

"Secondary Metal-Ligand Interactions: C-H Activation and Metal-Carbon Multiple Bonding in Palladium Carbene Complexes"

"Catalysis is at the center of green chemistry efforts, especially when it involves readily available feedstock such as water, alcohols, and amines. An approach with major practical implications is the selective functionalization of E-H (E = O, N, C, Si, B) bonds since syntheses can be simplified and less waste generated than with traditional methods. Oxidative addition of such bonds has been investigated with some success, and our new approach involves metal-ligand cooperation, specifically, hydrogen transfer from the ligand to the metal and vice versa, which allows transformations under mild conditions."