KANSAS STATE UNIVERSITY
Department of Chemistry

King Hall 04
Thursday, Jan 23, 2020
1:30pm
Coffee and Cookies provided & 1:15pm

Iridium-Aluminum and Rhodium-Aluminum Heterobimetallic Complexes

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Department of Chemistry

Abstract

Research in the Brewster lab seeks to harness the combined power of a strong Lewis acid, aluminum, and an electron-rich late transition metal for bond activation and catalysis. A modular synthetic route to heterobimetallic late transition metal-aluminum complexes has been developed and the electronic structure of the resulting species interrogated. Reactivity with small molecules, H_2 and CO_2 will be presented. Mechanistic studies reveal stark differences in reactivity depending on the substrate employed.

Biography

Dr. Brewster received his PhD in Organometallic Chemistry from Yale University in 2012 under the direction of Prof. Robert Crabtree. After postdoctoral research in the lab of Prof. Karen Goldberg at the University of Washington, Seattle, he joined the tenure-track faculty of the University of Memphis in 2015. Dr. Brewster's research is at the interface of organic and inorganic chemistry, focusing primarily on development and synthesis of novel catalyst architectures for important organic reactions. Developed catalysts rely on second coordination sphere effects to impart high reactivity and selectivity.