



Stephanie Jo Wilson

Graduate Institution: Texas A&M University

Graduate Discipline: Inorganic/Polymer Chemistry

Hometown: Terre Haute, IN

Relevant SC Research: Basic Energy Sciences

Research Interest:

Currently, the industrial production of polycarbonates typically involves the polycondensation of phosgene, a WWI chemical weapon, and a diol such as bisphenol-A. This biphasic reaction produces considerable amounts of waste, and the toxicity of the starting materials and products has been widely debated. My research currently focuses on finding new ways to couple carbon dioxide and epoxides to selectively afford polycarbonates via a more environmentally friendly route. CO₂, a greenhouse gas and the world's most abundant C1 feedstock, acts as both a co-monomer and co-solvent in these reactions. These processes have 100% atom economy, typically use no extraneous solvents, and serve as a constructive use of CO₂. This research has the potential to afford novel polymeric materials formed from renewable resources that have industrially-applicable properties. I am also highly interested

in other types of gas activation including dinitrogen, carbon monoxide, and dihydrogen.

About Me:

I am finishing my third year of graduate school at Texas A&M University working in the labs of Prof. Donald J. Darensbourg. I recently became the vice president of TAMU Chemistry's Phi Lambda Epsilon (PLU) Chemistry Honor Society, of which I have been an active member for over a year. In my free time, I enjoy playing with my dog, reading, and biking. I also enjoy a good game of Euchre. After completing my Ph.D., I hope to pursue a career in academia.



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