

THE OCTAGON



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Lehigh Valley Section of the American Chemical Society

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LVACS at the Iron Pigs - June 22, 2011

And a good time was had by all! *Fe rules 3-1 over the In! (That's Indianapolis Indians not Indium!)*



Councilor's Report

Spring Meeting, 2011 Anaheim, CA

District I Caucus Meeting

The CPC has published a report to amend bylaws to allow for electronic or "clicker" voting . These were published in C&E news and included details about recorded votes. Financially, assets are down about 50 million dollars from the ideal 40% of annual income as unrestricted assets. Given this shortfall 2011 dues were raised 1.01125% from \$146 to \$148. The division receives approximately 9% of dues paid. Two new chapters have been accepted the Shanghai and Thailand chapters.

General Councilor's Caucus

Candidates for President for 2012 were present and included

Marinda Li Wu, Judith L Benham, Diane Grob Schmidt and Dennis Chamot. All candidates spoke with particular emphasis and concern about the job market and educational opportunities for members.

President's report:

Sixty percent of journal citations internationally are ACS journals. Internationally it is recognized that investment in science drives economies. Unfortunately this is not universally the attitude in the US. As of March 14, starting salaries are down 5 %. More time is being spent by graduates as postdoctoral workers. With only 9% of the GDP in manufacturing the ACS must take on leadership in creating incentives for U.S. jobs.

President elect's report:

2012 is the sesquicentennial of the land grant act. ACS will use this opportunity to highlight our mission in science education and research.

Past president Francisco spoke about committee recommendations calling for scientist citizens. The charge of the committee was to form actionable recommendations. Those recommendations are:

- *encourage affordable access for startups
- *increase advocacy of policies for entrepreneurs and startups

*partner with academe to define career paths

The lawsuit against ACS in Ohio has been appealed to the supreme court with several supporting letters and briefs attached.

Candidates Wu and Chamot were selected by the delegates present to stand for President.

The remainder of the reports focused on finances and jobs.

In 2010 assets total 463.7 million up 0.8% from 2009. 131 million is available as unrestricted net assets. Four of the five guidelines are being met. Not met is the desired percent of assets unrestricted compared to operating. To meet that goal, 180 million in unrestricted assets would be needed.

The 2010 membership recruitment campaign was successful. The cost per new member ranged from \$67 to \$122 depending on categories.

The spring meeting had attracted 7,304 members, 4,672 students and 1,102 exhibitors. Revenue from expositions is down. Unemployment among members is the highest since 1970. Unemployment among Ph.D.s is higher than the national average. Masters degree holders have the best employment followed by bachelor's holders. At the meeting there were 182 jobs available from recruiters and 795 job seekers. At the virtual sessions there were 196 jobs available and 2,513 job seekers.

Respectfully submitted,

T. Michelle Jones-Wilson, Ph.D.

Alternate Councilor, LVACS

2011 Travel Award Winner

**Kevin Ling
Lafayette, Chemical Engineering Dept.**

Congratulations!

UNDERGRADUATE RESEARCH POSTER SESSION -POSTERS PRESENTED
The Lehigh Valley Section of The American Chemical Society
Moravian College
April 26, 2011

STUDENT MATH SKILLS AND SUCCESS IN GENERAL CHEMISTRY

Kristen Labert (Dr. Shari Dunham)
Moravian College, 1200 Main Street, Bethlehem, PA 18018

THE SYNTHESIS AND TAUTOMERISM OF γ -AMINO BUTENOLIDES

Justin Pagano and William H Miles
Department of Chemistry, Lafayette College, Easton, PA 18042

MODELS OF COENZYME NADH: THE SEARCH FOR INTERMEDIATES IN THE REDUCTION REACTION OF SUBSTITUTED DIHYDROPYRIDINES

Christine McCarl and Jennifer Candelora
Moravian College, 1200 Main Street, Bethlehem PA 18018

FORMATION OF IMINES FROM NITROARENES BY ONE-POT TRANSFER HYDROGENATION PROCESS

Nicholas J. Barna and Dr. Jennifer L. Rutherford
Lafayette College, Easton, PA 18042

SYNTHESIS OPTIMIZATION OF NOVEL ANTITUMOR ACTIVE DIRHODIUM COMPOUNDS

Asma Ashraf, Dr. Shari Dunham, Dr. Stephen Dunham
Moravian College, 1200 Main Street, Bethlehem, PA 18018

MOLYBDENUM COMPLEXES OF A QUINOLINE-BASED CHIRAL C₂-SYMMETRIC TETRAAMINE

Brendan F. Phelan
Muhlenberg College, Allentown, PA 18104

SPECTROPHOTOMETRIC QUANTITATION OF CATHINONE-RELATED COMPOUNDS USING A COPPER(II)-NEOCUPROINE REAGENT

Kelli Rickert and Thomas A. Brettell, Ph.D.
Cedar Crest College, Department of Chemical and Physical Sciences, 100 College Drive, Allentown, PA 18104

INVESTIGATION OF THE EFFECT THAT DIFFERENT DRYING METHODS HAVE ON THE RELEASE MECHANISM OF NAPROXEN FROM ETHYL CELLULOSE/MICROCRYSTALLINE CELLULOSE BEADS

Caitrin M. Dougherty, Megan E. Montchyk, and Francis C. Mayville, Jr.
Department of Natural Sciences, DeSales University, 2755 Station Avenue, Center Valley, PA 18034

SPECTRAL ANALYSIS OF THE INTERCONVERSION OF GAMMA-HYDROXYBUTYRATE (GHB) AND GAMMA-BUTYROLACTONE (GBL) USING NEAR INFRARED SPECTROSCOPY

Kristen J. Johnson and Thomas A. Brettell, Ph.D.
Cedar Crest College, Department of Chemical and Physical Sciences, 100 College Drive, Allentown, PA 18104

**QUANTIFICATION OF BERBERINE CONCENTRATION IN A JAPANESE BARBERRY
(*BERBERIS THUNBERGII*) SHRUB**

Michael MacDonald, James McMichael, Amanda Mogitz, Brandon Stempo
Northampton Community College, 3835 Green Pond Rd., Bethlehem, PA 18020

**ANALYSIS OF SKUNK CABBAGE (*SYMPLOCARPUS FOETIDUS*) AND SKUNK CABBAGE
TINCTURES USING GAS CHROMATOGRAPHY**

Jessica Miller and Jeanne Berk, Ph.D.
Cedar Crest College, 100 College Drive, Allentown, PA 18104

**THE EXTRACTION AND ISOLATION OF THE ACTIVE INGREDIENT, RESVERATROL, FROM
VARIOUS R.W. KNUDSEN FAMILY FRUIT JUICES**

Amber M. Fryer, Lauren N. Nothstein, and Francis C. Mayville, Jr. PhD
Department of Natural Science, DeSales University, 2755 Station Avenue, Center Valley, PA 18034

DETERMINATION OF ALLINASE ACTIVITY IN GARLIC SAMPLES

Danielle S. Gosha, Dr. Marianne E. Staretz
Cedar Crest College, Department of Chemical and Physical Sciences, 100 College Dr., Allentown, PA, 18104

CELLULAR PHENOTYPIC RESPONSES TO CULTURE ON THERMORESPONSIVE BRUSHES

Anderson LS¹, Ling K¹, Kaminski A¹, Laschewsky A^{2,3}, Lutz JF², Wischerhoff E³.
¹Department of Chemical and Biomolecular Engineering, Lafayette College, Easton, Pennsylvania, USA
²University of Potsdam, Institute of Chemistry, Karl-Liebknecht-Str. 24-25, D-14476 Potsdam-Golm, Germany
³Fraunhofer Institute for Applied Polymer Research, Geiselbergstrasse 69, Potsdam 14476, Germany.

DETERMINING THE SOURCES OF INDOOR AIR PARTICULATE MATTER

Armell McFarland and Dr. Julie Palkendo
Boehm Science Building, Kutztown University, Kutztown, PA 19530

**MECHANISTIC STUDIES OF HEXAMER DISSOCIATION IN PHYCOCYANIN USING STOPPED-
FLOW AND UV-VIS ABSORPTION AND FLUORESCENCE**

Nancy Giang
Lafayette College, 111 Quad Drive, Farinon Center, Box 9158, Easton, PA 18042

**SPECTROSCOPIC INVESTIGATION OF THE BINDING OF BENZODIAZEPINES TO HUMAN
SERUM ALBUMIN**

Kristina McNerney
Cedar Crest College Department of Chemical and Physical Sciences, Allentown, PA 18104.

**TEMPERATURE DEPENDENCE OF THERMODYNAMIC PARAMETERS FOR BINDING OF
SUBSTRATE TO DNA PHOTOLYASE**

Thomas J. Wilson, Matthew A. Crystal, and Yvonne M. Gindt
Lafayette College Department of Chemistry, Easton, PA 18042

**STRUCTURE ACTIVITY RELATIONSHIP OF NSAID CONJUGATES FOR THE TREATMENT OF
SULFUR MUSTARD EXPOSURE**

Meredith P. Harman and Ned D. Heindel
Chemistry Department, Lehigh University, Bethlehem, PA 18015 (USA)

TESTING THE BIOCHEMICAL MECHANISM FOR THE ACTIVATION OF APOPTOSIS BY THE MITOCHONDRIAL ENZYME CYTOCHROME C HEME LYASE (CCHL)

Terry Weller¹, Lawrence Fredericks¹, Brian Chiecko¹, Matthew Junker¹, Carsten Sanders^{2,3}

¹Kutztown University, Physical Sciences, P.O. Box 730, Kutztown, PA, 19530

²University of Pennsylvania, 3451 Walnut Street, Philadelphia, PA 19104

³University of Harrisburg, 326 Market Street, Harrisburg, PA 17101²

ADSORPTION OF BACTERIOPHAGE MS2 AT THE AIR-WATER INTERFACE

Lauren M. Huyett and James K. Ferri

Lafayette College, Department of Chemical and Biomolecular Engineering

DIFFERENTIATING UV-VIS SPECTRA BY NORMALIZED LINE SPECTRA ANALYSIS

Kelsey Wilkinson and Mr. Thomas Pritchett

Cedar Crest College, 100 College Drive, Allentown PA 18104

IR ANALYSIS OF ANTHRANILIC EMERALDINE CROSSED LINKED WITH METALS AND THEIR MAGNETIC PROPERTIES

Lakeisha Packer, Dr. Pamela Kistler, Dr. Berk, Dr. Sein,

Cedar Crest College, Department of Chemical and Physical Sciences, 100 College Dr., Allentown, PA, 18104

BREAKING THE MOLD: OPTIMIZATION OF VOXEL RESOLUTION IN MATERIALS-ADDITIVE MANUFACTURING

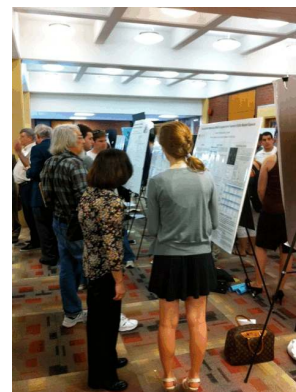
Melissa B. Gordon and James K. Ferri

Department of Chemical Engineering, Lafayette College, Easton, PA

SYNTHESIS OF SEVERAL POLYAMINE DERIVATIVES IN A SERIES OF ALCOHOLS

Weston J. Umstead, Christopher T. Plystak, Francis C. Mayville Jr.*

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2011 LVACS Undergraduate Poster Session in Action!

Complete abstracts are available at www.lvacs.net

2010-2011 LVACS Awardees

Outstanding seniors from Lehigh Valley Section Chemistry and Chemical Engineering programs were recognized at the April 2010 meeting. Each winner was presented with a Merck Index inscribed with his/her name and year of the award. Winners of the 2010-2011 ACS Undergraduate Awards were:

Albright College - Sarab Inder Singh Sodhi
Alvernia College - Lauren Kurek
Cedar Crest College - Jennifer L. Bonetti
East Stroudsburg University - Alyson K. Stark
Kutztown University - Andrew J. Pyle
Lafayette College (chem.) - Nicholas Barna
Lafayette College (chem. eng.) - Anuoluwatomiwa Osunkoya
Lehigh University (chem.) - Matthew J. Gardner
Lehigh University (chem. eng.) - Ke Xue
Moravian College - Derrick Shollenberger
Muhlenberg College - Jake Herb

Congratulations to all of the winners!

2011 Fall LVACS Meetings

September, Lafayette (date TBA)

October 4, Penn State Berks

November 1, Northampton Community College

December 1, Lehigh University

There is still time to register for the National ACS meeting in Denver!

Fall 2011 National Meeting & Exposition

Denver, Colorado Aug. 28 - Sept. 1



Selected Meeting Highlights:

The theme Chemistry of Air, Space and Water was developed by Thematic Program Chair Ronald Cohen (Professor, UC Berkeley Department of Earth and Planetary Science; Director, Berkeley Atmospheric Science Center).

The theme will cover, 1) chemistry affecting the exposure and response of humans to toxins in their air and water, 2) chemistry affecting the climate and chemical strategies for removing greenhouse gases from the atmosphere (or reducing their emissions to it), 3) chemistry for enhancing the availability of clean drinking water and 4) chemistry of atmospheres and clouds on other planets—especially as these provide insight into thinking about our own planet.

Special interdisciplinary symposia related to the theme are:

* Chemistry as a Tool for Space Exploration and Discovery at Mars and Exploring Planet Interiors: Experimental & Theoretical will discuss the chemistry and physical properties of planets and other objects in our solar system.

* Nitrogen and the Human Endeavor: Chemistry, Effects, and Solutions will incorporate air and water and the role of nitrogen in climate change.

* Atmospheric Aerosols: Chemistry, Clouds, and Climate will highlight recent advances in understanding the connections between the composition and chemical transformations of atmospheric particles and their direct and indirect effects on climate.

Plenary Session

Sunday, August 28, 4 p.m.- 6 p.m.

The session will underscore the thematic program with lectures on complexity and climate change, sustainable earth chemistry, and the high-pressure/high-temperature chemistry occurring on planetary objects.

Speakers

* Neil Donahue, Carnegie Mellon University, Center for Atmospheric Particle Studies, Pittsburgh, PA

* Russell Hemley, Carnegie Institution of Washington, Geophysical Laboratory, Washington, DC

* Alan Townsend, University of Colorado at Boulder, Department of Environmental Studies, INSTAAR, Boulder, CO

The Kavli Foundation Innovations in Chemistry Lecture

Monday, August 29, 5:30p.m. – 6:30p.m.



Dr. Susan Solomon Adjunct Professor, Department of Atmospheric and Oceanic Sciences at the University of Colorado, Boulder, is among one of the world's top climate scientists. She will discuss,

The Enduring Challenges of Ozone Depletion and Climate Change: How Planetary Chemistry is Changing Science and Society.

Solomon led the 1986 NOAA expedition to the South Pole that discovered the relationship between CFCs and the Ozone Hole. Solomon is a member of the U.S. National Academy of Sciences, the European Academy of Sciences, and the Academy of Sciences of France.

ACS Career Fair – August 28-31, 2011

The ACS Career Fair this August will be a hybrid event, fully integrating the Virtual Career Fair into the onsite ACS Career Fair to be held concurrently with the ACS national meeting at the Colorado

Convention Center. This innovative online/onsite career fair will not only offer job seekers more venues to connect with prospective employers, but also more programs to gain the knowledge and skills needed to reach their career goals.

Virtual attendees will be fully equipped to interact with onsite attendees. Workstations at the onsite career fair will allow onsite attendees to network with virtual attendees. Webcams at the onsite career fair will enable virtual attendees to see what's happening onsite and fully participate in speaker presentations.

Job seekers attending the career fair will have access to live and on-demand presentations both in person and via a virtual auditorium.

Attendees will also be able to submit applications, resumes, and supporting materials; review employer information, including products and services, working conditions, and open positions; talk informally with employers to learn more about their organizations; interview with prospective employers in person or via real-time video or text chat; and attend workshops to build professional skills and enhance job searching.

Onsite Hours of Operation:

* Sunday, August 28: 9:00 a.m. – 5:30 p.m.

* Monday, August 29-30: Tuesday, August 29: 8:00 a.m. – 5:30 p.m.

* Wednesday, August 31: 8:00 a.m. – 12 noon

Virtual Hours of Operation

* Tuesday - Wednesday, August 30-31: 9:00 am – 7:00 pm (MST)

All job seekers must be registered for the ACS National Meeting. Follow these simple steps to participate in the ACS Career Fair:

1. Log into your account. (New users will need to create an account.) Activate the link to attend.
2. Upload your resume.
3. Search and apply for jobs by field of specialization, work function, employer, etc. before the meeting.

4. Request interviews.
5. Check your account regularly for appointments.
6. Job seekers are encouraged to abide by the ACS Career Fair Code of Conduct to ensure a positive experience for all participants.

The onsite Career Fair is open to ACS members. All members must display a meeting badge to gain access to the Career Fair. Job seekers who sign up by August 12, 2011, will receive a confirmation packet containing their yellow ACS Career Fair ID card prior to the national meeting.

Members who have had their membership status changed to receive a 2011 unemployment dues waiver are eligible for a waiver on registration fees for the national meeting. Please direct questions about your membership status to ACS Member & Subscriber Services at 800-333-9511 (US only); 614-447-3776 (outside the US); or email: service@acs.org.

For Career Fair customer support call 1-888-667-7988 or email customerservice@jobcontrolcenter.com

Academic Employment Initiative Poster Session (AEI)

Monday, August 29, 2011, 8:00 – 10:00 p.m.
Sci-Mix, Colorado Convention Center

Searching for new faculty? Identify suitable candidates at the AEI Poster Session held at Sci-Mix. Biographical sketches for this year's candidates will be available in early July.

High School Chemistry Day

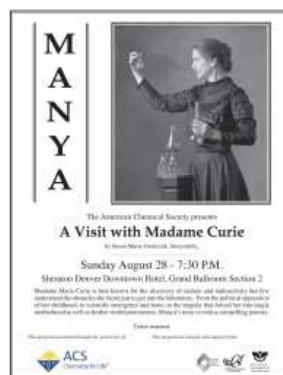


Sheraton Denver Downtown Hotel
Sunday, August 28, 2011
9:00 a.m. – 5:00 p.m.

The American Chemical Society is hosting a special High School Chemistry Day for teachers at the 242nd ACS Fall National

Meeting. The program features presentations and activities on ready-to-use classroom resources and programs that enhance student learning experiences in chemistry and expand teacher portfolios!

More than 11,000 scientists are expected to attend, and over 7,000 presentations are slated, comprised of symposia that highlight a broad range of scientific advancement.



Manya: A Visit with Mari Curie

Learn about the life of Marie Curie's migration, unconventional romance, and the basis for the scientific investigations that led to the discovery of two new elements – polonium and radium.

Where better to explore Air, Space, and Water than the "Mile-High City" and surrounding mountain regions? Attractions in and near Denver range from hot air balloon rides, to one of the country's highest operating space observatories, to white water rafting. Visit www.visitdenver.org/ACS for a directory of activities.

Denver Highlights Air

Rocky Mountain National Park - Touch the heavens on top peak with the 14,259 feet elevation



Royal Gorge Zip Line Tours - Get ready to take to the Colorado skies with this outdoor adventure!

Garden of the Gods - Take in the fresh air at this registered National Natural Landmark in Colorado Springs.

Skyventure Colorado - Need an adrenaline rush? Sky dive!

Colorado Hot Air Balloon Rides - For those who are looking for an alternative to the walking tour.

Mile High Gliding - The inner pilot in you is calling!

Space

University of Denver's Historic Chamberlin Observatory - Go moon- and planet-gazing at this recently-renovated Denver institution.



Denver Astronomical Society - Learn about educational, observing, and other outreach opportunities.

The Astronomical League - Find out more about the League's vision to promote "amateur astronomy".

Mt. Evans Meyer-Womble Observatory - Take in the sights from the highest operating observatory in the West.

Wings over the Rockies Air and Space Museum - Explore a wide collection of aircraft, space vehicles, and other high-flying artifacts.

Water

Downtown Aquarium - Houses over 500 species of water animals.



Water World - The biggest and best water attractions.

White Water Rafting - Select from dozens of companies for this thrill ride.

Flyfishing - Enjoy the outdoors while catching dinner.

LVACS Officers - 2010

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