

SEPTEMBER 2022 NEWSLETTER

The four hundred and sixty fourth meeting of the American Chemical Society Susquehanna Valley Section will be held on Wednesday, September 14, 2022 at 7:00pm in the Academic West building, room 108, on the Bucknell University campus in Lewisburg, PA. The speaker will be Miriam Freedman, PhD., Professor of Chemistry and Associate Department Head for Climate and Diversity at Penn State University. The talk will be preceded by a reception and dinner at 6:00pm in Academic West room 111.

*“Phase transitions, ice nucleation, and acidity
of atmospheric aerosol particles”*

Dr. Miriam Freedman
Professor of Chemistry
Associate Department Head for Climate and Diversity
Pennsylvania State University
University Park, PA



Atmospheric aerosol particles impact the climate system and human health through their reactive chemistry and interactions with light and clouds. In this talk, I will briefly discuss three different aspects of aerosol particles focusing on characterization of their phase transitions and physical properties, which determine their reactive chemistry, optical properties, and activity toward the nucleation of clouds. 1) One of the phase transitions that aerosol particles undergo, liquid-liquid phase separation, occurs due to differences in solubility between the components of the solution. I will discuss how non-phase separating compounds can impact the behavior of the phase separation process. 2) Clouds in the atmosphere can be composed of liquid water or ice, and these cloud droplets and ice particles tend to nucleate on a heterogeneous seed. I will discuss the nucleation of ice on silica and the features of the surface that can promote the ice nucleation process. 3) Aerosol particles are understood to be highly acidic, making direct measurement of the pH of aerosol particles challenging. I will discuss our development of carbon quantum dots for the measurement of highly acidic aerosol particles. For each of these three studies, I will address the impact of our results on our understanding of the climate system.

BIOGRAPHY OF DR. FREEDMAN:

Miriam Freedman graduated with her BA from Swarthmore College in 2000. She received a MS in Mathematics from the University of Minnesota from 2002. She then received her PhD in Chemistry from the University of Chicago in 2008, where she was an NSF graduate fellow. After her PhD, Miriam was a NOAA Climate and Global Change Postdoctoral Fellow at the University of Colorado at Boulder. Miriam began her independent position at the Pennsylvania State University in 2010, where she is currently a Professor of Chemistry and Meteorology and Atmospheric Science. She received an NSF CAREER award in 2014, the Eberly College of Science Dean's Climate and Diversity Award in 2019, and the ACS Physical Chemistry Division Early-Career Award for Experimental Physical Chemistry in 2021.


DINNER:

The lecture will be preceded by a reception and dinner at 6:00pm in the Academic West building, room 111. Dinner will be buffet style, including a vegetarian option and dessert. Those wishing to reserve a spot for dinner should contact Charlie Guttendorf by email (charlie.guttendorf@bucknell.edu) by 3:00pm Friday September 9.

DIRECTIONS TO BUCKNELL UNIVERSITY:

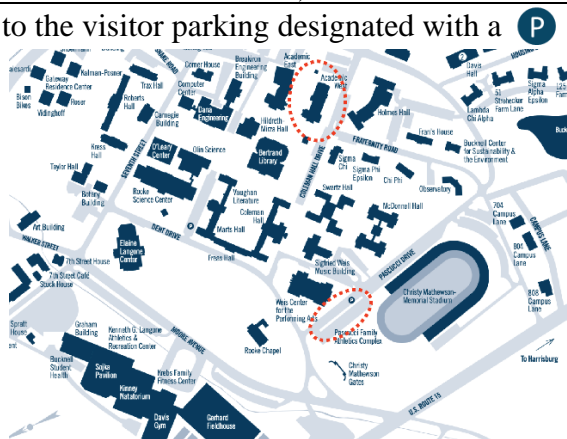
Address of the Academic West Building: 616 Coleman Hall Dr, Lewisburg, PA 17837

East of Lewisburg: <ol style="list-style-type: none">1. Interstate 80 West to Exit 210A2. Route 15 South3. At 11th traffic light (the first light after crossing Route 45 (Market Street)), turn left onto Moore Avenue. (Look for the Bucknell Athletic Stadium on the left.)	West of Lewisburg: <ol style="list-style-type: none">1. Interstate 80 East to Exit 210A2. Route 15 South3. At 11th traffic light (the first light after crossing Route 45 (Market Street)), turn left onto Moore Avenue. (Look for the Bucknell Athletic Stadium on the left.)
South of Lewisburg: <ol style="list-style-type: none">1. Take Routes 11&15 North2. When Routes 11 & 15 split, stay on Route 153. Approx. 7 miles after Selinsgrove / Shamokin Dam, you'll come to a stop light. Bucknell is on your right. (Look for the Bucknell Athletic Stadium on right.)	North of Lewisburg: <ol style="list-style-type: none">1. Take Route 15 south2. Once past Interstate 80, turn left on Moore Avenue at the 11th traffic light (the first light after crossing Route 45 (Market Street)). (Look for the Bucknell Athletic Stadium on the left.)

Once on campus: Follow the campus map below to the visitor parking designated with a .

CAMPUS MAP

LEWISBURG, PENNSYLVANIA



Online campus maps can be found at <https://www.bucknell.edu/sites/default/files/public-safety/campusmap.pdf>

LOCAL SECTION NEWS:

2022 LOCAL SECTION ELECTIONS:

Nominations are due for the position of Chair-elect. If interested, please contact any [section officer](#).

2022 LOCAL SECTION AWARDS:

Joseph Priestley Service Award

DR. HOLLY BENDORF

Lycoming College

Ron Blatchley High School Chemistry Teacher of the Year Award

MR. TODD DAVIS

Bloomsburg Area High School

Outstanding High School Chemistry Students

In lieu of the winners of the annual SVS High School Chemistry Exams, the best SVS chemistry high school students were identified by local chemistry teachers. The SVS would like to congratulate the following honorees:

MADALYN ELIZABETH THOMAS	Dallas High School Teacher – Mr. John Fredericks	EMILY RAKESTRAW	Montoursville High School Teacher – Ms. Natalie Smith
ALLISON ZEISS	Dallas High School Teacher – Ms. JoAnn Morris	THOMAS STEWART	Montrose High School Teacher – Mr. David Corbin
KAYLA NASH	Hanover Area Jr/Sr High School Teacher – Dr. Jocelyn Holodick-Reed	PATRICK ZALONIS	Muncy Jr Sr High School Teacher – Ms. Robin Peterman
JESSIECA AGUASIN	Honesdale High School Teacher – Ms. Michelle Tonkin	SAMANTHA GREENFIELD	Old Forge High School Teacher – Ms. Adrianna Rupprecht
OLIVIA MEYER	Lewisburg Area High School Teacher – Ms. Angela Gockley	AMIR AKACH	Scranton Preparatory School Teacher – Ms. Donna Barrett
AARON RUOHONIEMI	Line Mountain High School Teacher – Dr. Shelley Herb	MCKENNA PARKER	Selinsgrove Area High School Teacher – Ms. Tracy Hepner
MARIA DARRUP	Mifflinburg Area High School Teacher – Mr. Matthew Wells	SHANNEN PATRICIA SPRENKEL	Shikellamy High School Teacher – Ms. Yvonne Ferrante
MACKENZIE VASBINDER	Mifflinburg Area High School Teacher – Mr. Jeffrey Kiss	LUCAS DUNKELBERGER	Shikellamy High School Teacher – Ms. Jenna Mowery
LUKE DELONG	Milton Area High School Teacher – Mr. Jonathan Bixler	NICOLE MAE CANLAS	South Williamsport Area High School Teacher – Mr. Matthew Easley
ANDREW BURNS	MMI Preparatory School Teacher – Ms. Melissa McHale		

National Chemistry Week Award

JESSICA ZHENG GRADE 9-12	MMI Preparatory School Teacher – Ms. Melissa McHale
ALEXA FAZIO GRADE 6-8	Freeland Elementary/Middle School Teacher – Ms. Catherine Tombasco
GARRISON REINER GRADE 3-5	Upper Dauphin Elementary School Teacher – Ms. Kelly Dietrich

College Award Winners

ELIZABETH DECOTEAU	Bloomsburg University
KARLY FORKER	Bucknell University
TEAGAN CAMPBELL	King's College
KIYAH BELL	Lycoming College
DAVID SHEA	University of Scranton
ASHTON WEAVER	Susquehanna University
MATTHEW WIDDICOMBE	Wilkes University

2022 – 2023 LOCAL SECTION MEETING SCHEDULE:

14-Sept-2022: Bucknell University

8-Feb-2022: Marywood University

19-Oct-2022: Wilkes University

8-March-2022: Susquehanna University

Note this is the third Wednesday in October

9-Nov-2021: Lycoming College

12-April-2022: King's College

Jan 2022: Executive Board Meeting

May-2022: Awards Banquet

NATIONAL CHEMISTRY WEEK:



NCW will be celebrated October 16-22, 2022, with the theme, “Fabulous Fibers: The Chemistry of Fabrics” The Susquehanna Valley Section is once again collecting posters for this year’s event. If you know of a student in K-12 who would like to participate, please contact Karen Castle at kcastle@bucknell.edu. The deadline for submissions is Wednesday, October 12. For further details, see the [website](#).

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:

- SVS Chair-Elect
This two-year position is the usual office taken on by local chemists who want to begin to become more involved in the local section.
- [Chemistry Olympiad](#) Chair
Administer Local Chemistry Olympiad Competitions in coordination with the National Chemistry Olympiad.
- 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
- 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
- CH&S ([Chemical Health and Safety](#)) Committee Chair
Help provide authoritative technical resources and mentorship in chemical health and safety for all

- 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, and encourage the involvement of senior chemists in programs focused on K-12 education, undergraduate networking, and mentoring
- CCEW ([Chemists Celebrate Earth Week](#)) Coordinator
Help promote the positive role that chemistry plays in the protecting our planet (recyclable plastics, cleaner-burning fuels, phosphate-free detergents, environmental monitoring, and green chemistry initiatives).

If you are interested, contact the section Chair (Allison Saunders, saundersa@lycoming.edu), Secretary (Ronald Supkowski, ronaldsupkowski@kings.edu) or any member of the Susquehanna Valley Section leadership team ([executive committee](#), [committee chairs](#), [liaisons](#)).

LOCAL STEM COMPETITIONS:



A list of all STEM competitions for high school students is posted on our [website](#). If you have any questions about the contests or have suggestions for others, please contact either the person indicated on the site or the section webmaster, Ron Supkowski at ronaldsupkowski@kings.edu or 570-208-5900 x5733



Society for Analytical Chemists of Pittsburgh Spectroscopy Society of Pittsburgh

300 Penn Center Boulevard, Suite 332, Pittsburgh, PA 15235-5503
Phone 412-825-3220 / FAX: 412-825-3224
e-mail: sacpinfo@pittcon.org / www.sacp.org
e-mail: sspinfo@pittcon.org / www.ssp-pgh.org



The Spectroscopy Society of Pittsburgh (SSP) and the Society for Analytical Chemists of Pittsburgh (SACP) have decided to expand their geographical membership location to include the SVS. The membership of the SSP and SACP organize the Pittsburgh Conference (Pittcon), a nonprofit whose proceeds are distributed to their societies so that they may complete various outreach and educational programs. The SSP and SACP has provided their technical program for the current season, which has been included in this newsletter. If you would like more Information about joining these societies or attending their meetings virtually, please visit their website at chemistryoutreach.org.

NATIONAL ACS NEWS:

COVID-19

ACS is committed to helping combat the global COVID-19 pandemic with initiatives and free resources. Learn More at their website acs.org/content/acs/en/covid-19

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 website:

<https://www.acs.org/content/acs/en/policy/memberadvocacy/advocacy-tools.html>

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 Twitter](#) account, or email advocacy@acs.org.

Act4Chemistry Advocacy Issues. To take action go to the website
[acs.org/content/acs/en/policy/memberadvocacy/issues.html#/takeaction](https://www.acs.org/content/acs/en/policy/memberadvocacy/issues.html#/takeaction)

Ask Congress to support climate change legislation

With the growing climate crisis, the American Chemical Society recently endorsed a package of legislation to help address climate change, both to reduce greenhouse gas emissions, improve the sustainability of our energy and transportation sectors, and adapt to a changing world. ACS believes these steps are only part of addressing our changing climate, but it is a step towards leaving a better planet to our children and grandchildren. We ask you to raise these important issues to your Representative and Senators as they consider their legislative activities and priorities.

Ask the Senate to confirm science nominees for key positions & consider a chemist for the Chemical Safety Board

In 2021, the Biden Administration nominated three chemists for three important roles at the Department of Energy (DOE) and the Department of Commerce National Institute of Standards and Technology (NIST). Dr. Geri Richmond and Dr. Laurie Locascio have been confirmed as DOE's Under Secretary for Science and Energy and the Under Secretary of Commerce for Standards and Technology, respectively. Dr. Asmeret Berhe has been nominated as the Director of the DOE Office of Science. ACS asks the Senate to vote on her nomination as quickly as possible. ACS is also asking Congress to encourage the nomination of someone with experience and a background in chemistry for one of the two remaining vacancies on the U.S. Chemical Safety and Hazard Investigation Board (CSB).

Ask Congress to support the Research Investment to Spark the Economy (RISE) Act

We encourage you to ask that your members of Congress cosponsor and support the Research Investment to Spark the Economy (RISE) Act, [H.R. 869](#) and [S. 289](#). These bipartisan bills would authorize supplemental funding for a variety of research agencies.

Support the Chemical Safety Board

The CSB is an independent federal agency that saves companies, universities, and local communities billions of dollars and countless lives by helping them prevent catastrophic incidents. Despite its great value, the administration has called for \$9.4 million for FY 2019 to be allocated to CSB, specifically for its elimination. Join us in asking appropriators and other members of Congress for their continued support of the CSB and its mission to protect workers and the public.

Keep Science Funding Strong

Congress and the White House are working to complete the appropriations process for fiscal year 2021. Join us in asking appropriators for a strong and predictable boost in federal funding for scientific research.

Congressional Chemistry Caucus

The Caucus' mission is to educate Members of Congress, their staff, and the public on the benefits of chemistry in today's society and its economic impact on our country. If you do not see your Representative or Senators represented in the Chemistry Caucus ask them to join.

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/content/acs/en/membership-and-networks/acs/join.html>

NATIONAL MEETINGS:



Fall 2022 ACS National Meeting

The fall 2022 national meeting, “Sustainability in a Changing World” will be a hybrid event. The meeting will be held August 21-25, and the in-person event will take place in Chicago, IL. See the [website](#) for more information.

Susquehanna Valley Section Web Page: <http://departments.kings.edu/SusquehannaValleyACS>
Please send any comments about the monthly newsletter to Ron Supkowski, Section Secretary
King's College 131 N River St Wilkes-Barre PA 18711 ronaldsupkowski@kings.edu
