

2021 USNCO Honor's List

9th grade chemistry student

**Thank you
Professor
Blaney!**

P 8

**2021
USNCO
Nominees**

P 11

**2021
Braude
Award
Winner**

P 12



**Interview
with Anurag**

P 5/6

***"To me, chemistry is the perfect balance
of abstract scientific concepts
combined with abundant and clear
real-world application"*** P 4

Maryland Local Section Newsletter

Editor in chief: [Beatrice Salazar](#)

Policy

Pumtiwitt McCarthy, Chair-2020/social Media

Sarah Zimmerman, Web Master

<https://acsmaryland.org>

CONTENTS

3/Chair's Message

5/USNCO Report/ Interview with
Anurag Sodhi

8 / Thank you Professor Blaney

9/2021 CEW Illustrated
poetry contest

10/HISTORY CORNER

11/USNCO National Nominees

12/2021 Braude Award Winner

13/Announcements

15/ ACS Maryland Section's Reports

17/ACS Councilor's Report

18/ Outreach Program reports
/Laugh a Little...

19/ JOBS

23/ Events Contact

24/ Administration

Cover :



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From the Editor's Desk...

Relief from Covid-19 is still in the future

Last Spring, we were optimistic about Covid-19 becoming a nightmare from the past. Even though we never lose hope, as of August 16th, the nightmare is still with us. In fact, we are trending back to old restrictions since a new variant of the virus is causing havoc among the unvaccinated. Many outdoor activities have increased, bringing us some relief, but there is still a feeling of uncertainty and virtual communication is still the norm at many places of work.

We embraced the summer with its promise for warm, sunny weather. Climate change, however, is becoming apparent all over the world. We have had our share of harsh weather in Baltimore; on August 14th a strong storm that looked like a tornado fell near the Montebello Lake area. Strong winds caused the uprooting of giant trees that caused destruction in many houses.

Virtual meetings help us maintain our interest in learning. Stories in this newsletter confirm that students are keeping the promise and future of chemistry alive. Maryland students continue to be interested in chemistry activities like the U.S. National Chemistry Olympiad, USNCO (p 4). We have an interview with a 9th grade student that has made Maryland proud of his accomplishment in chemistry (p 5). The newsletter includes a list of the USNCO nominees (p 11) and a short history of the competition (p 10).

We present in a video the Student Award Lecture on the recovery nutrients from poultry litter with the Phosphorus Extraction and Recovery System, PEARS, an innovative technology (p 8). We are grateful to Professor Blaney from UMBC for his collaboration.

Finally, Local Section members were nominated, and a selection was made for the recipient of the 2021 Braude Award. Join me in congratulating the winner, Dr. Dana Ferraris, from McDaniel College (p 12).

Thank you for your contributions and cooperation.



Beatrice Salazar

Editor-in-Chief, ACS Maryland Section



Chair's Message

Summer 2021



Dr. C. Eric Cotton
Associate Professor

Chair, ACS Maryland Section
acsmaryland.org

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
443-840-341
ccotton2@ccbcmd.edu



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Phone: 609-258-5778

Greetings Maryland Section Members and Friends:

We are about halfway through the meteorological summer, and academic summer is at its end. When I first drafted this letter there were many reasons to look forward the possibility of face-to-face meetings. At that time, the number of new COVID cases in Maryland is at a point where it is as low as it was in late March 2020 when the pandemic began. Now the numbers are on the rise here in Maryland, and they are at all-time highs in other states. The discussions of vaccines remind me that the scientific community still needs much work on outreach. This is one of the things that the ACS and other scientific organizations should continue to work on with vigor. I anticipate that the remainder of meetings this year will remain virtual, but I hope for the best.

Revisions to the Sections bylaws have been submitted to ACS national headquarters and we await their feedback. We anticipate that you will be voting on the revisions along with our yearly elections.

My best to you all.

C. Eric Cotton

C. Eric Cotton, Ph.D.
2021 Chair - Maryland Section of the ACS
ccotton2@ccbcmd.edu

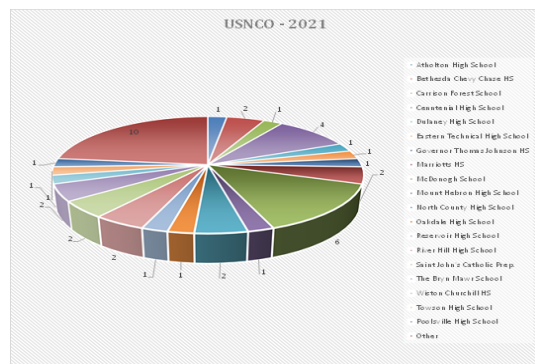
High school participation in 2021 USNCO



"Welcome"

This year we celebrate the nomination of excellent high school students who participated in several local, State, and nationwide chemistry Competitions. In the 2021 U.S. National Chemistry competitions (USNCO), Kien Phuong from ACS Washington Local Section and Anurag Sodhi from ACS Maryland Local Section completed all competitions and achieved high scores. Approximately 1600 competitor nationwide participated. Anurag qualified for the semifinal competition and made the honor's list and Kien became one of 20 students nominated nationwide to participate in the USNCO Chemistry Summer camp, an intensive summer chemistry training camp to prepare students for the final or International Chemistry Olympiad, IChO. Only the best 4 students were selected to compete internationally, IChO.

The USNCO in Maryland has been a successful activity for 9th - 12th students. All participants take qualifying exams in the Baltimore area first, then in the Maryland State and later in the country. The level of difficulty of the exams increases in each competition. Our high school students are becoming increasingly better prepared each year, Congratulations!



2011 U.S. NATIONAL CHEMISTRY OLYMPIAD NATIONAL EXAM
American Chemical Society Olympiad Examinations Task Force

Two Maryland Local Section Winners 2021 USNCO

Maryland Local Section in Baltimore

Anurag Sodhi, top 150 Honor's List

See page 5

Maryland Local Section in Washington Area

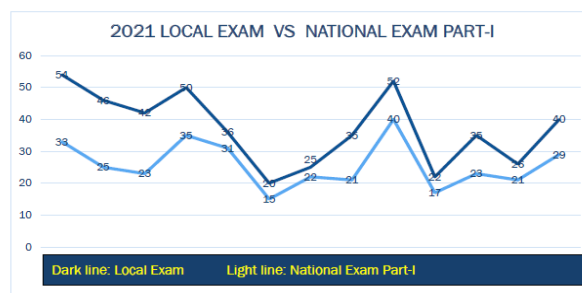
Kien Phuong, Top 20 attended Chemistry Camp also top 4th student nominated for the International Competition, IChO

"USNCO"

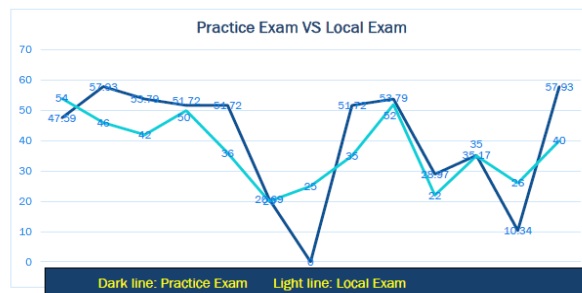
The following graphics represent only a partial sample of students' performance during the exams. It is clear that pre-qualifying exams and practice exams help in the performance of students' scores. The comparison was made both locally between Maryland students and Nationwide between all States in USA.

My own analysis 60 Questions 2021 USNCO

Round 2.



Round 1.



Note there many more students with high scores. However, ACS-Rule is that only 2 students per school may participate providing all requirements are fulfilled for both ACS and the ACS Maryland Local Section.

Chesapeake Chemist talks with student participant in USNCO

Anurag Sodhi a 9th grade student of

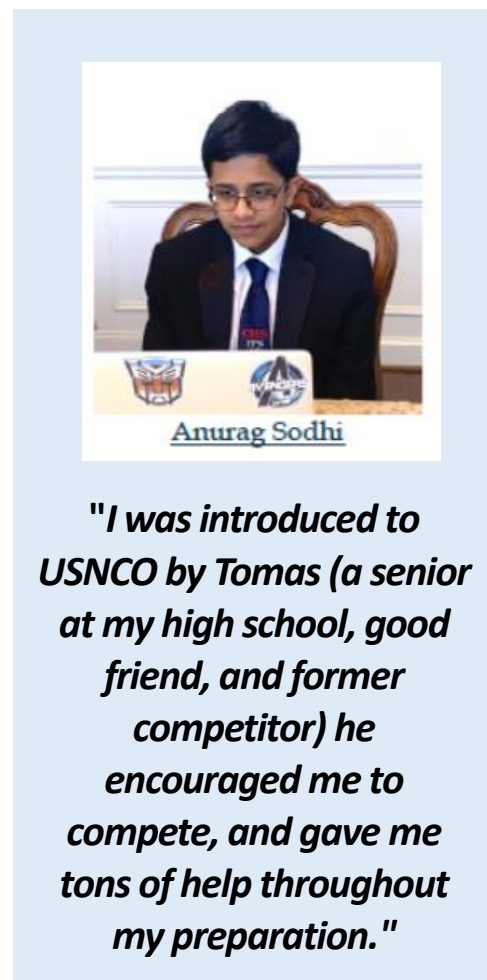
 Centennial High School,
Ellicott City, Maryland (HCPSS)

Beatrice Salazar,
USNCO Coordinator Maryland Local Section

His chemistry teacher [Dr. Robert Astri](#) had recommended him for this competition because of his ability to learn chemistry concepts thoroughly and his seriousness as science student. Anurag is very young, and he is beginning to learn chemistry; he has excelled in the subject and has demonstrated outstanding ability, commitment and good discipline in learning the subject.

Although it is the first time, he participated in the US National Chemistry Olympiad, USNCO he performed above average. Anurag first competed in the preliminary competition from Maryland State to qualify for the U.S. National exam. The number of participants in the 2021 digital national

prequalifying competition could amount to 16,000 nationwide participants. Anurag along with 37 more Maryland competitors took the ACS Maryland Local Section's exam and was nominated to participate in the national exam Part-I. Only 14-15 students from Maryland are nominated for this exam. A high score in the prequalifying exam is the requirement number one. The number of students allowed to take the exam is dictated by ACS, depending on the number of members of ACS in the state of Maryland. As of today, we have approximately 2000 members; if these numbers increase so the opportunity for students to take US National Chemistry Olympiad exam increase.



The USNCO program at ACS has improved their digital and virtual exam greatly. [ACS](#) began the virtual exams in 2020 with the help of the coordinator from each ACS local section in each state of the United States and other countries providing USA have an ACS chapter there. During the pandemic the uncertainty about

how we would collect information was a challenge, this year, ACS prepared students for the exams, created a "course" and a solid digital platform to collect data, fulfill the requirements for the competition and prepare students for various exams. There is still one part that we have not address as yet, the laboratory or practical Part-III, but the future is promising and will have something soon.

55

As we mentioned before, Anurag excelled in this exam and he qualified for the U.S. National exam part I, his score was among the best and immediately he was contacted to take the National exam part-II. This part includes 8 essay questions, high quality, and lengthy questions due to the embedded parts of each question making emphasis on problem solving. Passing this second part will have two major results. One_ students could qualify for the coveted [Chemistry Summer Camp](#). Only 20 students can be selected nationwide. Two_ students could receive HONOR mention, that is, only 150 out of approximately 1300-1500 (the number of participants varies each year) nationwide participants in the competition will have this honor. Proudly, Anurag was among them and his name makes Maryland proud in the [list of the 150 Honor US.](#)

[Chemistry Olympians for 2021](#) (p 3).

"I was introduced to USNCO by Tomas (a senior at my high school, good friend, and former competitor) he encouraged me to compete, and gave me tons of help throughout my preparation." said Anurag. I decided and selected to compete because I had done chemistry competitions in the past and really enjoyed them. Therefore, I decided to continue with competitive chemistry into high school with USNCO." Great decision! and it paid off this year 2021, the year of hope.

Anurag found that the USNCO enrollment was a straightforward process that facilitated his participation in the Olympiad. For more information on the [USNCO 2022](#) visit the USNCO Maryland website.

Two Maryland
Local Sections
made it to the
Honors List &
top 20
chemistry camp

Preparing for USNCO. In the beginning of my preparation, I

read a lot of chemistry textbooks and guides to learn more about chemistry topics I didn't know about. However, as the competition neared, I mainly prepared by taking practice tests.

I do not have a chemistry Tutor, aside from numerous online resources, I am mainly self-taught. Since the beginning, my parents have supported my USNCO efforts. They have directed me to the resources I needed to do well and have consistently motivated me to do the best that I can.



USNCO Coordinator's interview with Anurag...

Why Chemistry? - As a little kid, I always loved watching chemistry videos online. I have - always enjoyed studying chemistry and will hopefully continue to do so for years to come.

What do you like about chemistry and what is the area you enjoy the most? - To me, chemistry is the perfect balance of abstract scientific concepts combined with abundant and clear real-world applications. Currently, I am most fascinated by organic chemistry and biochemistry.

During 2021...

How do you like taking virtual examinations? Why? - A: While it probably isn't as great as the USNCO experience in-person, I did appreciate the ability to take exams from the comfort of my own home.

Did you find the exams challenging or they were easy for you? - I found the USNCO exams to be challenging. While they weren't super difficult, they certainly weren't easy either.

How did you feel when you knew that you obtained a passing score from the Maryland Pre-qualifying USNCO exam? - More than anything, I felt relieved.

I had been studying hard for many months at this point without any real way to gauge my progress without taking practice tests (which I hadn't done many of). Being able to see my effort pay off was truly gratifying.

How did you feel when you knew that you qualified for the second round of the USNCO? - I felt surprised, as I didn't think that I did well in the first round and was not expecting to qualify whatsoever.

When you talk to me after the exam, you were confident and happy that you had performed well in this exam, why did you feel that way? What did you do during the exam to feel that way?
- Given how poorly I felt the first

round went for me, I was not expecting to be able to perform on the second round at all. However, the test was a lot easier than I was expecting, and I was able to finish the test. I attribute this to my frantic studying and practice the week prior, which helped me get into a test-taking rhythm beforehand. During the exam, I just did what I had done during all of my practices.

How did your teacher, mentor, colleagues, parents feel or say to you for performing so well? - My parents, teacher, and friends were all very happy for me.

How did you find out that you were among the first 150 students in the US that perform well and qualified for the USNCO honors list? Given the difference between my Round - 1 and 2 scores and the whole situation with COVID-19, I really didn't know what to expect for my placement. I had been hoping since the beginning of the year to make the Honors List. When my mom told me that I made it to the Honors list, I was extremely happy and proud of myself.

How does it make you feel that you were so close to be a part of the USNCO select team of 20 for Chemistry camp? - While I don't believe that I am anywhere near the level of the USNCO campers, my placement this year has made me more confident about my

ability to get to camp, either next year or the year after.

Would you participate in other USNCO competitions and repeat this experience again? - Absolutely. I am more than looking forward to what an in-person USNCO experience looks like and am ready to take on the challenge once again.

Thanks to Anurag for taking time to respond to these questions, they are certainly franc and enthusiastic responses that in the future will bring good memories not only for him but for others that have shared these U.S. National Chemistry Olympiad with him.

It is a pleasure to learn that students that have participated in USNCO before are passing the torch to younger students. These actions will increase the participation of students in great programs like USNCO; they certainly increase the knowledge and interest for chemistry careers in younger students.

To the Parents and teachers of Anurag and to all parents and teachers that every day give a word of encouragement to students, Thank you! Due to your effort and support, students like Anurag excel in school, dream of learning great subjects like chemistry and will make the world a better place to be. ■

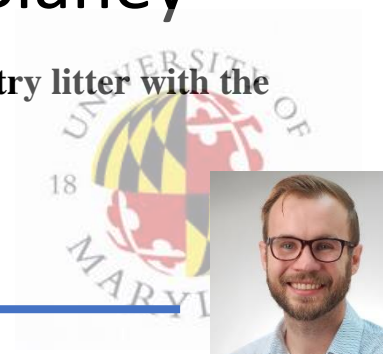
Thank you, Professor, Blaney

STUDENT AWARDS LECTURE: **Recovering nutrients from poultry litter with the Phosphorus Extraction and Recovery System (PEARS)**

Lee Blaney, Associate Professor

Department of Chemical, Biochemical, and Environmental Engineering

University of Maryland Baltimore County



Abstract

This presentation will describe the motivation for and application of an innovative nutrient recovery technology, namely the Phosphorus Extraction and Recovery System (PEARS), to agricultural waste. Each year, approximately 1000 chickens are raised for every person living in the 5400 square miles between the Delaware and Chesapeake Bays. Due to increasingly strict nutrient regulations in the Chesapeake Bay watershed, innovative resource recovery systems are needed to handle the large volume of nutrient-rich poultry litter. To address this issue, we developed PEARS, which uses CO₂ gas and acid to mobilize phosphate, ammonium, magnesium, potassium, calcium, and other species in poultry litter. The nutrient-rich extract is then separated from the nutrient-deficient poultry litter solids. Next, the pH of the nutrient-enriched solution is adjusted through aeration and NaOH addition to generate a valuable product, namely struvite-based fertilizers. PEARS has demonstrated >80% phosphorus recovery from real poultry litters collected from Chesapeake Bay farms. The findings from this study will help to not only reduce nutrient loads in the Chesapeake Bay, but also identify alternative sources for crucial nutrients like phosphorus. Overall, the outcomes of applying this technology to recover nutrients from agricultural waste involve water, food, economic, and political security



Biography

Lee Blaney is an Associate Professor in the Department of Chemical, Biochemical, and Environmental Engineering at the University of Maryland Baltimore County. He holds BS and MS degrees in Environmental Engineering from Lehigh University and a PhD in Civil Engineering from the University of Texas at Austin. His research program focuses on the (1) occurrence and fate of contaminants of emerging concern in natural and engineered systems and (2) recovery of nutrients and other resources from waste streams. Lee is a recipient of the NSF Career Award, the James J. Morgan ES&T Early Career Award, and the AEESP Award for Outstanding Teaching in Environmental Engineering and Science.

REPORT:

Professor Blaney contributed a third interesting article to the Chesapeake Chemist on [June/July issue, 2020](#), p 4-7 "*Occurrence of contaminants of emerging concern in the Environment*"

Dr. Blaney was the recipient of the 2020 Braude Award awarded by ACS Maryland Local Section. His lecture was announced in the CCNL [October issue](#).

The student Awards Lecture was recorded for the scientists and chemistry communities interested in this important environmental subject. Use the links: [Chesapeake Chemist Vol. 78 No.2](#) and [Lecture video](#)

"On the Student Award"

Last April 11, 2021, we celebrated the nomination of 21 excellent students from various colleges and universities of Maryland, see [History Corner p 6](#). CCNL Volume 78 No.2. Also, to learn more about Professor Blaney and his involvement with ACS Maryland Section see the 2020 CCNL [October issue](#) on his honor. Video Access passcode =kjk8Fj=!

"On the Supporting K-12 Student "

A Maryland Local Section 2021 Initiative

A series of virtual tutorial meetings on chemistry are held weekly for high school students interested in increase their learning and understanding of chemical concepts. This task created during the second Executive committee meeting is one of the accomplishments of this year, after the pandemic of 2020. See Maryland Reports pages 16-18. (Video Sample)

Topic: ACS MD, LS & USNCO Chemistry Virtual Meeting: Stoichiometry

Start Time : Aug 13, 2021 02:00 PM

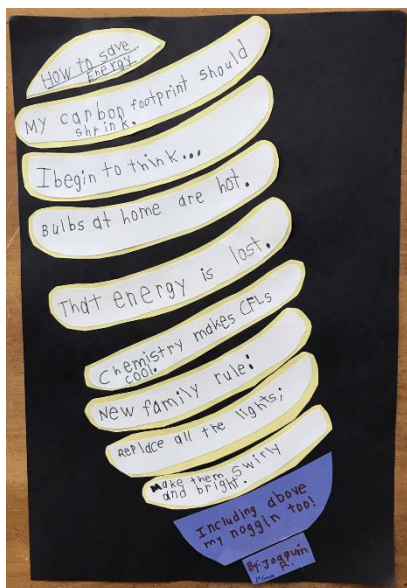
Meeting Recording:

[https://american-chemical-](https://american-chemical-society.zoom.com/rec/share/cPBb978k9duhYybwlCbok_98FsVIXPxtgqT9xO1EBIW9JGYnHnacIvadjlla9RjD.OALGPUTCTImT0QR)

[society.zoom.com/rec/share/cPBb978k9duhYybwlCbok_98FsVIXPxtgqT9xO1EBIW9JGYnHnacIvadjlla9RjD.OALGPUTCTImT0QR](https://american-chemical-society.zoom.com/rec/share/cPBb978k9duhYybwlCbok_98FsVIXPxtgqT9xO1EBIW9JGYnHnacIvadjlla9RjD.OALGPUTCTImT0QR)

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2021 CCEW Illustrated [Poetry contest](#) See p. 18



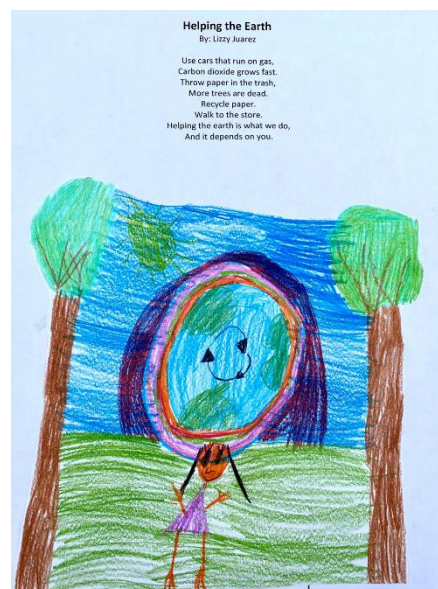
1st grade
Joaquin Roybal
Baltimore MD

1st grade
Lizzy Juarez
Columbia MD

Contact: Rose A. Pesce-Rodriguez

CIV USARMY ARL (US) at

rose.a.pesce-rodriguez.civ@mail.mil



HISTORY CORNER...

2021 U.S. National Chemistry Olympiad

This is the 53rd anniversary of the International Chemistry Olympiad, IChO. The U.S. National Chemistry Olympiad, USNCO was created for the purpose of preparing and selecting the best and most qualified chemistry students to participate in the IChO.

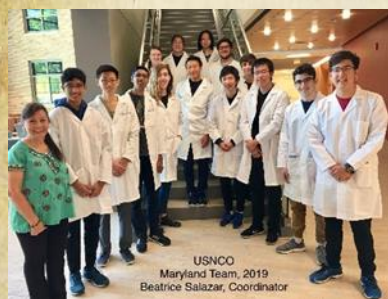
This event began on June 21, 1968, in Prague (4 days) three teams of six pupils. The test consisted of 4 theoretical tasks in mother tongues, no experimental tasks at this time. Maximum points: 61. The first three winners were given prizes. Today, we have around 172 teams of 4 pupils each.



Beatrice Salazar, USNCO
Coordinator Since 2010



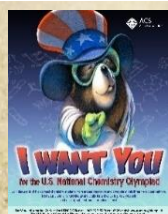
The idea to organize the International Chemistry Olympiad (IChO) was born in the former Czechoslovakia. The political situation in Czechoslovakia in the spring of 1968 was very tumultuous. Under new leaders the country was in an economic reform. Groups of intellectuals strove after a “socialism with a human face”. There was a smell of independence in the air. The people were full of activities, they wanted more contacts with other countries. One of the new ideas was to organize an International Chemical Olympiad, this was the first name for this competition. An added session at the end read: “*preliminary regulations accepted; decision to invite other “socialist” countries*”. [More information.](#)



The first regulations consisted of seven points:

1. The IChO will consist of two parts: theoretical and experimental.
2. The IChO is a competition of individual pupils, not a competition of teams.
3. Competitions of this kind should promote friendship and co-operation among the pupils, closer contacts among the young scientific workers, exchange of pedagogical and scientific experience.
4. The organizer of the competition is the Ministry of Education of the organizing country.
5. The competition should be organized at the end of the school year.
6. National team consists of pupils and accompanying persons (teachers).
7. Pupils of the secondary school without a special chemical orientation can only participate in the competition.

2020 USNCO new advertisement design. 1 and USNCO CCNL



Present and previous collaborators:

[CCBC](#), Eric Cotton, Diane Winter, Evon Ford, Linda Prentice and Michael Hands.

[Notre Dame of Maryland University](#), Angela Sherman, and Pat Bell



U.S. National
Chemistry Olympiad
Maryland

USNCO NOMINEES U.S. National Chemistry Olympiad

Congratulations!

2021
A Year of Hope

Beatrice Salazar, USNCO Maryland Coordinator
Beatricesalazar1@gmail.com

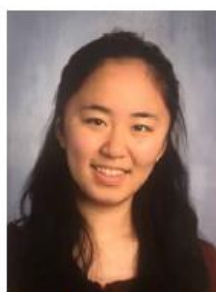
<https://www.acsmaryland.org/the-chesapeake-chemist> (Vol 78 Issue No.2 p 13)
(Vol 78 Issue No.3 p 10)



Kelly Chen



Colin T. Jones



Ammy Yuan



Anurag Sodhi



Aaban Syed



Michelle Lei



Vedant Patel



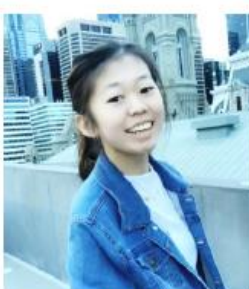
Pragat Patel



Jingjing Xu



Akshay Kannan



Kelly He



Imaad Syed



Alisha Mason

*The ACS Maryland Local Section
is proud of you!*

These students competed with approximately 16,000 students nationwide in the 2021 U.S. National Chemistry Olympiad at the ACS local level. They moved to the second round (National Exam Part-I) competing with about 1500 nominees nationwide. Those who qualify will move to the third round (National Exam Part-II) from which only 20 qualifiers will move to Camp; from this group four will be selected to represent USA internationally.

2021 BRAUDE AWARD WINNER

Dana Ferraris is the 2021 Braude Award Winner. CONGRATULATIONS!
The Award Ceremony and Award Lecture will be October 20, 2021
At McDaniel College



I am truly honored to even be considered for this award! Thank you so much!

Dana Ferraris, Ph.D., M.B.A.
John Desmond Kopp Endowed Chair,
Associate Professor of Chemistry, Department Chair,
McDaniel College

Dr. Ferraris received his Ph.D. degree in chemistry from Johns Hopkins University in 1999 and his M.B.A. from Carey Business School in 2009. Early in his career, Dr. Ferraris held a variety of leadership positions in the pharmaceutical industry particularly at Guilford, MGI Pharma, and the Eisai Pharmaceuticals. His efforts in the pharmaceutical industry resulted in the recent FDA approval of Cedazuridine to treat Myelodysplastic Syndrome. Dr. Ferraris then joined Johns Hopkins University as a Principal Scientist in 2009. He led medicinal chemistry activities at the Brain Science Institute with a primary mission of translating discoveries in basic science into novel therapeutics. In 2014, Dr. Ferraris transitioned into teaching at the undergraduate level and is currently at McDaniel College as an Associate Professor and the Chair of the Chemistry Department. Dr. Ferraris has extensive drug discovery experience in oncology, specifically in the design and synthesis of inhibitors of several members of the PARP family of enzymes.

Join us in congratulating Dr. Ferraris

Dana Ferraris, PhD, MBA
Associate Professor of Chemistry
John Desmond Kopp Endowed Chair
Chemistry Department Chair
McDaniel College
2 College Hill
Westminster, MD 21157
(410)857-2491
dferraris@mcdaniel.edu
danaferraris@yahoo.com

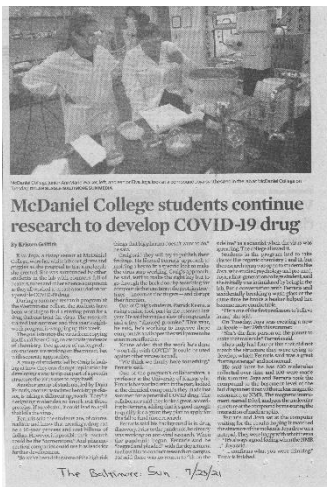
Contact Dana's Nominator:

"Hampt, Shawn" <smhampt@carrollk12.org>

Contact Award Chair

Louise Hellwig Louise.Hellwig@morgan.edu
Braude Award Chair, Maryland Section ACS
Chemistry Department, SP 212
Morgan State University
1700 E. Cold Spring Lane
Baltimore, MD 21251
443 885 2085

2021 Braude Award Cont.



Upon the recommendation of Shawn Hampt, The Maryland Section of the American Chemical Society selected Dr. D. Ferraris as the 2021 Braude Award winner in consideration of his research involving undergraduate students.

Dr. George Braude wished to support faculty who mentor undergraduates, and so underwrote this annual award to honor an outstanding college chemistry professor doing research with the assistance of undergraduates.

Dr. Ferraris is invited to speak about his research. He will also receive a plaque and a monetary award to support that research.

The Award Meeting is to be held near Mole Day (October 23, 2021).

[Article](#) provided by Jan Kolakowski jek6042@gmail.com

ANNOUNCEMENTS

Nominations for the 2021 MD Chemist Award

CALL FOR NOMINATION:

Sherman, Angela ASherman@ndm.edu



Please send me nominations for the 2021 MD Chemist Award. We typically finalize the selection by the end of September. Recipients for the last few years have been from universities, so it would be great to get a more diverse pool of nominations.

The nomination process has been revised so that members of the Executive Committee could also suggest nominees. For more information on the award visit <https://acsmaryland.org> or any Chesapeake Chemist December issue.

Morgan State University is in need of one or more adjuncts to teach Chemistry 101 for Non-Scientists in the fall 2021.

Possibly some higher-level classes may need adjuncts also. These classes will be in person. Everyone coming to campus will have to show proof of vaccination.

In you are interested contact the Chemistry Chairperson, Dr. Angela Winstead, at Angela.Winstead@morgan.edu

For more information contact: Louise Hellwig, Chemistry Department, SP 212
Morgan State University 1700 E. Cold Spring Lane - Baltimore, MD 21251 - 443 885 2085

Cont. on page 19.



JOBS

ANNOUNCEMENTS

CALL FOR NOMINATION: 2022 Braude Award

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



Louise Hellwig, Ph. D.

The Braude Award is awarded at the October meeting and honors a professor conducting outstanding research involving students at a college or university in the Chesapeake region. At the October meeting the recipient presents his/her research and receives a plaque describing his/her contributions as well as a monetary award to help support further student research. Nominations are now being accepted for the 2022 Braude Award. Nominees must be a member of the ACS, and underrepresented candidates including women, are encouraged. Please submit a list or description of the research accomplishments of the nominee, as well as an indication of the number of students involved in that research, to Louise Hellwig via email: louise.hellwig@morgan.edu. **Deadline: June 1, 2022**

CALL FOR CONTRIBUTIONS TO THE CHESAPEAKE CHEMIST NEWSLETTER, CCNL

<https://acsmaryland.org/>



Become a contributor, share your articles, ideas, and chemistry interest with your colleagues!


ACS members may contribute to CCNL any time by submitting comments, articles of interest to colleagues and the community and by writing for the following Newsletter sections:

CONTRIBUTORS' SECTIONS:

CHEMISTRY LITERATURE SPOTLIGHT

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/ear1y/2020/02/19/science.abb2507.full.pdf>
Discussed by Dr. C. Rojas "What is the science behind COVID-19?" see [Chesapeake Chemist March/April 2020](https://pubs.acs.org/doi/pdf/10.1021/acscchemrev.0c00361) 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/acscchemrev.0c00361>

BOOKS... 

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...

Chesapeake Chemist **ACS** Local Section Maryland



Why I chose ACS Maryland Local Section

An invitation to all new ACS Maryland members to submit your statement and a short biography.

Chesapeake Chemist **JOBS**

To advertise in the Chesapeake Chemist-JOBS section, please contact Beatrice Salazar via e-mail at CCNLclassifieds@gmail.com or leave a message at 443-801-0582.

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MARYLAND SECTION REPORTS

Attention Councilors!

During the councilors meeting No.1 at the Spring ACS National Virtual Meeting the following deadlines were announced.

2022 Committee Assignments



- Online Preference Form
 - Opens: April 1
 - Closes: July 1
- www.yellowbook.acs.org

For more information: secretary@acs.org

American Chemical Society

54

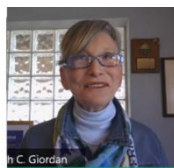
ACS MARYLAND Local Section Councilor's Corner...

Goals

- To bring the best communication between ACS and Maryland members in order to improve their professional career.
- To continue to support the development and employment of chemical professionals
- to maintain contact with ACS National and represent our Section's concerns and needs to ACS National staff and committees
- To continue to support the Maryland Section at ACS meetings



John C. Warner
Zymergen Corporation,
Emeryville, CA



Judith C. Giordan
ecosVC, Pelham, MA /
Tucson, AZ / Corvallis, OR

New ACS Presidential Candidates express their opinion on Education Issues

 see CCNL March - April Issues/ ACS.org

Reports cont.

ACS MARYLAND EXECUTIVE COMMITTEE MEETINGS MINUTES: To see previous and approved recent minutes of the ACS Maryland Local Section Executive Committee Meetings use <https://acsmaryland.org>

New Committee: **SUPPORTING K-12 STEM ACS Local Section Initiative** was formed.

Members: Lee Lefkowitz Angela Sherman Eric Cotton Stephanie Watson
 Beatrice Salazar Kelly Elkins George Farrant

Goals: brainstorm ideas for the development of outreach ideas supporting high school and undergraduate research, development of a STEM Camp for High School and/or Elementary Schools. This committee was created during the second Executive Committee meeting of April 19, 2021. See pages, 9 and 17.

Environmental/COVID-19

Concerns? contact:

PLEASE feel free to contact any of us if you have any questions
<https://cee.umd.edu/> and <https://www.enviroeng.umd.edu/>

USNCO Report

2021 marks the second virtual year of the **U.S. Chemistry Olympiad, USNCO**. The ACS office in charge of the competition created a new virtual system that enable students, mentors, and participants of USNCO to submit their application for the competition, enter all personal and school data, take pre-tests to prepare for the Chemistry Olympiad and observe their own results almost immediately. On page 4 of this issue students can observe the comparative graphs with other Maryland competitors and at the national level.

Message from ACS President Dr. Cheng

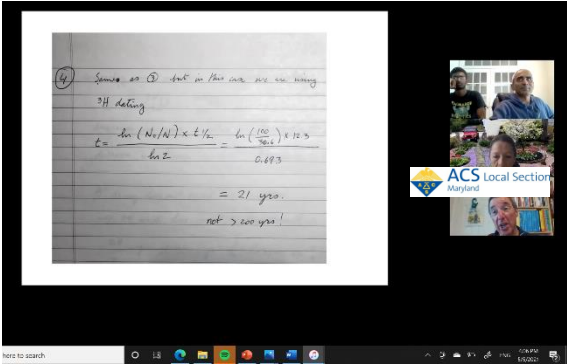


Dr. H. N. Cheng

During the Spring ACS National Meeting Dr. Cheng called for better communication and engagement with the chemistry community. The Maryland local section is addressing these recommendations. Here we have some of the points we have addressed so far:

- **Councilors could serve as mentors** at all levels and engage all local sections /Plan engagement of young chemists with emphasis on K-12 chemists (Beatrice Salazar, Councilor, USNCO Coordinator).

WORK DONE:

- The Maryland Local section has created a [virtual tutorial program](#) for High school students to clarify chemistry concepts, to answer questions they have on topics of GT and AP chemistry, and to coach them on the recent chemistry AP exams.
 - A series of [virtual lectures](#) and problem-solving sections have been developed every week. The first set of lessons was nuclear chemistry.
- 
- [The US National Chemistry Olympiad](#), USNCO has been publicized in the Chesapeake Chemist, Students had been interviewed and encouraged to participate in chemistry competitions. This action will bring enthusiasm to students to enroll in the competition in the future.
 - [Middle and Elementary grade students](#) have been approached with chemistry art competitions and the results are also publicized in the CCNL. This is a way to increasing communication with K-12 teachers, parents, and students (Rose Outreach, K1-8 outreach program coordinator).
 - [Work on regulation before materials are created](#) - Dr. Eric Cotton 2021 Chair (ACS Maryland Local Section) worked on the bylaw's revision during executive committee meeting No.2.
 - [Project SEED](#) programs (since 1993) expansion at both local and national levels - A version of Project SEED was organized this year at Morgan State University by Louise Hellwig.
 - [Influence by University Leaders](#) and planning virtual lessons learnt from the pandemic - Dr. Blaney's Presentation during Student Awards ceremony is an example of this leadership and virtual engagement. His lecture was made available to the public by a recorded video.
 - [Increase virtual communication](#) - "walk the walk" lead by example 2020-2021 We are going virtual:
 - The U.S. National Chemistry Olympiad, USNCO was virtual.
 - The High school tutorial program is virtual
 - All presentations and regular local section activities this year are virtual.
 - All ACS Maryland Executive committee meetings are virtual

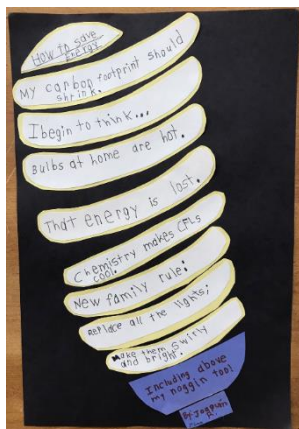
COUNCILORS GENERAL REPORT: ON COUNCIL MEETING FOR THE 262nd ACS National Meeting

By Beatrice Salazar, Councilor

The Fall 2021 (262nd) National Meeting of the American Chemical Society planned for Atlanta will be hybrid. All Councilor meetings will be virtual meetings. A recent Mock meeting to ensure the function of the LUMI and Zoom platform took place last August 12. 152 councilors attended this meeting. There were several comments on the lack of sound and poor internet communication. However, the problem appears to be at a local level. Please be sure your internet communication is good for the main **councilor's meeting on August 25, 2021, at 11:00 A.M.**

CHEMISTRY OUTREACH REPORT

From Page 9



Maryland Chemists Celebrate Joaquín Roybal, Winner in the 2021 CCEW Illustrated Poetry Contest

As part of this year's "Chemists Celebrate Earth Week" (CCEW) events, the MD local section participated in the illustrated poetry contest

organized at the national level by the ACS Office of Science Outreach. After competing for several years in both the CCEW and NCW events, we are proud to announce our first national winner!

Joaquín Roybal's submission was a clear favorite in the Local Section and apparently at the national level as well. For his efforts, Joaquín received \$300 and an ACS award certificate for first place in the K-2 category. His Cub Scout leader sponsored Joaquín and received a \$50 gift card and a letter of appreciation from the ACS Office of Science Outreach.

Joaquín's mother, Wendy, said that he was "over the moon" about winning the award and wanted his certificate framed and hung in his room.

When asked about how he felt about winning the illustrated poetry contest, Joaquín said, "I wanted to make my poem funny, like the poems from the book "Where the Sidewalk Ends" by Shel Silverstein. I also like how CFL bulbs are shaped so I cut construction paper shapes to look like it. I'm so happy that people are enjoying my poem! I still can't believe I won the Maryland Local Section and the National Contest! My family is going to celebrate with milkshakes!"

We in the MD Local Section think that milkshakes are a great way to celebrate and are toasting him with milkshakes of our own!

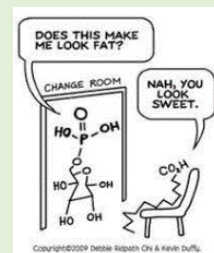
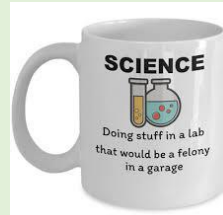
Congratulation Joaquín! We're looking forward to seeing you at our National Chemistry Week program in the fall...and of course also looking forward to your next Illustrated Poetry Contest submission!

Contact: Rose A. Pesce-Rodriguez
CIV USARMY ARL (US) at
rose.a.pesce-rodriguez.civ@mail.mil

Laugh a Little



- If Iron Man and Silver Surfer teamed up, they'd be alloys.
- Why is organic chemistry difficult? Those who study it have alkynes of trouble
- How many physical chemists does it take to change a light bulb? Only one, but he will change it three times, plot a straight line through the data, and then extrapolate to zero concentration.



JOBS

Job ad UMD Baltimore Pharmaceutical Sciences program

To apply, go to: <https://umaryland.edu/jobs> and click on Faculty/Post-doc jobs and select # 210000TP

Instructor, Master of Science in Pharmaceutical Sciences Program, Non-Tenure Track - (210000TP)

POSITION SUMMARY

Location: University of Maryland School of Pharmacy at the Shady Grove Campus located in Rockville, MD.

The Department of Pharmaceutical Sciences at the University of Maryland School of Pharmacy is conducting an open search for an Instructor (non-tenure track). The Instructor will support the MS in Pharmaceutical Sciences program and will also contribute to the PhD in Pharmaceutical Sciences Programs. The MS in Pharmaceutical Sciences is a 16-month degree that combines in person didactic coursework with biopharmaceutical internships. The Instructor will contribute to a range of activities that support student learning outcomes, program quality, and discipline integrity, all of which focus on student learning and retention.

The University of Maryland, Baltimore campus houses schools of Pharmacy, Medicine, Nursing, Social Work, Law and Dentistry. Additionally, the School of Pharmacy has a satellite campus at the Universities at Shady Grove in Rockville, Maryland. The University of Maryland enjoys an excellent established record of accomplishment of successful collaboration for interprofessional practice and research collaborations with the other professional schools on campus.

ACADEMIC RESPONSIBILITIES AND ESSENTIAL FUNCTIONS

- Demonstrate teaching excellence in courses within the Pharmaceutical Sciences MS and PhD program offered in person at the University of Maryland School of Pharmacy. These can include both didactic and experiential (e.g. biopharmaceutical internships) courses.
- Serve as a liaison for Biopharmaceutical Internship courses.
- Create, facilitate, interact, and moderate classroom activities.
- Evaluate and grade students' coursework, assignments, and papers within the timeframe set forth by the school policy providing effective feedback to guide student learning and success.
- Engage in the classroom and reply to emails in a timely manner.
- Participate in professional development to enhance teaching skills, scholarship and service.
- Assure quality curriculum design, ensure discipline, program and course continuity, currency, and relevance.

- Update course content and materials and/or delivery methods, based on information such as emerging changes in the discipline, instructional effectiveness data, current or future performance requirements, feasibility, and costs.
- Analyze courses and prepare analysis for program and course reviews.
- Remain aware of new advances in the area of Pharmaceutical Sciences, curricular committee changes, virtual classroom procedures, UMB/USG requirements, and instructional materials.
- Attend (in person or through technology) regular meetings with program directors and faculty to stay aware of how their courses fit within the overall program progression of students.
- Contribute to advancing the discipline as a leader through education research and services.
- Perform other duties as assigned.

Qualifications

- Doctoral degree in Pharmaceutical Sciences, Chemistry, Biology, or related Biomedical Sciences discipline.
- Prior teaching experience, including working as a teaching assistant.
- Experience in curriculum development is recommended.
- Record of excellence in teaching.

SERVICE TO THE UNIVERSITY, SCHOOL, AND PUBLIC

Participate in service contributions to the MS program through serving on appropriate committees associated with the program.

Participation in appropriate faculty activities (e.g. faculty assembly, department meetings, and faculty committees), professional organizations, and other endeavors is also expected.

REQUIRED SKILLS, KNOWLEDGE AND ABILITIES

- Professional conduct in all dealings with students, faculty, or administration.
- Communications - Knowledge of communication and dissemination techniques and methods. This includes alternative ways to inform via written, oral, and visual media.
- Deep Knowledge - Knowledge in Pharmaceutical Sciences and/or related Biomedical and Chemical Science disciplines. The ability to translate theory and practice into learning opportunities that advance the discipline.
- Education - Knowledge of principles and methods for curriculum design, evidence-based teaching and instruction for individuals and groups, and knowledge of measurement and assessment.
- Initiative - Willing and able to take on responsibilities and challenges.
- Leadership - Willing and able to lead; take charge and offer opinions and direction.
- Learning Strategies - Selecting and using instructional methods and procedures appropriate in the discipline family when learning or teaching new things.
- Monitoring - Monitoring/assessing curricula to make improvements or take corrective action.
- Stress Tolerance - Ability to accept criticism and deal calmly and effectively with high stress situations.
- Travel - Willing to travel between the Shady Grove and Baltimore Campuses and to Biopharmaceutical Internship sites and to conferences, as needed.

HOW TO APPLY

Interested candidates must apply online through the UMB Online Recruitment System and submit an initial application that includes a letter of intent (reference Position Number 05-178-76), curriculum vitae (signed and dated), a research summary, a one-page statement of teaching philosophy, and three references. Shortlisted candidates will be required to submit three letters of recommendation from reviewers external to the University of Maryland, School of Pharmacy. Review of applications will continue until the position is filled. In addition to applying online, interested candidates may email application materials to:

Sarah Michel, Ph.D.
Professor and Associate Dean for Graduate Programs
University of Maryland School of Pharmacy
Department of Pharmaceutical Sciences
Email: smichel@rx.umaryland.edu

Questions regarding this search should be directed to Dr. Sarah Michel (smichel@rx.umaryland.edu). Please reference position number 05-178-76.

The University of Maryland, Baltimore is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to sex, gender identity, sexual orientation, race, color, religion, national origin, disability, protected Veteran status, age, or any other characteristic protected by law or policy.

If you need a reasonable accommodation for a disability, for any part of the employment process, please contact us a HRJobs@umaryland.edu and let us know the nature of your request and your contact information. Please note that only inquiries concerning a request for a reasonable accommodation will be responded to from this email address.

JOBS

"Faces of Science"

Harford County Public Schools' "Faces of Science" initiative

For more information contact: Pesce-Rodriguez, Rose A CIV USARMY DEVCOM ARL (USA) rose.a.pesce-rodriguez.civ@mail.mil

From: Thompson, Brooke <Brooke.Thompson@hcps.org>

RE: The Current Faces of Science : Harford County Public School Science Department

I am currently a 6th grade Earth Science Teacher at Magnolia Middle School, and I am reaching out to you because I am working with a group of teachers in Harford County Public Schools to modernize the faces of science and I thought you would be an awesome resource to utilize. I am responsible for looking for STEM professionals in Earth Science fields, specifically:

1. Astronomy
2. Earth Systems
3. Geology
4. Meteorology
5. Natural Disaster

Our goal is to find available, current, diverse, and culturally relevant scientist who are willing to contribute time, current research, work, science knowledge, skills, anything, that could be incorporated into the above units throughout the school year. This could be videos, pictures, text, etc. that allow students to see everyday humans engaged in science in a meaningful way. Students need to understand that people making contributions to science currently are much more diverse now than when we look back at historical contributions. The idea is to infuse these diverse and current faces of science into all areas of the curriculum, motivating and bring to life the true potential of science beyond the classroom.

The following website is the starting point and idea motivation for this change

HCPS. <https://www.iamascientist.info/> < Caution-<https://www.iamascientist.info/> > A Free & Flexible Resources for Inclusive STEM Education "I Am A Scientist" is a collection of educational resources designed to challenge public misconceptions and inspire the next generation of STEM leaders.

[Apply or recommend anyone from your college/university/workplace who might be interested in helping with the initiative?](#)

Brooke Thompson

6th Grade Earth Science (6B)
Magnolia Middle School
Harford County Public Schools
304-745-0239
Brooke.thompson@hcps.org



 **JOBS**

To advertise in the Chesapeake Chemist-JOBS section, please contact Beatrice Salazar via e-mail at CCNclassifieds@gmail.com or leave a message at 443-801-0582.

 **ADVERTISE HERE!**

EVENTS CONTACT

The U.S. National Chemistry Olympiad
USNCO MARYLAND

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

Jan - April

Student Travel Awards

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

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

Jan – March

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

Email: George Farrant, gfarrant@yahoo.com

Chemists Celebrate Earth Day

April

Senior Awards

Email: Merle Eiss, meiss32@aol.com

Email: Linda Gonzalez <linda_gonzalez@mccormick.com>

May

National Chemistry Week Events

[Rose Pesce-Rodriguez](#)

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

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

May to Sept.

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/>

Email: Angela Sherman, asherman@ndm.edu and

Dec.

2021 ADMINISTRATION OFFICERS

2021 SECTION OFFICERS

Chair 2021.....	Eric C. Cotton, Community College, of Baltimore County, cccotton2@ccbcmd.edu
Vice-Chair 2021.....	Sarah Zimmerman, Web Master, Chair of Member Assistance Committee scatzim@gmail.com
Chair-Elect (Chair 2023)....	Kelly Elkins Kmelkins@towson.edu
Secretary 2021.....	Louise Hellwig, Morgan State University, louise.hellwig@morgan.edu
Treasurer 2021.....	Lee Lefkowitz, lee_lefkowitz@hotmail.com
Past Chair (2020).....	Pumtiwitt McCarthy, Morgan State University, pumtiwitt.mccarthy@morgan.edu

2021 SECTION COMMITTEE ON NOMINATIONS and ELECTIONS

Chair of the Committee on Nominations.....

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, Chair-2015, SNARAYAN@stevenson.edu

COUNCILORS/COMMITTEES

- 2020-2022 Kelly Elkins Kmelkins@towson.edu
- 2021-2023 Beatrice Salazar beatricesalazar1@gmail.com
- 2021-2023 Jan Kolakowski jek6042@gmail.com
- 2021-2023 Stephanie Watson stephanie.watson@nist.gov

ALTERNATE COUNCILORS/COMMITTEES

- 2021-2023 Alexander Samokhvalov alexandr.samokhvalov@morgan.edu
- 2021-2023 Rob Clapper rob.clapper@scioninstruments.com
- 2021-2023 Michele Foss foss.michele@gmail.com
- 2020-2022 Paul Smith pjsmith@umbc.edu

MEMBERS-AT-LARGE

- Angela Sherman, asherman@ndm.edu
- Fasil Abebe fasil.abebe@morgan.edu
- Therese Ku, tkyaya@gmail.com
- Rose A. Pesce-Rodríguez, rose.a.pesce-rodriguez.civ@mail.mil
- 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, Chair-2018, beatricesalazar1@gmail.com

Social Media Liaison..... Pumtiwitt McCarthy, Chair-2020, pumtiwitt.mccarthy@morgan.edu

PROGRAM CHAIRS

AWARDS

Braude Award, L. Hellwig
Remsen Award, D. Ferraris
Maryland Chemist of the Year Award,
 A. Sherman
Senior Chemist Award, M. Eiss/L. Gonzalez
Student Award, G. Farrant
Women Chemists, S. Narayan/K. Elkins

PROGRAMS

Women Chemists Committee, 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:

Thank you for your contributions!

We sincerely appreciate your contributions and the time you spend writing articles, comments and news for our newsletter. Your Collaboration makes this newsletter an important part of the Maryland Local section activities.

Useful Links:

- <https://www.editage.com/insights/a-young-researchers-guide-to-perspective-commentary-and-opinion-articles>
- See Chesapeake Chemist [volume 77 Issue No. 4 pg.13](#) for the announcement of a government job
- Senior Chemists presentations: [Dr. G. Lozos, Dr. R. Berninger and Dr. C. Milton](#)
<https://acsmaryland.org/chemistry-video-links/>

SEND US YOURS...



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 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 important for our history. Thank you [Dr. Lee Leftkowitz](#) for this magnificent idea!

CHEMUNITYNEWS

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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, please add the MD ACS e-mail



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

E-mail: (micronanalytical@compuserve.com)
Website: (<http://micronanalytical.com/>)

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