Bifunctional catalysts offer excellent potential for designing reactivity and selectivity into two parts of a molecular scaffold. For example, one could design a bifunctional catalyst in which a C-H bond activation system and an activating/directing group are combined.

Dual site synergy: The first C-H bond to expelling a ligand from a coordinatively saturated metal.

Complexes in this family are versatile dual site catalyst precursors for C-H conversion.