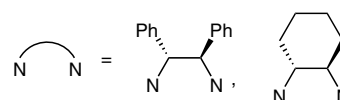
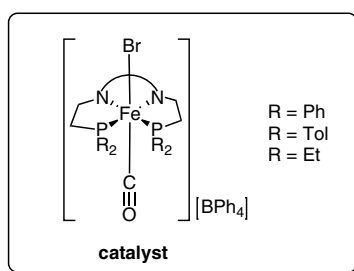
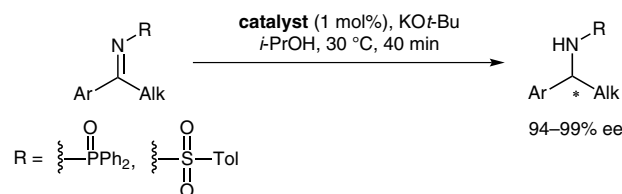
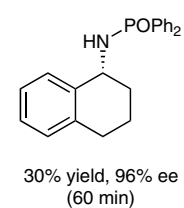
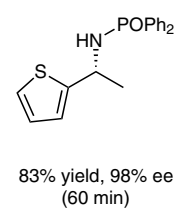
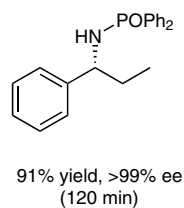
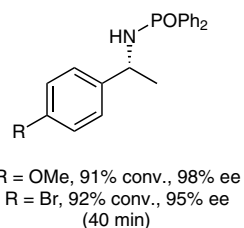
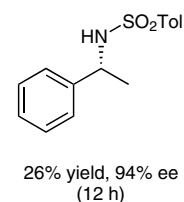
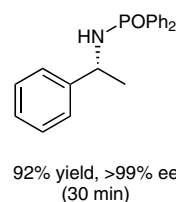
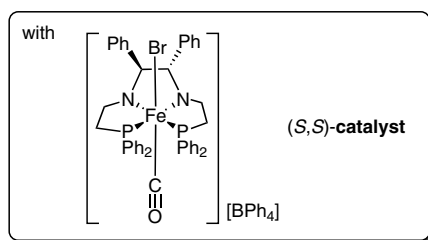


A. A. MIKHAILINE, M. I. MAISHAN, R. H. MORRIS* (UNIVERSITY OF TORONTO, CANADA)
Asymmetric Transfer Hydrogenation of Ketimines Using Well-Defined Iron(II)-Based Precatalysts Containing a PNNP Ligand
Org. Lett. **2012**, *14*, 4638–4641.

Iron-Catalyzed Asymmetric Transfer Hydrogenation of Ketimines



Selected examples:



Significance: The authors report an iron-catalyzed asymmetric transfer hydrogenation under mild conditions that gives chiral amines with high enantioselectivity (94–99% ee). The system provides a solution to the challenging C=N bond reduction and proceeds with 2-propanol as the reducing agent.

Comment: Iron(II)–PNNP complexes that catalyze the asymmetric reduction of *N*-(diphenylphosphino)- and *N*-(4-tolylsulfonyl)ketimines were developed. The (*R,R*)-diamine catalyst produces the (*S*)-amine. (*S,S*)-**3** are found to be the most active and stereoselective catalyst. The reaction outcome is influenced mainly by the sterics around the imine carbon but is insensitive to its electronic character.

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