The Spectroscopy Society of Pittsburgh Celebrates its 65th Anniversary

The Spectroscopy Society of Pittsburgh (SSP) is celebrating its 65th anniversary during 2011, The International Year of Chemistry. As part of this celebration, the SSP has dedicated this year to the former Chairman of the Society; recognizing their efforts in developing programs and activities over 65 years for the promotion of science education. To this end, the SSP is committed to educating members of the scientific community, students, and teachers about spectroscopy and science. With this as their goal, the SSP holds monthly technical meetings, develops and presents seminars and workshops, awards scholarships, grants and endowments and financially supports science related community activities.

The first chairman of the SSP was Dr. Mary Elizabeth Warga, 1946 to 1947. Mary was born in Donora, PA, and her advanced education was received at the University of Pittsburgh. Dr. Warga spent the early part of her professional career at the Mellon Institute of Industrial Research, Pittsburgh, PA, from 1929 to 1936. She joined the University of Pittsburgh Physics Department in 1936 and remained there as a faculty member until 1959. Mary developed the spectroscopy laboratory at the University; her research interest was emission spectrochemical analysis. She was also instrumental in establishing the SSP and became the Society’s first Chairman. Mary, at the age of 87, died on December 10, 1991. The people who worked with Dr. Warga knew her as a dedicated and talented educator; Mary’s strong contribution to the Pittsburgh scientific community will forever be remembered.

Also, in celebration of the 65th anniversary of the Spectroscopy Society of Pittsburgh, a commemorative poster has been designed and printed. The poster features a photograph of a classic, early twentieth century type, Bunsen-Kirchhoff spectroscope. It is being made available to interested individuals, and while the supply lasts, you can obtain a copy simply by directing your request to www.ssp-pgh.org or by calling (412) 825-3220, extension 212.

HAPPY 65TH ANNIVERSARY SSP!

Article Submitted by: Bob Witkowski, SSP Publicity Chair
EXHIBITION & SYMPOSIUM | MAY 3-5 2011
PENNSYLVANIA CONVENTION CENTER | PHILADELPHIA | USA

DELIVERING THE RIGHT FORMULA

Chemspec USA was created and is being launched because the market thought that there should be another choice in North America for a chemical event. As with all other successful Chemspec Events, CSUSA aims to draw in a diverse audience of exhibitors and visitors from such industries as fine chemicals, pharmaceuticals, crop science, biotechnology, cosmetics and personal care, water treatment, dyes and colorants and general specialty chemicals. We believe that Chemspec USA is the most significant new event in this global arena.

WORLD-CLASS SYMPOSIUM
TUESDAY MAY 3 2011

Top industry leaders will deliver two streams covering: pharma, chemical & crop protection, green chemistry, supply chain management, regulatory issues, mergers & acquisitions, investment & venture capital, outsourcing & biotechnology

OVER 30 SPEAKERS CONFIRMED TO DATE, INCLUDING:

Selfi Ghasemi
Chairman & CEO,
Rockwood Holdings

Craig Rogerson
CEO,
Chemtura Corporation

Dr. Magid Abou-Gharbia
Former Senior VP at Wyeth and now Dean for Research, School of Pharmacy, Temple University

Dr. Tom Connelly
Executive VP & Chief Innovation Officer,
DuPont

Peter Young
President,
Young & Partners

Guy Villax,
CEO,
Hovione

Dr. Joe Carleone
CEO, AMPAC

John Warner, President & CEO, Warner Babcock Institute for Green Chemistry, "one of the fathers of green chemistry"

Dr. Pat Confolane,
VP, Global R&D,
DuPont Crop Protection

I must say that your Symposium line up will make Chemspec USA the BEST meeting in the States to attend! I am really impressed

Steve Munk, CEO of Ash Stevens

www.chemspecamerica.com

PERFECT LOCATION

Philadelphia is at the heart of the US custom chemicals industry (Pennsylvania, New Jersey and adjacent states) and is also a major hub of the whole life science sector. Over 60% of SOCMA members are within 100 miles and over 27% of ACS members are within the same distance of the city. Philadelphia is one of the top three centers for biotechnology in the US.

SAMPLE OF PARTICIPANTS

AMPAC Fine Chemicals  • BeneGard  • Lonza  • Chemtura  • Chemetall  • Hovione  • Sumitomo  • Davao  • Daikin  • Almac Sciences  • Dishman  • Ash Stevens  • TCI America  • Kaneka  • Spectrum  • Isochem NA  • Notox  • Halocarbon and Bio organizations from key US states in close proximity to the event site

RX-360 SEMINAR
THURSDAY MAY 4 2011

Rx-360 is an international consortium of pharmaceutical and biotech companies and suppliers to the industry, that aims to develop and implement a global quality system to help members ensure product quality and authenticity throughout their supply chain to enhance patient safety.

AGENDA AT A GLANCE
SUNDAY MAY 1 - THURSDAY MAY 5

Starting Sunday, May 1: American Chemical Society Short Courses
Monday, May 2: Scholarship Golf Day
Tuesday, May 3: Symposium Day
Wednesday, May 4 - Thursday, May 5:
Exhibition & Exhibitor Showcases

MORE INFORMATION

USA
Benjamin W Jones
Global Consultant
jonescentury@verizon.net
Tel: +1 610 225 2396

Europe/Asia Pacific
John Lane, Sales Director
Chemspec Events
johnlane@quartzltd.co.uk
Tel: +44 (0) 737 855 076

April 2011 / The Crucible
Mass Spectrometry Discussion
Group of Pittsburgh

Thursday, April 14, 2010

ROUNDTABLE DISCUSSION:
CURRENT ISSUES & OPPORTUNITIES IN MS BASED BIOMARKER DISCOVERY
Sponsored by the Spectroscopy Society of Pittsburgh and Open to the Public

Grand Concourse – Ladies’ Waiting Room
100 West Station Square Drive, Pittsburgh PA 15219
*Must park in Station Square East Lot for free parking

PROGRAM

5:30 P.M. Social Hour (Cash Bar) and Registration

6:00 P.M. Dinner

7:00 P.M. Roundtable Discussion
Experts: William L. Bigbee, University of Pittsburgh Cancer Institute
Russell Grant, Lab Corps
Fred Regnier, Purdue University
Haleem Issaq, National Cancer Institute
Moderator: Scott Kuzdzal, Shimadzu Scientific Instruments

9:00 P.M. Conclusion

Registration Fee: $15 ($5 for Student and Retiree) – Dinner & Parking Included
Please make check payable to SSP and mail the form below by April 7 to:

Heather Juzwa
SSP – Continuing Education Symposium
321 Winners Circle
Canonsburg, PA 15317

For more information, visit the MSDG website at http://chemed.chem.pitt.edu/ssp-msdg/
or contact Heather Juzwa by email at hljuzwa@shimadzu.com.

Please tell Heather if you want a vegetarian meal.

SSP Continuing Education Registration Form – April 14, 2010

Name: ____________________________________________________ Affiliation: ____________________________________________

Mailing Address: ___________________________________________________________________________________________

Email: ________________________________ Phone: ________________________________________________________________
Presents a Continuing Education Symposium:

“Financial Planning in a Global Economy”

Saturday, May 7, 2011

8:45 am – 1:00 pm

Pittsburgh Athletic Association – 2nd Floor Library
4215 Fifth Avenue, Pittsburgh, PA 15213

PROGRAM

8:45-9:15  Registration
9:15-10:30  Jayme Meredith, Vice-President and Financial Advisor
10:30-10:45  Break
10:45-11:30  Matthew Snider, Vice-President and Financial Advisor
11:30-12:00  Question and Answer Session
12:00   Lunch

OPEN TO THE PUBLIC

Please register by April 27, 2011

Topics Include:

• What to ask and what you should be able to answer
• How to keep on track to meet goals
• Risks and how to handle them
• How to choose a financial professional
• Common mistakes

• Basics of portfolio construction
• How to determine financial goals
• Diversification and its importance
• Current economic and investment outlook
• Types of investment accounts and vehicles

Registration Fee: $10 ($5 for Student and Retiree) - Lunch & Parking* Included
(*Soldiers and Sailors lot)

Please make check payable to SSP and mail the Registration Form below to:

Jenna Sabot
SSP – Continuing Education
300 Penn Center Blvd, Suite 332
Pittsburgh, PA 15235

SACP Continuing Education Registration Form - May 7, 2011

Name: ____________________________________________________ Affiliation: __________________________________________

Mailing Address: _____________________________________________________________________________________________

Email: ______________________________________________________ Phone: _________________________________________

Indicate Meal Choice:  ☐ Traditional Club  ☐ Jumbo Fish Sandwich  ☐ Grilled Vegetable Sandwich

April 2011 / The Crucible
The use of performance-enhancing substances in sport is believed to date back to the Greeks and the original Olympic Games. Beginning in the early 1900’s, stimulants such as amphetamine, cocaine, heroin, and strychnine were widely used in multi-day endurance running, cycling, and swimming events. Deaths among athletes prompted initial bans on the use of stimulants in 1928. Anabolic steroids were introduced to sport in the 1950’s through 1980’s. Recombinant DNA-based protein pharmaceutical agents like erythropoietin (EPO) and growth hormone (GH) emerged in the 1980’s and 1990’s, as did their abuse.

In 2000, responsibility for overseeing the global fight against the use of performance-enhancing drugs was transferred to the World Anti-Doping Agency (WADA; www.wada-ama.org), a joint effort of sport bodies and governments. WADA is responsible for determining the List of Prohibited Substances, accreditation of 34 testing laboratories around the world, and evaluating signatory compliance with the World Anti-Doping Code. The purpose of anti-doping programs is to achieve “perceived deterrence”. The perceived deterrence model requires that the individual be more concerned about the consequences of being caught and sanctioned than they are with the benefits of violating the rules of sport. This places significant emphasis on the collection of appropriately timed samples and the capabilities of the analytical methods available for the detection of prohibited substances.

Chromatographic methods with mass spectrometric detection (GC-MS; LC-MS-MS) have always been the core analytical techniques used because of the need to identify substances (and their metabolites) that should not be present in the athlete’s urine or blood. The detection of substances that occur naturally in the body (e.g., testosterone, growth hormone) presents an even greater challenge. It is well known that most substances appearing in urine vary widely in concentrations, so measurement of concentration alone cannot be relied upon. The first means of detecting the use of testosterone was achieved by measuring the testosterone-to-epitestosterone ratio (T/E ratio). Initially the T/E ratio was compared to population reference ranges, but more recently intra-individual reference range assessment methods such as the personal reference range and “predictive” models have been used. Gas chromatography-combustion-isotope ratio mass spectrometry (GC-C-IRMS) has also been used to identify non-physiological sources of testosterone and other steroids.

It is clear from interviews with athletes who have confessed to their drug abuse and from other “intelligence” that athletes change their behaviors in response to changes in anti-doping strategies. Thus vigilance and continued analytical research funded by the anti-doping agencies such as the Partnership for Clean Competition (www.cleancompetition.org) are key to maintaining deterrence.

Biography: Larry Donald Bowers received his Bachelor of Arts degree in Chemistry from Franklin and Marshall College, Lancaster, Pennsylvania. He completed his graduate work at the University of Georgia. His thesis work, under the direction of Professor Peter Carr, involved the preparation and application of immobilized enzymes to problems in bioanalysis. He was awarded a Ph.D. degree in Chemistry. Dr. Bowers then joined the Clinical Chemistry and Toxicology Division of the Department of Clinical Pathology at the University of Oregon Health Sciences Center in Portland, Oregon as a postdoctoral fellow. In September, 2000, Dr. Bowers joined the United States Anti-Doping Agency (USADA). He currently serves as Chief Science Officer.
Nuclear magnetic resonance (NMR) is probably the most versatile analytical technique available to chemistry and biochemistry because it is non-perturbing and offers site-specific atomic resolution available with few other approaches. It is very forgiving as to the physical state of the sample, being applicable to gases, solutions and to amorphous and crystalline and microcrystalline solids. In addition, for similar reasons NMR (or MRI) is widely used in many other areas of science ranging from basic nuclear physics to medical imaging.

Despite its enormous versatility, the sensitivity of the NMR experiments is relatively low because it is based on observation of low energy spectroscopic transitions between nuclear Zeeman levels. As a consequence, there are continuing efforts to develop new NMR methods and instrumentation that improve the signal-to-noise of the experiments. Some of the most successful of these involve transfer experiments that move polarization from a highly polarized spin reservoir to a weakly polarized one, leading to an enhancement in the NMR signal intensities proportional to the ratio of the magnetic moments of the two spin species. It is now appreciated that the largest gains in signal intensities in these sorts of experiments can be achieved by transferring polarization from an electron spin(s) to a nuclear spin system. This is generally accomplished via microwave irradiation of the electron paramagnetic resonance (EPR) spectrum, an experiment known as dynamic nuclear polarization (DNP) NMR. Since contemporary NMR experiments are performed at magnetic fields of ~5-23 T, the required microwave radiation falls into the frequency range 140-660 GHz, or the millimeter wave regime. This presentation discusses the implementation of DNP/NMR experiments in high magnetic fields.

Over the last few years we have developed cyclotron resonance maser (a.k.a. gyrotron) microwave sources that operate at frequencies of 140-460 GHz that permit DNP enhanced NMR (DNP/NMR) experiments in magnetic fields of 5-16.4 T (1H NMR frequencies of 211-700 MHz, respectively). We review the instrumentation used for these experiments, which include new NMR probe designs and tunable gyrotron sources. In addition, we discuss two mechanisms that are currently used for DNP experiments in solids at high fields – the solid effect and cross effect -- and the polarizing agents appropriate for each. These include biradicals that enable increased enhancements at reduced concentrations of the paramagnetic center. Figure 1 depicts recent results obtained from the rigid biradical bis-TEMPO-bis-ketal (bTbk) where we observe an enhancement of ~250, or a reduction in signal averaging time of 62,500. In addition, we discuss applications of DNP/NMR that illustrate its utility in enhancing signal-to-noise in MAS NMR spectra of a variety of biological systems including membrane and amyloid proteins whose structures are of considerable scientific interest. Presently, enhancements that are routinely available and range from 40-250 depending on experimental variables such as temperature, magnetic field, microwave B1, polarizing agent, etc. Finally, we describe extensions of these experiments that permit observation of 13C liquid state spectra where we have observed enhancements of 140-400 in small molecules and a protein.

Bio: Prof. Robert G. Griffin received his B.S. degree (with Honors) in 1964 majoring in Chemistry at the University of Arkansas. He attended graduate school at Washington University (St. Louis, MO) where he worked with Prof. Samuel I. Weissman on EPR experiments directed at understanding the spectra and electron transfer processes of radical ions in solution. In 1970 after completing his Ph.D., he moved to MIT to perform postdoctoral work with Prof. John S. Waugh. At that time, the field of high resolution NMR in solids was in its infancy, and he was involved in multiple pulse NMR experiments that reported the initial observation of chemical shift anisotropies in single crystals and powders. In 1972 Prof. Griffin accepted a position at the Francis Bitter Magnet Laboratory (FBML) as a staff scientist, and rose through the ranks to become Director in 1992. In 1989, he joined the faculty of the MIT Chemistry Dept. where he teaches physical chemistry. In 2007 Professor Griffin received the Eastern Analytical Symposium Award for Outstanding Contributions to Magnetic Resonance and the Günther Laukien Prize of the Experimental Nuclear Magnetic Resonance Conference. In 2008 he was elected a Fellow of the International Society of Magnetic Resonance (ISMAR), and an honorary fellow of the NMR Society of India in 2009. In 2010 he received the ISMAR Triennial Prize for the development of high frequency dynamic nuclear polarization experiments.

Dinner Reservations: Please register on-line at http://www.pitcon.org/misc/societies/sspRSVP.php or call (412) 825-3220 ext 212 to make dinner reservations NO LATER THAN FRIDAY, April 15, 2011. This month’s entrée is Beef Wellington. Dinner will cost $8 and checks can be made out to the SSP. If you have dietary restrictions, please indicate them 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. Contact Duquesne University if any difficulties arise.
Mammoths are an extinct group of elephants, whose ancestors migrated out of Africa about 3.5 million years ago and spread across Eurasia. The well-known one is the woolly mammoth, a close cousin of living elephants (1,2,3). Woolly mammoths first appeared in the middle Pleistocene more than 400,000 years ago, most likely in northeastern Siberia. They were adapted to the extreme cold, with a dense undercoat, guard hairs up to 3 feet long, and small, fur-lined ears. An international team of scientists carried out a collaborative research to resurrect hemoglobin (a protein responsible for transport of oxygen from the lungs to tissue) from wooly mammoth. Using DNA extracted from a ~43,000 year-old Siberian mammoth specimen, team members followed stringent ancient DNA methods to amplify the coding regions of the woolly mammoth genes and further isolated DNA and mRNA from Asian elephant blood and amplified its adult-expressed $\alpha$- and $\beta$-like globin genes. There are only four amino acid substitutions in the hemoglobin molecule from Asian elephant to woolly mammoth, namely, one in the $\alpha$-chain, $\alpha$5Lys$\rightarrow$Asn and three in the $\beta$-like chain, $\beta$12Thr$\rightarrow$Ala, $\beta$86Ala$\rightarrow$Ser, and $\beta$101Glu$\rightarrow$Gln. The cDNA sample coding for Asian elephant hemoglobin was sent to our laboratory at Carnegie Mellon University. We constructed a plasmid for expressing the hemoglobin of Asian elephant using our existing plasmid for expression human hemoglobins in Escheria coli (3). We then constructed an expressing plasmid for woolly mammoth hemoglobin via site-directed mutagenesis on that for Asian elephant and expressed the recombinant hemoglobins for woolly mammoth and Asian elephant from these two plasmids (3). These recombinant hemoglobins were then used to measure their respective functional properties as well to determine their structures by NMR spectroscopy. In this presentation, we shall give a summary of our findings to gain some insights into the biochemical basis for mammoth hemoglobin to adapt to cold temperature in the Arctic environment.

References:

Bio
Dr. Ho received an MA and B.A. in Chemistry from Williams College, a Ph.D. in Physical Chemistry from Yale University and MA from the Massachusetts Institute of Technology concerning post doctoral biochemistry.

Dr. Ho has worked at several positions in the fields of chemistry, molecular biology, biophysics and biochemistry. These include being research chemist, Union Carbide Corporation; Assistant Professor of Biophysics, University of Pittsburgh; Associate Professor of Molecular Biology, Dept. of Biophysics and Microbiology and Acting Chairman, Univ. of Pittsburgh; Professor of Molecular Biology, Dept. of Biophysics & Microbiology, University of Pittsburgh and Professor/Head, Dept. of Biol. Sci., Carnegie Mellon University. Currently, Dr. Ho is Director, Pittsburgh NMR Center for Biomedical Research, and Alumni Professor of Biological Sciences, Carnegie Mellon University. Chien Ho has authored or coauthored hundreds of scientific papers and has received several prestigious honors and awards which include the John Simon Guggenheim Fellowship, 1970 - 1971; Elected to Membership in the Academia Sinica, 1980; Alumni Professor of Biological Sciences, Carnegie Mellon University, 1985–present; National Heart, Lung, and Blood Institute MERIT Award, 1986-1996; Fellow of the International Society of Magnetic Resonance, 2009.
**Banana Peels Get A Second Life As Water Purifier**

“*Banana Peel Applied to the Solid Phase Extraction of Copper and Lead from River Water: Preconcentration of Metal Ions with a Fruit Waste*”

Industrial & Engineering Chemistry Research

To the surprisingly inventive uses for banana peels — which include polishing silverware, leather shoes, and the leaves of house plants — scientists have added purification of drinking water contaminated with potentially toxic metals. Their report, which concludes that minced banana peel performs better than an array of other purification materials, appears in ACS’s journal Industrial & Engineering Chemistry Research.

Gustavo Castro and colleagues note that mining processes, runoff from farms, and industrial wastes can all put heavy metals, such as lead and copper, into waterways. Heavy metals can have adverse health and environmental effects. Current methods of removing heavy metals from water are expensive, and some substances used in the process are toxic themselves. Previous work has shown that some plant wastes, such as coconut fibers and peanut shells, can remove these potential toxins from water. In this report, the researchers wanted to find out whether minced banana peels could also act as water purifiers.

The researchers found that minced banana peel could quickly remove lead and copper from river water as well as, or better than, many other materials. A purification apparatus made of banana peels can be used up to 11 times without losing its metal-binding properties, they note. The team adds that banana peels are very attractive as water purifiers because of their low cost and because they don’t have to be chemically modified in order to work.

*The authors acknowledge funding from the São Paulo Research Foundation.*
Krzysztof Matyjaszewski To Receive 2011 Wolf Prize in Chemistry

Award for “Deep Creative Contributions to the Chemical Sciences” Will Be Bestowed by Israeli President and Minister of Education in May

Krzysztof Matyjaszewski, the J.C. Warner Professor of the Natural Sciences at Carnegie Mellon University’s Mellon College of Science, has been named a recipient of the 2011 Wolf Prize in Chemistry from Israel’s Wolf Foundation.

The Wolf Prize is given every year in four out of five categories, in rotation: agriculture, chemistry, mathematics, medicine and physics. A total of 262 scientists from around the world have been honored with this prize over the past 33 years. One out of every three Wolf Prize Laureates in chemistry, physics and medicine have later received a Nobel Prize. Matyjaszewski is the second Carnegie Mellon professor to receive a Wolf Prize. The late John Pople received the 1992 Prize in Chemistry for his contributions to theoretical chemistry. Pople went on to receive the Nobel Prize in Chemistry in 1998.

The Wolf Prize Committee commended Matyjaszewski for his “groundbreaking research in synthesis of organic materials, and in particular, in the critical area of controlled, efficient, safe and economical polymer synthesis.” Matyjaszewski invented the process of atom transfer radical polymerization (ATRP), one of the most effective and most widely used methods of controlled radical polymerization (CRP). This method allows scientists to create polymers from many different component parts, called monomers, in a piece-by-piece fashion, precisely controlling the polymer’s composition. By assembling polymers in such a manner, scientists have been able to create a wide range of new materials with highly specific, tailored functionalities. This technology also allows for the production of “smart” materials that can respond to altered environments, such as changes in pressure, acidity, light exposure or other variables.

Born in Poland, Matyjaszewski received his doctorate from the Polish Academy of Sciences in 1976 and completed a postdoctoral fellowship at the University of Florida in 1977. From 1978 until 1984 he was a research associate at the Polish Academy of Sciences. After spending a year at the University of Paris, Matyjaszewski came to Carnegie Mellon in 1985 and was appointed the J.C. Warner Professor of the Natural Sciences in 1998. While at Carnegie Mellon, Matyjaszewski founded the Center for Macromolecular Engineering, served as head of the Department of Chemistry from 1994 to 1998, and was named a University Professor in 2004.
**Society for Analytical Chemists of Pittsburgh**

Dues Only $5.00/year, Call Valarie Daugherty 412-825-3220 Ext. 204 Right Now!

---

**Micron Analytical Services**

COMPLETE MATERIALS CHARACTERIZATION
MORPHOLOGY CHEMISTRY STRUCTURE

SEM/EDXA • EPA/WDXA • XRD XRF • ESCA • AUGER • FTIR • DSC/TGA
Registered with FDA • DEA • GMP/GLP Compliant

3815 Lancaster Pike Wilmington DE. 19805
E-Mail micronanalytical@compuserve.com
Voice 302-998-1184, Fax 302-998-1836
Web Page: www.micronanalytical.com

---

**Spectroscopy Society of Pittsburgh**

• Professional Networking within the Spectroscopy Community
• Monthly Symposia by Prominent Researchers
• Promoting Science Education

To join call Emily: 412-825-3220 ext 212

---

**Robertson Microlit Laboratories**

Where speed and accuracy are elemental

Elemental CHN, S, X, Analysis (same day service)
Metals by ICP-OES, ICP-MS, A/A
FTIR, UV/VIS Spectroscopy
Ion Chromatography

Bioavailability
Polarimetry
DSC, TGA, melting point
KF Aquametry, Titrmetric

1705 U.S. Highway 46 • Suite 1D • Ledgewood, NJ 07852 • 973.966.6668 • F 973.966.0136
www.robertson-microlit.com • email: results@robertson-microlit.com

**NMR Service 500MHz**

**Mass**

**Elemental Analysis**

NuMega Resonance Labs
numegalabs.com • P- 858-793-6057

---

**Want More Articles**

When you tell our advertisers that you saw their ads here they have more confidence in our newsletter’s viability as an advertising medium. They advertise more. This supports our many activities.

**Specialized Analytical Testing**

**INDSPEC Chemical Corporation**

• Chromatography
• Absorption Spectroscopy
• Physical Measurement
• Chemical Analysis
• Thermal Analysis

For further information, please contact the Manager Analytical Testing Services Harmanville Technical Center
412-826-3666, E: Barbara_Buchner@oxy.com

---

Stay up-to-date on all the happenings of the Pittsburgh Section ACS

Section’s Website: http://www.chem.cmu.edu/acs-pgh/
Facebook Page: ACS Pittsburgh
Linked In: Pittsburgh Local Section ACS
The Crucible

The Crucible is published monthly, August through May. Circulation, 2,500 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.

Editor: Traci Johnsen
124 Moffett Run Rd.
Aliquippa, PA 15001
Phone: 724-378-9334
tracijohnsen@comcast.net

Advertising Editor: Vince Gale
MBO Services
P.O. Box 1150
Marshfield, MA 02050
Phone: 781-837-0424
cust-svc@mboservices.net

RECRUITING
WEB SITE LISTING
DIRECT TO YOUR SITE

There are two important ways to recruit through our services. One is to place a print ad in the Crucible. The other is to place a web site ad reaching out to 40,000 ACS members. We recommend using both low cost methods.

You can view both of these opportunities by going to the link below. Who uses these options?

● Companies for lab, management and sales personnel
● University & College teaching positions
● Hospitals for technical and research personnel

We provide more qualified resumes because of the highly targeted technical audience.

info -- www.mboservices.net

PITTSBURGH SECTION OFFICERS

Chair
Heather Juzwa
321 Winners Circle
Canonsburg, PA 15317
724-745-2662
hljuzwa@shimadzu.com

Chair-Elect
Michelle Ward-Muscatoello
Dept. of Chemistry
University of Pittsburgh
219 Parkman Ave.
Pittsburgh, PA 15260
412-624-8064
muscat@pitt.edu

Secretary
Michelle Coffman
246 Inglewood Dr.
Pittsburgh, PA 15228
(412)600-8502
mablanken@hotmail.com

Treasurer
Emanuel Schreiber
University of Pittsburgh
Genomics and Proteomics
Core Laboratories
3501 Fifth Ave.
BST-3, Room 9035
Pittsburgh, PA 15260
Office phone: 412-624-6862

Volunteers Needed!
There are a number of volunteer opportunities in the Pittsburgh ACS section! If you are interested in volunteering, please contact Jim Manner at manner1@comcast.net!

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 May 2011 issue must be to the editor by April 1, 2011.

Chair
Heather Juzwa
321 Winners Circle
Canonsburg, PA 15317
724-745-2662
hljuzwa@shimadzu.com

Chair-Elect
Michelle Ward-Muscatoello
Dept. of Chemistry
University of Pittsburgh
219 Parkman Ave.
Pittsburgh, PA 15260
412-624-8064
muscat@pitt.edu

Secretary
Michelle Coffman
246 Inglewood Dr.
Pittsburgh, PA 15228
(412)600-8502
mablanken@hotmail.com

Treasurer
Emanuel Schreiber
University of Pittsburgh
Genomics and Proteomics
Core Laboratories
3501 Fifth Ave.
BST-3, Room 9035
Pittsburgh, PA 15260
Office phone: 412-624-6862

Volunteers Needed!
There are a number of volunteer opportunities in the Pittsburgh ACS section! If you are interested in volunteering, please contact Jim Manner at manner1@comcast.net!

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 May 2011 issue must be to the editor by April 1, 2011.

The Crucible
The Crucible is published monthly, August through May. Circulation, 2,500 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.

Editor: Traci Johnsen
124 Moffett Run Rd.
Aliquippa, PA 15001
Phone: 724-378-9334
tracijohnsen@comcast.net

Advertising Editor: Vince Gale
MBO Services
P.O. Box 1150
Marshfield, MA 02050
Phone: 781-837-0424
cust-svc@mboservices.net

PITTSBURGH SECTION OFFICERS

Chair
Heather Juzwa
321 Winners Circle
Canonsburg, PA 15317
724-745-2662
hljuzwa@shimadzu.com

Chair-Elect
Michelle Ward-Muscatoello
Dept. of Chemistry
University of Pittsburgh
219 Parkman Ave.
Pittsburgh, PA 15260
412-624-8064
muscat@pitt.edu

Secretary
Michelle Coffman
246 Inglewood Dr.
Pittsburgh, PA 15228
(412)600-8502
mablanken@hotmail.com

Treasurer
Emanuel Schreiber
University of Pittsburgh
Genomics and Proteomics
Core Laboratories
3501 Fifth Ave.
BST-3, Room 9035
Pittsburgh, PA 15260
Office phone: 412-624-6862

Volunteers Needed!
There are a number of volunteer opportunities in the Pittsburgh ACS section! If you are interested in volunteering, please contact Jim Manner at manner1@comcast.net!

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 May 2011 issue must be to the editor by April 1, 2011.

The Crucible
The Crucible is published monthly, August through May. Circulation, 2,500 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.

Editor: Traci Johnsen
124 Moffett Run Rd.
Aliquippa, PA 15001
Phone: 724-378-9334
tracijohnsen@comcast.net

Advertising Editor: Vince Gale
MBO Services
P.O. Box 1150
Marshfield, MA 02050
Phone: 781-837-0424
cust-svc@mboservices.net

PITTSBURGH SECTION OFFICERS

Chair
Heather Juzwa
321 Winners Circle
Canonsburg, PA 15317
724-745-2662
hljuzwa@shimadzu.com

Chair-Elect
Michelle Ward-Muscatoello
Dept. of Chemistry
University of Pittsburgh
219 Parkman Ave.
Pittsburgh, PA 15260
412-624-8064
muscat@pitt.edu

Secretary
Michelle Coffman
246 Inglewood Dr.
Pittsburgh, PA 15228
(412)600-8502
mablanken@hotmail.com

Treasurer
Emanuel Schreiber
University of Pittsburgh
Genomics and Proteomics
Core Laboratories
3501 Fifth Ave.
BST-3, Room 9035
Pittsburgh, PA 15260
Office phone: 412-624-6862

Volunteers Needed!
There are a number of volunteer opportunities in the Pittsburgh ACS section! If you are interested in volunteering, please contact Jim Manner at manner1@comcast.net!

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 May 2011 issue must be to the editor by April 1, 2011.

The Crucible
The Crucible is published monthly, August through May. Circulation, 2,500 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.

Editor: Traci Johnsen
124 Moffett Run Rd.
Aliquippa, PA 15001
Phone: 724-378-9334
tracijohnsen@comcast.net

Advertising Editor: Vince Gale
MBO Services
P.O. Box 1150
Marshfield, MA 02050
Phone: 781-837-0424
cust-svc@mboservices.net

ADVERTISERS INDEX

Chemspec USA 2
INDSPEC Chemical Corporation 10
MASS VAC, Inc. 9
Micron inc. 10
NuMega Resonance Labs 10
Robertson Microlit Laboratories 10
Society for Analytical Chemists of Pittsburgh 10
Spectroscopy Society of Pittsburgh 10
The Crucible
A newsletter of the Pittsburgh Section of the American Chemical Society
124 Moffett Run Rd.
Aliquippa, PA 15001

Change of Address
If you move, notify the American Chemical Society, 1155 Sixteenth Street, N.W., Washington, D.C. 20036.
To avoid interruption in delivery of your CRUCIBLE, please send your new address to Traci Johnsen, 124 Moffett Run Rd., Aliquippa, PA 15001. Allow two months for the change to become effective.

Pittsburgh Area Calendar

Saturday, April 2

Society for Analytical Chemists of Pittsburgh
Continuing Education Symposium
“Regenerative Medicine and Stem Cell Research”
Duquesne University, Laura Falk Auditorium - Mellon Hall of Sciences, 600 Forbes Ave., Pittsburgh, PA

Monday, April 4

Society for Analytical Chemists of Pittsburgh
“New Analytical Chemistry and the Fight Against Performance-Enhancing Drugs in Sport”
Larry Bowers, Ph.D., Chief Science Officer, the US Anti-Doping Agency
Duquesne University, Laura Faulk Hall

Tuesday, April 12

ACS Pittsburgh Energy Technology Group
Pittsburgh Section AIChE
“Major U.S. DOE Sponsored Fossil Energy Projects”
Thomas Sarkus, Director of the Project Financing & Technology Deployment Division at U.S. DOE’s National Energy Technology Laboratory
Spaghetti Warehouse, 26th & Smallman Streets, Strip District

Thursday, April 14

Mass Spectrometry Discussion Group of Pittsburgh
Roundtable Discussion: Current Issues & Opportunities in MS Based Biomarker Discovery
Grand Concourse - Ladies’ Waiting Room, 100 West Station Square Drive, Pittsburgh, PA

Additional chemistry related seminars and events in the Pittsburgh area can be found on the Pittsburgh Section’s website at http://www.chem.cmu.edu/acs-pgh/