Low Ionic Strength Solution

Clinical Practice of Transfusion MedicineModern Blood Banking and Transfusion PracticesCanadian Journal of BiochemistryControlled Nanoscale MotionUnderstanding Humic SubstancesThe Indian Journal of Medical ResearchHandbook of Surface Plasmon ResonanceBlood Bank ReagentsContractile Mechanisms in MuscleThe Physiology of Excitable CellsThe Distribution and Dynamics of Macroions in Solutions of Low Ionic StrengthExperimental Studies of Phase Transitions in Solutions of Random HeteropolymersArtificial NucleasesBiophysical ChemistryCell ElectrophoresisMuscle ContractionElectron-transfer and Transport Mechanisms in Low Ionic Strength SolutionsMolecular BiologyWater and Ions in Biological SystemsElectrophoretic and Biochemical Studies of Erythrocyte StructureNovel Approaches in Biosensors and Rapid Diagnostic AssaysPlant-Soil Interactions at Low pHEnvironmental and Low Temperature GeochemistryAdsorption of Metals by GeomediaAtmospheric Environmental ResearchIssues in General Food Research: 2011 EditionMolecular Cardiology for the CardiologistsMonitoring Polymerization ReactionsGeochemistryCanadian Journal of Medical TechnologyAntibody-Drug ConjugatesThe Journal of Cell BiologyAging, Carcinogenesis, and Radiation BiologyPractical Blood TransfusionBlood and Bone Marrow Pathology E-BookPediatric Hematology, An Issue of Pediatric Clinics,The Adrenal Medulla, 1989-1991Alzheimer's and Parkinson's DiseasesPlant Nutrition — from

Genetic Engineering to Field PracticeGenitourinary Cancer

Clinical Practice of Transfusion Medicine

The development of agents capable of cleaving RNA and DNA has attracted considerable attention from researchers in the last few years, because of the immediate and very important applications they can find in the emerging fields of biotechnology and pharmacology. There are essentially two classes of these agents - nucleases that occur naturally inside cells and synthetically produced artificial nucleases. The first class includes protein enzyme nucle ases and catalytic RNA structured ribozymes that perform cleavage of the phosphodiester bonds in nucleic acids according to a hydrolytic pathway in the course of different biochemical processes in the cell. A different pathway is used by some antibiotics which cleave DNA via redox-based mechanisms resulting in oxidative damage of nucleotide units and breakage of the DNA backbone. The above molecules are indispensable tools for manipulating nucleic acids and processing RNA; DNA-cleaving antibiotics and cytotoxic ribonucleases have demonstrated utility as chemotherapeutic agents. The second class, artificial nucleases, are rationally designed to imitate the active centers of natural enzymes by simple structures possessing minimal sets of the most important characteristics that are essential for catalysis. A dif ferent approach, in vitro selection, was also used to create artificial RNA and DNA enzymes capable of cleaving RNA. Being less efficient and

specific as compared to the natural enzymes, the primitive mimics are smaller and robust and can function in a broad range of conditions.

Modern Blood Banking and Transfusion Practices

Canadian Journal of Biochemistry

The covalent attachment to deoxyribonucleic acid in vivo of a large number of different types of chemical compounds (both normal cellular constituents such as proteins and amino acids, and also exogenous compounds such as drugs, carcinogens, etc.) have been shown to exert profound effects upon cells. Four research activi ties, formerly considered to be totally independent, relate to this problem of nucleic acid adducts--(1) normal covalent attachment of DNA to membranes, protein linkers in chromosomes, etc. ; (2) the roles of radiation and chemical enhancement of DNA adduct formation in cell killing and mutagenesis. (A related field is the use of known cross-linking reactions to gain information on structural associations in macromolecular complexes.); (3) the relevance of DNA adducts to chemical and radiation carcinogenesis; (4) the rele vance of DNA adducts to the cross-linking theory of cellular aging. (1) There are numerous examples of normal linkages between DNA and protein, e. g. , DNA-membrane attachment sites, protein linkers in chromosomes, amino acids covalently linked to DNA as a function of growth conditions, and gene regulation by non-covalently

bound proteins. A summary of data on natural adducts to DNA thus serves to introduce the subject of the radiation and chemical enhancement of DNA adduct formation. (2) In the past, radiation biology has been concerned mainly with trying to understand the radiation chemistry of purified DNA, and the biological effects and repair of these radiation-induced alterations when produced in cellular DNA.

Controlled Nanoscale Motion

Understanding Humic Substances

Where do you begin to look for a recent, authoritative article on the diagnosis or management of a particular malignancy? The few general oncology textbooks are generally out of date. Single papers in specialized journals are informative but seldom comprehensive; these are more often preliminary reports on a very limited number of patients. Certain general journals frequently publish good indepth reviews of cancer topics, and published symposium lectures are often the best overviews available. Unfortunately, these reviews and supplements appear spo radically, and the reader can never be sure when a topic of special interest will be covered. Cancer Treatment and Research is a series of authoritative volumes which aim to meet this need. It is an attempt to establish a critical mass of oncology literature covering virtually all oncology topics, revised frequently to keep the coverage up to date, easily available on a single library shelf or by a single

personal subscription. We have approached the problem in the following fashion. First, by dividing the oncology literature into specific subdivisions such as lung cancer, genitourina ry cancer, pediatric oncology, etc. Second, by asking eminent authorities in each of these areas to edit a volume on the specific topic on an annual or biannual basis. Each topic and tumor type is covered in a volume appearing frequently and predictably, discussing current diagnosis, staging, markers, all forms of treatment modalities, basic biology, and more.

The Indian Journal of Medical Research

Soil acidity is a major limitation to crop production in many parts of the world. Plant growth inhibition results from a combination of factors, including aluminum, manganese, and hydrogen ion toxicities and deficiencies of essential elements, particularly calcium, magnesium, phosphorus, and molybdenum. Agricultural management practices and acid precipitation have increased acid inputs into the ecosystem and heightened concern about soil acidity problems. While application of lime has proved to be effective in ameliorating surface soil acidity in many areas, significant soil acidity problems still exist. Scientists from Alberta, Canada, recognized the need to provide a forum for researchers from different disciplines to exchange information and ideas on solving problems of plant growth in acid soils. As a result of their efforts, the First International Symposium on Plant-Soil Interactions at Low pH was held at Grande Prairie, Alberta, Canada, in July 1987.

In many acid soil areas, liming materials are not readily available, the cost may be prohibitive, or subsoil acidity cannot be corrected by surface application of lime. New management approaches involving both the plant and the soil are needed in these situations. Progress has been made in the selection and breeding of acid-tolerant plants. However, continued progress will be limited by our lack of understanding of the physiological and biochemical basis of differential acidity tolerance among plants.

Handbook of Surface Plasmon Resonance

Environmental and Low-Temperature Geochemistry presents conceptual and quantitative principles of geochemistry in order to foster understanding of natural processes at and near the earth's surface, as well as anthropogenic impacts on the natural environment. It provides the reader with the essentials of concentration, speciation and reactivity of elements in soils, waters, sediments and air, drawing attention to both thermodynamic and kinetic controls. Specific features include: • An introductory chapter that reviews basic chemical principles applied to environmental and low-temperature geochemistry • Explanation and analysis of the importance of minerals in the environment • Principles of aqueous geochemistry • Organic compounds in the environment • The role of microbes in processes such as biomineralization, elemental speciation and reduction-oxidation reactions • Thorough coverage of the fundamentals of important geochemical cycles (C,

N, P, S) • Atmospheric chemistry • Soil geochemistry • The roles of stable isotopes in environmental analysis • Radioactive and radiogenic isotopes as environmental tracers and environmental contaminants • Principles and examples of instrumental analysis in environmental geochemistry The text concludes with a case study of surface water and groundwater contamination that includes interactions and reactions of naturally-derived inorganic substances and introduced organic compounds (fuels and solvents), and illustrates the importance of interdisciplinary analysis in environmental geochemistry. Readership: Advanced undergraduate and graduate students studying environmental/low T geochemistry as part of an earth science, environmental science or related program. Additional resources for this book can be found at: www.wiley.com/go/ryan/geochemistry.

Blood Bank Reagents

The fourth edition of this highly successful text has been extensively revised and restructured to take account of the many recent advances in the subject and bring it right up to date. The classic observations of recent years can now be interpreted with the powerful new techniques of molecular biology. Consequently there is much new material throughout the book, including many new illustrations and extensive references to recent work. Its essential philosophy remains the same, though: fundamental concepts are clearly explained, and key experiments are examined in some detail. This textbook will be

used by students of physiology, neuroscience, cell biology and biophysics. Specializing undergraduates and graduates as well as lecturers and researchers will find the text thorough and clearly written.

Contractile Mechanisms in Muscle

No. 2, pt. 2 of November issue each year from v. 19 (1963)-47 (1970) and v. 55 (1972)- contain the Abstracts of papers presented at the Annual Meeting of the American Society for Cell Biology, 3d (1963)-10th (1970) and 12th (1972)-

The Physiology of Excitable Cells

This authoritative volume provides a holistic picture of antibody-drug conjugates (ADCs). Fourteen comprehensive chapters are divided into six sections including an introduction to ADCs, the ADC construct, development issues, landscape, IP and pharmacoeconomics, case studies, and the future of the field. The book examines everything from the selection of the antibody, the drug, and the linker to a discussion of developmental issues such as formulations, bio-analysis, pharmacokinetic-pharmacodynamic relationships, and toxicological and regulatory challenges. It also explores pharmacoecomonics and intellectual properties, including recently issued patents and the cost analysis of drug therapy. Case studies are presented for the three ADCs that have received FDA approval: gemtuzumab ozogamicin (Mylotarg®), Brentuximab vedotin (Adcetris®), and ado-trastuzumab emtansine

(Kadcyla®), as well as an ADC in late-stage clinical trials, glembatumumab vedotin (CDX-011). Finally, the volume presents a perspective by the editors on the future directions of ADC development and clinical applications. Antibody-Drug Conjugates is a practical and systematic resource for scientists, professors, and students interested in expanding their knowledge of cutting-edge research in this exciting field.

The Distribution and Dynamics of Macroions in Solutions of Low Ionic Strength

Experimental Studies of Phase Transitions in Solutions of Random Heteropolymers

Unique in its molecular approach and multidisciplinary in nature, this book will have broad appeal to researchers and postgraduates with an interest in this complex area.

Artificial Nucleases

Biophysical Chemistry

Cell Electrophoresis

Offers new strategies to optimize polymer reactions

With contributions from leading macromolecular scientists and engineers, this book provides a practical guide to polymerization monitoring. It enables laboratory researchers to optimize polymer reactions by providing them with a better understanding of the underlying reaction kinetics and mechanisms. Moreover, it opens the door to improved industrial-scale reactions, including enhanced product quality and reduced harmful emissions. Monitoring Polymerization Reactions begins with a review of the basic elements of polymer reactions and their kinetics, including an overview of stimuli-responsive polymers. Next, it explains why certain polymer and reaction characteristics need to be monitored. The book then explores a variety of practical topics, including: Principles and applications of important polymer characterization tools, such as light scattering, gel permeation chromatography, calorimetry, rheology, and spectroscopy Automatic continuous online monitoring of polymerization (ACOMP) reactions, a flexible platform that enables characterization tools to be employed simultaneously during reactions in order to obtain a complete record of multiple reaction features Modeling of polymerization reactions and numerical approaches Applications that optimize the manufacture of industrially important polymers Throughout the book, the authors provide step-by-step strategies for implementation. In addition, ample use of case studies helps readers understand the benefits of various monitoring strategies and approaches, enabling them to choose the best one to match their needs. As new stimuli-responsive and "intelligent" polymers continue to be developed, the ability to

monitor reactions will become increasingly important. With this book as their guide, polymer scientists and engineers can take full advantage of the latest monitoring strategies to optimize reactions in both the lab and the manufacturing plant.

Muscle Contraction

Electron-transfer and Transport Mechanisms in Low Ionic Strength Solutions

-- The latest information on hepatitis, HIV, and AIDS -- Complete coverage of all blood group systems -- New information on quality assurance and informational systems in the blood bank -- Case histories give the reader a picture of what is going on behind the scenes -- Summary charts at the end of each chapter identify for students the most important information to know for clinical rotations -- Helpful pedagogical tools, including chapter outlines, objectives, review questions, and a glossary -- An extensive package of illustrations, including 20 plates of full-color drawings and photomicrographs -- Procedural appendices at the end of selected chapters -- Antigen-Antibody Characteristic Chart on the inside covers of the book provides easy access to the vast amount of information related to the blood group systems

Molecular Biology

Water and Ions in Biological Systems

When the size of a machine approaches the nanometer scale, thermal fluctuations become large compared to the energies that drive the motor. The control of motion at the nanoscale therefore requires physical understanding and technical approaches that are fundamentally different from those that are successful at the macroscale. This volume provides an introduction to the state-of-the-art of controlled nanoscale motion in biological and artificial systems. Topics include the control and function of protein motors, the physics of non-equilibrium Brownian motion, and the physics and fabrication of synthetic molecular motors. The chapters in this book are based on selected contributions on the 2005 Nobel Symposium to Controlled Nanoscale Motion and are written by leading experts in their fields.

Electrophoretic and Biochemical Studies of Erythrocyte Structure

This issue will assist the practicing pediatrician with providing evidence-based care to children with common, rare, inherited and acquired hematological disorders whom they regularly see in general pediatric practice. The information in this edition will support a general pediatrician’s understanding of recently developed diagnostic and therapeutic tools--for instance, techniques for the assessment of transfusional iron overload in chronically transfused patients – resulting in better surveillance of medication side effects and improved support for

patients who are prescribed with complex chelation regimens. New, improved therapeutic approaches to treatment of children with venous thromboembolic disease have recently been introduced; affected patients often require close monitoring in their communities through the general pediatrician whose practice will be enhanced by information that has been prepared by pediatric specialists with pediatric patients in mind.

Novel Approaches in Biosensors and Rapid Diagnostic Assays

Contents: The Gas Law, Thermodynamics, Chemical Equilibrium, Solutions, Electrochemistry, Acids and Bases, Chemical Kinetics, The Kinetics of Enzyme Catalyzed Reactions, Spectroscopy, Macromolecules.

Plant-Soil Interactions at Low pH

Prior to the emergence of the sliding filament model, contraction theories had been in abundance. In the absence of the kinds of structural and biochemical information available today, it has been a simple matter to speculate about the possible ways in which tension generation and shortening might occur. The advent of the sliding filament model had an immediate impact on these theories; within several years they fell by the wayside, and attention was redirected towards mechanisms by which the filaments might be driven to slide by one another. In terms of identifying the driving mechanism, the pivotal observa tion was the electron micrographic

indentification of cross-bridges extending from the thick filaments. It was quite naturally assumed that such bridges, which had the ability to split ATP, were the molecular motors, i.e., that they were the sites of mechanochemical transduction. Out of this presumption grew the cross-bridge model. in which filament sliding is presumed to be driven by the cyclic interaction of cross-bridges with complementary actin sites located along the thin filaments.

Environmental and Low Temperature Geochemistry

Adsorption of Metals by Geomedia

Atmospheric Environmental Research

Molecular Cardiology for the Cardiologist provides a short, easily readable summary of what the new biology brings to cardiology. With this in mind, special efforts have been made to present many comprehensive schemes and drawings, as well as teaching tables. The five parts of the book provide a general introduction to the new language of biology; the normal structure of the heart and blood vessels; the physiopathology and the new therapeutic avenues that have been opened up by the new biology. A concise summary of the keys that assist the cardiologist or student who seeks to learn and read more about this field. Provides practical examples to illustrate the clinical interest of the new

approach.

Issues in General Food Research: 2011 Edition

Virtually all factors affecting the extent of metal adsorption on geomedia ranging from single minerals to sediments and soils are examined, including the effects of selected anions, competition among metals, pH, metal concentration, loading, variable metal adsorption capacity, ionic strength, hydrogen exchange and stoichiometry, solids concentration, and artifact effects of precipitation.

Molecular Cardiology for the Cardiologists

This book presents a summary of the application and instrumentation of cell electrophoresis. The method of making cell purification and characterization possible according to the cellular negative surface charge density is discussed, and ideas for future developments are explained. The negative electrostatic forces at cell surfaces provide information about cell-cell interaction, blood vessel sealing, cytokine actions, cell transformation, ion transport phenomena, and other biological phenomena. Recalculations of the physical principles of cell electrophoresis reveal possibilities for removing disruptive factors caused by electrical current, heat, and sedimentation. The introduction of computer technology, the performance of simultaneous two-parameter measurements, and the application of cell-

friendly but current-inert buffer systems render the method more reliable and efficient.

Monitoring Polymerization Reactions

Issues in General Food Research / 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about General Food Research. The editors have built Issues in General Food Research: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about General Food Research in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in General Food Research: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Geochemistry

Canadian Journal of Medical Technology

Antibody-Drug Conjugates

This is an extended version of lectures that were held at the summer workshop Atmosphiirische Umweltforschung im Spannungsfeld zwischen Technik und Natur (At mospheric Environmental Research between Technology and Nature) at the Techni 16, 1996. We were very happy to have Paul J. Crutzen, cal University in Cottbus on July winner of the Nobel Prize for chemistry in 1995, presenting the key lecture on glo bally changing chemistry in the atmosphere. Over the last decades, atmospheric chem istry has been established step by step, not just as an applied discipline of chemistry, but also as a key discipline for our understanding of air pollution, biogeochemical cycling, and climactic processes as well. In fact, the new definition of meteorology as the science of physics and chemistry of the atmosphere expresses this development very well. The chemistry of the atmosphere is strongly influenced by anthropogenic emissions, even on a global scale. As a result of emissions and chemical reactions, the chemical composition of the atmosphere influences the ecosystems directly via depo sition of trace substances, and indirectly by changing the physical climate. Therefore, in this book we combined state-of-the-art lectures describing the physical and chemi cal status of the atmosphere and selected issues representing the interface between atmosphere, technology and nature. Oxidising capacity, heterogeneous processes and acidity still remain as key issues in atmospheric chemistry, even in regions where efficient air control measures have been adopted resulting in reduction of primary atmospheric pollutants.

The Journal of Cell Biology

Chapters have been totally rewritten and some new chapters have been added especially on myeloid malignancies, in line with the WHO 2008 Classification All chapters have been revised to include new aspects of molecular biology and updated concerning flow cytometry diagnostics Greater emphasis on practical diagnostic aspects for all disorders Brand new editorial and contributing author team. Full Online text through Expert Consult. Full downloadable Image Bank

Aging, Carcinogenesis, and Radiation Biology

Surface plasmon resonance (SPR) plays a dominant role in real-time interaction sensing of biomolecular binding events. This book focuses on a total system description including optics, fluidics and sensor surfaces. It covers all commercial SPR systems in the market. It is the first of its kind and fills a gap in the technical literature as no other handbook on SPR is currently available. The final chapter discussed new trends and a vision is given for future developments and needs of the SPR market. This excellent handbook provides comprehensive information with easy to use, stand-alone chapters and will be of great use to anyone one working with or affiliated to the technology.

Practical Blood Transfusion

Proceedings of the Twelfth International Plant Nutrition Colloquium, 21--26 September 1993, Perth, Western Australia

Blood and Bone Marrow Pathology E-Book

Pediatric Hematology, An Issue of Pediatric Clinics,

In the medical, food, and environmental fields there is a continuous demand for inexpensive and sensitive analytical devices that are reliable, rapid, capable of high-throughput screening, and have low cost per test unit. Small and portable biosensor devices are designed to fulfill most of these requirements, and can be used in laboratory and on-site field testing. This volume discusses major issues in optical, acoustic and electrochemical-based biosensors, biochips, sensing recognition elements, and biosensors for medical and environmental applications. The papers presented at the conference represent basic and applied research studies in the fields of diagnostic assays and biosensor development. Novel technologies, such as arrays of sensors using high-density fiber optics to sense labeled or unlabeled oligonucleotides, and patterned arrays of recognition elements, demonstrated the capability of biosensors to analyze multiple analytes.

The Adrenal Medulla, 1989-1991

This book represents the third in a series of International Conferences related to Alzheimer's (AD) and Parkinson's (PD) diseases. The first one took place in Eilat, Israel, in 1985; and the second one in Kyoto, Japan, in 1989. This book contains the full text of oral and poster presentations from the Third International Conference on Alzheimer's and Parkinson's Diseases: Recent Developments, held in Chicago, Illinois, U.S.A. on November 1-6, 1993. The Chicago Conference was attended by 270 participants. The Scientific Program was divided into nine oral sessions, a keynote presentation, and a poster session. The conference culminated in a Round Table Discussion involving all of the participants in the conference. The four and one-half day meeting served as an excellent medium for surveying the current status of clinical and preclinical developments in AD and PD. There were 59 oral presentations and 93 posters. This book incorporates a majority of both.

Alzheimer's and Parkinson's Diseases

The student of biolo,gical science in his final years as an undergraduate and his first years as a graduate is expected to gain some familiarity with current research at the frontiers of his discipline. New research work is published in a perplexing diversity of publications and is inevitably concerned with the minutiae of the subject. The sheer number of research journals and papers also causes confusion and difficulties of assimilation. Review articles usually presuppose a background knowledge of the field and are inevitably rather restricted in scope. There is thus

a need for short but authoritative introductions to those areas of modern biological research which are either not dealt with in standard introductory textbooks or are not dealt with in sufficient detail to enable the student to go on from them to read scholarly reviews with profit. This series of books is designed to satisfy this need. The authors have been asked to produce a brief outline of their subject assuming that their readers will have read and remembered much of a standard introductory textbook of biology. This outline then sets out to provide by building on this basis, the conceptual framework within which modern research work is progressing and aims to give the reader an indication of the problems, both conceptual and practical, which must be overcome if progress is to be maintained.

Plant Nutrition — from Genetic Engineering to Field Practice

Genitourinary Cancer

The Adrenal Medulla, 1989-1991 offers a comprehensive review of the world literature on the adrenal medulla published during this period. The book emphasizes the role of the adrenal medulla in advancing our knowledge of neuroscience; for example, the Nobel Prize-winning technique of patch clamping has been applied to stimulus-secretion coupling in adrenal chromaffin cells. The book also discusses such topics as the ability to image the distribution of calcium within individual neural cells,

the ability to measure individual packets of neurotransmitter as they are released from cells, and advances in the understanding of ionic channels, cell-to-cell interactions, cell proliferation, sympathoadrenal ontogeny, growth factors, enzymatic biosynthetic pathways, electron and proton transfer, and neural pathways. Topics covered in clinical medicine include recent progress in the transplantation of the adrenal medulla to the brain as a treatment for Parkinson's disease and the latest reports on pheochromocytoma. The Adrenal Medulla, 1989-1991 is an essential book for neurobiologists, neurochemists, experimental biologists, physiologists, cell biologists, and informed clinicians.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION