



CHEMISTRY NEWS

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Council on Undergraduate Research

Issue 3 Season 2024

Welcome from the Chemistry Division Chair

Dear CUR Chemistry Community,

On behalf of your team of [Division Representatives](#), I want to say greetings and offer my well-wishes for a great Fall 2024! CUR Chemistry is excited about several initiatives in the coming year, focusing on better engaging with, connecting with, and providing value to all of you, our members!

Keep an eye out – all our members will soon be enrolled in our **newly formed online community space!** This will be our hub for Chemistry Division news, resources, and conversations (read more in the newsletter). Whether you're a long-time fan or just hearing about our [CUR chemistry blog](#) and [Podcast](#) (Chem4Real), we hope to engage better and involve you through this new CUR Chem community space with these great venues and *much* more. One easy thing to do, **tell us** if you or someone you know has recently published or received funding for work that prominently engages undergraduate researchers – we'll add this to our new CUR Chem virtual "Wall of Celebration"!

This year, we will also shift some focus to productively engage the ever-growing presence of artificial intelligence (AI) in our work, providing dedicated space for

resources, perspectives, and conversations. Some of you may have seen our CUR Chemistry session "**AI, Computational Chemistry, and Undergraduate Research – Delivering Essential Skill Sets and Curriculum for Undergraduates**" at the ACS meeting in Denver, CO. We plan to continue offering these sessions in connection with a space dedicated to information and conversations about AI in our CUR Chem community.

Of course, we will continue our usual activities to engage and promote high-quality undergraduate research and our community:

- In this Newsletter, read about the insightful perspective of the 2024 CUR Chemistry Undergraduate Mentoring awardee, **Dr. Alena Kubatova**. We'll be looking for great candidates for the [2025 award](#) cycle, with nominations due in January!
- Consider submitting an abstract (due soon!) to our CUR Chem led symposium at the upcoming Spring ACS meeting "CUREs Across the Chemistry Disciplines". We will also be hosting our traditional CUR Chemistry 'Meet and Greet' at the San Diego meeting, stay tuned for more details in our future newsletters.
- We are looking to connect with you on [LinkedIn](#)! Join our network there and keep our community informed

about professional opportunities and outcomes!

- Looking for a Mentor? Whether you're just starting or looking to re-boot your career, CUR Chemistry can connect you with a [Mentor](#) related to your area of expertise and goals.
- Finally, if you are interested in volunteering as a CUR Chemistry Representative or Councilor, look for the nominations call soon. Please feel free to contact us with any questions ahead of the early January nominations deadline.

We are excited to be starting the 2024 – 2025 academic year with great plans to bring value to our community and better serve as a hub, bringing our members together in support of our shared mission: to support high-quality mentored research (of all kinds!) in Chemistry and Biochemistry. Best wishes for a great year, and remember, we would love to hear from you!

Sincerely,



[Joe Reczek](#)

Chair – Chemistry Division of the Council on Undergraduate Research
Professor of Chemistry
Denison University

About CUR's Chemistry Division

The Chemistry Division of the Council on Undergraduate Research—the oldest and largest division of CUR—provides networking opportunities, activities, and resources to assist chemistry administrators, faculty members, students, practitioners, and others in advancing mentored undergraduate research.

Division Chair

[Joe Reczek](#), Denison University

Division Vice Chair

[Sarah Shaner](#), Southeast Missouri State University

Division Secretary

[Sudeep Bhattacharyay](#), University of Wisconsin-Eau Claire

Newsletter Committee

[Jeff Cannon](#), Occidental College

[Geneive Henry](#), Susquehanna University

[Patricia Ann \(Pam\) Mabrouk](#), Northeastern University

[Sarah Shaner](#), Southeast Missouri State University

A list of the Chemistry Division Representatives can be found [here](#)

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Council on Undergraduate Research

Setting An Example



Alena Kubatova, 2024 ChemCUR
Outstanding Mentor Awardee

I feel honored, grateful, and humbled to receive the CUR Chemistry Award for undergraduate mentoring. Early on, when I started working in research as a postdoc, I realized that I liked working with others and sharing what I learned. I wanted to help teach other young researchers things I had to learn the hard way and things that couldn't be found in textbooks. Eventually, this interest led me to pursue an academic career.

At that time, if I were asked what is "mentoring," I would describe mentoring and teaching with a focus on technical work. My mentoring approaches were initially intuitive, based on my personal experiences and what I learned from my own mentors. I was lucky to have several fantastic mentors – including my parents, throughout my career. These mentors provided informal support, often as role models sharing their views and strategies; I followed my career path by following their examples that showed me what was possible. I also used this approach during my informal mentoring but found it was

mainly effective for mentees of similar views and cultural backgrounds.

Realizing that what worked for me does not work for everyone, I started to look for ways to provide better support for my students, although I still did not think of this as "mentoring." In my lab meetings, we started conversations about students' career paths, aiming to address graduate students' responsibilities and driving power. Yet, very little was discussed with regard to mentors' responsibilities.

The turning point in my own mentoring pathway was when I became the principal investigator on an S-STEM award in 2011 from the NSF/Division of Undergraduate Education. This started nearly 13 years of continuous funding for undergraduate financial support from NSF. I worked with a collaborative team of many amazing colleagues, all highly motivated to provide the best research and mentoring experiences. Through this work, we learned and implemented effective mentoring practices that allowed us to reach over 70 students in STEM disciplines at UND.

During this time, I also had the privilege to be part of a research study on the effect of mentoring on students' science identity; we found that effective mentors share their authentic selves with their students, sharing their own past successes and failures. These close personal relationships with mentors build mentees' psychological safety and trust, that leads to student success (<https://journalhosting.ucalgary.ca/index.php/TLI/article/view/71999>). Today, I view authenticity as a central building block for my mentoring. I also strive to understand how different mentees perceive things, their life views, personalities, and their cultures. I try to personalize mentoring to each individual through mutual respect.

I believe that we cannot just work from our own experiences; we have to learn what works for others, their perceptions, and motivation. Mentorship is about listening, compassion, and guidance. Will I eventually understand everyone? As a scientist, I don't think that's feasible, but I know I can keep trying and provide the best mentorship that I can, just like many other mentors do.

I want to acknowledge all my mentors (formal and informal) and colleagues for their way of showing me what is possible and encouraging me when one sentence gives me the confidence to continue in challenging times. I want to thank my mentees, who often gave me trust and friendship, for the privilege to help them with their careers. Both my mentors and mentees – many of them now my friends led me to become who I am today – Thank you!

2024 ChemCUR Outstanding Mentorship Awardee, Chester Fritz Distinguished Professor, Chemistry Chair. With Ph.D. in Analytical Chemistry from Charles University, Prague, Czechia, she joined the University of North Dakota Chemistry in 2005. Her research focuses on the study of atmospheric particles, and understanding the contribution of pollen. Other projects involve the characterization of renewable feedstocks and biologically active species in plant materials. She received a National Science Foundation CAREER grant and continuously works on projects with Marvin Company. Her research resulted in over 80 peer-reviewed publications. Kubatova also aims to provide students' motivation, receiving NSF-S-STEM funding for +80 undergraduate students.

CUR Recognizes Prof. Geneive E. Henry (Susquehanna University) with the 2024 CUR Fellows Award for Excellence in Undergraduate Research Leadership



Dr. Henry and students participants in the 2021 Posters on the Hill

Geneive E. Henry, Charles B. Degenstein Professor of Chemistry at Susquehanna University, is the 2024 recipient of the CUR Fellows Award for Excellence in Undergraduate Research Leadership. <https://www.cur.org/geneive-henry-susquehanna-university-honored-as-2024-cur-fellow/> This award recognizes her leadership and excellence as a role model in undergraduate research, scholarship, and creative activities. She also earned the CUR Chemistry Division's Outstanding Mentorship award in 2020. At Susquehanna University, she received the 2009 John C. Horn Distinguished Lectureship, awarded for outstanding scholarship and conscientious service to the university. These achievements are a testament to her commitment to the mentorship of undergraduate research students. She has directly mentored 76 undergraduate student researchers, 42 of whom are co-authors on peer-reviewed publications. In addition, she has created research

opportunities for scores of undergraduate students through cross-disciplinary and inter-institutional collaborations and has served as a co-mentor for some of these students. She has been a Representative for CUR's Chemistry Division since 2021.

**CURChem at the ACS Fall 2024
National Meeting – Three Day
Symposium on the Use of AI in
Undergraduate Research**

Sudeep Bhattacharyay (University of
Wisconsin Eau-Claire)

Dr. Joe Reczek (Denison University) and I co-organized a well-attended three-session symposium called “Engaging Broadly with AI in Research and Research Training with Undergraduate Students” at the American Chemical Society’s Fall 2024 National Meeting in Denver. The event, hosted by the Chemical Education subdivision, featured 18 speakers from academia and industry who provided valuable insights on integrating AI and Computational Chemistry into undergraduate research. The symposium included a keynote address by former ACS President Dr. Angela Wilson (Michigan State University) and a panel discussion with distinguished chemists from various Primarily Undergraduate Institutions. They discussed how research, artificial intelligence, and computational methods influence chemistry education at the undergraduate level. The participants highlighted both the opportunities and challenges associated with these advancements. Thanks to Dr. Ashley McDonald (California Polytechnic State University) for moderating the discussion and to all who attended and participated in this important conversation.

**Exciting News: a CURCommunity for
the Chemistry Division**

Starting at the end of this month, we are launching a Chemistry Division CURCommunity. As a Division member, you will automatically be enrolled. Note that you can opt-out. Like all communities within the CURCommunity umbrella, you can set how you want to receive postings, including daily or weekly digests. As your division representatives, we plan to highlight the division's activities and create an archive of useful resources for our members. We also want this to be a virtual community among those of us in the chemical sciences passionate about research with undergraduates. Use this as a place to ask questions and get input from other members about resources and ideas. The threaded archive will allow us to go back and find what has been shared in the past and reactivate a conversation or start a new one. We will highlight and provide links to our podcast series, blog posts, and other resources. We invite you to engage with us and each other in this virtual space. If you have any questions, please email Bridget Gourley bgourley@depauw.edu

**Introducing Our New CUR
Chemistry Representatives**

The CUR Chemistry Division has four newly elected Representatives for 2024. They are Dr. Jeremy K. Klosterman (University of California San Diego), Dr. Katie Mauck (Kenyon College), Dr. Arun Sharma (California State University, Monterey Bay), and Dr. Hector Palencia (University of Nebraska at Kearney). They will each serve a three-year term and bring their expertise and

experience to the Division. Below is a short introduction to help you get to know them.

Jeremy K. Klosterman has had a uniquely international journey. He received his Dr. sc. nat. from the Universität Zürich under Prof. Jay S. Siegel in 2007. He was a JSPS postdoctoral fellow in the research group of Prof. Makoto Fujita at The University of Tokyo in 2007-2010 and a postdoctoral researcher Omar Yaghi's group at UCLA in 2010. In 2011, he began his independent career in the Center for Photochemical Sciences at Bowling Green State University. In 2017, he moved to the University of California San Diego where he applies 3D printing to improve student learning and increases opportunities for all students to engage in meaningful laboratory research experiences through industry based internships.

Katie Mauck joined the Department of Chemistry at Kenyon College in 2019. She has used various spectroscopic techniques to understand energy processes and morphology in emerging semiconductor materials with applications in optoelectronics, such as solar cells and light emitting devices, during her Ph.D. in the Wasielewski Group at Northwestern and her post-doc with the Tisdale group at MIT. Katie's own research experiences as an undergraduate gave her diverse opportunities, from art conservation science research in museums to a job at a nanotechnology start-up. Now, working with undergraduate researchers at Kenyon, she uses benchtop spectroscopic methods to address problems at the intersection of physical and materials chemistry, with a particular focus on organic semiconductors.

Arun Sharma currently serves as an Assistant Professor of Chemistry at California State University, Monterey Bay.

He holds a Ph.D. in Physical-Theoretical Chemistry from the University of Southern California. His research focuses on computational chemistry, machine learning applications, and chemical education. His group has secured funding from the NSF and USDA, and his work is widely published, often with undergraduate co-authors. Arun is passionate about mentoring students and advancing innovative chemistry curricula with computational tools.

Hector Palencia is a Professor at the University of Nebraska at Kearney. He earned his Ph.D. in organic chemistry from the University of Nebraska-Lincoln/Universidad Nacional Autonoma de Mexico, and his research interests are in organocatalysis, biofuels/biomass, organometallic chemistry, and synthetic methodology.

Scholarship & Practice of Undergraduate Research (SPUR) Wants You!

CUR's scholarly journal is [Scholarship & Practice of Undergraduate Research](#) (SPUR). SPUR welcomes submissions for research studies and reviews on all forms and aspects of undergraduate research, scholarship, and creative inquiry across disciplines year-round. We are currently soliciting 600-word prospecti for communications and article submissions for themed issues to be published in 2025 on mentorship (November 1, 2024 deadline) and responsible conduct of research training and education (February 1, 2025 deadline). The call for papers for these issues is available on the SPUR website. Please contact Pam Mabrouk, Editor-in-Chief, if you have any questions about

SPUR. We would love to have more contributions from the chemistry community. We are also eager to recruit peer reviewers. SPUR is now an electronic journal; it is indexed in Clarivate, and there are no fees for publication.

Did You Know CURChem Has a LinkedIn Group?

We would love to have you join us on LinkedIn! The group is open to everyone, so please encourage your colleagues - graduate students, postdoctoral scholars, faculty, and administrators - to join our LinkedIn group. LinkedIn is a great platform to share your undergraduate research accomplishments such as news about funded grants, undergraduate researchers presenting at conferences or receiving awards, and recent publications co-authored with your students. If you are unfamiliar with LinkedIn, please email Pam Mabrouk at p.mabrouk@northeastern.edu for a quick-start guide. We look forward to connecting with you soon!

Have you listened to the Chem4REAL Podcast?

The CUR Chemistry Podcasting group is back for our fourth season. This season, we are planning a loose theme around academic jobs - both advice and information for those who might be on the market right now, but also our experiences in reviewing files, crafting language for a job ad and the best places that we've found to post positions (other than the CUR listserves!). Right now the Podcasting team members are Joe Baker, Sudeep Bhattacharyay, Bridget Gourley, Katie Mauck, Vanessa McCaffrey and Kari Stone. We meet on the first and third Tuesdays of the month at 11 AM EDT. Contact Vanessa McCaffrey at vmccafrey@albion.edu if you want to join the team or have suggestions for a future episode.

Upcoming Chemistry Conferences and Deadlines

ACS Regional Meetings

- [Midwest Regional Meeting](#) (Omaha, NE) October 13-15, 2024
- [Southeastern Regional Meeting](#) (Atlanta, GA) October 23-26, 2024
- [Southwest Regional Meeting](#) (Waco, TX) October 20-23, 2024

ACS National Meetings

[Spring National ACS Meeting](#) (San Diego, CA) March 23-27, 2025, Abstract deadline: September 30, 2024

- CATL – Undergraduate Research in Catalysis (oral)
- CELL – Undergraduate Showcase (oral)
- CHED – Undergraduate Research (oral)
- CHED – Undergraduate Poster Session
- GEOC – Undergraduate Research (oral)
- INOR – Undergraduate Research at the Frontiers of Inorganic Chemistry (poster/oral)
- POLY – Undergraduate Research in Polymer Science (poster/oral)
- [NCUR 2025](#) (Pittsburg, PA) April 7-9, 2025, Abstracts due December 6, 2024
- [CONNECTUR](#) Onsite Grand Rapids, MI June 16-18, 2025; Online June 24-25, 2025

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Upcoming Chemistry-Related Funding Programs and Deadlines

American Chemical Society Petroleum Research Fund (2/10/2025-3/7/2025)

- [New Directions](#) (grants for faculty in PhD granting departments)
- [Doctoral New Investigator](#) (starter grants for new faculty in PhD granting departments)
- [Undergraduate New Investigator](#) (starter grants for new faculty at non-doctoral departments)
- [Undergraduate Research](#) (grants for faculty at non-doctoral departments)

National Science Foundation

- [Science of Learning and Augmented Intelligence](#), full proposal target dates of 2/12/25 and 8/6/25
- [Facilitating Research at Primarily Undergraduate Institutions \(RUI/ROA\)](#),

Chemistry division [deadlines](#) in September and October.

- [Faculty Early Career Development Program](#) (CAREER), full proposals due 7/23/25
- [Chemistry Research Experiences for Undergraduates](#) (REU), full proposals due 8/20/25
- [International Research Experiences for Undergraduates Program](#) (IRES), full proposals due 10/28/24
- [EHR Core Research Program](#) (ECR), full proposals due 10/3/23
- [Improving Undergraduate STEM Education \(IUSE\)](#), full proposals due 3rd Wed. in January for Capacity Building and Level 1 and 3rd Wed. Of July for Levels 2 and 3
- [Graduate Research Fellowship Program](#) (for doctoral students) 10/15-10/18/24 (date depends on division)
- [Louis Stokes Alliance for Minority Participation](#) (LSAMP) full proposals due 11/15/24
- [Division of Molecular and Cellular Biosciences Core Programs](#), proposals accepted anytime
- [Historically Black Colleges and Universities – Undergraduate Program](#) (HBCU-UP), Letter of Intent due 4th Tues. in July and full proposal due 1st Tues. in October for Research Initiation Awards
- [Tribal Colleges and Universities Program](#) (TCUP), 1/13/25 for Small Grants for Research
- [Alliances for Graduate Education and the Professoriate \(AGEP\)](#), AGEP Institutional Transformation Alliance (ITA) preliminary proposal due 2/11/25 and full proposal due 8/29/25; AGEP Catalyst Alliance (ACA) full proposals due 3/25/25 and 8/19/25

National Institutes of Health

- [K series](#) Research Career Development Awards, Standard due dates for new grant applications are 3/12, 7/12, and 11/12*
 - [R01](#) NIH Research Project Grant Program, Standard due dates for new grant applications are 2/5, 6/5, and 10/5*
 - [R15](#) NIH Research Enhancement Award (AREA and REAP), Standard due dates of 2/25, 6/25, and 10/25*
 - [R21](#) NIH Exploratory/Developmental Research Grant Award, Standard due dates of 2/16, 6/16, and 10/16*
- *AIDS-related grant proposals have different due dates

Research Corporation

- [Cottrell Scholar Award](#), the 2025 cycle will be open to faculty that started a tenure-track position in 2022, due July 2025

Dreyfus Foundation

- [Camille Dreyfus Teacher-Scholar Award](#), open to faculty at PhD institutions appointed since 2018, due 1/30/25
- [Henry Dreyfus Teacher-Scholar Award](#), open to faculty at PUIs in their 4-12th year, 2025 applications due 8/1/25
- [Jean Dreyfus Lectureship for Undergraduate Institutions](#), grants to bring lecturers to PUI campuses, 2025 applications due 8/1/25

U.S. Department of Energy

- [Basic Energy Science \(BES\)](#), applications accepted at any time.

Air Force Research Laboratory

- [AFRL Funding Opportunities](#), a variety of opportunities are available.

American Chemical Society Petroleum Research Fund (2/10/2025-3/7/2025)

- [New Directions](#) (grants for faculty in PhD granting departments)
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