

Internal Webinar

Synthesis of NHO-ligated Metal Complexes for Catalytic Applications

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N-Heterocyclic olefin (NHO) are anticipated to be softer donors when compared to N-Heterocyclic carbene (NHC) as they are highly polarized towards exocyclic carbon atom leading to increase electron density of high p-orbital character at the ligating carbon atom. Therefore, metal can easily coordinate with NHO ligand and produce highly electron-rich metal centre which are further used as promoters for bond activation under mild reaction conditions. The interaction of metal with NHO and the application of this complexes in catalysis field is still limited. With these objectives, initially a number of different functionalised NHOs will be synthesised and will further be utilised as ligand to stabilise Pd and Ni centres. We aimed to study the application of these complexes in various cross-coupling and C-H functionalisation reactions which are the most effective methods in organic synthesis.

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