# Triannual Newsletter



PROVIDING A COMMUNITY TO INSPIRE, AMPLIFY AND COLLABORATE ON COMPELLING-CUTTING EDGE RESEARCH, EDUCATION AND OUTREACH IN THE CHEMICAL/BIOCHEMICAL SCIENCES.





Every experiment contains crucial (pun intended): elements variable being tested, negative control(s), and positive control(s), for example. As I reflect on the current state of academics, science, and funding, I concluded that we find ourselves as components of an experiment. The reaction is well underway. We all have a decision to make concerning our role in the experiment. I decided to take on the role of a "positive control." Like me, I encourage us all to continue the investment of our intellectual energy towards the advancement of our respective disciplines while maintaining the highest level of academic and scientific integrity. Remain determined and consistent in applying for funding. Continue to researchers mentor to be competitive. Continue to invest in pedagogical new techniques. elevating how you approach teaching to effectively prepare the generation of academics. Lastly, just as each component of a reaction, each functional group, is unique, your intellectual distinctiveness remains a critical key towards the advancement of academics, science and in the substantive solutions that will be produced to benefit society, as a result.



Two students from Lincoln High School in Sioux Falls completed the 2025 US National Chemistry Olympiad Exam held April 5, 2025 at Augustana University.

Congratulations to Scout Rohwedder, Lex Kaufhold and their high school chemistry teacher at LHS Mr. James Jarovski.



Scout (left) and Lex (right) at the Spring Awards Banquet

Details about the 2026
USNCO will be shared in
the September newsletter.
You can follow the
progress of the 20 students
selected for the Study
Camp (June 1-14) and the
International Chemistry
Olympiad (July 5-14) at the
USNCO Website:
<a href="https://www.acs.org/education/olympiad.html">https://www.acs.org/education/olympiad.html</a>

# In this newsletter you can expect:

Spring 2025 ACS
Updates from
Councilor and
Committee on
Nomenclature,
Terminology
and Symbols

Spring 2025 Awards Banquet Recap

2025 US National Chemistry Olympiad Recap

Upcoming Events - Mark your Calendar!

Undergraduate Student Spotlights

Fall Research Symposium Announcement

ACS Midwest Regional Conference Information

Graduate Student Spotlights



# **Local and National USNCO Exams Certificate**

Scout Rohwedder - Lincoln High School, Sioux Falls
Lex Kaufhold - Lincoln High School - Sioux Falls
Mentored by James Jarovski (Chemistry teacher LHS)

# **Outstanding Senior Undergraduate Student Award**

Aidan Green (USF) - nominated by Adam Sturlaugson Ryan Schulte (Augustana) - nominated by Zachary Schulte Erin Danielewicz (Augustana) - nominated by Jetty Duffy-Matzner Samuel Osbourne (Augustana) - nominated by Barrett Eichler

# Graduate Student Research Excellence Award

Mahadi Hasan (USD) - nominated by Grigoriy Sereda Sandeep Paudel (SDSU) - nominated by Srinivas Janaswamy Sumi Regmi (SDSU) - nominated by Srinivas Janaswamy

> Excellence in Diversity and Outreach in Chemistry Award

> > Douglas Raynie (SDSU)







# Undergraduate Student Spotlight

#### **Aidan Green**

#### **University of Sioux Falls**

My name is Aidan Green. For simplicity's sake I tend to say that I am from Omaha, Nebraska. But I moved around a lot as a kid for my father's career in the Federal Bureau of Investigation. As a result, I lived in Michigan, Morocco, Wisconsin, Egypt and Nebraska for a few years at a time.

I did not originally intend to study chemistry at the beginning of my college education. However, after excelling in General Chemistry, Organic Chemistry and Biochemistry for my Biology major and seeing that a Chemistry minor could be easily accomplished, I added the minor. Furthermore, being selected as the General Chemistry tutor by Dr. Mwangi and Dr. Sturlaugson at USF fostered an interest and courage to pursue Chemistry further. A year

aree and only a few classes

later, I only required one more advanced topic course and physics to complete my biology degree and only a few classes for the chemistry minor. Rather than allowing my last year to be easy, I elected to challenge myself and switch my Chemistry minor to a major for only a few more classes. I knew that I would be dissatisfied with filling my last two semesters with easy electives and I enjoyed studying chemistry, so it was not too difficult of a decision. Ultimately, I intended on adding a chemistry major to diversify the potential career fields and fields of research I could pursue in the future. In particular, I was curious about the potential applications Chemistry could be used for identifying and quantifying pollutants and toxic chemicals in local habitats. In this manner, the quantitative and instrumental side of chemistry would harmonize well with my ecology-focused biology degree.

I was blessed to be able to participate in Dr. Mwangi's research on molecularly imprinted polymers for the template molecule Tyramine Hydrochloride. This was a truly experimental process that required a lot of educated changes to monomer ratios in order to achieve the best results. Furthermore, analysis of the created polymers and tyramine concentrations was informative of the research process. Furthermore, I was also able to join Dr. Graham at Black Hills State University over the summer through Biomedical Research Infrastructure Network (BRIN) internship. This research did not involve chemistry but focused on monitoring the nesting population of American Dippers, Cinclus mexicanus, in the Black Hills of South Dakota. Furthermore, this research involved the sampling of American Dipper blood to determine whether Haemosporidian parasite infection affected the reproduction rates across the declining population. Over the course of the summer, we monitored 13 breeding pairs in Spearfish Canyon, surveyed several miles of river, and collected and analyzed 29 adult samples for the presence of parasites via qPCR and confirming results with Sanger sequencing. Our analysis of these samples discovered that all samples were negative for the presence of any Haemosporidian parasite infection. During the internship I was able to present my findings from the summer in a poster session in Sioux Falls, SD. As a result of the BRIN internship and an interest in the research, Dr. Graham extended an offer for me to help write the report for the South Dakota Game, Fish and Parks beyond the internship. I accepted and now am blessed to have a writer's credit to add to my CV for future research projects. Furthermore, I am currently working with Dr. Graham to get the research published in an academic journal.

My plans for the future are to stay in Sioux Falls and try to get a full-time research job at Sanford Health or work with the South Dakota Game, Fish and Parks. Eventually, I would like to continue my higher education and enter graduate school. However, I am unsure of what field of study I would like to pursue and would rather join the workforce before aimlessly getting a master's degree or doctorate.

# Undergraduate Student Spotlight

#### **Ryan Schulte**

#### **Augustana University**

My name is Ryan Schulte, a chemistry major at Augustana University. I am originally from Yankton, SD, where I spent a lot of my time playing tennis.

At Augustana, I have spent the last two years conducting research under the mentorship of Dr. Zachary Schulte. My research has primarily focused on synthesizing metal-organic frameworks for drug-delivery and biological imaging applications. I have had the privilege to present my work at two consecutive Arthur Olsen Research Symposiums, the 2024 ACS Sioux Valley Regional Meeting,



ACS Midwest Regional Meetings in St. Louis, MI, and Omaha, NE, and most notably the ACS National Conference in San Diego, CA.

In addition to research, I am on the leadership board for the Student Members of the American Chemical Society (SMACS) club on campus. Currently, I am preparing to apply to graduate school with the intention of pursuing a research career.

# Graduate Student Spotlight

# Sandeep Paudel South Dakota State University

I am Sandeep Paudel, a PhD candidate in Food Science at South Dakota State University. I am originally from Lumbini, Nepal. I completed my undergraduate degree in Food Technology from Tribhuvan University, Nepal. Later, I joined as an MS Food Science student at South Dakota State University in the 2022 Fall, and then transitioned to a PhD degree. I am a Graduate Research Assistant in the "Functional Carbohydrate Laboratory" under the supervision of Dr. Srinivas Janaswamy in the Department of Dairy and Food Science.





For every individual, the home is the first school to learn, develop, and hone skills. I grew up in an agro-based family and have closely observed the loss of grains, fruits, and vegetables during harvesting and then through the supply chain from the field to consumers. I spent time with my parents on the farmland and farm and was intrigued by the food production lifecycle, emphasizing the sustainability and circular bioeconomy. The childhood lessons I gained from my family and neighboring farmers in the community instilled a great affection and attraction toward the chemistry of food and ultimately in Food Science.

I am currently extracting cellulose from agricultural residues and byproducts to make biodegradable and plastic-replace films. Furthermore, my research focuses on utilizing cellulose films to minimize the post-harvest loss of fruits such as raspberries and strawberries. During my PhD research, I have presented my research at 20 various local, regional, national, and international conferences and meetings, such as ACS, IFT, and Phi Tau Sigma. I have published 4 research papers as of now from my current research, which are listed below, and a few more will be published shortly.

- Paudel, S., Regmi, S., and Janaswamy, S. (2023). Effect of glycerol and sorbitol on cellulose-based biodegradable films. Food Packaging and Shelf Life, 37, 101090. <a href="https://doi.org/10.1016/j.fpsl.2023.101090">https://doi.org/10.1016/j.fpsl.2023.101090</a>
- Paudel, S., and Janaswamy, S. (2024). Corncob-derived biodegradable packaging films: A sustainable solution for raspberry post-harvest preservation. Food Chemistry, 454, 139749. https://doi.org/10.1016/j.foodchem.2024.139749
- Regmi, S., Paudel, S., and Janaswamy, S. (2024). Development of eco-friendly packaging films from soyhull lignocellulose: Towards valorizing agro-industrial byproducts. Foods, 13, 4000. https://doi.org/10.3390/foods13244000
- Paudel, S., and Janaswamy, S. (2025). Use of alfalfa cellulose for formulation of strong, biodegradable film to extend the shelf life of strawberries. International Journal of Biological Macromolecules, 290, 139004. <a href="https://doi.org/10.1016/j.ijbiomac.2024.139004">https://doi.org/10.1016/j.ijbiomac.2024.139004</a>



After my Ph.D., I aspire to pursue a career in academia as a researcher in the field of Food Chemistry. My long-term goal is to contribute to scientific advancements that improve food quality, safety, and sustainability. I am particularly passionate about exploring the chemical interactions in food systems and developing innovative solutions to challenges such as food preservation, new food product development, and packaging. Through academic research, I hope to mentor future scientists, foster interdisciplinary collaboration, and translate laboratory findings into real-world applications.

# Green Chemistry Travel Grant Award Blessing Ishola University of South Dakota

It's such an honor to have been awarded the competitive Sustainable Future Scholar Travel Grant to attend the 29th Annual Green Chemistry & Engineering Conference, which will take place from June 23 to 26, 2025, in Pittsburgh, PA. This event is organized by the ACS Green Chemistry Institute; chemistry for life.

The grant will cover my expenses for participating in this prestigious conference, which offers opportunities to engage in pre-conference events, GC & E Student Experience, service projects, and deepen my understanding of green chemistry and engineering. I will also have the chance to network with leading experts in the field and connect with peers from around the world.

As a Sustainable Future Scholar, I have also been given the exciting opportunity for a site visit to PPG Industries, a global leader in paints, coatings, and specialty materials based in Pittsburgh. This visit will provide an exclusive insight into their innovative processes and sustainable practices, which I am eager to experience.

# Councilor Report for ACS Spring 2025 Meeting San Diego, California March 23 – 27, 2025



Greetings from your Sioux Valley Local Section Councilor. Part of my job is to attend the national ACS meetings. Normally the locations for the spring meeting are much warmer than here. That was not the case in San Diego this year, brrrrr. Here are some bullet points that might be of interest to the group that I learned about this meeting:

- I am currently serving on the Committee for Nominations and Elections and have been in leadership positions to set up the new International Councilors that will be selected starting this Fall. Please let me know if you have any good colleagues in faraway places that might be interested in learning more.
- There is a plan to change the geographical area that is assigned to our local section. The Local Section Activities Committee would love to hear any feedback. Please visit the following to review the Working Group's recommendations: <a href="https://www.acs.org/local-sections/acs-unassigned-territories.html">https://www.acs.org/local-sections/acs-unassigned-territories.html</a>.
- The ACS has great resources for undergraduate and graduate students. Please share them
  - (<a href="https://gpchemist.acs.org/">https://gpchemist.acs.org/</a>). Magazine for graduate students and postdocs
  - (<u>https://www.acs.org/education/students/graduate/scholarships.html</u>). Lists scholarships and internships available for graduate students
  - (https://www.acs.org/education/students.html) Offers career planning advice for undergraduate and graduate students.

A full report from the national meeting from me is available on our local section website or by email request. Please contact me at (<u>jetty.duffy@augie.edu</u>) if you any questions or concerns. I would love to hear from you.

Councilor Sioux Valley Local Section Jetty Duffy-Matzner



# Save The Date! Fall Research Symposium · A forum for undergraduate and SOUTH DAKOTA STATE UNIVERS SATURDAY, SEPTEMBER graduate students to present their research in the form of a poster. · Opportunity to win a \$400 travel award to an ACS meeting. · Watch email and social media for registration information coming soon!

## **ACS Midwest Regional Awards**



(Nomination details here: <a href="https://www.mwrm2025.org/awards-1?">https://www.mwrm2025.org/awards-1?</a>
istry for Life\*

sc=250509 em\_abstract\_mtg\_MWRM2025)

- Regional Award for Excellence in High School Teaching
  recognizes a high school teacher within the region who excels in the classroom and
  beyond. Deadline: May 30
- E. Ann Nalley Award for Volunteer Service to the American Chemical Society recognizes the volunteer efforts of individuals who have served the American Chemical Society, contributing significantly to the goals and objectives of the Society through their regional activities. **Deadline: May 30**
- Partners for Progress and Prosperity Regional Award encourages and recognizes successful and exemplary partnerships within the Region. Deadline: May 30
- Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences recognizes individuals and/or institutions that have advanced diversity in the chemical sciences and significantly stimulated or fostered activities that promote inclusiveness within the region. Deadline: August 1
- Midwest Region Board's Travel Award for Undergraduate Students will have 5 travel awards to support undergraduate travel of up to \$500 each. This program will support travel for undergraduates at schools in the MWRM area to the 2025 ACS MWRM meeting. Deadline: September 17



# Abstracts submissions are open for the Midwest Regional Meeting 2025

MWRM 2025 will be held from Sunday to Tuesday, October 12 - 14, 2025 hosted by the University of Missouri Local Section.

The deadline to submit an abstract is **Monday, July 7**. Abstracts accepted in the categories below - use link to access the Abstract Submission portal.

https://www.acs.org/events/regional/midwest/2025-mwrm-call-for-abstracts.html

## **General Sessions**

- Analytical Chemistry
- Biochemistry
- Chemical Education
- Inorganic Chemistry
- Organic Chemistry
- Physical Chemistry



# <u>Organized Special Symposia:</u>

- Advanced Optical Imaging with Nanomaterials
- Advances in Peptide Chemistry: Synthesis, Structure, and Function
- Discovery and Destiny in Organic Chemistry
- Emerging Biosensing Techniques for Fundamental and Practical Applications
- Enhancing Sustainability through Chemical Catalysis
- From Structure to Function in Solid-State Supramolecular Chemistry
- Improving the Reliability of Methods and Processes in an Industrial Setting
- Polymers and Materials
- New Directions in Spectroscopy and Dynamics
- Unlocking the Potential of Deep Eutectic Solvents



# ACS Spring 2025 Committee on Nomenclature, \* Terminology, and Symbols (NTS) Hybrid Meeting; San Diego, CA March 24, 2025

Greetings from your NTS Representative Adam Sturlaugson!

The Spring meeting of the ACS Committee on Nomenclature, Terminology, and Symbols took place on March 24th at 10am (PDT). I attended in-person as a member of the committee, which consists of twelve members, six associate members, an ACS Committee on Committees liaison, and an ACS staff liaison. The chair for this year's committee is Dr. Hayley Brown, and I am just beginning my second 3-year term as a member. The mission of the committee is to educate, facilitate, and advocate for the effective use of representations in chemistry for all. NTS strives to fulfill its mission through three goals:

- **Goal 1:** Educate: Develop, improve, and promote resources for the effective communication of chemical representations.
- **Goal 2:** Facilitate: Establish strong partnerships to foster effective communication across diverse audiences and create a vibrant community.
- **Goal 3:** Advocate. Raise awareness of the value of a common language of chemistry and the resources NTS provides.

Other general information about NTS can be found at our website: <a href="https://www.acs.org/about/governance/committees/nomenclature-terminology-symbols.html">https://www.acs.org/about/governance/committees/nomenclature-terminology-symbols.html</a>

The meeting consisted of reports from various working groups of the committee, each linked to a specific goal as set by the NTS strategic plan. A summary of these reports is as follows:

- The committee is working to increase collaborations with other groups, including the ACS Society Committee on Education (SOCED), the American Association of Chemistry Teachers (AACT), and the National Institute for the Deaf.
- In conjunction with the AACT, the committee is working to develop a chemical representation teaching kit for K-12 educators. The selected topic is ionic bonding, and they hope to have a draft activity by the fall meeting.
- A subcommittee is working to identify common general chemistry textbook inconsistencies, with the goal of issuing recommendations to authors, editors, and publishers.
- The committee hosted a fall 2024 symposium at the Southeastern Regional Meeting of the ACS entitled Improving Communication in Chemistry for a More Inclusive Community. The committee is planning to co-sponsor a symposium with the History division at the Spring 2026 ACS meeting.
- The committee created a Chemluminary award that launched in 2025. There were no applicants, so the focus for 2026 will be to increase promotion of the award. The 2025 award funds were redirected to establish a grant for the AACT.
- The committee reviews and provides feedback to IUPAC on their provisional recommendations. Last year, two recommendations were submitted, one on the Definition of Materials Chemistry, and one on a Glossary of Terms for Mass and Volume in Analytical Chemistry.
- Publicity efforts of the committee include: participation in "Committee Row" at Sci-Mix, an upcoming chair's comment in C&EN, and media callouts by C&EN and Chemistry World.

If you have any questions about NTS, or my participation in the committee, please let me know. **Adam Sturlaugson** (Adam.Sturlaugson@USiouxFalls.edu)

# General ACS Updates and News Core Values



Passion for Science

We believe chemistry drives scientific discovery and innovation.



#### Lifelong Learning

We promote equitable access to science education, resources, and career pathways.



#### Inclusion and Belonging

We create environments where people from diverse backgrounds, cultures, perspectives, and experiences thrive.



Sustainability

We embody safe, ethical, and responsible practices.

#### A Closer Look at the ACS Vision and Mission

On January 1, the American Chemical Society introduced the ACS Strategic Plan 2025-2029. The plan, developed in 2024 and approved by the ACS Board of Directors on Dec. 6, 2024, provides a roadmap for all components of the organization. This story is part of a series looking at the various strategic components of the plan.

Read more about our society's mission and vision here.

#### ACS Graduate Student and Postdoctoral Scholars Recognition Program is open!

ACS is thrilled to invite nominations for the Graduate Student and Postdoctoral Scholars Recognition Program. Nominate individuals who have demonstrated exceptional leadership in mentoring, promoting inclusion and belonging, and ensuring research safety.

Let's highlight outstanding individuals within our communities to celebrate their achievements and support their professional growth. Learn More <u>Here!</u>

## 2025 ACS Undergraduate Award for Excellence in Chemical Safety and Ethics

The American Chemical Society (ACS) Committee on Ethics (ETHX) and the ACS Division of Chemical Health and Safety (CHAS) are excited to announce a call for nominations for the third annual ACS Undergraduate Award for Excellence in Chemical Safety and Ethics is now open. This award recognizes senior undergraduates who have exemplified the crucial link between chemical safety and ethical conduct.

Submit nominations at the following link: <a href="https://forms.office.com/r/w03ppjN0bw">https://forms.office.com/r/w03ppjN0bw</a>
Nominations will be accepted until June 15, 2025. For questions, contact Mark Cesa at markcesa@comcast.net.

# **Exciting funding opportunities to support innovation and engagement**

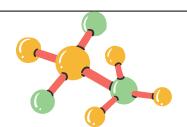
#### **LS-MEET Grant**

Receive up to \$2,000 to strengthen your local section through events, outreach, or technology that boost recruitment and connection. Applications due May 31, 2025. Contact: <a href="mailto:lsac@acs.org">lsac@acs.org</a>. [Review <a href="mailto:full details">full details</a> and <a href="mailto:apply here">apply here</a>]

#### **Innovative Project Grant (IPG)**

Apply for up to \$3,500 to launch a project that's new to your section—even if inspired by other local sections. Strengthen operations or seize a unique opportunity. Applications due June 30, 2025. [Review <u>full details</u> and <u>apply here</u>]





Join us for upcoming local, regional and national events!

- Sioux Valley Summer Social Event at The Levitt (Sioux Falls)
  - Thursday, June 26<sup>th</sup> at 7pm
- ChemED 2025
  - July 20-24 in Golden, CO
- Fall 2025 ACS Meeting
  - August 17-21 in Washington, DC
- Fall Research Symposium
  - Saturday, September 20 at South Dakota State University
- 2025 ACS Midwest Regional Meeting
  - o October 12-14 in Columbia, MO
- Pacifichem 2025
  - December 15-20 in Honolulu, Hawaii
- 2026 ACS Spring Meeting
  - March 22-26 in Atlanta, GA
- Thank you for reading! Look for the next edition in September! • 2026 BCCE (University of Wisconsin)
  - July 26-30, 2026 in Madison, WI



## Resources

- **ACS Meetings & Events**
- **Chemistry News**
- **ACS Webinars**
- ACS Division of Chemical Education
- Molecule of the Week

FOLLOW US ON SOCIAL MEDIA	https://www.facebook.com/SiouxValleyLocalSectionACS/ https://www.instagram.com/siouxvalleyacs/ Website: https://www.siouxvalleyacs.com/ Email: chemistry@siouxvalleyacs.com Submit Spotlight Information or suggestions for events/articles to chemistry@siouxvalleyacs.com or to melody.jewell@sdstate.edu
WE WANT TO HEAR FROM YOU!	<ul> <li>Seeking volunteers for Member Spotlight (Research and Teaching),         Undergraduate Student Spotlight and Graduate Student Spotlight     </li> <li>For all spotlights, please submit photo along with blurb to include current position/institution, brief description of current position and fun information about you and your relationship with chemistry!     </li> <li>Students also include any research, accolades, and future plans.</li> <li>Seeking interesting research or pedagogical techniques for a "Feature" Corner</li> <li>Consider sharing the things you are doing in the world of chemistry!</li> </ul>