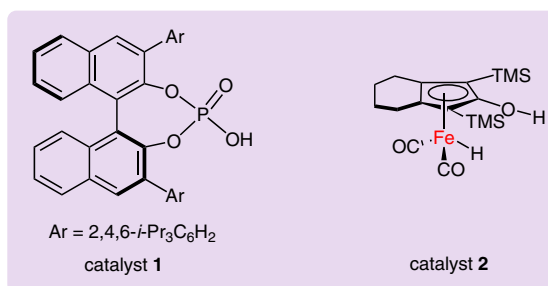
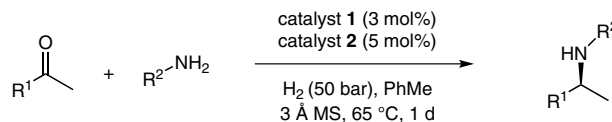
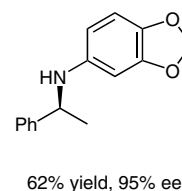
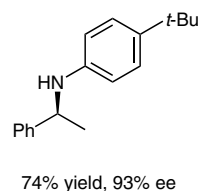
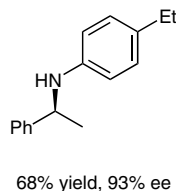
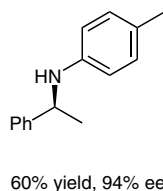
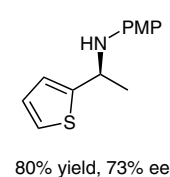
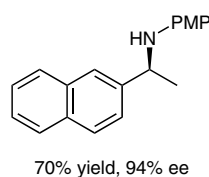
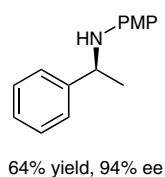
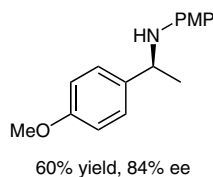


S. ZHOU, S. FLEISCHER, H. JIAO, K. JUNGE, M. BELLER* (LEIBNIZ-INSTITUT FÜR KATALYSE E.V. AN DER UNIVERSITÄT ROSTOCK, GERMANY AND CENTRAL CHINA NORMAL UNIVERSITY, WUHAN, P. R. OF CHINA)
Cooperative Catalysis with Iron and a Chiral Brønsted Acid for Asymmetric Reductive Amination of Ketones
Adv. Synth. Catal. **2014**, 356, 3451–3455.

Asymmetric Reductive Amination of Ketones



Selected examples:



Significance: Enantiomerically pure chiral amines are very important building blocks to synthesize numerous pharmaceutical drugs as well as bioactive compounds. The authors report the first iron-catalyzed asymmetric reductive amination of ketones with anilines in the presence of hydrogen, leading to chiral amines in moderate to good yields and good to excellent enantioselectivities.

Comment: The protocol represents a more convenient, simple and practical method for the synthesis of chiral amines. Interestingly, the combination of the chiral Brønsted acid (TRIP) catalyst and the non-chiral Knölker complex enabled the reductive amination of ketones with anilines in a cooperative manner.