

Summer 2009

REU at Peking University, Beijing, China

Research Advisor: Prof. Yuan Kou

- Synthesized metal nanoparticle catalysts suspended in various organic and inorganic solvents for the hydrogenation of phenol to alkanes and alkenes

COMPUTER AND LAB SKILLS

Microsoft Office Suite, Matlab, MathCad, Mathematica, Lotus Notes, ASPEN, HTML

HPLC, MS/GC, Anaerobic Lab Work, Biological Culturing and Fermentation, Genetic Engineering Techniques

LEADERSHIP EXPERIENCE

- 2014-2015 **Townsend Fellow, Delaware Biotechnology Institute**
Organized STEM Outreach for Middle and High School students and communicated Science to all levels of education
- 2012-2016 **Member of the Colburn Club**
DBI Rep: Served as a representative for students researching at DBI (2013)
Vice President: Planned and executed the Prospective Graduate Student Visits (2014)
4th year Rep: Liaison for 4th-year graduate students and the Department (2015)
- 2010 **President of the AIChE Student Chapter, UMass Amherst**
Increased membership by targeting freshmen involvement
Started a Chem-E Car Team that compete in the national competition, Nashville 2009
Hosted and organized the Regional Student Conference, 2009

PUBLICATIONS AND PRESENTATIONS

1. **Carlson, E. D.** et al. CO₂ fixation by anaerobic non-photosynthetic mixotrophy for improved carbon conversion. *Nat. Commun.* 7:12800. 2016.
2. Fast, A. G., **Schmidt, E. D.**, et al. "Acetogenic mixotrophy: novel options for yield improvement in biofuels and biochemicals production". *Curr. Opin. Biotechnol.* 33, 60–72 (2015).
3. **Carlson, E. D.**, E. T. Papoutsakis "CO₂ Fixation for Increased Microbial Fermentation Yields", Young Presenter Award, Clostridium XVI, Dartmouth, VT, 2016
4. **Schmidt, E. D.** (presenting Author), E. T. Papoutsakis
"Instating the Wood-Ljungdahl Pathway for Carbon Dioxide Fixation into the Solventogenic *Clostridium acetobutylicum*", AIChE Annual Meeting, Salt-Lake City, Utah 2015
5. **Schmidt, E.D.** , E. T. Papoutsakis "Enhancing Microbial Product Yields through Chemotrophic Carbon Capture", Poster Presentation, Clostridium XIII, Shanghai, China 2014

- DBI Townsend Fellow 2014-2015
- Otto-Bayer Fellowship 2012-2013
- J&A Adams Tuition Waiver and Dean's List 2006-2010
- College of Engineering Scholarship 2007-2010
- Research Assistant Fellowship 2008-2009

INTERESTS

I am fluent in German and English and have dual citizenship. I am interested in renewable energy and green chemistry, as well as microbiology. I am passionate about science communication and have made every effort to improve my presentation skills. I enjoy the outdoors, playing ultimate Frisbee, rock climbing, traveling the world and I love to learn foreign languages.