MSE SEMINAR

February 23, 2018
113 McBryde Hall
3:30 – 4:30 PM
Refreshments at 3:00 PM
Host: Prof. Bill Reynolds

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Renewable fuels and chemicals from plant biomass: Are we there yet?

Abstract:

In our efforts to shift away from conventional petroleum-based feedstock for productions of fuels, chemicals, and plastics, plant biomass has emerged as an attractive renewable alternative. However, its complex chemical make-up has created challenges that require unique processes to transform it into useful intermediates and products. In this seminar, developments in biological/chemical processes will be presented in the context of converting lignocellulosic biomass into bio-based products beyond bioethanol. Specific examples will be presented highlighting the role of spectroscopies in understanding cellulose conversion pathways, designing catalytic materials for lignin upgrading, and developing downstream production of renewable advanced fuels and chemicals.

Short bio:

Noppadon Sathitsuksanoh received his Ph.D. from Virginia Tech in 2011. His research focused on biofuels production from lignocellulose using ionic liquids. After completing his Ph.D., he joined the Lawrence Berkeley National Laboratory in 2011 as a postdoctoral fellow, leading R&D projects in enzyme engineering via genetic tools for fatty acid production from cellulosic wastes and applications of spectroscopies in understanding lignocellulose conversion pathways. He joined Chemical Engineering Department at the University of Louisville in 2015. His current research focuses on ‘bio-inspired catalytic systems,’ where he develops ‘green’ catalytic processes for productions of fuels, chemicals, and plastic intermediates from natural resources.