

# About Pearson

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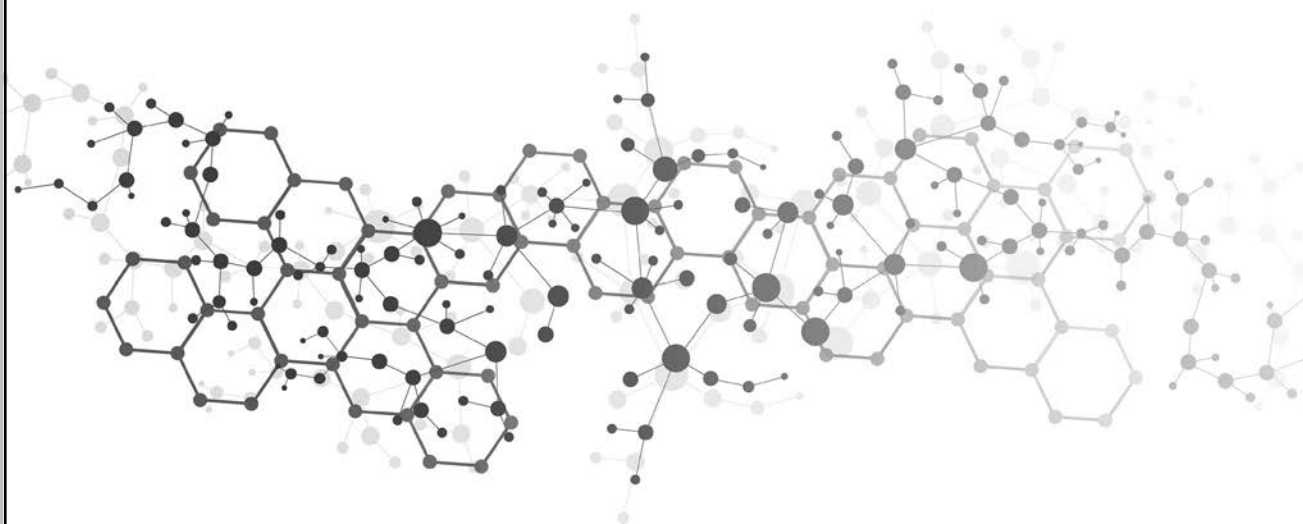
*Pearson is the world's learning company, with presence across 70 countries worldwide. Our unique insights and world-class expertise comes from a long history of working closely with renowned teachers, authors and thought leaders, as a result of which, we have emerged as the preferred choice for millions of teachers and learners across the world.*

*We believe learning opens up opportunities, creates fulfilling careers and hence better lives. We hence collaborate with the best of minds to deliver you class-leading products, spread across the Higher Education and K12 spectrum.*

*Superior learning experience and improved outcomes are at the heart of everything we do. This product is the result of one such effort.*

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# Chemistry

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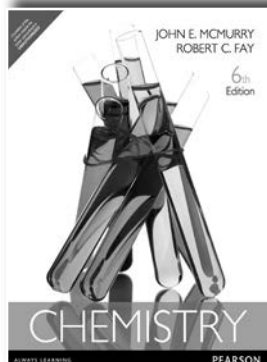


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## Chemistry, 6/e



ISBN: 9789332519022

 John E. McMurry | Robert C. Fay

 1072 | © 2014
**ABOUT THE BOOK**

Today's students use textbooks differently than their predecessors. *Chemistry, Sixth Edition* is designed to map to the way students seek and process information. McMurry/Fay's text helps students and professors get to the heart of chemistry more effectively, and helps students see the connections to chemistry more clearly.

With its spacious, unintimidating design and clear, direct writing style, this text is known for a smart, precise presentation that blends the quantitative and visual aspects of general chemistry. Chemistry is mastered when students make the right connections in three key areas: topics that are related, conceptual reasoning with

quantitative work, and the different modes of communicating information. McMurry/Fay's *Chemistry, Sixth Edition* breaks through the traditional textbook limitations and help students make connections that have historically been more difficult. Features like Remember&amphellip, Conceptual Problems, Conceptual Worked Examples, Inquiry and Worked Examples make these critical connections clear and visible, so students see the chemistry the first time.

**FEATURES**

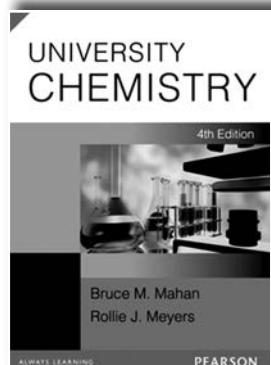
- Presents chemical concepts with quantitative discussions to bring in to sharp focus the connection between chemical reasoning and math. Three types of problems are designed to help students apply solid chemical reasoning to solving problems.
- In-chapter Conceptual Worked Examples give students their first exposure to working through problems on a conceptual level.
- In-chapter Conceptual Problems give students an immediate opportunity to solve problems that test their understanding of chemical concepts.
- End-of-chapter Conceptual Problems give students an opportunity to test that they understand all of the major concepts in the chapter before moving on to the multi-concept problems that require this understanding.
- McMurry/Fay's design uniquely integrates explanatory narrative with key principles by connecting the various modes of information, words, numbers, and graphics.
- The spacious, readable, unintimidating layout and design of McMurry/Fay is built in response to conversations with students about their study habits and use of science textbooks. McMurry/Fay maps to students' behavior, rather than challenging it.

**CONTENTS**

1. Chemistry: Matter 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 Bonds and Some Main-Group Chemistry
  7. Covalent Bonds and Molecular Structure
  8. Gases: Their Properties and Behavior
  9. Liquids, Solids, and Phase Changes
  10. Solutions and Their Properties
  11. Chemical Kinetics
  12. Chemical Equilibrium
  13. Aqueous Equilibria: Acids and Bases.
  14. Applications of Aqueous Equilibria
  15. Thermodynamics: Entropy, Free Energy, and Equilibrium
  16. Electrochemistry
  17. Hydrogen, Oxygen, and Water
  18. The Main-Group Elements
  19. Transition Elements and Coordination Chemistry
  20. Metals and Solid-State Metals
  21. Nuclear Chemistry
  22. Organic and Biological Chemistry
- Appendix: Mathematical Operations  
 Appendix: Thermodynamic Properties at 25oC  
 Appendix: Equilibrium Constants at 25oC  
 Appendix: Standard Reduction Potentials at 25oC  
 Appendix: Properties of Water

**ABOUT THE AUTHOR(S)**

John McMurry, educated at Harvard and Columbia  
 Robert C. Fay, Professor of Chemistry at Cornell University



ISBN: 9788131729571

## University Chemistry, 4/e

 Bruce M. Mahan | Rollie J. Meyers

 1076 | © 2009

### ABOUT THE BOOK

Designed for use in a course for first-year students, *University Chemistry, 4/e* continues in the tradition of previous editions by being intellectually challenging and using mathematical reasoning where it is appropriate to the subject at hand. Besides covering topics essential for an introductory university course in chemistry, the textbook concludes with a series of chapters on special topics including: organic chemistry, biochemistry, nuclear chemistry, and solid state chemistry. The SI system of units has been used throughout the text. The book also contains sufficient number of worked-out examples and numerous problems with a range of difficulty.

### FEATURES

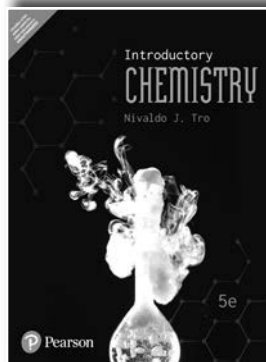
- SI system of units used throughout the text
- Over 200 worked-out examples, and questions and answers
- Over 600 unsolved problems and exercises
- Key words, chapter summaries and suggestions for further reading in each chapter to aid learning
- Appendices on physical constants, conversion factors, SI units, and Coulomb's Law
- Answers to select problems at the end of the book

### CONTENTS

1. Stoichiometry and the Basis of the Atomic Theory
2. The properties of gases
3. Liquids and Solutions
4. Chemical Equilibrium
5. Ionic Equilibria in Aqueous Solutions
6. Valence and the Chemical Bond
7. Oxidation-Reduction Reactions
8. Chemical Thermodynamics
9. Chemical Kinetics
10. The Electronic Structures of Atoms
11. The Chemical Bond
12. Systematic Molecular Orbital Theory
13. Periodic Properties
14. The Representative Elements: Groups I-IV
15. The Nonmetallic Elements
16. The Transition Metals
17. Organic Chemistry
18. Biochemistry
19. The Nucleus
20. The Properties of Solids



## Introductory Chemistry, 5/e



ISBN: 9789332581302

 **Nivaldo J. Tro**

 **848** | © **2017**

### ABOUT THE BOOK

Now in its fifth edition, *Introductory Chemistry* Essentials continues to foster deep engagement in the course by showing how chemistry manifests in students' daily lives. Author Nivaldo Tro draws upon his classroom experience as an award-winning instructor to extend chemistry from the laboratory to the student's world, capturing student attention with relevant applications and a captivating writing style.

### FEATURES

- The fifth edition includes more than 20 new Conceptual Checkpoints, focused on visualizations and drawing as requested by reviewers.
- Key Learning Outcomes that correlate to the Chemical Skills and Examples in the end-of-chapter material.
- Chapter Self-Assessment Quizzes at the end of each chapter provide opportunities for students to assess what they've learned.
- 3-4 Questions for Group Work have been added to the end-of-chapter problems in each chapter to facilitate guided-inquiry learning both inside and outside the classroom.
- Extensive labels and annotations for each illustration direct students to key elements in the art and help them to understand the processes depicted.

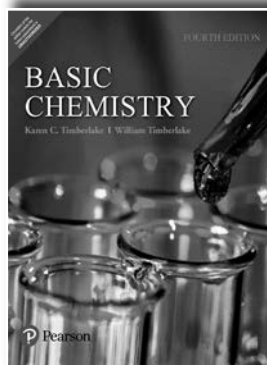
### CONTENTS

- |  |  |
|--|--|
| 1. The Chemical World                        | 10. Chemical Bonding                           |
| 2. Measurement and Problem Solving           | 11. Gases                                      |
| 3. Matter and Energy                         | 12. Liquids, Solids, and Intermolecular Forces |
| 4. Atoms and Elements                        | 13. Solutions                                  |
| 5. Molecules and Compounds                   | 14. Acids and Bases                            |
| 6. Chemical Composition                      | 15. Chemical Equilibrium                       |
| 7. Chemical Reactions                        | 16. Oxidation and Reduction                    |
| 8. Quantities in Chemical Reactions          | 17. Radioactivity and Nuclear Chemistry        |
| 9. Electrons in Atoms and the Periodic Table |  |

### ABOUT THE AUTHOR

**Nivaldo Tro** is Professor of Chemistry at Westmont College in Santa Barbara, California, where he has been a faculty member since 1990. He received his Ph.D. in chemistry from Stanford University, for work on developing and using optical techniques to study the adsorption and desorption of molecules to and from surfaces in ultrahigh vacuum. He then went on to the University of California at Berkeley, where he did post-doctoral research on ultra-fast reaction dynamics in solution. Since coming to Westmont, Professor Tro has been awarded grants from the American Chemical Society Petroleum Research Fund, from Research Corporation, and from the National Science Foundation to study the dynamics of various processes occurring in thin layer films adsorbed on dielectric surfaces. He has been honored as Westmont's outstanding teacher of the year three times and has also received the college's outstanding researcher of the year award.

## Basic Chemistry, 4/e



ISBN: 9789332581319



Karen C. Timberlake | William Timberlake



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### ABOUT THE BOOK

Popular features, including “Combining Ideas” sections and end-of-chapter questions, have also been strengthened and expanded. Modern real-world applications help students connect chemical principles to events in their world, while stories involving careers illustrate the importance of chemistry in future careers.

### FEATURES

- Unique, color-coded Guides to Problem-Solving are given for each problem type discussed in the text.
- Concept Checks throughout each chapter allow students to check their understanding of new chemical terms and ideas.
- Learning Goals at the beginning of each chapter section clearly identify the key concept of the section, providing a road map for studying.
- Chapter review, key terms, additional problems, and summary of reactions are included in the end-of-chapter material to help students review their comprehension of the material.
- Answers to study check questions and odd-numbered problems are included at the end of each chapter to give students immediate feedback and help them monitor their understanding of the content.

### CONTENTS

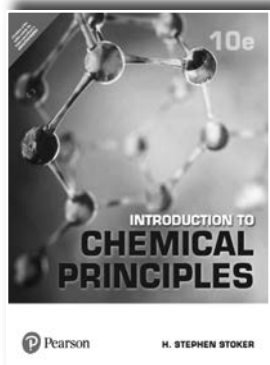
1. Chemistry in Our Lives
2. Measurements
3. Matter and Energy
4. Atoms and Elements
5. Electronic Structure and Periodic Trends
6. Ionic and Molecular Compounds
7. Chemical Quantities
8. Chemical Reactions
9. Chemical Quantities in Reactions
10. Properties of Solids and Liquids
11. Gases
12. Solutions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

### ABOUT THE AUTHOR(S)

**Karen 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.

## Introduction to Chemical Principles, 10/e



ISBN: 9789386873750

 H. Stephen Stoker

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### ABOUT THE BOOK

This solid, yet value-priced paperback gives students the background and confidence they need to succeed in chemistry. Stoker focuses on the most important topics—omitting organic and biochemistry chapters—and teaches the problem-solving skills students need. Each topic is developed at “ground level,” and continues step by step until the level of sophistication required for a further chemistry course is attained.

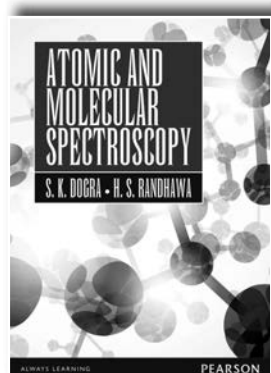
### FEATURES

- An emphasis on problem solving throughout uses dimensional analysis in problem-solving whenever possible. This equips students with a powerful and widely applicable tool that requires no mathematics beyond arithmetic and elementary algebra.
- Worked examples with detailed commentary show students the proper way to mentally dissect and solve a problem.
- Over 5,000 questions and problems give students more opportunities than any other text to become proficient problem-solvers.
- Emphasis on significant figure concepts in all problem-solving situations provides two answers to the example: the calculator answer (which does not take into account significant digits), and the correct answer (which is the calculator answer adjusted to the correct number of significant figures).
- Extensive margin notes provide additional details, links between concepts, or historical information about the concepts under discussion. They summarize key concepts and give students tips for remembering concepts or distinguishing between similar concepts.
- Vignettes on “The Human Side of Chemistry” are brief biographies of scientists who helped develop the foundations of modern chemistry.
- A Chemical Extension application adds perspective to worked-out examples that center on specific compounds. It focuses on the chemical compound itself, its relationship to the environment, its relationship to living systems (biochemistry), etc. This helps students become aware of the compound’s “realness,” and not lose themselves in the mathematics of problem solving.
- “Answer Double Check,” found at the end of two-thirds of the worked-out problems in the text, encourages students to consider if their answer in a problem is a “reasonable answer” in terms of numerical magnitude, number of significant figures present, sign convention (plus or minus) and direction of change (increase or decrease).
- Multiple-Choice Practice Test questions in the end-of chapter reviews help students prepare for exams.
- Practice Exercise Review questions are incorporated in the end of chapter summary. Similar to exercises found in the chapter, the end-of-chapter practice exercises measure the students’ comprehension and mastery of concepts in the chapter.

### CONTENTS

1. The Science of Chemistry
2. Numbers from Measurements
3. Unit Systems and Dimensional Analysis
4. Basic Concepts About Matter
5. Subatomic Particles, Isotopes, and Nuclear Chemistry
6. Electronic Structure and Chemical Periodicity
7. Chemical Bonds
8. Chemical Nomenclature
9. Chemical Calculations Involving Chemical Equations
10. States of Matter
11. Gas Laws
12. Solutions
13. Acids, Bases, and Salts
14. Chemical Equations: Net Ionic and Oxidation-Reduction
15. Reaction Rates and Chemical Equilibrium

➔ ALSO AVAILABLE...



ISBN: 9789332533530

## Atomic and Molecular Spectroscopy

 S. K. Dogra

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### ABOUT THE BOOK

Designed as a textbook for undergraduate and postgraduate students of chemistry and physics, *Atomic and Molecular Spectroscopy* elucidates the basic principles and applications of spectroscopy. The physical and quantitative aspects of spectroscopic techniques are covered comprehensively in one book.

## General Chemistry

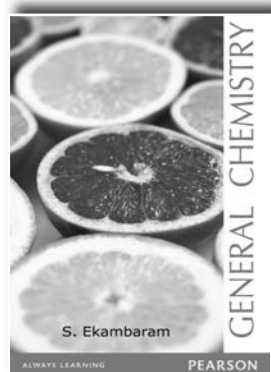
 S. Ekambaram

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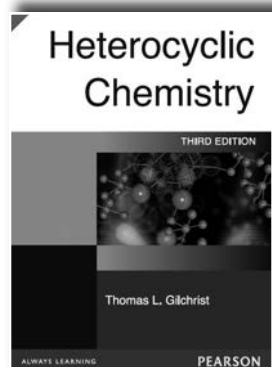


### ABOUT THE BOOK

This book presents the fundamental concepts of general chemistry in a precise and comprehensive manner for undergraduate students of chemistry and life science at all Indian universities. Adhering strictly to the UGC curriculum, the contents are written in a simple and lucid language enriched with a large number of examples and illustrations.



ISBN: 9788131773789



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.

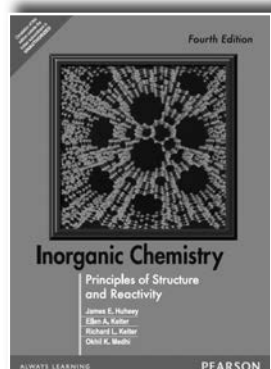
### CONTENTS

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(S)

Gary L. Miessler, St. Olaf College

Donald A. Tarr, St. Olaf College



ISBN: 9788177581300

## Inorganic Chemistry: Principles of Structure and Reactivity



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



826 | © 2005

### ABOUT THE BOOK

This classic in its field has been substantially reorganized and includes the latest findings in the discipline.

### FEATURES

- Substantial rearrangement to suit the requirement of the students and teachers of the Indian subcontinent.
- Thorough re-editing and reorganization of the chapters on chemistry of the main group elements, descriptive chemistry of metals, organometallic chemistry, solid-state chemistry, and bioinorganic chemistry.
- Addition of thermodynamic stability of complex compounds, organometallic chemistry of the main group elements, and Frost diagrams.
- A chapter on symmetry comprising applications of symmetry (including spectroscopy and crystallography) and an introduction to point groups.
- Reorganized and updated chapters on bonding, presenting a modern approach.

### 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, Kinetic and Mechanisms
18. Organometallic Chemistry: Syntheses, Structure, and Bonding
19. Organometallic Chemistry: Reactivity and Catalysis
20. The Inorganic Chemistry of Biological Systems

### ABOUT THE AUTHOR(S)

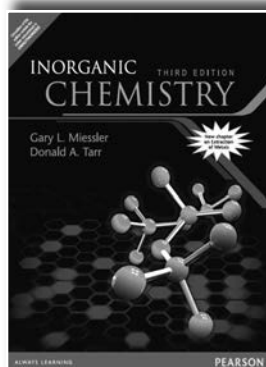
**James E. Huheey** received his Ph.D. from the University of Illinois at Urbana-Champaign and has taught at the University of Maryland since 1965. He has received the Leo Schubert Teaching Award and is a Fellow of the AAAS, the Herpetologists' League, and the United States National Museum.

**Ellen A. Keiter** received her Ph.D. from the University of Illinois at Urbana-Champaign and is currently the director of the honors program in the chemistry department of Eastern Illinois University, where she has taught since 1977. She has received merit awards from Eastern Illinois University for excellence in teaching, research, and service.

**Richard L. Keiter** received his Ph.D. from the University of Maryland. He joined the faculty at Eastern Illinois University in 1969 and was named distinguished professor in 1998. He served nine years as a councillor of the Council on Undergraduate Research and most recently received a Camille and Henry Dreyfus Scholar/Fellow Award.

**Okhil K. Medhi** received his Ph.D. from the Indian Institute of Technology, Kanpur, has taught at the North-Eastern Hill University, Shillong, and presently teaches at Gauhati University, Assam, where he has been a professor of chemistry since 1991.

## Inorganic Chemistry, 3/e



ISBN: 9788131718858

 Gary Miessler | Donald A. Tarr

 720 | © 2008



### 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.

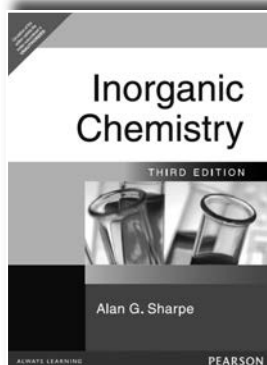
### CONTENTS

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



ISBN: 9788131706992

## Inorganic Chemistry, 3/e

 Alan G. Sharpe

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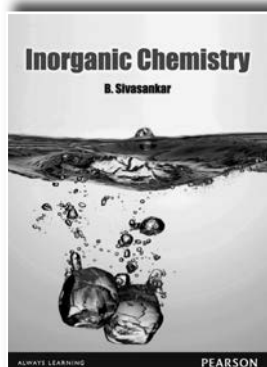
### ABOUT THE BOOK

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

### ➔ ALSO AVAILABLE...



ISBN: 9788131799062

## Inorganic Chemistry, 3e

 B. Sivasankar

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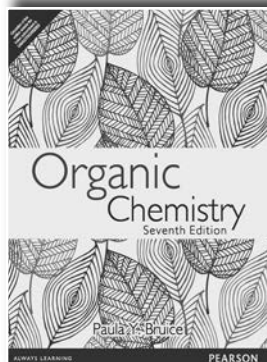
### ABOUT THE BOOK

Designed for a comprehensive course on inorganic chemistry, this textbook meets the academic requirements of undergraduate courses in Indian universities. The book introduces readers to the basics of the subject before progressing to advanced topics and techniques.



## Organic Chemistry, 7/e

 Paula Yurkanis Bruice

 1344 | © 2013


ISBN: 9789332519046

**ABOUT THE BOOK**

All of Paula Bruice's extensive revisions to the Seventh Edition of *Organic Chemistry* follow a central guiding principle: support what modern students need in order to understand and retain what they learn in organic chemistry for successful futures in industry, research, and medicine.

**FEATURES**

■ A modern organization emphasizing unifying principles of reactivity offers an economy of presentation and discourages memorization:

- Group I electrophilic addition reactions;
- Group II nucleophilic substitution reactions and elimination reactions;
- Group III nucleophilic addition reactions and nucleophilic addition-elimination reactions; and
- Group IV electrophilic (and nucleophilic) aromatic substitution reactions.
- Students are introduced to synthetic chemistry and retrosynthetic analysis early in the book (Chapters 6 and 7, respectively), so they can start designing multistep syntheses early in the course.
- Seven special Design a Synthesis sections introduce and help students through the iterative process of solving complex problems.
- Problem-Solving Strategies teach students how to approach various types of simple and complex problems, encourage students to organize their thoughts, and reinforces the development of critical thinking skills.
- Over 1,900 in-chapter and end-of-chapter problems include solved examples, problem-solving strategies, and cumulative problems. End-of-chapter problems are tied to each chapter's Learning Outcomes and vary in difficulty.
- End-of-chapter summaries review the major concepts of the chapter in a concise narrative format to help students synthesize the key points. Reaction summaries, included in each chapter on reactions, ensure that students understand and can explain how each reaction occurs.

**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 Representation of 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 and Their Effect on Stability, pK<sub>a</sub>, and the Products of a Reaction

**Part 3: Substitution and Elimination Reactions**

9. Substitution Reactions of Alkyl Halides
10. Elimination Reactions of Alkyl Halides • Competition between Substitution and Elimination
11. Reactions of Alcohols, Ethers, Amines, Thiols, and Thioethers
12. Organometallic Compounds
13. Radicals • Reactions of Alkanes

**Part 4: Identification of Organic Compounds**

14. Mass Spectrometry, Infrared Spectroscopy, and Ultraviolet/Visible Spectroscopy
15. NMR Spectroscopy

**Part 5: Carbonyl Compounds**

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

#### Part 6:

19. Reactions Of Benzene And Substituted Benzenes
20. More About Amines• Reactions of Heterocyclic Compounds

#### Part 7: Bioorganic Compounds

21. The Organic Chemistry Of Carbohydrates
22. The Organic Chemistry Of Amino Acids, Peptides, And Proteins
23. Catalysis in Organic Reactions and in Enzymatic Reactions
24. The Organic Chemistry Of The Coenzymes-

#### Compounds Derived From Vitamins

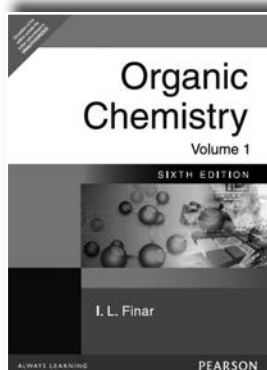
25. The Organic Chemistry of the Metabolic Pathways
  - Terpene Biosynthesis
26. The Chemistry of the Nucleic Acids

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

- Appendix I Values
- Appendix II Derivations of Rate Laws
- Appendix III Summary of Methods Used to Synthesize a Particular Functional Group
- Appendix IV Summary of Methods Employed to Form Carbon-Carbon Bonds

#### ABOUT THE AUTHOR(S)

Paula Y. Bruice, University of California, Santa Barbara



ISBN: 9788177585421

## Organic Chemistry, Volume 1, 6/e

 I. L. Finar

 966 | © 2005

#### 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

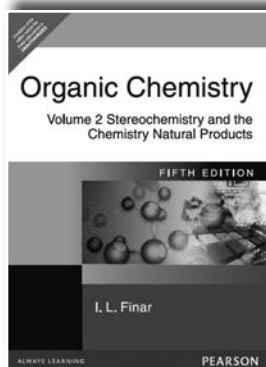
#### ABOUT THE AUTHOR(S)

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

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

 I. L. Finar

 956 | © 2005



ISBN: 9788177585414

### 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

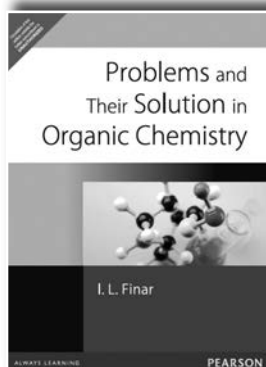
### ABOUT THE AUTHOR(S)

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

## Problems and Their Solution in Organic Chemistry

 I. L. Finar

 360 | © 2006



ISBN: 9788131700938

### 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.

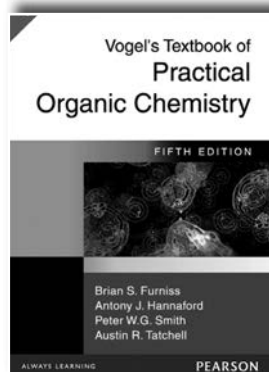
## CONTENTS

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(S)

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

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



ISBN: 9788177589573



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



1544 | © 2006

## ABOUT THE BOOK

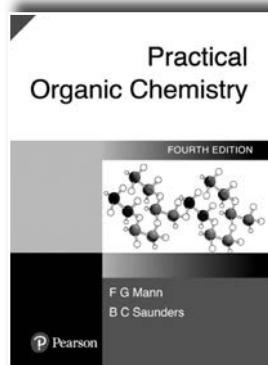
Still recognized as the definitive text on practical topics related to organic chemistry, this text is relied upon by undergraduates, postgraduate students, and professional organic chemists. Topics covered include the structural and theoretical principles required when designing a synthesis; the disconnection 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

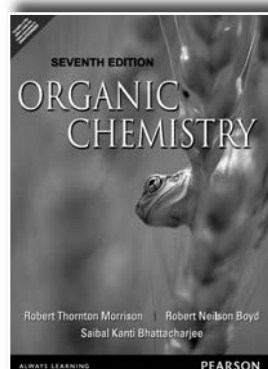
 600 | © 2009

### 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 | Saibal Kanti Bhattacharjee | Robert Neilson Boyd

 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, S<sub>N</sub> Reactions
13. Aryl Halides Nucleophilic Aromatic Substitution (S<sub>N</sub>Ar 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

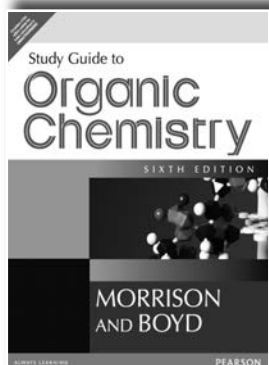
Saibal Kanti Bhattacharjee, Gauhati University

## Study Guide to Organic Chemistry, 6/e



Robert Thornton Morrison

738 | © 2007



ISBN: 9788131711514

## ABOUT THE BOOK

The sixth edition of the study guide represents the result of the authors' commitment to offer an even more effective teaching/learning tool in conjunction with their book titled Organic Chemistry. Much of the material has been rewritten and reorganized to provide a more accessible presentation, clear explanation and a greater emphasis on fundamentals.

## FEATURES

- The earlier chapters on fundamentals have been streamlined.
- Key topics such as nucleophilic substitution, elimination, addition, conjugation and stereoselectivity find an easy and effective introduction in the revised version.
- Alcohols and Ethers are now treated in Chapter 6 (immediately following nucleophilic substitution) which permits realistic use of oxygen compounds in the chemistry that follows.
- Removal of redundant and outdated material has made the study guide slimmer by 200 pages.

## CONTENTS

Acknowledgements.

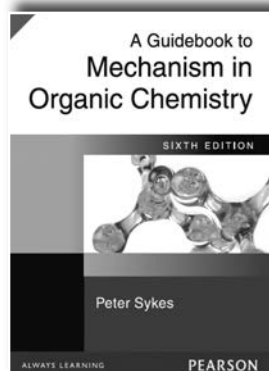
To the Students.

Note.

1. Structure and Properties.
2. Methane: Energy of Activation, Transition State.
3. Alkanes: Free-Radical Substitution. Stereochemistry Stereoisomers.
4. Alkyl Halides: Nucleophilic Aliphatic Substitution.
5. Alcohols and Ethers.
6. Role of the Solvent: Secondary Bonding.
7. Alkenes I Structure and Preparation: Elimination.
8. Alkenes II Reactions of the Carbon-Carbon Double Bond: Electrophilic and Free-Radical Addition.
9. Stereochemistry II Stereoselective and Stereospecific Reactions.
10. Conjugation and Resonance: Dienes.
11. Alkynes.
12. Cyclic Aliphatic Compounds.
13. Aromaticity: Benzene.
14. Electrophilic Aromatic Substitution.
15. Aromatic- Aliphatic Compounds: Arenes and Their Derivatives.
16. Spectroscopy and Structure.
17. Aldehydes and Ketones: Nucleophilic Addition.
18. Carboxylic Acids.
19. Functional Derivatives of Carboxylic Acids: Nucleophilic Acyl, Substitution.
20. Carbanions I: Aldol and Iaisen Condensations.
21. Amines I: Preparation and Physical Properties.
22. Amines II: Reactions.
23. Phenols.
24. Carbanions II: Malonic Ester and Acetoacetic Ester Syntheses.
25. Aryl Halides: Nucleophilic Aromatic Substitution.
26. Unsaturated Carbonyl Compounds: Conjugate Addition.
27. Molecular Orbitals.
28. Orbital Symmetry.
29. Symphoria: Neighboring Group Effects, Catalysis by Transition Metal Complexes.
30. Heterocyclic Compounds.
31. Macromolecules.
32. Polymers and Polymerization.
33. Stereochemistry III: Enantiotopic and Diastereotopic Ligands and Faces.
34. Lipids: Fats and Steroids.
35. Carbohydrates I: Monosaccharides.
36. Carbohydrates II: Disaccharides and Polysaccharides.
37. Proteins and Nucleic Acids: Molecular Biology.
38. Analysis of Spectra.

## ABOUT THE AUTHOR(S)

Robert Thornton Morrison, New York University



ISBN: 9788177584332

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

 Peter Sykes

 428 | © 2005

### ABOUT THE BOOK

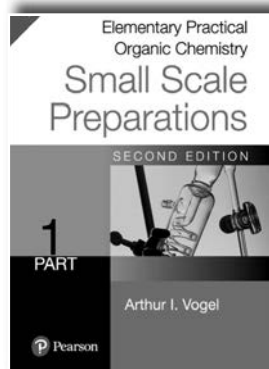
This classic textbook on mechanistic organic chemistry, characterized by its clarity, careful choice of examples, and its general approach designed to lead to a greater understanding of the subject matter. The book is aimed clearly at the needs of the student, with a thorough understanding of, and provision 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**

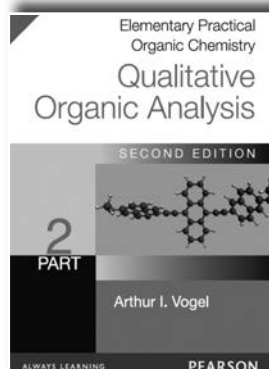
 **456** | © **2010**

#### 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

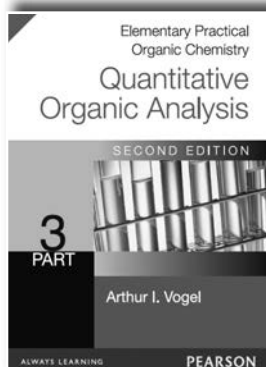
A dedicated chapter on "The use of spectroscopic methods in qualitative organic analysis" which includes the essentials from a practical viewpoint of ultraviolet and visible spectroscopy and infrared spectroscopy and mass spectroscopy. These spectroscopy techniques are now-days of such great importance 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**

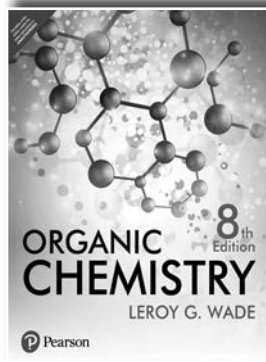
 **382 | © 2010**

#### 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



**ISBN: 9789332578586**

### Organic Chemistry, 8/e

 **Leroy G. Wade**

 **1288 | © 2016**

#### ABOUT THE BOOK

Acclaimed for its clarity and precision, Wade's *Organic Chemistry* maintains scientific rigor while engaging students at all levels. Wade presents a logical, systematic approach to understanding the principles of organic reactivity and the mechanisms of organic reactions. This approach helps students develop the problem-solving strategies and the scientific intuition they will apply throughout the course and in their future scientific work.

The Eighth Edition provides enhanced and proven features in every chapter, including new Chapter Goals, Essential Problem-Solving Skills and Hints that encourage both majors and non-majors to think critically and avoid taking “short cuts” to solve problems. Mechanism Boxes and Key Mechanism Boxes strengthen student understanding of *Organic Chemistry* as a whole while contemporary applications reinforce the relevance of this science to the real world.

## FEATURES

- Wade provides greater coverage of complete mechanisms and more mechanistic questions than any other book on the market to help students predict reactions they have never seen before.
- 20 Key Mechanism Boxes are the fundamental mechanistic principles that recur throughout the course. They are the mechanisms that compose most of the longer, more complex mechanisms. Each Key Mechanism Box reinforces student understanding with steps and explanations that describe the reaction mechanism (how the reaction occurs), a specific example of the mechanism for reinforcement, and a concluding problem or question so students can assess their understanding.
- Over 150 Mechanism Boxes help students understand how reactions occur by focusing on the individual steps of each reaction. The Mechanism Boxes are shaded in blue so students can locate them easily as they thumb through the chapter.
- Over 1400 (mostly multi-part) problems provide immediate review and allow students to assess their understanding of what they have read in each section before moving on to the next.
- Problem-Solving Strategies help students break down the multitude of complex problems into simpler pieces. These strategies help students establish thoughtful methods for approaching complicated problems — like those that require proposing mechanisms and developing multi-step synthesis.

## CONTENTS

1. Introduction and Review
2. Structure and Properties of Organic Molecule
3. Structure and Stereochemistry of Alkanes
4. The Study of Chemical Reactions
5. Stereochemistry
6. Alkyl Halides: Nucleophilic Substitution and Elimination
7. Structure and Synthesis of Alkenes
8. Reactions of Alkenes
9. Alkynes
10. Structure and Synthesis of Alcohols
11. Reactions of Alcohols
12. Infrared Spectroscopy and Mass Spectrometry
13. Nuclear Magnetic Resonance Spectroscopy
14. Ethers, Epoxides and Thioethers
15. Conjugated Systems, Orbital Symmetry, and Ultraviolet Spectroscopy
16. Aromatic Compounds
17. Reactions of Aromatic Compounds
18. Ketones and Aldehydes
19. Amines
20. Carboxylic Acids
21. Carboxylic Acid Derivatives
22. Condensations and Alpha Substitutions of Carbonyl Compounds
23. Carbohydrates and Nucleic Acids
24. Amino Acids, Peptides, and Proteins
25. Lipids

## ABOUT THE AUTHOR(S)

L.G. “Skip” Wade decided to become a chemistry major during his sophomore year at Rice University, while taking organic chemistry from Professor Ronald M. Magid. After receiving his B.A. from Rice in 1969, Wade went on to Harvard University, where he did research with Professor James D. White. While at Harvard, he served as the Head Teaching Fellow for the organic laboratories and was strongly influenced by the teaching methods of two master educators, Professors Leonard K. Nash and Frank H. Westheimer.

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

 I. L. Finnar

 375 | © 2016



ISBN: 9789332546974

### ABOUT THE BOOK

L. Finar द्वारा लिखित कार्बनिक रासायन विज्ञान, vol.1-मूलभूत सिद्धांत को यदि अपनी भाषा में पढ़ा जाये तो उसे अच्छी बात ही नहीं सकेगी। हमारी शिक्षण प्रणाली में सबसे बड़ी कमी यह है कि आज भी विज्ञान एम तकनीकी विषयों को पढ़ाने एम समझने के लिए English का ही प्रयोग किया जाता है, परिणामस्वरूप विद्यार्थी उच्च अंक प्राप्त करने की आकांक्षा में विषय की मूल अवधारणाओं को समझने के बजाय उनको रटने हेतु बर्बाद हो जाते हैं।

### CONTENT

Preface

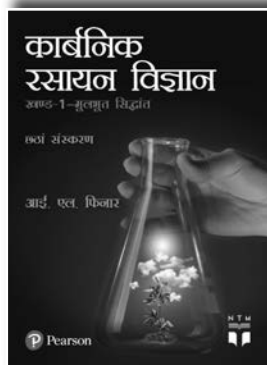
Sanrachna ka Nirdharan

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. Daeyejonyam 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

## Organic Chemistry, Vol 1, 6/e NTM (Hindi)

 I. L. Finnar

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ISBN: 9788131791394

### ABOUT THE BOOK

I. L. Finar द्वारा लिखित कार्बनिक रसायन विज्ञान, vol.1-मूलभूत सिद्धान्त को यदि अपनी भाषा में पढ़ा जाये तो उसे अच्छी बात ही नहीं सक्ती. हमारी सिखाने वाली प्रणाली में सबसे बड़ी कमी यह है कि आज भी विज्ञान एम तकनीकी विषयों को पढ़ाने एम समझने के लिए English का ही प्रयोग किया जाता है, परिणामस्वरूप विद्यार्थी उच्च आंक प्राप्त करने की आकांक्षा में विषय की मूल अवधारणाओं को समझने के बजाय उनको रटने हेतु बर्बाद हो जाते हैं।

### CONTENT

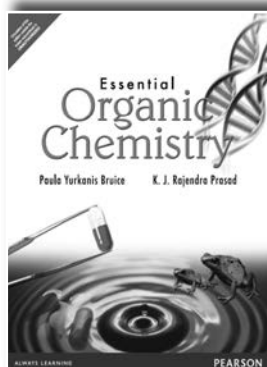
Preface

Sanrachna ka Nirdharan

1. Anuoo ke Gun
2. Elken
3. Elkin ewm Elkaien
4. Elkeno ke Helojan byutpann
5. Monohaedik Elkohol
6. Ethar
7. Eledhaid ewm kitor
8. Santript Monokarbocsilik aaml ewm unke byutpann
9. Bahukarbonil Yogik
10. Polyhaidik Elkohol

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26. Erometric Elcohals, Eldihaeds ewm kitons
27. Erometric Aaml
28. Bahunabhikiy Haydrocarban ewm unke byutpann

### ➔ ALSO AVAILABLE...



ISBN: 9788131703731

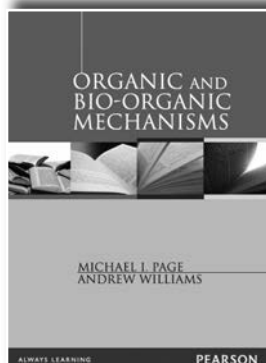
## Essential Organic Chemistry

 Paula Yurkanis Bruice | Rajendra Prasad

 672 | © 2007

### ABOUT THE BOOK

*Essential Organic Chemistry* is designed to help students see organic chemistry as an interesting and exciting science and to give them an opportunity to develop critical-thinking skills. It engages students through detailed presentation of reactions, providing a solid understanding of reactivity rather than requiring rote memorization. Once students understand the reasons behind the reactivity of organic compounds, they then will be better prepared to understand the reactions involved in such areas as metabolism, PCR and genetic engineering.



ISBN: 9788131729496

## Organic and Bio-Organic Mechanisms

 **Michael I. Page | Andrew Williams**

 **312 | © 2009**

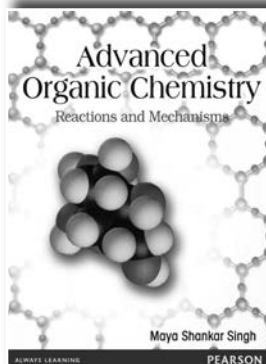
### ABOUT THE BOOK

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?'

## Advanced Organic Chemistry: Reactions and Mechanisms

 **Maya Shankar Singh**

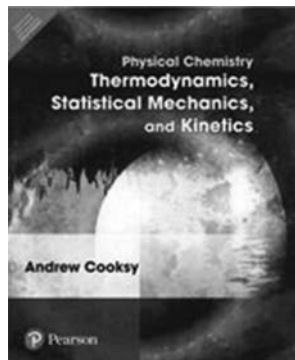
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ISBN: 9788131711071

### ABOUT THE BOOK

For students of B.Sc./M.Sc. Chemistry. Practising professionals in various chemical, bio-chemical and pharmaceutical industries.



ISBN: 9789353063627

## Physical Chemistry Thermodynamics, Statistical Mechanics, and Kinetics

 **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."

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Physical Chemistry at the Macroscopic Scale:

Statistical Mechanics, Thermodynamics, and Kinetics

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A.2 Classical Physics

I Extrapolation to Macroscopic Systems

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2. 2 Partitioning the Energy
3. 3 Statistical Mechanics and Molecular Interactions
4. 4 Mass Transport
5. 5 Energy transport

II Non-Reactive Macroscopic Systems

6. 6 Introduction to Thermodynamics

7. 7 Energy and Enthalpy

8. 8 Entropy

9. 9 Phase Transitions and Phase Equilibrium

10. 10 Solutions

III Reactive Systems

11. 11 Chemical Thermodynamics

12. 12 Elementary Reactions

13. 13 Multi-step Reactions

14. 14 Reaction Networks

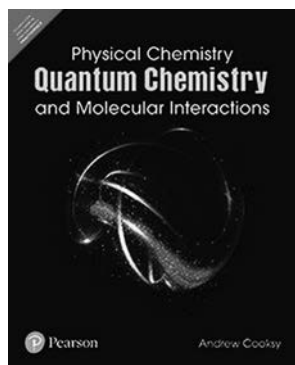
### ABOUT THE AUTHOR

**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.

## Physical Chemistry Quantum Chemistry and Molecular Interactions

 **Andrew Cooksy**

 **600** | © **2018**



**ISBN: 9789353063634**

### 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: Quantum Chemistry and Molecular Interactions* 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.
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- 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.

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##### A.2 Classical Physics

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2. The Schrödinger Equation
3. One-Electron Atoms
4. Many-Electron Atoms

#### II Molecular Structure

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6. Molecular Symmetry

7. Electronic States of Molecules
8. Vibrational States of Molecules
9. Rotational States of Molecules

#### III Molecular Interactions

10. Intermolecular Forces
11. Nanoscale Chemical Structure
12. The Structure of Liquids
13. The Structure of Solids

### ABOUT THE AUTHOR

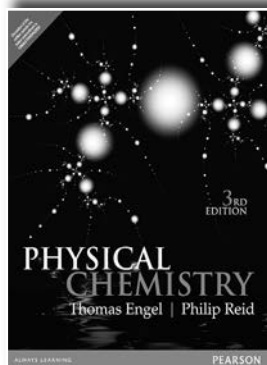
**Andrew Cooksy** is a chemistry professor at San Diego State University, where he teaches courses in physical and general chemistry and carries out research on the spectroscopy, kinetics, and computational chemistry of reactive intermediates in combustion and interstellar processes. He attended the 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.

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## Physical Chemistry, 3/e

 Thomas Engel | Philip Reid

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ISBN: 9789332519015

### ABOUT THE BOOK

Engel and Reid's *Physical Chemistry* gives students a contemporary and accurate overview of physical chemistry while focusing on basic principles that unite the sub-disciplines of the field. The Third Edition continues to emphasize fundamental concepts and presents cutting-edge research developments that demonstrate the vibrancy of physical chemistry today.

### FEATURES

- Modern applications are drawn from biology, environmental science, and material science to help give Physical Chemistry immediate relevance to students.
- An emphasis on problem solving includes:
  - Numerous Worked Examples and highlighted Key Equations throughout help students understand the math and develop their own problem-solving skills.
  - Concept Questions, Quantitative Problems, and a unique set of problems related to the web-based simulations and animations at the end of each chapter offer students a variety of study and assessment resources.
  - Additional math-development resources available in an Appendix provide a quick reference.
  - Current research is featured throughout along with new developments in the field, such as gap engineering, quantum dots, quantum wells, teleportation, and scanning tunneling microscopy to reflect the vibrancy of the field today.

### CONTENTS

1. Fundamental Concepts of Thermodynamics
2. Heat, Work, Internal Energy, Enthalpy, and the First Law of Thermodynamics
3. The Importance of State Functions: Internal Energy and Enthalpy
4. Thermochemistry
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6. Chemical Equilibrium
7. The Properties of Real Gases
8. Phase Diagrams and the Relative Stability of Solids, Liquids, and Gases
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11. Electrochemical Cells, Batteries, and Fuel Cells
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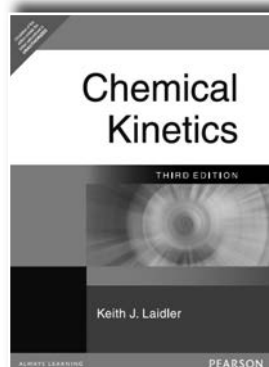
### ABOUT THE AUTHOR(S)

Thomas Engel has taught chemistry for more than 20 years at the University of Washington, where he is currently Professor of Chemistry and Associate Chair for the Undergraduate Program. Professor Engel received his bachelor's and master's degrees in chemistry from the Johns Hopkins University, and his Ph.D. in chemistry from the University of



Chicago. He then spent 11 years as a researcher in Germany and Switzerland, in which time he received the Dr. rer. nat. habil. degree from the Ludwig Maximilians University in Munich. In 1980, he left the IBM research laboratory in Zurich to become a faculty member at the University of Washington.

**Philip Reid** has taught chemistry at the University of Washington since he joined the chemistry faculty in 1995. Professor Reid received his bachelor's degree from the University of Puget Sound in 1986, and his Ph.D. in chemistry from the University of California at Berkeley in 1992. He performed postdoctoral research at the University of Minnesota, Twin Cities, campus before moving to Washington.



ISBN: 9788131709726

## Chemical Kinetics, 3/e

 **Keith J. Laidler**

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### 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.

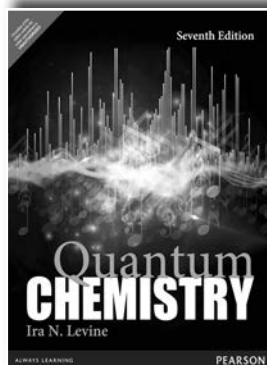
### CONTENTS

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.

## Quantum Chemistry, 7/e

 Ira N. Levine

 720 | © 2016



ISBN: 9789332558533

### 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
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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

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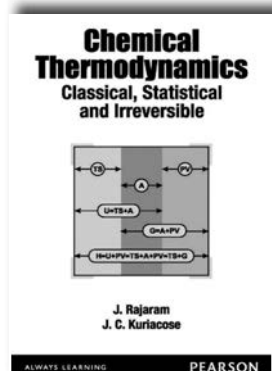
### ABOUT THE AUTHOR(S)

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

## Chemical Thermodynamics: Classical, Statistical and Irreversible

 J. Rajaram

 696 | © 2013



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 ade-

quate 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

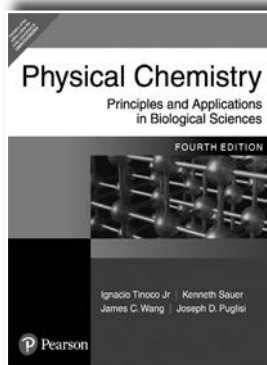
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1. Introduction
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7. Statistical thermodynamics
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10. Fugacity and activity
11. Chemical Equilibrium
12. Aqueous solutions of electrolytes

### 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.

➔ ALSO AVAILABLE...



ISBN: 9788131709757

## Physical Chemistry: Principles and Applications in Biological Sciences, 4/e

 Ignacio Jr. Tinoco | Kenneth Sauer | James C. Wang | Joseph D. Puglisi

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### ABOUT THE BOOK

This best-selling text presents the principles and applications of contemporary physical chemistry as they are used to solve problems in biology, biochemistry, and medicine. This text puts the study of physical chemistry for these students in context.

## Thermodynamics, Statistical Thermodynamics, and Kinetics

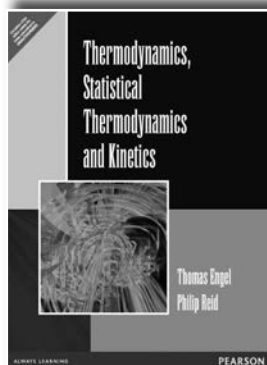
 Thomas Engel | Philip Reid

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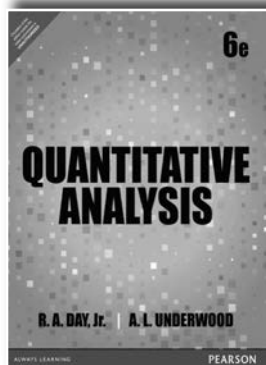
### ABOUT THE BOOK

This book presents the fundamental concepts of general chemistry in a precise and comprehensive manner for undergraduate students of chemistry and life science at all Indian universities. Adhering strictly to the UGC curriculum, the contents are written in a simple and lucid language enriched with a large number of examples and illustrations.



ISBN: 9788131712849

## Quantitative Analysis, 6/e



ISBN: 9789332551879

 R.A. Day | A.L. Underwood

 768 | © 2015

## ABOUT THE BOOK

This introduction to quantitative analysis first covers the traditional topics of titrimetric and gravimetric analysis; and then provides elementary coverage of instrumental topics, such as potentiometry, electrochemistry spectrophotometry, emission spectroscopy, and chromatography.

## FEATURES

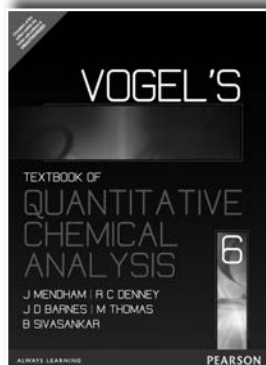
■ For each concept, first explains in words what is going on — to establish a physical picture for readers before they plunge into mathematical formulations.

- Provides directions for numerous laboratory experiments.
- Includes illustrative calculations.

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



ISBN: 9788131723258

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

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## 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.

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20. Atomic Emission Spectroscopy.
21. Molecular Electronic Spectroscopy.
22. Vibrational Spectroscopy.
23. Mass Spectrometry.

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R.C. Denney, Consultant Forensic Scientist

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

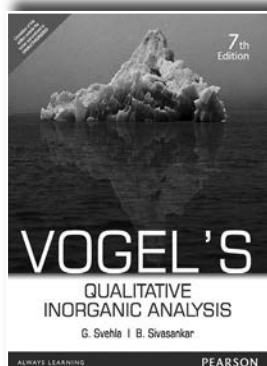
## Vogel's Qualitative Inorganic Analysis, 7/e



G. Svehla | B. Sivasankar



384 | © 2013



ISBN: 9788131773710

## 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
- 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

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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)

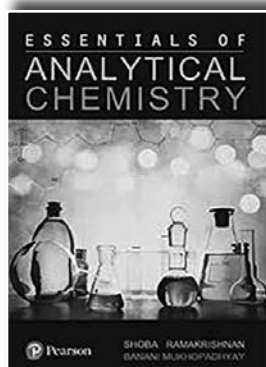
G. Svehla is a formerly professor from the department of chemistry, University College, York, Ireland.

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

# Essentials of Analytical Chemistry

 **Shobha Ramakrishnan | Banani Mukhopadhyay**

 **400 | © 2018**



**ISBN: 9789332545076**

## 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.

## 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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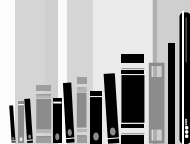
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## ABOUT THE AUTHOR(S)

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**Banani Mukhopadhyay** is Assistant Professor, Department of Chemistry, Women's Christian College, Chennai, Tamil Nadu.



## AUTHOR INDEX

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