# SEAC*communications*

Volume 20, Number 2, October 2004

**Editor**

***Anna Brajter-Toth***
Department of Chemistry
University of Florida
Gainesville, FL 32611-7200
Atoth(at)chem.ufl.edu

**Regional Editors**

***Alan Bond***
Professor Alan M. Bond
School of Chemistry
Monash University
Victoria 3800 Australia
alan.bond(at)sci.monash.edu.au

***Karl Cammann***
Westfälische Wihelms Unversität
D-4400 Münster, Germany
Cammann(at)uni-muenster.de

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

**SEAC Web Editor**

***Samuel Kounaves***
Department of Chemistry
Tufts University
Medford, MA 02155
samuel.kounaves(at)tufts.edu

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

***Available on the WWW at http://electroanalytical.org***

http://electroanalytical.org/

**SEAC** - *20 YEARS* -materials science – bioanalytical chemistry

We thank our sponsors: BAS, Cypress Systems, CH and Gamry Instruments, Nova Biomedical and PAR.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

## In this issue:


- *President's Message*
- Bob Osteryoung and Katsumi Niki
- PittCon® 2005 update and 2004- roundup
  - SEAC REILLEY AWARD goes Down Under to Alan Bond
  - SEAC Young investigator Award winner David E. Cliffel
  - *SEAC DOMAIN SITE*
  - *DUES RENEWAL*
- SEAC Members in the News-
  - -Alan Bard receives the Welch medal and the W. H. Nichols Medal Award of the NY section of the ACS
  - Henry White, Jean Pemberton and Ted Kuwana win ACS Awards
  - Eric Bakker wins Roche Diagnositcs Sensor Award
  - New Award in Bioanalytical Science named for Ralph Adams
- Science News-
  - -Psychoanalytical Chemistry and Flying Elephants
  - -Science Ethics
- Meetings…. Meetings….Meetings-
  - -Electrochemistry GRC is back
- ON THE MOVE
- JOBS
- -e- mail - you wrote- catch up on the news


---

***Quote to remember:" Life is too short to drink bad wine".***
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# President's Message

This time I got the pictures……

## - Bob Osteryoung and Katsumi Niki

# Osteryoung, 77, NCSU professor

**The News & Observer, Raleigh, N.C.**
**Aug. 16, 2004**

Osteryoung, revered for his teaching, was known for his wit.

By Ryan Teague Beckwith
Staff Writer

Robert Osteryoung was on a ventilator at Duke Medical Center last year when he learned that a teaching award had been established in his name at N.C. State University.

Unable to speak, he rolled his eyes to express how ridiculous the idea was.

Osteryoung, 77, died Aug. 10 of complications from Lou Gehrig's disease.

He did not think he was particularly good at teaching. A research scientist by nature, he had an old-fashioned approach in class. "He would just put it up there and say, 'Learn it, it's good for you, and I'm done,' " recalls Dennis Wertz, coordinator of N.C. State's general chemistry program.

Still, Osteryoung was one of the most influential heads of the chemistry department in recent memory, Wertz said.

When Osteryoung came to N.C. State as a researcher in 1992, he was already 65 -- an age when many others retire. Despite his lengthy resume, he intended to work as long as possible, like his mother, who supported herself at a clothing store into her 80s.

Osteryoung was asked to become chairman of the department when his then-wife, Janet, left the position for another job in Washington, D.C., in 1994. He said he would only do it if he could be more than a figurehead.

At the time, a startling percentage of students were failing the introductory general chemistry course. Osteryoung revamped the curriculum, taking out math and focusing more on the principles -- an approach now copied across the country.

He successfully lobbied for new state-of-the-art undergraduate teaching laboratories. Though initially appointed only for a year, he ended up chairing the department for four years because he was so popular, colleagues said.

Outside the classroom, Osteryoung was known for a wit that was as dry as his martinis and a wardrobe designed to shock.

Once, while working at Colorado State University, Osteryoung greeted his daughter, Kathy, wearing orange socks, plaid pants, a paisley shirt and a wild tie. He explained that he was going to meet the new graduate students that day.

"I want to scare the hell out of them," he told her.

An avid mystery reader, Osteryoung thrived on puzzles. Early in his career, he started research on room-temperature molten salts, a topic that held great interest for scientists trying to develop batteries for missiles and other applications.

As a result, his graduate dissertation at the University of Illinois was classified after he finished, said Debbie Boxall, his companion and former post-doctoral researcher at N.C. State.

Aside from a nine-year stint in the atomics division of what is now known as Rockwell International, Osteryoung spent nearly all of his career in academia, working at the Rensselaer Polytechnic Institute, the California Institute of Technology and the State University of New York at Buffalo.

Though he retired in January 2003 because of university budget constraints and his

deteriorating health, Osteryoung continued coming into his office for months afterward.

When he finally had to enter the hospital, unable to communicate except for writing on a small white board, he asked that his colleagues not visit him. His four children did, and on one occasion they serenaded him with a few of the songs he always sang while working.

It was an old novelty tune about a man who has an unfortunate encounter with a bird.

"I won't worry, I won't cry," they sang. "I'm just glad that cows don't fly."

---

**This from Fred Anson:**

# Robert Allen Osteryoung

Bob Osteryoung, long time member of SEAC and an organizing founder of its predecessor society, WETS (Western Electroanalytical Theoretical Society), died on August 10, 2004 in North Carolina of complications stemming from Lou Gehrig's disease.

Osteryoung published more than 225 papers covering a remarkable range of research topics: Fused salt electrochemistry, pioneering applications of digital electronics and computers to the acquisition and analysis of experimental data, the development of pulse techniques in electroanalytical chemistry (pulse polarography; Osteryoung square wave voltammetry), co-invention of the technique of chronocoulometry, the analysis of reactants adsorbed on electrode surfaces, is a partial list. He was a caring and stimulating mentor to a large number of graduate students and post-doctoral research associates while a member of the faculty at five different universities: RPI, Caltech, Colorado State, SUNY Buffalo, and NCSU.

Bob Osteryoung was also a highly successful academic administrator. He served as Chair of the Chemistry Departments at both Colorado State and North Carolina State. His many contributions to improvements in the General Chemistry Program at the latter department lead to the recent establishment of the Robert A. Osteryoung Award for Excellence in Teaching there.

In addition to SEAC, Osteryoung was also an active member of the American Chemical Society, the Electrochemical Society, the International Society of Electrochemistry, and he attended almost every Gordon Research Conference in Electrochemistry from the first in 1964. For 15 years Osteryoung served as an Associate Editor at Analytical Chemistry where his experience and knowledge were much appreciated by that journal's editors.

The awards and recognition received by Osteryoung included SEAC's C.N. Reilley Award, the Award in Electrochemistry of the Analytical Division and the Schoellkopf Medal of the American Chemical Society, the Max Bredig Award of the Electrochemical Society, and the Colorado ACS Section Award. He was elected in the first class of Fellows of the Electrochemical Society and was also elected as a Fellow of the American Association for the Advancement of Science.

Those who knew Bob would agree that he was one of a kind. A talented chemist whose many research achievements were coupled to a contagious enthusiasm for life, students, colleagues, friends, food and wine. The electrochemical community has lost one of its most admired practitioners and many SEAC members will feel the loss of a dear and respected friend.

***Contributions in honor of Robert Osteryoung are being accepted by the ALS Therapy Development Foundation and/or by WUNC, the local public radio station in Raleigh, NC.***

---

## This from Cynthia Wertz:

Robert's family, colleagues, and friends joined together in celebration of and in tribute to his life and accomplishments on Saturday, August 21, 2004, in the Marye Anne Fox Science Teaching Laboratory (MAF) building at 6:00 PM. The location was very appropriate as Robert was one of the main advocates for the new laboratory facility and was involved from the inception of the building through its construction. It opened in January 2004. A reception followed. Dress was casual and rainbow suspenders were optional. I have attached the obituary, which gives a number of highlights of his life. The list of speakers on the program was as follows:

Fred Anson (Caltech), Ray Fornes (for Jerry Whitten, Dean, College of Physical and Mathematical Sciences, NCSU), Ken Hanck (Associate Department Head, Dept. of Chemistry, NCSU), Boone Owens (North American Aviation; now Rockwell Science), Joe Gardella (Univ. of Buffalo), Frank Bright (Univ. of Buffalo), Paul Trulove (US Navel Academy), Rob Mantz (Wright Patterson Airforce Base), Royce Murray (UNC, Chapel Hill).

We had a quote from Robert that we used on the program.

"***It has been much fun and more pleasure to interact over the years with people of great talent and the ability to withstand my hysteria...Hopefully, the party's not quite over and with luck it will go on for awhile***." - Robert Osteryoung, 1987

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Robert Allen Osteryoung, 77, highly respected scientist and loving father, died August 10. A memorial service will be held on Saturday, August 21 at the Marye Anne Fox Science Teaching Laboratories on the campus of NC State University. Dr. Osteryoung is survived by son Adam Osteryoung, daughters Kathy Osteryoung, Sue Arellano and Anne Walter, four grandchildren, and beloved companion Debbie Boxall. He was preceded in death by his son David Osteryoung. He was a native of Cleveland, Ohio and the son of the late Adolph and Marie Osteryoung.

Robert leaves behind a legacy of scientific achievement spanning more than 50 years. During that time he published more than 225 research papers and was the recipient of several professional awards. Former Professor and Head, Department of Chemistry at NC State University, he retired in January, 2003. Robert was educated at Ohio University and the University of Illinois. He was on the faculty of Rensselaer Polytechnic Institute from 1954 to 1959, and from 1959 to 1968 was at Rockwell International in Los Angeles. During that time he was also a Visiting Associate in Chemistry at the California Institute of Technology. In 1968 he was named Professor and Chairman of the Chemistry Department at Colorado State University. In 1977-78 he served as Program Manager, Air Force Office of Scientific Research, Washington D.C. Robert joined the faculty of the State University of New York at Buffalo as a Leading Professor in 1979, followed by a Research Professor appointment at NC State University in 1992. He was Chemistry Department Head at NC State from 1994 to 1998.

He was active in the American Chemical Society and the Electrochemical Society, serving in a variety of offices at national and local levels. He was a past Chairman of the Analytical Division of the ACS, and served as Associate Editor for the journal *Analytical Chemistry* for 15 years.

Robert received the Colorado ACS Section Award in 1978, and became a Fellow of the American Association of the Advancement of Science in 1980. He received the Charles N. Reilley Award in Electroanalytical Chemistry in 1987, was elected to the first class of Fellows of the Electrochemical Society in 1990, and received the ACS Schoellkopf Medal in 1990. In 1991 the Electrochemical Society awarded him the Max Bredig Award. He also received the Ohio University College of Arts and Sciences Outstanding Alumnus Award in 1992.

Most recently, Robert's efforts were instrumental in obtaining funds for the new Marye Anne Fox Science Teaching Laboratory at NC State University; a plaque recognizing his tireless efforts to ensure the building became a reality hangs in the lobby. The Robert A. Osteryoung Award for Excellence in Teaching has been established at NC State in recognition of his outstanding contributions to improvements in the General Chemistry Program.

In lieu of flowers, contributions may be made to the ALS Therapy Development Foundation, or to local public radio station WUNC, whose broadcasts were a source of

great joy and comfort to Robert in his final days. Please include Robert's name on any donations to WUNC so that they will be recognized as a memorial gift.

---

*Bob once told me: " I've accepted the damn thing". We were at a meeting and this was his hello. Few editors feel comfortable doing this these days. Too bad we can not go on.*

---

This from Fred Hawkridge:

## Professor Katsumi Niki

Professor Katsumi Niki, an internationally recognized electrochemist, died unexpectedly on May 4, 2004 in Pasadena, California where he was working as a Visiting Associate in the Department of Chemistry at the California Institute of Technology. He devoted his entire career to the advancement of electrochemistry through his research efforts and through service in leadership roles in the field. He contributed to all aspects of the electrochemical sciences and exhibited a constantly cheerful, positive, and creative demeanor. Professor Niki demanded rigor and accuracy in all efforts in electrochemical science, but he was steadfastly constructive, and he readily shared his warm smile.

Professor Niki's vision of an internationally coherent effort in electrochemical science became evident early in his career. After doing his undergraduate work at Yokohama National University and taking his master's degree from Tokyo Institute of Technology, he received his Ph.D. at the University of Texas at Austin in 1966 working with Professor Norman Hackerman. He then returned to Yokohama National University as a lecturer in the Department of Electrochemistry in 1966, becoming full Professor in 1983. At Yokohama National University his research in electrochemistry gained international visibility and respect for its creativity and rigor. Professor Niki worked energetically to facilitate exchange visits for research and seminars by electrochemists between Japan and other countries. Any electrochemist who was fortunate to visit Japan, and the list was long, likely was invited into Professor Niki's home where he and his wife, were most gracious hosts. The "Visitor Book" that was kept and displayed prominently in their living room bore the signatures and inscriptions from essentially all of the electrochemists that took the field from its early roots into the field that now enjoys a suite of new methods involving faradaic reactions made possible by the advent of analog electrochemical instrumentation in the 1960's.

While Professor Niki's work covered a range of interests spanning the field of electrochemistry, he is the one who first demonstrated facile, reversible direct electron transfer between an electron transfer protein and a metal electrode in 1977. The unique

four-heme structure of cytochrome $c_3$ afforded an intriguing thermodynamic and kinetic system that his research group elucidated. This work extended to the very detailed examination of electron transfer of proteins through the bonds of self-assembled monolayers and he perfected the use of spectroscopic techniques such as potential-modulated and Raman spectroscopy for these studies.

During Professor Niki's career he held leadership positions in many international professional organizations including the International Society of Electrochemistry, The Electrochemical Society, and the International Union of Pure and Applied Chemistry. He was a leader in recognizing the critical importance of international interaction and collaboration. The electrochemical community has lost one of its invaluable leaders. An international community of his friends and colleagues will miss Professor Niki.

This from Joe Maloy:

Dear Anna,

Thank you for sending out this sad news.

Bob was one of the very best, a guy who was most supportive of SEAC at the beginning. He always viewed SEAC as just an expensive upgrade of WETS, whose dues, for life I believe, were only $1.00. I think he had it right there.

Katsumi was either a graduate student or a post-doc at UT when I was there. He was a nice guy, who was quite adaptable. His name was Katsumi Kanzaki at that time. He married a young lady, Ms. Nikki, who did not have a brother to carry on the family name. He taught all of us about a remarkable Japanese custom when he changed his name instead.

I'll miss both of them for awhile.

Still in good cheer,

Joe

Johna Leddy alerted me to Katsumi's obituary now at http://www.ise-online.org/portraits/niki_03.html.

## - PittCon® 2005 update and 2004- roundup

## - SEAC REILLEY AWARD goes Down Under to Alan Bond

Henry White as president of SEAC had the pleasure of congratulating the award winners on behalf of SEAC, once the Award was announced by the Awards Committee's chair Werner Kuhr. We join in the congratulations!!!!!

Dear Alan,

On behalf of the Society of Electroanalytical Chemistry, congratulations on very well-deserved recognition of your many contributions to electroanalytical chemistry.

I look forward to presenting the 2005 C. N. Reilley Award to you in Orlando.

Sincerely,

Henry

# - SEAC Young investigator Award winner David E. Cliffel

Dear David,

Congratulations on a very well deserved recognition.

I look forward to presenting the SEAC YI Award to you at the 2005 Pittsburgh Conference as part of the Reilley Symposium, to be held in Orlando, Florida during the week of February 27.

Sincerely,

Henry

---

**The Society for Electroanalytical Chemistry (SEAC) Charles N. Reilley and Young Investigator Awards Symposium**

Arranged by Stephen W. Feldberg

This award symposium will be presented at PITTCON® 2005 to be held at the Orange County Convention Center in Orlando, Florida, February 27 - March 4, 2005.

The Society for Electroanalytical Chemistry (SEAC), an organization dedicated to promoting awareness and growth in the field of analytical electrochemistry, will honor two electroanalytical chemists at its annual half-day awards symposium to take place at PITTCON® 2005:

- **Alan M. Bond**, R. L. Martin Distinguished Professor of Chemistry, Monash University, Clayton, Australia, is the recipient of the 2005 Charles N. Reilley Award in Electroanalytical Chemistry. The title of his award address is "A Unified Fourier Transform Based Approach to AC, Square Wave, Pulsed and Related Forms of Voltammetry and Impedance Spectroscopy".

- **David E. Cliffel**, Vanderbilt University, is the recipient of the 2005 Young Investigator Award. The title of his award address is "Multianalyte Monitoring of Cell Metabolic Responses to CBW and Environmental Toxins".

Also speaking in the symposium honoring Alan Bond and David Cliffel:

- Royce W. Murray, Kenan Professor of Chemistry, Department of University of North Carolina, Chapel Hill will discuss "Electron Transfer Chemistry of Metal Quantum Dots".

- Henry S. White, Professor of Chemistry, Department of Chemistry, University of Utah will discuss "Chemically Modified Nanopore Electrodes".

- R. Mark Wightman, Kenan Professor of Chemistry, Department of University of North Carolina, Chapel Hill, will discuss "Illuminating Chemistry: Electrogenerated Chemiluminescence on the Millisecond Time Scale".

The symposium will be chaired by Stephen W. Feldberg, Senior Scientist, Retired, Brookhaven National Laboratory, Upton, NY.

**Alan M. Bond** received his B.Sc. (1966), Ph.D. (1972) and D.Sc. (1977) degrees from the University of Melbourne. From 1970 to 1973 he was a Senior Demonstrator and from 1973 to 1978 a Research Fellow with the Department of Inorganic Chemistry, University of Melbourne; from 1978 to 1990 he was the Foundation Professor of Chemistry, Division of Chemical and Physical Sciences, Deakin University, Geelong; from 1990 to 1995 he was Professor of Chemistry at La Trobe University, Bundoora; in 1995 he joined the Department of Chemistry at Monash University, Clayton where he is now the R. L. Martin Distinguished Professor of Chemistry. Bond's research over more than 35 years has addressed the theory, instrumentation and application of modern electrochemical methods to a variety of inorganic, biochemical and analytical problems. To date he has published nearly six hundred papers and two books. He has received numerous and prestigious honors including election to the Australian Academy of Sciences in 1990, the Royal Society of Chemistry Award for Electrochemistry (1997), The Hinshelwood Lectureship, University of Oxford (1998) and the Faraday Medal of the Royal Society of Chemistry Electrochemistry Group (2000).

**David E. Cliffel** received his Bachelor of Science in chemistry and a Bachelor of Electrical Engineering from the University of Dayton in 1992. In 1998 he completed his Ph.D. with Prof. Alan at the University of Texas at Austin– his thesis focused on scanning electrochemical microscopy and fullerenes. He then joined the research group of Professor Royce W. Murray at the University of North Carolina as a postdoctoral associate working on the electrochemistry of monolayer protected clusters. In 2000 he joined the Department of Chemistry, Vanderbilt University, as an assistant professor. At Vanderbilt, Cliffel's research group concentrates on the electrochemical analysis of

nanoparticles and of biological cells. The group has explored catalytic properties and electron transfer kinetics of monolayer protected clusters using the scanning electrochemical microscope, and has developed a multianalyte microphysiometer for metabolic measurements and toxicology.

## ..... AND PITTCON® 2004- roundup

**2004 Reilley and Young Investigator Awards Symposium** proceeded with full house attendance. Adam Heller, the recipient of the 2004 Reilley Award, gave a talk on "Electrochemistry in Medicine" (note the title). The Award was quite timely- the company, which Adam founded to develop a diagnostic, patient friendly, continuous monitoring glucose sensor, was just sold for over a billion dollar price tag, reflecting the need for the product of the science. Other participants of the Symposium: Mark Meyerhoff, Alan Bard, **Young Investigator Awardee** Jeff Long, and Phil Bartlett gave stimulating talks, the latter two concentrating on materials science research for sensor and energy applications. The party that followed, organized by Greg Swain, let us celebrate in style.
See you in Orlando for the 2005 Symposium.

*The president of SEAC, Henry White, presenting the 2004 Awards to Jeff Long (left) and Adam Heller (right).*

*The participants of the Symposium from left: Alan Bard, Phil Bartlett, Adam Heller, Anna Brajter-Toth, Jeff Long, Mark Meyerhoff, with the president Henry White.*

*Thanks to Adrian Michael, our PittCon® liaisons for arranging the photo session and for the pictures.*

~~~
~~~

# - SEAC Members in the News-

## -Alan Bard receives the Welch medal and the W. H. Nichols Medal Award of the NY section of the ACS.

Al Bard is “a natural for the Welch Award” as a representative of the best of Texas science that is nationally and internationally distinguished (CEN, May 17, 2004).

“For his major accomplishments in the field of electrochemistry and the effect of these on the discipline of chemistry itself."

*From the 2004 Welch Award citation.*

**Nichols Medal by the NY section of the ACS** is the oldest award presented by a local section of the ACS, and recognizes outstanding achievement in chemical research. The award symposium in honor of Al Bard, a NY native, featured talks by the awardee and his former students, SEAC president Henry White and Dick Crooks, on High Resolution Electrochemistry with the Scanning Electrochemical Microscope, Electrochemistry in Tight Spaces and Electrochemical Detection and Photonic Reporting in Microfluidic Systems.

In the article recognizing Al (CEN, May 17, 2004), Dick Crooks pointed out Al’s unique contributions to the scientific community. *“Al is truly an amazing person – one of the last great American scientists who put science and education ahead of the business of science”.* Congratulations!

## - Henry White, Jean Pemberton and Ted Kuwana win ACS Awards.

Congratulations to our president **Henry S. White** for winning the 2004 ACS Division of Analytical Chemistry Cole Parmer Award in Electrochemistry (Mark Meyerhoff was last years' recipient of the award – our leaders are the best!). Henry has become one of the most respected and best recognized electrochemists and his significant contributions have been recognized by many awards, including the 2000 SEAC Reilley Award. Henry is also a winner of the 2004 David G. Grahame Award of the Electrochemical Society. Congratulations to our busy president!

**Jeanne E. Pemberton**, a professor of chemistry at the University of Arizona, a SEAC member, is the winner of the ACS Award in Analytical Chemistry sponsored by Battelle Memorial Institute. Jeanne is best known for her work on surface-enhanced Raman scattering, which she started in the laboratory of Dick Buck, her Ph.D. mentor at the University of North Carolina at Chapel Hill. In response to the award announcement, Henry Blount, who is now at NSF and was a professor at the University of Delaware while Jeanne was an undergraduate, praised Jeanne's "pioneering research on the analytical chemistry of interfaces and her creative investigations of chromatographic stationary-phase interfaces" (CEN, January 12, 2004). Gerri Richmond noted "her fundamental studies of controlled surface roughness". Jeanne's work on the education front and her involvement in the NSF education and ACS training efforts has also been noted. Blount pointed out her "proactive development of programs that champion gender equity and diversity on a platform of research excellence". Congratulations Jeanne!

**Ted Kuwana** a pioneer of bioanalytical chemistry research, and a founder of Cypress Systems, has been recognized by the ACS Division of Analytical Chemistry J. Calvin Giddings Award for Excellence in Education sponsored by Dekker Foundation. In addition to a distinguished career in research and teaching, Ted has directed NSF sponsored teaching initiatives in Kansas that have been successful in expanding research programs at smaller teaching institutions. Recently, he and his wife have set up a special endowment fund at the University of Kansas "for support of graduate students in chemistry with special emphasis on students of cultural diversity." Ted received the Reilley Award in 1989. Two other SEAC members, Gary Christian and Bill Heineman, have been the recipients of this prestigious ACS award in education.

**Jed Harrison**, a professor at the University of Alberta, who is well known to this community for his research in electrochemistry, has been awarded the ACS Division of Analytical Chemistry Award in Chemical Instrumentation sponsored by the Dow Chemical Foundation. Jed is a pioneer of microfabrication, an area that is beginning to revolutionize analytical measurements, especially in bioanalysis. Congratulations Jed!

**Chad A. Mirkin**, George B. Rathmann Professor of Chemistry and director of the Institute for Nanotechnology at Northwestern University, has been making important contributions at the interface of nanotechnology and analytical chemistry for some time. This year the **Nobel Laureate Signature Award for Graduate Education in Chemistry** Sponsored by Mallinckrodt Baker Inc. was awarded to his graduate student **So-Jung Park** for her and Mirkin's research on DNA detection. The work resulted in a new DNA detection method, based on a successful strategy to use DNA strands to interconnect gold nanoparticles in solution. In this method, when gold nanoparticles functionalized with oligonucleotides bind to target DNA strands, they close a gap between two microelectrodes, leading to a large and measurable change in conductivity. The strategy offers advantages over fluorescence-based methods. Chad Mirkin is known to this community as an alum of Mark Wrighton's group at MIT (Jed Harrison is a fellow alumnus). He is the recipient of the 1999 ACS Award in Pure Chemistry (CEN, January, 12, 2004). Congratulations Chad.

# - Eric Bakker wins Roche Sensor Award

Eric's sensors are ion-selective electrodes that have been the bread and butter of electroanalytical chemistry from their inception. Erick is making significant contributions by improving limits of detections and the range of applications of these classical sensors, including in collaboration with Ernie Pretsch of ETH. Erick's significant new contributions to the electroanalytical science have been recognized by the SEAC Young Investigator Award in 2001.

*From the AU award announcement*:

**AU PROFESSOR RECIEVES INTERNATIONAL RESEARCH AWARD**

**AUBURN –** Eric Bakker, a professor in the Auburn University College of Sciences and Mathematics (COSAM) Chemistry Department recently received the 2004 Roche Diagnostics Prize for Sensor Technology during the Seventh European Conference on Optical Chemical Sensors and Biosensors in Madrid, Spain.

Roche Diagnostics presents the international award each year to a young scientist under the age of 42 for his/her outstanding achievements in the fields of chemical sensing and biosensing.

"Receiving this award is a wonderful feeling," Bakker said. "It primarily means that what we have been doing here at Auburn University has received broad acceptance in the scientific world. I am very proud of my students and postdocs for all the wonderful science they have done in the past few years, and am pleased others in the world feel the same way."

Bakker's research focuses on chemical sensors based on molecular recognition and extraction principles. He has helped develop ion-selective electrodes with massively lower detection limits and today these sensors can be routinely designed to achieve detection limits in the nanomolar concentration range, a feat that was impossible to imagine a few years ago.

"In a relatively short time, Eric Bakker has established himself as one of the leading scientists in his field. His contributions have potentially important applications in medicine and environmental studies and have led to a significant lowering of detection limits in biosensor technology, thus making it preferable in many situations to competing techniques which are either more expensive or less convenient to utilize," said Howard Hargis, Head of COSAM's Chemistry Department. "The Roche award formalizes worldwide recognition of his contributions to this important area of analytical chemistry."

A native of Switzerland, Bakker received a diploma of chemistry from the Swiss Federal Institute of Technology in Zurich in 1989 and received his doctor of natural sciences in analytical chemistry from the Institute in 1993. After working as a postdoc at the University of Michigan, Bakker joined the Auburn University faculty in 1995.

In addition to his teaching and research Bakker serves on editorial boards for the journals *Electroanalysis* and *Talanta.* He has received numerous awards including the 2000 Sigma Xi Scientific Research Society's Research Award and the 2001 Young Investigator Award from the Society for Electroanalytical Chemistry.

Roche Diagnostics, headquartered in Basel, Switzerland, is one of the world's leading innovation-driven healthcare groups. It is number one in the global diagnostics market and is the leading supplier of pharmaceuticals for cancer and a leader in virology and transplantation.

---

Madrid, April 6th, 2004

## ROCHE DIAGNOSTICS AWARDS THE ROCHE DIAGNOSTICS PRIZE FOR SENSOR TECHNOLOGY 2OO4

ERIC BAKKER is awarded during the Seventh European Conference on Optical Chemical Sensors and Biosensors.

Professor Eric Bakker from the Auburn University, Auburn, Alabama, is this year's winner of the Roche Diagnostics Prize for Sensor Technology. He is awarded for his outstanding achievements in the area of molecular recognition-based electrochemical and optical sensing, a work clearly directed to clinical diagnostics. Sensors are getting increasingly important in the area of clinical testing and near-patient care.

In order to further encourage research Roche Diagnostics is awarding young scientists under the age of 42 for their outstanding achievements in the fields of chemical sensing, biosensing and for sensing of clinical parameter during the Seventh European Conference on Optical Chemical Sensors and Biosensors (EUROPT(R)ODE VII, April4-7, 2004, Madrid, Spain). The Roche Diagnostics Prize for Sensor Technology includes

the amount of4.000 Euro, The prize winner is identified by an international selection committee headed by Professor O. Wolfbeis (University of Regensburg, Germany). .

The research work of Prof. Bakker has focused on chemical sensors based on molecular recognition and extraction principles. He introduced completely new ideas into the mature and rather stagnant field of ion-selective electrodes. Furthermore, he has been involved in the development of optical ion sensors for clinical diagnostic applications. His most recent work has introduced mass produced optical sensing fluorescent microspheres for integration in fluidic diagnostic systems and onto optical fiber bundles for human saliva measurements.

Very recently Professor Bakker developed a novel electrochemical sensing principle to measure polyinonic analytes, the anticoagulant heparin and its antidote protamine, reversibly and selectively with a continuously operating sensor in whole blood samples. His research has been featured in more than 50 publications in the past six years.

Eric Bakker was born in 1965 near Neuchatel, Switzerland. He studied chemistry at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland and got the diploma of chemistry in 1989. He became Doctor of Natural Sciences in analytical chemistry at ETH Zurich in 1993 (with Professor Wilhelm Simon). Postdoc was done with Mark Meyerhoff and Raoul Kopelman at the University of Michigan, Ann Arbor, between 1993 and 1995. From 1995- 1998 he was Assistant Professor of Chemistry at Auburn University. Between 1998 and 2001 he worked as an Associate Professor of Chemistry at Auburn and reached tenure in 2000. Alumni Professorship at Auburn University is granted between 2001-2006. Since 2003 he is a full professor at Auburn University.

For more information regarding the Roche Diagnostics Prize for Sensor Technology please contact:
Dr. Marco Leiner
Roche Diagnostics GmbH
Roche Near Patient Testing
Global Research & Development
Kratkvstrasse 2. A-8020 GRAZ
Phone: +43 316 27787 1034 / Fax: +43 316 27787 6350 / marco.leiner(at)roche.co4

---

Roche and the Roche Diagnostics Division
Headquartered in Basel, Switzerland, Roche is one of the world's leading innovation-driven healthcare groups. Its core businesses are pharmaceuticals and diagnostics. Roche is number one in the global diagnostics market, the leading supplier of pharmaceuticals for cancer and a leader in virology and transplantation. As a supplier of products and services for the prevention, diagnosis and treatment of disease, the Group contributes on a broad range of fronts to improving people's health and quality of life. Roche employs roughly 65,000 people in 150 countries. The Group has alliances and research and development agreements with numerous partners, including majority ownership interests in Genentech and Chugai. Roche's Diagnostics Division, the world leader in in-vitro diagnostics with a uniquely broad product portfolio, supplies a wide array of innovative testing products and services to researchers, physicians, patients, hospitals and laboratories world-wide. Near Patient Testing, headquartered in Graz, Austria, brings the laboratory to the patient by offering a broad range of simple and reliable point of care systems. The product range consists of cardiac markers, blood gas and electrolyte analysis, coagulation, urinalysis, clinical chemistry immunological tests and convenient connectivity solutions for use in the hospital, the physician's office or at home.

For further information, please visit \ www.roche.com and www.rochediasnostics.com.

Roche Dlagnoslics GmbH A - 8020 Gra., Graz Site Klatkyslrasse 2 Roche N€ar Patient Tesling Global Rcsealch & Development Tel. +4it-316-27787-4990 Fax: +4:!-316-27787-6350 http://www.roch ediagnostlca.

# - New Award in Bioanalytical Science named for Ralph Adams.

***From PittCon 2005 announcement***:

**Ralph N. Adams Award in Bioanalytical Chemistry**

Nominations due July 15, 2004

We are pleased to announce the creation of the Ralph N. Adams Award in Bioanalytical Chemistry, to be presented for the first time at Pittcon 2005. The award will include a plaque and a $2500 honorarium, and will be accompanied by a Pittcon symposium. The award will recognize significant contributions to the field of bioanalytical chemistry, broadly defined. The recipient will have introduced a significant technique, theory, instrument or application important to the life sciences, and provided an exceptional environment to educate bioanalytical chemists. Ralph N. Adams (1924–2002) exemplified these characteristics as a distinguished professor of chemistry at the University of Kansas.

The award endowment resulted from contributions of former students and friends of Ralph Adams, and the annual symposium expenses will be covered by Pittcon. The selection committee includes representatives from the Spectroscopy Society of Pittsburgh, the Society of Analytical Chemistry of Pittsburgh, the Society of Electroanalytical Chemistry, the donor community, and a committee chairman (Rick McCreery for 2005).

We encourage you to nominate accomplished bioanalytical chemists for this inaugural award. The time line is fairly short this first year, with nominations due July 15, 2004. Nominations should include a nomination letter, 4–5 supporting letters and an abbreviated biosketch of the candidate. Completed nominations in one packet should be submitted to:

**The Pittsburgh Conference**
**300 Penn Center Boulevard, Suite 332**
**Pittsburgh, PA 15235**
**Attn: Adams Award**

**If you have questions about the nomination process or the award, please contact Rick McCreery at: Tel: 614–292–2021**
**e-amil: mccreery.2(at)osu.edu**

# - Science News-

## -Psychoanalytical chemistry and Flying elephants

"Psychoanalytical electrochemistry" is the title of a review article by R. M. Wightman and B. J. Venton (AC 75, 414-421A, 2003), which summarizes new results from Wightman's labs that push the frontier in behavioral science, by addressing dopamine functions in behavior. The article shows new results, which illustrate applications of microelectrode electrochemistry of dopamine to new problems - a clear accomplishment (see also *Nature* 422, 614, 2003). As Wightman's group shows again, microelectrode electrochemical technology can be used to continue to unravel important biological questions.

It is interesting to read this article and then read J. N. Stuart, A. B. Hummon and J. V. Sweedler's review, entitled: "The chemistry of thought: Neurotransmitters in the brain" (AC 76, 121-128A, 2004). Sweedler, whose group's focus is mainly on mass spectrometry, compares with his co-authors successes and failures of several different analytical technologies, including electrochemistry, in solving problems in neuroscience, venturing some predictions about future directions in this field.

It is clear that Sweedler's interest is primarily in imaging techniques, but he makes some important points about other technologies. I do not want to take sides in these arguments, but it may be worth adding that electrochemical technologies have already produced clear and real accomplishments in neuroscience, in unraveling complexities of brain function. It can also be argued that in addressing complex bioanalytical problems, electrochemical technologies have shown an advantage by being able to identify sources of the complexities in the measurements, such as in glucose and NO sensing.

Real progress in bioanalysis is measured by answers to real questions. Wightman has some answers already; others are working on new answers, advancing the electrochemical technology. And we are all in awe of the progress that can and needs to be made. John Fenn made "elephants fly". It can only get more exciting!

## -Science Ethics

According to the recent discussions on the topic, ethics is beginning to be taught as part of the chemistry curriculum, to round out professional education of chemists (CEN, April 26, 2004). SEAC member **Alanah Fitch,** who teaches at the Loyola University of Chicago, makes a strong case for including ethics in the chemistry curriculum. She points to examples from her own work on a class project with students: a group of students collects samples in a community, whose members they do not know. It turns out that these students, after they analyze the samples, interpret the results differently than the second group, which talks to the community members as part of the project. In interpreting the results, members of the second group tend to side with the community concerns, even when the data analysis does not support the communities' claims about

dangers represented by the samples. “Interpretations of the data are rarely neutral and scientific. The best we can hope for is to suspect ourselves at all times” according to Alanah. In her ethics part of the science class her goal is to alert the students to the issues and bring them out into the open.

# -Meetings…. Meetings….Meetings

## -Electrochemistry Gordon Conference is back- see the attached program.

**GRC in Electrochemistry, February 20-25, 2005**

Chair: Daniel A. Buttry, Department of Chemistry, University of Wyoming
Vice-Chair: Héctor Abruña, Department of Chemistry, Cornell University

**SESSION 1 (SUN PM):** Fundamentals of Charge Transfer and Electrocatalysis
**Discussion Leader:** Fred Anson, Caltech
**Speaker:** Jean-Michel Savéant, Univ. Paris 7, France
***Breaking bonds with electrons. From electrochemical to enzymatic reactions***
**Speaker:** Matt Neurock, Univ. of Virginia
**Title: TBA**

**SESSION 1 (MON AM):** Biological and Biomimetic Systems
**Discussion Leader:** Hugh De Long, AFOSR
**Speaker:** Owe Orwar, Chalmers Univ. of Technology, Sweden
**Title: TBA**
**Speaker:** Fraser Armstrong, Oxford Univ., UK
***Rapid Hydrogen Cycling by Enzymes: Electrocatalysis and Implications for Future Energy Technologies***
**Speaker:** Chuck Martin, Univ. of Florida
***Nanoscience in Bioanalytical Chemistry***

**SESSION 1 (MON PM):** Building Blocks and Supramolecular Assemblies
**Discussion Leader:** Richard Crooks, Texas A&M
**Speaker:** Angel Kaifer, Univ. of Miami
***Thermodynamic and kinetic effects on the electrochemistry of encapsulated redox centers***
**Speaker:** Catherine Murphy, Univ. of South Carolina
***Growth and Form of Metallic Nanorods From Wet Chemical Reduction of Metal Salts***

**SESSION 2 (TUES AM):** Molecular Electronics and Nanoscale Assemblies

**Discussion Leader:** Rick McCreery, Ohio State Univ.
**Speaker:** Paul Weiss, Penn State Univ**.**
***Measuring and Controlling Molecular-Scale Properties for Molecular Devices***
**Speaker:** Jim Heath, Caltech
***Molecular Mechanics and Molecular Electronics***
**Speaker:** Dan Ralph, Cornell Univ.
***Electron and Spin Transport in Single-Molecule Transistors***

**SESSION 3 (TUES PM):** Electrochemistry and Materials Science
**Discussion Leader:** Jay Switzer, Univ. of Missouri - Rolla
**Speaker:** **TBA**
**Title: TBA**
**Speaker:** Dan Schwartz, University of Washington
***Protein-directed hierarchy in the electrochemical synthesis of materials and structures***

**SESSION 4 (WED AM):** Surface Processes and Structures
**Discussion Leader:** **Jeanne Pemberton, Univ. of Arizona, invited**
**Speaker:** Kohei Uosaki, Hokkaido Univ., Japan
***Electrochemical formation of molecular layers on solid substrates***
**Speaker:** Bruce Parkinson, Colorado State Univ**.**
***Metal Oxides Applied to Solar Energy Conversion***
**Speaker:** Jillian Buriak, Univ. of Alberta
***Using electrochemistry on semiconductor surfaces to pattern nanoscale organic monolayers and metallic features***

**SESSION 6 (WED PM):** Young Investigators
**Discussion Leader:** Carol Korzeniewski, NSF
**Speaker:** Keith Stevenson, Univ. of Texas - Austin
***Preparation, Characterization and Application of Catalytic Nanocarbon Electrodes***
**Speaker:** Jim Burgess, Case Western Reserve Univ**.**
***Microelectrodes for Single Cell Cholesterol Detection***
**Speaker:** Bernadette Quinn, Helsinki University of Technology, Finland
***Metal nanocrystals- ideal nanoelectrodes?***
**Speaker:** Kyoung-Shin Choi, Purdue Univ.
***Electrochemical Fabrication of Semiconducting Electrodes with Controlled Micro- and Nano-Structures***

**SESSION 5 (THURS AM):** Interfacial Processes in Deposition and Corrosion
**Discussion Leader:** **TBA**
**Speaker:** Olaf Magnussen, Universitaet Kiel, Germany
***In-situ studies of atomic-scale dynamic processes at electrode surfaces***
**Speaker:** Karl Sieradzki, Arizona State University
**Title: TBA**

**SESSION 9 (THU PM):** Open Session
**Discussion Leader:** Hector Abruña, Cornell Univ.

# -Waters Symposium at PittConn® 2005

*This from Pete Kissinger*: "The "Waters Symposium" at Pittcon this year will focus on Electroanalytical Chemistry history... We have some historical figures speaking...and one hysterical figure..me. There will be accompanying publications in J. Chem. Ed.

**Abstract:** Let me take you back to 1960. Sputnik had launched in 1957. The transistor had just become a commercial reality. Jet aircraft had just entered commercial service. Scientists and engineers had hero status in many minds. There were no computers in chemistry laboratories. Instruments meant vacuum tubes or even just batteries and potentiometers. I was a sophomore in high school. I was excited about amateur radio and had built a transmitter for Morse code. I became a summer NSF chemistry student at the Brooklyn Polytechnic Institute, but I hadn't yet had high school chemistry. Chemistry and electronics seemed so cool to me. Could these interests be combined? I heard a lecture on polarography by Prof. Louis Meites and bought his book. It seemed impossible to avoid using the little I knew of electronics to build a polarograph for a science fair project. It is fair to say that this project has continued for some 45 years as a high school student, an undergraduate student, a Ph.D. student, a postdoc, a faculty member and as an entrepreneur. It has taken many twists and turns along the way and I'm sure there are others yet unforeseen. Electrochemistry is a marvelous teacher. It provides perspective on heterogeneous processes, thermodynamics, kinetics, transport, electrical circuits, cell biology, sensors, power generation and (thank you, Michael Faraday) the interconversion of chemistry and electricity. Most of all, it's great fun!

11th International Conference on Electroanalysis

**European Society for ElectroAnalytical Chemistry**

**Society for ElectroAnalytical Chemistry**

**Bordeaux, France**

**11-15 June 2006**

First Circular

National School of Chemistry and Physics of Bordeaux
University of Bordeaux 1

## Invitation

The European Society for ElectroAnalytical Chemistry invites you to participate in **ESEAC 2006**, which is the 11th International Conference on Electroanalysis that will be held in **Bordeaux** from **11-15. 06. 2006**. The conference is organized in co-operation with the Society for ElectroAnalytical Chemistry, the Electrochemistry Group of the French Chemical Society, the French Bioelectrochemistry Group, the University of Bordeaux 1 and the National School of Chemistry and Physics of Bordeaux.

The meeting will address all modern aspects of electroanalysis ranging from new theoretical and methodological developments to latest commercial applications. This will be reflected by four plenary lectures, keynote lectures, oral and poster presentations in the field of electroanalytical chemistry or combinations of electrochemistry with other analytical techniques. They will be suggested, reviewed and selected by the following **International Scientific Committee**:

F. Anson (USA), Honorary President C. Amatore (France), ChairmanJ. Barek (Czech Republic) P.N. Bartlett (UK) C. Brett (Portugal) H. Girault (Switzerland) J. Heinze (Germany) A. Ivaska (Finland) D. Mandler (Israel) J.M. Pingarron (Spain) M. Smyth (Ireland) Z. Stojek (Poland) P. Ugo (Italy) J. Wang (USA) H.S. White (USA)

## Conference Venue

The National School of Chemistry and Physics of Bordeaux (ENSCPB) is located on the campus of the University Bordeaux 1, and only minutes by tramway from the historic downtown of Bordeaux. Located in the south-west of France, Bordeaux attracts visitors from all over the world enjoying the city's life style, the well known culture of fine wine and food, and its outstanding architectural heritage. Bordeaux's prestigious centuries-old monuments are preserved with the greatest care and several are listed as World Heritage Sites by UNESCO (see also http://www.bordeaux-tourisme.com ).
The surroundings of Bordeaux provide an exceptional natural setting including endless sand beaches, medieval villages and hundreds of famous wine châteaux in the classic Saint Emilion, Pomerol, Medoc or Sauternes areas. There are numerous possibilities for guided tours, river cruises, sports and cultural activities for an unforgettable stay (see also http://www.crt.cr-aquitaine.fr/index-us.asp )

### Bordeaux is well connected to all capitals and major cities of northern and southern Europe.

- Bordeaux-Mérignac International Airport offers daily flights to over 30 cities in France and in Europe : Brussels, London, Amsterdam, Frankfurt, Munich, Basel, Geneva, Turin, Rome, Barcelona, Madrid, Lisbon etc…
- A high-speed train (TGV) to Paris, Lille and Brussels.
- Direct motorway links to Paris, Spain and the Mediterranean as well as to Lyon and Geneva.

Accommodation will be available in hotels in the downtown area and in University residences located directly on the campus, just a few minutes from ENSCPB where the scientific sessions will be held.

Those interested in attending the meeting should send an e-mail to the following address in order to get on the mailing list for the second circular:

**eseac2006(at)enscpb.fr**

For new information please visit also our website:

**http://www.enscpb.fr/eseac2006**

## Organising Committee

Alexander Kuhn (Bordeaux), Chairman
Laurent Authier (Pau), Serge Cosnier (Grenoble)
Marie-Hélène Delville (Bordeaux) ,Chrystel Faure (Bordeaux), Serge Ravaine (Bordeaux), Laurent Servant (Bordeaux), Neso Sojic (Bordeaux)

***Important dates***

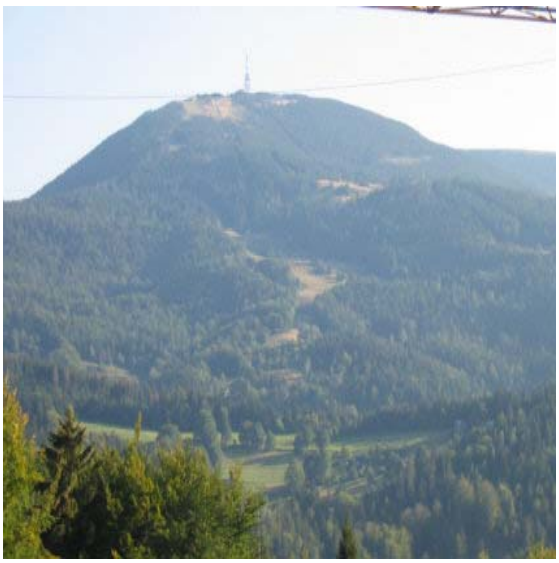
January 15, 2006 Submission of abstracts
March 15, 2006 Notification of abstract acceptance
April 15, 2006 Early registration
June 11, 2006 Conference start

***Contact***

Alexander Kuhn
ENSCPB University Bordeaux 1
33607 Pessac, France
Phone: 0033 5 40 00 65 73 FAX: 0033 5 40 00 27 17 eseac2006(at)enscpb.fr

**We look forward to meeting you in Bordeaux !**

# -"Electrode Processes", Szczyrk, Poland.



On Sept 15- 17, 2004, an electrochemistry conference was held in Szczyrk, Poland in honor of Prof. Zbigniew Galus's 70$^{th}$ birthday. Prof. Galus, is a Professor of Chemistry at the University of Warsaw in Poland. Prof. Galus is widely recognized for his contributions to electrochemistry of transitions metals and interfacial electrochemistry. He is the author of a popular English language electrochemistry book, "Fundamentals of Electrochemical Analysis" Ellis Harwood, Chichester, 1994.

The conference program featured many international participants

and the conference was well-attended. Many of the participants were trained or interacted over the years with Prof. Galus and his group. Prof. Galus spent some time in the laboratory of Prof. R.N. Adams with whom he had a life long friendship. We wish Prof. Galus Happy Birthday and many more to come!

## Conference Programme
## WEDNESDAY (15th September 2004)

**$12^{00}$ Lunch**

**$13^{00}$ Conference Opening - Pawel J. Kulesza, Jacek Lipkowski**

***Kinetics and Mechanistic Aspects of Electrode Reactions***
**Chair: Zofia Borkowska, Jacek Lipkowski**

$13^{30}$-$13^{50}$ A. M. Kuznetsov, J. Ulstrup, *Single-molecule electron tunneling through multiple redox levels with environmental relaxation*
$13^{50}$-$14^{10}$ R. L. McCreery, *Electron transport and redox reactions in carbon-based molecular electronic junctions*
$14^{10}$-$14^{30}$ O. A. Petrii, *The effects of supporting electrolyte concentration in the electrode kinetics: complications and reconsideration*
$14^{30}$-$14^{50}$ G. Gritzner, *Influence of the supporting electrolyte on standard electrode reaction rates on mercury*

$14^{50}$-$15^{20}$ *Coffee Break*

**Chair: Anna Brajter-Toth, Zbigniew Stojek**

$15^{20}$-$15^{40}$ M. Mazur, M. C. Rini, G. J. Blanchard, *Interface mediation of chemical deposition and degradation*
$15^{40}$-$16^{00}$ L. Birry, A. Lasia, *Effects of poison effect on hydrogen insertion into palladium membrane*
$16^{00}$-$16^{20}$ F. Marken, U. K. Sur, B. A. Coles, R. G. Compton, *Microwave activation of electrochemical processes*
$16^{20}$-$16^{35}$ K. De Wael, P. Westbroek, A. Adriaens, E. Temmerman, *Electrodeposition of cobalt(II) tetrasulfonated phthalocyanine at a gold electrode and its electrocatalytic behavior towards the oxidation of dithionite*
$16^{35}$-$16^{55}$ A. Vaskelis, *Anodic oxidation of Co(II) complexes with amines: ligand effects and application for autocatalytic metal deposition*
$16^{55}$-$17^{10}$ J. Taraszewska, B. Korybut-Daszkiewicz, K. Zięba, C*opper and nickel tetraazamacrocyclic complexes with appended crown ethers as electroche-mical sensors*
*$17^{10}$-$17^{25}$* *Break*

**Chair: Andrzej Barański, Tadeusz Krogulec**

$17^{25}$-$17^{40}$ J. S. Jaworski, M. Cembor, *Electrochemistry of chloroanthracenes in various solvents. an evidence of the stepwise mechanism of the bond cleavage in radical anions*
$17^{40}$-$17^{55}$ R. Jurczakowski, M. Orlik, *The complex mechanism of the Ni(II)-$N_3^-$ electroreduction and its multistable behavior at the streaming mercury electrode*
$17^{55}$-$18^{10}$ R. Tenno, K. Kantola, H. Koivo, *Electroless nickel plating: process modeling and estimation*
$18^{10}$-$18^{30}$ G. Farsang, *The anodic electrodimerisation mechanism of 2,4,6-trichloro-and tribromoanilines in acetonitrile*
$18^{30}$-$18^{45}$ P. Łoś, *Electrical impedance tomography – 2d and 3d images of soft and hard human tissues*
$18^{45}$-$19^{00}$ A.M. Nowicka, M. Donten, M. Pałys, Z. Stojek, *Influence of convection and position of electrode vs. flow direction on electrochemical responses in low ionic strength systems*
$19^{00}$–$20^{00}$ Dinner

***Interracial Aspects of Corrosion Protection***
**Chair: Kazimierz Darowicki, Marek Orlik**

$20^{00}$-$20^{20}$ A. J. Davenport, Y. Chin Tang, M. Gonzalez - Torreira, S. Yang, *Effect of magnetic fields on corrosion*
$20^{20}$-$20^{40}$ P. Schmuki, *Electrochemical nanostructuring of semiconductor electrodes by designed defect reactivity*
$20^{40}$-$21^{00}$ W. Plieth, *Tailored surface modification by conducting polymer coatings*
$21^{00}$-$21^{15}$ K. Darowicki, M. Szociński, *Degradation of organic coatings subjected to alternating mechanical stress impact*
$21^{15}$-$21^{30}$ A. Sadkowski, *On benefits of the zero-pole representation of electrochemical impedance spectroscopy data close to discontinuity point*

$21^{30}$-$21^{45}$ T. Zakroczymski, *Adaptation of the electrochemical permeation technique for studying entry, transport and trapping of hydrogen in metals*
$21^{45}$-$22^{00}$ J. Światowska-Mrowiecka, J. Banaś, *Anodic dissolution of zinc in organic solutions of chlorides*
$22^{00}$ Get-together

## THURSDAY ($16^{th}$ September 2004)

$7^{30}$–$9^{00}$ Breakfast

**Adsorption, Self-Assembly, Spectroscopy, and Surface Techniques**
**Chair: Renata Bilewicz, Andrzej Wieckowski**

$9^{00}$-$9^{20}$ E. Cholewa, I. Burgess, S. Xu, J. Kunze, M. Chen, G. Szymanski, J. Lipkowski, *Electrochemical and scanning probe microscopy studies of ionic and zwitterionic surfactants at a gold electrode surface*
$9^{20}$-$9^{40}$ F. Scholz, U. Hasse, K. Wagner, S. Fletcher, *In situ AFM studies of electrochemical reactions of particles immobilized on electrodes*
$9^{40}$-$10^{00}$ A. Kisza, *The electric double layer of electrodes in molten salts*
$10^{00}$-$10^{20}$ C. L. Brosseau, S. G. Roscoe, *Electrochemical quartz crystal nanobalance (EQCN) and chronocoulometry studies of mandelic acid and phenylalanine adsorption on Au*

$10^{20}$-$10^{50}$ *Coffee Break*

**Chair: Gyorgy Inzelt, Fritz Scholz**

$10^{50}$-$11^{10}$ A. Malec, D. Wu, M. Majda, *Dynamic phenomena in GIBBS monolayer films at the air-water interface*
$11^{10}$-$11^{30}$ A. Baranski, P. Diakowski, *Comparison of two potentiostat designs for application in alternating current scanning electrochemical microscopy*
$11^{30}$-$11^{45}$ R. Marczak, K. Noworyta, W. Kutner, G. Suresh, M. Zandler, F. D'Souza, B. Desbat, *Properties of donor-acceptor dyads of fullerene adducts of pyridine or imidazole and water soluble zinc porphyrins in the langmuir and langmuir-blodgett films*
$11^{45}$-$12^{05}$ G. Wittstock, *Patterned organic thin films: reactivity imaging from micrometer towards nanometer size regimes with scanning electrochemical microscopy*
$12^{05}$-$12^{20}$ M. Grzeszczuk, *Redox switching hysteresis of polyaniline. Effects of anions.*
$12^{20}$-$12^{40}$ J. Inukai, K. Itaya, *Comparison of etching processes on Si(111) and ZnO(0001) surfaces in solution using in situ STM*
$12^{40}$-$12^{55}$ K. Slowinski, *Tunnel junction with gate electrode*
$12^{55}$-$13^{15}$ K. A. Friedrich, V. Gogel, Th. Frey, M. Loster, L. Jörissen, J. Garche, *Performance and methanol permeation of direct methanol fuel cells: importance of electrocatalytic properties and electrode structure*

$13^{30}$- $14^{30}$ Lunch

**Fabrication and Characterization of Nanostructured Materials**
**Chair: Janusz Gołaś, Sharon Roscoe**

$14^{30}$-$14^{50}$ C. Vericat, M. Wakisaka, R. Haasch, P. S. Bagus, A. Wieckowski, *Binding energy of ruthenium submonolayers deposited on a Pt(111) electrode*
$14^{50}$-$15^{10}$ J. Augustynski, *Unusual photoelectrochemical behaviour of mesoporous titanium dioxide films*
$15^{10}$-$15^{30}$ D. Scherson, *Electrochemical supercapacitors: from high power sources to neural stimulation*
$15^{30}$-$15^{45}$ Z. Borkowska, A. Tymosiak-Zielinska, R. Nowakowski, *Electrocatalytic oxidation of methanol on activated gold electrodes. Relation between structure and reactivity*

$15^{45}$-$16^{15}$ *Coffee Break*

**Chair: Alison Davenport, Andrzej Lewenstam**

$16^{15}$-$15^{35}$ G. Inzelt, *Electrochemical microgravimetric study on microcrystalline particles of phenazine attached to gold electrodes*
$15^{35}$-$15^{55}$ M. A. Vorotyntsev, M. D. Levi, D. Aurbach, *A new method to determine the diffusion time constant and external resistance of thin solid films from potential step (PITT) experiments*
$15^{55}$-$16^{10}$ S. D. Minteer, B. L. Treu, S. Topcagic, *Development and characterization of polymer modified electrodes for biofuel cell applications*
$16^{10}$-$16^{30}$ G. A. Tsirlina, *Aqueous electrochemistry of tungstates*
$16^{30}$-$16^{45}$ M. Wysocka, K. Winkler, Jay R. Stork, Alan L. Balch, *Formation of one-dimensional crystals during electrochemical oxidation of* $(Ph_4As)[IrX_2(CO)_2]$ *(X = Cl and Br)*
$16^{45}$-$17^{00}$ M. Chojak, K. Karnicka, K. Miecznikowski, M. Skutnik, B. Baranowska, A. Kolary, O. Makowski, P. J. Kulesza, *Structure and reactivity of network films of conducting polymer-linked polyoxometallate-stabilized platinum and carbon nanoparticles*

$17^{30}$- $20^{00}$ ***Poster Session***
**Chairs: James A. Cox, Pawel J. Kulesza, Jacek Lipkowski**

$20^{30}$ Conference Banquet

## FRIDAY ($17^{th}$ September 2004)

$7^{30}$–$9^{00}$ Breakfast

**Fabrication and Characterization of Nanostructured Materials (continued)**
**Chair: Waldfried Plieth, Krzysztof Winkler**

$9^{00}$-$9^{20}$ W. M. Aylward, P. G. Pickup, *Ion exchange and ion transport properties of sulphonated organically modified silica hydrogels*

$9^{20}$-$9^{40}$ P. Audebert, *Electrochemical investigations into polymerizing sol-gel systems and new insights in electron transfer in functionalized hybrid xerogels*

$9^{40}$-$9^{55}$ Z. Florjańczyk, M. Marcinek, W. Wieczorek, N. Langwald, *PEO based composite polymer electrolytes*

$9^{55}$-$10^{15}$ F. Béguin, K. Jurewicz, M. Friebe, C. Vix-Guter, E. Frackowiak, *Reversible electrochemical sorption of hydrogen into nanostructured carbons*

$10^{15}$-$10^{30}$ E. Frąckowiak, G. Lota, J. Machnikowski, B. Grzyb, C. Vix, F. Béguin, *Optimisation of supercapacitors using carbons with controlled nanostructure and modified electronic properties*

$10^{30}$- $11^{00}$ *Coffee Break*

**Analytical Electrochemistry**
**Chair: Maria Grzeszczuk, Włodzimierz Kutner**

$11^{00}$-$11^{20}$ P. Lingenfelter, T. Sokalski, A. Lewenstam, *Membrane potential of ion-selective electrodes modeled by nernst-planck-poisson equations*

$11^{20}$-$11^{40}$ W. Schuhmann, T. Erichsen, B. Ngounou, D. Ruhlig, V. Ryabova, S. Reiter, S. Isik, J. Oni, *Electrochemical robotics as a tool for biosensor development and optimisation*

$11^{40}$-$12^{00}$ A. Brajter-Toth, *Electrochemistry on-line with mass spectrometry of biological reactions*

$12^{00}$-$12^{15}$ K. Peeters, P. Westbroek, A. Adriaens, P. Kiekens, E. Temmerman, *Amperometric detection of chlorophenol in alkaline solution at a gold electrode array modified with metal sulphonated phthalocyanines*

$12^{15}$-$12^{30}$ T. Kikas, A. Ivaska, *Potentiometric solid contact ion selective electrodes in the lab-on-valve based flow system*

$12^{30}$-$12^{50}$ P. Ugo, M. de Leo, L. M. Moretto, *Nanoelectrode ensembles for high efficiency electrochemical sensors and biosensors*

$12^{50}$-$13^{10}$ B. Ballarin, M. Berrettoni, I. Carpani, M. Giorgetti, E. Scavetta, D. Tonelli, S. Zamponi, *Electrochemical sensors based on electrodes modified with synthetic hydrotalcites*

$13^{10}$-$13^{30}$ J. Saffell, J. Groves, M. Hitchman, M. Park, *Competing reactions in a silver halide fast ion room temperature potentiometric carbon dioxide sensor*

$13^{30}$- $14^{30}$ Lunch

**Modified Electrodes**
**Chair: Krzysztof Maksymiuk, Patrik Schmuki**

$14^{30}$-$14^{50}$ J. A. Cox, *Study of electrodes modified with assemblies of functionalized gold nanoclusters*

$14^{50}$-$15^{10}$ S. Ben-Ali, D. A. Cook, P. N. Bartlett, A. Kuhn, *Bioelectrocatalysis with multilayer modified highly organized macroporous electrodes*

$15^{10}$-$15^{30}$ S. Bruckenstein, I. Jureviciute, A. R. Hillman, *Cation participation during the redox switching of poly(vinylferrocene) films in aqueous 0.05 m perchlorate solutions*

$15^{30}$-$15^{50}$ U. Janakiraman, D. Dini, K. Doblhofer, *Electrochemiluminescence in PPV-type polymer coatings*

$15^{50}$- $16^{20}$ *Coffee Break*

**Chair: James A. Cox, Marcin Majda**

$16^{20}$-$16^{40}$ J. Leddy, *Magnetic effects on electrochemical systems*

$16^{40}$-$17^{00}$ C. B. Breslin, E. M. Sheridan, *Chiral polyaniline electrodes: enantioselective discrimination of amino acids*

$17^{30}$-$17^{50}$ M. Berrettoni, P. Conti, M. Giorgetti, P.J. Kulesza, D. Tonelli, S. Zamponi, *Cobalt hexacyanoferrate: synthesis and characterization*

$17^{50}$-$18^{05}$ J. Flis, M. Kanoza, *Electrochemical and surface analytical study of vinyltriethoxysilane films on iron after exposure to air*

$18^{05}$-$18^{20}$ M. Skompska, J. Mieczkowski, R. Holze, J. Heinze, *Unique n-doping properties of poly(3,4-dialkoxythiophenes)*

$18^{20}$-$18^{35}$ *Break*

**Chair: Andrzej Czerwiński, Joanna Taraszewska**

$18^{35}$-$18^{50}$ K. Maksymiuk, A. Michalska, J. Dumańska, *The influence of spontaneous charging and discharging processes on analytical parameters of conducting polymer based potentiometric sensors*

$18^{50}$-$19^{05}$ A. Frydrychewicz, S. Yu. Vassiliev , G. A. Tsirlina, K. Jackowska, *Preparation and characterization of RVC\PANI\PD composite electrodes*

$19^{05}$-$19^{20}$ B. Pałys, *Raman and infrared studies of polymer nanotubes. Correlation between structure and electrochemical properties.*

$19^{20}$-$19^{35}$ A. Michalska, M. Ocypa, K. Maksymiuk, All-plastic, disposable, low detection limit, ion-selective potentiometric sensors

$20^{30}$ Closing and outdoor Social Event

## Saturday (18th September 2004)

$7^{30}$–$9^{00}$ Breakfast

Recreation and Social Program

$13^{00}$–$14^{00}$ Lunch

## POSTERS

Poster no. Poster title and authors

1. ***A NEW SELF-ASSEMBLY METHOD UTILIZING 4-(1H-PYRROL-1-YL) BENZOIC ACID FOR THE PREPARATION OF MONO AND MULTI LAYERS OF COBALT HEXACYANOFERRATE***
   *O. Makowski, K. Miecznikowski, P.J. Kulesza*
2. ***ANODIC BEHAVIOUR OF AL - BASED AMORPHOUS ALLOYS***
   *A. Jaskiewicz, M. Janik-Czachor, M. Dolata, Z.Werner*
3. ***ANODIC OXIDATION OF TROLOX IN AQUEOUS SOLUTIONS***
   *M. Mechanik, J. Małyszko*
4. ***ANODIC STRIPPING VOLTAMMETRY IN THE PRESENCE OF FUMED SILICA AND NONIONIC SURFACTANTS***
   *W. W. Kubiak, A. Kamiński, E. Niewiara, B. Baś*
5. ***A NOVEL APPROACH TO SIMULTANEOUS DETERMINATION OF DIFFUSION COEFFICIENTS AND CONCENTRATION OF RED-OX CENTRES IN CONDUCTING GELS***
   *K. Caban, P. J. Kulesza, Z. Stojek, K. Miecznikowski, G. Zukowska, W. Wieczorek*
6. ***A NOVEL CATALYTIC SYSTEM FOR DETERMINATION OF TRACES OF COBALT BY ADSORPTIVE STRIPPING VOLTAMMETRY***
   *M. Korolczuk, A. Moroziewicz, M. Grabarczyk*
7. ***ADSORPTION OF UREA AT THE GOLD/SOLUTION INTERFACE***
   *M. Jurkiewicz-Herbich*
8. ***ADSORPTION OF VETRANAL ON THE MERCURY ELECTRODE***
   *D. Sieńko, D. Gugała, J. Nieszporek, J. Jankowska, J. Saba*
9. ***ALL-SOLID-STATE REFERENCE ELECTRODES BASED ON CONDUCTING POLYMERS***
   *A. Kisiel, A. Michalska, H. Marcisz, K. Maksymiuk*
10. ***APPLICATION OF BISMUTH FILM ELECTRODES IN VOLTAMMETRIC STRIPPING ANALYSIS***
    *A. Bobrowiski, A. Królicka*
11. ***APPLICATION OF ELECTROCHEMICAL QUARTZ CRYSTAL MICROBALANCE (EQCM) TO STUDY ELECTROCHEMICAL PREPARATION AND REDOX/ION EXCHANGE PROPERTIES OF POLYPYRROLE IN AQUEOUS SOLUTION***
    *A. Kepas, M. Grzeszczuk*
12. ***AUGER ELECTRON MICROPROBE CHARACTERISATION OF Cu-BASED AMORPHOUS ALLOYS MODIFIED BY HYDROGEN CHARGING***
    *M. Pisarek, M. Janik - Czachor, K. Hughes*
13. ***CALCIUM ION SELECTIVE ELECTRODES UNDER GALVANOSTATIC CURRENT CONTROL***
    *I. Bedlechowicz, T. Sokalski, A. Lewenstam, M. Maj-Żurawska*
14. ***CATALYTIC ADSORPTIVE POTENTIOMETRIC STRIPPING DETERMINATION OF METAL TRACES AT BISMUTH FILM ELECTRODES***
    *A. Bobrowisk, K. Nowak*
15. ***CATALYTIC ADSORPTIVE STRIPPING VOLTAMMETRIC DETERMINATION OF Cr(VI) IN THE PRESENCE OF EXCESS OF Cr(III) WITH APPLICATION OF EDTA AS A MASKING AGENT.***
    *M. Grabarczyk, M. Korolczuk, K. Tyszczuk*
16. ***CATALYTIC CURRENTS OF THE IRON (II),(III)/HYDROPEROXIDE SYSTEMS***
    *T. Pacześniak, A. Sobkowiak*
17. ***CATHODIC REDUCTION OF ACIDS IN DMF ON A PLATINUM ELECTRODE***
    *B. J. Laskowska, S. S. Kurek, A. Stokłosa*

18. ***CHARACTERISTIC OF HYBRID FILMS COMPOSED OF POLY(3,4-ETHYLENEDIOXYTHIOPHENE) AND TUNGSTEN OXIDE***
*D. Krawczyk, P. J. Kulesza, K. Miecznikowski, L. Adamczyk, G. Wittstock*
19. ***CHEMICAL IN – SITU DEPOSITION OF POLY(1,8-DIAMINONAPHTALENE). FROM THIN FILMS TO NANOMETER – SIZED STRUCTURES.***
*M. Tagowska, B. Pałys, M. Mazur, M. Skompska, K. Jackowska*
20. ***COMMUNICATION BETWEEN METAL CENTERS IN HOMO- AND HETERONUCLEAR POLYMACROCYCLIC COMPLEXES OF Cu II AND Ni II***
*A. Więckowska, R. Bilewicz, K. Woźniak, B. Korybut-Daszkiewicz, J. Kowalski*
21. ***COMPOSITE Ni-BASED ELECTROCOATINGS FOR THE HYDROGEN EVOLUTION REACTION IN ALKALINE SOLUTIONS***
*B. Łosiewicz, A. Budniok*
22. ***CONTRIBUTION OF ELECTROCHEMISTRY TO THE KNOWLEDGE ON STRUCTURE AND PROPERTIES OF AMALGAMS***
*C. Gumiński*
23. ***CONDUCTING POLYMER BASED $Cu^{2+}$ POTENTIOMETRIC SENSORS***
*J. Migdalski, T. Błaż, A. Lewenstam*
24. ***CONDUCTING POLYMER FILMS AS MODEL BIOLOGICAL MEMBRANES. ELECTROCHEMICAL AND ION-EXCHANGE PROPERTIES OF PPY AND PEDOT FILMS DOPED WITH HEPARIN.***
*B. Paczosa, T. Błaż, J. Migdalski, A. Lewenstam*
25. ***CORROLES AS RECEPTORS IN LIQUID MEMBRANE ELECTRODES AND THEIR RESPONSES TOWARDS SALICYLIC ACID***
*J. Radecki, I. Stenka, E. Dolusic, W. Dehaen*
26. ***DECONTAMINATION OF JOHNSON ATOLL CORAL BY ELECTROCHEMICAL DISSOLUTION***
*S. Marczak*
27. ***DEGRADATION OF ORGANIC COATINGS SUBJECTED TO ALTERNATING MECHANICAL STRESS IMPACT***
*K. Darowicki, M. Szociński*
28. ***DETERMINATION OF TRACE AMOUNTS OF RUTHENIUM WITH ADSORPTIVE STRIPPING VOLTAMMETRY***
*I. Bartnicka, S. Huszał, J. Kowalska, E. Stryjewska, J. Golimowski*
29. ***DESIGNING AND STUDYING THE MONOLAYERS OF PYRENEBUTYRIC ACID CYSTEAMIDE ON DIFFERENT CONDUCTIVE SUBSTRATES***
*M. Domińska, K. Jackowska, P. Krysiński*
30. ***DESIGN OF FERROCENE ORGANOTHIOL MONOLAYER AS INTERMEDIATE PHASE FOR MINIATURIZED ELECTROCHEMICAL SENSORS WITH GOLD CONTACT***
*E. Grygołowicz - Pawlak, I. Grudzień, S. Sęk, R. Bilewicz, Z. Brzózka, E. Malinowska*
31. ***DESIGN OF NOVEL CALIX[4]ARENE IONOPHORES FOR POTENTIOMETRIC SENSING OF CATIONS AND ANIONS***
*M. Bocheńska, U. Lesińska, M. Hoffmann, R. Pomećko, Z. Asfari, F. Arnaud-Neu*
32. ***DEVICELESS DECOUPLING OF HV-FIELD EFFECTS ON INTEGRATED AMPEROMETRY IN AN ON-CHIP CE SYSTEM***
*O. Klett, D. Bergman, L. Nyholm, F. Nikolajeff*
33. ***EFFECTS OF MIXED OXIDIZER ON TUNGSTEN PASSIVATION LAYER FOR W-CMP***
*Y.-J. Seo, N.-H. Kim, S.-Y. Kim, E.-G. Chang*
34. ***ELECTROCHEMICAL BEHAVIOR OF BINARY Rh ALLOYS (Pt-Rh and Pd-Rh)***
*H. Siwek, M. Łukaszewski, A. Czerwiński*

35. ***ELECTROCHEMICAL PROBING AND XPS IDENTIFICATION OF SPIN TRANSITIONS IN SOLID COBALT HEXACYANOFERRATE MOLECULAR MAGNETS***
*K. Miecznikowski, O. Makowski, P. J. Kulesza, M. A. Malik, G. Wittstock, S. Sauter, R. Sazargan*
36. ***ELECTROCHEMICAL PROPERTIES OF POLY (INDOLE-5-CARBOXYLIC ACID)***
*A.T. Bieguński, K. Jackowska*
37. ***ELECTROCHEMICAL QUARTZ CRYSTAL MICROBALANCE STUDY ON BEHAVIOR OF Pd AND Ni ELECTRODES***
*A. Czerwiński, K. Klimek, M. Grdeń*
38. ***ELECTROCHEMISTRY AT BORON-DOPED DIAMOND - PVDF COMPOSITE ELECTRODES***
*D.-H. Kim, F. Marken, R. Barton*
39. ***ELECTROREDUCTION OF ADSORBED AZOCROWN ETHERS IN THE PRESENCE OF ALKALI METAL CATIONS***
*E. Jabłonowska, R. Bilewicz, M. Jamrógiewicz, E. Wagner-Wysiecka, E. Luboch, J. F. Biernat*
40. ***ELECTRODE PROCESSES ON NIOBIUM ANODIC OXIDE FILMS IN ELECTROLYTIC CAPACITOR STRUCTURES UPON CATHODIC POLARIZATION***
*L. Skatkov, V. Gomozov*
41. ***ELECTROOXIDATION OF UNDILUTED ORGANIC LIQUIDS SWELLING N-ISOPROPYLACRYLAMIDE BASED COPOLYMERS***
*E. Bak, J. Romiszewski, M. Donten, Z. Stojek*
42. ***EVALUATION OF RELATIVE HUMIDITY EFFECTS ON INTERFACIAL IMPEDANCE AT INTER-COAT INTERFACES***
*A. Miszczyk, K. Darowicki*

43. ***FLOW INJECTION POTENTIOMETRY FOR DETERMINATION OF ANTIOXIDANT CAPACITY OF WINE***
*M. Kolar, V. Weinger*
44. ***FORMATION OF ONE-DIMENSIONAL CRYSTALS DURING ELECTROCHEMICAL OXIDATION OF $(Ph_4As)[IrX_2(CO)_2]$ (X = Cl AND Br)***
*M. Wysocka, K. Winkler, Jay R. Stork, Alan L. Balch*
45. ***GENERAL THEORY OF THE ELECTRODE PROCESSES WITH THE REVERSAL OF THE CHARGE SIGN UNDER STEADY-STATE CONDITIONS***
*W. Hyk, Z. Stojek*
46. ***IONIC LIQUID MODIFIED ELECTRODES***
*E. Rozniecka, G. Shul, J. Sirieix-Plenet, L. Gaillon, M. Opallo*
47. ***IMPEDANCE STUDIES OF POLYMERIC MEMBRANE CONTAINING IONOPHORES FOR SELECTIVE ION RECOGNITION***
*A. Lisowska-Oleksiak, U. Lesińska, A. Nowak, M. Bocheńska*
48. ***INFLUENCE OF ELECTRODEPOSITION AND CONDITIONING ON THE MORPHOLOGY AND ELECTROCHEMICAL PROPERTIES OF POLY(3,4 – ETHYLENEDIOXYTHIOPHENE) FILMS DOPED WITH ADENOSINOTRIPHO-SPHATE***
*B. Paczosa, A. Lewenstam*
49. ***INFLUENCE OF IONIC AND NONIONIC SURFACTANTS ON THE ANALYTICAL PARAMETERS OF ION-SELECTIVE ELECTRODES BASED ON CHELATING ACTIVE SUBSTANCES***
*C. Wardak, B. Marczewska, J. Lenik*
50. ***INFLUENCE OF THE TRANSPORT CONDITIONS ON DETERMINATION OF TRACE ARSENIC BY CATHODIC STRIPPING VOLTAMMETRY***
*R. Piech, W. W. Kubiak, J. Gołaś*
51. ***IN SITU SPECTROELECTROCHEMICAL CHARACTERIZATION OF LANGMUIR – BLODGETT BILAYERS OF DMPC ON AN Au(111) ELECTRODE SURFACE***
*I. Zawisza, J. Lipkowski*
52. ***LOCALIZATION OF PITTING PRECURSOR SITES IN Nd-Fe-B-TYPE MAGNETIC MATERIALS BY SCANNING ELECTROCHEMICAL MICROSCOPIC IMAGING OF THEIR SURFACE***
*M. A. Malik, G. Pawlowska, H. Bala, P.J. Kulesza*
53. ***MINIATURE ION-SELECTIVE ELECTRODES***
*R. Paciorek, M. Maj-Żurawska*
54. ***MODIFIED ELECTRODES BASED ON LIPIDIC CUBIC PHASES***
*P. Rowiński, R. Bilewicz, E. Rogalska*
55. ***NON-STATIONARY ANALYSIS OF ELECTROCHEMICAL EMISSION DATA***
*K. Darowicki, A. Zieliński*
56. ***NOVEL ALL-SOLID-STATE CALCIUM-SELECTIVE ELECTRODE WITH CONDUCTING POLYMER LAYER FOR LOW-LEVEL CONCENTRATION MEASUREMENTS***
*A. Konopka, T. Sokalski, A. Michalska, A. Lewenstam, M. Maj-Żurawska*
57. ***OPTIMISATION OF MEMBRANE COMPOSITION AND RESEARCH OF PROPERTIES OF NAPROXEN ELECTRODE***
*J. Lenik, B. Marczewska, C. Wardak*
58. ***OXIDANTS IN ALUMINA SLURRY FOR METAL CMP APPLICATIONS***
*Y.-J. Seo, N.-H. Kim, S.-Y. Kim, E.-G. Chang*
59. ***OXYGEN REDUCTION REACTION AT COMPOSITE FILMS CONTAINING Pt, POMS AND NAFION ®***
*R. Wlodarczyk , R. Marassi, P.J. Kulesza*
60. ***PROPERTIES OF GOLD NANOCLUSTERS IMMOBILIZED ON/IN ALKANETHIOL MONOLAYERS ON GOLD ELECTRODES***
*K. Stolarczyk, R. Bilewicz*
61. ***PROTECTIVE PROPERTIES OF COMPOSITE FILMS OF 25% CROSSLINKED POLY(4- VINYLPYRIDINE) AND HEXACYANOFERRATES AGAINST GENERAL CORROSION OF STAINLESS STEEL***
*M. T. Galkowski, P. J. Kulesza*
62. ***PROTECTIVE PROPERTIES OF COMPOSITE FILMS OF POLY(3,4-ETHYLENEDIOXYTHIOPHENE) AND POLYOXOMETALLATE DEPOSITED ON STAINLESS STEEL***
*L. Adamczyk, D. Krawczyk, K. Miecznikowski, P. J. Kulesza*
63. ***REFERENCE ELECTRODES COMPATIBLE WITH SCREEN-PRINTED POTENTIOMETRIC SENSORS***
*Ł. Tymecki, R. Koncki, E. Zwierkowska, S. Głąb*
64. ***SELF- ASSEMBLED MIXED THIOL AND MACROCYCLIC POLYAMINE MONOLAYERS FOR ELECTROCHEMICAL DETECTION OF MALEIC AND FUMARIC ACIDS***
*J. Radecki, I. Szymańska , L. Bulgariu, M. Pietraszkiewicz*
65. ***SIMULATIONS OF CORROSION PROCESSES WITH SPONTANEOUS SEPARATION OF CATHODIC AND ANODIC REACTION ZONES***
*C. Vautrin-Ul, A. Chaussé, J. Stafiej, J.P. Badiali*
66. ***SPONTANEOUS SILVER DEPOSITION ON ELECTRODES COATED BY CONDUCTING POLYMERS***
*M. Ptasińska, A. Michalska, M. Ocypa, K. Maksymiuk, E.A.H. Hall*
67. ***STUDY OF MICROHETEROGENEOUS STRUCTURE OF NON-AQUEOUS MIXED SOLVENTS BY DIELECTRIC AND VISCOSIMETRIC METHODS***
*M. Dutkiewicz, E. Dutkiewicz*
68. ***SYNTHESIS, ELECTROCHEMICAL AND SPECTROELECTROCHEMICAL PROPERTIES OF VIOLOGEN DERIVATIVE OF PEDOT***
*A. Czardybon, J. Żak, M. Łapkowski*

69. ***SYNTHESIS OF HYDROXYLAMINE IN THE NITRIC OXIDE – HYDROGEN FUEL CELL***
*W. Lewdorowicz, W. Tokarz, P. K. Wrona*
70. ***THE COMPARISON OF ELECTROCHEMICAL AND RADIOCHEMICAL METHODS IN ADSORPTION STUDY OF THIOUREA ON SILVER ELECTRODES***
*A. Łukomska, J. Sobkowski*
71. ***THE EFFECT OF CYTOSINE ON THE TWO-STEP ELECTROREDUCTION OF $Zn^{2+}$ IONS IN ACETIC BUFFERS***
*J. Nieszporek, D. Gugała, D. Sieńko, J. Szaran, J. Saba*
72. ***THE EVALUATION OF BASELINE CORRECTION IN VOLTAMMETRY IN THE PRESENCE OF THE DIFFERENT ELECTRODE PROCESSES***
*M. Jakubowska, W. W. Kubiak*
73. ***THE EXTENSION OF THE STABILITY RANGE OF THE RECONSTRUCTED Au(111) SURFACE BY PROPANAL***
*P. Skoluda*
74. ***THIOPHENE-BASED COPOLYMERS CONTAINING OLIGOANILINE SIDE CHAINS: ELECTROCHEMICAL AND SPECTROELECTROCHEMICAL INVESTIGATIONS***
*K. Buga, R. Pokrop, A. Majkowska, S. Deja, M. Zagórska*
75. ***THE VOLUME PHASE TRANSITION OF POLYMERIC HYDROGELS ON THE SURFACE OF GOLD ELECTRODES***
*M. Karbarz, W. Hyk, Z. Stojek*
76. ***VOLTAMMETRIC DETERMINATION OF Pb AND Cd IN THE PRESENCE OF Tl IN PLANT MATERIAL AND SEDIMENT BY SUBSTRACTIVE ANODIC-STRIPPING VOLTAMMETRY AT A SILVER ELECTRODE***
*B. Krasnodębska-Ostręga*
77. ***VOLTAMMETRIC STUDIES OF FAMOTIDINE***
*S. Skrzypek, W. Ciesielski, A. Sokołowski*
78. ***Zr-PORPHYRINS – CHARGED or NEUTRAL CARRIERS?***
*Ł. Górski, E. Malinowska*

~~~
~~~

I just wanted to let you and the rest of my electrochemical colleagues know that I retired from The Dow Chemical Company last June. Much like Dennis Johnson, I have decided to turn my attention to things other than chemistry and I now consider myself a "gentleman astronomer." I have already had the chance to visit the Keck Observatory on Mauna Kea in Hawaii and got to stand inside the optical interferometer which will be used to search for extrasolar planets. I was happy to read in a recent issue of SEAC Communications that the GRC is on again for next year. A great injustice has been at least partially righted, and I wish Dan Buttry and Tito Abruna the best.

In case the news has not been communicated, Jim McIntyre has also retired from Dow but he remains involved in electrochemical matters.

Anyone who wishes to is welcome to correspond with me at my chalet in the Michigan forest.
Best Regards to all,
Dick Van Effen
2587 S. Five-Mile Rd.
Midland, MI 48640
drdick(at)prodigy.net
Anna,

Glad you got the message. Besides the Michigan woods, I will be spending lots of time on the Big Island of Hawaii where my sister and her husband have a condo. Since they are seldom there, I have a free place to stay almost anytime I want! I will miss my electrochemist friends but there comes a time when one must move on and experience the other things life has to offer.

Best Regards,

Dick Van Effen

---

~~~
~~~

Qualifications

BS or higher in electrochemistry/chemical engineering
5+ years of manufacturing experience in plating and electrochemical processing.
Experience in control of plating baths including bath monitoring and manufacturing processes including vendor management.
Proven problem solving abilities and a track record as a leader in high yield and quality.
Strong hands on skills working with electrochemistry processes, equipment, and bath monitoring.

Preferred: Experience with small features high aspect ratio plating, MEMS microfabrication, and ISO 9001 practice.
Send resumes to Nick Meyler at (818)597-3200 ext. 211 <www.wingate-dunross.com>
>

FOR MORE JOB OPENINGS CHECK THE SEAC WEBSITE AT
http://electroanalytical.org/employment.html

---

# e- mail - you wrote

Hi:
The news is very sad indeed.

Since moving to Asia I have not attended many EChem GRCs and so (I have been) out of touch with the main EC group.

I had been in contact with Katsumi for a while last year. Recent e-mails brought no response so I had wondered whom to contact to enquire about him.

Thank you for the information.

All best wishes.
Michael R Philpott
IMR, Tohoku U, Sendai, Jpn.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

***You may have experienced problems with the access to the SEAC site:***

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Hey, I can't get onto the SEAC website. What is the address these days?

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

It isn't good when the prez can't figure it out

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

I can't seem to access the SEAC website at electroanalytical.org. Do I have the address wrong?

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~

Hey Sam and Anna, and all.....

I think someone has stolen the SEAC website! http://seac.tufts.edu/ DC

SEAC has gotten religion! as pointed out by Dick Crooks

Actually that was the "Tufts Secular Student Association", a very "non-religious" group which shares space on my server! Anyway, as you may know, the SEAC website is now at
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

http://electroanalytical.org What happened was that the redirect pointer on the server was somehow reset to the wrong URL. I fixed it, and now it should redirect everyone to the correct URL. Sam Kounaves
http://planetary.chem.tufts.edu
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

**A new book**

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Dear Prof White,

I'd like to announce the release of my book Simulating electrochemical reactions with Mathematica (SERM). This may be of interest to SEAC members who perform or wish to perform simulations or are looking to include simulation as part of a graduate level course.

A description of the book can be found here: http://www.ibnh.com.au/SERM

A sample chapter can be downloaded from the website. Anyone not yet possessing a copy of Mathematica can view the sample by downloading the free "MathReader" using the link provided. Please note that since Mathematica notebooks include text, graphics and sound as well as executable code the SERM package is essentially an electronic book (i.e. has an ISBN number) that allows the reader to execute code and view results as they read.

Suggestions from readers/users about additions or improvements to the package will be most welcome.

Regards

Mike Honeychurch, School of Molecular and Microbial Sciences, Faculty of Biological and Chemical Sciences, University of Queensland, ST LUCIA 4072, Queensland, Australia.
Phone (internal): 69395; (external): +61 (0)7 3346 9395; fax: +61 (0)7 3365 4299

SEACers may also be interested in a product called webMathematica that enables you to run Mathematica programs over the web. The possibilities are broad and may be useful to supplement or complement teaching. I'm still experimenting with it but I have some examples on my homepage. I intend to add many more and ultimately add a chapter on converting Mathematica code to web based applications.

http://www.uq.edu.au/~uqmhoney/test.html

Regards

Mike
|~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

## *And then there is mail of our daily lives…..*

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

**Hi! Can my response wait until next week?** I have a proposal to finish and classes to prepare for this week and then I will have more time for other things.

thanks,
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

No input at this point unless someone wants to make a large donation to refill the (SEAC) coffers.
``````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````

Yep. But I have major grant reports to finish first.
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
``````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````````

Hi Dr. Toth

I really hate to miss class again. This time one of my dogs just ate a frog outside when I was walking them. I am taking him to the vet right now and I don't think I'll be out of the office before 10. Is there any new material that we will cover today for the test on Monday?

Sorry once again for the inconvience,

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

*Thanks to all who helped put this issue together. Thanks to Dick Crooks, Johna Leddy, Fred Anson, Fred Hakwridge, Cynthia Wertz, Steve Feldberg and to Henry White for their help.*

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

**Send your comments to** atoth(at)chem.ufl.edu.