

# About Pearson

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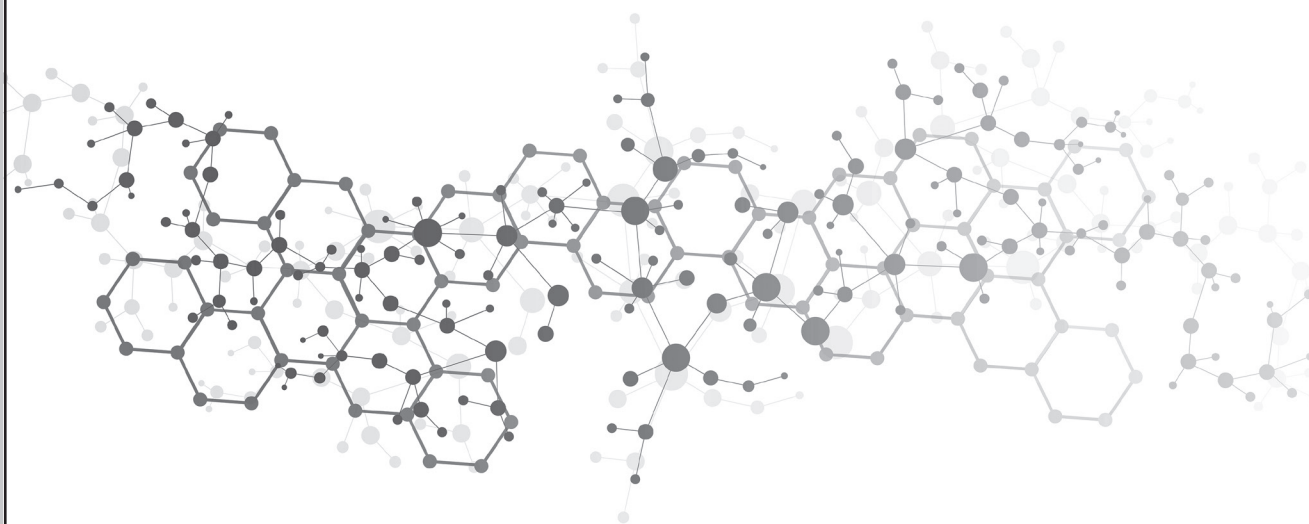
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# Chemistry

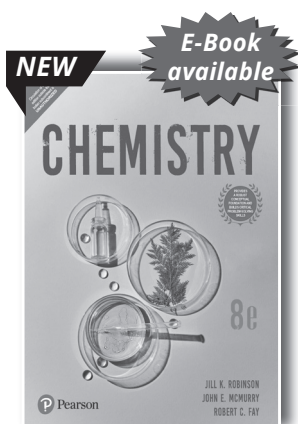
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ISBN: 9789356063419

## Chemistry, 8/e

 Jill Kirsten Robinson | John E. McMurry

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## ABOUT THE BOOK

Robinson/McMurry/Fay's **Chemistry**, known for a concise and united author voice, conceptual focus, extensive worked examples, and thoroughly constructed connections between organic, biological, and general chemistry, highlights the application of chemistry to students' lives and careers. Lead author Jill Robinson strengthens the student orientation by creating more engaging, active learning opportunities for students and faculty. With the 8th Edition, Robinson draws upon her exceptional teaching skills to provide new interactive experiences that help identify and address students' preconceptions.

## FEATURES

- New and Updated - Worked Examples provide more than any other text on the market and are tightly integrated into the text's flow and concise narrative.
- Updated - End-of-Chapter Problems have been reviewed and analyzed by author Jill Robinson for accuracy and to ensure each problem is tied to a learning objective in the end-of-chapter Study Guide. All End-of-Chapter problems now tie to specific examples throughout the text, supporting the intuitive flow of material.
- Updated - Inquiry sections highlight the importance of chemistry, promote student interest, and deepen student understanding of the content by showcasing problems that revisit several chapter concepts.
- Conceptual Problems: Conceptual understanding is a primary focus of this book.
- Conceptual problems are intended to help with the critical skill of visualizing the structure and interactions of atoms and molecules while probing the understanding of key principles rather than the ability to correctly use numbers in an equation.
- Excellent Pedagogy
- Big Idea- Questions Figure It Out- Questions
- Practice Problems Apply Problems
- Inquiry sections Conceptual Problems
- Key Terms Key Equations
- Section Problems Multiconcept Problems
- End-of-Chapter- Practice Test End-of-Chapter-Study Guide

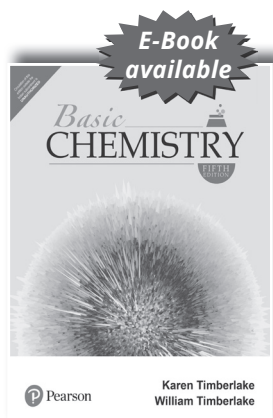
## CONTENTS

1. Chemical Tools: Experimentation and Measurement
2. Atoms, Molecules, and Ions
3. Mass Relationships in Chemical Reactions
4. Reactions in Aqueous Solution
5. Periodicity and the Electronic Structure of Atoms
6. Ionic Compounds: Periodic Trends and Bonding Theory
7. Covalent Bonding and Electron-Dot Structures
8. Covalent Compounds: Bonding Theories and Molecular Structure
9. Gases: Their Properties and Behavior
10. Liquids and Phase Changes
11. Solids and Solid-State Materials
12. Solutions and Their Properties
13. Chemical Kinetics
14. Chemical Equilibrium
15. Aqueous Equilibria: Acids and Bases
16. Applications of Aqueous Equilibria
17. Thermodynamics: Entropy, Free Energy, and Spontaneity
18. Electrochemistry
19. The Main-Group Elements
20. Transition Elements and Coordination Chemistry
21. Nuclear Chemistry
22. Organic and Biological Chemistry
23. Thermochemistry: Chemical Energy (Online Chapter)

## ABOUT THE AUTHOR(S)

Jill Kirsten Robinson, Indiana University

John E. McMurry, Cornell University, Robert C. Fay, Cornell University



ISBN: 9789353438753

## Basic Chemistry, 5/e

 Karen C Timberlake

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### ABOUT THE BOOK

Basic Chemistry introduces students to the essential scientific and mathematical concepts of general chemistry. With accessible language and a moderate pace, the text is easy-to-follow for first-time chemistry students, as well as those hoping to renew their studies of the subject. In the Fifth Edition, Bill and Karen Timberlake carefully develop core ideas while relating them to the possibility of future careers. The book guides students through basic chemistry problem solving with engaging visuals and a focus on developing the math skills necessary to be successful in the course. End of chapter questions strategically promote integration of cumulative

ideas, allowing students to develop a strong foundation for learning chemistry and encouraging them to continue their studies in the field.

### FEATURES

- **Guides to Problem Solving (GPS)** illustrate the steps needed to solve a problem and provide a visual guide for students to use in solving future problems.
  - **NEW! “Try It First” feature** precedes the Solution section of each Sample Problem, encouraging students to work on the problem before reading the given Solution and helping them learn to recall new ideas.
  - **NEW! Connect features** specify information that relates the Given and Need sections in Analyze the
- Problems to help students identify and connect the components within a word problem and set up a solution strategy.
  - **NEW! Follow-Up Stories** provide follow-up to the discussion in the chapter opener and include application questions.
  - **Analyze the Problems** convert a word problem into components for problem solving.

### CONTENTS

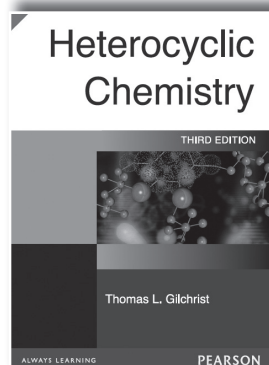
1. Chemistry in Our Lives
2. Chemistry and Measurements
3. Matter and Energy
4. Atoms and Elements
5. Electronic Structure of Atoms and Periodic Trends
6. Ionic and Molecular Compounds
7. Chemical Quantities
8. Chemical Reactions
9. Chemical Quantities in Reactions
10. Bonding and Properties of Solids and Liquids
11. Gases
12. Solutions
13. Reaction Rates and Chemical Equilibrium
14. Acids and Bases
15. Oxidation and Reduction
16. Nuclear Chemistry
17. Organic Chemistry
18. Biochemistry

### ABOUT THE AUTHOR

**Karen C. Timberlake** is Professor Emerita of chemistry at Los Angeles Valley College, where she taught chemistry for allied health and preparatory chemistry for 36 years. She received her bachelor’s degree in chemistry from the University of Washington and her master’s degree in biochemistry from the University of California at Los Angeles.

**Professor Timberlake** has been writing chemistry textbooks for 35 years. During that time, her name has become associated with the strategic use of pedagogical tools that promote student success in chemistry and the application of chemistry to real-life situations. More than one million students have learned chemistry using texts, laboratory manuals, and study guides written by Karen Timberlake.





ISBN: 9788131707937

**Heterocyclic Chemistry, 3/e** **Thomas L. Gilchrist** **432** | © **2006****ABOUT THE BOOK**

This popular text has been completely revised to reflect recent advances in the subject. Deals with the properties of ring systems and general methods of synthesis, providing a unique overview of the subject area. Includes a guide to the naming of the ring systems, invaluable to those unfamiliar with the area.

**FEATURES**

- Includes recent examples of organometallic reagents which are increasingly used in the synthesis and reactions of heterocyclic compounds.
- New reaction schemes illustrating the use of heterocycles as synthetic intermediates.

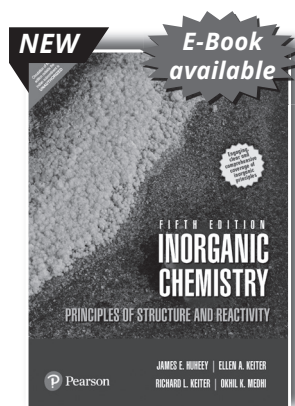
**CONTENTS**

1. Introduction
2. Aromatic Heterocycles
3. Nonaromatic Heterocycles
4. Methods of Ring Synthesis
5. Six-membered Rings
6. Five-membered Rings with One Heteroatom
7. Six-membered Rings with Two or More Heteroatoms
8. Five-membered Rings with Two or More Heteroatoms
9. Three and Four Membered Rings
10. Seven and Larger Membered Ring Compounds
11. Nomenclature

**ABOUT THE AUTHOR**

Thomas. L. Gilchrist, University of Liverpool

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ISBN: 9789356064485

## Inorganic Chemistry, 5/e

 James E. Huheey | Ellen A. Keiter | Richard L. Keiter | Okhil K. Medhi

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### ABOUT THE BOOK

For nearly half a century, this impeccable text has been revered for its clear and precise explanations, thoughtfully chosen examples, superior illustrations and time-tested exercise sets. This classic in its field has been substantially revised and includes the latest findings in the discipline. Its user-friendly approach and straightforward slang, patterned on professional literature, gives students a comprehensive look at the discipline and introduces them to such exciting topics as bioinorganic chemistry and solid-state chemistry.

### FEATURES

- Prepares students for current work in chemistry through its up-to-date, accurate coverage
- Rewritten chapters with new sections on hydrogen as an alternative fuel, environmental aspects of main group elements, metallic nanomaterials and much more
- Comprehensive coverage of bonding, solid state chemistry, organometallic chemistry and coordination chemistry
- Invaluable resource for students preparing for competitive examinations

### CONTENTS

1. What is Inorganic Chemistry?
  2. The Structure of the Atom
  3. Symmetry and Group Theory
  4. Ionic Bonding and the Solid State
  5. The Covalent Bond
  6. The Structure of Molecules and Stereochemical Nonrigidity
  7. Chemical Forces
  8. Acid-Base Chemistry
  9. Chemistry in Aqueous and Nonaqueous Solvents
  10. The Chemistry of the Main Group Elements: Periodicity
  11. The Chemistry of the Main Group Elements: Inorganic Chains, Rings, and Cages
  12. The Chemistry of the Main Group Elements: Halogens and the Noble Gases
  13. Some Descriptive Chemistry of the Metals.
  14. Coordination Chemistry: Bonding
  15. Coordination Chemistry: Spectra and Magnetism
  16. Coordination Chemistry: Structure, Isomerism, and Stability
  17. Coordination Chemistry: Reactions, Kinetics, and Mechanisms
  18. Organometallic Chemistry: Syntheses, Structure, and Bonding
  19. Organometallic Chemistry: Reactivity and Catalysis
  20. The Inorganic Chemistry of Biological Systems
- Appendix A: The Literature of Inorganic Chemistry  
 Appendix B: Units and Conversion Factors  
 Appendix C: Atomic States and Term Symbols  
 Appendix D: Character Tables  
 Appendix E: Bond Energies and Bond Lengths.  
 Appendix F: An Overview of Standard Reduction Potentials of the Elements  
 Appendix G: Tanabe-Sugano Diagrams  
 Appendix H: Essential and Trace Elements in Biological Systems  
 Appendix I: IUPAC Recommendations on the Nomenclature of Inorganic Chemistry

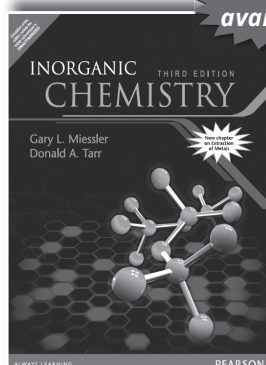
### ABOUT THE AUTHOR(S)

James E. Huheey, University of Maryland

Ellen A. Keiter, Eastern Illinois University

Richard L. Keiter, Eastern Illinois University

Okhil K. Medhi Gauhati University



ISBN: 9788131718858

## Inorganic Chemistry, 3/e

 Gary Miessler | Donald A. Tarr

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### ABOUT THE BOOK

This highly readable text provides the essentials of *Inorganic Chemistry* at a level that is neither too high (for novice students) nor too low (for advanced students). It has been praised for its coverage of theoretical inorganic chemistry. It discusses molecular symmetry earlier than other texts and builds on this foundation in later chapters. Plenty of supporting book references encourage instructors and students to further explore topics of interest.

### FEATURES

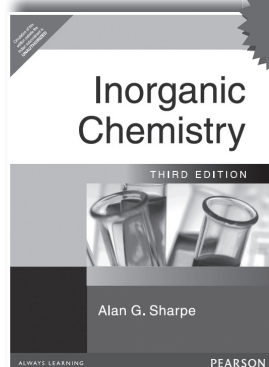
- NEW - Coverage of oxidation-reduction reactions.
  - NEW - Updated and reorganized material throughout. Includes recent literature references.
  - NEW - Web-based problems.
  - NEW - Problems using software for molecular orbital calculations.
  - Excellent, balanced coverage of core principles and theory.
  - Integration of symmetry arguments throughout
- Emphasizes symmetry more than other inorganic texts.
  - Many problems at the end of each chapter including some from the recent literature.
  - Worked examples in most chapters.
  - Exercises in most chapters.
  - Strong molecular symmetry/group theory coverage.
  - Strong molecular-orbital approach.
  - Special topic coverage e.g., organometallic, solid-state chemistry, bioinorganic, and environmental inorganic.

### CONTENTS

1. Introduction to Inorganic Chemistry.
2. Atomic Structure.
3. Simple Bonding Theory.
4. Symmetry and Group Theory.
5. Molecular Orbitals.
6. Acid-Base and Donor-Acceptor Chemistry.
7. The Crystalline Solid State.
8. Chemistry of the Main Group Elements.
9. Coordination Chemistry I: Structures and Isomers.
10. Coordination Chemistry II: Bonding.
11. Coordination Chemistry III: Electronic Spectra.
12. Coordination Chemistry IV: Reactions and Mechanisms.
13. Organometallic Chemistry.
14. Organometallic Reactions and Catalysis.
15. Parallels Between Main Group and Organometallic Chemistry.
16. Bioinorganic and Environmental Chemistry.

### ABOUT THE AUTHOR(S)

Gary L. Miessler, St. Olaf College  
Donald A. Tarr, St. Olaf College



POD

ISBN: 9788131706992

## Inorganic Chemistry, 3/e



Alan G. Sharpe



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### ABOUT THE BOOK

The 3rd edition of *Inorganic Chemistry* provides an excellent introduction to the subject. The fully revised text takes account of important advances, and a new larger format provides accessibility. The exercises have been updated and new outline solutions have been added. In this edition, the author has increased emphasis on solid state chemistry and expanded the treatment of aqueous and non-aqueous solutions.

### CONTENTS

1. Nuclear Chemistry
2. Quantum Theory and Atomic Structure
3. Electronic Configurations and some Physical Properties of Atoms
4. Electronic Configurations of Molecules
5. Some Physical Properties of Molecules
6. The Structures and Energetics of Inorganic Solids
7. Inorganic Chemistry in Aqueous Media
8. Inorganic Chemistry in Non-Aqueous Media
9. Hydrogen
10. The Alkali Metals
11. Beryllium, Magnesium and the Alkaline Earth Metals
12. Boron, Aluminium, Gallium, Indium and Thallium
13. Carbon, Silicon, Germanium, Tin and Lead
14. Nitrogen, Phosphorus, Arsenic, Antimony and Bismuth
15. Oxygen, Sulphur, Selenium, Tellurium and Polonium
16. The Halogens
17. The Noble Gases
18. The Transition Elements
19. Electronic Configurations, Electronic Spectra, and Magnetic Properties of Transition Metal Compounds
20. Thermodynamic Aspect of Transition Metal Chemistry
21. Kinetic Aspects of Transition Metal Chemistry
22. Transition Metal Carbonyls and Related Compounds
23. Organometallic Compounds of the Transition Metals
24. Transition Metals of the First Series
25. Transition Metals of the Second and Third Series
26. Inner Transition Elements: The Lanthanides
27. Inner Transition Elements: The Actinides

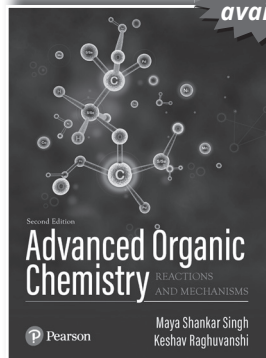
## Advanced Organic Chemistry: Reactions &amp; Mechanisms, 2/e



Maya Shankar Singh | Keshav Raghuvanshi



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E-Book  
available

ISBN: 9789354490781

**ABOUT THE BOOK**

Advanced Organic Chemistry – Reactions and Mechanisms, 2e – written in a simple and honest way this book is extremely pleasant to follow the language of chemistry via structures and equations. The book is developed to initiate fundamental ideas rather than on the sequential presentation of facts and is articulated with the two most important sorts of chemistry that exist—the chemistry that is known as life, and the chemistry as practiced by chemists solving real problems in laboratories. Each chapter contains only those topics and reactions that are needed to understand the intellectual roots of organic chemistry as it is currently practiced.

All topics covered are either 'fundamental' or 'advanced'. Fundamental sections address the needs of upper-level undergraduates, while the advanced sections are intended for graduate-level/ senior audiences. The problems at the end of each chapter represent application of concepts to new structures and circumstances, rather than review of material explicitly presented in the text. These problems are designed in such a way that students can test themselves on the material just covered before proceeding to the next section. Chapters like theory, mechanism, synthesis, structure, and stereochemistry are discussed throughout the book in a qualitative to semi quantitative tone.

**FEATURES**

- It is written in an informal and honest way that makes it extremely pleasant to follow the language of chemistry via structures and equations
- Examples based on interesting/famous molecules or chemical problems are presented throughout the book
- Specific examples are included at each stage to illustrate the mechanism under discussion.
- Chemists present chemistry in terms of structural diagrams and for this reason all reactions have been drawn using curly arrows—the handwriting of chemistry
- A rich graphic design, which does a great job bringing some of the more abstract concepts of Organic Chemistry closer to the students.
- End of chapter summaries reinforce/ emphasize the student's comprehension of the key points.

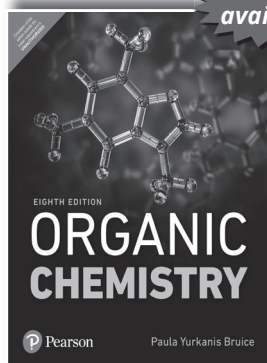
**CONTENTS**

- |  |  |
|--|--|
| 1. Introduction to Organic Chemistry                   | 8. Pericyclic Reactions                            |
| 2. Delocalized Chemical Bonding and Electronic Effects | 9. Aromaticity                                     |
| 3. Concept of Acids and Bases                          | 10. Aromatic Substitution                          |
| 4. Alkyl Halides: Nucleophilic Substitution Reactions  | 11. Buckminsterfullerene (Soccer Ball, Bucky Ball) |
| 5. Elimination Reactions                               | 12. Stereochemistry                                |
| 6. Alkenes and Alkynes: Addition Reactions             | 13. Asymmetric Synthesis                           |
| 7. Free Radical Reactions                              | 14. Molecular Rearrangements                       |

**ABOUT THE AUTHOR**

**Maya Shankar Singh** (FNA, FASc, FNASc), JC Bose National Fellow, Department of Chemistry, Institute of Science, Banaras Hindu University, Varanasi, India

**Keshav Raghuvanshi**, Chemical and Biomolecular Engineering, North Carolina State University, Raleigh, NC 27695-7905, USA



E-Book  
available

ISBN: 9789353948450

## Organic Chemistry, 8/e



Paula Yurkanis Bruice



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### ABOUT THE BOOK

Paula Bruice's presentation in Organic Chemistry, Eighth Edition provides mixed-science majors with the conceptual foundations, chemical logic, and problem-solving skills they need to reason their way to solutions for diverse problems in synthetic organic chemistry, biochemistry, and medicine. The Eighth Edition builds a strong framework for thinking about organic chemistry by unifying principles of reactivity that students will apply throughout the course, discouraging memorization. With more applications than any other textbook, Dr. Bruice consistently relates structure and reactivity to what occurs in our own cells and reinforces the

fundamental reason for all chemical reactions—electrophiles react with nucleophiles. New streamlined coverage of substitution and elimination, updated problem-solving strategies, synthesis skill-building applications and tutorials guide students throughout fundamental and complex content in both the first and second semesters of the course.

### FEATURES

The textbook bridges The gap between organic chemistry and biochemistry. Because bioorganic chemistry is The bridge between organic chemistry and biochemistry, The text emphasizes that The organic reactions that chemists carry out in The laboratory are similar to those performed by nature inside a cell. These connections are especially important to biological science majors. -Revised, accuracy-checked text provides increased exam relevancy. -Improved visuals and organization engage students with difficult subject matter, organizes The chapter content and improves ease of use. -Strengthened emphasis on The strategies needed to solve problems and master The content. -New and restructured features give students additional conceptual and skill building support. -Organizing What We Know about The reactions of organic Compounds Table. -Content Updates and Revisions to The Table of Contents streamline and improve clarity in The presentation.

### CONTENTS

#### Part 1: An Introduction to the Study of Organic Chemistry

1. Remembering General Chemistry: Electronic Structure and Bonding
2. Acids and Bases: Central to Understanding Organic Chemistry
3. An Introduction to Organic Compounds: Nomenclature, Physical Properties, and Structure

#### Part 2: Electrophilic Addition Reactions, Stereochemistry, and Electron Delocalization

4. Isomers: The Arrangement of Atoms in Space
5. Alkenes: Structure, Nomenclature, and an Introduction to Reactivity
  - Thermodynamics and Kinetics
6. The Reactions of Alkenes
  - The Stereochemistry of Addition Reactions
7. The Reactions of Alkynes
  - An Introduction to Multistep Synthesis
8. Delocalized Electrons: Their Effect on Stability, pKa, and the Products of a Reaction
  - Aromaticity and Electronic Effects: An Introduction the Reactions of Benzene

#### Part 3: Substitution and Elimination Reactions

9. Substitution and Elimination Reactions of Alkyl Halides
10. Reactions of Alcohols, Ethers, Epoxides, Amines, and Sulfur-Containing Compounds
11. Organometallic Compounds
12. Radicals

#### Part 4: Identification of Organic Compounds

13. Mass Spectrometry; Infrared Spectroscopy; and UV/Vis Spectroscopy
14. NMR Spectroscopy

#### Part 5: Carbonyl Compounds

15. Reactions of Carboxylic Acids and Carboxylic Acid Derivatives
16. Reactions of Aldehydes and Ketones
  - More Reactions of Carboxylic Acid Derivatives
17. Reactions at the  $\alpha$ -Carbon

#### Part 6: Aromatic Compounds

18. Reactions of Benzene And Substituted Benzenes
19. More About Amines
  - Reactions of Heterocyclic Compounds



**Part 7: Bioorganic Compounds**

- 20. The Organic Chemistry Of Carbohydrates
- 21. Amino Acids, Peptides, and Proteins
- 22. Catalysis in Organic Reactions and in Enzymatic Reactions
- 23. The Organic Chemistry of the Coenzymes, Compounds Derived from Vitamins
- 24. The Organic Chemistry of the Metabolic Pathways

- 25. The Organic Chemistry of Lipids
- 26. The Chemistry of the Nucleic Acids

**Part 8: Special Topics in Organic Chemistry**

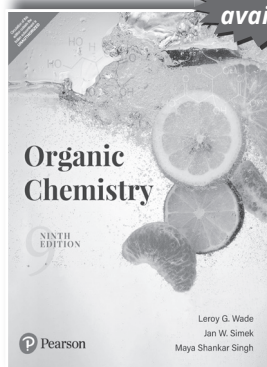
- 27. Synthetic Polymers
- 28. Pericyclic Reactions

**Appendices**

**ABOUT THE AUTHOR**

**Paula Yurkanis Bruice** is from the University Of California, Santa Barbara. Bruice earned her Ph.D. in chemistry from the University of Virginia. She then received an NIH postdoctoral fellowship for study in the Department of Biochemistry at the University of Virginia Medical School and held a postdoctoral appointment in the Department of Pharmacology at the Yale School of Medicine. Paula has been a member of the faculty at the University of California, Santa Barbara since 1972, where she has received the Associated Students Teacher of the Year Award, the Academic Senate Distinguished Teaching Award, two Mortar Board Professor of the Year Awards, and the UCSB Alumni Association Teaching Award. Her research interests center on the mechanism and catalysis of organic reactions, particularly those of biological significance.

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E-Book  
available

ISBN: 9789389342673

## Organic Chemistry, 9/e



Leroy G. Wade, Jr. | Jan William Simek | Maya Shankar Singh



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### ABOUT THE BOOK

Organic Chemistry, Ninth Edition gives students a contemporary overview of organic principles and the tools for organizing and understanding reaction mechanisms and synthetic organic chemistry with unparalleled and highly refined pedagogy. This text presents key principles of organic chemistry in the context of fundamental reasoning and problem solving. Authored to complement how students use a textbook today, new Problem Solving Strategies, Partially Solved Problems, Visual Reaction Guides and Reaction Starbursts encourage students to use the text before class as a primary introduction to organic chemistry as well as a comprehensive

study tool for working problems and/or preparing for exams.

### FEATURES

- New chapters on Phenols and Quinones and Asymmetric Synthesis.
- Green Chemistry is emphasized with presentation of less-toxic, and environmentally friendly reagents.
- Enriched and updated treatment of Acid/Base Chemistry, Study of Chemical Reactions, Stereochemistry, Alkyl Halides, Alkenes, Dienes, Alkynes, Thiols, Aromatic Compounds, Amines, and Polymers.
- Over 100 new problems include more synthesis problems and problems based on recent literature.
- Over 80 Mechanism boxes help students understand how specific reactions occur by zooming in on each individual step in detail.
- Updated art throughout to provide consistency and clarity in the text, giving detailed representations of molecular and orbital art.

### CONTENTS

1. Introduction to Organic Chemistry
  2. Structure and Properties of Organic Molecules: Acids and Bases
  3. The Study of Chemical Reactions
  4. Structure and Stereochemistry of Alkanes and Cycloalkanes
  5. Structure and Synthesis of Alkenes
  6. Reactions of Alkenes and Dienes
  7. Alkynes
  8. Alkyl Halides; Nucleophilic Substitution and Elimination
  9. Alcohols and Thiols: Structure and Synthesis
  10. Reactions of Alcohols
  11. Ethers and Thioethers
  12. Stereochemistry
  13. Aromatic Compounds
  14. Reactions of Aromatic Compounds
  15. Ketones and Aldehydes
  16. Carboxylic Acids
  17. Carboxylic Acid Derivatives
  18. Condensations and Alpha Substitutions of Carbonyl Compounds
  19. Phenols and Quinones
  20. Amines
  21. Carbohydrates
  22. Amino Acids, Peptides, Proteins and Nucleic Acids
  23. Polymeric Materials
  24. Asymmetric Synthesis
  25. Conjugated Systems, Orbital Symmetry, and Ultraviolet Spectroscopy
  26. Infrared Spectroscopy and Mass Spectrometry
  27. Nuclear Magnetic Resonance Spectroscopy
  28. Lipids
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### ABOUT THE AUTHOR(S)

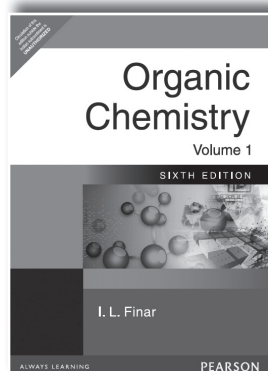
Leroy G. Wade, Whitman College

Jan W. Simek, Cal Poly State University

Maya Shankar Singh, Department of Chemistry, Institute of Science, Banaras Hindu University



## Organic Chemistry, Volume 1, 6/e



ISBN: 9788177585421

 I. L. Finar

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### ABOUT THE BOOK

In the sixth edition of Dr. Finar's best-selling student text, a great deal of material has been rewritten and many new topics have been added. The arrangement of the subject matter is based on homologous series and SI units have been used throughout the text.

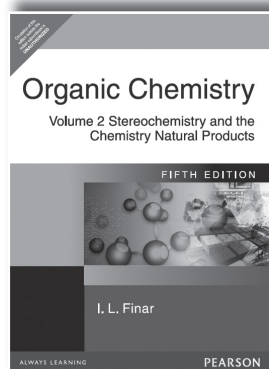
### CONTENTS

1. Determination of Structure
2. Properties of Molecules
3. Alkanes
4. Alkenes and Alkynes
5. Halogen derivatives of the alkanes
6. Monohydric alcohols
7. Ethers
8. Aldehydes and ketones
9. Saturated monocarboxylic acids and their derivatives
10. Polycarbonyl compounds
11. Polyhydric alcohols
12. Unsaturated alcohols, ethers, carbonyl compounds and acids
13. Nitrogen compounds
14. Aliphatic compounds of sulphur, phosphorus, silicon and boron
15. Organometallic compounds
16. Saturated dicarboxylic acids
17. Hydroxyacids, stereochemistry, unsaturated dicarboxylic acids
18. Carbohydrates
19. Alicyclic compounds
20. Monocyclic aromatic hydrocarbons
21. Aromatic halogen compounds
22. Aromatic nitro-compounds
23. Aromatic amino-compounds
24. Diazonium salts and their related compounds
25. Aromatic sulphonic acids
26. Phenols and quinones
27. Aromatic alcohols, aldehydes and ketones
28. Aromatic acids
29. Polynuclear hydrocarbons and their derivatives
30. Heterocyclic compounds
31. Dyes and photochemistry

### ABOUT THE AUTHOR

The late Dr. Finar was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.

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ISBN: 9788177585414

## Organic Chemistry, Volume 2: Stereochemistry and the Chemistry Natural Products, 5/e

 I. L. Finar

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### ABOUT THE BOOK

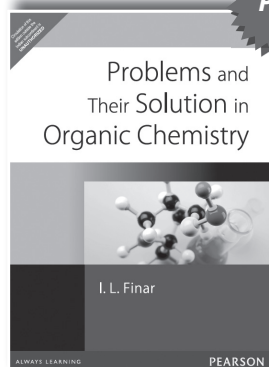
*Organic Chemistry* is a well-established two-volume textbook for students studying chemistry at degree level. Volume 2 carries the material of Volume 1: Fundamental Principles to a more advanced level. The author provides a comprehensive introduction to the relationship between physical properties and chemical structures, and then proceeds to a detailed account of stereochemistry. The later chapters are devoted to the most typical compounds of natural products and the problems involved. A selected number of reading references are given at the end of each chapter.

### CONTENTS

1. Physical properties and chemical constitution
2. Optical isomerism
3. Nucleophilic substitution at a saturated carbon atom, asymmetric synthesis
4. Geometrical isomerism, stereochemistry of alicyclic compounds
5. Stereochemistry of biphenyl compounds
6. Stereochemistry of some elements other than carbon
7. Carbohydrates
8. Terpenoids
9. Carotenoids
10. Polycyclic aromatic hydrocarbons
11. Steroids
12. Heterocyclic compounds containing two or more hetero-atoms
13. Amino-acids and proteins
14. Alkaloids
15. Anthocyanins
16. Purines and nucleic acids
17. Vitamins
18. Chemotherapy
19. Haemoglobin, chlorophyll and phthalocyanines

### ABOUT THE AUTHOR

The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



ISBN: 9788131700938

## Problems and Their Solution in Organic Chemistry

 I. L. Finar

 360 | © 2006

### ABOUT THE BOOK

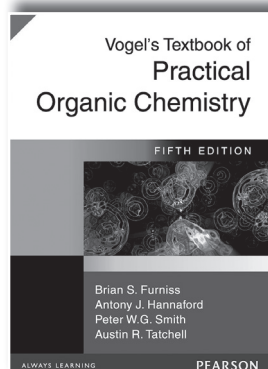
The first part of this book collects together the questions set out at end of each chapter in the authors Textbook of Organic Chemistry, Volume 1 (sixth edition). The second part of this book gives the possible solutions, which are linked with an explanation of the sort of reasoning used in order to arrive at one of the answers. In many cases, several answers are given for one question; and in each set of questions, there is at least one which involves the completion of equations. The result is a book which can be used independently of the main volume. This book helps in acquiring a better understanding of the basic principles of organic chemistry and in revising a large amount of the subject matter quickly.

## CONTENTS

1. Determination of Structure
2. Properties of Molecules
3. Alkanes
4. Alkenes and Alkynes
5. Halogen derivatives of the alkanes
6. Monohydric alcohols
7. Ethers
8. Aldehydes and ketones
9. Saturated monocarboxylic acids and their derivatives
10. Polycarbonyl compounds
11. Polyhydric alcohols
12. Unsaturated alcohols, ethers, carbonyl compounds and acids
13. Nitrogen compounds
14. Aliphatic compounds of sulphur, phosphorus, silicon and boron
15. Organometallic compounds
16. Saturated dicarboxylic acids
17. Hydroxyacids, stereochemistry, unsaturated dicarboxylic acids
18. Carbohydrates
19. Alicyclic compounds
20. Monocyclic aromatic hydrocarbons
21. Aromatic halogen compounds
22. Aromatic nitro-compounds
23. Aromatic amino-compounds
24. Diazonium salts and their related compounds
25. Aromatic sulphonic acids
26. Phenols and quinones
27. Aromatic alcohols, aldehydes and ketones
28. Aromatic acids
29. Polynuclear hydrocarbons and their derivatives
30. Heterocyclic compounds
31. Dyes and photochemistry

## ABOUT THE AUTHOR

The late Dr. Finar was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.



ISBN: 9788177589573

## Vogel's Textbook of Practical Organic Chemistry, 5/e



Brian S. Furniss | Antony J. Hannaford | Peter W.G. Smith | Austin R. Tatchell



1544 | © 2006

## ABOUT THE BOOK

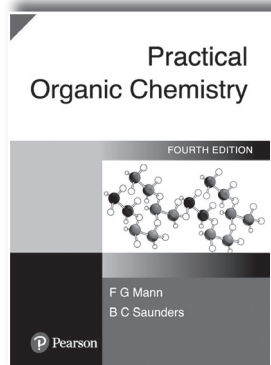
Still recognized as the definitive text on practical topics related to organic chemistry, this text is relied upon by undergraduates, postgraduate students, and professional organic chemists. Topics covered include the structural and theoretical principles required when designing a synthesis; the disconnection or synthon approach; the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds; and developments in reaction techniques.

## FEATURES

- An introductory chapter on the structural and theoretical principles required when designing a synthesis.
- The disconnection on synthon approach now integrated into the text, and the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds.
- Synthesis methodology is expanded to cover a range of new reagents, including oxidants and reductants; reagents for asymmetric synthesis; and those derived from lithium, boron, silicon, phosphorous and sulphur.
- Recent developments in reaction techniques which include: handling of air-sensitive and moisture-sensitive compounds; new chromatographic procedures; phase transfer catalysis; and solid support reagents.
- Over 100 new experiments selected from the literature to illustrate new reagents and techniques, and the operation of protection, selectivity and control in synthesis.
- A more detailed treatment of carbon-13 n.m.r. spectroscopy, and the interpretation of spectroscopic data for many of synthesized compounds.

## CONTENTS

1. Organic Synthesis.
2. Experimental Techniques.
3. Spectroscopic Methods and the Interpretation of Spectra.
4. Solvents and Reagents.
5. Aliphatic Compounds.
6. Aromatic Compounds.
7. Selected Alicyclic Compounds.
8. Selected Heterocyclic Compounds.
9. Investigation and Characterization of Organic Compounds.
10. Physical Constants of Organic Compounds.



ISBN: 9788131727102

## Practical Organic Chemistry

 **F.G. Mann | B.C. Saunders**

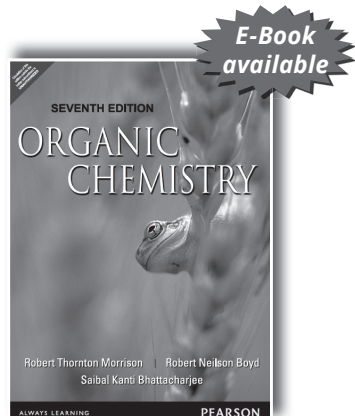
 **600 | © 2009**

### ABOUT THE BOOK

This book has proved useful for research as well as for teaching purpose. The fourth edition of this book was distinguished from its predecessors by a greater emphasis on semi-micro methods and modern techniques and reactions. While updating the book in several important aspects, namely, chromatography, reaction mechanism, and safety and first-aid measures.

### CONTENTS

- Part I: Methods and Manipulation
- Part II: Preparations
- Part III: Reactions and Identification of Organic Compounds
- Part IV: Quantitative Analysis
- Part V: Simple Enzyme Reactions



ISBN: 9788131704813

## Organic Chemistry, 7/e

 **Robert Thornton Morrison | Robert Neilson Boyd | Saibal Kanti Bhattacharjee**

 **1508 | © 2010**



### ABOUT THE BOOK

As in the earlier editions, the book conveys the important fundamentals and principles of the subject in a simple and easily understandable manner.

### CONTENTS

- Part 1: Fundamentals of Organic Chemistry
  1. Structures of Organic Compounds
  2. Structural Theory
  3. Symmetry of Organic Molecules (Molecular Dissymmetry)
  4. Types of Reactions of Organic Compounds
  5. Alkanes, Cycloalkanes and Aromatic Hydrocarbons

## Part 2: Chemistry of Functional Groups Alkenes

11. Alkynes
12. Alkyl Halides Nucleophilic Substitutions, SN Reactions
13. Aryl Halides Nucleophilic Aromatic Substitution (SNAr Reactions)
14. Alcohols and Ethers
15. Phenols
16. Aldehydes and Ketones Nucleophilic Addition
17. Carboxylic Acids
18. Functional Derivatives of Carboxylic Acids Nucleophilic Acyl Substitution
19. Amines

## Part 3: Special Topics

20. Heterocyclic Compounds
21. Purification and Identification of Organic Compounds: Spectroscopic Analysis of Organic Compounds
22. Organic Synthesis
23. Oxidation and Reduction Electroorganic Synthesis
24. Molecular Orbitals; Orbital Symmetry (Pericyclic Reactions)
25. Organic Photochemistry

26. Synthetic Organic Compounds of Commercial Importance: Synthetic Dyes and Macromolecules
27. Symphoria (Anchimeric Assistance) Neighboring Group Effects. Catalysis by Transition Metal Complexes
28. Introduction to Supramolecular Chemistry Host-Guest Chemistry

## Part 4: (Biomolecules and Bioorganic Chemistry)

29. Lipids Fats, Steroids, Terpenes, and Prostaglandins
30. Carbohydrates I: Monosaccharides. Carbohydrates II: Disaccharides and Polysaccharides
31. Alkaloids
32. Amino Acids and Proteins Molecular Biology
33. Enzymes, Co-Enzymes and Vitamins
34. Nucleic Acids Nucleotides, Polynucleotides and Nucleosides
35. Drugs Chemotherapeutic and Pharmacodynamic Agents

## Part 5: Contemporary and Future Organic Chemistry

36. Nanoparticles (Size-Dependent Chemistry)
37. Future Devices and Challenges of Chemistry of this Century Molecular Machines or Nanomachines

## ABOUT THE AUTHOR(S)

Robert Thornton Morrison, New York University

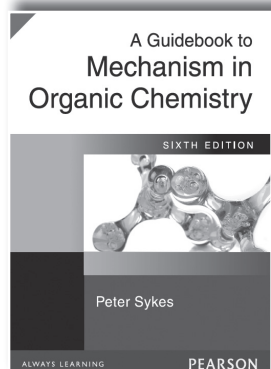
Robert Neilson Boyd, New York University

Saibal Kanti Bhattacharjee, Gauhati University

## A Guidebook to Mechanism in Organic Chemistry, 6/e

 Peter Sykes

 428 | © 2005



ISBN: 9788177584332

## ABOUT THE BOOK

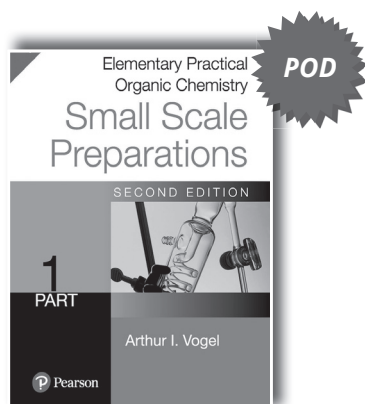
This classic textbook on mechanistic organic chemistry, characterized by its clarity, careful choice of examples, and its general approach designed to lead to a greater understanding of the subject matter. The book is aimed clearly at the needs of the student, with a thorough understanding of, and provision for, the potential conceptual difficulties he or she is likely to encounter. The book's success in achieving these goals is reflected in the opinion of one reviewer who says, "Sykes remains the bible of mechanistic organic chemistry for thousands of undergraduates, and there is certainly no English language publication of which I am aware which comes even close to challenging it in terms of clarity and coverage."

## FEATURES

- New – topics introduced in this edition : ipso aromatic substitution; the mechanistic borderline in nucleophilic substitution; more use of activation parameters; Dimorth's ET parameter; Hammett's  $\sigma^+$  and spectroscopic data; and  $^{13}\text{C}$  n.m.r. in biogenesis.
- New – thoroughly revised text with improved explanations, more examples and increased clarity.

## CONTENTS

1. Structure, Reactivity, and Mechanism.
2. Energetics, Kinetics, and the Investigation of Mechanism.
3. The Strengths of Acids and Bases.
4. Nucleophilic Substitution at a Saturated Carbon Atom.
5. Carbocations, Electron-deficient N and O Atoms and Their Reactions.
6. Electrophilic and Nucleophilic Substitution in Aromatic Systems.
7. Electrophilic and Nucleophilic Addition to C=C.
8. Nucleophilic Addition to C=O.
9. Elimination Reactions.
10. Carbanions and Their Reactions.
11. Radicals and Their Reactions.
12. Symmetry Controlled Reactions.
13. Linear Free Energy Relationships.



ISBN: 9788131756867

### Elementary Practical Organic Chemistry: Small Scale Preparations Part 1, 2/e

 **Arthur I. Vogel**

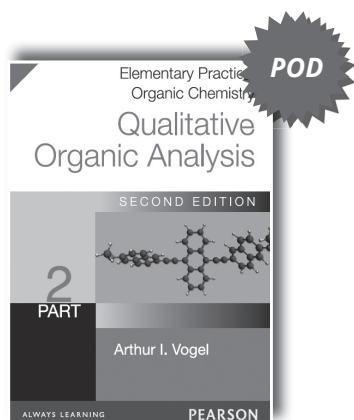
 **456** | © **2010**

#### FEATURES

- Experimental Techniques
- Mechanism of all reactions described
- Introduction of a number of reactions and experimental procedures of general interest

#### CONTENTS

1. Theory of General Technique
2. Experimental Technique
3. Aliphatic Compounds
4. Aromatic Compounds
5. Miscellaneous Compounds and Miscellaneous Reactions



ISBN: 9788131756874

### Elementary Practical Organic Chemistry: Qualitative Organic Analysis Part 2, 2/e

 **Arthur I. Vogel**

 **448** | © **2010**

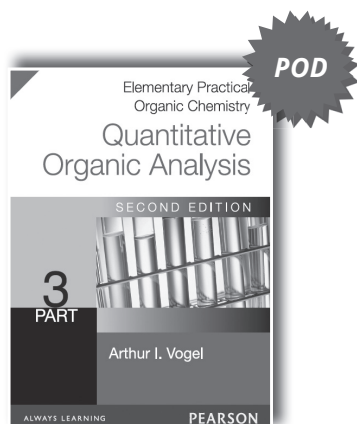
#### ABOUT THE BOOK

A dedicated chapter on "The use of spectroscopic methods in qualitative organic analysis" which includes the essentials from a practical viewpoint of ultraviolet and visible spectroscopy and infrared spectroscopy and mass spectroscopy. These spectroscopy techniques are now-days of such great importance that no book on qualitative organic analysis can be regarded complete without their inclusion.

#### CONTENTS

1. Determination of physical constants
2. Qualitative analysis for the elements
3. The solubility classes

4. Reactions and characterization of selected classes of organic compounds
5. Class reactions
6. The preparation of derivatives
7. Qualitative analysis of mixtures of organic compounds
8. The use of spectroscopic methods in qualitative organic analysis
9. Physical constants of organic compounds



**ISBN: 9788131756881**

5. Hydroxyl groups (Phenols)
6. Amino groups
7. Salts of amines
8. Amino acids
9. Carboxyl groups
10. Salts of carboxylic acids
11. Anhydrides of carboxylic acids
12. Esters of carboxylic acids
13. Aldehydes and ketones
14. Carbohydrates (Sugars)
15. Nitro, Nitrates and azo groups

## Elementary Practical Organic Chemistry: Quantitative Organic Analysis Part 3, 2/e

 **Arthur I. Vogel**

 **382** | © **2010**

### FEATURES

- Numerous Experiments
- Coverage of quantitative organic analysis through the medium of functional groups

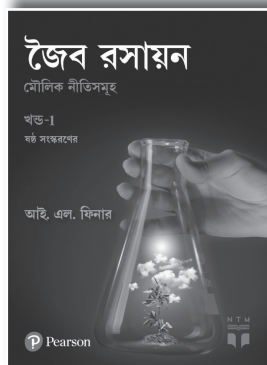
### CONTENTS

1. Determination of selected elements in organic compounds
2. General discussion of titrations in non-aqueous solvents
3. Hydroxyl groups (Alcohols)
4. Adjacent hydroxyl groups
16. Unsaturation
17. Alkoxy groups
18. C-Methyl, O-acetyl and N-acetyl groups
19. Active Hydrogen
20. Enols
21. Imides
22. Sulphonamides, Thiols, Sulphides and disulphides
23. Determination using ION exchange resins
24. Some application of the karl fischer reagent
25. Alpha-epoxy groups
26. Miscellaneous determinations

## Organic Chemistry, Vol 1, 6/e (Bangla)

 I. L. Finnar

 375 | © 2016



ISBN: 9789332546974

### ABOUT THE BOOK

L. Finar द्वारा लिखित Carbanik Rasayan Vigyan, vol.1-mulbhut sidhant ko yadi aapni bhasa mein pada jaye to esse aachi bat ho hi nahin sakti. Hamari sikhshan pranali mein sabse badi kami yah hai ki aaj bhi vighan ewm takniki vishyo ko padhane ewm samjhane ke liye English ka hi prayog kiya jata hai, parinamsawarup vidhyarthi uchh aank prapt karne ki aakanksha mein Vishay ki mul avdharnaoo ko samjhne ke bajay unko ratne hetu badhya ho jate hai.

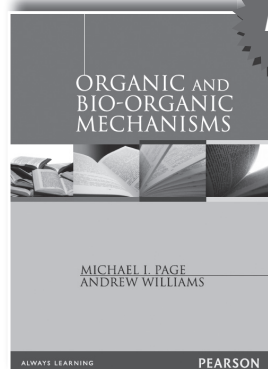
### CONTENT

Preface

Sanrachna ka Nirdharan

1. Anuoo ke Gun
2. Elken
3. Elkin ewm Elkaien
4. Elkeno ke Helojan byutpann
5. Monohaedik Elkohal
6. Ethar
7. Eledhaid ewm kiton
8. Sanstript Monokarbocsilik aaml ewm unke byutpann
9. Bahukarbonil Yogik
10. Polyhaidik Elkohal
11. Asanstript Elkohal, Ethar, Carbonil yogik ewm Aaml
12. Naitrozen yukt Yogik
13. Salfar , Fasforas, Silican ewm Boron ke Elifatik yogik
14. Carbdhatvik Yogik
15. Sanstript Daecarbocsilik Aaml
16. Haidocsi Aaml, Trivim Rasayan Sastra tha Asanstript Aaml
17. Carbohaidets
18. Elisaeclick yogik
19. Ekalchakriya erometik haydrocarbons
20. Erometic Hellogen Yogic
21. Erometic Naetro Yogic
22. Erometic emino Yogic
23. Daeyejoniyam lavan ewm unse sambandhit Yogic
24. Erometic Salfonik Aaml
25. Finaols ewm cvinons
26. Erometic Elcohals, Eldihaeds ewm kitons
27. Erometic Aaml
28. Bahunabhikiy Haydrocarban ewm unke byutpann
29. Vishamchakriya Yogik
30. Ranjak ewm Prakashiy Rasayan Sashttra
31. Parisist
32. Anukramnik





POD

ISBN: 9788131729496

## Organic and Bio-Organic Mechanisms

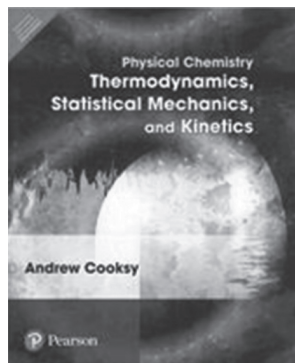
 Michael I. Page | Andrew Williams

 312 | © 2009

### ABOUT THE BOOK

This text provides a comprehensive and detailed discussion of the investigation of organic and bioorganic reaction mechanisms. It addresses questions such as: 'How are bonds between atoms rearranged?', 'What sort of structural changes take place to cause bond fission and formation?' and 'How do catalysts lower the activation energies of reactions?'

## Physical Chemistry Thermodynamics, Statistical Mechanics, and Kinetics



ISBN: 9789353063627

 **Andrew Cooksy**

 **576** | © **2018**

### ABOUT THE BOOK

Andrew Cooksy's clear teaching voice help students connect immediately with the subject matter while defusing some of their initial trepidation about physical chemistry. Through lively narrative and meticulous explanations of mathematical derivations, *Physical Chemistry: Thermodynamics, Statistical Mechanics, and Kinetics* engages students while fostering a sincere appreciation for the interrelationship between the theoretical and mathematical reasoning that underlies the study of physical chemistry. The author's engaging presentation style and careful explanations make even the most sophisticated concepts and mathematical details clear and comprehensible.

### FEATURES

- FLEXIBLE ORGANIZATION ACCOMMODATES THE CONTENT NEEDS AND TEACHING STYLES OF EACH SEMESTER/QUARTER SEQUENCE.  
Separation of Quantum Chemistry and Thermodynamics into distinct volumes provides the utmost in flexibility, allowing instructors to lead with their choice of Quantum-first or Thermo-first coverage.
- Reflective of popular lecture strategies, chapter opening and closing features ground each topic within the larger framework of physical chemistry and help students stay oriented as they deepen their understanding.
- Opening features including a "Visual Roadmap" and "Context: Where Are We Now" show readers where they are within the text and relative to other physical chemistry topics.
- "Goal: Why Are We Here?" and "Learning Objectives" features prepare students for the work ahead and outline the skills students should expect to acquire from their study of the chapter.
- The concluding "Where Do We Go From Here" section at the end of each chapter reinforces student orientation and illuminates the intrinsic connection between concepts."

### CONTENTS

Physical Chemistry at the Macroscopic Scale:

Statistical Mechanics, Thermodynamics, and Kinetics

A Introduction: Tools from Math and Physics

A.1 Mathematics

A.2 Classical Physics

I Extrapolation to Macroscopic Systems

1. Introduction to Statistical Mechanics: Building Up to the Bulk
2. Partitioning the Energy
3. Statistical Mechanics and Molecular Interactions
4. Mass Transport
5. Energy transport

II Non-Reactive Macroscopic Systems

6. 6 Introduction to Thermodynamics

7. Energy and Enthalpy

8. Entropy

9. Phase Transitions and Phase Equilibrium

10. Solutions

III Reactive Systems

11. Chemical Thermodynamics

12. Elementary Reactions

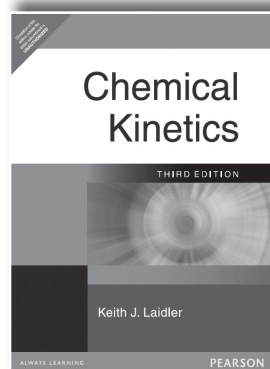
13. Multi-step Reactions

14. Reaction Networks

### ABOUT THE AUTHOR

**Andrew Cooksy** is a chemistry professor at San Diego State University, where he teaches courses in physical and general chemistry and carries out research on the spectroscopy, kinetics, and computational chemistry of reactive intermediates in combustion and interstellar processes. He attended the Washington, D.C. public schools before receiving his undergraduate degree in chemistry and physics from Harvard College and his Ph.D. in chemistry from the University of California at Berkeley.

## Chemical Kinetics, 3/e



ISBN: 9788131709726

 Keith J. Laidler

 544 | © 2007

### ABOUT THE BOOK

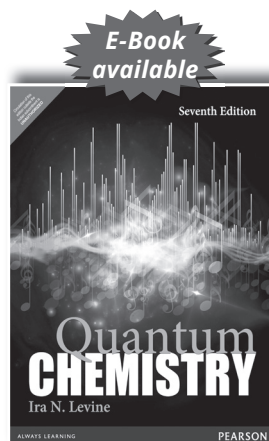
Basic concepts of both experimental and theoretical chemical kinetics are concisely explained for those seeking a general knowledge of the subject from this well-known text, now being totally revised and updated. In addition, the book is an invaluable starting point for those embarking on research in kinetics and physical chemistry. Extensive chapter bibliographies point the way toward more detailed accounts or specialized aspects. Historical background included in both chapter introductions and biographical sketches of important researches in chemical kinetics.

### FEATURES

- An invaluable starting point for those embarking on research in kinetics and physical chemistry.
- Extensive chapter bibliographies point the way toward more detailed accounts or specialized aspects.
- Historical background included in both chapter introductions and biographical sketches of important researchers in chemical kinetics.

### CONTENTS

1. Basic Kinetic Concepts.
2. Analysis of Kinetic Results.
3. Energy of Activation.
4. Theories of Reaction Rates.
5. Elementary Gas-Phase Reactions.
6. Elementary Reactions in Solution.
7. Reactions on Surfaces.
8. Composite Reactions.
9. Photochemical and Radiation-Chemical Reactions.
10. Homogeneous Catalysis.
11. Isotope Effects.
12. Reaction Dynamics.



ISBN: 9789332558533

## Quantum Chemistry, 7/e

 Ira N. Levine

 720 | © 2016



### ABOUT THE BOOK

This classic text on quantum chemistry has been extensively updated to include the latest research and developments in the field. With its solid presentation of mathematics, this bestseller provides a great introduction to the fundamentals of quantum chemistry and the math needed to master it.

The seventh edition covers quantum mechanics, atomic structure, and molecular electronic structure and clearly demonstrates the usefulness and limitations of current quantum-mechanical methods for the calculation of molecular properties.

### FEATURES

- In-depth treatment of quantum chemistry
- Derivations are presented in full, step-by-step detail
- Comprehensive discussions of the major computational methods of molecular electronic structure (Hartree—Fock, CI, density-functional theory, MP2, coupled cluster, semiempirical, molecular mechanics) are provided.

### CONTENTS

1. The Schrödinger Equation
2. The Particle in a Box
3. Operators
4. The Harmonic Oscillator
5. Angular Momentum
6. The Hydrogen Atom
7. Theorems of Quantum Mechanics
8. The Variation Method
9. Perturbation Theory
10. Electron Spin and the Spin-Statistics Theorem
11. Many-Electron Atoms
12. Molecular Symmetry
13. Electronic Structure of Diatomic Molecules
14. Theorems of Molecular Quantum Mechanics
15. Molecular Electronic Structure
16. Electron-Correlation Methods
17. Semiempirical and Molecular-Mechanics Treatments of Molecules

Appendix

Bibliography

Answers to Selected Problems

Index

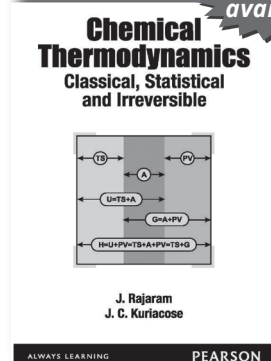
### ABOUT THE AUTHOR

Ira N. Levine is faculty, Brooklyn College, City University of New York.

## Chemical Thermodynamics: Classical, Statistical and Irreversible

J. Rajaram | J. C. Kuriacose

696 | © 2013



E-Book  
available

ISBN: 9788131792155

### ABOUT THE BOOK

Aimed at providing undergraduate and postgraduate students with an understanding of thermodynamics, this book brings out the thermodynamic interrelationships in a succinct break-down of its essential elements. It starts with the fundamentals and progresses to advanced concepts to enable students to appreciate the application of thermodynamics in different areas of chemistry. Conforming to the syllabus framed by the U.G.C. curriculum, this course textbook is written in a simple and lucid language, the discussion and explanations being interspersed with appropriate worked-out examples. Every chapter is accompanied by adequate end-of-chapter exercises.

### FEATURES

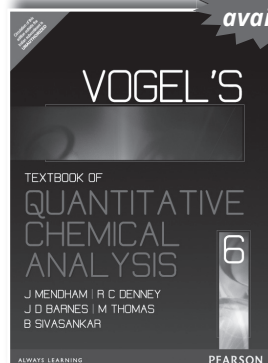
- Covers all introductory concepts in detail with a rich pedagogy for easy understanding
- Clear explanation of important concepts such as partial molar properties, fugacity and activity
- Over 140 solved examples and 100 end-of-chapter exercises

### CONTENTS

1. Introduction
2. The first law of thermodynamics
3. Thermochemistry
4. The second law of thermodynamics
5. Free energy and work function
6. The third law of thermodynamics
7. Statistical thermodynamics
8. Partial molar properties
9. Phase equilibria
10. Fugacity and activity
11. Chemical Equilibrium
12. Aqueous solutions of electrolytes

### ABOUT THE AUTHOR(S)

J. Rajaram and J. C. Kuriacose are retired professors of the department of chemistry, Indian Institute of Technology, Madras, Chennai, having devoted over thirty years to teaching chemistry.

E-Book  
available

ISBN: 9788131723258

## Vogel's Quantitative Chemical Analysis, 6/e



J. Mendham | David J. Barnes | R.C. Denney | M. J. K. Thomas



836 | © 2009

## ABOUT THE BOOK

Dr. Vogel's classic introduction to analytical methods has provided generations of chemists worldwide with a basis for teaching, learning and applying analytical chemistry. This 60th anniversary edition - the first for a decade - reflects major changes in the subject. Analysts need to understand the concepts behind methods and *Vogel's Quantitative Chemical Analysis* provides clear introductions to all the key analytical methods including those involving advanced computerised equipment available in many analytical laboratories. The editors have built further on the work of Dr Vogel, modernising the approach while retaining the analytical concepts and ideas which

were built into the original work. This new edition has been extensively revised to take into account developments in instrumental procedures and coupled techniques whilst maintaining the book's focus on quantitative chemical and problem-specific analyses. With excellent cross-referencing this book provides a wealth of examples and tables of data.

## FEATURES

- Comprehensive coverage of methods with detailed easy-to-follow practical experiments.
- Basic analytical theory which is essential for understanding the subject.
- Greatly expanded sections on instrumental analysis including aspects of miniaturisation.
- Increased emphasis on minor/trace component analysis and revised statistical handling of data.
- New chapters on sampling, mass spectrometry and nuclear magnetic resonance.

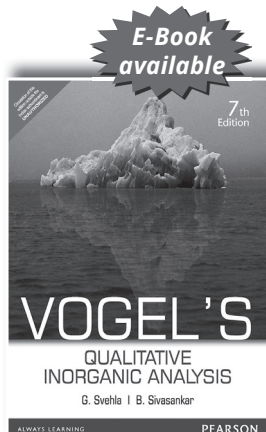
## CONTENTS

- |   |  |  |
|---|--|--|
| 1. Preface to First Edition.                                    | 8. Statistics, Introduction to Chemometrics. | 17. Direct Electroanalytical Methods.        |
| 2. Preface to Sixth Edition.                                    | 9. Sampling.                                 | 18. Nuclear Magnetic Resonance Spectroscopy. |
| 3. Safety; Units.   | 10. The Basis of Separative Methods.         | 19. Atomic Absorption Spectroscopy.          |
| 4. Reagent Purity.  | 11. Thin Layer Chromatography.               | 20. Atomic Emission Spectroscopy.            |
| 5. Introduction.  | 12. Liquid Chromatography.                   | 21. Molecular Electronic Spectroscopy.       |
| 6. Fundamental Theoretical Principles of Reactions in Solution. | 13. Gas Chromatography.                      | 22. Vibrational Spectroscopy.                |
| 7. Common Apparatus & Basic Techniques.                         | 14. Titrimetric Analysis.                    | 23. Mass Spectrometry                        |
|   | 15. Gravimetric Analysis.                    |  |
|   | 16. Thermal Analysis.                        |  |

## ABOUT THE AUTHOR(S)

J. Mendham, Consultant Analytical Chemist  
R.C. Denney, Consultant Forensic Scientist

J. D. Barnes, University of Greenwich  
M.J.K. Thomas, University of Greenwich



ISBN: 9788131773710

- New classification of mixtures of common and less common ions
- Marginalia highlighting important facts
- Elaborate discussions on preliminary tests, dissolution and fusion of samples
- Health and hazard warnings throughout the text
- Details on the preparation of reagents provided in the appendix

#### CONTENTS

1. Introduction
2. Experimental Techniques
3. Reactions of the Cations
4. Reactions of the Anions
5. Selected Tests and Separations
6. Reactions of Some Less Common Ions

#### ABOUT THE AUTHOR(S)

G. Svehla is a formerly professor from the department of chemistry, University College, York, Ireland.

B. Sivasankar is a visiting professor from the department of chemistry, Anna University, Chennai, Tamilnadu.

## Vogel's Qualitative Inorganic Analysis, 7/e

 G. Svehla | B. Sivasankar

 384 | © 2013

#### ABOUT THE BOOK

*Vogel's Qualitative Inorganic Analysis* (in its seventh edition) follows the current trends and techniques in the field of analytical chemistry. Written for undergraduate and postgraduate students of chemistry, this revised and updated edition treats each concept and principle systematically to make the subject comprehensible to beginners as well as advanced learners.

#### FEATURES

- Updated nomenclature
- Addition of tests for metals based on flame atomic emission and atomic absorption spectrometry

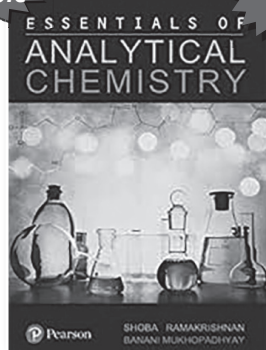
## Essentials of Analytical Chemistry

 Shobha Ramakrishnan | Banani Mukhopadhyay

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#### ABOUT THE BOOK

The book elucidates the principles of analytical methods such as volumetric analysis, gravimetric analysis, statistical methods of analysis, electro-analytical, and thermoanalytical techniques. It also presents the basic principles and instrumentation of UV, IR, NMR, Mass and ESR spectral methods, accompanied by a discussion on the spectra of a number of molecules, intended to develop the skill of the reader and to interpret the spectra of common organic molecules. This text will benefit those preparing for competitive examinations such as NET, SLET, GATE, and the UPSC Civil Services exam.



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## FEATURES

- Includes up-to-date developments in the field
- Detailed illustration of AES, AAS, and Flame Photometry
- Numerous review questions, solved problems and end of chapter exercises:

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