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The multifaceted chemistry of functional phosphinoferrocene carboxamides

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Phosphinocarboxamides are structurally versatile hybrid ligands finding extensive use in catalysis.[1] This contribution will detail our recent results achieved in the synthesis of phosphinoferrocene carboxamides derived from 1′-(diphenylphosphino)-ferrocene-1-carboxylic acid (Hdpf)[2] and various functional amines such as amino acids, aminosulfonic acids, hydroxyamines, *etc*. (for the general synthetic concept, see Fig. 1). Also reported will be our coordination studies with these new ligands and catalytic results obtained in various simple and asymmetric transition-metal catalyzed organic transformations (e.g., in enantioselective allylic alkylation and conjugate addition of diethyl zinc to acyclic enones, as well as in selected C-C bond forming reactions).[3]

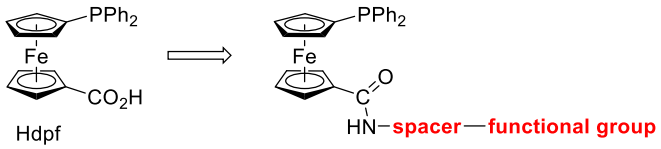

Fig. 1 The design of phosphinoferrocene carboxamides

References

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