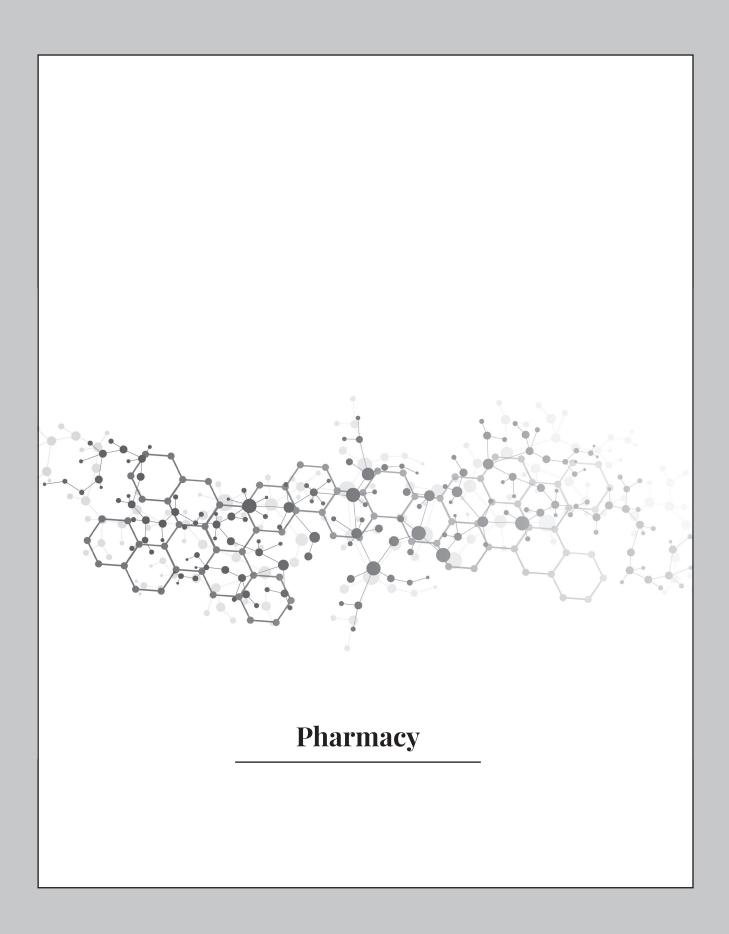
# About Pearson

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.

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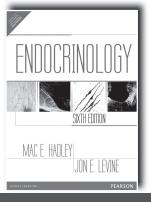


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# **HUMAN ANATOMY AND PHYSIOLOGY-I**



ISBN: 9788131726105

Endocrinology, 6/e

# Mac E. Hadley | Jonathan Levine

#### **ABOUT THE BOOK**

Appropriate for one-semester junior-graduate level courses in Endocrinology, Endocrine Physiology, as well as courses in medicine, dentistry, pharmacology, nutrition, nursing and other related medical or animal sciences where endocrinology is the focus. Hadley provides comprehensive coverage of endocrinology, centralizing on the critical roles of glands, hormones, receptors, and molecular signaling pathways in the control of physiological processes. This up-to-date Sixth Edition reviews the basic concepts, research methodologies, and the "state-of-the-art" scientific understanding of each of the major endocrine systems, in examples designed specifi-

cally for premedical and related professional courses.

#### **FEATURES**

- Emphasizes that all aspects of hormone function—synthesis, secretion, delivery, action and disposal—are of great physiological significance.
- Special reference to the roles of chemical messengers in the control of homeostatic systems—In the overall discussion of homeostasis.
- Coverage of the most recent molecular, genetic, and physiological—As well as the more classical methodologies.
- Traces the evolution of hormone structure—In relation to the comparative endocrinology of neurohypophysial hormones.

#### CONTENTS

- 1. Introduction to Endocrinology.
- 2. The Vertebrate Endocrine System.
- 3. General Mechanisms of Hormone Action.
- 4. Endocrine Methodologies.
- 5. Pituitary Hormones.
- 6. The Endocrine Hypothalamus.
- 7. Neurohypophysial Hormones.
- 8. Melanotropic Hormones.
- 9. Hormonal Control of Calcium Homeostasis.
- 10. Gastrointestinal Hormones.
- **11.** Pancreatic Hormones and Metabolic Regulation.
- 12. Growth Hormones.
- 13. Thyroid Hormones.
- 14. Catecholamines and the Sympathoadrenal System.
- **15.** Adrenal Steroid Hormones.
- 16. Endocrinology of Sex Differentiation and Development.
- 17. Hormones and Male Reproductive Physiology.
- **18.** Hormones and Female Reproductive Physiology.
- **19.** Endocrinology of Pregnancy, Parturition and Lactation.
- **20.** Endocrine Role of the Pineal Gland.

HUMAN ANATOMY AND PHYSIOLOGY-I

# PHARMACEUTICAL ANALYSIS



ISBN: 9788131773710

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

🖌 G. Svehla | B. Sivasankar

🔡 384 | © 2013

#### **ABOUT THE BOOK**

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

#### **FEATURES**

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

- Reactions of the Anions
   Selected Tests and Separations
- 6. Reactions of Some Less Common lons

Experimental Techniques
 Reactions of the Cations

#### **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.

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PHARMACEUTICAL ANALYSIS



# Vogel's Quantitative Chemical Analysis, 6/e

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

#### **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

including aspects of miniaturisation.

nuclear magnetic resonance.

Increased emphasis on minor/trace component

analysis and revised statistical handling of data.

New chapters on sampling, mass spectrometry and

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

#### CONTENTS

- 1. Preface to First Edition.
- 2. 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.

#### ABOUT THE AUTHOR(S)

- R.C. Denney, Consultant Forensic Scientist
- J. Mendham, Consultant Analytical Chemist
- J. D. Barnes, University of Greenwich.

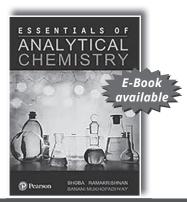
M.J.K. Thomas, University of Greenwich

- 8. Statistics, Introduction to Chemometrics.
- 9. Sampling.
- **10.** The Basis of Separative Methods.
- **11.** Thin Layer Chromatography.
- 12. Liquid Chromatography.
- **13.** 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

PHARMACEUTICAL ANALYSIS

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# **Essentials of Analytical Chemistry**

#### 🖌 Shobha Ramakrishnan | Banani Mukhopadhyay

\_\_\_\_\_\_ 400 | © 2018

#### **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:

#### CONTENTS

Preface Acknowledgements About the Authors

#### **UNIT I Statistical Methods of Analysis**

1. Errors in Chemical Analysis and Statistical Data Treatment

#### **UNIT II Quantitative Analysis**

- 2. Volumetric (Titrimetric) Analysis
- 3. Gravimetric Analysis
- UNIT III Thermal Methods of Analysis
  - 4. Thermogravimetric Analysis
  - 5. Differential Thermal Analysis
  - 6. Thermometric Titration
- **UNIT IV Electroanalytical Techniques**

- 7. Electrogravimetry
- 8. Polarography

#### **UNIT V Atomic Spectroscopy**

- 9. Atomic Emission Spectroscopy
- 10. Flame Emission Spectroscopy or Flame Photometry
- 11. Atomic Absorption Spectroscopy

#### **UNIT VI Molecular Spectroscopy**

- **12.** Ultraviolet and Visible Spectroscopy
- **13.** Infrared Absorption Spectroscopy
- 14. Nuclear Magnetic Resonance (NMR) Spectroscopy
- 15. Electron Spin Resonance Spectroscopy

#### **UNIT VII Mass Spectrometry**

**16.** Mass Spectrometry Bibliography Index

#### ABOUT THE AUTHOR(S)

**Shoba Ramakrishnan** was Former Professor and Head, Department of Chemistry, Women's Christian College, Chennai, Tamil Nadu. **Banani Mukhopadhyay** is Assistant Professor, Department of Chemistry, Women's Christian College, Chennai,

Tamil Nadu.

PHARMACEUTICAL ANALYSIS

# PHARMACEUTICS-I



ISBN: 9789353439606

#### **Pharmaceutics-I Practicals**

## 🖌 K. Elango

**208** | © 2021

#### **ABOUT THE BOOK**

This text is intended for the undergraduate students of B.Pharmacy for the practical course on Pharmaceutics-I as per the latest PCI syllabus. The book includes solid dosage forms, semisolid dosage forms and liquid dosage forms, including fundamental unit operations required for manufacturing of pharmaceutical products. Written in a simple and lucid fashion, the experiments are sequenced in a logical order. It also features basic theoretical notes correlating to the different formulations dealt, which gives a clear understanding of the subject to the reader.

#### **FEATURES**

- Unambiguous classi cation of the various dosage forms
- Contains relevant prescriptions, formulae, procedures and labels for the individual preparations
- Stepwise approach to calculations for easy comprehension

#### CONTENTS

- 1. Dosage Forms Classification
- 2. Definitions of Pharmaceutical Dosage Forms
- **3.** Metrology
- 4. Solubility
- 5. Storage
- 6. Posology
- 7. Latin Terms
- 8. Percentage Solutions
- **9.** Dilute Solutions
- **10.** Stock Solutions
- **11.** Isotonic Solution
- **12.** Isotonic Calculation
- 12. Isotonic Calculation

#### 13. Alcohol Dilution

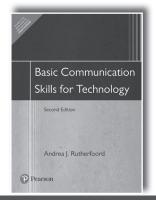
- 14. Alligation Method Liquid Dosage Forms for External Use
- 15. Ear Drops
- 16. Enemas
- 17. Gargles
- 18. Liniments
- 19. Lotions
- 20. Mouthwash
- 21. Nasal Drops
- 22. Paints
- 23. Solutions Liquid Dosage Forms for Internal Use

- 24. Mixtures
- 25. Elixir
- 26. Linctus
- 27. Syrups
- **28.** Emulsions Semisolid Dosage Forms
- 29. Ointments
- **30.** Paste
- 31. Creams
- 32. Jellies Solid Dosage Forms
- 33. Powders
- 34. Granules
- 35. Suppositories

#### **ABOUT THE AUTHOR**

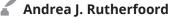
**K. Elango** is presently the Professor and Head, Department of Pharmaceutics, College of Pharmacy, Madras Medical College, Chennai. With a teaching experience spanning over 33 years, and an industrial experience of 3 years, he is an accomplished teacher at both undergraduate and postgraduate levels

# **COMMUNICATION SKILLS**



ISBN: 9788177584073

## Basic Communication Skills for Technology, 6/e



416 © 2005

#### **ABOUT THE BOOK**

This book provides practical applications of writing in vocational/technical fields, Presenting clear, simplified explanations of key concepts and skills in written communication, Rutherfoord's guide covers the writing process in a systems approach that integrates reading, planning, writing, and revising.

#### **FEATURES**

- Fourteen technical reading passages that introduce or demonstrate each writing topic.
- Integration of reading, writing, spelling, word usage, and vocabulary exercises and assignments within each chapter.
- Complete and independent grammar and mechanics units for flexible planning and individualized study.
- Exercises and models using common technical vocabulary and concepts.
- Explanations of concepts in language that is easy to understand and apply.
- This book is designed to help readers gain a working knowledge of all the major skills for career-related communication, including e-mail, graphics, reports, business correspondence, presentations, job interviews, and resumes.

### **CONTENTS**

#### PART 1 Foundation

- Audience
- Language and Style
- Organization
- PART 2 Writing Elements
  - Technical Definitions

- Summaries
- Graphics
- Instructions Comparison and
  - Contrast

#### Technical Descriptions PART 3 Forms of Technical Communication

- Technical Reports
- Forms, Memos, and
- Presentations
- The Job Search: **Resumes and Letters**

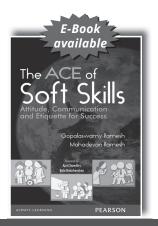
COMMUNICATION SKILLS

E-mail

Business Letters

Pharmacy Catalog.indd 6

01-Jan-02 12:37:57 AM



ISBN: 9788131732854

### The ACE of Soft Skills: Attitude, Communication and Etiquette for Success

#### Gopalaswamy Ramesh | Mahadevan Ramesh

**472** © **2010** 

#### **ABOUT THE BOOK**

Our world is witnessing a major change in communication patterns, with expanding social spheres, openness in communication and professionals working in multicultural environments. It is crucial, therefore, that India's workforce remains world-class, through re-training and continuous improvement, to remain competent, competitive and successful. To create and nurture successful professionals, the acquisition, cultivation and fine-tuning of soft skills are highly essential in the given business paradigm. **The ACE of Soft Skills** is a part of this educational process that produces top-notch professionals. Divided into three parts "Attitude, Communication and Etiquette" this unique book provides a broad-based coverage of what constitute soft skills. The foundations of soft skills lie in

a strong attitude; this attitude gets manifested as communication, which gets further refined as etiquette. This book covers a wide range of topics "a gamut of nearly 40 essential soft skills" including personal accountability, listening skills, business proposals, and the role of small talk and humour at work. The numerous case studies, cartoons, figures, tables and quotations not only offer an insightful, practical and well-rounded perspective into soft skills, but also make reading a joyful experience.

#### CONTENTS

1. Let Us Get Started!

- Part I: Attitude
  - 2. Big Picture, Pride, Passion and Process
  - 3. Vision
  - 4. Personal Accountability
  - 5. Teamwork and You
  - 6. Diversity Awareness
  - 7. Lifelong Learning
  - 8. Performance Expectations Management
  - 9. The Art of Time Management
  - **10.** Stepping Up to the Plate
  - 11. When Things Go Way Wrong at the Workplace
  - 12. Tying It All Together: Work Your Way to Success

#### Part II: Communication

**13.** Understanding the

- Communication Cycle 14. Distortion in Communication
- **15.** The 'Why' and 'To Whom' Parts
- of Communication:
- **16.** Knowing the Objective of Communication and Audience Analysis
- **17.** Preparing for the Communication
- 18. Listening Skills
- 19. Body Language
- **20.** Vocal Variety: Using the Voice Channel
- 21. Visual Aids
- 22. Putting It All Together
- 23. Resume Writing
- 24. Interviews
- 25. Meetings

- **26.** Proposals
- **27.** Status Reports
- **28.** Giving and Receiving Feedback
- **29.** Performance Appraisals
- 30. How to Present Bad News
- **31.** Presenting to the Senior Management

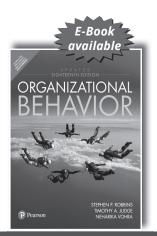
#### Part III: Etiquette

- 32. Phone Etiquette
- **33.** E-mail Etiquette
- 34. Foreign Business Trips
- **35.** Visits of Foreign Counterparts
- **36.** The Big Deal About Small Talk
- **37.** Respecting Privacy
- 38. Learning to Say 'No'
- **39.** The Role of Humour in the Workplace
- 40. English-language Skills
- 41. Reach for the Moon

#### **ABOUT THE AUTHOR(S)**

Professor *Gopalaswamy Ramesh* has 30 years of international experience and is an independent consultant and Adjunct Professor at the International Institute of Information Technology Bangalore (IIIT-B), SSN School of Management and Computer Applications, Chennai, and Amrita School of Business, Coimbatore. He has also taught at the Indian Institute of Management Bangalore; Anna University, Chennai; Great Lakes Institute of Management, Chennai, and XLRI Jamshedpur. His vast industry experience covers both India and abroad. He played a key role in the establishment of

Oracle India Development Center and was its former Senior Director. He is the author of the National Award "winning book *Managing Global Software Projects*, and has also authored *Software Testing Principles and Practices and Software Maintenance*. Two of these books have also been translated into Chinese. His most recent book is *The ACE of Soft Skills: Attitude, Communication and Etiquette for Success*. He currently offers consultancy services in the areas of project management and soft skills to several companies in India and abroad. He holds an MS in engineering management from Stanford University, California; MS in computer science from IIT Madras and BE from IISc Bangalore. **Mahadevan Ramesh** graduated from IIT Kanpur (five-year integrated MSc degree in Physics) and earned a PhD (Physics) from the Ohio State University, USA. Following a research stint in the electrical and computer engineering department in Carnegie Mellon University, Pittsburgh, he worked for Storage Technology Corporation (now a part of Sun Microsystems/Oracle), and for Maxtor Corporation (now a part of Seagate Technologies) at Colorado, USA. He held leadership positions in global product teams and spent considerable time on the factory floor in Singapore, working with stakeholders from many different cultures, and learnt first hand the importance of soft skills. He is currently an adjunct professor in the SSN School of Management and Computer Applications, and he also consults on management and engineering, specializing in production and operations management.



ISBN: 9789356064270

# Organizational Behavior, Updated, 18/e

Stephen P. Robbins | Timothy A. Judge | Neharika Vohra

**796** | © 2022

#### **ABOUT THE BOOK**

The bestseller title Organizational Behavior 18e is now revised and updated. This updated 18th edition reflects the most recent research and business events within the field of organizational behavior, while maintaining its hallmark features – a clear writing style, cutting-edge content, and intuitive pedagogy. The text is lucid and makes current, relevant research come alive for readers. The book holds significance as a textbook for students of management and practicing professionals in organizations with engaging, cutting-edge material that aids to understand and connect with organizational behavior.

#### **FEATURES**

- Employability Skills Matrix to support the development of skills employers are looking for in today's business graduates.
- Updated Opening-Chapter Vignettes bring current business trends and events to the forefront
- Career Objectives in every chapter provide advice, in a question-and-answer format to help students think through issues they may face in the workforce today.
- Updated End-of-Chapter Experiential Activities, Ethical Dilemmas, and Cases.
- Real-world examples of organizational behavior
- Includes latest Indian case studies and research

#### CONTENTS

- 1. Introduction
- 2. What Is Organizational Behavior?
- 3. The Individual
- **4.** Diversity in Organizations
- 5. Attitudes and Job Satisfaction
- 6. Personality and Values
- 7. Perception, Learning, and Individual Decision Making
- 8. Emotions and Moods
- 9. Motivation Concepts
- **10.** Motivation: From Concepts to Applications
- 11. The Group
- 12. Foundations of Group Behavior
- 13. Understanding Work Teams
- **14.** Power and Politics
- 15. Communication

- 16. Leadership
- **17.** Foundations of Organization Structure
- **18.** The Organization System
- **19.** Organizational Culture
- 20. Organizational Change and Stress Management
- **21.** Conflict and Negotiation

#### **ABOUT THE AUTHOR(S)**

Stephen P. Robbins, San Diego State University.
 Timothy A. Judge; The Ohio State University.
 Neharika Vohra; Indian Institute of Management Ahmedabad.

Appendix Research in Organizational Behavior Comprehensive Cases Glossary Name Index Organization Index Subject Index



ISBN: 9788131760345

# Effective Communication and Soft Skills

#### 🖌 Nitin Bhatnagar | Mamta Bhatnagar

**448** | © 2011

#### **ABOUT THE BOOK**

This book provides a clear understanding of the attributes of good communication vis-Ã -vis soft skills and hard skills. It guides you through each set of skills and provides practice and assessment modules to sharpen learning, while covering all the four tenets of language learning, listening, speaking, reading and writing. Covering all the topics essential for teachers and students of BCom, BBA and MBA and mass communications, as well as professionals in all industries, *Soft Skills and Communication Skills* is a complete manual to grooming yourself for inter-personal communication in the professional world.

#### FEATURES

- Situational case studies, illustrations and flow charts for clear grasp of concepts
- Model questions for practice and guidelines for answering difficult problems
- Highlights the linkages between soft skills and hard skills, illustrating the manner in which they can be utilized together in professional situations

#### CONTENTS

- 1. Introduction
- 2. About the Editors
- 3. Soft Skills: Growing Importance
- 4. Understanding Communication
- 5. Channels of Communication
- 6. Evolution and Theories of Communication
- 7. Models of Communication
- 8. Psychology and Communication
- 9. Pedagogy and Communication
- 10. Communication Skills

- 11. Communication: Spoken English
- 12. Communication: Written English
- 13. Emotional Skills
- 14. Interpersonal Effectiveness
- **15.** Assertiveness Skills
- 16. Conflict Management and Negotiation Skills
- 17. Team-building Skills
- 18. Time-management Skills
- **19.** Model Question Papers



# Communication Skills and Soft Skills : An Integrated Approach

🖌 E. Suresh Kumar | J. Savithri | P. Sreehari

**208** | © **2010** 

#### **ABOUT THE BOOK**

Communication *Skills and Soft Skills* is an invaluable guide to students of professional courses, job seekers and people of various professions seeking to improve their soft skills. The unique feature of the book is that it integrates training in essential soft skills with all the four language skills "listening, speaking, reading and writing" and all the four language components, pronunciation, vocabulary, grammar and spelling. With its perfect blend of theory and practice, this book effectively meets the requirements of the present-day job market and other interactive spheres of their lives.

#### **FEATURES**

- Training in essential soft skills
- Uniquely designed practical approach to improving communication skills
- Guidance for all four language skills, listening, speaking, reading and writing
- Practice modules for all four language components, pronunciation, grammar, vocabulary and spelling

#### CONTENTS

#### Preface

- 1. Interpersonal Communication
- 2. Goal-setting
- **3.** Personality Development
- 4. Critical Thinking

- 5. Stress Management
- 6. Team Work
- 7. Time Management
- 8. Essential Written Communication

#### Appendixes

#### **ABOUT THE AUTHOR(S)**

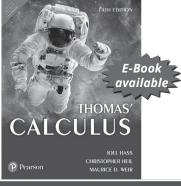
**E. Suresh Kumar** is Head, Department of English, University College of Engineering, Osmania University, Hyderabad. **P. Sreehari** teaches English at Al-Jabal Al-Gharbi University, Zawia, Libya.

J. Savithri teaches English at the Department of English, Osmania University, Hyderabad.

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# **REMEDIAL MATHEMATICS**

Supplements



Thomas' Calculus, 14/e

🖌 Joel Hass | Christopher Heil | Maurice D. Weir

**1208** | © 2018

#### **ABOUT THE BOOK**

**Thomas' Calculus**, Fourteenth Edition, introduces students to the intrinsic beauty of calculus and the power of its applications. For more than half a century, this text has been revered for its clear and precise explanations, thoughtfully chosen examples, superior figures, and time-tested exercise sets.

ISBN: 9789353060411

#### FEATURES

- Strong exercise sets feature a great breadth of problems—progressing from skills problems to applied and theoretical problems—to encourage students to think about and practice the concepts until they achieve mastery.
- **Complete and precise multivariable coverage** enhances the connections of multivariable ideas with their single-variable analogues studied earlier in the book.

#### **NEW TO THIS EDITION**

- **Updated graphics** emphasize clear visualization and mathematical correctness.
- New examples and figures have been added throughout all chapters, based on user feedback.
- New types of homework exercises, including many geometric in nature, have been added to provide different perspectives and approaches to each topic.
- Short URLs have been added to the historical margin notes, allowing students to navigate directly to online information.
- New annotations within examples guide the student through the problem solution and emphasize that each step in a mathematical argument is rigorously justified.

#### CONTENTS

- **1.** Functions
- **2.** Limits and Continuity
- 3. Derivatives
- 4. Applications of Derivatives
- 5. Integrals
- 6. Applications of Definite Integrals
- 7. Transcendental Functions
- 8. Techniques of Integration
- 9. First-Order Differential Equations
   10. Infinite Sequences and Series

- 11. Parametric Equations and Polar Coordinates
- 12. Vectors and the Geometry of Space
- 13. Vector-Valued Functions and Motion in Space
- 14. Partial Derivatives
- **15.** Multiple Integrals
- **16.** Integrals and Vector Fields
- 17. Second-Order Differential Equations (Online)
- Appendices
- Answers to Odd-Numbered Exercises

#### **ABOUT THE AUTHOR(S)**

**George B. Thomas, Jr. (late)** of the Massachusetts Institute of Technology, was a professor of mathematics for thirty-eight years; he served as the executive officer of the department for ten years and as graduate registration officer for five years. Thomas held a spot on the board of governors of the Mathematical Association of America and on the executive committee of the mathematics division of the American Society for Engineering Education.

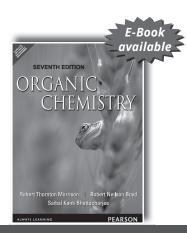
**Joel Hass** received his PhD from the University of California Berkeley. He is currently a professor of mathematics at the University of California Davis. He has coauthored widely used calculus texts as well as calculus study guides. He is currently on the editorial board of several publications, including the Notices of the American Mathematical Society.

**Christopher Heil** received his PhD from the University of Maryland. He is currently a professor of mathematics at the Georgia Institute of Technology.

**Maurice D. Weir (late)** of the the Naval Postgraduate School in Monterey, California was Professor Emeritus as a member of the Department of Applied Mathematics. He held a DA and MS from Carnegie-Mellon University and received his BS at Whitman College.

**REMEDIAL MATHEMATICS** 

# PHARMACEUTICAL ORGANIC CHEMISTRY



ISBN: 9788131704813

Organic Chemistry, 7/e

Robert Thornton Morrison | Robert Neilson Boyd | Saibal Kanti Bhattacharjee

🗍 1508 | © 2010

#### **ABOUT THE BOOK**

Supplements

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

#### CONTENTS

#### Part 1: Fundamentals of Organic Chemistry

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

#### Part 2: Chemistry of Functional Groups Alkenes

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

#### Part 3: Special Topics

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

#### **ABOUT THE AUTHOR(S)**

Robert Thornton Morrison, New York University Robert Neilson Boyd, New York University Saibal Kanti Bhattacharjee, Gauhati University

- **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

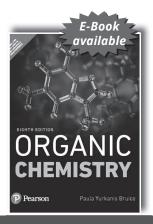
#### Part 4: (Biomolecules and Bioorganic Chemistry)

- 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

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Organic Chemistry, 8/e

Paula Yurkanis Bruice

#### 

#### **ABOUT THE BOOK**

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

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

#### **FEATURES**

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

#### CONTENTS

PART ONE: An Introduction to the Study of Organic Chemistry

- 1. Remembering General Chemistry: Electronic Structure and Bonding
- 2. Acids and Bases: Central to Understanding Organic Chemistry
- 3. An Introduction to Organic Compounds: Nomenclature, Physical Properties, and Structure PART TWO: Electrophilic Addition Reactions, Stereochemistry, and Electron Delocalization
- 4. Isomers: The Arrangement of Atoms in Space
- 5. Alkenes: Structure, Nomenclature, and an Introduction to Reactivity • Thermodynamics and Kinetics
- 6. The Reactions of Alkenes The Stereochemistry of Addition Reactions
- 7. The Reactions of Alkynes An Introduction to Multistep Synthesis
- 8. Delocalized Electrons: Their Effect on Stability, pKa, and the Products of a Reaction • Aromaticity and Electronic Effects: An Introduction the Reactions of Benzene
- PART THREE: Substitution and Elimination Reactions

- 9. Substitution and Elimination Reactions of Alkyl Halides
- 10. Reactions of Alcohols, Ethers, Epoxides, Amines, and Sulfur-Containing Compounds
- 11. Organometallic Compounds
- 12. Radicals
- PART FOUR: Identification of Organic Compounds
- 13. Mass Spectrometry; Infrared Spectroscopy; and UV/ Vis Spectroscopy
- 14. NMR Spectroscopy
- PART FIVE: Carbonyl Compounds
- 15. Reactions of Carboxylic Acids and Carboxylic Acid Derivatives
- 16. Reactions of Aldehydes and Ketones More Reactions of Carboxylic Acid Derivatives
- 17. Reactions at the a-Carbon
- PART SIX: Aromatic Compounds
- 18. Reactions of Benzene And Substituted Benzenes
- 19. More About Amines Reactions of Heterocyclic Compounds
- PART SEVEN: Bioorganic Compounds
- 20. The Organic Chemistry Of Carbohydrates
- 21. Amino Acids, Peptides, and Proteins

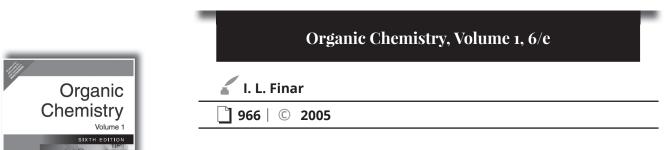
PHARMACEUTICAL ORGANIC CHEMISTRY

Supplem

- 22. Catalysis in Organic Reactions and in Enzymatic Reactions
- 23. The Organic Chemistry of the Coenzymes, Compounds Derived from Vitamins
- 24. The Organic Chemistry of the Metabolic Pathways
- ABOUT THE AUTHOR(S)

25. The Organic Chemistry of Lipids 26. The Chemistry of the Nucleic Acids PART EIGHT: Special Topics in Organic Chemistry 27. Synthetic Polymers 28. Pericyclic Reactions Appendices

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



#### **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.



I. L. Fina

#### CONTENTS

1. Determination of Structure

DEARSO

- 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

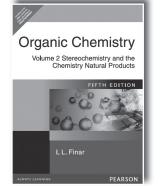
#### **ABOUT THE AUTHOR**

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



PHARMACEUTICAL ORGANIC CHEMISTRY

Pharmacy Catalog.indd 14



#### **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

#### **ABOUT THE AUTHOR**

- **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

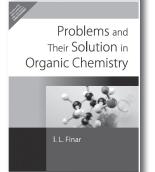
The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.

I. L. Finar

**ABOUT THE BOOK** 

chapter.

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ISBN: 9788131700938

# Problems and Their Solution in Organic Chemistry

🖌 I. L. Finar

] 360 | © 2006

#### **ABOUT THE BOOK**

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

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PHARMACEUTICAL ORGANIC CHEMISTRY

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

**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

17. Hydroxyacids, stereochemistry, unsaturated

24. Diazonium salts and their related compounds

29. Polynuclear hydrocarbons and their derivatives

27. Aromatic alcohols, aldehydes and ketones

16. Saturated dicarboxylic acids

20. Monocyclic aromatic hydrocarbons

21. Aromatic halogen compounds

22. Aromatic nitro-compounds

25. Aromatic sulphonic acids

30. Heterocyclic compounds

**31.** Dyes and photochemistry

26. Phemols and guinones

28. Aromatic acids

23. Aromatic amino-compounds

dicarboxylic acids

**19.** Alicyclic compounds

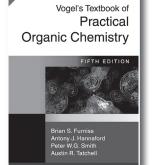
18. Carbohydrates

#### CONTENTS

- 1. Determination of Structure
- 2. Properties of Molecules
- 3. Alkanes
- 4. Alkenes and Alkynes
- 5. Halogen derivatives of the alkanes
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- 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

#### **ABOUT THE AUTHOR(S)**

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



ACTAIN COMMING

ISBN: 9788177589573

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



#### **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.

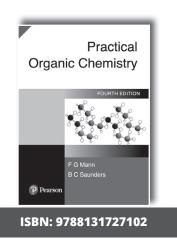
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#### CONTENTS

- 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.



# Practical Organic Chemistry



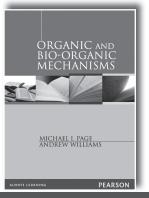
### **∐** 600 | © 2009

#### **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: 9788131729496

# Organic and Bio-Organic Mechanisms

## 🖌 Michael I. Page | Andrew Williams

<u>312</u> © 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?'

#### **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.

PHARMACEUTICAL ORGANIC CHEMISTRY

#### CONTENTS

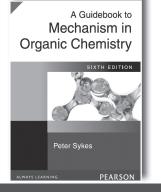
- 1. The Transition State
- 2. Kinetics and Mechanism
- 3. The Effect of Changes in Reactant Structure
- 4. Kinetic and Equilibrium Isotope Effects
- 5. Transition States from External Effects

#### **ABOUT THE AUTHOR(S)**

Michael I. Page, Huddersfield University

- 6. Transition State Structures Anomalies
- 7. Bioorganic Group Transfer Reactions
- 8. Catalysis
- 9. Complexation Catalysis
- 10. Some Enzyme Systems

Andrew Williams, University of Kent at Canterbury



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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 Ã<sup>3</sup>x and spectroscopic data; and 13C 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.

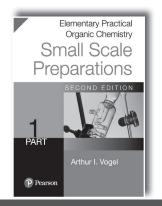
#### **ABOUT THE AUTHOR**

Peter Sykes, Christ's College, Cambridge

- 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.



PHARMACEUTICAL ORGANIC CHEMISTRY



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

#### Arthur I. Vogel

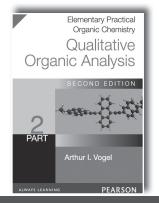
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#### **FEATURES**

- 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

3. The solubility classes

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
- 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

PHARMACEUTICAL ORGANIC CHEMISTRY

Pharmacy Catalog.indd 19

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

# Arthur I. Vogel

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#### **ABOUT THE BOOK**

# Elementary Practical Organic Chemistry **Quantitative** Organic Analysis SECOND EDITION SECOND EDITION Arthur I. Vogel

ISBN: 9788131756881

5. Hydroxyl groups (Phenols)

PEARSON

- 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

E-Book available Elementary Practical Organic Chemistry: Quantitative Organic Analysis Part 3, 2/e

#### 🖌 Arthur I. Vogel

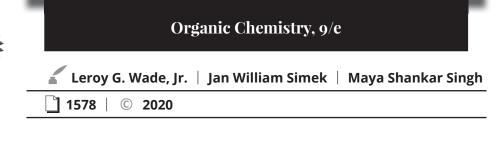
📋 382 | © 2010

#### 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. 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



#### **ABOUT THE BOOK**

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

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

#### FEATURES

ISBN: 9789389342673

Organic Chemistry

P Pearson

- New chapters on Phenols and Quinones and Asymmetric Synthesis.
- Green Chemistry is emphasized with presentation of less-toxic, and environmentally friendly reagents.
- Enriched and updated treatment of Acid/Base Chemistry, Study of Chemical Reactions, Steriochemistry, Alkyl Halides, Alkenes, Dienes, Alkynes, Thiols, Aromatic Compounds, Amines, and Polymers.



PHARMACEUTICAL ORGANIC CHEMISTRY

- Over 100 new problems include more synthesis problems and problems based on recent literature.
- Over 80 Mechanism boxes help students understand how specific reactions occur by zooming in on each individual step in detail.
- Updated art throughout to provide consistency and clarity in the text, giving detailed representations of molecular and orbital art.

#### CONTENTS

Preface

- 1. Introduction to Organic Chemistry
- 2. Structure and Properties of Organic Molecules: Acids and Bases
- 3. The Study of Chemical Reactions
- 4. Structure and Stereochemistry of Alkanes and Cycloalkanes
- 5. Structure and Synthesis of Alkenes
- 6. Reactions of Alkenes and Dienes
- 7. Alkynes
- 8. Alkyl Halides; Nucleophilic Substitution and Elimination
- 9. Alcohols and Thiols: Structure and Synthesis
- **10.** Reactions of Alcohols
- 11. Ethers and Thioethers
- 12. Stereochemistry
- **13.** Aromatic Compounds
- 14. Reactions of Aromatic Compounds
- 15. Ketones and Aldehydes
- 16. Carboxylic Acids

#### ABOUT THE AUTHOR(S)

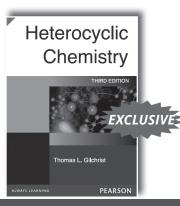
Leroy G. Wade, Whitman College

#### Jan W. Simek, Cal Poly State University

- 17. Carboxylic Acid Derivatives
- **18.** Condensations and Alpha Substitutions of Carbonyl Compounds
- 19. Phenols and Quinones
- 20. Amines
- 21. Carbohydrates
- 22. Amino Acids, Peptides, Proteins and Nucleic Acids
- 23. Polymeric Materials
- 24. Asymmetric Synthesis
- **25.** Conjugated Systems, Orbital Symmetry, and Ultraviolet Spectroscopy
- 26. Infrared Spectroscopy and Mass Spectrometry
- 27. Nuclear Magnetic Resonance Spectroscopy
- 28. Lipids

Appendices Brief Answers to Selected Problems Photo Credits Index Color Illustrations

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



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.

#### PHARMACEUTICAL ORGANIC CHEMISTRY

# **BIOCHEMISTRY**

#### 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

#### **ABOUT THE AUTHOR(S)**

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

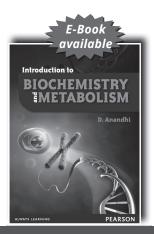
- 7. Six-membered Rings with Two or More Heteroatoms
- 8. Five-membered Rings with Two or More Heteroatoms
- 9. Three and Four Membered Rings
- 10. Seven and Larger Membered Ring Compounds
- 11. Nomenclature

**Introduction to Biochemistry and Metabolism** 

Designed as per the UGC curriculum, Introduction to Biochemistry and Metabolism meets the syllabus requirements of all universities offering a course on biochemis-

The subject, a core paper for the students of botany, zoology, biotechnology and bioinformatics, is dealt with in detail across 13 chapters with emphasis on the metabolism of amino acids, carbohydrates, lipids and high energy compounds. Replete with

illustrations and schematic representations, the book reinforces theoretical concepts



ISBN: 9788131774854

#### **FEATURES**

- Comprehensive coverage of free radicals, antioxidation and proteins.
- Focus on enzymes, fatty acids and their metabolic activities.
- Elucidation of the detoxification mechanism.
- Disseminates information on diseases caused due to enzyme deficiencies.

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- 1. Chapter 1 Cell
- 2. Chapter 2 Carbohydrates
- 3. Chapter 3 Amino acids
- 4. Chapter 4 Lipids
- 5. Chapter 5 Nucleic acid
- 6. Chapter 6 Enzymes

**ABOUT THE AUTHOR** 

7. Chapter 7 High energy compounds

- in food samples.
  - 8. Chapter 8 Introduction to metabolism
  - 9. Chapter 9 Amino acid metabolism
- 10. Chapter 10 Lipid metabolism
- 11. Chapter 11 Nucleotide metabolism
- 12. Chapter 12 Detoxication mechanism

**13.** Chapter 13 Antibiotics Index

D Anandhi is from the department of biochemistry, D G Vaishnav College, Chennai.

D. Anandhi

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**ABOUT THE BOOK** 

try and metabolism.

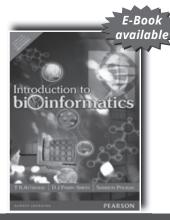


#### BIOCHEMISTRY

with its concise, easy-to- follow approach making it an ideal textbook on the subject. ee radicals, **1**50 illustrations and schematics to help readers

- 150 illustrations and schematics to help readers understand how biochemical reactions and metabolic pathways work
- Includes laboratory techniques for qualitative and quantitative lipid analysis and estimation of proteins in food samples.

# **COMPUTER APPLICATIONS IN PHARMACY**



ISBN: 9788177586411

#### **FEATURES**

- Unique guide to bioinformatics linked to an interactive practical on the World Wide Web
- Introduces key databases, tools and resources, and outlines pitfalls of methods

#### CONTENTS

- 1. Overview
- 2. Introduction
- **3.** Information networks
- 4. Protein information resources
- **5.** Genome information resources
- 6. DNA sequence analysis

#### **ABOUT THE AUTHOR(S)**

Introduction to Bioinformatics
Teresa Attwood | David J. Parry-Smith | Dr Samiron Phukan
920 | © 2007

#### ABOUT THE BOOK

Bioinformatics, the application of computers in the biological sciences, especially analysis of biological sequence data, is becoming an essential tool in molecular biology as genome projects generate vast quantities of data. With new sequences being added to DNA databases on an average of once a minute, there is a pressing need to convert this information into biochemical and biophysical knowledge by deciphering the structural, functional and evolutionary clues encoded in the language of biological sequences.

- The Web link integrates conventional and Webbased publishing, allowing interactive exploration of concepts discussed in the book
- Includes numerous Further Reading suggestions, Web references and a useful Glossary
- 7. Pairwise alignment techniques
- **8.** Multiple sequence alignment
- 9. Secondary database searching
- **10.** Building a sequence search protocol
- **11.** Analysis packages
- **12.** Probability and statistics

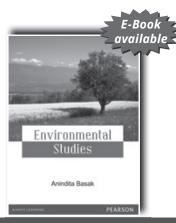
**Dr Teresa K. Attwood** is a Royal Society University Research fellow and Senior Lecturer in the School of Biological Sciences, University of Manchester, UK, Visiting Fellow at the European Bioinformatics Institute, and author and curator of the PRINTS protein fingerprint database.

**Dr David J. Parry-Smith** is Informatics Director at Cambridge Drug Discovery Limited, Cambridge, UK, and works mainly with algorithm development.

Dr Samiron Phukan is Senior Scientist, SDMD Drug Discovery at Jubilant Biosys Limited, Bangalore, India.

COMPUTER APPLICATIONS IN PHARMACY

# **ENVIRONMENTAL SCIENCES**



#### ISBN: 9788131721186

#### **FEATURES**

- This book completely follows the UGC model curriculum.
- Discusses current topics in the global environment scenario such as ecological footprint, carbon trading, and emission trading
- Equipped with a complete list of ISO standards for environment management systems
- Entire unit devoted to field work with more than 10 experiments for quantitative evaluation of

#### CONTENTS

- 1. Definition, scope and importance, need for public awareness, environment and its components
- 2. Natural resources: Renewable and non-renewable resources Natural Resources and associated problems
- 3. Ecosystems

#### **ABOUT THE AUTHOR(S)**

ecosystems Has more th

- Has more than 30 case studies to illustrate environmental issues
- An updated list of international conventions and protocols
- Comprehensive glossary for quick recapitulation of technical terms
- Updated statistical information on air quality standards, permissible exhaust limit, and so on.
- 4. Biodiversity and its conservation
- 5. Environmental pollution
- 6. Social Issues and the environment
- 7. Human population and the environment
- 8. Field work

**Dr. Anindita Basak** is presently Reader in Chemistry at Sushilavati Government Women's College, Rourkela. She was also deputed as a visiting scientist at National Institute of Technology, Rourkela from 2004 to 2006. She has published 16 papers in journals of national and international repute. She has extensive research experience in different fields of chemistry, polymer science, and environmental science.

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ENVIRONMENTAL SCIENCES

# **Environmental Studies**

Anindita Basak	Supplem
<b>]</b> 920   © 2009	st <sup>ur</sup> es

#### ABOUT THE BOOK

This book covers the course requirements for **Environmental Studies** for undergraduate students of all disciplines. It aims to educate the readers about nature, ecosystems, natural resources, biodiversity, pollution, and the current challenges faced by environmentalists. It integrates the social impact associated with environmental issues through national and international case studies.



# **Environmental Studies**

### 🖌 D. L. Manjunath

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#### **ABOUT THE BOOK**

**Environmental Studies**, focuses in clear and simple language, on the basic scientific content necessary to understand environmental issues. It details the latest developments in the field and reflects several major shifts in environmental science education this century. Designed as a foundational text for environmental science courses and spread over eleven chapters, the book includes various aspects of ecology such as ecosystems, environmental impacts, and current environmental issues.

#### **FEATURES**

- Pedagogical treatment of the subject to help students grasp fundamentals
- A strong focus on statistical data that illustrates the deterioration of our surroundings, with emphasis on environmental abuse

#### CONTENTS

- 1. The Earth, Fact File
- 2. Environment and Ecology
- 3. Environmental Impacts of Human Activities
- 4. Water Resources and Water Quality
- 5. Mineral Resources and Mining
- 6. Forests

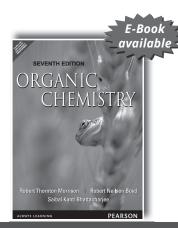
- Images that portray the current degeneration of our environment
- 7. Bio-Geo-Chemical Cycles
- 8. Matter and Energy Fundamentals
- 9. Environmental Pollution
- 10. Current Environmental Issues of Importance
- 11. Environmental Protection

**ABOUT THE AUTHOR(S) D. L. Manjunath**, Head, Department of Civil Engineering, Malnad College of Engineering, Hassan

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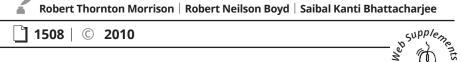
**ENVIRONMENTAL SCIENCES** 

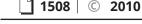
# PHARMACEUTICAL ORGANIC CHEMISTRY-II



ISBN: 9788131704813

## Organic Chemistry, 7/e





#### **ABOUT THE BOOK**

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

#### **CONTENTS**

#### Part 1: Fundamentals of Organic Chemistry

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

#### Part 2: Chemistry of Functional Groups Alkenes

- 11. Alkynes
- 12. Alkyl Halides Nucleophilic Substitutions, SN Reactions
- 13. Aryl Halides Nucleophilic Aromatic Substitution (SNAr Reactions)
- 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

#### **ABOUT THE AUTHOR(S)**

Robert Thornton Morrison, New York University Robert Neilson Boyd, New York University Saibal Kanti Bhattacharjee, Gauhati University

- 14. Alcohols and Ethers
- 15. Phenols
- 16. Aldehydes and Ketones Nucleophilic Addition
- 17. Carboxylic Acids
- 28. Introduction to Supramolecular Chemistry Host-**Guest Chemistry**

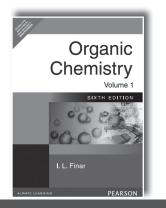
#### Part 4: (Biomolecules and Bioorganic Chemistry)

- 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

PHARMACEUTICAL ORGANIC CHEMISTRY-II



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- 1. Determination of Structure
- 2. Properties of Molecules
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- 4. Alkenes and Alkynes
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- 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
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- 20. Monocyclic aromatic hydrocarbons
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- **22.** Aromatic nitro-compounds
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- 27. Aromatic alcohols, aldehydes and ketones
- 28. Aromatic acids
- 29. Polynuclear hydrocarbons and their derivatives
- 30. Heterocyclic compounds
- 31. Dyes and photochemistry

#### **ABOUT THE AUTHOR**

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

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I. L. Finar

**ABOUT THE BOOK** 

throughout the text.

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PHARMACEUTICAL ORGANIC CHEMISTRY-II

# Organic Chemistry, Volume 1, 6/e

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



Vogel's Textbook of Practical Organic Chemistry



ISBN: 9788177589573

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

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

**1544** © 2006

#### **ABOUT THE BOOK**

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

#### **FEATURES**

- An introductory chapter on the structural and theoretical principles required when designing a synthesis.
- The disconnection on synthon approach now integrated into the text, and the principles of retrosynthetic analysis applied to relevant aliphatic, aromatic, alicyclic and heterocyclic compounds.
- Synthesis methodology is expanded to cover a range of new reagents, including oxidants and reductants; reagents for asymmetric synthesis; and those derived from lithium, boron, silicon, phosphorous and 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.

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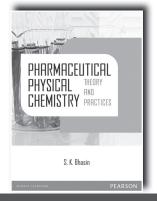
- 1. Organic Synthesis.
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- **3.** Spectroscopic Methods and the Interpretation of Spectra.
- 4. Solvents and Reagents.
- 5. Aliphatic Compounds.

- **6.** Aromatic Compounds.
- 7. Selected Alicyclic Compounds.
- 8. Selected Heterocyclic Compounds.
- **9.** Investigation and Characterization of Organic Compounds.
- 10. Physical Constants of Organic Compounds.

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PHARMACEUTICAL ORGANIC CHEMISTRY-II

# **PHYSICAL PHARMACEUTICS-I**



#### ISBN: 9788131765272

#### **FEATURES**

- 20 Most common laboratory experiments
- 350 Review questions
- 125 Solved problems
- 280 MCQs
- 152 Line Diagrams
- 35 Tables

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- 2. The Liquid state
- 3. Solution
- 4. Thermodynamic
- 5. Adsorption and Catalysis
- 6. Photochemistry
- 7. Chemical Kinetics
- 8. Quantum Mechanics

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- 10. Distribution Law
- 11. Electrochemistry
- 12. Electromotive Force and Oxidation–Reduction System
- 13. Solid State (Crystalline State)
- 14. Chemical Bonding
- 15. Phase Equilibria

**Dr S K Bhasin** is the Director and Professor of Chemistry at Himalayan Group of Professional institute, Kala Amb, Ambala, Haryana. He has been teaching undergraduate and postgraduate students for more than 40 years.

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**PHYSICAL PHARMACEUTICS-I** 

Pharmaceutical Physical Chemistry : Theory and Practices

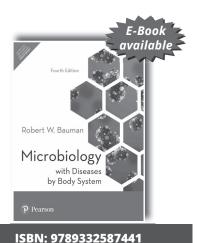
#### Dr S K Bhasin

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#### **ABOUT THE BOOK**

Physical Chemistry is a compulsory paper offered to all the students of Pharmacy. There is a dearth of good books that exclusively cover the syllabi of physical chemistry offered to pharmacy courses. Pharmaceutical Physical Chemistry has been designed considering their requirements laid down by AICTE and other premier institutes/universities. Apart from the theory 20 most common laboratory experiments have been included to make this book a unique offering to the students of pharmacy.

# PHARMACEUTICAL MICROBIOLOGY



Microbiology with Diseases by Body System, 4/e

#### Robert W. Bauman

**944** | © 2017

#### **ABOUT THE BOOK**

Designed for pre-nursing and allied health students (and also mixed-majors courses), *Microbiology with Diseases by Body System, Third Edition* retains the hallmark art program and clear writing style that have made Robert Bauman's book a success. This Third Edition features compelling clinical content related to students' future healthcare careers and abundant opportunities for applied student practice. Chapter-opening Clinical Cases, Emerging Diseases boxes, and Clinical Applications boxes introduce students to real-world clinical situations. Student comprehension is ensured with end-of-chapter practice that encompasses applications boxes applied with end-of-chapter practice that encompasses applications boxes applied by the student boxes applications boxes applied by the student boxes applied by the student by the st

plied, visual, and conceptual understanding.

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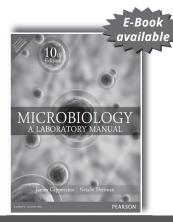
- 1. A Brief History of Microbiology
- 2. Cell Structure and Function
- 3. Microscopy, Staining, and Classification
- 4. Microbial Metabolism
- 5. Microbial Nutrition and Growth
- 6. Microbial Genetics
- 7. Recombinant DNA Technology
- 8. Controlling Microbial Growth in the Environment
- **9.** Controlling Microbial Growth in the Body: Antimicrobial Drugs
- 10. Characterizing and Classifying Prokaryotes
- 11. Characterizing and Classifying Eukaryotes
- **12.** Characterizing and Classifying Viruses, Viroids, and Prions
- **ABOUT THE AUTHOR**

Robert W. Bauman, Amarillo College

- 13. Infection, Infectious Diseases, and Epidemiology
- 14. Innate Immunity
- 15. Adaptive Immunity
- 16. Immunization and Immune Testing
- 17. AIDS and Other Immune Disorders
- 18. Microbial Diseases of the Skin and Wounds
- 19. Microbial Diseases of the Nervous System and Eyes
- 20. Microbial Cardiovascular and Systemic Diseases
- 21. Microbial Diseases of the Respiratory System
- **22.** Microbial Diseases of the Digestive System
- 23. Microbial Diseases of the Urinary and Reproductive Systems
- 24. Applied and Environmental Microbiology

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PHARMACEUTICAL MICROBIOLOGY



Microbiology: A Laboratory Manual, 10/e

# James G. Cappuccino | Natalie Sherman

**576** © 2014

# **ABOUT THE BOOK**

Versatile, comprehensive, and clearly written, this competitively priced laboratory manual can be used with any undergraduate microbiology text-and now features brief clinical applications for each experiment, MasteringMicrobiology&regquizzes that correspond to each experiment, and a new experiment on hand washing. Microbiology: A Laboratory Manual is known for its thorough coverage, descriptive and straightforward procedures, and minimal equipment requirements. A broad range of experiments helps to convey basic principles and techniques. Each experiment includes an overview, an in-depth discussion of the principle involved,

easy- to-follow procedures, and lab reports with review and critical thinking questions. Ample introductory material and laboratory safety instructions are provided.

# **FEATURES**

- Comprehensive coverage of the core microbiology topics includes experiments in the areas of genetics, immunology, and biotechnology.
- A wide range of experiments progressing from simple to complex enable instructors to tailor their laboratory classes to the topics they wish to cover.
- Experiments use the most common and affordable laboratory materials, designed to accommodate any lab.
- Over 90 photographs in full color and numerous illustrations appear directly alongside the experiments, helping students visualize techniques and expected results.
- Spiral binding makes student-use easier and minimizes space on a lab bench.
- A detailed introductory section on basic lab techniques and safety thoroughly prepares students for lab work during the semester.
- "Caution" icons alert users to experiments that pose a potential risk.
- Six appendices cover the topics of Scientific Notification, Methods for Preparation of Dilutions, Microbiological Media, Biochemical Test Reagents, Staining Reagents, and Experimental Microorganisms.
- A Guide to Serial Dilutions is printed on the inside back cover for students' quick reference in completing exercises.
- Art demonstrating lab procedures appears consistently in a special box design that distinguishes it from other art, and catches the student's eye.
- A bold and modern four-color design adds distinction to each individual element, and allows for easier navigation within each experiment.

# CONTENTS

- 1. Part 1: Basic Laboratory Techniques for Isolation, Cultivation, and Cultural Characterization of Microorganism
- 2. Part 2: Microscopy
- 3. Part 3: Bacterial Staining
- 4. Part 4: Cultivation of Microorganisms: Nutritional and Physical Requirements, and Enumeration of Microbial Poulations
- 5. Part 5: Biochemical Activities of Microorganisms

- 6. Part 6: The Protozoa
- 7. Part 7: The Fungi Part 8: The Viruses
- 8. Part 9: Physical and Chemical Agents for the Control of Microbial Growth Part 10: Microbiology of Food
- **9.** Part 11: Microbiology of Water Part 12: Microbiology of Soil Part 13: Bacterial Genetics
- 10. Part 14: Biotechnology
- 11. Part 15: Medical Microbiology Part 16: Immunology

# **ABOUT THE AUTHOR(S)**

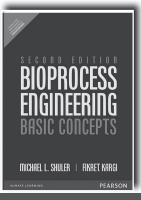
James Cappuccino is a Professor Emeritus at the State University of New York (SUNY) system at Rockland Community College.

Natalie Sherman is at the State University of New York (SUNY) system at Rockland Community College.

PHARMACEUTICAL MICROBIOLOGY

Supplements

# PHARMACEUTICAL ENGINEERING



ISBN: 9789332549371

# Bioprocess Engineering: Basic Concepts, 2/e

Michael L. Shuler

**984** | © 2015

# **ABOUT THE BOOK**

This is the definitive, up-to-the-minute guide to systems management for every IT professional responsible for maintaining stable, responsive IT production environments. Top IT system management expert Rich Schiesser illuminates both the theoretical and practical aspects of systems management, using methods and examples drawn from decades of professional experience in roles ranging from data center leadership to infrastructure design. Schiesser covers every systems management discipline, every type of IT environment, and all elements of success: technology, processes, and people. This edition adds detailed new coverage of the popular IT Infastructure Library, show-

ing how ITIL's 10 processes align with the 12 processes Schiesser presents. Another new chapter addresses key issues related to ethics, legislation, and outsourcing. Additional new coverage ranges from managing wireless networks, VoIP, and & quotultra-speed" Internet to strategic security and new approaches to facilities management

# **FEATURES**

- NEW Concepts of validation and Good Manufacturing Practice (GMP) are introduced.
- Helps students to better understand regulatory constraints on bioprocess development.
   NEW Updated coverage of concepts.
- Shows students the connection between traditional ideas and emerging areas, such as tissue engineering and gene therapy.
- NEW Material on functional genomics and cellular engineering.
   Provides students with new developments in biology as they impact bioprocess engineering.
- NEW Expanded discussion of modeling approach.
- Presents students with a clarified section on models in continuous cultures and adds cybernetic modeling.
   NEW Expanded coverage of chromatography.
- Introduces students to discussions of IMAC (immobilized metal affinity chromatography), use of fusion
  proteins, and porous supports.
- NEW Expanded sections on metabolic engineering, animal cell culture, and protein processing.
- Offers students information on analysis of metabolic pathways, bioreactor considerations for animal cells, and includes some recent examples.
- NEW Additional examples and homework problems, e.g., on topics such as enzyme reaction; reactor operation and scale-up; purification; waste treatment; and genetically engineered cells.
  - Enables students to more thoroughly test their understanding of applied concepts.
- NEW Reorganized coverage.
  - Gives students a more logical presentation of genetic instability, strategies for genetic engineering, and then an approach to selection of host expression system for production of a heterologous protein.
- Emphasis on novel bioprocessing technologies.
- Provides students with discussions on metabolic pathways and regulation, bioreactors, and separation processes.
- Coverage on production of proteins from recombinant DNA technology.
- Allows students to critically compare and evaluate the various techniques involved.
- Applications-To special systems and the particular characteristics of mixed cultures; genetically engineered cells; and plant and animal cells.
  - Reinforces the previously covered engineering and biological concepts while providing more detailed information about important new biological systems.
- Chapter-end suggested readings.
  - Encourages students to obtain a more in-depth understanding of key biological

PHARMACEUTICAL ENGINEERING

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# I. INTRODUCTION.

1. What is a Bioprocess Engineer?

Introductory Remarks. Biotechnology and Bioprocess Engineering. Biologists and Engineers Differ in Their Approach to Research. The Story of Penicillin: How Biologists and Engineers Work Together. Bioprocesses: Regulatory Constraints. Suggestions for Further Reading. Problems.

# II. THE BASICS OF BIOLOGY: AN ENGINEER'S PERSPECTIVE.

2. An Overview of Biological Basics.

Are All Cells the Same? Cell Construction. Cell Nutrients. Summary. Suggestions for Further Reading. Problems. **3.** Enzymes.

 Introduction. How Enzymes Work. Enzyme Kinetics. Immobilized Enzyme Systems. Large-scale Production of Enzymes. Medical and Industrial Utilization of Enzymes. Summary. Suggestions for Further Reading. Problems.
 How Cells Work.

4. How Cells Work.

Introduction. The Central Dogma. DNA Replication: Preserving and Propagating the Cellular Message. Transcription: Sending the Message. Translation: Message to Product. Metabolic Regulation. How the Cell Senses Its Extracellular Environment. Summary. Appendix: Examples of Regulation of Complex Pathways. Suggestions for Further Reading. Problems.

5. Major Metabolic Pathways.

Introduction. Bioenergetics. Glucose Metabolism: Glycolysis and the TCA Cycle. Respiration. Control Sites in Aerobic Glucose Metabolism. Metabolism of Nitrogenous Compounds. Nitrogen Fixation. Metabolism of Hydrocarbons. Overview of Biosynthesis. Overview of Anaerobic Metabolism. Overview of Autotrophic Metabolism. Summary. Suggestions for Further Reading. Problems.

6. How Cells Grow.

Introduction. Batch Growth. Quantifying Growth Kinetics. How Cells Grow in Continuous Culture. Summary. Suggestions for Further Reading. Problems.

- Stoichiometry of Microbial Growth and Product Formation. Introduction. Some Other Definitions. Stoichiometric Calculations. Theoretical Predictions of Yield Coefficients. Summary. Suggestions for Further Reading. Problems.
- How Cellular Information is Altered. Introduction. Evolving Desirable Biochemical Activities through Mutation and Selection. Natural Mechanisms for Gene Transfer and Rearrangement. Genetically Engineering Cells. Genomics. Summary. Suggestions for Further Reading. Problems.

# III. ENGINEERING PRINCIPLES FOR BIOPROCESSES.

- Operating Considerations for Bioreactors for Suspension and Immobilized Cultures. Introduction. Choosing the Cultivation Method. Modifying Batch and Continuous Reactors. Immobolized Cell Systems. Solid-state Fermentations. Summary. Suggestions for Further Reading. Problems.
- Selection, Scale-Up, Operation, and Control of Bioreactors. Introduction. Scale-up and Its Difficulties. Bioreactor Instrumentation and Control. Sterilization of Process Fluids. Summary. Suggestions for Further Reading. Problems.
- Recovery and Purification of Products. Strategies to Recover and Purify Products. Separation of Insoluble Products. Cell Disruption. Separation of Soluble Products. Finishing Steps for Purification. Integration of Reaction and Separation. Summary. Suggestions for Further Reading. Problems.

# IV. APPLICATIONS TO NONCONVENTIONAL BIOLOGICAL SYSTEMS.

- Bioprocess Considerations in Using Animal Cell Cultures. Structure and Biochemistry of Animal Cells. Methods Used for the Cultivation of Animal Cells. Bioreactor Considerations for Animal Cell Culture. Products of Animal Cell Cultures. Summary. Suggestions for Further Reading. Problems.
- Bioprocess Considerations in Using Plant Cell Cultures. Why Plant Cell Cultures? Plant Cells in Culture Compared to Microbes. Bioreactor Considerations. Economics of Plant Cell Tissue Cultures. Summary. Suggestions for Further Reading. Problems.

### 14. Utilizing Genetically Engineered Organisms. Introduction. How the Product Influences Process Decisions. Guidelines for Choosing Host-Vector Systems. Process Constraints: Genetic Instability. Considerations in Plasmid Design to Avoid Process Problems. Predicting HostĐVector Interactions and Genetic Instability. Regulatory Constraints on Genetic Processes. Metabolic Engineering. Protein Engineering. Summary. Suggestions for Further Reading. Problems.

PHARMACEUTICAL ENGINEERING

15. Medical Applications of Bioprocess Engineering.

Introduction. Tissue Engineering. Gene Therapy Using Viral Vectors. Bioreactors. Summary. Suggestions for Further Reading. Problems.

16. Mixed Cultures.

Introduction. Major Classes of Interactions in Mixed Cultures. Simple Models Describing Mixed-culture Interactions. Mixed Cultures in Nature. Industrial Utilization of Mixed Cultures. Biological Waste Treatment: An Example of the Industrial Utilization of Mixed Cultures. Summary. Suggestions for Further Reading. Problems.

17. Epilogue.

Appendix: Traditional Industrial Bioprocesses.

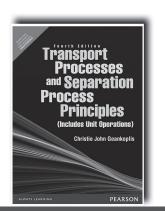
Anaerobic Bioprocesses. Aerobic Processes.

Suggestions for Further Reading.

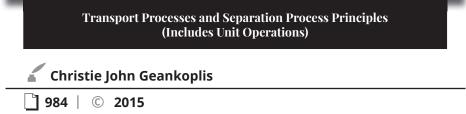
# **ABOUT THE AUTHOR(S)**

**DR. MICHAEL L. SHULER** is Professor in the School of Chemical Engineering, Cornell University. His areas of research include structured models, heterologous protein expression systems, cell culture analogs for pharmacokinetic models, in-vitro toxicology, plant-cell tissue culture, microbial functional genomics, and bioremediation.

**DR. FIKRET KARGI** is Professor of Environmental Engineering at Dokuz Eylul University in Ismir, Turkey. His current research includes bioprocessing of wastes for production of commercial products, development of novel technologies for biological treatment of problematic wastewaters, nutrient removal, and novel biofilm reactor development.



ISBN: 9789332549432



# **ABOUT THE BOOK**

Appropriate for one-year transport phenomena (also called transport processes) and separation processes course. First semester covers fluid mechanics, heat and mass transfer second semester covers separation process principles (includes unit operations).

The title of this Fourth Edition has been changed from Transport Processes and Unit Operations to Transport Processes and Separation Process Principles (Includes Unit Operations). This was done because the term Unit Operations has been largely superseded by the term Separation Processes which better reflects the present

modern nomenclature being used. The main objectives and the format of the Fourth Edition remain the same. The sections on momentum transfer have been greatly expanded, especially in the sections on fluidized beds, flow meters, mixing, and non-Newtonian fluids. Material has been added to the chapter on mass transfer. The chapters on absorption, distillation, and liquid-liquid extraction have also been enlarged. More new material has been added to the sections on ion exchange and crystallization. The chapter on membrane separation processes has been greatly expanded especially for gas-membrane theory.

## **FEATURES**

- The comprehensive, unified, up-to-date guide to transport and separation processes.
- A more thorough coverage of momentum, heat, and mass transport processes and new coverage of separation process applications.
- Greatly expanded coverage of momentum transfer, including fluidized beds and non-Newtonian fluids.
- More detailed discussions of mass transfer, absorption, distillation, liquid-liquid extraction, and crystallization.



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PHARMACEUTICAL ENGINEERING

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  - 7. Principles of Unsteady-State and Convective Mass Transfer.

### II. SEPARATION PROCESS PRINCIPLES (INCLUDES UNIT OPERATIONS).

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- 9. Drying of Process Materials.

- **10.** Stage and Continuous Gas-Liquid Separation Processes.
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Appendix A.5. Properties of Pipes, Tubes, and Screens.

# **ABOUT THE AUTHOR(S)**

**CHRISTIE JOHN GEANKOPLIS** is a Professor of Chemical Engineering and Materials Science at the University of Minnesota. His current research interests involve transport processes, biochemical reactor engineering, mass transfer in liquid solutions, and diffusion and/or reaction in porous solids. He holds a Ph.D. in Chemical Engineering from the University of Pennsylvania.

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# PHARMACEUTICAL ORGANIC CHEMISTRY-III

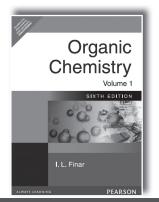
I. L. Finar

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966

**ABOUT THE BOOK** 

throughout the text.



# ISBN: 9788177585421

## 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

Organic Chemistry, Volume 1, 6/e

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

- **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

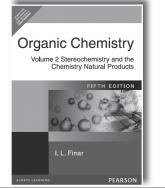
# **ABOUT THE AUTHOR**

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

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PHARMACEUTICAL ORGANIC CHEMISTRY-III

Pharmacy Catalog.indd 36



# **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
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- 8. Terpenoids
- 9. Carotenoids

# **ABOUT THE AUTHOR**

- **10.** Polycyclic aromatic hydrocarbons
- 11. Steroids
- 12. Heterocyclic compounds containing two or more hetero-atoms
- 13. Amino-acids and proteins

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

**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

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- 17. Vitamins
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- **19.** Haemoglobin, chlorophyll and phthalocyanines

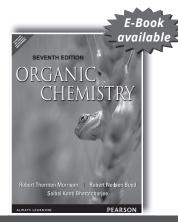
The late **Dr. Finar** was Principal Lecturer in Organic Chemistry at the Polytechnic of North London.

I. L. Finar

**ABOUT THE BOOK** 

of each chapter.

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### ISBN: 9788131704813

# Organic Chemistry, 7/e

Robert Thornton Morrison | Robert Neilson Boyd | Saibal Kanti Bhattacharjee

**1508** | © 2010



# **ABOUT THE BOOK**

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

# CONTENTS

# Part 1: Fundamentals of Organic Chemistry

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

PHARMACEUTICAL ORGANIC CHEMISTRY-III

# Part 2: Chemistry of Functional Groups Alkenes

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

## Part 3: Special Topics

**20.** Heterocyclic Compounds

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

# **ABOUT THE AUTHOR(S)**

Robert Thornton Morrison, New York University Robert Neilson Boyd, New York University Saibal Kanti Bhattacharjee, Gauhati University

- 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

# Heterocyclic Chemistry **ABOUT THE BOOK** EXCLUSIVE This popular text has been completely revised to reflect recent advances in the

# Heterocyclic Chemistry, 3/e

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.

**Thomas L. Gilchrist** 

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# Thomas I Gilchris PEARSON

## ISBN: 9788131707937

# **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.

PHARMACEUTICAL ORGANIC CHEMISTRY-III

# 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)**

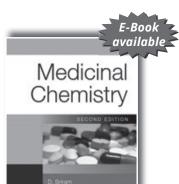
Gary L. Miessler, St. Olaf College Donald A. Tarr, St. Olaf College

PHARMACEUTICAL ORGANIC CHEMISTRY-III

Pharmacy Catalog.indd 39

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# MEDICINAL CHEMISTRY-I



ISBN: 9788131731444

# Medicinal Chemistry 2/e

# Sriram | Yogeeswari



# **ABOUT THE BOOK**

The second edition of Medicinal Chemistry is based on the core module of Pharmacy syllabi of various technical universities, and targets undergraduate B.Pharma students across India.

The current edition has been designed by authors based on the opinion of the experts to include the latest developments in the field of medicinal chemistry, detailed synthesis mechanism of the drugs and their mode of action inside the body.

## **FEATURES**

- Complex reactions broken down into intermediary steps
- A variety of exercises to test the cognitive level of students
- New pedagogical features:
  - Learning objectives Further Reading guidelines Coloured illustrations Data tables
- New chapters on drug design and development, principles of drug action, CADD and a chapter on miscellaneous drugs

# CONTENTS

- 1. Drug Discovery and Development
- 2. Principles of Drug Action
- 3. Drug Metabolism and Prodrugs
- 4. Computer-aided Drug Design
- 5. General Anaesthetics
- 6. Local Anaesthetics
- 7. Sedatives, Hypnotics, and Anxiolytic Agents
- 8. Anti-Epileptic Drugs
- 9. Antipsychotic Agents
- 10. Antidepressants
- 11. Narcotic Analgesics
- 12. Antipyretics and Non-Steroidal Anti-Inflammatory Drugs

- 13. Miscellaneous CNS Agents
- 14. Antihistamines and Anti-Ulcer Agents
- 15. Diuretics
- 16. Antihypertensive Agents
- 17. Antiarrhythmic Drugs
- 18. Antihyperlipidemic Agents
- 19. Antianginal Drugs
- 20. Insulin and Oral Hypoglycaemic Agents
- 21. Oral Anticoagulants
- 21. Oral Anticoaguiants
- 22. Adrenergic Drugs
- 23. Cholinergic Drugs
   24. Sulphonamides, Sulphones,
- and Dihydrofolate

- 25. Inhibitors
- 26. Quinolone Antibacterials

supplements

- 27. Antibiotics
- 28. Antitubercular Agents
- 29. Antifungal Agents
- 30. Antiviral Agents
- 31. Antiprotozoal Agents
- 32. Anticancer Agents
- 33. Prostaglandins
- 34. Steroids
- 35. Miscellaneous Agents
- 36. Nomenclature of Medicinal Compounds

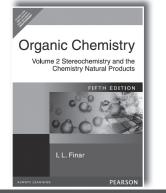
MEDICINAL CHEMISTRY-

ABOUT THE AUTHOR(S)

**D. Sriram** is presently Senior Professor at Pharmacy Group, Birla Institute of Technology and Science-Pilani, Hyderabad Campus. He received his Ph.D. in 2000 from Banaras Hindu University, Varanasi.

**P. Yogeeswari** is presently Senior Professor at Pharmacy Group, Birla Institue of Technology and Science-Pilani, Hyderabad Campus. She received her Ph.D. degree in 2001 from Banaras Hindu University, Varanasi.

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# CONTENTS

- 1. Physical properties and chemical constitution
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# **ABOUT THE AUTHOR**

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I. L. Finar

**ABOUT THE BOOK** 

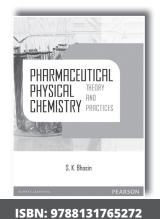
of each chapter.

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MEDICINAL CHEMISTRY-I

# PHYSICAL PHARMACEUTICS-II



# Pharmaceutical Physical Chemistry : Theory and Practices

	Dr	S	κ	Bhasin

**]** 956 | © 2012

# **ABOUT THE BOOK**

Physical Chemistry is a compulsory paper offered to all the students of Pharmacy. There is a dearth of good books that exclusively cover the syllabi of physical chemistry offered to pharmacy courses. Pharmaceutical Physical Chemistry has been designed considering their requirements laid down by AICTE and other premier institutes/universities. Apart from the theory 20 most common laboratory experiments have been included to make this book a unique offering to the students of pharmacy.

## **FEATURES**

- 20 Most common laboratory experiments
- 350 Review questions
- 125 Solved problems
- 280 MCQs
- 152 Line Diagrams
- 35 Tables

# **CONTENTS**

### Part A

- 1. Behaviour of Gases
- 2. The Liquid state
- 3. Solution
- **4.** Thermodynamic
- 5. Adsorption and Catalysis
- 6. Photochemistry

# **ABOUT THE AUTHOR**

- 7. Chemical Kinetics
- 8. Quantum Mechanics
- 9. Ionic Equilibria
- **10.** Distribution Law
- 11. Electrochemistry
- **12.** Electromotive Force and Oxidation-Reduction System
- 13. Solid State (Crystalline State)

PHYSICAL PHARMACEUTICS-II

- 14. Chemical Bonding
- **15.** Phase Equilibria
- Part B
  - 16. Experiments

**Dr S K Bhasin** is the Director and Professor of Chemistry at Himalayan Group of Professional institute, Kala Amb, Ambala, Haryana. He has been teaching undergraduate and postgraduate students for more than 40 years.

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# Introducing Pharmacology: For Nursing and Healthcare, 2/e

# Roger McFadden

<b>368</b>	©	2014
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# **ABOUT THE BOOK**

This new edition of Introducing Pharmacology remains an accessible and relevant introduction for nursing and healthcare students who are new to pharmacology, as well anyone looking to refresh their knowledge of the subject.

Focused and engaging, the text balances accessibility with depth. Coverage of anatomy and physiology as well as pathophysiology helps to relate the subject to practical realities and makes this text stand out.

# **FEATURES**

- Extend coverage of the pharmacopoeia with a completely new chapter on anti-cancer drugs.
- New sections, including general anaesthetics, hay-fever and prescribing for special groups such as children, pregnant women and the elderly.
- Fully updated with the Recommended International Non-proprietary Names (rINN) for drugs as used in the British National Formulary.
- Inclusion of a new glossary of key terms and definitions.

## CONTENTS

Part 1 Principles of pharmacology

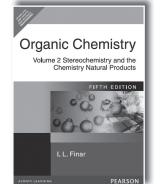
- 1. Let's start at basics: cells and how they work
- 2. Protein targets for drugs
- **3.** Side-effects, interactions and pharmacokinetics Part 2 The major drug groups
- **4.** The cardiovascular system I: drugs used in the
- management of coronary artery disease
- 5. The cardiovascular system II: hypertension and antihypertensive drugs
- 6. Inflammation and the management of pain
- 7. Disorders and drugs of the digestive system
- 8. Infection and anti-microbial drugs
- 9. Disorders and drugs of the respiratory system
- **10.** Disorders and drugs of the endocrine system
- **11.** Drugs used in the treatment of mental health and neurological disorders 12 Drugs used in the treatment of Cancers and Chemotherapy

# **ABOUT THE AUTHOR**

Roger McFadden is Senior Lecturer in Applied Physiology at Birmingham City University

PHARMACOLOGY-I

# **MEDICINAL CHEMISTRY-II**



ISBN: 9788177585414

## **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
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# **ABOUT THE AUTHOR**

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

# I. L. Finar

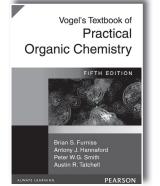
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- 10. Polycyclic aromatic hydrocarbons
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  - 19. Haemoglobin, chlorophyll and phthalocyanines

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



ISBN: 9788177589573

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

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

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## **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.



MEDICINAL CHEMISTRY–II

# **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.

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# CONTENTS

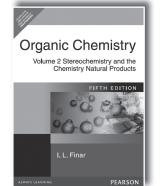
- 1. Organic Synthesis.
- 2. Experimental Techniques.
- **3.** Spectroscopic Methods and the Interpretation of Spectra.
- 4. Solvents and Reagents.
- 5. Aliphatic Compounds.

- 6. Aromatic Compounds.
- **7.** Selected Alicyclic Compounds.
- 8. Selected Heterocyclic Compounds.
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- 10. Physical Constants of Organic Compounds.

MEDICINAL CHEMISTRY-II

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# **MEDICINAL CHEMISTRY-III**



ISBN: 9788177585414

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MEDICINAL CHEMISTRY-III

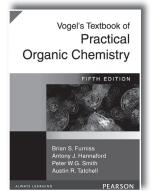
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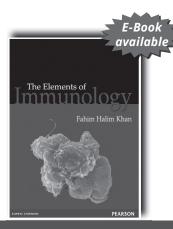
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- 8. Selected Heterocyclic Compounds.
- **9.** Investigation and Characterization of Organic Compounds.
- 10. Physical Constants of Organic Compounds.

MEDICINAL CHEMISTRY-III



# The Elements of Immunology

# Fahim Halim Khan

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# ABOUT THE BOOK

**The Elements of Immunology** is designed to introduce readers to the exciting world of immunology, the people who populate it and foster a curiosity to question and know more. The book is supported by a consistent, colourful art programme. The detailed explanation of concepts and terms, and the deconstruction of complex molecular mechanisms into simple, easy-to-remember steps help students focus on the fundamentals without any distractions. Packed with extensive Web-based supplements, the book enables students to visualize concepts, thereby enriching the learning process. The book, comprising twenty chapters, has numerous peda-

gogical elements built into it. Margin snippets present interesting and relevant information without breaking the flow of the text. Margin definitions highlight the key terms for easy identification and recollection. Each chapter talks about a relevant molecular biology technique, thus providing an insight into the practical aspect of immunology as well. A glossary at the end of the book lists out the important terms used.

# **FEATURES**

- Simple and lucid language explaining core concepts
- Rich pedagogy that facilitates learning
- Colourful and consistent art programme comprising over 300 four-colour illustrations that helps to visualize and comprehend concepts better
- 400 end-of-chapter questions help revise the key concepts
- Discussion of the latest developments in the area of immunology such as MHC haplotype matching for cell transplantation, latest antiretroviral drugs developed against HIV, etc.
- Description of key contributors, researchers and their landmark experiments
- Packed with supplements and media resources
  - Over 30 animations that depict key concepts in three dimensions
  - A question bank containing over 400 questions and clinical case studies along with lecture slides including artwork from the book, as supplements to the text, specifically for the instructors

# CONTENTS

- 1. Introduction to the Immune System
- 2. Cells and Organs of the Immune System
- 3. Antigens
- 4. Antibodies
- 5. Generation of Antibody Diversity
- 6. Major Histocompatibility Complex
- 7. T-cell Receptor
- 8. T-cell Development and Activation
- 9. B-cell Development and Activation
- **10.** Complement System

- 11. Antigen Processing and Presentation
- 12. Cell-mediated Immunity
- 13. Hypersensitivity
- 14. Cell Migration and Inflammatory Response
- 15. Immune Response to Infectious Agents
- 16. Vaccines
- **17.** Transplantation Immunology
- 18. Cancer and the Immune System
- **19.** Primary and Secondary Immunodeficiencies

PHARMACEUTICAL BIOTECHNOLOG

20. Autoimmunity and Autoimmune Diseases

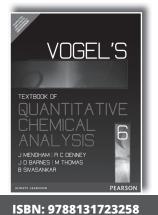
# **ABOUT THE AUTHOR**

Fahim Halim Khan is an assistant professor of biochemistry at the Aligarh Muslim University.

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Supplements

# **INSTRUMENTAL METHODS OF ANALYSIS**



Vogel's Quantitative Chemical Analysis, 6/e

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

# 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

# CONTENTS

- 1. Preface to First Edition.
- 2. 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.

# **ABOUT THE AUTHOR(S)**

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

- 8. Statistics, Introduction to Chemometrics.
- 9. Sampling.
- **10.** The Basis of Separative Methods.
- **11.** Thin Layer Chromatography.
- **12.** Liquid Chromatography.
- **13.** Gas Chromatography.
- **14.** Titrimetric Analysis.
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- **21.** Molecular Electronic Spectroscopy.
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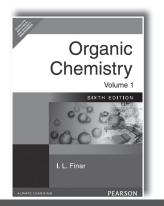
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INSTRUMENTAL METHODS OF ANALYSIS

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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- 1. Determination of Structure
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- 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

# ABOUT THE AUTHOR

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

🖌 I. L. Finar

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# **ABOUT THE BOOK**

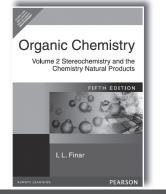
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- **21.** Aromatic halogen compounds
- **22.** Aromatic nitro-compounds
- 23. Aromatic amino-compounds
- 24. Diazonium salts and their related compounds
- 25. Aromatic sulphonic acids
- 26. Phemols and quinones
- 27. Aromatic alcohols, aldehydes and ketones
- 28. Aromatic acids
- 29. Polynuclear hydrocarbons and their derivatives
- **30.** Heterocyclic compounds
- 31. Dyes and photochemistry

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## INSTRUMENTAL METHODS OF ANALYSIS

# Organic Chemistry, Volume 1, 6/e



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- 1. Physical properties and chemical constitution
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- **3.** Nucleophilic substitution at a saturated carbon atom, asymmetric synthesis
- 4. Geometrical isomerism, stereochemistry of alicyclic compounds
- 5. Stereochemistry of biphenyl compounds
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- 17. Vitamins
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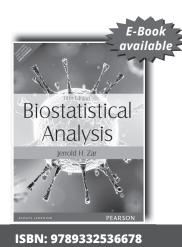
of each chapter.

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INSTRUMENTAL METHODS OF ANALYSIS

# **BIOSTATISITCS AND RESEARCH METHODOLOGY**



Biostatistical Analysis, 5/e

🖌 Jerrold H. Zar

💾 760 | © 2014

# **ABOUT THE BOOK**

Zar's *Biostatistical Analysis, Fifth Edition*, is the ideal textbook for graduate and undergraduate students seeking practical coverage of statistical analysis methods used by researchers to collect, summarize, analyze and draw conclusions from biological research. The latest edition of this best-selling textbook is both comprehensive and easy to read. It is suitable as an introduction for beginning students and as a comprehensive reference book for biological researchers and for advanced students.

This book is appropriate for a one- or two-semester, junior or graduate-level course in biostatistics, biometry, quantitative biology, or statistics, and assumes a prerequisite of algebra.

# **FEATURES**

- A broad collection of data-analysis procedures and techniques are presented, covering a wide variety of biological research, such as physiology, genetics, ecology, behavior, morphology.
- The most comprehensive treatment available includes coverage of the basics of statistical analysis, and also the following topics rarely or never found in statistics books for biologists:
  - Diversity

- Nonparametric multiple
- Circular distributions
- Power and sample size determinations.

- Polynomial regression
   Multidimensional contingency tables
- comparisons Higher order factorial analyses of variance
- Stepwise regression
- An orderly organization and presentation of topics, with cross-referencing as appropriate.
- The readable and accessible approach allows students with no previous statistical background or mathematical expertise beyond simple algebra to understand the material presented.
- The thoughtful presentation encourages students to think about the value of each statistical technique, as opposed to merely plugging numbers into formulae.
- The exposition considers complex procedures such as factorial analysis of variance and multiple regression in terms of the interpretation of typical computer output.
- A wealth of graphs and other figures are integrated to visually support concepts under discussion.
- A uniquely comprehensive set of statistical tables-more than 40 in all-facilitates statistical analyses without having to consult a separate book. This includes tables that are unique to this book.
- Worked examples for all major procedures guide readers step-by-step through the techniques, demonstrating each of the important concepts.
- An extensive bibliography directs readers to further relevant literature.

**BIOSTATISITCS AND RESEARCH METHODOLOGY** 

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- 1. Data: Types and Presentations
- 2. Populations and Samples
- 3. Measures of Central Tendency
- Measures of Variability and Dispersion
- 5. Probabilities
- 6. The Normal Distribution
- 7. One-Sample Hypotheses
- 8. Two-Sample Hypotheses
- 9. Paired-Sample Hypotheses
- **10.** Multisample Hypotheses and the Analysis of Variance
- **11.** Multiple Comparisons
- **12.** Two-Factor Analysis of Variance

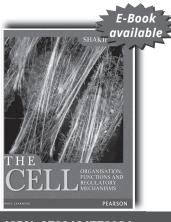
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- **15.** Nested (Hierarchical) Analysis of Variance
- **16.** Multivariate Analysis of Variance
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- **18.** Comparing Simple Linear Regression Equations
- 19. Simple Linear Correlation
- **20.** Multiple Regression and Correlation
- 21. Polynomial Regression

- **22.** Testing for Goodness of Fit
- 23. Contingency Tables
- 24. Dichotomous Variables
- **25.** Testing for Randomness
- **26.** Circular Distributions: Descriptive Statistics
- 27. Circular Distributions: Hypothesis Testing
- 28. Answers to Exercises
- 29. Literature Cited

**ABOUT THE AUTHOR(S)** Jerrold H. Zar received his undergraduate degree in Biological Sciences from Northern Illinois University in 1962. He later earned his M.S. and Ph.D. degrees in biology and zoology from the University of Illinois at Urbana-Champaign. Zar then returned to Northern Illinois University for 34 years to serve in a variety of capacities. He joined the faculty at NIU as an Assistant Professor in 1968 and quickly rose through the ranks of associate and full professor to become Chair of the Department of Biological Sciences in 1978. He served two terms as Chair of the Department and then, became the Vice Provost for Graduate Studies and Research and Dean of the Graduate School. He was a founder of the Illinois Minority Graduate Incentive Program and the Illinois Consortium for Educational Opportunities Program, where he helped create and protect fellowship opportunities for minority graduate students at universities across the state. Zar is a member of 17 professional scientific societies, including being an elected fellow of the American Association for the Advancement of Science. His many research publications cover a range of topics, from statistical analysis to physiolog-ical adaptations of animals to their environment.

BIOSTATISITCS AND RESEARCH METHODOLOGY

# **CELL AND MOLECULAR BIOLOGY**



ISBN: 9788131773284

The Cell: Organization, Functions and Regulatory Mechanisms

Shakir Ali

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## **ABOUT THE BOOK**

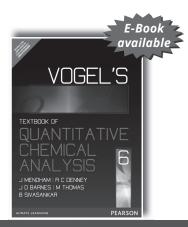
*The Cell: Organisation, Functions and Regulatory Mechanisms* provides a precise blend of basic and applied knowledge of cell science that reinforces the conceptual understanding of the subject with leading edge examples and experiments. Catering to the prescribed curricula for a wide range of programmes in different universities and colleges, this book is ideal for undergraduate and postgraduate students who pursue a detailed study of the subject. The book will also serve as a standard resource material for teachers and scholars who may like to enrich their knowledge about the cell in areas pertaining to their specific fields of interest.

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Supplements

**CELL AND MOLECULAR BIOLOGY** 

# **ADVANCED INSTRUMENTATION TECHNIQUES**



ISBN: 9788131723258

# Vogel's Quantitative Chemical Analysis, 6/e

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

# **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

nuclear magnetic resonance.

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.

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- 1. Preface to First Edition.
- 2. 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.

## **ABOUT THE AUTHOR(S)**

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

- 8. Statistics, Introduction to Chemometrics.
- 9. Sampling.
- **10.** The Basis of Separative Methods.
- **11.** Thin Layer Chromatography.
- **12.** Liquid Chromatography.
- **13.** Gas Chromatography.
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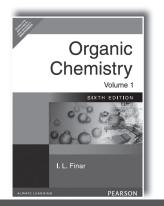
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J. D. Barnes, University of Greenwich M.J.K. Thomas, University of Greenwich

ADVANCED INSTRUMENTATION TECHNIQUES

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# Organic Chemistry, Volume 1, 6/e

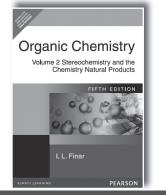
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I. L. Finar

**ABOUT THE BOOK** 

of each chapter.

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	For s	ales que	eries, please contac	t Pearson
	Ankit Kesarwani	7291826785	ankit.kesarwani@pearson.com	Uttarakhand
	Arvind Dubey	8130835072	arvind.dubey@pearson.com	Uttar Pradesh
ORTH	Karan Alagh	7837052092	karan.alagh@pearson.com	Chandigarh
	Manoj Gupta	9910974743	manoj.gupta@pearson.com	Delhi
	Pawan Verma	9015182175	pawan.verma@pearson.com	Uttar Pradesh
	Rajdip Sen	9582284615	rajdip.sen@pearson.com	Delhi
Ž	Raman Pruthi	9999841513	Raman.Pruthi@Pearson.com	Delhi
	Ranjeet Kumar	9950701203	ranjeet.kumar@pearson.com	Jaipur
	Ranjeev Jha	9560698997	ranjeev.jha@pearson.com	Delhi
	Santosh Kumar	9415517650	santosh.kumar2@pearson.com	Uttar Pradesh
	Darpandra Bhuyan	9706554754	darpandra.bhuyan@pearson.com	Assam
	Pratik Mazumdar	9836264409	pratik.mazumdar@pearson.com	Bihar
LS	Soumyo Banerjee	9582988656	soumyo.banerjee@pearson.com	Odisha
EAST	Sourabh Sen	9830336567	sourabh.sen@pearson.com	West Bengal
	Sudipto Banerjee	9836970429	sudipto.banerjee@pearson.com	West Bengal
	Tapan Kumar Saha	9830137194	tapan.saha@pearson.com	West Bengal
	Aakash Agrawal	81034 66555	akash.agrawal@pearson.com	Madhya Pradesh
	Akshay Naik	7400315566	akshay.naik@pearson.com	Maharashtra
	Alok Tiwari	9935398757	alok.tiwari l @pearson.com	Chhattisgarh
E	Anirudh Kulkarni	89834 81390	anirudha.kulkarni@pearson.com	Maharashtra
WEST	Brijesh Pandey	9892064017	brijesh.pandey@pearson.com	Maharashtra
≥	Dinesh Adyalkar	9970545744	dinesh.adyalkar@pearson.com	Maharashtra
	Gaurav Gagwani	9898813419	Gaurav.Gagwani@pearson.com	Gujarat
	Jyoti Kumar Chaudhary	8377989817	jyoti.chaudhary@pearson.com	Maharashtra
	Priyank Vyas	9867223897	priyank.vyas@pearson.com	Maharashtra
	Arjun Shetty	9886099802	arjun.shetty@pearson.com	Karnataka
	Bala Subrahmanyam	9391393919	bala.subrahmanyam@pearson.com	Andhra Pradesh
	Bibin Baburaj	9495331849	bibin.baburaj@pearson.com	Kerala
	Jayaraj V. S	9994070570	vs.jayaraj@pearson.com	Tamil Nadu
	Manigandan P. A	9003353596	manigandan.anand@pearson.com	Tamil Nadu
H	Paraneetharan. I	9092005309	i.paraneetharan@pearson.com	Karnataka
SOUTH	Premsai. R	7358398311	premsai.r@pearson.com	Tamil Nadu
	Purushotham. S	9916633111	s.purushotham@pearson.com	Karnataka
	Ramakrishnan. A	9500028293	ramakrishnan.arumugam@pearson.com	Tamil Nadu
	Ravichandran, Gobinath	9944759974	gobinath.ravichandran@pearson.com	Tamil Nadu
	Thummala Kiran	9177602565	thummala.kiran@pearson.com	Telangana
	Vasudevan B.V	9032760875	bv.vasudevan@pearson.com	Andhra Pradesh
	Venu Kumar. A	9676771407	venu.kumar@pearson.com	Telangana

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