

Dear Class of 1955,

I want to express my sincere gratitude for your general Class of '55 Award which helped me participate in the Oak Ridge Science Semester program (ORSS) during the fall semester of 2014.

ORSS was a semester-long off-campus research program at Oak Ridge National Laboratory (ORNL) in Oak Ridge, Tennessee sponsored by the U.S. Department of Energy (DOE). During this internship, I had the privilege to work at one of the most advanced scientific and technological laboratories in the world along with many prominent scientists in their respective fields and cutting-edge and expensive instruments which were not available at a small liberal arts college like Cornell. To be specific, I was working on the capture and separation of carbon dioxide (CO<sub>2</sub>) by room-temperature ionic liquid. This is significant because CO<sub>2</sub> is one of the most prevalent byproducts of many industrial processes emitted into the atmosphere as well as a greenhouse gas which causes global warming. Therefore, an efficient approach to capture and separate CO<sub>2</sub> from other waste gases would prevent it from entering the air and lessen the greenhouse effect, which is currently one of the biggest concerns for the environment. However, traditional methods of CO<sub>2</sub> capture are energetically inefficient and very expensive. Therefore, we are trying to devise novel energy-efficient methods, like room-temperature ionic liquid, for CO<sub>2</sub> capture and apply them to the industry. Our project is consistent with the goal of DOE of creating a more energy-efficient world considering the imminent global energy crisis as fossil fuels will be exhausted in a few decades.

This high-level research opportunity has made significant impacts for my undergraduate study and academic career in general. First of all, I was able to work at an intense and high-level

research environment which developed the skills I needed for future scientific research. It made me realize my true passion indeed belongs to science which is the reason that I will start graduate school as a Ph.D. candidate in chemistry in the fall of 2015. I have also made various connections with the scientists at ORNL which would serve great for my future career. So again, I want to thank you very much for the generous sponsorship to my internship and to other Cornell students who I believe all benefited greatly from this award. Hopefully more Cornell students can study off-campus in the future because of the Class of '55 Award.

Sincerely,

Jihang Wang

Class of 2015