LVACS Mourns the Passing of Dr. Ned D. Heindel on June 27th, 2023, at age 85. See pages 11-12.

Put it on Your Calendar!
Lehigh Valley IRONPigs
Wednesday, August 30th (5:30 gates open; 6:45 game time) in the ‘Pig’Nic Patio

LVACS ‘takes you out to the ballgame…’

‘Get the Pb Out’ with Ferrous and FeFe!!

We’re in the ‘Pig’Nic Patio: all-you-care-to-eat buffet and unlimited soda
Special Price Tickets: $15 ($5 parking not included)
Reserve your tickets NOW: [here](mailto:lawelch@cedarcrest.ecu)
CONTACT: Lindsey Welch, lawelch@cedarcrest.ecu

Remember: if you’re not there, ‘it’s a shame…’
LVACS Events Calendar

**Summer 2023**

**LVACS Takes You Out to the Ball Game!**
Wednesday, August 30th, (5:30 gates open; 6:45 gametime)
'Pig'Nic Patio: all-you-care-to-eat buffet and unlimited soda
Special Price Tickets: $15 ($5 parking not included)
Reserve your tickets NOW: [here](#)
*Remember: if you’re not there, ‘it’s a shame…’*
CONTACT: Lindsey Welch ([lawelch@cedarcrest.edu](mailto:lawelch@cedarcrest.edu))

*Keep an eye out for more summer events on [www.lvacs.org](http://www.lvacs.org)*

**September 2023**

**Section Meeting**
Thursday, September 14th, 4-9 pm
Evonik Corporation, Trexlersville, PA
Presentations and Facility Tour
More details to come: keep watching [www.lvacs.org](http://www.lvacs.org)
CONTACT: Philip Elias ([philipjelias@gmail.com](mailto:philipjelias@gmail.com))

**October 2023**

**National Chemistry Week**
October 15–21, 2023
Topic: Health & Medicine
Theme: The Healing Power of Chemistry

Outreach Events are being developed - tell us your ideas and how you would like to participate as an ACS Volunteer! CONTACT: Philip Elias ([philipjelias@gmail.com](mailto:philipjelias@gmail.com))

******************************************************************************************
**LVACS has a new NCW Coordinator! Philip Elias, our present Chair-elect of the section, has agreed to take on this role. We thank Dr. Lindsey Welch, our past chair and professor at Cedar Crest College for guiding our NCW and CCEW outreach for many years!**

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Octagon CONTACT: Nigel Sanders, LVACS secretary and newsletter editor, [nigel53.sanders@gmail.com](mailto:nigel53.sanders@gmail.com)
Monday, May 8th was a very special day for science in Monroe County as Mount Pocono elementary students were invited to attend the Inaugural Night of Science at Pocono Mountain West High School, hosted by WHS’s Science National Honor Society. In addition to demonstration tables run by the Honor Society students, several guest groups brought in exhibits and experiments including Lehigh Valley ACS volunteers and East Stroudsburg University’s Chem Club. ESU’s Steve Boyer, Oliver Paszkowski, Carolyn Knowlton, Lennox Lewis and Chris Kloppenburg presented the ever-popular make-your-own slime/bouncy balls; iodine clock reaction; shaving cream/dye swirls and CO₂ color change while LVACS’ Nigel Sanders and Philip Elias demonstrated alginate water pods (popping bobas). Amazing Algae (aka seaweed) also made an appearance in honor of Chemists Celebrate Earth Week. The kids (about 100) had a great time and so did we!
POCONO MOUNTAIN WEST HIGH SCHOOL “NIGHT OF SCIENCE”
Southern Lehigh MS MAY 30th STEAM Expo

Southern Lehigh Middle School held a STEAM Expo Tuesday, May 30th from 6-8 pm to bring 25 organizations on the SoLeMS Center Valley campus to demonstrate STEAM in many ways. LVACS had 2 activities which amazed and delighted the students: Spartan Blue Bottle and Siphon Effect, expertly demonstrated, respectively, by Past Chair Lindsey Welch and Chair Elect Philip Elias. Lindsey reported that "We had a steady presence of students and parents at our table. Several parents asked about summer camps and what else we do for youth, so maybe we should talk about that at a future meeting?" No question, Lindsey, we're on it! Our thanks to SoLeMS parent Charu Chaturvedi and Principal Deanna Webb for inviting us to participate in their STEAM Expo.

Summer Shines Bright at Women Chemists Committee June Wine Social

Great time at Violet Vintage Wine Company in Bernville on June 29th thanks to Lorena Tribe and the LVACS Women Chemists Committee! Cultural Historian Dr. Michelle Mart of PSU/Berks and author of the recent book "Pesticides, A Love Story: America’s Enduring Embrace of Dangerous Chemicals," gave us a whole new perspective on the history of Ag chemicals while we sampled the fruits of the (hopefully safer) vines of 2023 Pennsylvania.
Tyler Roberts is our 2023 winner of the LVACS Organic Chemistry Scholarship Exam & $1000 prize! He is pursuing a double major in Biochemistry and Neuroscience at Lafayette College. Tyler explains why he loves Organic chemistry: “Organic chemistry fascinates me because it explains the chemical reactions constantly taking place within us. My favorite part about learning is trying to tie various concepts together to try to understand why things work the way they do. I also play football for Lafayette College as a tight end, and I have been playing football since 8th grade. It is certainly difficult to balance academics with athletics, but I enjoy the challenge. I find the physical demands of football to be a fun complement to the mental aspects of classroom studies. On top of that, I am planning on attending medical school after completing my undergraduate education. My sights are currently set on emergency medicine, and I also work as an EMT in Easton. I love the emergency aspects of medicine, and having to constantly think on your feet and be ready for anything.”

Sarah Beitel of Lafayette College has won the award for Best Essay ($100) entitled “The Wittig Reaction.” Sarah tells us that “I’ve loved science ever since I can remember, and I hope to pursue medicine to some extent. Outside of academics, I’m involved in a cappella & choir, alpha gamma delta, ultimate frisbee (the ‘Pards participated at the High Tide tournament in Myrtle Beach, South Carolina over Spring Break this year and, for the second year in a row, placed second in its bracket), and, of course, ACS.”
Excellence in High School Teaching Award 2023

The Lehigh Valley Section of the American Chemical Society is pleased to announce Dr. Audrey Smeltzer of Muhlenberg High School as the winner of the 2023 Excellence in High School Teaching Award. Dr. Smeltzer’s excellence extends well beyond the high school classroom as evidenced by her continuing research into educational pedagogy through a collaboration with Dr. Eshani Lee from Penn State Hazleton, and her completion of a Ph.D. degree in curriculum and instructional development from Mercer University of Macon GA. Additionally, Dr. Smeltzer teaches as an adjunct chemistry professor at Penn State/Berks. Over the last 5 years Dr. Smeltzer has presented papers at two conferences on Multiple Ways to Engage Students Virtually in Chemistry Labs. Outside of her classroom, Dr. Smeltzer has volunteered with the Pennsylvania Junior Academy of Science as a judge for many years and currently serves as the Judging chairperson for the region 3 event. She has also mentored students in multiple science fairs including the PA Invention Convention: the State level of the Pennsylvania academy of science. Dr. Smeltzer's students regularly participate in the LVACS local section Chemagination program and often they proceed to the Mid Atlantic regional competition.

At Muhlenberg high school she serves as chair of the science department and mentors both chemistry and physics pre-service teachers. In Dr. Smeltzer’s letters of recommendation she is commended for her ability to enable students to succeed at the rigorous level at which she teaches chemistry by teaching students how to organize their work - not just teaching the information involved. Students in Dr. Smeltzer's classes not only excel in the class but seek to do projects beyond the classroom. Students leaving Dr. Smeltzer’s classroom comment that they continued to receive mentoring as they pursued their careers in science, particularly those involved in the education process. One letter mentions that without her follow up mentorship post high school, she would not have succeeded in the classroom and given up on the teaching profession. Finally, one of her support letters mentions that Dr. Smeltzer inspires them to improve their commitment to education by her example and commitment to students. It is with great pleasure that we honor Dr. Audrey Smeltzer with the Lehigh Valley Section’s 2023 Award for excellence in High School Teaching.

LVACS thanks John Freeman (jcf2@rcn.com) and the Awards review committee for planning and supporting the annual competitions for HS Teaching Excellence, HS chemistry student scholarship and the Chemagination Competition. These awards recognize high school faculty and student achievement in thinking and writing about chemistry and allied fields. Interested in helping us with one of our annual awards for excellence in Chemistry? Just let us know!
Foundation in Chemistry Scholarship 2023

This year's Lehigh Valley ACS Foundation in Chemistry Scholarship award winner is Elizabeth Sterner, 2023 Salutatorian of Salisbury High School. Elizabeth's interest in chemistry started when, as a child, she started experimenting in the kitchen with recipes and wondering how they worked. She was elated in High School to find that Chemistry had recipes as well in the form of procedures and she saw that by changing the recipe you would change the results. Sterner plans to attend Lehigh University and continue to explore changing chemical recipes as a Chemical Engineering major. In her letter of support, her AP biology Teacher commented on her excellence in the classroom and her data collection and interpretation skills in her Pennsylvania Junior Academy of Science Projects. Additionally, she led Salisbury High School's Envirothon team for two years helping lead the team to participation at the state level in the 2022 competition. Elizabeth also participated in School athletics, in the school's music program and in several community volunteer activities. At Salisbury’s 2023 graduation ceremony, Sterner remarked, “No matter what you face in life, face it with your head held high. Remember, Salisbury, you are not defined by the cards you are dealt but how you play the game with the cards you are given.” We are pleased to Award her the Lehigh Valley Section of the ACS its 2023 Foundation in Chemistry Scholarship to aid in pursuit of a Chemical Career.

2023 Chemistry Olympiad was held at East Stroudsburg University

This year’s entrants from our local section were Harrison Vicic from Moravian Academy, Zachary Conzman from Wilson HS, Sooraj Tharumia from Parkland HS, Natasha Ding from Southern Lehigh HS, Claire Xie from Wilson Area HS and Gio Choi from Blair Academy. All of them took the National Exam on Sunday, April 23rd at East Stroudsburg University. For the first time since the COVID-19 pandemic, the laboratory section of the exam was included. The top scorer on the written exam was Sooraj Tharumia from Parkland HS. Much thanks to their chemistry teachers, Cole Wisdo of Moravian, Patricia Metz of Parkland, Beth Levan of Wilson, Rachel Saber of Southern Lehigh, Roger Stewart of Wilson Area and Dr. Michael Sayers of Blair for sponsoring and tutoring these students and to Gail Marsella and Steve Boyer for arranging the exam venue!
Chemagination at MARM 2023

The Lehigh Valley ACS Chemagination competition took place during April and May. The first-place teams in each category spent a day at St. John’s University in conjunction with MARM 2023 at the regional competition. For this competition, students must imagine that they are scientists living 25 years in the future and have made a discovery that has had a positive impact on people’s lives. They must write an article describing the science and present that article on a poster and in interviews with judges. The articles are in one of four categories: Alternative Energy, Environment, Medicine/Health or New Materials. This year a total of 21 teams competed, representing the Lehigh Valley section at the regional competition. Each team submits their article to be reviewed by two or three judges. First and Second Place winners were chosen in each category. Our warmest congratulations go to this year's winners:

**Alternative Energy Category**

**First Place**
“The Thorium: Saving nature and the world one rock at a time”
Jackson Smith and Reid Bagans
Mentor: Dr Audrey Smeltzer, Muhlenberg HS

**Second Place**
“Fueling the Future with Algae”
Taylor Devine Lillian Bruinsma and Quinn Wagner
Mentor: Dr Audrey Smeltzer, Muhlenberg HS

**Environment Category**

**First Place**
“Methane: Revolutionizing Protein”
David Markwood and Kendra Montalvo
Mentor: Dr Audrey Smeltzer, Muhlenberg HS

**Second Place**
The Artificial Tree
Aya Amin, Cadence Perez, Dana Gahuancelan
Mentor: Dr Audrey Smeltzer, Muhlenberg HS

“Future of Mussel Filtration: How did Mussels Save the Ocean From Micro Plastics”
Beckum Greth, Samuel Bissell and Kenna Follweiler
Mentor: Dr Audrey Smeltzer, Muhlenberg HS

**Medicine/ Health Category**

**First Place**
“A New Solution To Blood”
Judy Pintor and Calliope Padilla
Mentor: Mr. Mark Wladyslawski, Bethlehem Catholic HS

**Second Place**
“JuViSleeve: The all New Innovative Sleeve to Rejuvenate Your Cells.”
Rey Espady, Justin Hildalgo, Dahlia Snyder
Mentor: Dr Audrey Smeltzer, Muhlenberg HS

**New Materials Category**

**First Place**
Lunar 3D Printing: Regolith Structures.
Andrea Santiago, Leonardo Carbajal and Salem Davis
Mentor: Dr Audrey Smeltzer, Muhlenberg HS

**Second Place**
Discovery in the Deep Pacific: The Discovory of Vitalitium
Ayden Seaman and Yolianyela Rosario Leon:
Muhlenberg High School
Mentor: Dr Audrey Smeltzer, Muhlenberg HS

The Chemagination Chair would like to thank the following Judges for their help with the Lehigh Valley Section’s Chemagination program:
Guido Pez, Julie Himmelberger, Bob Fuller, Sarah Hayik, Ian Rhile, Mark Witmer, Joe Yanchunis, Sherman Cox, Philip J Elias, and Christian Ham.

Credit: John Freeman, Awards Chair.
LEHIGH VALLEY ACS CAREER PAGE

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 at greglgibbs@gmail.com

ACS Virtual Office Hour – careers in Government

Join the ACS for this free Virtual Office Hour session on Thursday, August 3, 2023 at 12pm EST. Open to ACS members and non-members, this virtual session will begin with a panel discussion reviewing Careers in Government, followed by the opportunity to network in small groups, led by ACS Career Consultants. Register now to reserve your seat!

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

Applied Technology Scientist, Evonik, Allentown, PA On-site
This position involves designing and conducting laboratory experiments for semiconductor applications, generating data for new chemicals for semiconductor processes, maintaining and setting up complex analytical instrumentation, and training others to use them. Additionally, this role requires providing technical support for scale-up activities and collaborating with marketing to identify opportunities and provide product recommendations. The person in this position will engage with customers, design technical service projects, and ensure professional documentation and presentation of laboratory work in written reports and PowerPoint slides. Staying up to date with technical trends in the semiconductor industry is necessary. Safety training, hazards review and management of change, safe work practices, and compliance with regulations are also important responsibilities. Apply

Director, Process R&D, Evonik Allentown, PA On-site
Strategic planning, coordination, and scientific management of global processes for amines; Development and leadership of projects to drive step change productivity through application of novel process technology including creation of white papers, technology road maps and engineering economics in areas new to the business. Management of international, strategic innovation and process optimization projects across a complex matrix involving R&D, application technology, process engineering and production. Coordination of important internal and external partners regarding technical aspects of projects. Global functional and disciplinary responsibility for “Hydrogenation and Amine Derivatives” group including resource allocation. Monitor new or alternative technology platforms. Development and implementation of IP strategies Responsible; key skills areas in Process R&D including development and recruitment of talent. Ensures that Knowledge Retention is maintained. Apply

Senior Surfactants Scientist, Nouryon, Bridgewater, NJ On-site
The Senior Surfactants Scientist will join the Nouryon team and be responsible for the research, development, and evaluation of surfactant ingredients for the home and personal care segments. This may include developments for various sub-segments, such as hard surface cleaners, degreasers, laundry and dish washing products, personal cleansing systems, conditioners, sunscreens, and skin care products. Apply
LVACS Mourns the Passing of Ned Duane Heindel, PhD., on June 27th, 2023, at age 85; was 60+ year ACS member Shining Star of Chemistry and Past ACS President (1994)

Age 85, Howard S. Bunn Emeritus Professor of Chemistry and Distinguished Senior Research Scientist of Lehigh University died June 27 at his home. He was the beloved husband of Linda (Heefner) Heindel to whom he had been married for 63 years. Ned was born 4 September 1937 in Red Lion, PA, to Penrose Horace Heindel and Dorothy Mae (Strayer) Heindel. Ned graduated from Red Lion High School and pursued the field of chemistry at Lebanon Valley College (BS), University of Delaware (PhD, chemistry), and a postdoctoral fellowship at Princeton University. He held successive teaching appointments at the University of Delaware (Wilmington campus), Ohio University, Marshall University, and Lehigh University. From 1966 till 2018 he rose through the Lehigh ranks completing 52 years of teaching/research service to the institution till retirement in 2018, when he transitioned to Distinguished Senior Research Scientist status till his death. From 1971 - 2000 Ned was a Visiting Professor of Radiation Oncology at Drexel University School of Medicine (formerly Hahnemann Medical School), Philadelphia, and from 1979–1986 he served as Visiting Lecturer in Nuclear Medicine Imaging at the Uniformed Services University of the Health Sciences, Bethesda, MD. He lectured on tumor imaging with radio-nuclides and served as research supervisor for Lehigh and Hahnemann graduate students doing research in diagnostic nuclear medicine. He published more than 300 journal articles on organic and medicinal chemistry in numerous chemical and biomedical journals, obtained 20 patents, and graduated 40 doctoral students and 168 M.S. students. He served as Director of Lehigh’s Center for Health Sciences from 1981 to 1988, and in 1991 he initiated Lehigh’s Distance Education program by transmitting courses for an M.S. in pharmaceutical chemistry by satellite TV and later by on-line video; students from 51 companies enrolled, and more than 120 completed the program. Ned served on the Boards of the American Chemical Society (ACS), the Council for Chemical Research, the International Union of Pure and Applied Chemistry-American Division, the Chemical Heritage Foundation, the Science History Institute, the Chemical Sciences Roundtable of the National Academy of Sciences, the Pennsylvania Drug Discovery Institute, and CentCom Advertising. He was President of the American Chemical Society in 1994. His honors included; Lebanon Valley College (D.Sc. (Hon.); D.Sc.(Hon.) Albright College; the Ben Franklin Partnership Award for Corporate Assistance to Start-Ups; and the 2011 Hillman Award for Service to Lehigh University. Imbued with an avocational interest in history, Heindel published 16 articles and five books on topics of regional and chemical history. His book Hexenkopf: History, Healing and Hexerei went through three editions and 5 printings. He also wrote Iron, Armor, and Adolescents: A History of Redington and the Carter Junior Republic, The 1863 Diary of Beates R. Swift, and (with Robert D. Rapp) The Nineteenth-Century Horse Doctor. A lifelong interest in patent medicines resulted in Medicine, Music, and 'Money' Munyon, a biography of a colorful Pennsylvania patent medicine showman. For more than 45 years Ned was a frequent contributor of local history articles to Pennsylvania Folklife magazine and to The Pastfinder, newsletter for the Williams Township Historical Society. Ned served several historical organizations including the Northampton County Historical and Genealogical Society, the Science History Institute, the Williams Township Historical Society, and the Division of the History of Chemistry (ACS). In 2020, Ned and his wife Linda donated the Hexenkopf Ridge, the Hexenkopf Rock, and the surrounding 77-acres to Northampton County for a nature preserve. Memorial donations to the Northampton County Historical and Genealogical Society (Easton) would be appreciated. A Celebration of Life will be scheduled. To share an expression of sympathy with this family, please visit www.heintzelmancares.com. Arrangements are by the Heintzelman Funeral Home.

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LVACS Mourns the Passing of Ned Duane Heindel, PhD., on June 27th, 2023, at age 85; was 60+ year ACS member Shining Star of Chemistry and Past ACS President (1994)
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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 elevate 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