


UE Asymmetric synthesis

 ECTS
6 credits

 Component
UFR Chimie-
Biologie

 Semester
Tous les ans

- > **Teaching language(s):** French, English
- > **Open to exchange students:** No

Presentation

Description

Course outline:

The principle of asymmetric synthesis is presented and illustrated by examples of asymmetric reduction of carbonyl, imines, alkenes, asymmetric oxydations, stereoselective alkylations, aldol reactions and stereoselective allylations. This asymmetric reaction toolbox set the basic knowledge to generate enantioenriched compounds, crucial for organic chemists. This course is also illustrated by the study of natural products asymmetric synthesis.

Details:

- I. Principle of asymmetric synthesis, reminder on enantiomeric excess and absolute configuration, catalysis
- II. Enantioselective reduction of C=O, C=N and C=C bonds
- III. Asymmetric oxidation
- IV. Enantioselective (2+1) and (4+2) cycloadditions
- V. Enolates Formations; Stereoselective Alkylations, Stereoselective Aldol Reactions
- VI. Stereoselective Allylations

Course parts

UE Asymmetric synthesis - CM	Lectures (CM)	36h
TD	Tutorials (TD)	4,5h

Recommended prerequisites

Prerequisites:

Master 1 Organic chemistry 1 and 2

Period : Semester 9

Skills

Skills:

- Determining enantiomeric excesses and absolute configuration
- Knowledge of the principal asymmetric transformations
- Recognizing the interactions involved in the stereo-selection.

Useful info

Contacts

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Place

› Grenoble

Campus

› Grenoble - Saint-Martin d'Hères