

PUBLICATIONS

- 1 **MJ Gilkey**, AV Mironenko, DG Vlachos, B Xu, "Adipic Acid Formation via Hydrogenolysis of Biomass-Derived Tetrahydrofuran-2,5-Carboxylic Acid in Organic Acid Solvents." *Submitted*.
- 2 **MJ Gilkey**, DG Vlachos, B Xu, "Poisoning of Ru/C by Homogeneous Brønsted Acids in Hydrodeoxygenation of 2,5-Dimethylfuran via Catalytic Transfer Hydrogenation," *Appl. Catal. A-Gen.* *Under review*.
- 3 **MJ Gilkey**, AV Mironenko, L Yang, DG Vlachos, B Xu, "Insights into the Ring-Opening of Biomass-Derived Furanics over Carbon-Supported Ruthenium," *ChemSusChem* 2016, 9(21), 3113-3121.
- 4 **MJ Gilkey**, B Xu, "Heterogeneous Catalytic Transfer Hydrogenation as an Effective Pathway in Biomass Upgrading," *ACS Catal.* 2016, 6(3), 1420-1466.
- 5 **MJ Gilkey**, P Panagiotopoulou, AV Mironenko, GR Jenness, DG Vlachos, B Xu, "Mechanistic Insights into Metal-Lewis Acid Mediated Catalytic Transfer Hydrogenation of Furfural to 2-Methylfuran," *ACS Catal.* 2015, 5(7), 3988-3994.
- 6 AV Mironenko, **MJ Gilkey**, P Panagiotopoulou, G Facas, DG Vlachos, B Xu, "Ring Activation of Furanic Compounds on Ruthenium-Based Catalysts," *J. Phys. Chem. C* 2015, 119(11), 6075-6085.
- 7 **MJ Gilkey**, V Krishnan, L Scheetz, X Jia, AK Rajasekaran, PS Dhurjati, "Physiologically Based Pharmacokinetic Modeling of Fluorescently Labeled Block Copolymer Nanoparticles for Controlled Drug Delivery in Leukemia Therapy," *CPT Pharmacometrics Syst. Pharmacol.* 2015, 4(3), 167-174.
- 8 JS Paustian, R Nery Azevedo, STB Lundin, **MJ Gilkey**, TM Squires, "Microfluidic Microdialysis: Spatiotemporal Control over Solution Microenvironments Using Integrated Hydrogel Membrane Microwindows," *Phys. Rev. X* 2013, 3(4), 041010.

SELECTED PRESENTATIONS

- 1 **MJ Gilkey**, AV Mironenko, DG Vlachos, B Xu, "Metal-Free Production of Adipic Acid via Hydrogenolysis of Biomass-Derived THFDCA in Organic Acid Solvents," Center for Catalytic Science and Technology Annual Research Review, Newark, DE, 2016. *Oral Presentation*.
- 2 **MJ Gilkey**, P Panagiotopoulou, AV Mironenko, GR Jenness, DG Vlachos, B Xu, "Mechanistic Investigation of the Hydrodeoxygenation of Furfural to 2-Methylfuran over Ru/C Using Isotopic Labeling Techniques," 24th North American Catalysis Society Meeting, Pittsburgh, PA, 2015. *Oral Presentation*.
- 3 **MJ Gilkey**, DG Vlachos, B Xu, "Towards Understanding of Ring Opening of 2,5-DMF to Straight-Chain Molecules on Ru/C," Catalysis Center for Energy Innovation, Invited Seminar, Newark, DE, 2015. *Oral Presentation*.
- 4 **MJ Gilkey**, P Panagiotopoulou, DG Vlachos, B Xu, "Mechanistic Investigation of the Hydrodeoxygenation of Furfural to 2-Methylfuran," Catalysis Club of Philadelphia Annual Poster Session, 2015, Wilmington, DE. *Poster*.

ACTIVITIES AND AWARDS

Editorial Board for <i>Frontiers in Energy Research Newsletter</i>	05/2016 – Present
Guest writer for <i>Frontiers in Energy Research Newsletter</i>	05/2016 – Present
1. "Chopping Oxygen: A Sugary Recipe for Biofuels"	
2. "Attacking Carbon Dioxide: Collective Efforts in Removing Atmospheric Troublemaker"	
Exceptional Pass on Qualifying Examination	08/2014
Southern California Edison Scholar	09/2009 – 06/2013

TEACHING EXPERIENCE

University of Delaware

Special Topics in Energy | Teaching Assistant

Spring 2016

Thermodynamic and economic analysis of energy conversion and emerging energy strategies.

Fluid Mechanics | Teaching Assistant

Fall 2014

Macro- and microscopic flow analysis, pumps and head loss calculations, and boundary layer analysis.