

Advanced Organic Chemistry

2 units (selection)

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Target This lecture intends to reconstruct knowledge of basic organic chemistry in view of structure and reactivity aspects and thus, aims at grasping essence shown in the real organic chemistry journals.

Outline We wish to discuss 1) Basic concepts of organic photochemistry, 2) chemistry of reactive intermediates, 3) logical synthesis of organic molecules, and finally, 4) physical influence on organic reactions.

Style Lecture

Keyword *structure and reactivity, reactive intermediates*

Fundamental Lecture “Organic Chemistry 3”(1.0), “Organic Chemistry 4” (1.0)

Relational Lecture “Advanced Topics in Synthetic Chemistry”(0.5)

Goal

1. Understanding essence of organic chemistry journals.
2. Ability to suggest or propose the way to solve various organic chemistry subjects.

Schedule

1. Photochemistry: Basic Concept
2. Photochemistry: Application
3. Reactive Intermediates: Molecules in Excited States
4. Reactive Intermediates: Carbocations and Carbanions
5. Reactive Intermediates: Free Radicals
6. Reactive Intermediates: Carbenes and Nitrenes
7. Reactive Intermediates: Radical Ions
8. Interim Exam
9. Asymmetric Synthesis: Introduction
10. Asymmetric Synthesis: Basic Concept
11. Diastereoselective Reactions
12. Enantioselective Reactions
13. Asymmetric Catalysis
14. Asymmetric Synthesis: Application
15. Asymmetric Synthesis: Topics
16. Term Exam

Evaluation Criteria Students are credited by the results of evaluation of their reports (50%) and scores of the final exam (50%).

Contents <http://cms.db.tokushima-u.ac.jp/cgi-bin/toURL?EID=216898>

Student Able to be taken by only specified class(es)

Contact

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