

# The Minnesota Chemist



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## Chair's Corner

Season's Greetings!

As I am writing this note on Christmas Eve and the seventh night of Hanukkah, we are also at the end of the snowiest and coldest spell of 2022. All the snow we had over the past few days provided many opportunities for beautiful pictures. Here's one of mine.



I am looking forward to new faces and new roles among MN ACS Local Section officers after our November election. Please, welcome 2023 Chair-Elect Catherine Sutton, new Treasurer Sarah Dimick-Gray, Councillors James Wollack and Becky Guza, Alternate Councilor Blaire Troudt, and Nominations Committee members Chris Douglas and Cassandra Joiner. At the turn of the year, my title will also change, from 2022 Interim Chair to 2023 Chair. We all anticipate having more in-person activities during 2023 and welcome your ideas.

MN ACS is looking for a new Newsletter Editor since our current Editor Taysir Bader is graduating soon and leaving Minnesota. If you are interested, please, reach out to me or to Taysir.

Happy holidays to all our members, affiliates, and their families, and best wishes for a fabulous 2023!

Stay healthy and safe,  
Ekaterina (Katya) Kadnikova

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# As 2022 Ends, 2023 Faces Shortages of Science Teachers

By Chuck Wheeler Handlon, MN ACS Education Chair

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The end of the year is a time for reflection about the changes and progress that has been made as well as a look forward into the new year and what that might bring. In 2022 there was a return to “normalcy” in the sense that schools were open and gatherings could take place. I worked with the University of Minnesota Joint Safety Team to plan and conduct a two-day workshop at the U of Mn on Chemical Safety for secondary teachers. Those who attended felt it was an excellent overview of chemical safety in high school labs. They felt there were valuable resources and speakers. There are tentative plans to repeat this workshop next summer.

An extension of the workshop was provided by Steven Butler, a member of the JST Safety Workshop planning team and presenter. He attended the Minnesota Science Teachers Association (MSTA) annual Minnesota Conference On Science Education (MNCOSE) held in Duluth Nov the 4<sup>th</sup> & 5<sup>th</sup>. Steven reported that those who attended suggested that it would be helpful for members of the JST to visit schools. The purpose would be to conduct a walk-through and identify areas that might need improvement or that pose safety hazards. Steven felt this would be a project the JST might do.

For the second year, I attended the ACS Career Fair at St. Catherine’s University on Nov. 10<sup>th</sup>. My purpose was to promote careers in Chemistry / Science teaching. I had a number of conversations with undergraduate chemistry students. While they were receptive it is difficult to judge the degree of real interest.

I feel it is important to promote STEM Teaching as a legitimate career especially now that the shortage of qualified science teachers is reaching a crisis level. In Rochester where I live, the school system is well known for excellence, yet some science teaching positions go unfilled. I myself have recently agreed to teach a middle school Earth Science class for a short while and another retired teacher has agreed to teach four of the school's Life Science classes because of the resignation of a teacher. Using retired teachers as temporary solutions to teaching shortages is not sustainable. I hope those of you in business and industry engage your companies to assist in doing what they can to promote science teaching.

## Welcome to New Local Section Members

Elections for Executive Committee positions were held in November. We would like to extend a generous welcome to Catherine Sutton, Ph.D., Sherwin-Williams, as the incoming Chair-Elect for 2023. Sarah Dimick Gray, Ph.D., Metropolitan State University, will act as the Treasurer; James Wollack, Ph.D., St. Catherine University, and Becky Guza, Ph.D., Computype, were elected as Councilors; Blair Troudt, Ph.D., UW River Falls, will serve as an alternate Councilor. Chris Douglas, Ph.D., UMN Twin Cities, and Cassie Joiner, St. Olaf College, will serve on the Nominations Committee. Thanks to all who voted!

## New Membership Benefit: ACS Link

ACS is excited to announce that all members of the ACS community will now have access to [ACS Link](#) networking platform. ACS Link provides you with a new way to connect virtually with individuals in the global ACS community who are around the corner, or around the world! This benefit is now included in your current benefits package. Have a question? The [ACS community might just have the answer](#).

## Nominations for the 2023 Heroes of Chemistry Award are now open through February 1! This award is one of ACS's

Nominations for the [2023 Heroes of Chemistry Award](#) are now open through February 1! This award is one of ACS's highest honors for industry, recognizing companies that have

developed successfully commercialized products. Celebrate the breakthrough treatments and revolutionary new products of a team from your company today!

Please email [ChemHero@acs.org](mailto:ChemHero@acs.org) with any questions.

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## [New Dates Added for Microaggressions Course](#)

Have you ever witnessed an uncomfortable or potentially offensive interaction at work or an ACS event? Learn the skills to respond in the moment. Transforming Microaggressions into Microinclusions is available for ACS Local Section and Division Officers. This course will help you to define and identify microaggressions, and learn tools to address them in real-time. Microaggressions can happen to anyone, and better addressing them (particularly in your role as a leader) can help make ACS even more welcoming to all. [Pre-register today!](#)

To learn more about the Office of DEIR check out our website or contact us at [diversity@acs.org](mailto:diversity@acs.org).

## [Learn About Chemistry's Impact in Mandarin and Arabic](#)

Chemists know how influential their work is to society, but not everyone is aware of these secrets. So tell someone! [The ACS National Historic Chemical Landmarks program](#) helps do just this. And now those who speak [Arabic](#) or [Mandarin](#) can learn about the development of penicillin in their respective languages. There are also [six landmarks translated into Spanish](#).

## **IUPAC Global Women's Breakfast 2023: Breaking Barriers in Science**

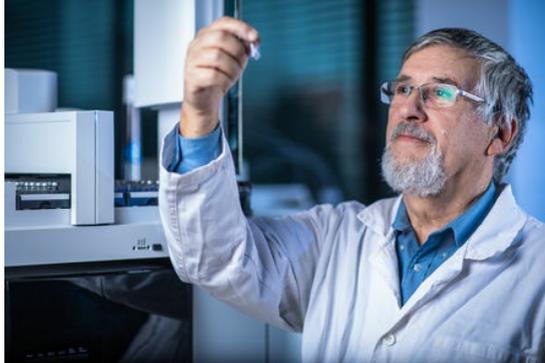
Join the global chemistry community in:

IUPAC Global Women's Breakfast 2023: Breaking Barriers in Science

- Building active networks of people of all genders
- Overcoming barriers to gender equality
- Advancing UN Sustainable Development Goals

Learn more about hosting or attending events on February 14, 2023 as [ACS celebrates the IUPAC Global Women's Breakfast](#).

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## MNACS Senior Chemists

The Senior Chemists are in Action Again!

After two years of not meeting or meeting via Zoom, the MNACS Senior chemists are back in action. On October 12<sup>th</sup> a group of Senior Chemists lunched at Stouts Pub on Larpenteur Avenue in Falcon heights, and then visited the new Bell Museum, located on the University of Minnesota Twin Cities campus in St Paul. Entrance to the Museum was paid for by the Senior Chemist funds. The group was impressed with the new museum. Some of the features of the original Bell Museum have been retained, like the wildlife dioramas, but there are also new areas. For example, there is an excellent new section about astronomy and a digital planetarium. Some of the group bought tickets for the planetarium show after visiting the museum. There is also a new "Touch and See" lab. The building is attractive and modern in design. It was opened in 2018. Everyone enjoyed the visit.

On November 28<sup>th</sup>, the Senior Chemists got together again for a lunch at the Green Mill on Hudson Road in Woodbury. We were given a private room. After lunch, Todd Williams, a former 3M employee, gave a short talk about his retirement activity: Wood Turning. He brought along several beautiful examples of wooden objects that he had made and explained how he got started and learned how to do this. He explained some of the techniques involved. A couple of the wooden objects he had made were given away as door prizes.

If you are a member of MNACS and over 50 you are welcome to come along and join the Senior Chemists anytime. You do not have to be retired, though most of our members are. The announcement for the month's Senior Chemist activity is usually featured in the MNACS announcements sent out by Taysir Bader. Ken Latham (Century College, retired) sends out emails to the list of email addresses that he has for senior chemists. We ask that you reserve by responding to Ken Latham since we need to know the expected numbers. Spouses and guests are always welcome! Usually, the group consists of between 12 and 15 people.

Lynn Hartshorn (University of St Thomas, retired) organizes the group. She is always happy to receive suggestions for places to visit and/or lunch. Please contact Lynn at [lghartshorn@stthomas.edu](mailto:lghartshorn@stthomas.edu) or Ken Latham at [lathamke@mac.com](mailto:lathamke@mac.com) if you would like to be added to our list; we work with a list from ACS which is not always up to date.

The activity for January is not yet planned and we would be happy to receive suggestions! If you would like to give a short talk, let Lynn and Ken know. We also need suggestions for interesting places to tour/visit.

We would like to send our best wishes for the Holiday Season to everyone and look forward to meeting in January.

Lynn Hartshorn

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## Adjunct Professor Opportunities at Hamline University

Hamline University Chemistry department has three open adjunct professor positions, two gen chem labs, and one organic lab for this coming spring. Anyone who is interested in excellent teaching opportunities please contact Nick Schlotter [here](#).

## Chemistry Teaching Faculty and Organic Lab Director at the University of Minnesota

The University of Minnesota Chemistry department is searching for a term contract non-tenure track Assistant Professor position serving as the organic lab director with a 12-month, annually renewable appointment beginning the summer or fall term of 2023 (May 31, 2023, or later). Both junior and senior hiring levels will be considered. The full listing can be viewed [here](#). Questions can be directed to professor Christy Haynes [here](#).

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## In memoriam: Professor Emeritus Wayland E. Noland (12/08/1926 - 10/04/2022)

MINNEAPOLIS/ST. PAUL (10/07/2022) — Professor Emeritus Wayland E. Noland passed away on October 4<sup>th</sup>, 2022 at the age of 95. He first arrived on the University of Minnesota's campus 71 years ago, followed by a 64-year faculty career, giving him the distinction as the longest-serving tenured faculty member in the university's history. For the many people whose time in Chemistry falls within Prof. Noland's notable career, it is difficult to think of the department without him.

Noland had remarkably served the local ACS section for over 48 years. He has held many positions including member of the arrangements committee (1954-56), Chairman of the arrangements committee (1956), elected member of the Nominations Committee for 11 years (1963, 1976-77, 1982, 1985, 1988-89, 1994, 1996, 1998, 2000), Chairman of the Nominations Committee for 8 years (1976, 1982, 1985, 1988-89, 1996, 1998, 2000); Section Committee Elect and Chairman of the Program Committee (1969), Section Chairman (1970); National Council for 32 total years, Alternate Councilor for 11 years (1971-73, 1979-80, 1990-95); Councilor for 21 years (1973-78, 1981-89, 1996-2001); and finally Awards Subcommittee, Judge for College Chemistry Teachers Award (1973-75)

Noland earned his bachelor's degree with high honors in 1948 from the University of Wisconsin-Madison, where his parents were members of the Zoology department. He then went on to earn his master's degree (1950) and doctorate in chemistry (1952) from Harvard University, specializing in physical organic chemistry. His roots at the University of Minnesota are deep, starting with his research as a DuPont post-doctoral fellow working with Professor Walter M. Lauer in 1951-52. He joined the faculty in the Department of Chemistry in 1952, which has included serving as its interim department chair from 1967-1969. Following his retirement in December 2016, he continued to operate an active lab and research group until an injury in August 2019 prevented him from working on campus. The closure of his labs followed at the start of the COVID-19 pandemic in March 2020.

"It would be almost impossible to overstate the enormous positive impact Prof. Noland had on our department, and perhaps most importantly on so many students over so many years," according to department head Prof. David Blank. "Whenever I meet with our alumni all over the country, members of every generation, Prof. Noland is one of the first topics to come up, and this is usually followed by remarkable stories of the significant impact Prof. Noland had on their lives."

His research focus shifted over the years to synthetic and mechanistic organic chemistry, resulting in 150 publications. Throughout the years, he made more than 7,000 chemical compounds, seeking to create one that can be used as a pharmaceutical to combat disease. His research has been in heterocyclic chemistry with a focus on indoles and other nitrogen-containing ring systems. In the latter years of his career his research was concentrated on heterocyclic nitrogen and/or sulfur chemistry, including the chemistry of nitro compounds, with emphasis on synthesis, mechanisms, and submission of compounds for testing for medicinal activity. To date, activity has been found against cancer in two classes of compounds, HIV, and tuberculosis. Emphasis was placed on the synthesis of benzofuran oxides, nitriles, isonitriles, and their analogs, to observe interactions, especially with halogens, in the crystalline state. This work was built in part on the work of the late Professor Emeritus Doyle Britton.

Faculty colleague Prof. Tom Hoyer recalls that "Wayland pioneered investigations into topics as disparate as the Nef reaction, Diels-Alder reactions of nitrogen-containing heterocycles, condensative cyclization chemistries, nitroalkenes, and, of course, all-things-indole. "Mr. Indole" taught our course in heterocyclic chemistry over decades. He was a stickler for nomenclature, which I learned first-hand in his office during my interview here for a faculty position. He politely (as always) but effectively corrected my use of the jargonish 'tosic acid' with the comment 'I presume you mean para-toluenesulfonic acid.' Noted to self, it was classic Wayland, always the consummate teacher-scholar."

Noland was self-effacing, but he has touched thousands of students. It is estimated that he has taught more than 14,000 students over the years, mentored more than 350 undergraduate students, 43 master and 46 doctoral graduate students, and about 30 post-doctoral fellows. He loved teaching and was honored in 1964 with the Institute of Technology Distinguished Teaching Award and in 2006 with the Charles E. Bowers Faculty Teaching Award. He taught his last class, "Advanced Organic Chemistry: Heterocycles," in the spring of 2016.

His legacy is indelibly tied to providing research opportunities to undergraduate students, supporting undergraduate researchers in his lab along with Project SEED students and fellowships in the summer. He was director of the department's National Science Foundation (NSF) Undergraduate Research Program for 11 straight years, including 11 summers and four academic years from 1959 to 1970, and the NSF-Research

Experiences for Undergraduates program from 1987 to 1993, including six summers with 193 summer and 35 academic year participants.

He fostered strong connections with the many alumni of the Noland group. The combination of his science, his unique personality and his steadfast support of his students is what prompts so many former group members to cite the experience with Noland as a formative step in their careers. Noland loved to fish, as evidenced by annual summer trips with his research group to Lake Bertha near Pequot Lakes, MN.

His natural gift for maintaining relationships with many students, staff and faculty colleagues made Noland a first point of contact on the history and people of the department. He worked closely on alumni and donor relations with the College of Science & Engineering's Kathy Peters-Martell who works on department fundraising efforts. Six semesters of economics as an undergraduate student led Noland to an interest in investing. His success on this front allowed him to become a major supporter of each of his alma maters. At the University of Minnesota he enthusiastically created multiple undergraduate student scholarships and graduate student fellowships over the past 45 years. "My gifts have always been to help students become better students and better citizens as a result of their education at the University," he once explained.

Noland had a natural curiosity about things and how they work. He was a long-time collector of just about anything, including dumpster-diving for interesting finds. He was passionate that things should not be wasted, especially things that can be recycled. This extended to his teaching freshman seminar courses on recycling processes. For decades it was common to find him digging for cans and other treasures, which led to dramatic experiences such as having to do a backflip out of a dumpster which tilted toward him on a slope. There were many times he has been offered money, which he would decline with thanks when people saw him looking in the garbage.

He was interested in the weather. As a high school student, Noland was one of 40 winners in the 1944 Westinghouse National Science Search, honored for his research on "Amateur Weather Forecasting." Winners received an expense-paid trip to a national meeting in Washington, D.C., where they met Eleanor Roosevelt on the steps of the White House for a photo, and Vice President Henry Agard Wallace.

One of Noland's long-time service commitments was to Organic Syntheses Inc., a non-profit that publishes organic chemistry books and information on an open access website. Noland had been involved with this organization since 1969, serving as secretary, vice president, and editor of Collective Volume 6, which is about 1,200 pages.

He was also active with the Minnesota Section of the American Chemical Society (ACS) for 48 years, serving as its chair in 1970, and as a councilor for 21 years or alternate councilor for 11 years, which meant being a delegate to the ACS Council and attending its national meetings. He worked on local elections (1990-2004), serving as an election judge for 13 years in his neighborhoods of Prospect Park and Seward. He also served on the East River Gorge Citizens Advisory Committee (1990-1994), working to make improvements and preserve the river area so others can enjoy its amenities. He was a consultant in petroleum technology and heterocyclic chemistry for the Sun Oil Co. in Marcus Hook, PA, for 11 years (1958-1970).

Noland believed in service. "I have always believed that my purpose in life is to do good in many ways," he said in 2016, "particularly, if that is creating something useful for the future."

Noland once offered advice for students to "make up your mind what you want to do, pursue it with vigor, and try to do public service on the outside." And for his colleagues, "Be friendly, stop by each other's office and say 'Hi' if the door is open, and take an interest in each other's activities as widely as possible."

In a 2007 interview, Noland stated "I hope that I will, in a favorable way, live on in the memories of the people I've been associated with and those I have helped."

Watch the video of Prof. Noland's memorial service [HERE](#)

View the slideshow from the memorial service [HERE](#)

Share memories, stories and pictures about Prof. Noland [HERE](#)

We would like to connect with Noland group alumni. A short survey is [HERE](#)



Visit our Website

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