10: Alkenes and Alkynes. Electrophilic and Concerted Addition Reactions

Preview

(continued)

10.5 Alkenes to Alcohols by Hydroboration

Hydroboration of Alkenes with BH_3 (10.5A)
- *Overall Reaction Sequence*
- *Formation of the Organoborane Intermediate*
- *Concerted Addition Mechanism*
- *The BH_3 Reagent*
- *Conversion of R_3B to the Alcohol (R-OH)*

Hydroboration with RBH_2 and R_2BH Reagents (10.5B)
- *Disiamyborane*
- *Thexylborane*
- *9-BBN*
- *Regioselectivity*

Hydroboration of Alkynes (10.5C)

10.6 Addition of H_2 to Alkenes and Alkynes

Catalytic Hydrogenation of Alkenes (10.6A)
- *Heterogeneous Catalysts*
- *Heterogeneous Catalysis Mechanisms*
- *Homogeneous Catalysts*
- *Structures of Homogeneous Catalysts*
- *Homogeneous Catalysis Mechanisms*

Hydrogenation of Alkynes (10.6B)
- *Catalytic hydrogenation*
- *Lindlar Catalyst*
- *Sodium Metal in NH_3*

H_2 Addition Reactions are Reduction Reactions (10.6C)

Review