

# Stephanie Wilson



**Graduate Institution:** Texas A&M University

**Location:** College Station, Texas

**Graduate Discipline:** Inorganic/Organometallic Chemistry

**Hometown:** Terre Haute, Indiana

## Research Interests:

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 in the labs of D.J. Darensbourg focuses on novel (salen), (salan), and (salalen)MX complexes for the co- and terpolymerization of carbon dioxide and epoxides or oxiranes to afford polycarbonates via a more environmentally friendly route. CO<sub>2</sub>, 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, use no extraneous solvents, and serve as a constructive use of CO<sub>2</sub>. This research has the potential to afford novel polymeric materials formed from renewable resources that have industrially-applicable properties.

## About me:

I am a native Hoosier, having grown up in Terre Haute, IN and attended college at the University of Southern Indiana in Evansville, IN. While at USI, I was a four-year starter and three-year team captain for our NCAA Division II volleyball team, and I was honored as an Academic-All American after my senior season. I am now starting my second year as a chemistry graduate student at Texas A&M University in College Station, TX, working in the labs of Prof. Donald J. Darensbourg. I am an active member of the American Chemical Society and hope to join TAMU's Phi Lambda Upsilon (PLU) and the Society of Plastics Engineers in the coming school year. After obtaining my Ph.D., I plan to pursue a career in academia.



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