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Department of Chemistry

Student Seminar Series

9:45 a.m. Tuesday, October 22, 2013 • 331 Smith Hall

Professor

Oleg Ozerov

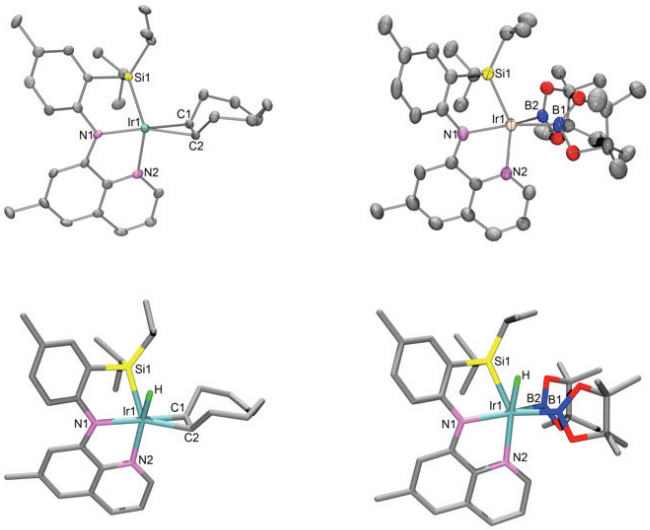
Department of Chemistry
Texas A&M University

Reaction Discovery With Pincer Complexes

Website:
http://www.chem.tamu.edu/rgroup/ozerov/OVO.htm

Abstract

This presentation will relate the latest in chemistry of late transition metal complexes made possible with pincer ligands in the Ozerov group. It will attempt to show how pursuit of rationally conceived ligand design ideas can lead to unanticipated serendipitous discoveries which then are harnessed for the next round of rational design. The presentation will focus specifically on the development of iridium pincer complexes as catalysts for dehydrogenative coupling of boranes and terminal alkynes to yield alkynylboronates. This chemistry is genuinely a treasure trove for an organometallic chemist as it allows one to engage in molecular design, mechanistic studies, and promising applications.



Professor Oleg V. Ozerov is a professor of Chemistry at Texas A&M University.

Oleg was born in Russia, where he received his undergraduate education at the Higher Chemical College of the Russian Academy of Sciences. As an undergraduate, he was first exposed to inorganic synthesis working on manganese vinylidene complexes in the laboratory of Professor Nikolai Ustynyuk. In 1996, Oleg then went on to do his doctorate studies in the laboratory of Professor Folami Ladipo at the University of Kentucky, where he studied the organometallic chemistry of titanium complexes supported by modified calixarene ligands.

Upon receiving his doctorate in 2000, Oleg moved to Indiana University, where he joined the group of Ken Caulton as a post-doctoral associate. Oleg's contributions in the Caulton group were numerous, exploring the chemistry of ruthenium and rhenium pincer complexes. In 2002, Oleg was hired by Brandeis University as an assistant professor of chemistry. In less than four years, Oleg was promoted to an associate professor with tenure. In 2009, Oleg accepted a position at Texas A&M University, where he holds his current title of professor of Chemistry.

Oleg's research spans the fields of both synthetic transition-metal and main-group chemistry, focusing on the broader areas of catalysis, energy conversion and environmental remediation.

Oleg is on the editorial advisory board of both *Chemical Science* and *Organometallics*, and is the associate editor of *Inorganic Chemistry Frontiers*. He has received numerous awards on his research, including the American Chemical Society Award in Pure Chemistry, the Norman Hackerman Award in Chemical Research, the Camille Dreyfus Teacher-Scholar Award, and the Alfred P. Sloan Research Fellowship.

Host: Mayank Puri