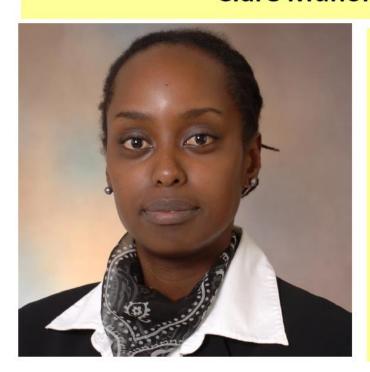




WCC Special Event Clare Muhoro



Date: April 12, 2018

Loyola University, Sellinger VIP Lounge

6:00 P.M.-8:30 P.M.

Cost: \$10/students and \$20 ACS members and non-members

Map

Contact: Kelly Elkins or Sara Narayan

Science for Diplomacy and Global Development: Perspectives of an Organic Chemist

Dr. Clare N. Muhoro is Associate Professor of Chemistry at Towson University. Her research focuses on the role of transition metals in organic transformations in two broad areas: synthesis of organic molecules via homogeneous metal-based catalytic hydroboration reactions; and degradation of organic pesticides in tropical aqueous environments in Ecuador, Mexico and Kenya. From 2013-2015, Dr. Muhoro served as a science and technology policy fellow in Diplomacy, Development and Security in the U.S, Global Development Lab at the U.S. Agency for International Development (USAID) in Washington DC. Dr. Muhoro currently serves as science partnerships advisor at USAID where she leads on efforts to source, generate and apply innovative approaches that use science, technology and partnerships to address development challenges. Dr. Muhoro is a strong advocate for women in science and is a board member of the Committee for the Advancement of Women in Science (COACh) and a founding member of the Mentoring neTwork of African Women in Academia (MTAWA). Dr. Muhoro received her B.Sc. in Chemistry from St. Lawrence University, NY, and her Ph.D. in Organometallic Chemistry from Yale University.

Maryland Section

Message from the Chair,

April 2018

Dear colleagues:

April has arrived and with it many ACS activities. This month could be called the outreach month because we have numerous activities reaching out young students from K-12 and young undergraduate and graduate chemistry students as well.

ACS Recent Activities

April 8, 2018. Twenty one students from colleges and universities in the Maryland area were nominated by their respective chemistry professors for their chemistry accomplishments. They received an Award from the Maryland Section of the American Chemical Society. On Sunday April 8th the beautiful celebration took place. The nominees were present at Notre Dame of Maryland University for lunch, a poster presentation (from previous month travel awardees), and an interesting presentation and demonstration of the Flavor Industry; *Trilogy Essential Ingredients, Inc.* The article with this information is found in this month's Chesapeake Chemist, in the following pages. The tittle is Successful Activities: Student Awards.

April 12, 2018. The Women Chemist Committee, WCC announced a special event. Dr. Clare Muhoro, Associate Professor of Chemistry at Towson University will address chemists on the *Science for Diplomacy and Global Development: Perspectives of an Organic Chemist*. The talk will take place at Loyola University, Sellinger VIP Lounge at 6:00 P.M. for the abstract and more information see our flyer in the April Chesapeake Chemist.

April 14, 2018. The Maryland section is proud to sponsor the 50th U.S. National Chemistry Olympiad. The Olympiad will allow 14 young promising future chemists to compete for one or more of the 20 places allocated nationally to participate in the International Chemistry Olympiad that will take place in Prague, Czech Republic.

Approaching events:

Chemist Celebrate Earth Day (April 20th), Forensics Conference (April 21st), 2nd Executive Committee Meeting (April 24th), Annual SFA STEM Club Earth Day/science night (April 26th), Brewery Tour (May 12th), Senior Chemists Luncheon (May 25th) and BMA Tour: "*Materials and Human Creativity through Time and Place*" Details on each event will appear in our next newsletter. Thank you for your continuous support.

<u>Beatrice Salazar</u>

Maryland Section Chair-2018

Information is Key

The following includes a background on ACS and the Maryland Local Section, our website, the first executive committee meeting and the section's programs for Spring-2018. Please check the *2018 Year Events* to see in detail each month of activities.

III. Executive Committee Meetings

Plans for this year include four regular executive committee meetings:

First executive committee meeting: Monday Feb. 12, 2018 at Notre Dame of Maryland University

Second executive committee meeting: Tuesday, April 24, 2018 at Stevenson University

Third executive committee meeting in September 4-7, 2018

Fourth executive committee meeting in December 17-20, 2018

Exact dates will be announced approximately two weeks prior to each meeting. Please allocate time in your schedules. An extra meeting will be assigned to discuss MARM-2019. Dates could change. Please use our website to stay informed on exact dates.

If you have any event to be considered please contact us before each month's meeting.

IV. The Maryland Section Program for 2018

All ACS members are welcome to our local section activities, lectures and events. They could bring new initiatives to us and ask for support on their activities. We are good at collaborating! For information on previous months events or other past activities please refer to Chesapeake Chemist publications: January, February, March

APRIL

- 1. Student Awards, April 8, 2018. For details check March Issue and this issue.
- 2. WCC Event: April 12, 2018 at 6:00 P.M.: Women Chemists Committee (WCC) Seminar All genders are encouraged to attend! Our Speaker is Dr. Clare Muhoro. The lecture location: Loyola University. To reserve a place contact: Sara Narayan and Kelly Elkins



Women Chemists Committee (WCC) serves all members of the American Chemical Society. The Maryland local section's mission is to continue the mission of ACS that is, to be leaders in attracting, developing, promoting, and advocating for women in the chemical sciences in order to positively impact society and the profession. Our goal is to increase participations of women in the chemical sciences, every year, we invite a women chemists to address the community of chemists professionals and students in the Maryland area. We advocate for women chemists in issues that concern to their career and professional advancement. We recognize women chemists' professional accomplishments in all science disciplines. See event Flyer in this issue.

Contact: Dr. KELLY ELKINS, Assistant Professor, Chemistry Department, Smith Hall, Room 514 - Phone: 410.704.6217 - Email Address: kmelkins@towson.edu

The Earth Day event Friday, April 20, 2018. Chemistry high school students and their teachers are invited



to tour the Montebello Water Filtration Plant-I in Baltimore City. All high schools in the Maryland area are welcome to apply for this tour-celebration of earth-day. The Tour includes: History of water treatment, information on water sources, a visit to each plant stages of water treatment, the chemistry of water treatment and its impact on public health. Contact: B.Salazar

<u>U.S. National Chemistry Olympiad</u> - <u>USNCO</u> – High School students need to apply to UNSCO Maryland coordinator at http://beatricesalazarusncocoordinator.webs.com by March 5th. The competition will take place at **CCBC Catonsville Campus on Saturday, April 14th** from 7:30 A.M.-3:30 P.M. ACS members that want to volunteer on that day to proctor during the exam are welcome.



<u>Chem-a-Thon</u> - The Maryland Local Section of ACS has supported the Chem-a-thon at the University of Maryland College Park since 1980. The support includes prices for students and teachers and volunteer judges. Participation could fluctuate from 26-270 participants. Each school participates with two teacher mentors and two student-teams (level-1 and level-2) per participant school. This is the 34th year of this competition. This event is open to other local sections including our neighbor Washington local section.

Contact: Mike Zapf

Executive committee meeting No.2 Tuesday, April 24, 2018, 6-8 pm at Stevenson University (Owings

Mills campus) Catering Services: Sodexo at Stevenson University

Location: Stevenson University

Beverly K. Fine School of the Sciences Kevin Manning Academic Center N-102

Room: N-122 Conference Room

Ted Herget Way (11200 Gundry Lane)

Owings Mills, MD 21117 (see <u>map</u> or click <u>here</u>) Contact: snarayan@stevenson.edu 443-394-9894

Presentation: A message to Maryland section members from Spring ACS National Meeting at New Orleans, LA by councilors and student travel awardees.

Annual SFA STEM Club Earth Day/Science Night April 26, 2018, 5:30-7:15 pm. The SFA STEM Club for pre-K-5th grade will host a science night event. The hands-on science experiments are hosted by the Maryland section of the American Chemical Society and its students members. Contact Sandra Young.

Chemistry in the Library: April 22- 28th Chemists Celebrate Earth Week Events Programs are for children ages 7 & up; 7-8 year olds must be accompanied by an adult. Miller Library program on 9 May at 7pm is open to all ages. 60 min. Registration required. Please register with the appropriate library system

MAY

Saturday, May 12, 2018 at 2:00 P.M.

Let's have FUN! See the advertisement on our next BEER TOUR Contact <u>Louise Hellwig</u>, <u>Kelly Elkins or just sign up at https://doodle.com/poll/imebe95v74spbnbm</u>

Friday, May 25, 2018 at 11:30 A.M.

Let's Celebrate! Senior Chemists Luncheon at Matthew's, 1600 Frederick Road in Catonsville. Presentation: STEM Outreach in our Communities by Rose Pesce-Rodriguez and Sandra Young, Maryland Section members.

SUCCESS STORIES Update on Project SEED Alumni

Corshai Williams, formerly a student at Western High School, was a Project SEED high school student at Morgan State University during the summer of 2013 (working with Dr. Yousef Hijji) and the summer of 2014 (Dr. Pumtiwitt McCarthy). We have now received word that she has been accepted at MIT for a PhD in Chemistry with a full scholarship and teaching assistant position! Congratulations Corshai! The ACS Project SEED summer research program allows economically disadvantaged high school students to intern in an academic, industrial, or government laboratory. https://www.acs.org/content/acs/en/education/students/highschool/seed.html Corshai's stipend was paid by the national ACS (50%) and by the Maryland Section.

SUCCESS STORIES Update on Student Travel Awards and its impact to Chemistry Safety

Sarah Ashleigh Wirick and her professor Christopher Stromberg research was featured in C&EN, March 26 edition. Congratulations!

Some safety eyewear fails to protect against ultrafast lasers

Users should test eyewear under their own working conditions,

researchers suggest

by Jyllian Kemsley

MARCH 26, 2018 | APPEARED IN VOLUME 96, ISSUE 13

C&EN website https://cen.acs.org/safety/lab-safety/safety-eyewear-fails-protect-against/96/i13

To Maryland Section Executive Board:

"Thank you. That feature was a direct result of us being able to attend the meeting, which we couldn't do it without the Maryland Section's support! Thanks, Chris" Christopher Stromberg.

Abstract ID: 2860140

Femtosecond laser eyewear protection: Measurements and precautions

Maximilian Riedel-Topper¹, Sarah Wirick¹, Joshua A. Hadler², Brian G. Alberding³

Edwin J. Heilweil³, Christopher J. Stromberg¹

A :1 0010

April, 2018 Volume 75, Number 4

¹Department of Chemistry and Physics, Hood College, 401 Rosemont Ave, Frederick, MD 21710 ²Applied Physics Division, Physical Measurement Laboratory, NIST Boulder, CO 80305 ³Radiation Physics Division, Physical Measurement Laboratory, NIST Gaithersburg, MD 20899

Unlike continuous-wave lasers, femtosecond pulsed lasers have wide spectral bandwidths and extremely high peak power. Lasers such as Ti:Sapphire oscillators also have an adjustable center wavelength. These factors become an issue when selecting eyewear protection, as the eyewear may not protect the user from the entire laser spectrum, and the integrity of the eyewear material may be compromised by the high peak powers. This study was a continuation of a previous study that measured the effective optical densities of commercially donated filter samples. In this study, the same samples were tested to characterize their potential modes of failure using a 1 kHz Ti:Sapphire regenerative amplifier which generated ca. 80 fs pulses with various wavelengths, powers, repetition rates, and beam spot sizes. For some filters, the wide bandwidth and variable center frequency of the laser caused the observed optical densities to be significantly lower than the supplier's rating at the center frequency. The observed modes of failure included melting, burning, bleaching, and saturable absorption behavior. Several filters transmitted several orders of magnitude more light than the supplier's suggested optical density ratings without any physical signs of damage. In general, plastic lenses were considerably more likely to fail, while all glass samples tested maintained their integrity under the conditions tested. The results of these experiments indicate that eyewear protection should be tested under the given experimental conditions to determine their efficacy before use.

SUCCESS STORIES Update on NOLA 2018 Student Travel Awards

Caitlin McCadden, another successful Travel Awardee, Presented in both, New Orleans ACS National Meeting in March 18th and in the Student Awards event this past April 8th at Notre Dame of Maryland University. She has accepted the Maryland Section's invitation to present (third time) her research and poster to members of the Maryland Section. Her presentation will be at 6:30 P.M. on Tuesday April 24, 2018 at Stevenson University.

Abstract

Design, synthesis, and evaluation of selective inhibitors of mono-(ADP-ribosyl) transferase, PARP-10

Poly-(ADP-ribose) polymerases (PARPs) and mono-(ADP-ribosyl) transferases are members of a superfamily of enzymes that catalyze the transfer of ADP-ribose onto target proteins. The extensive research of PARP1, the parent member of the superfamily, has resulted in advances in treatment of tumor types deficient in certain DNA repair mechanisms. While PARP1 was the first member of the family that was characterized, there are currently 17 other members of the PARP family. One of the other members of the family is PARP10 (a.k.a. ARDT10). This enzyme has been implicated in the regulation of gene transcription, genomic stability and DNA repair via the addition of ADP-ribose to histones. The overall goal of the research was to modify a series of diaryl-ethers in order to improve the potency and selectivity towards PARP10 and enhance the drug-like properties of members of this series. Based upon the known crystal structure of a closely related member of the superfamily, PARP 14, we were able to design analogs in which modifications to the series increased the potency towards PARP10. Many members of this series demonstrate sub micromolar inhibition against PARP10 and over 10-fold selectivity over other closely related members of the PARP family.



Successful Activities

Maryland Section 2018

Student Awards

OUR STORY...

IN THIS ISSUE:

"THE STORY OF CINNAMON"

APRIL EVENT

Nineteen chemistry students were honored on April 8th by the Maryland Section of the American Chemical Society at Notre Dame of Maryland University. honorees their nominated by respective chemistry professors and advisors from universities and colleges in the Maryland area. Students received an award certificate, a commemorative portfolio and a periodic table mug. The Awardees (from left to right) are: Mitchell Winkie U.S. Naval Academy; Kayla Martin-Culet, Towson University; Krystine Hill, Stevenson University; Talon Bevan, University of Maryland Baltimore County; Simon Belcher, Washington

College; Alexander E. Kossak, Johns Hopkins University; Maxwell Madden, Saint Mary's College of Maryland; Elton Kativhu, Goucher College; Sarah Wirick, Hood College; Dan Burgoon, Frederick Community College; Faith Olulana, Howard Community College; Jane Butler, Loyola of Maryland University; Phuc Truong, McDaniel College; Olumide Fagboyegun, Anne Arundel Community College: Nathaniel McClean, Coppin State University; Jin Hee Yi, Notre Dame of Maryland University; Treshaun Sutton, Morgan State University. Rob Leikus, Community College of Baltimore County(not present); and

Kevin Jankowski, Mount Saint

present).CONGRATULATIONS!











A well-attended event at Notre Dame of Maryland University; Speakers and Event Organizers April 8th

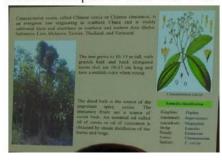
These students reflect the highest academic performance in chemistry. They were nominated because of their chemistry achievements and its dedication to research. They are a promising new generation of chemists.

"The Story of Cinnamon" was the topic of an interesting presentation and demonstration of three different types of cinnamon extracts oil cassia Chinese redistilled, oil cinnamon bark from India and oleoresin cinnamon

Smelling and
Tasting
oil cassia
oil cinnamon
Korintji

(Korintji)
from
Indonesia.
by Stephen
P. Askew
and
Roxanne T.
Dierich
both from
Trilogy
Essential
Ingredients,
Inc.

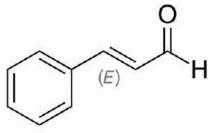
During the event the presentation and tasting and smelling of the cinnamon extracts captivated the audience. Cinnamon is more than just a spice! It is obtained from the inner bark of several tree species (cinnamomum). It has been consumed since 2000BC in ancient Egypt, highly priced in ancient times for its use as perfume during embalming process. It is one of the most beneficial spices used to treat conditions such as coughing, arthritis, and sore throats. It ranks No.1 as protective antibacterial and antioxidant spice it also has anti-



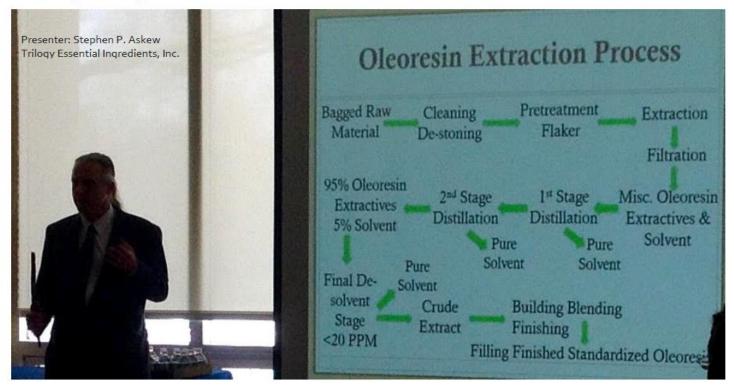
Mary's University (not

inflammatory properties just to name few of its benefits. Its name Cassia is from AD 1000 derived from Hebrew "qatsa" meaning 'to strip off bark'.

C₉**H**₈**O** Cinnamaldehyde is the organic compound that gives cinnamon its flavor and odor. The spice taste and fragrance occurs due to the absorption of oxygen.



Contact:
George Farrant
Email Address: <u>afarrant@yahoo.com</u>
<u>www.maryland.sites.acs.org</u>



A bit of history about the Student Awards Program

The Student Awards program has been in existence for more than 25 years. The program was started by Carl Minnier, Professor of chemistry at Essex Community College (today, Community College of Baltimore County, CCBC at Essex campus). George Farrant member of the Maryland Section Executive Board became the Chair of Student Awards Committee in 2005. The purpose of the committee is to have an annual program that recognizes top chemistry students at the various schools in the Maryland area. Its mission is to advance students chemistry careers and benefit the new generation of chemists. Students would have a nice accomplishment to write on their curriculum vitae when applying to graduate school or getting jobs. This Award, hopefully, will be one of the numerous awards these deserving students receive in their chemistry career.

Each school sets up its own criteria for nominating the best candidate. Most are chemistry majors but other related disciplines such as biochemistry or medicine are included. The Maryland Section only asks Professors to provide the names of their top chemistry student. In the future, the section will request some words by the professors to share the accomplishments of their nominees with the chemistry community.

Angela Sherman, Chair of the Chemistry Department at Notre Dame of Maryland University is also a member of the Student Awards Committee. She has been very active in providing the location for the awards ceremony and has arranged for many years, a variety of delicious lunch during the event.

ACS Local Section



Chemistry in the Library: Chemists Celebrate Earth Week Events

Programs are for children ages 7 & up; 7-8 year olds must be accompanied by an adult.

Miller Library program on 9 May at 7pm is open to <u>all ages</u>.

60 min. Registration required. Please register with the appropriate library system.

Howard County Library System Glenwood Branch Sat, April 7 @ 11 am https://hclibrary.org/

Enoch Pratt Free Library Govans Branch Saturday, April 14 @2pm www.prattlibrary.org/

Howard County Library System
East Columbia Branch
April 21 @ 2 pm
https://hclibrary.org/

Howard County Library System Savage Branch Sat, April 28 @ 2pm https://hclibrary.org/ Howard County Library System Elkridge Branch Sat, May 5 @ 2 pm https://hclibrary.org/

Howard County Library System
Miller Branch
May 12 @ 1 & 3 pm
Wednesday, May 9th @ 7pm (adult/family program)
https://hclibrary.org/

Howard County Library System Central Branch Sat, May 26 @ 2 pm https://hclibrary.org/

Carroll County Library System Eldersburg Branch Sat 21 Jul @ 1pm https://library.carr.org/

Annual SFA STEM Club Earth Day/ Science Night

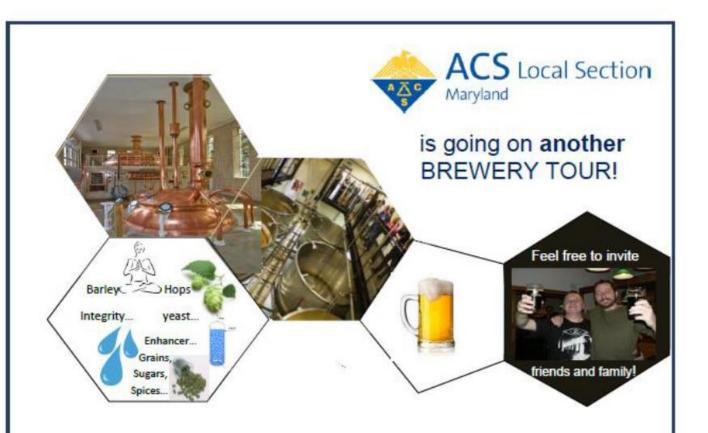
What: Annual SFA STEM Club Earth Day/Science Night

When: Thursday, April 26 - 5:30-7:15pm

Where: 3617 Harford Road, Baltimore, MD 21218 Who: Pre-K through 5th graders (and their parents!)

Why?: To celebrate Earth Day!

The SFA STEM Club will be hosting its annual Earth Day/Science Night for pre-K through 5th graders. Hands on experiments hosted by Maryland ACS members/student members, live animal exhibit from Scales and Tales, Blue Water Baltimore and the Maryland Master Gardeners will all be present to make for a GREAT educational and FUN evening for your student. (\$1 admission fee helps support the SFA STEM Club and includes admission and lite dinner.)



BREWERY TOUR: Peabody Heights Brewery

http://www.peabodyheightsbrewery.com/

Location 401 E 30th St.

Baltimore, MD 21218

Date/Time: Saturday, May 12, 2018 at 2:00 P.M.

Cost: FREE admission! (just pay for your drinks)

to https://doodle.com/poll/imebe95v74spbnbm

Tour the Peabody Heights Brewery & learn how beer is made!

Tour includes lots of baseball history, since the brewery is on the site of an Old Orioles stadium!

You must be 21+ years of age to drink.
For safety reasons, no open toe shoes, flip flops, heels, etc.

Announcements

ACS Call for papers Present Your Innovative Work at the 2018 Green Chemistry & Engineering

<u>Conference.</u> The call for abstracts is now open! Submit abstracts for presentation at the <u>22nd Annual Green Chemistry & Engineering Conference (GC&E)</u>, to be held June 18-20, 2018, in Portland, OR. The theme for the 2018 GC&E is "Product Innovation Using Greener Chemistries."

CALL FOR NOMINATIONS: MD ACS OFFICER POSITIONS

Nominations are solicited from the membership for positions as officers within the Maryland Section of ACS. Nominations may be send to the Chair of the Nomination Committee, Dr. James A. Saunders at jsaunders@towson.edu either as self-nominations or to nominate a colleague.

Position that are elected in 2018 are:

- 1 Chair-Elect
- 1 Treasurer
- 1 Secretary
- 5 Members At Large
- 2 Councilors

The Chair-Elect term is 3 years: candidate is Chair-Elect for one year, and then moves to Vice-Chair for one year, followed by Chair for the last year.

Two Councilor positions are also open for a 3-year term in 2018.

Members-at Large, Treasurer and Secretary are elected each year.

Undergraduate and Graduate Student Travel Grants

Undergraduate and Graduate students may apply to the ACS Maryland Section to receive up to \$200 for travel and expenses to attend the August national ACS meeting in Boston. This is open to ACS members 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 and dates
- Your ACS membership number
- An estimated budget (cost for travel, registration, lodging, and meals)
- A 250 word essay describing your motivation for attending the meeting
- A copy of your abstract and the abstract number ACS gave it when your abstract was accepted
- A letter of support from your faculty advisor

• Please state what would be the most convenient way for the check to be made out, in the event you are awarded a travel grant.

Applications for the August national ACS meeting in Boston are now being accepted. Decisions will be announced May 10.

To a certain extent the decisions will be made on a first come, first served basis; however the goal is to allow students from as many schools as possible to attend, so special consideration will be given to the first student who applies from each college/university. We especially encourage schools which have never had a student apply for a travel grant, to consider applying for a travel grant this year.

Submit your application to Louise Hellwig by e-mail: <u>Louise.Hellwig@morgan.edu</u>. If you are awarded a travel grant, the following items need to be submitted after the meeting:

- Photocopies of receipts totaling the amount of the award.
- Trip report summarizing your experience at the meeting and photos of yourself at your poster at the meeting so we can proudly post them on the section website.

CALL FOR NOMINATION: 2018 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. At the October dinner meeting the recipient presents his/her research and receives a plaque describing his/her contributions as well as a monetary award to help support further student research. Nominations are now being accepted for the 2018 Braude Award. Nominees must be a member of the ACS, and underrepresented candidates including women, are encouraged. 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. Deadline: June 1, 2018

Attention U.S. National Chemistry Olympiad (USNCO-2018) Participants

Due to the increased interest in the USNCO local participation we have decided to open the registration to this outstanding competition in advance:

- Registration for 2018 Local Exam is now open for all previous and new participants.
- Schools will receive a letter of invitation in January and February 2018
- The Local Exam will take place during the Month of March 2018
- The National exam will take place in April 14, 2018 (New location: Community College of Baltimore County, CCBC)

Please use the website http://www.beatricesalazarusncocoordinator.webs.com to find the registration form. The website will be updated soon to show the correct dates as soon as we receive confirmation from ACS headquarters.

Thank you for your continuous interest in USNCO local and National competition

REMINDER:

Receiving the Chesapeake Chemist

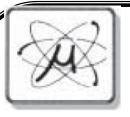
Hopefully, if you are reading the Chesapeake Chemist this month, you are receiving it via e-mail from us. We went to electronic-only mailings to our MD ACS membership in October 2006.

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

- E-mailing us at <u>contact-us@mdchem.org</u> 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 left-hand side of the website.



micron inc

ANALYTICAL SERVICES

MATERIALS CHARACTERIZATION

MORPHOLOGY CHEMISTRY STRUCTURE

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3815 LANCASTER PIKE, WILMINGTON, DE 19805

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