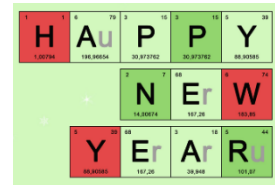
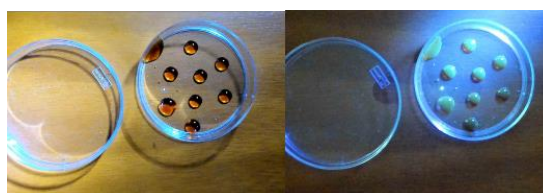


THE OCTAGON

HAPPY NEW YEAR, 2022 !



LVACS AND AACT CELEBRATE OUR HIGH SCHOOL TEACHERS THURSDAY, JANUARY 27th



Our next section meeting, Thursday, January 27th, is High School Teachers Night. This virtual event will begin online at 7:00 pm! There will be a program consisting of speakers, laboratory demonstrations and educational exhibits focusing on High School teaching needs.

Lehigh Valley ACS and the American Association of Chemistry Teachers (AACT) invite 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 also want to cover are Science Coaches, Chemagination, Foundation in Chemistry Award, HS Teacher of the Year, Science Fairs, NCW/CCEW, After-School Chemistry Partnership Program, Chemistry Olympiad and SEED.

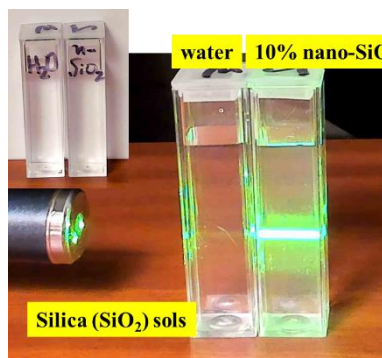
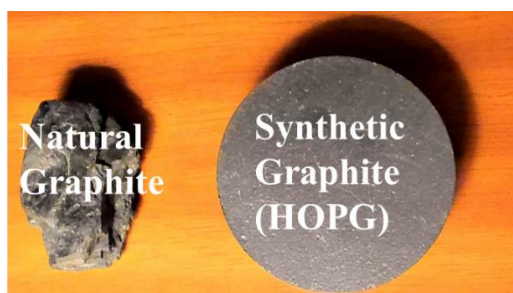
--- First 5 teachers to log on receive an AACT gift membership (\$50/yr) !!!

Demonstrations:

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

Zoom [link](#) Meeting ID: 852 4599 2952; Password: 461035

CONTACT: Lindsey Welch, lawelch@cedarcrest.edu



LVACS Events Calendar

January 2022

January Meeting (Virtual Format)
“High School Teachers Night”
Presentations/demonstrations/exhibits
Thursday, January 27th / 7:00 pm
Zoom [link](#) Meeting ID: 852 4599 2952; Password: 461035
CONTACT: Lindsey Welch, lawelch@cedarcrest.edu

February 2022

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

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



April 2022

April Meeting (Hybrid Format)
Undergraduate Poster Night
Date/Time/Format TBA

May 2022

TBA

CONTACT: Nigel Sanders, LVACS secretary and newsletter editor, nigel53.sanders@gmail.com

Also In This Issue...

3-4. LVACS Welcomes Mussel
Polymers, Inc. to Lehigh Valley

5-6. LVACS Elections 2021: Your
2022 Section Officers Announced!

7. November Virtual Meeting
Report.

8. LVACS Career Page.

9. Senior Chemists Page.

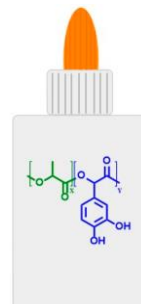
10. 2022 LVACS Organic Chemistry
Scholarship Competition
Announced.

11. ACS Spring Meeting Registration
Opens January 17th.

12. Green Chemistry Summer
School and Intercollegiate Student
Chemists Convention April 2nd.

13. 2022 Chemistry Olympiad
updates and Project SEED plans.

14. 2022 Executive Committee.



STRONG UNDERWATER BONDING

LVACS Welcomes New Adhesives Company to the Lehigh Valley Area

Over the holidays, The Octagon visited a start-up company which recently moved into the Ben Franklin TechVentures incubator. Mussel Polymers, Inc. or MPI is an adhesive and related systems company developing the world's most effective adhesives for wet, high moisture, and low-energy surfaces. MPI's solutions are based on Poly Catechol Styrene (PCS), a proprietary synthetic polymer that mimics the structure of the natural adhesive used by mussels to anchor themselves to substrates in the ocean. Here's what we learned about MPI and its unique adhesive chemistry, featured in our National Chemistry Week 2020 exhibit: "[Sticking with Chemistry.](#)"

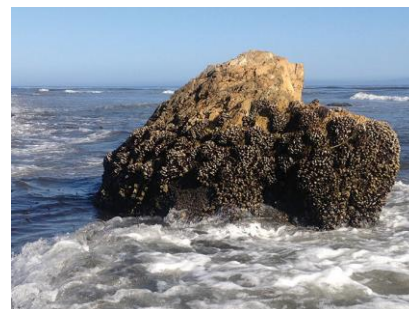
Octagon: How did your company get started?

MPI: Mussel Polymers Inc. (<https://www.musselpolymers.com>) was launched in 2019 to develop wet substrate adhesive technology from Purdue University discovered and patented by Prof. Jonathan [Wilker](#) of Purdue's chemistry and materials engineering department. The company is currently funded through a Private Placement Memorandum and grants from SBIR and the US Navy. Our mission is to develop and bring to market superior cost-effective, environmentally sound adhesives for challenging problems.

Octagon: What's your technology and what makes it special?

MPI: Prof. Wilker has been studying adhesion chemistry and material systems inspired by the mussel for almost 20 years. The realization that the catechol moieties found in DOPA protein residues had a major role in the remarkable way that mussels form strong attachments under salt water led to a whole new approach to synthesizing and formulating adhesives and adhesive primers. While replicating the mussel's exact protein-based excretion and cross-linking process ([C&EN](#) October 18 2021 and references therein) is not likely feasible for commercial adhesive use, the basic functional elements can be mimicked by fairly simple copolymer synthesis exemplified by MPI's PCS (PolyCatechol Styrene) materials. Adhesive strength testing of PCS in both dry and wet applications shows promising results (2x-5x improvements) and is currently being used to assess the value of various formulations in specific applications in our labs here at Ben Franklin TechVentures (BFTV). There's never been a glue that works underwater. It's been 60 years since there's been a new class of adhesives - the last one was cyanoacrylate (Super Glue).

[ARTICLE CONTINUES NEXT PAGE]



LVACS Welcomes New Adhesives Company to the Lehigh Valley Area [CONTINUED]

Octagon: What are the applications that you see emerging for your technology/products?

MPI: There are many, but some examples we are working on right now are coral reef remediation (funded by a NOAA SBIR grant), several naval applications and dental procedures that currently employ acrylic-based cements. We have labs here at BFTV that perform synthesis of polymers, formulation of adhesive materials, underwater applications and physical bond testing of specimens. The application conditions are worked out carefully with the interested partners/customers to represent the best laboratory-scale evaluation of our technology in the intended use. The first product Mussel Polymers will be bringing to market is an adhesive designed to work with corals. It can be used by aquarium enthusiasts, but it can also be used for larger-scale reef repair. They should also be soon completing a product for the U.S. Navy, which had funded the early research. Currently the company is developing a dental cement which they hope to have to market next year, but it first needs approval from the Food & Drug Administration.

Octagon: What are the biggest technical challenges?

MPI: Optimizing an adhesive or adhesive primer formulation to wet and spread on the target surface is always a challenge for any 'glue' application! Controlling surface roughness and energy is tough even in the lab. If you're bonding surfaces underwater there are a whole raft of additional challenges: simply delivering the adhesive to the target surface requires new formulation developments.

Octagon: How has it been getting started at BFTV and how do you see your future there? I see you just won their Venture Idol Award for best startup pitch - Congratulations!

MPI: Thank you! It's worked very well. We were scheduled to open our facilities in February 2020 but the pandemic intervened to push that timeline back to the summer of 2020, so we have been working for just over a year. The resources here are very good; we have 5 spaces in all - 3 labs and 2 office areas. As COVID-19 has eased, we've been able to take advantage of the unique opportunities to network with fellow entrepreneurs and innovators. We also have reached out to other local technical talent such as polymer and materials groups at Lehigh University. We hope to engage more chemists and engineers in the Lehigh Valley area as we ramp up our activities over the next 3-5 years.



Future Glues: Chemistry Mimicking Nature?

Unlike early humans' adhesives, however, new solutions probably won't involve using animal and plant products but will mimic them. For example, researchers at Purdue University created a **bio-mimetic** (copying nature) synthetic polymer after examining mussels' protein-based adhesives. Mussels use tiny hair-like fibers covered in an adhesive to attach to surfaces. The mussel's glue contains the amino acid dihydroxyphenylalanine (DOPA), which gives it a unique adhesive strength. DOPA contains a reactive functional group known as a catechol, which consists of two hydroxyl groups sticking out from a benzene ring. The catechol group interacts with surfaces, such as rocks, through intermolecular forces including hydrogen bonding. By combining the chemistry of mussel proteins and DOPA into a new polymer, the Purdue researchers created a strong underwater adhesive.

Carl E. Heltzel, ChemMatters, October 2020, p. 15

https://www.youtube.com/watch?v=2l2p46XMMuk&feature=emb_logo

LEHIGH VALLEY ACS ELECTIONS 2021

NEWLY ELECTED 2022 LVACS OFFICERS ANNOUNCED

CHAIR-ELECT. *Dr. Steven M. Boyer* is an assistant professor at East Stroudsburg University with research interests in synthesis of metal-organic frameworks for the mediation of organic pollutants and renewable energy. He earned his B.S. from Elizabethtown College and Ph.D. from Binghamton University where he was active in outreach and the local ACS. He has been involved with coordinating events such as the Go Green Institute Science Summer Camp, the Regional Science Olympiad, the 2016 ACS Northeast Regional Meeting, and various outreach events at elementary schools and in the community. After graduation, he was a visiting professor at Ashland University in Ohio where he served as the Wooster Local Section's secretary and Chemistry Olympiad coordinator. While new to the LVACS, he hopes his prior experiences can help foster an engaging local section.

SECRETARY. A retired industrial chemist and Chair of the Lehigh Valley Section in 2011, *Nigel Sanders* currently serves as secretary of the section and chairs the Strategic Planning Committee. Through his leadership, LVACS developed its first 5-year Strategic Plan in 2012 and LVACS received its first ACS ChemLuminary award. Nigel led development of a partnership with Da Vinci Science Center in Allentown which won the "Partners for Progress and Prosperity Award" at MARM in 2019, Da Vinci's Grand Maestro Award honoring a partner organization in 2020 and a \$2000 ACS Innovative Program Grant for Da Vinci's Idea Lab in Fall 2019. Most recently, Nigel organized a special Mole Day 2021 celebration at Da Vinci which drew 100 kids and their parents. If re-elected, Nigel plans to continue the work of section secretary in a challenging era of changing member communication needs. A key activity in 2022 will be the next 5-year strategic plan, now scheduled for mid-June, which will address effectiveness of the website, lvacs.org, our 104-year-old newsletter, The Octagon, and our social media channels. Improved use of media tools will be needed to advance both member engagement and public outreach partnership initiatives in the post-pandemic future.

TREASURER. *Dr. Lorena Tribe* is a Professor of Chemistry at Penn State Berks, Reading, PA, where she joined the faculty in 2002. She earned both her undergraduate degree in Physical Chemistry and her PhD in Theoretical Chemistry at the University of Buenos Aires, in Argentina. Her area of expertise is in Computational Chemistry focusing on the interaction of atoms and molecules with surfaces; applications of these atomistic level studies include environmental issues such as fate of herbicides, alternative energy production, and carbon sequestration. Dr. Tribe is a Fellow of the ACS and has been a member since 2001, attending regional and national meetings, organizing symposia, and presenting more than 80 poster and oral presentations, many of them in collaboration with her undergraduate research students. She has served LVACS previously as International Year of Chemistry Coordinator (2011), as Chair (2012), as Chair of the Awards Committee (2014-2015), and Councilor (2015-2017), and Alternate Councilor (2017-2020). She also serves the ACS Division of Colloid and Surface Chemistry first as Secretary (2014-2016) and as Chair in 2019. Dr. Tribe has organized local conferences (MADCP, MoleCVUE) and most recently MARM2017 at Hershey, PA, a team effort between the Lehigh Valley and the Susquehanna Valley Local Sections. Through her work coordinating the LVACS Volunteer of the Month awards program she has developed a huge appreciation for the human potential of the LVACS membership. On the Local Sections Activities Committee, she developed the MEET (Mutual Exchange of Expertise and Technology) program, which has been carried out in several local sections throughout the country engaging students and senior chemists. Most recently, Tribe joined the ACS Women Chemists Committee.

NEWLY ELECTED 2022 LVACS OFFICERS ANNOUNCED (CONTINUED)

ACS COUNCILOR. *Jeanne Berk* has been a member of the American Chemical Society since 1993 and has been active in the Lehigh Valley Section for over 20 years. She joined Cedar Crest College in 2009, and is an Associate Professor in the Chemical & Physical sciences Department teaching Organic Chemistry; previously she worked at Lehigh University. Jeanne has organized several section meetings at Cedar Crest College, run LVACS tables at local outreach programs and has been organized several of the May Social meeting over the past few years. She has served the LVACS section as the Chair of the Awards Committee, alternate Councilor, Chair, and Past-Chair. Currently she holds one of the two councilor positions for the section. In that role she is also serving on the Local Activities Section National Committee, and is the vice-chair for the Communication subcommittee. She is very active in chemistry academic outreach programs having work for several summers at Lehigh as part of the STAR Program which enhances science, technology, engineering, and mathematics in K-12 schools and the Greater Allentown Math and Science Program which works with local middle school science teachers. Currently she is advisor for the Chemistry Club at Cedar Crest College, and actively works with the DaVinci Science Center, and is part of their Meet the Scientist program.

ALTERNATE COUNCILOR. *Ned Corcoran* received a Ph.D. in Inorganic Chemistry from the University of Pennsylvania in 1985, and joined Exxon's Corporate Research Labs later that same year. During his time in the corporate research labs, he has initiated, worked, and/or led, a variety of programs to discover and develop materials for a range of separations and catalysis applications. One of these efforts resulted in a commercial application of pressure swing adsorption for hydrogen recovery from refinery gases; a second is being commercialized this year for natural gas processing. Ned has also spent more than 10 years in several managerial roles, most notably as a Section Head over Separations Science, working to define and develop this new section into a world-class effort in the area of gas separations, and another over Active Materials. In 2014, he returned to the technical ranks, being named a Senior Scientific Advisor for ExxonMobil corporate labs, and a member of the Senior Technical Council. He is currently ExxonMobil's scientific portfolio advisor for the MIT energy center, and a visiting scientist at MIT. He also is the program lead over the CCUS fundamentals project portfolio, focused on a variety of new approaches to carbon capture. Ned currently holds more than 50 issued US patents in materials and separations processes, and more than 25 external publications. In 2009, he received the Thomas Alva Edison Patent Award for a key patent behind the above-mentioned hydrogen recovery commercialization. He is a long-standing member of the ExxonMobil Congressional Contact Committee, serving in this capacity for more than 10 years. Ned has also developed and stewarded a large number of external collaborations with academics in the US, Europe, and Asia Pacific in both materials and separations, and has chaired numerous internal and external workshops, symposia, and conferences. He is also an officer for the Northeast Corridor Zeolite Association.

Lehigh Valley ACS welcomes our new officers and Executive Committee members! See the final page of this issue for the full listing of EC members.

The Chair-elect, Secretary and Treasurer are officers of the Section and members of the Executive Committee, the Governing body of the Section. Together with the Chair, the Immediate Past Chair, the ACS Councilors/Alternate Councilors and up to 2 at-large members appointed by the Chair each year, the EC conducts, manages, and directs the business and affairs of the Section in accordance with the Constitution and Bylaws of ACS and the Section. All members in good standing are eligible to serve in these positions with the exception that Student Members may not serve as treasurer or ACS Councilor/Alternate.

NOVEMBER 2021 SECTION MEETING (VIRTUAL FORMAT) REPORT



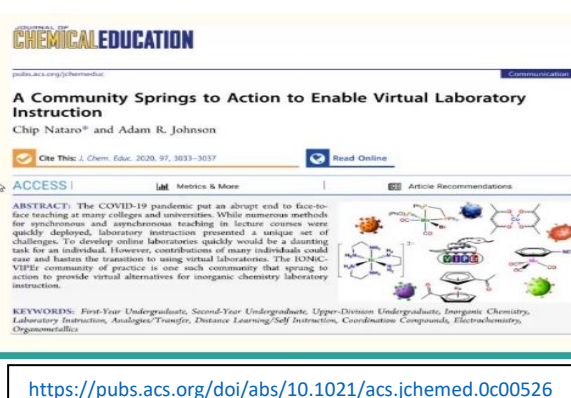
32.06 16 999.6 2.58 S Sulfur [Ne] 3s ² 3p ⁴	6.94 3 520.2 0.98 Li Lithium 1s ² 2s ¹	232.04 90 587.0 1.30 Th Thorium [Rn] 6d ² 7s ²	167.25 68 589.3 1.24 Er Erbium [Xe] 4f ¹² 6s ²
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“SLiThEr - Supporting Learning with Interactive Teaching: a Hosted, Engaging Roundtable”

On Thursday, November 18th, Chip Nataro of Lafayette College described a pandemic-stimulated seminar series sponsored by the Interactive Online Network of Inorganic Chemists (IONiC) to encourage continuing engagement of the community around interactive teaching/learning methodologies.

The recording of the virtual meeting is available on YouTube https://youtu.be/i_tWWP7zOGk

IONiC is a community of transformation dedicated to improving the teaching and learning of inorganic chemistry. When the pandemic reached the US, the community responded in a variety of ways to help each other make the adjustments we all faced in our classes. From how to Zoom to developing remote laboratory experiences, IONiC helped countless members get through the spring semester of 2020 offering students the best experience possible given the circumstances. As the summer continued and the shutdowns remained, the leadership of IONiC sought out new ways to keep the community engaged. This was the origin of what has become a biweekly series of presentations/discussions on any topic that might be of interest to the community. The first step was creating a name for this series. The chosen name was Supporting Learning with Interactive Teaching: A Hosted, Engaging Roundtable or SLiThEr, keeping with our snake motif and being able to spell things out with element symbols. Once that was decided upon, the format for the first SLiThEr was developed. These would be 20-30 presentations with time for Q&A after. We would have people sign up to prevent Zoom-bombing and we would record these to post on our YouTube channel. The first SLiThEr happened on July 7th, 2020. It was by Kyle Grice at DePaul and focused on materials he created having to move his inorganic lab online. Since that time, we have hosted 26 additional SLiThErs with topics including alternative assessment, mental health, flipping the classroom, scaffolding oral exams and searching for a job at a PUI. The leadership of ‘Team SLiThEr’ now consists of 6 people, half of which are members of the IONiC leadership team. This presentation covers background on the IONiC community, the development of the SLiThEr series and will provide a sneak peek into some of the interesting things we have learned along the way.



LEHIGH VALLEY ACS CAREER PAGE

Career Guidance

ACS Career Navigator

Professional Education
Short Courses
On Demand
Online Courses
Sci-Mind™

Leadership Development
Online Courses
Facilitated Courses



Careers Services
Career Consulting
Career Fairs
Virtual Career Fairs
Career Pathways

Market Intelligence
Employment Dashboard
Salary Comparator
Employment Reports
Ethics & Professional Guidelines
Chemical Labor Market Tracking

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

LVACS SENIOR CHEMISTS' COMMITTEE PAGE

Fiestaware Fiasco

by Allen A. Denio;

[published in ACS Senior Chemists Newsletter, November 19, 2021]

Allen Denio earned his first two chemistry degrees at what is now the University of Massachusetts-Lowell. He completed his PhD in Physical Chemistry at the University of New Hampshire. His industrial experience was obtained at Dow Chemical in Midland, Michigan and at Dupont in Wilmington, Delaware. In 1964, he joined the faculty at the University of Wisconsin-Eau Claire (UW-EC).



My interest in pottery goes back many years.

Thus, at UW-EC I soon introduced myself to Prof. Richard Joslin who taught ceramic courses in the Art Department. He was a very talented potter and soon we were talking about the chemistry of ceramic glazes. He provided a tour of the facility, and I noticed a glass jar with a label that said uranium oxide! That was quite a shock. Joslin explained that it was used in glazes to obtain certain colors in the yellow to orange spectrum. I reminded him of its radioactivity due to uranium and proposed that we place it in the remote storage area of our Chemistry Department. Luckily, he agreed! It is probably still there.

At some point, I read about a brand of everyday china called Fiestaware, produced by the Homer Laughlin China Co. of Newell, West Virginia. It was produced in a range of colors and was quite popular. In 1936, the company started producing an impressive orange colored glaze using uranium oxide. What were they thinking? Obviously, not about radioactive decay. In 1943, all uranium sources were taken over by the military. The atomic bomb project had priority over dinnerware. In 1959, the company restarted making this glaze, but with “depleted” uranium which did not contain much of the U-235 isotope. This continued for about ten years. In 1969, the company introduced a new color called “Ironstone,” still using depleted uranium. This ended in 1973. At that point, the hazard of the radioactive glaze ended production.

The U-238 isotope is quite stable with a half-life of 4.5 billion years, emitting alpha particles. The resulting decay product is thorium, (Th-234). This decays more rapidly ($t_{1/2} = 24.1$ days) with the emission of beta particles and gamma rays. The product is Pa-234 which also emits beta particles and gamma rays, ($t_{1/2} = 1.17$ minutes). The decay process ends eventually with the formation of lead (Pb-206). Thus, Fiestaware glazes containing uranium are indeed hazardous to your health.

I purchased an orange saucer of Fiestaware in an antique store in Eau Claire. I used it in General Chemistry classes when discussing radioactivity. The Geiger Counter clearly pointed out the danger. After one class, a student mentioned that his grandmother had a complete set of this color of Fiestaware in her dining room! I suggested that he share this information with her. I hope it went to a remote storage area. It is interesting that the production of the “Ironstone” glaze ended in 1973. I suspect this is related to the formation of the Consumer Product Safety Commission by Congress on October 24, 1972.

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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.



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 (https://www.lafayette.edu/visit/wp-content/uploads/sites/3/2020/01/Campus_Map.pdf). 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**



Bonding Through Chemistry: ACS Spring 2022



Mark your calendars: registration for [ACS Spring 2022](#) opened January 17! The theme, "Bonding Through Chemistry," will be at the core of programming for the hybrid event taking place March 20-24, 2022, virtually and in San Diego, CA. Explore the [Schedule-at-a-Glance](#) to review the overall meeting schedule, including hybrid, in-person, and live virtual sessions along with keynote events, expo hours, and poster events.

[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.

ACS Spring 2022 will be a vaccination-required event for all attendees, exhibitors, vendors, and ACS staff who plan to participate at the meeting in-person. For detailed information about the requirement and all other ACS safety measures, please visit the [ACS website](#). 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

The Venue

[San Diego Convention Center](#) (SDCC)
111 W Harbor Drive, San Diego, CA 92101

The San Diego Convention Center is located along the waterfront in the heart of San Diego and close to beaches, museums, parks, nightlife and much more.



Summer School on Green Chemistry and Sustainable Energy



ACS SUMMER SCHOOL ON
GREEN CHEMISTRY &
SUSTAINABLE ENERGY

Apply now for the [ACS Summer School on Green Chemistry and Sustainable Energy!](#) The 2022 program is being planned as an in-person event at the Colorado School of Mines in **Golden, CO, July 15-22, 2022**. However, the final format of the program will be determined by COVID-19 conditions leading up to the Summer School.

Applications are being accepted through Friday, January 21. The Summer School is open to graduate students and postdoctoral scholars who are studying in the U.S., Canada, and Latin America. The program will feature interactive lectures by experts in green chemistry and sustainable energy, poster presentations, collaborative projects, and discussions on the role of science and technology in addressing global sustainability challenges. Financial support of the Summer School is generously provided by the ACS Petroleum Research Fund. [Learn more and apply today >>>](#)

Intercollegiate Student Chemists Convention (ISCC)

When: Saturday, April 2, 2022, from 8:30 AM to ~1:30 PM

Where: Virtual (Hosted by Franklin & Marshall College)

Who: Undergraduate students who want to share their research through a 12-minute presentation followed by several minutes for questions from other attendees and judges.

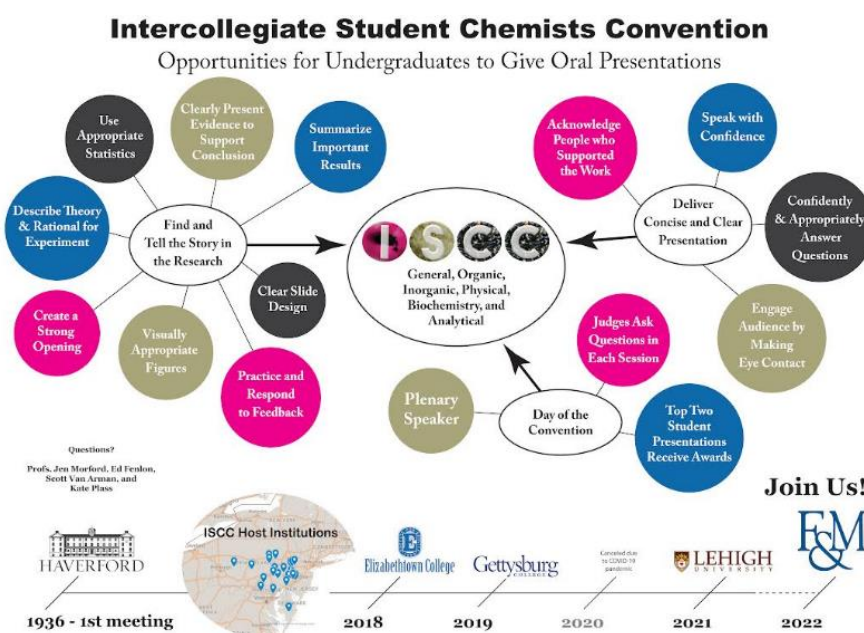
Why: The ISCC is a unique opportunity for undergraduates to orally present their research in judged sessions. Prizes will be awarded to the top two students in each division.

All attendees are invited to join us for a presentation by our plenary speaker, [Dr. Luisa Whittaker-Brooks](#), an Inorganic/Materials Chemist from the University of Utah.

Please join us for this annual tradition to recognize, reward, and celebrate meaningful undergraduate research in the chemical sciences.

More details can be found on the [F&M ISCC2022 website](#).

Questions?
contact us at ISCC2022@fandm.edu.

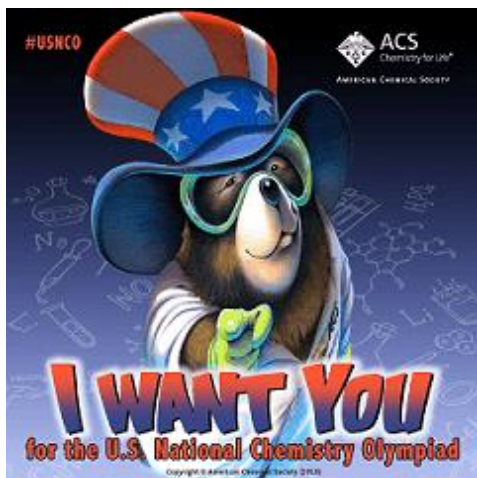




Jeremy Heyman of Steppingstone Scholars in Philadelphia continues to coordinate the Lehigh Valley ACS SEED program. ACS is planning for a full return to in-person SEED projects for summer 2022 but will also continue to approve 20+ virtual projects across the US for the benefit of SEED students who do not live near a SEED site or can't travel to a site. So far projects for 3 students have been identified at two area schools (PSU/Berks and Lafayette) this year. Students will be working for 8 weeks, ~30-35 hours/wk.

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?

If you have questions about SEED, contact Jeremy at jbheyman@gmail.com.



The date for the 2022 High School **Chemistry Olympiad** Lehigh Valley exam has been set for Saturday, March 19th beginning at 1:00 pm. It will be online at the ACS website and Gail Marsella, LVACS Olympiad Coordinator, will be proctoring via Zoom. **The deadline for teachers to provide student names is February 1st.** Gail can provide access to the Teacher Resource folder to enter students in the participant spreadsheet and get other documents. It would be great if we had more high schools participate - we're allowed ten students for the next tier (national exam), but we can only take 2 from each high school. *Teachers must recommend promising students** (they cannot apply on their own).* There is no charge to participate. Students must be younger than 20 years of age as of July 1, 2022 and must graduate high school no earlier than May 1, 2022. Gail will be assisted by graduate student mentor Aarshi Singh, Chemistry PhD candidate at Lehigh University.

All students will be recognized and presented with a certificate and approximately 150 top scoring students receive recognition for outstanding performance at the national level. We hope this recognition will serve to stimulate interest and promote a positive attitude toward chemistry.

The full ACS Olympiad website may be found here:

<https://www.acs.org/content/acs/en/education/students/highschool/olympiad.html>. If you know teachers who wish to recommend students or may not be aware of the Olympiad, please share this information and have them contact Gail to recruit/sign-up students. **DACA students may take the local section exam and will get a certificate, but only citizens and green card holders may sit for the national exam.

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