February Meeting (Hybrid Format)

PRIDE IN STEM
Processing the LGBTQ identity in STEM professions.

Panel Discussion/Q&A
Panelists: Bryan Trimm, IBM; Christopher Dubbs, ESU
Moderator: Ariel Tucci, ESU Gender & Sexuality Center
Host: East Stroudsburg University
Co-sponsored by ESU’s Gender & Sexuality Center and Diversity and Inclusion Committee

Friday, February 18th, 2022
In-person beginning 6:00pm
Beers Lecture Hall (map #59)
East Stroudsburg University
200 Prospect Street
East Stroudsburg, PA 18301
Or join remotely via Zoom

Campus Map: https://www.esu.edu/about/campus/documents/21-22/esumap-080421.pdf
Social/Snacks: 6:00 pm; Panel/Q&A: 6:15 pm
Zoom live streaming link: https://esu-online.zoom.us/j/97332529947
CONTACT: Steve Boyer, sboyer11@esu.edu
LVACS Events Calendar

February 2022

February Meeting (Hybrid Format)
Panel Discussion/Q&A: PRIDE in STEM
Host: East Stroudsburg University
Co-sponsored by ESU’s Gender & Sexuality Center and Diversity and Inclusion Committee
**Friday, February 18th**
Social/_snacks: 6:00 pm; Panel/Q&A: 6:15 pm
Zoom link: [https://esu-online.zoom.us/j/97332529947](https://esu-online.zoom.us/j/97332529947)
CONTACT: Steve Boyer, [sboyer11@esu.edu](mailto:sboyer11@esu.edu)

Networking Event
“Creating a Community of Practice for Faculty Mentoring Undergraduate Research in the Lehigh Valley”
**Part I: Why Don’t We Collaborate?**
Identifying overlaps with research areas among LVACS faculty & speed networking event for faculty to meet others and share ideas.
Facilitators: Lindsey Welch, Cedar Crest College
 Fran Mayville, DeSales University
Date/Time/Format TBA
CONTACT: Lindsey Welch, [lawelch@cedarcrest.edu](mailto:lawelch@cedarcrest.edu)

March 2022

March Meeting (Hybrid Format)
“Dynamic Materials”
Speaker: Lauren Zarzar, Penn State U
Host: Muhlenberg College
**Thursday, March 10th**
5:30 reception; 6:00 dinner; 7:00 Talk
CONTACT: Justin Sparks, [justinsparks@muhlenberg.edu](mailto:justinsparks@muhlenberg.edu)

April 2022

April Meeting (Hybrid Format)
Undergraduate Poster Night
Host: DeSales University
Date/Time/Format TBA
CONTACT: Fran Mayville, [Francis.Mayville@desales.edu](mailto:Francis.Mayville@desales.edu)

May 2022

TBA

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

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. CONTACT: John Freeman, jcf2@rcn.com

Chemagination Competition
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 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 2022 sponsored by the Trenton Section of the ACS. Details, contacts and application materials may be accessed here or in the appendix of this issue.

Foundation in Chemistry Scholarship Award
The Lehigh Valley Section of the American Chemical Society (LVACS) is delighted to announce the 2022 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. The guidelines for the award, contact and application materials may be accessed here and in the appendix of this issue.

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. Details may be found here and in the appendix of this issue.
LVACS Announces Annual Competitions and Awards [CONTINUED]

High School Teacher of the Year
The Lehigh Valley Section of the American Chemical Society (LVACS) is delighted to announce the 2022 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. The nomination and application materials may be found here and in the appendix of this issue.

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. Further details may be found here.

SPRING IS THE TIME FOR SCIENCE FAIRS!!

Pennsylvania Junior Academy of Sciences
The 2022 Region 3 Meeting will be held on February 26, 2022 at Northampton Community College, 3835 Green Pond Road, Bethlehem, PA 18020 from 8:00 until 3:30. Registration is in the Main lobby. If you wish to be a judge, fill out a Judge Registration form and email to Megan Basile, Judge Coordinator, mbasile@salisburysd.org.

Lehigh Valley Science and Engineering Research Fair
The Lehigh Valley Science and Engineering Research Fair will be held March 11 & 12, 2022 in Rauch Field House, Lehigh University, 123 Goodman Dr, Bethlehem, PA 18015. The fair is open from Friday, March 11th at noon until Saturday, March 12th at midnight. Judging begins Saturday, March 11th at 8:30 am. CONTACT Jill Forest: jsf212@lehigh.edu.

Reading-Berks Science & Engineering Fair
RBSEF 2022 is at Albright College’s Bollman Gymnasium, located inside the Schumo Center for Fitness and Well-Being on N. 13th St. and Richmond St. in Reading, PA. It is currently in-person the week of March 14 – March 17, 2022 but may have to revert to virtual depending on venue restrictions. CONTACT Deanna Witzel: Director@rbsef.com.
ESU Awarded $5 Million NSF Grant for Continued Scholarships and Research

In 2016, East Stroudsburg University (ESU) received its largest single grant ever awarded from the National Science Foundation (NSF) totaling $4 million to help transfer students complete their education at ESU in the fields of Science Technology and Math (STEM).

At a press conference with community college partners, ESU announced a second NSF grant of nearly $5 million ($4,982,181), the largest grant in the University’s history, to continue the University’s work on that original grant which was dubbed Clear Path. This new iteration of the grant – Clear Path 2 (CP2) – provides scholarships of up to $10,000 a year for 135 students to support the timely completion of their STEM associate and subsequent STEM bachelor’s degrees through the implementation of an evidence-based, sustainable, transferrable program that maximizes student success. The grant is a partnership among ESU and Northampton Community College, Lehigh Carbon Community College, Luzerne Community College, and Community College of Morris.

In addition to millions of dollars in scholarships, the Clear Path grant supports students with proactive developmental advocacy holistic advising, cohort activities, peer mentoring and tutoring and mentor mediated online education that fosters development of traits associated with academic success.

“ESU is proud to note that 79 students have graduated in STEM fields thanks to the initial Clear Path grant,” said Margaret Ball D.M.A., interim provost and vice president for academic affairs at ESU. “To receive this award again, in an increased amount, is a reflection on the professors’ collective and individual commitment to recruiting and supporting students, including women and students of color who are often disenfranchised from pursuing a career in the sciences.”

Scores of community college students going into STEM fields will be able to transfer to ESU and graduate on time with minimal debt, according to Dr. Ball.

“Building upon the success of CP1, CP2 has selected successful program components that can be assessed and scaled and applied beyond the Clear Path team,” said T. Michelle Jones-Wilson, Ph.D., professor and department chair of chemistry and biochemistry at ESU and principal investigator for the grant. “Through CP2 programing and intervention we will increase associate degree completion to greater than 90% with effective advising and scholar support. We’ll maintain a 90% program retention rate with a 2.8 GPA minimum, reduce the transfer deficit through Clear Path programming, and increase underrepresented populations by employing methods that support diverse populations.”

“This grant will allow our team to better understand how identified success predictors affect STEM student retention and degree completion,” said Olivia Carducci, Ph.D. professor and department chair of mathematics at ESU and a co-principal investigator of the grant. “We will mathematically model what we deem a causal path towards success and create research-based student support structures building upon and advancing the science of teaching and learning.”

The principal investigators for CP2 are Dr. T. Michelle Jones-Wilson, professor and department chair of chemistry and biochemistry at ESU; Dr. Olivia Carducci, professor and department chair of mathematics at ESU; Dr. Danielle Ringhoff, assistant professor of chemistry at Northampton Community College; Joanne Z. Bruno, J.D., ESU’s former provost and vice president of academic affairs; and Dr. Kristin Noblet, assistant professor of mathematics at ESU.

For more information about the Clear Path scholarship visit https://www.esu.edu/clear_path/index.cfm

Credit: Elizabeth Richardson, ESU Insider, January 6, 2022

 Congratulations to LVACS members Drs. Jones-Wilson and Ringhoff for winning a continuation of this important grant!
Celebrate CCEW the week of April 17–23, 2022 with the theme, “The Buzz About Bugs: Insect Chemistry.” Explore the many ways insects in nature can help us (promote biodiversity, pollinate fruits and vegetables, produce honey and silk, etc.) or bug us (give us itchy bites, spread disease, etc.), and the exciting chemistry at play in the lives of insects.

Activities for Science Outreach Events within this year’s theme include:

**Bugs to Dye For**: Cochineal bugs are used today to color many things including food, beverages, and cosmetics. Try this activity to discover how!

**Taking the Sting Out of Bites**: Bites or stings from certain bugs, such as red fire ants or bees, can be extra irritating. Explore some common remedies and see how effective they are!

**Amazing Aromas**: In this activity, you will assemble some common aromas from natural fruits and flowers and from products that use scents as part of their ingredients.

See the ACS website for a full range of educational resources: [https://www.acs.org/content/acs/en/education/outreach/ccew/educational-resources.html](https://www.acs.org/content/acs/en/education/outreach/ccew/educational-resources.html)

As always, the K-12 Illustrated Poem Contest! As part of every CCEW celebration, LVACS sponsors a national illustrated poem contest for K-12 students. The winners go on to a national competition. Our local section CCEW Coordinator, Lindsey Welch, [lawelch@cedarcrest.edu](mailto:lawelch@cedarcrest.edu) has the details.

This year ACS President, Dr. Angela Wilson, is committed to visit as many Local Sections, International Chapters, Student Chapters, and High School ChemClubs as possible during CCEW.
The Thursday, January 27th, section meeting was High School Teachers Night. This virtual event began online at 7:00 pm. The program consisted of speakers, laboratory demonstrations and educational exhibits focusing on High School teaching needs. Lehigh Valley ACS and the American Association of Chemistry Teachers (AACT) invited all Lehigh Valley section members, student members and all High School chemistry/science teachers to learn about the resources available to them through the ACS, the LV section, the AACT and other local area organizations. Some of the joint LVACS/HS activities we covered were Chemagination/Foundation in Chemistry Award/HS Teacher of the Year (John), SEED (Jeremy/Lorena), Science Coaches/Science Fairs/NCW&CCEW (Lindsey), Chemistry Olympiad (Gail) and After-School Chemistry Partnership Program (Nigel). In between presentations were two sets of demonstrations of topics of possible interest to the High School chemistry community.

Demonstrations:
- Carl Salter, Moravian College, on light absorption/spectroscopy
- Nigel Sanders, ESU, on simple nanotechnology examples

A brief business meeting followed the presentations. Lindsey reviewed the schedule for the next three months. The next section meeting is scheduled for Friday, February 18th beginning at 6:00 pm at East Stroudsburg University and will feature a panel discussion focused on LGBTQ in STEM fields. The format will be hybrid and more details will follow shortly. A March meeting is scheduled at Muhlenberg College for Thursday, March 10th beginning at 5:30 pm with outside speaker Lauren Zarzar of PSU. The format will be FTF and possibly hybrid. The Annual Undergraduate Poster session is planned for April at DeSales University. As there were no further items shared, the meeting adjourned at 8:45 pm.
LEHIGH VALLEY ACS CAREER PAGE

Career Guidance

Check out the Career page on our website 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. greglgibbs@gmail.com

Chemistry Job Listings

The Lehigh Valley Section of the American Chemical Society posts specific job opportunities as they become known to us. These listings are posted to aid LVACS members in their career development and do not reflect a recommendation of these institutions by LVACS.

Visiting Assistant Professor in Chemistry, Lafayette College
The Department of Chemistry invites applications for a full-time visiting (non tenure- track) position for the 2022/23 academic year. Teaching will include courses in introductory (general) chemistry with possible other courses depending on the candidate's specific expertise, prior teaching experience, and departmental need. The teaching load will be three lecture courses each semester, where two laboratory sections are equivalent to a lecture course. While not a requirement, opportunities and support are available for the successful candidate to mentor students on research projects. A Ph.D. degree or ABD is required, and teaching experience is preferred. Additional information about the position and the Department of Chemistry http://chemistry.lafayette.edu/chemistry-home/vis-asst-prof-2022. We especially welcome applicants who can contribute to Lafayette's commitment to greater diversity and inclusion.

Associate Scientist, Medicinal Chemistry, Pfizer, Inc.
As an Associate Scientist in Medicinal Chemistry at Pfizer you will play a vital role as a key contributor of a large, multi-disciplinary matrix team from project inception through to delivery of clinical drug candidates. You will provide key contributions to the implementation of medicinal chemistry strategies through development and execution of innovative chemistry and help to revolutionize our approach to the discovery and development of small molecule and synthetically-derived drugs. Apply

Senior Associate Scientist, Medicinal Chemistry, Pfizer, Inc.
As a Senior Associate Scientist in Medicinal Chemistry at Pfizer you will play a vital role as a key contributor of a large, multi-disciplinary matrix team from project inception through to delivery of clinical drug candidates. You will provide key contributions to the implementation of medicinal chemistry strategies through development and execution of innovative synthetic chemistry and help to revolutionize our approach to the discovery and development of small molecule and synthetically-derived drugs. Apply

Polymer Chemists, Mussel Polymers, Inc.
Mussel Polymers, Inc. located at 116 Research Dr, Bethlehem, PA 18015 in Bethlehem PA is a biomimetic specialty adhesive and formulations company. We are seeking Polymer Chemists and Adhesion Scientists to join our team while we expand our scientific development and pilot manufacturing. This is an opportunity to join an innovative startup looking to rapidly grow and develop new solutions to previously unsolvable problems. Qualities desired in ideal candidates are: Pilot scale polymerization design and operations experience, Commercial scale specialty polymer production experience, Experience with catechol chemistry, Experience with functional protection/de-protection chemistry, Organic monomer synthesis chemistry experience and cGMP production experience. Interested? CONTACT: letsbond@musselpolymers.com
Notes of a Chemical Corps Soldier

By Bill Ramsey

Bill Ramsey received an AB in bacteriology from Indiana University and a PhD in microbiology from the University of Minnesota. Later he attended night law school at the University of Baltimore and subsequently pursued a career and retired as a patent attorney.

“How could you have done it?” This is the reaction I sometimes receive when friends or acquaintances learn of my Army service involving biological weapons (BW) research and development during 1961-63. Some seem to feel the self-evident wrongness of such activity should have caused me to forestall my participation. However, it is not that simple when considering the facts that my orders and duty were clear.

At Fort Detrick, our motivation stemmed primarily from a number of lines of evidence that the USSR was actively developing BW. It was during the height of the Cold War (the Cuban Missile Crisis was in 1962) and we had no doubt who was the adversary. Our goal was the capacity to respond in kind to a first use of BW by the Soviets. We saw precedence in this approach by the absence of chemical weapons (CW) use during World War II. The principal combatants were prepared to use CW in retaliation, but none appeared willing to be the first.

The United Kingdom was prepared to use mustard gas on the beaches in the event of sea-borne invasion, apparently feeling the seriousness of such a situation would justify the stigma of first use. U.S. preparations for chemical warfare were revealed by the release of mustard gas from the Liberty Ship John Harvey (2000 CW bombs in its cargo) due to being bombed while at port in Brai, Italy. About 600 military and an unknown number of civilians were casualties. The first nerve gas, tabun, was invented in Germany in 1937 and large amounts of nerve agents were weaponized during WWII. We may never know for sure why CW were not used, but it’s certainly possible that fear of retaliation in kind was involved.

Public antipathy to CW may be attributed to widespread familiarity with the effects during and after WWI. This led to the Geneva Protocol of 1925 which forbade the use of chemical and bacteriological weapons in combat.

There were no similar experiences to lead to public distaste for BW which nevertheless were quickly developed. BW were viewed as significantly more dangerous than CW because of the self-propagating nature of microbes which could lead to epidemics and pandemics, perhaps of a unique nature. BW were suggested as a “poor man’s atomic bomb” thus, empowering and emboldening small countries. Finally, the reputation of biomedical research as a benefit to mankind made using it to create BW seem especially corrupt and wrong.

For the current state of BW and CW research, see the Arms Control Association Website www.armscontrol.org

**Elementis Regamus Proelium translates to: "Let us (or we) rule the battle by means of the elements”

SCC Chair, John Freeman, jcf2@rcn.com, invites you to participate in the many special events sponsored by the ACS SCC and to let him know what local events would be of interest to you.
The LVACS Women Chemists Committee invites you to the Celebration of the Annual IUPAC Global Women's Breakfast

Join the fun on February 16, 2022!

Panel Discussion and 2 Networking Sessions

Register for the Live Panel Discussion, 10:00 AM - 11:00 AM Eastern Time

Join the American Chemical Society and IUPAC on February 16, 2022 for the Global Women's Breakfast! The Global Breakfast is an event that happens on a single day in February of each year in conjunction with the U.N Day of Women and Girls in Science. In celebration of 2022’s central theme “Empowering Diversity in Science”, the ACS will host a virtual panel event and networking sessions with prominent female chemists.

The panel discussion will be recorded live at 10:00 AM Eastern Time followed by networking sessions. A recording of this discussion will be posted on this page by 1:00 PM Eastern Time.

Register for either or both networking sessions below:

Networking Session 1, 11:00 AM - 12:00 PM Eastern Time
Networking Session 2, 4:00 PM - 5:00 PM Eastern Time

Be sure to tag @IUPAC and @AmerChemSociety in your social media posts and use #GWB2022 to join the global conversation. Take a selfie with our virtual backgrounds below and invite all your friends and colleagues to join us.

To see other events around the world, visit www.iupac.org/gwb.
Bonding Through Chemistry: ACS Spring 2022

Access the ACS Spring 2022 Meeting Program. Explore the Technical Program and start planning your meeting experience. Find information about the symposia schedule and session types planned, use the filtering capabilities to find programming by division, date, session type, symposia, and time block. Visit the website to find information on booking your stay, attendee resources, and register. Attend courses and workshops, both in-person and virtually, to grow your career. Discover the latest Student Programming details planned for ACS Spring 2022. Find information about the technical programming and engagement events for students.

ACS Spring 2022 will be a mask and vaccination-required event for all who plan to participate in person in San Diego, CA. All individuals will need to be fully vaccinated by March 6, 2022. Visit the ACS website for detailed information about the requirements and ACS safety measures.

Book your housing by February 25, 2022, and receive exclusive rates and benefits by making your hotel reservations through ConferenceDirect, the official housing service provider for ACS Spring 2022 in San Diego, CA. Please note that ACS does not endorse booking hotel reservations through any other sources.

We look forward to seeing you at ACS Spring 2022—virtually or in-person!

Hybrid Registration
- Enjoy all that San Diego has to offer in March
- Attend both in-person only and live hybrid sessions
- Live in-session Q&A opportunities
- In-person networking opportunities
- Full access to all in-person, virtual, and on-demand sessions included in your full registration
- 24/7 access to programming; on-demand content available through April 8, 2022

Virtual Registration
- Attend live hybrid and 100% live virtual sessions via the meeting platform
- 24/7 access to programming; on-demand content available through April 8, 2022
- Interactive sessions with live chats and Q&A
- Digital networking opportunities to connect with others without leaving your home

ACS Fall 2022
Now accepting abstracts.
The submission deadline is March 14, 2022.

List of Topics Submit Now
OFFICERS

Chair:
Lindsey Welch
lawelch@cedarcrest.edu

Chair Elect:
Steve Boyer
lawelch@cedarcrest.edu

Immediate Past Chair:
Roger Egolf
rae4@psu.edu

Secretary:
Nigel Sanders
nigel53.sanders@gmail.com

Treasurer:
Lorena Tribe
lut1@psu.edu

COUNCILORS

Jeanne Berk (term ends 12/31/24)
irberk@cedarcrest.edu

Kelley Caflin (term ends 12/31/23)
caflinacs@yahoo.com

Mike Bertucci (term ends 12/31/23)
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Ned Corcoran (term ends 12/31/24)
ewc777@gmail.com

The Octagon Newsletter is published by the Lehigh Valley Section of the American Chemical Society to provide information to section members and the public about activities and programs which support the section mission “To promote the chemical sciences in the Lehigh Valley section for the benefit of our members and our community.” Send all queries to the editor at: nigel53.sanders@gmail.com
APPENDIX: 2022 LVACS Competitions Announced

Information, eligibility and nomination/application forms

Chemagination
Foundation in Chemistry Scholarship
Organic Chemistry Award
High School Teacher of the Year
Small College Teacher of the Year
Dear High School Teachers,

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 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 local section competition will be completely electronic. Teams should submit their articles and cover design to by April 18, 2022. The articles will be judged based on the MARM 2022 rules. Please refer to the attached document titled 2022 MARM CHEMAGINATION DESCRIPTION AND RULES for the official rules.

The winners of the LVACS local section competition will advance to the regional meeting, MARM 2022 sponsored by the Trenton of the ACS. This will be held on Saturday, June 4. First place category winners from Local ACS Section’s Chemagination contests are eligible to participate in MARM 2022. If a first place winning team chooses not to participate, a second place team can serve as an alternate.

At this time the plan is for an in-person event. At that event masks covering the nose and mouth will be required. Students and faculty will be required to comply with any existing NJ Covid regulations for large gatherings. If an in person event is not possible the regional competition will move to virtual event

DEADLINES
March 15: Teams should submit their intent to participate (this allows for appropriate judge recruitment but is not a firm deadline.)

April 18: Teams submit their articles online for the LVACS competition to lvacschemagin@gmail.com, (this is a firm deadline)

May 9: Teams notified of award status (this is a firm deadline)

May 2022 or September 2022: Teams honored at Lehigh Valley ACS awards meeting

Late May (TBD): Local section winning teams submit their articles for pre-judging to MARM 2022

June 4: The 2022 MARM Chemagination Competition takes place either virtually or in person at The College of New Jersey, 2000 Pennington Rd, Ewing, NJ 08628-0718 https://tcnj.edu/

Regards,
John Freeman, Chemagination 2022 coordinator
lvacschemagin@gmail.com
CONTEST OVERVIEW

For this event, high school students are asked to imagine that they are living 25 years in the future and have been invited to write an article for ChemMatters, a magazine for high school students that focuses on the role of chemistry in everyday life. The subject of the article is: “Describe a recent breakthrough or innovation in chemistry (and/or its applications) that has improved the quality of people’s lives today.” To view a sample ChemMatters magazine visit acs.org, and look under Education: http://www.acs.org/content/acs/en/education/resources/highschool/chemmatters.html.

In addition to the article, students are asked to design a cover for the magazine. The article must be written as if the student is living in the year 2047, looking back at innovations that have occurred since 2022. The innovation must fall into one of the following categories:

- Alternative Energy
- Environment
- Medicine/Health
- New Materials

A few examples of areas where development is expected are: nanotechnology, energy efficiency, pollution prevention, green chemistry, sustainability, intelligent devices for sensing, proteomics, climate models, biopharmaceutical therapies, medical devices and/or implants and new energy sources.

Evaluation of the entry is based upon:
(1) the written article which is submitted in advance,
(2) the presentation of the innovation on a self-standing display and
(3) knowledge of and soundness of the science as demonstrated in interviews with judges (much like science fair judging).

RULES

ARTICLES must:
• be written by a team of two or three students; each student may be on only one team.
• be about 1000 words (figure captions are not included in the limit).
• present the chemistry/scientific concepts/ideas/principles behind the innovation.
• describe the innovation and indicate how it has improved people’s lives.
• present a “history” of the changes that had to occur over the prior 25 years to develop this innovation.
• include drawings, diagrams, illustrations and descriptions of the chemistry and any technology involved in all key aspects of the innovation.
• cite a minimum of three technical references.
• include a cover design for the magazine. The cover design can be an original computer graphic or a free-hand drawing.

DISPLAYS must:
• be 24” deep, 40” wide and 48” tall or less, and be able to sit on a table, much like at a science fair display.
• include the cover of the magazine.
• be a visual representation of the article’s content with a minimum of text.
• include a list of references cited.
ATTENDANCE:
• At least one member of the team must attend the competition to present the display and be interviewed by the judges to be eligible for prizes.

SCORING:
• Winners are selected by the judges based on the quality of the article and display, and the quality and understanding of the science of the innovation.
• Criteria for scoring include scientific thought, creativity, clarity, thoroughness and teamwork.

ELIGIBILITY/REQUIREMENTS:
• Each local section can submit up to four entries (1 per category).
• All students must be currently enrolled in an accredited high school or home school and be taking or have recently completed a grades 9-12 science class.
• Students and their parents are responsible for transportation to and from the meeting site.
• All entries become the property of the ACS and will not be acknowledged or returned.
• The ACS, its agents and contractors, are not responsible for lost, late, misdirected, or postage-due entries.
• Acceptance of the prize constitutes consent to use the winners’ names, likeness and entries for editorial, advertising, and publicity purposes.
• Prizes are not transferable.
• Taxes, if any, are the sole responsibility of the winner.
• Participants will be asked to provide a Photo Release Form signed by a parent or guardian prior to attending the contest.

KEY DEADLINES

February 28 Local sections notify 2022 MARM Chemagination competition co-chairs of their preliminary intent to participate in 2022 MARM Chemagination.

March 30 Local sections confirm their intent to participate in 2022 MARM Chemagination

May 1 Local Sections submit their estimate of the number of teams they will be sending to the 2022 MARM Chemagination.

May 15 Local sections confirm the number of participating teams and submit article titles and contact information on each student. (Submission process will be announced at a later date.)

Late May TBD Teams submit their articles to the 2022 MARM competition for pre-judging.

June 4 The 2022 MARM Chemagination competition takes place on the campus of The College of New Jersey, 2000 Pennington Rd, Ewing, NJ 08628-0718 https://tcnj.edu/
The Lehigh Valley Section of the American Chemical Society (LVACS) is delighted to announce the 2022 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 certificate, which will be presented to the winner at the May meeting of the Lehigh Valley Section of the American Chemical Society. We have enclosed the guidelines for the award and the application materials. Please post the flyer and feel free to make additional copies as needed.

As an ACS member, please share this information with parents, students and guidance counselors. The four-part application should be completed and submitted by April 18, 2022. We appreciate your help and thank you for publicizing the 2022 Foundation in Chemistry Award. We look forward to many worthy applications.

**Instructions:** The Foundation in Chemistry Award is sponsored by the Lehigh Valley Section of the American Chemical Society (LVACS) to promote the chemical sciences at the college level. This award, consisting of $1000 and a plaque, will be awarded annually to a high school senior within the membership boundaries of the LVACS (Lehigh, Northampton, Berks, Monroe, Schuylkill, and Carbon Counties in PA, and Warren County in NJ) to attend a college in the Lehigh Valley area (eligible colleges are listed below) and intending to major in chemistry, biochemistry, or chemical engineering. The $1000 check will be given to the student for defraying college expenses.

The applicant for this award should have completed one year of college preparatory chemistry, four years of mathematics, and one semester of college preparatory physics by high school graduation. The application, which is attached to these instructions, will be evaluated on merit by the LVACS HS Scholarship Committee. The completed four-part application (nomination letter from your chemistry teacher, the application form, transcript, and your essay) must be submitted by April 18, 2022 and emailed to: lvacsfoundations@gmail.com

Please direct any questions about this award to: John Freeman at lvacsfoundations@gmail.com

Sincerely
John Freeman
Chair of the LVACS HS Scholarship Committee
220 W Pierce
Easton, PA 18042

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**Eligible Colleges for Awardees:**

- Albright College
- Cedar Crest College
- Kutztown University
- Lehigh University
- Northampton County CC
- Penn State-Berks
- Penn State-Schuylkill Valley
- Warren County CC
- Alvernia College
- DeSales University
- Lafayette College
- Moravian University
- Penn State-Lehigh Valley
- Reading Area CC
- East Stroudsburg University
- Lehigh Carbon CC
- Muhlenberg College
2022 Foundation in Chemistry Award
Nomination Form

(To be filled out by the student)
Student’s Name: ________________________________

Chemistry Teacher’s Name: ________________________________
e-mail address: ________________________________

School Address: ______________________________________
________________________

I hereby ____ waive my right of access to this recommendation
_____ do not waive my right of access to this recommendation

(To be filled out by the teacher)
Please submit a letter of recommendation (as an attached letter) addressing such issues as the above student’s
knowledge of chemistry and the sciences, initiative, leadership potential, and potential as a student in the chemical
sciences at college. Any additional information about the student’s financial need would be appreciated; we will
consider financial need in the event we judge more than one student to be equivalent on the basis of merit.

Deadline: April 18, 2022
Foundation in Chemistry Award
Application Form

(To be filled out by the student)

Full Name: ___________________________________
Home Address: ___________________________________
_________________________________
_________________________________
Home Phone #: _________________________
e-mail address: ________________

High School: ___________________________________
Names and addresses of your legal guardians:

_________________________________
_________________________________
_________________________________

College you will attend: _____________________________
Proposed major degree program: ________________________
Please attach an official transcript with your most recent grades.

Please write and attach an one page essay (250 words maximum) on why you have chosen to study the chemical sciences in college.

Deadline: April 18, 2022

Application Check list

☐ Application form/this page

☐ Letter of recomendation

☐ Student Essay

☐ Student Transcript
LEHIGH VALLEY ACS ANNOUNCES 2022 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. Additionally, the top essay will receive $100. Details about the exam, letter, and essay follow below. Students should indicate their interest in the scholarship by April 28th, 2022 to Dr. Michael Bertucci (bertuccm@lafayette.edu)

ACS Organic Chemistry Examination: The exam will be administered on Saturday, April 30th, 2022 at Lafayette College, Easton, PA from 9:00-11:00 AM. Students should report to the entry foyer of the Hugel Science Center. Parking is available behind the Hugel/Kunkle Hall in the lot indicated by the red asterisk on the campus map (see next page). Juice and bagels will be available inside the foyer starting at 8:30 AM.

Essay: The student should address the impact of an organic molecule or process in organic chemistry on society and his or her personal interest in it. The essay should be written at a level to interest and educate a general chemist who has completed sophomore-level organic chemistry. If a molecule is chosen, the synthesis, including key mechanistic features and structural analysis, should be covered. If a process is chosen, the physical and chemical basis for its success should be explained. Appropriate use of structures to facilitate understanding of the chemistry is expected. An additional page with references must be included. References should follow the guidelines as delineated in the ACS Style Guide. The essay should run from 1000 to no more than 1200 words in Times New Roman 12-point font with one-inch margins on all sides. The references and figures are not considered in the overall word count. Each page should have a header with the student’s last name, brief essay title and page number. The winning essay after editing may be published in a future issue of the Octagon.

The essay will be rated on:
• Appropriate depth of coverage of the molecule or process
• Appropriate depth of coverage on the impact on society and student’s interest
• Ease of reading, including grammar, spelling, and logical flow of the material
• Appropriate use of scholarly references & formatting

The essay should be submitted electronically to bertuccm@lafayette.edu by the student before the exam begins on April 30th. The essay can be submitted at any time before the day of the exam; so, you are encouraged to get started early!

Letter of Recommendation: Professors writing a letter of recommendation on behalf of a student who is applying for the Lehigh Valley ACS Scholarship should speak to the student’s skills in lecture and laboratory in Organic Chemistry I and Organic Chemistry II. Please provide the course grade for Organic Chemistry I and comment on performance on written exams, proficiency in organic lab, and participation in course-related activities. If possible, address the student’s quantitative skills by commenting on her or his performance in quantitative analysis or its local equivalent. The letter of recommendation must be signed on institution letterhead and submitted electronically to bertuccm@lafayette.edu by the student’s professor before the exam begins on April 30th.
Dear Principle or Science Coordinator

The Lehigh Valley Section of the American Chemical Society (LVACS) is delighted to announce the 2022 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 award and a certificate of recognition. We hope that you will Identify an outstanding teacher at your school and support them for the award. Additionally, we hope you will share this with your faculty so that they might identify colleagues deserving of the award. The application should be completed and submitted by **APRIL 1, 2022** to LVACSTOTY@gmail.com as an attachment.

We appreciate your help and thank you for publicizing the 2022 Excellence in Teaching award. We look forward to many worthy applications. Please contact me by phone or e-mail if you have any questions.

Sincerely,

John Freeman
Chair, LVACS Excellence in teaching award Committee
LVACSTOTY@gmail.com
610 923-3587
THE LEHIGH VALLEY SECTION AWARD FOR EXCELLENCE IN HIGH SCHOOL TEACHING
AWARD PROGRAM FOR 2022

Purpose: To recognize, encourage, and stimulate outstanding teachers of high school chemistry in the Lehigh Valley Section of the American Chemical Society.

Nature: The Section Award consists of a cash award and a certificate. A meal at the meeting of the Lehigh Valley section of the ACS at which the award will be presented will be paid. A certificate will also be provided to the recipient’s institution for display. The Winner's Application will be forwarded to the Mid Atlantic Regional ACS Division of Chemical Education Award for Excellence in High School Teaching for the following year.

Who May Nominate? Any individual, except a member of the award selection committee or currently enrolled student of the nominee, may submit one nomination or support form in any given year. Prior winners are members of the award selection committee for 10 years post their award.

Who is Eligible? The nominee must be actively engaged in the teaching of chemistry or a chemical science in a high school (grades 9-12) on at least a half-time basis in Berks, Schuylkill, Carbon, Lehigh, Northampton or Monroe counties in PA or in Warren County, NJ. The nomination should clearly demonstrate as many of the following attributes as possible:

- The quality of the nominee’s teaching; unusually effective methods of presentation should be emphasized;
- The nominee’s ability to challenge and inspire students;
- Extracurricular work in chemistry or a chemical science by the nominee, including science fairs, science clubs, and activities that stimulate the interest of young people in chemistry and related sciences;
- A willingness to keep up-to-date in the field, as evidenced by the pursuit of a higher degree in chemistry or a chemical science, enrollment in refresher courses and summer institutes, regular attendance at scientific meetings, membership in professional organizations, and other means of self-improvement;
- Evidence of leadership and/or active involvement within the profession.;
**Required components of Nomination Portfolio:**

- The Awards Committee will consider only **complete** nomination portfolios.
- A complete portfolio shall consist of
  - A Nomination Portfolio Check List (see Page 3), which shall serve as the Portfolio Cover Sheet;
  - Nominator Information Form (see page 5);
  - Nominee Information Form (see page 6);
  - Nominator Recommendation of not more than 750 words submitted by the nominator according to the guidelines outlined on the Recommendation Form (see page 7);
  - A current 2 page curriculum vitae or resume that includes a list of the nominee’s honors, professional activities, and additional evidence of service to the profession; **NOTE: Limited to no more than two pages and the activities listed must have occurred within the past five years.**
  - A statement by the nominee of not more than 500 words that describes the nominee’s teaching philosophy or commitment to the profession;
  - At least one, but not more than three, letters of support. One letter, of no more than 400 words, must be from the teacher’s current principal or supervisor. Additional letters of support, of no more than 400 words, may be sent by colleagues, members of the American Chemical Society, who are familiar with the nominee’s achievements, or former students and parents of former students.
  - **NOTE: Some commentary on student reaction to the work of the nominee in either the nominating letter or that of the current principal or supervisor is essential for a well-rounded portfolio.**

Submit nominations to **John Freeman** by e-mail attachment to **LVACSTOTY@gmail.com** by April 1st 2020

***Please state award title in subject line, and the candidates name ***
The following items are required components for a Nomination Portfolio. Please check each item contained in the portfolio. This list, submitted by the nominator, will serve as the cover to every submitted portfolio.

☐ Nominator Information Form;

☐ Nominee Information Form;

☐ Nominator Recommendation Letter of no more than 750 words send as email by Nominator with nominees name in subject line.

☐ Nominee’s Statement on Teaching Philosophy of no more than 500 words;

☐ Nominee’s Current CV:
A curriculum vitae or resume that includes a list of the nominee’s honors, professional activities, and additional evidence of service to the profession. This must be limited to no more than two pages and the activities listed must have occurred within the past five years.

☐ Letters of Support (no more than 400 words) sent separately as email by principal with nominee’s name in subject line:
  *One must* be from the teacher’s current principal or supervisor.
  *Up to two* additional letters of support may be sent by colleagues, members of the American Chemical Society who are familiar with the nominee’s achievements, or former students and parents of former students.

Nominator’s
Name:_______________________________________ Date:_______________
NOMINATION FORM
THE ACS LEHIGH VALLEY LOCAL SECTION AWARD
FOR EXCELLENCE IN HIGH SCHOOL TEACHING

Deadline: APRIL 1, 2022
Any individual, except a member of the award selection committee or current students of the nominee, may nominate or support only one nominee during any given award year. Submit to JOHN FREEMAN via e-mail at LVACSTOTY@gmail.com by April 1 2022. Please state award title in the subject line.

The award will be announced at the May Meeting of the Lehigh Valley Section of the American Chemical Society.
Dinner will be arranged

NOMINATOR INFORMATION

Name:  
Company or Institutional Affiliation:  
Present Position (Exact Title):  
Address:  
City:  
State and Zip:  
Telephone:  
Fax:  
e-mail:  
Relationship to Nominee
### NOMINATION FORM

**THE ACS LEHIGH VALLEY SECTION AWARD**  
**FOR EXCELLENCE IN HIGH SCHOOL TEACHING**

**Deadline:** *April 1, 2022*

### NOMINEE INFORMATION

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<thead>
<tr>
<th>Name:</th>
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<tbody>
<tr>
<td>Present Position (Exact Title):</td>
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<td>Website: if appropriate</td>
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Give your current teaching assignment including course titles and grade levels. What is your involvement in extracurricular activities

- On a separate sheet, provide a statement of not more than 500 words in which you present your teaching philosophy or otherwise describe your commitment to the profession.
NOMINATION FORM

THE ACS LEHIGH VALLEY SECTION AWARD
FOR EXCELLENCE IN HIGH SCHOOL TEACHING

Deadline: APRIL 1, 2022

RECOMMENDATION STATEMENT OF NOMINATOR
Submit a narrative statement of no more than 750 words that describes and comments upon the following:

- The quality of the nominee’s teaching. Unusually effective methods of presentation should be emphasized;
  - NOTE: Some commentary on student reaction to the work of the nominee in either the nominating letter or that of the current principal or supervisor is essential for a well-rounded portfolio.
- The nominee’s ability to challenge and inspire students;
- Extracurricular work in chemistry or a chemical science by the nominee, including science fairs, science clubs, and activities that stimulate the interest of young people in chemistry and related sciences;
- A willingness to keep up-to-date in the field, as evidenced by the pursuit of a higher degree in chemistry or a chemical science, enrollment in refresher courses and summer institutes, regular attendance at scientific meetings, membership in professional organizations, and other means of self-improvement;
- Evidence of leadership and/or active involvement within the profession.
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) to be held in mid-April 2022. The event will feature dinner followed by a keynote speaker and the award recognition program. 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. Seconding letters are not essential but as many as three may be included with each nomination. Letters may include careful evaluations of the teacher's abilities by their superiors, associates, or by local section members. Please contact Lorena Tribe at lut1@psu.edu for any questions pertaining to the nomination for this award.

The deadline for reception of your emailed application is April 1, 2022.