

The Crucible

www.pittsburghacs.org

Volume: XCIX No.3

November 2013

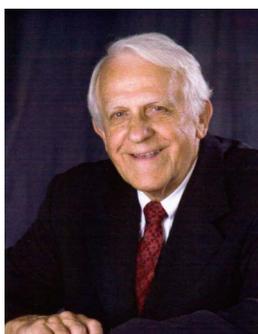
Pittsburgh Section ACS Announces 2013 Pittsburgh Award and Distinguished Service Award Winners

The Pittsburgh Section of The American Chemical Society is pleased to announce Dr. David H. Waldeck as recipient of the 2013 Pittsburgh Award and Dr. Gerald (Jerry) Carlson as recipient of the 2013 Distinguished Service Award. A dinner honoring the two awardees will take place in December. Look for details on the Pittsburgh Section website and in the December issue of The Crucible.



David H. Waldeck was born in Cincinnati, OH on September 5, 1956. He obtained a B.S. in chemistry from the University of Cincinnati in 1978 and a Ph.D. in chemistry from the University of Chicago in 1983. He was a post-doctoral fellow at the University of California, Berkeley from 1983 to 1985. In 1985, he moved to the University of Pittsburgh as an Assistant Professor of Chemistry, and he is now Professor and Chair of the Department of Chemistry. David became a Fellow of the American Physical Society in 2004.

Continued on Page 12



Gerald (Jerry) Carlson received the B.S. in Chemistry from Grove City College and his M.S. and Ph.D. degrees from the University of Pittsburgh under the direction of Foil Miller. He spent 20 years at Mellon Institute and Carnegie Mellon University carrying out research and providing analytical services in the field of molecular spectroscopy. He was a Fellow at Mellon Institute and was named Director of Educational and Research Services for the newly formed Carnegie-Mellon University. He joined the Westinghouse Research Laboratories in

1974 as a Senior Engineer in the Physical Chemistry Department and later as Manager of the Analytical Chemistry Department. While at Westinghouse, he worked closely with many operating divisions in applying chemical and spectroscopic techniques to their manufacturing and operational problems. Probably the most significant of these programs was the development of an on-line system for monitoring ppb levels of corrosive impurities in live steam to prevent the stress corrosion cracking of turbine blades. This development was recognized with an IR-100 Award as one of the 100 most significant inventions of 1980. Jerry ended his career as Manager of the System Laboratory for the

Continued on Page 13

Contents . . .

Pittsburgh Section ACS Announces 2013 Pittsburgh Award and Distinguished Service Award Winners	1
2014 Candidates for Office	2
Ballot	3
Greater Pittsburgh Area Women's Chemists Adopt-A-Vet Holiday Stocking Drive	5
ACS Pittsburgh Section Polymer Group Reactivated	5
Greater Pittsburgh Area Womens Chemists Committee Grant Writing Seminar	6
Society for Analytical Chemists of Pittsburgh November Meeting	7
Student Travel Grant Recipient Fall	8
National Meeting Report	8
Applications for Student Travel Awards	9
ACS Energy Technology Group	9
CERM 2014	9
The Spectroscopy Society of Pittsburgh	10
November Meeting and Technology Forum	11
Councilor Report: Fall 2013 ACS	11
National Meeting	15
Advertiser's Index	15
Calendar	16

2014 CANDIDATES FOR OFFICE

Pittsburgh Section
American Chemical Society

The 2013 Nominating Committee of the Pittsburgh Section of the American Chemical Society submits the following slate of candidates for Section office for 2014. 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. The polls will open on November 5th. Please note that all ballots must be received by November 20, 2013 at 5:00 PM, when polls close.

Unless you receive a paper copy of The Crucible, and assuming you are a member in good standing, you will receive your ballot electronically via a notification and code from www.vote-now.com. The polls open on November 5th and close November 20th at 5:00 pm EST.

For ballot questions, please contact: Evonne Baldauff, Secretary - ACS Pittsburgh Section, ebaldauff@waynesburg.edu

Chair - Elect

Mackenzie Speer

Mackenzie Speer received her B.S. in Chemistry at Gannon University and her M.S. in Analytical Chemistry under the advisement of Distinguished Professor Sanford Asher, researching the volume phase transitions of thermo-responsive polymers using Raman Spectroscopy. During her time at The University of Pittsburgh, she served on executive boards for both Phi Lambda Upsilon and the Greater Pittsburgh Area Women Chemists Committee (WCC). She is currently serving as the Secretary of the WCC as well as sitting on their Outreach and Social committees. She has been a member of the ACS for 5 years and was active in the Erie Section while completing her degree at Gannon and is currently working with the CERM 2014 committee to submit a programing grant to ACS National. Mackenzie is a current member of the SACP and SSP. Her committee work for the sister societies includes being the current Chair-elect of the SACP Publicity committee and serving on the SSP Publicity/TV/Media, College Equipment Grants, High School Equipment Grants, College Chemistry Awards, and Membership and Directory. Having received awards from both a local ACS section and the SACP, she values the contributions that societies like these make to young

scientists and is excited for the opportunity to give back. She has served on other executive boards for non-science related organizations, including the position of President in multiple organizations. She understands the need for effective, relevant outreach to help ensure that the award-winning ACS Pittsburgh Section continues to be a top large section. Mackenzie works as the Laboratory Services Manager for Reaxis, Inc. in McDonald, PA.

Secretary

Logan Miller

Logan Miller received his B.S. in Chemistry with an emphasis in biochemistry and forensic chemistry from Slippery Rock University of Pennsylvania (SRU). While at SRU Logan was involved in a multi-year, independent research project involving intracellular protein analysis for apoptotic response in human myelogenous leukemia cells. In addition, he attended two academic meetings at Experimental Biology as a first author presenter. Logan also successfully wrote and received three independent grants to fund his research while at SRU. Currently, he is a second year chemistry Ph.D. student at Duquesne University. He is working in Dr. H.M. "Skip" Kingston's research group, which focuses on analytical techniques for the betterment of environmental human health. His research interests

range from developing separation methods for the quantification of human biomarkers with nanoESI-LC/MS/MS technology to laser ablation/MALDI quantification using Speciated Isotope Dilution Mass Spectrometry. He is currently a Bayer Fellow at Duquesne. Logan is involved in several committees with both SACP and SSP. He is looking to become involved with the ACS to help Pittsburgh's local chemical needs. In his spare time he enjoys volunteering for a local animal shelter and playing the piano.

Treasurer - Elect

Evonne Bauldauff

Evonne Baldauff received her B.S. in chemistry from Grove City College in 2000 followed by a Ph.D. in inorganic chemistry from Purdue University. She currently serves as Chair of the Department of Chemistry & Forensic Science at Waynesburg University where she is an Assistant Professor of chemistry. Her research interests range from characterizing inorganic materials to studying learning outcomes in the general chemistry laboratory. She served as the ACS Pittsburgh Section Secretary in 2013 and advises the Waynesburg University ACS student chapter.

BALLOT
For Offices of the
2014
Pittsburgh Section, American Chemical Society

Chair-Elect

(Vote for 1)

Mackenzie Speer

Secretary

(Vote for 1)

Logan Miller

Treasurer - Elect

(Vote for 1)

Evonne Baldauff

Director

(Vote for 2)

Toby Chapman

Joe Jolson

Councilor

(Vote for 2)

Richard (Rich) Danchik

Robert Mathers

INSTRUCTIONS

Instructions are for Pittsburgh Members who receive a paper copy of The Crucible. Those receiving electronic copies will receive their ballot electronically via an email notification and code from www.vote-now. 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, Evonne Baldauff. **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. Ballots must be received by November 20, 2013.**

Candidate Bio's Continued from Page 2

Director

Dr. Toby Chapman
Dr. Joseph Jolson

Dr. Joseph Jolson - In 2004, Dr. Joseph D. Jolson founded Custom Client Solutions (CCS) to provide product support, investment, intellectual property, and litigation services to clients in the battery, gas detection, and respiratory protection business (www.customclientsolutions.net).

From 2000 – 2004, as technical director of CSE Corporation, Dr. Jolson oversaw the development of emergency-breathing devices & air quality monitors. In this capacity, he improved product quality, solved manufacturing problems, and reduced costs; enabling CSE's sales to grow from \$6.8 to \$13 million/year.

From 1996 – 2000, as trace gas analysis marketing and applications laboratory manager of the Mine Safety Appliances Company, Inc., Dr. Jolson was responsible for business development and product management. He analyzed detection technologies for anesthetic agents, chemical warfare agents, explosives, illicit drugs, pesticides, and VOCs. He oversaw qualification testing and applications support for a \$100 million/year division.

From 1989 – 1996, Dr. Jolson held several R&D management positions. During this time, the teams he supervised developed over a dozen commercially successful catalytic combustible and electrochemical gas sensors, and several gas detection instruments. Dr. Jolson invented the lithium-silver oxide battery and improved lithium-iodine and thermally activated batteries.

From 1985 – 1988, Dr. Jolson set up and operated a facility to produce

specialty batteries for the U.S. Government. He has 11 U.S. Patents, 13 publications, and 21 presentations. He earned a Ph.D. in Analytical Chemistry from the SUNY at Buffalo.

Dr. Jolson became active in the ACS – Pittsburgh Section professional relations committee in 2000. Since becoming chair of the committee in 2004, he made changes to the Job Searching for Chemical Professionals workshop that increased attendance from 10-15 to 54-73 job seekers per year. Since 2008, he has supported job seekers by phone, e-mail and in person as an ACS National Career Counselor. He chaired the SACP employment committee since the 2010-11 year. He is employment committee chair for the October 1-4, 2014 CERM meeting.

In 2007, Dr. Jolson became active in the ACS – Pittsburgh Section Energy Technology Group and was a key player in the formation of the Pittsburgh Energy Technology Group. He helped organize the 2008 Future of Energy Symposium. In 2009, he served as ACS – Pittsburgh Section secretary. From 2010 to the present he served as ACS – Pittsburgh Section alternate councilor and from 2011 to the present as ACS-Pittsburgh Section director. He also serves as a member of the ACS-Pittsburgh Section Library Committee.

Dr. Toby Chapman received a B. S. from the University of Illinois in 1960 and a Ph. D. in Polymer Chemistry from the Polytechnic Institute of Brooklyn with C. G. Overberger in 1965. He was a Postdoctoral Research Fellow with the Department of Biological Chemistry at Harvard Medical School with E. R. Blout from 1965-1967. Toby became the Assistant Professor of Chemistry at the University of Pittsburgh in 1967 and became Associate Professor in 1974. He spent a sabbatical year at Bayer Corp. in Pittsburgh from 1985-1986. He served as Interim Assistant Department Chair in 2009 and 2010.

Toby has been very active in the Pittsburgh Section. His activities include serving a number of years on the Pittsburgh Award Committee, co-Program Chairman of the Central Regional Meeting in 2003, Job Search for Chemical Professions program for several years, and working with Joseph Jolson to reconstitute the Section Library Committee. Toby is currently a Director of the Section.

Councilor

Dr. Richard Danchik
Dr. Rober Mathers

Dr. Richard Danchik received his B.S. in Chemistry from Duquesne University and earned his Ph.D. in Analytical Chemistry from Wayne State University. He joined ALCOA in the Analytical Chemistry Division of Alcoa Laboratories where his research interests included atomic absorption spectrophotometry, electroanalytical techniques, selective ion electrodes and the development of automated process control systems.

Rich became Manager of ALCOA's Environmental Health Laboratory and had the responsibility for the development of new methodology and instrumentation in the field of industrial hygiene chemistry. He also managed the development and operation of the Laboratory. He is now consulting in the areas of analytical chemistry, environmental and industrial hygiene chemistry.

Societies: American Chemical Society (Councilor-1991 to present;), American Industrial Hygiene Association, American Institute of Chemists (Fellow), American Society for Testing Materials(Fellow)-D-19,Committee on Water Analysis and D-22,Committee on Air Quality(Chairman- 2000 to

Continued on Next Page

Danchik Bio Continued from Page 4

2005, Vice-Technical Chair- 2005 to present), Sigma Xi, Society for Analytical Chemists of Pittsburgh(SACP), Spectroscopy Society of Pittsburgh(SSP), and Phi Lambda Upsilon.

Rich was the 1991 Chairman of the Pittsburgh Section of the ACS. He has been actively involved with Pittcon and was the 1986 Conference President. He has chaired numerous committees for the SSP. He was the 1979-1980 Chairman of the SACP. He is also active in the National ACS and is a member of the International Activities Committee (1991-2000; 2005 to present) and was the Subcommittee Chairman of the Meetings and Exposition Committee (2000 -2006). He was a Pittsburgh Section Director for the ACS (1992-2004). He represents the United States on the International Standards Organization (ISO) for Workplace Atmospheres. He received the Moyer Thomas Award from ASTM in 2008. He has been a member of the Advisory Board of Analytical Chemistry and has authored or co-authored a number of technical articles and has previously authored the Nonferrous Metallurgy Review for Analytical Chemistry. He was also a

member of the Editorial Board of the Applied Occupational and Environmental Hygiene Journal.

Dr. 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 postdoctoral researcher at Cornell University in the Department of Chemistry and Chemical Biology. Robert is an Associate Professor of Chemistry at The Pennsylvania State University in New Kensington. His research interests include utilizing renewable resources for sustainable polymeric materials. Recently, he spent a one-year sabbatical at Carnegie Mellon University. He regularly attends and presents at ACS National meetings. Robert has served as secretary (2008 and 2010) and alternate councilor (2011 and 2013) for the Pittsburgh ACS section.



Adopt-A-Vet Holiday Stocking Drive

Join with the Women Chemists Committee and the University of Pittsburgh ACS Student Affiliates, as we look to bring a little holiday cheer to the patients at the VA Hospital in Oakland.

December 1st – 17th we will be collecting stockings and filling them with items from a wish list we received from the hospital. These stockings will then be hand-delivered to the inpatient and outpatient veterans. The wish list can be found on the Upcoming Events page of the WCC website (www.pitt.edu/~pghwcc) or by contacting Dr. Michelle Ward (muscat@pitt.edu).

ACS Pittsburgh Section Polymer Group Reactivated

ACS Pittsburgh Section's Polymer Group will be reactivated and functioning in the year 2014 to promote technological and environmental innovation in the polymer sciences. If you are interested in joining the polymer group or want more information, please contact Kailas Sawant at kbs@wspchemtech.com.

Vacuum Inlet Traps
Because vacuum pumps don't grow on trees.

Oil Filtration Systems
Because a really old, really healthy vacuum pump is a beautiful thing.

Oil Mist Eliminators
Because no one wants to eat oily mist.

M PRODUCTS
A Division of Mass-Vac, Inc.
247 Rangeway Road ■ PO Box 359 ■ North Billerica, MA 01862
978 667 2393 Fax 978 671 0014 sales@massvac.com www.massvac.com



GRANT WRITING SEMINAR

Saturday, November 9th 11am-12:30pm

Room 150 Chevron Science Center
219 Parkman Avenue
Pittsburgh, PA 15260

Cost: FREE

(advanced registration required)

Open to the public - all are welcome!



Seminar by Catalina Achim, Ph.D.

*Program Director, NSF Chemistry Division
Chemistry of Life Processes Program*

This Program will include:

- Overview of funding opportunities for graduate students, postdocs & early-career faculty members
- Characteristics of a “good” vs. “bad” proposal
- The typical process between submission decision time
- A mock panel review of a proposal
- Q&A session

**REGISTRATION DEADLINE:
November 2nd**

To register, please send the form below to:

Dr. Michelle Ward / 219 Parkman Ave / Room 107 / Pittsburgh, PA 15260.

You may also RSVP via our website: www.pitt.edu/~pghwcc on the Upcoming Events page.

GRANT WRITING SEMINAR

Name: _____

Affiliation: _____

Email: _____



Society for Analytical Chemists of Pittsburgh



November Meeting
Monday, November 4, 2013
8:00 PM
Duquesne University

“In-Vivo Solid Phase Microextraction”

Janusz Pawliszyn, Ph.D.
Department of Chemistry, University of Waterloo

Abstract: In recent years, there has been a lot of interest in monitoring levels of biologically active compounds in living systems in their natural environments. These efforts are a significant departure from conventional ‘sampling’ techniques, where a portion of the system under study is removed from its natural environment, and the compounds of interest extracted and analyzed in a laboratory environment. There are two main motivations for exploring these types of investigations. The first one is the desire to study chemical processes in association with the normal biochemical milieu of a living system, and the second one is the lack of availability or impracticality of removing suitable samples from a living system, frequently because of size.

In the presentation I will describe the use of solid-phase microextraction (SPME) for in vivo sampling of drugs and metabolites in the tissue of freely moving animals that eliminates the need for tissue withdrawal in order to obtain quantitative analytical information. In comparison to the established in-vivo technique of microdialysis, in vivo SPME provides the advantages of reduced matrix effect, improved spatial resolution, better compatibility with LC-MS due to minimization of ionization suppression effects, improved extraction of unstable species and hydrophobic compounds. In contrast, in vivo microdialysis provides better temporal resolution resulting in semi-continuous monitoring in almost real-time. I will also describe the initial results of the collaborative research with Toronto General Hospital focused on development of low invasive tool for monitoring organ function during transplantation. Monitoring of the graft function before transplantation, especially by screening the profile of entire metabolome can provide important information to the physicians and therefore help in making decision of clinical matter. However, this type of analysis requires collecting tissue sample followed by its homogenization and solvent extraction. Such a procedure is not convenient and not recommended because of its high invasiveness, particularly when it needs to be repeated for monitoring purpose. In the current studies we used pig model to demonstrate the use of SPME for in situ extraction from organs in living donors, grafts undergo standard and experimental preservation methods as well as from the organs after transplantation and reperfusion.

Biography: Janusz Pawliszyn is a Professor and Canada Research Chair at the University of Waterloo. Dr. Pawliszyn received his B.Sc./Chem.Eng. in 1977 and M.Sc. in 1978 at Technical University of Gdansk; Ph.D. in 1982 at Southern Illinois University; PDF. in 1984 at University of Toronto.

Professor Pawliszyn has supervised 41 PhD and 62 MS students and he is an author of over 450 scientific publications and a book on Solid Phase Microextraction. His Hirsch Index (H-index) is 75. He is a Fellow of Royal Society of Canada and Chemical Institute of Canada, editor of *Analytica Chimica Acta*, *Trends in Analytical Chemistry* and a member of the Editorial Board of *Journal of Separation Science* and *Journal of Pharmaceutical Analysis*. He initiated a conference, “ExTech”, focusing on new advances in sample preparation and disseminates new scientific developments in the area, which meets every year in different part of the world. He received the 1995 McBryde Medal, the 1996 Tswett Medal, the 1996 Hyphenated Techniques in Chromatography Award, the 1996 Caledon Award, the

Continued on Page 13

Dinner Reservations: Please email the SACP Administrative Assistant, Valarie Daugherty at daugherty@pittcon.org by Tuesday, October 29, 2013 to make dinner reservations. Should you not have email, please call 412-825-3220, ext. 204. Dinner will cost \$8 (\$4 for students) and checks are 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, you will need to get a parking ticket and drive to upper floors. Bring your parking ticket to the dinner or meeting for a validation sticker. Please contact Duquesne University, if any difficulties should arise.

Student Travel Grant Recipient, Shaili Aggarwal's, Fall National Meeting Report

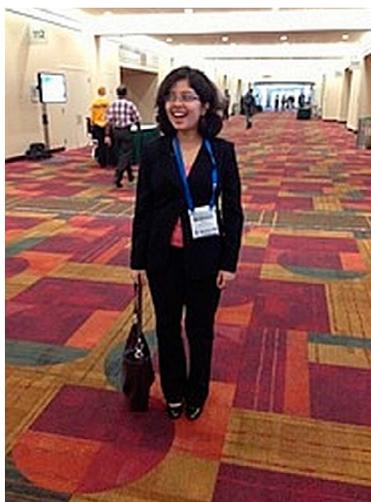
Thanks to the student travel grant award from the Pittsburgh section of ACS, I was able to attend the 246th ACS national meeting & exposition held in Indianapolis from Sep 7th to 12th 2013. I am a graduate student at Duquesne University advised by Dr David Lapinsky working on the design and synthesis of chemical probes for mapping the binding sites and poses of protein targets implicated in psychostimulant abuse and addiction. I am soon graduating with a Ph.D. in Medicinal Chemistry and this was my third ACS meeting I've attended so far. Like always, the meeting was great for my professional development and I learned a great deal about the research going around in the world in the fields of organic and medicinal chemistry.

My talk on "the design and synthesis of photoaffinity probes for mapping the binding sites and poses of Metabotropic glutamate receptors type 2 (mGlu2)" during the general oral session received a positive feedback. It was exciting to present in front of a diverse audience and to answer their questions. Most important highlights of my ACS meeting were the talks given by Drs. Shaun Stauffer and Craig Lindsley on the research work they are doing on allosteric modulators of metabotropic glutamate receptors (mGlu) at Vanderbilt University. Another great talk that I attended was by Professor Stephen Buchwald during his Arthur C. Cope award address. I learnt that not only is he a pioneer in the field of organometallic chemistry but he is also an entertainer and an impressive speaker. During the general and sci-mix poster sessions, I took advantage of the opportunity to talk to various professors and their students about possibilities of future collaborations and also potential post-doc positions. I also went to the exposition hall where I got to

know about all the new and state-of-the-art instruments available from the vendors ranging from advanced automated chromatographic separation units, bench-top NMR machines, highly sensitive mass spectrometers, microwave reactors, portable hydrogenation apparatus, industrial scale rotovaps, high efficiency vacuum pumps, etc. The recruiter's row at the exposition also gave me a chance to talk to company professionals about the upcoming job opportunities and openings. I also went for a resume review at the career fair and received useful career advice from an ACS consultant.

Overall, my experience at this year's ACS meeting was extremely helpful. As a final year graduate student, I took the advantage of this opportunity to explore possible career pathways, make valuable contacts, meet employers, network with other research professionals and broaden my future prospects. Finally, I also took some time off to explore the beautiful city of Indianapolis and saw few of its landmarks such as the lucas oil stadium, soldiers and sailors monument and the canal walk.

Thank you Pittsburgh Section of ACS for such an unforgettable and valuable experience!



Applications for Student Travel Awards Now Being Accepted

The Pittsburgh Section of the American Chemical Society has budgeted funds to help encourage undergraduate/graduate student participation in national and regional ACS meetings. The awards are intended to help defray meeting registration and travel-related expenses (lodging, transportation, per diem) for eligible students. To apply for the funds, one should simply complete the application (available on our web site at www.pittsburghACS.org) and return it by the relevant deadline to:

Pittsburgh Section ACS
Travel Grants
Attn: Dr. Michelle Ward
Room 107 / Chevron Science Center
219 Parkman Avenue
Pittsburgh, PA 15260

Each year, the Pittsburgh Section of the ACS will award up to four \$500 grants to aid our undergraduate/graduate student members in presenting papers or posters at ACS Meetings. Awards will be made based on the scientific merit of the paper/poster to be presented and financial need. The deadlines for receipt of applications are 12/01/2013 (for travel to be completed by 06/30/2014) and 06/01/2014 (for travel to be completed by 12/31/2014).

Our Section is looking forward to helping increase the participation of local students in ACS conferences. If you have any questions, please do not hesitate to contact Dr. Michelle Ward, muscat@pitt.edu or 412-624-8064.

ACS Energy Technology Group

Tuesday, November 12, 2013

“The Seneca Pumped Storage Hydro Plant – Its History & Operation”

Ronald M. Kovach
Consultant, FirstEnergy Corporation

Social Hour 6:00 PM, Dinner 6:30 PM, Talk 7:30 PM

Spaghetti Warehouse
26th & Smallman Streets, Strip District, Pittsburgh PA
Free parking behind the restaurant

In Northwestern Pennsylvania a unique hydroelectric plant, one of approximately 30 such plants in the U.S. has operated for nearly 50 years. A brief history of the 435MW(e) Seneca Pumped Storage Hydro Plant is given, including some rarely seen construction photos. Such plants function similarly to an electric battery. Major pieces of equipment are described individually and also how they work together. Finally some unique aspects of plant operation and maintenance are explored.

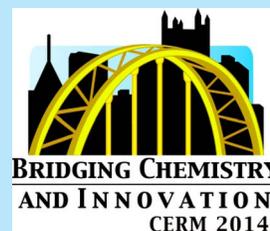
Ron Kovach, P.E. received his Bachelor of Science in Mechanical Engineering degree from The Ohio State University. He holds a Master's Degree in Mechanical Engineering from Cleveland State University, where his thesis focused on multi-component working fluid vapor power cycles. He has been with FirstEnergy and a predecessor company since 1982. For the last 10 years he has supported the Seneca Pumped Storage facility as a technical expert, project manager and outage coordinator. He has articles that can be found in Power magazine, ASME and the International Journal of Energy. A son of a chemical engineer, he and his wife Debbie have 3 sons and reside in Avon Lake, OH.

For reservations, please contact Elliott Bergman at elliott.acstechnology@gmail.com by 1:00 on Nov. 11th. Walk-ins are welcome. Our meetings are open to all. Cash or check payable to: Energy Tech Pgh Section ACS.

The cost of the dinner is \$20 including tax and gratuity. Alcoholic drinks cost extra. Please specify your preference from the following menu choices: Spaghetti with meatballs, 15-layer lasagna, Four-cheese manicotti, Fettuccini Alfredo, Pesto Pasta, or Grilled chicken Caesar salad. Please indicate special needs such as vegetarian, gluten-free, etc.

CERM 2014 Call for Technical Session Topics and Organizers

The 45th Central Regional Meeting of the American Chemical Society is being held in Pittsburgh October 1-4, 2014. The Program Committee will be soliciting suggestions for Session Topics and Organizers through NOVEMBER 1, 2013. You can access a link to submit your topics on our website: www.pittsburghACS.org. Any questions regarding Programming should be directed to Program Co-Chairs Dr. Adrian Michael (amichael@pitt.edu) or Dr. Michelle Ward (muscat@pitt.edu).



CERM 2014 Save the Date!

The Central Regional Meeting of the ACS will be held October 1-4, 2014 at the Doubletree by Hilton Green Tree Hotel, Pittsburgh.

For more information, visit the CERM website at www.acscerm2014.org.



The Spectroscopy Society of Pittsburgh



November Meeting

Wednesday, November 20, 2013

Duquesne University – Bayer Learning Center (Wolfe Lecture Hall)

Technology Forum Speaker's Presentation 5:30 PM

Social Hour 5:30 PM • Dinner in the City View Café (6th Floor) 6:30 PM

Business Meeting 8:00 PM • Technical Program Speaker's Presentation 8:15 PM

TECHNICAL PROGRAM - 8:15 PM

"Surface-Enhanced Infrared Absorption: Mechanism and Applications"

Peter Griffiths

Professor Emeritus, Department of Chemistry, University of Idaho

Abstract: Since the first report of surface-enhanced Infrared absorption (SEIRA) by Hartstein et al. in 1980, many practitioners have attributed the enhancement to a similar mechanism to the electromagnetic mechanism of surface-enhanced Raman scattering (SERS). In this talk I will attempt to summarize several of the theories that ascribe SEIRA both to plasmonic and non-plasmonic mechanisms. The observation that SEIRA enhancements are very similar for all metals and that the band-shapes in SEIRA spectra become distorted when the percolation limit is exceeded mitigate strongly against a plasmonic mechanism. In practice, SEIRA spectra can be accurately modeled using the appropriate form of effective medium theory. Several applications of SEIRA that have been developed in the speaker's lab and those of others will be described at the end of this talk.

Bio: Peter Griffiths obtained his B.A. and D.Phil. in Chemistry from Oxford University in England. After a two-year post-doctoral stay at the University of Maryland, he worked with Digilab, Inc. (which became the Spectroscopy Division of Bio-Rad and is now part of Agilent) on the development of the first FT-IR spectrometer of the modern era. He subsequently held positions with Sadtler Research Labs, Ohio University and the University of California, Riverside, before being appointed as Chair of the Department of Chemistry at the University of Idaho in 1989, a position that he held for a total of 12 years. He retired in 2008 but is still very active in several aspects of vibrational spectroscopy. Over the past 30 years, his work has involved the development of better ways of measuring infrared spectra, including the optics for diffuse reflection spectroscopy, the chromatography/FT-IR interface, the hardware and software for open-path FT-IR spectrometry and investigations into surface-enhanced infrared absorption (SEIRA) spectrometry.

Griffiths has co-authored over 300 papers and 50 book chapters. He has written 3 books, of which the most important is Fourier Transform Infrared Spectroscopy which he wrote with James de Haseth, and edited 10 others including the Handbook of Vibrational Spectroscopy, a major five-volume text covering all aspects of mid-infrared, near-infrared and Raman spectroscopy. He has received several honors and awards including the Spectroscopy Society of Pittsburgh Award, the Coblentz Award, the Prögl medal of the Austrian Society of Analytical Chemistry, the Gold Medal Award of the New York SAS, the Bomem Michelson Award in vibrational spectroscopy, the Gerald Birth Award in near-infrared spectroscopy and most recently the Anachem Award. He was president of the SAS in 1994 and editor-in-chief of Applied Spectroscopy for which he is now the second editor.

TECHNOLOGY FORUM - 5:30 PM

"Are You Tired or Toxic?"

Dr. Joseph Porreca, D.C.

Dr. Joseph Porreca will be discussing the five factors that are most responsible for damaging our health and causing us to age prematurely.

Bio: Dr. Joseph Porreca, D.C. has been practicing chiropractic for the past 28 years. He is board eligible in chiropractic neurology and is a contributing author to the book, "Improve Your Health Proactively". He also served on the advisory board of one of the largest chiropractic magazines in the nation. He's hosted numerous radio shows regarding natural health care and has been studying nutrition and nutritional cleansing for the past 30 years.

Dinner Reservations: Please register on-line at <http://www.ssp-pgh.org/monthly-meeting-rsvp/> to make dinner reservations NO LATER THAN Thursday, November 14, 2013 at noon. Dinner will cost \$10 (\$8 for students) and checks can be made out to the SSP. If you have any 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.

Councilor Report on: ACS Fall 2013 NATIONAL MEETING – Indianapolis, Indiana

Three of ACS Pittsburgh Section Councilors were in attendance at Indianapolis, Indiana.

The meeting attracted approximately 10,800 attendees and an exposition of 361 booths.

The Pittsburgh Section received the Outstanding Local Section Award for 2012 at the Luminary Awards Reception. Also, the Pittsburgh Section received a Luminary Award for Sustainability. Congratulations to Michelle Ward and the officers, directors, and Councilors, and members of the Pittsburgh Section for an outstanding year of accomplishments.

The Candidates for President- Elect, 2014 are:

- Dr. G. Bryan Balazs, Associate Leader, Lawrence Livermore National Lab, CA

- Dr. Charles E. Kolb, Jr., President and CEO, Aerodyne Research Inc., Billerica, MA.

- Dr. Diane Grob Schmidt, Section Head R&D, The Procter and Gamble Company, Cincinnati, OH.

The Candidates for District II (2014-2016) are: George M. Bodner and Alan A. Hazari. Ballots will be mailed on or before October 10th to all ACS members in District II.

The Candidates for Directors-at-Large for a 2014-2016 term: Susan B. Butts, Thom H. Dunning, Jr., Dorothy J. Phillips, and Kathleen M. Schulz. The election of two Directors-at-Large from among those candidates will be conducted in the fall. Ballots will be mailed to the Council on or before October 10.

The Council elected Harmon B. Abrahamson, Arindam Bose, Judith H. Cohen, Alan M. Ehrlich and Angela K. Wilson

for membership on the Council Policy Committee for the 2014-2016 term.

The Council elected Janet L Bryant, Dee Ann Casteel, Amber S. Hinkle, Wayne E. Jones, Jr., and V. Michael Mautino for the 2014-2016 term. Congratulations Mike Mautino.

The Council elected Lisa M. Balbes, Jeanette E. Brown, Martha L. Casey, D. Richard Cobb, and Lissa Dulany for the 2014-2016 term.

As part of a regular performance review, the Council voted unanimously to continue the joint Board-Council Committee on International Activities and the Council Other Committee on Nomenclature, Terminology and Symbols. Continuation of the Committee on International Activities also requires Board concurrence.

The Council voted to approve amendments to the charters of the committees on International Activities and on Nomenclature, Terminology and Symbols.

The Committee on Meetings & Expositions reported that the total meeting registration was 10,840. Of these, 6,683 were regular registrations, 878 were exhibitors, 2,610 were students, 417 were exposition only, and 252 guests. The exposition had 361 booths with 229 companies. The meeting had over 6,684 papers presented.

The Committee on Economic and Professional Affairs reported that employment is up and unemployment is down for ACS chemists. The complete review of the Comprehensive Salary Survey is in the September 23rd issue of C&EN.

The Council voted to approve a proposal by the Committee on Nomi-

nations and Elections to realign six electoral districts. The realignment meets the specified criteria for redistricting as required by Bylaw V, Section 4a and brings all six districts within permissible population range. This change takes place in 2014 and does not affect the 2013 national ACS elections. The N&E website explains the actual proposal and its impact.

The Council voted, on the recommendation of the Committee on Local Section Activities (LSAC), to approve a request from the Syracuse Local Section to change its name to the Central New York Local Section. Council also approved a recommendation from LSAC that the Monmouth County Local Section (in New Jersey) be dissolved. Effective January 1, 2014, due to a decline in activity over the last several years. The North Jersey Local Section has contacted LSAC and will submit a petition in 2014 to annex the Monmouth County territory.

After much debate, a proposed name change for the Division of Colloid and Surface Chemistry to the Division of Colloids, Surfaces and Nanomaterials was defeated by the Council in a close vote.

A special discussion item was put on the Council agenda for this meeting. ACS President Marinda Li Wu presented and moderated a discussion on "What can we - as the Society and as individual citizens- do to help create jobs or demand for chemists?" She shared five recommendations from the presidential task force "Vision 2025: Helping ACS Members to Thrive in the Global Chemistry Enterprise" and what they might imply for our efforts to help create jobs: discover and share information about skills and competencies that a wide range

Pittsburgh Award David Waldeck's Bio Continued from Page 1

As a faculty member David has made important contributions in chemistry education. During his time in the Department, David has taught more than fifteen different courses in areas of chemistry and photonics at all levels, ranging from introductory general chemistry to advanced topics in physical chemistry.

Currently he is co-teaching an advanced course entitled Special Topics in Chemistry: Models for Complex Materials, in conjunction with collaborators at Duke University and Carnegie Mellon University via videoconference technology. In the early 1990's, David began incorporating computational activities into the Physical Chemistry curriculum and later led the Department's 'Computing across the Chemistry Curriculum' initiative. Also, David is the co-author of a recent textbook on physical chemistry, Principles of Physical Chemistry with H. Kuhn and H. D. Foersterling (Wiley, NY, 2009). David has mentored six postdoctoral students, twenty-one PhD students, three MSc. students, and numerous undergraduates during his time in Pittsburgh.

David's research program uses methods of spectroscopy, electrochemistry, and microscopy to investigate primary processes in the condensed phase, which includes liquids, solids, and liquid/solid interfaces. Since its inception, David's research has investigated how the properties of the medium (solvent) affect molecular motion and chemical reaction rates. His research group pioneered experimental studies into dielectric friction effects on rotational motion and isomerization reaction rates and developed models which incorporate important features of a solute molecule's charge distribution to describe solute-solvent interactions. By the late 1990's his research focus shifted to electron transfer reactions where his research group has made important contributions to our understanding of electron tunneling via non-bonded contacts, electrical 'wiring' of redox proteins to electrodes, the role played by fluctuations in electron transfer, and the effect of dielectric friction on electron transfer rates. Current efforts are aimed at understanding how charge transport can be directed in supramolecular assemblies, the importance of electron spin orientation on charge motion through chiral molecules, and the transfer of charge between inorganic nanoparticles and conjugated organic polymers. His research program uses experiment and theory in a synergistic manner to quantify the interesting phenomenology that is displayed by molecules and their assemblies. He and his collaborators have published more than 165 papers.

Since becoming Chair of the Chemistry Department in 2005, David has helped to guide its expansion and improvement. Part of this expansion entails the hiring of fourteen tenure/tenure-stream faculty and six teaching faculty, as well as a 25% increase in the available research space. Another quarter of the Department's research and teaching labs have been fully renovated, and the shared equipment facilities have been modernized and expanded. These activities represent a large (> \$75 M) investment in infrastructure for teaching and research in the Department.

Councilor's Report Continued from Page 9

of employers will need; continue to expand resources which help our members to position themselves for successful careers in the global chemistry enterprise; enable entrepreneurs to create and strengthen their start-ups that hire chemistry professionals; advocate for policies that improve the business climate and promote the creation of chemistry jobs; and work with other stakeholders to understand and influence the supply and demand of chemists and jobs. Following the presentation, numerous Councilors engaged in a robust discussion of this focused topic on possibilities to encourage jobs creation and offered several suggestions.

On the recommendation of the Committee on Budget and Finance (B&F), the Board voted to approve an advance member registration fee of \$380 for the national meetings held in 2014. The Board also voted to reauthorize funding in next year's proposed budget for the ACS International Center, and the ACS Entrepreneurial Initiative, and to authorize funding for a new initiative, the National Association of Chemistry Teachers (NACT). This association will be an ACS program to provide teachers a professional home. Through NACT they will have access to specialized resources and the broader ACS community.

Respectfully submitted,

Richard S. Danchik (Author)
Michelle Coffman
Mike Mautino
Pittsburgh Section Councilors

Distinguished Service Award Gerald “Jerry” Carlson Bio Continued from Page 1

General Public Utility System in Reading, PA. This Laboratory was responsible for assisting the nuclear and fossil fuel electric generating stations of the four operating companies with their chemistry and materials related problems. Dr. Carlson’s technical work has resulted in over 50 publications, and he has been awarded 5 patents.

Jerry has been an active participant in the Pittsburgh Technical Community since 1954 and a member of the Pittsburgh Section of the American Chemical Society since 1961. He has served as President/Chairman of the Pittsburgh Section of the American Chemical Society, the Spectroscopy Society of Pittsburgh, the Society for Analytical Chemists of Pittsburgh, the Pittsburgh Chemists’ Club and was President of the 1969 Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. In all of these organizations, he has served on numerous committees and, in many, also fulfilled the duties of Chairman-Elect and secretary.

In addition to serving as Chairman/Chairman-Elect of the Pittsburgh Section, ACS, Jerry also was Secretary/Treasurer of the Physical-Inorganic Group (1976-78) and has participated in and been an Invited Speaker at Pittsburgh Regional ACS Meetings. Along with Gerst Gibbon, he helped conceive and set up a funding mechanism for the very successful Tripartite Meetings which continue to this day. As requested he assisted with the gathering of information for the preparation of the successful petition to the Chemical Heritage Foundation for designation of the Mellon Institute as a National Historic Chemistry Landmark. He has also been recognized with the 1984 Pittsburgh Award by the Pittsburgh Section of the American Chemical Society.

Dr. Carlson also has the distinction of designing and commissioning the Logo for the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy in 1969 and for coining the title, “Vision, Venture, and Volunteers, A History of the Pittsburgh Conference” for the history of the Conference published on the occasion of the 50th Anniversary of the Conference in 1999.

Jerry has been married to the former Lucille Valli for 54 years and they are the proud parents of six children. He acknowledges that without Lucille giving up her career as an RN to remain at home and care for and mentor the 6 active children, the large amounts of time he spent furthering his own career would not have been possible. Thank you, Lucille!

SACP November Meeting Continued from Page 11

Dr. Janusz Pawliszyn

Jubilee Medal 1998 from the Chromatographic Society, U.K., the 2000 Maxxam Award from Canadian Society for Chemistry, the 2000 Varian Lecture Award from Carleton University, the Alumni Achievement Award for 2000 from Southern Illinois University, the Humboldt Research Award for 2001, 2002 COLACRO Medal, 2003 Canada Research Chair, in 2006 he has been elected to the most cited chemists by ISI, in 2008 he received A.A. Benedetti-Pichler Award from Eastern Analytical Symposium, 2008 Andrzej Waksmundzki Medal from Polish Academy of Sciences, 2008 Manning Principal Award, 2010 Torbern Bergman Medal from the Swedish Chemical Society, 2010 Ontario Premier’s Innovation Award, 2010 Marcel Golay Award, 2010 ACS Award in Separation Science and Technology, 2011 PittCon Dal Nogar Award, 2012 E.W.R. Steacie Award, 2013 CIC Environmental Research and Development Award and 2013 CIC LeSueur Memorial Award. He presently holds the University Professor, Canada Research Chair and Natural Sciences and Engineering Research Council of Canada Industrial Research Chair in New Analytical Methods and Technologies.

Get Connected!

Section’s Website: www.pittsburghacs.org

Facebook Page: Pittsburgh Section of the American Chemical Society

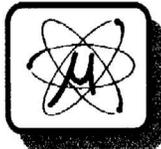
Linked In: Pittsburgh Section of the American Chemical Society

Business Directory

Services

Services

Services



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

NMR Service 500MHz

*Mass

*Elemental Analysis

NuMega Resonance Labs

numegalabs.com P- 858-793-6057



SOCIETY FOR
ANALYTICAL CHEMISTS
OF PITTSBURGH

Calling New Members

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

Spectroscopy Society of Pittsburgh

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



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

TELL OUR ADVERTISERS

Membership surveys show that you want more articles in our newsletter. If you tell our advertisers that you saw their ad here, they will provide more financial support and this will allow us to add more articles.

Specialized Analytical Testing

INDSPEC Chemical Corporation

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

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

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.



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, Titrimetry

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

Rapid Results • Quality • Accuracy • Competitive Pricing

Get Connected!

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

Section's Website:

www.pittsburghacs.org

Facebook Page:

Pittsburgh Section of the American Chemical Society

Linked In:

Pittsburgh Section of the American Chemical Society

Business Directory

Services

PITTSBURGH SECTION OFFICERS

Chair

Jay Auses
Department of Chemistry
Dietrich School of Arts and
Sciences
University of Pittsburgh
244 Chevron Science Center
219 Parkman Avenue
Pittsburgh, PA 15260
412-624-8500
jpauses@pitt.edu

Chair-Elect

Amy Rupert
7026-2A Biomedical Science
Tower 3, 3501 Fifth Avenue
Pittsburgh, PA 15260
610-349-3849
aeh37@pitt.edu

Secretary

Evonne Baldauff
51 W. College St.
Waynesburg University
Waynesburg, PA 15370
Office: 724-852-7627
Cell: 7654914425
ebaldauf@waynesburg.edu

Treasurer

Amy Rupert
7026-2A Biomedical Science
Tower 3, 3501 Fifth Avenue
Pittsburgh, PA 15260
610-349-3849
aeh37@pitt.edu

Services

Volunteers Needed!

There are a number of volunteer opportunities in the Pittsburgh ACS section! If you are interested in volunteering, please contact Heather Juzwa at hljuzwa@shimadzu.com!

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 December 2013 issue must be to the editor by November 1, 2013.

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@mboseervices.net

Career Opportunities

SEARCHING FOR THAT SPECIAL JOB?

There are many companies and organizations searching for chemical and biochemical personnel to fill important jobs in their organizations.

- Companies for laboratory and management positions
- Universities & Colleges for teaching positions and laboratory personnel
- Hospitals for technical and research personnel

There are several web sites that may help you search for these open positions.

- www.mboseervices.net/recr_disp.php
- <http://pubs.acs.org/chemjobs/>

ADVERTISERS INDEX

INDSPEC Chemical Corporation	14
MASS VAC, Inc.	5
Micron inc.	14
NuMega Resonance Labs	14
Robertson Microlit Laboratories	14
Society for Analytical Chemists of Pittsburgh	14
Spectroscopy Society of Pittsburgh	14

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

Monday, November 4

Society for Analytical Chemists of Pittsburgh

"In-Vivo Solid Phase Microextraction"

Janusz Pawliszyn, Ph.D., Department of Chemistry, University of Waterloo
Duquesne University, Pittsburgh, PA

Saturday, November 9

Greater Pittsburgh Women Chemists Committee

Grant Writing Seminar

Catalina Achim, Ph.D., Program Director, NSF Chemistry Division, Chemistry of Life Processes Program
Chevron Science Center, 219 Parkman Ave., Pittsburgh, PA

Tuesday, November 12

ACS Energy Technology Group

"The Seneca Pumped Storage Hydro Plant - Its History and Operation"

Ronal M. Kovach, Consultant, FirstEnergy Corporation
Spaghetti Warehouse, 26th & Smallman Streets, Strip District, Pittsburgh, PA

Wednesday, November 20

The Spectroscopy Society of Pittsburgh

"Surface-Enhanced Infrared Absorption: Mechanism and Applications"

Peter Griffiths, Professor Emeritus, Department of Chemistry, University of Idaho
Duquesne University - Bayer Learning Center (Wolfe Lecture Hall), Pittsburgh, PA

Wednesday, November 20

The Spectroscopy Society of Pittsburgh

Technology Forum

"Are You Tired or Toxic"

Dr. Joseph Porreca, D.C.
Duquesne University, Pittsburgh, PA