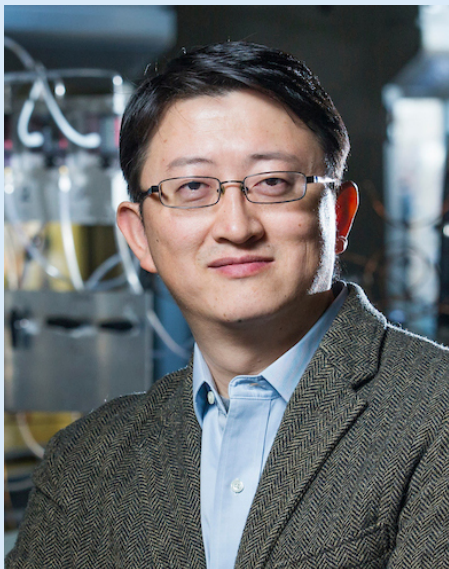


JEFFREY I. ZINK INORGANIC CHEMISTRY SEMINAR SERIES



Prof. Wenyu Huang

Department of Chemistry, Iowa State University

“From Selective Hydrogenation to Polymer Upcycling: Implementation of Ordered Nanomaterials in Heterogeneous Catalysis”

Abstract: Catalysis—the essential science for accelerating and directing chemical transformation—is the key to realizing environmentally friendly and economical processes for the conversion of fossil energy feedstocks. Catalysis is also the key to developing new technologies for converting alternative feedstocks, such as waste plastics, biomass, carbon dioxide, nitrogen, and water, to chemicals and fuels. The two grand challenges of heterogeneous catalysis, understanding mechanisms and dynamics of catalyzed reactions as well as the design and controlled synthesis of catalyst structures, require an atomic and electronic-level understanding of catalysts and catalytic processes. Due to their structural complexity, especially under reaction conditions, the catalytic active site and the molecule-catalyst interaction are often difficult to describe. This presentation will discuss our recent research on the synthesis, characterization, reaction study, and modeling of heterogeneous catalysts that are precisely synthesized at the atomic level using well-defined porous silica nanomaterials, intermetallic compounds, and metal-organic frameworks, which provide the means for meeting the two grand challenges of heterogeneous catalysis. This presentation will demonstrate that ordered nanomaterials could not only help the understanding of catalysis mechanisms but also reveal new catalytic phenomena.

Meet the Speaker

11:00 a.m. | YH 3096

Wednesday, June 7th, 2023

UCLA College | Physical Sciences
Chemistry & Biochemistry

More information: stephanie.Lo@chem.ucla.edu

4:00 p.m. | YH4222 - Collaboratory
Yoo Seminar & Conference Hall