

Massachusetts Institute of Technology
Organic Chemistry 5.512

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Unit 6
Stereocontrolled Aldol Reactions

- ★ Overview of the Stereochemistry of the Aldol Reaction and Substrate Control
- ★ Reagent Control: Chiral Auxiliary Strategies
- ★ Reagent Control: Chiral Controller Strategies
- ★ Reagent Control: Chiral Lewis Acid Catalyzed Aldol Reactions

General References

- "Catalyzed Enantioselective Aldol Additions of Latent Enolate Equivalents", Nelson, S. G. *Tetrahedron: Asymmetry* 1998, 9, 357-389.
- "Diastereoselection in Lewis-Acid-Mediated Aldol Additions", Mahrwald, R. *Chem. Rev.* **1999**, 99, 1095-1120.
- "The Catalytic Asymmetric Aldol Reaction", Machajewski, T. D.; Wong, C. -H. *Angew. Chem. Int. Ed.* **2000**, 39, 1352-1374.
- "Recent Developments in Asymmetric Aldol Methodology", Franklin, A. S.; Paterson, I. *Contemp. Org. Syn.* **1994**, 1, 317-338.
- "Recent Advances in Asymmetric Aldol Addition Reactions", Carreira, E. M. In *Catalytic Asymmetric Synthesis*, Second Edition; Ojima, I., Ed.; Wiley-VCH, 2000, pp 513-541.
- "Aldol Reactions: Methodology and Stereochemistry", Carreira, E. M. In *Modern Carbonyl Chemistry*; Otera, J., Ed.; Wiley-VCH, 2000, pp 227-248.
- "Stereoselective Aldol Reactions in the Synthesis of Polyketide Natural Products", Paterson, I.; Cowden, C. J.; Wallace, D. J.; In *Modern Carbonyl Chemistry*; Otera, J., Ed.; Wiley-VCH, 2000, pp 249-298.
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Aldol Reaction Stereochemistry: Recent Examples

Evans, D. A.; Siska, S. A.; Cee, V. J. *Angew. Chem. Int. Ed.* **2003**, *42*, 1761

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