

YSU Chemistry Seminar Series 2017-2018

Upcoming Seminar

Friday: 10/6/2017 3PM

Room 3022 Ward Beecher Hall

Refreshments Provided

Dr. Thomas G. Gray

Case Western Reserve University

Metal-Carbon Bond Forming **Reactions for Luminescent Materials**

Boron transmetalation has emerged as a powerful means of generating molecular organometallic phosphors. Progress in boron-to-gold transmetalation will be described, with an emphasis on triplet-state light emitters and their photophysical characterization. Ultrafast spectroscopic studies that quantify the heavy-atom effect of gold on ligand-centered excited states will be discussed. Transmetalation reactions have also been developed for other metal ions, including reactions that afford functionalized iridium(III) cyclometalates at room temperature. A palladium-catalyzed arylation of gold(III) has been discovered, where Au(III) chloro complexes serve as electrophiles in the Suzuki-Miyaura cross-coupling reaction. Recent advances in metalla-click chemistry will be considered that proceed with and without substoichiometric quantities of added copper.