



Department of Chemistry & Biochemistry Seminar

Friday, February 12th, 2021

1:30pm – 2:45pm

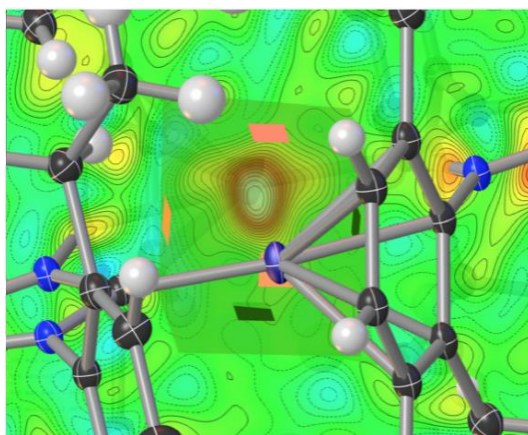
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Bonding and Reactivity in Low Coordinate Late Transition Metal Complexes

Speaker: *Dr. Joseph P. Sadighi*, Georgia Institute of Technology



Abstract: Low-coordinate complexes of the late transition metals exhibit unusual bonding and reactivity. The N-heterocyclic carbene (NHC) ligand framework has proven remarkably useful in the support of reactive complexes of copper, silver and gold. Beginning with reactive coinage metal hydrides, we have studied metal–element and metal–metal interactions with an eye toward catalysis. Finally, low-valent nickel hydrides present surprising contrasts with their copper-based analogues.

Biography: Joseph received his B.A. in Chemistry from Williams College, then carried out doctoral studies under the guidance of Prof. Stephen L. Buchwald at the Massachusetts Institute of Technology. After receiving his Ph.D. he moved to the California Institute of Technology as an NIH postdoctoral scholar under the guidance of Prof. John E. Bercaw and Dr. Jay A. Labinger. In 2001 he joined the Chemistry faculty at MIT as an assistant professor. From 2007–2011 he served on active duty in the U.S. Army, and in 2011 he joined the School of Chemistry & Biochemistry at the Georgia Institute of Technology, where he is currently an associate professor. His research interests include the synthesis of late transition metal complexes of interest to enable new catalysis.