

## ABIGAIL ENGELBERTH

### **Education:**

Ph.D. 2009, University of Arkansas, Chemical Engineering  
M.E. 2006, Iowa State University, Chemical Engineering  
B.S. 2004, Iowa State University, Chemical Engineering

### **Academic Experience:**

Assistant Professor, Purdue University, Joint appointment in Agricultural & Biological Engineering and Environmental & Ecological Engineering (2011-present)  
Postdoc Research Associate, University of Maine (2009-2011)

### **Non-academic Experience:**

Pollution Prevention Intern, Equistar Chemicals (2004)  
Senior Technical Intern, Rockwell Collins (2003)

### **Certifications or professional registrations:**

### **Current Membership in Professional Organizations:**

American Institute of Chemical Engineers (AIChE)  
Society of Biological Engineers (SBE)  
Society of Industrial Microbiology (SIMB)

### **Honors and Awards:**

Outstanding Contribution Award for Excellence in Refereeing. Bioresources and Bioprocessing. 2016  
Outstanding Mentor for Graduate Students, Agricultural & Biological Engineering Graduate Student Association, College of Engineering, 2016  
Nominated for the 'Mentor Me!' Award from the Women in High Tech, October 2014

### **Service activities (within and outside of the institution):**

1. Purdue ABE Graduate Committee Member, 2011-present
2. Purdue Student Soybean Competition Advisor, various teams, 2013 - present
3. Purdue Women Faculty in Engineering Committee (WFEC) Chair, 2012-2018
4. Advisor for Alpha Epsilon, 2013- present, Purdue University
5. Editorial Board member for the Journal of Environmental and Ecological Science (JEES), 2011 - present

### **Publications:**

1. Engelberth, A.S., Wheeler, M.C., van Walsum, G.P. Techno-Economic Comparison of Three Scenarios for Upgrading a Hemicellulose-rich Pre-pulping Extract to Mixed-Alcohols. Biofuels, Bioproducts & Biorefining. Accepted July 2018. DOI: 10.1002/bbb.1928
2. Li, J., Engelberth, A.S. Quantification and Purification of Lutein and Zeaxanthin Recovered from Distillers Dried Grains with Solubles (DDGS). Bioresources and Bioprocessing. 2018. 5:32
3. RedCorn, R., Fatmei, S., Engelberth, A.S. Comparing End-use Potential for Industrial Food Waste Sources. Engineering. 2018. 4(3): 371-380.
4. RedCorn, R., Engelberth, A.S. Quantifying Glycogen in Solids at Full-scale Enhanced Biological Phosphorous Removal Wastewater Facilities. Journal of Environmental Engineering. 2018. 144(9)

5. Suwal, S., Li, J., Engelberth, A. S., & Huang, J. Y. Application of electro-membrane separation for recovery of acetic acid in lignocellulosic bioethanol production. *Food and Bioproducts Processing*. 2018. 109: 41-51.
6. Redcorn, R., Engelberth, A.S. Opportunities to Improve the Conversion of Food Waste to Lactate: Fine Tuning Secondary Factors. *Waste Management & Research*. 2017. 35(11): 1112-1120.
7. Zhang, X., Eren, N., Kreke, T. Mosier, N., Engelberth, A.S. Kilaz, G. 1L Reactor Production of Concentrated Hydrochloride Catalyzed 5-(Chloromethyl) Furfural Production from Forage Chopped Corn Stover. *BioEnergy Research*. 2017. 10(4): 1018-1024.
8. Brace, E., Engelberth, A.S. Enhancing Silymarin Fractionation using the Conductor-like Screening Model for Real Solvents. *Journal of Chromatography A*. 2017. 1487: 187-193.
9. Zhang, H., Brace, E., Engelberth, A.S. Selection of a Non-Aqueous Two-Phase Solvent System for Fractionation of Xylo-oligosaccharide Prebiotics using the Conductor-Like Screening Model for Real Solvents. *Journal of Liquid Chromatography and Related Technologies*. 2016. 39(14): 666-673.
10. Aghazadeh, M., Engelberth, A. S. Techno-economic analysis for incorporating a liquid-liquid extraction system to remove acetic acid into a proposed commercial scale biorefinery. *Biotechnology Progress* 2016. 32(4): 971-977.
11. Aghazadeh, M., Ladisch, M. R., Engelberth, A. S. Acetic acid removal from corn stover hydrolysate using ethyl acetate and the impact on *Saccharomyces cerevisiae* bioethanol fermentation. *Biotechnology Progress* 2016. 32(4): 929-937.
12. RedCorn, R., Engelberth, A.S. Identifying conditions to optimize lactic acid production from food waste co-digested with primary sludge, *Biochemical Engineering Journal*, 2016. 105 (Part A): 205-213.
13. Ladisch, M.R., Ximenes, E., Engelberth, A.S., Mosier, N.S. Biological Engineering and the Emerging Cellulose Ethanol Industry, *Chemical Engineering Progress* 2014. 10(11): 59-62.

**Briefly list the most recent professional development activities:**

Conference Leadership: Co-chair of the “Extractions in Bioprocessing” session at the Annual American Institute of Chemical Engineers meeting (2014 and 2015). Organizer of the poster session and student poster competition at the Symposium on Biotechnology for Fuels and Chemicals (2016-2018 term). Co-chair of the “Driving the Bioeconomy” topic area for the Symposium on Biotechnology for Fuels and Chemicals (2019-2021 term).

Professional Contributions: Manuscript peer-reviewer for *Bioresource Technology*, *Separation Science & Technology*, *BioEnergy Research*, *Journal of Environmental Engineering & Ecological Science*, *Energy and Environmental Science*, *Environmental Science & Technology*, *Journal of Chromatography A*, *ACS Sustainable Chemistry & Engineering*, *Industrial & Engineering Chemistry Research*, *Bioresources* and *Bioprocessing*.

Discovery/Learning Activities: Developed five courses overall at both graduate and undergraduate levels since joining Purdue. Developed and received funding to lead a two-week study abroad program in Germany (May 2018) targeted towards rising-seniors in Biological Engineering. The course focused on industrial products that used microbes somewhere within the process.

Student Mentoring: Undergraduate mentor for 8-10 students in EEE; meet at least 2 times/year to discuss course plans and career goals. Serve as the academic advisor for the Purdue Alpha Epsilon chapter; the honor society of Agricultural, Biological & Food Engineering from the national ASABE organization. Co-creator and advisor for ABE Graduate Student Association Annual Industrial Research Symposium.