



The Crucible

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November 2015



CONGRATULATIONS TO THE 2015 ACS PITTSBURGH SECTION AWARD RECIPIENTS!

PITTSBURGH SECTION
AWARDS BANQUET
INFORMATION
LOCATED ON PAGE 8

PITTSBURGH AWARD

DR. KAY BRUMMOND

Kay Brummond grew up on a farm in eastern Nebraska where her family raised corn and soybeans. She attended the University of Nebraska-Lincoln and received her B.S. degree from UNL in 1985. She carried out her graduate work at the Pennsylvania State University and was awarded a Ph.D. in organic chemistry in 1991. Her postdoctoral research was performed at the University of Rochester and her first faculty appointment was in the Department of Chemistry at West Virginia University in 1993; she was promoted to Associate Professor with tenure in 1999 and held an adjunct Associate Professor position in the Department of Basic Pharmaceutical Sciences at WVU. She was honored with the Departmental Outstanding Faculty Award in 1999.



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DISTINGUISHED SERVICE AWARD DR. PAUL JOHNSON

Dr. Paul G. Johnson received a B.A. degree in chemistry from Slippery Rock State College (now called SRU) in 1966. He moved on to Duquesne University where he received his Ph.D. in chemistry before spending three years doing post-doctoral research at Cornell University in Ithaca, NY. He returned to Pittsburgh in 1975 where he began a teaching career at various community colleges before receiving a faculty position at Duquesne. He is currently on the Advisory Board of the Chemistry Department at SRU and also sponsors scholarships for deserving undergraduate chemistry majors at the University. He has been active in the ACS Pittsburgh section for 25 years, principally as the chair of the High School Chemistry Contest since 1997. He has been co-advisor of the Duquesne University Student Affiliate Chapter from 1984 to the present. In 2013 he was recognized by the national organization as an ACS Chemistry Ambassador for promoting the value of chemists and chemistry in the community.



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2016 Nominations for ACS Executive Board

The 2015 Nominating Committee of the Pittsburgh Section of the American Chemical Society submits the following slate of candidates for Section office for 2016. All persons nominated are members of the society and have agreed to serve if elected. Only members of the Pittsburgh Section of the American Chemical Society are eligible to vote. Please note that all ballots must be received by November 23, 2015. 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 an email notification and code from www.vote-now.com. The polls will open on November 9th and close November 23rd at Midnight EST. For ballot questions, please contact: Logan Miller, Secretary - ACS Pittsburgh Section, miller.logant@gmail.com. For those receiving a printed copy, please follow instructions printed on the ballot. Ballots received in any other manner than what is stated in the instructions will not be accepted.

Chair-Elect

Dave Waldeck

David 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 postdoctoral 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. He served as Chair of the Department of Chemistry from 2004 to 2014. Currently, he holds the rank of Professor and is the Director of the Petersen Institute of NanoScience and Engineering at the University of Pittsburgh. David became a Fellow of the American Physical Society in 2004, and he received the ACS Pittsburgh Award in 2014. David first became a member of the ACS in 1978.

As a faculty member David has made important contributions in chemistry education and research. 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. David has written a textbook on physical chemistry, *Principles of Physical Chemistry* with H. Kuhn, H. D. Foersterling, and D. H. Waldeck (Wiley, NY, 2009). David has mentored numerous postdoctoral students and more than 35 PhD & MSc. students, as well as 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. 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 180 papers.

David has played an active role in the Pittsburgh chemistry community through his active participation in the SSP and SACP societies and through his position as chair of Pitt's chemistry department. He intends to apply that experience and expertise for the benefit of the local ACS section.

Secretary

Matthew Price

Matthew joined the Chemistry and Physics Department at California University of PA in the fall of 2004. Matthew's main instructional load consists of Organic and Biochemistry courses and also participates in the chemistry programs integrated laboratory and research program. Matthew has participated in the department's ACS accreditation efforts and has served as Chemical Hygiene officer in the department since 2008 and is currently the department chair since 2014. Matthew has also been actively involved in the General Education committee at CalU since 2008, serving as assessment coordinator (2009-present) and vice-chair (2012-present).

Matthew received a B.S in Chemistry in 1995 from Adams State College in Alamosa, CO and a Ph.D. in Organic Chemistry from the University of Utah in 2002 under the direction of Cynthia Burrows in the area of designing polymeric bioconjugates in gene transfection applications. While at Utah, Matthew received the NIH Biological Chemistry Training Fellowship. Upon completion of his graduate studies, he conducted proprietary research into polymeric drug formulations at a biotechnology company in downtown Salt Lake City until accepting a position as a visiting assistant professor at Earlham College in 2003-4.

Matthew has been a member of the American Chemical Society since 1998. Matthew also joined the Society for Analytical Chemists of Pittsburgh in 2009, and has been an active member serving as an advisor in the student affiliates and National Chemistry Week committee (chaired in 2013-4).

Secretary – Elect

Chad Keyes

Dr. Chad Keyes is originally from West Lafayette, IN. He received his B.S. degree in chemistry at Ball State University in 2009. Shortly thereafter, he attended Purdue University and received his Ph.D. in organic chemistry in August of 2014. Following the completion of his doctoral degree, he moved to Pennsylvania to start

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BALLOT
For Offices of the
2016
Pittsburgh Section, American Chemical Society

Chair-Elect

(Vote for 1)

Dave Waldek

Secretary

(Vote for 1)

Matthew Price

Secretary - Elect

(Vote for 1)

Chad Keyes

Treasurer - Elect

Amy Rupert

Director

(Vote for 2)

David Gallagher

Fu-Tyan Lin

Councilor

(Vote for 2)

Richard Danchik

Joe Jolson

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.com. 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, Logan Miller. 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 23, 2015.



Society for Analytical Chemists of Pittsburgh



November Meeting
Monday, November 2, 2015
8:00 PM, Duquesne University

Cocktail Hour and Dinner - City View Cafe
Business Meeting and Technical Program - Mellon Hall

“Comprehensive Lipidome Profiling to Elucidate the Functional Role of Lipids in Colorectal Cancer Malignancy and Metastatic Progression”

Gavin Reid, Ph.D., Professor of Bioanalytical Chemistry

School of Chemistry and the Department of Biochemistry and Molecular Biology, The University of Melbourne

Abstract: The disruption of lipid metabolism pathways involved in the regulation of membrane structure, energy homeostasis and signaling are known to be associated with the onset and progression of various diseases, including cancer. To date, however, systematic characterization of the diverse range of individual lipid species (i.e., the lipidome) that may be present within cancer cells as a function of molecular phenotype or metastatic potential, and examination of the functional (i.e., causative) roles that these lipids may play in normal versus malignant to metastatic cancer cell transformation remains poorly understood. Here, a comprehensive lipidome analysis strategy employing ultra-high resolution ‘shotgun’ mass spectrometry and ‘targeted’ tandem mass spectrometry (MS/MS) will be described, along with novel lipid extraction and in situ sequential functional group specific chemical derivatization reactions, for the systematic identification and quantification of >1000 individual molecular lipid species that are present within a series of malignant and metastatic human colorectal cancer cells, and their secreted exosomes. Significant changes in abundance and/or lipid subclass remodeling of numerous lipid classes are observed, including for monoalkyl-glycerophosphocholine (PC) and monoalkenyl-glycerophosphoethanolamine (PE) ether lipids, and certain long chain length SM species, that have previously been associated with cancer development, or are known mediators in a range of physiological and pathological processes. Based on these results, functional studies using targeted gene silencing and associated biochemical methods are being used to elucidate the functional role(s) of colon cancer cell and exosome derived lipids in malignant transformation, metastatic progression and exosome mediated cancer signaling.

Biography: Dr. Gavin E. Reid is the Professor of Bioanalytical Chemistry in the School of Chemistry and the Department of Biochemistry and Molecular Biology, and member of the multidisciplinary Bio21 Molecular Science and Biotechnology Institute, at The University of Melbourne, Australia. Over the past twenty eight years, he has held a variety of technical research positions and academic appointments in Australia and the USA. From 1987-1997 he was employed as a Research Assistant at the Ludwig Institute for Cancer Research in Melbourne, Australia, while also studying part time to obtain an Assoc. Dip. Appl. Sci. (Swinburne TAFE). He then earned a Post Graduate Diploma in Science in 1997 and a PhD in Chemistry in 2000 from the University of Melbourne, followed by post-doctoral research at Purdue University, Indiana, USA. After initially establishing his independent research career in 2002 in Australia as an Assistant Member at the Ludwig Institute for Cancer Research, Gavin moved to Michigan State University, Michigan, USA in 2004 as an Assistant Professor, where he was promoted (early) to the rank of Associate Professor with tenure in 2009. He then returned to Australia to take up his current position in June 2014.

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Dinner Reservations: Please email the SACP Administrative Assistant, Valarie Daugherty at daugherty@pittcon.org by Tuesday, October 27, 2015 to make dinner reservations. Should you not have email, please call 412-825-3220, ext 204. Dinner will cost \$10 (\$5 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 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.

Mildred Perry Memorial Lecture

SATURDAY, NOVEMBER 7TH

SETON HILL UNIVERSITY

Dr. Mandy Trinkey

Laboratory Manager, Allegheny County Medical
Examiners Office

Join local ACS members for the speaker, lunch, & an undergraduate poster session on Seton Hill's beautiful campus.

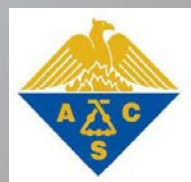
10:00 Technical Presentation

Boyle Health Science Building, Ridge Lecture Hall, Room 156

11:00-1:00 Poster Session & light lunch

To participate in the poster session, follow available links at
<http://www.pittsburghacs.org/outreach/mildred-perry-memorial-lecture/>

To RSVP contact Dr. Demetra Czegán at czegan@setonhill.edu



Sponsored by the ACS Pittsburgh Section & Seton Hill University
Please contact Evonne Baldauff (ebaldauff@waynesburg.edu) with questions.



Featuring Ayana Ledford

Founding Executive Director,
Program for Research and Outreach on Gender Equity
in Society at Carnegie Mellon University

Tuesday, November 17th

5:30 PM Social Hour

6:00 PM Speaker Presentation

6:30 PM Dinner

The Spaghetti Warehouse / 2601 Smallman St. / Pgh., PA 15222

Ayana Ledford is a highly sought out national lecturer by nonprofits, corporations, government agencies, and academic institutions that seek to improve diversity and inclusion in all facets of their organization. She is an expert on multiple factors influencing women's long-term career success and utilizes negotiation as an essential leadership skill within her program offerings. Ms. Ledford seeks to fulfill the mission of PROGRESS (improve society by empowering all women) by providing results oriented workshops that increase the self-sufficiency of women. In addition, she developed an innovative capacity building curriculum that is based on sound academic research for the next generation of women leaders called "Speak Up!"

Ms. Ledford presented to well over 500 organizations from a variety of sectors; for example, the 2014 Women of Courage Awardees, Harvard University, PNC Bank, Emory College, Carnegie Mellon's Women in Engineering, BNY Mellon, WQED's national "Close the Wage Gap" webcast, Charles Schwab, Otterbein's Women & the New American Dream Summit, and the Association for Latino Professionals for America.

The path that led her toward this profession was built on a foundation of advocacy, with past work experience with the Bloomfield-Garfield Corporation and the Bayer Center for Nonprofit Management at Robert Morris University. She served as a consultant for the Consumer Health Coalition and Wireless Neighborhoods to improve access, recruit customers, and retain employees from economically challenged communities. Some of her past and present commitments include serving on the board of the Kelly Strayhorn Theater, Sojourner House, Athena Awards, Terry McAdam Book Committee for Nonprofit Management, and founding member of the Sankofa Fund of Southwestern Pennsylvania. She is a recipient of the *Friend of Equity Award* and *Pittsburgh Courier's Fabulous 40*. Ms. Ledford holds a Bachelors of Arts degree from Dickinson College and a Masters degree from the University of Pittsburgh.

The cost of this dinner is \$16 and includes a salad, a soft drink, and your choice of Spaghetti & Meatballs, 15-Layer Lasagne, Fettuccini Alfredo, Four-Cheese Manicotti, Grilled Chicken Caesar Salad. or Chicken Parmigiana.

You can register using the link on the Upcoming Events page of our website: www.pghwcc.org. Registration is limited to the first 40 guests. Please contact Dr. Michelle Ward (michelle.ward@pitt.edu) with any questions.



The Spectroscopy Society of Pittsburgh



November Meeting
Wednesday, November 18, 2015
Duquesne University

5:30 PM Technology Forum Speaker's Presentation Power Center Ballroom Section C
5:30 PM Social Hour – Power Center Fides Shepperson Suite • 6:45 PM Dinner – Power Center Ballroom Section C
8:00 PM Business Meeting – Power Center Ballroom Section C • 8:15 PM Technical Program Speaker's Presentation – Power Center Ballroom Section C

TECHNOLOGY FORUM - 5:30 PM

“How to Understand & Manage Your Risk of Lyme Disease”

William Todaro, Medical Entomologist, Allegheny County Health Department

What is a tick? Which ticks are carrying Lyme disease? What is Lyme disease? Do ticks carry other diseases as well? What is your risk of catching a tick borne pathogen? What can you do to make sure that you do not suffer from a tick borne illness? All this and more.

Biography: William Todaro is a BS and MS graduate of the SUNY of New York College of Environmental Sciences and Forestry at Syracuse University in Syracuse, NY. He served as Medical Entomologist in Buffalo, NY for 11 months with the Onondaga County Health Department. Since then, he has served over 38 years with the Allegheny County Health Department in the Greater Pittsburgh Area. He is involved in many areas, and monitors the abundance and distribution of public health pests and pest borne disease; flies, fleas, mosquitoes, ticks, etc. He also is involved in research on public health pests; cockroaches, scabies mites, dog heartworm. Additionally he interfaces to the public and the news media on pests, in addition to involvement with local police on forensic studies.

TECHNICAL PROGRAM - 8:15 PM

“A Combined Time-Resolved Raman, Laser-Induced Fluorescence and Laser-Induced Breakdown Spectroscopy System for Mars Exploration”

Shiv Sharma, Hawaii Institute of Geophysics and Planetology
Washington University

There is currently great interest in standoff detection of surface minerals and biomarkers for NASA's exploration programs, particularly as applied to Mars, Venus, and icy satellite Europa. Recent scientific observations have steadily advanced our understanding of the nature and abundance of water on Mars, and there is growing recognition of the abundant hydrous alteration that has taken place on its surface. Stand-off active spectroscopic techniques such as Raman, laser-induced native fluorescence (LINF) and laser-induced breakdown spectroscopy (LIBS) are highly synergistic analytical techniques and are well suited for planetary missions. Raman spectroscopy is sensitive to the molecular structure of the sample from which one can definitively determine mineralogy, and identify organic and biogenic materials. In the time-resolved (TR) mode LINF spectra allow measurement of fluorescence from trace rare-earths and transition-metal ions in minerals with high sensitivity, and also assist in differentiating between abiogenic minerals from organic and biogenic materials based on their fluorescence lifetime. Time-resolved LIBS allows measurements of chemical compositions from stand-off distances. At the University of Hawaii, we have developed a combined TR Raman, LINF and LIBS spectroscopic instrument suitable

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Dinner Reservations: Please register on-line at <http://www.ssp-pgh.org> to make dinner reservations **NO LATER THAN Thursday November 12, 2015 at noon**. Dinner will cost \$10 (\$5 for students) and checks must be made payable 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 registration desk upon entering the Power Center.



**AMERICAN CHEMICAL SOCIETY
PITTSBURGH SECTION
AWARD BANQUET**

Honoring

2015 PITTSBURGH AWARD RECIPIENT

Dr. Kay Brummond

2015 DISTINGUISHED SERVICE AWARD WINNER

Dr. Paul Johnson

MONDAY, DECEMBER 7, 2015

Grand Concourse
100 West Station Square Dr.
Pittsburgh, PA 15219

Social Hour: 6:00 Cash Bar
Dinner: 6:45
Award Presentation: 7:45

DINNER REGISTRATION

Registration must be submitted by Monday, November 30, 2015: \$44.00; Student or Post-Doc \$20.00

Parking is not included in the cost but is available in lots adjacent to Station Square or through valet at the Grand Concourse.

To officially register for the event, payment must be received. Please make checks payable to ACS Pittsburgh Section and mail to Evonne Baldauff, 51 W. College St., Waynesburg, PA 15370. Include the following information along with your check:

NAME _____

ADDRESS _____ STATE _____ ZIP _____

EMAIL _____

AFFILIATION _____

MEAL CHOICE (PLEASE CHOOSE ONE):

SIRLOIN STEAK WITH WARM BLUE CHEESE BUTTER

SALMON ROCKEFELLER WITH SPINACH, CRAB MEAT, BACON, BÉARNAISE

VEGETARIAN (TO BE ANNOUNCED)

2016 Executive Board Bio's Continued from Page 2

teaching at Waynesburg University as an Assistant Professor of Chemistry.

Dr. Keyes is actively involved in various student and volunteer organizations such as the Student Affiliates of the American Chemical Society at Waynesburg University and Big Brother Big Sister of Washington County. Furthermore, he has held several leadership positions outside of Waynesburg University, serving on the Washington County Advisory Board for Big Brother Big Sister and as a Visiting Instructor at Purdue University during the summer of 2015.

During his undergraduate studies, Dr. Keyes was awarded the Newell C. Cook Sr. and Jr. Scholar Award and was also awarded the Ross Fellowship during his doctoral studies.

Treasurer - Elect

Amy Rupert

Amy received her B.S. in chemistry in 2006 from Indiana University of Pennsylvania and her PhD in chemistry in 2012 under the advisement of Dr. Stephen Weber from the University of Pittsburgh. From 2012 to early 2014 she held a post-doctoral appointment in the Department of Neurology at the University of Pittsburgh before accepting a position as a scientific advisor at a local IP (intellectual property) law firm, Beck and Thomas.

Amy has helped initiate two subsections of the ACS – the WCC and the YCC and has served on the executive committees of both. She was treasurer of the Pittsburgh Section of the ACS in 2013 and served as chair of the section in 2014. She is enthusiastic about the sciences and enjoys donating her time to promote and serve these local organizations.

Director

Fu-Tyan Lin

Fu-Tyan received his bachelor degree in Physics and Teaching in 1962 from the National Taiwan Normal University (Taipei, Taiwan). He enjoyed seven years of teaching in high schools and colleges in Taiwan. He came to the United States for his graduate studies in August 1969. Fu-Tyan received his MS in Physics in 1971 and his Ph.D. in polymer science in 1979 from the University of Akron (Akron, OH). During his graduate studies, he worked as a technician for the Physics Department (1971 to 1973) and as an NMR Spectroscopist for the Institute of Polymer Science (1973 to 1978). He was the manager of chemistry instrumentation at the University of Louisville (Louisville, KY) from 1978-1980. In June 1980, he became the director of the NMR Lab as well as research assistant professor in The Department of Chemistry at the University of Pittsburgh. He was promoted to research associate professor in November 1986 and retired from the University of Pittsburgh in January 2005. In 2005, he founded LIST NMR, an NMR services and consulting lab. His current research interest is the separation and characterization of natural products. Fu-Tyan is the author and co-author on more than sixty papers and has presented more than twelve papers at academic institutions and conferences. In October 2005, he presented the plenary lecture at the Beijing Conference and Exhibition on Instrumental Analysis (BCEIA) in Beijing, China. He presented another lecture at the International Forum for BCEIA on October 12th, 2011 in Beijing. He was one of the opening ceremony speakers at the 15th BCEIA in Beijing on October 24, 2013.

Fu-Tyan has been an active member of American Chemical Society (ACS) since 1978, a member of the Spectroscopy Society of Pittsburgh (SSP) since 1982, a member of the Society for the Analytical Chemists of Pittsburgh (SACP)

since 1999, and a member of the Pittsburgh Conference (PITTCON) since 1993. He has served the role of chair on various committees over the past several years for PITTCON, SSP, SACP and ACS Pittsburgh Section. He was chair for the Pittsburgh Section of the ACS in 2008, chair of SSP in 2003-2004, and chair for SACP in 2010-2011. He served as a chair for the Pittsburgh ACS Polymer Group in 1985-1986 and was president of Pittsburgh Chapter of The Monte Jade Science and Technology Association in 1999.

Fu-Tyan enjoys sewing, cooking, reading and classical music.

Dave Gallagher

David is currently an Associate Professor of Chemistry and Chair of the Department of Chemistry at Carlow University. A lifelong Pittsburgh native, David credits the Pittsburgh region with its abundance of educational and professional opportunities along with excellent mentoring for helping to develop his passion for and interest in the chemical sciences. David began his education in Chemistry at Seton LaSalle high school with instruction from Br. Eric Henderson. After graduation, David pursued studies at the University of Pittsburgh, graduating in 1993 with a B.S. in Chemistry. During his tenure at Pitt, David had the opportunity to be mentored by George Bandik and Andrew G. (Jack) Sharkey, performing undergraduate research for the latter in the area of trimethylsilyl derivitization as a tool for lowering detection limits of environmental pollutants in GC-MS.

During his time at Pitt, David was very active as a student aide to the Pittsburgh conference as well as serving as President of Pitt's ACS-SA chapter. Following graduation from Pitt, David pursued graduate studies at Duquesne University, earning his Ph.D. in 1999, working in the lab of Mitchell E. (Mitch)

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2016 Executive Board Bio's Continued from Page 3

Johnson, where the focus of his dissertation work centered on strategies for Near-Infrared Diode Laser Induced Fluorescence Detection of Bioactive Analytes in Capillary Electrophoresis. Upon completion of his doctoral work, David stayed at Duquesne to perform postdoctoral research in the lab of Dr. Bruce Beaver where projects ranged from analytical methods to determine the tannin content of white oak trees in western PA forests to spectroscopic investigation of the high-temperature auto-oxidation of jet fuels.

In the fall of 2000, David was appointed to the faculty of Carlow University. During his fifteen year tenure at Carlow, David has helped the both the chemistry major program and the department to grow. He maintains an active undergraduate research program and teaches a variety of courses across the program curriculum. David also serves as faculty advisor to the Carlow University ACS-SA chapter, which has been recognized by the national ACS for the last twelve consecutive years. David maintains memberships in the national and local ACS, as well as SACP and SSP and is looking to get more actively involved, specifically in service to the section in the role of director. He is looking for ways to "give back" to the scientific community and to mentor the newer generations of scientists in the Pittsburgh

community. He is also interested in finding ways to increase opportunities for partnerships among educational institutions, industry and professional organizations in the Pittsburgh area. In his free time, David enjoys spending time with his wife Jennifer, and their two young children Jacob and Emma.

Councilor

Rich Danchik

Rich 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.

He spends his time serving a variety of 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 2005, Vice-Technical Chair- 2005 to 2012,Vice-Chairman Membership 2012 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 received several awards from ACS for service as a Councilor (2015) and for the ACS/Pittcon International Travel Program. 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

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Section's Website: www.pittsburghacs.org

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SSP November Meeting Continued from Page 8

for remotely exploring planetary surfaces during daytime and nighttime. The fluorescence spectrograph is capable of measuring TR- laser-induced fluorescence excited with 355 nm laser in the spectral range 380-800 nm spectral range. Biological materials are also identified from their characteristic short-lived (<10 ns) laser-induced fluorescence lifetime. Biomarkers such as chlorophyll-a, and carotenes can be identified from their characteristic fluorescence and resonance Raman spectra, respectively. The combined TR Raman-LIBS spectrograph allows measurements of LIBS spectra for elemental analysis of surface minerals. The role of these combined active spectroscopic instruments in the upcoming NASA's Mars 2020 rover mission, and in future planetary exploration will be discussed.

Biography: Shiv K. Sharma is Professor and Associate Director in Hawaii Institute of Geophysics and Planetology, School of Ocean and Earth Science and Technology. He is also on the graduate faculty of Geology and Geophysics, and Electrical Engineering in the College of Engineering at the University of Hawaii. He joined the University of Hawaii in 1980 (July) after spending two and a half years as Carnegie Post-doctoral Fellow working in the field of Experimental Petrology & Geochemistry at the Geophysical Laboratory in Washington, D. C. In 1973, Shiv earned his Ph. D. degree in Physics from the Indian Institute of Technology (IIT), Delhi, India. During 1974-75, he worked as Research Associate in the Department of Chemistry at the University of Leicester, Leicester, England. During 1973-1974, he worked as Post-Doctoral Fellow in the Thin Film Laboratory, Department of Physics, IIT Delhi, India.

Shiv Sharma is the author or co-author of over 270 research publications in refereed Journals, and has presented over 250 talks at various national and international scientific conferences and institutions. His research interests include Raman and infrared spectroscopy of minerals and mineral glasses at ambient and low temperature, at very high pressure and temperatures, remote sensing, and light detection and ranging (LIDAR) techniques, stand-off Raman, laser-induced fluorescence and laser-induced breakdown spectroscopy (LIBS) of earth and planetary materials; and hazardous chemicals.

Duquesne University Department of Chemistry Hosts November Seminars

11/6/15 - Dr. James Rondinelli, Northwestern University "Versatile Abilities of Lattice Instabilities: New Design Strategies for Emergent Ferroics."

11/13/15 - Dr. Lawrence Cathles, Cornell University, "The Role of Methane in Climate Change and Energy Policy."

11/20/15 - Dr. Emile Schweikert, Texas A&M University, "Molecular Analysis at the Nanoscale."

Seminars take place at 3:00 PM in the Bayer Learning Center, Pappert Lecture Hall

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Review for Analytical Chemistry. He was also a member of the Editorial Board of the Applied Occupational and Environmental Hygiene Journal.

Joe Jolson

Joe, who has been chair of the ACS-Pittsburgh Section employment committee since 2004, has most notably successfully quadrupled annual attendance at the annual Job Searching for Chemical Professionals workshop. Additionally, he has been an ACS National career counselor since 2008, chaired the SACP employment committee from 2010 to 2015, and was employment committee chair for the 2014 Central Regional Meeting of the ACS. He has been an ACS-Pittsburgh Section director since 2014 and an alternate councilor since 2010. In 2015, he helped the Carnegie Library of Pittsburgh obtain SciFinder access. Dr. Jolson founded Custom Client Solutions in 2004 to provide battery, gas detection, and respiratory protection services to clients. From 2000 – 2004, he oversaw the development of emergency-breathing devices and air quality monitors for CSE Corporation. From 1979 – 2000, he analyzed detection technologies for potential use in emerging markets; facilitated qualification testing and applications support for gas detectors; led teams that developed gas sensors, gas detectors, and lithium batteries; and set up a specialty battery facility for the Mine Safety Appliances Company, Inc. Dr. Jolson has 11 U.S. Patents, 13 publications, and has given 27 presentations. He has a Ph.D. in analytical chemistry from SUNY at Buffalo.

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SACP November Meeting Continued from Page 7

Gavin has twenty five years' experience in the development of bio-analytical mass spectrometry and associated chemical strategies for proteome and lipidome analysis, and their application toward understanding the role of proteins and lipids in disease, including cancer, diabetes and diabetic complications. To date, this inter-disciplinary and highly collaborative research has resulted in 145 peer-reviewed publications (H-index = 37, >5000 citations), >130 conference and invited seminar presentations, and 3 patents. Funding to support this work has been received from agencies including the National Institutes of Health, the National Science Foundation, the Australian Research Council, the Multiple Myeloma Research Foundation, the Juvenile Diabetes Research Foundation, and multiple industry groups. Gavin received a National Science Foundation CAREER award in 2006, an American Society for Mass Spectrometry Research Award in 2007 and the Bowie Medal from the Australian and New Zealand Society for Mass Spectrometry in 2011. He served from 2002-2004 on the Board of Directors of the American Society for Mass Spectrometry. He is currently an Associate Editor for the Journal of the American Society for Mass Spectrometry, Treasurer for the Australasian Proteomics Society, a member of the Executive Committee of the Australian and New Zealand Society for Mass Spectrometry, and is on the Editorial Advisory Boards for the Journal of Mass Spectrometry and the European Journal of Mass Spectrometry.

SURPRISE

our editor by calling and saying you appreciate the quality and content of our newsletter. Our editor works hard to maintain a publication of interest to our membership. Oh, and by the way you could also give credit to our advertisers who financially support us.

2015 Pittsburgh Award Continued from Page 1

In 2001, she moved her labs to the Department of Chemistry at the University of Pittsburgh where she was promoted to Professor in 2006 and as of January in 2015 is serving as the Chair of the Department. While at the University of Pittsburgh, Brummond has been the recipient of the Chancellor's Distinguished Research Award, the ACS Akron Section Award, the Carnegie Science Center Emerging Female Scientist Award, and the Johnson & Johnson Focused Giving Award. She is currently an American Chemical Society Fellow. She served as the Chair of the Gordon Research Conference, Organic Reactions and Processes. Brummond was elected by the DOC Executive Committee of the ACS to serve as the Chair of the 45th National Organic Symposium, 2017. She has served as a co-organizer of the annual workshop, "Accelerated Reaction Discovery" in Telluride, Colorado since 2010. She has also been appointed as a Member of the Committee on Publications, a Joint Committee of the American Chemical Society Council and Board of Directors, 2014-2017. Brummond just completed her eight-year term on the Board of Editors for the Corporation of Organic Synthesis, Inc. and is the editor of Volume 91. She served as the Vice-Chair of the NIH Center of Excellence for Chemical Methodologies and Library Synthesis at the University of Pittsburgh for ten years, where she was also a project leader. She has served as a permanent member of the NIH Synthetic and Biological Chemistry Study Section A and the University of Pittsburgh Drug Discovery Institute. Brummond has also been honored

with positions as a Visiting Fellow at the University of New South Wales, Sydney, Australia in the Fall of 2011; a Visiting Professor at the Université Pierre et Marie Curie-Paris 6, Paris, France in the Fall of 2010; and a Visiting Professor in the Department of Chemistry, MIT, Boston, MA in the Spring of 2008. Brummond's research program focuses mainly on the development of new synthetic methods to expedite the preparation of, and to expand on Nature's toolbox of biologically relevant compounds. She and her group have published over 60 journal articles, 15 reviews and book chapters, and she has delivered over 160 invited lectures and symposia. The students and post-docs in her group have presented 56 conference posters and presentations. Twenty-two graduate students have obtained Ph.D. and M.S. degrees under her direction; Jamie McCabe and Jennifer Loyer-Drew were recipients of a Pfizer Diversity Fellowship Award. Branko Mitasev and Laura Kocsis were recipients of the Mellon Fellowship at the University of Pittsburgh. Thirty-three undergraduates have worked in her laboratory from 1993-2015.

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 hjuzwa@shimadzu.com!

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 12/01/2015 (for travel to be completed by 06/30/2016) and 06/01/2016 (for travel to be completed by 12/31/2016.)

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.

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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 2015 issue must be to the editor by November 1, 2015.

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.

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The Crucible

A newsletter of the Pittsburgh Section of the American Chemical Society

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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

Wednesday, November 2

Society for Analytical Chemists of Pittsburgh

“Comprehensive Lipidome Profiling to Elucidate the Functional Role of Lipids in Colorectal Cancer Malignancy and Metastatic Progression”

Gavin Reid, Ph.D., Professor of Bioanalytical Chemistry, School of Chemistry and the Department of Biochemistry and Molecular Biology, The University of Melbourne
Duquesne University, Pittsburgh, PA

Saturday, November 7

ACS On the Road Mildred Perry Memorial Lecture
Seton Hill University

Tuesday, November 17

WCC Networking Dinner

Ayana Ledford, Founding Executive Director, Program for Research and Outreach on Gender Equity in Society at Carnegie Mellon University
The Spaghetti Warehouse, 2601 Smallman St., Pittsburgh, PA

Wednesday, November 18

The Spectroscopy Society of Pittsburgh

“A Combined Time-Resolved Raman, Laser-Induced Fluorescence and Laser-Induced Breakdown Spectroscopy System for Mars Exploration”

Shiv Sharma, Hawaii Institute of Geophysics and Planetology, Washington University

Technology Forum

“How to Understand & Manage Your Risk of Lyme Disease”

William Todaro, Medical Entomologist, Allegheny County Health Department
Duquesne University, Pittsburgh, PA

Monday, December 7

ACS Pittsburgh 2015 Award Banquet

Grand Concourse, 100 West Station Square Dr., Pittsburgh, PA