

The Minnesota Chemist



Chair's Corner

Greetings!

The calendar says fall is here, but the weather feels like it is still summer. The tree leaves are starting to turn yellow and orange; the sumac bushes are already turning crimson. The peak color for our Local Section area is expected about a month from now, in the 3rd week of October. If you would like to know the chemistry behind the leaves changing color, check out

this [Compound Interest post](#) or a [short video from ACS](#) about it.

The Chemistry of Autumn Leaf Colours CI COMPOUND INTEREST

Chlorophyll
 Chlorophyll gives plant leaves their green colour. Plants require warm temperatures and sunlight to produce chlorophyll. In autumn, the amount produced begins to decrease and existing chlorophyll is slowly broken down, diminishing the green colour of the leaves.
 KEY: ● Carbon ● Oxygen ● Nitrogen ● Hydrogen

Carotenoids and flavonoids
 Carotenoids and flavonoid pigments are always present in leaves, but as chlorophyll is broken down in the autumn their colours come to the fore. Xanthophylls, a subclass of carotenoids, are responsible for the yellows of autumn leaves. A major xanthophyll, lutein, is also the compound that contributes towards the yellow colour of egg yolks.

Carotenoids
 Carotenoids also contribute orange colours. Beta-carotene is one of the most common carotenoids in plants, and absorbs green and blue light strongly, reflecting red and yellow light and causing its orange appearance. It is also responsible for the colour of carrots. Carotenoids in leaves start degrading at the same time as chlorophyll, but they do so at a much slower rate. Some fallen leaves can still contain measurable amounts.

Anthocyanins & carotenoids
 Anthocyanin synthesis is kick-started by the onset of autumn. As sugar concentration in the leaves increases, sunlight initiates anthocyanin production. The purpose anthocyanins serve isn't clear, but it is suggested that they may play a light-protective role. It was thought they might delay leaf fall, but this has been discounted.

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In the last few weeks, the local section had several events, including the Younger Chemists Committee social at Malcolm Yards on August 2nd (organized by Dr. Safia Jilani) and the ACS Family Day on September 9th (organized by Dr. James Wollack and Dr. Becky Guza).

The ACS Family Day was very well-attended and much fun was had by children and adults alike, despite a short bout of rain. As always, everyone's favorite part was preparing and eating liquid nitrogen ice cream!

Our Chemists-in-the-Library outreach program held its 200th (!) event on September 16th (organized by Dr. Philippe Buhlmann) - read more about it below!

The Local Section has also sponsored the travel awards to the ACS National Meeting in San Francisco in August. The PUI faculty travel award went to Dr. Annette Raigoza (College of Saint Benedict, St. John's University).

The upcoming Local Section events include a symposium on PFAS at the University of Minnesota on November 9th (organized by Dr. Will Pomerantz and Dr. Philippe Buhlmann). We are also hoping to host a holiday season social at the end of the year.

Please feel free to reach out to me or the other officers and committee members at any time if you have suggestions, ideas, or needs that we can support [here](#).

Enjoy the beautiful fall and stay safe and healthy!

Ekaterina (Katya) Kadnikova, PhD
 Chair, Minnesota Local Section of the American Chemical Society

ACS MN Local Section News

The Minnesota Local Section of the American Chemical Society is pleased to announce our 13th annual

Chemistry Job & Recruiting Fair

The Chemistry Job and Recruiting Fair will be held from 4 – 6 P.M. on, **November 16th, 2023** at the **Science Education Center** of **Metropolitan State University** in Saint Paul, MN.

Past companies and organizations that have attended the career fair include:

Aerotek, Apex Life Sciences, Experis, H.B. Fuller, Medtronic, Medtox Laboratories, Pace Analytical, Land O'Lakes, Lab Corp, Verum Scientific, WuXi AppTec, Minnesota High Tech Forum, Sherwin Williams, University of MN Department of Chemistry, University of MN Department of Medicinal Chemistry, University of MN Environmental Health Sciences, University of MN M.S. in Patent Law, MN-ACS senior Chemists.

***4-6pm meet with recruiters
light snacks and beverages will be served.***

This event is an opportunity to meet with technical recruiters from the Twin Cities area and is open to professionals and students from chemistry and related fields. Sophomore and junior chemistry majors are also encouraged to attend to inquire about internships.

Please RSVP to James Wollack, jwollack@gmail.com by November 10th. If RSVPing as a group please include the number of folks you are RSVPing for.

Minnesota Local ACS Section Officer Positions Open!

The Minnesota Local ACS Section is looking for volunteers willing to serve as officers in the Local ACS Section. If you are looking to serve the broader community of chemists, chemical engineers, and educators working in Minnesota and Western Wisconsin, this is a great opportunity to gain that experience and give back. This is also a great opportunity to meet and work with other academic and industrial chemists and chemical engineers in the area. The election of new officers will be held from November 1st – 15th and new officers will not officially begin their terms until January 2024.

If you are interested in serving in any of the officer positions listed below or have further questions about the positions, please contact the Chair of the Nominations Committee, Cassie Joiner at joiner1@stolaf.edu.

The following positions are open:
Chair Elect (from academia) – 3 year term

MN ACS Chapter Assists with Chemical Safety Outreach

By Chuck Wheeler Handlon, MN ACS Education Chair,
chuckwheelerhandlon@gmail.com

The University of Minnesota's Joint Safety Team (JST) held a two-day workshop on chemical safety for high school science teachers on August 8th and 9th. I was invited to participate as a former speaker and chair of the MN ACS Education Committee.

This was the second year for the workshop and although attendance was down, attendees felt they received a lot of valuable information to assist in the planning for their department's chemical safety. Teachers represented school districts in the MSP / St. Paul region as well as outstate districts. The workshop was free. Both staff development Continuing Education Units and possible graduate credit from the U of MN were offered.

Planning for the event was led by Erin Maines and other members of the University of Minnesota Joint Safety Team. The program went from 8:00 AM till 4:00 PM and was structured around lecture presentations, group discussions and hands on activities in the laboratory.

Topics covered during the workshop included: developing best practices and a chemical hygiene plan for teaching chemistry, understanding the proper PPE equipment and protocols for high school laboratory work, understanding chemical storage and chemical waste standard operating procedures, promoting safety culture in the laboratory and planning effective, safe demonstrations.

Teachers were given the experience in the laboratory of identifying unknown chemical wastes and safely practicing some exciting chemical demonstrations. The workshop also included a tour of the University of Minnesota Chemical Waste handling facility.

The consensus of both participants and presenters is that valuable connections were made and important safety training had been provided. There is also a feeling that science teachers are not adequately prepared in chemical safety through the teaching licensure process. There is a great need for workshops such as this for more teachers. This training should perhaps be required of all licensed science teachers.

The MN ACS wishes to thank the U of MN JST Committee for providing this service and is grateful to be of support. The U of MN JST and ACS is considering sharing an exhibit table at the Minnesota Science Teachers Association fall Minnesota Conference On Science Education (MNCOSE) which will be held November 10 – 11 in Rochester, Minnesota.

Volunteer opportunities



Chemists-in-the-Library Celebrates Event #200 and is Recruiting New Volunteers

On September 16, the MNACS sections' outreach program Chemists-in-the-Library visited Brooklyn Park Library and celebrated their 200th (!) event since the inception of the program in October 2004.

The next event will be on October 21, 1:30 to 3:30 PM, at the Minneapolis Central Library, and other events will follow on a monthly basis. The kids are back to visiting libraries in droves, but getting together enough volunteers for these events has been a little bit harder since coming back from the break forced upon us by the COVID-19 pandemic. If you are interested in helping as a volunteer, please contact Phil Buhlmann (buhlmann@umn.edu); he would be grateful to hear from you. No preparation before events is required, and no commitment has to be made; volunteers can sign up for one event at a time.

Chemists-in-the-Library Events 2023

21 Oct 1:30 PM: Minneapolis Central Library

18 Nov 1:30 PM: Oxboro

9 Dec 1:30 PM: Roseville



Catalyze the Vote! Meet the 2024 ACS President-Elect Candidates (National Event)

Wednesday, October 4th, 1-2pm CT

Join Dorothy J. Phillips and Florian Schattenmann for a friendly virtual discussion between the 2024 ACS President-Elect Candidates. Don't miss this opportunity to discover more about each candidate's values as they answer questions relevant to young chemists as well as the entire Society. Become more informed of their specific goals during this free interactive broadcast, and get the information you need to confidently cast your vote.

This ACS Webinar is moderated by Amber Wilson of Green Analytics, LLC, and co-produced with the ACS Younger Chemists Committee.

CATALYZE THE VOTE

What You Will Learn

- Meet the ACS President-Elect Candidates
- Listen as the candidates share their vision for ACS
- Ask your questions and receive your answers Live

Webinar Details

- Wednesday, October 4, 2023 @ 2-3pm ET
- Free to register with ACS ID. Register for free [here](#).
- There will be no slides available for download for this webinar



MNACS Senior Chemists

The MNACS Senior Chemists' Group will be meeting for lunch on Wednesday, October 25. at 11:30 am. We will meet somewhere that we have met several times before: the Green Mill Restaurant at 57 Hamline Avenue S., at the corner of Grand Avenue and Hamline. Ave in St Paul.

There is a very convenient parking lot just across Grand Avenue, next to the Sinclair gas station. We will meet in the private room. (Newly remodeled!) There will be a short after-lunch talk, not yet finalized. Please mark your calendars. All senior chemists (those over 50) are welcome, you do not have to be retired. This will be a self-paying lunch, we will order from the menu. Ken Latham and I (the organizers of the Senior Chemists Group of MNACS) are looking forward to seeing you!

Lynn Hartshorn, Senior Chemists' Coordinator



ACS National News

2025 ACS National Awards Open for Nominations!

[Nominate](#) one of your peers, students, teachers, mentors, or colleagues for a 2025 ACS National Award, recognizing outstanding contributions in chemistry, doctoral research, public service, commercialization of new products, and more! We encourage the nominations of individuals from groups not commonly named as recipients of ACS awards such as women, chemists with disabilities, and people from unrepresented racial and/or ethnic groups, as well as industrial and international chemists. All nominations must be [submitted](#) online by November 1, 2023



Career Resources for Industrial Scientists

Help spread the word about a valuable resource for ACS industry members! The [ACS Industry Matters](#) newsletter offers exclusive interviews with industry professionals, as well as an insider's guide to working in the chemical industry. Each issue is filled with insightful answers to your questions as a chemical professional and is designed to help you grow and succeed. Explore more and subscribe [here](#).

2023 DEIR Educational Resources Guide Available Now

Be sure to check out the new [2023 Diversity, Equity, Inclusion and Respect Educational Resources Guide](#)! The guide is full of resources, links, videos, and book recommendations on allyship, intersectionality, LGBTQ+ inclusion, cultural competence and much more. Check it out and please share it widely.

Now Accepting Abstracts for ACS Spring 2024

[Submit your abstracts](#) for oral and poster presentations for ACS Spring 2024 by Monday, October 2, 2023. The theme, Many Flavors of Chemistry, will be at the core of programming. Sessions for the hybrid meeting (in-person & virtual) will be held in New Orleans, LA, and virtually, March 17 – 21, 2024. New for ACS Spring 2024 – Global Virtual Symposia is a new programming opportunity for presenters and audiences to participate in ACS Meetings & Expositions virtually and across many time zones. [Learn more and submit >>](#)



Book a Speaker Today with the ACS Speaker Directory

During her remarks to Council, ACS President Judy Giordan reaffirmed her goal for all local sections to use the ACS Speaker Directory to book a speaker by year-end. The ACS Speaker Directory provides users with access to over 500 speakers who are available to present technical science talks, lead career development & professional advancement presentations, explore general interest, popular science topics, and more. Book your speaker today at www.acs.org/speakerdirectory. (ACS ID and login required)



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Phil Buhlmann | 325 Smith Hall, Department of Chemistry, University of Minnesota,
Minneapolis, MN 55455

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