

Department of Chemistry and Molecular Biology Seminar
October 25, 2007
3:45 pm in Dunbar 152

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***Electron Donating and Accepting Properties
of the Diiminepyridine Ligand and Some Variations***

Diiminepyridine (DIP) ligands are unique in leading to olefin polymerization catalysts with a wide range of transition metals, including even iron, for which no other insertion polymerization catalysts exist. The same ligands are also remarkable in stabilizing metals in a wide variety of oxidation states, which is related to their capacity to act as both σ -donors and π -acceptors. We have been analyzing the nature of the bonding between metal and DIP ligand, the *amount* of metal-to-ligand electron transfer, and the *energy change* associated with σ -donation and π -backdonation interactions.