American Chemical Society
Susquehanna Valley Section

OCTOBER 2024 NEWSLETTER

LOCAL SECTION ELECTIONS:

Our Local Section needs nominations for the following position:

- **Secretary** (three-year term)

Additional nominations may be submitted for these as well:

- **Chair-elect** (one year term as Chair-Elect, one year as Chair, and one year as Past Chair)
- **Treasurer, Councilor, and Alternate Councilor** (all three-year terms)
-

If interested, please contact the Section Councilor.

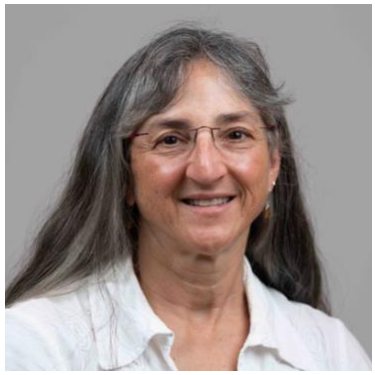
Our Local Section needs a full slate of officers to be in good standing with our Society.
More information on these positions can be found in this newsletter (see below).
Expect a ballot to be emailed to you later in the fall.

MONTHLY DINNER MEETING:

The four hundred and seventy-sixth meeting of the Susquehanna Valley Section of the American Chemical Society will be the Wilkes University Catherine H. Bone Lecture held on Wednesday, October 16th, 2024 in Stark Learning Center 105 (formerly 101). The lecture will be preceded by a reception (5:00 p.m.) and dinner (5:30 p.m.) honoring the guest speaker, Dr. Levinger, at The Mary Stegmaier Mansion, 156 S. Franklin Street, Wilkes-Barre.

"Save the Plants! Visualizing Cryoprotectant Permeation and Location Confined in Plant Cells and Tissues"

Dr. Nancy E. Levinger
Department of Chemistry
Colorado State University
Fort Collins, CO 80523, USA



ABSTRACT: Look out your window this winter and you might see a pine tree covered with snow. Have you ever wondered how the needles stay alive all winter long as the temperature dips below freezing? Like conifers in northern climates, some organisms possess molecules that naturally enable them to withstand cold. Scientists have copied nature to develop methodology to cryopreserve biological materials, storing them at low temperatures for applications conserving endangered species, storing critical agricultural materials, or for exotic plans to send plants to the moon or Mars. The first step in any cryopreservation protocol involves dosing the sample with a cocktail of cryopreservation agents, that is molecules that help them stay viable. Although researchers know what cryopreservation agents work for some samples some of the time, these solutions are not universally cryoprotective. Likewise, little is known about how these solutions protect cells and tissues from freezing damage. The Levinger research group at Colorado State University has embarked on a project using coherent Raman microscopy to explore how plant cryopreservation agents interact with plant cells and tissues. This presentation will highlight how chemistry can contribute to plant cryopreservation research and practice. Our results demonstrate precise times and locations of the cryoprotecting agents as they interact with living rice callus cells and mint shoot tips. We follow cryoprotecting molecules using as they interact with samples to measure how and why they work to protect materials at low temperatures.

BIOGRAPHY: Dr. Nancy E. Levinger is a Professor of Chemistry and University Distinguished Teaching Scholar at Colorado State University. She also has a courtesy appointment in Electrical Computer Engineering. At Northwestern University, she earned B.A. degrees, in integrated science and physics, where she performed research with Prof. Richard Van Duyne. Her Ph.D. degree, in chemical physics, is from the University of Colorado where she worked with Prof. W. Carl Lineberger. As an NSF postdoctoral fellow, she worked with Prof. Paul Barbara at the University of Minnesota on ultrafast electron transfer dynamics. At Colorado State University, she uses ultrafast spectroscopic techniques, NMR, and neutron scattering to explore the dynamics of molecules and chemistry in the condensed phase by looking at molecular assemblies and molecules at liquid interfaces and in confined environments. More recently, she has explored the cryopreservation of plant cells and tissues with fundamental physical chemistry methods.

Levinger has published over 100 peer reviewed papers and presented more than 175 invited talks. She is a fellow of the American Physical Society, AAAS, and American Chemical Society. She has also contributed to science with leadership roles in the ACS PHYS division, the APS Division of Chemical Physics, the AAAS chemistry division nominating committee, on the board and president of Telluride Science Innovation Center, and currently as the chair of the science advisory board for the IDREAM EFRC. Levinger also has a strong interest and focus on educational issues. She incorporates innovative teaching ideas in her courses and is a proponent of involving students at all levels in research. Her educational activities and leadership led to her being named one of 12 University Distinguished Teaching Scholars at Colorado State University. Throughout her career, Levinger has also been a strong advocate for women and students from underserved groups in science.

DINNER:
The lecture will be preceded by a reception (5:00 p.m.) and dinner (5:30 p.m.) honoring Dr. Levinger, held at The Mary Stegmaier Mansion, 156 South Franklin Street, Wilkes-Barre, PA 18701. Dinner attendees may park on Wilkes University surface lots in addition to Mansion

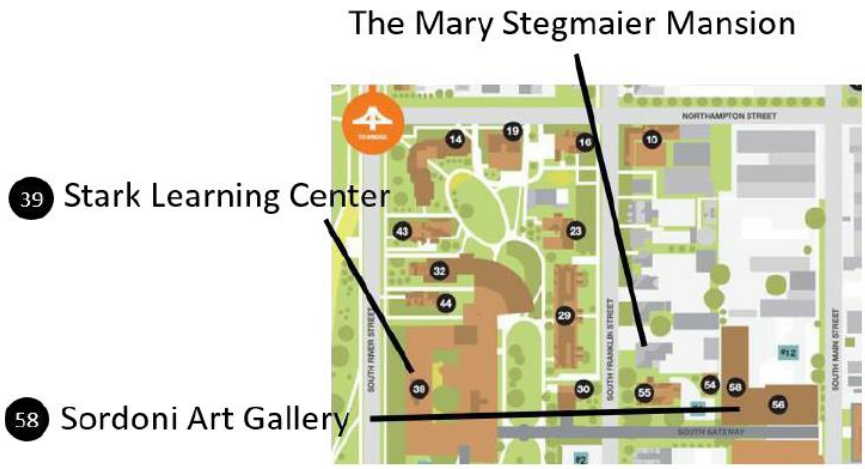
parking (see directions below). The reception will include Hors D'oeuvres and there will be a cash bar. Dinner will include Caesar Salad, Aligot French Style Mashed Potatoes, Green Beans with Georgia Pecan Butter, Petite Dessert Display, and beverage service (Coffee, Tea, Iced Tea, Soda). Entrée choices include a choice of Tuscany Chicken, Stegmaier Surf & Turf, Herb Crusted North Atlantic Fillet, or Vegetarian Penne Pasta in a Creamed Sauce. As a result of the generosity of Catherine H. Bone, our guests will be provided with dinner at no cost. However, dinner capacity is limited, and reservations will be confirmed on a first-come, first-serve basis. Please RSVP for the event and dinner (noting your entree choice) to Gail Kozich (gail.kozich@wilkes.edu) or 570.408.4715 by 3 p.m. Wednesday, 9 Oct. 2024.

DIRECTIONS TO WILKES UNIVERSITY:

GPS: Wilkes University parking can be accessed at 141 S. Main St, Wilkes-Barre, PA 18702

Detailed directions can be found at:
https://www.wilkes.edu/about-wilkes/planning-your-visit/directions-to-campus.aspx

Take Exit 3 (River Street Exit), from PA Route 309N then make a left at traffic light. You are now on River Street. Immediately after turning left onto River Street, you will encounter the first of 8 traffic lights. Continue on River Street to the 8th light where you will turn left (east) onto W. Northampton Street. Continue on Northampton until you reach Main St. and turn right. You can park in the Parking #12 (141 S. Main St. next to the Karambelas Media & Communication Center Sordoni Art Gallery). Additional parking can be found in Parking #8 (169 S. Main Street behind University Center on Main (UCOM) with entrance on W. South Street) and Parking #5 (84 W. South Street behind the Henry Student Center with entrances on S. River Street and S. Franklin Street).



detailed campus map (https://wilkes.university-tour.com/map.php)
parking (https://www.wilkes.edu/about-wilkes/planning-your-visit/parking-locations.aspx)

LOCAL SECTION NEWS:

OPEN POSITIONS IN THE LOCAL SECTION:

Do you want to use your talents to help other chemists in the Susquehanna Valley section? Listed below are examples of positions that need to be filled by willing individuals along with websites that give organizing ideas:

- Susquehanna Valley Local Section Chair-Elect
  This three-year position is the usual office taken on by local chemists who want to begin to become more involved in the local section.
- Susquehanna Valley Local Section Secretary
  Create and distribute the monthly newsletter by email. Coordinate with the webmaster.
- Susquehanna Valley Local Section Treasurer
  Maintain the finances of the local section with routine reports to the Executive Committee.
- WCC (Woman Chemists Committee) Chair
  Help attract, retain, develop, promote, and advocate for women to positively impact diversity, equity and inclusion in the Society and the profession.
- CMA (Committee on Minority Affairs) Chair
  Help increase the number & participation of racially & ethnically underrepresented scientists in the Society and its governance.
- Project SEED (Summer Experiences for the Economically Disadvantaged) Coordinator
  Coordinators are responsible for establishing programs, identifying mentors, recruiting students, fundraising, and organizing activities such as field trips.
- SCC (Senior Chemists Committee) Chair
  Help improve communication among senior chemists, increase the number of senior chemists' groups, and the level of their engagement within local sections.
- CCEW (Chemists Celebrate Earth Week) Coordinator
  Help promote the positive role that chemistry plays in the protecting our planet.

If you are interested in learning more about these volunteer activities, please contact the section Councilor (Donald Mencer, donald.mencer@wilkes.edu).

2024 – 2025 UPCOMING LOCAL SECTION MEETINGS:

13 November 2024: at Lycoming College

will feature a talk by Julien Panetier, from the Chemistry Department at

The State University of New York at Binghamton

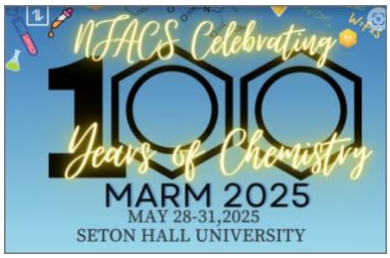
Jan 2025: Executive Board Meeting

NATIONAL CHEMISTRY WEEK:

NCW will be celebrated 20-26 October 2024, with the theme "Picture Perfect Chemistry" which will have a *focus* on Photography and Imaging. The Susquehanna Valley Section is once again collecting illustrated poems for this year's event. If you know of a student in K-12 who would like to participate, please contact Charlie Guttendorf at cg029@bucknell.edu. The deadline for submissions is Sunday, October 20th. For further details, see the website.

REGIONAL ACS NEWS:

MIDDLE ATLANTIC REGIONAL MEETING:



The 53rd Middle Atlantic Regional Meeting (MARM 2025) - "Celebrating 100 years of Chemistry" will be held at Seton Hall University 28 - 31May 2025
Sponsored by the North Jersey Local Section of the ACS

NATIONAL ACS NEWS:

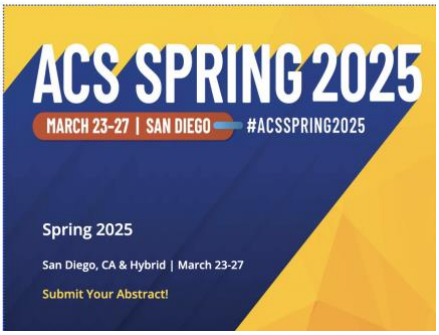
ACS LEGISLATIVE ACTION NETWORK:

Legislation that may impact the chemical enterprise comes before Congress on a regular basis, and the ACS is committed to keeping its members informed and encouraging them to weigh in on high-priority issues. To see the position of the ACS on many legislative issues visit the ACS LAN website: https://www.acs.org/content/acs/en/policy.html To find out how to become more active in ACS advocacy activities, see the advocacy website.

To join ACS' grassroots legislative advocacy network, ACT4CHEMISTRY, which will allow you to stay up to date on policy issues and contact legislators on behalf of chemistry and chemists, go to their website, follow the Act4Chemistry X account, or email advocacy@acs.org.

Act4Chemistry Advocacy Issues. To take action go to the website
https://www.acs.org/policy/memberadvocacy.html

NATIONAL MEETINGS:



Spring 2025 ACS National Meeting
The Spring 2025 national meeting will be a hybrid event.

The meeting will be held 23-27 March 2025, and the in-person event will take place in San Diego, CA.

See the website for more information.

JOIN THE ACS:

If you know of anyone who would benefit from being a member of the American Chemical Society, please direct them to the membership website: https://www.acs.org/membership.html

Susquehanna Valley Section Web Page: svs-acs.org. Please send any comments about the monthly newsletter to your Local Section Councilor Donald Mencer.