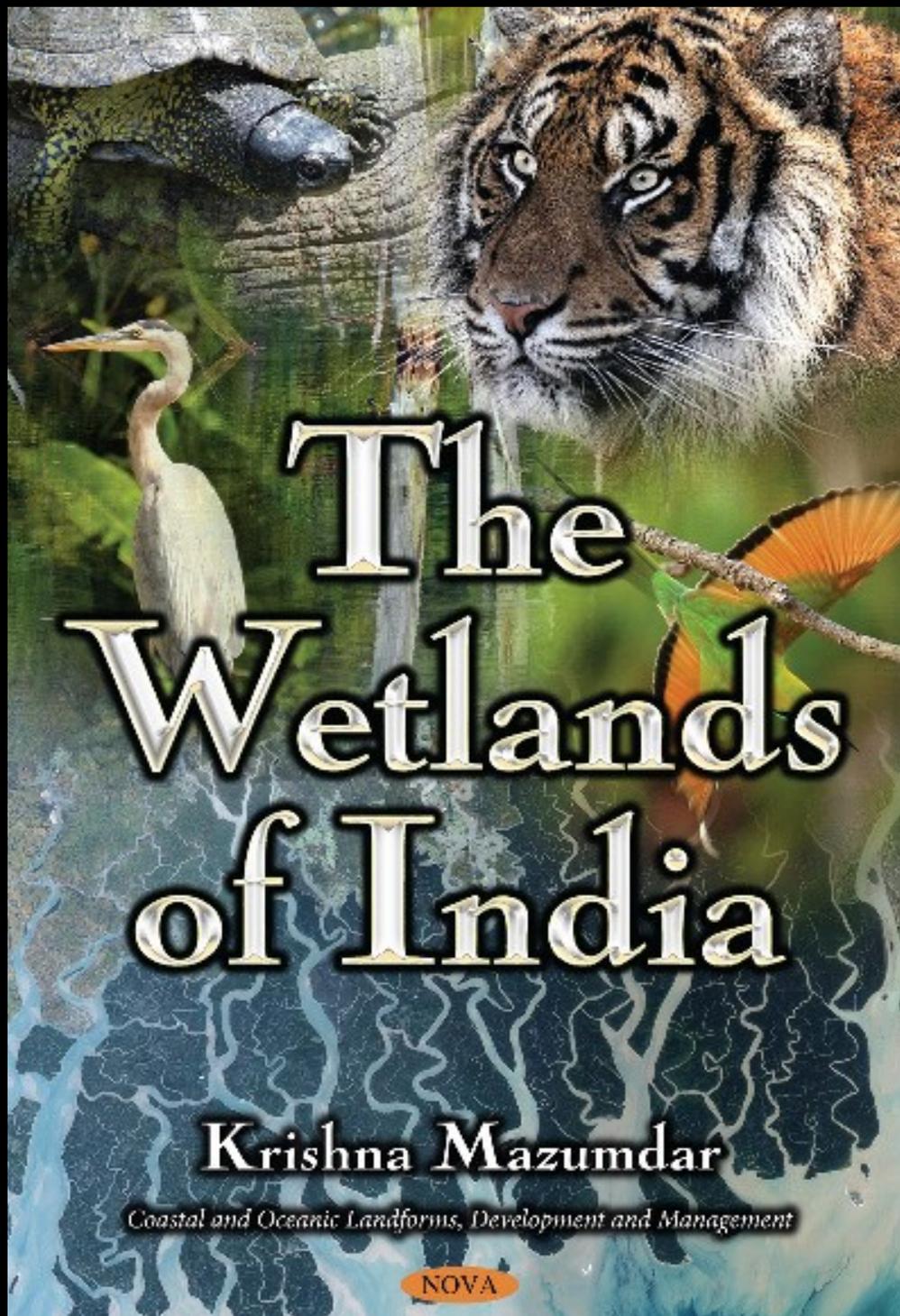




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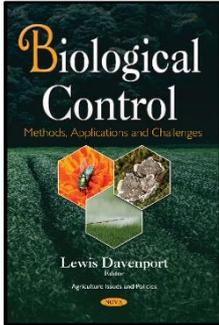
PHYSICS

Titles Received in November 2017

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Agriculture & Farming



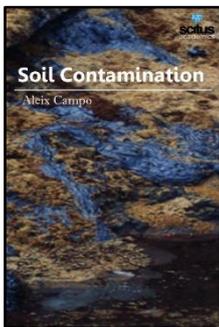
Biological Control

Methods, Applications & Challenges (Agriculture Issues & Policies Series)

Edited by Lewis Davenport

Biological control is a plant protection strategy widely-used in horticultural cropping systems to regulate insect and mite pest populations on greenhouse-grown ornamentals and vegetables. The use of natural enemies in controlling the SWD has been researched in Chapter One. Chapter Two aims to recover the history and present the current status of the biological control of fruit flies of the genus *Anastrepha* and to show perspectives of the use of such method. Chapter Three discusses the advantages and issues affiliated with using natural enemies in conjunction with pesticides and provides insights on the practicality of using both plant protection strategies simultaneously. Chapter Four describes screening methods for candidate biocontrol agents, application methods and challenges associated with biological control of fungal pathogens by antagonistic micro-organisms.

PB 9781536124163 £78.50 September 2017 Nova Science Publishers 128 pages



Soil Contamination

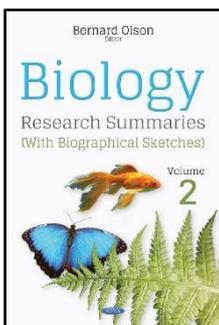
(Agricultural Sciences Series)

Edited by Aleix Campo

Soil contamination has rigorously improved over the last decades, mainly due to petroleum hydrocarbons, solvents, pesticides, lead and other heavy metals from industrial wastes and human activities. Soil contamination or soil pollution is caused by the presence of xenobiotic (human-made) chemicals or other alteration in the natural soil environment. Sustainable efforts are required to develop sound risk assessment procedures, remediation strategies and sustainable soil management policies. Contaminated or polluted soil directly affects human health through direct contact with soil or via inhalation of soil contaminants which have vaporized; potentially greater threats are posed by the infiltration of soil contamination into groundwater aquifers used for human consumption, sometimes in areas apparently far removed from any apparent source of above ground contamination. Not unexpectedly, soil contaminants can have significant deleterious consequences for ecosystems. Soil Contamination provides comprehensive overview in the perspective of contaminated soil monitoring and remediation approaches. Soil is an inimitable resource that sustains life on the planet, challenged by food and energy demands of an increasing population. Therefore, soil contamination set up a critical issue to be addressed if we are to secure the life quality of present and future generations. The book covers topics on monitoring of dioxin, furan, hydrocarbons and heavy metals level in soils - bioindicators and biomarkers for the assessment of soil toxicity - use of reflectance spectroscopy for soil contaminants and waste material detection - remediation technologies and strategies.

HB 9781681175362 £160.99 January 2017 Scitus Academics 330 pages

Biology & Life Sciences



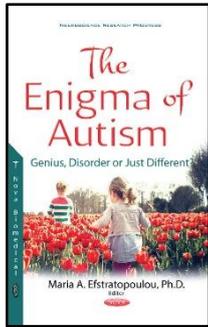
Biology Research Summaries (with Biographical Sketches)

Volume 2 (Biology Research Summaries Series)

Edited by Bernard Olson

This book provides research summaries from a number of different focuses in biology, and compiles biographical sketches of top professionals in this important field.

HB 9781536102086 £219.50 October 2017 Nova Science Publishers 436 pages



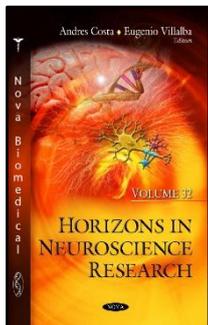
Enigma of Autism

Genius, Disorder or Just Different? (Neuroscience Research Progress Series)

Edited by Maria A Efstratopoulou

Those of us fortunate enough to work with children and young people on the Autistic Spectrum learn something new every day. The study of autism is a dynamic, rapidly evolving world in which research outcomes, new ideas and innovative practices are continuously emerging in an apparently endless stream. During the last few years, there have been a number of important developments in the field, which have dramatically affected the lives and experiences of people with autism and their families, and have moved forward with thinking in the field exponentially. The Enigma of Autism is a recourse for everyone who is dedicated not only to research, but also to the education and wellbeing of children and adults on the Autistic Spectrum. The text presents the latest research findings in the field and provides coping strategies for professionals working with students with autism in special education or mainstream settings. The book is intended to serve as not only a research textbook for researchers and professionals, but also aims to serve as a user-friendly guide and resource for the families who have a child in the Spectrum. Socialising and communicating can be challenging for many autistic people. Many really do want to make friends and form relationships but find it hard. There may be difficulty in reading social cues and knowing when to speak or listen and facial expressions can be impossible to read, resulting in social isolation. The behaviour is the child's attempt to communicate some need or feeling. It is our role as professionals to consider what the child is trying to express. We need to recognise that there is some legitimacy to the child's needs and/or feelings that motivate the behaviour. In Part I of this book, different aspects and characteristics of autism are presented in separate chapters. Problems concerning behaviour, sensory sensitivity, and anxiety issues and their implications on the social lives of people with autism are discussed in depth. While rearing a child with autism can result in marked psychological distress and mental health problems for mothers, there is increasing evidence that parents of children with disabilities demonstrate considerable strength, articulating the positive contributions of their child's difficulties to their lives and wellbeing. In Part II, the psychological health of families and strategies to cope are discussed using data from interviews and friendly discussions with parents and family members of children with autism. Finally, in Part III intervention strategies and educational approaches are presented in an attempt to help parents and professionals to have a clear overview of the latest practices as well as their usefulness and desirable effects. A fundamental role of Part III is to offer a number of possible solutions with the belief that scientifically valid information will be useful to both educational professionals and families in real life situations, and that this information can help reduce the emotional pressure and anxiety caused by the lack of knowledge.

HB 9781536125979 £152.50 October 2017 Nova Science Publishers 227 pages



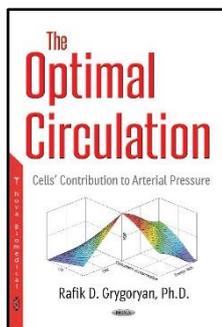
Horizons in Neuroscience Research

Volume 32 (Horizons in Neuroscience Research Series)

Edited by Andres Costa, Eugenio Villalba

This book provides readers with the latest developments in neurosciences research. Chapter One reports on how neural network learning is possible in patients who are not conscious including patients in the vegetative state. Chapter Two is written for educational therapists who are working with ASD cases and the aim is twofold. Firstly, it is to raise the awareness among educational therapists on current neuroscientific studies on the autistic brain and its ASCs (and hence, ASD). Secondly, it is to inform how the findings from these neuroimaging studies can be translated into praxiological implications in autism treatment plan design for educational therapists. Chapter Three studies the postoperative cognitive dysfunction (POCD) in patients after cardiac surgeries along with extensive review of the literature in this field. At least three types of POCD may be outlined, and therefore tests sensitive to each type of POCD should be included into test batteries. Chapter Four discusses the common types of brachial plexus injuries, local anatomy, exam findings, classification systems for injury severity, diagnostic tests and management. Chapter Five integrates the results of prior publications and describes additional findings and further implications providing indications that these intra- and intermuscular sequencing patterns are referenced to the cross-system relevance of "efficient movement coordination" in general, interlocking the whole range from intersegmental motor interactions down to the functional structures within specific muscles, as one functional entity. Chapter Six reports on strabismus which is the most frequent ocular surgery performed in childhood and requires anaesthesia that provides akinesia, analgesia, and sometimes ocular hypotonia, to adjust sutures. Chapter Seven studies the poster dorsal medial amygdala (MePD) which is involved in the display of reproductive behaviour in both male and female rats. Further studies demonstrated that it also integrates a subcortical 'social behaviour network' with additional, but selective modulatory roles.

HB 9781536124477 £238.50 November 2017 Nova Science Publishers 202 pages



Optimal Circulation

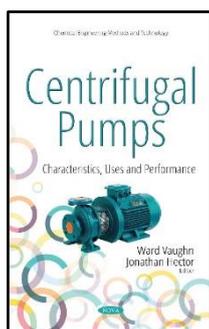
Cells' Contribution to Arterial Pressure (Cell Biology Research Progress Series)

Rafik D Grygoryan

Prevailing physiological concepts (PPC) of blood circulation consider the cardiovascular system (CVS) an autonomous system that has its own goal and mechanisms for achieving it. Physiologists agreed that complex neural and humoral controllers of a mean arterial pressure (MAP) indirectly alter the blood flows for satisfying cellular needs. However, PPCs are incapable of explaining the causes of long-term shifts of an MAP's rest level. In particular, this affects current understanding and cure technologies of arterial hypertension (AH). Considering AH as a disease, physicians seek a cure that effectively decreases the elevated pressure. This gave rise to the palliative cure softening of AH symptoms without an understanding of AH's primary causes. But this strategy, working until the patient intakes antihypertensive drugs, often leads to AH's further development, and in extreme cases current antihypertensive drugs are helpless. These limitations of PPC are forced to seek a circulation's extended physiological theory (EPT), explaining the mechanisms of both normal and altered MAPs. In the EPT presented in the book, CVS is considered a constituent part of a more complex functional super-system (FSS) that appeared in a multi-cellular animal organism during the co-evolution of specialized cells. The general goal of the FSS is to provide optimal physiochemical and energy states of the cell cytoplasm. To achieve this goal under a stochastic total and local variations of cells' activity, FSS should control: i) The cardiac output; ii) the regional and local blood flows; and iii) the chemical composition of both arterial and venous blood. Under chronic energy shortage, FSS should also provide an adequate increasing of ATP-synthesis in mitochondria of stagnated cells. So, under the ineffectiveness of current mitochondria, FSS must enrich the arterial blood by chemicals providing the biogenesis of mitochondria. However, neither the energy providers nor the providers of blood chemistry are properly involved in PC of the blood circulation. The EPT for the first time integrates the hemodynamic and metabolic aspects of cell life at the organism scale. It is proved that the CVS activity is inversely associated with the activity mechanisms controlling the rates of both pulmonary ventilation and erythropoiesis. Under significant and chronic energy deficiency, the cells activate additional FSS mechanisms, materially supporting the biogenesis of mitochondria. The activity of FSS mechanisms forming the chemical composition of arterial and venous blood is in reciprocal relationships with the function of CVS. So, the EPT associates the function of CVS with energy and metabolic problems in cells. The EPT concerns both traditional and additional determinants of the MAP level. It is proved that stochastic combinations of these determinants force the MAP level to "float". In particular, both the mitochondrial insufficiency and the chemical contamination of cytoplasm are capable of causing AH. The normal arterial pressure is always individual. Before correcting the altered arterial pressure, a complex medical examination for ascertaining the mitochondrial function, the status of the FSS mechanisms is recommended. The diagnosis of AH should be reoriented for detecting cellular abnormalities. The therapy of AH should be targeted at finding strategies for the optimizing the entire FSS function.

HB 9781536122954 £219.50 October 2017 Nova Science Publishers 355 pages

Chemical Engineering



Centrifugal Pumps

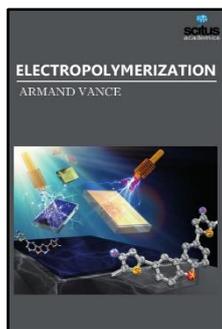
Characteristics, Uses & Performance

(Chemical Engineering Methods & Technology Series)

Edited by Ward Vaughn, Jonathan Hector

In Chapter One, Fujun Wang, Chaoyue Wang, Zhengjun Yang, Peijian Zhou, and Zhifeng Yao propose and examine a dynamic mixed nonlinear SGS model, with the results indicating that this wall-resolved near-wall solution could capture details more accurately. In Chapter Two, José González and Jesús M. Fernández present a study wherein the flow in a one stage, single volute centrifugal pump is examined at the Fluid Mechanics Laboratory at the Universidad de Oviedo. In Chapter Three, Hua-Shu Dou, Lulu Zheng, Zuchao Zhu, Xiaoping Chen, and Baoling Cui discuss the evolution of the separating flow and pressure variation distribution around the tongue region in a centrifugal pump. In Chapter Four, Angelo Leto discusses centrifugal pumps for liquid-propellant engines for space propulsion applications. Jamshid H. Karimov, MD, PhD, Shinji Okano, MD, and Kiyotaka Fukamachi, MD, PhD review continuous-flow mechanical circulatory support technology in Chapter Five. Next, Susanta K. Das wraps up the book with an experiment on the effect of impeller vane geometry design on the performance of a centrifugal pump.

PB 9781536125467 £219.50 November 2017 Nova Science Publishers 166 pages



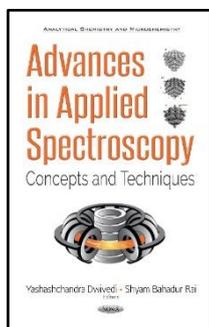
Electropolymerization (Chemical Engineering Series)

Edited by Armand Vance

A great focus has been placed upon polymer thin films. These polymer thin films are significant in many technological applications, ranging from coatings and adhesives to organic electronic devices, as well as sensors and detectors. Electropolymerisation is the polymerization in the presence of an electrical current. Polymerisation is any process in which relatively small molecules, called monomers, combine chemically to produce a very large chain-like or network molecule, called a polymer. The monomer molecules may be all alike, or they may represent two, three, or more different compounds. Usually at least 100 monomer molecules must be combined to make a product that has certain unique physical properties -- such as elasticity, high tensile strength, or the ability to form fibres -- that differentiate polymers from substances composed of smaller and simpler molecules; often, many thousands of monomer units are incorporated in a single molecule of a polymer. Electrochemical polymerisation is preferable, especially if the polymeric product is intended for use as polymer thin films, because electrogeneration allows fine control over the film thickness, an important parameter for fabrication of devices. Moreover, it was demonstrated that it is possible to modify the material properties by parameter control of the electrodeposition process.

HB 9781681172934 £141.50 January 2017 Scitus Academics 266 pages

Chemistry

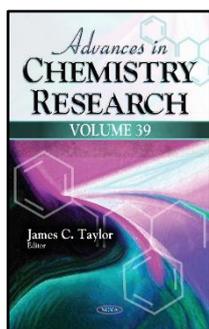


Advances in Applied Spectroscopy Concepts & Techniques (Analytical Chemistry & Microchemistry Series)

Edited by Yashashchandra Dwivedi, Shyam Bahadur Rai

Spectroscopy in its broadest sense deals with the interaction of light with matter. Spectroscopic techniques contribute a lot to various diverse research areas including material processing and characterisation, communication, forensic science, defence, etc. The rapid expansion of research activity in the field of material science evokes the need for different analytical and diagnostic techniques. Spectroscopy is such an analytical and diagnostic tool, extremely used to characterise materials. It is now commonly used by astrophysicist, mineralogists, nano-physicists or even scientists working in medical research. This book has therefore been prepared to provide easy access to basic information on different spectroscopy techniques and related instrumentation. This book is intended as a guide to the novice reading technical books or facing the complexities while dealing with the concept of spectroscopic techniques and their instrumentation. The authors of chapters presented in this book are all experts in their fields and were instructed to give substantial information to enable novices to learn and understand the advanced spectroscopic techniques. The present book primarily provides details about the time resolved spectroscopy; laser induced breakdown spectroscopy (LIBS); Raman spectroscopy; nonlinear spectroscopy; microwave spectroscopy; up conversion spectroscopy, etc

HB 9781536124392 £152.50 September 2017 Nova Science Publishers 243 pages

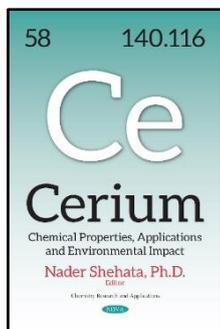


Advances in Chemistry Research Volume 39 (Advances in Chemistry Research Series)

Edited by James C Taylor

In Chapter One, the part gas chromatography-mass spectrometry (GC-MS) and liquid chromatography-mass spectrometry (LC-MS) plays in the discovery and verification of PAEs in food and beverages is confronted by Francesa Serrano, Naiara Pardo-Mates, and Oscar Núñez. In Chapter Two, Joanna Cabaj and Jadwiga Soloduchko examine the recent advancements made in the electrochemical and optical sensors for the detection of catecholamines. Afterwards, Vladislav Yu. Vasilyev analyses experimental data on ruthenium thin film deposition kinetics in Chapter Three. In Chapter Four, Li Fu discusses catechol, a natural polyphenolic compound that can be highly toxic and is frequently created through factory practices. In Chapter Five, Dinesh C Bilehal, Mahadev C. Khetagoudar, and Mahadev B Chetti present a study on Multi-residue GC-MS/MS chromatographic method that has proven useful in the confirmation of 47 multiclass pesticide residues in mango samples. Next, Chapter Six by Hiroshi Matsudam deliberates on the development of innovative nanocomposite ceramics sintered using conventional alumina powders and mixed with calcium stearate sintering additive. In Chapter Seven, Y Kohzuki studies the interaction concerning a dislocation and numerous divalent impurities to try to determine whether the divalent ionic size is a vital factor for the deformation characteristics. In the final chapter, aromatic aldehydes are applied in a one-pot reaction with enolisable ketones, acetonitrile, and acetyl chloride in the presence of KHSO₄ at room temperature to allow for resultant β-acetamido ketones in high yields.

HB 9781536126136 £238.50 November 2017 Nova Science Publishers 250 pages



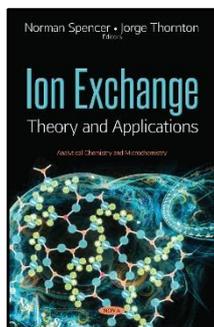
Cerium

Chemical Properties, Applications & Environmental Impact (Chemistry Research & Applications Series)

Edited by Nader Shehata

Cerium is one of the most important lanthanide elements based on its characteristics and wide range of related applications. Cerium is the second element in the lanthanide series, and mostly can be found in either +3 or +4 ionisation states. It can be considered one of the rare earth elements with relatively low toxicity and a lot of biological applications depending on its redox (reduction-oxidation) process between the +3/+4 ionisation states and oxygen storage capability. This book focuses on the cerium compounds such as oxides and silicides, with detailed studies about its structures, characterisations and related applications. Chapter One mainly presents some optical characteristics of stoichiometric ceria nanoparticles – whether undoped or doped – with some other lanthanide elements. Then, some applications of ceria nanoparticles, such as optical nanosensors and solar cell coaters, are discussed based on optical characteristics of CeO₂-x. Chapter Two studies the catalytic activity of cerium dioxide (CeO₂) included within nanophase (nanocomposite) metal-oxide systems such as Al₂O₃/cordierite carriers and prototypes of anode materials for SOFCs (based on stabilised zirconia), within different processes of environmental catalysis. CeO₂ increases stability of the Ni-Al₂O₃ catalysts by suppressing surface carbonisation and enhancing resistance to poisoning by sulphur compounds. Cerium dioxide as a modifying additive within the ZnO–CuO–CeO₂/Al₂O₃/cordierite catalysts is shown to stabilise their operation in the decomposition of methanol by suppressing surface carbonisation, thereby facilitating hydrogen formation as the target product. In Chapter Three, another cerium-dependent compound –cerium silicide (CeSi₆) – and its nanowires were investigated over a broad range of different cerium monolayers on Si(110)-16x2 surfaces via scanning, tunnelling, microscopy and spectroscopy. The growth progress of the CeSi₆ nanowires undergoes a coverage-dependent metal-insulator-metal electronic transition, which has never been found in other rare-earth silicide nanowires. Moreover, the insulating CeSi₆ nanowires have been structurally and electronically studied, without lattice distortions with large Coulomb repulsion energy between the filled and empty surface bands. Thus, the insulating phase of atomically precise CeSi₆ nanowires is an electronically driven phase because of its temperature and structure independence. Chapter Four is mainly concerned with some biological applications of ceria nanostructures through the treatment of diseases characterised by increased oxidative stress levels. This chapter offers a study of consumption and occupational exposures, and consequently its toxicology properties are discussed due to the recent applications of nanoceria as a high priority material for toxicological evaluations.

PB 9781536124330 £78.50 September 2017 Nova Science Publishers 125 pages



Ion Exchange

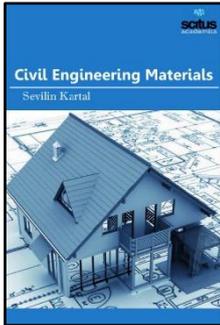
Theory & Applications (Analytical Chemistry & Microchemistry Series)

Edited by Norman Spencer, Jorge Thornton

Ion exchange materials are extremely effective absorbents generally containing some functional groups with insoluble structures, which have high affinity capacities towards the targets among a series of structurally similar ions or ion groups. In recent decades, the various methods used to preparing the absorbents for contaminant removal and resource recycle from environment have been extensively studied under the backgrounds of environment pollution and resource shortages. Molecular imprinting technology (MIT) was developed rapidly as a research hot topic to prepare ion exchange materials with shape memory effects. In consideration of the advantages of molecular imprinted polymers (MIPs), including high adsorption capacities, high selectivity, easy recycle etc., their applications in the separation and concentration of target molecules or ions have been widely explored. This book briefly narrates the fundamentals and preparations of MIPs, and particularly focus on the research advances relevant to human-living environment including water, atmosphere and soil. An overview of the most important applications of the ion exchange method in the treatment of industrial wastewaters which contain heavy metal ions, and the main environmental benefits of this method are highlighted. The most important ion exchangers used in environment remediation processes, including their classification and environmental utilisations, are presented as well. The influence of operating conditions on the ion exchange process is discussed, both from efficiency and mechanism perspectives. Also, the opportunities and challenges, which make that the ion exchange method to be still an important research issue at international level, are reviewed. Other chapters familiarise the reader with innovative practices to develop sustainable water treatment methods; review the use of adsorption materials, including raw biomasses, and ion exchange resins for the treatment of olive mill wastewater; various examples of selective removal of heavy metal ions discharged in an effluent from electroplating plants, metal finishing operations, as well as mining and electronics industries through ion exchange are presented and finally; the principal mechanisms and specific features of the copper ion exchange in alkali silicate glasses is explored.

HB 9781536123517 £219.50 November 2017 Nova Science Publishers 135 pages

Civil Engineering

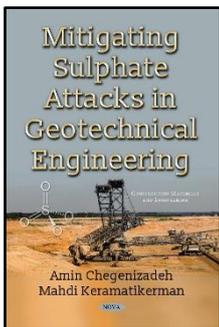


Civil Engineering Materials (Civil Engineering Series)

Sevilin Kartal

The modern civil engineer needs to deal with traditional construction materials as well as advanced materials. Traditional construction materials, such as timber, steel, asphalt and Portland cement concrete are often used in many construction projects. Modern materials, such as polymers and composites are making headway into the construction industry. Significant research on these materials has led to better understanding of these materials and improved their strength and durability performance. The traditional materials used today are far superior to those of the past, and new materials are being specially developed to satisfy the needs of civil engineering applications. To a civil engineer the performance of materials in structures and their ability to resist various stresses are of prime importance. This book concentrates on demonstrating methods to obtain, analyse and use information rather than focusing on presenting large amounts of data. It is intended to help students in civil engineering to understand the physical and structural properties of common construction materials.

HB 9781681175911 £141.50 January 2017 Scitus Academics 292 pages



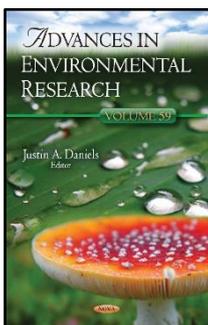
Mitigating Sulphate Attacks in Geotechnical Engineering (Construction Materials & Engineering Series)

Amin Chegenizadeh, Mahdi Keramatikerman

A magnesium sulphate attack is one of the main issues that challenge civil engineering projects, in particular in coastal, landfill, and mining areas. This phenomenon reduces the stability of the structure and causes a complete failure for the system over time. Previous studies mainly focused on investigating the effects of magnesium sulphate attacks on concrete and from a structural point of view, and only a low number of studies investigated the effects of a magnesium sulphate attack on soil from a geotechnical point of view. The investigation on the effect of a magnesium sulphate attack is an important issue, particularly for stabilised soils that have a role in maintaining the integrity of foundations, slopes, embankments, etc. Portland cement (PC) is widely used in ground improvements and geotechnical engineering projects as an additive to improve the mechanical behaviour of soil. However, PC is effective to improve the engineering characteristics of soil; it is weak when exposed to the magnesium sulphate concentration. This book investigates the behaviour of different soils when treated with PC and after exposure to magnesium sulphate contamination. Also, the effect of some abundant materials in the environment such as carbon in the mechanical behaviour of stabilised soil has been investigated.

PB 9781536123692 £90.50 October 2017 Nova Science Publishers 210 pages

Environment

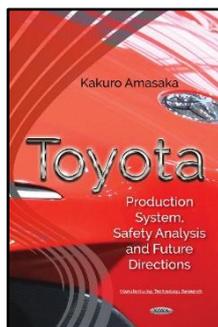


Advances in Environmental Research Volume 59 (Advances in Environmental Research Series)

Edited by Justin A Daniels

Keke Xiaoa and Yan Zhou open this book by examining the effectiveness of combined ultrasonic-acid pre-treatment for the improving of sludge dewaterability, the role of Fe (II) – oxone conditioning on sludge dewaterability, and the applications of different treatments. Next, María Isabel González-Bravo, Ph.D. and Eva Lahuerta-Otero, Ph.D. explore the correlation between future environmental risk perception and sustainable development in European countries. The authors discuss cultural factors and social attitudes on eco-innovation. Afterwards, Keke Xiaoa and Yan Zhou discuss methods of sludge treatment while discussing recent developments. Keke Xiaoa and Yan Zhou go on to discuss anaerobic digestion for sludge treatment in the following chapter, supplementing this. Subsequently, Paul J. Oberholster, Petri F. Oberholster, Christoff Truter, and Anna-Maria Botha present a study that examines the link between river phosphorus sensitivity, self-purification capacity, and benthic algae biomass downstream from waste water treatment plants in the middle Olifants River sub catchment in South Africa. Then, Huynh Viet Khai presents a study on organic vegetables and customer willingness to pay for them in the Vietnamese Mekong Delta. Huynh Viet Khai also presents a study based in the Vietnamese Mekong Delta in the following chapter, focusing on rice farmers and their attitudes towards pesticides.

HB 9781536127010 £238.50 November 2017 Nova Science Publishers 169 pages



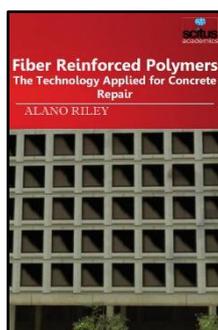
Toyota Production System, Safety Analysis & Future Directions (Manufacturing Technology Research Series)

Kakuro Amasaka

This book explains the production methods and future trajectories for the Japanese car company through the strategic development of Toyota's automobile manufacturing both in Japan and overseas as follows: Part I gives an overview of the book based on the Toyota Production System (TPS), its advanced production management principles and its aim to create the "simultaneous realisation of quality and productivity" via "process control and process improvement", with priority given to the customer. In Chapter One, the author describes the outline of the "characteristic, aim, and validity" of this book. Chapter Two focuses on the "progress and fundamentals of TPS" in terms of the "just in time" (JIT) principle and "automobile manufacturing technology," which has contributed to the simultaneous achievement of QCD at Toyota. In Chapter Three, the author asserts the necessity for the evolution of manufacturing in order to deal with the management issues currently facing Japanese manufacturers. Therefore, in this chapter, the author establishes an advanced TPS and its effectiveness of strategic development, surpassing JIT. In Chapter Four, the author develops an advanced TPS for an automobile manufacturing strategy to expand this strategy throughout Japan and overseas. "Safety Analysis to Strengthen Toyota Automobile Manufacturing" is the topic of Part II. Today's management challenge is to provide excellent QCD products ahead of competitors through "market creating" activities. In the implementation stage, strategic QCD studies are needed to strengthen core technologies, and to have them mutually linked as a whole. Therefore, the author develops the safety analysis utilizing a statistical science known as the "Science of SQC: The New Quality Control Principle" for the strengthening of the business and manufacturing processes. Chapters Five – Seven discuss and demonstrate the effectiveness of the following as the driving force in developing advanced TPS: "Realizing high quality manufacturing," "strengthening new manufacturing management technology," and "creating an SCM strategy for developing QCD studies of Japan and overseas." In Part III, the author discusses and demonstrates the "future directions" for Toyota's manufacturing strategy. Focusing on a concrete target, the author reconsiders new management tasks foreseen for the advanced manufacturing companies, shifting to expanding global production. Based on the focus of Parts I and II, the author asserts the profitability (justification and validity) for re-progress in automobile manufacturing in order to deal with the management issues currently facing Japanese manufacturers. In Chapter Eight, as an overseas production strategy, the author propagates an "expanding new integrated production model" to developing countries and discusses the necessity for the global deployment. In Chapter Nine, the author shows and demonstrates the effectiveness of "new production progress for re-strengthening global production". In Chapter Ten, the author provides an overall conclusion of the topics covered in this book.

HB 9781536125719 £185.99 November 2017 Nova Science Publishers 264 pages

Materials Science

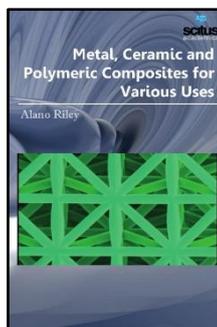


Fiber Reinforced Polymers The Technology Applied for Concrete Repair (Materials Engineering Series)

Edited by Alano Riley

Gas chromatography (GC) is a common type of chromatography used in analytical chemistry for separating and analysing compounds that can be vaporised without decomposition. In gas chromatography, the components of a sample are dissolved in a solvent and vaporised so as to separate the analytes by distributing the sample between two phases: a stationary phase and a mobile phase. This book is intended to cover numerous facets of applications ranging from basic biological, biomedical applications to industrial applications. The book analyse new developments in chromatographic columns, micro extraction techniques, derivatisation techniques and pyrolysis techniques. The book also focuses on various features of basic chromatography techniques and is appropriate for both young and advanced chromatographers. It includes some new developments in chromatography. This book is an invaluable tool for chemists as well as non-chemists employed in gas chromatography.

HB 9781681172729 £160.99 January 2017 Scitus Academics 320 pages



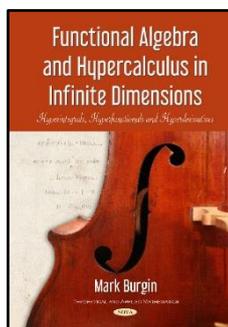
Metal, Ceramic and Polymeric Composites for Various Uses (Materials Engineering)

Edited by Alano Riley

Gas chromatography (GC) is a common type of chromatography used in analytical chemistry for separating and analysing compounds that can be vaporized without decomposition. In gas chromatography, the components of a sample are dissolved in a solvent and vaporized so as to separate the analytes by distributing the sample between two phases: a stationary phase and a mobile phase. Gas chromatography is in principle similar to column chromatography, but has several notable differences. Gas chromatography is also similar to fractional distillation, since both processes separate the components of a mixture primarily based on boiling point (or vapour pressure) differences. The mobile phase is a chemically inert gas that serves to carry the molecules of the analyte through the heated column. Gas chromatography is one of the sole forms of chromatography that does not utilize the mobile phase for interacting with the analyte. The stationary phase is either a solid adsorbant, termed gas-solid chromatography (GSC), or a liquid on an inert support, termed gas-liquid chromatography (GLC). In organic chemistry, liquid-solid column chromatography is frequently used to separate organic compounds in solution. Among the various types of gas chromatography, gas-liquid chromatography is the method most commonly used to separate organic compounds. The combination of gas chromatography and mass spectrometry is a vital tool in the identification of molecules. A typical gas chromatography comprises an injection port, a column, carrier gas flow control equipment, ovens and heaters for maintaining temperatures of the injection port and the column, an integrator chart recorder and a detector. The book, *Advanced Gas Chromatography*, is intended to cover numerous facets of applications ranging from basic biological, biomedical applications to industrial applications. The book analyse new developments in chromatographic columns, micro extraction techniques, derivatisation techniques and pyrolysis techniques. The book also focuses on various features of basic chromatography techniques and is appropriate for both young and advanced chromatographers. It includes some new developments in chromatography. This book is an invaluable tool for chemists as well as non-chemists employed in gas chromatography.

HB 9781681174709 £160.99 January 2017 Scitus Academics 314 pages

Mathematics

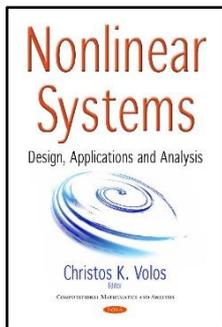


Functional Algebra & Hypercalculus in Infinite Dimensions Hyperintegrals, Hyperfunctionals & Hyperderivatives (Theoretical & Applied Mathematics Series)

Mark Burgin

The theory of hypernumbers and extra functions is further development in distribution theory inspired by contemporary physics and influenced by problems in mathematical physics. It makes more functions differentiable and provides new kinds of derivatives and hyper derivatives aimed at solving more differential and operator equations than ever before possible. In the book, extra functions are extended to hyper functionals and hyperoperators in infinite-dimensional vector spaces. Due to its development, many problems in contemporary physics, as well as in modern linear and nonlinear analysis have an infinite-dimensional nature, and the infinite-dimensional theory of extra functions, hyper functionals and hyperoperators provides new tools for solving many of these problems. The book describes new mathematical structures such as hyper derivatives and hyper integrals of real and complex functions, hyper probability and hyper expectation of random processes and some others, essentially increasing power of functional analysis and probability applications. It presents the key parts of calculus – number systems, function spaces, the differential calculus and the integral calculus – in the setting of hypernumbers, extra functions, hyper functionals and hyperoperators in finite-dimensional and infinite-dimensional vector spaces. In addition, functional algebra, which employs algebraic operations with extra functions, hyper functionals and hyperoperators is developed. New relations between hyper differentiation and continuity of functions and operators are explicated. As differentiation and integration are special cases of hyper differentiation and hyper integration, respectively, hyper calculus includes calculus as its part or subtheory. It is possible to use this book for enhancing traditional courses of calculus for undergraduates, as well as for teaching separate courses for graduate and undergraduate students at colleges and universities. To achieve these goals, exposition in the book goes from simple topics to more and more advanced topics, while proof of some statements are left as exercises for the students.

HB 9781536124415 £219.50 September 2017 Nova Science Publishers 381 pages



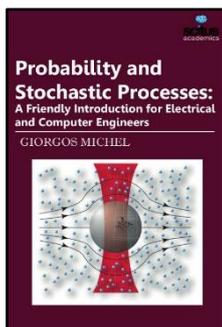
Nonlinear Systems

Design, Applications & Analysis (Computational Mathematics & Analysis Series)

Edited by Christos K Volos

A non-linear system is a set of nonlinear equations, which may be algebraic, ordinary differential, partial differential, fractional, integral or a combination of these. Especially, nowadays, the term “dynamical system” is used as a synonym of nonlinear systems where the nonlinear equations represent the evolution of a solution over time. So, the notion of dynamical systems arose following the name of equations governing the motion of a system of particles, even though the nonlinear system may have no application to mechanics. Also, from an engineering point of view a nonlinear system may be represented with a feedback loop in which the output of an element is not proportional to its input. Over the last few decades, nonlinear systems have been used to describe a great variety of phenomena, in social and life sciences as well as in physical sciences and engineering. The theory of nonlinear systems has applications to problems of population growth, economics, chemical reactions, celestial mechanics, physiology of nerves, onset of turbulence, regulation of heartbeats, electronic circuits, cryptography, secure communications and many others. Nonlinear dynamical systems, which present chaotic behaviour, are of great importance due to their applications in science and engineering. Chaotic systems are nonlinear dynamical systems and maps that are highly sensitive to initial conditions. The sensitivity of initial conditions is usually called the butterfly effect for dynamical systems and maps. So, nowadays the design and analysis of nonlinear systems and especially chaotic systems has gained the interest of the research community due to the fact that many phenomena on financial, physical, biological, chemical, mechanical and engineering systems can be modelled and studied through the perspective of non-linear dynamics. These nonlinear systems can be modelled by discrete-time or continuous-time mathematical models. This book aims to bridge the gap between the design/analysis and applications, which are the two research stages on the progress of nonlinear systems and also which open up some new directions of applications, where chaos can be put up to technological use, including communication systems, electronic circuits’ design, memristors and radar.

HB 9781536122916 £219.50 October 2017 Nova Science Publishers 375 pages



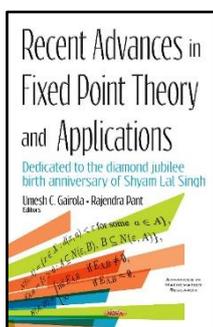
Probability & Stochastic Processes

A Friendly Introduction for Electrical & Computer Engineers (Mathematics Series)

Giorgos Michel

In probability theory, a stochastic process, or often random process, is a collection of random variables representing the evolution of some system of random values over time. This is the probabilistic counterpart to a deterministic process (or deterministic system). Instead of describing a process which can only evolve in one way (as in the case, for example, of solutions of an ordinary differential equation), in a stochastic, or random process, there is some indeterminacy: even if the initial condition is known, there are several directions in which the process may evolve. Classic examples of the stochastic process are guessing the length of a queue at a stated time given the random distribution over time of a number of people or objects entering and leaving the queue and guessing the amount of water in a reservoir based on the random distribution of rainfall and water usage. Stochastic processes were first studied rigorously in the late 19th century to aid in understanding financial markets and Brownian motion. This book covers characterisation, structural properties, inference and control of stochastic processes. It is concerned with concepts and techniques, and is oriented towards a broad spectrum of mathematical, scientific and engineering interests.

HB 9781681174525 £160.99 January 2017 Scitus Academics 282 pages



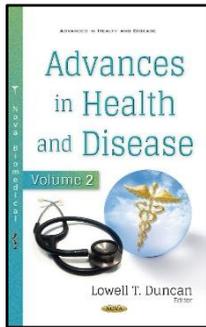
Recent Advances in Fixed Point Theory & Applications

(Advances in Mathematics Research Series)

Edited by Umesh C Gairola, Rajendra Pant

Fixed point theory is a growing and exciting branch of mathematics with a variety of wide applications in biological and mathematical sciences, proposing newer applications in discrete dynamics and super fractals. The present endeavour is to report the latest trend in metric fixed point theory, emphasising newer applications in numerical analysis, discrete dynamics and fractal graphics, besides traditional applications. The book is useful to a large class of readers interested in analysis, applicable mathematics and fractal graphics. The articles have been selected carefully so that the book is useful for sophomores up to senior researchers looking for new material and new ideas in the existence of fixed points, new applications and survey articles. A few chapters included herein are formal in nature and suggest new directions of research in this area, which are especially useful to beginners in the field. The book is divided into two parts: Part I contains surveys and existence and convergence results. In Part II (Applications), various applications of fixed point theory to initial value problems, local attractivity of certain functional integral equation solutions, fractals and super-fractals, and solving equations in numerical praxis have been discussed.

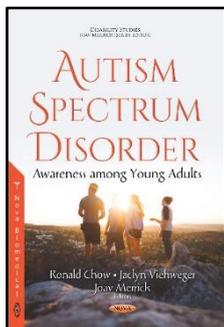
HB 9781536120851 £219.50 September 2017 Nova Science Publishers 315 pages



Advances in Health & Disease
Volume 2 (Advances in Health & Disease Series)
 Edited by Lowell T Duncan

In the first chapter, Ahmed Marroki and Leila Bousmaha-Marroki provide an overview on Lactic Acid Bacteria, along with non-lab probiotics strains, in dairy products in order to determine their benefits in the prevention and treatment of human diarrhea. Afterwards, Riccardo De Robertis, MD, Nicolò Cardobi, MD, Paolo Tinazzi Martini, MD, and Mirko D'Onofrio, MD discuss biliary obstruction and its standards of care in the second chapter. In the third chapter, Tania Ramos-Moreno, Ph.D. reviews several autoimmune diseases to determine how they might affect brain development and mental health. Next, Simon B Cooper and Fenghua Sun discuss the way carbohydrates impact the glycaemic index throughout the fourth chapter. In the fifth chapter, Rachel Malcolm and Simon B Cooper review evidence on the impact of exercise on cognitive function in young people and adults, as well as the effect of exercise on age-related atrophy. Ching-fen Hsu presents a study with the goal of determining the problem of contextual integration of philological items into sentences for persons with Williams syndrome in chapter seven. Following, Carlos Ramírez-García presents a discussion of research on bicycle helmet use in children in chapter eight.

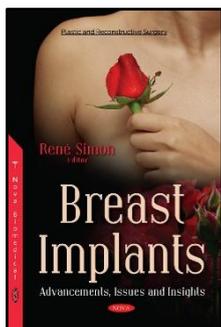
HB 9781536126952 £238.50 November 2017 Nova Science Publishers 183 pages



Autism Spectrum Disorder
Awareness Among Young Adults (Disability Studies Series)
 Edited by Ronald Chow, Jaclyn Viehweger, Joav Merrick

People with autism spectrum disorder display deficits/unusual behaviour in one of the three domains: Reciprocal social interaction, communication and restricted/repetitive interests/behaviours. The cause of ASD is still unknown, with etiological theories continuing to change as research progresses. It was once proposed that child-rearing was a major determinant, but more recent studies have suggested that the cause is multi-factorial, with genetics playing a substantial part in aetiology. Since awareness seems to be a precursor of increased prevalence, it would be interesting to note the awareness amongst young adults, who are the future parents of society. The awareness of these individuals may allow for the extrapolation of predicting whether the future prevalence of ASD will increase or decrease. In this book, the authors describe the awareness of young adults from Canada, United States, United Kingdom and Asia with respect to ASD.

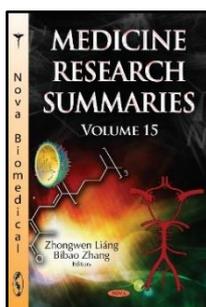
HB 9781536127300 £78.50 November 2017 Nova Science Publishers 106 pages



Breast Implants
Advancements, Issues & Insights (Plastic & Reconstructive Surgery Series)
 Edited by René Simon

Pawel Rzymiski, MD, Ph.D., Mikolaj Kubasik, MD, Izabela Rzymaska, Ph.D., and Maciej Wilczak, MD, Ph.D. begin by discussing Shear Wave Sonoelastography, a means of studying tissue stiffness. The use of Shear Wave Sonoelastography has been previously reviewed in regards to cancer, however here the authors discuss, instead, its applications in plastic surgery. Next, Yolanda K Zayakova, Ph.D. deliberates on breast symmetry and the surgical approaches one could use to attain it. Then, Cristina Gómez, MD and Bernardo Hontanilla, Ph.D. discuss capsular contracture, a complication that can arise from the use of silicone implants. Lastly, Diana Zuckerman, Ph.D., Madris Tomes, and Amelia Murphy consider whether or not "gummy bear" breast implants are safer than traditional implants.

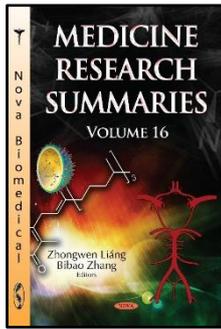
PB 9781536127263 £78.50 November 2017 Nova Science Publishers 87 pages



Medicine Research Summaries (with Biographical Sketches)
Volume 15 (Medicine Research Summaries Series)
 Edited by Zhongwen Liang, Bibao Zhang

This book is a continuation of "Medicine Researcher Biographical Sketches & Research Summaries" which compiles biographical sketches of top professionals in the field of medicinal research, as well as research summaries from a number of different focuses in this important field.

HB 9781536127591 £185.99 November 2017 Nova Science Publishers 434 pages



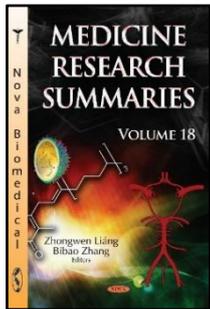
Medicine Research Summaries (with Biographical Sketches)

Volume 16 (Medicine Research Summaries Series)

Edited by Zhongwen Liang, Bibao Zhang

This book is a continuation of "Medicine Researcher Biographical Sketches & Research Summaries" which compiles biographical sketches of top professionals in the field of medicinal research, as well as research summaries from a number of different focuses in this important field.

HB 9781536127539 £185.99 November 2017 Nova Science Publishers 223 pages



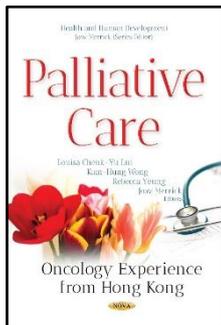
Medicine Research Summaries (with Biographical Sketches)

Volume 18 (Medicine Research Summaries Series)

Edited by Zhongwen Liang, Bibao Zhang

This book is a continuation of the book Medicine Researcher Biographical Sketches and Research Summaries which compiles biographical sketches of top professionals in the field of medicinal research, as well as research summaries from a number of different focuses in this important field.

HB 9781536128062 £185.99 November 2017 Nova Science Publishers 422 pages



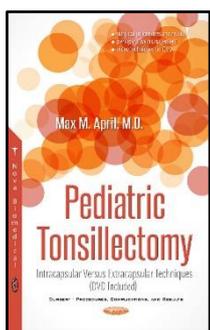
Palliative Care

Oncology Experience from Hong Kong (Health & Human Development Series)

Edited by Louisa Cheuk-Yu Lui, Kam-Hung Wong, Rebecca Yeung, Joav Merrick

Training in palliative medicine for clinical oncologists in Hong Kong is organised by the Palliative Medicine Subspecialty Board under the Hong Kong College of Radiologists, and it is expected that through this training the oncologists will be equipped to provide good quality palliative care for their cancer patients. As part of the training and subspecialty certification, the candidates must submit a research project of high scientific standard. In this book, the authors present some of the research conducted during the last examination and certification. The research covered different topics including radiotherapy in patients with metastatic diseases, survival predictors, a systemic review on drugs, and advanced directives in the Chinese population. The authors hope that this presentation will provide insight to the progress of palliative care development in different facilities in Hong Kong.

PB 9781536123975 £78.50 September 2017 Nova Science Publishers 106 pages



Pediatric Tonsillectomy

Intracapsular Versus Extracapsular Techniques

(Surgery -- Procedures, Complications, & Results Series)

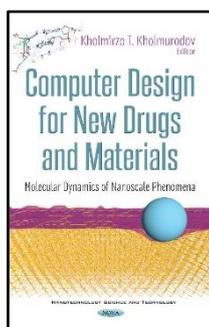
Edited by Max M April

Tonsillectomy is one of the most common procedures that otolaryngologists perform. Early in residency, most trainees are heavily influenced by their instructors in tonsillectomy technique and rarely revisit these procedures later in training. In practice, their surgical technique reflects these early experiences. Opinions regarding tonsillectomy are often difficult to change, possibly because of this early exposure. In 2000, Dr Peter Kotai described a radical new approach to tonsil surgery: intracapsular tonsillectomy. He questioned why otolaryngologists perform traditional extracapsular tonsillectomy (which was designed for infectious diseases) for children with obstructive symptomatology. As 19th century German philosopher Arthur Schopenhauer wrote, "All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident." Intracapsular tonsillectomy is a prime example of this acceptance process. When Kotai first described it, there were very few otolaryngologists who embraced this procedure. Over time, much data has been collected, and this procedure has gained increasing acceptance. This textbook was undertaken with several ideas in mind. First, it reviews the current understanding of tonsil and adenoid surgery in children, along with when to consider intracapsular tonsillectomy (IT) and when to consider extracapsular tonsillectomy (ET). It reviews the last 16 years of information regarding differences in the surgical techniques. Concepts and data supporting the use of the procedures are presented. Secondly, this text will serve as a surgical atlas for those in the beginning of training, those that have mastered many techniques but may have not had exposure to all options, and those that are looking for even more advanced surgical manoeuvres that may enhance their results. This

will be a new type of surgical atlas describing not only basic techniques used in the beginning of one's experience but also more advanced manoeuvres to improve results even further. Full length videos are included on a DVD. The European Experience of Tonsillotomy is not included in this text because there are no centres in the United States experienced with that procedure. Tonsillotomy is described as removing the tonsil tissue to the level of the anterior tonsillar pillar with a CO2 laser. It does not approach the depth of dissection of intracapsular tonsillectomy and therefore provides difficulty with comparisons. The text begins with Dr Peter Koltai's description of how he developed the concept of intracapsular tonsillectomy. Chapter One, "Powered Adenoidectomy", introduces many concepts that are also common to tonsillectomy. Chapters Two - Four describe the author's technique of intracapsular tonsillectomy (IT), as well as those of Dr Robert Ward (New York University), and Dr John Bent (Albert Einstein Medical College). In Chapter Five, Drs. Goldstein and Gitman from SUNY Downstate review extracapsular tonsillectomy (ET) and include their interpretation of IT. In Chapter Six, Dr Nina Shapiro, with Sophie Shay from University of California, Los Angeles, reviews her extensive experience with coblation assisted tonsillectomy, both for extracapsular and intracapsular techniques. In Chapter Seven, Drs. Rubinstein and Derkay from Eastern Virginia University discuss the results of both IT and ET from the perspective of treatment of sleep disturbances and compare the complication rates published over the past 16 years. In Chapter Eight, the recent controversy of post-tonsillectomy pain treatment is presented with recommendations from Drs. David Tunkel and Grace Tan of Johns Hopkins University School of Medicine. Finally, in the last chapter, conclusions are drawn and questions for the future are presented.

PB 9781536122381 £78.50 / HB 9781536127065 £142.99 November 2017 Nova Science Publishers 142 pages

Nanotechnology

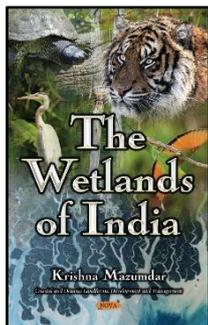


Computer Design for New Drugs and Materials Molecular Dynamics of Nanoscale Phenomena (Nanotechnology Science & Technology Series)

Edited by Kholmurzo T Kholmurodov

In this book, chapters from multiple experts have been collected that demonstrate the efficient use of the computer molecular dynamics (MD) simulation methods for the studying of nanoscale phenomena in materials and life sciences. This volume contains the Proceedings of the International Symposium KSCMBS-2016 Khujand Symposium on Computational Materials and Biological Sciences (10th Japan-Russia Workshop on Molecular Simulation Studies in Materials and Biological Sciences), which was organized by the Frank Laboratory of Neutron Physics (FLNP), Joint Institute for Nuclear Research (JINR), Dubna, Russian Federation and Khujand State University named after Academician B Gafurov, The Ministry of Education and Science of The Republic of Tajikistan (HGU, RT) from 24-28 September 2016 in Khujand, Tajikistan. It is remarkable that the first chapter opening this book is contributed by C Arnarez and S J Marrink, representatives of the same faculty from the University of Groningen in the Netherlands, where Professor Bernard L Feringa won the 2016 Nobel Prize in Chemistry "for the design and synthesis of molecular machines" (nanomotors and nanorobots), which are the actual topics of the current KSCMBS-2016 Japan-Russia-Tajikistan International Symposium. In the first chapter, C Arnarez and S J Marrink have developed a computational "microscopy" approach based on a coarse-grained molecular dynamics simulation to study the mitochondrial membranes. The developed method is capable of simulating the cell membranes and efficiently capturing the interplay between the lipids and proteins at a spatio-temporal resolution, which is unmatched by other methods. The other interesting chapters of the book provide very broad and useful information to the readers by demonstrating the clear examples of how modern state-of-the-art molecular dynamics modelling can provide a molecular level of insight into the organisation and dynamics of the atomic/molecular processes in nanosystems, cell membranes, lipids, and proteins through new materials, exploring and new drug design.

HB 9781536120820 £152.50 November 2017 Nova Science Publishers 170 pages



Wetlands of India

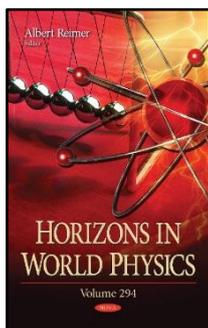
(Coastal & Oceanic Landforms, Development & Management Series)

Krishna Mazumdar

Wetlands are the vital link between land and water. They support unique flora and fauna as well as provide ecological services that are beneficial to society. Wetlands are among the most important and productive ecosystems on Earth. India is blessed with water resources and has a rich diversity of inland and coastal wetlands. Wetlands in India are distributed from the cold arid Trans-Himalayan zone to the wet Teri region of the Himalayan foothills, to the Gangetic plains extended to the flood-plains of Brahmaputra, and to the swamps of Northeastern India including the saline expanses of Gujarat and Rajasthan. This study is about three major natural wetlands of Eastern India: Sundarbans, Chilika and Kolleru. The Sundarbans is the largest mangrove forest in the world. It covers an area of about 1 m. ha. Sixty percent of this wetland is located in Bangladesh and the rest of the forty percent is in India. The Indian part of the Sundarbans is situated in the western part of the Ganges–Brahmaputra delta, and is extended from the Hooghly River in the west to the Raimangal River in the southeastern portion of the West Bengal State, spreading over two districts: North 24 Parganas and South 24 Parganas. The Chilika is the world's second largest brackish water lagoon, and it is situated along the east coast of India in the state of Orissa on the Bay of Bengal with an area of 116,500 ha. The Chilika is extended over eight blocks of three districts; these districts are known as Ganjam, Khurda and Puri. This pear-shaped lake is about 64.5 km. long; its width varies from 18 km to 5 km. The water spread area of the lake varies from 906 sq.km to 1165 sq. km. depending upon the seasons. The Kolleru Lake is extended over the Krishna and West Godavari districts along the east coast of India in the state of Andhra Pradesh. Kolleru is a large natural freshwater lake, with the catchment area being 4763 sq. km. Although the lake is about 35 km. inland from the present coast, it used to be a coastal lagoon in the past. Kolleru still maintains its connection with the Bay of Bengal through a 60 km long tidal channel called Upputeru. The average depth of the lake varies from 0.5 m. to 2.0m. This study offers a new sampling design; blocks in and around the specific wetland were stratified into three clusters, according to their distance from the specified wetland. Samples were chosen mostly from the blocks closest to the wetland, with minimal samples chosen from the blocks most distant from the wetland. Four different schedules were canvassed to four different groups of people: householders, entrepreneurs, tourists, and experts on wetlands. A new approach has been introduced for valuing the wetlands. This approach attempts to combine valuation of a wetland to the aforementioned groups of people. It also attempts to incorporate the valuation of the wetlands when used for other purposes.

HB 9781536120417 £152.50 September 2017 Nova Science Publishers 130 pages

Physics



Horizons in World Physics

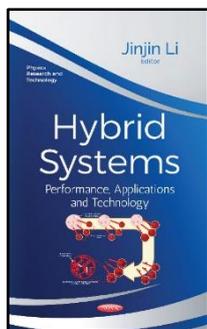
Volume 294

(Horizons in World Physics Series)

Edited by Albert Reimer

In the opening chapter by J J Camacho, a study of laser-produced swine muscle plasma is presented. The findings indicate that the surface morphology of the irradiated surface increased the pressure of the ambient gas and decreased the ablated mass, significantly reducing the laser-target coupling. In the second chapter by Emanuele Calabrò, another study is presented, showing in this study that the effectiveness of a solar panel greatly depends on the slope and tilt angle of the panel. It was also shown that the optimal tilt angle of a solar panel can be easily calculated by way of an algorithm that maximises the global solar radiation impinging upon an inclined surface. In the third chapter, P A Sedykh researches the power of combining two plasma domains. In the fourth chapter, an overview of the outcome of synchrotron radiation is presented, in addition to notes on its properties and applications, by Sameen Ahmed Khan. In the fifth chapter by I. Schmelzer poses the theory that a simplification of the Lorentz ether interpretation of the Einstein equations of general relativity could have a comparable educational value as the Lorentz ether interpretation for special relativity. In the sixth chapter, Zlatko Koinov investigates, the single-particle and collective excitations of a two-component Fermi gas with attractive interaction loaded in a two-dimensional square lattice. Finally, in the seventh chapter, S O Alexeyev and Monong Yu express how the Gauss-Bonnet term acts on the solution with two accompanying factors.

HB 9781536125153 £238.50 November 2017 Nova Science Publishers 185 pages

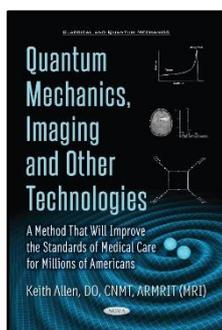


Hybrid Systems Performance, Applications & Technology (Physics Research & Technology Series)

Edited by Jinjin Li

Hybrid systems, inheriting the merits of their predecessors, exhibit extraordinary strengths to face various challenges and hostile environments. Hybrid systems have the ability to inspire and encourage researchers and engineers to propose novel ideas, which allow for more applications and devices in physics, chemistry and biology. In this book, the authors introduce various applications of hybrid methods, hybrid models, hybrid systems and hybrid materials by taking advantage of high performance and better implementation of hybrid structures. This book covers both theoretical methods and practical realisations from distinct disciplines by introducing the recent advances of hybrid structures.

HB 9781536124880 £152.50 October 2017 Nova Science Publishers 185 pages



Quantum Mechanics, Imaging & Other Technologies A Method That Will Improve the Standards of Medical Care for Millions of Americans (Classical & Quantum Mechanics Series)

Keith Allen

The author wrote this book to accomplish three major objectives: 1) For the appreciation of science, the philosophy of science and its beauty and wonder; 2) to explore the quantum paradigm and other important developments in science that are leading the way to important progress in key areas of research; and most importantly, 3) to appreciate how medical technologies are important medical tools that can improve the human condition. With regard to the first objective, as Carl Sagan implied, science provides us with a better understanding of who we are, our humanity, and even our role in the Universe. Science is a doorway to deeper knowledge about both ourselves and the world we live in. The author thinks that there is nothing more important we as a species can do in this life than to appreciate the beauty and order of our Universe! The quantum paradigm along with the relativity theory are currently some of our most advanced theories. The author has applied these theories in important ways to medical technologies. Specifically, he explains PET and MRI imaging according to the quantum paradigm, and MEG according to special relativity theory. It was the author's intent to use the most advanced theories known to provide the best explanation for the operation of these technologies. Consistent with this objective, he made an effort to approach current theoretical limits by discussing quantum field theory and its important applications in PET and MRI imaging technologies. Most importantly, the author talks about how early disease detection is an effective method that can be applied to many diseases including cancer, heart disease, and many neurological diseases. He argues very simply that early disease detection improves treatment outcomes, and that, if we apply this early detection methodology nationally or even globally, then this could improve the standards of medical care for many millions of people both in American and worldwide! In addition, the author also has a chapter on ethics, law and policy. It was his goal to emphasise that we have good policies that will be beneficial both here in American as well as internationally. These policies will be beneficial to the Trump Administration and any administration that follows. Most importantly, by applying Kant's universal principles, we can make the world a better place!

PB 9781536118131 £78.50 October 2017 Nova Science Publishers 220 pages