Title: Diversity and Selectivity in Palladium- and Rhodium-Catalyzed C-H Activation of Arenes

Abstract: C-H activation plays an important role in synthetic organic chemistry. Palladium complexes have been well-known for oxidative C-H activation. Significantly, our recent studies have revealed that when catalyzed by stable Rh(III) complexes a large scope of arenes can undergo both oxidative and redox-neutral C-H activation in the diversified coupling with unsaturated molecules (alkene, alkyne, aziridine). Representative examples are presented with emphasis on different reaction patterns and selectivities as a result of substrate control and control of reaction conditions.