



The Crucible

www.pittsburghacs.org

Volume: XCVII No.2

October 2011

Two Pittsburgh Section Members Named in 2011 Class of ACS Fellows

WASHINGTON, Aug. 8, 2011 - The American Chemical Society (ACS) has named the 2011 class of ACS Fellows, an honor bestowed upon 213 distinguished scientists who have demonstrated outstanding accomplishments in chemistry and made important contributions to ACS, the world's largest scientific society. Among those named are Pittsburgh Section members, Andrew John Gellman and Jeffrey Madura.

The 2011 Fellows were recognized at an induction ceremony on Aug. 29 during the Society's 242nd National Meeting & Exposition in Denver.

"ACS is especially proud to honor these chemists during the 2011 International Year of Chemistry," said ACS President Nancy B. Jackson, Ph.D. "The work they are doing will improve all of our lives as they unleash the power of chemistry to solve global challenges like providing clean water, sufficient food, new energy sources and cures for disease. But that's not all. They're also organizing scientific conferences for their peers, doing outreach with scouts and schools, and being mentors to the next generation of scientists."

The ACS Fellows Program was created by the ACS Board of Directors in December 2008 "to recognize members of ACS for outstanding achievements in and contributions to Science, the Profession, and the Society." Fellows come from academe, industry and government. The official list of names is published in the Aug. 8 issue of Chemical & Engineering News (C&EN).

Important News!

ACS Pittsburgh Section Goes Green with Electronic Crucible The Pittsburgh Section's Website has a New Home

In 2012, the Pittsburgh Section plans to go green! We will begin to issue the Crucible newsletter electronically with the January 2012 issue. **If you are unable to receive an electronic copy and wish to continue receiving the paper version, please 'opt-in' by mailing the form on Page 13. All forms must be received by December 31, 2011.**

Also, the Pittsburgh Section website has a new address and can be found at www.pittsburghacs.org. Thank you to Guy Berry for his years of service to our old website

Contents . . .

Two Pittsburgh Section Members Named in 2011 Class of ACS Fellows	1
Important News! ACS Pittsburgh Section Goes Green with Electronic Crucible & the Section's Website has a New Home!	1
ACS "On the Road" Meeting	3
You're Invited - National Chemistry Week Celebration	4
National Chemistry Week 2011	5
Chemistry - Our Health Our Future Poetry Contest	5
Women Chemists Committee Empowering Women in Science Symposium	6
Spectroscopy Society of Pittsburgh October Meeting	7
Spectroscopy Society of Pittsburgh Technology Forum	7
ACS Pittsburgh Chemists Club October Meeting	8
INTEL International Science & Engineering Fair - Judge Pre-Registration is Open	9
4 th Annual Pittsburgh Faraday Lecture	10
Did You Know?	10
Society for Analytical Chemists of Pittsburgh October Meeting	10
Society for Analytical Chemists of Pittsburgh November Meeting	11
ACS Energy Technology Group October Meeting	11
Spectroscopy Society of Pittsburgh Continuing Education Fall Symposium	12
Crucible Paper Version "opt-in" Form	13
Advertiser's Index	15
Calendar	16



Celebrating Innovation in Analysis



Join the celebration! For 50 years, scientists and researchers have enhanced their professional development by attending the East Coast's largest analytical event. And this year's golden anniversary symposium will be bigger and better than ever. Enjoy our daily anniversary festivities while experiencing the latest innovations in analysis at our courses, presentations, and exposition. For the full agenda, visit www.eas.org or call (732) 449-2280.

www.eas.org



Clarion University of Pennsylvania Department of Chemistry



Presents

ACS "ON THE ROAD" MEETING

Tuesday, October 11, 2011

*"What You Always Wanted to Know about
Chemicals in Foods but Were Afraid to Ask"*



Dr. Robert P. Bates
University of Florida

Foods are complex mixtures of chemicals, but with difference. There is a very important legal distinction between naturally occurring food constituents and other chemicals that end up in food by design or default. Conversely, the much more important matter, chemical compatibility, dictated by human physiology and nutritional biochemistry and vital to well-being, health, performance, and survival - is often ignored or misinterpreted by vocal yet chemically illiterate groups. Despite considerable progress in understanding the science and technology of foods, culture and perception have a far greater influence upon food acceptance and regulation than the reality of nutrition and toxicology. Paradoxically, as science uncovers more about the complex interactions of foods with the human body, the less confident and more confused the public becomes regarding the safety, value, and nutritional efficacy of the U.S. (increasingly global) food supply. Food additives and now phytochemicals are examples of food consumption concerns that should also stress total diet, lifestyle, and common sense. This presentation will deal with both essential and trivial food constituents and emphasize some of the positive and negative aspects of each. Despite our imperfect and changing knowledge, a better appreciation of the chemistry and metabolism of foods has dramatic potential for improving health and well-being, while ignorance is sure to have the opposite effect.

Schedule of Events

- 5:15 ACS Regional Meeting/Student Affiliate Meeting
- 5:30 Dinner
- 6:30 Research Poster Session
- 7:15 Speaker Presentation

The entire meeting will take place in DINE 107 and DINE 108 in the Dining Hall.

All participating colleges will receive a complimentary copy of The Merck Index, courtesy of the Pittsburgh section.

Dinner Reservations: A buffet dinner will cost \$15 for members and \$5 for students. Checks can be made out to American Chemical Society and mailed to Heather Juzwa (ATTN: Science on the Road) at 321 Winners Circle, Canonsburg, PA 15317. You may also pay at the door. Please make dietary restrictions known when you RSVP. For dinner reservations, please call Heather Juzwa at 724-745-2662 or email her at hljuzwa@shimadzu.com by **4:00 PM, October 4, 2011**. Please also let Heather know if you plan to bring a poster.



YOU ARE INVITED

Join the Pittsburgh Section ACS
as we celebrate

National Chemistry Week!

“Chemistry - Our Health, Our Future!”

Where: Carnegie Science Center

When: October 21-22, 2011

The 2011 National Chemistry Week (NCW) celebrations in Pittsburgh will be held on Friday, October 21 (9 AM to 3 PM) and Saturday, October 22 (10 AM to 5 PM), at the Carnegie Science Center. Join in the NCW activities as we celebrate this year's NCW theme "Chemistry - Our Health, Our Future!" Each year National Chemistry Week reaches millions of people with positive messages about the contributions of chemistry.

Hands-on Activities • Theater Shows • Prizes

- Visit over 20 tables with hands-on experiments, activities, and demonstrations
- Visit the Drake Oil Well Museum's Mobile Energy Education Training Unit, located in the Carnegie Science Center's parking lot
- Catch special NCW-related theater shows throughout each day
- Register to win a chemistry set or one of several prizes

For more information about the NCW celebration contact the Carnegie Science Center at (412) 237-1640 or the Pittsburgh Section's NCW Coordinator Michael Mautino at (412) 777-4792 or michael.mautino@bayer.com

For more information about the Pittsburgh Section's 2011 NCW event visit us at:
<http://www.chem.cmu.edu/acs-pgh/activities.html#week>

Look for us on Facebook: Pittsburgh ACS NCW

***The Pittsburgh Section's 2011 NCW activities are sponsored by
The Society for Analytical Chemists of Pittsburgh, The Spectroscopy Society of Pittsburgh,
PPG Industries Foundation, Carnegie Science Center, and Bayer Corporation.***



National Chemistry Week 2011: “Chemistry - Our Health, Our Future!”

Illustrated Poem Contest

As part of their National Chemistry Week (NCW) and the International Year of Chemistry (IYC) celebration, the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in Kindergarten - 12th grade.

Write and illustrate a poem using the National Chemistry Week theme, “*Chemistry - Our Health, Our Future!*” Your poem can be in any style as long as it is no more than 40 words. Some example poem styles are: Haiku, Limerick, Ode, ABC poem, Free Verse, End Rhyme, and Blank Verse.

Possible topics related to health and chemistry: Hygiene, Vitamins, Nutrition, Minerals, Medicine, and Sport Fitness.

Winners will be selected in each of the following categories:

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

1st Place in each grade category - \$50 • 2nd Place in each grade category - \$25

Contest Rules

- Poems must conform to a particular style. No poem may be longer than 40 words.
- The topic of the poem and the illustration must be related to the NCW theme, “Chemistry - Our Health, Our Future!”
- All entries must be original works without aid from others.
- Each poem must be submitted and illustrated on an unlined sheet of paper (of any type) not larger than 11” x 14”. The illustration must be created by hand using crayons, watercolors, other types of paint, colored pencils or markers. The text of the poem should be easy to read and may be printed with a computer, before the hand-drawn illustration is added, or the poem may be written on lined paper which is cut out and pasted onto the unlined paper with the illustration.
- Only one entry per student will be accepted.
- All entries must have the following information included with the entry: student’s name, grade, home telephone number and/or parent/guardian e-mail address (used only for notifying winning entries), school name, school address, teacher’s full name, email, school telephone number and style of the poem below the title. For school districts with “privacy” policies regarding the sharing of student’s home contact information, please use school telephone number and teacher’s e-mail address for the student’s contact information. For home schooled students, write “Home Schooled” for school name, and note any home school association you may be affiliated with.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners’ names, likenesses and entries for editorial, advertising and publicity purposes.
- ACS is not responsible for lost, damaged, or delayed postal shipments and electronic submission is encouraged.
- Contest entries must be received at the address listed below by Friday October 21, 2011.
- NO LATE ENTRIES WILL BE ACCEPTED.
- Judging will take place Saturday, October 22, 2011.
- Winning entries will be announced Monday, October 24, 2011.

Entries will be judged based on:

- Relevance to and incorporation of the theme
- Word choice and imagery
- Colorful artwork
- Adherence to poem style
- Originality and creativity
- Overall presentation

For more information about the NCW 2011 contest, contact
Michael Mautino at 412-777-4792 or michael.mautino@bayer.com (e-mail preferred)

Please send entries by Friday, October 21, 2011 to:
Michael Mautino, 3485 Frye Ave., Finleyville, PA 15332

EMPOWERING WOMEN IN SCIENCE SYMPOSIUM



Ayana Ledford



Rebecca U. Harris, MBA



Dr. Kathleen Shulz

www.pitt.edu/~pghwcc

Saturday, November 5th

Chevron Science Center • University of Pittsburgh

219 Parkman Avenue • Pittsburgh, PA 15260

Parking included at Soldiers & Sailors Parking Garage.

Cost: \$15 professional / \$10 students or retirees.

Open to the public - all are welcome!

9:30 Registration & Welcome

10:00 **Ayanna Ledford**, Executive Director of the Program for Research and Outreach on Gender Equity in Society (PROGRESS)

10:45 **Rebecca U. Harris**, Director of the Center for Women's Entrepreneurship at Chatham University

11:30 **Dr. Kathleen Shultz**, Board of Directors, American Chemical Society

12:30 Networking Luncheon

REGISTRATION DEADLINE: OCTOBER 28TH

To register, please send the form below and a check made out to "Greater Pittsburgh WCC" to Michelle Ward Muscatello / 219 Parkman Ave / Room 107 / Pittsburgh, PA 15260. You may also RSVP via email: muscat@pitt.edu.

Empowering Women in Science Symposium

Name: _____

Affiliation: _____

Email: _____ Phone: _____

Interested in childcare for _____ child(ren) age(s) _____



SPECTROSCOPY SOCIETY OF PITTSBURGH



Wednesday, October 19, 2011

Duquesne University
Bayer Learning Center (Pappert Hall)

8:15 PM - Technical Program

“Super Earths and Life”

Dr. David Latham

Harvard-Smithsonian Center for Astrophysics, Cambridge

Transiting planets are special. The amount of light blocked by the planet as it passes in front of its host star sets the size of the planet (relative to the star). If an orbit can be derived from Doppler spectroscopy of the host star, the light curve also provides the orientation of the orbit, leading to the mass of the planet (again relative to the star). The resulting density for the planet can be used to constrain models for its structure and bulk properties. We are on the verge of using these techniques to characterize a population of Super Earths, planets in the range 1 to 10 Earth masses that may prove to be rocky or water worlds. Space missions such as Kepler, Plato, and TESS promise to play key roles in the discovery and characterization of Super Earths. Transiting planets also provide remarkable opportunities for spectroscopy of planetary atmospheres: transmission spectra during transit events and thermal emission throughout the orbit, calibrated during secondary eclipse. Spectroscopy of Super Earths will not be easy, but is not out of the question for the James Webb Space Telescope.

Our long-range vision is to attack big questions, such as “Does the diversity of planetary environments map onto a diversity of biochemistries, or is there only one chemistry for life?” A giant first step would be to study the diversity of global geochemistries on super-Earths and Earth analogs.

Bio: Dave Latham is an astronomer at the Harvard-Smithsonian Center for Astrophysics in Cambridge. He works on the discovery and characterization of planets around other stars, with the goal of identifying planets enough like the Earth so that water could be liquid on the surface and life as we know it might be comfortable. NASA’s Kepler mission is enabling important progress towards this goal.

Dinner Reservations: Please register on-line at <http://www.pittcon.org/misc/societies/ssprsvp.php> to make dinner reservations NO LATER THAN FRIDAY, October 14, 2011. This month’s entrée is TBA. Dinner will cost \$8 and checks can be made out to the SSP. If you have dietary restrictions, please indicate them when you RSVP.

Parking Instructions: The Duquesne University Parking Garage is located on Forbes Avenue. Upon entering the garage, receive parking ticket and drive to upper floors. Pick up a parking chit at the dinner or meeting.

Spectroscopy Society of
Pittsburgh

Technology Forum

Wednesday, October 19, 2011

Duquesne University, 5:30 p.m.

Duquesne University - Bayer
Learning Center (Pappert Hall)

*“The Large Hadron Collider
(LHC) - Exploring a
New Energy Frontier”*

Dr. Thomas Ferguson

Professor of Physics
Carnegie Mellon University

The Large Hadron Collider (LHC) is a 7 TeV x 7 TeV proton-proton colliding-beam accelerator, situated at the European accelerator center, CERN, outside Geneva, Switzerland. The 14 TeV center-of-mass energy of the LHC is a factor of 7 higher than the previous highest-energy accelerator, the Tevatron at Fermilab, thus opening up a entirely new energy regime for study. The LHC began taking data in September 2009 at a center-of-mass energy of 7 TeV, and has already become the highest-intensity colliding-beam accelerator in history.

I will give a short introduction on the history of colliding-beam accelerators and the Standard Model of particle physics. I will then discuss the LHC itself, the Compact Muon Solenoid (CMS) experiment, of which I am a part, and the present results and possible future discoveries that could come from the LHC.

Bio: Thomas Ferguson is a professor of physics at Carnegie Mellon University. He received his Ph.D. from UCLA in 1978, and was then a research scientist at Cornell University for 7 years, before joining the CMU physics faculty in 1985. He has worked on the electron-positron colliding-beam accelerators SPEAR at the Stanford Linear Accelerator Center, CESR at Cornell University, and LEP at the European accelerator center CERN. Since 1994, he has been a member of the Compact Muon Solenoid (CMS) collaboration, helping to build the CMS detector, which is now taking data at the CERN Large Hadron Collider (LHC).

ACS Pittsburgh Chemists Club

Pittsburgh Section,
American Chemical Society

October Meeting

Tuesday, October 25, 2011

Spaghetti Warehouse

26th & Smallman Streets, Strip District, Free parking behind the restaurant

Social Hour: 6:00 pm

Dinner: 6:40 pm

Presentation: 7:40 pm

“Alzheimer’s Disease-Modifying Drug Candidates”

Susan Catalano, Ph.D.

Chief Science Officer

Cognition Therapeutics, Inc., Pittsburgh, PA.

The societal costs of neurodegenerative diseases are enormous. Alzheimer’s disease, the most common cognitive dementia, affects one of every ten people over age 65 and nearly 35% over age 85. The cognitive decline associated with Alzheimer’s disease is the result of the creation and accumulation of toxic oligomeric proteins. This talk will overview some of the research paths and difficulties into the discovery of small molecule therapeutics targeting these toxic proteins.

Biography:

Dr. Susan Catalano has extensive experience in oligomer biology in the field of Alzheimer’s disease drug discovery. She has over 14 years of experience as a cell biologist in the fields of neuroscience and oncology and 9 years of experience in the drug discovery industry. Dr. Catalano received her Ph.D. from U.C. Irvine and her postdoctoral training at U.C. Berkeley and Caltech in the field of neurobiology. While a scientist at Roche Palo Alto, she held leadership positions in the Neurophysiology and Neuroimaging groups and led exploratory programs against targets involved in anxiety, depression, and schizophrenia. Following this, Dr. Catalano joined Rigel Pharmaceuticals, Inc. as a Senior Scientist and pioneered the use of high content phenotypic screening technology to discover an Aurora kinase inhibitor that recently began its third Phase I clinical trial. This screening technology drove the program from pilot screen to IND filing within 3 years and led to a licensing deal with Serono Pharmaceuticals in 2005. Dr. Catalano then founded a successful consulting practice, Drug Discovery Imaging, specializing in image-based consulting for the drug discovery industry. She has served as Director of Discovery Biology for the south San Francisco-based startup Acumen Pharmaceuticals, Inc., where she led a scientific team to the development of novel, first-in-class assay systems responsible for the discovery of the company’s first small molecule lead candidates targeting oligomers. Currently, Dr. Catalano is the Chief Science Officer for the Southside Pittsburgh-based company, Cognition Therapeutics, Inc. This company is focused on the discovery and development of small molecule therapeutics targeting the toxic oligomer proteins whose build-up causes the cognitive decline associated with Alzheimer’s and other degenerative human brain diseases.

For reservations, please call Ed Martin by Noon, Friday, October 21, 2011 at (724) 335-0904 or by e-mail at edwardmartin1046@verizon.net.

INTEL INTERNATIONAL SCIENCE & ENGINEERING FAIR - JUDGE PRE-REGISTRATION IS OPEN FOR MAY 2012

The premier global science competition is coming to Pittsburgh in May 2012. This is a great honor for our city and recognition of the quality of our science fairs. The Intel ISEF 2012 is recruiting Volunteer Grand Awards Judges for May 15 - 16, 2012. We need 900-1,000 judges. To preregister as a judge at the Intel ISEF 2012 in Pittsburgh, please complete the preliminary application at <https://apps.societyforscience.org/isef/judging/gapittsburgh.asp>. If you have any questions, please contact Chuck Vukotich, Judging Chair 2012, at judgeisef@yahoo.com.

In addition, we need general volunteers and interpreters. More than 500 volunteers across a spectrum of activities are needed during the week in a range of shifts. We will need approximately 200 interpreters to work with the students on both a conversational and scientifically-informative technical level. Greatest demand is for the languages of Spanish, Russian and Mandarin, but other languages are needed, too. Please contact isefvolunteer@societyforscience.org with interest and any questions.

GUY C. BERRY WINS 2011 CHAIRMAN’S AWARD

The ACS Pittsburgh Section recognizes Dr. Guy C. Berry with the 2011 Chairman’s Award. Guy is the section’s unsung hero, working for decades in many roles, including our webmaster. Please join Heather Juzwa in congratulating Guy for his years of dedicated service to our section.

24th Annual Pittsburgh Faraday Lecture

G. Wiz at Work and Play: Freezing Spells, Fractal Music and Flying Chemical Detectors



Professor Garon Smith
University of Montana

Among numerous accolades, Garon Smith was named the 2008 Montana Professor of the Year by two national organizations: the Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education. Join us as Prof G. Wiz dons a purple wizard's cape, robe and hat then proceeds to regale and instruct students about chemistry and science with fiery tricks and humorous incantations. While still undergoing design, G. Wiz's 2011 Faraday presentation will likely be a fun blend of spells and current research work (hint: he is exploring honey bees as mobile detectors for land mines and other purposes!)

Tuesday, November 15, 2011
7:30 pm

Soldiers and Sailors Memorial Hall
4141 Fifth Avenue in Oakland, PA
FREE & OPEN TO THE PUBLIC

Sponsored by The Spectroscopy Society of Pittsburgh
(www.ssp-pgh.org)
and
The Society for Analytical Chemists of Pittsburgh
(www.sacp.org)

Middle school and high school teachers: to inquire about participating in one of the two School Student Shows (tickets required in advance for either Tuesday, November 15, 2011 at 11:00am OR Wednesday, November 16, 2011 at 10:15am) email Ms. Jenna Sabot at sabot@pittcon.org

DID YOU KNOW?

- The Pittsburgh on the Road program has been re-named the Mildred Perry Memorial Lecture in honor of our former Distinguished Service Award Winner and beloved Mille Perry.
- The ACS Pittsburgh Section website has a new home: www.pittsburghacs.org. We appreciate Guy Berry for his years of service to our old website.
- It is possible to be a dues-paying local member of the ACS but not pay national dues! If you are interested in becoming a local member, please send a \$15.00 check payable to American Chemical Society to Heather Juzwa at 321 Winners Circle, Canonsburg, PA 15317.
- Emeritus members no longer have to pay national dues, but continuing to pay the local dues is appreciated so that we can continue our award-winning programs.
- In order to continue our award-winning programs and outreach, it is imperative for all members to pay their \$15.00 local section dues, which are sent with your national ACS dues invoice.

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.



Society for Analytical Chemists of Pittsburgh



October Meeting

Monday, October 3, 2011

8:00 PM

Duquesne University, Laura Faulk Hall

“Rolling Circles and Jumping Viruses: How the Genetic Promiscuity of *E. coli* Created a Sticky Situation in Germany”

Edward G. Dudley, Ph.D.

The Pennsylvania State University

“Flexibility, as displayed by water, is a sign of life. Rigidity, its opposite, is an indicator of death”. The philosophy Anthony Lawlor follows in his modern day architecture is not new, but has been obeyed by bacteria for millions of years. Bacteria live in a cruel world where rapid adaptation is the rule as the competitors and assassins are everywhere. This ability for single-celled organisms to change has been taken advantage of by our own species (think cheese), but it also causes us much dismay. May 21, 2011, much like February 5, 1982, showed us the terrible downside of bacteria evolution as a large outbreak associated with the organism *Escherichia coli* was beginning to take shape. As part of an unprecedented demonstration of world-wide cooperation it was quickly realized by experts that the beast was a new player in the food safety arena, interpreted in the blogosphere as well as conventional media as bioterrorism and creation of a “superbug”. These ideas are certainly false or at least a bit sensationalistic. To convince you of this, we need to address how this bacteria came to be, why it exists, where is it going, and importantly where is the next new beast lurking? The answer to these questions requires knowledge of rolling circles and jumping viruses, and the rules bacteria follow in the game of evolutionary poker.

Biography:

Dr. Edward G. Dudley is currently an Assistant Professor at Pennsylvania State University Department of Food Science. In 2006 Dr. Dudley received his Postdoctoral Fellow in Infectious Disease from the University of Maryland School of Medicine. In 2000 he received his Ph.D. in Bacteriology and in 1994 he received his M.S. in Food Science from the University of Wisconsin Madison. In 1991, he received his B.S. in Microbiology from Penn State University.

Dr. Dudley is a member of the Institute of Food Technologists and American Society for Microbiology. In 2010, a panel member for USDA-NIFA NIFSI and USDA-AFRI SBIR Food Science & Nutrition. In 2009, Ad Hoc reviewer for USDA CREES SBIR Food Science & Nutrition. From 2007-2009, Ad Hoc reviewer for Binational Agricultural Research and Development Fund. Ad hoc reviewer for Molecular Microbiology, J. Bacteriology, Applied and Environmental Microbiology, Microbiology (UK), Foodborne Pathogens and Disease, Research in Microbiology.

Dr. Dudley has received the following honors: In 2007, Lester Earl and Veronica Casida Development Professor for Food Safety; 2001, Postdoctoral Training Grant (T32) through the National Institutes of Health; 2000, First-place winner in American Dairy Science Association graduate student scientific paper competition, Baltimore, MD.; 1993, Third-place winner in 1993 American Dairy Science Association graduate student scientific paper competition, College Park, MD.

Dinner Reservations: Please email the SACP Administrative Assistant, Valarie Daugherty at daugherty@pittcon.org by Wednesday, September 28, 2011 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 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.



Society for Analytical Chemists of Pittsburgh

November Meeting

Monday, November 7, 2011
8:00 PM
Duquesne University
Laura Falk Hall

“Iontophoresis Made Quantitative”

R. Mark Wightman, Ph.D.
University of North Carolina Chapel Hill

Abstract: By inducing the movement of ions and neutral species with the application of an electrical current, iontophoresis allows for drug ejections directly into localized regions of the rat brain to probe neuronal interactions. Recently, a method for the quantitative use of iontophoresis in vivo and the advantages of this particular methodology has been established using a carbon fiber microelectrode coupled to iontophoretic barrels filled with a solution of desired drug and a neutral marker molecule. This allows for the ejection variability introduced by electroosmotic flow to be monitored in real-time using fast scan cyclic voltammetry. With this technique the volume and reproducibility of ejections has been established in vivo in anesthetized rats and the ability of these ejections to modulate the electrically evoked release of dopamine in the caudate of anesthetized rats quickly and reversibly has been established. This allows for better understanding of how much of the brain is affected by an ejection in a localized region and this unique methodology gives unique insight into the neurochemical response to localized drug administration.

Dinner Reservations: Please email the SACP Administrative Assistant, Valarie Daugherty at daugherty@pittcon.org by Wednesday, November 2, 2011 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 message.

ACS Energy Technology Group Pittsburgh Section The Pittsburgh Section AIChE

Tuesday, October 11, 2011

“Wind Energy - It Must be Serious”

Dr. Ted S. Andersen, Ph.D., P.E., M.B.A.

Spaghetti Warehouse

26th & Smallman Streets, Strip District, Free parking behind the restaurant

Social Hour: 6:00 pm Dinner: 6:30 pm

Presentation: 7:30 pm

Dr. Ted S. Andersen, Ph.D., P.E., M.B.A., Chemical Engineer, brings the experiences of a full and varied career to the issue of energy in general and in respect to wind power in particular. He earned a B. Ch.E. from the Cooper Union in New York City and M.S., Ph.D. (Ch.E.) and MBA from the University of Pittsburgh. He is a registered PE in PA and has twice served as Chair of the Pittsburgh AIChE section. While working at the Westinghouse Advanced Energy Systems Division, he was involved in various solar and wind energy projects culminating in the first large wind farm project in Hawaii (fifteen 500 kw turbines). He served several years on the board and as Chair of the American Wind Energy Association in its formative years from 1980 - 1984. For the past fifteen years, Ted has been at ChemTech consultants, where he now works as Chief Engineer. Ted is an advocate of a balanced approach to energy with a healthy regard for safety and environmental impact. Increasing numbers of large wind turbines continue to appear on ridges in the Allegheny and Pocono mountains in Pennsylvania and surrounding states. Huge arrays of turbines grow out of cornfields in the mid-west from Texas to Wyoming. The science and technology of successfully reaping power from the wind is fascinating, sophisticated, and tremendously interdisciplinary.

Over the years, wind energy has attracted at least its fair share of inventors, visionaries, enthusiasts, scamsters, and critics. Poor understanding of the technology has contributed to unrealistic claims and expectations as well as criticism. Many early projects were short-lived but the technology and industry matured and survived. Policy and market incentives for new projects are still imperfectly aligned with maximum efficiency and utilization. As an active participant and observer of the wind industry for over 30 years, Dr. Andersen will provide his perspective on the hits and misses in science, technology, policy, and deployment of wind turbines yesterday, today, and tomorrow.

For reservations, please contact Elliott Bergman by Monday, October 10th at elliott.acstechnology@gmail.com. Our meetings are open to all.

The cost of the dinner is \$16 including tax and gratuity. Please specify your preference from the following menu choices: •Spaghetti with meatballs •15-layer lasa-



**Spectroscopy Society of Pittsburgh
presents a
Continuing Education Fall Symposium:**



“The Chemistry of Wine” at The Winery at Wilcox

**Friday, November 18, 2011
The Winery at Wilcox**

1940 Settlers Ridge Center Drive Pittsburgh, PA 15205
Near Cinemark Movie Theatre

- 5:30-6:00 Registration & Social Time (Cash Bar)
- 6:00-6:20 How to Taste Wine - Judy Lipinski – Grape Thoughts
- 6:30-7:00 Wine Tasting & Tapas
- 7:00-7:45 Science of Wine Making – Jamie Williams - Winemaker

**REGISTRATION IS LIMITED TO 40 PEOPLE.
THE FIRST 40 PEOPLE TO REGISTER CAN ATTEND.
LIMITED TO SSP MEMBERS AND ONE (1) GUEST.**

Registration Fee: \$15 - Parking Included
Please make check payable to SSP (dated 11/18/11) and mail the
Registration Form below to:
Jenna Sabot
SSP – Continuing Education
300 Penn Center Blvd, Suite 332
Pittsburgh, PA

November 18 SSP Continuing Education Registration Form

Name: _____ Affiliation: _____

Mailing Address: _____

Phone: _____ Email: _____

Please indicate dietary restrictions:

ACS Pittsburgh Section Going Green in 2012 with Electronic Crucible

In 2012, the Pittsburgh Section plans to go green! We will begin to issue the Crucible newsletter electronically with the January 2012 issue. If you are unable to receive an electronic copy and wish to continue receiving the paper version, please “opt-in” by mailing the form below to Heather Juzwa, ATTN: Crucible, 321 Winners Circle, Canonsburg, PA 15317. Opt-in forms must be received by December 31, 2011.

Name: _____ Affiliation: _____

Preferred Mailing Address _____

Phone: _____ Signature _____

I am unable to receive the Crucible electronically and wish to continue to receive paper copies

Pittsburgh Section
ACS

Section's Website:
www.pittsburghacs.org

Facebook Page:
ACS Pittsburgh

Linked In:
Pittsburgh Local Section
ACS

A good vacuum system

needs a great vacuum trap:

Posi-Trap positive flow vacuum inlet traps!

- No “blow-by”. . . **ever!**
- Filter elements matched to **your** application.
- **Easy** cleaning and changing.

When you want the best, you want MV Products.



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

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

Voice 302-998-1184, Fax 302-998-1836

E-Mail micronanalytical@compuserve.com

Web Page: www.micronanalytical.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.

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

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.



SOCIETY FOR
ANALYTICAL CHEMISTS
OF PITTSBURGH

Calling New Members

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

NMR_{Service} 500MHz

***Mass**

***Elemental Analysis**

NuMega Resonance Labs

numegalabs.com P-858-793-6057

Spectroscopy Society of Pittsburgh

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



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

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

Section's Website:
www.pittsburghhacs.org

Facebook Page:
ACS Pittsburgh

Linked In:
Pittsburgh Local Section ACS



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

Business Directory

Services

PITTSBURGH SECTION OFFICERS

Chair

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

Chair-Elect

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

Secretary

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

Treasurer

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

Services

Volunteers Needed!

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

Crucible Deadline

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

For example, all items for the November 2011 issue must be to the editor by October 1, 2011.

The Crucible

The Crucible is published monthly, August through May. Circulation, 2,500 copies per month. Subscription price, six dollars per year. All statements and opinions expressed herein are those of the editors or contributors and do not necessarily reflect the position of the Pittsburgh Section.

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

Advertising Editor: Vince Gale
MBO Services
P.O. Box 1150
Marshfield, MA 02050
Phone: 781-837-0424
cust-svc@mbosevices.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.mbosevices.net/recr_disp.php
- <http://pubs.acs.org/chemjobs/>

ADVERTISERS INDEX

Eastern Analytical Symposium	2
INDSPEC Chemical Corporation	14
MASS VAC, Inc.	13
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

NON-PROFIT ORG.
U. S. POSTAGE

PAID

PITTSBURGH, PA
Permit No. 196

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, October 3

Society for Analytical Chemists of Pittsburgh

“Rolling Circles and Jumping Viruses: How the Genetic Promiscuity of E. Coli Created a Sticky Situation in Germany”

Edward G. Dudley, Ph.D., The Pennsylvania State University
Duquesne University, Laura Faulk Hall

Tuesday, October 11

ACS “On the Road” Meeting

“What You Always Wanted to Know about Chemicals in Foods but Were Afraid to Ask”

Dr. Robert P. Bates, University of Florida
Clarion University of Pennsylvania, Clarion, PA

ACS Pittsburgh Energy Technology Group Pittsburgh Section AIChE

“Wind Energy - It Must Be Serious”

Dr. Ted S. Andersen, Ph.D., P.E., M.B.A.
Spaghetti Warehouse, 26th & Smallman Streets, Pittsburgh, PA

Wednesday, October 19

Spectroscopy Society of Pittsburgh Technology Forum

“The Large Hadron Collider (LHC) - Exploring a New Energy Frontier”

Dr. Thomas Ferguson, Professor of Physics, Carnegie Mellon University
Duquesne University, Bayer Learning Center (Pappert Hall)

Spectroscopy Society of Pittsburgh

“Super Earths and Life”

Dr. David Latham, Harvard - Smithsonian Center for Astrophysics, Cambridge
Duquesne University, Bayer Learning Center (Pappert Hall)

Additional chemistry related seminars and events in the Pittsburgh area can be found on the Pittsburgh Section’s website at www.pittsburghacs.org

Tuesday, October 25

ACS Pittsburgh Chemists Club

“Alzheimer’s Disease-Modifying Drug Candidates”

Chief Science Officer, Cognition Therapeutics, Inc., Pittsburgh PA
Spaghetti Warehouse, 26th & Smallman Streets, Pittsburgh, PA

Friday & Saturday, October 21 & 22

National Chemistry Week

“Chemistry - Our Health, Our Future!”

Carnegie Science Center

Saturday, November 5

Greater Pittsburgh Area Women Chemists Committee

Empowering Women in Science Symposium

University of Pittsburgh, Chevron Science Center

Monday, November 7

Society for Analytical Chemists of Pittsburgh

“Iontophoresis Made Quantitative”

R. Mark Wightman, Ph.D., University of North Carolina Chapel Hill
Duquesne University, Laura Faulk Hall

Tuesday, November 15

24th Annual Faraday Lecture

“G. Wiz at Work and Play: Freezing Spells, Fractal Music and Flying Chemical Detectors”

Professor Garon Smith, University of Montana
Soldiers and Sailors Memorial Hall, 4141 Fifth Avenue, Pittsburgh, PA

Friday, November 18

Spectroscopy Society of Pittsburgh Continuing Education Fall Symposium

“The Chemistry of Wine”

The Winery at Wilcox, 1940 Settlers Ridge Center Drive, Pittsburgh PA