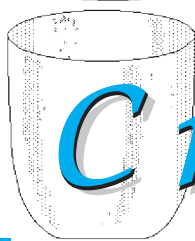


The Crucible



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

Volume: XCIV No.7

March 2009

Call for Nominations The Pittsburgh Award



The Pittsburgh Award was established in 1932 by the Pittsburgh Section of ACS to recognize outstanding leadership in chemical affairs in the local and larger professional community. This Award symbolizes the honor and appreciation accorded to those who have rendered distinguished service to the field of chemistry.

The Award consists of a plaque presented annually at a Section dinner. Members of the Pittsburgh Section, or in exceptional cases, non-members, who have done work worthy of recognition toward increasing chemical knowledge, promoting the chemical industry, benefiting humanity, or advancing the Pittsburgh Section, are eligible for consideration.

Nominations for the Pittsburgh Award are solicited from the membership of the Pittsburgh Section. The form can be found on the section's website, <http://membership.acs.org/P/Pitt>. Click on the awards link at the top of the page. Please send all nominations to Pittsburgh Section Chair-Elect, Garry Warnock, warnock@andrew.cmu.edu by May 15, 2009.

For more information about the nomination process, contact Garry at 412-268-4229.

For a complete listing of former Pittsburgh Award winners see the Pittsburgh Award Section on the Pittsburgh Section's website, <http://membership.acs.org/P/Pitt>.

**Check out details for
the newly formed
Pittsburgh Section
Younger Chemists
Committee on Page 7**

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2009 Eastern Analytical Symposium

November 16 - 19, 2009
Garden State Exhibit Center, Somerset, New Jersey

CALL FOR PAPERS

Deadline – April 15, 2009

The Eastern Analytical Symposium and Exposition is the second largest conference and exposition for laboratory science in the U.S. dedicated to the needs of analytical chemists and those in the allied sciences. We offer high quality cutting-edge technical sessions and state-of-the-art short courses, workshops and seminars. We invite you to be a part of the program by contributing a paper for oral or poster consideration. Please note that all abstracts must be submitted electronically via the EAS web site at www.EAS.org. The abstract submission deadline is April 15.

To submit a contributed paper for the 2009 EAS Technical Program, please submit abstracts through our web site at www.EAS.org, between March 1 and April 15, and follow the instructions for abstract submission.

Invited speakers must not submit abstracts to EAS until requested.

Please carefully review the following information:

- All contributed abstracts must be submitted through our web site at www.EAS.org between March 1 and April 15, 2009. No faxed, e-mailed, or mailed abstracts will be accepted.
- **Please note that no one author may submit and present more than two posters.**
- All abstracts will be acknowledged via e-mail.
- The title of the presentation and the list of authors that you submit are final, and may not be changed.
- The abstract that you submit will be considered to be your final abstract that will be printed in the abstract book for the 2009 Eastern Analytical Symposium.
- Presenting authors of contributed submissions will be notified in June 2009 of the status of the abstract and its session assignment.

TOPIC AREAS

Bioanalysis	Industrial Hygiene	Quality/Regulatory/Compliance
Biomolecules/Biological Systems	Ion Chromatography	Raman Spectroscopy
Capillary Electrophoresis	IR Spectroscopy	Sample Preparation
Chemometrics	Laboratory Automation	Science Education
Chiral Analysis	Laboratory Management	Sensors
Chromatography	LC-MS	Separation Sciences
Compendial Methods	Mass Spectrometry	Size Exclusion Chromatography
Conservation Science	Microchemistry	Solid State Analysis
Data Analysis/LIMS	Microscopy	Space Analytics
Dissolution	Near Infrared (NIR)	Statistics
Environmental Analysis/Pollutants	NMR Spectroscopy	Supercritical Fluid Chromatography
Food Analysis	Organic Chemistry	Surface Science
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Gas Chromatography	Pharmaceutical Impurities	Vibrational Spectroscopy
HPLC	Process Analytical Science	
Immunochemistry	Quality by Design	

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The 2009 Tripartite Symposium CHEMISTRY IN ART AND ARCHEOLOGY

May 6, 2009

University of Pittsburgh, Alumni Hall, Room 343

Parking included (Soldiers and Sailors Garage on Bigelow between Fifth Ave and O'Hara)

Sponsored by

Society for Analytical Chemists of Pittsburgh -- www.sacp.org

Spectroscopy Society of Pittsburgh -- www.ssp-pgh.org

American Chemical Society, Pittsburgh Section -- <http://membership.acs.org/P/Pitt/>

12:30 PM - 1:20 PM REGISTRATION

1:20 PM Introduction

1:30 PM Professor Richard Hark, Juniata College

“Raman Microscopy of Pigments: Archeological Puzzles and Miniature Treasures”

2:20 PM Dr. Sandra L. Olsen, Carnegie Museum of Natural History

“Applications of Chemical Analysis in Archaeology in Early Horse Herding Settlements in Northern Kazakhstan, ca. 35000 BC”

3:10 PM BREAK

3:30 PM Professor Michael Henchman, Brandeis University

“Is the \$25M Vinland Map genuine or fake? An ongoing controversy since 1965”

4:10 PM Speaker #4 TBD

5 : 00 PM - 6:00 PM RECEPTION

For More Information contact:

Jim Manner (manner1@comcast.net) or Joe Grabowski (joeg@pitt.edu)

PLEASE REGISTER BY APRIL 29, 2009

COST: \$10 (Exception: full-time students who pre-register can attend for free)

Mail check (if not a student; payable to SSP) and the completed form to:

SSP - Tripartite Symposium
300 Penn Center Blvd, Suite 332
Pittsburgh, PA 15235

NAME: _____ COMPANY: _____

ADDRESS: _____

CITY: _____ ST: _____ ZIP: _____

EMAIL: _____ PHONE: _____

Chemists Celebrate Earth Day: “Air- The Sky’s the Limit” Illustrated Haiku Contest

As part of their Chemists Celebrate Earth Day (CCED) celebration, the American Chemical Society (ACS) is sponsoring an illustrated haiku contest for students in grades Kindergarten-12.

A haiku is a three-line poem with five syllables in the first line, seven in the second, and five in the third. Haikus typically have nature-related themes and do not rhyme, as in the example below.

Submerged rocks stare back
through the glistening water
streaming clean and clear.

Possible topics related to the atmosphere and chemistry include:

- Wind flowing through valleys, canyons, and over mountains.
- Wind Power - conversion of wind energy.
- Environmental chemistry -keeping air clean.
- Air pollutants - fumes from cars and factories.
- Properties of gas - temperature, density, pressure.
- Gas Phases - water vapor or steam.
- The layers of the atmosphere.

One winner will be selected in each of the following categories:

- K - 2nd grade
- 3rd - 5th grade
- 6th - 8th grade
- 9th - 12th grade

Prizes:

- 1st Place in each grade category - \$50
- 1st Place winners will be submitted for the national ACS’s CCED Haiku contest

For more information about the CCED 2009 contest,
contact Michael Mautino at 412-777-4792 or
michael.mautino@bayerbms.com (e-mails preferred)



Chemists Celebrate Earth Day Illustrated Haiku Contest Rules

ACS Local Sections are encouraged to participate in the Chemists Celebrate Earth Day (CCED) illustrated haiku contest by inviting area Kindergarten - 12th grade students to compete.

Contest Rules

- Poems must conform to the haiku style. Students in grades K-2 may be more free with their syllables; however, no poem may be longer than 25 words.
- The topic of the haiku and the illustration must be related to the CCED theme, “Air-The Sky’s the Limit” and should reflect some aspect of air science from the possible topics listed.
- All entries must be original works without aid from others.
- Each poem must be submitted and illustrated on an unlined 8.5” x 11” sheet of paper (of any type). The illustration must be created by hand using crayons, watercolors, other types of paint, colored pencils or markers. The text of the poem should be easy to read and may be printed with a computer, before the hand-drawn illustration is added, or the poem may be written on lined paper which is cut out and pasted onto the unlined paper with the illustration.
- Only one entry per student will be accepted.
- All entries must have the following information included with the entry: student’s name, grade, parent/guardian’s e-mail address and telephone number, school name, school address, teacher’s name, email, and school telephone number (addresses are used only for sending prizes). For school districts with “privacy” policies restricting sharing of student’s contact information, then use school address and telephone number. For home schooled students, write “Home Schooled” under school name, and note any home school association you may be affiliated with.
- All illustrated haikus and/or digital representations of the haikus become the property of the American Chemical Society. Contest entries will not be returned.
- Acceptance of prizes constitutes consent to use winners’ names, likenesses and entries for editorial, advertising and publicity purposes.
- ACS is not responsible for lost, damaged, or delayed postal shipments and electronic submission is encouraged.
- Contest entries must be received at the address listed below by Wednesday, April 1, 2009 so that local contest winning entries can be submitted in time for the ACS’s national contest. **NO LATE ENTRIES WILL BE ACCEPTED.**
- Local contest winning entries will be announced Thursday, April 2, 2009.

Entries will be judged based upon:

- Relevance to and incorporation of “Air-The Sky’s the Limit” theme
- Word choice and imagery
- Colorful artwork
- Adherence to haiku style
- Originality and creativity
- Overall presentation

Please send entries by Wednesday, April 1, 2009 to:

Michael Mautino
3485 Frye Ave.
Finleyville, PA 15332





Society for Analytical Chemists of Pittsburgh



April Meeting
8:00 PM

Duquesne University, Laura Falk Hall

Monday, April 6, 2009

“Nanoelectronic-Biology Interface”

Charles M. Lieber, Ph.D.
Harvard University

Biography: Charles M. Lieber was born in Philadelphia, Pennsylvania in 1959. He attended Franklin and Marshall College for his undergraduate education and graduated with honors in Chemistry. After doctoral studies at Stanford University and postdoctoral research at the California Institute of Technology, he moved to the East Coast in 1987 to assume an Assistant Professor position at Columbia University. There Lieber embarked upon a new research program addressing the synthesis and properties of low-dimensional materials. He moved to Harvard University in 1991 and now holds a joint appointment in the Department of Chemistry and Chemical Biology, as the Mark Hyman Professor of Chemistry, and the School of Engineering and Applied Sciences. At Harvard, Lieber has pioneered the synthesis of a broad range of nanoscale materials, the characterization of the unique physical properties of these materials and the development of methods of hierarchical assembly of nanoscale wires, together with the demonstration of applications of these materials in nanoelectronics, nanocomputing, biological and chemical sensing, neurobiology, and nanophotonics. Lieber has also developed and applied a new chemically sensitive microscopy for probing organic and biological materials at nanometer to molecular scales. His work has been recognized by a number of awards, including the Einstein Award, Chinese Academy of Sciences (2008); NBIC Research Excellence Award, University of Pennsylvania (2007), Nanotech Briefs Nano 50 Award (2005), ACS Award in the Chemistry of Materials (2004), World Technology Award in Materials (2004 and 2003), Scientific American 50 Award in Nanotechnology and Molecular Electronics (2003), New York Intellectual Property Law Association Inventor of the Year (2003), APS McGroddy Prize for New Materials (2003), Harrison Howe Award, University of Rochester (2002), MRS Medal (2002), Feynman Prize in Nanotechnology (2001), NSF Creativity Award (1996) and ACS Award in Pure Chemistry (1992). Lieber is an elected member of the National Academy of Sciences and the American Academy of Arts and Sciences, Fellow of the Materials Research Society, American Physical Society, Institute of Physics and American Association for the Advancement of Science. He is Co-Editor of Nano Letters, and serves on the Editorial and Advisory Boards of a large number of science and technology journals. Lieber also serves on the Technical Advisory Committee of Samsung Electronics. He has published more than 300 papers in peer-reviewed journals and is the principal inventor on more than 35 patents. In his spare time, Lieber has been active in commercializing nanotechnology, and has founded the nanotechnology companies: Nanosys, Inc. in 2001 and the new nanosensor company Vista Therapeutics in 2007, and nucleated Nantero, Inc. from his laboratory in 2001.

Dinner Reservations: Please email Valarie Daugherty, SACP Administrative Assistant at daugherty@pittcon.org, by Friday, March 20, 2009 to make dinner reservations. Should you not have email, please call Valarie at 412-825-3220 ext 204. Dinner will cost \$8 (\$4 for students) and checks can to be made out to the SACP. If you have any dietary restrictions, please let Valarie know when you leave a 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. Please contact Dr. Mitch Johnson at Duquesne University if any difficulties arise.

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ENERGY TECHNOLOGY GROUP

Pittsburgh Section,
American Chemical Society

Wednesday
March 25, 2009

More Restaurant
214 North Craig Street
Oakland Section of Pittsburgh, PA

5:30 pm
Cocktail Time - Cash Bar
6:00 pm Dinner
7:00 pm Program

“Adsorption of SO₂ and H₂S by Modified Amorphous Carbon Films”

James B. Miller

Department of Chemical Engineering, Carnegie Mellon University
National Energy Technology Laboratory (NETL)

Abstract: Sulfur compounds are ubiquitous in fossil fuels processing. Solid sorbents, including activated carbons, have seen growing interest for both capture and conversion of H₂S and SO₂. However, relatively little is known at the molecular level about the nature of sulfur-compound adsorption onto carbonaceous surfaces. In this work, we prepare a set of well-controlled model carbon surfaces and apply the methods of ultra-high vacuum (UHV) surface science to determine how microstructure and surface chemical modification influence adsorption capacity and desorption kinetics for H₂S and SO₂. This approach allows us to isolate and understand important elementary steps in capture of sulfur-compounds by carbon surfaces; our results will contribute to a basis for rational design of next-generation activated carbons for fossil fuel applications.

Biography: Jim Miller is a Fellow of the Institute for Advanced Energy Solutions at NETL and Assistant Research Professor at Carnegie Mellon's Chemical Engineering Department. He joined CMU in February 2006 after over 25 years in industry as a developer of catalysts, catalytic processes and chemical sensors. Jim's research interests include characterization of surfaces and surface processes for basic understanding of catalysts, separation devices and chemical sensors. He is a past Chair of AIChE-Pittsburgh and current President of the Pittsburgh-Cleveland Catalysis Society.

For reservations, please call Al Mann by noon Monday March 23, 2009 at 412-661-5947 or by email at alfred.mann@verizon.net

Pittsburgh Section Launches Younger Chemists Committee

The YCC has arrived in the 'burgh! Chartered by the American Chemical Society, the Younger Chemists Committee is intended to encourage young (below 35 years of age) and early career chemists to pursue successful professions and involvement in the scientific field!

The Pittsburgh YCC is actively seeking members and ideas for events! If you are a chemist under 35, please join us! Send an email to the secretary of the group, Eric Lanni at elanni@andrew.cmu.edu to become a member! All young chemists, from high school, to college, to graduate students or recent graduates, educators or industrial chemists are welcome.

Your suggestions and comments are gratefully appreciated. Feel free to share them with Eric or with the YCC group Chair, John Williams (jtwillia@waynesburg.edu). Future events will be announced in the Crucible.



Society for Analytical Chemists of Pittsburgh

March Meeting

The SACP will not be meeting in March due to Pittcon® 2009.

The Conference and Exposition will be held in Chicago, IL March 8 - March 13, 2008

NMR Symposium

Honoring Aksel A. Bothner-By

March 26-27, 2009

Mellon Institute Auditorium,
Carnegie Mellon University, Pittsburgh, PA

Invited Speakers

- **Ad Bax**, National Institutes of Health
- **John Delayre**, Tecmag
- **Jerry Glickson**, University of Pennsylvania
- **Christian Griesinger**, Max Planck Institute for Biophysical Chemistry, Germany
- **Angela Gronenborn**, University of Pittsburgh
- **Chien Ho**, Carnegie Mellon University
- **Oleg Jardetzky**, Stanford University
- **Dennis Markiewicz**, National High Magnetic Field Laboratory, Florida
- **John Markley**, University of Wisconsin-Madison
- **Martin Packard**, Retired from Varian Inc.
- **James Prestegard**, University of Georgia
- **Alfred G. Redfield**, Brandeis University
- **James Shoolery**, Retired from Varian Inc.
- **Brian Sykes**, University of Alberta, Canada
- **Nico Tjandra**, National Institutes of Health
- **Peter Van Zijl**, John Hopkins University
- **Dieter Ziessow**, Technical University, Berlin

Organizers

- **Roberto R. Gil**, Carnegie Mellon University
- **Josef Dadok**, Carnegie Mellon University
- **Istvan Pelczer**, Princeton University

REGISTRATION: You can register online at www.chem.cmu.edu/nmr-symposium/ or see contact information below to obtain a paper registration.

Contact Information

Roberto R. Gil
Department of Chemistry
Carnegie Mellon University
4400 Fifth Avenue
Pittsburgh, PA 15213
Telephone: (412) 268-4313
Fax: (412) 268-1061
E-mail: nmr-symposium@andrew.cmu.edu

We gratefully acknowledge generous support from Carnegie Mellon's Office of the Vice-President for Research, Mellon College of Science and Department of Chemistry.

ACS Pittsburgh Chemists Club

Pittsburgh Section, American
Chemical Society

March Meeting

Tuesday, March 31, 2009

More Restaurant, 214 N. Craig St.

Social Hour: 6:00 PM

Dinner: 6:40 PM

Program: 7:50 PM

“What is and what is new at PTEI”

Joan F. Schanck, MPA, Director, Education and Workforce Development
Pittsburgh Tissue Engineering Initiative, Inc.

Abstract

Regenerative medicine is at the forefront of modern medicine and Pittsburgh Tissue Engineering Initiative, Inc (PTEI) has been a leader of this fast-growing sector since 1996-- with innovative programs that spur technology development, shape policy, provide research funding, and sponsor innovative professional training and education programs for scientists, students and the public-at-large. PTEI, a 501(c)(3) non-profit organization, promotes the field of regenerative medicine by sponsoring programs in research, education and industry development. The complementary talents of Western Pennsylvania's renowned health and research institutions were the foundation for PTEI. This field of biomedicine requires the coordinated efforts of biologists, physicists, chemists, engineers, computer engineers, material scientists and physicians. This talk will overview the history, research and educational outreach programs going on at PTEI today.

Biography

Joan F. Schanck, MPA, is Director of Education and Workforce Development for the PTEI. Joan's professional background includes over 17 years of specialized experience in administration, education, research, fund raising, collaborative team building, program development and direct care/services delivery within the university, community and non-profit, public health, and education settings. Joan was educated at the University of Pittsburgh and received a Bachelor of Arts concentrated on psychology and legal studies, a Masters of Public Administration concentrated on Policy Analysis-Education and Health Care and further graduate certification in Non-Profit Management. Currently she bridges the worlds of cutting-edge biomedical research, education, and grant writing. As Director, Joan has developed various unique, interdisciplinary educational programs for undergraduate, graduate and post-doctoral students along with programs for the general public, K-12 students and their teachers.

*For Reservations, please call Ed Martin by
noon Friday, March 27, 2009 at (724) 335 -0904 or
by e-mail at edwardmartin1046@verizon.net*

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

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Services

Crucible Deadline

The deadline for items submitted to The Crucible is the 1st of the month prior to publication.

For example, all items for the April 2009 issue must be to the editor by March 1, 2009.

The Crucible

The Crucible is published monthly, August through May. Circulation, 2500 copies per month. Subscription price, six dollars per year. All statements and opinions expressed herein are those of the editors or contributors and do not necessarily reflect the position of the Pittsburgh Section.

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Pittsburgh Area Calendar

March

Wednesday, March 4, 2009

Philips Lectures

Professor Héctor D. Abruña
Cornell University
Fuel Cells and Batteries in the Electrical
“*Energy Landscape Fuel Cells and Batteries
in the Electrical Energy Landscape*”
4:00 PM - Chevron Science Center, Room
12, University of Pittsburgh

Thursday, March 5, 2009

Philips Lectures

Professor Héctor D. Abruña
Cornell University
“*Materials Advances for Electrical Energy
Generation and Storage: Fuel Cells, Lithium
Ion Batteries and SuperCaps*”
4:00 PM - Chevron Science Center, Room
12, University of Pittsburgh

Thursday, March 12, 2009

Professor Ben Liu
University of Texas
“*Mechanistic Studies of C-4 Deoxygenation
in the Biosynthesis of Unusual Sugars*”
2:30 PM, Chevron Science Center,
Room 12B, University of Pittsburgh

Professor Toby Allen
UC Davis
“*Ions and Ionizable Protein Side Chains
Crossing Membranes: with and without
Ion Channels*”
4:00 PM, Chevron Science Center, Room
12B, University of Pittsburgh

Tuesday, March 17, 2009

CMMS Distinguished Lecture

Professor Wilfred van Gunsteren
ETH Zurich-Eidgenössische Technische
Hochschule (Swiss Federal Institute of
Tech)
“*Thirty Years of (Bio)Molecular Simulation:
How Far Have We Come?*”
2:30 PM - Room TBD, University of
Pittsburgh

Green Chemistry

Professor Omar Yaghi
University of California, Los Angeles
“*Zeolitic Imidazolate Frameworks and
Application to CO₂ Capture*”
4:00 PM - Chevron Science Center, Room
12A, University of Pittsburgh

Thursday, March 19, 2009

Professor Jeff Long
UC Berkeley
“*Hydrogen Storage in Metal-Organic
Frameworks*”
2:30 PM, Chevron Science Center, Room
12B, University of Pittsburgh

CMMS Distinguished Lectures

Professor Wilfred van Gunsteren
ETH Zurich-Eidgenössische Technische
Hochschule (Swiss Federal Institute of
Technology)
“*Methodological Advances in Computer
Simulation of Biomolecular Systems*”
4:00 PM - Chevron Science Center, Room
12A, University of Pittsburgh

Thursday, March 19, 2009

Professor Eric Heller
Harvard University
“*All About Tunneling*”
5:30 PM, Room TBD, University of
Pittsburgh

Wednesday, March 25

Energy Technology Group More Restaurant

“*Adsorption of SO₂ and H₂S by Modified
Amorphous Carbon Films*”
James B. Miller, Department of Chemical
Engineering, Carnegie Mellon University,
University National Energy Technology
Laboratory (NETL)

March 26-27

**NMR Symposium Honoring Aksel A.
Bothner-By**
Mellon Institute Auditorium, Carnegie
Mellon University

Tuesday, March 31

ACS Pittsburgh Chemists Club More Restaurant

“*What is and What is New at PTEI*”
Joan F. Schanck, MPA, Director, Education
and Workforce Development, Pittsburgh
Tissue Engineering Initiative, Inc.

*Additional chemistry related seminars and events in the Pittsburgh area can be found
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