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### PHYSICAL CHEMISTRY

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### FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS, SI EDITION

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*Cengage Learning* A brand new book, **FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS** makes the abstract subject of chemical engineering thermodynamics more accessible to undergraduate students. The subject is presented through a problem-solving inductive (from specific to general) learning approach, written in a conversational and approachable manner. Suitable for either a one-semester course or two-semester sequence in the subject, this book covers thermodynamics in a complete and mathematically rigorous manner, with an emphasis on solving practical engineering problems. The approach taken stresses problem-solving, and draws from best practice engineering teaching strategies. **FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS** uses examples to frame the importance of the material. Each topic begins with a motivational example that is investigated in context to that topic. This framing of the material is helpful to all readers, particularly to global learners who require big picture insights, and hands-on learners who struggle with abstractions. Each worked example is fully annotated with sketches and comments on the thought process behind the solved problems. Common errors are presented and explained. Extensive margin notes add to the book accessibility as well as presenting opportunities for investigation. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

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### PHYSICAL CHEMISTRY

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### THERMODYNAMICS IN EARTH AND PLANETARY SCIENCES

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*Springer Nature* Based on a university course, this book provides an exposition of a large spectrum of geological, geochemical and geophysical problems that are amenable to thermodynamic analysis. It also includes selected problems in planetary sciences, relationships between thermodynamics and microscopic properties, particle size effects, methods of approximation of thermodynamic properties of minerals, and some kinetic ramifications of entropy production. The textbook will enable graduate students and researchers alike to develop an appreciation of the fundamental principles of thermodynamics, and their wide ranging applications to natural processes and systems.

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### CHEMICAL THERMODYNAMICS IN MATERIALS SCIENCE

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### FROM BASICS TO PRACTICAL APPLICATIONS

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*Springer* This textbook covers chemical thermodynamics in materials science from basic to advanced level, especially for iron and steel making processes. To improve a process by applying knowledge of thermodynamics or to assess the calculation results of thermodynamic software, an accurate and systematic understanding of thermodynamics is required. For that purpose, books from which one can learn thermodynamics from the basic to the advanced level are needed, but such books are rarely published. This book bridges the gap between the basics, which are treated in general thermodynamic books, and their application, which are only partially dealt with in most specialized books on a specific field. This textbook can be used to teach the basics of chemical thermodynamics and its applications to beginners. The basic part of the book is written to help learners acquire robust applied skills in an easy-to-understand manner, with in-depth explanations and schematic diagrams included. The same book can be used by advanced learners as well. Those higher-level readers such as post-graduate students and researchers may refer to the basic part of the book to get down to the basic concepts of chemical thermodynamics or to confirm the basic concepts. Abundant pages are also devoted to applications designed to present more advanced applied skills grounded in a deep understanding of the basics. The book contains some 50 examples and their solutions so that readers can learn through self-study.

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### OCEAN CIRCULATION

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### MECHANISMS AND IMPACTS -- PAST AND FUTURE CHANGES OF MERIDIONAL OVERTURNING

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*John Wiley & Sons* Published by the American Geophysical Union as part of the Geophysical Monograph Series, Volume 173. The ocean's meridional overturning circulation (MOC) is a key factor in climate change. The Atlantic MOC, in particular, is believed to play an active role in the regional and global climate variability. It is associated with the recent debate on rapid climate change, the Atlantic Multi-Decadal Oscillation (AMO), global warming, and Atlantic hurricanes. This is the first book to deal with all aspects of the ocean's large-scale meridional overturning circulation, and is a coherent presentation, from a mechanistic point of view, of our current understanding of paleo, present-day, and future variability and change. It presents the current state of the science by bringing together the world's leading experts in physical, chemical, and biological oceanography, marine geology, geochemistry, paleoceanography, and climate modeling. A mix of overview and research papers makes this volume suitable not only for experts in the field, but also for students and anyone interested in climate change and the oceans.

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### GLUTEN-FREE FOOD SCIENCE AND TECHNOLOGY

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*John Wiley & Sons* Coeliac disease (CD) and other allergic reactions/intolerances to gluten are on the rise, largely due to improved diagnostic procedures and changes in eating habits. The worldwide incidence of coeliac disease has been predicted to increase by a factor of ten over the next number of years, and this has resulted in a growing market for high quality gluten-free cereal products. However, the removal of gluten presents major problems for bakers. Currently, many gluten-free products on the market are of low quality and short shelf life, exhibiting poor mouthfeel and flavour. This challenge to the cereal technologist and baker alike has led to the search for alternatives to gluten in the manufacture of gluten-free bakery products. This volume provides an overview for the food industry of issues related to the increasing prevalence of coeliac disease and gluten intolerance. The properties of gluten are discussed in relation to its classification and important functional characteristics, and the nutritional value of gluten-free products is also addressed. The book examines the diversity of ingredients that can be used to replace gluten and how the ingredient combinations and subsequent rheological and manufacturing properties of a range of gluten-free products, e.g. doughs, breads, biscuits and beer may be manipulated. Recommendations are given regarding the most suitable ingredients for different gluten-free products. The book is directed at ingredient manufacturers, bakers, cereal scientists and coeliac associations and societies. It will also be of interest to academic food science departments for assisting with undergraduate studies and postgraduate research. The Author Dr Eimear Gallagher, Ashtown Food Research Centre, Teagasc - The Irish Agriculture and Food Development Authority, Dublin, Ireland Also available from Wiley-Blackwell Management of Food Allergens Edited by J. Coutts and R. Fielder ISBN 9781405167581 Bakery Manufacture and Quality - Water Control and Effects Second Edition S. Cauvain and L. Young ISBN 9781405176132 Whole Grains and Health Edited by L. Marquart et al ISBN 9780813807775

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### VETERINARY TECHNICIAN AND NURSE'S DAILY REFERENCE GUIDE

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### CANINE AND FELINE

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*John Wiley & Sons* The revised and expanded new edition of this classic reference to daily skills used by veterinary technicians **Veterinary Technician and Nurse's Daily Reference Guide: Canine and Feline** provides rapid access to the information veterinary technicians need in clinical practice. With an easy-to-use tabular format, the book covers diagnostic and patient care skills, diseases and conditions, preventive care, anatomy, anesthesia, and all other major areas of veterinary technician education and training. Chapters written by experienced veterinary specialists integrate charts, tables, and concise explanatory text to enable quick and efficient retrieval of information. Focusing on practical skills and knowledge, the fourth edition features extensively revised material incorporating the latest developments, evidence-based guidelines, and best practices in veterinary medicine. Brand-new chapters describe licensure and certifications in veterinary technology and discuss nursing theory and science and its relation to veterinary nursing. Expanded and updated coverage includes novel therapeutics in dermatology, vaccination standards, pain assessment and management, stress-free handling and nursing care strategies, RECOVER CPR guidelines, and more. Equally useful in the classroom and in the clinic, this popular quick-reference guide: Provides new and updated content, including coverage of advancements in diagnostic capabilities and of pharmacologic agents used in treatment and management of disease states Contains hundreds of clear illustrations and high-quality photographs Includes a comprehensive table of contents in each chapter Features a companion website with forms and worksheets, self-review questions, vocabulary flashcards, links to online resources, and PowerPoint slides **Veterinary Technician and Nurse's Daily Reference Guide: Canine and Feline, Fourth Edition** remains an invaluable resource for both student and practicing veterinary technicians and nurses of all skill and experience levels.

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### METHYLXANTHINES

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*Springer Science & Business Media* In the present volume of the **Handbook of Experimental Pharmacology** well known experts describe the actions of different xanthines with a focus on caffeine and theophylline. A special chapter is devoted to theobromine, an active component of chocolate, the actions of which are less well characterized. This book also presents the pharmacology of one xanthine derivative, propentofylline, as an example of a xanthine that has gone through extensive development for a novel therapeutic area.

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## BAKING PROBLEMS SOLVED

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*Woodhead Publishing* **Baking Problems Solved**, Second Edition, provides a fully revised follow-up to the innovative question and answer format of its predecessor. Presenting a quick bakery problem-solving reference, Stanley Cauvain returns with more practical insights into the latest baking issues. Retaining its logical and methodical approach, the book guides bakers through various issues which arise throughout the baking process. The book begins with issues found in the use of raw materials, including chapters on wheat and grains, flour, and fats, amongst others. It then progresses to the problems that occur in the intermediate stages of baking, such as the creation of doughs and batters, and the input of water. Finally, it delves into the difficulties experienced with end products in baking by including chapters on bread and fermented products, cakes, biscuits, and cookies and pastries. Uses a detailed and clear question and answer format that is ideal for quick reference. Combines new, up-to-date problems and solutions with the best of the previous volume. Presents a wide range of ingredient and process solutions from a world-leading expert in the baking industry.

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## FOODBORNE MICROBIAL PATHOGENS

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### MECHANISMS AND PATHOGENESIS

*Springer Science & Business Media* At last, here is a graduate-level textbook that focuses on the very latest information on the molecular and cellular mechanism of several major foodborne bacterial pathogens. For the first time in the field, this book makes the link between foodborne illness and immunology. It also covers virulence genes and their regulation in the host or the food environment, pathogenicity testing models, clinical symptoms and prevention and control strategies. Unlike other textbooks this one also covers the host/parasite interaction to a level where readers have a real appreciation of the disease mechanism. It is imperative that we acquire a better understanding of foodborne pathogens. And this is what this brilliant and timely contribution to the subject offers.

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## TRANSLATIONAL APPROACHES TO AUTISM SPECTRUM DISORDER

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*Springer* This book addresses and synthesizes recent basic, translational, and clinical research with the goal of understanding the mechanisms behind autism spectrum disorder (ASD) and how they lead to altered brain function and behavior. Bringing clarity to these mechanisms will lead to more effective therapies for the various heterogeneous pathologies that comprise ASD. Currently there are few, if any, proven therapies for the majority of the disorders. Among the topics addressed are neural plasticity, neuroimmunology, neuroinflammation, neuroimaging, and appropriate animal and genetic models.

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## SILICON NANOMEMBRANES

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### FUNDAMENTAL SCIENCE AND APPLICATIONS

*John Wiley & Sons* Edited by the leaders in the field, with chapters from highly renowned international researchers, this is the first coherent overview of the latest in silicon nanomembrane research. As such, it focuses on the fundamental and applied aspects of silicon nanomembranes, ranging from synthesis and manipulation to manufacturing, device integration and system level applications, including uses in bio-integrated electronics, three-dimensional integrated photonics, solar cells, and transient electronics. The first part describes in detail the fundamental physics and materials science involved, as well as synthetic approaches and assembly and manufacturing strategies, while the second covers the wide range of device applications and system level demonstrators already achieved, with examples taken from electronics and photonics and from biomedicine and energy.

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## VASCULAR SURGERY

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### A GLOBAL PERSPECTIVE

*Springer* Vascular surgery has experienced remarkable growth and diversification in the last decade, especially with its embracing the disruptive endovascular technological revolution. Vascular surgeons remain the only group of specialists capable of total treatment of patients with vascular disease, providing medical, minimally invasive, and surgical therapy. Although vascular surgeons practice in all areas of the world, practice patterns in different areas naturally have both similarities and differences that reflect both regional patterns of disease, genetic characteristics of local peoples, cultural preferences for treatment, local political and economic situations, different access to resources and devices, as well as different training paradigms. Thus, the practice of vascular surgery has diversified and evolved in parallel in many areas, converging and diverging in many ways. *Vascular Surgery: A Global Perspective* provides the first review and comparison of the diversity of vascular surgery practice around the world. The book is grouped according to common vascular diseases such as aneurysmal and occlusive arterial disease, as well as venous and lymphatic disease and dialysis access. Each major disease topic includes multiple chapters written by expert specialists from around the world, each discussing their local approach to the disease and its treatment. Similarly, the status of vascular surgery practice is addressed, including discussion of the influence of payment systems on practice, patient access to the internet for information, training paradigms, and the legal system including malpractice. This textbook provides the first worldwide summary of the care of patients with vascular disease and will be of interest to a wide audience including vascular surgeons, vascular medical specialists, cardiologists, radiologists, internists, and family practice physicians.

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## BAKERY PRODUCTS

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### SCIENCE AND TECHNOLOGY

*John Wiley & Sons*

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## ORGANOMETALLICS IN PROCESS CHEMISTRY

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*Springer Nature* This volume gives an overview of the applications of organometallic chemistry in process chemistry relevant to the current topics in synthetic chemistry. This volume starts with an introduction on the historical development of organometallics in process chemistry and is followed by chapters dealing with the last five years' development in various organometallic reaction types such as the challenging cross coupling process, construction of 3.1.0 bicycles, pressure and transfer hydrogenations of historically challenging compounds such as esters, utilization of carbon dioxide for making organic compounds by flow process, drug synthesis and metal detection and scavenging in the finished APIs. A chapter by Colacot et al., is also devoted to the process development and structural understanding of organometallic catalysts with particular emphasis to LnPd(0) catalysts. An academia - industry collaborated chapter on the use of water as a solvent for organometallic processes is included in this book.

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## AQUATIC ECOSYSTEMS

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### INTERACTIVITY OF DISSOLVED ORGANIC MATTER

*Academic Press* **Aquatic Ecosystems** explains the interplay between various movements of matter and energy through ecosystems mediated by Dissolved Organic Matter. This book provides information on how much DOM there is in a particular aquatic ecosystem and where it originates. It explains whether the DOM composition varies from time to time and place to place. It also details how DOM becomes incorporated into microbial food webs, and gives a better, clarifying, understanding to its significance of DOM. Dissolved Organic Matter (called DOM) is incredibly important in all aquatic ecosystems. Although it might seem that logs and leaves are more important, in fact the DOM is more crucial because the DOM is in a form that is available for use by all the organisms living in the water. Furthermore, DOM influences complex food webs by mediating the availability of aquatic nutrients, metals, salts and minerals. DOM also affects water clarity, which of course has alters the way animals and plants live and feed in the water. There are many ways to study DOM and this book focuses on several central questions. How much DOM is there in a particular aquatic ecosystem? Where does it come from? Does the composition of the DOM vary from time to time and place to place? How does DOM become incorporated into microbial food webs, which are the basis of plant, invertebrate and vertebrate food webs? How can the answers to these and other questions about DOM be considered together so that a better understanding of the significance of DOM can emerge?

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## ADVANCES IN APPLIED MECHANICAL ENGINEERING

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### SELECT PROCEEDINGS OF ICAMER 2019

*Springer Nature* This book presents select peer reviewed proceedings of the International Conference on Applied Mechanical Engineering Research (ICAMER 2019). The book examines various areas of mechanical engineering namely design, thermal, materials, manufacturing and industrial engineering covering topics like FEA, optimization, vibrations, condition monitoring, tribology, CFD, IC engines, turbo-machines, automobiles, manufacturing processes, machining, CAM, additive manufacturing, modelling and simulation of manufacturing processing, optimization of manufacturing processing, supply chain management, and operations management. In addition, recent studies on composite materials, materials characterization, fracture and fatigue, advanced materials, energy storage, green building, phase change materials and structural change monitoring are also covered. Given the contents, this book will be useful for students, researchers and professionals working in mechanical engineering and allied fields.

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## TECHNOLOGY OF BREADMAKING

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*Springer Science & Business Media* Not another book on breadmaking! A forgiveable reaction given the length of time over which bread has been made and the number of texts which have been written about the subject. To study breadmaking is to realize that, like many other food processes, it is constantly changing as processing methodologies become increasingly more sophisticated, yet at the same time we realize that we are dealing with a food stuff, the forms of which are very traditional. We can, for example, look at ancient illustrations of breads in manuscripts and paintings and recognize products which we still make today. This contrast of ancient and modern embodied in a single processed foodstuff is part of what makes bread such a unique subject for study. We cannot, for example, say the same for a can of baked beans! Another aspect of the uniqueness of breadmaking lies in the requirement for a thorough understanding of the link between raw materials and processing methods in order to make an edible product. This is mainly true

because of the special properties of wheat proteins, aspects of which are explored in most of the chapters of this book. Wheat is a product of the natural environment, and while breeding and farming practices can modify aspects of wheat quality, we millers and bakers still have to respond to the strong influences of the environment.

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## PHARMACEUTICS

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### BASIC PRINCIPLES AND APPLICATION TO PHARMACY PRACTICE

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*Academic Press* **Pharmaceutics: Basic Principles and Application to Pharmacy Practice** is an engaging textbook that covers all aspects of pharmaceutics with emphasis on the basic science and its application to pharmacy practice. Based on curricular guidelines mandated by the American Council for Pharmacy Education (ACPE), this book incorporates laboratory skills by identifying portions of each principle that can be used in a clinical setting. In this way, instructors are able to demonstrate their adherence to ACPE standards and objectives, simply by using this book. Written in a straightforward and student-friendly manner, Pharmaceutics enables students to gain the scientific foundation to understand drug physicochemical properties, practical aspects of dosage forms and drug delivery systems, and the biological applications of drug administration. Key ideas are illustrated and reinforced through chapter objectives and chapter summaries. A companion website features resources for students and instructors, including videos illustrating difficult processes and procedures as well as practice questions and answers. Instructor resources include Powerpoint slides and a full-color image bank. This book is intended for students in pharmaceutical science programs taking pharmaceutics or biopharmaceutics courses at the undergraduate, graduate and doctoral level. Chapter objectives and chapter summaries illustrate and reinforce key ideas Designed to meet curricular guidelines for pharmaceutics and laboratory skills mandated by the Accreditation Council for Pharmacy Education (ACPE) Companion website features resources for students and instructors, including videos illustrating difficult processes and procedures and practice questions and answers. Instructor resources include Powerpoint slides and a full-color image bank

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### THE FLYING CIRCUS OF PHYSICS WITH ANSWERS

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*John Wiley & Sons* This new version now contains answers to all the over 600 stimulating questions. Walker covers the entirety of naked-eye physics by exploring problems of the everyday world. He focuses on the flight of Frisbees, sounds of thunder, rainbows, sand dunes, soap bubbles, etc., and uses such familiar objects as rubber bands, eggs, tea pots, and Coke bottles. Many references to outside sources guide the way through the problems. Now the inclusion of answers provides immediate feedback, making this an extraordinary approach in applying all of physics to problems of the real world. · Hiding Under the Covers, Listening for the Monsters· The Walrus Speaks of Classical Mechanics· Heat Fantasies and Other Cheap Thrills of the Night· The Madness of Stirring Tea· She Comes in Colors Everywhere· The Electrician's Evil and the Ring's Magic· The Walrus Has His Last Say and Leaves Us Assorted Goodies

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### HIGH DILUTION EFFECTS: PHYSICAL AND BIOCHEMICAL BASIS

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*Springer Science & Business Media* Since the subject of high dilution effects is still a subject for debate, this volume provides evidence in support of effects from control clinical studies, clinical records from veteran physicians, controlled experiments on animals and plants, and in vitro tests without any organisms (Chapter II). An overview of the methods for preparing drugs at ultra high dilution is also provided as well as the basic principles of homeopathy, which has been alleviating human suffering through the use of these drugs for several hundred years (Chapter I). Chapter III provides physical basis of high dilutions as evidence from the NMR, IR, UV and fluorescence spectra of those drugs. Since water is used as the diluents media, the structure and dynamics of water polymers in relation to high dilution are discussed in order to facilitate easy comprehension of this physical aspect, the basic principles of spectroscopy are also described. Chapter IV focuses on the mechanism of action of potentized drugs in the living system, discussing the structure of the cell, the plasma membrane, the integral proteins on the membrane, the interaction between these proteins and high dilutions and the manifestations of the therapeutic effects of high dilutions. Some aspects, peculiar to homeopathy, such as the chief miasm psora, and the literalities and time modalities of symptoms and drug action are interpreted from a scientific perspective. Chapter IV ends with a brief discussion on water structures and the origin of life to show the natural evolution of high dilution effects. The book not only helps in understanding the physical basis of high dilutions and their mechanism of action in organisms but provides many new avenues of investigation into this interdisciplinary field of science.

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### GENOME MAPPING AND GENOMICS IN ANIMAL-ASSOCIATED MICROBES

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*Springer Science & Business Media* Achievements and progress in genome mapping and the genomics of microbes supersede by far those for higher plants and animals, in part due to their enormous economic implication but also smaller genome size. In the post-genomic era, whole genome sequences of animal-associated microbes are providing clues to depicting the genetic basis of the complex host-pathogen relationships and the evolution of parasitism; and to improving methods of controlling pathogens. This volume focuses on a globally important group of intracellular prokaryotic pathogens which affect livestock animals. These include Brucella, Mycobacterium, Anaplasma and Ehrlichia, as well as the protozoan pathogens Cryptosporidium and Theileria, for which genome sequence data is available. Insights from comparative genomics of the microbes described provide clues to the adaptation involved in host-microbe interactions, as well as resources potentially useful for application in future research and product development.

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### MATERIALS THERMODYNAMICS

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#### WITH EMPHASIS ON CHEMICAL APPROACH(WITH CD-ROM)

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*World Scientific Publishing Company* This book is the expanded edition of the first book entitled "Chemical Thermodynamics for Metals and Materials." This new version presents thermodynamics of materials with emphasis on the chemical approach, and is thus suitable for students in materials science and metallurgical engineering, as well as related fields such as chemical engineering and physical chemistry. Sample Chapter(s) Chapter 1: Introduction (50 KB) Chapter 2: The First Law of Thermodynamics (56 KB) Chapter 3: The Second Law of Thermodynamics (56 KB) Request Inspection Copy

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### GERIATRICS FOR SPECIALISTS

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*Springer Nature* This book aims to be a single point of reference for advances in the care of geriatric populations across medical and surgical specialties. The aging population is a unique demographic with its own health challenges. Geriatricians are specifically trained to address these challenges but few medical students or residents enter geriatrics, even as the demand for geriatric expertise increases. The practices of many medical and surgical specialists are dominated by older patients who may themselves see many specialists but rarely visit geriatricians. This updated edition elucidates the most common medical conditions seen in aging patients and translates approaches to those conditions for physicians across specialties. Divided into three sections that assemble crosscutting issues, medical specialties, and surgical and related specialties, this book serves as a guide for clinicians of all backgrounds who will work with older patients as the demographic ages further. This second edition of Geriatrics for Specialists expands the number of specialist chapters to reflect growth in research in aging and clinical care for older people in dermatology, plastic surgery, and behavioral neurology. All original chapters from the first edition are extensively revised and updated to reflect the rapid growth of new knowledge in the field.

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### ELEMENTARY CHEMICAL THERMODYNAMICS

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### BIBLIOGRAPHY ON THE HIGH TEMPERATURE CHEMISTRY AND PHYSICS OF MATERIALS

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### ENZYMES IN FOOD AND BEVERAGE PROCESSING

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*CRC Press* **Biotechnology**, particularly eco-friendly enzyme technologies, has immense potential for the augmentation of diverse food products utilizing vast biodiversity, resolving environmental problems owing to waste disposal from food and beverage industries. In addition to introducing the basic concepts and fundamental principles of enzymes, *Enzymes in Foo*

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### EMERGING TOPICS IN PHYSICAL VIROLOGY

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*World Scientific* **Emerging Topics in Physical Virology** is a state-of-the-art account of recent advances in the experimental analysis and modeling of structure, function and dynamics of viruses. It is the first interdisciplinary book that integrates a review of relevant experimental techniques, such as cryo-electron microscopy, atomic force microscopy and mass spectrometry with the latest results on the biophysical and mathematical modeling of viruses. The book comprehensively covers the structure and physical properties of the protein envelopes that encapsulate and hence protect the delicate viral genome, their assembly and disassembly, the organization of the viral genome, infection, evolution, as well as applications of viruses in Biomedical Nanotechnology. It is an essential primer for scientists working in all aspects of virology, including the increasing use of viruses and virus-like particles in bio- and nano-technology. Its review style makes it moreover suitable for non-experts as an introduction into this exciting research area.

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### THERMODYNAMICS AND AN INTRODUCTION TO THERMOSTATISTICS

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*John Wiley & Sons* The only text to cover both thermodynamic and statistical mechanics--allowing students to fully master thermodynamics at the macroscopic level. Presents essential ideas on critical phenomena developed over the last decade in simple, qualitative terms. This new edition maintains the simple structure of the first and puts new emphasis on pedagogical considerations. Thermostatistics is incorporated into the text without eclipsing macroscopic thermodynamics, and is integrated into the conceptual framework of physical theory.

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### CANINE AND FELINE INFECTIOUS DISEASES - E-BOOK

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*Elsevier Health Sciences* **Canine and Feline Infectious Diseases** is a practical, up-to-date resource covering the most important and cutting-edge advances in the field. Presented by a seasoned educator in a concise, highly visual format, this innovative guide keeps you current with the latest advances in this ever-changing field. 80 case studies illustrate the

clinical relevance of the major infectious disease chapters. Well-organized Major Infectious Diseases chapters break down content by etiologic agent and epidemiology, clinical signs and their pathophysiology, physical examination findings, diagnosis, treatment and prognosis, immunity, prevention, and public health implications. Over 80 case studies illustrate how the information provided can be applied in everyday practice. Logical approach to laboratory diagnosis guides you through all the steps needed to accurately diagnose and treat viral, bacterial, fungal, protozoal, and algal diseases. Practical protocols provided by expert clinicians guide you in the management of canine and feline patients suspected to have infectious diseases, including handling, disinfection, isolation, and vaccination protocols. Over 500 full color images - geographic distribution maps, life cycle drawings, and hundreds of color photographs - visually illustrate and clarify complex issues. Easy-to-understand tables and boxes make content quickly accessible, eliminating the need to sort through dense text for critical information in the clinical setting.

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## AORTIC VALVE TRANSCATHETER INTERVENTION

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### COMPLICATIONS AND SOLUTIONS

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*John Wiley & Sons* **A Practical Guide to Prevention and Treatment of Complications during Transcatheter Aortic Valve Implantation** Calcific aortic stenosis (AS) is the most common heart valve anomaly, with a largely age-dependent prevalence, a calculated annual incidence rate in the range of 4-5% in general populations and up to 6% in patients aged 75 years and over. Surgical aortic valve replacement (SAVR) was previously the only option available to patients with symptomatic, severe aortic stenosis. After the first-in-human transcatheter aortic valve implantation (TAVI) was performed by Alain Cribier in 2002, the treatment strategy for patients with symptomatic AS has been revolutionized. Since then, TAVI has grown exponentially, as a result of accruing evidence demonstrating safety and efficacy, and reduced invasiveness compared with SAVR. TAVI devices are continuously expanding to include several valve design options. As this strategy is continuously evolving to treat younger patients and lower-risk populations, aside from the long-term durability of the valve systems, procedural safety will become the focus of newer-generation devices. This book is a practical handbook devoted to the optimization of TAVI procedures, through a focused containment of complications. Through an integrated evaluation of the clinical status, imaging techniques and laboratory findings, the authors provide readers with clear messages on preventive and therapeutic recommendations.

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## CLINICAL GYNECOLOGY

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*Cambridge University Press* Written with the busy practice in mind, this book delivers clinically focused, evidence-based gynecology guidance in a quick-reference format. It explores etiology, screening, tests, diagnosis, and treatment for a full range of gynecologic health issues. The coverage includes the full range of gynecologic malignancies, reproductive endocrinology and infertility, infectious diseases, urogynecologic problems, gynecologic concerns in children and adolescents, and surgical interventions including minimally invasive surgical procedures. Information is easy to find and absorb owing to the extensive use of full-color diagrams, algorithms, and illustrations. The new edition has been expanded to include aspects of gynecology important in international and resource-poor settings.

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## N-HETEROCYCLIC CARBENES IN ORGANOCATALYSIS

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*Wiley-VCH* Summarizing the emerging field of N-heterocyclic carbenes used in organocatalysis, this is an excellent overview of the synthesis and applications of NHCs focusing on carbon-carbon and carbon-heteroatom bond formation. Alongside comprehensive coverage of the synthesis, characteristics and applications, this handbook and ready reference also includes chapters on NHCs for polymerization reactions and natural product synthesis.

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## PATHOGENIC MYCOBACTERIA IN WATER

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### A GUIDE TO PUBLIC HEALTH CONSEQUENCES, MONITORING AND MANAGEMENT

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*World Health Organization* Environmental mycobacteria can be found in diverse environments around the world, some of which have the ability to infect animals, birds and humans and have evolved mechanisms by which they can invade and grow within host cells, the pathogenic environmental mycobacteria (PEM). Although the diseases caused by these organisms have been known for many years, it is only recently that the potential significance of PEM as a waterborne pathogen has been appreciated. This publication discusses current knowledge about the distribution of PEM in water and other parts of the environment, the routes of transmission that lead to human infection, the most significant disease symptoms that can follow infection, methods of analysis and detection, the control of PEM in drinking-water and the assessment and management of risks.

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## INTRACRANIAL ATHEROSCLEROSIS

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*John Wiley & Sons* Intracranial atherosclerosis is the dominant cause of stroke in over 70% of the world's population. Globalization is leading to an increasingly heterogeneous society everywhere. Advances in imaging technology allow this previously inaccessible pathology to be clinically studied. Edited by internationally renowned clinicians, *Intracranial Atherosclerosis* is the first book to examine intracranial causes of stroke. Clinical practice is allied with basic science to guide all those with an interest in stroke on the diagnosis and management of intracranial atherosclerosis.

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## THE HYDROGEN BOND AND THE WATER MOLECULE

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### THE PHYSICS AND CHEMISTRY OF WATER, AQUEOUS AND BIO-MEDIA

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*Elsevier Science Limited* The water molecule, H<sub>2</sub>O, is one of the most familiar molecules, yet it is considered a molecule with almost no interest and which can be consequently ignored. The aim of this book is to present our present view of this molecule, in the hope that it is no longer ignored where it intervenes, and also to show what we still have to learn about it.

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## CASE FILES PSYCHIATRY

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*McGraw Hill Professional* The closest a student can get to the wards without seeing patients! Designed to teach through clinical cases, this text offers 60 of the most common clinical problems in psychiatry along with case discussion questions, clinical pearls, key terms and concepts, and USMLE-style questions and answers to reinforce learning. This is an excellent study guide for the psychiatry shelf exam and the USMLE Step 2.

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## POLYPHENOLS IN PLANTS

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### ISOLATION, PURIFICATION AND EXTRACT PREPARATION

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*Academic Press* Polyphenols in Plants assists plant scientists and dietary supplement producers in assessing polyphenol content and factors affecting their composition. It also aids in selecting sources and regulating environmental conditions affecting yield for more consistent and function dietary supplements. Polyphenols play key roles in the growth, regulation and structure of plants and vary widely within different plants. Stress, growth conditions and plant species modify polyphenol structure and content. This book describes techniques to identify, isolate and characterize polyphenols, taking mammalian toxicology into account as well. Defines conditions of growth affecting the polyphenol levels Describes assay and instrumentation techniques critical to identifying and defining polyphenols, critical to researchers and business development Documents how some polyphenols are dangerous to consume, important to dietary supplement industry, government regulators and lay public users

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## INTRODUCTION TO PATTERN RECOGNITION AND MACHINE LEARNING

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*World Scientific* This book adopts a detailed and methodological algorithmic approach to explain the concepts of pattern recognition. While the text provides a systematic account of its major topics such as pattern representation and nearest neighbour based classifiers, current topics — neural networks, support vector machines and decision trees — attributed to the recent vast progress in this field are also dealt with. Introduction to Pattern Recognition and Machine Learning will equip readers, especially senior computer science undergraduates, with a deeper understanding of the subject matter. Contents: Introduction Types of Data Feature Extraction and Feature Selection Bayesian Learning Classification Using Soft Computing Techniques Data Clustering Soft Clustering Application — Social and Information Networks Readership: Academics and working professionals in computer science. Key Features: The algorithmic approach taken and the practical issues dealt with will aid the reader in writing programs and implementing methods Covers recent and advanced topics by providing working exercises, examples and illustrations in each chapter Provides the reader with a deeper understanding of the subject matter Keywords: Clustering; Classification; Supervised Learning; Soft Computing