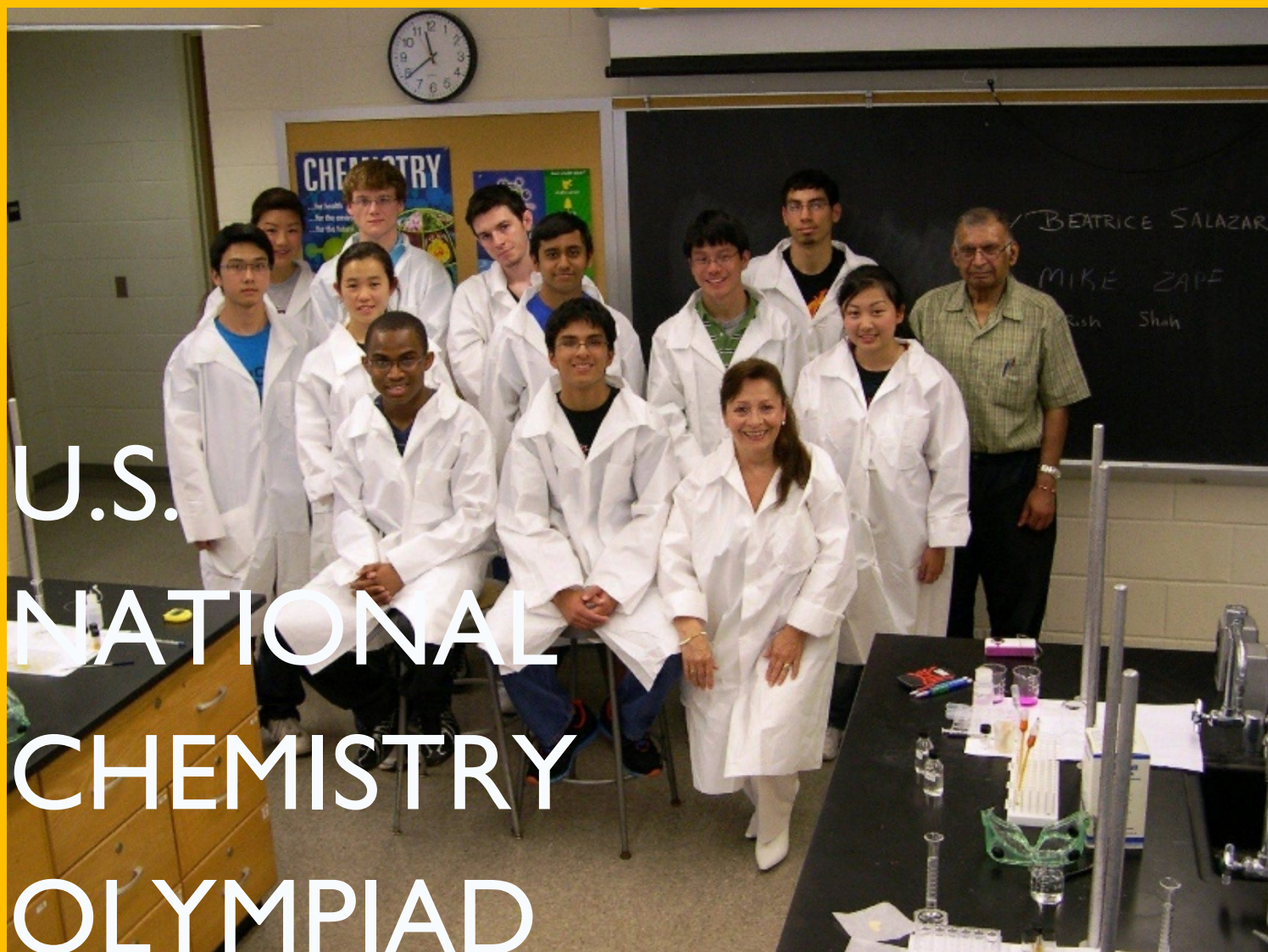


2023



MARCH 1 - APRIL 23

ACS MARYLAND SECTION P.4

*Nearly Two Dozen
New Molecules in
Space Reported in
2022 P. 9*

Maryland Local Section Newsletter

Editor-in-chief: [Beatrice Salazar](#)

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From the Editor's Desk...

Spring 2023: Here we go!

Every year at the executive committee meeting we welcome new members and outline plans for the immediate future. Plans try to address members' needs in the profession to succeed and enjoy chemistry.



We will continue to participate in the **U.S. National Chemistry Olympiad**, USNCO with Maryland students (page 4) and in **Project SEED** (page 15). **The Travel Awards** program this year will continue to support ACS Maryland student members that are planning to give poster presentations to attend the 2023 ACS Spring Meeting in Indianapolis (pages 13 & 17). **The Student Awards** event on April 16th celebrates chemistry achievements by students in college (page 13).

Also, in April we are planning two special events to engage with the community. Chemists Celebrate **Earth Week** and **Chemists Celebrate Earth Day**. The purpose of these events is to increase awareness in the community of environmental changes and of what we can do to care about home-earth. One event is designed for children k-8 with themes and materials provided by ACS. The second event, Chemists celebrate earth day, encompasses two different approaches one for high school students and a second one for adults in the community. The latter programs are entirely prepared by the ACS Maryland Section (pages 12 & 18). **Senior Chemists** are also in our plans; we will be celebrating their achievements during a celebration in May.

We are hoping you will enjoy these activities. As we say in Spanish, "Vino, mujeres y canto"; we will have everything we need to have fun. Stay tuned to our messages in the Chesapeake Chemist and Constant Contact to learn about new events.

Beatrice Salazar

Contact Editor: beatricesalazar1@gmail.com

Contact ACS Maryland Section a acsmarylandsection10@gmail.com

Follow us...



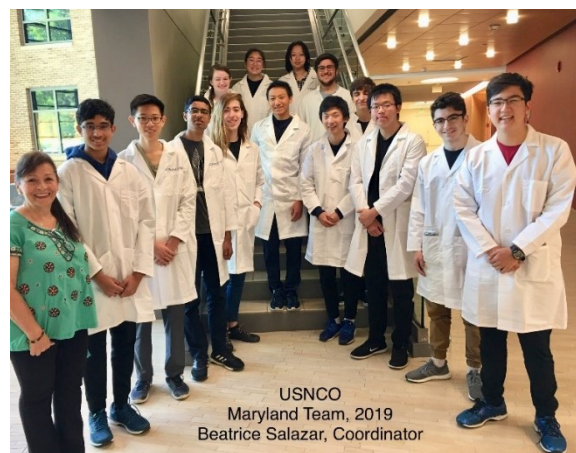
Be one of us! Write articles for the Chesapeake Chemist. Send announcement of your projects and activities Share your chemistry life with your colleagues.

USNCO

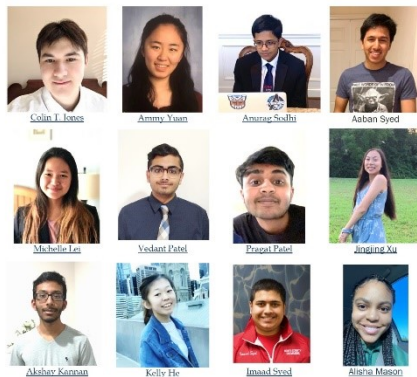
At Notre Dame of Maryland University
 2000 - 2017



At Community College of Baltimore, CCBC 2018 - 2019



Virtual Olympiad 2020 - 2021



At Morgan State University
 2022

[Beatrice Salazar - ACS Maryland Local Section \(webs.com\)](#)





U.S. National Chemistry Olympiad

The U.S. National Chemistry Olympiad

is open to high school students grades 9-11. The registration was open since February 1, 2023. The competition has two major



exams 1. The Maryland Local Section Exam (part of USNCO) and 2. The U.S. National Chemistry Olympiad in Maryland. Students residing in the area in blue from the map should register at the ACS Maryland Section.

Details of the Maryland Local Section Exam:



Students register for the exam by completing a registration form available in the [USNCO Maryland website](#). The form is sent via email to the [USNCO Maryland Coordinator](#). The coordinator sends a unique code to each registrant so they can obtain a) an [ACS ID](#) number and b) access to the ACS virtual exam and a series of requirements all within the “ACS Course.” Some of these requirements include consent forms by the student’s parents, practice exams etc.

Dates of the Maryland Local exam

The exam will be virtual using the ACS platform. Students receive instructions on the computer requirements and the form in which they will take the exam. For example, two cameras are required at different angles for security purposes to observe the computer screen, the desk each student is using, and to ensure the privacy of the room being used; both video and audio should be “on”. Non-programmable calculators are allowed, and students may take the exam only one time during one of the following days. Strict confidentiality is expected.

DATE: Wed. March 23, 2023	Time: 4:00 P.M. ET
Thu. March 24, 2023	4:00 P.M. ET
Sat. April 1, 2023	10:00 A.M. ET
Sun. April 2, 2023	10:00 A.M. ET

The exam consists of 60 questions using multiple choice format. They have 110 min to complete and submit their answers. Students are encouraged to take the practice exam at the ACS platform several times. Also, they are encouraged to use the resources* available for them: Practice exams from previous years and videos with advice, and Q & A samples from mentors, administrators and other students that were successful before at USNCO. The time frame to administer the 2023 Local Exam is March 1-April 2, 2023



This year we have approximately 60 students registered for the USNCO local exam. This is an increase from the 2020 and 2021 years. We are fortunate that students learn fast the technicalities of the exam and after two years of virtual exams they feel more comfortable with this method.

How are the results of the Local exam evaluated?

There is no limited number of students to take the USNCO Maryland local exam. However, only two students per school with the highest exam scores will be considered for the next round of the competition. The first factor to be nominated for the National exam is the local exam score. Students with the highest scores will be identified and notified. If they are willing to continue in the competition their teachers will be contacted for a letter of recommendation. We expect an increase of participants this year because the membership of the American Chemical Society has increased. ACS has numerous members from the scientific community, there is a direct correlation between membership and participants to the U.S. National Chemistry Olympiad; currently, we have 13 places available. The students with higher scores on their local exam will fill these seats. The rest of qualifying students will be on the waiting list. In the past at the last minute, one or two students have not been able to attend the competition, so the waiting list have been the hope for those waiting in line. They have their opportunity to shine among USA competitors with more than 1600 students nationwide, something to be proud of!

Details of the U.S. Maryland National Competition exam

The Maryland national exam consists of three parts, where content and skills in chemistry are tested. The Olympiad is



hybrid. The first part will be 60 multiple choice questions, more rigorous than in the local exam. Another difference is that the 13 nominees are competing with many more students nationwide.

The second and third parts of the exam are in-person. The second part includes essay questions like “problem solving.” These questions require an integration of concepts and their application to world problems; they are lengthy, so good writing as well as good analysis counts. The third part includes a laboratory practical. Students here use their creativity and knowledge to solve two lab-problems. Familiarity with the use of instruments and properties of chemicals are essential in this test. Students develop their own lab procedure for their experiment. The student’s procedure is checked and signed by proctors to ensure safety, but they abstain from suggesting any step. The 2023 National Exam will be administered all on paper. The time frame to administer the National Exam is April 15- 23, 2023.

How students benefit from USNCO chemistry competition?

Besides the FUN of competing and showing that one is capable, interested and wants to excel, this competition will help students to learn more chemistry, help them to be part of something extraordinary (competing at different levels), help them decide what will be the career of their choice and will help them to secure a place in a good university or college. Students will write about this experience on their resume and will show their certificates of participation with their college and university applications.

Please use the [USNCO Maryland website](#) to learn more about the Olympiad and remember you may start at ninth grade and participate for three more years! The improvement of your chemistry knowledge will be unique, and your memories of your high school competitions will be one of your best treasures.

2023 USNCO REOURCES: Links to help Olympian to find more information.

How the program is organized: [The program has four tiers](#), [Student support](#).

Enrollment: [The USNCO 2023 Local Section Exam "course" in the ACS Learning Center is now open](#).

Link to USNCO Course: <https://learning.acs.org/course/view.php?id=1224>

Webinar: https://american-chemical-society.zoom.com/webinar/register/WN_Uslp6gb0SpqCOHGHLMCdfg

To avoid technical problems on the day of the exam:

Log on to [ACSLC](#) and take a practice exam prior to exam date. If you experience any technical problems, report them promptly to learning@acs.org

Check to be sure you have these basic system requirements:

- Windows or Macintosh laptop or computer with minimum 8GB RAM
- Latest versions of Chrome, Firefox, Safari or Edge
- If possible or if your Wi-Fi is not reliable, link to the internet using an ether-cable and plugging directly into router.

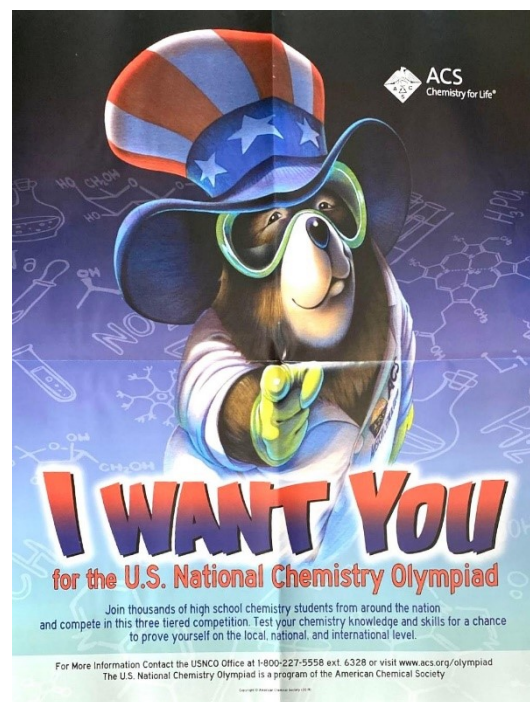
For urgent issues, contact USNCO@acs.org

Hint: Print out the periodic table and reference sheet before my exam (only from this link)

<https://www.acs.org/education/students/highschool/olympiad/prepare-for-exams/reference-page.html>.

Contact your USNCO Coordinator: <https://www.usncolookup.acs.org/>

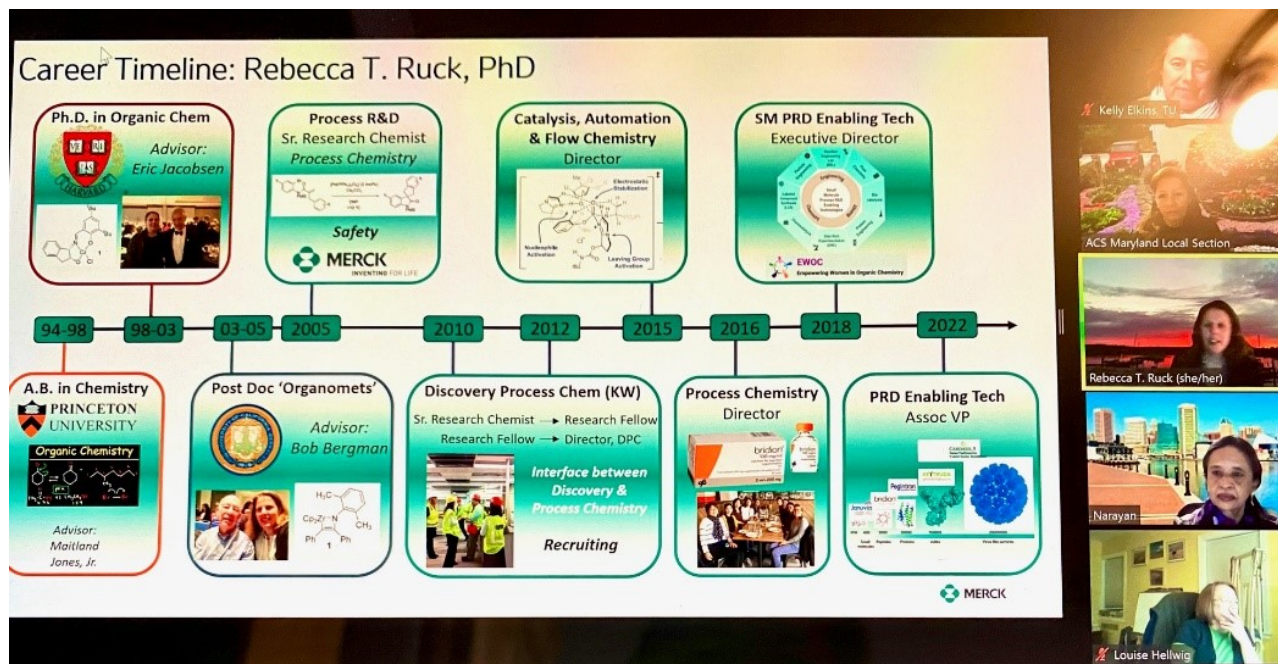
MARCH 1-31 - Local Chemistry Olympiad Exams The first step in USNCO, held each March. High school students can participate by contacting the ACS Local Section's coordinator.
APRIL 15-23 - National Chemistry Olympiad Exams. A three-part exam administered to more than 1,000 students each April.
JUNE 4-17- Study Camp. The 20 top-scoring students from the National Exam spend two weeks at a Study Camp.
JULY 16-25- International, IChO, Chemistry Olympiad Exams. Only four students represent



The U.S. National Chemistry Olympiad (USNCO) program is a chemistry competition for high school students. ACS has sponsored the program since 1984.

Women Chemists Committee, WCC, February Lecture 2023

Report, ACS Maryland Local Section



Dr. Rebecca Ruck, Women Chemists Annual Lecture, ACS Speaker Directory, February 8, 2023, 7-8 pm, attendance: 7

The title of the talk was “Using Great Chemistry to Influence the Field.” Becky has been working at Merck for 18 years and has been promoted up the leadership chain to her current role as an Associate Vice President. She showed a new catalyst she and her team designed to make a new therapeutic and the computational work that guided and supported the synthetic work. She reported on optimizing the process to simplify the synthetic route to make an acquired therapeutic agent.

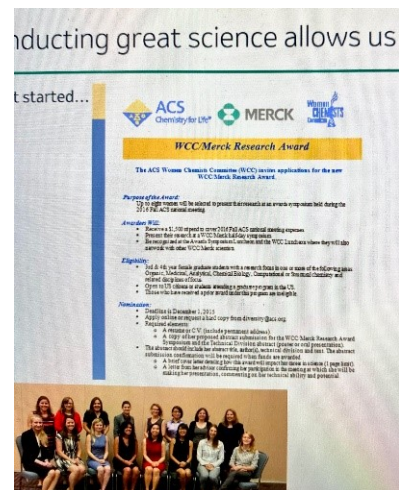
She led the process development for Merck COVID-19 therapeutic, Molnupiravir, and showed the initial 9-step synthesis that they shortened. She showed beautiful reaction cycling and winning Green Chemistry processes three years in a row.

She is won the WCC Rising Star



Award and has mentored numerous Merck colleagues to the award and hired 3 awardees.

She is committed to



encouraging and mentoring women to leadership positions through growth assignments.

Report by Kelly Elkins, Ph.D. Chair ACS Maryland section



WCC SPEAKER: Dr. Rebecca Ruck from Merck. Introduction by Dr. Sara Narayan from Stevenson University.

"I had the great pleasure of introducing the speaker Dr. Rebecca Ruck from Merck".

Our local WCC section has been inviting speakers each year and we used to have it as luncheon or dinner meetings. Due to pandemic face to face meetings have been replaced by zoom meetings since 2020.

Dr. Rebecca Ruck is our first local section speaker for 2023. She is currently an Associate Vice President at Merck's Process and Development section. Dr. Ruck was before the executive director, small molecule process R & D enabling Technologies. She has held several leading roles at Merck for the past 18 years.

Dr. Ruck has a Ph.D. from Harvard, AB from Princeton and Post Doc from Berkeley. She has been involved in WCC through Merck and University Collaboration Empowering Women in Organic Chemistry (EWOC). For her effort she received an ACS award in 2018. In addition, she is also involved in Diversity and Inclusion Program. She also received HBA (Healthcare Business Association) Rising Star award in 2020. She is listed as one of the ACS speakers' series.



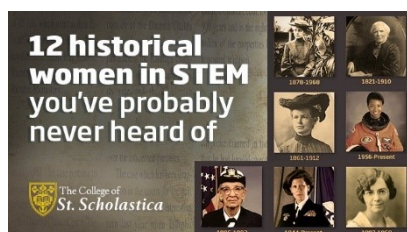
[Sara Narayan, Ph.D.](#)

She is an editor of ACS catalysis and an ACS fellow. She has several publications to her credit. Without further ado, I would like Dr. Rebecca Ruck to address our WCC meeting. Her title of presentation is "**Using Great Chemistry to Influence the Field**".

The meeting was followed by Q & A session. We had the pleasure of meeting her parents also. The following link will connect you with the recording of her presentation on February 8, 2023. There is a lot to learn from this presentation, Dr. Ruck provided us with a great resource for young women chemists in ACS. [Recording](#) and

Passcode: Q7f+CWp

MARCH IS WOMEN'S MONTH. LET'S CELEBRATE!



<https://www.css.edu/about/blog/12-historical-women-in-stem-youve-probably-never-heard-of/>

Nearly Two Dozen New Molecules in Space Reported in 2022

By Olivia Harper Wilkins

On all but the smoggiest days, the white domes housing the telescopes at Mount Wilson Observatory can be seen from the greater Los Angeles towns crowding the foothills south of the San Gabriel Mountains. One of these domes shelters the 100-inch Hooker Telescope, which was the largest telescope in the world between 1917 (when the telescope was completed) and 1949. While it is now used for public viewing, the Hooker Telescope rose to fame in the early 20th century thanks to observations by American astronomer Dr. Edwin Hubble, who used the telescope in the 1920s to prove that not only does the universe extend beyond the edge of the Milky Way galaxy, but it is expanding.

About a decade after Hubble's discoveries that fundamentally changed how we understand our physical universe, the telescope serendipitously detected the first molecule known to exist in interstellar space. In 1936, Dr. Theodore Dunham, Jr., who was an astronomer at Mount

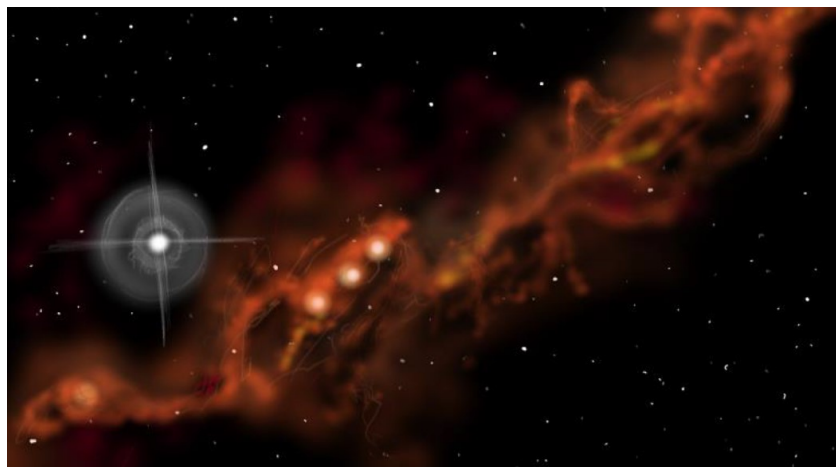


The first detection of a molecule in space was made using the 100-inch Hooker Telescope dome atop Mount Wilson.

Digital illustration by O. H. Wilkins

Wilson, observed the atomic absorption of neutral potassium and calcium atoms around five stars. In his findings, published in the *Publications of the Astronomical Society of the Pacific* in 1937, Dunham pointed out two spectral lines that could not be identified when compared to laboratory spectra.¹ One of these lines—observed at a wavelength of 430 nm—was determined months later to be the methylidyne, or CH, radical by astronomers from the University of Liège in Belgium.²

Since then, more than 250 molecules have been detected in inter- and circum-stellar space. Even distant galaxies have been found to harbor molecules, with around 70 compounds having been detected in extragalactic sources.³ Last year alone, in 2022, around 20 new interstellar molecules were reported for the first time, along with a new extragalactic molecule. Unlike CH, which was discovered via its electronic transitions, most molecules today are identified from their rotational spectra at much



Taurus Molecular Cloud, or TMC-1, is a well-stocked celestial laboratory.
Digital illustration by O. H. Wilkins

longer wavelengths using radio telescopes that look more like giant satellite dishes than your standard optical telescope.

Among last year's additions to our celestial chemical stockroom are simple inorganics **cationic phosphorus monoxide (PO⁺)**, found in a cold molecular cloud at the center of the galaxy,⁴ and **magnesium dicarbide (MgC₂)**, reported around a star called CW Leonis about 310 lightyears away.⁵ **Silicon phosphide (SiP)** was also reported, but only tentatively, around CW Leonis.⁶ **Phosphorus nitride (PN)** was found near the center of NGC 253, a nearby galaxy.⁷

Among the newly discovered organics in space, two were neutral radicals. **Ethynylcyclopropynylidyne (c-C₃C₂H)**—which contains a three-membered ring—and

butadiynethionyl (HC₄S)—a carbon-chain molecule—were both found in Taurus Molecular Cloud (TMC-1).^{8,9} Another four were cationic species, also all found in TMC-1: **thioketenylum (HCCS⁺)**,¹⁰ **protonated isocynoacetylene (HCCNH⁺)**,¹¹ **pentadiynylidynium (C₅H⁺)**,¹² and **protonated cyanohexatriyne (HC₇NH⁺)**.¹³

The rest of the molecules first reported in 2022 to have been found in interstellar space are neutral so-called complex organic molecules, or COMs. In the context of astrochemistry, “complex” is used to describe molecules that have six or more atoms. Not only are COMs interesting because they are (relatively) large molecules that survive and thrive in the harsh conditions of interstellar space, but many are thought to have astrobiological significance in that they may

play a role in prebiotic chemistry.

For example, **(Z)-1,2-ethenediol ((CHOH)₂)**, which was found in the cloud G+0.693-0.027 in the galactic center, is an intermediate in the formation of glyceraldehyde.

Glyceraldehyde is the simplest aldose, which is a class of monosaccharides or simple sugars.¹⁴ In the same galactic center cloud, **normal-propanol (n-C₃H₇OH)** was also found.¹⁵ Propanol is a precursor to prebiotic lipids, namely fatty (or long-chain) alcohols. The branched isomer, **iso-propanol (i-C₃H₇OH)**, was also reported for the first time in 2022, but in the northern core of the giant molecular cloud Sagittarius B2, more commonly designated as Sgr B2(N).¹⁶

Other newly detected interstellar molecules are remarkable because they might *not* be expected to exist naturally in space, either because computations suggest they do not form in large enough quantities to be detected or because they stray from the typical chemical formulas that grace organic chemistry text books. Two such molecules—both of which were found in TMC-1—are the unsaturated carbon-chain molecules

ethynylbutatrienyldiene (HC_2HC_4) and **1,2-heptadiene-4,5-diyne** ($\text{H}_2\text{CCCHC}_4\text{H}$).^{9,17} Other unsaturated molecules are ringed molecules like the newly discovered **ethenylidenecyclopentadiene** ($\text{c-C}_5\text{H}_4\text{CCH}_2$) and **2-cyanoindene** ($2\text{-C}_9\text{H}_7\text{CN}$).^{18,19}

Cyano-derivatives, such as 2-cyanoindene, are quite common in interstellar space. This was especially true in 2022 with three new cyano-derivatives of propene being identified for the first time in TMC-1. Specifically, *trans*- and *cis*-crotononitrile (CH_3CHCHCN), methacrylonitrile ($\text{CH}_2\text{C}(\text{CH}_3)\text{CN}$), and *gauche*- and *cis*-allyl cyanide ($\text{CH}_2\text{CHCH}_2\text{CN}$) were all detected.²⁰

Two other large organic molecules—specifically **3-hydroxypropenal** (HOCHCHCHO) and **methylcyanotriacetylene** ($\text{CH}_3\text{C}_7\text{N}$) were reported as tentative detections in the low-mass solar-type protostar IRAS 16293-2422 and TMC-1, respectively.

Identifying new molecules in space is interesting because it demonstrates the power of molecular bonds even in the

most extreme environmental conditions. Furthermore, identifying molecules in space is an important aspect of disentangling the chemical networks that preceded the solar system (including life) as we know it. Together, the new detections summarized here represent the rapid growth of interstellar chemical stockrooms that are possible because of dedicated molecular line surveys using premier radio astronomy facilities. For example, most of the interstellar molecules newly reported in 2022 come from the QUIJOTE line survey, or the Q-band Ultrasensitive Inspection Journey to the Obscure TMC-1 Environment, which is a dedicated project of the Yebes 40-meter telescope in Spain. Such surveys, especially with the identification of prebiotic molecules (like propanol) bring us ever closer to understanding our celestial chemical origins.

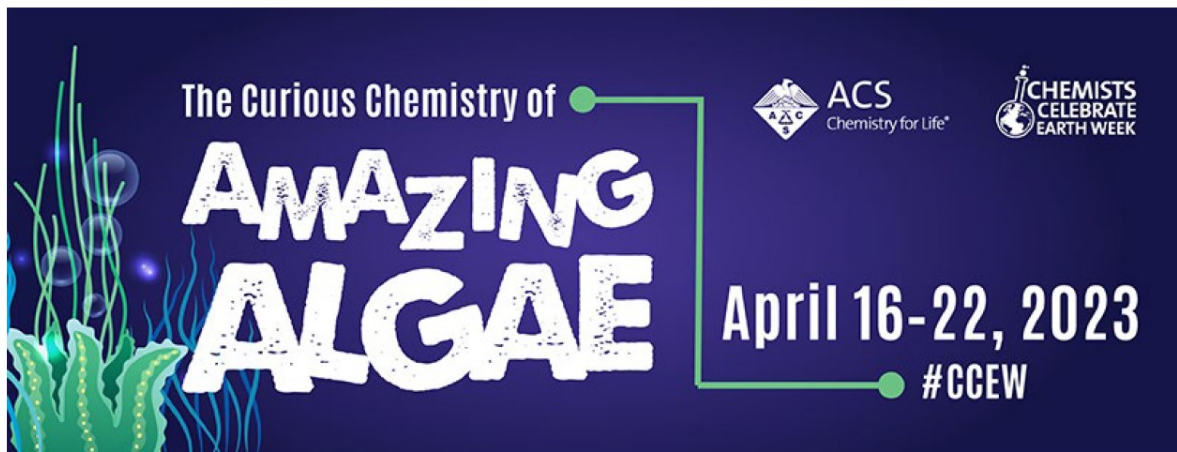


References. ¹Dunham, T. *Publ. Astron. Soc. Pac.* **1937**, 49, 26. ²Swings, P.; Rosenfeld, L. *Astrophys. J.* **1937**, 86, 483. ³Cologne Database for Molecular Spectroscopy (CDMS, <http://cdms.de>). ⁴Rivilla, V. M. et al. *Front. Astron. Space Sci.* **2022**, 9, 829288. ⁵Changala, P. B. et al.

Astrophys. J. Lett. **2022**, 940, L42. ⁶Koelemay, M. A. et al. *Astrophys. J. Lett.* **2022**, 940, L11. ⁷Haasler, D. et al. *Astron. Astrophys.* **2022**, 659, A158. ⁸Cabezas, C. et al. *Astron. Astrophys.* **2022**, 663, L2. ⁹Fuentetaja, R. et al. *Astron. Astrophys.* **2022**, 667, L4. ¹⁰Cabezas, C. et al. *Astron. Astrophys.* **2022**, 657, L4. ¹¹Agúndez, M. et al. *Astron. Astrophys.* **2022**, 659, L9. ¹²Cernicharo, J. et al. *Astron. Astrophys.* **2022**, 657, L16. ¹³Cabezas, C. et al. *Astron. Astrophys.* **2022**, 659, L8. ¹⁴Rivilla, V. M. *Astrophys. J. Lett.* **2022**, 929, L11. ¹⁵Jiménez-Serra, I. et al. *Astron. Astrophys.* **2022**, 663, A181. ¹⁶Belloche, A. et al. *Astron. Astrophys.* **2022**, 662, A110. ¹⁷Fuentetaja, R. et al. *Astron. Astrophys.* **2022**, 663, L3. ¹⁸Cernicharo, J. et al. *Astron. Astrophys.* **2022**, 663, L9. ¹⁹Sita, M. L. et al. *Astrophys. J. Lett.* **2022**, 938, L12. ²⁰Cernicharo, J. et al. *Astron. Astrophys.* **2022**, 663, L5.

Olivia Harper Wilkins, Ph.D., is a NASA Postdoctoral Program (NPP) Fellow at NASA Goddard Space Flight Center. She is also a Maryland Section Member-at-Large and a National Younger Chemists Committee (YCC) Affiliate. You can connect with her on Twitter and Instagram at @LivWithoutLimit. She can also be reached by email at olivia.h.wilkins@nasa.gov. Views expressed are the author's own.

Dr. Wilkins is a frequent contributor to *The Chesapeake Chemist*.



Chemists Celebrate Earth Week (CCEW) is a community-based program of the American Chemical Society (ACS). For us, this annual program unites the Maryland ACS local section, area student, schools, and individuals in communicating the positive role that chemistry plays in the world. CCEW occurs annually during the week of Earth Day, which is April 22. Earth Day provides us with an opportunity to demonstrate support for a healthy environment, raise awareness about environmental issues, and remind us that we all need to contribute to a sustainable planet. Earth Day 2023 marks the 53rd anniversary of the world's largest environmental movement!

Chemistry in the Library

Join a chemist from the Army Research Laboratory and the American Chemical Society and participate in hands-on experiments exploring the chemistry of algae.

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

Registration required.

Library System	Branch	Day	Date	Time
Howard	Miller	Saturday	11 Mar	11:00
Howard	East Columbia	Saturday	18 Mar	2:00
Howard	Elkridge	Saturday	25 Mar	2:00
Harford	Jarrettsville	Saturday	01 Apr	1:00
Howard	Central	Saturday	08 Apr	2:00
Anne Arundel	Linthicum	Saturday	15 Apr	11:00
Enoch Pratt	Govans	Saturday	22 Apr	2:00
Howard	Glenwood	Saturday	29 Apr	10:30
Howard	Savage	Saturday	06 May	2:00
Carroll	Eldersburg	Saturday	13 May	2:00
Enoch Pratt	Light St	Saturday	20 May	2:00
Anne Arundel	Odenton	Saturday	27 May	11:00

Contact: [Rose Pesce-Rodriguez](#) for Chemist celebrate earth week, CCEW Ages 7 & up.

[Beatrice Salazar](#) for Chemist Celebrate Earth Day, CCE-Day High School students and adults.

ANNOUNCeMeNTS

TRAVEL AWARDS, March 26th - March 30th 2023 ACS Spring Meeting, Indianapolis

STUDENT AWARDS April 16, 2023

Chemists Celebrate Earth Week, April 16 - 22, 2023 & Chemists Celebrate Earth Day, April 22, 2023

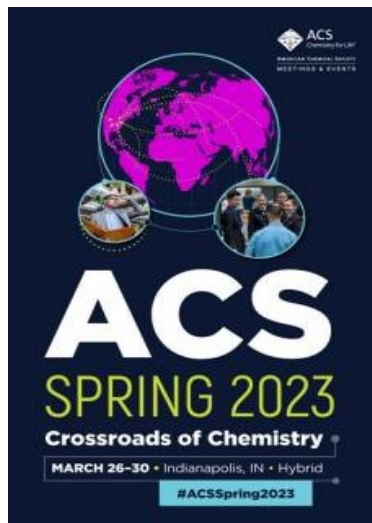
U.S. National Chemistry Olympiad, March 1, 2023 – April 23, 2023

MARM-2023, June 2023 P. 14

PROJECT SEED, Summer 2023 P.15

ACS Strategic Plan Washington D.C. – Retreat P.16 & ACS Div. of Health and Safety Workshop P.16

DETAILS of the EVENTS 2023



CONGRATULATIONS!

STUDENT TRAVEL AWARDS

Nine graduate and undergraduate students each received a \$500 travel grant to present their papers at the national ACS meeting in Indianapolis March.26-30. Also four **high school students** received \$149 apiece for registration to present their talks and posters virtually. See page 17.

Contact Students Travel Grants Coordinator: Louise Hellwig | Chemistry Department, SP 212 | Morgan State University | 1700 E. Cold Spring Lane | Baltimore, MD 21251 | 443-885-2085

You are invited! **STUDENT AWARDS April 16, 2023**

Speaker: Dr. Matthew A. Zajac

The Student Awards Celebration and Lecture

Dr. Zajac – Senior Director of Process Chemistry at GlaxoSmithKline, Upper Providence, PA.

Lecture Title: **Adventures in the Small Molecule Pharmaceutical Industry Illustrations of Chemistry Careers in Big Pharma** for the abstract and biography see: acsmaryland.org and the Chesapeake Chemist Vol. 80 Issue 4 April 2023.

Host: Dr. Jason Labonte from Notre Dame of Maryland University, Doyle Hall. ACS student awards programmed for Sunday, April 16, 2023, at 12:00 Noon. Contact [Sara Narayan Ph.D.](mailto:Sara.Narayan@acs.org) ACS Student Awards Program Coordinator and Chair



JUNE 9-10, 2023

MARM 2023 CHEMISTRY REFOCUSSED

New York, NY



www.acs.org > [meetings](#) > [regional Middle Atlantic Regional Meeting \(MARM\) - American Chemical ...ACS](#) | [Meetings & Events](#) | [Regional Meetings](#)

[MARM 2023](#)

[Home](#) | [Program](#) | [Abstract Submission](#) | [Registration](#) | [Exposition & Sponsorship](#) | [Special Events](#) | [Awards](#)

Seeking Awards Nominations for Maryland Local Section Members:

There are 4 regional awards that will be given at the 2023 Mid Atlantic Regional Meeting of the ASC. They are:

1. [The Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences](#) – Sponsored by the [ACS Committee on Minority Affairs](#)– **deadline March 1, 2023**
2. [The ACS Division of Chemical Education \(CHED\) Regional Awards for Excellence in High School Teaching](#) – **deadline March 8, 2023**
3. [The E. Emmet Reid Award in Chemistry for Teaching at Small Colleges in the ACS Middle Atlantic Region](#) – **deadline March 8, 2023**
4. [The E. Ann Nalley Regional Award for Volunteer Service to the American Chemical Society](#) – **deadline March 8, 2023**

Visit: www.MARM2023.org/awards for more information about eligibility and the nomination process, contact:

C. Eric Cotton, Ph.D. | Associate Professor of Chemistry | The Community College of Baltimore County | Catonsville Campus, MASH 014 | 800 S. Rolling Road, Catonsville, MD 21228 | 443-840-5932 | Fax: 443-840-3414 | ccotton2@ccbcmd.edu |
CCBC. The incredible value of education.

Nominees needed: <https://www.acs.org/funding/awards/stanley-israel-regional-award-for-advancing-diversity.html> The deadline is March 1.

Letter for Israel Nomination - MARM-2023

 Paul Smith

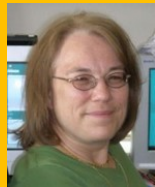
[Nomination letter & abstract](#) for Mike Summers and Robert Meyerhoff for the Stan Israel Award
Nominators:

Paul Smith, Associate Professor, Associate Chair and Undergraduate Program Director for Chemistry, Department of Chemistry and Biochemistry, UMBC (410-455-2519).

Brian Cullum, Department Chair Department of Chemistry and Biochemistry UMBC.

Brian Cullum, Prof. **Tom Cech** from the University of Colorado, and

Dawn Ward, Prof at Stevenson, and Alum of the Meyerhoff Graduate Program.

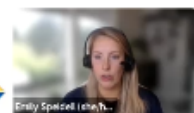


2023 Project SEED

Maryland Local Section

2023 Project SEED Coordinator/ Mentor Inform...

Submitting a Project Proposal- To Keep in Mind



Keep in Mind:

1. Reviewer criteria (Chemistry relevance, suitable rigor, sufficient time, clear research project, safety)
2. Your project is more likely to be accepted first round if you have been thoughtful and descriptive about safety concerns
3. Be thoughtful and descriptive when answering project questions! One sentence answers to project questions raise concerns for reviewers.

Introductory video 2023 for coordinators and mentors [Video for Project SEED](#)

Program I.

The ACS Maryland Section **Project SEED** run by the national ACS is closed for applications. The selected students will begin their summer research during the summer 2023. Now it is the time to consider whether you could mentor a high school student in your lab this summer.

Program II.

Summer Research Opportunity for High School Students, an alternative to Project SEED. This program was created in 2022 under the name project Seed -*germinating seeds*-. We are pleased to announce the recipients of this summer research grant.

More information visit: [Project SEED](#) at ACS.

To inquire about the program at ACS Maryland Section contact any of the Committee Program coordinators: [Louise Hellwig](#), [Beatrice Salazar](#) or [Kelly Elkins](#).

Please use the following information to be more familiar with the [Project SEED process](#)

STRATEGIC PLANNING

WASHINGTON DC - RETREAT

[The strategic plan 2023](#) is focused on ACS mission, vision, four core values and the five goals. Learn to make your best plans even more strategic and lead your team to success with effective strategic planning practices.

ACS is offering a retreat on strategic planning for Governance in the Fall. It will be the dates shown below. Working meals will be provided for breakfast and lunch. The hotel is located near ACS Headquarters in DC. Find the information if you are interested contact your local section Chair.

Sept 9-10

Oct 7-8

Nov 4-5

Sept 23-24

Oct 14-15

Nov 11-12

Sept 30-Oct 1

Oct 21-22

Oct 28-29

[The strategic plan 2023](#) is focused on ACS mission, vision, four core values and diversity and five goals. Learn to make your best laid plans even more strategic and lead your team to success with effective strategic planning practices.

[Strategic Planning \(acs.org\)](#) free for all members

<https://www.acs.org/careers/leadership/strategic-planning-retreats-for-acg-governance-groups.html> for Governance

<https://acs.org/content/dam/acsorg/about/strategicplan/ACS-Strategic-Plan-2023.pdf>

ACS Division of Chemical Health and Safety Virtual Workshop

Submitted by [Sarah Zimmermann](#).

"Empowering Academic Researchers to Strengthen Safety Culture"

A STEM departments workshop.

DESCRIPTION: This interactive workshop provides an opportunity for frontline researchers in academic institutions to **learn more about safety culture and gain skills to be a leader in safety**. Our target audience is **graduate students, postdocs, and undergraduates** in STEM departments, but we also welcome faculty and safety professionals interested in supporting the development of Laboratory Safety Teams (LST) and the strengthening of safety culture. If your department has already established an LST, this workshop can also help it grow and mature - as well as build connections among students across universities who are working hard to strengthen their safety culture.

While this workshop has been designed from a US perspective, we have had participants from multiple countries report that they found it useful as well! This international audience is just one more reason why the interactivity among participants is so vital to the success of the workshop for all participants!

This workshop is brought to you by the ACS Division of Chemical Health and Safety as one of two workshops in the ACS CHAS Peer Led Workshop Series. To learn more about the Division and the ACS CHAS Peer Led Workshop Series, please visit our main website at dchas.org.

Organized by: [ACS Division of Chemical Health and Safety | Connecting Chemistry & Safety \(dchas.org\)](#)

If you'd like to know more about Lab Safety Teams, I recommend this [article](#).

CONTACT:

Monica Nyansa | Chemistry Ph.D. Candidate | [Tanasova Lab](#), [Michigan Tech](#) | mnyansa@mtu.edu, 906-231-2283

Student Travel Grant Recipients for Minneapolis National ACS Meeting in March 26 – 30, 2023



Student: Larissa Speaks
Mentor: Kelly Elkins, Ph.D.



JOHNS HOPKINS
UNIVERSITY

Student: Ewa Harinszka
Mentor: Rigoberto Hernandez, Ph.D.
Nominee to ACS President /2024

Student: Divya Yadav
Mentor: Stephen Fried, Ph.D.



Student: Anna McClain
Mentor: Lee Blaney, Ph.D.

Student: Sukh Singh
Mentor: Lisa Kelly, Ph.D.



Students:
Alex Chan
Fletcher Zoe
Wuyts Chris Goodis
Brandan Lowe

Mentor: Dr. Steve Fletcher

High School Students



Desmond Smith
Mansoor Johnson
Tessa Snyder
Catherine Connolly
Mentor: Dr. Mary Devadas

Congratulations to all presenters! We will be looking forward to seeing your posters at the Spring National Meeting.



Families dyeing multi-fabric strips.
 (Central Branch Library Columbia, MD)

Students examining dyed multi-fabric strips.
 (East Columbia Branch Library Columbia, MD)

OUTREACH

Maryland Local Section Participated in National Chemistry Week and Chemists Celebrate Earth Week 2022

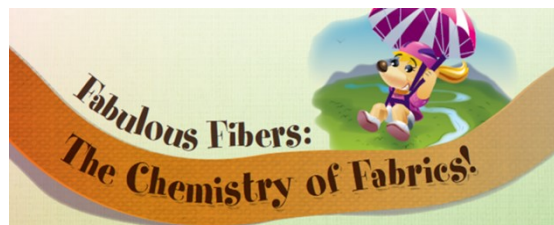
Jan 2022 (report for CY2022)

Report by: Dr. Rose Pesce-Rodriguez (rose.a.pesce-rodriguez.civ@army.mil)

Edited by: Beatrice Salazar, *Chemists Celebrate Earth Day*, Coordinator

Title: Outreach Coordinator; Member at Large

[National Chemistry Week, NCW](#) | Chemists Celebrate Earth Week, CCEW | Gains in the Education of Math and Science - GEMS @ US Army Research Lab



NCW_ From Sept. 3 to Dec. 3, 2022 The Maryland Section of the American Chemical society celebrated Chemistry week with the theme: Fabulous Fibers: The Chemistry of Fabrics! The section included hands-on activities during 10 sections, 60 minutes each at three counties' public libraries: Howard County, Baltimore County, Harford County and Anne Arundel County.

The sessions included hands-on activities relating fabric structure and wettability and dyeing using different dye mixes on various types of fabrics. Our 2022 NCW program was very successful and well received with respect to how the content and the overall attendance. The number of participants for the entire sections was 175 students and 110 caregivers. The chemistry content of the activities included: microscopic appearance of fabrics and fibers, fabric

wettability and contact angle, hydrogen bonding using magnetic water models, dying of multi-fabric strips using Kool-Aid and dye mixes, and concepts of polarity where ion charges and hydrogen bonding were related.

In addition to the local public libraries hands-on activities the **NCW illustrated poetry** was represented by: Grades 3-5, 4 submissions; Grades 6-8, 1 submission and Grades 9-12, 2 submissions.

Chemists Celebrate Earth Week, CCEW

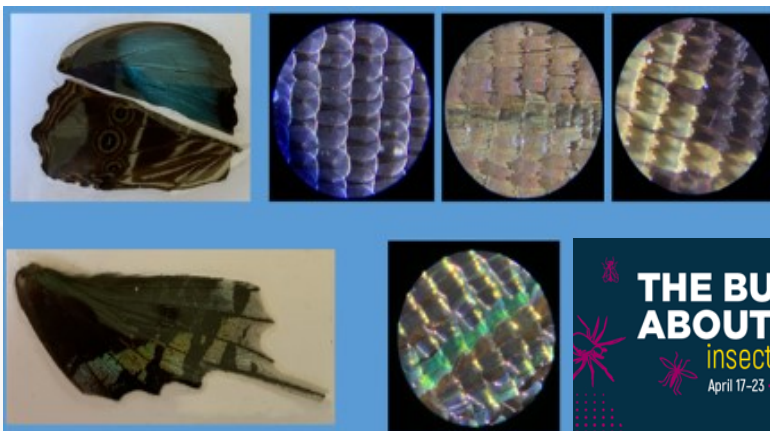
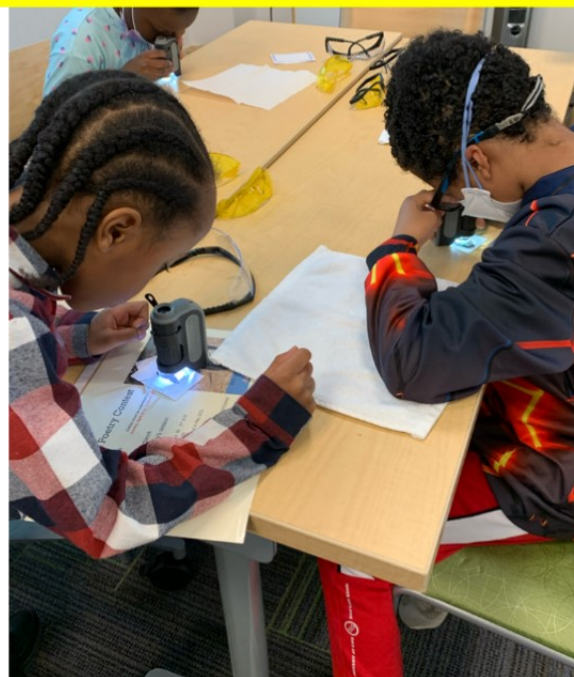
CCEW_ During March 19–May 28, 2022, American Chemical Society Maryland Local Section engaged in Hands-on chemistry experiments and activities for children and adults. The Maryland Local section conducted 7 sections in local public libraries, each section is 60 minutes for children K-12 parents and adults.

The total of attendee through the three months were 150 participants and 110 accompanying adults. We encourage hand-on participation of accompanying adults because it is a learning experience for them and enables them to better follow up on the topic with their children at home.

Participants received Carson Microbrite mini microscopes to be used the ACS 2022 CCEW (Earth Week) theme: “Buzz about Bugs.” “We use the microscopes in many of our programs and find that in addition to being very good microscopes (magnification 60-120x), they are robust and easy to use. Kids and adults love them” said program coordinator.

The concepts learned included butterfly wings pigment and structural-based insect color, qualitative assessments of silkworm cocoons and discussion of their life cycle, the importance of acids

Students at MD Section CCEW event at the ElkrIDGE Branch library observing butterfly wings with mini microscopes.



Volunteers:

Angelica Guzman (6th grade; Anne Arundel Public School System)
Claire Shamul (Johns Hopkins Whiting School of Engineering)
Dr. Tolu Aduroja (Morgan State, recent PhD)
Rose Pesce-Rodriguez (MD ACS)

in insect defense against predators along with assessment of pH of common materials using cabbage juice indicators, insect vision (visible and UV) along with assessment of luminescence of scorpions, wasp nests and other materials, assessment of honey/honeycombs, the of process of honey production and the observation of hexagonal structures

in nature, and a demo on edible insects. Also, the local public libraries hands-on activities the **CCEW illustrated poetry** was represented by: Grades K-2, 3 submissions; Grades 3-5, 3 submissions; Grades 9-12, 1 submission.

NCW and CCEW Themes Applied

Gains in the Education of Math and Science - GEMS @ US Army Research Lab

The ARL's Gains in the Education of Math and Science (GEMS) Program. Content from the 2021 NCW program "**Fast or slow Chemistry Makes it Go: The Chemistry of Reaction Rates**" was applied and run in five virtual sessions, 25 min. each from July 17, 2022 – Aug. 15, 2022

CONGRATULATIONS!

The MD Local Section **marked 20 years of our Chemistry in the Library program!** The program currently serves public libraries in Baltimore City and Howard, Anne Arundel, Carroll (recently) and Harford Counties. In 2022, approximately 325 students and 220 parents, volunteers, caregivers and virtual participants in the three programs. Based on the positive and enthusiastic feedback from attendees the program appears to be valuable. We are grateful for the financial support provided by the MD-ACS Section and the time investment by the presenters.



Chemistry Library Program 20th year celebration at Govans Branch Library, Baltimore City, MD.

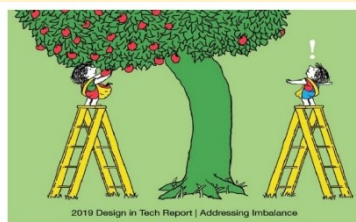
Laugh a Little...



Courtesy of the artist
Pablo Rojas

A picture is worth 1000 words....

What is the difference between equality and Equity?

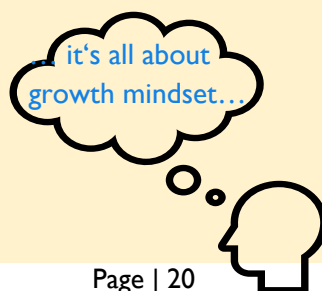


Equality



Equity

A CEO in a company prepares the slides of his presentation with the following picture and asks: Which should come first Diversity or Inclusion?



Report _ First Executive Committee Meeting Agenda

Maryland Local Section of the ACS

Executive Board Meeting Agenda

February 16, 2023

7:00-8:30PM

Minutes: see Website: acsmaryland.org

Call to Order and Approval of Agenda

Approval of the Minutes from the December Meeting

Treasurer's Report (Lee)

Investment Report (Jan)

New Business

A. Networking at four "corners" of the state and engaging our members (Kelly)

B. Tours (Michele / Louise)

C. Earth Day (Beatrice)

D. Senior Chemists Luncheon (Merle)

E. MARM (Sarah or Kelly)

F. Interest in Strategic Planning? (Kelly)

G. Other

Adjourn

Announcements

-Thank you to everyone who helped to complete the Annual Report! It is submitted.

-Thank you to everyone who attended the Women Chemists lecture!

-Thank you to Sarah Z. for serving as Section Chair last year.

-Outreach Report (Rose)

-Travel Grant Awards (Louise)

-Student Awards Symposium, April 16, NDM, Speaker: Matthew Zajac, GSK (Sara)

-Send Chesapeake Chemist Newsletter Items to Beatrice

-Awards nominations to Dana, Louise, or Beatrice

[Minutes from Fourth Executive Committee Meeting, December 14, 2022](#), presided by Dr. Sarah Zimmerman, Chair 2022

[Minutes of first executive committee Meeting, February 16, 2023](#), Presided by Dr. Kelly Elkins, Chair 2023

Special issues: new program [Younger Chemists Committee, YCC](#)

New social-networking meetings TBA: Submit proposals before the second executive Meeting in May.

2023 Administration Officers

2023 Section Officers

Chair 2023 _____	Kelly Elkins, Kmelkins@towson.edu
Vice-Chair (Chair 2024) _____	Jiangnan Peng, jiangnanpeng@morgan.edu
Chair Elect (Chair 2025) _____	Beatrice Salazar, beatricesalazar1@gmail.com
Immediate Past Chair-2022 _____	Sarah Zimmermann, scatzim@gmail.com
Secretary 2023-2024 _____	Louise Hellwig, louise.hellwig@morgan.edu
Treasurer 2023-2024 _____	Lee Lefkowitz, lee_lefkowitz@hotmail.com

2023 Committee on Nominations and Elections

Chair, Section Committee on Elections	Eric C. Cotton Chair 2021, ccotton2@ccbcmd.edu
Committee member	____ Jiangnan Peng, jiangnanpeng@morgan.edu
Committee member	____ Beatrice Salazar, beatricesalazar1@gmail.com
Committee member	____ Sara Narayan, snarayan5@yahoo.com
Committee member	____ Pumtiwitt McCarthy, pumtiwitt.mccarthy@morgan.edu

Council/Committees

2023-2025	Kelly Elkins, Nominations Committee, Kmelkins@towson.edu
2021-2023	Beatrice Salazar, History of Chemistry Committee, beatricesalazar1@gmail.com
2021-2023	Jan Kolakowski, Tech. Committee, jek6042@gmail.com
2021-2023	Stephanie Watson, stephanie.watson@nist.gov

Alternate Councilor

2023-2025	Jillian Malbrough _____ jillian.malbrough2@gmail.com
2021-2023	Alexander Samokhvalov _____ alexandr.samokhvalov@morgan.edu
2021-2023	Michele Foss _____ foss.michele@gmail.com
2021-2023	Robert Clapper _____ rob.clapper@scioninstruments.com

Member-At-Large

2023	Eric C. Cotton _____ ccotton2@ccbcmd.edu
2023	Nirupam J. Trivedi _____ nirupam.j.trivedi@mail.mil
2023	Olivia Harper Wilkins _____ olivia.h.wilkins@nasa.gov
2023	Rose A. Pesce-Rodriguez, _____ rose.a.pesce-rodriguez.civ@army.mil
2023	Saraswathi Narayan _____ snarayan5@yahoo.com

Maryland Section Website/Social Media

2023 Webmaster _____	Nicole Carbonaro, ncarbonaro@towson.edu
Chesapeake Chemist Editor-in-Chief _____	Beatrice Salazar, Chair 2018, beatricesalazar1@gmail.com
Social Media Liaison _____	Pumtiwitt McCarthy, Chair 2020, pumtiwitt.mccarthy@morgan.edu

CONTACT US: acsmarylandsection10@gmail.com

AWARDS

Braude Award, L. Hellwig
Remsen Award, D. Ferraris
Maryland Chemist of the Year Award,
 B. Salazar
Senior Chemist Award, M. Eiss
Student Award, S. Narayan

PROGRAMS

Women Chemists Committee, S. Narayan/K. Elkins
Student Travel, L. Hellwig
High School Outreach: National Chemistry Olympiad & Chemists Celebrate Earth Day,
 B. Salazar
Middle and Elementary School Outreach
 (National Chemistry Week, Earth Week),
 R. A. Pesce-Rodriguez
Publicity, P. McCarthy / B. Salazar / R. Clapper
Entertainment/Tours, M. Foss / L. Hellwig

EVENTS CONTACT

The U.S. National Chemistry Olympiad

USNCO MARYLAND

URL: <http://www.beatricesalazarusncoordinator.webs.com>

WCC February Lecture [Kelly Elkins](#) & [Sara Narayan](#)

Jan - April

Student Travel Awards

<https://acsmaryland.org/travel-awards/>

Email: Louise Hellwig <Louise.Hellwig@morgan.edu>

Jan - March

Student Awards <https://acsmaryland.org/student-awards/>

Email: Sara Narayan, snarayan5@yahoo.com, SNARAYAN@stevenson.edu

April

Chemists Celebrate Earth Day – beatricesalazar1@gmail.com

National Chemistry Week / Earth Week Events

[Rose Pesce-Rodriguez](#)

Chemists Celebrate Earth Day – [Beatrice Salazar](#)

<http://acsmarylandevents2016.webs.com>

Beer & Social Tours: Louise Hellwig <Louise.Hellwig@morgan.edu>
and Michele Foss <foss.michele@gmail.com>

April - Oct.

Senior Awards

Email: Merle Eiss, meiss32@aol.com

May

Braude Award

<https://acsmaryland.org/braude-award/>

Email: Louise Hellwig <Louise.Hellwig@morgan.edu>

Oct.

The Remsen Award

<https://acsmaryland.org/remsen-award/>

Email: Dana Ferraris (dferraris@mcdaniel.edu)
<dferraris@mcdaniel.edu>

Nov.

The Maryland Chemist of the Year Award

<https://acsmaryland.org/maryland-chemist-of-the-year/>

[Beatrice Salazar](#), Award Committee Chair

Dec.

Subscribe to Chesapeake Chemist! it is Free!

Send us your email
if you are not receiving
our newsletter

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 Maryland ACS membership in October 2006.

Changing your e-mail address? Moving out of the MD ACS area?

Let us update your email if you have any changes.

- E-mail us at acsmarylandsection10@gmail.com
- Provide your ACS member number, full name, and email changes and we can ensure that your records are updated with National ACS.
- **Contact the National ACS membership division:** 800-333-9511 (US only) or at service@acs.org to ensure that you receive the Chesapeake Chemist, and please add your ACS email.



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3815 LANCASTER PIKE, WILMINGTON, DE 19805
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E-mail: (micronanalytical@compuserve.com)
Website: (<http://micronanalytical.com/>)

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