Pittsburgh Section ACS to Honor 50 and 60 Year Members

The Pittsburgh Section will honor several 50 and 60 year American Chemical Society members. The members will be honored during an awards ceremony at the May meeting of the Pittsburgh Chemists Club. Details on the meeting can be found on page 4.

Congratulations to the following 50 year members:

Mrs. Dolores Edwin Avner  
Dr. Shiao Hung Chiang  
Mr. Paul E. Gallagher  
Mr. Clarence R. Guibert  
Dr. James V. Kennedy  
Mr. Thomas John Kondis  
Dr. Robert B. LaCount  
Dr. Sidney H. Metzger  
Dr. William Straub  
Mr. Daniel J. Zeloyle

Congratulations to the following 60 year members:

Mr. Robert James Allison  
Mr. Lester Berkowitz  
Mr. David Hodowanetz  
Dr. George Kitazawa  
Mr. Robert L. Tilton

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The 2008 Tripartite Symposium
RENEWABLE ENERGY RESOURCES

May 6, 2008

University of Pittsburgh, Chevron Science Center Room 12
Parking included (Soldiers and Sailors Garage on Bigelow between Fifth Ave. and O’Hara)

Sponsored by
Society for Analytical Chemists of Pittsburgh - www.sacp.org
Spectroscopy Society of Pittsburgh - www.ssp-pgh.org
American Chemical Society - Pgh. Section - http://membership.acs.org/P/Pitt/

12:30 PM - 1:20 PM REGISTRATION
1:20 PM Introduction
1:30 PM Jessica Benson Smith, Plextronics
2:20 PM Joseph P. Strakey, Chief Technology Officer, US Dept. of Energy - National Energy Technology Laboratory (DOE-NETL)
“Fossil Energy Technology for the Future”
3:30 PM “Wind Energy” Speaker to be Announced
4:10 PM Robert Remick, National Renewable Energy Laboratory (NREL)
“Hydrogen Fuel Cells: Path to Net Zero Carbon”

5:00 PM - 6:00 PM RECEPTION

For more information contact:
Grace Ann Bello bellog@pittcon.org or Kurt Rothenberger rothenberger@pittcon.org

PLEASE REGISTER BY APRIL 29, 2008

COST: $10 (students free - please register) - Make check payable to SSP and mail to:
SSP - Tripartite Symposium, 300 Penn Center Blvd, Suite 332, Pittsburgh, PA 15235

NAME: _______________________________________ COMPANY: _______________________________
ADDRESS: ______________________________________________________________________________
CITY: ________________________________________ ST: ________ ZIP: ________________
EMAIL: ______________________________________ PHONE: ___________________________
Pittsburgh Section
American Chemical Society

Everything the scientist needs to know OUTSIDE the lab!

All are invited to a financial seminar:
“PLANNING FOR RETIREMENT”
by
Jayme Meredith and Matthew Snider,
Hefren-Tillotson Inc.

Near retirement or not, we all need to plan ahead.
With the current financial climate, how should we invest?

To send questions ahead of time contact Mastromatteo@pittcon.org

Thursday, June 12, 2008, 5:30 p.m.
Pennsylvania Brewing Company (Penn Brewery)
800 Vinial Street, Pittsburgh, PA 15212
Parking: Penn Brewery Garage
Cost: $25 (Buffet dinner: salad, main course and soft drinks included)

Agenda:
5.30 - 6.30 PM REGISTRATION and mixer
6.30 pm Dinner
7.30 pm Financial seminar: ‘Planning For Retirement’

Sponsored by:
American Chemical Society - Pittsburgh Section and the Women Chemists Group
(http://membership.acs.org/P/Pitt/)

Pittsburgh Section ACS: Planning For Retirement Seminar

REGISTRATION: Please return slip and enclose check by: Monday June 2, 2008
COST: $25 SEND a check payable to “Pittsburgh Section ACS”
SEND TO C. Mastromatteo: ACS, 6248 Heberton Drive, Verona PA 15147

NAME: ____________________________________ Number of attendees: __________
ADDRESS: _______________________________________________________________________
CITY: __________________________ ST: _______ ZIP: __________
EMAIL: __________________________ PHONE: __________________
Dr. Breault will speak on the U.S. Department of Energy’s Gasification Program, including a quick overview of what gasification is, a summary of the history of gasification and IGCC power, and details of DOE’s research program.

Dr. Breault has over twenty years experience in energy development and is presently the Assistant Gasification Technology Manager at the U.S. DOE’s National Energy Technology Laboratory at Morgantown, WV. Prior to holding this position, he was a program manager in the Gasification and Combustion Division where he managed advanced technology research projects on gasification, novel warm syngas gas cleaning technologies, systems and device modeling, and hydrogen utilization. He received his Ph. D. and M.S. in Chemical Engineering from the University of New Hampshire and a B.S. in Chemical Engineering from Clarkson University.

Dr. Breault is also a Director for the Energy Transport Division of the AIChE.
Polymer acrylate inorganic/organic hybrids were prepared using either an ex situ or an in situ approach. For the ex situ approach vinyl or acrylic functionalized alkoxysilanes were used to form functionalized colloids. The colloid was formulated into an acrylated polyester (AP), and a radical photoinitiator was added a sol-gel precursor, coupling agent, and reactive diluent then UV-cured. The tensile and scratch data show that inorganic colloid dramatically increased mechanical and coatings properties. The morphology of films and the particle size were observed using atomic force microscopy (AFM). The data indicated that the average silica particle size was ~90 nm and the particles were well-dispersed in the organic phase. It was postulated that the VTMS oligomer functioned effectively as a hyperbranched crosslinker, a surface modifier and reactive diluent. For an in situ sol-gel approach, a sol gel precursor was formulated with unsaturated polyesters and UV-cured. The UV-cured inorganic/organic hybrid films exhibited more homogeneous film morphology compared to the organic counterparts. Microgel and inorganic network formation during the UV-initiated free radical crosslinking reactions was suggested to describe the complex gel-point behavior. It was proposed that the formation of the inorganic silicate groups retarded the organic crosslinking reactions. In the hybrid films, a core-shell like inorganic/organic particle morphology was observed. The UV-crosslinked organic phase forms the core, whereas the inorganic silicate forms the surrounding shell.

For dinner reservations please contact Hongying Zhou (Tel: 412-492-5284; email: zhou@ppg.com) no later than Monday, May 19, 2008. The cost of dinner is $19.00 per person; discount rate of $11.00 for retirees; no charge for students. All are welcome!
Earth Day Illustrated Haiku Contest Winners

As part of the 2008 Chemists Celebrate Earth Day (CCED) celebration, the Pittsburgh Section sponsored an illustrated haiku contest for students in grades K-12. The topic for the 2008 CCED program was water and the theme was “Streaming Chemistry.” First place winners were selected from four grade categories: K-2nd, 3rd-5th, 6th-8th, and 9th-12th. Each winner received a check for $50 and was entered into a national poetry contest sponsored by the ACS’s Office of Community Activities and Committee on Community Activities. Honorable Mention was also selected for each grade category, with each winner receiving a CCED gift.

And the winners of the 2008 Pittsburgh Section’s CCED illustrated haiku contest:

K-2nd Grade
1st Place: Morgan Meer, Jubilee Christian School
Honorable Mention: Taryn Campbell, Streams Elementary School

3rd-5th Grade
1st Place: Jennifer Ferrone, Hyde Elementary School
Honorable Mention: Pam Rutherford, Hyde Elementary School

6th-8th Grade
1st Place: Evelyn Moss, Hopewell Memorial Jr. High
Honorable Mention: Tom Calhoon, Hopewell Memorial Jr. High

9th-12th Grade
1st Place: Christine Rothrauff, Penn-Trafford High School
Honorable Mention: Dan Wrobel, Penn-Trafford High School

Submitted by V. Michael Mautino

THE SOCIETY FOR ANALYTICAL CHEMISTS OF PITTSBURGH

and

THE PITTSBURGH SECTION
AMERICAN CHEMICAL SOCIETY

MAY AWARDS BANQUET

Monday, May 19, 2008

Duquesne University Ballroom
Student Union 4th floor

Social Hour - 5:30 P.M.
Dinner - 6:30 P.M.

Dinner reservations: Please email Valarie Daugherty (daugherty@pittcon.org), SACP Administrative Assistant by Monday, May 5, 2008. Should you not have email, please call Valarie at 412-825-3220 ext 204. Dinner will cost $15.00 and checks can be made payable to the SACP.

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Mass Spectrometry Discussion Group

Manufacturer’s Night and Poster Session

Wednesday, June 18, 2008
Pittsburgh Athletic Association
4215 Fifth Ave., Pittsburgh, PA
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PROGRAM: Sponsored by the Spectroscopy Society of Pittsburgh

3:30 PM Manufacturer’s Booths and Poster Social with drinks
6:00 PM Complimentary Dinner
7:00 PM Speaker: Dr. Herbert H. Hill

“The Basics of Ion Mobility Mass Spectrometry”
Herbert H. Hill, Professor of Chemistry, Department of Chemistry, Washington State University

Complimentary Parking behind PAA.

MUST RSVP to register & for Complimentary Dinner to:
dsipe@andrew.cmu.edu, 412-268-7548 by June 16th.
Tell Dave if you plan to bring a poster.

SEE: SSP-MSDG at http://chemed.chem.pitt.edu/ssp-msdg

Influence the Chemistry Field Today and Tomorrow

Remember who inspired you to work in the chemistry field? Honor that person by giving to Project SEED, a program that gives economically disadvantaged high school students the rare opportunity to work in the lab for eight to ten weeks in the summer. Use our new online donation form at www.acs.org/giving to make a gift in honor or in memory of your favorite chemistry mentor.

You’ve given your part by making a gift to ACS. Learn how to double or possibly triple your gift with no extra cost. See if you qualify at http://www.matchinggifts.com/chemistry/.

Are you confused about how to calculate your income tax deduction for making a charitable gift? Not sure of the difference between a CRAT and a CRUT? Do you wonder how new laws in Congress will affect your distributions from your individual retirement account? Find the answers to these questions and more by visiting the American Chemical Society’s new website.

ACS Cut and Paste
March/April 2008
On February 1 and 2, 2008 the Professional Relations Committee of the Pittsburgh Section American Chemical Society hosted the 2008 Job Searching for Chemical Professionals/Technicians Workshops. The committee used the workshop format instituted in 2007 and as a result 23 chemical technicians and 45 chemical professionals attended.

This year’s 68 attendees compares favorably with previous year’s attendance.

The committee overhauled the format of the workshop in 2007 splitting it into two sessions. Because this format resulted in last year’s large increase in attendance, it was used again this year. The first session was a half day at Bidwell Training Center aimed at chemical technicians. The second was an all day workshop at the University of Pittsburgh aimed at chemical professionals.

The workshop held at Bidwell on February 1, included 23 chemical technicians and one B.S. level chemist in attendance. Daniel Eustace presented an overview of the job searching process and Joseph Jolson provided information specific to job hunting in the Pittsburgh region. The attendees showed a high level of interest, liked the mock interview sessions, and asked many questions. 20 of the 24 attendees submitted evaluation forms. All were positive and four thought the program should run longer. Several attendees expressed interest in joining the sponsoring societies.

The morning session at the University of Pittsburgh on February 2 followed the previous day’s schedule and the networking lunch went well. 44 chemical professionals attended the workshop. Most were from the University of Pittsburgh and CMU and the remainder included those from WVU, Duquesne, Youngstown, and Carlow. Half were Ph.D. candidates and a quarter were B.S. candidates. The rest were M.S. candidates, post-docs, and mid-career job seekers. The timing of the workshop was ideal for mid-career job seeker and many Ph.D. candidates. Special thanks go to Toby Chapman, Lyle Farr, Nancy Ryba-Mullaney, Tiffany Ragan, and Sue Zawacky for arriving at 8:15 AM to setup and manage the registration, hiring representative, and food service tables at the University of Pittsburgh.

All attendees stayed for the afternoon resume review and career counseling session and most interacted with hiring agency representatives. Jim Knights of the FBI, Zane Frund of MSA, Don Stine of PPG, and Tiffany Ragan of On-Assignment staffed recruitment tables. Jim Knights and Tiffany Ragan have been workshop regulars for years and view attendance as an integral part of their organizations business development activities.

14 of the 44 attendees at the University of Pittsburgh workshop filled out evaluation forms. All were positive; however, several said they would like to see more recruiters at the afternoon session.

As exemplified by the level of interest shown by the attendees, Dan Eustace is an exceptional speaker who interacts well with the attendees. Dan says our Job Searching for Chemical Technicians workshop is seminal. Next year, we plan to work harder to attract attendees from other colleges and universities. We also need a second representative from the AIChE to help during the review and career counseling session.

Submitted by Joseph Jolson, Chair, Professional Relations Committee
Glow-in-the-Dark Geode

Kids, how can you make a geode glow in the dark? It’s very easy in this experiment. The ‘rock’ is a natural mineral (in this case an eggshell). You can use one of several common household chemicals to grow the crystals. And the glow comes from paint that you can get from a craft store.

To Prepare the “Rock”

• There are two ways to crack eggs. Carefully crack the top of the egg by tapping it on a countertop to make a deep geode with a smaller opening. Alternatively, crack the equator of the egg or have an adult partner carefully cut it with a knife. This will make a geode you can open and put back together.
• Discard the egg (or save for scrambled eggs).
Rinse out the inside of the eggshell with water. Peel away the interior membrane to leave only the shell.
• Allow the egg to air dry or carefully blot it dry with a paper towel or napkin.
Use a paintbrush or swab to coat the inside of the eggshell with glow-in-the-dark paint (such as GlowAway™ washable glowing paint).
• Set the painted egg aside while making the crystal-growing solution.

To make the Crystal Solution:

• Have an adult partner pour hot water (such as from a coffeemaker) into a cup.
• Stir borax or another crystal salt (alum, epsom salts, sugar, or table salt) into the water until it stops dissolving and you see some solid at the bottom of the cup.
• Add food coloring, if desired. Food coloring does not get incorporated into all crystals (e.g., borax crystals will be clear), but it will stain the eggshell behind the crystals, giving the geode some color. Neon green coloring looks great.

To Grow the Crystals:

• Support the shell so that it won’t tip over (for example, a nest can be made with a crumpled napkin set inside a cereal bowl).
• Pour the crystal solution into the shell so that it is as full as possible. Don’t pour the undissolved solid into the eggshell, just the saturated liquid.
• Set the shell somewhere where it won’t get knocked over. Allow crystals to grow for several hours (overnight is better) or as long as you like.
• When you are satisfied with the crystal growth, pour out the solution and allow the geode to dry.

Phosphorescent paint is activated by exposing it to bright light; black light (ultraviolet) also produces a very bright glow. The duration of the glow depends on the paint (seconds to minutes).

Note: Take appropriate safety cautions when handling the crystal solutions.
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May 2008 / The Crucible
The Crucible

Stay up-to-date on all the happenings of the Pittsburgh Section ACS by visiting the section’s website.

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

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Schwarzkopf Microanalytical 10
Society for Analytical Chemists of Pittsburgh 11
Spectroscopy Society of Pittsburgh 11
May

Tues.  6  **Tripartite Symposium**
      University of Pittsburgh, Chevron Science Center Room 12
      “Renewable Energy Sources”

Thurs. 15  **Pittsburgh Section ACS Energy Technology Group**
      More Restaurant
      Speaker: Ronald Breault

Mon.  19  **Pittsburgh Section ACS**
      Society for Analytical Chemists of Pittsburgh (SACP)
      May Awards Banquet
      Duquesne University Ballroom, Student Union

Tues.  20  **Pittsburgh Section ACS Polymer Group**
      Duranti’s Restaurant
      “UV-Curing of Polyester Acrylate Inorganic/Organic Hybrids”
      Dr. Mark D. Soucek, Department of Polymer Engineering, University of Akron, Akron, OH

Tues.  27  **Pittsburgh Section Chemists Club**
      Presentation of 50 Year ACS Chemists Awards
      Duranti’s Restaurant
      “Optimization in Chemistry and Biology - Making Connections”
      Nick Sahinidis, Professor of Chemical Engineering, Carnegie Mellon University

June

Thurs. 12  **Pittsburgh Section ACS**
      Financial Seminar
      Pennsylvania Brewing Company (Penn Brewery)
      “Plan for Retirement”

Wed.  18  **SSP Mass Spectrometry Discussion Group**
      Manufacturers Night and Poster Session
      Pittsburgh Athletic Association
      “The Basics of Ion Mobility Mass Spectrometry”
      Herbert H. Hill, Professor of Chemistry, Department of Chemistry, Washington State University