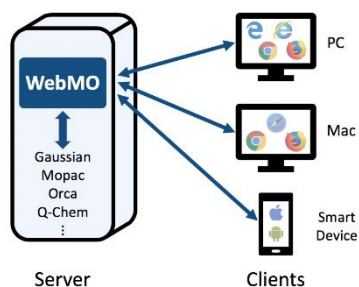


# THE OCTAGON

## Bringing Computational Chemistry into the Classroom

\*\*\*\*\*



January Section Meeting

Moravian University

Thursday, January 19<sup>th</sup>, 5:30-8:30pm

Molecular Modeling Workshop

Priscilla Payne Hurd Academic Complex

1130 Monocacy St, Bethlehem, PA 18018

### Speakers:

Heidi Hendrickson, Lafayette College

Carl Salter, Moravian University

Lorena Tribe, PSU/Berks



5:30 Social; 6:00 Dinner/Meeting; 7:00 Workshop

Social Hour / Dinner Menus / Cost: \$30/member, \$15/student

Social hour: Light hor d'oeuvres: Cheese and crackers, sliced fruit, beverages (same as dinner)

Dinner: Grilled Chicken with Bruschetta Topping

Market House Salad with Homemade Croutons and Balsamic Vinaigrette

Vegetarian pasta (instead of the starch choices listed)

Chef's Choice Seasonal Vegetable

Lattice Top Blueberry Pie

Lemonade, Ice tea, bottled water.

**Reservations:** June Thompson, 610-861-1425, [thompsonj03@moravian.edu](mailto:thompsonj03@moravian.edu)

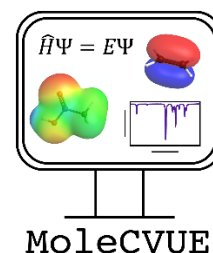
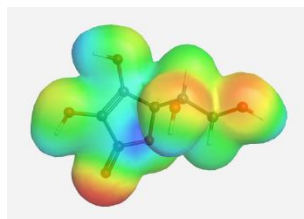
**Directions:** <https://www.moravian.edu/landmarkconference/directions>

**Abstract:** The program will be an introduction on the use of WebMO and Gaussian calculations in the chemistry classroom. In the past, semi-empirical and *ab initio* calculations were often tied to computers programs with software locks, or to desktops computers with licenses. Those days are over! Thanks to WebMO, now calculations can be done over the web, and all students need is a computer or tablet running a browser. Bring your laptop as we show you how to do three simple computational activities that are appropriate for General and Organic Chemistry classes. We'll investigate a periodic trend, the bond angle in H<sub>2</sub>O, H<sub>2</sub>S, and H<sub>2</sub>Se; we'll look at the solubility of vitamins, and we'll predict the energy change that takes place in simple reactions involving electron or proton addition. Our presentation follows the outline of the MoleCVUE workshop given at the BCCE meeting at Purdue last August. The suite of activities can be found at

<https://sites.google.com/view/molecvue/bcce2022>

For more about WebMO see <https://www.webmo.net/>

For more about Gaussian see <https://gaussian.com/>



CONTACT: Carl Salter, [csalter@moravian.edu](mailto:csalter@moravian.edu)

## LVACS Events Calendar

**HAPPY NEW YEAR 2023!**



### January 2023

January Section Meeting  
[Moravian University](#)

Thursday, January 19<sup>th</sup>, 5:30-8:30pm  
[Priscilla Payne Hurd Academic Complex](#)

348 Main St, Bethlehem, PA 18018

Molecular Modeling Workshop

5:30 Social; 6:00 Dinner/Meeting; 7:00 Workshop

**Reservations:**

June Thompson, 610-861-1425, [thompsonj03@moravian.edu](mailto:thompsonj03@moravian.edu)

**Directions:**

<https://www.moravian.edu/landmarkconference/directions>

CONTACT: Carl Salter, [csalter@moravian.edu](mailto:csalter@moravian.edu)



### February 2023

February Section Meeting  
[Lafayette College](#)

730 High St, Easton, PA 18042

Date/Times TBA

Protein folding and protein interactions

Speaker: [James Petersson](#), U. Penn

CONTACT: Mike Bertucci, [bertuccm@lafayette.edu](mailto:bertuccm@lafayette.edu)



### March 2023

March Section Meeting  
[Muhlenberg College](#)

2400 Chew Street, Allentown, PA 18104

Date/Times TBA



### April 2023

April Section Meeting and Undergraduate Poster Session  
[DeSales University](#)

2755 Station Avenue, Center Valley, PA 18034

Wednesday, April 12<sup>th</sup>

CONTACT: Sara Hayik, [sara.hayik@desales.edu](mailto:sara.hayik@desales.edu)



**April 16-22: Chemists Celebrate Earth Week**

Outreach Events TBA: What will you do to Celebrate Planet A in 2023?

**Special Earth Day event:** On Earth Day, Saturday, April 22nd, LVACS will be co-sponsoring a special symposium on climate science at Cedar Crest College with plenary speaker Sherine Obare, 2022-2023 chair of ACS ENVR Division.

CONTACT: Lindsey Welch, [lawelch@cedarcrest.edu](mailto:lawelch@cedarcrest.edu)

Octagon CONTACT: Nigel Sanders, LVACS secretary and newsletter editor, [nigel53.sanders@gmail.com](mailto:nigel53.sanders@gmail.com)

## Also In This Issue...

3. LVACS 2023 New Officers; ACS New President-elect and New CEO.

4-6. November 17<sup>th</sup> Career Night Meeting Report.

7. The Chemistry of Deception.

8-9. Career Pages: Virtual Office Hour January 5th.

10-11. LVACS 2023 Awards: Second Call for nominations.

12. SEED 2023 Seeks Project Proposals.

13. ACS Chemistry Olympiad seeks mentors.

14. New Speaker Directory needs speakers.

15. LVACS Strategic Plan Updates.

16. 2023 LVACS Executive Committee.

## Lehigh Valley American Chemical Society (LVACS) Election

### *Introducing the New Officers for 2023*

The newly elected LVACS Officers for 2023 are: **Philip Elias**, chair-elect, **Sherman Cox**, treasurer and **Nigel Sanders**, secretary. Review their bios [here](#). Philip, who graduated from Muhlenberg College last spring and now works at Evonik in Allentown, has been very active in community outreach events. Sherman, just retiring in December from a long career at Minerals Technologies Inc. in Hanover Township, has been LVACS treasurer before (in the 1990s!) and brings a wealth of experience in many areas of chemistry and chemical engineering. They join Steve Boyer, chair, Lindsey Welch, past chair, Jeanne Berk and Kelley Caflin, councilors and Mike Bertucci and Ned Corcoran, alternate councilors. Come out to our meetings in 2023 and meet your LVACS governance team in person! Check us out on: [www.lvacs.org](http://www.lvacs.org)



Philip Elias and Sherman Cox wave their magic chemistry wands during recent LVACS outreach events

### \*\*\*\*\*ACS Election News\*\*\*\*\*

#### Mary K. Carroll voted 2023 ACS president-elect

**Mary K. Carroll**, the Dwane W. Crichton Professor of Chemistry at Union College, has been voted the 2023 American Chemical Society president-elect by members of ACS. Carroll will serve as president of the society in 2024 and immediate past president in 2025; she will also serve on the board of directors from 2023 through 2025. With 6,582 votes, Carroll won the president-elect race against Johns Hopkins University's Gompf Family Professor, Rigoberto Hernandez, who received 5,670 votes. ACS, which publishes C&EN, also elected or reelected four other board directors. "I feel honored and really pleased," Carroll says. "I look forward to promoting ACS activities that are going to yield maximum results for the members and for society." During her presidential year, Carroll intends to support the dissemination of research to the scientific community, communicate the value of science to elected officials and members of the public, encourage ACS members' engagement in outreach activities, and increase diversity among the society's membership. "I am not necessarily going to be focused on starting new initiatives but using the platform that is afforded to me as a member of the presidential succession to help elevate ongoing activities," Carroll says.



#### Albert G. Horvath to be ACS's new CEO

The American Chemical Society's treasurer and chief financial officer, **Albert G. Horvath**, will succeed Thomas Connelly as head of the society on Jan. 1, 2023. Connelly will retire at the end of 2022 after nearly 8 years with ACS. Horvath joined ACS as treasurer and CFO in February 2019. Horvath plans to focus on growing the information services businesses that make up a significant portion of ACS's revenue. He hopes to facilitate a successful transition to hybrid work and bolster staff engagement after the tumultuous years of the pandemic. "That's obviously something that I want to work closely with the executive leadership team on," he says. "How do we continue to help people around the society feel positive about their place here?" He says his time with the society has helped him understand the CEO's role in facilitating the flow of information between staff and governance, as well as appreciate the importance of ACS volunteers. "The opportunity to have this experience to better understand how ACS works, get to know people within the organization, have a sense of what the issues are in front of us, I think is a real benefit," he says. [excerpted from C&EN: October 24/31, page 5 and December 5, page7]





## LVACS HOLDS CAREER NIGHT NOVEMBER 17<sup>TH</sup> AT PSU/LV'S NEW LABS



Ever wonder what you could do with your chemistry degree or how to make yourself marketable to employers? That question and more was answered during our November 2022 section meeting on **November 17th** at the **Penn State / Lehigh Valley** campus which was devoted to student member career exploration. A comprehensive career guidance talk by ACS Career Consultant **Greglynn Gibbs** included: deciding career paths, employment/internship opportunities, online courses for certification/training and how to navigate the application process. That was followed by ample career opportunity discussion and networking time with member representatives from six companies with labs in the local area: **Sanofi Pasteur, Gold Coast Ingredient Inc, Roquette Global Business Unit Pharma, DSM, Evonik and Minerals Technologies Inc.** The response from students and presenters was, in a word, **OUTSTANDING**. Missed it? Don't worry" start [here](#) to learn more about ACS member career growth support and how to chart the next steps in your job search! And we'll be hosting another Career Night in spring 2023 so stay tuned!



ACS Career Consultant Greglynn Gibbs talks with students about how to 'get out there' on the web with social media such as a LinkedIn page. The lecture was followed by one-on-one conversations with 10 LVACS section members representing six companies with local labs.



Lorrie Hill of Sanofi talks about her career and working in industry and academia.



## LVACS HOLDS CAREER NIGHT NOVEMBER 17<sup>TH</sup> AT PSU/LV'S NEW LABS

Based on feedback from the meeting, the format worked well with the possibility to expand it with more volunteer speakers/mentors. The students really appreciated Greglynn's help with LinkedIn, as most did not know the opportunities that come with having one. Several attendees made valuable contacts at the event and reportedly landed internships. Read [more](#) about what you can do with a chemistry degree and be sure to visit the ACS Careers [page](#).



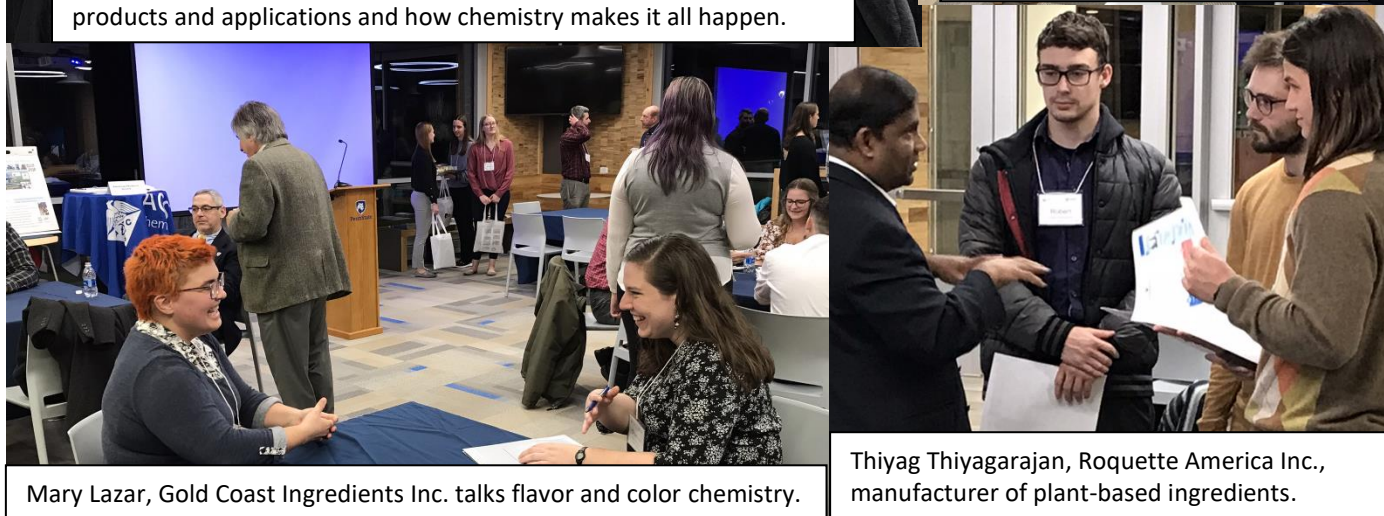
Lorrie connects with students.

Sherman Cox of Minerals Technologies Inc. talks about industrial opportunities in the inorganic chemistry field.



Patrick Mertz and Sarah DeMaio of DSM describe their multitude of products and applications and how chemistry makes it all happen.

Jess Miller and Philip Elias, Evonik, tell how chemists help develop additives for industrial coatings.



Mary Lazar, Gold Coast Ingredients Inc. talks flavor and color chemistry.

Thiyag Thiyagarajan, Roquette America Inc., manufacturer of plant-based ingredients.





## LVACS HOLDS CAREER NIGHT NOVEMBER 17<sup>TH</sup> AT PSU/LV'S NEW LABS



Thiyag Thiyagarajan of Roquette America Inc. talks about his perspectives on chemical careers.



Patrick Mertz introduces DSM career opportunities for chemists.

# The Chemistry of Deception

By Wynne Parry, excerpted from ChemMatters, December 2022

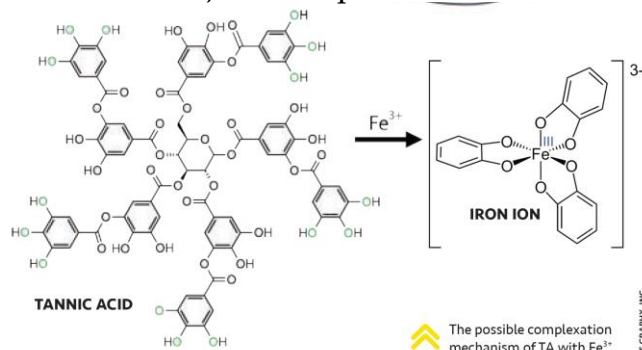
## “MAGICAL WHITE INK”

“During the American Revolution, the rebels used a different technology to send messages in secret. At first, a revolutionary spy operating among the British wrote his reports in regular black ink. But if these messages were intercepted, they could be read easily. That all changed when George Washington learned of a “magical white ink,” Macrakis\* recounts. Once on the page, this new ink, which was supplied by a patriot named James Jay, was invisible. It needed a specific reagent to make it visible. Washington realized that this would make it more secure, even if the note fell into enemy hands. It was more complicated to develop, and therefore harder to detect, than a simpler, heat-activated formula like lemon juice type inks, according to Macrakis’\* account. A spy operating in New York City used the white ink to write his reports, which a chain of messengers transported across Long Island Sound to Washington’s headquarters. Once developed with the reagent, these reports gave Washington valuable information about British movements. Washington never knew exactly how it worked, however, according to Macrakis\*. An analysis more than 150 years later revealed that the ink was made of a tannic acid and developed with iron(II) sulfate ( $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ )—a formula that wasn’t actually new. Similar types were used by military groups dating back to 300 BCE. Oak galls, as well as other plants, produce an abundance of tannic acids, also called tannins. If you’ve had tea, coffee, chocolate, or other food and beverages that are naturally bitter, you’ve already had tannins, which have an astringent taste. When combined, tannic acid and iron(II) sulfate interact to make a black ink. Anywhere from two to four tannic acid molecules wrap around the iron ion, explains Jason Lye, a color chemist who runs an innovation consulting company, Lyco Works Incorporated. When exposed to air the iron(II) ions oxidize to iron(III) ions, which produces a darker ink. The process, in which organic molecules surround a metal atom by binding at multiple points, is known as chelation. It is also the basis for chelation therapy, which doctors use to capture heavy metals, such as lead, in the body and remove them. The term “tannins” describes a large group of related molecules, all of which contain aromatic rings with carbon atoms connected by resonating double bonds. These “double” bonds resonate with the “single bonds” and act more like a “one-and-a-half” bond, rather than “double” bond. These resonating bonds have energetic properties that affect the absorption of light and so contribute to the color our eyes perceive. Tannic acid solutions are pale brown, like weak tea. When applied to paper lightly and allowed to dry, the writing is very difficult to see. But when the iron chelates are added to the tannins, the complex that forms is very highly colored, appearing dark blue or black.”

Galls are abnormal growths that result from infection, often by insects. Oak galls are rich in organic molecules known as tannins or tannic acids



ChemMatters | www.acs.org/chemmatters 15



Wynne Parry is a freelance writer based near Philadelphia, Penn.

\*Macrakis, K. Prisoners, Lovers, and Spies: The Story of Invisible Ink from Herodotus to Al-Qaeda. Yale University Press: New Haven, Conn, 2014.

ChemMatters, December 2022, pp 15-17 © American Chemical Society, All Rights Reserved

The full article by Wynne Parry, ‘How Invisible Ink Fueled Espionage and Other Trickery Throughout History’ may be read [here](#).



## LEHIGH VALLEY ACS CAREER PAGE

Check out the Career page on our website [lvacs.org/careers](http://lvacs.org/careers) for a wealth of information on the services provided by LVACS to chemists at all stages of their careers. Online courses, 1-on-1 consulting, professional development grants and the [ACS Career Navigator™](#) package are some of the benefits offered to ACS members to assist in planning and executing your career. Greglynn Gibbs, our local section ACS Career Consultant, would be happy to assist any member seeking more information at [greglgibbs@gmail.com](mailto:greglgibbs@gmail.com)



Join ACS for our ACS Virtual Office Hour – Academia vs. Industry on Thursday, February 2, 2023 at 12pm EST. Open to ACS members and non-members, this virtual session will begin with a presentation reviewing ins and outs of Academia vs. Industry, followed by the opportunity to network in small groups lead by ACS Career Consultants. Register: [here](#)

**CHEMISTRY JOB LISTINGS:** These listings are posted to aid LVACS members in their career development and do not reflect a recommendation of these institutions by LVACS. For an updated listing, check our website, [www.lvacs.org](http://www.lvacs.org)

### Scientist, Printing Inks, Evonik, Allentown, PA On-site

Lead New Product development projects designed to meet unmet needs within the Global Printing Inks markets by developing structure-property understanding, performing all needed laboratory research and using the company's work processes to capture ideas, develop project proposals, and have projects approved and prioritized. [Apply](#)

### Formulation Chemist Personal Care, Brenntag, Allentown, PA

The Formulation Chemist is responsible for creating innovative starting point formulations and managing customer projects, product development, and application testing in order to support the sales and marketing organization as well bring value to our customers and suppliers. [Apply](#)

### Chemist, Evonik, Allentown, PA On-site

Manages and completes new product development programs to meet the emerging needs of the epoxy adhesive market, that results in increased, defensible opportunities for the ECA business line. Works with North America-Application Technology and adhesive market leads to manage assigned product development projects from concept to commercialization. Support customers and commercial team on the adhesive curing agents and additives product lines and be the key point of contact. Understand the ECA base product offerings and have a deep knowledge of structure-properties-relationship to apply for the new product design. Develops a strong working relationship with technology teams in the Americas and further develop these relationships with technical counterparts in Europe & Asia. Demonstrates technical leadership in the area of safety and product stewardship. [Apply](#)

### Post Doc Industrial Fellow - High Performance Polymers, Evonik, Allentown, PA On-site

The position is limited to 15 months.

Contribute to R&D projects, communicate with partners internally (e.g., Technical centers in Marl and China) and externally (e.g., concerning polymer processing). This includes the planning, preparation, coordination, and execution of R&D work in labs and plants. The position holder will be in contact with customers and internal stakeholders to learn new competences and get involve with main tasks and challenges in polymer development work. [Apply](#)

### Quality Assurance Senior Manager, Thermo Fisher Scientific, Allentown, PA On-site

Lead the Technical Quality group handling Quality Risk Management, Deviation, and Change Management systems as well as supporting Facilities, Utilities, Maintenance, Engineering, Validation from a Quality perspective. Provide interpretation and recommend FCS Allentown's position on compliance with related to Technical Services, Quality Risk Management, Deviation and Change Management. [Apply](#)

### Senior Research Technician II, Evonik, Allentown, PA On-site

The position is located in the Evonik Technology Centre (Allentown) and is focused on the development of new products and applications in support of technology focused on high-performance coatings. [Apply](#)



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## LEHIGH VALLEY ACS CAREER PAGE [continued]

**Sr. Research Chemist - Oral Care, Church & Dwight Co., Inc., Princeton, NJ On-site**

Provide technical expertise and lead the development and qualification/implementation of new oral care products; maintenance of current products. [Apply](#)

**Sr. Research Chemist, Church & Dwight Co., Inc., Princeton, NJ On-site**

The Senior Research Chemist will work with other researchers and multidisciplinary project teams to solve problems using various analytical chemistry techniques. Work with Sr. Manager Applied Sciences and other Analytical, and Microbiology Leads to develop a 5- and 10-year plan to build C&D's Analytical/Microbiology capability delivering a roadmap to support innovation. The Senior Research Chemist will be able to interpret and communicate results to various product and process personnel. The Senior Research Chemist will also mentor other chemists and technicians in the department. [Apply](#)

**Associate Chemist, Church & Dwight Co., Inc., Princeton, NJ On-site**

The candidate for this position will support the Fabric Care Research and Development activities with development of new formulations and product improvements in addition to other R&D work. The Associate Chemist will be under the supervision of an R&D Manager in a manner consistent with the C&D R&D Core Principles of teamwork, consumer and customer focus, personal responsibility and integrity, and ethical behavior and practices. [Apply](#)

**Technician II/III - Construction Polymers, Wacker Chemical Corporation USA, Allentown, PA On-site**

WACKER POLYMERS is the global technology leader in the development and production of redispersible powders, dispersions solid resins, powder binders and surface coating resins. At our Allentown site, we are currently looking for a Technician II/III - Construction Polymers to join our growing team. Safely support product development and/or technical service of customers by doing general lab work including preparation and testing of materials. Proactively and independently supporting business by initiating projects, generating data, and effectively communicating results. Serving as an expert in safety, training, and related functions/activities. [Apply](#)

**Senior Surfactants Scientist, Nouryon, Bridgewater, NJ On-site**

The Senior Surfactants Scientist will join the Nouryon team and be responsible for the research, development, and evaluation of surfactant ingredients for the home and personal care segments. This may include developments for various sub-segments, such as hard surface cleaners, degreasers, laundry and dish washing products, personal cleansing systems, conditioners, sunscreens, and skin care products. [Apply](#)

**Senior Scientist, AR&T Pigment Concentrates, Evonik Allentown, PA On-site**

You will work on exciting and challenging topics together with a team in an ultra-modern, innovative and creative environment. Intensive on-the-job training with expert colleagues guarantees you will quickly become familiar with your duties and perform them independently. Performance related pay and the opportunity for personal and professional development are of course part of the package. Since 2009 Evonik Industries AG has been certified as a family-friendly company by the German Hertie Foundation. [Apply](#)

**Senior Consumer Scientist, Church & Dwight Co., Inc., Princeton, NJ**

The Senior Consumer Scientist will be the voice of the consumer and own agile research solutions that uncover insights that enhance consumer experience. Leads product and consumer research for designated categories to guide product development/ Innovation R&D. Subject matter expert of consumer and product research methods (qualitative and quantitative methods). Develops/ leverages holistic approaches that capture consumer needs. Ability to connect research solutions to consumer centric needs and lifestyle trends. Collaborates with R&D partners to help formulate project objectives, appropriate action standard for research and recommendation on methods, analyses. Strong story-telling skill to deliver comprehensive view point of consumer experience. Collaborative and willing to 'roll up sleeves' to provide constructive solutions for problem solving are critical leadership qualities for this role. [Apply](#)

**Plant Process Chemist, SF 158083, Evonik, Allentown, PA, On-site**

Provide process chemistry expertise and technical support for the Amines Process Technology manufacturing sites. Utilize advanced chemistry skills to develop practical commercial manufacturing processes for new products. Help drive continuous improvement at manufacturing sites through process optimization. Apply technical skills in troubleshooting efforts and general plant support as needs arise. Provide process chemistry expertise in support of e-MOC, OPHR and technical risk management. [Apply](#)

**Senior Surfactants Scientist, Nouryon, Bridgewater, NJ**

The Senior Surfactants Scientist will join the Nouryon team and be responsible for the research, development, and evaluation of surfactant ingredients for the home and personal care segments. This may include developments for various sub-segments, such as hard surface cleaners, degreasers, laundry and dish washing products, personal cleansing systems, conditioners, sunscreens, and skin care products. [Apply](#)



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## LVACS Annual Competitions and Awards: Call #2

John Freeman, LVACS Awards Committee Chair, along with the Section's Executive Committee invite members and the local community to recognize outstanding achievements in chemistry and chemical education by our colleagues. More on these awards, including past winners can be found by visiting our website, <https://www.lvacs.org/education-and-student-awards> and seeing our most recent award winners being honored at our September 2022 meeting at Ben Franklin TechVentures. Soooo...Nominations, please!! CONTACT: John Freeman, [jcf2@rcn.com](mailto:jcf2@rcn.com)

### Chemagination Competiton

The Lehigh Valley American Chemical Society (LVACS) will be holding a Chemagination Competition. Chemagination is a great learning experience for students. In addition to increasing their knowledge of science and chemistry, they can improve their creative, teamwork and public speaking skills. Such skills will serve them well in their future careers. High school students are asked to imagine that they are living 25 years in the future, 2047 and are writing for ChemMatters, a magazine for high school students that focuses on the role of chemistry in everyday life. The editor chooses them to them to write the cover article for the next issue of the magazine describing a recent breakthrough or innovation in chemistry and its applications that improve the lives of those living in 2047. Along with the article they have the honor of designing the magazine's cover. The subject of the article is: "Describe a recent breakthrough or innovation in chemistry (and/or its applications) that has improved the quality of people's lives today." The article must be written to fit in one of four categories: Alternative Energy, Environment, Medicine/Health, or New Materials. The winners of the LVACS local section competition will advance to the regional meeting, MARM 2023.

### Foundation in Chemistry Scholarship Award

The Lehigh Valley Section of the American Chemical Society (LVACS) is delighted to announce the 2023 Foundation in Chemistry Award. The award, designed to promote the chemical sciences at the college level, will be given to a high school senior who will be majoring in chemistry, biochemistry, or chemical engineering and attending a college or university in the Lehigh Valley Section. This scholarship award consists of \$1000 and a plaque, which will be presented to the winner at the Awards meeting of the Lehigh Valley Section of the American Chemical Society.

### Undergraduate Senior Awards

Every year we honor the top graduating seniors in chemistry and chemical engineering from each of LVACS's 4-year colleges. The selections are made by their respective faculty and a list of our local Chemistry 'BEST AND BRIGHTEST' appears in the Section's Octagon Newsletter. Their selection is accompanied by a framed certificate and a special prize. As well as recognition in the newsletter, the awardees are featured in our social media and are officially presented their awards at our April Undergraduate Student Poster Session.

### Organic Chemistry Scholarship Competition

The Lehigh Valley Section of the American Chemical Society will award its annual Scholarship for Organic Chemistry this spring! To be eligible, students should be below the junior level, currently enrolled in organic chemistry at an institution in the section, and a chemistry, biochemistry, or chemical engineering major. The competition entails taking the ACS Organic Chemistry Examination (45%), a brief, one-page letter of recommendation from the student's organic chemistry professor (10%), and an essay on a topic in organic chemistry (45%). The value of the scholarship is \$1000 and the top essay will receive \$100.



## LVACS Annual Competitions and Awards: Call #2 [CONTINUED]

### High School Teacher of the Year

The Lehigh Valley Section of the American Chemical Society (LVACS) is delighted to announce the 2023 award for excellence in teaching. The award is designed to promote excellence in Chemistry instruction at the high school level within the membership boundaries of the LVACS (Lehigh, Northampton, Berks, Monroe, Schuylkill, and Carbon Counties in PA, and Warren County in NJ). The award consists of a \$500 and a certificate of recognition. We hope that members will identify an outstanding teacher at their school and support them for the award. Additionally, we hope that members will share this with your neighborhood schools to increase awareness of the award. Winners of this award will be nominated by the Section for the ACS Division of Chemical Education Middle Atlantic Region Award for Excellence in High School Teaching.

### Small College Teacher of the Year

You are cordially invited to nominate a colleague to be recognized at the annual awards program of the Lehigh Valley Section of the American Chemical Society (LVACS). We are seeking to recognize, encourage, and stimulate high quality teaching and research at small colleges. Please send the nominee's short curriculum vitae, list of publications, and evaluation of the nominee's achievements as a teacher in a small college. This document should clearly demonstrate the candidate's attributes: the quality of the candidate's teaching; organization and efficiency of lab work; research and/or development work; ability to challenge and inspire students; extra-curricular work in chemistry; courses, meetings, presentations, awards, etc. Winners of this award will be nominated by the Section for the Mid-Atlantic region's E. Emmet Reid Award.

### Outreach Volunteer of the Year Award

To recognize the immeasurable efforts made by ACS local section and international chapter volunteers who conduct outreach and teach the public about chemistry. ACS presents awardees with a small gift and a certificate during a meeting or event. Awardees are also recognized at the annual ChemLuminary Awards, on social media, and in a special article in Chemical & Engineering News. The ACS Committee on Community Activities (CCA) selects one VOTY awardee from a local section or international chapter to be named the Global Outreach Volunteer of the Year. Volunteers are only eligible to be recognized once every five years. Members of CCA are not eligible for the Global Outreach Volunteer of the Year award if nominated or selected during their CCA service years. Each ACS local section and international chapter can recognize one individual annually for demonstrating extraordinary outreach volunteer service. Chairs receive communications and access to the submission form in mid-October. Section winner would be eligible for the Ann Nalley Middle Atlantic Regional Award for Volunteer Service to the ACS.





## Project SEED is Seeking Proposals for the Lehigh Valley in 2023

### *Project Proposals (In-Person or Virtual) Due February 8th 2023!*

ACS SEED has announced its 2023 program. Project Proposals may be submitted for [In-Person](#) and [Virtual](#) work. Here are examples of last year's funded projects.

*Lorena Tribe, PSU/Berks (virtual computational project):*

#### **Computation and visualization of species in coastal carbon dynamics in freshwater systems**

Global warming leads to changes in coastal systems that must be explored to predict its effects and implement remediation processes. During this project, students will explore chemical species involved in the carbon cycle and learn the computational skills to model them with atomic level ab initio software. In addition to molecules present in the atmosphere, in aqueous solution, and in soil fractions, mineral substrates will also be modeled. The adsorption process will be visualized, and the energetics will be calculated.

*Chip Nataro, Lafayette College:*

#### **Synthesis of Novel Organometallic Catalysts**

Students will be involved in the synthesis of organometallic compounds. By bonding organic molecules to metal atoms, the reactivity of the organic molecules is greatly enhanced. In the lab, students are generally making compounds that have never before been prepared, so you have the opportunity to create the world's supply of a brand new compound. After making the compounds, we are interested in the properties of these compounds. In particular, we are interested in how these molecules behave as catalysts. Catalysts are compounds that enable reactions to proceed more efficiently than they would without a catalyst (for example taking place at a lower temperature, or taking less time). By making subtle changes to the catalyst molecules such as their shape, the catalytic effectiveness can be significantly altered.

SEED Project proposals typically consider: Goals/purpose of the project, in language a high school student would understand; Project activities: what would a typical week look like for a student; How many students would be working on the project (1 or 2, unless you have multiple different mentors involved, in which case it could be up to 2 per mentor); What are the most likely safety hazards for the student(s) in the lab, if any, and what safety training, PPE, engineering controls, or other changes will be implemented to minimize the risks from those safety hazards; Any additional training that the student will receive. If necessary, could this be a virtual project?

Program [link](#).

The LVACS Executive Committee strongly supports Project SEED and encourages members to contribute to this important ACS strategic [program](#). LVACS CONTACT: Jeremy Heyman, Northampton CC, [jbheyman@gmail.com](mailto:jbheyman@gmail.com)



ACS  
NEWS

Yannik Singh (left) and mentor Melissa Barranger Mathys at the University of Maryland, College Park, in 2019

## ACS chemistry olympiad program seeks high school mentors for 2024–26

The US National Chemistry Olympiad (USNCO) program is seeking high school chemistry teachers with a background in organic, inorganic, analytical, or physical chemistry or biochemistry to mentor olympiad participants. Successful candidates should have laboratory and classroom experience with highly motivated students at or above the Advanced Placement Chemistry level. Applicants must be prepared to make a 3-year term commitment. The American Chemical Society pays an honorarium and pays for most expenses associated with the study camp and the International Chemistry Olympiad. Experience with the USNCO is not a prerequisite for selection.

Interested individuals may obtain an application and additional information at [www.acs.org/olympiad](http://www.acs.org/olympiad) or by contacting program specialist Margaret Thatcher at [usnco@acs.org](mailto:usnco@acs.org) or 202-872-6328. If you are interested, please submit an application and your résumé by Jan. 6. Applicants must arrange to send three letters of recommendation to Lily Raines, manager of the Office of Science Outreach, at [usnco@acs.org](mailto:usnco@acs.org) by Jan. 19.—MARGARET THATCHER, ACS staff

<https://www.acs.org/education/students/highschool/olympiad.html>

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For more information, please email [lsac@acs.org](mailto:lsac@acs.org)

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# LVACS 2022 - 2027 Strategic Plan Updates

## Goal 2: Ensure LVACS Communications are Current and Effective

**Strategy 1:** *By the end of 2022 calendar year, build a communications committee to update and enhance current communications plan. Nigel Sanders, Champion; Sara Hayik, Team Lead*

The purpose of the LVACS Communications Plan is to ensure that key information about Section activities is received in a timely fashion by the appropriate member group. The Plan should provide a clear pathway to message formation, approval and delivery based on the target audience and communication channels. With a team representing the range of LVACS members (student to retired), a [document](#) that addresses internal and external areas that could be improved has been drafted including recommendations to move it forward. The internal portion looks to support members who would like to be more active leaders but need more direction on how to run different groups within LVACS as well as more information about hosting meetings. For the external, the plan offers ways to better target demographics who are less in tune with email while still serving those utilizing it as the main form of communication with the organization.

## Goal 3: Develop Partnerships to provide resources to benefit the LV Community

The new Strategic Plan recognizes key stakeholders: organizations and individuals who should be engaged and consulted depending on the LVACS activities. Of those, three types are especially important as we address our Goal 3 to 'Develop Partnerships to provide resources to benefit the LV Community.' Informal Science Educators (ISEs) such as the Da Vinci Science Center and Reading Science Center, Peer Technical groups such as environmental groups and interested K-12 schools and High School chemistry teacher ACS/AACT members. As science centers regain visitor numbers post-pandemic, we will again be able to provide chemistry outreach experiences for young people and adults in our community. Chemists Celebrate Earth Week, April 16-22 and featuring the theme 'The Curious Chemistry of Amazing Algae,' will again provide ideas and resources for demonstrating the value of chemistry to our community. On Earth Day, Saturday, April 22<sup>nd</sup>, LVACS will be sponsoring a special symposium on climate science at Cedar Crest College with plenary speaker Sherine Obare, 2022-2023 chair of ACS ENVR Division. The K-12/AACT connection is planned to focus on orienting more teachers to working NCW/CCEW/Chemagination into the curriculum through additional programming for them enabled through existing in-service days.

### Goal 3 Strategies



**Goal 3:** *Develop Partnerships to provide resources to benefit the LV community.*

**G3S1: ISE.** Continue and build partnerships with DaVinci and Reading Science Centers. (ongoing)

**G3S2: Climate & Peers.** By end of 2023 calendar year, (assign interim milestone) identify and coordinate  $\geq 2$  activities with groups with an emphasis on environment (climate sciences). [Impact=H, Resources=M] **Champion – Lindsey**

**G3S3: K-12.** Build connections with K-12 schools or chem organizations by identifying receptive organizations by Q4 2022 and creating a program to fulfill their needs. Leverage CCEW and NCW during the first year. [Impact=H, Resources=M] **Champion - Lorena**



The Strategic Planning Committee invites your comments and suggestions.

Lindsey Welch, Past Chair, [lawelch@cedarcrest.edu](mailto:lawelch@cedarcrest.edu); Steve Boyer, Chair, [sboyer11@esu.edu](mailto:sboyer11@esu.edu)

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