

2018 Braude Award



“Identification of extracted antioxidant compounds and quantification of their binding affinities with proteins”

Dr. Jocelyn McKeon
Notre Dame of Maryland University

Thursday, October 25, 2018
6:00 P.M.

Doyle Formal Room
Notre Dame of Maryland University
4701 N Charles St.
Baltimore, MD 21210

RSVP Louise Hellwig Secretary-2018, Maryland Section
E-mail: louise.hellwig@morgan.edu



2018 Section Officers:

Chair 2018..... Beatrice Salazar, beatricesalazar1@gmail.com
Vice Chair 2018..... Dana Ferraris, McDaniel College, dferraris@mcdaniel.edu
Chair-Elect (Chair 2020)....Pumtiwitt McCarthy, Morgan State University, pumtiwitt.mccarthy@morgan.edu
Secretary 2018..... Louise Hellwig, Morgan State University, louise.hellwig@morgan.edu
Treasurer 2018.....Angela Sherman, Notre Dame of Maryland University, asherman@ndm.edu
Past Chair (2017).....Stephanie Watson, N.I.S.T., stephanie.watson@nist.gov

2018 SECTION COMMITTEE ON NOMINATIONS

Nominated by current Chair, Congratulations!

Chair of the Committee on Nominations..... James Saunders, jsaunders@towson.edu
Additional 4 members: Beatrice Salazar, Chair-2018, beatricesalazar1@gmail.com
..... Dana Ferraris, Vice Chair-2018, dferraris@mcdaniel.edu
.....Sara Narayan, Stevenson University, SNARAYAN@stevenson.edu
..... Sandra Young, RDECOM, sandra.k.young26.civ@mail.mil

COUNCILORS/COMMITTEES

1. 2018-2020 Dana Ferraris Chair of the Section Program Committee (McDaniel College), dferraris@mcdaniel.edu
2. 2018-2020 Jan Kolakowski Member of ACS Committee on Economic and Professional Affairs, Chair of Section Finance/Investment Committee, jek6042@gmail.com
3. 2017-2019 Merle Eiss Member of ACS Meetings and Expositions Committee, meiss32@aol.com
4. 2017-2019 Paul Smith Member of ACS Local Section Activities (LSAC) Committee Associate/Chair of Long-Range Planning Committee (MARM-2019) (UMBC), pjsmith@umbc.edu
5. 2018-2020 Stephanie Watson Member of the ACS Committee on Committees (ConC) Liaison on [Nomenclature, Terminology and Symbols](https://www.acs.org/content/dam/acsorg/about/governance/charter/lsbylaws/nomenclature_terminology_and_symbols) (NIST), stephanie.watson@nist.gov 

ALTERNATE COUNCILORS/COMMITTEES

1. 2017-2019 Kelly Elkins Member of the ACS Ethics Committee, Kmelkins@towson.edu
2. 2017-2019 Pumtiwitt McCarthy Chair of Publicity Committee, pumtiwitt.mccarthy@morgan.edu
3. 2017-2019 Sandra Young Chair of Community Outreach Activities Committee, sandra.k.young26.civ@mail.mil
4. 2018-2020 Michele Foss Committee TBA, foss.michele@gmail.com
5. 2018-2020 Sarah Zimmerman Chair of Member Assistance Committee,* scatzim@gmail.com

*New 2018 Committee as per Maryland Section Governance Bylaws, nominated by current Chair, Congratulations!

<https://www.acs.org/content/dam/acsorg/about/governance/charter/lsbylaws/maryland.pdf>

MEMBERS-at-Large

Suzanne Procell, Edgewood Chemical Biological Center, suzanne.a.procell.civ@mail.mil
Rose A. Pesce-Rodriguez, RDECOM, rose.a.pesce-rodriguez.civ@mail.mil
Sara Narayan, Stevenson University, SNARAYAN@stevenson.edu
James Saunders, jsaunders@towson.edu
George Farrant, gfarrant@yahoo.com

[Awards Committee Chairs & Local Section Committees Chairs](#)

Maryland Section on the Web:

maryland.sites.acs.org

Webmaster:

Pumtiwitt McCarthy, Pumtiwitt.McCarthy@morgan.edu

Chesapeake Chemist Editor-in-Chief:

Pumtiwitt McCarthy, Pumtiwitt.McCarthy@morgan.edu

Contact us at:

acsmarylandsection10@gmail.com

CHAIR'S MESSAGE

BEATRICE SALAZAR



As chair of the Maryland Section of the American Chemical Society, I thank you for your interest in our local section and the Chesapeake Chemist. We had plenty of activity in July and August and more coming up in the Fall.

Last July we had a second tour for chemists of the Montebello Water Filtration Plant-I in Baltimore. Attendees included students and faculty members from both Stevenson University and Johns Hopkins University. As usual the tour was informative and entertaining thanks to the wonderful explanations given by Dr. Richard Nuss the Director of the water treatment plant laboratory.

In August, several Maryland Section members attended the 256th ACS National Meeting in Boston, MA. It was a delight. There were several excellent “not-to-be-missed” presentations. Among them:

(1) - **21st Century Medicine Will Transform Healthcare: Opportunities for Nanoscience and Chemistry**, presented by Leroy Hood, Institute for Systems Biology.

(2) - **PMSE Advances in Human Space Exploration Chemistry for Humanity's Next Big Leap**. Speakers included Robert Langer (MIT), Emily Carter (Princeton) and James Green (NASA).

(3) - **The Kavli Lecture Series** presented by Jill Millstone (University of Pittsburgh) and Kavli Innovations in Chemistry: Light as Fuel by Dr. Harry Atwater (California Institute of Technology).

Also, The **Graduate & Postdoctoral Scholars Seminar** with Jorge Cham made us laugh; he is an entertainer and creator of the popular cartoon PhD Comics.

During the 50th Project SEED celebration at the National Meeting we had the opportunity to listen to Sir Fraser Stoddart, 2016 Nobel Laureate in Chemistry and Champion for the *50 Forward Campaign*. During the reception many volunteers at the local section level were honored, including me. What a surprise to receive this unexpected award! The NASA and ChemLuminary award receptions (about 40 awards!) were filled distinguished presenters, chemists from all over the world and excellent conversation (see photos in the following pages).

Poster sections, the exhibit halls, short lectures and workshops did not disappoint. One workshop that called my attention was ACS axial: Behind Every Article, there's a PERSONAL STORY OF DISCOVERY. The workshop, “ten Tips for Publications” by four journal editors including Dr. Teri W. Odom, JACS editor, was helpful to those of us interested in submitting articles for publication. We have more information about this subject in our newsletter.

Other activities at the Boston meeting included the public Executive Committee meeting and public Governance Committee Meetings. I encourage all members to participate in these meetings at future national meetings. They are great source of information and an opportunity to become involved with ACS.

This Fall 2018, the Maryland Section will be celebrating **Chemistry Week**. Please contact our coordinator [Sandra Young](#) for further information. Contact [Rose Pesce-Rodriguez](#) for Chemistry in the Library: *Chemistry is out of this world*, a magnificent weekly program for children (7 year old and up). In addition to the programming for the Fall, we are having three Award Events:

October - The Braude Award - Our awardee this year is Dr. Jocelyn McKeon Associate Professor, Chemistry Department, Notre Dame of Maryland University. For reservations, contact coordinator [Louise Hellwig](#).

November 15th - Remsen Award - The 73rd Ira Remsen Award will go to Professor Chad Mirkin of Northwestern University. The award will be presented at Johns Hopkins University. Contact [Dana Ferraris](#) for more details.

December - Maryland Chemist of the Year Award, contact coordinator [Angela Sherman](#).

Finally, I want to invite all members to apply for governance positions at your Maryland Local Section. See the announcement at the home page of our website. We will announce again via e-mail to all our members. For more information, you are invited to attend the **Third Executive Committee Meeting** on **September 24th at UMBC** (1000 Hilltop Circle, MD 21250) Chemistry Department Room-351. All are welcome!

Information is key continues with the special interest in keeping you informed in detail about activities at the Maryland local section. Our webpage is updated. Keep in touch with us and let us know what you want. Your views on past activities are welcome.

Beatrice Salazar

ACS - Maryland Section Chair-2018

Information is Key

The following includes a background on ACS and the Maryland Local Section, information on our website, and executive committee meetings and more section's programs for 2018. Please check the **2018 Year Events** to see in detail each month of activities. For information on previous month's events or other past activities please refer to Chesapeake Chemist publications: [January](#), [February](#), [March](#), [April](#), [May](#), [June](#) and [July](#).

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 **Monday, September 24, 2018**, UMBC Chemistry Department

Fourth executive committee meeting in December 2018, exact date TBA

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. For [minutes](#) of previous meetings please check the website.

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

The Maryland Section Program for 2018 continues...

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.

SEPTEMBER

September 24, 2018 - Third Maryland Local Section Executive Committee Meeting This meeting is open to all ACS Maryland Section Members. All interested in the events, governance positions or have other inquiries are encouraged to attend the meeting.

Location: UMBC Chemistry Department (MYER) Room 351

Time: 6:00 P.M.

Dinner: UMBC Catering Services

OCTOBER

Mole Day celebration! We wish you on October 23rd 6.02×10^{23} moments of happiness!

October 24, 2018. The Braude Award will take place at Notre Dame of Maryland University. Please see the cover page of this September Chesapeake Chemist Issue and the information below.

The Braude Award supports and celebrates the work of a professor conducting outstanding research involving students at a college or university, particularly in the Maryland section. The recipient receives a plaque describing his/her contributions and a monetary award to help support further student research. The monetary award has grown over the years to being presently \$3500.

Congratulations to Dr. Jocelyn McKeon, 2018 Braude Award recipient!

“Identification of extracted antioxidant compounds and quantification of their binding affinities with proteins”



Speaker Bio: Dr. Jocelyn McKeon is an Associate Professor in the Chemistry Department at Notre Dame of Maryland University. She received her Ph.D. in analytical chemistry from North Carolina State University. After spending a year working in the pharmaceutical industry she completed a postdoctoral research appointment at West Virginia University. Her area of expertise is in the area of bioanalytical separations chemistry. Since joining the faculty at Notre Dame of Maryland University she has supervised undergraduate research projects involving the following analytical separation techniques: capillary electrophoresis, high-performance liquid chromatography and ion-exchange chromatography. These research projects have produced several poster presentations, grant submissions, and a forthcoming article submission on the use of capillary electrophoresis for the determination of binding constants between proteins and antioxidant flavonoid compounds.

Abstract: Within the context of this program undergraduate students engaged in research projects involving a variety of separation techniques. In particular gas chromatography-mass spectrometry (GC-MS) and affinity capillary electrophoresis (ACE) methodologies were developed for the identification of extracted antioxidant compounds and the determination of their binding strength with proteins. More specifically d-limonene- a cyclic monoterpene found in citrus fruit rinds, kavain – a lactone found in the roots of kava plant, and a set of flavonoids - polyphenolic plant compounds found in a variety of fruits, vegetables, grains, seeds, nuts, wine, beer, and tea – were investigated since these compounds have been shown to exhibit antioxidant properties when ingested. Moreover, in many studies it has been shown that the interaction between antioxidant compounds and proteins, in particular bovine serum albumin, affects antioxidant capacity and efficacy. Antioxidant compounds extracts were characterized using GC-MS. Additionally ACE methodologies were developed and applied for the determination of binding constants between three flavonoid compounds (quercetin, baicalein, and kaempferol) and bovine serum albumin. Data was collected from monitoring the shift in migration time of the flavonoids with increasing concentration of BSA added to the electrophoresis buffer solution. This migration time shift data was then analyzed using a linear regression Scatchard plot as a means of quantifying the binding constants between the flavonoid compounds and the protein.

PHOTOS from 256TH ACS National Meeting in Boston, MA (next page) August 19-23rd, 2018

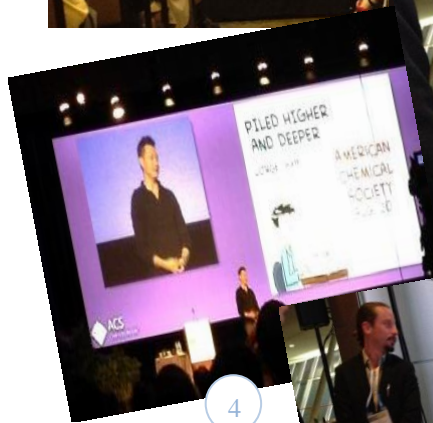
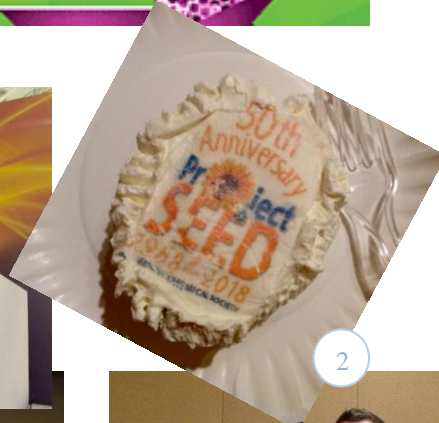
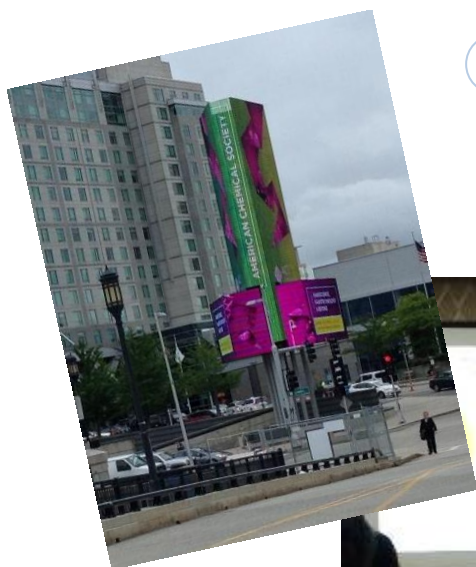
- 1 ACS Axial, ACS Publications, JACS editors' panel with Dr. Teri W. Odom (third from left)
- 2 50th Anniversary Project SEED, presentations and reception
- 3 PMSE Advances in Human Space Exploration Chemistry for Humanity's Next Big Leap: Speakers included Robert Langer (MIT), Emily Carter (Princeton) and James Green (NASA).
- 4 Graduate & Postdoctoral Scholars Seminar with Jorge Cham
- 5 20th Annual ChemLuminary Awards, new Chair-person and Washington Local section awardees

2018 NANOSCIENCE, NANOTECHNOLOGY & BEYOND

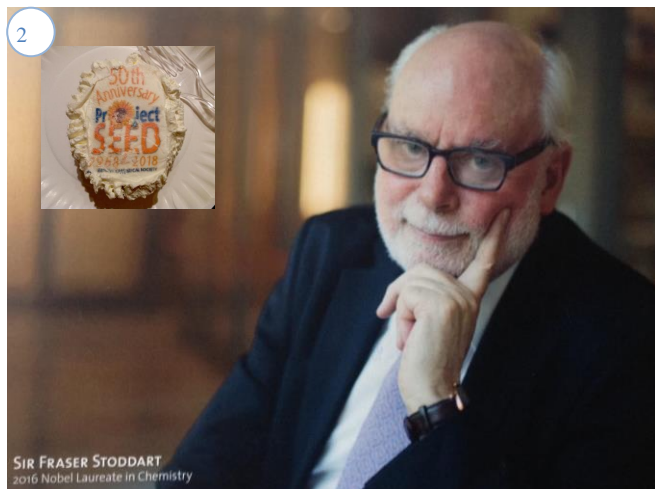
AMERICAN CHEMICAL SOCIETY National Meeting & Exposition

Aug. 19-23 Boston | MA

Photos: Courtesy of Beatrice Salazar, Chair-2018, ACS Maryland Section



2



TOP 10 TIPS FOR PREPARING YOUR MANUSCRIPT 1

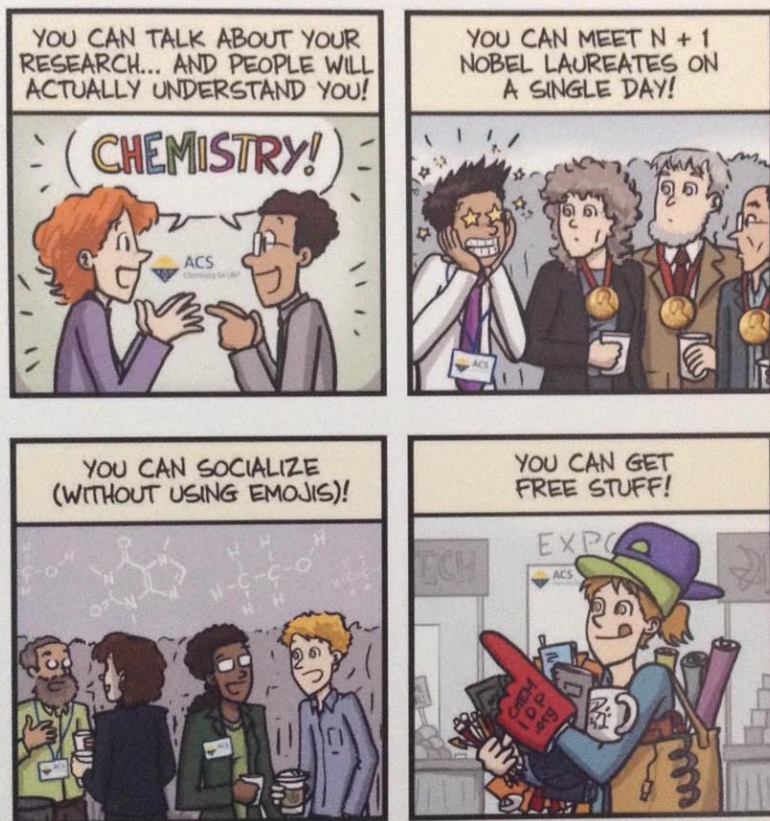
- 1_ CREATE A USEFUL OUTLINE
- 2_ CHOOSE THE JOURNAL CAREFULLY
- 3_ READ AND FOLLOW THE GUIDELINES
- 4_ TELL A STORY
- 5_ DRAW GRAPHICS WITH CARE
- 6_ ATTRACT READERS WITH A STRONG TITLE
- 7_ TOC GRAPHICS COUNT
- 8_ REVISE, EDIT AND REWORK
- 9_ PREPARE THE 'SI' WITH CARE
- 10_ WRITE A STRONG COVER LETTER

HOW TO PUBLISH YOUR RESEARCH

Author resource centre: rsc.li/journal-resources

- 1_ CHOOSE THE RIGHT JOURNAL
- 2_ READ THE AUTHOR GUIDELINES
- 3_ WRITE YOUR ARTICLE
- 4_ CHECK YOUR ARTICLE
- 5_ YOUR SUBMISSION CHECKLIST
- 6_ ARTICLE ASSESSMENT
- 7_ REVISING YOUR ARTICLE
- 8_ PROMOTING YOUR WORK

THE BEST THINGS ABOUT AN ACS MEETING FOR GRADUATE STUDENTS AND POSTDOCS



BEATRICE!
-JORGE C. 😊

Contact Beatrice Salazar for more details on the right hand side information...

September, 2018

Volume 75, Number 8

Councilor Report

American Chemical Meeting Boston August 2018

The ACS Council met Wednesday August 22, 2018 at the Boston meeting. All five Maryland Councilors were present. Attendance for the national meeting was 14,235, 3,671 of whom were students. The Exhibit was completely sold out with 300 vendors presenting their products and services. The ACS membership has been declining somewhat over the past few years. As of August 31, 2018, current membership was 149,584. There is cautious optimism that total membership will rise this year for the first time since 2011.

By electronic ballot, the Council elected members to three council committees, Council Policy Committee, Committee on Nominations and Elections, and the Committee on Committees.

The Board of Directors took several actions:

- They approved the Society's nominees for the 2019 Perkin Medal and the 2019 National Science Board Public Service Award.
- The Board voted to keep the advance member registration fee of \$490 for national meetings held in 2019.
- The Board expressed support for the value of industry to ACS and acknowledged Corporation Associates as being positioned to represent the voice of industry to the Board and ACS.
- The Board liaison to the Leadership Advisory Board provided an update on initial efforts to the development of the next generation ACS Leadership Program.
- The Board's global liaison offered an update on efforts to strengthen the global presence of the Society's programs to better serve our international members and the global chemistry industry.

The Board received an extensive report from the Executive Director and CEO on issues relating to Passion for Chemistry and Diversity and Inclusion as core values of the Society. The Director also reported that there has been initial success with several initiatives underway to address and reverse the decline in membership.

Special Discussion

Society President, Peter Dorhout led a special discussion on what role(s) ACS should play in preventing sexual harassment in the sciences. One question that was asked of Council was "Have you ever witnessed or experienced harassment at an ACS meeting or event". From 413 councilor responses, 23% (94) said yes and 77% (319) said no. The second question, "Have you ever witnessed or experienced sexual harassment at an ACS meeting or event or in your professional work place?", 141 women and 127 men responded "Yes".

After the discussion, the Council heard current and planned activities for the 2018-2019 years. Several symposia and events were reported supporting this national's meeting theme of Nanoscience, Nanotechnology & Beyond.

The Board meeting was adjourned at 11:25 PM.

Merle Eiss, Councilor

Second Tour for Chemists

Montebello Water Filtration Plant-I in Baltimore City

(Event: July 27, 2018)



STEM as its best! The tour has participants from the community, scientists from industry: Trilogy Essential Ingredients, INC. and Johns Hopkins & Stevenson Universities: faculty and student from chemistry, biochemistry, biology, applied math and **Project REAP**.

Each summer, Stevenson University runs a Summer Science Scholars Research Program (S3RP). Selected Stevenson science and math students, and this year a high school student who is part of the **US Army's Research & Engineering Apprenticeship Program (REAP)**, work full-time in one of our campus research or computer laboratories or in field studies on a meaningful project under the guidance of a faculty mentor. Students in the program have the opportunity to engage in all aspects of a research project, from designing and executing the experimental approach to research questions to analyzing and communicating their research results in verbal and written format to other scientists and mathematicians. By engaging in this summer program, students refine their future career plans by reflecting on their research experience and their unique interests and talents. In addition, students attend professional meetings and visit local places of scientific interest.

For information on this program, contact Professors: Timothy M. Dwyer (Chemistry), Benjamin N. Wilson (Math) or Ellen Roskes.

Ellen Roskes, Ph.D., Associate Dean | Chemistry, Mathematics and Physics
Stevenson University | Fine School of the Sciences, Manning Academic Center- N110
11200 Ted Herget Way | Owings Mills, MD 21117
<http://www.facebook.com/School.of.the.Sciences> | 443-394-9652

Announcements

CALL FOR NOMINATIONS: MD ACS OFFICER POSITIONS

This is the last call for nominations for officers of the Maryland Section of ACS. In October we will hold annual elections for all expiring and annual officers that include a Chair Elect, Secretary, Treasurer, and 5 Members at Large. This is an opportunity for you to help guide the leadership of your society. All these positions are open for nominations each year as long as you are an ACS member. If you are interested in nominating an individual for any of these positions please send your nominations to the Chair of the Nominations Committee, Dr. James Saunders at jrsaunders@towson.edu .

2019 CHEMAGINATION COMPETITION

We are pleased to announce that the Maryland Section of the American Chemical Society will be sponsoring a 2019 Chemagination Competition. For this event, high school students are asked to imagine that they are living 25 years in the future and have been invited to write an article for ChemMatters, a magazine for high school students that focuses on the role of chemistry in everyday life. The subject of the article is: “Describe a recent breakthrough or innovation in chemistry and/or its applications that has improved the quality of people’s lives today.” The article is written to fit in one of four categories: Alternative Energy Sources, Environment, Medicine/Health, or New Materials. In addition to the article, students are asked to design a cover for the magazine.

It is a great learning experience for students. In addition to using and adding to their knowledge of science and chemistry, they can improve their “soft” skills of creativity, teamwork and public speaking, skills that will serve them well in their future careers.

There will not be an onsite competition. Rather student teams will be asked to submit an article and video presentation of their “research. First Place winners in each category will go on to compete in the 2019 Mid Atlantic Regional Competition will be held on Saturday, June 1 from 12:00 pm to 5:00 pm at the University of Maryland, Baltimore County (UMBC) in conjunction with MARM 2019 sponsored by the Maryland ACS Section.

Please contact George Farrant (garrant@yahoo.com) for more information about this contest and the rules of the competition. Any and/all high Schools in our area are encouraged to compete.



ACS

Chemistry for Life®

CHEMISTRY IS OUT OF THIS WORLD

OCTOBER 21-27, 2018
www.acs.org/ncw

CHEMISTRY IN THE LIBRARY

Ages 7 & up (7-8 year olds must be accompanied by an adult); 60 min. Registration required.

Celebrate National Chemistry Week with a chemist from the Army Research Laboratory and the American Chemical Society. Participate in hands-on experiments exploring the chemistry of and in outer space.

Glenwood Branch

Howard County Public Library
Sat, 15 Sep @ 11 am.

Savage Branch

Howard County Public Library
Sat, 13 Oct @ 2 pm

Miller Branch

Howard County Public Library
Sat, Oct 27 @ 1 pm & 3 pm

East Columbia Branch

Howard County Public Library
Sat, 22 Sep @ 2 pm

Govans Branch

Enoch Pratt Free Library
Sat, 20 Oct @ 2pm

Roland Park

Enoch Pratt Free Library
Sat, Nov 3 @ 2pm

Central Branch

Howard County Public Library
Sat, 29 Sep @ 2 pm

Miller Branch

Howard County Public Library
Tue, 23 Oct @ 7pm
"No kids required" - for adults & families

Elkridge Branch

Howard County Public Library
Sat, Nov 10 @ 2 pm

Eldersburg Branch

Carroll County Public Library
Sat, 6 Oct @ 1pm

To contact the NCW Coordinator for the Maryland Local Section, visit www.ncwlookup.acs.org and search with your ZIP code. For general information about National Chemistry Week, visit www.acs.org/ncw.



**Upcoming Seminars in the
Department of Chemistry and Biochemistry
at the University of Maryland, Baltimore County (UMBC)***

**September
21, 2018**

Dr. Tuan Vo-Dinh
Duke University

“Plasmonic
Nanoprobes:
Harnessing the
Power of
Photonics for
Medical
Diagnostics
and Thereapy”

**September
28, 2018**

**Dr. Megan
McEvoy**
UCLA

“Metals in
Motions:
Survival in
Metal-Rich
Environments
through
Sequestration
an Export”

**October 5,
2018**

Dr. Brian Miller
Florida State
University

Regulation of
Enzyme
Function by
Dynamic
Conformational
Heterogeneity”

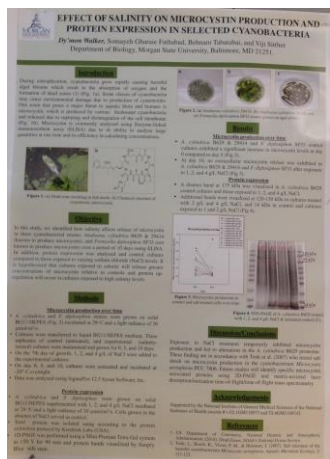
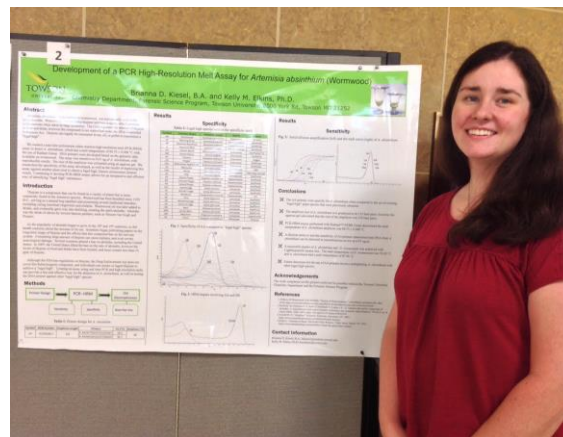
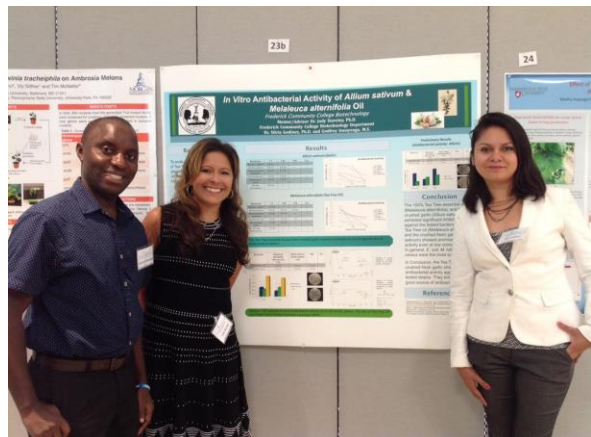
* Seminars are from 12:00-1:00 in room 120 of the Meyerhoff Chemistry Building (MEYR).
For more information, contact Professor Minji Kyoung (mjkyoung@umbc.edu, 410-455-3867).

SUCCESS STORIES

The 35th Mid Atlantic Plant Molecular Biology Society Annual Conference (AMAPMBS) was held on August 14th and 15th, 2018 at the Patuxent Research Refuge 10901 Scarlet Tanager Loop in Laurel, MD 20708. One hundred and four registered participants attended the event with details of the meeting published on the MAPMBS website at <http://wp.towson.edu/mapmbs>. The society encourages presentations of research in the form of poster presentations as well as short oral talks from all participants in addition to a slate of 10 invited speakers on topics related to plant or plant viral Molecular Biology, Biochemistry, or Bioinformatics. In addition, we feature a special poster competition for the best poster for early career scientists at the levels of undergrad and grad students, technicians, and postdoc researchers which compete for cash awards and certificates. The goals of the meeting are to facilitate networking and the exchange information between plant researchers in the Mid-Atlantic region.

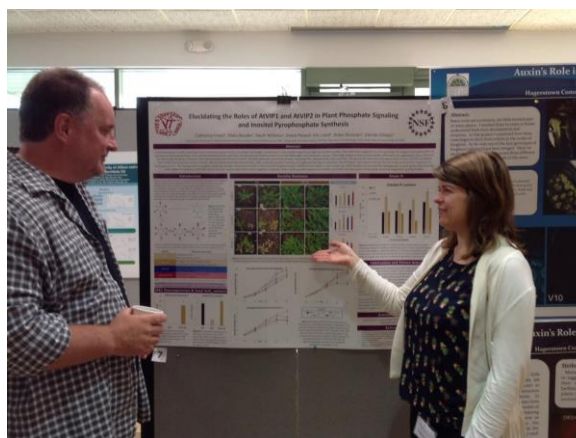
This year, thanks to the collaboration of Dr. James Saunders, treasurer, organizer and editor of the AMAPMBS we are participating in their events. The Biology Society members are also invited to ACS Maryland Section events. We expect this partnership to improve and increase in membership on both societies.

Contact: Dr. James A. Saunders, Chair Nominations & Elections Committee, Maryland Section of the American Chemical Society and Treasurer, Mid Atlantic Plant Molecular Biology Society
 14590 Triadelphia Mill Road, Dayton, MD 21036 jsaunders@towson.edu 443-386-4695



Some participants and AMAPMBS members of the Maryland Section of the American Chemical Society:

- Morgan State University
- Stevenson University
- Towson University
- UMBC



SUCCESS STORIES: 2018 U.S. National Chemistry Olympiad Participant Made Honors

High School student Kevin Wang received honors in his U.S. National Chemistry Olympiad. Kevin participated in the Maryland section with other 13 nominated students. He was one of 1300 students who competed nationwide.

USA Team wins 4 gold medals at the 50th International Chemistry Olympiad. 296 students from 76 countries!



U.S. National Chemistry Olympiad program proudly announces the extraordinary performance of the Alpha Lambda Team at the [50th International Chemistry Olympiad](#) competition, which concluded July 29, 2018, in Prague, Czech Republic.

Jeffrey Shi of Marcellus High School, NY won the fourth highest-ranking gold medal; place 4th

Michelle Lu of Pomperaug High School, CT, place 10th

Andrew Wu from Park Tudor School, IN, place 12th

Yutong Dai of Princeton International School, NY, place 13th

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

Sarah Ashleigh Wirick and her professor Christopher Stromberg research were 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 | Vol 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 Wirick](#)¹, Joshua A. Hadler², Brian G. Alberding³, Edwin J. Heilweil³, [Christopher J. Stromberg](#)¹

¹Department of Chemistry and Physics, Hood College, 401 Rosemont Ave, Frederick, MD 21710

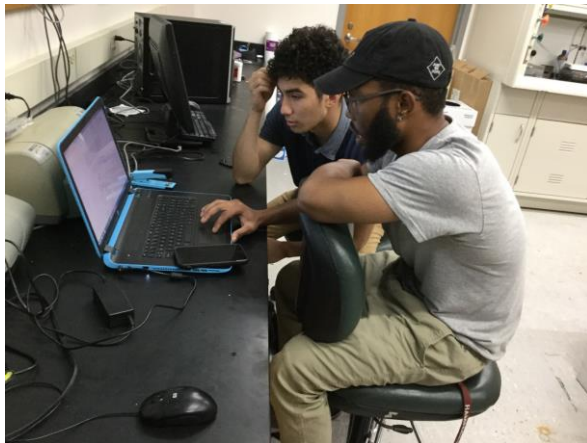
²Applied Physics Division, Physical Measurement Laboratory, NIST Boulder, CO 80305

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: 2018 Project SEED Program

Morgan State University hosted an intern from Baltimore Polytechnic High School this summer, Rudy Diaz, through Project SEED. Rudy worked in Dr. Fasil Abebe's lab on rhodamine-based fluorescent and colorimetric chemosensors. Rudy (center) was partnered in the lab with Morgan Chemistry major, Khalil Makins-Dennis (right).



SUCCESS STORIES: Update on Project SEED Alumni & 50th Anniversary Celebration

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 (50%).

This year we celebrate the success and 50th Anniversary of Project SEED!

Participating members of the Maryland section:

Pumtiwitt McCarthy, PhD, Chair Elect-2018, MD Section – Morgan State University

Louise Hellwig, PhD, Secretary-2018, MD Section – Morgan State University

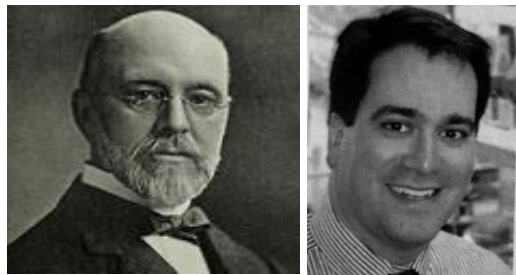
Takashi Tsukamoto, PhD, Past Chair-2011, MD Section - Johns Hopkins University

Beatrice Salazar, MS, Chair-2018, MD Section of the American Chemical Society

SUCCESS STORIES: 2018 Outreach Volunteer of the Year Award

Dr. Angela Sherman (Chemistry Department Chair at Notre Dame of Maryland University and Maryland Section Treasurer) has received the 2018 Outreach Volunteer of the Year Award for her commitment to the local section and the outreach programs. An announcement of the award and her picture came out in [February 8th](#) on the ACS website.

The Remsen Award is announced!



The Ira Remsen Award was inaugurated in 1946 in honor of Ira Remsen, second President of Johns Hopkins University

The **73rd Ira Remsen Award (2018)** will go to Professor Chad Mirkin of Northwestern University. The award will be presented November 15, 2018 at Johns Hopkins University.

Contact [Dana Ferraris](#), Vice-Chair-2018, Maryland Section

NEW PROGRAMS



New Program for Senior Chemists

Announcement from your Maryland Local Section:

[ACS Senior Chemists](#): Message from the Senior Committee Chair

<https://www.acs.org/content/acs/en/membership-and-networks/senior-chemists.html>

Start a [New Senior Committee](#) at your Local Section:

<https://www.acs.org/content/dam/acsorg/membership/senior-chemists/senior-chemists-starter-kit.pdf>

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 acsmarylandsection10@gmail.com – 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 acsmarylandsection10@gmail.com.

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 acsmarylandsection10@gmail.com – 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://www.maryland.sites.acs.org> – please see the Newsletter Archive link on the left-hand side of the website.



micron inc

ANALYTICAL SERVICES

MATERIALS CHARACTERIZATION
MORPHOLOGY CHEMISTRY STRUCTURE

OM / SEM / EDXA / TEM / SAED, EPA / WDXA
XRF / ESCA / AUGER / XRD
DSC / TGA / MFTIR

3815 LANCASTER PIKE, WILMINGTON, DE
19805

Phone: 302-998-1184, Fax: 302-998-1836

The Chesapeake Chemist is e-published monthly September through June by the Maryland Section of the American Chemical Society. Send submissions to the editor in electronic format. The Maryland Section is not responsible for opinions expressed herein. Editorials express the opinions only of the authors. The editor is not responsible for all unsigned material.