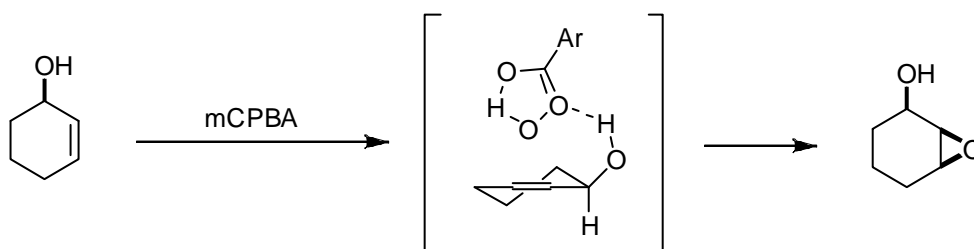


Lecture “Modern Synthetic Methods”

Take-home messages from Week 5

2.2.3. Directed reactions

In directed reactions a functional group coordinates or intermediately binds covalently to the reagent and therefore directs the attack to one diastereomeric side of a molecule.



2.3. Enolate alkylation, enolate functionalization

Two factors need to be controlled – enolate geometry and enolate face selectivity

Chiral auxiliaries: - Allow diastereoselective transformations on achiral substrates

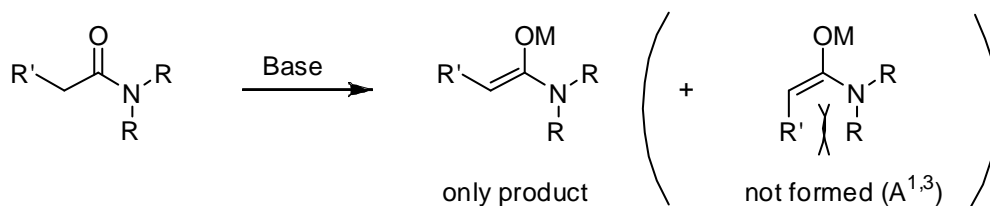
- Two different approaches for a) carboxylic acid derivatives

b) aldehydes or ketones

Cyclic solutions: - Enolate geometry is fixed, rigid structure allows good control

- Examples: **Meyers, Schöllkopf, Seebach**

Acyclic systems: - Chiral amides allow better control for enolate geometry than esters



- need to solve problem of difficult amide hydrolysis

