

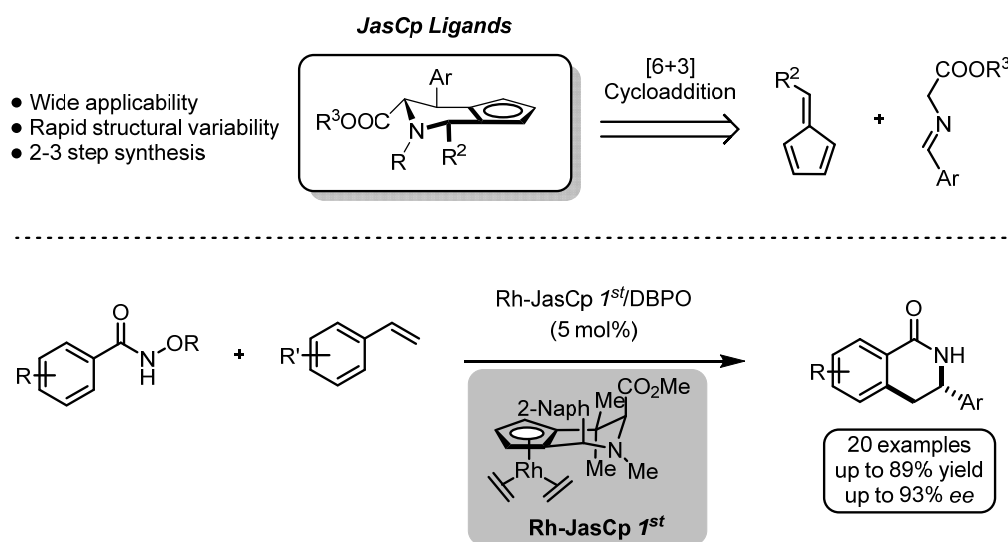
ENANTIOSELECTIVE C-H ACTIVATION WITH Rh(I)*JasCp* COMPLEXES

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The cyclopentadienyl (Cp) ligand and its pentamethyl analogue (Cp*) have emerged as versatile anionic ancillary ligands broadly applicable in transition-metal catalysis. In the past years, several chiral Cp^x ligands have been prepared and successfully tested in a plethora of reaction [1]. We have developed a general strategy for the synthesis of a new class of chiral Cp ligands (*JasCp* ligands) [2] embody four adjustable positions and can be accessed efficiently in three steps on gram scale from commercially available starting materials with an enantioselective [6+3] cycloaddition. These catalysts have been successfully applied in a variety of transformation leading to the desired products in high yields and enantioselectivities (Scheme 1).



Scheme 1. Application of the Rh*JasCp* in enantioselective C-H activation reactions.

[1] B. Ye, N. Cramer, *Acc. Chem. Res.* **2015**, *48*, 1308-1318.

[2] Z. Jia, C. Merten, R. Gontla, C. Daniliuc, A. Antonchick, H. Waldmann, *Angew. Chem. Int. Ed.* **2017**, *56*, 2429-2434.