C. MOLINARO,* J. P. SCOTT,* M. SHEVLIN,* C. WISE, A. MÉNARD, A. GIBB, E. M. JUNKER, D. LIEBERMAN (MERCK & CO. INC., RAHWAY, USA AND MERCK SHARP AND DOHME LTD, HODDESDON, UK)

Catalytic, Asymmetric and Stereodivergent Synthesis of Non-Symmetric β,β-Diaryl-α-Amino Acids
J. Am. Chem. Soc. **2015**, *137*, 999–1006.

Category

Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

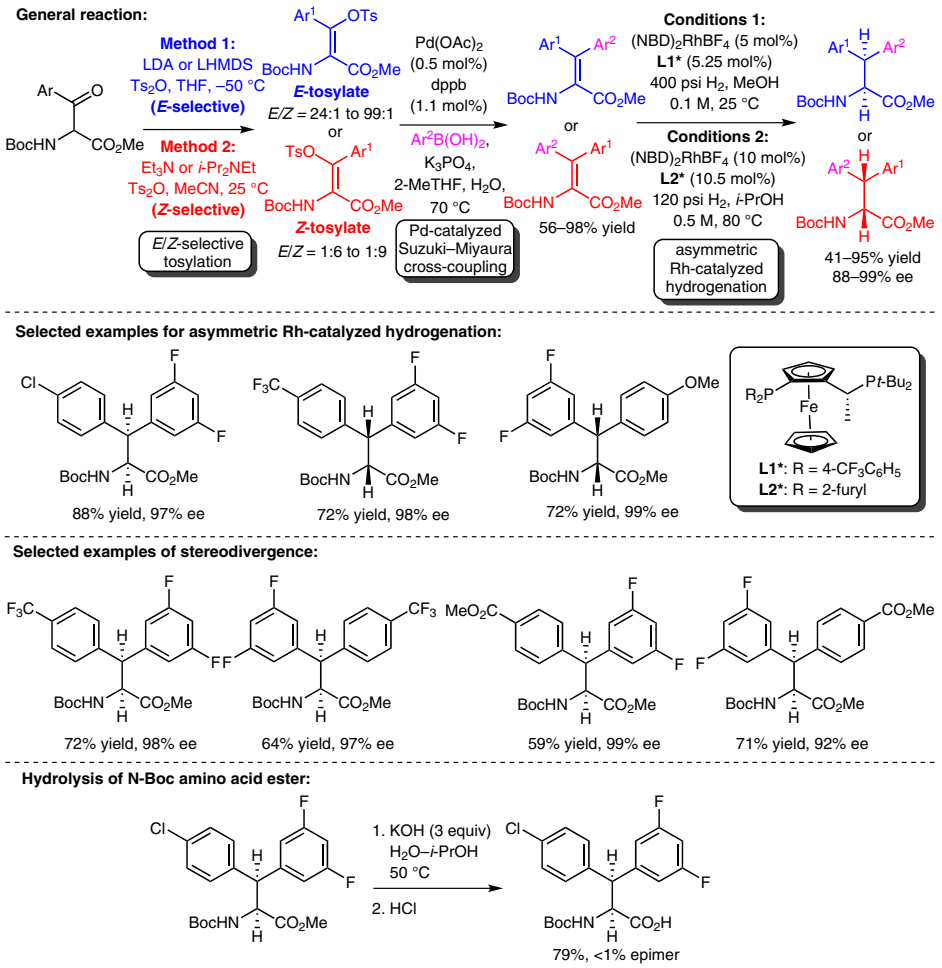
Key words

palladium

rhodium

asymmetric hydrogenation

Enantioselective and Stereodivergent Synthesis of β,β-Diaryl-α-Amino Acids



Significance: The β,β-diarylalanine core is a synthetically useful motif due to its prevalence in bioactive molecules. Merck process chemists demonstrate the elegant utility of asymmetric Rh-catalyzed hydrogenation to access such challenging structures.

Comment: The authors report a three-step sequence with potential access to all four stereoisomers of the β,β-diarylalanines. A difficult to achieve hydrogenation on a tetrasubstituted olefin was effected using Rh catalysis with a chiral Josiphos ligand.

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