

THE OCTAGON



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Lehigh Valley Section of the American Chemical Society

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815th Meeting of the LVACS

Thursday, March 25, 2010

Cedar Crest College

Spouse's Night

Reception: 6 PM Tompkins College Center, Alcove A, cheese/crackers, beverages

Dinner: 6:30 PM Tompkins College Center, 1867 Room

Business Meeting: at conclusion of dinner

Talk: at conclusion of business meeting

Menu: Chicken Prima-Rosa, red skin potatoes, roasted asparagus, dessert & coffee. Vegetarian option: Mediterranean pasta

Cost: \$20.00 (\$10.00 for students, Spouses & retirees)

Contact: cbovee@cedarcrest.edu by Monday, March 22, 2010. Please give full name, affiliation and phone number/e-mail

Directions: on the web at <http://www.cedarcrest.edu/ca/admissions/bycar.shtm>

Speaker: Ms. Patty Valente

Flavor Chemist, Hagelin & Co. Flavor Technologies, Branchburg, NJ

Biography: Patty Valente obtained her BS at Cook College, Rutgers and her MS at Seton Hall University. She has 25 years experience in flavor creation. She

was formerly with Givaudan and International Flavors and Fragrances, and is now a Senior flavorist with Hagelin & Co Flavor Technologies in Branchburg, NJ

Talk: *Tasted any Good Chemicals Lately? The Chemistry of Flavors*

Abstract: This talk will address the chemistry of flavors including:

- a brief history of flavor creation and the roles of chemistry.
- the art and science of flavor creation
- the cast of characters
- meeting the family
- conclusion/discussion and industry associations

LVACS Meetings Spring 2010

*Thursday, April 29 - Moravian College
Student Poster Session and
Undergraduate Awards Night
Dr. Joe Vison, University of Scranton*

May - TBA

Free Workshops on Engineering Education

There will be free workshops on engineering education for HS teachers In conjunction with the 2010 Mid-Atlantic American Society of Engineering Education (ASEE) Conference. There will be a series of free workshops for high school teachers on Friday afternoon, April 16 at Lafayette College. The workshops (participants can pick two) will focus on chemical & biomolecular engineering, civil & environmental engineering, electrical & computer engineering, and mechanical engineering. Further details will be mailed to local high schools or, if interested, contact Professor Javad Tavakoli (tavakoli@lafayette.edu). Details for the meeting are at <http://sites.lafayette.edu/asee2010/>.



LVACS Science Cafés - Arsenic and Drinking Water

The first Science Café on chocolate was postponed due to weather, until either May or June (the exact date will be determined later). However, we are set for the next Café on April 22 at 7PM. Professor Arup SenGupta from Lehigh will talk about his work in removing arsenic from drinking water. The title of his presentation is “*Sustainable Mitigation of Global Arsenic Crisis: Recent Advances and Role of Chemistry.*” Professor SenGupta has received many awards for his work, including the 2007 Grainger Silver Prize Award from the National Academy of Engineering (NAE) for providing sustainable engineering solutions for arsenic-contaminated drinking water of the Indian subcontinent.

LVACS Officers - 2009

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Undergraduate Research Poster Session



Sponsored by The
Lehigh Valley
Section of The
A m e r i c a n
Chemical Society

Thursday April 29, 2010

Moravian College

5:00-6:15 PM - Preceding the 816th meeting of the
Lehigh Valley Section of the ACS

(Meeting details will be published in the April
Octagon and at <http://www.esu.edu/lvacs/>)

Who may participate?

Undergraduates attending a college or university
within the Lehigh Valley section of the ACS.
Research may have been done at the student's home
institution with a chemistry or chemical engineering
faculty member or during a summer research
experience elsewhere.

To participate:

Students wishing to present their work must
themselves submit an abstract by April 19, 2010, as
a Microsoft Word attachment to an email, to
cbllibby@cs.moravian.edu. Please indicate
"LVACS Poster Session" in the subject line of your
email header. Early submission is encouraged.

Abstract format:

Times New Roman font

TITLE (all capitals)

Authors' names, authors' institutions and addresses

Abstract of research, 150 words maximum

One poster session participant will be chosen to
receive a \$250 award to support travel to present
research at a national or regional ACS or AIChE
meeting.

Other requirements and information:

The poster session is held before the dinner meeting
and our annual student awards night.

Poster presenters must provide their own pins and
poster board. Easels will be provided for displaying
the posters.

Abstracts will be acknowledged by an email message
that will include details about meeting room, set-up
time, and the travel award.

If you do not get a response within two days of
abstract submission or you have any other questions,
contact Carol Libby, cbllibby@cs.moravian.edu,
610-861-1629



Submissions to the Octagon

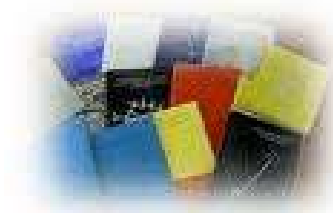
**LVACS members, we want to know about what
you do!** Please submit pieces of interest to the
chemistry community for publication in the Octagon.
Articles about chemistry or science in the Lehigh
Valley are always welcome. Let us know about
upcoming events, educational opportunities or job
openings.

The Octagon is published eight times per academic
year, September through May. Each issue generally
arrives three weeks before a section meeting. Thus
the deadline for submissions is generally one week
earlier. Please email the editor at lvacs@ptd.net for
specific questions about deadlines for any issue. Email
submissions to lvacs@ptd.net

A note about formatting:

Please submit text as simple .txt files, or you may
paste the text into an email. If you use later versions
of MS word please do not submit documents as .docx
files. I cannot always read all content in .docx
formatted files. It would be best to use the "save as"
option, generally found under the file menu, to save
the document as .txt. Also images embedded (pasted)
in MS word (particularly later versions) are
problematic to extract and put in the newsletter while
retaining good image quality. Whenever possible,
please submit images in a standard format such as
.jpg, .jpeg, .gif, .tiff or .bmp as individual files, rather
than embedded within a document. If the placement
of images is critical you could submit two versions
(one embedded so that I can see where you would like
images placed) and the other as separate files so that
I may maintain figure resolution.

LVACS Scholarship for Organic Chemistry



The Lehigh Valley Section of the American Chemical Society will award its annual Scholarship for Organic Chemistry this May. To be eligible,

students should be below the junior level, currently enrolled in organic chemistry at an institution in the section, and a chemistry, biochemistry, or chemical engineering major. The competition entails taking the ACS Organic Chemistry Examination (45%), a letter of recommendation from the student's organic chemistry professor (10%), and an essay on a topic in organic chemistry (45%). The value of the scholarship is \$1000. Additionally, the top essay will receive \$100. Details about the exam, letter, and essay follow below. Students should indicate their interest in the scholarship in advance of May 1 to Dr John Freeman, Jfreeman@po-box.esu.edu.

ACS Organic Chemistry Examination: The exam will be administered on Saturday, May 1, 2010, at Moravian College, Bethlehem, PA from 9:00-10:30 AM. Students should report to the entry foyer of Collier Hall of Science. For directions see <http://www.moravian.edu/campusMaps/northBuildings/collier.htm>. Juice and bagels will be available at 8:45 AM.

Letter of Recommendation: Professors writing a letter of recommendation on behalf of a student who is applying for the Lehigh Valley ACS Scholarship should speak to the student's skills in lecture and laboratory in Organic Chemistry I and Organic Chemistry II. Please provide the course grade for Organic Chemistry I and comment on performance on written exams, proficiency in organic lab, and participation in recitations, problem sessions or course-related group work. If possible, address the student's quantitative skills by commenting on her or his performance in quantitative analysis or its local equivalent. The letter of recommendation must be submitted in a sealed plain envelope and signed by the professor over the seal. The student

will be required to bring the sealed letter to the ACS Organic Chemistry Exam at Moravian College on May 2.

Essays: The student should choose a molecule, a group of molecules, or a process in organic chemistry to write about. The essay should be written at a level to interest and educate a general chemist who has completed sophomore-level organic chemistry. Synthesis, mechanism and structural elucidation should be covered for the chosen molecule (or representative examples of a chosen group). If a process is chosen, the physical and chemical basis for its success should be explained. Judicious use of structures is expected. The essay should address the impact of the molecule or process on society and the student's personal interest in it. The essay should contain between 1600 to 1800 words in Times New Roman 12 point font with one-inch margins on all sides. Each page should have a header with the student's last name, brief essay title and page number. An additional page with references must be included. References should follow the style of The Journal of the American Chemical Society (an article from a recent issue can serve as a model).

The winning essay will be published in the Octagon. The essay will be rated on:

- 40% - Appropriate depth of coverage of the molecule(s) or process.
- 30% - Appropriate depth of coverage on the impact on society and student's interest.
- 20% - Ease of reading, including grammar, spelling, and logical flow of the material.
- 10% - Appropriate use of references.
- 5% - Adherence to the formatting rules provided.

Undergraduate Research Travel Award - \$250



Sponsored by The Lehigh Valley Section of The American Chemical Society

Purpose

The prize must be used to help defray expenses associated with presentation of undergraduate research at a national or regional meeting.

Eligibility

Student must present research at the Undergraduate Research Poster Session, to be held at the April 29, 2010, meeting of the Lehigh Valley ACS. Undergraduate Research Poster Session details will be available at <http://www.esu.edu/lvacs>. The winner will be chosen by lottery.

Limitations of the Award:

The award must be used between March 21, 2010* and April 29, 2011 to pay for travel, registration, or accommodations associated with attending a national or regional American Chemical Society or American Institute of Chemical Engineers (AIChE) conference to present *research* carried out as an *undergraduate* (or the summer after you graduate if you receive your degree this spring).

Visit these websites for possible meetings that you might attend. Speak to your advisor soon about the possibility of presenting at a national or regional meeting. Note that abstract submission deadlines are far in advance of the actual meeting, so it's not too soon to begin planning.

<http://www.acs.org/> (Meetings tab)

<http://www.aiche.org/>

<http://www.aiche.org/Students/Conferences/index.aspx>

*to include the 239th National Meeting of the ACS, March 21-25, 2010 in San Francisco and the 2010 Spring Meeting of the AIChE, March 21-25 in San Antonio.

NERM Announcement



The 2010 American Chemical Society Northeast Regional Meeting, NERM2010, will be held June 2-5, at the SUNY Potsdam campus, New York. The theme of our event is "Chemistry for a Sustainable World". Our keynote speakers, including Dr. Catherine T. Hunt (2007 ACS president) from Dow Chemical, Prof. Paul T. Anastas from Yale University and Prof. Vicki L. Colvin from Rice University, will elaborate on this theme, headlining our technical sessions on green and environmental chemistry. The meeting features 25 special symposia with particularly strong programming in physical chemistry and nanotechnology; biomedical and biochemistry; analytical chemistry; organic/medicinal chemistry; and chemical education. There will be a strong program for K-12 educators on Saturday June 5. ACS regional meetings provide a high level of scientific discourse,

excellent networking opportunities, and are great value for money. We invite you to visit our website: www.nerm2010.org, to learn more about our special symposia, our many distinguished invited speakers, and about the wonderful social and networking events planned for this meeting. We also invite you to present your research: the meeting is open for abstract submission until April 20.

Conference chair: Martin Walker, Dept. of Chemistry, SUNY Potsdam,

Program chair: Maria Hepel, Dept. of Chemistry, SUNY Potsdam.

ACS Website has great links for kids!

Explore the great links for kids available on the ACS website. To find them visit www.acs.org and click on: Home > Education > Explore Chemistry >

The site has articles, puzzles and games as well as great K-8 Education resources.

Categories include:

Everything you see and touch has the ability to change.



Sometimes substances change to form new substances. This is called a chemical change. Other times substances change but keep the same identity. This is called a physical change.

What makes diapers absorbent? Is peanut butter stickier



than syrup or jelly? Strong, stretchy, sticky, or sweet—everything around us has special properties which make them unique. See if you can identify and compare the characteristics of materials. Water is an amazing substance! It can form into a beautiful snowflake in its solid state or evaporate into the air as a gas.

How do objects move? How far can a rubber band



stretch? How does energy affect what we can see, hear or feel? Discover the science of motion and energy.

PLANET EARTH



What lies beneath the surface of our Earth? How are volcanoes and caves formed? Take a closer look at the chemistry of our planet through these activities.

YOUR BODY



The human body is made of various chemicals to help us smell, see, move, and most importantly, survive. We also rely on certain chemicals found in food and other products to protect us from disease and harm. Explore the chemistry of our bodies and our senses in these activities.

ART & TOYS



Have some fun playing with science. Launch a rocket, make your own homemade play dough, experiment with color, and much more.

WHAT CHEMISTS DO

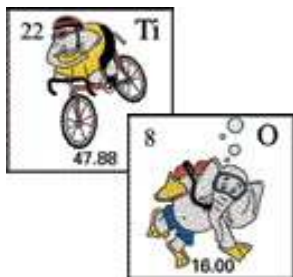


Tag along with our friend Meg A. Mole as she visits with chemists to find out how they solve everyday problems.

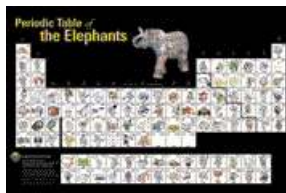
The Periodic Table of the Elephants?

No it isn't a typo -

Have you seen and chuckled at the "Periodic Table of the Elephants" and found yourself puzzled over the intended meaning behind any of the figures? If you have a copy of the "Periodic Table of the Elephants" you may have tried



to determine the reasoning behind many of the pictures. Some, you will find, are a play on words, others show where or how the element is used and yet others are an interpretation of a phrase that involves the element's name.



The table was created as part of a Washington, DC tourism project and was designed by high school students at Patapsco High School and Center for the Arts. ACS purchased the elephant when it was auctioned

and we have since created the products you may have received or purchased from the online store, including posters and T-shirts.

Thanks to the help of William Trammell, NCW coordinator in the Savannah River Section who asked us questions and then filled in almost all the blanks to get this resource started, we are pleased to share with you a reference list or the "Periodic Table of the Elephants". We think you'll be trumpeting over it, just as we were!

Attention Unemployed ACS Members

ACS is here for you. Tap into a host of valuable benefits and services to help you get back into the workforce. **How can ACS help you?**

First, get a special dues waiver. You may retain all of your benefits of membership at no cost. Contact us with your name and member number to see if you qualify. service@acs.org, 800-333-9511 or 614-447-3776

Next, tap into these special benefits and services:

- * Free registration at ACS National Meetings and greatly reduced registration for Regional Meetings. Network and attend the ACS Career Fairs with on-site interviews

- * Special discounts for ACS/Harvard courses, ACS ProSpectives, Short Courses, Webcasts, and the ACS Leadership Development System

- * Membership in the ACS Network, your online resource to connect and communicate with friends, colleagues, and potential employers

- * Free Guidance from ACS Career Consultants – ACS mentors offer resume reviews, job search strategies, and interview tips that make you stand out from the rest

- * Members-only access to the ACS Salary comparator ACS is here for you! Please view our Full List of Benefits for ACS Unemployed Members and contact us today to see how we can help. E-mail service@acs.org or call 800-333-9511 or 614-447-3776