

American Chemical Society Susquehanna Valley Section

MAY 2025 NEWSLETTER

MAY AWARDS BANQUET:

The four hundred and seventy-ninth meeting of the Susquehanna Valley Section of the American Chemical Society will be our Annual Awards Banquet held on Wednesday, May 7th, 2025. With the presentation of various local section awards, the Annual Awards Banquet recognizes both aspiring and accomplished local chemistry professionals who have helped to promote chemistry, the chemical professions, and the section. This year's ceremony will begin at 5:30 p.m. at the <u>Pine Barn Inn</u> in Danville, PA.

Solving the Puzzle of the Rare Earth Elements

Roger Turner, PhD Curator of Instruments and Artifacts Science History Institute

ABSTRACT: The lanthanides are metallic elements that have been known as "rare earths" since the late 18th century. Hard to separate and hard to study, these elements troubled chemists for a century and a half. After a brilliant young chemist destined for tragedy used them to rationalize atomic numbers just before World War I, they languished as afterthoughts floating at the bottom of the periodic table for decades. But the quirk of quantum chemistry that makes them so hard to separate has recently made them essential to today's electronics and the green technologies we may need to avoid destabilizing the climate. Producing them is toxic, however, and currently concentrated in China. This talk uses the history of "rare earth" to explore how we might rethink metal production in ways that enhance democracy and does not create environmental sacrifice zones.



Learn about:

- Why China dominates rare earth production now, and why the US did previously
- Several key applications of rare earth metals
- How the methods for studying and separating rare earth elements have changed since the 1780s

BIOGRAPHY: Roger Turner is an historian of science and museum curator. He helps diverse audiences better understand how science shapes our daily lives. His storytelling brings to life the passionate people behind things we rely on, from metals and medicines to plastic bags and weather forecasts.

Roger earned a PhD in History and Sociology of Science at the University of Pennsylvania in 2010. His particular scholarly expertise is in 20th-century atmospheric science, scientific instruments, and environmental monitoring. At the Science History Institute in Philadelphia since 2016, Roger produces digital exhibits and delivers educational programs. He has given invited talks at SciX, the American Meteorological Society, an ACS chapter, public libraries, colleges, and local science societies. Usually, the audience is entertained. Sometimes they learn something too.

Roger was the lead historian in the Rare Earth Elements project, convening scientists, artists and historians to explain the promises and problems of the lanthanide metals. This project won a Horizon Prize for Education from the Royal Society of Chemistry in 2023.

At the Science History Institute, Roger helped launch the student role-playing game Conflicts in Chemistry: The Case of Rare Earth Elements, worked on the film The Instrumental Chemist, developed the playful online experience Instruments of Change, and contributes to museum exhibitions. He wrote and curated Mechanochemistry: The Science of Crush for Google Arts & Culture and also authors the occasional Distillations magazine story.

DINNER:

The Annual Awards Banquet of the local section will be held on Wednesday, May 7th at 5:30 p.m. at the Pine Barn Inn in Danville, PA. Dinner is a buffet. Cost of the dinner is \$10 per person, paid at the door, cash or check (payable to Susquehanna Valley Section of the ACS). Please do not mail checks in advance. Receipts will be provided upon request. Please note that individuals who are receiving an award at the banquet, or their guests, will not be charged for dinner. For more details, or to RSVP, use the QR code to the right.



The deadline to RSVP is Friday, April 25th

DIRECTIONS TO THE PINE BARN INN:

Address: One Pine Barn Place, Danville, PA 17821 From I-80: Take the Danville exit 224 to PA-54 East which is Continental Blvd. In three miles turn left onto Bloom Street. Stay on Bloom Street; the Pine Barn Inn will be on your left in about half a mile. See the website for more details: pinebarninn.com

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.
- WCC (<u>Woman Chemists Committee</u>) Chair Help attract, retain, develop, promote, and advocate for women to positively impact diversity, equity and inclusion in the Society and the profession.
- CMA (<u>Committee on Minority Affairs</u>) Chair Help increase the number & participation of racially & ethnically underrepresented scientists in the Society and its governance.
- Project SEED (<u>Summer Experiences for the Economically Disadvantaged</u>) Coordinator *Coordinators are responsible for establishing programs, identifying mentors, recruiting students, fundraising, and organizing activities such as field trips.*
- SCC (<u>Senior Chemists Committee</u>) Chair Help improve communication among senior chemists, increase the number of senior chemists' groups, and the level of their engagement within local sections.
- CCEW (<u>Chemists Celebrate Earth Week</u>) 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, <u>donald.mencer@wilkes.edu</u>).

LOCAL STEM COMPETITIONS:



A list of all STEM competitions for high school students is posted on our <u>website</u>. If you have any questions about the contests or have suggestions for others, please contact the person indicated on the site. Questions may also be directed to the <u>Local Section Councilor</u>.

2025 UPCOMING LOCAL SECTION MEETINGS: May 2025: Annual Awards Banquet

REGIONAL ACS NEWS:

MIDDLE ATLANTIC REGIONAL MEETING:



The 53rd Middle Atlantic Regional Meeting (MARM 2025) - "<u>Celebrating 100 years of Chemistry</u>" will be held at Seton Hall University 28 - 31May 2025.

Sponsored by the North Jersey Local Section of the ACS

NATIONAL ACS NEWS:

NATIONAL MEETINGS:



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

The meeting will be held 17 - 21 August 2025, and the inperson event will take place in Washington, D.C.

See the <u>website</u> 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: <u>https://www.acs.org/membership.html</u>

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: <u>https://www.acs.org/content/acs/en/policy.html</u> To find out how to become more active in ACS advocacy activities, see the <u>advocacy website</u>.

Joining the ACS' grassroots legislative advocacy network, ACT4CHEMISTRY 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 <u>Act4Chemistry X</u> account, or email <u>advocacy@acs.org</u>.

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

Susquehanna Valley Section Web Page: <u>svs-acs.org</u>. Please send any comments about the monthly newsletter to your Local Section Secretary, Sydney Bachman, <u>sydney.bachman@stellantsystems.com</u>