

Textbook Of Biochemistry By Thomas M Devlin

The second edition of a highly acclaimed handbook and ready reference. Unmatched in its breadth and quality, around 100 specialists from all over the world share their up-to-date expertise and experiences, including hundreds of protocols, complete with explanations, and hitherto unpublished troubleshooting hints. They cover all modern techniques for the handling, analysis and modification of RNAs and their complexes with proteins. Throughout, they bear the practising bench scientist in mind, providing quick and reliable access to a plethora of solutions for practical questions of RNA research, ranging from simple to highly complex. This broad scope allows the treatment of specialized methods side by side with basic biochemical techniques, making the book a real treasure trove for every researcher experimenting with RNA.

The first stand-alone textbook for at least ten years on this increasingly hot topic in times of global climate change and sustainability in ecosystems. Ecological biochemistry refers to the interaction of organisms with their abiotic environment and other organisms by chemical means. Biotic and abiotic factors determine the biochemical flexibility of organisms, which otherwise easily adapt to environmental changes by altering their metabolism. Sessile plants, in particular, have evolved intricate biochemical response mechanisms to fit into a changing environment. This book covers the chemistry behind these interactions, bottom up from the atomic to the system's level. An introductory part explains the physico-chemical basis and biochemical roots of living cells, leading to secondary metabolites as crucial bridges between organisms and the respective ecosystem. The focus then shifts to the biochemical interactions of plants, fungi and bacteria within terrestrial and aquatic ecosystems with the aim of linking biochemical insights to ecological research, also in human-influenced habitats. A section is devoted to methodology, which allows network-based analyses of molecular processes underlying systems phenomena. A companion website offering an extended version of the introductory chapter on Basic Biochemical Roots is available at http://www.wiley.com/go/Krauss/Nies/EcologicalBiochemistry

Boron Hydride Chemistry covers the significant contributions of boron hydride research in the subjects of bonding, structure, and stereochemistry. This book contains 12 chapters that illustrate the merging of certain areas of boron hydride chemistry with other disciplines, such as organic, organometallic, and transition metal chemistry. After providing an overview of the general geometric, stereochemical, and dynamic stereochemical features of boron hydrides, this book goes on exploring the bonding theory and theoretical research on boron hydrides, with an emphasis on boron hydrides that have open polyhedral structures. These topics are followed by discussions on gas phase and solution reactions of borane and substituted boranes. A chapter focuses on the chemistry of cations containing boron atoms bonded to hydrogen. The remaining chapters examine the syntheses, structures, bonding, spectral properties, and chemistry of specific boron hydrides, including borazines, closo-boron hydrides, carboranes, icosaehedral carboranes, and close- and nido-heteroboranes. Inorganic chemists and researchers, teachers, and undergraduate inorganic chemistry students will find this book invaluable.

Case studies and other examples enrich the text, firmly rooting it in the context of clinical and biomedical practice. --Book Jacket.

This completely revised and updated edition provides a comprehensive overview of mammalian biochemistry. Topics examined include introductions to the structure of the cell and protein composition, followed by in depth coverage of biological membranes, bioenergetics, metabolism of carbohydrates, lipids, amino acids and nucleotides. Chapters have been updated on DNA replication and repair, recombinant DNA and biotechnology, regulation of gene expression and RNA structure and function.

Further subjects covered include protein synthesis and post-translational modification, biochemistry of hormones, and biotransformation.

Textbook of Biochemistry With Clinical CorrelationsWiley-Liss

This first entry-level guide to the multifaceted field takes readers one step further than existing textbooks. In an easily accessible manner, the authors integrate the biochemistry, cell biology and medical implications of intracellular redox processes, demonstrating that complex science can be presented in a clear and almost entertaining way. Perfect for students and junior researchers, this is an equally valuable addition to courses in biochemistry, molecular biology, cell biology, and human physiology.

Genetics and Genomics in Medicine is a new textbook written for undergraduate students, graduate students, and medical researchers that explains the science behind the uses of genetics and genomics in medicine today. Rather than focusing narrowly on rare inherited and chromosomal disorders, it is a comprehensive and integrated account of how geneti

Clinical Biochemistry and Metabolic Medicine

Outlines & Highlights for Textbook of Biochemistry by Thomas M. Devlin

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Sugarcane

Clinical Laboratory Diagnostics

Biochemistry and Physiology of Plant Hormones

Boron Hydride Chemistry

Cancer as a Metabolic Disease

Biomedical Science Practice

Biochemistry

From the Preface: Over a dozen years have passed since the first edition of this textbook was published. As is to be expected, tremendous progress has been made in the study of zooparasites and the nature of parasitism. This is especially true in the case of the protozoans and helminths of medical and economic importance. Continuing the original intent, this book is meant to be a teaching tool rather than a reference volume for seasoned investigators. It is meant to supplement formal lectures, but at the same time to provide students with sufficient information as to where more detailed review articles and primary research reports can be located.

Volume 2 of the Textbook of Neural Repair and Rehabilitation stands alone as a clinical handbook for neurorehabilitation.

Physiology of Sugarcane looks at the development of a suite of well-established and developing biofuels derived from sugarcane and cane-based co-products, such as bagasse. Chapters provide broad-ranging coverage of sugarcane biology, biotechnological advances, and breakthroughs in production and processing techniques. This single volume resource brings together essential information to researchers and industry personnel interested in utilizing and developing new fuels and bioproducts derived from cane crops.

This landmark publication takes the 50th anniversary of the publication of the seminal paper by the Danish scientist, Eiler Steemann Nielsen, as an occasion to assess the development, present state and future of the major aspects in freshwater and marine plankton productivity. Each chapter of this important work has been written by internationally-acknowledged experts in the subject, and the whole has been carefully drawn together and edited to provide a book that is an essential tool and reference for all aquatic scientists. The book takes ascending temporal and spatial size scale as its framework - covering molecular to geological scales. Chapters include reviews of physiology and biochemistry, measurement of phytoplankton productivity, the supply and uptake of nutrients, the evolution of the carbon cycle, and ecosystems. The subject is set in context with a chapter covering the work of Steemann Nielsen, whose work inspired the last 50 years of aquatic productivity studies. Historical aspects are discussed together with thought-provoking assessments of modern technological approaches and where future research emphasis should be focussed. Phytoplankton Productivity provides, in one book, cutting edge reviews and key facts on the subject, making it a vital information source for marine and freshwater biologists, oceanographers, ecologists, environmental scientists and plant scientists. Copies should also be available in libraries of any research establishment and university as a reference for students, wherever these subjects are studied and taught. Also available from Blackwell Publishing Aquatic Photosynthesis P. Falkowski & J. Raven 0-86542-387-3 Fisheries Oceanography Edited by P. Harrison & T. Parsons 0-632-05566-9 Marine Ecology (Journal) Published quarterly ISSN 0173-9565 Fisheries Oceanography (Journal) Published 6 times per year ISSN 1054-6006 Freshwater Biology (Journal) Published monthly ISSN 0046-5970 Internationally recognised editors and contributors. A landmark publication in marine and freshwater biology. All major aspects covered in a clear and concise reader-friendly manner. Invaluable for all those working in aquatic sciences. Book will be launched to coincide with major international conference. For details see www.plankton-productivity.org

Whether you are following a problem-based, an integrated, or a more traditional medical course, clinical biochemistry is often viewed as one of the more challenging subjects to grasp. What you need is a single resource that not only explains the biochemical underpinnings of metabolic medicine, but also integrates laboratory findings with clinical p

Quantitative Understanding of Biosystems: An Introduction to Biophysics focuses on the behavior and properties of microscopic structures that underlie living systems. It clearly describes the biological physics of macromolecules, subcellular structures, and whole cells, including interactions with light. Providing broad coverage of physics, chemistry, biology, and mathematics, this color text features: Mathematical and computational tools—graphing, calculus, simple differential equations, diagrammatic analysis, and visualization tools Randomness, variation, statistical mechanics, distributions, and spectra The biological micro- and nanoworld—structures, processes, and the physical laws Quantum effects—photosynthesis, UV damage, electron and energy transfer, and spectroscopic characterization of biological structures Through its active learning approach, the text encourages practical comprehension of the behavior of biosystems, rather than knowledge of the latest research. The author includes graph- and diagram-centered physics and mathematics, simple software, frequent checks of understanding, and a repetition of important ideas at higher levels or from different points of view. After completing this book, students will gain significant computational and project experience and become competent at quantitatively characterizing biosystems. CD-ROM Resource The accompanying CD contains multimedia learning tools, such as video clips and animations, that illustrate intrinsically dynamic processes. For students inexperienced in the application of mathematics and physical principles to naturally occurring phenomena, this multimedia component emphasizes what is most obvious about biological systems: living things move.

Students can also manipulate and re-program the included Excel graphs.

Biochemistry Explained employs an innovative approach which has proven highly successful in the author's own classes. The author establishes a thorough understanding of the foundations of and common linkages between molecular structures and reactions, so that eventual interpretation of complex biochemical pathways and reactions is easy. All of the major molecular structures and biochemical pathways are explained, and, for the most part, these center on mammalian biochemistry. The text is supported by biochemical nomenclature and questions to bear in mind while reading.

Higher learning sections are also provided for advanced students. Written in an informal, conversational style, this textbook will serve as an invaluable resource for any student who is struggling with the standard texts and for postgraduate students who need to refresh their knowledge.

Clinical Biochemistry of Domestic Animals, Second Edition, Volume I, is a major revision of the first edition prompted by the marked expansion of knowledge in the clinical biochemistry of animals. In keeping with this expansion of knowledge, this edition is comprised of two volumes. Chapters on the pancreas, thyroid, and pituitary-adrenal systems have been separated and entirely rewritten. Completely new chapters on muscle metabolism, iron metabolism, blood clotting, and gastrointestinal function have been added. All the chapters of the first edition have been revised with pertinent new information, and many have been completely rewritten. This volume contains 10 chapters and opens with a discussion of carbohydrate metabolism and associated disorders. Separate chapters follow on lipid metabolism, plasma proteins, and porphyrins. Subsequent chapters deal with liver, pancreas, and thyroid functions; the role of the pituitary and adrenal glands in health and disease; the function of calcium, inorganic phosphorus, and magnesium metabolism in health and disease; and iron metabolism.

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