

1. Basics including "static stereochemistry"

- 1.1 Stereogenic elements
- 1.2 Properties of enantiomers
- 1.3 Prochirality/Topicity

2. Dynamic Stereochemistry

- 2.1 Drawing of conformers
- 2.2 Acyclic compounds
- 2.3 Cyclic compounds
- 2.4 Atom inversions

3. Asymmetric Synthesis

- 3.1 Basic Terms
- 3.2 Reactions of C=O with nucleophiles
 - 3.2.1 Diastereoselective additions
 - 3.2.2 Enantioselective additions
 - 3.2.3 Allylations
 - 3.2.4 Aldol AdditionsIncluding organocatalysis
- 3.2.5 α -Functionalizations of C=O
- 3.3 Reactions of Alkenes
 - 3.3.1 Epoxidation
 - 3.3.2 Dihydroxylation
 - 3.3.3 Hydroboration
 - 3.3.4 Cycloadditions/Diels-Alder reaction

Written examination (80 points): 19.07.2013, 10.00 a.m. (10 Uhr), HS II, Silberlaube

Repeated written examination (80 points): 27.09.2013, 10.00 a.m. (10 Uhr), HS Chemie, Takustr. 3

For solution of problem sets a maximum of 8 extra-points can be gained which are added to the result of your written examination in July. These extra-points are **not** considered for the repeated examination in September except you had been sick (certificate is required).