Key words

silver

monophosphines

vinylogous Mannich reaction

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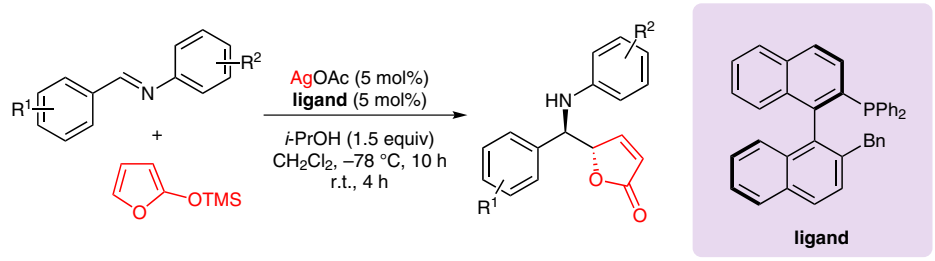
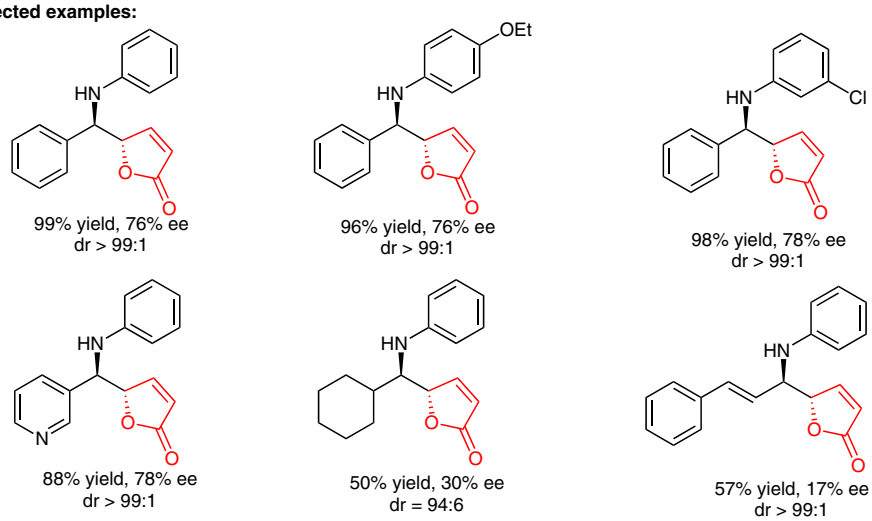
New Silver(I)–Monophosphine Complex Derived from Chiral Ar-BINMOL: Synthesis and Catalytic Activity in Asymmetric Vinylogous Mannich Reaction

Tetrahedron **2013**, *69*, 8777–8784.

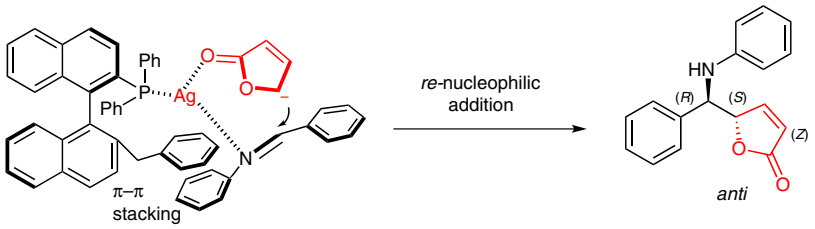
Silver(I)–Monophosphine-Catalyzed Asymmetric Mannich Reaction



Selected examples:



Proposed transition state:



Significance: The authors developed a new class of axially chiral monophosphine ligands for silver-catalyzed asymmetric reactions. This catalytic system shows good catalytic activities and good enantioselectivities in an asymmetric vinylogous Mannich reaction.

Comment: These air-stable ligands can be synthesized easily on gram scale in good yields from available starting materials. The benzyl group of the chiral monophosphine not only offers weak silver-π/π–π stacking, but also provides steric repulsion to favor the diastereoselective *re*-nucleophilic addition of siloxyfuran to the imine.

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