

YSU Chemistry Seminar Series 2017-2018

Upcoming Seminar

Friday: 3/30/2018 3PM

Room 3022 Ward Beecher Hall

Refreshments Provided

Dr. Casey Wade, Ohio State University

Synthesis, Post synthetic Modification, and Catalysis with pincer MOFs



Metal-organic frameworks (MOFs) have emerged as versatile platforms for the design of heterogeneous catalysts. Our group has been investigating the assembly of “pincer MOFs” using linkers based on transition metal diphosphine pincer complexes. Pincer complexes have become ubiquitous in homogeneous catalysis owing to their stability and tunability, but remain prone to many of the deactivation processes that often plague homogeneous catalysts. Consequently, pincer MOFs provide unique platforms for the study of immobilization and site isolation effects on the reactivity and catalytic activity of these species. This presentation will discuss design principles for the synthesis of Zr pincer MOFs using linkers based on of M-PCP and M-PNP pincer complexes ($M = \text{Co}, \text{Ru}, \text{Rh}, \text{Pd}, \text{Pt}$) as well as our recent investigations into the post synthetic modification and catalytic activity of these materials.