



### Speaker:

Megan Keener, Ph.D.,  
Lawrence Berkeley  
National Lab

### When:

**Friday, 04/05/24**

**1pm in Glenn Hall  
314**



Department of Chemistry and  
Biochemistry  
CSU, Chico  
400 West First Street  
Chico, CA 95929-0210  
(530) 898-5259  
[www.csuchico.edu/chem](http://www.csuchico.edu/chem)  
[chem@csuchico.edu](mailto:chem@csuchico.edu)

# Chemistry and Biochemistry

## Spring 2024 Seminar Series

From organic synthesis to the trans-actinides: a retrospective of my career since Chico State

From my foundational undergraduate experience in synthetic chemistry at California State University, Chico, to my current role as a postdoctoral researcher in the Heavy Elements Chemistry Group at Lawrence Berkeley National Laboratory (LBNL), this seminar will provide insights into my academic journey since graduating from the chemistry department at Chico State.



My experience at Chico State ultimately led to pursuing a Ph.D. in inorganic synthetic chemistry at the University of California, Santa Barbara (UCSB), under the guidance of Prof. Gabriel Ménard and co-mentorship of Prof. Trevor Hayton. During my Ph.D., I investigated two primary research topics, united by the theme of understanding homogeneous processes for clean alternative energy and storage applications. The first focused on catalytic ammonia ( $\text{NH}_3$ ) oxidation for dihydrogen ( $\text{H}_2$ ) storage, utilizing a manganese-nitride transition metal complex. The second marked a pivotal shift in my career towards studying the *f*-elements, specifically by investigating the selective capture and recovery of uranium from aqueous mixtures containing metal ions commonly found in nuclear waste.

My fascination with the *f*-elements brought me to pursue my first postdoctoral fellowship at École Polytechnique Fédérale de Lausanne (EPFL) in Switzerland, under the guidance of Prof. Marinella Mazzanti. Our work centered on accessing electron-rich, highly reactive uranium complexes to transform readily available feedstocks into higher-value chemicals.

Lastly, I will touch on the transition to my current position working in the Heavy Elements Research Group at LBNL. I will present my current work in developing methodologies to access air-free, electron-rich trans-actinide targets and studying their reactivity with various substrates. Our overarching mission is to contribute to environmental and nuclear waste remediation efforts while advancing fundamental understanding of the trans-actinides.

Overall, this seminar will provide a comprehensive overview of my research trajectory, highlighting key milestones and contributions across diverse areas of inorganic synthetic chemistry.