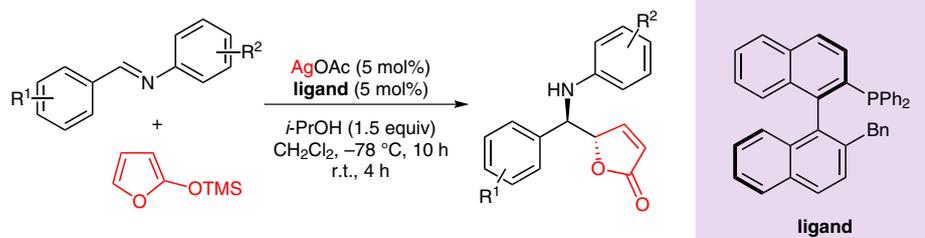
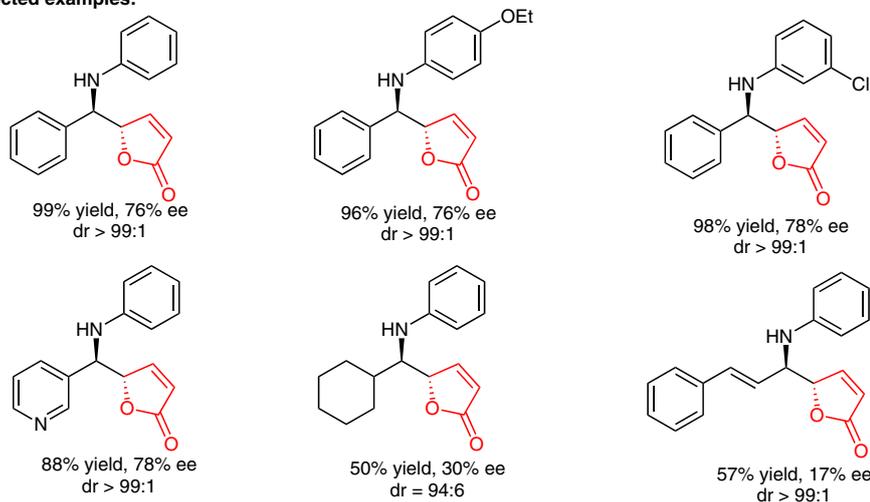


L.-S. ZHENG, L. LI, K.-F. YANG, Z.-J. ZHENG, X.-Q. XIAO, L.-W. XU* (HANGZHOU NORMAL UNIVERSITY AND LANZHOU INSTITUTE OF CHEMICAL PHYSICS, P. R. OF CHINA)
New Silver(I)–Monophosphine Complex Derived from Chiral Ar-BINMOL: Synthesis and Catalytic Activity in Asymmetric Vinylogous Mannich Reaction
Tetrahedron **2013**, *69*, 8777–8784.

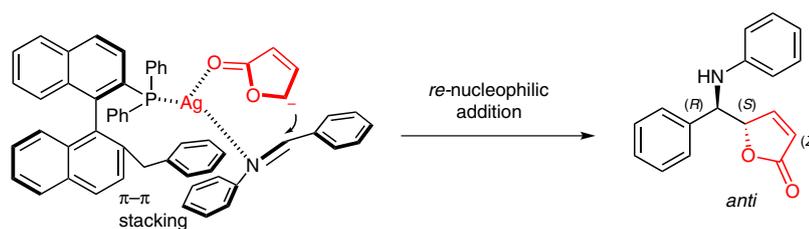
Silver(I)–Monophosphine-Catalyzed Asymmetric Mannich Reaction



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.

SYNFACTS Contributors: Hisashi Yamamoto, Fengtao Zhou
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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 stacking, but also provides steric repulsion to favor the diastereoselective *re*-nucleophilic addition of siloxyfuran to the imine.