Organic Chemistry

by

Robert C. Neuman, Jr.
Professor of Chemistry, emeritus
University of California, Riverside

orgchembyneuman@yahoo.com
<http://web.chem.ucsb.edu/~neuman/orgchembyneuman/>

Chapter Outline
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I. Foundations
1. Organic Molecules and Chemical Bonding
2. Alkanes and Cycloalkanes
3. Haloalkanes, Alcohols, Ethers, and Amines
4. Stereochemistry
5. Organic Spectrometry

II. Reactions, Mechanisms, Multiple Bonds
6. Organic Reactions * (Not yet Posted)
7. Reactions of Haloalkanes, Alcohols, and Amines. Nucleophilic Substitution
8. Alkenes and Alkynes
10. Alkenes and Alkynes. Addition Reactions
11. Free Radical Addition and Substitution Reactions

III. Conjugation, Electronic Effects, Carbonyl Groups
12. Conjugated and Aromatic Molecules
14. Substituent Effects
15. Carbonyl Compounds. Esters, Amides, and Related Molecules

IV. Carbonyl and Pericyclic Reactions and Mechanisms
17. Oxidation and Reduction Reactions
18. Reactions of Enolate Ions and Enols
19. Cyclization and Pericyclic Reactions *(Not yet Posted)

V. Bioorganic Compounds
20. Carbohydrates
21. Lipids
22. Peptides, Proteins, and α−Amino Acids
23. Nucleic Acids

*Note: Chapters marked with an (*) are not yet posted.
Detailed Contents
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II. Reactions, Mechanisms, Multiple Bonds

6: Organic Reactions (Not Posted)

This chapter will introduce general types of organic reactions. It will highlight the fundamental differences between ionic, radical, and concerted reactions, as well as between single step and multiple step chemical transformations. It also will also introduce and contrast basic concepts of reaction mechanisms, chemical kinetics, and chemical synthesis.
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