



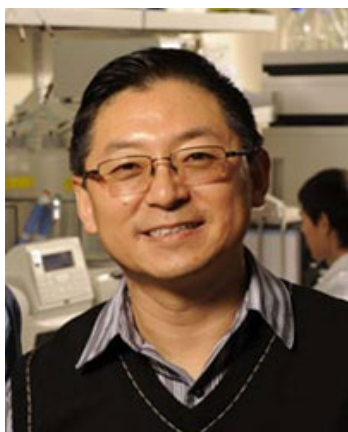
BIOLOGICAL ENGINEERING

Graduate Seminar Series

Title

“Aqueous Processing of Lignocellulosic Biomass to Advanced Biofuels”

Presentation by



Bin Yang
Associate Professor
Washington State University

Date: October 26th, 2016

Time: 1:30 – 2:30 PM

Place: ENGR 406

Abstract

An important current focus of research in biology, chemistry, engineering, agriculture, and environmental sciences is the development of clean technologies that utilize cellulosic biomass as a renewable resource to the largest extent possible in a biorefinery setting to produce sustainable liquid transportation fuels and chemicals. Of all sustainable resources, only biomass can be transformed into organic fuels and chemicals that can integrate well into our current transportation infrastructure with the inherent convenience, cost, and efficiency advantages of current fuels. Cellulosic biomass can be converted to fuels and chemicals through aqueous-phase processes involving carbohydrates-derived and lignin-derived reactive intermediates deconstructed from these structural components within biomass. The key challenge is to achieve high yields of these reactive intermediates for biological and/or catalytically upgrading into fuels or chemicals at low cost.

In this talk, an overview of state-of-the-art technologies for the advanced biofuels production as well as Dr. Yang's recent research and development on both catalytic and biological pathways to upgrade lignin to jet fuel, chemicals, and materials will be discussed.