



UNIVERSITY OF SOUTHERN CALIFORNIA

DEPARTMENT OF CHEMISTRY

Organic / Materials Chemistry Seminar

“Multiple Metal-Boron Interactions in Carboranyl Pincer Complexes”

Development of novel molecular architectures capable of enforcing unique electronic and geometric environments of reactive metal centers is an important avenue of homogeneous catalysis. The unusual three-dimensional structure of icosahedral clusters consisting of boron and carbon atoms (carboranes) is utilized in our research for the synthesis of metal complexes with novel bonding arrangements. First examples of novel (BB)-carboryne complexes containing three-membered (BB)>M metallacycles, which are inorganic boron-based analogs of metal benzyne complexes, were synthesized. Facile interconversion between carborane, carboranyl, and carboryne bonding modes plays an important role in reactivity of these metal complexes and leads to cooperative activation of organic substrates. The role of metal-boron interactions in reactivity pathways for activation of organic substrates will be discussed.

Professor Dmitry Peryshkov

Department of Chemistry and Biochemistry
University of South Carolina

Tuesday, May 8, 2018

12:00 PM

Olah Library

Hosted by: Professor Travis Williams

Scientific Community is Invited