

Massachusetts Institute of Technology

Organic Chemistry 5.512

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Prof. Rick L. Danheiser

Unit 2

Stereocontrolled Alkylation and Related Electrophilic Substitution Strategies

V. Catalytic Methods

- ★ α -Oxidation of Aldehydes and Ketones (*H. Yamamoto, MacMillan, Zhong, Y. Hayashi*)
- ★ Alkylation of Imine Derivatives of α -Amino Esters (*O'Donnell, Corey, Maruoka*)
- ★ Tsuji Allylation of Ketones (*Stoltz, Trost*)
- ★ Enantioselective Protonation Strategies (*Fu*)

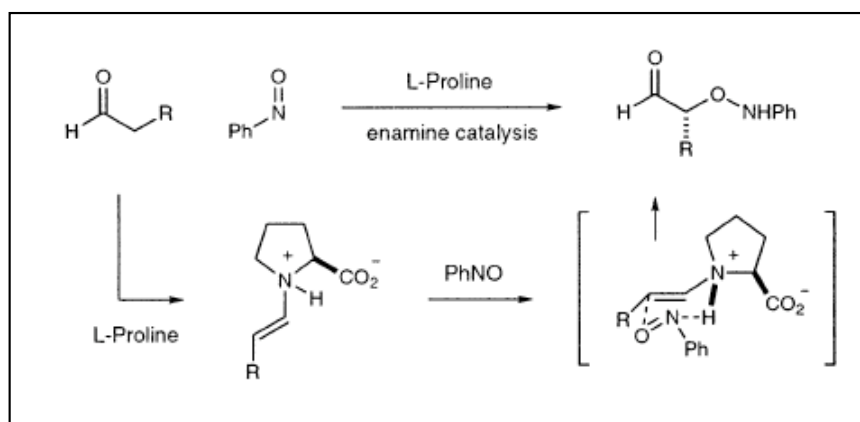
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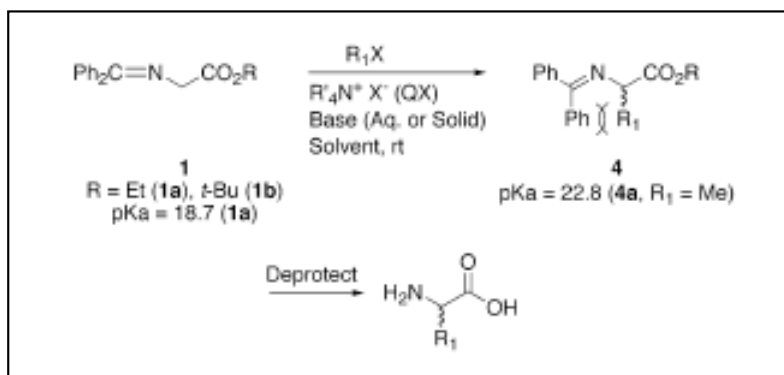
Special Issue on
Asymmetric Organocatalysis
Accts. Chem. Res. **2004**, *37*, 487-631

"Asymmetric Organocatalysis"
A. Berkessel and H. Gröger
Wiley-VCH, **2005**

*Enantioselective
Organocatalytic
Oxidation of Aldehydes with
Nitrosobenzene*



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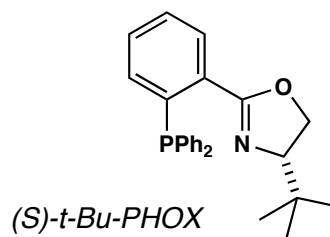
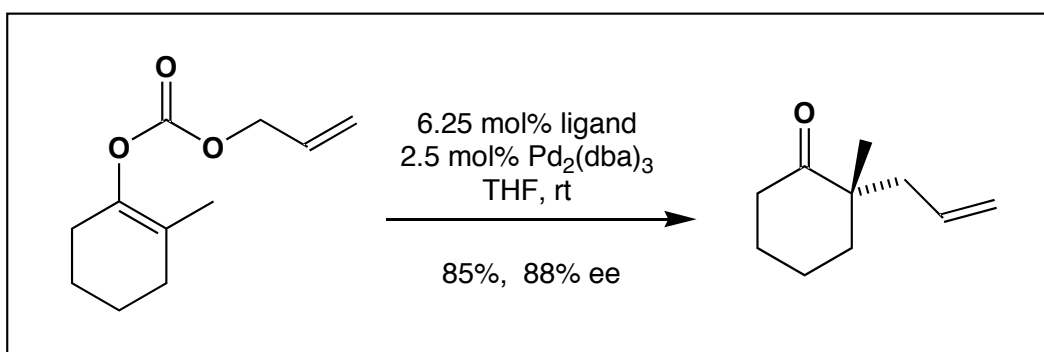


Alkylation of Imine Derivatives of α -Amino Esters

Martin J. O'Donnell
IUIPUI

Enantioselective Tsuji Allylation

D. C. Behenna; B. M. Stoltz *J. Am. Chem. Soc.* **2004**, *126*, 15,044
B. M. Trost; J. Xu *J. Am. Chem. Soc.* **2005**, *127*, 2846



Enantioselective Addition of Amines to Ketenes Catalyzed by a Planar-Chiral Derivative

B. L. Hodous; G. C. Fu *J. Am. Chem. Soc.* **2002**, *124*, 10,006

