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2021-08-23

### MALONE NEAL

*The Impact of Food Bioactives on Health* CRC Press

This book highlights electromagnetic actuation (EMA) and sensing systems for a broad range of applications including targeted drug delivery, drug-release-rate control, catheterization, intravitreal needleless injections, wireless magnetic capsule endoscopy, and micromanipulations. It also reviews the state-of-the-art magnetic actuation and sensing technologies with remotely controlled targets used in biomedicine.

[A History](#) Springer Nature

Specific ion effects are important in numerous fields of science and technology. They have been discussed for over 100 years, ever since the pioneering work done by Franz Hofmeister and his group in Prague. Over the last decades, hundreds of examples have been published and periodically explanations have been proposed. However, it is only recently that a profound understanding of the basic effects and their reasons could be achieved. Today, we are not far from a general explanation of specific ion effects. This book summarizes the main new ideas that have come up in the last ten years. In this book, the efforts of theoreticians are substantially supported by the experimental results stemming from new and exciting techniques. Both the new theoretical concepts and the experimental landmarks are collected and critically discussed by eminent scientists and well-known specialists in this field. Beyond the rigorous explanations, guidelines are given to non-specialists in order to help them understand the general rules governing specific ion effects in chemistry, biology, physics and engineering. Sample Chapter(s). Foreword (36 KB). Chapter 1: An Attempt of a General Overview (1,279 KB). Contents: Examples, Ion Properties and Concepts: An Attempt of a General Overview (W Kunz & R Neueder); Phospholipid Aggregates as Model Systems to Understand Ion-Specific Effects: Experiments and Models (E Leontidis); Modelling Specific Ion Effects in Engineering Science (C Held & G Sadowski); Promising Experimental Techniques: Linear and Non-linear Optical Techniques to Probe Ion Profiles at the Air/CoWater Interface (H Motschmann & P Koelsch); X-Ray Studies of Ion Specific Effects (P Viswanath et al.); The Determination of Specific Ion Structure by Neutron Scattering and Computer Simulation (G W Neilson et al.); Specific Ion Effects at the Air/CoWater Interface: Experimental Studies (V S J Craig & C L Henry); Newest Results from Theory and Simulation: Ion Binding to Biomolecules (M Lund et al.); Ion-Specificity: From Solvation Thermodynamics to Molecular Simulations and Back (J Dzubiel et al.); HNC Calculations of Specific Ion Effects (L Belloni & I Chikina); Modifying the Poisson/COBoltzmann Approach to Model Specific Ion Effects (M BostrAm et al.); Summary and Conclusions: An Attempt of a Summary (W Kunz & G J T Tiddy). Readership: Graduate students and researchers in physical chemistry, biological chemistry and chemical engineering; colloidal scientists."

[Calculus and Its Applications](#) Springer Science & Business Media

NOTE: You are purchasing a standalone product; MyMathLab does not come packaged with this content. If you would like to purchase both the physical text and MyMathLab, search for: 013379556X / 9780133795561 Calculus And Its Applications Plus MyMathLab with Pearson eText -- Access Card Package Package consists of: 0321431308 / 9780321431301 MyMathLab -- Glue-in Access Card 0321654064 / 9780321654069 MyMathLab Inside Star Sticker 0321979397 / 9780321979391 Calculus And Its Applications MyMathLab should only be purchased when required by an instructor. Calculus and Its Applications, Eleventh Edition, remains a best-selling text because of its accessible presentation that anticipates student needs. The writing style is ideal for today's students, providing intuitive explanations that work with the carefully crafted artwork to help them visualize new calculus concepts. Additionally, the text's numerous and up-to-date applications from business, economics, life sciences, and social sciences help motivate students. Algebra diagnostic and review material is available for those who need to strengthen basic skills. Every aspect of this revision is designed to motivate and help students to more readily understand and apply the mathematics.

**Biology of Termites: a Modern Synthesis** Woodhead Publishing

This book offers a broad-ranging assessment of current efforts of the molecular, cellular, hormonal, nutritional and lifestyle strategies being tested and applied by biogerontologists in the search for effective means of intervention, prevention and treatment of age-related diseases, and for achieving healthy old age. Employing a semi-academic style, the book presents data from experimental systems, while focusing primarily on their applications to humans in the prevention and treatment of age-related impairments.

[Proceedings of the 11th IAPTC&B Congress, August 13-18, 2006 Beijing, China](#) Springer Science & Business Media

This book constitutes the refereed proceedings of the 13th International Conference on Information and Communications Security, ICICS 2011, held in Beijing, China, in November 2011. The 33 revised full papers presented together with an invited talk were carefully reviewed and selected from 141 submissions. The papers are organized in topical sections on digital signatures, public key encryption, cryptographic protocols, applied cryptography, multimedia security, algorithms and evaluation, cryptanalysis, security applications, wireless network security, system security, and network security.

[Nonlinear Photonics](#) Pearson College Division

This book provides a comprehensive overview of the field of plasma catalysis, regarded as a promising alternative to thermal processes for energy and environmental applications. It bridges the gap between the plasma and catalysis research communities, covering both the fundamentals of plasma catalysis and its application in environmental and energy research. The first section of the book offers a broad introduction to plasma catalysis, covering plasma-catalyst systems, interactions, and modeling. The core of the book then focuses on different applications, describing a wide range of plasma-catalytic processes in catalyst synthesis, environmental clean-up, greenhouse gas conversion and synthesis of materials for energy applications. Chapters cover topics ranging from removal of NO<sub>x</sub> and VOCs to conversion of methane, carbon dioxide and the reforming of ethanol and methanol. Written by a group of world-leading researchers active in the field, the book forms a valuable resource for scientists, engineers and students with different research backgrounds including plasma physics, plasma chemistry, catalysis, energy, environmental engineering, electrical engineering and material engineering.

**Nonlinear Structural Dynamics and Damping** John Wiley & Sons

Since the publication of the second edition of this handbook in 1993, the field of photochemical

sciences has continued to expand across several disciplines including organic, inorganic, physical, analytical, and biological chemistries, and, most recently, nanosciences. Emphasizing the important role light-induced processes play in all of these fields

[The Interface Between Neurons and Global Brain Function](#) Springer Science & Business Media

Surface chemistry is an essential and developing area of physical chemistry and one that has become increasingly interdisciplinary. The Second Edition of *Surface Science: Foundations of Catalysis and Nanoscience* has been fully revised and updated to reflect all the latest developments in the field and now includes an extensive discussion about nanoparticle growth and the quantum confinement effects in nanoscale systems. Two new chapters have been added and discuss *The Liquid/Solid Interface and Non-Thermal Reactions*, and *Photon and Electron Stimulated Chemistry and Atom Manipulation*. There are now many more worked examples included throughout to help students develop their problem-solving skills.

[Popular Electronics](#) World Scientific

This book features selected research papers presented at the International Conference on Evolutionary Computing and Mobile Sustainable Networks (ICECMSN 2020), held at the Sir M. Visvesvaraya Institute of Technology on 20–21 February 2020. Discussing advances in evolutionary computing technologies, including swarm intelligence algorithms and other evolutionary algorithm paradigms which are emerging as widely accepted descriptors for mobile sustainable networks virtualization, optimization and automation, this book is a valuable resource for researchers in the field of evolutionary computing and mobile sustainable networks.

**Astrophysical Data** Springer Science & Business Media

This volume of *Astrophysical Data* deals with Planets and Stars; a second volume, Part II, will give data for Galaxies and the Universe. They both provide basic data for use by all scientists, from the amateur astronomer to the professional astrophysicist. In this first volume, we not only provide physical parameters of planets, stars and their environment, but we also provide the celestial coordinates required to observe them. Here we use c.g.s. units, for they are the most commonly used in astronomy and astrophysics; but our volume begins with astronomical and physical constants and the conversion factors needed for other units. The next section concerns the planets and their satellites; it singles out the Earth and Moon for special treatment. Spacecraft rendezvous with the planets and satellites have led to improved values for their atmospheric compositions, orbital parameters, magnetic fields, masses, radii, rotation periods, and surface pressures and temperatures. This section also contains data for the asteroids, comets and their debris. We then discuss everyday stars, beginning with the Sun, and continuing with basic stellar data, the brightest stars and nearby stars. Special categories of stars, such as the Wolf-Rayet stars, magnetic stars, flare stars, and RS CVn binary stars, are included.

**Extremophiles in Deep-Sea Environments** Pearson

The revised 13th edition of the essential reference for the prescribing of drugs for patients with mental health disorders The revised and updated 13th edition of *The Maudsley Prescribing Guidelines in Psychiatry* provides up-to-date information, expert guidance on prescribing practice in mental health, including drug choice, treatment of adverse effects and how to augment or switch medications. The text covers a wide range of topics including pharmacological interventions for schizophrenia, bipolar disorder, depression and anxiety, and many other less common conditions. There is advice on prescribing in children and adolescents, in substance misuse and in special patient groups. This world-renowned guide has been written in concise terms by an expert team of psychiatrists and specialist pharmacists. The Guidelines help with complex prescribing problems and include information on prescribing psychotropic medications outside their licensed indications as well as potential interactions with other medications and substances such as alcohol, tobacco and caffeine. In addition, each of the book's 165 sections features a full reference list so that evidence on which guidance is based can be readily accessed. This important text: Is the world's leading clinical resource for evidence-based prescribing in day-to-day clinical practice and for formulating prescribing policy Includes referenced information on topics such as transferring from one medication to another, prescribing psychotropic medications during pregnancy or breastfeeding, and treating patients with comorbid physical conditions, including impaired renal or hepatic function. Presents guidance on complex clinical problems that may not be encountered routinely Written for psychiatrists, neuropharmacologists, pharmacists and clinical psychologists as well as nurses and medical trainees, *The Maudsley Prescribing Guidelines in Psychiatry* are the established reference source for ensuring the safe and effective use of medications for patients presenting with mental health problems.

[Fundamentals and Applications](#) Morgan & Claypool Publishers

The chapters of this book report cutting-edge research on molecular events in adiposity and type 2 diabetes, thus opening the way for innovative drug-based therapeutic strategies. It addresses all those who wish to keep in touch with recent developments in the field.

[A Report from ... for the Six Months' Period November 1, 1953 - April 30, 1954](#) John Wiley & Sons

Thermally Activated Delayed Fluorescence Organic Light-Emitting Diodes (TADF-OLEDs) comprehensively introduces the history of TADF, along with a review of fundamental concepts. Then, TADF emitters with different colors, such as blue, green, red and NIR as well as white OLEDs are discussed in detail. Other sections cover exciplex-type TADF materials, emerging application of TADF emitters as a host in OLEDs, and applications of TADF materials in organic lasers and biosensing. Discusses green, blue, red, NIR and white TADF emitters and their design strategies for improved performance for light-emitting diode applications Addresses emerging materials, such as molecular and exciplex-based TADF materials Includes emerging applications like lasers and biosensors

**Specific Ion Effects** Cambridge University Press

This book is composed of 6 papers. The first paper reports a novel technique for the selective emitter formation by controlling the surface morphology of Si wafers. Selective emitter (SE) technology has attracted renewed attention in the Si solar cell industry to achieve an improved conversion efficiency of passivated-emitter rear-contact (PERC) cells. In the second paper, the temperature dependence of the parameters was compared through the PERC of the industrial-scale solar cells. As a result of their analysis, PERC cells showed different temperature dependence for the fill factor loss as temperatures rose. The third paper reports the effects of carrier selective front contact layer and defect state of hydrogenated amorphous silicon passivation layer/n-type crystalline silicon interface. The results demonstrated the effects of band offset determined by band bending at the interface of the passivation layer and carrier selective front contact layer. In addition, the nc-SiO<sub>x</sub>: H CSFC layer not only reduces parasitic absorption loss but also has a tunneling effect



and field-effect passivation. The fourth paper reports excimer laser annealing of hydrogenated amorphous silicon film for TOPCon solar cell application. This paper analyzes the crystallization of a-Si:H via excimer laser annealing (ELA) and compared this process with conventional thermal annealing. The fifth paper reports the contact mechanism between Ag-Al and Si and the change in contact resistance ( $R_c$ ) by varying the firing profile.  $R_c$  was measured by varying the belt speed and peak temperature of the fast-firing furnace. The sixth paper reports a silicon tandem heterojunction solar cell based on a ZnO/Cu<sub>2</sub>O subcell and a c-Si bottom subcell using electro-optical numerical modeling. The buffer layer affinity and mobility together with a low conduction band offset for the heterojunction are discussed, as well as spectral properties of the device model.

#### Calculus and Its Applications MDPI

"How did life originate and why were left-handed molecules selected for its architecture?" This question of high public and interdisciplinary scientific interest is the central theme of this book. It is widely known that in processes triggering the origin of life on Earth, the equal occurrence, the parity between left-handed amino acids and their right-handed mirror images, was violated. The balance was inevitably tipped to the left – as a result of which life's proteins today exclusively implement the left form of amino acids. Written in an engaging style, this book describes how the basic building blocks of life, the amino acids, formed. After a comprehensible introduction to stereochemistry, the author addresses the inherent property of amino acids in living organisms, namely the preference for left-handedness. What was the cause for the violation of parity of amino acids in the emergence of life on Earth? All the fascinating models proposed by physicists, chemists and biologist are vividly presented including the scientific conflicts. The author describes the attempt to verify any of those models with the chirality module of the ROSETTA mission, a probe built and launched with the mission to land on a comet and analyse whether there are chiral organic compounds that could have been brought to the Earth by cometary impacts. A truly interdisciplinary astrobiology book, "Amino Acids and the Asymmetry of Life" will fascinate students, researchers and all readers with backgrounds in natural sciences. With a foreword by Henri B. Kagan.

#### Amino Acids and the Asymmetry of Life Elsevier

Biology of Termites, a Modern Synthesis brings together the major advances in termite biology, phylogenetics, social evolution and biogeography. In this new volume, David Bignell, Yves Roisin and Nathan Lo have brought together leading experts on termite taxonomy, behaviour, genetics, caste differentiation, physiology, microbiology, mound architecture, biogeography and control. Very strong evolutionary and developmental themes run through the individual chapters, fed by new data streams from molecular sequencing, and for the first time it is possible to compare the social organisation of termites with that of the social Hymenoptera, focusing on caste determination, population genetics, cooperative behaviour, nest hygiene and symbioses with microorganisms. New chapters have been added on termite pheromones, termites as pests of agriculture and on destructive invasive species.

#### The University Address Book Springer Science & Business Media

Restriction enzymes cleave DNA at specific recognition sites and have many uses in molecular biology, genetics, and biotechnology. More than 4000 restriction enzymes are known today, of which more than 621 are commercially available, justifying their description by Nobel Prize winner Richard Roberts as "the workhorses of molecular biology." This book by Wil Loenen is the first full-length history of these invaluable tools, from their recognition in the 1950s to the flowering of their development in the 1970s and 1980s to their ubiquitous availability today. Loenen has worked with restriction enzymes throughout her career as a research scientist, during which she came to know many of the leaders in this field personally and professionally. She is the author of several authoritative and widely appreciated reviews of the enzymes' biology. Her book was written with the close assistance of several of the field's pioneers, including Rich Roberts, Stuart Linn, Tom Bickle, Steve Halford, and the late Joe Bertani. The seed for the book was sown at a retirement party for Noreen Murray, to whom the book is dedicated, and its roots lie in a remarkable 2013 conference at Cold Spring Harbor Laboratory that celebrated the people and events that were vital to the field's development. Funding for the book was made possible by the Genentech Center for the History of Molecular Biology and Biotechnology at Cold Spring Harbor Laboratory.

*Applications to Civil, Mechanical and Chemical Engineering* Springer

"Infogest" (Improving Health Properties of Food by Sharing our Knowledge on the Digestive Process) is an EU COST action/network in the domain of Food and Agriculture that will last for 4 years from April 4, 2011. Infogest aims at building an open international network of institutes undertaking multidisciplinary basic research on food digestion gathering scientists from different origins (food scientists, gut physiologists, nutritionists...). The network gathers 70 partners from academia, corresponding to a total of 29 countries. The three main scientific goals are: Identify the beneficial food components released in the gut during digestion; Support the effect of beneficial food components on human health; Promote harmonization of currently used digestion models. Infogest meetings highlighted the need for a publication that would provide researchers with an insight into the advantages and disadvantages associated with the use of respective in vitro and ex vivo assays to evaluate the effects of foods and food bioactives on health. Such assays are particularly important in situations where a large number of foods/bioactives need to be screened rapidly and in a cost effective manner in order to ultimately identify lead foods/bioactives that can be the subject of in vivo assays. The book is an asset to researchers wishing to study the health benefits of their foods and food bioactives of interest and highlights which in vitro/ex vivo assays are of greatest relevance to their goals, what sort of outputs/data can be generated and, as noted above, highlight the strengths and weaknesses of the various assays. It is also an important resource for undergraduate students in the 'food and health' arena.

#### Information and Communication Security John Wiley & Sons

Fundamentals of 5G Mobile Networks provides an overview of the key features of the 5th Generation (5G) mobile networks, discussing the motivation for 5G and the main challenges in developing this new technology. This book provides an insight into the key areas of research that will define this new system technology paving the path towards future research and development. The book is multi-disciplinary in nature, and aims to cover a whole host of intertwined subjects that will predominantly influence the 5G landscape, including Future Internet, cloud computing, small cells and self-organizing networks (SONs), cooperative communications, dynamic spectrum management and cognitive radio, Broadcast-Broadband convergence, 5G security challenge, and green RF. The book aims to be the first of its kind towards painting a holistic perspective on 5G Mobile, allowing 5G stakeholders to capture key technology trends on different layering domains and to identify potential inter-disciplinary design aspects that need to be solved in order to deliver a 5G Mobile system that operates seamlessly as a piece of the 5G networking jigsaw. Key features: • Addresses the fundamentals of 5G mobile networks serving as a useful study guide for mobile researchers and system engineers aiming to position their research in this fast evolving arena. • Develops the Small cells story together with next generation SON (self-organizing networks) systems as solutions for addressing the unprecedented traffic demand and variations across cells. • Elaborates Mobile Cloud technology and Services for future communication platforms, acting as a source of inspiration for corporations looking for new business models to harness the 5G wave. • Discusses the open issues facing broad scale commercial deployment of white space networks, including the potential for applications towards the future 5G standard. • Provides a scientific assessment for broadcast and mobile broadband convergence coupled together with a 'win-win' convergence solution to harmonize the broadcasting and mobile industry. • Describes the key components, trends and challenges, as well as the system requirements for 5G transceivers to support multi-standard radio, a source of inspiration for RF engineers and vendors to tie down the requirements and potential solutions for next generation handsets.

#### **13th International Conference, ICICS 2011, Beijing, China, November 23-26, 2011, Proceedings** Springer Science & Business Media

Atomically precise metal nanocluster research has emerged as a new frontier. This book serves as an introduction to metal nanoclusters protected by ligands. The authors have summarized the synthesis principles and methods, the characterization methods and new physicochemical properties, and some potential applications. By pursuing atomic precision, such nanocluster materials provide unprecedented opportunities for establishing precise relationships between the atomic-level structures and the properties. The book should be accessible to senior undergraduate and graduate students, researchers in various fields (e.g., chemistry, physics, materials, biomedicine, and engineering), R&D scientists, and science policy makers.