

The Crucible



<http://membership.acs.org/P/Pitt>

Volume: XCIV No.3

November 2008

Pittsburgh Section Names W. Richard (Dick) Howe 2008 Distinguished Service Award Recipient

It is with great pleasure we announce that the Pittsburgh Local Section of the ACS will award the 2008 Distinguished Service Award to W. Richard (Dick) Howe at the annual Pittsburgh Award Dinner. Dick Howe has given unusual service to the chemical community and the Pittsburgh Section of the ACS over many years. His work in bringing the International Chemistry Olympics to Pittsburgh in 1992 (the only time it has been in the United States) and organizing and directing the event was extraordinary. The success of this major project was due to Richard Howe's skill in organizing and directing numerous committees and people and to his unstinting efforts. For his work and his success he was made an honorary member of ACS.



2008 Pittsburgh Section ACS Distinguished Service Award Winner, W. Richard (Dick) Howe

He has served as chair of SACP and as president of the Pittsburgh conference. He has worked with ACS nationally on special issues

of Today's Chemist at Work and Analytical Chemistry on the history of analytical instrumentation and the 50th anniversary of Pittcon. He rescued the Pittsburgh Chemistry Olympics, a project of the Pittsburgh Section from demise. He is a key organizer of the Chemical Heritage Foundation (CHF) permanent museum of historical chemical instruments. CHF is an ACS affiliate.

Richard Howe, as Assistant Chairman of the Pitt Chemistry Dept., assisted graduate and undergraduate students as a mentor and in job placement on graduation for 17 years. He has worked diligently in forging strong relationships between industry and the University of Pittsburgh Chemistry Dept. He is currently Associate Dean of Pitt's School of Arts and Sciences.

*Submitted by:
Christina Mastromatteo*

Give Us Your Thoughts!

Would you prefer to receive an electronic copy of The Crucible? The Executive Committee is considering this option. Please take a moment to vote for 2009 officers and answer the two questions under the Crucible Survey Section of the Ballot. Follow the directions carefully and mail in your ballot by November 21.

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ACS/DAC Co-Programming at Pittcon 2009

INVITED SYMPOSIA

- Biological Applications of Capillary Electrophoresis
- Evolution of Modern Chromatography: Celebration of 25 years of the Subdivision on Chromatography and Separation Chemistry
- The Future of HPLC-Method Development: Quality by Design—Evaluating the Control Space of Robust HPLC Methods
- New Dimensions in Multidimensional Separations
- Young Investigator Award from Subdivision on Chromatography and Separation Chemistry
- Pressurized Fluids in Separations Technology

ORGANIZED CONTRIBUTED SESSIONS

- Validation of Bioanalytical Methods: Addressing matrix effects, ion suppression and ISR (incurred sample reanalysis)
- New Concepts and Instruments for Electrochemical Sensors
- Multi-residue Pesticide Analysis for Food Testing
- Understanding Chromatography with Sub-2 μ m Particles
- Quality Assurance of Measurements and Proficiency Testing

Visit www.pittcon.org for the complete technical program.

Welcome to Pittcon—your once-a-year opportunity to get together with just about everyone in the laboratory science community. There's no better place to network with colleagues from all over the world, or to meet one-on-one with experts in every discipline.



PITTCON
CONFERENCE & EXPO **2009**

MCCORMICK PLACE • CHICAGO • MARCH 8–13, 2009

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THE FUTURE OF ENERGY SYMPOSIUM

Sponsored by:

American Institute of Chemical Engineers - Pittsburgh Section
American Chemical Society - Pittsburgh Section Energy Technology Group
BP Solar • Concurrent Technologies Corporation • Duquesne University Chemistry Department
Sauereisen • Westinghouse Electric Company

Wednesday, November 12, 2008

DUQUESNE UNIVERSITY, STUDENT UNION, DUQUESNE ROOM
(Pay Parking Available in the Forbes Avenue Garage)

- 8:30 AM Registration
- 9:00 AM Welcome and Introduction
- 9:15 AM Dale Kearns, AIChE National President and SAIC Technical Fellow and Assistant VP
Our Energy Future - Opportunities, Risks and Trade-offs
- 10:00 AM Tom Hart, AEP Manager of Integrated Emissions Control & Chemical Engineering
Fossil Power Plants and Environmental Controls
- 10:40 AM Anthony Cugini, U.S. DOE NETL Director, Office of Research and Development
Safe and Environmentally Acceptable Fuels from Coal
- 11:20 AM Buffet Lunch
- 12:35 PM Ed Cummins, Westinghouse Vice President of Regulatory Affairs & Standardization
The Role of Nuclear Power as a Clean Source of Energy
- 1:20 PM Marc Portnoff, CMU Center for Advanced Fuel Technology Co-Director & Senior Scientist
Biofuels: 2nd Generation & Beyond
- 2:00 PM Networking Break
- 2:20 PM Jean Posbic, BP Solar Director of Technology Products
From Silicon to Solar Kilowatt-hour, BP Solar Path to Grid-Parity
- 3:00 PM Ed Rubin, CMU EPP Alumni Professor of Environmental Engineering and Science
The Future of Coal
- 3:40 PM Networking Break
- 4:00 PM Roundtable Discussion
- 4:40 PM George Klinzing, University of Pittsburgh Vice Provost for Research
Energy Education, Transformative Research and Wicked Problems
- 5:25 PM End of Energy Symposium

For additional information, contact Paul Brezovec at 814-269-2844 or brezovec@ctc.com

Registration Form (Mail by November 7, 2008)

Fee: \$50.00 including buffet lunch (\$25.00 for students and retired ACS/AIChE members).
Please make your check payable to AIChE - Pittsburgh Section and send with this form to:
Paul Brezovec, AIChE - Pittsburgh Section, 337 Fourth Avenue, Pgh, PA 15222

Name: _____

Address: _____

City: _____ State: _____ Zip: _____ Phone: _____

E-mail address: _____

Regular Registration Retired, ACS/AIChE Member Student

Also send an e-mail with the above information to brezovec@ctc.com if your check is mailed between 11/1/08 and 11/7/08

2009 CANDIDATES FOR OFFICE

Pittsburgh Section
American Chemical Society

The 2008 Nominating Committee of the Pittsburgh Section of the American Chemical Society submits the following slate of candidates for Section office for 2009. All persons nominated are members of the society and have agreed to serve if elected.

Only members of the Pittsburgh section of the American Chemical Society are eligible to vote. Please note that all ballots must be received by Pittsburgh Section Secretary, Robert Mathers, by November 21, 2008. Please follow instructions printed on the ballot. Ballots received in any other manner than what is stated in the instructions will not be accepted.

Chair - Elect

Garry Warnock

Dr. Garry Warnock

Dr Warnock is currently an Associate Teaching Professor, in the chemistry department at Carnegie Mellon University, in Pittsburgh. Educated in England and Wales he obtained first degrees in Physics / Chemistry [BSc] at the University of Wales [1971]. After grade school teaching experiences in England he completed his Masters [MA] in Borane Chemistry at the University of South Dakota [1979]. Dr Warnock's Phd [1985] at the University of Minnesota in Minneapolis involved the synthesis and characterization of hitherto unknown low oxidation states of transition metal carbonyl complexes. From 1985 until 1987 he was employed as a Research Fellow at the Australian National University in Canberra, Australia. His work involved stabilization and reactivity studies of small cycloalkynes ligated on late transition metal moieties. Returning to the USA his interests returned to education and with Professor Henry Bent, together with funds from SACP/SSP he worked to create a Chemistry Van Outreach program at the University of Pittsburgh in Oakland. His more recent activities at CMU have been divided between teaching classes for the Chemistry department, the Qatar branch campus and the CMU Outreach Van program that he first created over ten years ago when he moved to CMU in 1997. In that year he received the first Carnegie Catalyst Award for public understanding of Science, in recognition of the outreach work with which he had been involved in as a Visiting Professor at the University of Pittsburgh between 1987 until 1997. Over the years he has presented many science shows and workshops to teachers and students in the Pittsburgh area, at Pittcon and recently [2007-2008] at CMU Qatar in area schools in Doha.

Secretary - Elect

Robert Mathers
Tamanna Sultana

Robert Mathers

Robert Mathers graduated from North Carolina State University with a B.S. in chemistry in 1996. He worked for a year in industry as a chemist before entering graduate school. After obtaining a PhD in Polymer Science at The University of Akron in 2002, he spent two years as a post-doctoral researcher at Cornell University in the Department of Chemistry and Chemical Biology. Currently, Robert is an assistant professor of chemistry at Pennsylvania State University, New Kensington. His research interests include utilizing renewable resources for polymer chemistry and fuel additives. At present, Robert is secretary for the Pittsburgh ACS section.

Tamanna Sultana

Tamanna Sultana is a staff researcher at Bioinformatics Analysis Core, at the University of Pittsburgh, since September of 2008. Her research interests include proteomics data mining, processing, analysis and presentation. Tamanna came to USA in 1999 after she received her master's in Physical-Organic Chemistry from University of Dhaka, Bangladesh. She joined the group of Dr. Mitchell Johnson in the Department of Chemistry and Biochemistry at Duquesne University with the research focus on sample preparation, method development, validation and application in the area of lipidomics (lipid analysis). After she received her doctorate in Analytical Chemistry in 2005, she joined the Proteomics Core Laboratories, at the University of Pittsburgh as a staff researcher under the supervision of Dr. Billy Day. She has worked on numerous protein extraction and quantitation techniques on multiple instruments. On April of 2008 she received Biomedical Informatics Certification from the Department of Biomedical Informatics

at the University of Pittsburgh. Tamanna was an active student volunteer at the Pittsburgh conference from 2001-2005. She had been a student member of ACS and is a current member of ASMS (American Society for Mass Spectrometry). Her interest to run as an ACS-Pittsburgh section secretary comes from her intention to be actively involved with the chemical society and to serve the chemist's community.

Director

Guy C. Berry
Robert Witkowski

Guy C. Berry

Guy C. Berry, is University Professor Emeritus of Chemistry and Polymer Science of Carnegie Mellon University. He has been a Director (1999-2008), Chair (1997), Chair-elect (1996), Webmaster of the Section website (1998-present) and Alternate Councilor of the Pittsburgh Section of the ACS. He is chair of the Selection Committee for the PhD in Polymer Science and Engineering Award of the National ACS. Berry joined the Polymer Program of the Mellon Institute in 1960, having received B.S, M.S. and Ph.D. degrees from the University of Michigan. He became a member of the faculty of Carnegie Mellon University on the merger of Mellon Institute with the Carnegie Institute of Technology in 1966. Berry's research interests are in the physical chemistry and physics of polymers and their solutions. He has served as Head of the Department of Chemistry, as well as Acting Dean of the Mellon College of Science of Carnegie Mellon. He is co-editor of Progress in Polymer Science, past co-editor of the Journal of Polymer Science: Polymer Physics, and serves on the editorial boards of a number of journals. He has held Visiting Professorships at the Universities of Kyoto and Tokyo and Colorado State University.

Continued on Page 12

BALLOT
For Offices of the
2009
Pittsburgh Section, American Chemical Society

Chair-Elect

Garry Warnock

Secretary-Elect
(Vote for one)

Robert Mathers

Tamanna Sultana.....

Director
(Vote for two)

Guy C. Berry

Robert Witkowski.....

Councilor
(Vote for two)

Mark Bier.....

Michelle Blanken.....

Michael Mautino.....

Almudena Prudencio.....

Crucible Survey

Are you able to receive an electronic copy of The Crucible

Yes No

Would you prefer to receive an electronic copy of The

Crucible instead of a printed version? Yes No

INSTRUCTIONS

Ballot must be placed and sealed in the enclosed blank envelope. Do not write on the blank envelope. Place the blank envelope in the enclosed printed envelope which is addressed to Pittsburgh Section Secretary, Robert Mathers. **Print your return address in the upper left hand corner and sign your name on the line provided. Ballots received in any other manner will be disqualified.**

Only members of the Pittsburgh section of the American Chemical Society are eligible to vote. All ballots must be received by the Secretary of the Pittsburgh Section by November 21, 2008.



Society for Analytical Chemists of Pittsburgh



November Meeting

8:00 PM

Duquesne University
Laura Falk Hall

Monday, November 3, 2008

“Analytical Separation Techniques Utilizing Axial Force Gradients”

**Milton L. Lee, Ph.D.,
Brigham Young University**

Abstract:

Gradient focusing separation techniques involve at least one force gradient that compresses analyte bands as they move along a separation column or channel. In thermal gradient gas chromatography (TGGC), a temperature gradient from high to low temperature is applied along the column, which causes the chromatographic peaks to become narrower than observed in conventional GC because the leading edges of the peaks are always at lower temperature (lower velocity) compared to their respective trailing edges. Using a moving thermal gradient, analytes can be separated and eluted at their respective optimum isothermal temperatures. A similar focusing effect is observed when capillary electrophoresis (CE) is conducted in an electric field gradient along the separation channel from high to low field. This technique, called field gradient electrophoresis (FGE), causes analyte bands to compress in width because the leading edges of the bands are always at lower field (lower mobility) compared to their respective trailing edges. If a hydrodynamic counter-force is applied in FGE, the net force draws an analyte species to its unique equilibrium point where the net force is zero. This technique, called electric field gradient focusing (EFGF), has been shown to concentrate trace proteins by over 15,000 fold.

Biography:

Milton L. Lee received a B.A. Degree in Chemistry from the University of Utah in 1971 and a Ph.D. in Analytical Chemistry from Indiana University in 1975. Dr. Lee spent one year (1975-76) at the Massachusetts Institute of Technology as a Postdoctoral Research Associate before taking a faculty position in the Chemistry Department at Brigham Young University, where he is presently the H. Tracy Hall Professor of Analytical Chemistry. Dr. Lee is an author or co-author of over 500 scientific publications. Since 1980, he has given over 700 presentations on various aspects of his research, of which approximately one-third were invited lectures at major conferences and symposia. He is a member of the Scientific Committee for the International Symposia on Capillary Chromatography.

Dr. Lee is best known for his research in capillary separations and mass spectrometry detection. Following is a partial list of scientific awards that he has received for his achievements in research and professional activities: M.S. Tswett Chromatography Medal (1984), Keene P. Dimick Chromatography Award (1988), American Chemical Society Award in Chromatography (1988), Martin Gold Medal (1996), M.J.E. Golay Award (1998), American Chemical Society Award in Chemical Instrumentation (1998), Dal Nogare Award (1999), Eastern Analytical Symposium Award for Achievements in Separation Science (1999), the California Separation Science Society Award (2005), and the Pittsburgh Conference Analytical Chemistry Award (2008).

Professor Lee is also an entrepreneur and has been involved in transferring technology from his university research laboratory to the private sector. He has co-founded three analytical instrument companies, the most recent of which is Torion Technologies, which is commercializing hand-portable gas chromatograph-mass spectrometers. He is listed as a co-inventor on 20 issued or pending patents.

Dinner Reservations:

Please email Larry Senor, Arrangements Co-Chair at senor@pittcon.org, by Thursday, October 30, 2008 to make dinner reservations. Should you not have email, please call Larry at 724-327-4428. Dinner will cost \$8 (\$4 for students) and checks can be made out to the SACP. If you have any dietary restrictions, please let Larry know when you leave message.

Parking:

Duquesne University Parking Garage entrance is on Forbes Avenue. Upon entering the garage receive parking ticket and drive to upper floors. Pick up a parking sticker at the dinner or meeting. Contact Dr. Mitch Johnson at Duquesne University if any difficulties arise.

A New Pilot Program at Duquesne University for High School Chemistry Teachers

The American Chemical Society (ACS) Summer Research Fellowships for High School Chemistry Teachers is a new pilot program administered by the ACS that took place this past summer. Motorola provided the funding for the pilot program. The National ACS selected only three locations across the country to try out this new program: the North Jersey Section, the University of Toledo and Duquesne University. The pilot locations were chosen based upon previous success of these programs with the ACS Project SEED program.



Mr. Josh Lucas, chemistry teacher at Sto-Rox High School, seals up a reaction for his summer research.

Through this program, three teachers worked at Duquesne University this summer under the guidance of a faculty mentor and were provided the opportunity to participate in a cutting-edge research project. Ms. Annette Oros, chemistry teacher at Fox Chapel High School was mentored by Dr. Mitch Johnson. Annette worked on the doping of latex polymer microspheres with near infrared dye in order to enhance the detection of latent fingerprints on various surfaces. Mr. Josh Lucas, chemistry teacher at Sto-Rox High School, worked with Dr. Jennifer A. Aitken on the synthesis and study of dilute magnetic semiconductors which may find potential applications in optical and spintronic devices. Ms. Nancy Silvia did a comparison study regarding the concentration of tannins from wood samples obtained from different elevations in five forests in Pennsylvania. Dr. Bruce Beaver served as Ms. Silvia's project mentor.

All three teachers presented the results of their research projects at the Annual Undergraduate Student Symposium at Duquesne University at the end of July. Additionally, each teacher turned in a final report to the National ACS as well as a reflection statement on how this experience will affect their classroom teaching. Mr. Josh Lucas also presented his work in the Sci-Mix poster session at the 236th ACS National Meeting in August.

This experience served to update the teachers' content knowledge and provide them with the opportunity to experience academic culture again, which will hopefully translate into success for their own students in their home districts. Mr. Josh Lucas commented that the opportunity to experience the scientific process again served to remind him of how science can act as an engine of social change. He will strive to work hard to transfer some of what he learned to his students in the classroom. For example, through the summer experience, Josh realized that not only strong analytical skills and vast amounts of training are necessary to make a good scientific researcher, but also the ability to communicate, relate to and motivate your peers.

The program will also take place next year but new locations may be selected to host the program.

Submitted by Dr. Jennifer A. Aitken



**Wednesday
November 19, 2008**

**“Natural Medicines
from Three Continents”**

Dr. Dan Wagner

Dr. Wagner will take us on a botanical and pictorial adventure into the rainforests of Central & South America and Africa. He will discuss his research into drugs that are derived from rainforest plants and their relevance to modern medicine.

Bio

Dr. Dan Wagner is a clinical and natural pharmacist (ethnopharmacist) from the North Hills. He opened NUTRI-FARMACY, Western PA's only all natural pharmacy, in 1997. He consults with patients who take both prescriptions and vitamins, herbs & other nutrients, and helps them integrate the benefits of both for better health. He has traveled extensively to the rainforests of South and Central America and Africa studying medicinal plants and has worked with some of the best known herbalists and ethnobotanists. He strives to incorporate this knowledge into his integrative medicine practice

Project SEED Students go to the National ACS Meeting in Philadelphia

For 40 years the Project SEED program has been providing summer research experiences for disadvantaged high school students. This year's Project SEED program at Duquesne University hosted four talented high school students. Ms. Beth Pfabe from Brashear High School worked in the laboratory of Dr. Ellen Gawalt studying monolayer formation on stainless steel. By the end of the summer, Beth was well versed in discussing her data obtained from diffuse reflectance infrared Fourier transform (DRIFT) spectroscopy. Ms. Kerry Connolly from Sto-Rox High School worked in the laboratory of Dr. Tomislav Pintauer. Kerry's project involved the solution study of copper (II) complexes. Ms. Kristin Olejar, also from Sto-Rox High School, carried out a computational study using the Molecular Operating Environment software under the guidance of Dr. Jeffry Madura. Ms. Casey Lipovsky from Brashear High School synthesized intermetallic compounds using microwave radiation in Dr. Jennifer Aitken's laboratory. After synthesis, Casey analyzed the products using powder X-ray diffraction. In July, the students participated in poster session at the Annual Undergraduate Research Symposium at Duquesne University.

Since this year marked the 40-year anniversary of the Project SEED program and there was a special Project SEED program at the National Meeting in Philadelphia, it seemed appropriate that all of the Project SEED students should have the opportunity to attend the meeting. Beth, Kerry and Kristin traveled by train to Philadelphia to attend. Overall there were more than 100 Project SEED students in attendance from across the country. The morning session involved talks about research carried out with Project SEED students. Drs. Jennifer Aitken and Jeffry Madura delivered talks

in this session highlighting the results of Project SEED students from the Pittsburgh area. At lunch the students were invited to the luncheon hosted by the Committee on Minority Affairs. The afternoon session comprised a mixture of speakers. The very personal and moving talks given by former Project SEED students about their successes after participation in Project SEED were the most impressive to the current SEED students. The experience culminated in the presentation of the results of their projects in the Sci-Mix poster session that evening.

In addition to traveling by train for the first time, visiting the historical sites of Philadelphia and

having dinner at the Hard Rock Café, the students learned how large the chemistry community is and the importance of networking. Many people came to their posters and asked them questions, they met other current Project SEED students and they obtained advice from former Project SEED students. It was evident that the trip will have a lasting effect on these students as they continue on with their academic careers and their future.

The trip to Philadelphia marked the end of the program for the students, who also participated in safety training, library training, field trips to local chemical companies and visits to local Universities, in addition to laboratory work. This year's Project SEED program was made possible by generous donations from the R. J. Lee Group Inc., the Spectroscopy Society of Pittsburgh, Respirationics, Acucis and Ms. Tabitha Riggio, in addition to the local Pittsburgh Section ACS and National ACS fellowship funds. Also, support from the Bayer School for Natural and Environmental Sciences at Duquesne University including lunches provided everyday is gratefully acknowledged.

Submitted by Dr. Jennifer A. Aitken

Mentors Wanted!

The U.S. National Chemistry Olympiad: A Program Sponsored by the American Chemical Society invites You to Apply for the Mentor Position

College and High School educators are invited to apply for a position as mentor for the U.S. National Chemistry Olympiad program. Duties during the three-year term include helping to conduct the national study camp for high school students held at the United States Air Force Academy located in Colorado during mid-June 2010, 2011 and 2012. Generally, in their second and third year, mentors accompany four U.S. student competitors to the International Chemistry Olympiad (IChO). During the competition, the mentors will serve as members of the IChO Jury. The 2011 and 2012 IChO events are scheduled to be held in Turkey and the U.S., respectively. Most students at the study camp have completed Advanced Placement Chemistry or the equivalent; therefore instruction at the camp is well beyond the level of high school general chemistry courses. The curriculum also includes considerable laboratory work.

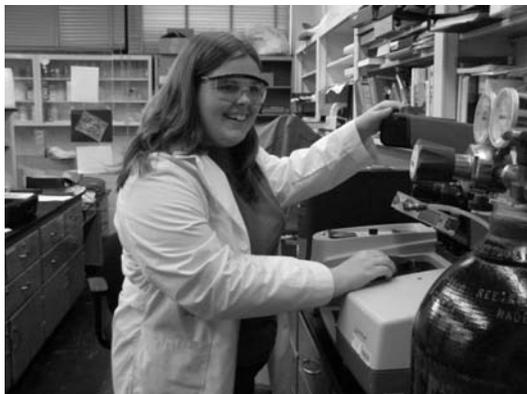
Successful applicants are expected to have a background in one or more of the areas of organic, inorganic, analytical, physical, or biochemistry with classroom experience and should demonstrate involvement with students in special projects or activities. Applicants must be prepared to make a three-year term commitment as outlined above. ACS pays all expenses and travel costs, as well as an honorarium.

Interested individuals may obtain an application form at: www.acs.org/olympiad or by contacting:

Margaret Thatcher, Senior Program Associate
U.S. National Chemistry Olympiad Program
American Chemical Society
1155 Sixteenth Street, N.W.
Washington, DC 20036
(202) 872-6328

The deadline for completed applications is January 27, 2009. Applicants must also arrange to have three letters of reference forwarded to Cecilia Hernandez by February 7, 2009 at the above address.

ACS Cut and Paste September/October



Beth Pfabe is preparing a sample for DRIFT measurements.



SPECTROSCOPY SOCIETY OF PITTSBURGH



November Meeting
Wednesday, November 19, 2008

Duquesne University, Mellon Hall of Science
(Laura Falk Hall)

6:00 PM - Social Hour
6:30 PM - Dinner
(City View Cafe - 6th Floor)
8:15 PM - Technical Program

“Photons and Electrons as Alternatives to Collisions for Obtaining Chemical Structure Information Using MS/MS”

Dr. Gary L. Glish

Tandem mass spectrometry (MS/MS) is a potent method for obtaining structural information of analytes. The ion activation step in the MS/MS experiment almost always involves a collision between the parent ion and a target gas, so-called collision induced dissociation (CID). Ion traps can be particularly efficient at CID, albeit with some limitations. However, because of the ion manipulation capabilities of ion traps they also offer opportunities, often unique, for other activation methods using photons or/and electrons. This presentation will focus on the use of infrared multiphoton dissociation (IRMPD) and electron capture dissociation (ECD) for ion activation in quadrupole ion traps.

IRMPD has some advantages over CID in a quadrupole ion trap, and these advantages can be enhanced by the ion manipulation capabilities of the ion trap. Variations of the IRMPD experiment will be presented.

ECD is typically performed in FT-ICR instruments, but we have a unique ECD cell based on a linear ion trap that is part of a hybrid linear ion trap/time-of-flight (LIT/TOF) instrument. This instrument has the capability of performing CID and ECD on alternate scans on the LC time scale. Other experiments, which take advantage of the ion manipulation capabilities of the ion trap, involving ECD combined with other activation techniques, e.g. ECD+CID and ECD/IRMPD, will also be presented.

Bio

Gary L. Glish received a B.A. from Wabash College in 1976 with majors in Chemistry and Economics. Deciding that he wanted to be able to do experiments to test hypotheses, he chose Chemistry over Economics for graduate school and obtained a Ph.D. from Purdue University (Advisor: R. Graham Cooks), in 1980. After receiving his Ph.D. Gary was a research scientist and group leader at Oak Ridge National Laboratory until 1992. In 1992 he took his current position on the faculty in the Department of Chemistry at the University of North Carolina where he is currently Professor of Chemistry.

Professor Glish has an impressive record of scholarly activities. The more important of which are 2 U. S. patents, published over 100 papers in refereed journals, co-author of a book and several book chapters, conference/symposium organizer and reviewer for many publications. He is currently President of the American Society for Mass Spectrometry.

Professor Glish is the director of a large research group of students at all levels and post-doctoral researchers at the University of North Carolina. Gary's research interests are in the areas of mass spectrometry instrumentation, ion activation, ion chemistry, and development of methods for characterizing compounds of biological and environmental interest. In the area of instrumentation his focus has been on hybrid mass spectrometers and quadrupole ion traps.

Gary has conceived and built several hybrid mass spectrometers including the first tandem quadrupole/time-of-flight mass spectrometer in 1984. He began his involvement with quadrupole ion traps in 1984 and more than half of his 100+ publications are related to quadrupole ion trap development and applications. His group was the first to couple ESI with a quadrupole ion trap. On the environmental front, he is involved in developing new methods for analysis of drinking water disinfection by products and for characterization of aerosol particles.

Please email Carolyn Benga at crbssp@yahoo.com or call (412) 487-0915 to make dinner reservations NO LATER THAN FRIDAY, November 14, 2008. Dinner will cost \$8 and checks can be made out to the SSP. If you have dietary restrictions, please let Carolyn know when you RSVP. Parking Instructions: The Duquesne University Parking Garage is located on Forbes Avenue. Upon entering the garage, receive parking ticket and drive to upper floors. Pick up a parking chit at the dinner or meeting. If any difficulties arise, contact Dr. Mitch Johnson at Duquesne University.

Joint Meeting
ACS Pittsburgh Chemists Club
ACS Pittsburgh Polymer Group

Tuesday, November 18, 2008

Duranti's Restaurant
128 North Craig Street
Oakland Section of Pittsburgh, PA

5:30 PM Cocktail Time - Cash Bar
6:30 PM Dinner
7:30 PM Program

“Organoelectronics: Small Molecules to Polymers”

Britt Minch, Ph D
PPG Industries Inc.

Demand for low cost energy has led researchers to explore a variety of potentially low cost alternative energy solutions, including photovoltaics. Though photovoltaics have been around since the 1950s, the commercially available photovoltaics remain expensive and have low efficiencies. Since the ground breaking work of Tang and coworkers in the 1980s, researchers have looked to organic materials to take the place of the more expensive inorganics for use in photovoltaics. Among the many materials that have been reported in the literature for use in photovoltaics, phthalocyanines have been the focus of many reports.

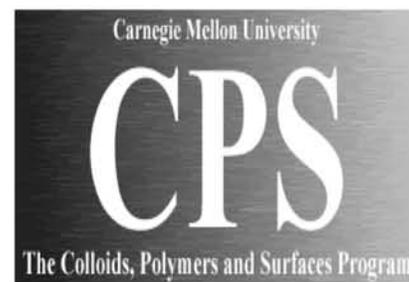
Phthalocyanines are attractive due to their stability and strong molar absorptivities. The group of Steven Forrest has been prolific in the area of vacuum deposited phthalocyanine photovoltaics. However, there is a strong desire to use materials that are solution processable. Phthalocyanines can be made solution processable by adding peripheral substituents. The addition of these substituents to the rigid disc shaped pigments provides solubility and in some cases the phthalocyanines will exhibit liquid crystalline behavior. A novel synthesis was developed to prepare a series of discotic liquid crystalline phthalocyanines.

Discotic liquid crystals tend to form columnar assemblies, which can behave like molecular wires. The properties and the stability of the liquid crystalline phases can be tuned by choice of the side chain. Furthermore, the assembly can be stabilized by a variety of methods. The use of hydrogen bonding to form supramolecular assemblies and [2+2] cycloadditions can be used to create covalently crosslinked phthalocyanine polymers.

For Reservations, members of the Pittsburgh Chemists Club and Energy Technology Group, please contact Ed Martin by noon Friday, November 14, 2008 at (724)-335-0904 or e-mail at esm@icubed.com Dinner charge is \$20.00; please make checks payable to “Pittsburgh Chemists Club. Please select beef, chicken or fish, when placing reservation.

For Reservations, members of the ACS Polymer Group-Pittsburgh Section and students, please contact Hongying Zhou by Monday November 17, 2008 at (412)-492-5284 or e-mail at zhou@ppg.com Cost of dinner is \$19.00; \$11.00 for retiree Polymer Group members; no charge for students.

Carnegie Mellon



PART-TIME GRADUATE DEGREE

This interdisciplinary program of part-time graduate study (currently in its 35th year) leads to a Master of Science degree in Colloids, Polymers and Surfaces (CPS) offered jointly by the Engineering and Science Colleges at Carnegie Mellon University. Course work is relevant to many industries, as chemical product manufacture and process development often require applications involving complex fluids that include nanoparticles, macromolecules and interfaces. Examples include industries working with nanotechnology, coatings and pigments, pharmaceuticals, surfactant-based products, food science, environmental science, polymers/advanced materials and biomaterials. Participating faculty are drawn mainly from the Department of Chemical Engineering and the Department of Chemistry.

Applications for Spring 2009 enrollment are now being accepted. Classes begin January 12 2009, and new students may enroll in the entry-level course, Physical Chemistry of Colloids and Surfaces.

For additional information, please contact:

Dr. Annette M. Jacobson
Director, CPS Program
1107 Doherty Hall
Carnegie Mellon University
Pittsburgh, PA 15213
Phone: (412)268-2244
E-mail: jacobson@andrew.cmu.edu
www.cheme.cmu.edu/prospective/mscps/

Candidate Bios Continued from Page 4

Guy C. Berry Cont'd

Awards include the 1994 Pittsburgh Award of the ACS, Pittsburgh Section and the 1990 Bingham Medal of the Society of Rheology; he is a Fellow of the American Physical Society, the American Physical Society, and the Division of Polymeric Materials: Science and Engineering, of the American Chemical Society.

Robert E. Witkowski

Robert E. Witkowski received his B.S. (Chemistry), M.S. (Geochemistry, and Ph.D. (Planetary Science) from the University of Pittsburgh; he is a Pennsylvania registered professional geologist. Bob serves as a Consultant, Chemistry of Materials, to MCS Associates, Inc. He has been a lecturer in the Westinghouse Science Honors Institute.

Bob was a participant in the U.S. Antarctic Research Program (USARP); University of Pittsburgh Antarctic Search for Meteorites (ANSMET) project. His work at the geographic South Pole involved the search for the cosmic dust increment to atmospheric aerosol particles; he continues to maintain an active interest in the science of carbon-rich meteorites and interplanetary dust particles (IDPs). At MCS Associates he provides consulting support in materials compatibility and analytical chemistry.

He is a member of the American Chemical Society (ACS) and the Society for Analytical Chemists of Pittsburgh (SACP). He is a member and also served as Chairman of the Spectroscopy Society of Pittsburgh (SSP), Chairman and Director of the Pittsburgh Section ACS and President of the Pittsburgh Chemists Club. He is a member of the Chemical Heritage Foundation Bolton Society, an organization of chemical bibliophiles, and the University of Pittsburgh Chapter of Sigma Xi.

Bob received the American Chemical Society (ACS), Pittsburgh Section, 2007 Distinguished Service Award "In Grateful Recognition of his Outstanding Volunteer Service to the Pittsburgh Section."

Bob is a collector and restorer of antique scientific instruments and apparatus; he specializes in spectrometers, microscopes, analytical balances and Bunsen burners.

Councilor

Mark Bier
Michelle Blanken
V. Michael Mautino
Almudena Prudencio

Mark E. Bier

Mark E. Bier received his B.S. degree in chemistry with Honors from Allegheny College in Meadville, PA and his Ph.D. in chemistry from Purdue University. He has worked at the V.A. Medical Center in Oakland, the American Sterilizer Corp. in Erie, Thermo Fisher Scientific Corporation in San Jose, CA. and currently as an Associate Research Professor in the Department of Chemistry at Carnegie Mellon University. Mark was a key scientist in the development of Thermo Fisher's GCQ and LCQ mass spectrometers and his invention of the linear ion trap has made a major impact to mass spectrometry worldwide. He has co-authored book chapters, journal articles and patents. He is also an active reviewer of numerous proposals submitted to funding agencies such as the NSF and the NIH. Current research interests include bio-physical chemistry in which his research group is focused on building a heavy ion mass spectrometer to analyze heavy macromolecular complexes such as the bacteriophage HK97, a virus. Mark has advised over 20 students at Carnegie Mellon, judged numerous science fairs and co-directed the development of the educational resource entitled, Virtual MS Lab. <http://sVMSL.cmu.chm.edu>, which is used nationwide.

·ACS member, Pittsburgh Section: Secretary 2000, Chair 2002, Director 2006-07, Councilor 2008.

·Spectroscopy Society of Pittsburgh (SSP), member 1997 to present. SSP- Mass Spectrometry Discussion Group, Chair 1998-99, 2004-05. 2007-08

·American Society for Mass Spectrometry (ASMS) member.

·International Mass Spectrometry Society (IMSS) member.

·Society of Analytical Chemist of Pittsburgh (SACP) member.

·Bay Area Mass Spectrometry Society (BAMS), member, 1988-96, treasurer 1995.

·Purdue University Nu chapter, honorary chemical society Phi Lambda Upsilon. Past Chair.

Michelle Blanken

Michelle Blanken received her B.S. in chemistry from Gannon University, her M.S. in chemistry from the University of Pittsburgh and her M.Ed. from Slippery Rock University. Michelle was the Program Director of the Chemical Laboratory Technician Program at Bidwell Training Center from 2000 until September of 2008. This program trains entry-level technicians to work in a variety of fields within the chemical industry. While at Bidwell, Michelle and her students were involved in the Western Pennsylvania Technician Affiliate Group of the ACS and volunteered at National Chemistry Week and National Engineers Week activities at Carnegie Science Center. She has also volunteered as a judge and has been Chair of the Senior Chemistry division at the Pittsburgh Regional Science and Engineering Fair. Michelle has been an ACS member for over 12 years and serves on the Committee of Technician Affairs. She worked for over seven years as an Environmental Scientist at Baker Environmental and has recently accepted a position with Tetra Tech NUS, Inc., an environmental consulting firm.

Michael Mautino

Michael Mautino has worked for Bayer MaterialScience LLC for the past eighteen years and is currently a Senior Marketing Representative in the BaySystems Insulation Group. During the first sixteen years of his career at Bayer he worked in the technical side as a chemical technician and chemist, formulating polyurethane rigid foam insulation for a variety of market applications including water heaters, entry doors, vending machines, and refrigerators. He developed a number of polyurethane foam systems that have been successfully commercialized and currently holds a patent on one such formulation. Michael obtained a Bachelor of Science in Business Management from the University of Phoenix in 2004. In 2006 he began working in the business side at Bayer as a Marketing Representative.

Michael is a very active member of the ACS at both the local and national levels. In addition to being Councilor (2003-08), he has been the Pittsburgh

Mautino Continued

Section's National Chemistry Week (NCW) Coordinator since 1999, during which time the Pittsburgh Section's NCW program has been recognized with eight consecutive national ACS awards. He also has served as the Section's Chemists Celebrate Earth Day (CCED) Coordinator since 2003, during which time the Pittsburgh Section was the recipient of the ACS's first CCED recognition award. Nationally, he was chair of the Division of Chemical Technicians (2001-02), the Committee on Community Activities (2004-06), and currently chairs the Committee on Technician Affairs (2007-08).

Statement

Each of my colleagues who are running for Councilor in this election would serve the Pittsburgh Section with distinction. Please take the time to vote and elect 2 of us to represent you!

Dr. Almudena Prudencio

Dr. Almudena Prudencio is a Senior Associate Scientist and North America Lead in a Global Medical Team in the Product Safety and Regulatory Affairs department of Bayer MaterialScience. Her work at Bayer covers the areas of Medical Devices, Food and Drug Administration's regulations for food-contact and medical applications, Toxic Substance Control Act's regulations, compliance with NSF International's standards and internal scientific consulting.

Dr. Prudencio holds a B.S. in Chemistry (2001) from the University of Extremadura (Spain) and a Ph.D. in Chemistry (2006) from Rutgers University. In her doctorate degree, she focused on biomaterial research for drug delivery and medical applications. She chemically incorporated therapeutic agents (e.g., salicylic acid and derivatives, antioxidants, antibiotics, antiseptics) into a polymer backbone to obtain biocompatible polymeric systems that biodegrade to release the drug. Her multidisciplinary thesis work resulted in several publications, patent applications, and presentations at national meetings. Her work on "Polyaspirin", a polymer that biodegrades into salicylic acid (the active form of Aspirin®) for different medical and dental applications led her to her current position at Bayer. During Almudena's graduate studies, she collaborated with researchers from other universities and mentored students. She was awarded a Distinguished Alumni Fellow Award (2001), the Suresh Damle Fund Award for good standing as a Ph.D. candidate (2002) and the Rieman Prize Honorable Mention for outstanding performance as a teaching assistant during the 2003-2004 academic year.

Dr. Prudencio has been a member of the American Chemical Society (ACS) since 2005. She is an ACS Women Chemists Committee (WCC) Associate Member and she has been an alternate Councilor for the ACS Pittsburgh Section in 2008.

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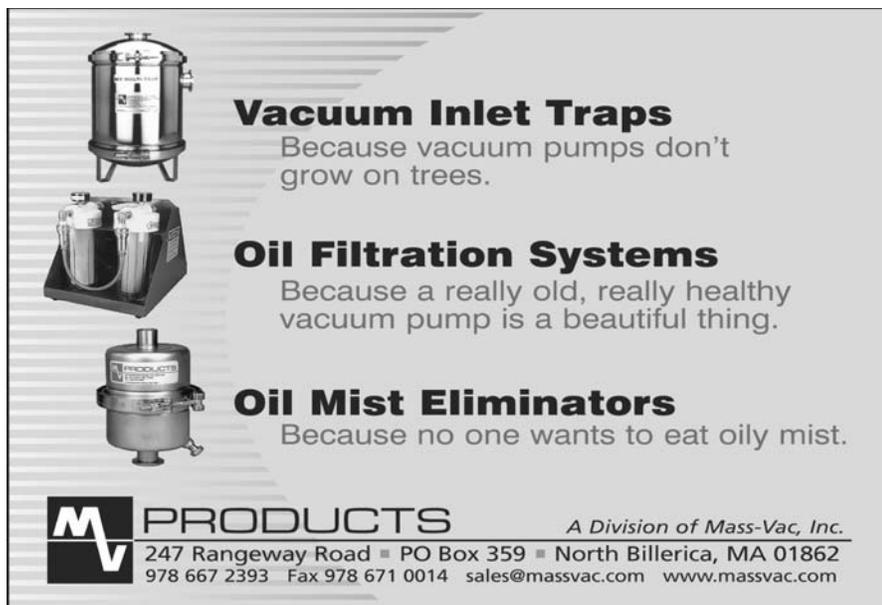
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The Crucible

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Pittsburgh Area Calendar

November

- Mon. 3 **Society for Analytical Chemists of Pittsburgh (SACP)**
Duquesne University, Laura Falk Hall
"Analytical Separation Techniques Utilizing Axial Force Gradients"
Milton L. Lee, Ph.D., Brigham Young University
- Wed. 5 **Pittsburgh Award Dinner**
Pennsylvania Athletic Association
- Wed. 12 **Energy of the Future**
Duquesne University, Duquesne Room
- Tues. 18 **Joint Meeting Pittsburgh Section ACS Chemists Club and ACS Polymer Group**
Duranti's Restaurant
"Organoelectronics: Small Molecules to Polymers"
Britt Minch, Ph.D., PPG Industries Inc.
- Wed. 19 **Spectroscopy Society of Pittsburgh Technology Forum**
Duquesne University, Mellon Hall of Science, Laura Falk Hall
"Natural Medicines from Three Continents"
Dr. Dan Wagner
- Wed. 19 **Spectroscopy Society of Pittsburgh**
Duquesne University, Laura Falk Hall
"Photons and Electrons as Alternatives to Collisions for Obtaining Chemical Structure Information Using MS/MS"
Dr. Gary L. Glish

*Additional chemistry related seminars and events in the Pittsburgh area can be found
on the Pittsburgh Section's website at <http://membership.acs.org/P/Pitt>*

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