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Lecture Capture is a comprehensive collection of audio-video classroom recordings. It is available on cloud and in the form of on-premise installations with live streaming functionality.

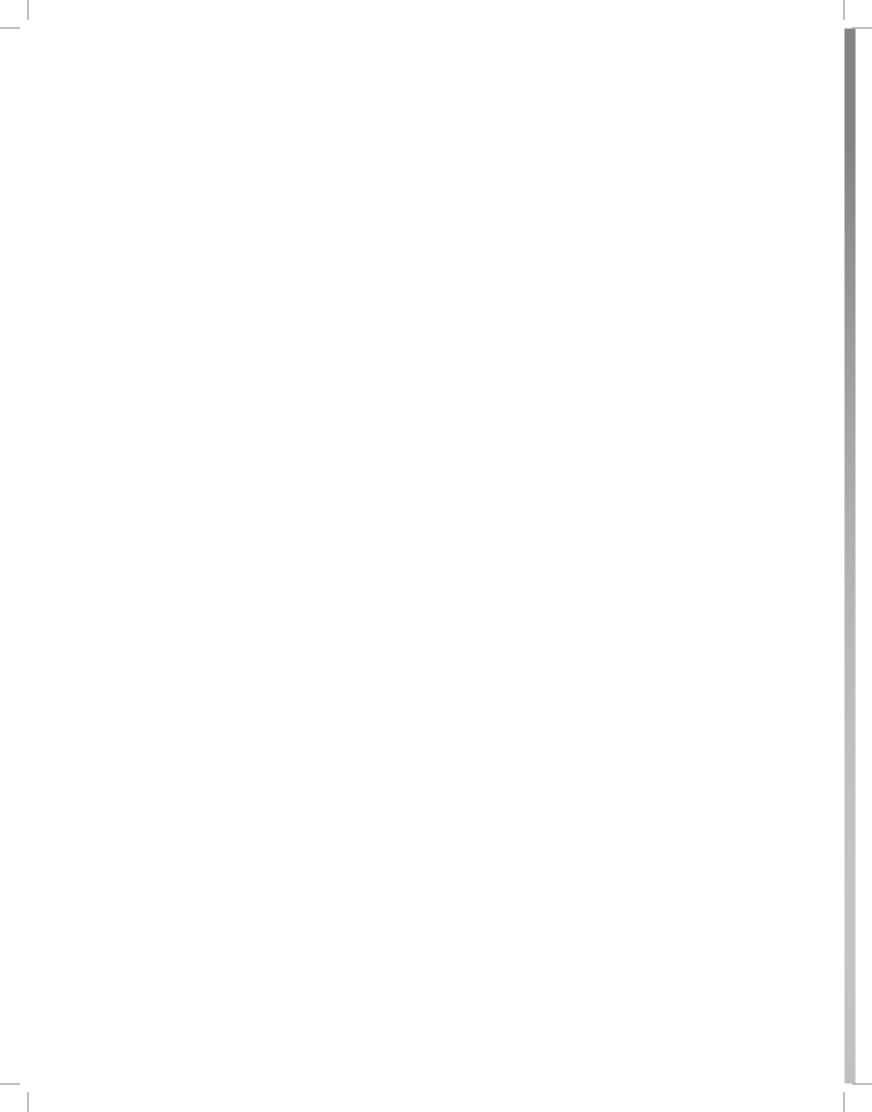
www.pearsoned.co.in/web/lecturecapture.aspx



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CHEMISTRY





Analytical Chemistry



Quantitative Analysis, 6/e

R.A. Day A.L. Underwood

ISBN: 9789332551879 © 2015 Pages: 768



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.

Contents

- I. Introduction.
- 2. Errors and the Treatment of Analytical Data.
- 3. Titrimetric Methods of Analysis.
- 4. Gravimetric Methods of Analysis.
- 5. Review of Chemical Equilibrium.
- 6. Acid-Base Equilibria.
- 7. Acid-Base Equilibria in Complex Systems.
- 8. Complex Formation Titrations.
- 9. Solubility Equilibria and Precipitation Titrations.
- 10. Oxidation-Reduction Equilibria.
- 11. Applications of Oxidation-Reduction Titrations.
- 12. Potentiometric Methods of Analysis.
- 13. Other Electrical Methods of Analysis.
- 14. Spectrophotometry.
- 15. Emission Spectroscopy.
- 16. Solvent Extraction.
- 17. Gas-Liquid Chromatography.
- 18. Liquid Chromatography.
- 19. Perspectives.
- 20. General Laboratory Directions.
- 21. The Analytical Balance.
- 22. Laboratory Procedures.

Appendix I: Tables of Equilibrium Constants and Standard Potentials.

Appendix II: Balancing Oxidation-Reduction Equations.

Appendix III: Answers to Odd-Numbered Problems.



Vogel's Quantitative Chemical Analysis, 6/e

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

ISBN: 9788131723258 © 2009

Pages: 836

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.

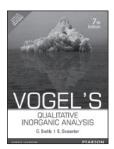
- Preface to First Edition.
- Preface to Sixth Edition.
- 3. Safety; Units.
- 4. Reagent Purity.
- 5. Introduction.
- 6. Fundamental Theoretical Principles of Reactions in Solution.
- 7. Common Apparatus & Basic Techniques.
- 8. Statistics, Introduction to Chemometrics.
- 9. Sampling.
- 10. The Basis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

J. Mendham, Consultant Analytical Chemist

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

ISBN: 9788131773710 © 2013 Pages: 384

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

Contents

1.Introduction

2.Experimental Techniques

3.Reactions of the Cations

4.Reactions of the Anions

5. Selected Tests and Separations

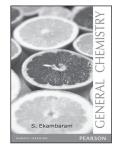
6.Reactions of Some Less Common Ions

About the Author

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

Chemistry



General Chemistry

S. Ekambaram

ISBN: 9788131773789 © 2013 Pages: 656

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.

Features

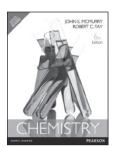
- Optimum balance between theory and problems, supported with graphical and schematic illustrations
- Discussion of contemporary topics on nuclear chemistry, plastics and polymer chemistry
- More than 200 illustrations, 250 solved problems, 400 practice problems and end-of-chapter multiple choice questions

Contents

- I. Chemistry Foundations
- 2. Quantum Chemistry in a simple way
- 3. Thermodynamics and Thermochemistry
- 4. Chemical Kinetics
- 5. Photochemistry
- 6. Chemical Equilibrium of Reactions
- 7. Chemical Bonding
- 8. Gases and Gas equations
- 9. Colligative Properties
- 10. Phase rule
- 11. Acids and Bases
- 12. Electrochemistry
- 13. Colloidal State
- 4. Chemistry of S-block elements
- 15. Chemistry of main group elements
- 16. Chemistry of coordination compounds
- 17. Chemistry of f-block elements
- 18. Solid State Chemistry
- 19. Organic Chemistry Hydrocarbons and their derivatives
- 20. Polymers
- 21. Nuclear Chemistry

About the Author

Ekambaram Sambandan is a Former Scientist, Authentix, Inc., Texas, USA. He won the Bayer postdoctoral award from the University of Notre Dame, and has over 15 years of research experience in physical and inorganic chemistry.



Chemistry, 6/e John E McMurry Robert C. Fay

ISBN: 9789332519022 © 2014 Pages: 1072

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&hellip, 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

- I. 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

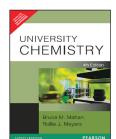
Appendix: Thermodynamic Properties at 25oC Appendix: Equilibrium Constants at 25oC Appendix: Standard Reduction Potentials at 25oC

Appendix: Properties of Water

About the Author

JOHN MCMURRY, educated at Harvard and Columbia, has taught approximately 17,000 students in general and organic chemistry over a 30-year period. A Professor of Chemistry at Cornell University since 1980, Dr. McMurry previously spent 13 years on the faculty at the University of California at Santa Cruz. He as received numerous awards, including the Alfred P. Sloan Fellowship (1969-71), the National Institute of Health Career Development Award (1975-80), the Alexander von Humboldt Senior Scientist Award (1986-87), and the Max Planck Research Award (1991).

ROBERT C. FAY, Professor of Chemistry at Cornell University, has been teaching general and inorganic chemistry at Cornell since 1962. Known for his clear, well-organized lectures, Dr. Fay was the 1980 recipient of the Clark Distinguished Teaching Award. He has also taught as a visiting professor at Harvard University and at the University of Bologna (Italy). A Phi Beta Kappa graduate of Oberlin College, Fay received his Ph.D. from the University of Illinois. He has been an NSF Science Faculty Fellow at the University of East Anglia and the University of Sussex (England) and a NATO/Heineman Senior Fellow at Oxford University. JORDAN FANTINI, Associate Professor of Chemistry and Biochemistry at Denison University, has been teaching general and organic chemistry for the past 14 years. Known for his interactive lectures, Dr. Fanitini has been a student favorite for years.



University Chemistry, 4/e

Bruce M. Mahan Rollie J. Meyers

ISBN: 9788131729571 © 2009 Pages: 1076

About the Book

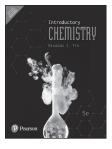
Designed for use in a course for first-year students, University Chemistry, 4/e continues in the tradition of previous editions by being intellectually challenging and using mathematical reasoning where it is appropriate to the subject at hand. Besides covering topics essential for an introductory university 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

- I. 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, 5e Nivaldo J.Tro

ISBN: 9781292057811 © 2017 Pages: 848

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-ofchapter 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.

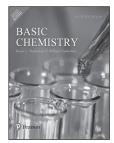
Contents

- I. The Chemical World
- 2. Measurement and Problem Solving
- 3. Matter and Energy
- 4. Atoms and Elements
- 5. Molecules and Compounds
- 6. Chemical Composition
- 7. Chemical Reactions
- 8. Quantities in Chemical Reactions
- 9. Electrons in Atoms and the Periodic Table
- 10. Chemical Bonding

- Gases
- 12. Liquids, Solids, and Intermolecular Forces
- 13. Solutions
- 14. Acids and Bases
- 15. Chemical Equilibrium
- 16. Oxidation and Reduction
- 17. Radioactivity and Nuclear Chemistry

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

Karen C.Timberlake William Timberlake

ISBN: 9781292039534 © 2016 Pages: 756

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

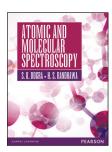
- Unique, color-coded Guides to Problem-Solving are given for each problem type discussed in the text.
- Concept Checks throughout each chapter allow students to check their understanding of new chemical terms and ideas.
- Learning Goals at the beginning of each chapter section clearly identify the key 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.

- I 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
- Chemical Quantities in Reactions
- 10 Properties of Solids and Liquids
- II Gases
- 12 Solutions

- 13 Reaction Rates and Chemical Equilibrium
- 14 Acids and Bases
- 15 Oxidation and Reduction
- 16 Nuclear Radiation

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.



Molecular Spectroscopy

SK Dogra HS Randhawa

ISBN: 9789332533530 © 2014 Pages: 784

About the Book

The text elucidates the basic principles as well as the applications of atomic and molecular spectroscopy. There is comprehensive coverage of physical and quantitative aspects of spectroscopic techniques in one book. It covers the complete undergraduate and post graduate syllabus for Spectroscopy.

Features

- Covers the theoretical, experimental and applied aspects in the field of spectroscopy
- Theory is supplemented by basic problems and qualitative and quantitative applications in different areas.
- Over 480 figures/illustrations, 240 solved and 120 unsolved problems with answers.

Contents

Chapter I Introduction

Chapter 2 Atomic Structure and atomic spectra

Chapter 3 Microwave Spectroscopy

Chapter 4 Vibrational Spectra and the Flexibility of Molecules

Chapter 5 Raman Spectroscopy

Chapter 6 Electronic Spectroscopy

Chapter 7 Nuclear Magnetic Resonance Spectroscopy.

Chapter 8 Electron Spin Resonance Spectroscopy

Chapter 9 Moss Bauer Spectroscopy

Chapter 10 LASERS

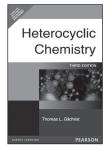
Chapter 11 Mass Spectrometry

About the Author

Dr. S. K. Dogra is a Former Professor and Head, Department of Chemistry, I.I.T. Kanpur, Kanpur

Dr. H. S. Randhawa is Former Professor, Department of Chemistry, Punjab Agriculture University, Ludhiana

Heterocyclic Chemistry



Heterocyclic Chemistry, 3/e

Thomas.L. Gilchrist

ISBN: 9788131707937 © 1997 Pages: 432

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.

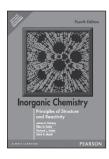
Contents

- I. 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
- I. Nomenclature

About the Author

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

Inorganic Chemistry



Inorganic Chemistry: Principles of Structure and Reactivity

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

ISBN: 9788177581300 © 2006 Pages: 826

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.

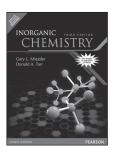
Contents

- I. 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
- Chemical Forces
 Acid- Base Chemistry
- 9. Chemistry in Aqueous and Nonaqueous Solvents
- 10. The Chemistry of the Main Group Elements: Periodicity
- The Chemistry of the Main Group Elements: Inorganic Chains, Rings and Cages
- 12. The Chemistry of the main group elements: Halogens and the Noble
- 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

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

Gary Miessler Donald A.Tarr

ISBN: 9788131718858 © 2008 Pages: 720

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.

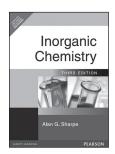
Features

- 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.

- I. 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.

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



Inorganic Chemistry, 3/e

Alan G. Sharpe

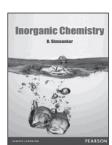
ISBN: 9788131706992 © 1981 Pages: 702

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

- I. 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



Inorganic Chemistry

B Sivasankar

ISBN: 9788131799062 © 2013 Pages: 1032

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. The theory is asserted by adequate illustrations and the essence of each concept is driven home with conspicuous examples that make this book an ideal companion for students.

Features

- Elucidation of the preparation and structures of inorganic solids
- Compares classical and modern approaches to atomic structure, the periodic table and the coordinate bond
- Over 600 illustrations and 450 end-of-chapter review questions
- Significant experimental methods interspersed with theory for practical understanding.
- Chapters on biological inorganic chemistry and nanomaterials can be accessed at

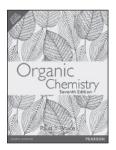
Contents

- I. Atomic structure I Nucleus and radioactivity
- 2. Atomic structure II Electronic configurations of atoms
- 3. Periodic table
- 4. Bonding in ionic solids and metals
- 5. Molecular architecture/ structure
- 6. Structures of inorganic solids
- 7. Preparation and properties of solids
- 8. Chemistry in aqueous and non-aqueous media
- 9. Classical coordination compounds
- 10. Coordination compounds bonding theories and properties
- 11. Formation and reactions of coordination compounds
- 12. Organotransition metal compounds
- 13. Hydrogen
- 4. The s- block elements
- 15. The p-block elements
- 16. The d-block elements
- 17. The f-block elements
- 18. Noble gases
- 19. Bioinorganic chemistry
- 20. Nanomaterials

About the Author

B. Sivasankar is Visiting Professor at the department of chemistry, Anna University, Chennai. An academician with over 35 years' experience, he is an active researcher in the fields of analytical and inorganic chemistry. He has over 85 research publications to his credit.

Organic Chemistry



Organic Chemistry, 7/e Paula Yurkanis Bruice

ISBN: 9789332519046 © 2014 Pages: 1344

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 ddition reactions and nucleophilic additionelimination 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-ofchapter 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 I 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
- An Introduction to Organic Compounds: Nomenclature, Physical Properties, and Representation of Structure

Part Two Electrophilic Addition Reactions, Stereochemistry, and Electron Delocalization

- 4. Isomers: The Arrangement of Atoms in Space
- 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, pKa, and the Products of a Reaction

Part Three Substitution and Elimination Reactions

- 9. Substitution Reactions of Alkyl Halides
- Elimination Reactions of Alkyl Halides Competition between Substitution and Elimination

- II. Reactions of Alcohols, Ethers, Amines, Thiols, and Thioethers
- 12. Organometallic Compounds
- 13. Radicals Reactions of Alkanes

Part Four Identification of Organic Compounds

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

Part 5 Carbonyl Compounds

- 16. Reactions of Carboxylic Acids and Carboxylic Derivatives
- Reactions of Aldehydes and Ketones More Reactions of Carboxylic Acid Derivatives • Reactions of Unsaturated Carbonyl Compounds
- 18. Reactions at the 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

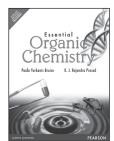
Appendix II Derivations of Rate Laws

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

Paula Y. Bruice, University of California, Santa Barbara



Essential Organic Chemistry

Paula Yurkanis Bruice Rajendra Prasad

ISBN: 9788131703731 © 2007 Pages: 672

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.

Features

- Focus on mechanisms to enhance understanding over memory.
- Clear and accessible writing style to make the material easy for students to understand.
- Problems at the end of each section in all chapters to enable students monitor their progress.
- Over 100 special-interest boxes throughout the text designed to illustrate the connection between organic chemistry and familiar aspects of the world.
- Reactions organized according to mechanisms that help students

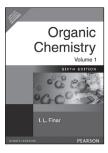
- recognize similarities and patterns.
- Problems solved step-by-step to enable students learn the various approaches adopted, before testing themselves at the end of the chapter.

Contents

- I. Electronic Structure and Covalent Bonding
- 2. Acids and Bases
- 3. An Introduction to Organic Compounds
- Alkenes: Structure, Nomenclature, Stability, and an Introduction to Reactivity
- Reactions of Alkenes and Alkynes: An Introduction to Multi-Step Synthesis
- 6. Delocalized Electrons and Their Effect on Stability, Reactivity, and pKa
- 7. Aromaticity: Reactions of Benzene and Substituted Benzenes
- 8. Isomers and Stereochemistry
- 9. Reactions of Alkanes: Radicals
- 10. Substitution and Elimination: Reactions of Alkyl Halides
- 11. Reactions of Alcohols, Amines, Ethers, and Epoxides
- 12. Carbonyl Compounds I: Nucleophilic Acyl Substitution
- Carbonyl Compounds II: More Reactions of Carboxylic Acid Derivatives
- 14. Carbonyl Compounds III: Reactions at the x-Carbon
- 15. Determining the Structure of Organic Compounds
- 16. Carbohydrates
- 17. Amino Acids, Peptides, and Proteins
- 18. Enzymes, Coenzymes, and Vitamins
- 19. Metabolism
- 20. Lipids
- 21. Nucleosides, Nucleotides, and Nucleic Acids
- 22. The Organic Chemistry of Drugs

About the Author

Paula Y. Bruice, University of California, Santa Barbara



Organic Chemistry, Volume I,

I. L. Finar

ISBN: 9788177585421

© 1973 Pages: 966



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.

Features

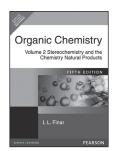
Contents

- I. 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. Phemols 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.



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

I. L. Finar

ISBN: 9788177585414 © 1956

Pages: 956



About the Book

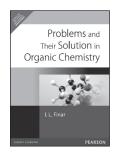
Organic Chemistry is a well-established two-volume textbook for students studying chemistry at degree level. Volume 2 carries the material of Volume 1: Fundamental Principles to a more advanced level. The author provides a comprehensive introduction to the relationship between physical properties and 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.

Features

- 1. Physical properties and chemical constitution
- 2. Optical isomerism
- 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
- II. Steroids
- 12. Heterocyclic compounds containing two or more hetero-atoms
- 3. Amino-acids and proteins

- 14. Alkaloids
- 15. Anthocyanins
- 16. Purines and nucleic acids
- 17. Vitamins
- 18. Chemotherapy
- 19. Haemoglobin, chlorophyll and phthalocyanines

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



Problems and Solution in Organic Chemistry

I. L. Finar

ISBN: 9788131700938

© 1973 Pages: 360

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 I (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.

Features

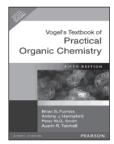
Contents

- I. Determination of Structure
- 2. Properties of Molecules
- 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. Phemols 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.



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

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

ISBN: 9788177589573 © 1989

Pages: 1544

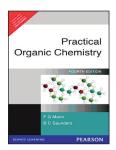
About the Book

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 suphur.
- 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.

- I. 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.



Practical Organic Chemistry

F.G. Mann B.C. Saunders

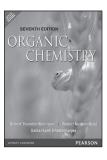
ISBN: 9788131727102 © 2009 Pages: 600

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

- I. Part I: Methods And Manipulation
- li. Part II: Preparations
- lii. Part III: Reactions And Identification Of Organic Compounds
- Iv. Part IV: Quantitative Analysis
- V. Part VI: Simple Enzyme Reactions



Organic Chemistry, 7/e

Robert Thornton Morrison Saibal Kanti Bhattacharjee Robert Neilson Boyd

ISBN: 9788131704813 © 2011 Pages: 1508



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 ONE Fundamentals of Organic Chemistry

- I 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 TWO Chemistry of Functional Groups

6 Alkenes

7 Alkynes

8 Alkyl Halides Nucleophilic Substitutions, SN Reactions

9 Aryl Halides Nucleophilic Aromatic Substitution (SNAr Reactions)

10 Alcohols and Ethers

- II Phenols
- 12 Aldehydes and Ketones Nucleophilic Addition
- 13 Carboxylic Acids
- 14 Functional Derivatives of Carboxylic Acids Nucleophilic Acyl Substitution

PART THREE Special Topics

16 Heterocyclic Compounds

17 Purification and Identification of Organic Compounds: Spectroscopic Analysis of Organic Compounds

18 Organic Synthesis

19 Oxidation and Reduction Electroorganic Synthesis

- 20 Molecular Orbitals; Orbital Symmetry (Pericyclic Reactions)
- 21 Organic Photochemistry
- 22 Synthetic Organic Compounds of Commercial Importance: Synthetic Dyes and Macromolecules
- 23 Symphoria (Anchimeric Assistance) Neighboring Group Effects. Catalysis by Transition Metal Complexes
- 24 Introduction to Supramolecular Chemistry Host–Guest Chemistry

PART FOUR (Biomolecules and Bioorganic Chemistry)

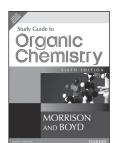
- 25 Lipids Fats, Steroids, Terpenes, and Prostaglandins
- 26 Carbohydrates I: Monosaccharides. Carbohydrates II:
- Disaccharides and Polysaccharides
- 27 Alkaloids
- 28 Amino Acids and Proteins Molecular Biology
- 29 Enzymes, Co-Enzymes and Vitamins
- 30 Nucleic Acids Nucleotides, Polynucleotides and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

PART FIVE Contemporary and Future Organic Chemistry

- 32 Nanoparticles (Size-Dependent Chemistry)
- 33 Future Devices and Challenges of Chemistry of this Century Molecular Machines or Nanomachines

About the Author

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

ISBN: 9788131711514 © 2007 Pages: 738

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.

- 1. Acknowledgements.
- 2. To the Students.
- 3. Note.
- 4. Structure and Properties.
- 5. Methane: Energy of Activation, Transition State.
- 6. Alkanes: Free-Radical Substitution. Stereochemistry Stereoisomers.
- 7. Alkyl Halides: Nucleophilic Aliphatic Substitution.
- 8. Alcohols and Ethers.
- 9. Role of the Solvent: Secondary Bonding.

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

Robert Thornton Morrison, New York University



Organic and Bio-organic Mechanisms

Michael I. Page Andrew Williams

ISBN: 9788131729496 © 2009

Pages: 312

About the Book

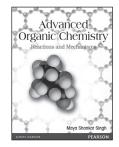
This text provides a comprehensive and detailed discussion of the investigation of organic and bioorganic reaction mechanisms. It addresses questions such as: 'How are bonds between atoms rearranged?', 'What sort of structural changes take place to cause bond fission and formation?' and 'How do catalysts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

Features

- Techniques for diagnosis of mechanism not previously compiled from research literature.
- An important bridge between fundamental studies and mechanisms in solution.
- · Key references from classic papers to the latest research literature.

Contents

- I. The Transition State
- 2. Kinetics and Mechanism
- 3. The Effect of Changes in Reactant Structure
- 4. Kinetic and Equilibrium Isotope Effects
- 5. Transition States from External Effects
- 6. Transition State Structures Anomalies
- 7. Bioorganic Group Transfer Reactions
- 8. Catalysis
- 9. Complexation Catalysis
- 10. Some Enzyme Systems



Advanced Organic Chemistry: Reactions and Mechanisms

Maya Shankar Singh

ISBN: 9788131711071 © 2004

Pages: 528

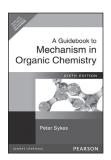
About the Book

For students of B.Sc./M.Sc. Chemistry. Practising professionals in various chemical, bio-chemical and pharmaceutical industries Advanced Organic Chemistry: Reactions and Mechanisms provides an up-to-date and comprehensive account of the structural and mechanistic concepts of organic chemistry. The book is based on three important principles: first, the four types of reactions "substitution, addition, elimination and rearrangement; second, the three types of reagents "nucleophiles, electrophiles and radicals; and third, the two effects "electronic and stearic" through which the behaviour of a particular reaction can be proposed.

Features

- Solidifies and extends the student's and professional's understanding of basic concepts.
- Shows how the mechanistic principles of organic reaction can be applied to acquiring knowledge of organic synthetic processes and planning the construction of organic molecules.
- Aspects of stereochemistry are explored in all reaction types.

- I. Concept of Acids and Bases
- 2. Delocalized Chemical Bonding and Electronic Effects
- 3. Aliphatic Nucleophilic Substitution Reactions
- 4. Elimination Reactions
- 5. Addition Reactions
- 6. Free Radical Reaction
- 7. Molecular Rearrangements
- 8. Aromatic Substitution
- 9. Stereochemistry
- 10. Buckminsterfullerenes
- II. Pericyclic Reactions
- 12. Aromaticity



A Guidebook to Mechanism in Organic Chemistry, 6/e

Peter Sykes

ISBN: 9788177584332 © 1986

Pages: 428

About the Book

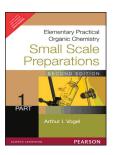
This classic textbook on mechanistic organic chemistry, characterized by its clarity, careful choice of examples, and its general approach designed to lead to a greater understanding of the subject matter. The book is aimed clearly at the needs of the student, with a thorough understanding of, and provision 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 óx and spectroscopic data; and 13C n.m.r. in biogenesis.
- New "thoroughly revised text with improved explanations, more examples and increased clarity.

Contents

- I. 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.



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

Arthur I. Vogel

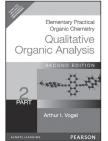
ISBN: 9788131756867 © 2011 Pages: 456

Features

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

Contents

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



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

Arthur I.Vogel

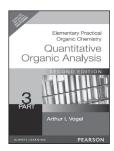
ISBN: 9788131756874 © 2011 Pages: 448

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

- I. 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



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

Arthur I. Vogel

ISBN: 9788131756881 © 2011 Pages: 382

Features

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

- I. Determination of selected elements in organic compounds
- 2. General discussion of titrations in non-aqueous solvents
- 3. Hydroxyl groups (Alcohols)
- 4. Adjacent hydroxyl groups
- 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, Nitrsos and azo groups
- 16. Unsaturation
- 17. Alkoxyl 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, 8/e Leroy G.Wade

ISBN: 9789332578586 © 2016

Pages: 1288



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 multistep 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
- II: 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

Chapter 23: Carbohydrates and Nucleic Aci

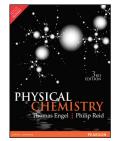
24: Amino Acids, Peptides, and Proteins

25: Lipids

About the Author

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.

Physical Chemistry



Physical Chemistry, 3/e

Thomas Engel Philip Reid

ISBN: 9789332519015 © 2014

© 2014 Pages: 1048

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

- I. Fundamental Concepts of Thermodynamics
- Heat, Work, Internal Energy, Enthalpy, and the First Law of Thermodynamics
- 3. The Importance of State Functions: Internal Energy and Enthalpy
- 4. Thermochemistry
- 5. Entropy and the Second and Third Laws of Thermodynamics
- 6. Chemical Equilibrium
- 7. The Properties of Real Gases
- 8. Phase Diagrams and the Relative Stability of Solids, Liquids, and Gases
- 9. Ideal and Real Solutions
- 10. Electrolyte Solutions
- 11. Electrochemical Cells, Batteries, and Fuel Cells
- 12. The Schrödinger Equation
- 13. The Quantum Mechanical Postulates
- 14. The Particle in the Box and the Real World
- Commuting and Noncommuting Operators and the Surprising Consequences of Entanglement
- A Quantum Mechanical Model for the Vibration and Rotation of Molecules
- 17. The Vibrational and Rotational Spectroscopy of Diatomic Molecules
- 18. The Hydrogen Atom
- 19. Many-Electron Atoms
- 20. Quantum States for Many- Electron Atoms and Atomic Spectroscopy
- 21. The Chemical Bond in Diatomic Molecules
- 22. Molecular Structure and Energy Levels for Polyatomic Molecules
- 23. Electronic Spectroscopy
- 24. Computational Chemistry
- 25. Molecular Symmetry
- 26. Nuclear Magnetic Resonance Spectroscopy
- 27. The Boltzmann Distribution
- 28. Ensemble and Molecular Partition Functions
- 29. Statistical Thermodynamics
- 30. Kinetic Theory of Gases
- 31. Transport Phenomena
- 32. Elementary Chemical Kinetics
- 33. Complex Reaction Mechanisms

About the Author

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 II 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.



Thermodynamics: Statistical Thermodynamics and Kinetics

Thomas Engel Philip Reid

ISBN: 9788131712849 © 2007 Pages: 610

About the Book

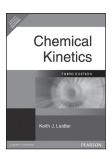
Thermodynamics, Statistical Thermodynamics, and Kinetics is a groundbreaking new text that explains core topics in depth with a focus on basic principles, applications, and modern research. The authors hone in on key concepts and cover them thoroughly and in detail as opposed to the general, encyclopedic approach competing textbooks take. Excessive math formalism is avoided to keep students focused on the most important concepts and to provide greater clarity.

Features

- Modern applications drawn from biology, environmental science, and material science. Spectroscopy applications are introduced early in concert with theory.
- Problem solving. Numerous worked examples help students practice their math and problem-solving skills.
- Covers modern research and new developments in the field like scanning tunneling microscopy, bandgap engineering, quantum wells, teleportation, and quantum computing to capture students' attention and show them that physical chemistry is a dynamic branch of science.
- A chapter on Computational Chemistry, written by Warren Hehre who has a distinguished reputation as a developer of computational chemistry software and is credited with bringing these techniques to the educational environment.

- I. Fundamental Concepts of Thermodynamics
- 2. Heat, Work, Internal Energy, Enthalpy, and the First Law of Thermodynamics
- 3. The Importance of State Functions: Energy and Enthalpy
- 4. Thermochemistry
- 5. Entropy and the Second and Third Laws of Thermodynamics
- 6. Chemical Equilibrium
- 7. Real Gases and Ideal Gases
- 8. Phase Diagrams and the Relative Stability of Solids, Liquids, and Gases
- 9. Ideal and Real Solutions
- 10. Electrolyte Solutions
- 11. Electrochemical Cells, Batteries, and Fuel Cells
- 12. Probability
- 13. The Boltzmann Distribution
- 14. Ensemble and Molecular Partition Functions
- 15. Statistical Thermodynamics
- 16. Kinetic Theory of Gases
- 17. Transport Phenomena
- 18. Elementary Chemical Kinetics
- 19. Complex Reaction Mechanisms

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. Professor Engel's research interests are in the area of surface chemistry, and he has published more than 80 articles and book chapters in this field. He has received the Surface Chemistry or Colloids Award from the American Chemical Society and a Senior Humboldt Research Award from the Alexander von Humboldt Foundation, which has allowed him to establish collaborations with researchers in Germany. He is currently working together with European manufacturers of catalytic converters to improve their performance for diesel engines. 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. Professor Reid's research interests are in the areas of atmosphere chemistry, condensed-phase reaction dynamics, and nonlinear optical materials. He has published more than 70 articles in these fields. Professor Reid is the recipient of a CAREER award from the National Science Foundation, is a Cottrell Scholar of the Research Corporation, and is a Sloan fellow.



Chemical Kinetics, 3/e Keith J. Laidler

ISBN: 9788131709726 © 1987 Pages: 544

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

- 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.
- Isotope Effects.
- Reaction Dynamics.

Quantum CHEMISTRY Ira N. Levine

Quantum Chemistry, 7/e

Ira N. Levine

ISBN: 9789332558533 © 2016 Pages: 720



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

- I. 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.
- II. 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.

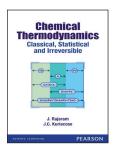
Bibliography.

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

ISBN: 9788131792155 © 2013 Pages: 696

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

- I. 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 Equlibrium
- 12. Aqueous solutions of electrolytes

About the Author

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.



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

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

ISBN: 9788131709757 © 2007 Pages: 764

About the Book

This best-selling text presents the p plications 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. Each chapter starts with sections on concepts and applications. These provide students with an overview of the physical chemistry principle under discussion and how that topic can be applied to solving biological and biochemical problems.

Features

- NEW Improved chapter-end problems—This has always been a strength of this text, but now essentially all of the end-of-chapter problems are biologically relevant.
- NEW Updated and expanded references and suggested readings.
- NEW Clearer, more explicit writing—Explains the important equations in words
- · Mathematics at an appropriate level.
- NEW New applications—e.g., single-molecule experiments.
- NEW Enhanced emphasis on methods that are important in biology—e.g., fluorescence.
- NEW Includes a new section on biological membranes— Strengthened descriptions of lipids, the formation of micelles, vesicles and bilayers and the relation to surface tension.
- NEW Theory of molecular structure and interactions—Ch.
 9 now begins with the origins of quantum mechanics, and builds up to intermolecular and intramolecular forces and the use of semi-empirical methods to calculate molecular conformations

Contents

- 1. The First Law: Energy Is Conserved.
- 2. The Second Law: The Entropy of the Universe Increases.
- 3. Free Energy and Chemical Equilibria.
- 4. Free Energy and Physical Equilibria.
- 5. Molecular Motion and Transport Properties.
- 6. Kinetics: Rates of Chemical Reactions.
- 7. Enzyme Kinetics.
- 8. Molecular Structures and Interactions: Theory.
- 9. Molecular Structures and Interactions: Spectroscopy.
- 10. Molecular Distributions and Statistical Thermodynamics.
- 11. Macromolecular Structure and X-Ray Diffraction.

About the Author

Ignacio Tinoco was an undergraduate at the University of New Mexico, a graduate student at the University of Wisconsin, and a postdoctoral fellow at Yale. He then went to the University of California, Berkeley, where he has remained. His research interest has been on the structures of nucleic acids, particularly RNA. He was chairman of the Department of Energy committee that recommended in 1987 a major initiative to sequence the human genome. His present research is on unfolding single RNA molecules by force.

Kenneth Sauer grew up in Cleveland, Ohio, and received his A.B. in chemistry from Oberlin College. Following his Ph.D. studies in gas-phase

physical chemistry at Harvard, he spent three years teaching at the American University of Beirut, Lebanon. A postdoctoral opportunity to learn from Melvin Calvin about photosynthesis in plants led him to the University of California, Berkeley, where he has been since 1960. Teaching general chemistry and biophysical chemistry in the Chemistry Department has complemented research in the Physical Biosciences Division of the Lawrence Berkeley National Lab involving spectroscopic studies of photosynthetic light reactions and their role in water oxidation. His other activities include reading, renaissance and baroque choral music, canoeing, and exploring the Sierra Nevada with his family and friends.

James C. Wang was on the faculty of the University of California, Berkeley, from 1966 to 1977. He then joined the faculty of Harvard University, where he is presently Mallinckrodt Professor of Biochemistry and Molecular Biology. His research focuses on DNA and enzymes that act on DNA, especially a class of enzymes known as DNA topoisomerases. He has taught courses in biophysical chemistry and molecular biology and has published over 200 research articles. He is a member of Academia Sinica, the American Academy of Arts and Sciences, and the U.S. National Academy of Sciences .

Joseph Puglisi was born and raised in New Jersey. He received his B.A. in chemistry from The Johns Hopkins University in 1984 and his Ph.D. from the University of California, Berkeley, in 1989. He has studied and taught in Strasbourg, Boston, and Santa Cruz, and is currently professor of structural biology at Stanford University. His research interests are in the structure and mechanism of the ribosome and the use of NMR spectroscopy to study RNA structure. He has been a Dreyfus Scholar, Sloan Scholar, and Packard Fellow



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9789332519046	Bruice	Organic Chemistry, 7e	1045.00
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9789332551879	Day & Underwood	Quantitative Analysis 6e	629.00
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9788131723258	Mendham	Vogel's Quantitative Chemical Analysis, 6e	899.00
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9788131704813	Morrison	Organic Chemistry, 7e	899.00
9788131711514	Morrison	Study Guide to Organic Chemistry, 6e	729.00
9781292057811	Nivaldo J. Tro	Introductory Chemistry Essentials, 5/e	729.00
9788131729496	Page	Organic and Bio-organic Mechanisms	579.00
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9788131799062	Sivasankar	Inorganic Chemistry, 3e	629.00
9788131773710	Svehla	Vogel's Qualitative Inorganic Analysis, 7e	575.00
9788177584332	Sykes	A Guidebook to Mechanism in Organic Chemistry, 6e	650.00
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