



Matthew Scarborough

PhD Candidate

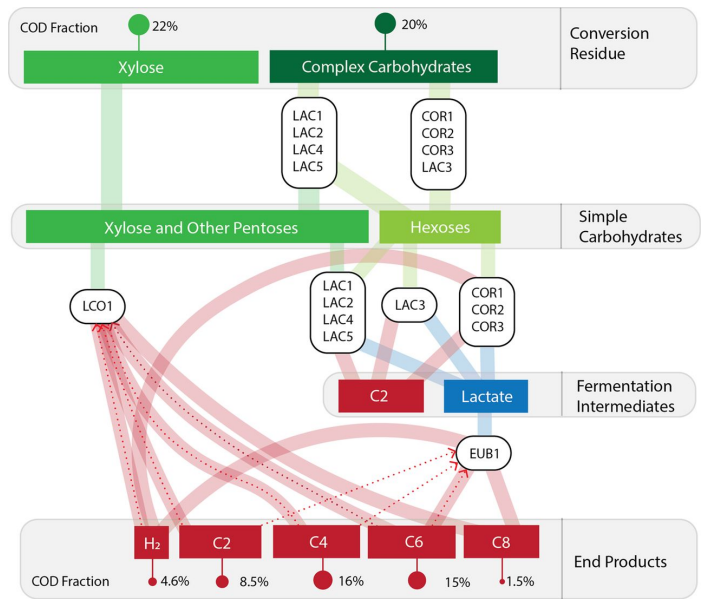
Department of Civil and Environmental Engineering, University of Wisconsin-Madison

Production of beneficial chemicals from renewable feedstocks using anaerobic microbiomes

Wednesday, December 5, 2018, 4 PM

2029 GG Brown (North Campus), University of Michigan

Abstract: The carboxylate platform has emerged as a promising strategy to produce carboxylic acids from complex organic wastes. Limitations persist in the ability to direct production from short-chain (C1-C5) products to medium-chain (C6-C12) products, which have higher value, are more energy dense, and are easier to recover. In this talk, I will discuss implementing the carboxylate platform on a waste stream from lignocellulosic biorefining to recover additional valuable chemicals from biorefinery "leftovers." I will present an evaluation of process stability and economics and share insights into medium-chain carboxylate production from metagenomic, metatranscriptomic, and thermodynamic analyses. I will also share strategies for continuing to improve our understanding of carboxylate platform systems and increase production of medium-chain products.



Matthew J. Scarborough et al. *mSystems* 2018; doi:10.1128/mSystems.00221-18