

Maura Koehle
221 Academy Street, Newark, DE 19716
301-529-4302
makochle@gmail.com

EDUCATION

University of Delaware Newark, DE
Doctoral candidate in the Department of Chemical and Biomolecular Engineering 2013-present
Advisor: Dr. Raul Lobo
Thesis topic: Catalytic transformations of biomass with zeolites

University of Connecticut Storrs, CT
Master of Science in Chemical Engineering 2010-2013
Advisor: Dr. Ashish Mhadeshwar
Thesis topic: Microkinetic modeling and analysis of ethanol partial oxidation and reforming

University of Pittsburgh Pittsburgh, PA
Bachelor of Science in Chemical Engineering, Magna Cum Laude 2006- 2010

RESEARCH EXPERIENCE

University of Delaware Newark, DE
Graduate Research February 2013-present

- Investigated zeolites for catalytic biomass transformations in batch and flow reactors
- Synthesized solid Lewis acid zeolites and studied their kinetics in transfer hydrogenation reactions, Friedel-Crafts acylation and Diels-Alder cycloaddition
- Experience with XRD, XRF, EXAFS, UV-Vis, ICP-AES, SEM, FTIR, NMR, GC, GC-MS, HPLC and LC-MS techniques

University of Connecticut Storrs, CT
Graduate Research Nov. 2010-May 2012

- Developed a microkinetic model for the partial oxidation and reforming of ethanol
- Experimental work on ethanol reforming via microwave heating and methane dry reforming

WORK EXPERIENCE

ExxonMobil Process Research Clinton, NJ
Intern May-December 2012

- Supported catalytic research in the Catalyst Technology group
- Responsibilities included catalyst synthesis, experimental design, data analysis and preparation of written reports and patent applications

Federal Aviation Administration, Office of Environment and Energy Washington, DC
Technical Intern Summer 2009

- Composed literature review on feasibility of alternative aviation fuel technologies
- Assisted in planning Commercial Aviation Alternative Fuels Initiative (CAAFI) annual conference
- Proofread and provided comments for the International Panel on Climate Change's Zeroth Order Draft of Special Report on Alternative Energy

Mascaro Center for Sustainable Innovation Pittsburgh, PA
Research Intern Summer 2008

- Conducted biofuels research project that resulted in provisional patent
- Used bomb calorimetry, UV-Vis and viscometry to analyze fuel blends with waste vegetable oil