

Massachusetts Institute of Technology
Organic Chemistry 5.512

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Prof. Rick L. Danheiser

Unit 4

Stereocontrolled 1,2-Addition to Carbonyl Groups

★ General Principles

★ Substrate Control: 1,2-Induction by Molecular Framework

★ Substrate Control: 1,3-Induction by Molecular Framework

★ Addition of "Unstabilized" Carbon Nucleophiles

★ Reagent Control: Organozinc and Related Addition Reactions

Alkyl, Alkenyl, and Alkynyl Metal Compounds

Asymmetric Induction by the Molecular Framework

Reviews: "Around and Beyond Cram's Rule" Mengel, A.; Reiser, O. *Chem. Rev.* **1999**, *99*, 1191

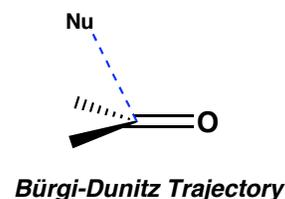
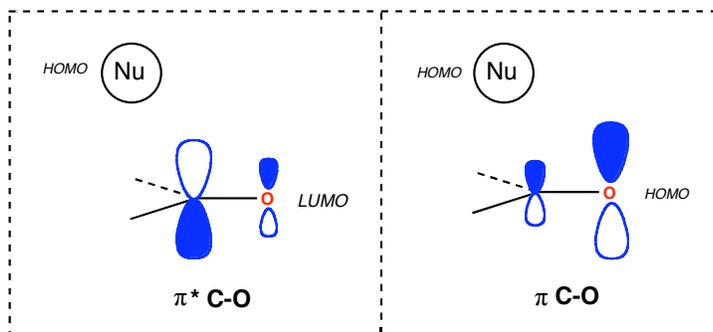


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Figure 8. — Secondary interactions for anti- and syn-periplanar attacks.