



## SELENA L. STAUN

*BS in Chemistry with a minor in Sociology, Purdue University (2016); PhD in Inorganic Chemistry, University of California Santa Barbara (2021)*

### What have you been doing since the publication of your article in JPUR, volume 6?

I graduated from Purdue in spring 2016 and moved to California two months later to start my PhD journey at the University of California Santa Barbara (UCSB). I decided to take full advantage of pursuing another degree in a completely different part of the country for five years. During my graduate studies, I was awarded a Seaborg Summer Research Fellowship and a US DOE Science Graduate Student Research Fellowship, which allowed me to work for a full year at Los Alamos National Laboratory in New Mexico, thus broadening my horizons even more. After graduating from UCSB in June 2021, I have joined the Leadership and Development Program (LDP), class of 2021, at BASF, where I will do three rotations in completely different areas within the company while moving around every eight months, starting with a technical role.

### What are your career goals?

After graduating from Purdue, I was driven to continue learning and chose to pursue a PhD. Now with nine years of schooling I feel ready to take my experience and knowledge into industry. I am extremely passionate about sustainability

and landed my dream job at BASF. This is a company that puts sustainability first, and I am looking forward to making an impact within BASF. I am just starting my industry experience and look forward to learning whether I prefer a technical role or a business role as I grow into the company.

### How did the research you did as an undergraduate at Purdue impact your current endeavors? What is the value of undergraduate research?

The research I did as an undergraduate made a huge impact on my endeavors after Purdue. While there I worked with Dr. Suzanne Bart for two years, staying over the summers to continue my research. This is where I started my research with the actinides and learned to love the academic research environment. I spent all my extra time in the Bart lab because I enjoyed the work I was doing and the people I was surrounded by. I was able to publish in a big research journal before graduation, which set me apart going forward. I loved what I was doing so much that I found a research group at UCSB that would continue my research with the actinides for the next five years, expanding my knowledge and growth in this area. Furthermore, I was able to apply for

a fellowship at Los Alamos National Laboratory, where I extended my research from the early actinides onto the transuranics. I never dreamed that I would have the chance to work at a national lab, but the initial foundation I built at Purdue allowed me to excel in graduate school, which opened these opportunities. My undergraduate research experience was incredibly valuable in guiding and preparing me for the next five years after graduation, and I will always look back at my time in the Bart lab with fond memories.

**SYNTHESIS AND CHARACTERIZATION OF A SERIES OF URANIUM(IV) SPECIES:**  
Investigating Coordination With a Redox Innocent Triamine Ligand

**Student Author**

 **Selena L. Staun** earned a BS degree in chemistry with a minor in sociology in May 2016; she graduated with department honors. She will start graduate school to pursue a PhD in chemistry beginning September 2016 at the University of California, Santa Barbara. While at Purdue, Staun was an undergraduate researcher in the Bart Laboratory for over 2 years and received Purdue's Department of Chemistry 2015 Summer Research Award. She also found time to facilitate student learning as a Supplemental Instruction Leader for a math course and as a teaching assistant for a biology lab.

**Mentors**

 **John J. Kiernicki** earned AB degrees in chemistry and history from Ripon College in 2011 and is currently working on his PhD in inorganic chemistry at Purdue University. His current research project involves the synthesis and reactivity of low-valent uranium

 **Suzanne Bart** graduated from the University of Delaware with a BS in chemistry (2001) and earned her PhD from Cornell University with Professor Paul J. Chirik (2006). Subsequently, she was an Alexander von Humboldt Postdoctoral Fellow at the Friedrich-Alexander University Erlangen-Nuremberg under the direction of Professor Karsten Meyer. In 2008 she became an assistant professor at Purdue University, then in 2014 she was promoted to associate professor. Her research interests include organometallic transformations mediated by organoactinide species. Bart recently won an NSF CAREER award, and has been named a 2012 Cottrell Scholar and 2014 Organometallics Young Investigator Fellow.

complexes containing redox-active ligands, and studies in the reductive silylation of the  $UO_2^{2+}$  cation.

56 Journal of Purdue Undergraduate Research: Volume 6, Fall 2016

### **How did the faculty mentor relationship impact you during your time at Purdue?**

Having a strong female role model in science showed me that I could accomplish anything I set out to do. Dr. Bart's support from the very beginning helped me grow into a strong scientist and a female in science while at Purdue. My relationship with Dr. Bart still impacts me today, five years later. I have gone back to visit her since graduation and reach out to her whenever I need a recommendation because I know she will always support me at any stage of my career. During my last year of graduate school, Dr. Bart was assigned to be the editor of the journal I submitted my research paper to and it was satisfying to have her see how far I have come.

### **How did the experience of publishing an article in JPUR benefit you? What advice would you give to other undergraduates at Purdue who are interested in contributing to the journal?**

Publishing the work I accomplished as an undergraduate was a great experience in helping me grow as a scientific writer. I was able to learn how to independently write, but also to work alongside Dr. Bart to become a better writer. I highly recommend publishing in JPUR because it is extremely rewarding to see the hard work that gets done in the lab become a piece in a journal that can continue making a difference to others in the field. A bonus of course is that the journal article can be added to your CV and fast-track you to standing out among your peers.

### **What advice would you give to other undergraduates at Purdue who are interested in doing research?**

I strongly suggest undergraduate research because it is an experience that makes your time at Purdue special. If you find research that excites you, it provides an escape from the worry and stress that comes from classes. It is a great way to build relationships with professors and graduate students who have more experience and can help guide you in making decisions related to both career and life. Lastly, it can open a door to graduate with honors. From personal experience I understand that the science coursework at Purdue is tough, and I thought that I had

lost my chance to graduate with honors. I still remember feeling overcome with emotion when I learned that the two years of hard work and fun I had doing research could earn me an honors degree by writing a thesis. Undergraduate research is worth your time!

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Staun, S. L. (2016). Synthesis and characterization of a series of uranium(IV) species: Investigating coordination with a redox innocent triamine ligand. *Journal of Purdue Undergraduate Research*, 6, 56–63.  
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