George L. Braude Award Lecture

“New Insights into the mechanism of HIV-1 Assembly”

~ Michael F. Summers, Ph.D. ~

HHMI, Department of Chemistry and Biochemistry, University of Maryland Baltimore County

Wednesday, October 20 – 6-9pm – University of Maryland Baltimore County, MD
# ACS Maryland Section - Officers and Committee Chairs

## Section Officers:
- **Chair 2010** - Alvin Kennedy, Morgan State University, (443) 885-3115; alvin.kennedy@morgan.edu
- **Vice-chair (chair 2010)** - vacant
- **Chair-elect (chair 2011)** - Takashi Tsukamoto, Johns Hopkins Medical Institutions, 410-614-0982, ttsukamoto@jhmi.edu

**Secretary** - Lance Baird, Johns Hopkins Applied Physics Lab, 301-395-7168, lance.baird@jhuapl.edu

**Treasurer** – Holly Cymet, Morgan State University, 443-885-3882, 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
- **Stephanie J. Watson**
  - NIST
  - stephanie.watson@nist.gov
- **David Roswell**
  - Loyola College
  - droswell@loyola.edu
- **Paul Smith**
  - UMBC
  - psmith@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

### MD ACS Student Grants
- Paul Smith, psmith@umbc.com
  - or Louise Hellwig, Louise.Hellwig@morgan.edu

### Remsen Award (May/June)
- Dana Ferraris; Dferrar2@jhmi.edu

### Braude Award (October)
- Louise Hellwig, Louise.Hellwig@morgan.edu, 443-885-2085

### Maryland Chemist Award (December)
- Angela Sherman – (410) 532-5713; ASherman@ndm.edu

### Maryland Service Award
- Shree Iyengar – (410) 777-2266; 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)

### Environmental Issues
- Shirish Shah – (410) 704-2720
  - sshah@towson.edu & Lance Baird

### Finance Committee
- Jan Kolakowski – (410) 436-2755
  - jan.kolakowski@us.army.mil

### Government Relations
- Shirish Shah & Robert von Tersch - roberl.vontersch@us.army.mil

### Long Range Planning
- Shekar Munavalli

### MARM
- Shirish Shah & Paul Smith

### Membership
- Merle Eiss

### Public Relations
- Shirish Shah & Walter Roy
  - Walter_Roy@mccormick.com

### Retired Chemists
- Alvin Bober, 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

## 2011 Elections Committee:
- **Chair** - Sandy Young (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

### 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 /Sandy Young

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

## Maryland Section on the Web:
- [http://mdchem.org](http://mdchem.org)

## Webmaster
- Greg Delahanty (contact-us@mdchem.org)

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

## Chesapeake Chemist Editor-in-Chief:
- Takashi Tsukamoto (contact-us@mdchem.org)

**Have a job to post?, a good news chemistry story?** - contact the Maryland Executive Committee through e-mail via: (contact-us@mdchem.org).
George L. Braude Award Lecture

New insights into the mechanism of HIV-1 Assembly

The Braude Award honors people who have had significant impacts on teaching and who are collaborating in their research with students and post-doctoral fellows. The award was endowed by and named for George L. Braude, a chemist with W. R. Grace and the Food and Drug Administration. This year, the award goes to Dr Michael Summers, University of Maryland Baltimore Campus.

Wednesday, October 20 – 6-9pm
University Center room 312,
University of Maryland Baltimore County, MD

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>6 – 6:45 pm</td>
<td>Registration / Networking</td>
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<tr>
<td>6:45 – 7:45 pm</td>
<td>Dinner</td>
</tr>
<tr>
<td>7:45 - 8:00 pm</td>
<td>Braude Award Presentation</td>
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</table>
| 8 – 9 pm       | Lecture:
         | Dr. Michael F. Summers (Department of Chemistry and Biochemistry, UMBC) |

Price $20 - ACS members, Guests; $10 - students

Speaker Bio:

MICHAEL F. SUMMERS
HHMI, Department of Chemistry and Biochemistry,
University of Maryland Baltimore County
E-mail: summers@hhmi.umbc.edu

Dr. Michael F. Summers received his B.S. degree in Chemistry from the University of West Florida in 1980, his Ph.D. degree in 1984 from Emory University, and was a postdoctoral fellow at the NIH from 1984-1987. He joined the faculty at the University of Maryland Baltimore County as an Assistant Professor in 1987, and was promoted to Associate Professor with tenure in 1991 and to Full Professor in 1996. In 1994 he was appointed as an Investigator with the Howard Hughes Medical Institute. He currently serves on the Advisory Council for the NIH Office of AIDS Research and is an Associate Editor for the Journal of Molecular Biology. Dr. Summers’ research focuses on NMR studies of the structures and functions of proteins and RNA molecules of the human immunodeficiency virus (HIV-1). He has trained more than 200 undergraduate and high school students in his laboratory, which typically includes large numbers of students from diverse backgrounds.

Abstract: In HIV-1 infected cells, retroviral proteins are targeted to specific virus assembly sites on the plasma membrane, where they assemble and bud to form new immature virions. Membrane targeting is mediated by the viral matrix (MA) domain, which contains an N-terminal myristyl group. We show that the cellular phosphatidylinositol phosphate PI(4,5)P₂, a cellular factor that is enriched in the plasma membrane, acts as both a trigger of the myristyl switch and as a membrane anchor, suggesting a structure-based mechanism for the specific targeting HIV-1 Gag to PI(4,5)P₂-enriched membranes. Our studies suggest a new strategy for combating AIDS.
UMBC Campus Map

Directions to University of Maryland Baltimore County: 1000 Hilltop Circle, Baltimore, MD 21250

http://www.umbc.edu/aboutumbc/directions.php

To the Main Campus:
From the north, take Interstate 95 to Route 166 (Exit 47B, Catonsville) or take Interstate 83 to the Baltimore Beltway (I-695, west) and then take Exit 12C (Wilkens Avenue, west); follow the signs to UMBC.
From the south, take Interstate 95 to Route 166 (Exit 47B, Catonsville); follow signs to UMBC.
Baltimore-Washington International Airport is only five minutes away. Bus service is available from downtown Baltimore. AMTRAK and MARC commuter trains serve the nearby BWI Rail Station.
Help needed for coordinating the Chemistry Olympiad Program

The MD Section is looking for a coordinator for the International Chemistry Olympiad program. Activities will begin in February 2011. The tasks require an initial mailing to solicit participation, coordinating the exam site and timing (3rd Saturday in April), and communications before and after with the selected students, teachers and the ACS National staff. Assistance from the current committee will be given and a budget is approved. The Section has been involved with this program for more than 26 years and we’ve had several students attend the Olympic training camp and had two Olympians during this time.

For further information, please contact Mike Zapf or Shrish Shah; mike_zapf@mccormick.com, sshah@towson.edu.

Nominations Open For Remsen Award

The ACS Maryland Section is seeking nominations for the 2011 Remsen Award, named in honor of Ira Remsen, John Hopkins University’s first professor of chemistry and second president. Remsen Award lecturers are chemists of outstanding achievement, in keeping with Remsen’s long and devoted career as a proponent of the highest standards in teaching and research in chemistry. The award consists of a plaque and an honorarium.

Nominators should use the form for ACS national awards available at www.acs.org/funding. (Click on the link for “National Awards” then “Nominating Procedures” to reach the page containing the downloadable form.) Send the completed form and brief nominee curriculum vitae to Dana Ferraris at dferrar2@jhmi.edu by Nov. 30.

Reminder: Cast Your Ballots for the Section Election!

As we did last year, an electronic voting system will be used. You should have received an email with a link to your ballot by now. Member access to the ballot is important to us!! For those, who have not received the email or who would still like to vote by mail, please contact Stephanie Watson:

stephanie.watson@nist.gov, 301-975-6448.

Please cast your vote by October 22, 2010.
Chair: Takashi Tsukamoto  
Johns Hopkins Brain Science Institute  
443-629-7984  
ttsukamoto@jhmi.edu

For the following positions, please vote for one candidate:

**Vice-Chair:**
Holly Cymet  
Morgan State University  
Professor of Chemistry  
443-885-3882  
Holly.Cymet@MORGAN.EDU  
(uncontested)

**Chair-Elect:**
Sara Narayan  
Stevenson University  
Professor of Chemistry  
443-334-2326  
snarayan@stevenson.edu  
(uncontested)

**Secretary:**
Lance Baird  
Johns Hopkins University Applied Physics Laboratory  
443-778-7522  
Lance.Baird@jhuapl.edu  
(uncontested)

**Treasurer:**
Holly Cymet  
Morgan State University  
443-885-3882  
Holly.Cymet@MORGAN.EDU  
(uncontested)

With Charles Rowell stepping down, there is the vacancy of one counselor position and re-election of another:

**Counselor:**
Paul Smith  
University of Maryland – Baltimore County  
410-455-2519  
Pjsmith@umbc.edu  
(uncontested)

**Counselor:**
Merle Eiss  
McCormick Spice Company  
Meiss32@aol.com  
(Last elected in 2008 – term up in 2011)  
(uncontested)

**Alternate Counselor:**
Sandra Young  
US Army Research Laboratory  
410-306-0679  
sandra.young@us.army.mil

Please vote for up to 5 candidates:

**Members At Large:**
Maurice Iwunze  
Morgan State University  
Liina Ladon  
Towson University  
Mike Zapf  
McCormick Spice Company  
Suzanne Procell  
ECBC  
Rose Pesce-Rodriguez  
ARL  
Angela Wells Winstead  
Morgan State University

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Recap: September Activities

Morgan State University Chem Club
At our first meeting Sept. 2 we did two fun demos. We went outside and made “Mentos fountains” by dropping Mentos mint candies into 2 L bottles of Coke. We also decorated t-shirts (shown in the photo below) by first applying Sharpie permanent marker and then causing it to chromatograph with 90% isopropyl alcohol.

At the second meeting Bryant Young (MSU Chemistry ’97), now an intellectual property lawyer, described how chemistry can lead to a legal career.

The third meeting was a joint meeting with Bio Club and M.A.P.S. (a pre-med club) at which representatives of Johns Hopkins, Columbia, Harvard, and Yale Schools of Public Health described the possibilities in public health as a career and how to apply to their schools.

Teams of Morgan students are visiting fifth grade classes at Northwood Elementary School on Weds. and Fri. afternoons in the Morgan Undergraduate Chemistry Help (MUCH) program. The Morgan students have led the Northwood students in fun experiments such as cleaning pennies with salt and vinegar, and testing for acids and bases so far.
University of Maryland Baltimore County Chem Club
On September 23, the UMBC club held their 3rd annual Saccharide Social. This event is designed to welcome everyone back for a new semester, help meet new members and welcome them into the club. We made s'mores and caramel apples, played games and took advantage of the Member Get A Member campaign.

Washington College ACS Student Members Chapter
Last semester the Washington College ACS Student Members Chapter traveled to a local High School to present chemistry demonstrations to four 9th grade science classes. The 9th grade students were shown magic burning money, flame tests of various inorganic salts, and the properties of liquid nitrogen, as well as hands-on labs such as making elephant toothpaste, making lava lamps, and making slime. The students really appreciated our visit and the instructor informed us that many of them went home and did some of the demonstrations for their families.

Washington College ACS Student Members demonstrating how to make a lava lamp during their recent visit to a local High School.
September Meeting “Careers in Chemistry: Challenges and Opportunities”
On September 29, our local section held a career guidance event at the College of Notre Dame hosted by the Chemistry Department at College of Notre Dame. Following the reception with free pizza, Drs. Takashi Tsukamoto and Stephanie Watson (shown in the photo below) shared their job-hunting experiences and tips on how students can prepare for entering the job market in the toughest economic environment. Nearly 50 students from several local colleges and universities attended. The presentations were followed by a good audience Q&A session and networking.
Applications are Being Accepted for the 2011 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 15th but will continue through the year until all funds are utilized. Applications should be mailed to: Dr. Louise Hellwig, Morgan State University, Department of Chemistry, 1700 Cold Spring Lane, Spencer Hall Rm. 318B, Baltimore, MD 21251 or sent via e-mail: louise.hellwig@morgan.edu

Fall 2010 - Important Dates

October 17-23, 2010 National Chemistry Week  
October 20, 2010 Braude Award – UMBC  
November 18, 2010 November Meeting – Stevenson University  
December 8, 2010 Maryland Chemist Award Lecture – UMD School of Pharmacy

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/
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 (contact-us@mdchem.org).

National Chemistry Week

What: National Chemistry Week (NCW) 2010
Theme: "Behind the Scenes with Chemistry!"
When: October 17-23, 2010
Where: At a school, library, or museum near YOU!

Our NCW schedule of events is listed below. For more information please contact Sandra Young (sandra.young@us.army.mil).

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<th>Libraries:</th>
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<tbody>
<tr>
<td>Date</td>
<td>Location</td>
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<tr>
<td>Friday, 15 October 2010 – 11:30am</td>
<td>Savage Library (Howard County)</td>
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<td>Friday, 15 October 2010 – 2pm</td>
<td>Elkridge Library (Howard County)</td>
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<tr>
<td>Tuesday, 19 October -4:30-5:30pm</td>
<td>Bel Air Library (Harford County)</td>
</tr>
<tr>
<td>Saturday, 23 October 2010 – 11am</td>
<td>Glenwood Library (Howard County)</td>
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<tr>
<td>Saturday, 23 October 2010 – 2pm</td>
<td>Central Library (Howard County)</td>
</tr>
<tr>
<td>Thursday, 28 October 2010 - 4:30-5:30</td>
<td>Abingdon Library (Harford County)</td>
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<tr>
<td>Friday, 5 November 2010 – 11am</td>
<td>East Columbia Library (Howard County)</td>
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<tr>
<td>Friday, 5 November 2010 – 2pm</td>
<td>Miller Library (Howard County)</td>
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<tr>
<td>Tuesday, 23 November 2010 – 4:15-5:15</td>
<td>Waverly Branch Library (Baltimore City)</td>
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<tr>
<td>December 7 – 6:30-7:30pm</td>
<td>Edgewood Library - Cool Blue Light – Kids &amp; Chemistry (Harford County)</td>
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<th>Schools:</th>
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<tr>
<td>Date</td>
<td>Location</td>
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<tr>
<td>Thursday, 14 October 2010</td>
<td>Pleasant Plains Elementary (Baltimore County)</td>
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<tr>
<td>Friday, 15 October 2010</td>
<td>APG-EE Youth Center (Harford County)</td>
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<tr>
<td>Date</td>
<td>Location</td>
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<tr>
<td>Friday, 15 October 2010</td>
<td>APG Youth Center (Harford County)</td>
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<tr>
<td>Monday, 18 October</td>
<td>Meadowvale ES (Harford County)</td>
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<tr>
<td>Tuesday, 19 October 2010</td>
<td>Carver Center for the Arts HS (Baltimore County)</td>
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<tr>
<td>Wednesday, 20 October 2010</td>
<td>Hall's Cross Roads Elementary (Harford County)</td>
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<td>Friday, 22 October 2010</td>
<td>Moravia Park Elementary (Baltimore City)</td>
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<tr>
<td>Friday, 22 October 2010</td>
<td>Colgate Elementary (Baltimore County)</td>
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<tr>
<td>Monday, 25 October 2010</td>
<td>Youths Benefit Elementary School</td>
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<td>9-11am</td>
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<tr>
<td>Friday, 29 October 2010</td>
<td>Johnnycake Elementary School (Baltimore County)</td>
</tr>
<tr>
<td>Tuesday, 9 November 2010</td>
<td>St. Joan of Arc (Harford County)</td>
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<tr>
<td>Friday, 12 November 2010</td>
<td>Halstead Academy</td>
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Plants & People Sundays at the Rawlings Conservatory

The Howard Peters Rawlings Conservatory & Botanic Gardens in Druid Hill Park runs various programs on Sundays. The 2nd (Exploration Station), 3rd (Story Hour), and 4th (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)

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.
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, 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, 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 contact-us@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
To ensure that you receive the Chesapeake Chemist, please add the MD ACS e-mail (contact-us@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 contact-us@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
- Women’s Chemist Chair
- Young Chemist Chair

Please contact Walter Roy (Walter_Roy@mccormick.com, 410-771-7886) or Alvin Kennedy (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 contact-us@mdchem.org.