

Massachusetts Institute of Technology

Organic Chemistry 5.512

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Stereocontrolled Conjugate Addition

★ Catalytic Asymmetric Conjugate Addition I: *Unstabilized Nucleophiles*

Hayashi-Miyaura Rh-Catalyzed Conjugate Addition Reactions

Cu-Catalyzed Conjugate Addition of Organozinc and Organomagnesium Compounds

Organocatalytic Conjugate Addition of Activated Aromatic Compounds

★ Catalytic Asymmetric Conjugate Addition II: *Conjugate Reduction*

★ Catalytic Asymmetric Conjugate Addition III: *Stabilized Nucleophiles*

Michael Reactions Using Heterobimetallic Catalysts (Shibasaki)

Organocatalytic Michael Reactions (Jorgensen)

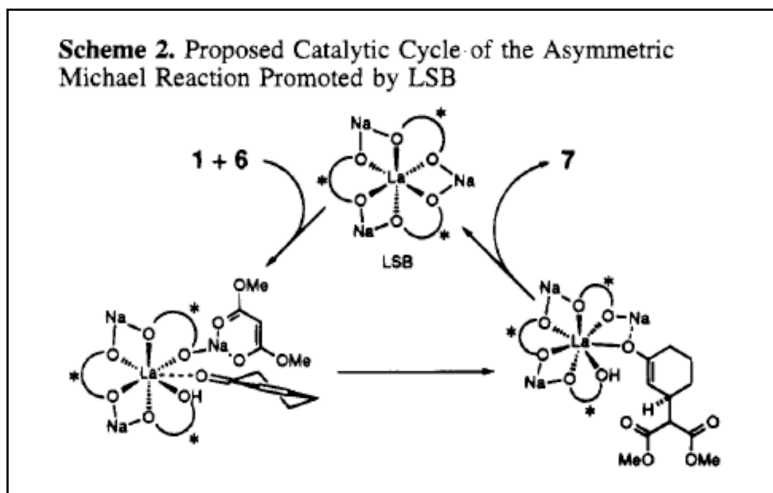
Catalytic Asymmetric Conjugate Addition of Stabilized Nucleophiles

I. Shibasaki: "Heterobimetallic Catalysts"

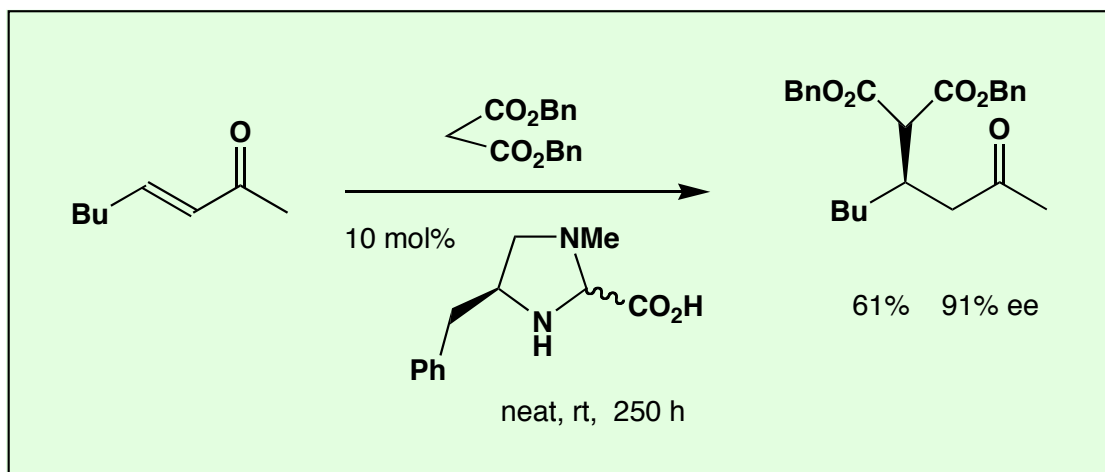
Review

"Asymmetric Michael Reactions" Kanai, M; Shibasaki, M.

In *Catalytic Asymmetric Synthesis*; Ojima, I., Ed.; Wiley-VCH, 2000, pp 569-592



II. Jorgensen: Organocatalytic Conjugate Addition *Angew. Chem. Int. Ed.* **2003**, 42, 661 and 4955



III. Jacobsen: Enantioselective Conjugate Additions Catalyzed by (Salen)Al Complexes
J. Am. Chem. Soc. **2005**, 127, 1313

IV. Corey: Organocatalytic Conjugate Addition of Imino Esters
Org. Lett. **2000**, 2, 1097

