

Summer Internship Report 2017

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Chemistry Research Sewanee, Tennessee

Provide an overview of the organization/research project and a summary of your responsibilities, tasks, and/or projects.

We were researching potential organometallic catalysts that could be used to synthesize amides from amines. I was responsible for synthesizing different variations of an iron-centered catalyst and testing their catalytic properties. In doing so I had to distill different solvents and running NMR's of my products. I also was responsible for keeping the glassware and lab clean.

During your internship, what did you accomplish or how did you make a difference? In what ways did you grow in your professional and technical skills?

During my internship I managed to produce multiple potential iron-centered catalysts (specifically $[\text{FeCl}(\text{dppe})\text{Cp}^*]$) as well as a few of their hydride variations. I grew a lot in certain lab technique skills such as distilling solvents and layering on top of others. I also learned how to better read research papers and gather information that was useful to me from them as well as find those papers to begin with.

Describe a problem that you helped to solve at your internship. What skills or knowledge from your education at Sewanee helped you address the problem?

During my internship we had some trouble synthesizing some iron-centered catalysts. I helped solve the problem by looking up other published research papers with other methods of synthesizing the product we were looking to create. I had acquired a skill for being able to sift through a large research

paper and pick out the information relevant through one of my classes in Sewanee, where we were required to do so regularly.

In what way were your teamwork skills strengthened?

My research partner in the lab was a year below me in school and thus did not know all of the required techniques necessary. Whenever our research professor (Dr. Joslin) was unable to be in lab, it would fall on me to help her out if she ever had any questions. It helped teach me how to act in more of a mentor-type role. We also had to share a limited space as well as help keep the space clean, strengthening our teamwork skills as a whole.

How did your internship affect your career plans?

My internship taught me what it would be like to work 40-hour weeks in a lab, thus giving me a glimpse into what it would be like to go to graduate school after Sewanee. There were ups and downs depending on how things worked. It gave me a better view of what is in store for me in the future if I go to graduate school, which I still plan on doing.

In what ways did your internship cause you to encounter people of different backgrounds from your own? What steps did you take to communicate effectively with such persons? What did you learn from such persons' perspectives?

My research partner was from a different part of the country and had a different upbringing than me, so our views differed on a few things. We learned to just overlook those differences and work together. Another person in my dorm was from Nepal, so I learned a lot about their culture and how things worked in different cultures.

Words of thanks to your internship funding donors:

I would just like to thank those who donated the money and made it possible for me to get this research experience. It was invaluable to my future and means more to me than words can express.