PROFESSOR
THOMAS
WILLIAM
MUIR

DEPARTMENT
OF CHEMISTRY

PRINCETON
UNIVERSITY

2020 Ira Remsen Award Recipient
Editorial

THIS FALL, ACS MARYLAND CONTINUES HONORING EXCELLENT SCIENTISTS

Scientific research is hard work. Scientists spend their time doing research and bringing the best of their work to the scientific community and the world. They deserve respect and admiration. The Maryland Section of the American Chemical Society makes an effort to recognize scientists for their work by presenting them with awards at the local and national level.

Dr. Lee Blaney from UMBC received the distinguished George Braude Award for his research on Environmental Chemistry and his altruistic mentorship. Dr. Blaney was nominated by his boss and friend Professor Marten, Chair of the Department of Chemical, Biochemical, and Environmental Engineering, UMBC. During the Braude Award Lecture on October 22nd, Dr. Blaney was presented with a plaque and an honorarium by the ACS Maryland Section. This issue includes pictures and slides related to his presentation (p.6-8).

In another recognition, Princeton University Professor Thomas William Muir is the recipient of the Ira Remsen Award for his research on physiochemical basis of protein function in complex systems of biomedical interest. We cover some research highlights of Professor Muir in this issue (p. 4,5). Due to the uncertainty of the pandemic his Award Lecture has been delayed. We will be checking periodically to determine the date and time of what will be another illuminating Lecture.

The Ira Remsen Award was established in 1946, exactly one hundred years after Ira Remsen was born in New York. The Ira Remsen story is fascinating. We mention some of his history in this issue (p. 3, 8,9).

We have a special BOOKS section with a detailed description of each book by Dr. Glenda Bilder (p. 10). She is an author and a pharmacologist. Immediately following BOOKS, we provide links to videos on the just awarded 2020 Chemistry Nobel Laurates (p. 11).

This Fall the Maryland Local Section will continue with the officer elections and will begin the preparation of the final event of the year 2020 in December: The Maryland Chemist of The Year Award. I am thankful to all contributors to the Chesapeake Chemist.
Stay safe and well,

Pumtiwitt McCarthy
THE REMSEN AWARD ANNOUNCEMENT FROM PREVIOUS ISSUES...

The Maryland Section

Of the American Chemical Society is pleased to announce that Thomas William Muir from Princeton University is the recipient of the 2020 Remsen Award. Dr. Muir will be giving the Remsen Lecture on the campus of Johns Hopkins University, November 12, 2020 (at this time, due to COVID-19 the date is TBD)

See the Chesapeake chemist June/July issue pages 14-16

Ira Remsen
The Scientist Behind the Award

The Ira Remsen Award was inaugurated in 1946 in honor of Ira Remsen (1846-1927) who was the first Chairman of the Chemistry Department at Johns Hopkins University and the second President of the University (1901-1912). He was one of the original faculty members. He discovered and initiated the development of Saccharin. This serendipitous discovery was one of his most notable accomplishments along with the foundation of the American Chemical Journal in 1879. Later in 1915 the journal was combined with the Journal of the American Chemical Society, ACS. During his presidency he advocated for women to be admitted as graduated students at Johns Hopkins University. He founded the chemistry Department and was a chemistry professor during 1876-1901. Ira was the first chemist to receive the Priestley Medal in 1903. He was also president of the society of the Chemical Industry, 1910 and of the National Academy of Sciences, 1907-1913. He is the only scientist buried on campus at Johns Hopkins University. Today, a plaque where he is buried is known for its good luck to students if they rub it before their chemistry exam.

More information at ACS.
THE 2020 REMSEN AWARD

Thomas Williams Muir from Princeton University, is the recipient of the 2020 Remsen Award, given by the Maryland Section of the American Chemical Society. He is a chemist of outstanding achievement, with highest standards in teaching and research in chemistry.
The award was established in 1946. It is named in honor of Ira Remsen, the first chemistry teacher and second president of Johns Hopkins University. Dr. Muir received the nomination in June 2020 and will receive a plaque and an honorarium during the Remsen lecture at the Remsen building on the campus of Johns Hopkins University in Baltimore. November 12, 2020
The Maryland Section of the American Chemical Society is pleased to announce that Thomas William Muir from Princeton University is the recipient of the 2020 Remsen Award (History of the award p. 9)

"I find that I spend a lot of my time talking to my dog, which is somewhat alarming since I don’t own a dog."

**Research Activities:** The Muir Team is interested in studying protein function by integrating the tools of synthetic organic and physical chemistry with those of molecular genetics.

**The Muir lab** investigates the physiochemical basis of protein function in complex systems of biomedical interest. It has developed a suite of new technologies that provide fundamental insight into how proteins work.  
Meet the people in the Muir lab.

**Chemical Biology**
Chemical biologists generate and utilize chemical tools to explore biological systems. Researchers work at the intersection of the two disciplines to probe scientific questions at the molecular level.
Professor, Dr. Marten Chair of the Department of Chemical, Biochemical, and Environmental Engineering at the University of Maryland Baltimore County (UMBC) nominated Dr. Blaney for the distinguished George Braude Award. He introduced Professor Blaney as one of the youngest, high-achieving Chemist of his department. He talked about Dr. Blaney’s interesting life and research interest at a younger age including his research-trips over the world, his research experience and accomplishments. We learned of the courageous actions of Dr. Blaney in Kenya, about his interesting research in the Baltimore surrounding areas and his especial mentoring practices that keep a strong teacher-student relationship at all levels: PhD students, post Doc students, graduate and undergraduate students even research conducted with high school students. Professor Blaney's wrote an interesting article about his research for the June/July issue of the Chesapeake Chemist. If you missed his talk this article will bring you up to date on his current research. The October issue was dedicated to professor Blaney, it contains the history of the Braude award. The virtual lecture was well attended (29) and those that could not be present had requested his video (publication of his video is TBD). The Abstract of Professor Blaney’s lecture is shown again in the next page.
Occurrence of contaminants of emerging concern in the Chesapeake Bay watershed

Dr. Lee Blaney
University of Maryland Baltimore County (UMBC)
Department of Chemical, Biochemical, and Environmental Engineering

Contaminants of emerging concern (CECs), such as pharmaceuticals and personal care products, are present in the aquatic environment and represent potential threats to both human and ecological health. To date, few efforts have focused on the occurrence of CECs in the Chesapeake Bay, the nation’s largest estuary. To address this knowledge gap, we measured antibiotics, hormones, and ultraviolet filters (UV filters), which are the active ingredients in sunscreen and other personal care products, in water, sediment, and oyster tissue from sites throughout the Chesapeake Bay. Both human- and animal-labeled antibiotics were detected, suggesting impacts from wastewater effluent and agricultural runoff. Further analysis of CEC data indicated the presence of other, unknown sources in several river systems. We hypothesize that those sources are septic systems, and we are continuing to investigate this issue. Based on those findings, we also explored the occurrence of CECs in the urban, Gwynns Falls watershed, which is not impacted by wastewater treatment plants or animal feeding operations. Indeed, CECs were present in water and accumulated in crayfish tissue. We hypothesize that CECs are introduced to the Gwynns Falls through leaking sewers, which are common in urban areas. Given the detection of CECs in the aquatic environment, we recommend upgrading wastewater infrastructure and improving CEC removal during wastewater treatment and animal waste management.
In his boyhood Remsen was reared in a strict, religious atmosphere and he retained a simple religious faith throughout his life. In his address "On the Life History of a Doctrine," delivered as president of the American Chemical Society, after pointing out that "faith is called for at every turn in scientific matters as well as spiritual," he said, "It would be as illogical to give them (atoms) up as it is, in my opinion, to deny the existence of a power in the universe infinitely greater than any of the manifestations familiar to us; infinitely greater than man; a power that 'passeth all understanding."

Source: Biographical memoir, see History Corner p 10.

In 1872, returning to the United States, he took a position as professor of chemistry and physics at Williams College. He found Williams unsympathetic to scientific research, so he concentrated on teaching. Shortly thereafter, he wrote *Theoretical Chemistry*, in which he reduced fundamental principles to a form simple enough for beginning students to understand. The book received immediate recognition and was soon translated into German and Italian. Perhaps more important, the book's success brought its author to the attention of Daniel Coit Gilman, who was searching for a candidate to occupy the chemistry chair at the opening of The Johns Hopkins University.

Although just 30 years old in 1876, Remsen had made a reputation for himself, both as a researcher and as a teacher, despite the inhospitable environment at Williams College. He jumped at the chance to equip and direct his own chemistry laboratory in Baltimore, and soon his lab became a center for chemical research, attracting graduate students who went on to become outstanding figures in later years. His instinctive teaching talents were developed and honed through experience, and it was said of him that "nobody ever understood the beginner better than Remsen." In 1879 he founded the *American Chemical Journal*, which he edited for 35 years, and he contributed a number of authoritative textbooks that remained standards for many years. While working with postdoctoral colleague Constantine Fahlberg in 1878, they discovered a substance that became the artificial sweetener saccharin. Remsen had little interest in the practical application of this discovery, preferring research for the sake of advancing learning, but Fahlberg saw commercial potential and wasted little time in obtaining a patent on saccharin.
Since 1946 The Maryland Section of ACS presents each year the distinguished Ira Remsen Award to a deserving Chemist with an extraordinary contribution to the Chemistry Field.

Ira Remsen served as President of the National Academy of Sciences from 1907 to 1913. A chemist, whose most notable discovery was found while conducting research on coal tar derivatives. He noticed that through oxidation of a particular compound he had created a sweet substance he named saccharin, widely used as an artificial sweetener.

1846 Ira Remsen was born in New York
1863 History of the JHU Academy Began
1867 Doctor of Medicine, Thesis: “Changes of the Urine”
1870 PhD in Chemistry, Munich and Göttingen
1872 Returned to United States - had a faculty position at William College in MA.
1875 Married to Elizabeth H. Mallory (2 male children)
1879 Founded the American Chemical Journal, served as editor until 1913
1901 Became second president, Johns Hopkins University
1902 President of ACS
1907-13 President of the National Academy of Sciences
1909 President Roosevelt appointed Remsen as the Chairman of a Board to study problems associated with the Pure Food and Drug Act.
1913 Semicentennial Celebration history commissioned by Remsen to be prepared by Frederick W. True, Deputy Secretary of the Smithsonian.
1923 Awarded The Priestly Medal, ACS - 1927 Rests in the Remsen Hall at JHU

Other references:
The CCNL June-July p.14-15

Credits: Biographical Memoir

By Beatrice Salazar Chesapeake chemist Editor-in-Chief Vol. 77 No 7 pg. 9
I am a pharmacologist with a career in basic research and preclinical drug discovery that focused principally on the development of receptor tyrosine kinase inhibitors for cardiovascular and oncological therapies. I am not a chemist but as a chemistry minor in college, I have a tremendous respect for the discipline of chemistry and throughout my career have worked closely with medicinal chemists who designed and synthesized the chemical entities that myself and coworkers evaluated in biological systems.

One of the first books that influenced my career was Arthur C. Guyton's *Textbook of Medical Physiology* (2nd Edition, W.B. Saunders Company, Philadelphia, PA). This book provided the foundational knowledge essential for a career in pharmacological research. It detailed the complex physiological mechanisms in organ-systems, noted their relevance for normal function as well as for disease, explained the underlying physics and mathematics and discussed contributions from classic experiments. Although immensely interested in physiological processes, I was completely captivated by Guyton's presentation of experiments that utilized drugs e.g. nicotinic or sympathomimetic drugs, for example, to disrupt or ameliorate the functions of the autonomic nervous system. This set my path to pharmacology. It is worth noting that Dr. Guyton, an award-winning scientist, established the principles for regulation of cardiac and vascular function and identified the factors important in blood pressure control, leading to a better understanding of hypertension. His book is as significant and influential today (14th edition as of this year) as it was when it motivated me.

*Goodman and Gilman's The Pharmacological Basis of Therapeutics* (Goodman, Louis S and Gilman, Alfred, Macmillan Company, New York, third edition) solidified my career choice of pharmacological research and similar to Guyton's *Textbook of Medical Physiology* provided the requisite knowledge base for future research. Often referenced as the "bible" of pharmacology, *The Pharmacological Basis of Therapeutics* details the entire field of pharmacology. This 1785 page book explains principles of receptor theory and drug metabolism, and within each class of drugs, describes the central mechanism of action at the cellular and physiological levels, the current therapeutic uses, side effects, toxicities and structure/activity relations of drugs in that class. The most interesting chapters grouped as "drugs acting on the synaptic and neuroeffector junctions" were critical to my thesis work exploring the effect of the thyroid hormones on the acetylcholine receptor. *Goodman and Gilman's The Pharmacological Basis of Therapeutics* is now in its 13th edition with new editors and many more contributors. I have read these later editions. Much of the basic material that I learned many years ago remain but important updates in membrane transporters, pharmacogenetics, drug therapy of inflammation and gastrointestinal disorders, and immuno-modulators have been added.

Two other books, *Robbins Pathology* (Robins, Stanley L, WB Saunders Company, Philadelphia, 3rd Edition) and *Cell Calcium* (Bianchi, C. Paul, Appleton-Century-Crofts, New York, 1968) shaped my career but in different ways. *Robbins Pathology* illustrated disease states with gross, histological and x-ray photographs of aberrant tissue changes. Although it was disheartening to read about human diseases, it was clear that comprehension of basic pathology was crucial for pharmacological research that sought to prevent and/or minimize this pathology with novel drugs. Specifically, the thorough pathological presentations in this text and later editions aided me in the development of relevant animal models that mirrored human disease and thereby greatly improved the odds that a preclinical drug candidate would become a clinical success. *Robbins Pathology* continues today as the premier text from medical students. It presently is part of a 14 book series on pathology and has multiple editors and contributors.
**Cell calcium**, although a small hardcover monograph, is loaded with great science. *Cell Calcium*, written by Dr. Bianchi, one of my PhD mentors at the University of Pennsylvania, provided an exemplary guide to actual "hands on" experimentation. *Cell Calcium* is an in-depth discussion of experiments that elucidated the role of calcium in the cell and in nerve excitation-contraction coupling, some of which astutely employed caffeine and cardiac glycosides to gain insights. Although this book influenced my thesis research related to the effect of ionized calcium on the release of the neurotransmitter, acetylcholine, the eloquent experiments described by Dr. Bianchi including his own, additionally continued to inspire me throughout my career.

My fifth influential book, *Philosophy of Science* (Arthur Danto and Sidney Morgenbesser, editors, The World Publishing Company, Cleveland, Ohio, 1966), is a collection of selected readings that discuss in the words of the preface by Ernest Nagel, "the character of the scientific enterprise". These exemplary essays analyze the nature and structure of scientific knowledge (laws and theories), dissect problems relating to scientific conclusions e.g. empirical evidence, logical principles, and probability interference and discuss relevant aspects of time, space and causality. These interesting readings provided a necessary assessment of exactly what a researcher is trying to achieve with scientific experimentation. Although there are no recent editions of this book, there are many other excellent *Philosophy of Science* books, for example, by Rosenberg (2011), Maudin (2012) and Barker and Kitcher (2013) that stimulate critical scientific thought and promote cautious awe of scientific achievements.

**Further Reading...**

**A Day with a Nobel Laureate**

**2020 Nobel Prize in Chemistry**

![Emmanuelle Charpentier](image1.jpg)  
![Jennifer Doudna](image2.jpg)

*Articles from ACS c&en*
Hands-on experience is the way to invite children to explore the world of chemistry, its magic and inspiration to the science world. Science teachers explore chemistry concepts at all levels of understanding from elementary grades to high school. ACS themes created to celebrate chemistry, have a large plethora of experiments that gradually increase students' knowledge, curiosity and understanding of chemistry concepts. Let's not forget the fun that is shared by children and adults, and by chemistry professionals as well as non-scientists in the community. The article discussed by Rose is purposely written for teachers and adults with interest in the chemistry, composition and history of adhesives. It is a well-balanced and informative article, a research report that applies to STEM. Experimenting with adhesives such as glue and adding liquid detergent containing Boron (borax soap) creates a new material that children could play with, safely. The changes observed in the mixture, the elasticity of the new formed material, the change of its physical and chemical properties and the calculated amounts of each substance are just perfect guides to address each of the disciplines: Science, Technology, Engineering and Mathematics, STEM. It is my pleasure to address Rose's article. She did a magnificent job!

Welcome to the section created for chemists to discuss chemistry

- First discussion - from Science, Cryo-EM structure of the 2019-nCoV spike in the prefusion confirmation.
  
  [https://science.sciencemag.org/content/sci/early/2020/02/19/science.abb2507.full.pdf](https://science.sciencemag.org/content/sci/early/2020/02/19/science.abb2507.full.pdf)
  Discussed by Dr. C. Rojas "What id the science behind COVID-19?" see
  Chesapeake Chemist March/April 2020 Vol.77 Issue No.2 p19

- Second discussion - from Chemical reviews.
  Introduction: Reactivity of Nitrogen from the Ground to the Atmosphere
  [https://pubs.acs.org/doi/pdf/10.1021/acs.chemrev.0c00361](https://pubs.acs.org/doi/pdf/10.1021/acs.chemrev.0c00361)
discussed by Dr. C. Rojas "Nitrogen Fixation..."s
Congratulations to all ACS members that want to serve as leaders of the Maryland Local Section of the American Chemical Society.

I have worked for the ACS Maryland Section since 2010. I have served in different positions including Chair-2018. As Councilor, I will work hard to bring the best communication between ACS and Maryland members to improve their professional career.

Jan Kolakowski, Councilor
ACS member since 1977. Maryland Section Councilor since 2012. I will continue to support the development and employment of chemical professionals as I represent our Section at ACS meetings.

Stephanie Watson - Councilor
I would like to continue to serve as Councilor for the Maryland Section to maintain contact with ACS National and represent our Section's concerns and needs to ACS National staff and committees.

New Members, Welcome to the Team!

Member at Large

Dr. Therese Ku
It would be my pleasure to serve as a Member-at-Large for the Maryland Section of the ACS. I have attended several Executive Committee meetings and look forward to becoming more involved.

Dr. Fasil Abebe
Member of the American Chemical Society (ACS) and national organization for the professional advancement of black chemists and chemical engineers (NOBCCHe).

Alternate Councilor

Mr. Rob Clapper
Rob Clapper is US Sales Manager for Scion Instruments USA, part of Techcomp (USA) Inc. Rob is a dedicated scientist in the Chromatography field with over 20 years of experience.

Dr. Alexander Samokhvalov
Alexander Samokhvalov, Assistant Professor of Chemistry, Morgan State University. ACS member since 2003 and regular contributor to ACS and MARM meetings. I run for Alternate Councilor of MD section.
Dr. Kelly Elkins

It will be an honor to serve the Maryland Section as Chair Elect. I am an ACS programming organizer, Councilor, Ethics Committee member and Secretary of the Division of Professional Relations.

Dr. Lee Lefkowitz

The Maryland Section is in excellent financial shape. I will build upon the well-organized record-keeping of my predecessors and increase the section's use of electronic financial records and payments.

Dr. Rose Pesce-Rodriguez

I am interested in continuing my service to the ACS as a Member-at-Large. As such, my main responsibilities will be to continue spreading the word about chemistry through outreach activities.

Dr. Sara Narayan

Dr. Saraswathi (Sara) Narayan a professor of chemistry at Stevenson University, formerly Villa Julie College.

Dr. Louise Hellwig

I would like to continue to serve as Secretary of the Maryland local ACS section because we have a great section with many worthwhile projects and interesting meetings.

Dr. Angela Sherman

I have served the local Section for many years as Treasurer and Chair of the Chemist of the Year Committee. I would like to continue my involvement in the Section's activities as Member-at-Large.

Dr. Michele Foss

I am seeking re-election as an Alternate Councilor for the Maryland Section. My current role in Industry gives a perspective on what is needed to continue to make ACS a relevant organization for Government, Academic and Industrial Chemical professionals during these unprecedented times.

Alternate Councilor

Member at Large

Volume 77, No. 7.
What does it mean... give or obtain more than 100%? Is it possible?

There is a mathematical explanation for this. Let's give each letter of the alphabet a corresponding number from 1 - 26

Then let's have fun and find what percent corresponds to "knowledge"
"Attitude" and 'love of God "... so, it is possible only if one finds the way (no wonder CHEMISTRY is the leading science career choice )

Courtesy of Nelly Schwan from East Hartford, CT.

- What is the TV show Cesium and Iodine love watching? CSI
- What do you call a clown who is in jail? A silicon
- What emotional disorder does a gas chromatograph suffer from? Separation anxiety
- What kind of fish is made-out of 2 sodium atoms? 2Na

* Source
The Fall 2020 (260th) National Meeting of the American Chemical Society, originally planned for San Francisco, was held virtually on August 17-20, 2020 due to the COVID-19 pandemic. This was the first time an ACS National meeting has been held virtually. The theme for the meeting was “Moving Chemistry from Bench to Market”. The Council Meeting was held virtually on August 19. The Maryland Section was represented by all four Councilors in attendance: Kelly Elkins, Dana Ferraris, Jan Kolakowski, and Stephanie Watson.

As of August 19th,

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<tr>
<th>Registration for the National meeting, by category, was:</th>
<th>The virtual presentation uploads, by category, were:</th>
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<tr>
<td>Member – 3,494</td>
<td>All Inclusive (SciMtgs) – 1,735</td>
</tr>
<tr>
<td>Student Member – 1,638</td>
<td>Virtual Platform Only – 1,655</td>
</tr>
<tr>
<td>Unemployed Member – 25</td>
<td>Temporary Access Option – 640</td>
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<tr>
<td>Non-Member – 945</td>
<td>Presentation Uploads – 4,067</td>
</tr>
<tr>
<td>Student Non-Member – 375</td>
<td></td>
</tr>
<tr>
<td>Total – 6,477</td>
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</tbody>
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By electronic ballot, the Council elected Elizabeth M. Howson, Zaida C. Morales-Martinez, Margaret J. Schooler, and Jeanette M. Van Emon for three-year terms (2021-2023) and Mark D. Frishberg for a one-year term (2021) on the Council Policy Committee (CPC).

By electronic ballot, the Council elected Martha G. Hollomon, Diane Krone, Sarah M. Mullins, Andrea B. Twiss-Brooks, and Javier Vela for three-year terms (2021-2023) on the Committee on Committees (ConC).


On the recommendation of ConC, and with the concurrence of CPC, Council voted to approve the Petition to Clarify Amendments to the Standing Rules.
On the recommendation of ConC, and with the concurrence of CPC, Council voted to disband the Joint Board-Council Committee on Chemical Abstracts Service (CCAS). The main reason was that most, if not all, of the responsibilities of CCAS are already being performed by the Chemical Abstract Services itself.

On the recommendation of the Committee on International Activities, and with the concurrence of CPC, Council approved the creation of an ACS International Sciences Chapter in Israel.

The ACS 2020 financial performance through July 31st yielded a Net from Operations of $55.7 million, which was $25 million greater than the same period in 2019. Total revenues are $354 million (5% ahead of last year) and total expenses are $298 million (3% below last year). Unrestricted Net Assets increased to $466 million.

Ballots for the 2020 fall national election will be distributed on September 28th, with a voting deadline of October 23rd. ACS members eligible to vote and with an email address on file will receive an electronic ballot with the option to request a paper ballot. Those members with no email address on file will be sent a paper ballot with the option to vote electronically. Election information may be viewed at acs.org/elections.

The continuous and ongoing struggle in this country to create a safe and equitable society for all was brought to Council’s attention. The ACS encourages inclusivity and opposes discrimination in scientific learning and practice. Councilors were urged to take active roles in dismantling any barriers that may deter or impede their colleagues in their research or careers. Councilors and guests were encouraged to review the ACS statements on diversity and reflect on how to implement these in their local sections and divisions.

Respectfully submitted,

Jan E. Kolakowski
Councilor, Maryland Section
The 2021 Maryland Section Officers
Duties and Responsibilities

https://acsmaryland.org

Contact

Dr. Eric Cotton, Vice Chair 2020, if interested in any of the following positions for 2022.

Chair-Elect
1. Attend monthly meetings/ events and quarterly Executive Committee meetings and communicate regularly with Vice-Chair and Chair to become familiar with their roles.

2. Succeed to Vice-Chair on January 1 or if Vice-Chair is unable to fulfill their term.

Vice-Chair
1. Act as Program Chair, who is responsible for organizing all monthly meetings (other than award meetings) from January to December. This involves inviting speakers, finding venues (determine audio-visual needs), making travel arrangements (hotel, etc.) and collecting speaker talk title, abstract and bio information (picture) for newsletter. The date and type of meeting in addition to any special budget requirements must be approved by the Executive Committee. Note that speaker Honoria is not permitted based on National rules.

2. Act in place of Chair whenever required and shall assist the Chair in their role, if requested. Succeed to Chair in January or if Chair is unable to fulfill his term.

Chair
1. Attend and preside over all meetings of the Section or arrange the Vice-Chair or Chair-Elect to do so in their absence. There are an average of 10 meetings per year.

2. Call and preside over all meetings of the Executive Committee and prepare meeting agenda, preferably to circulate in advance. Call on committee chairs to report on activities. Call any special meetings as needed.

3. Appoint chair of all standing and special committees and may in some circumstances appoint members to the committee. Serve as ex-officio member of any Section committee.

4. Confer with Award committee chairs in the selection of the awardee and perform such duties as outlined for the Award. Ensure that nomination and selection deadlines are met for all Awards.

5. Cooperate with National officers and endeavor to represent the Section at National meetings. Ensure that the Annual Report of the Section is properly prepared and is submitted to National by deadline.

6. See that current records, correspondence, and pertinent information in their possession is passed on to their successor and that non-current records are archived.

7. Recommend to the Executive Committee special programs/actions necessary to further Section affairs and implement actions with Executive Committee approval.
8. Work closely with Vice-Chair and Chair-Elect, especially in organizing monthly meetings. Provide written thank-you correspondence to speakers and institutions providing meeting facilities, if necessary.

**Councilor**
1. Keep informed of National’s activities, insofar as they can relate to the business and interest of the Section.

2. Attend and take active part in sessions of the Council and participate in National committees in various topic areas. Admission to meetings of Council are sent by National electronically or through the mail. Notify an Alternate Councilor should you be unable to attend a National meeting (or perform your duty as Councilor).

3. Ascertain, insofar the views of the Section or Council business of interest to the Section.

4. Report to the Executive Committee on the activities of the Council; reports shall be placed in the newsletter and made at quarterly Executive Committee meetings.

**Alternate Councilor**
1. Back-up position for councilor; shall keep active in the Section and informed of National activities.

**Secretary**
1. As principal recording officer, attend monthly meetings of the Section to record any business transacted and to note attendance. Attend to any necessary Section correspondence. Answer any inquiries regarding Section activities and make necessary referrals. Assist as needed in maintaining Section files.

2. Attend quarterly Executive Committee meetings, keep minutes, and prepare a copy for publication in newsletter. Send notices of Executive Committee meetings to its members and include prior meeting minutes.

3. Certify to National by December 1 of each year, the results of the officer elections by providing the names, address, telephone, and email of each new officer that will begin on January 1.

4. In January prepare a list of new Executive Committee, including address, telephone, and email address for distribution to its membership.

5. Maintain Section membership roster (e-roster from National); send any changes to the roster to National.

6. Assist other officers in the completion of the Annual Report of the Section, particularly on the activities of the Section during the preceding year.

7. In the event that a councilor cannot attend a National meeting, certify an alternate councilor to National.

**Treasurer**
1. As principal financial officer, keep all financial records of the Section. Prepare financial form for the Annual Report of the Section; form will be reviewed by the Section Chair, Secretary, and a Councilor before the deadline from National. Compile and file with the proper authority, Income Tax Form 990-A for the Section by January 10 following the term in office, preserving a copy for Section records.
2. Supply funds to other officers and committee chair with funds to compensate for their budgeted and approved expenses.

3. Attend all meetings of the Section, prepared with checks and change to meet situations to pay, as required for dinners, speakers, or other approved services. Arrange for another section member to perform these duties, if not available to attend.

4. Submit a proposed budget with the help of the Finance Committee for the next calendar year to the Section Chair and Secretary by December 31.

5. Write to National Officer of Treasurer requesting payment in full of allotment to the Section by January 1. Note that the Annual Report must be submitted and approved by a Section councilor to be eligible for the allotment. Record and bank all Local Section dues.

6. Prepare treasurer reports for the quarterly Executive Committee meetings.

7. For more detailed information see National’s weblink for a Treasurers Handbook (http://portal.acs.org/portal/PublicWebSite/membership/ls/mngt/volunteerresources/WPCP_011475)

**Members-At –Large**

1. Serve as members of the Executive Committee and as chair or members of Section committees.
2020 National Chemistry Week Programs
Ages 7 & up; 60 min. Registration required.

Celebrate National Chemistry Week with a chemist from the Army Research Laboratory and the American Chemical Society. Participate in a live, on-line program exploring the chemistry glues and adhesives.

Howard County Library, Central Branch
Saturday  Oct 24   2 - 3 pm

Carroll County Public Library, Eldersburg Branch
Saturday  Nov 7    2 - 3 pm

Enoch Pratt Free Library, Light Street Branch
Saturday  Nov 14   2 - 3 pm

Howard County Library, East Columbia Branch
Saturday  Nov 21   2 - 3 pm

https://hclibrary.org/classes-events/
https://ccpl.librarymarket.com/events/
http://calendar.prattlibrary.org/

For more info: rose.a.pesce-rodriguez.civ@mail.mil

For details on illustrated poetry contest, see:
https://www.acs.org/content/acs/en/education/outreach/ncw/plan-an-event/illustrated-poem-contest.html

Student Submission Deadline: Sunday, October 25 by 11:59 PM Eastern
"Sticking with Chemistry - The Chemistry of Glues and Adhesives"

Poems

I never had a glue
Spicecorn to were stuck with glue
I never had a glue
Blood is used as a glue
I never had a glue
I can use milk to make glue
Now I have a glue
Adhesion and cohesion makes a glue

Gracey and glossy
Little molecules within
Unusually sticking
Even with gravity

What is Adhesion? Does it have a reason?
Adhesion is in your everyday day.
It sticks themselves or your house furniture and cor together.

What would we do without Adhesion or glue?

Congratulations!

https://www.acs.org/content/acs/en/education/outreach/celebrating-chemistry-editions.html
https://apps.dtic.mil/sti/citations/AD110736
Purdue University is seeking applications from outstanding candidates to fill a Postdoctoral Scholar position to work on molecular-level simulations of shock loading of molecular materials with specific emphasis on energy localization and induced chemistry. The successful candidates will join a multidisciplinary team including modelers and experimentalists working at Purdue University and the Army Research Laboratory. The efforts will involve large-scale molecular dynamics and coarse-grained simulations designed to develop a predictive understanding of: shock interaction with microstructure, energy localization, and chemical response. The successful candidate will be part of the cPRIMED center, headquartered at Discovery Park in Purdue University, and will have the opportunity to interact with a wide range of experimentalists and theoreticians in academia, industry and national labs and contribute to nanoHUB. Qualifications. Candidates should have earned a PhD in Physics, Chemistry, Materials, Chemical, or Mechanical engineering or a related field. The successful candidates will have experience in molecular modeling. A strong background in one or several of these fields is desirable: condensed matter or materials physics, physics of materials at extreme conditions or dynamical loading. This position requires US citizenship.

Application process. Applicants must provide a detailed resume including education, experience and qualifications; they should also include the names of three potential references. Applications from women and minorities are strongly encouraged. Applicants should submit the application materials electronically to:

- Prof. Alejandro Strachan. Email: strachan@purdue.edu
- Dr. John Brennan. Email: john.k.brennan.civ@mail.mil
- Dr. James Larentzos. Email: james.p.larentzos.civ@mail.mil

Evaluation of candidates will begin immediately and will continue until the position is filled.

Greater Lafayette Indiana is home to Purdue University and is one of the fastest growing communities in the Midwest. Subaru of Indiana Automotive, Caterpillar, Corteva Agriscience, Rolls-Royce, GE Aviation, Schweitzer Engineering Laboratories, Wabash National, Saab Global Defense and Security Company, high tech firms and small businesses all call Greater Lafayette their home. Conveniently located between Chicago and Indianapolis, Greater Lafayette is also near several other major metropolitan cities.
Plants require H\(_2\)O, CO\(_2\) and sunlight to live. Sunlight a continuous energy spectrum is absorbed by chlorophyll which in turn reacts with H\(_2\)O and CO\(_2\) to produce sugars and the green color of leaves.

In colder months LEAVES STOP PRODUCING CHLOROPHYL due to lack of sunlight and heat and began to change color. All colors are different pigments always present in the leaves. The intensity of colors is due to the humidity. In the winter, layers of cells form along the base of the leaf stalk, sealing the transportation of sugars from leaf to tree, as the leaf is blown off, the remaining sugar react with cells sap producing anthocyanin, a flavonoid compound responsible for the red color. The different red tones depend on the soil acidity.

Ref.1  -  Ref.2
<table>
<thead>
<tr>
<th>Event Description</th>
<th>URL/Email Information</th>
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<tr>
<td>The U.S. National Chemistry Olympiad</td>
<td>USNCO MARYLAND URL: <a href="http://www.beatricesalazarusncocoordinator.webs.com">http://www.beatricesalazarusncocoordinator.webs.com</a></td>
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<td>Student Travel Awards</td>
<td><a href="https://acsmaryland.org/travel-awards/">https://acsmaryland.org/travel-awards/</a></td>
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<td>Email: Louise Hellwig <a href="mailto:Louise.Hellwig@morgan.edu">Louise.Hellwig@morgan.edu</a></td>
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<td>Jan - April</td>
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<td>Student Award</td>
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<td>Email: George Farrant, <a href="mailto:gfarrant@yahoo.com">gfarrant@yahoo.com</a></td>
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<td>Jan – March</td>
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<td>Chemists Celebrate Earth Day</td>
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<td>April</td>
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<td>Senior Awards</td>
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<td>Email: Merle Eiss, <a href="mailto:meiss32@aol.com">meiss32@aol.com</a></td>
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<td>Email: Linda Gonzalez <a href="mailto:linda_gonzalez@mccormick.com">linda_gonzalez@mccormick.com</a></td>
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<td>May</td>
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<td>National Chemistry Week Events</td>
<td><a href="http://www.beatricesalazarusncocoordinator.webs.com">http://www.beatricesalazarusncocoordinator.webs.com</a></td>
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<td>Beer Tours: Louise Hellwig <a href="mailto:Louise.Hellwig@morgan.edu">Louise.Hellwig@morgan.edu</a> &amp;</td>
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<td>Michele Foss <a href="mailto:foss.michele@gmail.com">foss.michele@gmail.com</a></td>
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<td>May to Sept.</td>
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<td>Braude Award</td>
<td><a href="https://acsmaryland.org/braude-award/">https://acsmaryland.org/braude-award/</a></td>
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<td>Email: Louise Hellwig <a href="mailto:Louise.Hellwig@morgan.edu">Louise.Hellwig@morgan.edu</a></td>
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<td>The Remsen Award</td>
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<td>Email: Dana Ferraris (<a href="mailto:dferraris@mcdaniel.edu">dferraris@mcdaniel.edu</a></td>
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<td><a href="mailto:dferraris@mcdaniel.edu">dferraris@mcdaniel.edu</a></td>
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<td>The Maryland Chemist of the Year Award</td>
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<td>Email: Angela Sherman, <a href="mailto:asherman@ndm.edu">asherman@ndm.edu</a> and</td>
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<td>Jennifer Schmitt, <a href="mailto:jen@rapafusyn.com">jen@rapafusyn.com</a></td>
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2020 ADMINISTRATION OFFICERS

2020 SECTION OFFICERS

Chair 2020………………... Pumtiwitt McCarthy, Morgan State University, pumtiwitt.mccarthy@morgan.edu
Vice-Chair 2020…………… Eric C. Cotton, Community College, of Baltimore County, cccotton2@ccbcmd.edu
Chair-Elect (Chair 2022)… Sarah Zimmerman, Web Master, Chair of Member Assistance Committee scatzim@gmail.com
Secretary 2020……………. Louise Hellwig, Morgan State University, louise.hellwig@morgan.edu
Treasurer 2020……………. Angela Sherman, Notre Dame of Maryland University, asherman@ndm.edu
Past Chair (2019)………… Dana Ferraris, McDaniel College, dferraris@mcdaniel.edu

2020 SECTION COMMITTEE ON NOMINATIONS and ELECTIONS

Chair of the Committee on Nominations…… Eric Cotton, Vice-Chair 2020, cccotton2@ccbcmd.edu
Additional 4 members: ……………………… Dana Ferraris, Chair-2019, dferraris@mcdaniel.edu
………………………………. Pumtiwitt McCarthy, Chair-2020, pumtiwitt.mccarthy@morgan.edu
………………………………. Beatrice Salazar, Chair-2018, beatricesalazar1@gmail.com
………………………………. Sara Narayan, Stevenson University, SNARAYAN@stevenson.edu

COUNCILORS/COMMITTEES

1. 2020-2022 Kelly Elkins Kmelkins@towson.edu
2. 2018-2020 Dana Ferraris dferraris@mcdaniel.edu
3. 2018-2020 Jan Kolakowski jek6042@gmail.com
4. 2018-2020 Stephanie Watson stephanie.watson@nist.gov

ALTERNATE COUNCILORS/COMMITTEES

1. 2020-2022 Paul Smith pjsmith@umbc.edu
2. 2020-2022 Pumtiwitt McCarthy pumtiwitt.mccarthy@morgan.edu
3. 2018-2020 Michele Foss foss.michele@gmail.com
4. 2018-2020 Sarah Zimmerman scatzim@gmail.com

MEMBERS-AT-LARGE

1. Beatrice Salazar, beatricesalazar1@gmail.com
2. George Farrant, gfarrant@yahoo.com
3. James Saunders, jsaunders@towson.edu
4. Rose A. Pesce-Rodriguez, rose.a.pesce-rodriguez.civ@mail.mil
5. Sara Narayan, Stevenson University, SNARAYAN@stevenson.edu

Maryland Section on the Website: www.acsmaryland.org
Webmaster……………………………… Sarah Zimmerman, scatzim@gmail.com
Chesapeake Chemist Editor-in-Chief… Beatrice Salazar, beatricesalazar1@gmail.com
Social Media Liaison…………………… Jennifer Schmitt, Jen@rapafusyn.com

PROGRAM CHAIRS

AWARDS
Braude Award, L. Hellwig
Remsen Award, D. Ferraris
Maryland Chemist of the Year Award, A. Sherman/J. Schmitt
Senior Chemist Award, M. Eiss/L. Gonzalez
Student Award, G. Farrant

PROGRAMS
Young Women Chemists, S. Narayan/K. Elkins
Student Travel, Louise Hellwig
High School Outreach: National Chemistry Olympiad & Chemist Celebrate Earth Day, B. Salazar
Middle and Elementary School Outreach (National Chemistry Week, Earth Day Week), R. A. Pesce-rodrigues
Publicity, S. Zimmerman/B. Salazar/J. Schmitt
Entertainment/Tours, M. Foss/L. Hellwig

CONTACT US: acsmarylandsection10@gmail.com
**COMMENTS:**

“Hopefully, none of the future events will be cancelled! Let us go virtual, just in case...” This was the case for the George Braude Award lecture it was a successful virtual presentation. Way to go ACS-MD!

“We like the direction of the Chesapeake Chemist, the articles are fun, informative and enjoyable. In particular, the article from the last issue on environment from Professor Lee at UMBC was remarkably interesting” Thank you for your comments, please sign them.

"It has been wonderful to have many contributors in the past, please continue sending more articles, comments, opinions, reviews etc. I don’t mind going through all the paperwork in fact, it has been fun"

B. S.

Useful Links:

- See Chesapeake Chemist volume 77 Issue No. 4 pg.13 for the announcement of a government
- Senior Chemists presentations: [Dr. G. Lozos, Dr. R. Berninger and Dr. C. Milton](https://acsmaryland.org/chemistry-video-links/)

OLD CHESAPEAKE CHEMISTS ISSUES: [https://maryland.sites.acs.org/chesapeakechemist.htm](https://maryland.sites.acs.org/chesapeakechemist.htm)

Memory of people's pandemic experiences

Invitation... to all ACS Maryland Section Members. How are you feeling during the COVID-19 pandemic? Let us know your experiences, let us hear your voices. Scholars, doctors, scientists, health experts, university administrators will better understand how the community reacted to the COVID-19 pandemic and how we are able to respond and help support the world. Send us an article with pictures, graphs, videos or journal entries, it will help us all. This is important for our history. Thank you [Dr. Lee Leftkowitz](https://www.editage.com/insights/a-young-researchers-guide-to-perspective-commentary-and-opinion-articles) for this magnificent idea!
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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 Maryland ACS membership in October 2006.

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