

Ligand-Accelerated C-H Functionalization Reactions

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Metal-catalyzed C-H functionalization is a highly attractive strategy to introduce complexity in organic molecules and has the potential to revolutionize the way we synthesize molecules. However, the low reactivity and selectivity observed in many of these processes impede the actual implementation of this strategy as a general synthetic tool in organic laboratories. To unlock the full potential of metal-catalyzed C-H functionalization, the discovery of new ligands capable of increasing the reactivity and selectivity of these processes is of central importance. To date, only few ligands are able to promote the direct functionalization of C-H bonds.¹

In our laboratories we are interested in design new ligands for promoting high reactivity and selectivity in palladium-catalyzed C-H functionalization processes.² In this communication I present the discovery and development of new type of ligands capable of promoting a variety of C-H functionalization reactions of simple arenes.

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