

# Chesapeake Chemist

*Maryland Section  
American Chemical  
Society*



~ **Robert J. Cotter, Ph.D.** ~

Professor of Pharmacology & Molecular Sciences and Director of the Middle Atlantic Mass Spectrometry Laboratory  
Johns Hopkins University School of Medicine  
(<http://www.hopkinsmedicine.org/pharmacology/research/cotter.html>)

“Mass Spectrometry on Earth and Mars”

Sunday, April 11 - 12:30-4pm - Burkshire Marriott, Towson, MD

February 2010

Volume 66, Number 6

## April Student Awards Meeting

Sunday, April 11 - 12:30-4pm - Burkshire Marriott, Towson, MD

12:30-1pm	Registration / Networking & appetizers
1-2pm	Luncheon
2-2:30pm	Student Awards
2:30-3:30pm	Presentation: Professor Robert Cotter (Department of Pharmacology and Molecular Sciences at Johns Hopkins School of Medicine)

**Price:** \$20 - ACS members, guests; \$10 - students; Student award winners - Free (please RSVP)  
**Contact:** For questions, contact Dr. Shirish Shah - sshah@towson.edu - (410) 704-2720  
**Where:** Burkshire Marriott, 10 W. Burke Avenue, Towson, Maryland 21204

~ Directions to meeting, Speaker Information & Abstract on Page 4 ~



Join us on meetup.com to keep up with Section Events (dates for meetings), Discussion Boards (including job postings), photos from events & more!

(Meetup is FREE for individual members and does NOT require you to post your general information beyond your name.)

<http://www.meetup.com/Maryland-American-Chemical-Society/>

### **Nominations for the 2010 Maryland Chemist Award**

The Maryland Chemist Award Committee is accepting nominations for the 2010 Maryland Chemist Award. Supportive documentation should include copies of the resume of the nominee and his/her list of publications. A short statement describing the outstanding contributions of the nominee to scientific research, education, industry, technology, etc., will be helpful and appreciated. Please send nominations to Dr. Angela Sherman. Nominations are **PREFERRED** to be sent in to the committee via e-mail: [ASherman@ndm.edu](mailto:ASherman@ndm.edu). If you can not send your nomination via e-mail, please contact Dr. Sherman via e-mail or phone (410) 532-5713 to arrange for alternate delivery method. The deadline for submission of nominations is April 15, 2010.

### **Nominations for the 2010 Braude Award**

The Braude Award, established by George and Monique Braude, is awarded at the October meeting and honors a professor conducting outstanding research involving students at a college or university in the Chesapeake region. Nominations are now being accepted for the 2010 Braude Award. Please submit a list or description of the research accomplishments of the nominee, as well as an indication of the number of students involved in that research, to Louise Hellwig via e-mail: [Louise.Hellwig@morgan.edu](mailto:Louise.Hellwig@morgan.edu) or by phone at 443-885-2085. The deadline is May 15, 2010.

## ACS Maryland Section - Officers and Committee Chairs

### Section Officers:

*Chair 2010* - Alvin Kennedy, Morgan State University, (443) 885-3115; [alvin.kennedy@morgan.edu](mailto:alvin.kennedy@morgan.edu)

*Vice-chair (chair 2010)* - vacant

*Chair-elect (chair 2011)* - Takashi Tsukamoto, Johns Hopkins Medical Institutions, 410-614-0982, [ttukamoto@jhmi.edu](mailto:ttukamoto@jhmi.edu)

*Secretary* - Lance Baird, Johns Hopkins Applied Physics Lab, 301-395-7168, [lance.baird@jhuapl.edu](mailto:lance.baird@jhuapl.edu)

*Treasurer* - Holly Cymet, Morgan State University, 443-885-3882, [holly.cymet@morgan.edu](mailto:holly.cymet@morgan.edu); Department of Chemistry, Morgan State University, 1700 East Coldspring Lane, Baltimore, MD 21251

### Councilors:

Merle I. Eiss  
McCormick & Co, Inc  
[meiss32@aol.com](mailto:meiss32@aol.com)

Stephanie J. Watson  
NIST  
[stephanie.watson@nist.gov](mailto:stephanie.watson@nist.gov)

David Roswell  
Loyola College  
[droswell@lovol.edu](mailto:droswell@lovol.edu)

Paul Smith  
UMBC  
[pismith@umbc.com](mailto:pismith@umbc.com)

**Alternate Councilors:** Shirish Shah (Towson), Joseph Topping (Towson), Sandra Young (ARL)

**Members at Large:** Maurice Iwunze (Morgan), Rose Pesce-Rodriguez (ARL), Suzanne Procell (ECBC), Angela Wells Winstead (Morgan)

### Committee Chairs:

*Student Awards (April)* - George Farrant - (410) 455-4120; [gfarrant@yahoo.com](mailto:gfarrant@yahoo.com)

*MD ACS Student Grants - Travel & Student Affiliate Awards (February/March)* - Paul Smith, [pismith@umbc.com](mailto:pismith@umbc.com)  
or Louise Hellwig, [Louise.Hellwig@morgan.edu](mailto:Louise.Hellwig@morgan.edu)

*Remsen Award (May/June)* - Lev Ryzhkov; [lryzhkov@towson.edu](mailto:lryzhkov@towson.edu)

*Braude Award (October)* - Louise Hellwig, [Louise.Hellwig@morgan.edu](mailto:Louise.Hellwig@morgan.edu), 443-885-2085

*Maryland Chemist Award (December)* - Angela Sherman - (410) 532-5713; [ASherman@ndm.edu](mailto:ASherman@ndm.edu)

*Maryland Service Award* - Shree Iyengar - (410) 777-2266; [ssiyengar@aacc.edu](mailto:ssiyengar@aacc.edu)

### Programs:

*Archives* - Ernie Silversmith - (443) 885-3214

*Career Planning* - Linh Cheong - (410) 762-1159

*Earth Day* - Paul Smith, Lance Baird  
([Lance.Baird@jhuapl.edu](mailto:Lance.Baird@jhuapl.edu))

*Environmental Issues* - Shirish Shah - (410) 704-2720  
[sshah@towson.edu](mailto:sshah@towson.edu) & Lance Baird

*Finance Committee* - Jan Kolakowski - (410) 436-2755  
[jan.kolakowski@us.army.mil](mailto:jan.kolakowski@us.army.mil)

*Government Relations* - Shirish Shah & Robert von Tersch - [robert.l.vontersch@us.army.mil](mailto:robert.l.vontersch@us.army.mil)

*Long Range Planning* - Shekar Munavalli

*MARM* - Shirish Shah & Paul Smith

*Membership* - Merle Eiss

*Minority Affairs* - Alfred Amah - (410) 602-7164;  
[aamah@coppin.edu](mailto:aamah@coppin.edu)

*Public Relations* - Shirish Shah & Walter Roy,  
[Walter\\_Roy@mccormick.com](mailto:Walter_Roy@mccormick.com)

*Retired Chemists* - Alvin Bober, [abober@verizon.net](mailto:abober@verizon.net),  
410-581-5321

*Student Affiliate Liaison* - Louise Hellwig

*Women Chemists/Younger Chemists* - Sara Narayan -  
443-334-2326 / Amanda (Miller) Idstein -  
[aredmiller@cs.com](mailto:aredmiller@cs.com)

### 2011 Elections Committee:

**Chair** - Sandy Young ([sandra.young@us.army.mil](mailto:sandra.young@us.army.mil))

**Members** - Takashi Tsukamoto, David Roswell, Frank Switzer, Dana Gasiorowski

### Educational Programs:

*Chemistry Olympiad/Chem-a-Thon* -  
Shirish Shah & Mike Zapf,  
[Mike\\_Zapf@mccormick.com](mailto:Mike_Zapf@mccormick.com)

*Continuing Education/High School Education* -  
Shirish Shah/Ellen Pisciotta

*Kids & Chemistry/Chemistry-in-the-Library* -  
Sue Procell, 410-436-4604,  
[suzanne.procell@us.army.mil](mailto:suzanne.procell@us.army.mil) / Sandy Young

*National Chemistry Week (NCW)* -  
Shirish Shah & Sandy Young

**Maryland Section on the Web:** <http://mdchem.org>

*Webmaster* - Sandy Young ([mdchem@mdchem.org](mailto:mdchem@mdchem.org))

*E-issues team:* Mike Zapf, Frank Switzer, Sandy Young

### Chesapeake Chemist Editor:

([mdchem@mdchem.org](mailto:mdchem@mdchem.org))

**Have a job to post?, a good news chemistry story? - contact the Maryland Executive Committee through e-mail via: ([mdchem@mdchem.org](mailto:mdchem@mdchem.org)).**

## Directions to Berkshire Marriott Conference Center: 10 West Burke Avenue, Towson, MD

- From the Baltimore beltway, I-695, follow to exit 27, Dulaney Valley Road
- The Berkshire is on the left side as you enter Burke Ave. (18-story building). Meeting attendees should proceed to the left lane. Turn left into the Berkshire's parking entrance. Turn the corner and make an immediate right into the P2 parking garage.
- (You may have to press the intercom button for admittance to the elevators)
- Proceed to the front desk to get a parking pass required for your car
- Look for signs posted in the lobby and by the elevators to locate the dining room

## Mass Spectrometry on Earth and Mars

This presentation begins on earth, in fact in Baltimore on the Homewood Campus of the Johns Hopkins University where the speaker began his interest in mass spectrometers in the laboratory of Dr. Walter Koski. Later, finding himself in the School of Medicine he focused that interest on the *time-of-flight* (TOF) mass spectrometer, invented in the 1950s and known (at least in theory) to have the possibility of unlimited mass range. The development of new methods to make large gas phase ions in the 1980s made it possible to move TOF instruments from small volatile molecules to intact proteins and protein assemblies, while a novel *reflectron* TOF developed in his laboratory enabled fast amino acid sequencing of those proteins. At the same time, miniaturization of these instruments has had an application to the detection of biological threat agents and homeland security.

This talk will review some basic concepts for the TOF mass spectrometer, how the design has been improved, and some applications to the so-called *histone code* and the field of epigenetics. The talk will then introduce another technology known as an *ion trap*, which is being developed in miniaturized, low power form as part of the payload on a Mars Rover mission scheduled for 2016. When completed, this instrument (which uses a laser to form ions from non-volatile molecules) will have a higher mass range than any other sent in space. Samples will be drawn up from a depth of 2 meters, crushed and presented for analysis by a suite of instruments, one of which is the *Mars organic mass analyzer* (MOMA) being developed with support from both NASA and the European Space Agency (ESA). Ions will be formed outside the instrument in the 7 Torr atmosphere, drawn into the vacuum system and trapped using the CO<sub>2</sub> gas from the Mars atmosphere. The MOMA mass spectrometer will be tasked with the search for *signs of life*: larger, functionalized molecules that may indicate either past life forms or the beginning processes for developing biological molecules.

### Speaker Bio:



Robert J. Cotter  
Middle Atlantic Mass Spectrometry Laboratory  
Pharmacology and Molecular Sciences  
Johns Hopkins University School of Medicine  
Baltimore, MD 21205

Robert J. Cotter, Ph.D. received his M.S. and Ph.D. in Physical Chemistry from The Johns Hopkins University and joined the faculty in 1978. Dr. Cotter is now Professor of Pharmacology & Molecular Sciences and Professor of Biophysics & Biophysical Chemistry at the Johns Hopkins University School of Medicine. He is also the Director of the Middle Atlantic Mass Spectrometry Laboratory and holds a Principal Professional Staff appointment at the Johns Hopkins University Applied Physics Laboratory. He was formerly the President of the American Society for Mass Spectrometry, and is currently a member of the Science and Education Council of the Maryland Science Center. Dr. Cotter's research focuses on the development of new mass spectrometry based instruments and techniques for the study of biological systems and applications ranging from the characterization of proteins in disease, detection of biological threat agents, and more recently the search for life signs on Mars. His laboratory has been a world leader in the development of time-of-flight (TOF) mass spectrometry and he has written a text on the subject entitled: *Time-of-Flight Mass Spectrometry, Instrumentation and Applications to Biological Research*. Dr. Cotter was recently awarded the American Chemical Society Analytical Division Award in Chemical Instrumentation.

**Maryland Section of the ACS Student Awardees for 2010**

**Anne Arundel Community College**

Nick Prindeze



**College of Notre Dame of Maryland**

Mary L. Ensey



**CCBC-Catonsville**

Bibina F. Tenjoh-Okwen





**Coppin State College**

Nicole Brown



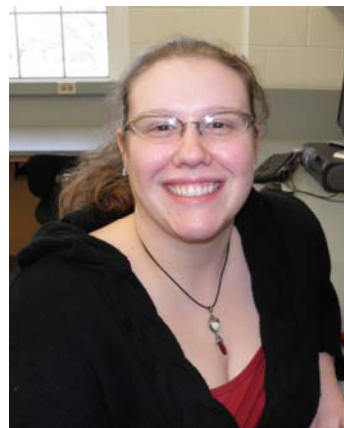
**Goucher College**

Richard Vaughan



**Hood College**

Casey Kohnhorst



**Howard Community College**

Kelsey Tyson



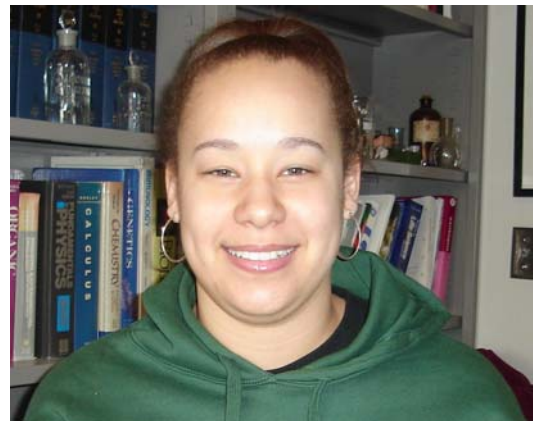
**Johns Hopkins University**

Giselle Elbaz



**Loyola College**

Jocelyn Claude



**McDaniel College**

Kevin Bowman



**Morgan State University**

Abdul-Rahman Raji



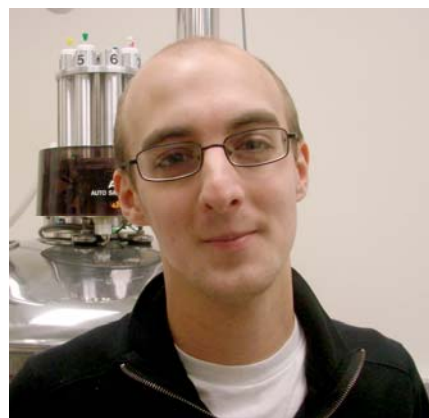
**Mount Saint Mary's University**

Thaddeus Mostowtt



**Saint Mary's College of Maryland**

Neil A. Hawbaker





**Stevenson University**

Julia Mae Wikoff



**Towson University**

Kaitlyn A. Grosso



**United States Naval Academy**

Blaine A. Lander



**University of Maryland - Baltimore County**

Seungkyung Lee



## Washington College

Samantha De Carlo



## **Student Affiliate (SA) Corner**

### Morgan State University - Dr. Louise Hellwig

In March Morgan State University held a Demo Day, in which six stations were set up, each featuring a different fun activity: making Slime, turning pennies gold, making a rubber ball, blowing up a balloon with carbon dioxide formed by vinegar on baking soda, various demonstrations by Dr. Ernest Silversmith, and a computer game about the elements. The demos were aimed mainly at piquing the interest of students taking general chemistry or chemistry for nonscientists. About 50 students toured through the six stations over the course of the hour.

The speakers at the two general meetings were Ms. JuliAna Brammer of the University of Maryland School of Pharmacy, and Dr. Ambrose Jearld of Woods Hole, MA.

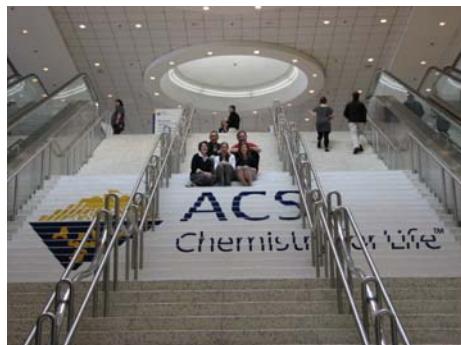


### Stevenson University - Dr. Sara Narayan

Stevenson University had their first speaker for the chemistry club on Monday, April 5, 2010. It was well attended by students. The speaker was Dr. Jennifer Young, Manager of ACS Green Chemistry Institute, Washington D.C. She spoke about how to start green Chemistry chapter for our chem. club students.

### University of Maryland - Baltimore County - Dr. Tara Carpenter

Dr. Carpenter and 5 students went to the National ACS meeting in San Francisco in March. Two students gave oral presentations. The group attended the SA awards ceremony to accept our honorable mention for the 2008 - 2009 academic year for UMBC SA activities/achievements on Sunday evening which is what some of the pictures are from.



## Student Affiliate (SA) Corner ~ continued

### Applications are Being Accepted for the 2010 Undergraduate Student Travel Awards

Students can apply to receive up to \$500 for travel and expenses to attend a National ACS Meeting or up to \$300 to attend a Regional ACS Meeting. Open to undergraduate student affiliates of the ACS who are enrolled full time in a college or university in the Maryland Section.

The application should include:

- The meeting you plan to attend along with location, dates
- An estimated budget (cost for travel, registration, lodging, and meals)
- A 250 word essay describing your motivation for attending the meeting (if you plan to present, include a brief description of the work to be presented)
- A letter of support from a faculty member in your department

Review of applications will begin January 15<sup>th</sup> but will continue through the year until all funds are utilized. Applications should be mailed to: Dr. Paul Smith, UMBC, Department of Chemistry and Biochemistry, 1000 Hilltop Circle, Baltimore, MD, 21250 or sent via e-mail: [pjsmith@umbc.com](mailto:pjsmith@umbc.com).

### Earth Day Community Event

The Maryland ACS will once again be participating in the Herring Run Watershed – Project Clean Stream Clean-Up Event on **Saturday, April 10<sup>th</sup>, 2010 – 9am-12pm**. Gloves, bags, and rakes are provided to assist in the clean-up. There is also an area available for breaks and snacks/drinks are provided. Please mark your calendars and plan to join us for this important event!! For questions about this event, please contact Maryland ACS POCs: Paul Smith, UMBC, ([pjsmith@umbc.edu](mailto:pjsmith@umbc.edu)) or Lance Baird, JHU-APL, ([Lance.Baird@jhuapl.edu](mailto:Lance.Baird@jhuapl.edu)).

\* T-shirts personalized with your college/university name will be awarded to the SA group who brings out the most students to help at this event!!

### Earth Day at the Maryland Science Center

MD ACS will be at the Earth Day events at the Maryland Science Center. The MD ACS will have tables set up and be doing hands-on experiments with young students.

What: Earth Day event

When: Saturday, April 24<sup>th</sup>, 2010 – 12-4pm

If you have any questions or want to assist with an event, please contact Maryland ACS POCs: Paul Smith, UMBC, ([pjsmith@umbc.edu](mailto:pjsmith@umbc.edu)) or Lance Baird, JHU-APL, ([Lance.Baird@jhuapl.edu](mailto:Lance.Baird@jhuapl.edu)).

**MINUTES OF THE COUNCIL MEETING  
AMERICAN CHEMICAL SOCIETY  
239<sup>th</sup> ACS NATIONAL MEETING  
SAN FRANCISCO, CA**

The Council meeting took place Wednesday, March 24, 2010. All four Maryland councilors were present. The general San Francisco meeting attendance was over 18,000, a near record.

**Election Results**

By electronic ballot, the Council selected Luis A. Echegoyen, Chemical Division Director, National Science Foundation and Bassam Z. Shakhashir, Professor of Chemistry, University of Wisconsin Madison as candidates for 2011 President-Elect. These two candidates, along with any candidates selected via petitions, will stand for election in the Fall National Election.

**Petitions to Amend the Constitution and Bylaws**

The Council received three amendments to the ACS Constitution and Bylaws for action: The Petition on Admissions Committee, the Petition on Candidate Selection by Member Petition, and the Petition on Election Timelines 2009.

The Council VOTED to approve the Petition on Admissions Committee. This petition removes the Admission Committee from the Bylaws and transfers its functions to the Council Committee on Membership Affairs.

After considerable debate, a motion to approve the Petition on Candidate Selection by Member Petition FAILED. The Petition on Candidate Selection by Member Petition would have amended the Constitution to emphasize that candidates selected by a petition process from members will have no further screening. Many council members felt that the correct place for Petition Candidate selection rules is in the Society By-Laws where they currently reside.

The Council also thoroughly debated the merits of the Petition on Election Timelines 2009. The motion to approve this petition FAILED. The Petition on Election Timelines 2009 would have shortened certain national election timelines. The petition was developed by the Committee on Nominations and Elections in response to candidate comments. Many candidates that have run for elected positions in recent years felt that electioneering times were too long and that in today's current economic environment, they could not afford time away from their jobs.

The Board of Directors will vote within 90 days on whether to ratify the Petition on Admissions Committee.

**The Society's Finances**

The Council and Board of Directors learned that the Society's total 2009 revenue (\$460 million) was up +1% from 2008, but fell short of the 2009 approved budget by \$19.5 million or 4.1%. Fortunately, the revenue shortfall was fully anticipated in early 2009. Therefore, contingency planning actions and cost containment initiatives were implemented across the Society, resulting in expense savings totaling \$22.5 million. Significant reductions were realized in salaries and fringe benefits, and in discretionary accounts such as travel, training, and professional services. As a result, the Society's Net Return from Operations was \$13.7 million, or \$3.0 million greater than anticipated in the 2009 Approved Budget.

Unrestricted Net Assets rebounded in 2009 to approximately \$124 million, from a previous \$60 million at the end of 2008. The significant increase can be attributed to the favorable operating results, investment gains, and a net reduction in the Society's post-retirement benefit plan liabilities. The Society ended the year in compliance with four of the five Board-established financial guidelines. The Fund Balance Ratio Guideline, which measures the adequacy of the Society's unrestricted net assets, was not met. The financial outlook for 2010 is better, and ACS management expects the Society to meet the 2010 approved budget.

**2011 Member Dues**

The Council VOTED to set the member dues for 2011 at the fully escalated rate of \$146. This rate is established pursuant to an inflation-adjustment formula in the ACS Constitution and Bylaws.

**Local Section Allotment Calculator**

The Council VOTED to continue for three years the current formula for determining allotments to local sections.

### **Member Statistics**

At the close of 2009, Society membership totaled 161,783 compared to 154,024 for year-end 2008. The number of new membership applications received last year was the highest ever. The 2009 number also reflects the transition of 6,658 former Student Affiliates to the new student member category in June 2009 and the recruitment of 6,341 new student member undergraduates.

### **ACTIONS OF THE BOARD OF DIRECTORS**

The Committee on Grants and Awards presented the Board with a screened list of nominees for the 2011 Priestley Medal, the Volunteer Service Award, and the Parsons Award. The Board agreed to review the screened list and announce the winners of these three awards after its June meeting.

The Board's Committee on Planning met with the Board in executive session. At that point, the Board Chair announced that the Board of Directors had VOTED to grant full voting rights on the Planning Committee to the chairs of the Committees on Local Section Activities and Divisional Activities. (CPC & B&F already vote.) The committee and the Board then discussed the results of an external environmental scan and offered suggestions that could be used to refine the Society's Strategic Plan for 2011 and Beyond.

### **Presidential Task Force on Diversity Reports**

The Board received a report from the President's Task Force on Diversity Reports. The task force was charged with assessing the recommendations from the diversity workshop reports in the context of current efforts and committees of the Society, and developing a road map for the implementation of the recommendations. The task force also urged that the ACS move into a leadership role in promoting the education, professional development, and inclusion and equity of present and future generations of chemical professionals that reflect the diversity of America. The Presidential succession and the full Board VOTED to refer the task force report to the Board Standing Committee on Professional and Member Relations for prioritization, assignment of accountability, and development of implementation timelines, and discharged the task force with sincere thanks for its excellent work.

### **The Executive Director/CEO Report**

The Executive Director/CEO, along with several of her direct reports, updated the Board on the activities of Chemical Abstracts Service, the Publications Division, and the Society's General Counsel. As a follow-up, the Board VOTED to approve a new appointment and three reappointments of journal editors.

### **Other Society Issues**

The Board was briefed by its working group monitoring 2010 Board Logistical Training. This plan, which currently includes four broad topic areas, is designed to enhance overall Board effectiveness. The Board also received reports from several international guests representing the following scientific societies: Brazilian Chemical Society, the Chemical Society for Canada, the European Association for Chemical and Molecular Sciences (EuChemS), the Royal Society of Chemistry (RSC), and the International Union of Pure and Applied Chemistry (IUPAC).

The old ACS Speaker Tour Service will end in December 2010 and a new Online Speaker Service will begin in 2011.

According to recent statistics, unemployment in the chemical industries is only a little over 3% as compared to 11% in the country as a whole. However, the job recruitment service, registered about 1000 members looking for positions. There were only 40 companies with 110 jobs listed as available.

Respectfully submitted,

Merle I. Eiss, Councilor



## Save the Date: June Remsen Award Meeting

Wednesday, June 16, 2010

Remsen Awardee: John T. Groves, Princeton University

<http://www.princeton.edu/~jtgggroup/index.html>

Schedule:

Coffee/tea/light snacks: 5:30 - 6:00 pm

Award presentation, etc./lecture: 6:00 - 7:00 pm

Reception afterwards: 7:00 - 9:00 pm



### Spring 2010 - Important Dates



- April 10, 2010 (Saturday) MD ACS Earth Day Community Event - Project Clean Stream - Herring Run Park (Argonne Drive & Harford Road), Baltimore, MD
- April 11, 2010 Student Awards Meeting - Burkshire Marriott Hotel & Conference Center
- April 19, 2010 Spring Meeting - Society of Environmental Toxicology and Chemistry, Chesapeake and Potomac Regional Chapter, Towson University in the Union (<http://cprc-setac.com/Upcomingevents.aspx>)
- April 22, 2010 Earth Day



### Summer 2009 - Important Dates



- June 16, 2010 Remsen Award Meeting - Awardee: John T. Groves, Princeton University - Meeting Location: Johns Hopkins University, Baltimore, MD - directions at: (<http://mdchem.org/meetings/JHU.html>)
- June 2010 Student Affiliate National Meeting Travel Grant application deadline for August meeting.
- August 22-26, 2010 240<sup>th</sup> National ACS Meeting & Exposition, Boston, MA (<http://chemistry.org/meetings>)

## 2010 Chemistry Olympiad Coming Soon!

Currently the Section is making plans to participate in the 2010 Chemistry Olympiad Program sponsored by the National ACS. We will give the exam to nearly a dozen talented students on Saturday, April 24th at Notre Dame College in Baltimore. The exam is in three parts: Lab, Multiple Choice, and Essay and is nearly 5 hours in length. If you would like to assist as an exam proctor, please contact us, even for one part.

On the same day, the 26th Annual Chemathon is being held at the University of Maryland, College Park campus. This is a fun-filled morning for both proctors and students alike. Members can participate by monitoring student experiments and assisting the committee with logistics. Please contact us if you wish to help.

The Section has a long history of supporting Chemistry for High Schools. If you wish to become involved with these programs, or possibly to launch new endeavors, please contact us. This is one means of connecting our chemists with students and teachers, often in a fun-filled manner.

For more information, please contact Mike Zapf: [Mike\\_Zapf@mccormick.com](mailto:Mike_Zapf@mccormick.com) or 410-771-7471.



## K-12 Educational Outreach

We know that people have limited time. But taking the time to mentor others, as all of us were once mentored by someone, is a truly fulfilling experience. If you have any questions or are thinking about helping out with a future event, please feel free to contact us at ([mdchem@mdchem.org](mailto:mdchem@mdchem.org)).

### **Chemists Celebrate Earth Day 2010: "Plants - The Green Machines!"**

The ACS Office of Community Activities (OCA) would like to remind you that **CHEMISTS CELEBRATE EARTH DAY (CCED) will be celebrated on April 22!** The CCED theme for 2010 is "Plants - The Green Machines!" Hopefully you are planning to celebrate on campus anytime during the week of April 22nd. The 2010 CCED edition of *Celebrating Chemistry* will be available online through the CCED home page in late January. It will contain hands-on activities and articles geared for students in grades 4-6. The CCED Order Forms will also be primed and ready to receive your orders in early January. Email updates regarding the order form and other relevant CCED information will be on the way soon. So get a head start on planning your activities for Chemists Celebrate Earth Day 2010! Stay tuned to [www.acs.org/earthday](http://www.acs.org/earthday) for updates and the latest information as CCED is soon approaching!

Saturday, April 10, 2010 - 11am-12pm	East Columbia Library, Howard County	Earth Day events
Saturday, April 10, 2010 - 2-3pm	Central Library, Howard County	Earth Day events
Friday, April 16, 2010 - 2:30-4pm	APG Youth Center, Harford County	Earth Day events
Saturday, April 17, 2010 - 11am-12pm	Perryville Public Library, Cecil County	Earth Day events
Saturday, April 24, 2010 - 11am-12pm	Savage Library, Howard County	Earth Day events
Saturday, April 24, 2010 - 2-3pm	Elkridge Library, Howard County	Earth Day events

### **Kids & Chemistry**

Kids & Chemistry is an ever active outreach group within the MD ACS and is run by Sue Procell.

Schools K&C have visited/are visiting (5th grade):

- Homestead-Wakefield Elementary School - 8, 22 Jan 2010
- Meadowvale Elementary School - 29 Jan, 26 Mar, 9 Apr 2010
- Fountain Green Elementary School - 19 Mar, 16 Apr 2010

Programs at the Anita C. Leight Estuary Center:

- 22 Jan 2010 - DNA Extraction Lab
- 26 Feb 2010 - Harry Potter Potions Lab
- 16 Apr 2010 - Electricity Lab
- 7 May 2010 - Polymer's Lab

Harford County Public Library - Edgewood Branch:

- Harry Potter Potions Lab - 2 Mar 2010

### **Plants & People Sundays at the Rawlings Conservatory**

The Howard Peters Rawlings Conservatory & Botanic Gardens in Druid Hill Park runs various programs on Sundays. The 2<sup>nd</sup> (Exploration Station), 3<sup>rd</sup> (Story Hour), and 4<sup>th</sup> (Ask a Scientist) Sundays are programs directed towards K-12 students and often include hands-on science activities.

**Where:** Howard Peters Rawlings Conservatory & Botanic Gardens, 3100 Swan Drive, Baltimore, MD 21217 (by the zoo)

**When:** Almost every Sunday

For more information, visit their website or call (410) 396-0008 for details on the upcoming Sunday program!!

([http://www.baltimorecity.gov/government/recnparks/special\\_facilities.php#Howard](http://www.baltimorecity.gov/government/recnparks/special_facilities.php#Howard))

## Other Educational Outreach Programs

With recognition of the decreasing numbers of trained STEM professionals that are US citizens, the general decline of hands-on activities in Science, Technology, Engineering, and watering-down of Mathematics in many K-12 programs, and many people's general lack of understanding of STEM topics in society, the Department of Defense has coordinated many of their programs into single websites that contain a wide-range of educational outreach programs, internships, and scholarship opportunities available for K-12, undergraduate, graduate students and beyond.

Information on the wide-variety of programs through the **US Army Educational Outreach Program (AEOP)** can be found on their website (<http://www.usaeop.com>).

Information on the wide-variety of programs through the **National Defense Education Program (NDEP)** can be found on their website (<http://www.ndep.us>).

Many of the programs/opportunities that are listed on these two sites are available to students for participation in Maryland locations.



## EARTH DAY

APG

Earth and Arbor Day

Celebration

(Open to the Public)

**Save the Date: Friday, April 16, 2010**

APG Youth Center - Bldg 2522

9am-12pm

Poster contest winners announced, poster submissions viewing, EAGLES, Woodsie the Owl, Hands-on Earth Day science activities, Native Maryland Tree seedling give-away & MORE!!



## ARBOR DAY

### **RE-SEED** (*Retirees Enhancing Science Education through Experiments and Demonstrations*)

Since 1991, the RE-SEED program at Northeastern University has trained retired scientists and engineers and others with backgrounds in science or mathematics to provide classroom assistance to K-12 science teachers. There are over eighty volunteers assisting science teachers in the greater Boston area. After taking part in a comprehensive training program, participants typically assist in school classrooms one day a week for most of the academic year. The RE-SEED Program is part of the Center for STEM (science, technology, engineering and mathematics) Education at Northeastern University. Other programs focus on science teacher training and student assistance in science learning.

Northeastern University has assisted in the formation of more than fourteen regional volunteer centers where over 600 RE-SEED volunteers have worked in schools in about 100 communities throughout the country, offering approximately 600,000 hours of their time. You can learn more about RE-SEED by visiting their website, [www.reseed.neu.edu](http://www.reseed.neu.edu) or by calling Paul Conroy at 617-373-8388 or by email to [pa.conroy@neu.edu](mailto:pa.conroy@neu.edu).

The Center for STEM Education, Northeastern University, 1135 Tremont St., Suite 940 RP, Boston, MA 02120



## April Historical Events In Chemistry

By: Leopold May

- April 1, 1860 Two hundred years ago, Sergei N. Reformatsky was born on this date. He synthesized organozinc halides (Reformatsky reaction).
- April 4, 1939 Synthesis of Vitamin B<sub>6</sub> was announced by Merck, Sharp & Dohme on this date.
- April 9, 1930 F. Albert Cotton, a researcher in inorganic and structural chemistry, was born on this date.
- April 11, 1899 Seventy-five years ago in 1935, Percy L. Julian synthesized physostigmine with Josef Píkl. In 1953, he founded Julian Laboratories in 1953, prepared intermediates for commercial production of steroid hormones and was the first black chemist member of National Academy of Sciences. He was born on this date.
- April 13, 1760 Two hundred and fifty years ago, Thomas Beddoes was born on this date. He studied medical treatment of disease by the therapeutic inhalation of different "factitious airs" or gases and vapors and established Pneumatic Institution for Inhalation Gas Therapy in 1798.
- April 15, 1710 Three hundred years ago on this date, William Cullen was born. He was the first to notice that heat is produced during compression of a gas, was born on this date.
- April 16, 1921 Marie M. Daly, the first black woman to earn a PhD in chemistry in 1948 at Columbia University, was born on this day
- April 18, 1864 Samuel C. Hooker was a sugar chemist, who was born on this day. [04,
- April 21, 1889 Seventy-five years ago in 1935, Paul Karrer synthesized Vitamin B<sub>2</sub> (riboflavin). He synthesized vitamins A in 1931 and E (tocopherol) in 1938. In 1937, he shared the Nobel Prize in Chemistry for his investigations on carotenoids, flavins and vitamins A and B<sub>2</sub> with Walter N. Haworth for his investigations on carbohydrates and vitamin C.
- April 21, 1960 One hundred and fifty years ago, Aleksandr Oparin died. He did studies on the origin of life from chemical matter and extended the Darwinian theory of evolution backward in time to explain how simple organic and inorganic materials might have combined into complex organic compounds. He was born on February 18, 1894.
- April 21, 1970 The first Earth Day was founded by Sen. Gaylord Nelson, Father of Earth Day and organized by Denis Hayes on this date. It is celebrated by ACS on April 22
- April 24, 1817 Jean C. de Marignac, who was born on this date, discovered gadolinium in 1880
- April 27, 1896 Seventy-five years ago in 1935, Wallace H. Carothers developed Nylon. He was born on this date.
- April 28, 1954 Fifty years ago, Champion International was incorporated on this date.
- April 29, 1870 Atlantic Richfield Co., was incorporated on this day.
- April 30, 1897 Joseph J. Thomson announced the discovery of the electron as a body smaller than and a constituent of all atoms on this date

For more historical facts on chemistry, visit Dr. May's website at <http://faculty.cua.edu/may/>.

An informal association, Society for the Propagation of the Music of the Chemist-Composers, has been formed to publicize the music of chemist-composers. For information, see <http://faculty.cua.edu/may/SPMCC.htm>.

## Job Hunting Corner

### Job Hunting?

We don't always have job posts in the Chesapeake Chemist. But if you have a position available locally, you are welcome to send them to us for posting in the Chesapeake Chemist. If you are job hunting, remember to put your membership to work by using the ACS job bank: (ACS Careers: [www.acs.org/careers](http://www.acs.org/careers)).

### ACS offers special benefits for unemployed members

During these tough economic times it's more important than ever to belong to the American Chemical Society. Unemployed members can tap into a host of valuable benefits and services that help them get back in the workforce. And, members in good standing may qualify for an unemployed member dues waiver, allowing them to renew their memberships and keep their member benefits at no cost. Contact ACS at [service@acs.org](mailto:service@acs.org), 800-333-9511 or 614-447-3671 for complete details.

Other valuable benefits that help ACS member get back in the workforce include:

- Free registration at ACS National Meetings and registration fees at Regional Meetings of just \$25. Meetings offer ACS Career Fairs with on-site interviews.
- Special discounts for ACS/Harvard courses, ACS ProSpectives and Short Courses, 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.
- Free access to InterviewStream, an online tool that will sharpen your interview skills
- Members-only access to the ACS Salary comparator.
- And more!

Contact ACS customer service today at [service@acs.org](mailto:service@acs.org), 800-333-9511 or 614-447-3671 today and let us know how we can help.

### REMINDER: Receiving the Chesapeake Chemist

Hopefully, if you are reading the Chesapeake Chemist this month, you are receiving it via e-mail from us. We went to electronic only mailings to our MD ACS membership in October 2006. Please remember that we are dependant on the National ACS records for your correct, current e-mail.

**Changing your e-mail address? Moving out of the MD ACS area?** E-mail changes can be updated either by:

- E-mailing us at [mdchem@mdchem.org](mailto:mdchem@mdchem.org) – give us your member #, full name, and e-mail changes and we can ensure that your records are updated with National ACS.
- **Contacting the National ACS membership division: 800-333-9511 (US only)** or [service@acs.org](mailto:service@acs.org)

To ensure that you receive the Chesapeake Chemist, please add the MD ACS e-mail ([mdchem@mdchem.org](mailto:mdchem@mdchem.org)) to your accepted e-mail address list IF you have a spam filter.

If you are a member who currently doesn't receive the Maryland ACS Chesapeake Chemist but download it from our website, it is possible that National ACS does not have your e-mail address on file. If you want to receive the Chesapeake Chemist via e-mail, please e-mail us at [mdchem@mdchem.org](mailto:mdchem@mdchem.org) – give us your member #, full name, and e-mail address and we can ensure that your records are updated with National ACS.

The current edition and previous editions of the Chesapeake Chemist can ALWAYS be obtained via our website: <http://mdchem.org> – please see the Newsletter Archive link on the right-hand side of the website.



## Call for Volunteers for Committee Positions

Interested in how your dues get used and want to work on interesting member programs/projects? If you want to get involved with the Maryland Section Executive Committee and/or with section activities, we want to hear from YOU! The Maryland ACS Executive Committee meets 4 times during the year to discuss and plan activities. Please feel free to contact the chair, vice-chair, or chair-elect via e-mail to get more information on various areas/activities that you are interested in or that we would like to start or expand in the future. The amount of time to commit would be up to you but might be around 2 hours per month, depending on the activity. We are always looking for individuals with budget/financial, editing, and planning skills.

Our Section is always looking for volunteers for our various committees. We are currently looking to fill positions for:

- Archivist
- Young Chemist Chair
- Women's Chemist Chair

Please contact **Walter Roy** ([Walter\\_Roy@mccormick.com](mailto:Walter_Roy@mccormick.com), 410-771-7886) or **Alvin Kennedy** ([alvin.kennedy@gmail.com](mailto:alvin.kennedy@gmail.com), 443-885-3794)

## Get Involved, Stay Involved

As you know, the American Chemical Society offers many ways for its members and non-members to get involved at the local, regional and national levels. There are opportunities for everyone, whether you are a student, or just starting your career, or a seasoned professional. Are you interested in getting involved, but don't know where to start? Are you already involved with one or more ACS activities but need help finding resources? Please visit (<http://www.acs.org/getinvolved>) to find a streamlined list of links of helpful procedures and resources specifically geared towards your area of interest.

Alternately, you can contact the Maryland ACS Section directly... Like working with students? Have a talent for encouraging students in science? Have ideas for outreach events? Sign up for our volunteer news. Contact us at [mdchem@mdchem.org](mailto:mdchem@mdchem.org).



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3815 LANCASTER PIKE, WILMINGTON, DE 19805  
Phone: 302-998-1184, Fax: 302-998-1836

E-mail: ([micronanalytical@compuserve.com](mailto:micronanalytical@compuserve.com) )  
Website: (<http://micronanalytical.com/>)

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