



# CHEMISTRY NEWS

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## Welcome from the Chemistry Division Chair

CUR Chemistry Membership:

Happy New Year! Your CUR Chemistry Representatives are looking forward to an exciting 2024, and we hope your year is off to a good start. As the current Division Chair, I am committed to further engaging our diverse membership and continuing to facilitate opportunities for professional development and community building related to all aspects of undergraduate research in chemistry. We have some new podcasts coming on our Chem4Real channel that we hope you enjoy (see below) and we would love to hear your ideas for future topics, or even have you join Chem4Real team to produce an episode! Have a recent achievement you'd like to highlight or undergraduate research experience you'd like to write about? We are always interested in short piece to add to our blog and future Newsletters. You can also reach out to us if you are looking for a mentor or interested in mentoring another faculty member or postdoc. Many of the current Chemistry representatives have benefited from these relationships through CUR, and we would love to help others make these types of connections.

If you are headed to the ACS conference in New Orleans this March, we hope you will consider joining us at the CUR

Chemistry social on Monday, March 18<sup>th</sup>. Several CUR Representatives will be presenting at the conference – if you and/or your students are also presenting, let us know and we will add the details to our new forum and CUR Chem site for “upcoming member presentations”. CUR Chemistry will also be at the upcoming *ConnectUR* conference this June in Maryland, including several sessions during the virtual and in-person portions and an official hybrid Division meet-and-greet on June 24<sup>th</sup>. Looking ahead to the Fall ACS conference, CUR Chem is sponsoring the CHED session: *Engaging (broadly) with AI in carrying out research and research training with undergraduate students*. If you have experience or are experimenting with AI in undergraduate research, consider submitting an abstract!

We would love to make new connections and have you engage in any of our ongoing projects or share ideas you have for new impactful activities! Please send an email or otherwise get in touch with me or any of your CUR Chemistry Representatives.

Sincerely,

Joe Reczek

Chair- Chemistry Division of the  
Council on Undergraduate Research

## 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

[Jennifer Morford](#), Franklin & Marshall University

### Division Secretary

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

### Newsletter Committee

[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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## Reflection by the 2023 CURChem Mentoring Award Recipient, Dr. Craig Anderson (Bard College, NY)



First and foremost, I would like to express how grateful and honored I am to be recognized by the Council for Undergraduate Research Chemistry Division with the Outstanding Mentorship Award. For more than two decades, my professional attention and energy have focused on mentoring student researchers at an undergraduate institution, Bard College. This award celebrates the importance of helping undergraduate students with scientific discovery, and I am proud to be devoted to that goal. I consider undergraduate research one of the highest-impact practices for recruiting and retaining students and the most effective way to train the next generation of scientists. I offer my heartfelt appreciation to all of my students, my colleagues in the Chemistry and Biochemistry Program, and the administration of Bard College for all of their

support and help over the years. Your constructive collaboration truly made this achievement possible. I'm lucky to work with such talented and enthusiastic individuals; they are why I strive to improve daily.

In my opinion, there are three important aspects to effectively mentoring undergraduate students. These are availability, patience, and adaptability. Invoking the old cliché, the best ability is availability, availability or accessibility to mentorship are extremely important for undergraduate students, especially those embarking on their undergraduate research careers. Novices in research require significant attention and access to a knowledgeable, supportive, and occasionally challenging mentor to succeed.

Patience is another key aspect of mentorship. We, as mentors, must remember that at primarily undergraduate institutions, we do not have seasoned graduate students or postdoctoral fellows who come to us with extensive research experience. Our students usually begin with no research experience whatsoever. They are eager neophytes, and it is our privilege and responsibility as mentors to help transform them into experienced researchers through encouragement and constructive criticism.

As mentors, we must also instill patience in our students, helping them understand the power of perseverance and impressing upon them that research is an iterative process that necessitates adaptability and flexible thinking. This is a fundamental lesson for young researchers. Each experimental outcome, positive or otherwise, informs the next experiment. Often, students new to the laboratory spend time trying to devise the "perfect experiment," mistakenly thinking they have

one opportunity to obtain usable data. I remind my students that the experimental data and figures presented in a manuscript are almost always not the first attempt and never a single attempt by the authors. It is imperative for our students to be able to embrace research as an iterative process. When honoring both the process and our goals, which include publishing our research and exploring the nature of chemistry, they realize that there is a delicate balance between pragmatism and romanticism.

I must add that an inclusive and cooperative team is critical to a nurturing research environment. I have found success in building a cohesive group by assembling teams of students. This allows the cohort to work together to solve daily challenges and encourages more senior members to assist more junior members in their research apprenticeships. I have seen diversity promote both insight and collaboration, enabling us to question our assumptions and share our expertise.

Finally, I believe that educators and mentors in undergraduate education ultimately share the goal that our students become independent thinkers. I am convinced that investment in undergraduate research is a means of achieving that goal. Again, my heartfelt gratitude for this tremendous honor. I am proud to be recognized by CUR, an organization championing undergraduate research.

Craig Anderson is the Wallace Benjamin Flint and L. May Hawyer Professor of Chemistry and Director of Undergraduate Research for the Division of Science, Mathematics, and Computing at Bard College.

## Did You Know that Scholarship & Practice of Undergraduate Research (SPUR) is Now Electronic?

This fall marked the debut of SPUR as an electronic journal. SPUR is a CUR member benefit. SPUR welcomes submissions for research studies on all forms and aspects of undergraduate research, scholarship, and creative inquiry across disciplines year-round. Call for papers for 2025-themed issues will be released soon. SPUR is soliciting submissions about vertically integrated undergraduate research programs, mentorship, and responsible conduct of research training and education.

## Did You Know CURChem Has a LinkedIn Group?

We would love to have you join us on LinkedIn! The group is open to all, so encourage your colleagues—graduate students, postdoctoral scholars, faculty, and administrators—to join our LinkedIn group. You are welcome to share your work involving undergraduates; any questions you have about CUR; the teaching and practice of undergraduate research in chemistry such as links to useful articles, books, grant opportunities, information about undergraduate research conferences, symposia, journals; and so forth. If you are unfamiliar with LinkedIn, email Pam Mabrouk for a quick-start guide. We look forward to seeing you soon!

## Have you Checked Out Chem4Real Recently?

Chem4REAL: Research Engages All Learners is the official podcast of the CUR Chemistry Division, and it is a great way to catch up on some professional development during your commute or while running errands. Chem4REAL is available on platforms such as [Spotify](#) and [Apple Podcasts](#), and you can also listen and find transcripts for the episodes on the [CUR Chemistry blog](#). There are 30 episodes currently available that cover topics such as DEI, collaboration, and mentoring. Check out the back catalog and stay tuned for new episodes.

If you are interested in getting more involved, you can join the podcast team – no experience necessary! They meet the first and third Thursdays of the month at 3:00 pm Eastern. Join at this [Google Meet link](#).

Here is a preview of some of the spring episodes.

**January** – The first episode of 2024 is now available. “Blooming AI” features several Chemistry Division Representatives in conversation about using AI as a tool in teaching and research.

**February** – In the February episode, new CUR Chemistry Division Representatives are interviewed. Listen to learn more about their backgrounds and perspectives.

Other future episodes for spring 2024 include discussions about a coop model

for chemistry majors, the D2D CURE that engages students in investigating protein structure-function relationships, an interview about International Research Experiences for Students (IRES), and more!

### ***Nominations for CURChem 2024 Mentoring Award – Due March 1***

Please consider nominating a colleague for the **2024 ChemCUR Outstanding Mentorship Award**. The award was established in 2019 to recognize Chemistry faculty engaged in undergraduate research. Nominees must demonstrate transformative mentoring and advising of undergraduate students in mentor-led chemistry research projects, in addition to at least one of the following three categories:

- Mentorship of undergraduate students through the integration of undergraduate research into the academic curriculum and coursework in chemistry, and
- Mentorship of undergraduate students and/or faculty with demonstrated evidence of supporting diversity, equity, and inclusion in chemical education and research.
- Mentoring undergraduate students and/or faculty by establishing programmatic infrastructure that enhances undergraduate research.

Nomination materials include a nomination letter (2-page maximum; font size 12-pt Times New Roman; 1-inch margins), two support letters (2-page maximum; font size 12-pt Times New Roman; 1-inch margins), and the *nominee's* CV (10-page maximum). Click the link below for nomination details. [Divisions - Chemistry Outstanding Mentorship Awards - The Council on Undergraduate Research \(cur.org\)](#)

### ***CUR Chem Community Celebrations***

Please direct any questions about the award to Joe Reczek ([reczekj@denison.edu](mailto:reczekj@denison.edu)), Chair, CUR Chemistry Division.

The members of the CUR Chem Community are doing great things in undergraduate research! Below are some highlights that we would like to recognize. This will be a recurring feature in the newsletter. If you have recent publications, awarded grants, or other accomplishments, the CURChem Community would like to celebrate with you! Please send your celebration items to [curchem@gmail.com](mailto:curchem@gmail.com) with the subject line "Celebrations."

- Tom Wenzel, Emeritus Professor from Bates College, was named to the 2023 *Analytical Scientist* journal's "[Power List](#)." The list recognizes excellence and impact over the past decade in four categories: innovators and

trailblazers, leaders and advocates, connectors and interdisciplinarians, and mentors and educators. Tom was ranked third among the 25 mentors and educators, and the honor recognizes his activities aimed at promoting the use of active learning in courses, primarily involving his leadership in creating the [Active Learning](#) site on the Analytical Sciences Digital Library, and engagement of undergraduates in research. Of the 100 people from around the world named to the list, he was the only one from academia from an undergraduate institution.

- Chris Hamann, Professor at Albright College, recently published the article "[Students Constructing for Themselves the Concept of Chemical Shift Correlation for Organic Substructures](#)" in the *Journal of Chemical Education*. This publication was co-authored with a student, Kyle T. Smith '13, who graduated as a chemistry/secondary education major. Additionally, Chris was awarded a Holland Research School of Molecular Chemistry Fellowship for the project, "Generating Physically Sound, Interpretable Models That

Replace Phenomenological Explanations in Organic Chemistry Using Quantum Chemical Techniques." The grant will provide partial support for his sabbatical leave during which he will be hosted by a former undergraduate research student, Trevor Hamlin '10, who is currently a professor in the Department of Chemistry at the Vrije Universiteit Amsterdam.

### ***CURChem at the Spring ACS National Meeting in NOLA***

The ACS Spring Meeting is quickly approaching, and the conference, which will be in New Orleans, LA from March 17-21, 2024, is an excellent opportunity to connect with members of our CUR Chem community. If you are planning to attend the conference, here are two ways to connect. We anticipate having a social at the ACS meeting. More information will be available soon on LinkedIn, Discord, and the CUR Community. Also, if you or your students are presenting at the conference, please add your information to this [Google Sheet](#). Once compiled, this list will allow members to attend each other's presentations and hear about interesting research going on in the Division.