)atlas.chem.utah.edu)

In message Fri, 4 Aug 2000 11:17 -0500,
Pete Kissinger writes:

Henry—I think I can make the Gordon Conference... the weather and seeing pals/gals and good science is very appealing.

I'll share a little secret with you: In the early '60s, electrochemistry really got bogged down in polarography of cadmium and such. Suddenly, Adams and others got into interesting chemistry at solid electrodes and CV was born. Solid-state op amps changed everything. By about 1990, I started to get tired of it again. CV mechanism studies were routine old hat. I got tired of self-assembled monolayers and ridiculous "biosensors" that never worked and stuff like "adsorptive stripping analysis" which I feel is junk science (or no science) and in any event is

not needed. It is almost as if "If it is published in an electroanalytical journal, it's no damn good, at least not to me." One more mathematics paper on pulse this or pulse that and I felt I really needed to go elsewhere.... or at least take a vacation. People proposing determination of Vitamin C with some absurd sonoechem thing or biosensor have got to make Faraday wonder at the waste of very talented energy. Some of this happens because academics are unaware (and don't make themselves aware) of the best way to make measurements in the real world.

I just had to give my "mind time" to other things. Now I see some new things... a new wave to be caught perhaps... and many of those topics are captured by this Gordon Conference program Debra has cooked up.

I love echem and like to see it thrive and not be trivialized by overworking old unproductive themes... bolder steps (while risky) appeal to me much more. I don't pretend to be a leader in this area, just a very interested observer.

As Debra knows, I see value in debate. Progress can result.

Cheers. Pete

—... well, Pete... since "they" equals "me", I suspect your application for attendance to the 2001 GRC on Electrochemistry will be approved... now you get to decide if that is a good thing or not... —

Reminders to SEAC Members

—and now a message from Harry Mark, Chair of the Nominations Committee—

(yes, there is a committee, not just Harry!)

As stated in the Society's By-laws, suggestions for candidates can be made by SEAC members to the Nominations Committee at any time during the year—we welcome your input. The names of potential candidates can be forwarded to: [markhb\(at\)email.uc.edu](mailto:markhb(at)email.uc.edu). The preparation of the next ballot will begin in early Autumn 2000.

Special SEAC Exclusives! SEAC Around the World!!!

SEAC in Japan. Ex-El Prez **R. Mark Wightman** (rmw@unc.edu) reports, in words and pictures, on the celebrations in honor of Professor Senda in Japan in March 2000.

Immediately after the SEAC festivities in New Orleans at Pittcon 2000, several SEAC members set off for Kyoto, Japan, to celebrate Professor **Mitsugi Senda's** 70th birthday. Professor Senda has had a long and highly prolific career in electrochemical research, and is especially well known for his contributions in bioelectrochemistry.

The gathering, celebrating both his birthday and his retirement was truly an international one with approximately 150 scientists and guests from around the world including Sweden, Germany, China, France, the USA as well as Japan. SEAC members in attendance included **Royce Murray** with wife, **Mirtha Umaña**, **Joe Wang** and his wife, Ruth, **George Wilson**, **Bill Heineman**, **Rob Corn**, and **Mark Wightman**.

The theme of the scientific program was Prospects of Bioelectrochemistry in the 21st century. The program and social sessions, all organized by **Tokuji Ikeda**, went very smoothly. Scientific sessions with oral presentations were held on three days. Each night there was a poster session with many active discussions. The opening talk by Royce Murray predicted that the Prospects were "sunny with strong winds". By the end of the meeting the sunny aspects of bioelectrochemistry were clearly revealed.

There was also ample time for SEAC members to play the role of tourists. Kyoto is the former imperial capital of Japan and it is full of temples and palaces. Our Japanese hosts organized tours of Japanese temples and a trip up into the mountains near Kyoto followed by a wonderful lunch in a scenic hotel. One night there were authentic Geisha girls, a Japanese play, and plenty of Japanese music. Eat your heart out, **Henry White**.



Electrochemists contemplating a Kyoto garden (—looks like Ryoan-ji to me! ... seriously Zen—)

The last night of the conference featured a banquet, Japanese style. The sushi was wonderful and the Japanese beer and sake were plentiful. The number of dishes was uncountable and all was delicious. SEAC members didn't always know what they were eating, but they all enjoyed it.



Electrochemists: 1; Sushi: 0 (L-to-R): Joe and Ruth Wang, Mark Wightman, and Bill Heineman.



***Never* get between Royce and a piece of sushi (as Mirtha Umaña-Murray knows all too well!)**

To maintain the long standing friendship between Professor Senda (standing, R) and his friends in SEAC, Royce Murray and **Mark Wightman** gave him a lifetime membership in SEAC, signed by **Steve Weber**, President.



We hope to see our new member at Pittcon for the next SEAC meeting this March.

—Mark Wightman

SEAC in England—From Femto to Teraamps: An Electrochemistry Meeting to honor the work of Martin Fleischmann, FRS. **Daren Caruana** (d.j.caruana@ucl.ac.uk)—Cartoonist, Electrochemist, and Lecturer at University College, London—volunteered to be the SEAC Stringer-on-the-Spot for the festivities in April 2000 at The University (Southampton for you Yanks).

This two-day meeting was, as the title suggests, a tribute to **Martin Fleischmann**, FRS for his contributions to electrochemistry during his long and distinguished career. The meeting, immaculately organized by **Derek Pletcher** was a thoroughly enjoyable one, which covered many areas of fundamental physical and industrial applications of electrochemistry, initiated or furthered by Martin Fleischmann FRS. Most of the presenters and delegates had either worked with or had some association with Martin through the years, the rest were past or present members of the Southampton electrochemistry group.

The first afternoon session was kicked off by an introduction and welcome by Derek and the talks were started by **Laurie Peter** and followed by **Alan Bond**, **Jim Utley**, **Phil Bartlett**, **Giuliano Mengoli** and **S.K. Rangrajan**. On the following morning the plenary lecture entitled “Unfinished Business” was delivered by Martin. Before he started his talk, there was some speculation as

to what he was going to present, however the title of the meeting was somewhat misleading, as he did not talk about cold fusion. He did however deliver an excellent talk in which he focused on the applications of QED (quantum electrodynamics) in electrochemistry. He also mentioned other ‘unfinished’ projects that he had started before the cold fusion work was published.

The morning session continued with talks from **Frank Walsh**, **Ian Dalrymple**, Geoff Kelsall and **David Genders**. In the afternoon session, **Richard McCreery**, **Maher Kalaji** and **Richard Nichols** presented their work. The rest of the afternoon was taken up by a lively poster session and a visit to the new Southampton electrochemistry group laboratories.

For some of the delegates the trip to the Southampton chemistry department was a chance to look for the IR spectrometer or the potentiostat that they built when they worked in Southampton and were sure would stand the

test of time and countless graduate students. In fact two delegates did find the IR spectrometer that they used in the 1970s for their Ph.D.—it was a touching and tearful reunion.

The formal conference dinner was held in the evening, with an after dinner speech given by Sir **Graham Hills**, who amongst other things recounted the story of how many times **Walther Nernst** was buried,[‡] which had most of the delegates in almost painful stitches of laughter. To commemorate the occasion, Martin was given a copy of his own bound Ph.D. thesis as a memento, which apparently was found whilst clearing the old electrochemistry laboratories in Southampton. The thesis was subsequently passed around and signed by all the delegates.

The following morning and final session was started by **Hubert Girault** followed by **David Williams**, **Stephen Fletcher**, **David Schiffrin** and concluded by **Guy Denault**.

All the talks were scientifically very exciting, and many included brief contributions of “I remember when Martin...”. The most memorable one was when Martin suggested using a safe as a faraday cage!

Overall the conference was a great success attended by approximately 90 delegates at the conference with an additional 60 attending only the dinner from all over the world. My hat comes off to the Derek Pletcher for organising the meeting with great precision, including strict seating instructions for each delegate at the formal dinner!

—Daren Caruana

‡ **Editor’s Note:** Planck, when commenting on the re-burial of Nernst in Göttingen, said something to the effect that one cannot bury Walther Nernst too many times... which means that Nernst must have been the archetype Loser-Electrochemist!!

SEAC in Germany—ESEAC. **Harry Mark** ([markhb\(at\)email.uc.edu](mailto:markhb(at)email.uc.edu)), SEAC’s latest Foreign Correspondent, reports on SEAC at ESEAC in June 2000 [<http://www-upb.ipc.kfa-juelich.de/ESEAC2000.htm>]
—photos by Ex-EI Prez Mark Wightman.

The joint meeting of the European Society for Electroanalytical Chemistry and our Society of Electroanalytical Chemistry took place on June 11-15, 2000 in Bonn, Germany. The meeting was an enormous success in all respects—scientific, organization, social, gastronomic and cultural. In reality, this was actually an International Meeting on Electroanalysis because, if I count correctly (and **Tom Ridgway** would tell you I don’t do anything correctly), there were participants from close to sixty countries from all parts of the globe. The organizing committee, especially **Hendrik Emons** (Chairman) and **Peter Ostapizuk** (Scientific Secretary), are to be congratulated on an outstanding job of putting on the meeting. I remember Hendrik at the previous Portugal ESEAC meeting remarking on the unfortunate continuous drizzle in Coimbra and promising to have better weather in Bonn. He certainly delivered on his promise, as the weather was absolutely perfect. Thus, the walks from the hotels in the downtown old part of the city to the meetings were interrupted frequently for stops to enjoy German beer or wine at the many outdoor cafes, etc., on the banks of the Rhine, e.g. as shown here:



Who *are* these people? Oh, yes (clockwise from center, front): El Prez Steve Weber, Royce Murray, Hubert Girault, and Phil Bartlett.

One especially nice and original touch was the idea of naming the plenary lectures after six Eminent Electroanalytical Chemists of the past 30 years. The choice of **Buzz Adams**, **Pete Kolthoff**, **V.G. Levich**, **H.-W. Nürnberg**, **Gaston Patriarche**, and **W. Simon** was excellent and pointed out the diverse nature of the field of Electroanalytical Chemistry. The

plenary speakers, **Mark Wightman**, **Royce Murray**, **Andy Ewing**, **Jacques Buffle**, **Phil Bartlett** and **Karl Cammann**, respectively, were all excellent and each speaker took the opportunity to give a look into the lives and contributions of each of the “name” scientists.



Andy Ewing, researching the lesser known aspects of Levich’s life.

Opening talks by ESEAC President **Malcolm Smyth**, SEAC President **Steve Weber** and Hendrik Emons set the tone for the meeting and described the history of each society (or in one case a “non society”) and the evolution of the joint 2000 meeting. The quality of all the oral and poster presentations was outstanding throughout. The social highlight of the meeting was the Rhine dinner cruise. The food and wine were copious and “to die for”; reminiscent of the old WETS tradition. Nothing could top the exhibition of the Irish Jig put on by the Irish contingent (with the help of that old “leprechaun” **Faraday Farbunkle** who delighted the crowd when he fell overboard, jagged instead of jigged).



Pete Kissinger (pre-visit to the Rhine maidens) and **Linda Heineman**.



The Gang of Four + Special Guest, Bill Heineman. The G-of-F (L-to-R): Royce Murray, El Prez Steve Weber, Harry Mark, and Pete Kissinger (who often is mistaken on the Continent for Faraday Farbuncle).



Really. I mean it. Who *are* these people? (clockwise from far left): Hubert Girault, Malcolm Smyth, Phil Bartlett, Helmut Baltruschat, obscured (but not obscure) electrochemist, Jaques Buffle, and Telly Savalas.

There was, of course, a sad undercurrent throughout the meeting as we all mourned the unexpected passing of our old friend and colleague, **Eberhard Steckhan**. He is greatly missed.

In view of the “international” success of the joint meeting, perhaps the board of SEAC should consider another joint meeting to be held in this country sometime in the next few years.

—Harry Mark

—SEAC Official News—*New Chairs for Old!*

Harry Mark is the new chair of the Nominations Committee (replacing **Jim Cox**) and Rick Baldwin is the new chair of the Membership Committee (replacing **Sue Lunte** who is flying up the officer ranks to her new duties as Secretary).

—Reminders to the Surfin' SEAC non-members—*Join us!*

SEAC's (new!) Membership Chairman, **Rick Baldwin** [Department of Chemistry; 2320 South Brook Street, University of Louisville, Louisville KY 40292, USA. E-mail: rick.baldwin@louisville.edu] will now receive all NEW MEMBERSHIP APPLICATIONS and INITIAL DUES PAYMENTS. Remember: a membership form can be downloaded in either HTML or PDF format from the SEAC website [<http://seac.tufts.edu/membership.html>]. Any new members recruited by current members should send their completed applications directly to Rick.

—SEAC Officers—

President (1999-2001)	Stephen G. Weber Department of Chemistry Chevron Science Center University of Pittsburgh Pittsburgh PA 15260	Phone: 412-624-8520 FAX: 412-624-8611 E-mail: sweber@imap.pitt.edu
President-Elect (2001-2003)	Mark E. Meyerhoff Department of Chemistry University of Michigan Ann Arbor MI 48109	Phone: 734-763-5916 FAX: 734-747-4865 E-mail: mmeyerho@umich.edu
Past-President (1997-1999)	R. Mark Wightman Department of Chemistry C.B. 3290 University of North Carolina Chapel Hill NC 27599-3290	Phone: 919-962-1472 FAX: 919-962-2388 E-mail: rmw@unc.edu
Secretary:	Susan M. Lunte Department of Pharmaceutical Chemistry 2095 Constant Avenue University of Kansas Lawrence KS 66047	Phone: 913-864-3811 FAX: 913-864-5097 E-mail: lunte@ukans.edu
Treasurer:	Joseph T. Maloy Department of Chemistry Seton Hall University South Orange NJ 07079	Phone: 201-761-9031 FAX: 201-761-9772 E-mail: jtmaloy@att.net
Committee Chairs:		
<i>Membership:</i>	Richard P. Baldwin Department of Chemistry 2320 South Brook Street University of Louisville Louisville KY 40292-0001	Phone: 502-852-6798 FAX: 502-852-8149 E-mail: rick.baldwin@louisville.edu

Nominating: Harry B. Mark, Jr.
 Department of Chemistry
 University of Cincinnati
 Cincinnati OH 45221-0172
 Phone: 513-556-9236
 FAX: 513-556-9239
 E-mail: [markhb\(at\)email.uc.edu](mailto:markhb@email.uc.edu)

Activities: Craig Bruntlett
 Bioanalytical Systems, Inc.
 2701 Kent Avenue
 West Lafayette IN 47906
 Phone: 765-497-5806
 E-mail: [craig\(at\)bioanalytical.com](mailto:craig(at)bioanalytical.com)

Awards: Richard M. Crooks
 Department of Chemistry
 Texas A&M University
 P.O. Box 30012
 College Station TX 77842-3012
 Phone: 409-845-5629
 FAX: 409-845-1399
 E-mail: [crooks\(at\)tamu.edu](mailto:crooks(at)tamu.edu)

Pittcon Liaison: Adrian C. Michael
 Department of Chemistry
 Chevron Science Center
 University of Pittsburgh
 Pittsburgh PA 15260
 Phone: 412-624-8560
 FAX: 412-624-8611
 E-mail: [amichael+\(at\)pitt.edu](mailto:amichael+(at)pitt.edu)

Newsletter Editor: Debra R. Rolison
 Surface Chemistry Branch; Code 6170
 Naval Research Laboratory
 Washington DC 20375-5342
 Phone: 202-767-3617
 FAX: 202-767-3321
 E-mail: [rolison\(at\)nrl.navy.mil](mailto:rolison(at)nrl.navy.mil)

Webmeister: Samuel P. Kounaves
 Department of Chemistry
 Tufts University
 Medford MA 02155
 Phone: 617-627-3124
 FAX: 617-627-3443
 E-mail: [skounave\(at\)tufts.edu](mailto:skounave(at)tufts.edu)

Board of Directors

<u>1995-2000</u>	1996-2001	_____
James Anderson []	James A. Cox []	
Marcin Majda []	Richard M. Crooks []	
Robert Rodgers []	Debra R. Rolison [
<u>1997-2002</u>	1998-2003	_____
Craig Bruntlett	Richard Baldwin	
Johna Leddy	Susan Lunte	
Dennis Tallman	Marc Porter	
<u>1999-2004</u>	2000-2005	_____
Andrew Gilicinski	Lou Coury	
Harry Mark	Howard Dewald	
Adrian Michael	Greg Swain	