

Chemistry 7300

Reactions and Synthesis in Modern Organic Chemistry, Fall 2007

Instructor: Dr. Tom Chang
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Meeting Time/Place:

Office Hour: M-F 8:30 am to 9:30 am, or drop by with or without appointment

Texts: none

Journals: J. Am. Chem. Soc.*
J. Org. Chem.*
Angew. Chem. Int. Ed.*
Synthesis*
J. Chem. Soc. Perkin Trans I*
Org. Lett.*
Tetrahedron*
J. Med. Chem.
J. Combinatorial Chem.
Synth. Lett.
Chem. Commun.
Tetrahedron: Asymmetry
Tetrahedron Lett.
Bioorg. Med. Chem. Lett.
Bioorg. Med. Chem.
Acc. Chem. Res.
Antimicro. Agents Chemother.
J. Antibiot.

*: journal for selecting topic of report

Grading Scheme:

Point Distribution: four reports (60%) and final presentation (40%)

Reports: (monthly):

1. Select a total synthesis paper from marked (*) journals and ask me for approval (1st week of the month)

2. Expand the synthetic schemes in detail and ask me for assigning interested transformations (2nd week of the month)

3. Briefly summarize the work involved in the selected paper including:

- A) Objective of this paper
 - B) Importance of this paper
 - C) Outline the mechanism of interested transformations and provide explanation for chemoselectivity, regioselectivity, stereoselectivity.
 - D) Result and conclusion of this paper
- (3rd or 4th week of the month)

The purpose of these reports is to train you how to extract useful information, organize your data, and pin-point the problem among reactions.

Final Presentation:

A set of total synthesis papers will be provided. You will prepare a 30-40 min. presentation to introduce the paper of your choice.

Assessment:

A set of questions of reaction mechanism will be given at the beginning of this class. Same questions will be given again at the final month. The improvement will be evaluated.