



SEAC NEWSLETTER

Volume 5, No. 1, February 1988

The Society for Electroanalytical Chemistry

President's Message

The SEAC Officers and Board have been busy. Enclosed with this mailing you will find information on the ByLaw revisions which have been under consideration for 18 months. These are now endorsed by the Board. It is crucial that you send in your ballot to Joe Maloy at the earliest possible date (do it today in the envelope provided) so that SEAC business at the Pittsburgh Conference can proceed smoothly.

The extension of officers' tenure to two years and the change to July 1st for beginning terms of office will certainly facilitate the efficient operation of your Society. As a third matter, a means of electing the "management" of SEAC in a more democratic manner by the membership is being implemented.

Now that we are about to present our 5th Reilley Award, the Society has matured enough to want to spread its wings and attract a larger, more diverse membership. We are keenly aware of the relative lack of industrial members. We intend to reach out to the industrial community more aggressively this year. At the recent Board meeting in Ventura, California, lifetime foreign memberships were approved. Recognizing that the interest in electroanalytical chemistry is in some ways more prominent outside the U.S., we enthusiastically welcome foreign members.

This is the last issue of the newsletter under the editorship of Prof. William Geiger. Bill has served our organization well during its formative stages and has helped develop what is now an attractive newsletter. Many of our members have commented to me how much they enjoyed the articles by Reilley Awardees on their careers and historical perspectives. Thanks to Bill for a job well done.

Dr. Richard Durst of NBS has just agreed to serve as our new editor. There is a plan to expand the newsletter both in scope and frequency and to build a "Board of Contributors" to assist the editor in compiling material for each issue. Both Dick and I would like to hear from any member who has thoughts on the newsletter and the directions it might take. It is hoped that increased frequency will bring increased participation.

Pete Kissinger

P.S. SEAC will have a booth at the Pittsburgh Conference. We need volunteers to serve in the booth for periods throughout the week. Try to stop by Monday morning and sign up for a specific time slot. It's a good place to meet other electroanalytical enthusiasts! We expect to sign up many new members at Pittcon. Your help is needed!

New SEAC Directors:

The following Directors of SEAC were elected to the Board by the membership:

James Q. Chambers (University of Tennessee)

Robert J. Nowak (Naval Research)

William G. Peterson (EG&G PARC)

We look forward to having their guidance in the years ahead. Thanks to those who also ran for election in this close contest. These new Directors will serve until 1993.

Will We See You in the French Quarter?

As was previously announced, Prof. Royce W. Murray will receive the Reilley Award in Electroanalytical Chemistry on Wednesday, February, 24th, Room 13/15 of the New Orleans Convention Center (1:30 p.m.). We encourage all SEAC members to attend! Following this symposium at 4:45 p.m., the Annual Meeting of SEAC will be held at which time officers of SEAC will be introduced and plans for the coming year will be described. This is a good chance for members to ask questions of their Board members (and to volunteer to participate more actively in SEAC).

SEAC Reception:

Tues February 23rd, 5:30 - 7:30 p.m., Sheraton New Orleans, Bayside B Room. Please join Royce and the SEAC Board in toasting the future of electroanalytical chemistry!

GORDON RESEARCH CONFERENCE

ANALYTICAL CHEMISTRY (Note the large number of SEACers!)

New Hampton School, New Hampton, New Hampshire
August 7-12, 1988

William R. Heineman, Chairman
Ira W. Levin, Vice Chairman

Monday, August 7, 1988

Morning Session, Mark E. Meyerhoff, Discussion Leader
Chromatographic Immunological Analysis, Fred E. Regnier,
Purdue University

Fundamental Studies of Immunosorbents, George S. Wilson
University of Kansas

Evening Session, James W. Jorgenson, Discussion Leader
High Performance Capillary Electrophoresis, Barry L. Karger
Barnett Institute
Studies in Retention Mechanisms of Reversed Phase Liquid
Chromatography, John G. Dorsey, University of Florida

Tuesday, August 9, 1988

Morning Session, Karl Bratin, Discussion Leader
Detectors for the High Sensitivity LC Analysis of Neurogenic
Amines and Peptides, Theodore Kuwana, Center for **Bioanalytical Research/University** of Kansas
In Vivo Monitoring with Microdialysis Sampling Probes
Coupled to Liquid Chromatography, Peter T. Kissinger,
Bioanalytical Systems/Purdue University

Evening Session, Thomas C. Pinkerton, Discussion Leader
Pulsed **Amperometric/Pulsed** Coulometric Detection at Noble
Metals for HPLC, Dennis C. Johnson, Iowa State University
Samplers and Detectors for **Non-electroactive** Anions Based on
Conducting Polymer Electrodes, Harry B. Mark, Jr., University
of Cincinnati

Wednesday, August 10, 1988

Morning Session, Sydney W. Fleming, Discussion Leader
Accuracy and Interlaboratory Variation in Trace Analysis,
Bernard J. **Bulkin** BP America
Challenges in Process Analytical Chemistry, Melvin V. Koch,
Dow Chemical Company

Evening Session, Charles N. McEwen, Discussion Leader
Ion Traps and Ion/Surface Collisions: Quo Vadis Mass
Spectrometry?, R. Graham Cooks, Purdue University
Microorganism Analysis by Desorption Mass Spectrometry
Catherine Fenselau, University of Maryland, Baltimore County

Thursday, August 11, 1988

Morning Session, Jerome L. Ackerman, Discussion Leader
The Potential of Two-Dimensional NMR for the **Determination**
of Molecular Structure and Dynamics, Richard Ernst, ETH
Center, Zurich, Switzerland
Chemical Analysis at Surfaces by NMR Spectroscopy, Cecil R.
Dybowski, University of Delaware

Evening Session, James W. Robinson, Discussion Leader
Open Session

Friday, August 12, 1988

Morning Session, Ramon M. Barnes, Discussion Leader
Argon and Helium Plasmas as Sources for Plasma Mass
Spectrometry: Applications to Speciation, Joseph A. Caruso,
University of Cincinnati

Improved Precision and Acc
mal Atomic Absorption Sp
tional Bureau of Standards

trother-
ns, Na-

Bard Strikes A

Congratulations to Professor Allen J. Bard for **winning** the
ACS Division of Analytical Chemistry/Electrochemistry
Award. Al has started off this new series just as he did for the
Reilley Award which he received in 1984. It is good to see
this increased recognition of electroanalytical chemistry by the
ACS. It's clear that they felt some pressure from the success
of the Reilley Award and its enormous symposium at the Pit-
tsburgh Conference. This is good for the health of our uphill
struggle vs. the spectroscopists and chromatographers (who
outnumber us 20: 1). Quality vs. quantity!

Joe Maloy observes that it is interesting that the Bard
Award Symposium (BAS) is sponsored by EG & G. This is
the kind of observation that has made Joe famous. He's the
SEAC Membership Guru. We need members. One of the true
benefits of membership is a chance to enjoy Joe's wit and wis-
dom. The cost is very low. Let's get some more members.

Dopamine in thalamus linked to schizophrenia

University of Kansas scientists have presented strong
evidence that a chemical messenger in the brain is related to
schizophrenia.

The KU researchers have found high concentrations of the
chemical, dopamine, in the thalamus, a part of the brain
neglected by most researchers. An article on the work appears
in the **current** issue of Schizophrenia Bulletin, published by the
National Institute of Mental Health.

Scientists searching for schizophrenia's biological **source**
had suspected dopamine but could not find significantly larger
quantities in the schizophrenic brain.

In eight of nine schizophrenic brains they examined, Ralph
"Buzz" Adams, University distinguished professor of
chemistry, and research associate Arvin Oke found greatly
elevated levels of dopamine in the thalami - "as high as 50 to
200 percent greater than in normal brains," Adams said. Other
researchers, looking elsewhere in the brain, found much
smaller differences in dopamine levels between normal and
schizophrenic brains.

Adams and Oke looked at the thalamus because
"schizophrenics just don't see, hear or feel the outside world
like other people do," Adams said. "And the thalamus over-
sees every bit of that. It's the brain's primary sensory station."
Nevertheless, most **researchers** have ignored the thalamus,
Adams said, because there's normally little dopamine there.

Dopamine functions like the brain's dozen or so other
chemical messengers. It is released in minute quantities from
the end of one nerve cell and moves across a gap to a receptor
site on a second cell, firing that cell to action.

Researchers were led to investigate dopamine because
studies showed that phenothiazine drugs like Thorazine, found



Ralph "Buzz" Adams, left, university distinguished professor of chemistry, and research associate Arvin Oke confer about their research findings.

to reduce schizophrenic symptoms, worked by attaching to dopamine receptor sites.

The implication was that without the phenothiazines, schizophrenics must suffer an overstimulation of those sites. The logical culprit was too much dopamine.

To find direct evidence of dopamine excess, researchers have looked at parts of the brain associated with motor activities where dopamine concentrations are highest.

"People have found only 10 to 20 percent more dopamine in schizophrenic brains, compared to normal ones, at those sites," Adams said. "There was one report of 30 percent. That's not very impressive."

-Roger Martin and Bill Cannon

(Reproduced from a University of Kansas Publication. Electrochemical techniques first developed in this **Reilly** Award winner's lab have been a key to this important neuroscience research project.)

Photo by Steve Dick

From the Double Layer

The other day I received a report of "alumni giving" from one of the several dozen institutions (so it seems) that I must have attended at one time or another. I notice the array of categories they place you in to identify you as a major, minor, or inconsequential donor. Is there any doubt as to whether this is an expression of thanks or an attempt to embarrass those in the "cheapskate club" to move up to the "century club" or the "founders club" next year? Perhaps this would be a good scheme for SEAC. I can envision the platinum plates, the gold group, the mercury marauders, and the carbon paste cowboys (those who pay their dues late). In any case, if you haven't **paid** your SEAC dues, you'll be off our mailing list for the very next newsletter! Prof. Faulkner awaits your check!

---Faraday Farbuncle

Postdoctoral position:

Studies using EXAFS techniques for the in situ characterization of electrode processes. Recent emphasis on metal species in polymer modified electrodes. Contact William R. Heineman or Richard C. Elder, Department of Chemistry, University of Cincinnati, Cincinnati, OH 45221-0172.