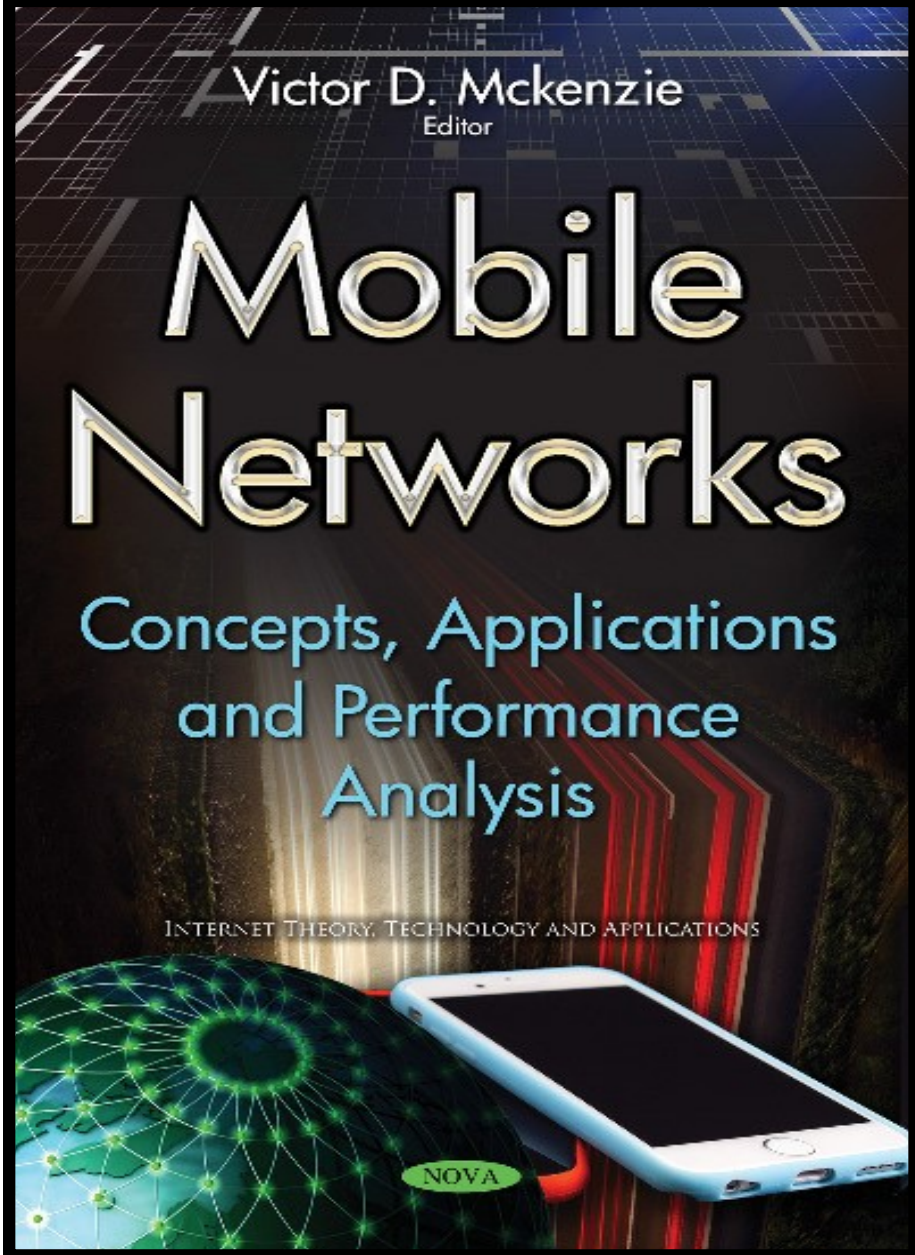
Gazelle

STM NEW TITLES

Titles Received in July 2017



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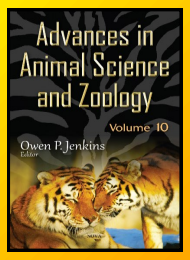
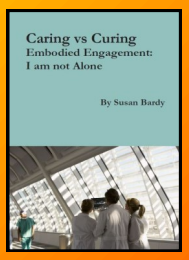
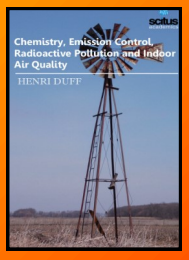
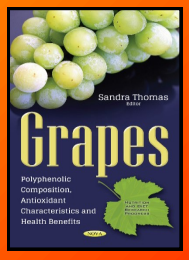
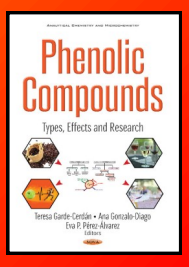


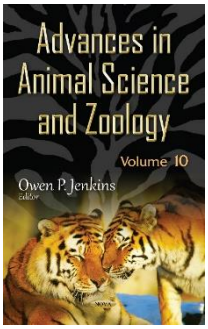








Contents

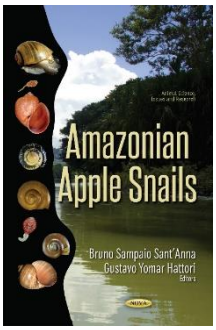


Advances in Animal Science & Zoology
Volume 10 (Advances in Animal Science & Zoology Series)

Edited by Owen P Jenkins

Chapter One reviews the ninety year period from 1925 to 2015 of working on cingulates cytogenetics, showing the importance of chromosomal analysis for the systematic identification of species and in making decisions about reproductive crosses in captive animals. In Chapter Two, the authors present an overview of the biology, economic impact, behaviour, major outbreaks and possible prediction of attacks by the Moroccan locust Dociostaurus maroccanus (Thunberg). The mating strategy of the male desert locust Schistocerca gregaria depends on its capacity to increase their fitness. Chapter Three analyses the choice made by the male when it has the possibility to choose between a mated or a non-mated female. Wolbachia is the most commonly occurring endosymbiotic bacteria in insects. Wolbachia selfishly manipulate the reproduction of hosts, resulting in cytoplasmic incompatibility between infected sperm and uninfected egg, and the death of male offspring by infected females. Chapter Four discusses previous Wolbachia studies of scolytine beetles and propose future Wolbachia studies using scolytine beetles, which may further elucidate the evolutionary influences of Wolbachia. Chapter Five provides a brief description of the biological features of the gypsy moth and the current methods of its control. In South America, the six-banded armadillo is constantly exploited as a source of food, even if biomedical research highlights its importance as natural reservoir hosts for the bacterium that causes leprosy (Mycobacterium leprae). Chapter Six covers the current knowledge on the reproductive aspects of the species, both for male and female, and to point some perspective of studies on assisted reproduction focused on its conservation or multiplication. Chapter Seven describes the anatomy of eight internal organs of the bottlenose dolphin (Tursiops truncatus) and process them through plastination technique, characterising and pondering the generation of useful structures for different purposes in field dolphins´ anatomy. Chapter Eight determines the profile of social alliances among bottlenose dolphin groups in northern Gulf of Mexico at Veracruz Sate, Mexico. Chapter Nine summarises the main records obtained on the richness and ecology of species and communities of molluscs already recorded in marine ecosystems off the coast of Ceará in the central region of the semiarid coast of north-eastern Brazil. Chapter Ten covers the existing literature on the morphology, pathology, distribution, diagnosis and control of gastrointestinal nematodes that cause fatal health problems.

HB 9781536120240 £235.80 July 2017 Nova Science Publishers 210 pages 155x230mm

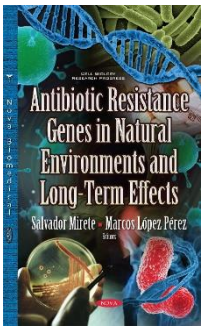


Amazonian Apple Snails
(Animal Science, Issues & Research Series)

Edited by Bruno Sampaio Sant'Anna, Gustavo Yomar Hattori

The Amazon forest is one of the world's most complex, unknown and threatened ecosystems that holds a considerable part of the Earth's biodiversity. This ecosystem needs greater scientific attention so that we can better understand the features of its fauna and conserve species before they become extinct. The book addresses issues about resources within Earth's largest rainforest. The knowledge of the molluscs in the region is extremely scarce, and in most cases only information concerning their spatial distribution is available. Specifically, for the gastropods of the Pomacea genus, which were introduced in every continent and became known as pests, scientific knowledge in native areas is very important to understand. Research may help to control these organisms and the many areas they tend to invade. Specialists and scientists that work with apple snails in the region and around the world can access information about the species that inhabit this region with unprecedented advances in various scientific aspects such as diversity and occurrence, anatomy aspects of Pomacea in Peru, and phylogeny of this group in the Amazon. Information about the biological aspects such as imposex development, effects of the dry season duration in the gastropod growth, aquaculture technical to human food production, and reproduction (including oviposition, fecundity, ultrastructural view of spermatozoa and egg predation).

HB 9781536110326 £90.50 June 2017 Nova Science Publishers 170 pages 155x230mm

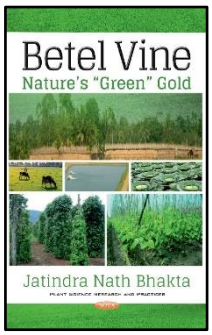


Antibiotic Resistance Genes in Natural Environments & Long-Term Effects
(Cell Biology Research Progress Series)

Salvador Mirete, Marcos López Pérez

Over the past 70 years, antibiotic therapy has been successfully used to combat infectious diseases. Nevertheless, the emergence of antibiotic-resistant bacteria is a phenomenon that can plague the effectiveness of the antibiotics employed, which represents a major concern for human and animal health with important socio-economic consequences. Traditionally, most investigations on antibiotic resistance were conducted almost exclusively in the clinical setting. However, now it is well accepted that the current antibiotic resistance found in human pathogens originated from environmental microbes by means of a horizontal transfer of antibiotic resistance genes. The book aims to focus on the importance of natural environments as diverse as rivers, soils and glaciers for the evolution, maintenance and dissemination of resistance genes. Therefore, the chapters included in this volume will be of interest to those scientists, technologists and graduate students involved in the study of antibiotic resistance from an environmental point of view.

HB 9781536118186 £90.50 June 2017 Nova Science Publishers 190 pages 155x230mm

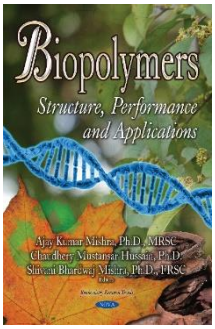


Betel Vine
Nature's "Green" Gold (Plant Science Research & Practices Series)

Jatindra Nath Bhakta

An innovative book in the agricultural field. The leaf of the betel vine has a vast array of health and medicinal properties for multiple applications in human health. Besides, it is considered as one of the most potential high-yielding and beneficial cash crops, having substantial international demand and playing a significant role in uplifting the socioeconomic status of rural peoples. Due to its various merits, it has been recognized as a "green gold" or "green heart" of nature. Additionally, a farm of betel vines is also popularly known as a "household bank". Nonetheless, there is no such organized book on the betel vine. The literature concerning the basic concepts, various practical aspects of cultivation and economics of the betel vine are very scanty and scattered. The present book comprises the most current and important information in various aspects of the betel vine in fourteen chapters. Keeping in mind the beneficial aspects of students, farmers, agriculturists, teachers and researchers, the book has been written on the basis of present practical concepts and current research findings of various scientists. It is a useful and unparalleled resource book for the above readers, graduate and post-graduate students of agriculture, botany and plant pathology, and also for researchers, teachers, scientists and farmers to develop a practical concept concerning the various aspects of the betel vine.

HB 9781536119411 £152.50 May 2017 Nova Science Publishers 120 pages 155x230mm

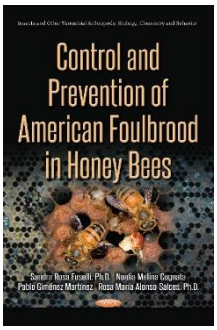


Biopolymers
Structure, Performance & Applications (Biochemistry Research Trends Series)

Edited by Ajay Kumar, Mishra Chaudhery, Mustansar Hussain Shivan

This book describes the structure, performance and applications of biopolymers. It contains thirteen chapters: Chapter One describes the general introduction of biopolymers, while Chapter Two deals with environmental perspectives that biopolymers are involved in. Chapter Three deals with the surface nanostructuring of biopolymers for tissue engineering. Chapter Four describes the nanomaterials as an emerging opportunity for purifying drinking water. Chapter Five is based on the microalgal engineering of biopolymers, while Chapter Six contains information on the lignocellulosic biomass used to obtain polyhydroxybutyrate as a biopolymer under. Chapter Seven mainly discusses chitosan as a biomedical material (properties and applications), and Chapter Eight introduces details about gum ghatti (Anogeissus latifolia), a proteinaceous edible biopolymer and its multifaceted biological applications. Chapter Nine describes the recent advances in biopolymers for innovative food packaging, while Chapter Ten discusses the potential production of polyhydroxybutyrate from renewable feedstocks. Chapter Eleven contains information about biopolymer stabilization of fly ash and coal mine overburden for erosion resistance, whereas Chapter Twelve describes in detail the structure, features and applications of biopolymers. Finally, Chapter Thirteen summarizes the recent trends concerning biopolymers. The current book will be highly beneficial to researchers working in the area of biopolymers, polymer chemistry, materials science, engineering, drug delivery, medicine, waste management, environmental science and waste water research. This book also covers information concerning natural biopolymers, biotechnology, biocomposites and bioplastics for a variety of environmental applications. The potential researchers working in the area will benefit from the fundamental concepts, advanced approaches and applications. The book also provides a platform for all researchers to carry out biopolymer research mainly towards its structure, performance and application, and also covers fundamental background information in the area. The book also covers recent advancements in the area as well as prospects about the future research and development of biopolymers.

HB 9781536118469 £219.50 June 2017 Nova Science Publishers 310 pages 180x260mm

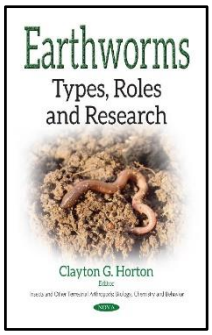


Control & Prevention of American Foulbrood in Honey Bees
(Insects & Other Terrestrial Arthropods -- Biology, Chemistry & Behavior Series)

Sandra Rosa Fuselli, Noelia Melina Cugnata, Pablo Gimenez Martinez, Rosa Maria Alonso-Salces

American foulbrood (AFB) is a severe bacterial disease that affects larvae of honey bees (Apis mellifera). The causative agent is the spore forming bacteria Paenibacillus larvae. The use of antibiotics has led to the appearance of resistant bacterial strains and residues in beehive products. Nowadays, antibiotics are legally banned in several countries, and the affected colonies have to be destroyed by burning the hives. Therefore, the development of alternative therapeuctic methods for the control and prevention of AFB is necessary. The present monograph reviews the traditional methods used for the control of AFB, and the natural strategies based on the application of essential oils, plant extracts, propolis, royal jelly, non-conventional natural molecules, bacteria and bacteriocines, assessed in vitro and in vivo for the prevention and control of P. larvae. This book also discusses the experimental data achieved from these studies, and intends to be a starting point for future research in the field.

PB 9781536119862 £78.50 July 2017 Nova Science Publishers 75 pages 155x230mm

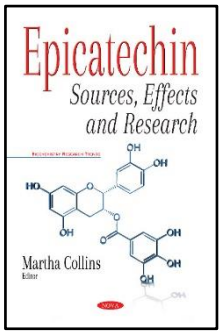


Earthworms
Types, Roles & Research
(Insects & Other Terrestrial Arthropods: Biology, Chemistry & Behavior Series)

Edited by Clayton G Horton

Earthworms are often recognised as key organisms in soil ecosystems. In Chapter One, the authors propose endozoochory (seed dispersal through ingestion) as a missing mechanism of Oligochaeta dispersal and put forward the fusion-orthogonalisation model for the diversification and speciation of the Oligochaeta populations. Chapter Two discusses the biodiversity of earthworms in Madhya Pradesh, a central part of India. Earthworm diversity in some parts of India is still poorly explored, but findings suggest that the Madhya Pradesh region is rich in biodiversity of earthworms. In Chapter Three, a predation pressure is presented as an important variable which can be viewed as another type of pressure on the earthworm population, such as pollution, environmental stress or land management, causing additional or extrinsic mortality to earthworm population. Chapter Four covers the key role played by earthworms as ecosystem engineers through their bioturbation activities involving soil mixing, their influence on the decomposition and mineralisation of litter by breaking down organic matter, and their influence on the gas and water exchange or nutrient transfer in the soil. Chapter Five reviews recent research regarding the assessment of various pollutants on earthworms.

HB 9781536121766 £90.50 July 2017 Nova Science Publishers 150 pages 155x230mm

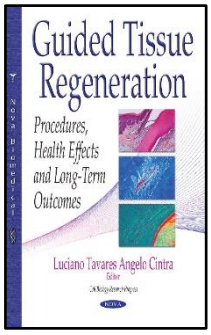


Epicatechin
Sources, Effects & Research (Biochemistry Research Trends Series)

Edited by Martha Collins

Phenolic compounds are aromatic secondary metabolites of plants. In food, they are the major contributor to the color, astringency, bitterness, flavor and smell of them. They are also well known to be natural antioxidants. Epicatechin is a phenolic compound widely present in chocolates, red wine, green and black teas, broad beans, pears, apples, black grapes, apricots, raspberries, blackberries, cherries and bilberry fruits. In this book, Chapter one focuses in principal sources and health benefits associated with food consumption rich in epicatechin, highlighting their chemical structure, bioavailability, biological potential and health benefits. Chapter Two examines the preventive properties of green tea catechins against metabolic syndrome. Chapter Three covers the latest discoveries about biological activities credited to epicatechin, in addition to sources and physicochemical properties, aiming to provide a useful direction to future studies regarding epicatechin effects.

PB 9781536117943 £78.50 June 2017 Nova Science Publishers 90 pages 155x230mm

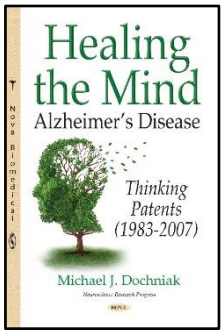


Guided Tissue Regeneration
Procedures, Health Effects & Long-Term Outcomes
(Cell Biology Research Progress Series)

Edited by Luciano Tavares Angelo Cintra

Regeneration is the reproduction or reconstitution of a lost or damaged tissue through the formation of a new one that can reproduce the form, structure and function of original tissues. Tissue regeneration is a complex process that needs a sequence of molecular events, such as cell adhesion, migration, multiplication and differentiation. Tissue engineering is an interdisciplinary science that applies the principles of engineering and biological sciences in order to develop biological substitutes for tissues and injured and/or lost organs. In the medical field, these techniques are already used and are widely established. However, they have been used most recently for concepts of tissue engineering in dentistry. The Guided Tissue Regeneration (GTR) is a technique used in dentistry that also aims at tissue and bone regeneration, or to repair damaged tissue. It is based on the perception that tissues, for the most part, are capable of self-reconstitution if the right conditions are provided.

HB 9781536118148 £90.50 June 2017 Nova Science Publishers 260 pages 155x230mm

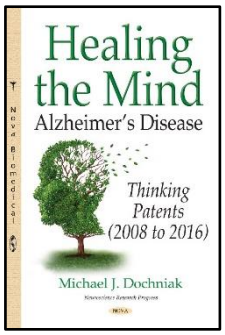


Healing the Mind
Alzheimer's Disease -- Thinking Patents (1983-2007)
(Neuroscience Research Progress Series)

Michael J Dochniak

The brain is a masterpiece that defines your uniqueness. As you age, though, your brain may be susceptible to a terrible disease. Alzheimer's disease is the most common cause of dementia among older adults. It is considered an irreversible, progressive brain disorder that slowly erases memories and thinking, and eventually eliminates the ability to carry out the simplest of tasks. Alzheimer's disease may rank third, just behind heart disease and cancer, as the leading cause of death for elderly people. Medical science continues to make progress in the search for therapeutic interventions and a cure. Since 1983, hundreds of Alzheimer's-related patents have been granted by the United States Patent and Trademark Office in an effort to eradicate this deadly disease. To better understand these inventions, Michael J. Dochniak has written this book to provide an easy-to-read, brief summary of such patents. Within the summaries are inventor profiles and news articles that are insightful and relevant.

HB 9781536110630 £152.50 May 2017 Nova Science Publishers 250 pages 155x230mm

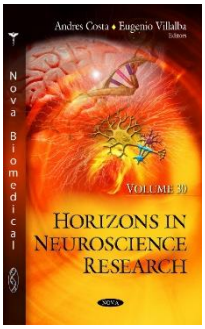


Healing the Mind
Alzheimer's Disease -- Thinking Patents (2008 to 2016) (Neuroscience Research Progress Series)

Michael J Dochniak

The brain is an extremely complex organ that defines your uniqueness. As you age, though, your brain may be susceptible to a terrible disease. Alzheimer's disease is the third biggest killer in the developed world after cancer and heart disease. It is considered an irreversible, progressive brain disorder that slowly erases memories and thinking, and eventually eliminates the ability to carry out the simplest of tasks. Medical science continues to make substantial progress in the search for therapeutic interventions and a cure. Since 2008, hundreds of Alzheimer's-related patents have been granted by the United States Patent and Trademark Office in an effort to eradicate this deadly disease. To better understand these inventions, Michael J. Dochniak has written this informative book to provide an easy-to-read summary of these patents. Within the summaries are inventor-profiles and news articles that are insightful and pertinent. Pioneering and international inventors hail from Australia, Chile, England, and Hawaii. At the beginning of several chapters, you will read about one of the early signs and symptoms of Alzheimer's. Most importantly, Healing the Mind - Alzheimer's Disease -Thinking Patents (2008-2016) is about keeping your brain at peak performance as you age.

HB 9781536119053 £219.50 June 2017 Nova Science Publishers 305 pages 180x260mm

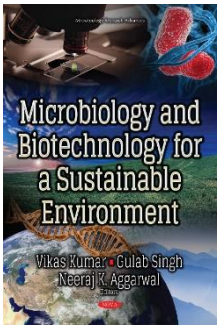


Horizons in Neuroscience Research
Volume 30 (Horizons in Neuroscience Research Series)

Edited by Andres Costa, Eugenio Villalba

Chapter One explains how the monocyte/macrophage cell lineage plays a key role in the development of immune and adaptive responses, and how some cell subpopulations associated with this lineage exhibit highly specialised phagocytic activity following cell degradation. Using the method of gravitational mass spectroscopy (GMS), the bio field of the brain and that of the intestine during physical/mental stress were investigated in Chapter Two. Chapter three discusses the evidence that the prevalence of vitamin D deficiency is increasing both in different age groups (mainly in older adults) and in different geographic regions of the world. Chapter Four describes the harmful effect of alcohol intoxication. The authors investigated the influence of high, low and hormetic doses of alcohol on the free-radical signal intensity in cerebral cortex, hippocampus and liver of the offspring of female rats in gestation period treated with ethanol. Chapter Five proposes a concise and easy-to-use terminology to describe the motor deficit of patients with spinal cord injury. The authors of Chapter Six systematically evaluate how the prior spatial ("where") and feature ("what") information about an upcoming target differentially influence visual searching during the course of inhibition of return of attention (IOR). Chapter Seven reviews the aetiology, clinical appearance, diagnosis, and management for pneumocephalus and cerebrospinal fluid fistula. Chapter Eight surveyed the prognostic value of maternal and foetal autonomic balance in the prediction of Pre-eclampsia (PE). Chapter Nine performs a retrospective review of literature spanning 1979 to 2015 on the subject of staged resection of large (>3cm) vestibular schwannomas. Chapter 10 discusses how neuroprotective mechanics are transformed to pathogenetic agonists in the propagating establishment and spread of lost synaptic plasticity in the Alzheimer disease process.

HB 9781536120295 £235.80 July 2017 Nova Science Publishers 180 pages 155x230mm

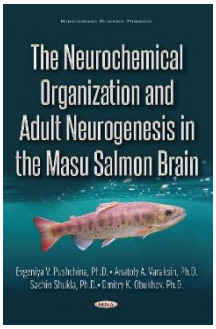


Microbiology & Biotechnology for a Sustainable Environment (Microbiology Research Advances Series)

Edited by Vikas Kumar, Gulab Singh, Neeraj K Aggarwal

The precarious activities of human beings bring undesirable changes in the environment. The environment is degrading due to overpopulation, industrialisation, heavy metals, pesticide, antibiotics, and other hazardous chemicals from one or more sources. As a result, humanity has to ponder over the condition of the environment, which is getting worse day by day. The more efforts humanity puts forward to control nature, the more environmental pollution increases, and because of this the future is getting more and more insecure. So, environmental protection is the primary concern for the future of humanity. There are vast scientific communities working towards the development of eco-technologies, which can improve environmental sustainability without hampering the development of society. Environmental sustainability defines how people should study and protect ecosystems, air quality, integrity and focus on the elements that place stress on the quality of the environment. The environmental protection agencies recognised that developing technology acts as a key to this sustainability and protecting the environment from damages that technological advances could potentially bring. Environmental Microbiology and Biotechnology has emerged as very important and promising disciplines in the last two decades. Biotechnology has shown a great promise in solving a plethora of environmental problems. So, different authors regularly try to fill the gap of knowledge in this field. The major goal of this book is to emphasise all the disciplines from the subject of environmental microbiology and biotechnology. This book fills a long felt gap in the field of environmental sustainability and presents chapters authored by most active researchers in this area. Considerable emphasis in the book is given on all the currently significant research topics/areas, which can be used in the future for the sustainable development of society through environmental protection.

HB 9781536120769 £219.50 July 2017 Nova Science Publishers 235 pages 180x260mm

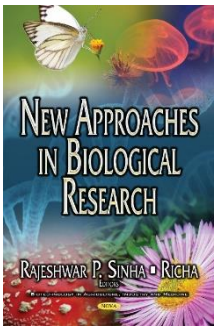


Neurochemical Organization and Adult Neurogenesis in the Masu Salmon Brain (Neuroscience Research Progress Series)

Evgeniya Pushchina, Anatoly Varaksin, Sachin Shukla, Dmitry Obukhov

This monograph presents the results of long-term research on the neurochemical structure of the brain and spinal cord of Masu salmon Oncorhynchus masou, as well as cellular, molecular and physiological mechanisms of adult neurogenesis. Salmon are a phylogenetically ancient branch of ray-finned fish, the brain of which retains a large number of matrix zones with high proliferative activity involved in adult neurogenesis. The presence of large proliferative zones in the brain of juvenile salmonids signifies a high reparative potential in the brain. The results of investigations presented in the book to improve the understanding of cellular and molecular mechanisms of the fish's CNS structure during postembrionic ontogeny. The objective of this monograph is to investigate the organization, projection features and relationships of a signal transductor system, producing classic neurotransmitters (catecholamines, acetylcholine and gamma-aminobutyric acid) and gaseous intermediates (nitric oxide and hydrogen sulphide) in the Oncorhynchus masou brain, and to evaluate their participation in the processes of postembryonic morphogenesis of the CNS. Identified particular structural and neurochemical characteristics of CNS organisation and basic histogenetic processes (proliferation, migration and differentiation of nerve cells) after the completion of brain formation in fishes with signs of fetalisation expand existing notions of histogenesis in these structures during adulthood. It is expected that during the post-embryonic ontogenesis in fish, several neurotransmitters and gaseous intermediaries can be considered as factors in triggering and regulating cellular and tissue processes of genetic programs concerning brain development. The content of the study determined the range of experimental models for the study of reparative processes and adult neurogenesis. A new in vitro model system of cultured neural cells from O. masou was reported. Morphological data and some cellular characterisation supporting the use of this novel in vitro tool in investigations of neurochemical properties, axonal growth and neurogenesis in CNS were presented. For a more detailed study of the properties of H2S-expressing cells, their cellular relationships with different neurochemical specialisation in the central nervous system, their characteristics of the processes of proliferation and differentiation, and the features of participation of hydrogen sulphide in reparative neurogenesis, the primary culture of the brain and spinal cord from the O. masou was set up, and properties of proliferation and differentiation were analysed with the specific markers.

HB 9781536100440 £219.50 June 2017 Nova Science Publishers 210 pages 155x230mm

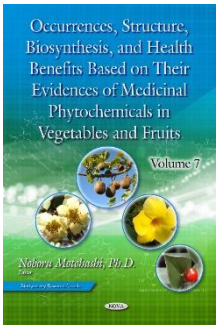


New Approaches in Biological Research (Biotechnology in Agriculture, Industry & Medicine Series)

Edited by Rajeshwar P Sinha, Richa

Biological science primarily deals with the morphology, physiology and biochemistry of living organisms, including their distribution, taxonomy, evolution, structure, growth, function and metabolism. All living organisms undergo metabolism, maintain homeostasis, have the capacity to grow, respond to stimuli, communicate through various means, reproduce and adapt to their environment through natural selection. The organisms that photosynthesise are the primary producers and represent life support systems from aesthetics to food to medicine. The book deals with the topics pertaining to biotechnology, molecular biology, ecology, plant pathology, bionanotechnology and stress biology. Technology-assisted research had led to the evolution of new disciplines of biological sciences with narrow specialisation. The requirement of food, medicines, natural products, the quest to resolve and develop a better understanding of life and other biological processes need to conserve genes, plants and ecosystems; the apprehension of land, water and the environment have led to the strengthening of traditional disciplines as well as the emergence of diverse disciplines such as stress biology, molecular biology, biotechnology and bioinformatics. The chapters in this book impart the recent developments and the state-of-the art knowledge in biological sciences. In addition, this book provides newer techniques and uses for these tools in achieving the potential of biotechnology to understand some of the basic problems in biological sciences.

HB 9781536121155 £219.50 July 2017 Nova Science Publishers 315 pages 180x260mm

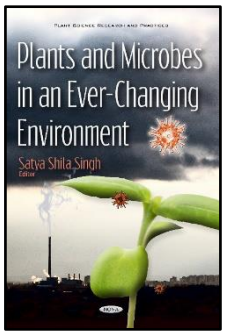


Occurrences, Structure, Biosynthesis & Health Benefits Based on Their Evidences of Medicinal Phytochemicals in Vegetables & Fruits Volume 7 (Biochemistry Research Trends Series)

Edited by Noboru Motohashi

Recently, much evidence has shown that phytochemicals are essential for daily health maintenance just like essential amino acids, vitamins, and minerals. However, some of these components are not able to produce within our bodies. Therefore, we must intake these phytochemicals from external sources. Based on the above fact, this book mainly describes the phytochemicals and their effects, including preventions and treatments as follows: Chapter One: "Medicinal Phytochemicals and Health Effects of Henbit Lamium amplexicaule L. Based on Their Evidences"; Chapter Two: "Natural Carotenoids: Occurrence, Structure, Synthesis and Their Dietary Absorption"; Chapter Three: "The Phytochemicals and Health Benefits of Murraya koenigii"; Chapter Four: "Bioactive Compounds from Lippia citriodora: Application in Diseases Prevention"; and Chapter Five: "Food for Mental Cognition and Brain Health". These chapters will provide more advanced information to researches in the academic region of advanced novel drug designs using phytochemicals.

HB 9781536119824 £90.50 July 2017 Nova Science Publishers 190 pages 155x230mm

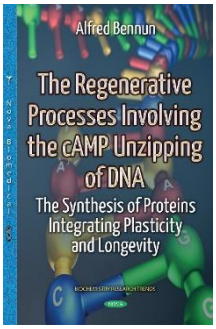


Plants & Microbes in an Ever-Changing Environment (Plant Science Research & Practices Series)

Edited by Satya Shila Singh

The ever-increasing human population, rapid development of industries and human introduction of different xenobiotic compounds have contaminated the three major abiotic environmental factors (i.e., air, water and soil) all over the world. Contamination of these factors exerts adverse impacts on existing plants and microbes. Microbes present in the air, water and soil are always exposed to the ever-changing environment and exhibit tremendous variations in their community structure. However, few environmental alterations have positive and beneficial impacts on microbes. Plants also show a number of detrimental symptoms such as reduced growth, delayed fruit ripening, altered photosynthesis, rapid leaf fall, early senescence and premature death of seedlings in response to the disintegration of air, water and soil quality. So, the survival of plants and microbes in these changing environments is under serious threat. However, it is interesting how plants and microbes, despite their extreme sensitivity to environmental changes, are surviving in these continuously changing environments. In this respect, a genomic study of plants and microbes may help to understand how they have overcome previous environmental changes because millions of years of natural selection have shaped their genome. Moreover, this process of acclimation to environmental stresses was further continued through the inheritance of the altered genome of the offspring. In brief, present-day plants and microbes have obtained the resistance power from their precursors, which they have developed during the course of evolution.

HB 9781536109184 £295.50 May 2017 Nova Science Publishers 550 pages 180x260mm

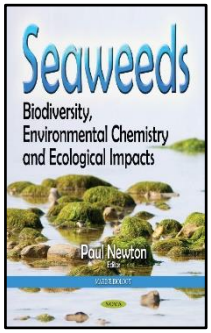


Regenerative Processes Involving the cAMP Unzipping of DNA Synthesis of Proteins Integrating Plasticity & Longevity (Biochemistry Research Trends Series)

Edited by Alfred Bennun

This book reviews experimental contributions from many sources to search for a model of structure and molecular function of the blood-astrocytes-neuronal-system. An oxy-Hb of lower pka compared to deoxy-Hb allows for a higher dissociation of protons. This functioning for the mutual inclusion of O2 and Mg2+ is surrounded by a hydration shell of about 60 molecules. 2,3 DPG-dependent deoxygenation involves the tetramer chains of hydrophobic attractions. Their favourable thermodynamics allows for the dissociation of O2 and Mg2+ by breaking the H-bonds between the protein and the water shell. The turnover between hydrated versus hydrophobic forms of proteins involved in enzyme kinetics requires energy expenditures during the turnover of [ES], changing the enzyme hydration states into its [EP] form. A divalent metal (Mg++) when chelated by a protein loses its hydration sphere. It then releases its hydration (which is incomplete) and shows an intrinsic stronger charge. This is the denominated Mg2+ nascent, which functions by capturing water from Na+ and K+, allowing for sieve effects operating as intermediates of the physical open system. The dissipative energy potential is controlled within astrocytes by decreasing the number of H-bonds through rapid circulation. This is made possible by decreasing the number of H-bonds to reach the vapor state associated with air breathing, which could also operate through the vomeronasal organ that experiences direct contact with the brain. The breakdown of MgATP by the Na+/K+ ATPase of MgATP is involved in the release of ADP3-, and Pi2- and nascent Mg2+ that decrease ATP4-. Mg2+ could be the generator of an action potential via the activation of a Na+/K+ ATPase pump, which opens the gates for Na+ in and K+. The free [Mg2+] up-regulates responsiveness of the post synaptic AC (adenylyl cyclase) NA (noradrenaline) released by the long axons of the corpus coerellus into the synaptic junctions, and also contributes to additional up-regulation by increasing the CAMP. The up-regulation of AC by Mg2+ is turned off by Ca+2. Stressors trigger the Mg2+ response, which results in emotional pain.

HB 9781536118490 £219.50 June 2017 Nova Science Publishers 420 pages 180x260mm

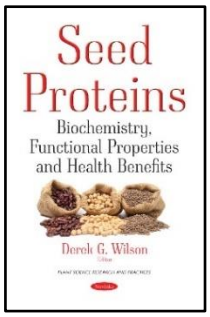


Seaweeds Biodiversity, Environmental Chemistry & Ecological Impacts (Marine Biology Series)

Edited by Paul Newton

Malaysia has the potential to be a key seaweed production player in the region if proper management and possible interventions take place. Chapter One analyses the capacity building programs in Malaysia that aim to transform conventional seaweed cultivation techniques to modern seaweed cultivation techniques by applying a scientific approach. Chapter Two studies the marine macroalgae thriving at intertidal rocky shores on the west coast of Portugal, a transition zone where the combined influence of cold waters and warmer waters may favour the development of unique macroalgal communities. In Chapter Three, the authors discuss how problems of environmental deterioration and energy demand could be alleviated by the paradigm shift from fossil to biofuel from marine algae. The chapter elaborates on the unconventional strategies developed for the farming as well as conversion of Ulva rigida to biofuels and biochemicals. Chapter Four discusses the incorporation of macroalgae or macroalgal derived ingredients as a source of both macro-nutrients and micro-nutrients for animal feed production. The biological health benefits of the macroalgal ingredients beyond basic nutrition for the development of functional feed in the aquaculture, the ruminant and the swine sectors are also discussed together with the industrial challenges of its application. To conclude, Chapter Five provides a brief review of seaweed co-culture and its environmental impact on coastal fisheries.

HB 9781536118582 £90.50 June 2017 Nova Science Publishers 185 pages 155x230mm

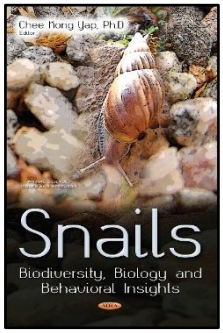


Seed Proteins
Biochemistry, Functional Properties & Health Benefits
(Plant Science Research & Practices Series)

Edited by Derek G Wilson

Seeds are a pathway for species survival. They are a fundamental unit for plants spreading, performing a vital biological role. They have been consumed as food for thousands of years, and contain the genetic potential of agricultural species; therefore, they are continually improved and selected along time. This book reviews the biochemistry, functional properties and health benefits of seed proteins.

PB 9781536109801 £78.50 June 2017 Nova Science Publishers 70 pages 155x230mm



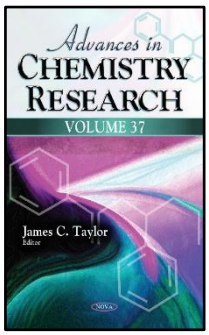
Snails
Biodiversity, Biology & Behavioral Insights (Animal Science, Issues & Research Series)

Edited by Chee Kong Yap

The purpose of this book is to provide specific, updated information concerning the topic of snail diversity, snail biology and snail behaviours. The intended readers of this book include researchers, academicians and university students. This book contains ten chapters, the first three focusing on biodiversity. Chapter One presents the values of a wide spectrum of snail biodiversity. Chapter Two reviews snail biodiversity based on 45 reported publications, from 1991 until 2016, covering most of the ecoregions. Chapter Three also reviewed the current geographical distribution of marine snails along the Persian Gulf and Oman Sea, based on 42 publications. Chapters Four, Five and Six are concerned with snail behaviours ranging from sensitivity to metal exposure, and the effects of botanical pesticides on neural activity patterns. Chapter Four presents the toxicity test of Cd and Cu by using two different sized groups of Pomacea insularum as test subjects. Chapter Five presents information concerning methanol extracts of plants. Chapter Six gives a comprehensive overview of the nervous system as well as individual neurons in the pond snail. Chapters Seven through Ten consider environmental biomonitoring. Chapter Seven presents the allometric data and concentrations of heavy metals in the total soft tissues of the mud-flat snail. Chapter Eight reviews and cites nickel (Ni) concentrations in the total soft tissues of the mangrove snail. Chapter Nine presents concentrations of four heavy metals in the edible snails from three selected sites in Peninsular Malaysia. Chapter Ten presents concentrations of five heavy metals in five taxa of intertidal snails.

HB 9781536118476 £219.50 June 2017 Nova Science Publishers 200 pages 155x230mm

CHEMISTRY

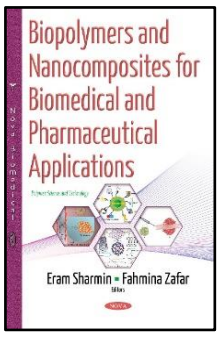


Advances in Chemistry Research
Volume 37 (Advances in Chemistry Research Series)

Edited by James C Taylor

Chapter One summarises the latest achievements on the determination of synthetic antioxidants. Chapter Two provides an overview on the activity of essential oils with defined chemical composition, tested against cholinesterases and identifies the ones that could be used in Alzheimer's treatment. Chapter Three discusses the adverse clinical effects and the potential toxicological effects of Aloe vera/ Chapter Four describes a simple, cost-effective and ecofriendly approach for the fabrication of different metal nanoparticles (MNPs) including silver, gold, iron, zinc and palladium by using different plant phytochemicals as potential reducers and stabilisers. Chapter Five studies ionic liquid-promoted synthesis of phosphinates and biphosphonic acid derivatives. Chapter Six focuses on low molecular mass reactive acrylamide copolymers as carriers of biologically active compounds. Chapter Seven discusses the phenomenon of mass concentration periodicity in amorphous matter. Chapter Eight studies the use of furan derivatives acting as electrophilic dienophiles. Chapter Nine examines the use of surfactants in the chemical treatment of crude case oriental zone in Venezuela for asphaltene mitigation.

HB 9781536110418 £238.50 June 2017 Nova Science Publishers 200 pages 155x230mm

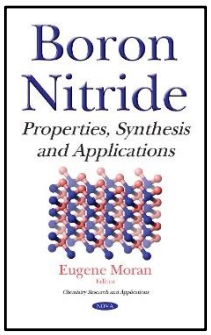


Biopolymers & Nanocomposites for Biomedical & Pharmaceutical Applications
(Polymer Science & Technology Series)

Edited by Eram Sharmin, Fahmina Zafar

Biopolymers are endowed with excellent attributes such as biodegradability, biocompatibility and functional versatility, which render them an edge over other polymers. Today, they find broad applications in the biomedical field and pharmaceutical world. Nanotechnology has offered tremendous opportunities to design and tailor-make biopolymers augmenting their applications further. This book presents topical articles on the synthesis and applications of biopolymers, biopolymer nanoparticles and nanocomposites. The book includes chapters on conducting polymers, vegetable oils, chitosan and cellulose based polyurethanes, polymeric hydrogels, biopolymeric nanoparticles and nanocomposites, and their applications as drug carriers and sensors in cancer therapy and others. This book would be useful for students, scholars, and scientists interested in the synthesis, biomedical and pharmaceutical applications of biopolymers and their nanocomposites.

PB 9781536106350 £90.99 June 2017 Nova Science Publishers 120 pages 155x230mm

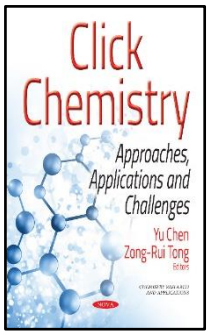


Boron Nitride
Properties, Synthesis & Applications (Chemistry Research & Applications Series)

Edited by Eugene Moran

In Chapter One, the authors introduce two methods for the exfoliation of BNNS from hexagonal boron nitride (hBN). Then, methodologies for the surface functionalisation and nanocomposite construction are demonstrated by two BNNS based nanocomposites. The catalytic performance of the BNNS based nanocomposites is also evaluated and discussed in detail. Chapter two evaluates the formation of rolled hexagonal boron nitride nano-sheets (h-BN nanoscrolls) on their unique morphology, magnetic properties and applications. Due to the high chemical and thermal stabilities, as well as atomically smooth surfaces with free of dangling bonds, hBN has been used as barriers, passivation and support layers in 2D electronic devices, to maximise the electrical and optical characterisation of 2D materials. Chapter Three focuses on chemical vapor deposition, a promising method to overcome these limitations. Chapter Four discusses how a boron doped armchair graphene ribbon has been shown by cyclic voltammetry to be a potential catalyst to replace platinum, however the reaction catalysed was not identified. The authors use density functional calculations to show the reaction catalysed is likely dissociation of HO2. Chapter Five reveals a novel and industrially feasible route to incorporate boron nitride nanoparticles (BNNPs) in radiation-shielding aerospace structural materials. Chapter Six deals with the preparation and characterisation of boron nitride nanotube (BNNT)-reinforced biopolyester matrices. The morphology, hydrophilicity, biodegradability, cytotoxicity, thermal, mechanical, tribological and antibacterial properties of the resulting nanocomposites are discussed in detail. Chapter Seven presents theoretical estimations regarding the compressive buckling response of single walled boron nitride nanotubes which have a similar crystal structure as single walled carbon nanotubes. Finally, Chapter Eight shows how the different exchange mechanisms can be distinguished and measured by studying solid films where part of the 3He is replaced by immobile Ne atoms.

HB 9781536119084 £90.50 June 2017 Nova Science Publishers 170 pages 155x230mm

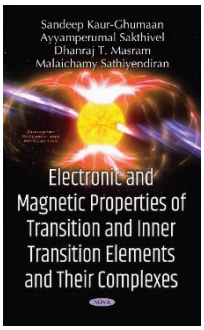


Click Chemistry
Approaches, Applications & Challenges (Chemistry Research & Applications Series)

Edited by Chen Yu, Xue Ke, Tong Zong Rui

Click chemistry, which is also referred to as linkage chemistry, dynamic, combinatorial chemistry or quick linking combinatorial chemistry describes the reaction that joins molecular fragments as simply, efficient and versatile as clicking a mouse. The two units with specific click structures can be linked by a click reaction no matter what is attached to the structure, and only the specific click structures can be joined. It emphasises the development of new combinatorial chemistries on the basis of the synthesis of efficient and highly selective carbon-heteroatom bonds (C-X-C), and effectively prepares molecules with high diversity via these simple reactions. It significantly simplified and promoted the development of synthesis chemistry. Click chemistry has become one of the most useful and attractive synthetic strategies in many fields. In this book, the definition of click chemistry is explained, the characteristics and types of click chemistry are introduced, and some specific reaction types are focused on.

HB 9781536119039 £219.50 July 2017 Nova Science Publishers 260 pages 155x230mm

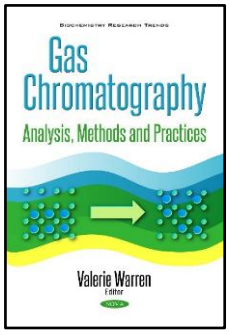


Electronic & Magnetic Properties of Transition & Inner Transition Elements & Their Complexes (Chemistry Research & Applications Series)

Sandeep Kaur-Ghumaan, Ayyamperumal Sakthivel, Dhanraj T Masram, Malaichamy Sathiyendiran

The book focuses on the principles of electronic and magnetic properties of transition and inner transition metal ions/complexes. It is one of the essential and fundamental topics for graduate and undergraduate students, and it is also important for researchers. The book also covers basic concepts of symmetry in orbital, point group, spectroscopic terms and energy level diagrams. Crystal field, ligand field and molecular orbital theory (along with their importance in spectra) are elaborated. Further magnetic properties of transition metal ions/complexes as well as their spin and orbital contributions have been described in this book.

HB 9781536109146 £90.50 May 2017 Nova Science Publishers 150 pages 155x230mm

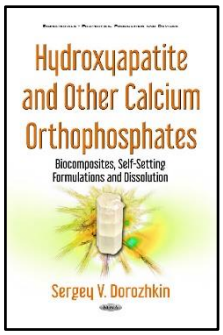


Gas Chromatography
Analysis, Methods & Practices (Biochemistry Research Trends Series)

Edited by Valerie Warren

Many members of plant and fungi kingdoms have toxic alkaloids that are highly poisonous. Chapter One explores how gas chromatography is used to analyse some classes of these alkaloids. In Chapter Two, the effect of surfactants on gas-liquid interfaces by using reverse-flow gas chromatography (RF-GC). Chapter Three describes the application of Solid-Phase Microextraction (SPME) for identifying volatile organic compounds (VOCs), additives and degradation products in industrial plastics, rubber, and packaging materials. And in Chapter Four, the authors discuss sampling procedures for the analysis of volatile and gaseous substances used in daily life and in forensic medicine.

HB 9781536119909 £152.50 July 2017 Nova Science Publishers 80 pages 155x230mm

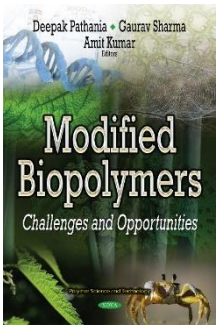


Hydroxyapatite & Other Calcium Orthophosphates
Biocomposites, Self-Setting Formulations & Dissolution
(Biomaterials -- Properties, Production & Devices Series)

Sergey V Dorozhkin

As the inorganic constituents of skeletons, dentine and the enamel of teeth in all vertebrates, as well as antlers of male deer, calcium orthophosphates (CaPO4) appear to be the key materials to sustain all life on Earth. Therefore, biologically relevant CaPO4 possess all the necessary features of the biomaterials, such as biocompatibility, bioactivity, bioresorbability, osteoconductivity, osteoinductivity, and appear to be non-toxic, non-inflammatory and non-immunogenic. In this book, the author presents current state-of-the-art applications of CaPO4 as biocomposites and hybrid biomaterials, self-setting formulations, as well as the workings of their dissolution mechanism. Topics discussed include the major constituents of biocomposites and hybrid biomaterials for bone grafting, preparation, properties and the available knowledge on interactions among the phases for various types of CaPO4-based biocomposites. Additionally, the major types, preparation, properties and the available knowledge on the reinforced formulations for various types of self-setting CaPO4-based compositions, followed by the detailed description of their biomedical applications and in vivo behaviour are discussed. The comprehensive description of currently available dissolution mechanisms of calcium apatites in acids, followed by the successful attempt to create the general dissolution mechanism is given in the last section of this book.

HB 9781536119367 £219.50 June 2017 Nova Science Publishers 360 pages 180x260mm

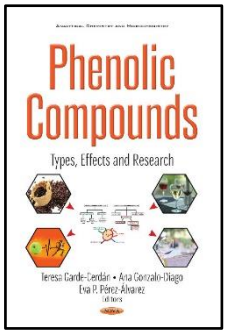


Modified Biopolymers
Challenges & Opportunities (Polymer Science & Technology Series)

Edited by Deepak Pathania, Gaurav Sharma, Amit Kumar

Biopolymers such as cellulose, lignin, starch, pectin, chitin, xylan, etc. are copiously available in nature in the form of plant biomass. They have been used for various applications such as biofuels, nanobiocomposites, biomedicine, etc. Biopolymers have unique antimicrobial properties, and are thus used for food packaging. The field of biomaterials is interdisciplinary and includes chemistry, biology and medicine. There are different ways to apply biopolymers for the benefit of our society. Although natural polymers are cheap and available in large quantities, it is still difficult to utilise their potentials. Still, there are challenges to develop new methodologies for the efficient and economic utilisation of these biopolymers. Consequently, the modification of these materials is the focus of recent scientific research. These modifications improve the various properties of biopolymers required for specific applications. Modifications improve heat, moisture resistance, solubility in water, sustainability, flexibility, compatibility, biodegradability, etc. Biopolymers modified by blending shows considerable improvement in the impact resistance of brittle polymers. Biopolymer systems containing particles with one or more dimensions in the nanometer scale are called bionanocomposites, a special class of materials possessing unique thermal stability, fire resistance, mechanical and optical properties. Bionanocomposites have been effectively used in controlled drug delivery, food packaging, etc.

HB 9781536121162 £219.50 July 2017 Nova Science Publishers 305 pages 180x260mm

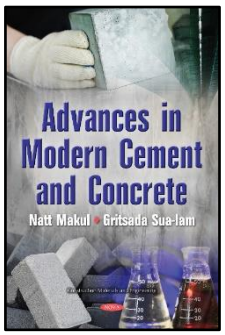


Phenolic Compounds
Types, Effects & Research
(Analytical Chemistry & Microchemistry -- Food Science & Technology Series)

Edited by Teresa Garde-Cerdan, Ana Gonzalo-Diago, Eva P Perez-Alvarez

Phenolic compounds are a large family of metabolites that result from the secondary metabolism of plants. Novel insights about phenolic chemical structure, analytical methods, therapeutic effects, sensory properties, viticultural practices to modify their content and the use of these compounds found in agro-industrial wastes have been gathered in this book. A comprehensive overview on phenolic compounds and neurodegenerative disorders, highlighting their antioxidant, anti-inflammatory properties and their effects on Parkinson's disease have been compiled. In relation to antioxidant properties, the metabolism and bioavailability of several hydroxycinnamic acids present in coffee have been studied in detail, and also the methods to determine antioxidant capacity have been included. Different strategies in order to improve the extraction and determination of phenolic compounds in a complex matrix by analytical techniques are provided, reporting problems and new analytical solutions. The role of these compounds in colour stabilisation and also in bitterness and astringency perception has been reported. Moreover, the interactions that take place among no volatile and volatile compounds present in wine affecting sensory perception have been briefly introduced. Furthermore, the use of cover crops in vineyards and their effects on agronomical and enological behaviour -- particularly, their impact on phenolic compounds -- have been highlighted. Finally, the biological properties of phenolic compounds from industrial wastes have been tackled, since they are a promising alternative to transform agro-industrial wastes into a source of natural and healthy compounds.

HB 9781536120332 £152.50 July 2017 Nova Science Publishers 240 pages 155x230mm

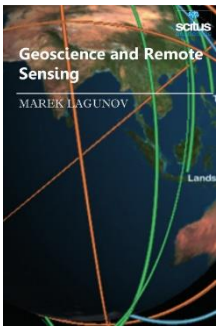


Advances in Modern Cement & Concrete
(Construction Materials & Engineering Series)

Natt Makul, Gritsada Sua-lam

Cement and concrete are among the materials made by man that tell us a great deal about how far civilisation has come. Developed over time for various uses, modern concrete and cement come in multiple forms, including self-compacting/consolidating concrete, green concrete, and nano cement. This book consists of five chapters. Each chapter comprises an introduction, a discussion of the concept of the design and the concrete's development, and the properties and testing of the concrete in fresh and hardened stages. This book is for readers who want to become well-versed in the most important and current research in the field of modern cement and concrete. The book will be useful for students, researchers, concrete scientists and technologists, and practicing engineers. Each chapter focuses on a specific modern concrete technology, and offers a summary and critique of recent research findings and patents published in the most well-known, reputable publications. The author would like to express his gratitude to the many people who saw him through this book - people who provided support, read sections of the manuscript, offered comments, allowed him to quote their remarks, and assisted in the editing, proofreading, and design.

HB 9781536110371 £185.99 June 2017 Nova Science Publishers 250 pages 180x260mm

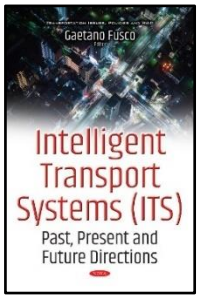


Geoscience & Remote Sensing
(Civil Engineering Series)

Marek Lagunov

Remote sensing refers to the activities of recording/observing/perceiving (sensing) objects or events at far away (remote) places. In remote sensing, the sensors are not in direct contact with the objects or events being observed. The information needs a physical carrier to travel from the objects/events to the sensors through an intervening medium. The electromagnetic radiation is normally used as an information carrier in remote sensing. The output of a remote sensing system is usually an image representing the scene being observed. A further step of image analysis and interpretation is required in order to extract useful information from the image. The human visual system is an example of a remote sensing system in this general sense. Geoscience addresses critical issues such as energy, meteorology, water and mineral resources, stewardship of the environment, oceanography, reducing natural hazards for society, planetary science and more. It can be considered to be a branch of planetary science, but with a much older history. There are both reductionist and holistic approaches to Earth sciences. Therefore, the geoscience comprehends earth, atmospheric, oceanography, pedology, petrology, mineralogy, hydrology and geology. This book deals with the latest and futuristic developments in remote sensing novel theory and applications.

HB 9781681172712 £160.99 January 2017 Scitus Academics 338 pages 155x230mm

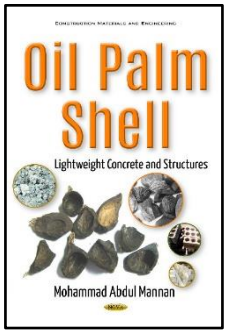


Intelligent Transport Systems (ITS)
Past, Present & Future Directions (Transportation Issues, Policies & R&D Series)

Edited by Gaetano Fusco

Intelligent Transport Systems (ITS): Past, Present and Future Directions introduces the reader to the fundamentals of the ITS. It provides an overview of their evolution, starting from the earliest experiments on the route guidance systems in the 70s to their current deployment, and discusses the main challenges to face for their future development.

HB 9781536118155 £219.50 June 2017 Nova Science Publishers 375 pages 180x260mm

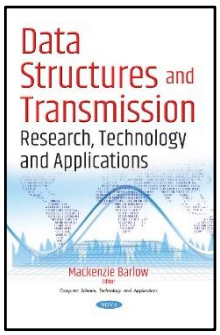


Oil Palm Shell
Lightweight Concrete & Structures (Construction Materials & Engineering Series)

Mohammad Abdul Mannan

Due to a high demand in construction and furniture industries worldwide, natural resources such as stones and wood as non-renewable resources are being depleted. Thus, researchers are focusing on renewable resources as alternative materials. As such, the utilisation of abundant solid wastes and byproducts, which are discharged from agriculture, industry and municipalities present an alternative to the conventional materials for the construction and furniture industries. These solid wastes and byproducts, when properly processed have shown to be effective and can readily meet design specifications. Agricultural solid wastes from oil palm distributors such as Oil Palm Shell (OPS) and Empty Fruit Bunch (EFB), which are abundant in agro-based countries, present an interesting alternative to the conventional aggregate in lightweight concrete and artificial plank production, respectively. The major technical characteristics of OPS solid waste must be primarily understood before each particular use. Therefore, there is a need to highlight the importance of OPS to be used in the construction industry.

HB 9781536108781 £219.50 May 2017 Nova Science Publishers 300 pages 180x260mm

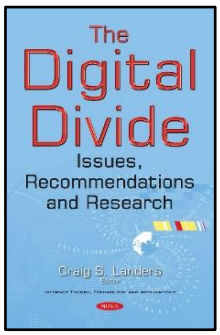


Data Structures & Transmission
Research, Technology & Applications
(Computer Science, Technology & Applications Series)

Edited by Mackenzie Barlow

The recent advances in computer networks and the widespread use of the Internet, together with other developments in telecommunications technology have made it possible to send messages and exchange information around the whole world. The high variety and the large amount of data exchanged across communication networks have increased over the last few years. This means the threat of interception during data transmission has become a major concern. Important research aimed at designing algorithms to help prevent interception and enhance data security is currently of primary relevance. This advanced technology requires new and efficient encryption methodologies. These algorithms can assure security for fast evolving communication and storage applications that must be secured against intrusion threats, which unfortunately are increasing in sophistication and frequency. This book analyses new research on the technology and applications of data structures and data transmission.

PB 9781536110715 £78.50 May 2017 Nova Science Publishers 110 pages 155x230mm

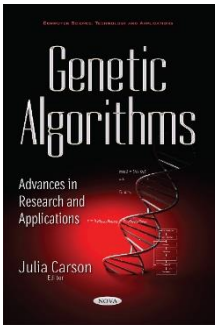


Digital Divide
Issues, Recommendations & Research
(Internet Theory, Technology & Applications Series)

Edited by Craig S Landers

The emergence of the Internet as a world wide web in the late 1990s made access to information and knowledge significantly easier. Soon after the Internet started reaching the masses, concerns about its unequal distribution appeared. The digital divide that is manifested in access and usage differences between individuals, groups, regions and even countries is created between those who have access to information and communication technologies and know how to utilise them, and those who do not. Empirical studies supply strong evidence that many of those who are digitally excluded are also socially excluded, i.e., digital inequality is strongly related to economic and social stratification. Specifically, empirical studies have examined the digital divide as reflected in gaps in digital access, digital literacy, digital competence, digital, Internet and computer skills, attitudes towards computer and Internet and digital uses between different population groups. This book further reviews the issues, recommendations and new research on the digital divide.

HB 9781536110708 £90.50 May 2017 Nova Science Publishers 170 pages 155x230mm

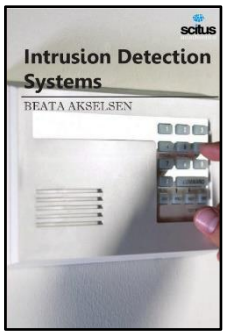


Genetic Algorithms
Advances in Research & Applications
(Computer Science, Technology & Applications Series)

Edited by Julia Carson

In Chapter One, a revision and complementary analysis of three interesting cases where stochastic strategies are applied to get the optimal design of intensified schemes is presented. The revisited cases include multicomponent, extractive and reactive thermally coupled distillation. Chapter Two performs parameter optimisation on a genetic algorithm to skip the tuning parameter process during unmanned aerial vehicle path planning. Results show that truncation selection at 20% is highly recommended for genetic algorithm path planning application because of its low average path and computational costs. Chapter 3 describes the calibration of the numerical model of the Monte da Virgem telecommunications tower, located near the city of Porto, Portugal. The calibration of the numerical model of the tower relies on the application of an iterative method based on a genetic algorithm. Chapter 4 describes the genetic algorithm-based calibration procedure for a microscopic traffic simulation model, focusing on freeways and modern roundabouts. For both case studies, the genetic algorithm tool in MATLAB® was applied in order to reach the convergence between the outputs from Aimsun microscopic simulator and the observed data.

PB 9781536118568 £78.50 June 2017 Nova Science Publishers 90 pages 155x230mm

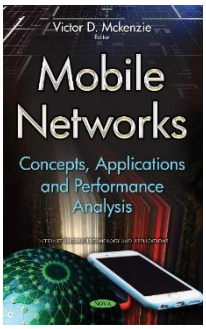


Intrusion Detection Systems
(Artificial Intelligence Series)

Edited by Beata Akselsen

An intrusion detection system inspects all inbound and outbound network activity and identifies suspicious patterns that may indicate a network or system attack from someone attempting to break into or compromise a system. Intrusion detection (ID) is a type of security management system for computers and networks. An intrusion detection system gathers and analyzes information from various areas within a computer or a network to identify possible security breaches, which include both intrusions (attacks from outside the organisation) and misuse (attacks from within the organisation). Intrusion detection and prevention systems (IDPS) are primarily focused on identifying possible incidents, logging information about them, and reporting attempts. In addition, organisations use IDPSes for other purposes, such as identifying problems with security policies, documenting existing threats and deterring individuals from violating security policies. The safeguarding of security is becoming increasingly difficult, because the possible technologies of attack are becoming ever more sophisticated; at the same time, less technical ability is required for the novice attacker, because proven past methods are easily accessed through the Web. This book presents the practical application and results obtained for existing networks as well as results of experiments confirming efficacy of a synergistic analysis of detection and signature detection, and application of interesting solutions, such as an analysis of the anomalies of user behaviors and many others.

HB 9781681172668 £160.99 January 2017 Scitus Academics 338 pages 155x230mm

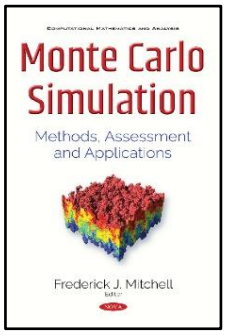


Mobile Networks
Concepts, Applications & Performance Analysis
(Internet Theory, Technology & Applications Series)

Edited by Victor D McKenzie

The mobile network is continuously evolving to fulfill subscribers' requirements; however, there are still restrictions. CONTENTS: Preface; Redefining Communication with 5G Mobile Technology; TCP 5G for Next Generation High Speed Mobile Networks; Advanced QoS-Based User-Centric Aggregation (AQUA) Framework for User Terminals in 5G Mobile Networks; Survey on Human Activity Recognition Systems Using RF Signals; Index.

HB 9781536121230 £152.50 July 2017 Nova Science Publishers 90 pages 155x230mm

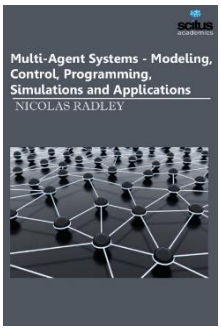


Monte Carlo Simulation
Methods, Assessment & Applications
(Computational Mathematics & Analysis Series)

Edited by Frederick J Mitchell

Chapter One presents a study on application of Monte Carlo simulation in reliability assessment of composite electric power systems. Chapter Two develops a PK/PD model to evaluate, by Monte Carlo simulation as a data maximisation strategy, the antiviral activity of two stavudine formulations: conventional stavudine and stavudine-gold nanoparticles (stavudine-AuNPs). In Chapter Three, the magnetic properties of the kagomé lattice is studied with Ruderman–Kittel–Kasuya–Yosida (RKKY) exchange interactions in a spin-7/2 and alternate mixed spin-5/2 and spin-2 Ising model on the Bethe lattice by using the Monte Carlo simulations.

PB 9781536119893 £78.50 July 2017 Nova Science Publishers 55 pages 155x230mm

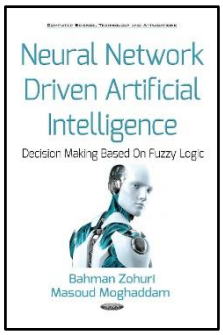


Multi-Agent Systems
Modeling, Control, Programming, Simulations & Applications
(Computer Science Series)

Nicolas Radley

Multiagent systems consist of multiple autonomous entities having different information and/or diverging interests. The study of multiagent systems (MAS) focuses on systems in which many intelligent agents interact with each other. The agents are considered to be autonomous entities, such as software programs or robots. Their interactions can be either cooperative or selfish. That is, the agents can share a common goal (eg: an ant colony), or they can pursue their own interests. Multi-agent systems can be used to solve problems that are difficult or impossible for an individual agent or a monolithic system to solve. Intelligence may include some methodic, functional, procedural approach, algorithmic search or reinforcement learning. Although there is considerable overlap, a multi-agent system is not always the same as an agent-based model (ABM). The goal of an ABM is to search for explanatory insight into the collective behavior of obeying simple rules, typically in natural systems, rather than in solving specific practical or engineering problems. Topics where multi-agent systems research may deliver an appropriate approach include online trading, disaster response, and modelling social structures. Multi-agent systems consist of agents and their environment. Typically multi-agent systems research refers to software agents. However, the agents in a multi-agent system could equally well be robots, humans or human teams. A multi-agent system may contain combined humanagent teams.

HB 9781681173139 £141.50 January 2017 Scitus Academics 284 pages 155x230mm

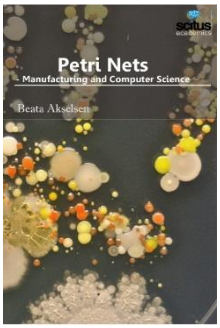


Neural Network Driven Artificial Intelligence Decision Making Based On Fuzzy Logic (Computer Science, Technology & Applications Series)

Bahman Zohuri, Masoud Moghaddam

With today's growing and overloading volume of information, it is becoming tremendously difficult to analyse the huge amounts of data that contain this information. It makes it very strenuous and inconvenient to introduce an appropriate methodology of decision-making fast enough to the point that it can be considered as real-time. The demand for real-time processing information and related data -- both structured and unstructured -- is on the rise and consequently makes it harder and harder to implement correct decision making at the enterprise level to keep the organisation robust and resilient against either manmade threats or natural disasters. Neural networking and fuzzy systems combined show how an artificial intelligence (AI) can be driven, by these combinations as a trainable system that is more dynamic than static when it comes to machine and deep learning language to deal with both adversary and friendly events in real-time. Dynamic systems of AI that are built around such an innovative approach allows the robots of the future to be more adaptive with mechanisms such as principle adoption, self-organisation, and the convergence of global stability from the viewpoint of business and intelligence security needed in today's cyber world. To deal with uncertainty, vagueness, and imprecision, Lofti A Zadeh introduced fuzzy sets and fuzzy logic. In the present book, fuzzy classification is applied to extend portfolio analysis, scoring methods, customer segmentation and performance measurement, and thus improves managerial decisions.

HB 9781536121148 £219.50 July 2017 Nova Science Publishers 435 pages 180x260mm

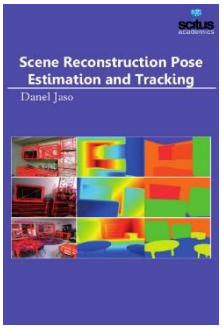


Petri Nets Manufacturing & Computer Science (Artificial Intelligence Series)

Beata Akselsen

Petri Nets are graphical and mathematical tool used in many different science domains. Their characteristic features are the intuitive graphical modelling language and advanced formal analysis method. The concurrence of performed actions is the natural phenomenon due to which Petri Nets are perceived as mathematical tool for modelling concurrent systems. The nets whose model was extended with the time model can be applied in modelling real-time systems. Petri Nets were developed originally by Carl Adam Petri, and were the subject of his dissertation in 1962. Since then, Petri Nets and their concepts have been extended and developed, and applied in a variety of areas: office automation, work-flows, flexible manufacturing, programming languages, protocols and networks, hardware structures, real-time systems, performance evaluation, operations research, embedded systems, defence systems, telecommunications, Internet, e-commerce and trading, railway networks, biological systems. Like industry standards such as UML activity diagrams, Business Process Model and Notation and EPCs, Petri nets offer a graphical notation for stepwise processes that include choice, iteration, and concurrent execution. This book focuses on Petri Nets applications in two main areas: manufacturing and computer science. These two areas have still huge influence on our lives and our world. The theory of Petri Nets is still developing. Although many other models of concurrent and distributed systems have been developed since the introduction in 1964 Petri nets are still an essential model for concurrent systems with respect to both the theory and the applications.

HB 9781681174655 £160.99 January 2017 Scitus Academics 312 pages 155x230mm



Scene Reconstruction Pose Estimation & Tracking (Artificial Intelligence Series)

Edited by Danel Jaso

This book envisages contemporary advances in the use of pattern recognition techniques for computer and robot vision. The disciplines of pattern recognition and computational vision have been intimately entangled since their early days, some four decades ago with the development of fast digital computing. It is generally easy for a person to differentiate the sound of a human voice, from that of a violin; a handwritten numeral "3" from an "8"; and the aroma of a rose, from that of an onion. Though, it is difficult for a programmable computer to solve these kinds of perceptual problems. These problems are difficult because each pattern usually contains a large amount of information, and the recognition problems typically have an inconspicuous, high-dimensional, structure. Pattern recognition is the science of making inferences from perceptual data, using tools from statistics, probability, computational geometry, machine learning, signal processing, and algorithm design. Thus, it is of central importance to artificial intelligence and computer vision, and has far-reaching applications in engineering, science, medicine, and business. In particular, advances made during the last half century, now allow computers to interact more effectively with humans and the natural world (eg: speech recognition software). However, the most important problems in pattern recognition are yet to be solved. Pattern recognition is generally categorised according to the type of learning procedure used to generate the output value. Supervised learning assumes that a set of training data (the training set) has been provided, consisting of a set of instances that have been properly labelled by hand with the correct output. All computer vision techniques could be regarded as a form of pattern recognition, in the broadest sense of the term.

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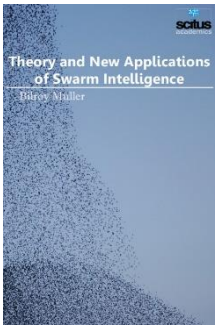

Theory & New Applications of Swarm Intelligence (Artificial Intelligence Series)

Edited by Bilroy Muller

A single ant or bee is not smart, but their colonies are. The study of swarm intelligence is providing insights that can help humans manage complex systems, from truck routing to military robots. A colony can solve problems unthinkable for individual ants, such as finding the shortest path to the best food source, allocating workers to different tasks, or defending a territory from neighbours. As individuals, ants might be tiny dummies, but as colonies they respond quickly and effectively to their environment. They do it with something called swarm intelligence. Swarm intelligence is the discipline that deals with natural and artificial systems composed of many individuals that coordinate using decentralised control and self-organisation. In particular, the discipline focuses on the collective behaviours that result from the local interactions of the individuals with each other and with their environment. Swarm intelligence has a marked multidisciplinary character since systems with the above mentioned characteristics can be observed in a variety of domains. SI systems are typically made up of a population of simple agents interacting locally with one another and with their environment. The inspiration often comes from nature, especially biological systems. The agents follow very simple rules, and although there is no centralised control structure dictating how individual agents should behave, local, and to a certain degree random, interactions between such agents lead to the emergence of “intelligent” global behaviour, unknown to the individual agents. This book allows the reader to know more both theoretical and technical aspects and applications of Swarm Intelligence that reflect the emerging trends in state-of-the-art algorithms.

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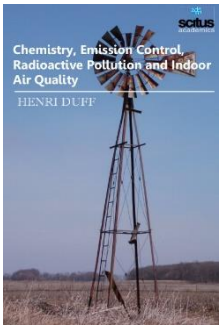
EARTH SCIENCES



Chemistry, Emission Control, Radioactive Pollution & Indoor Air Quality (Oceanography Series)

Henri Duff

The atmosphere may be our most precious resource. Accordingly, the balance between its use and protection is a high priority for our civilisation. While many of us would consider air pollution to be an issue that the modern world has resolved to a greater extent, it still appears to have considerable influence on the global environment. The radioactive pollution refers to the physical pollution of air, water and the other radioactive materials. The natural radiations are also known as the background radiations. In this the cosmic rays are involved and reach the surface of earth from space. It includes the radioactive elements like radium, uranium, thorium, radon, potassium and carbon. These occur in the rock, soil and water. The man-made radiations include the mining and refining of plutonium and thorium. This production and explosion of nuclear weapons include the nuclear fuels, power plants and radioactive isotopes. Indoor air quality (IAQ) is a term which refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants. IAQ can be affected by gases (including carbon monoxide, radon, volatile organic compounds), particulates, microbial contaminants (mould, bacteria), or any mass or energy stressor that can induce adverse health conditions. Source control, filtration and the use of ventilation to dilute contaminants are the primary methods for improving indoor air quality in most buildings.

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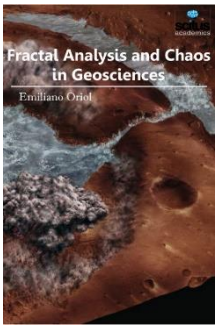
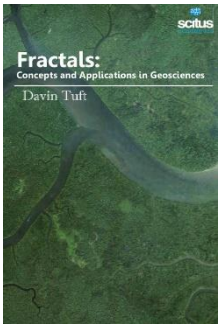


Fractal Analysis & Chaos in Geosciences (Earth Sciences Series)

Edited by Emiliano Oriol

The fractal analysis is becoming a very convenient tool to process obtained data from chaotic systems in geosciences. It can be used to resolve many ambiguities in this field. Fractal analysis is an up-to-date method of applying nontraditional mathematics to patterns that defy understanding with traditional Euclidean concepts. Fractal analysis is measuring fractal characteristics of data. It entails several methods to assign a fractal dimension and other fractal characteristics to a dataset which may be a theoretical dataset or a pattern or signal extracted from phenomena including natural geometric objects, sound, market fluctuations, heart rates, digital images, molecular motion, networks, etc. Fractal analysis is now widely used in all areas of science. An important limitation of fractal analysis is that arriving at an empirically determined fractal dimension does not necessarily prove that a pattern is fractal; rather, other essential characteristics have to be considered. Fractals are not necessarily physical forms -- they can be spatial or temporal patterns, as well. In general, fractals can be any type of infinitely scaled and repeated pattern. In this regard, it is important to be aware that theoretical fractals are abstractions, but the subjects of fractal analysis, such as digital images limited by screen resolution, are generally not true fractals in the strictest sense. Similarly, the so-called fractals typically found in nature are not substantially scaled, thus, like finite computer generated patterns, are generally only approximations to fractals in the strictest sense. This book places emphasis on recent applications of the fractal/mutifractal analysis in geosciences and will be an immense valuable tool for researchers and students from universities. The book relates fractals and chaos to assortment of geological and geophysical applications and presents essential concepts of fractal geometry and chaotic dynamics.

HB 9781681175164 £141.50 January 2017 Scitus Academics 292 pages 155x230mm



Fractals
Concepts & Applications in Geosciences (Earth Sciences Series)

Edited by Davin Tuft

The fractal analysis is becoming a very useful tool to process obtained data from chaotic systems in geosciences. It can be used to resolve many ambiguities in this domain. Fractals are not just complex shapes and pretty pictures generated by computers. Anything that appears random and irregular can be a fractal. Fractals permeate our lives, appearing in places as tiny as the membrane of a cell and as majestic as the solar system. Fractals are the unique, irregular patterns left behind by the unpredictable movements of the chaotic world at work. Fractals have always been associated with the term chaos. The study of chaos and fractals is more than just a new field in science that unifies mathematics, theoretical physics, art, and computer science -- it is a revolution. It is the discovery of a new geometry, one that describes the boundless universe we live in; one that is in constant motion, not as static images in textbooks. Today, many scientists are trying to find applications for fractal geometry, from predicting stock market prices to making new discoveries in theoretical physics. Fractal geometry allows the description of natural patterns and the establishment and testing of models of pattern formation. In particular, it is a tool for geoscientists. This book investigates the theory and practical applications from fractal modeling to applications in the geosciences, physics, and engineering fields. It can be used to resolve many ambiguities in this domain, containing research topics showing the recent applications of the fractal/multifractal analysis in geosciences. The aim of this book is to give an overview of the applications of fractal geometry and the theory of dynamic systems in the geosciences. The state of the art is presented and the reader obtains an impression of the variety of fields for which fractal geometry is a useful tool and of the different methods of fractal geometry which can be applied.

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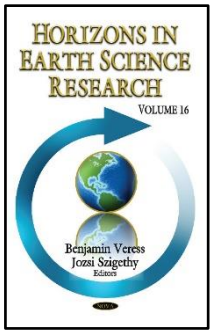


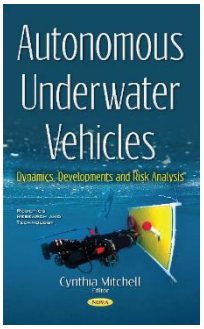
Horizons in Earth Science Research
Volume 16 (Horizons in Earth Science Research Series)

Edited by Benjamin Veress, Jozsi Szigethy

Chapter one reports the results of a radiometric survey performed at the main installations of DPM-Department of Petrology and Metallogeny of IGCE-Institute of Geosciences and Exacts Sciences belonging to UNESP, Rio Claro (SP), Brazil, whose major task has been to realise researches with crystalline rocks. The acquired dataset is presented and discussed in terms of possible implications for human health. Chapter two aims to map the spatial distribution of various land cover types at the surface of the Ghuwaymid sabkha using L1B ASTER data. Chapter three discusses if the zone of shearing is treated as a separate layer (Layer of Lateral Anisotropy and Mass Advection, LLAMA), it can remain isolated from the convecting mantle but be only partially attached to the overlying plate. As such it may serve as a long-lived shallow source for intraplate volcanism if it undergoes suitable metasomatic enrichment. Chapter four applies statistical and geochemical modelling techniques to an extensive major and trace element composition database for 86 samples from eight outcrops. A statistical comparison scheme applied to diverse geochemical ratios discards a genetic link between San Felipe volcanic ashes and regional contemporary magmatic localities. In Chapter five, Subsidence dolines are described. Additionally, the morphological environment of subsidence dolines of glaciokarst, the bearing cover, their size, their morphology and features of their activity are characterised. Chapter six provides new insight into the formation of high-grade precious-metal ores in low-sulfidation deposits. The chapter presents textural evidence for formation of electrum flocs in a boiling environment under epithermal conditions. Chapter seven suggests that a large low shear velocity province beneath Columbia would have triggered mantle plumes after the arrival of 2.0 Ga to 1.8 Ga active subducting slabs in the lower mantle. Columbia breakup attempt could have been started in such Large Igneous Provinces regions, where rifting processes may have occurred. Finally, Chapter eight examines what we define as legally relevant "outer space" and who has legal competence in space to begin with? These issues are considered in regard to potential outer space warfare: its legality, pros and cons, as well as its probability.

HB 9781536118520 £238.50 June 2017 Nova Science Publishers 145 pages 155x230mm

ELECTRONICS & COMMUNICATIONS ENGINEERING

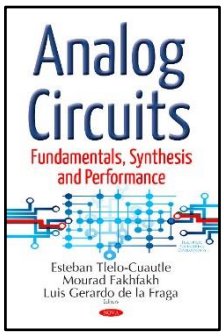


Autonomous Underwater Vehicles
Dynamics, Developments & Risk Analysis (Robotics Research & Technology Series)

Edited by Cynthia Mitchell

Gravity-gradient and magnetic-gradient inversion equations are combined to estimate the orientation and distance of an underwater object. The CKF algorithm based on EMMAF algorithm and Spherical-Radial is proposed and is applied to the fault diagnosis of slaver AUV in multi AUV collaborative positioning system. Simulation results are used to analyze the advantages and disadvantages of the three algorithms. This book looks at how a Service-Oriented Agent Architecture (SOAA) for marine robots is endowed with resilient capabilities in order to build a robust (fault-tolerant) vehicle control approach. Particular attention is paid to cognitive RCAs based on agent technologies and any other smart solution already applied or potentially applicable to UMVs. The book also presents current and future trends of RCAs for UMVs.

HB 9781536118193 £90.50 June 2017 Nova Science Publishers 170 pages 155x230mm

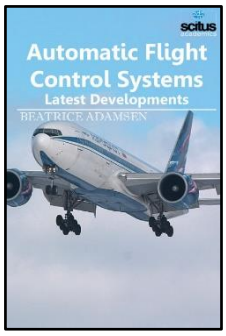


Analog Circuits
Fundamentals, Synthesis & Performance
(Electrical Engineering Developments Series)

Edited by Esteban Tlelo-Cuautle, Mourad Fakhfakh, Luis Gerardo de la Fraga

This book includes recent research that focuses on analog integrated circuits and covers three main topics, namely: fundamentals, synthesis and performance. Eleven chapters are divided among these three topics as follows: Chapters One to Four are a part of fundamentals. CONTENTS: Preface; The Next Generation of Nanomaterials for Designing Analog Integrated Circuits; Application of Nullors in Designing Analog Circuits for Frequency Bandwidth; RC & RL to LC Circuit Conversion, & its Application in Poles & Zeros Identification; Enhanced & Improved Symbolic Circuit Analysis Using MATLAB; On the Synthesis of Sinusoidal Oscillators Using Nullors; Synthesis of SRCOs & Multi-Phase Oscillators from State Variables to their Implementation Using CMOS IC Technology; Evolutionary Optimization in the Design of CMOS Analog Integrated Circuits; Synthesis & Design of a CMOS Harmonic Mixer with Output Power Management for Narrowband & Wideband Wireless Communications: The Bluetooth & UWB Cases; FPGA Realization of RF Power Amplifiers Models; White-Box Models of Optimal-Sized Solutions of Analog Integrated Circuits; Radial Basis Function Surrogate Modeling for the Accurate Design of Analog Circuits; Index.

HB 9781536109696 £152.50 June 2017 Nova Science Publishers 232 pages 155x230mm

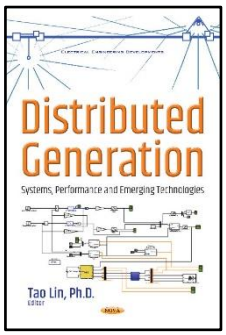


Automatic Flight Control Systems
Latest Developments (Electrical & Electronics Engineering Series)

Edited by Beatrice Adamsen

The history of flight control is inseparably associated to the history of aviation itself. Since the early period, the concept of automatic flight control systems has progressed from mechanical control systems to highly advanced automatic fly-by-wire flight control systems which can be found nowadays in military jets and civil airliners. A conventional fixed-wing aircraft flight control system consists of flight control surfaces, the respective cockpit controls, connecting linkages, and the necessary operating mechanisms to control an aircraft's direction in flight. Aircraft engine controls are also considered as flight controls as they change speed. An autopilot is a system used to control the trajectory of a vehicle without constant 'hands-on' control by a human operator being required. Autopilots do not replace a human operator, but assist them in controlling the vehicle, allowing them to focus on broader aspects of operation, such as monitoring the trajectory, weather and systems. Autopilots are used in aircraft, spacecraft, missiles, and others. Autopilots have evolved significantly over time, from early autopilots that merely held an attitude to modern autopilots capable of performing automated landings under the supervision of a pilot. The autopilot in a modern large aircraft typically reads its position and the aircraft's attitude from an inertial guidance system. The book emphases on a selection of significant research areas, such as inertial navigation, control of unmanned aircraft and helicopters, trajectory control of an unmanned space re-entry vehicle, aeroservoelastic control, adaptive flight control, and fault tolerant flight control.

HB 9781681172736 £160.99 January 2017 Scitus Academics 322 pages 155x230mm

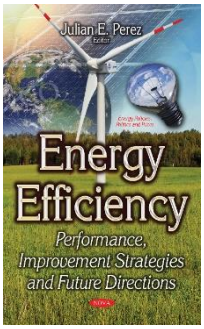


Distributed Generation
Systems, Performance & Emerging (Electrical Engineering Developments Series)

Edited by Tao Lin

This book systematically discusses (a) Distributed Generation (DG), which operates in a single, stand-alone controllable system mode, and (b) the Microgrid (MG) powered by DG, along with the technical concepts, the impact on power systems, control and optimisation techniques, and their applications. It includes ten chapters that focus on the following five aspects: 1) An overview of distributed generation is introduced in Chapter One, and the technical concept of the microgrid is introduced in Chapter Eight with detail; 2) As the main element of distributed generation (DG), a smart inverter system for the control of active and reactive power in a grid-tied mode, which is treated as an interface between grid and the RES (Renewable Energy System), is studied concretely in Chapter Two; 3) The influence of distributed generation on power systems, including the impact of DG on the planning and operation of power systems, the impact of DG on power quality, and power system protection are concretely described and analysed in Chapters Three, Four and Five, respectively;) The control and optimisation technologies for DG and MG. These techniques include: the Economic Model Predictive Control (EMPC) strategy for the solution of pricing management in community-based microgrids (MGs), which consider economic benefits as the control and optimisation objects; the distributed control and optimisation techniques for islanded microgrids (MGs) that consider stability as the control and optimisation objects; the intelligent load shedding for stability enhancement in an autonomous microgrid; and the recovery (restoration) control after a contingency situation. These are all investigated in Chapters Six, Seven, Eight and Nine, respectively; 5) The applications of renewable energy technology, such as efficient artisanal light fishing technologies that exploit lake light physics and light-fish interactions, are specifically presented in Chapter Ten.

HB 9781536110746 £219.50 May 2017 Nova Science Publishers 260 pages 180x260mm

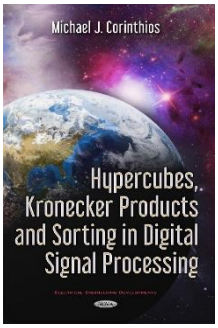


Energy Efficiency
Performance, Improvement Strategies & Future Directions
(Energy Policies, Politics & Prices Series)

Edited by Julian E Perez

There are increasing demands on energy supplies as they become an essential requirement to support modern life in most countries. Conventional resources for power generation that depend on fossil fuels become less reliable because of price fluctuations and long-term supply uncertainties. Furthermore, strong environmental awareness coupled with recent efforts to reduce greenhouse gas emissions has encouraged a shift from fossil fuels to renewable power generating resources. This has resulted in a significant investment in renewable energy technologies such as wind, solar, hydro and fuel cells. This book provides new research on performance, improvement strategies and the future directions on energy efficiency.

PB 9781536110401 £78.50 June 2017 Nova Science Publishers 105 pages 155x230mm

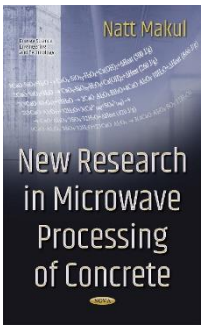


Hypercubes, Kronecker Products & Sorting in Digital Signal Processing
(Electrical Engineering Developments Series)

Michael J Corinthios

This book covers recent advances and contributions to the area of digital signal processing. It starts with a revisit and a rewriting of the sampling theorem in the context of signals containing discontinuities. The approach of impulse invariance for converting continuous-time domain filters to discrete-time domain filters is questioned in light of the Mittag-Leffler expansion. Higher quality digital filters than those obtained using the present day approach are studied. General base perfect shuffle transformations are shown to be basic operations prevalent in transform factorisation and parallel processing. Hypercube transformations, Kronecker products and sorting formalism have had a major impact on transformations of generalised spectral analysis, processor architecture, optimal parallel, massively parallel processing and parallel sorting. The objective of the present book is to render some of the author's previously and recently published papers in the domain of digital signal processing and the architecture of parallel digital signal processors into a simpler format for all to read. In the topics covered in this book, matrix formalism is often employed. Hypercubes, the Kronecker product of matrices and matrix operators such as the general base perfect shuffle matrix are powerful mathematical tools that effectively convert sequential information into matrices. Matrix formalism is a powerful mathematical tool. In fact, it may be said that if a picture is worth a thousand words, a matrix is worth a thousand equations.

HB 9781634851213 £257.50 February 2017 Nova Science Publishers 470 pages 180x260mm

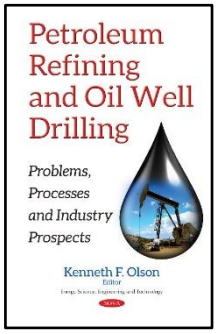


New Research in Microwave Processing of Concrete
(Energy Science, Engineering & Technology Series)

Natt Makul

Microwave heating is a highly efficient technique for various thermal processes. It offers many advantages when compared to conventional processing methods such as rapid heating rates and short processing time which saves energy, deep penetration of the microwave energy that allows heat to be generated efficiently without directly contacting the work-piece, instantaneous and precise electronic control, and clean heating processes. This book presents a comprehensive study on the interaction between steel-reinforced concrete and microwave energy using a single-mode rectangular waveguide. The author begins by investigating the mechanisms of changes in the adaptive dielectric properties of concretes and reinforced concretes to predict how these properties are altered when microwave energy is applied. Next, the structural characteristics of microwave-cured concrete will be identified. Finally, the author formulates mathematical models to describe the relationship between microwave curing and mass transfer for steel-reinforced concrete. The obtained results show that dielectric properties are relatively high and remain constant during the dormant period. After this period, the hydration reaction resumes and dielectric properties decrease rapidly.

PB 9781536120233 £90.50 July 2017 Nova Science Publishers 95 pages 155x230mm

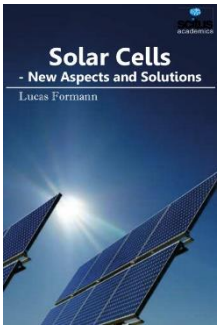


Petroleum Refining & Oil Well Drilling
Problems, Processes & Industry Prospects
(Energy Science, Engineering & Technology Series)

Edited by Kenneth F Olson

This book has two volumes and consists of forty-four chapters, which are divided into five sections: (i) Mathematical treatment of non-linear problems, including the differential equations, numerical methods, algorithms and solutions; (ii) theoretical and computational studies dedicated to the physics and chemistry of advanced materials, nanostructured and fractal systems; (iii) articles dedicated to non-linear processes in complex biological processes, systems and objects; (iv) theoretical and modeling studies of kinetics, dynamics and thermochemistry of micro-, meso- and macro-scale systems; and (v) multidisciplinary research focused on forecasting, control and management problems.

HB 9781536121247 £219.50 July 2017 Nova Science Publishers 250 pages 155x230mm

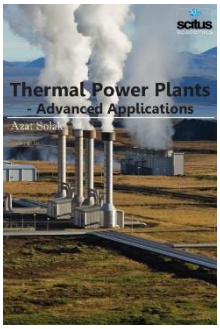


Solar Cells
New Aspects & Solutions (Energy Engineering Series)

Lucas Formann

A solar cell (or a "photovoltaic" cell) is a device that converts photons from the sun (solar light) into electricity. In general, a solar cell that includes both solar and non-solar sources of light (such as photons from incandescent bulbs) is termed a photovoltaic cell. Fundamentally, the device needs to fulfil only two functions: photo-generation of charge carriers (electrons and holes) in a light-absorbing material, and separation of the charge carriers to a conductive contact that will transmit the electricity. This conversion is called the photovoltaic effect, and the field of research related to solar cells is known as photovoltaic. Solar cells have many applications. Historically solar cells have been used in situations where electrical power from the grid is unavailable, such as in remote area power systems, Earth orbiting satellites, consumer systems (eg: hand-held calculators or wrist watches, remote radio-telephones and water pumping applications). Solar cells are regarded as one of the key technologies towards a sustainable energy. This book consists chapters that are general in nature and not related specifically to the so-called photovoltaic generations, novel scientific ideas and technical solutions, which has not properly approved. General issues of the efficiency of solar cell and through hydrogen production in photo-electrochemical solar cell are discussed.

HB 9781681176147 £160.99 January 2017 Scitus Academics 304 pages 155x230mm



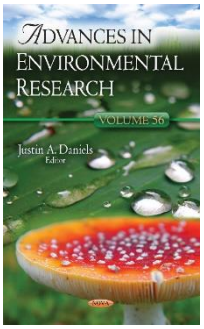
Thermal Power Plants
Advanced Applications (Energy Engineering Series)

Edited by Azat Solak

Thermal power plants are one of the most important process industries for engineering professionals. Over the past decades, the power sector is facing a number of critical issues; however, the most fundamental challenge is meeting the growing power demand in sustainable and efficient ways. Practicing power plant engineers not only look after operation and maintenance of the plant, but, also look after range of activities including research and development, starting from power generation to environmental aspects of power plants. A Thermal power plant is a power plant where steam is used to drive a steam turbine. This turbine is connected to an electrical generator. After this, the water is condensed, and may be used again. This is known as the Rankine cycle. There are different procedures that can be used to heat the water; this gives different types of thermal power plants. The theory of thermal power station or working of thermal power station is very simple. A power generation plant mainly consists of alternator runs with help of steam turbine. The steam is obtained from high pressure boilers. This book deals with various aspects of a thermal power plant, providing a new dimension to the subject, with focus on operating practices and troubleshooting, as well as technology and design. The book presents reliability-based tools used to define performance of complex systems and introduces the basic concepts of reliability, maintainability and risk analysis aiming at their application as tools for power plant performance. The book is valuable for both undergraduate and research higher degree students, and of course for practicing power plant engineers.

HB 9781681176161 £160.99 January 2017 Scitus Academics 300 pages 155x230mm

ENVIRONMENT

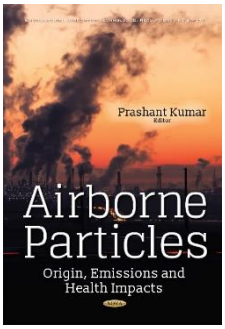


Advances in Environmental Research
Volume 56 (Advances in Environmental Research Series)

Edited by Justin A Daniels

Flooding is the number one natural disaster in the United States. While levees can help reduce the risk of flooding, it is important to remember that they do not completely eliminate the risk. CONTENTS: Preface ; The Role of Levees in Flood Disaster Protection & the FEMA Accreditation Process; Flood-Control Levees on River Deltas: What We Have Learned from the New Orleans Hurricane Katrina Experience; Wastewater Treatment by Microbial Fuel Cells: The Latest Research, Development, Locks & Ways to Follow (For the Future); Low-Pressure Reverse Osmosis for Boron Elimination in Seawater Desalination: Analysis of Concentration Polarization & Degree of Rejection of Boric Acid, Borates & Monovalent Ions; The Ocean's Surface Acidification with Increasing Atmospheric Carbon Dioxide & the Threats for Coral Reef Calcification; Pollution Caused by Mineral Oil in Mangrove Swamps; Climate-Geologic Processes on the Landform Development in the Ejina Basin; The Geomorphological & Landscape Evolution of Namibia in Southwestern Africa, & the Related Environmental Changes They Present; Logging: Global Practices, Environmental Risks & Economic Impacts; Index.

HB 9781536118612 £238.50 June 2017 Nova Science Publishers 180 pages 155x230mm

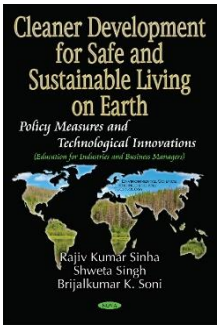


Airborne Particles
Origin, Emissions & Health Impacts
(Environmental Remediation Technologies, Regulations & Safety Series)

Edited by Prashant Kumar

This book compiles a number of well-known authors in their respective research fields who have contributed their chapters on numerous specialised topics, such as sources of particulate matter emissions, their dispersion modelling, long-range transport, and both epidemiological and toxicological effects on human health. A part of this book is dedicated to controlling measures of particulate matter using innovative methods and approaches. This book revolves around particulate matter, mainly in outdoor environments. It contains a wide range of chapters, from critical reviews to original research-based case studies for different regions of the world. This book contains both very basic information that is important for undergraduate students and advanced research-based content, which is sufficient to draw the attention of young and established researchers.

HB 9781536109658 £185.99 June 2017 Nova Science Publishers 384 pages 180x260mm

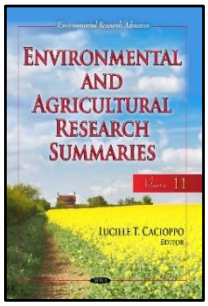


Cleaner Development for Safe & Sustainable Living on Earth
Policy Measures and Technological Innovations (Education for Industries & Business Managers) (Environmental Science, Engineering & Technology Series)

Rajiv Kumar Sinha, Shweta Singh, Brijalkumar K Son

Cleaner production is defined as the continuous application of an integrated preventive strategy for environmental protection in the developmental processes applied to products and services in industries and business organisations to increase overall efficiency and reduce risks to humans (consumers and industrial workers) and the environment from the hazardous chemicals and materials used in the production process. Cleaner production requires applying know-how, improving technology and changing attitudes.

HB 9781536105094 £185.99 June 2017 Nova Science Publishers 250 pages 180x260mm

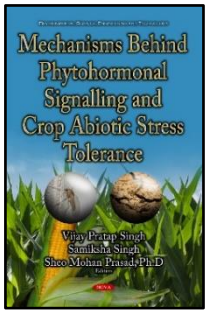


Environmental & Agricultural Research Summaries (with Biographical Sketches) Volume 11 (Environmental & Agricultural Research Summaries Series)

Edited by Lucille T Cacioppo

This book compiles research summaries from a number of different focuses in the important field of environment and agriculture.

HB 9781536114188 £257.50 July 2017 Nova Science Publishers 470 pages 180x260mm

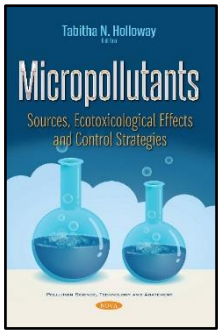


Mechanisms Behind Phytohormonal Signalling & Crop Abiotic Stress Tolerance (Environmental Science, Engineering & Technology Series)

Edited by Vijay Pratap Singh, Samiksha Singh, Sheo Mohan Prasad

Environmental stresses, such as heavy metals, drought, radiation, salts, pesticides, temperature, etc. are major factors collectively called abiotic stresses, which limit agricultural productivity. Abiotic stress factors negatively influence the survival, biomass production, and yield of staple food crops of up to 70%. In recent years, much attention has been given for developing strategies to alleviate the adverse effects of abiotic stresses on crops in order to fulfill the food demand of increasing population. Chemical application and agronomical crop management practices have been used to alleviate abiotic stresses with some success. During the last decade, extensive work has been carried out to understand plant hormone-mediated enhancement in abiotic stress tolerance using physiological, biochemical, genetic, molecular, and genomic approaches for crop breeding and management. This book has complied recent research on plant hormone mediated regulation of abiotic stress tolerance in plants with special emphasis on crops. This book consists of fourteen chapters dealing with recent research made in the direction of plant hormone and abiotic stress tolerance in crop plants. Chapter One deals with abiotic stress and crop productivity. Chapters Two and Three deal with the role of polyamines, ROS, and melatonin in the regulation of abiotic stresses. Chapter Four extensively elaborates the significance of the multigene family in the improvement of crops under stress conditions. Chapters Five and Six deal with the interaction of plant hormones and their subsequent impact on plant abiotic stress tolerance. Chapter Seven, Eight and Nine comprehensively deal with the role of abscisic acid and gibberellic acid signaling in the regulation of abiotic stress tolerance in crops. Chapters Ten through Thirteen describe the role of brassinosteroids cross talk, interaction and signaling in the regulation of abiotic stress tolerance in crops. Chapter Fourteen deals with the emerging role of oxylipins in the regulation of abiotic stress in crops. Chapter Fifteen deals with the role of jasmonic acid and salicylic acid signaling in the regulation of abiotic stress tolerance. This book has gathered recent information of plant hormone research and abiotic stress tolerance in crops. We hope that this book will be very useful for graduate and post graduate students and researchers.

HB 9781536106954 £257.50 January 2017 Nova Science Publishers 460 pages 180x260mm

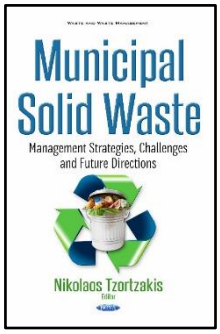


Micropollutants
Sources, Ecotoxicological Effects & Control Strategies
(Pollution Science, Technology & Abatement Series)

Edited by Tabitha N Holloway

Many organic pollutants, such as, organochlorine pesticides (OCPs), polychlorinated biphenyl (PCBs) and polycyclic aromatic hydrocarbons (PAHs) are detected in the environment at low concentrations. Due to their large-scale production and usage, toxicity, bioaccumulation and persistence in the environment, they can cause harmful effects to organisms and to human health. Atmospheric deposition, industrial and urban activity presents the main sources of environmental pollution. CONTENTS: Preface; The Distribution of Organic & Inorganic Pollutants in Marine Environments; Effect of Manganese & Ferric Ions on the Degradation of Di-2-Ethylhexyl Phthalate (DEHP) by Acinetobacter sp. SN13; The Lanthanides & Platinum Group Metals as Mineral Micropollutants in Russian Soil; Index.

PB 9781536120677 £78.50 July 2017 Nova Science Publishers 75 pages 155x230mm

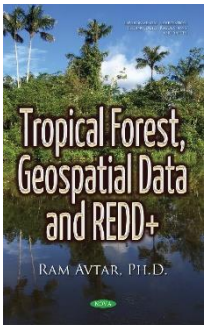


Municipal Solid Waste
Management Strategies, Challenges & Future Directions
(Waste & Waste Management Series)

Edited by Nikolaos Tzortzakis

Solid waste has grown into a relatively difficult problem to solve for those responsible for its management; these responsibilities include the collection, transport, treatment, and disposal of solid wastes, particularly wastes generated in medium and large urban centres. This problem is even more intense in economically developing countries, where the financial, human, and other critical resources are scarce in general. In the last decade, there has been a great interest and awareness regarding the environmentally safe management of waste worldwide, centralised in legislative, administrative, standardisation, and research activities in this field. The general idea of this book has arisen from the mutual experience of many specialists in numerous disciplines from different countries involved in the problem of environmental assessment, economic and monitoring approaches, and control approaches for chemicals generated from solid waste disposal. Solid waste worldwide issues nowadays reflect the complexity and unbalanced development of our world at the beginning of the 21st century.

HB 9781536118650 £219.50 June 2017 Nova Science Publishers 430 pages 180x260mm



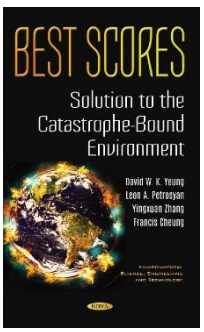
Tropical Forest, Geospatial Data & REDD+
(Environmental Remediation Technologies, Regulations & Safety Series)

Ram Avtar

With an increasing role of tropical forests supporting a range of ecosystem services, biodiversity conservation, water regulation, soil conservation, timber, non-timber forest products, carbon sequestration, and climate change mitigation, the importance of forest resources management has become very crucial. CONTENTS: Preface; Introduction; Cambodian Forest; Forest Cover Monitoring Based on Full Polarimetric PALSAR Data; Forests & Deforestation Characterization Using PALSAR Data; Deforested Area Height Estimation: DEMs Data; PALSAR Mosaic Data for National Level Biomass Estimation; Role of Remote Sensing & Community Forestry to Implement REDD+ Mechanism; Summary & Recommendations; References; Index.

PB 9781634852777 £90.50 June 2017 Nova Science Publishers 147 pages 155x230mm

ENVIRONMENTAL SCIENCE, ENGINEERING & TECHNOLOGY

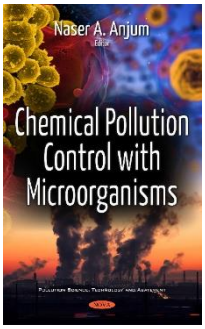


BEST SCORES Solution to the Catastrophe-Bound Environment
(Environmental Science, Engineering & Technology Series)

David Wing Kay Yeung, Leon A Petrosyan, Yingxuan Zhang, Francis Cheung

After several decades of rapid technological advancement and economic growth, alarming levels of pollution and catastrophe-bound environmental degradations are emerging all over the world. Even sizable reduction in industrial pollutant emissions would only slow down the accumulation of pollution. Given the complexity of the problem and the over-simplicity of international environmental initiatives (like the Kyoto Protocol, Montreal Protocol and Paris Agreement, which focused mainly on emissions' reduction and regulations), limited success has been observed. The design of a comprehensive solution for solving this globally devastating problem is very much in order. Research in developing environmentally clean technology into efficient and affordable means of production plays a key role to effectively solving the continual worsening global industrial pollution problem and meeting the industrial growth needs. An essential element for success is that the participating nations' well-being must not be worse than their non-cooperative well-being throughout the cooperation duration. In addition, for the cooperative scheme to be sustainable, the agreed-upon optimality principle in sharing the cooperative benefits must be upheld at every stage of the cooperation plan – this condition is known as subgame consistency.

HB 9781536109153 £152.50 June 2017 Nova Science Publishers 130 pages 155x230mm

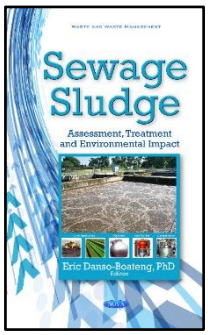


Chemical Pollution Control with Microorganisms
(Pollution Science, Technology & Abatement Series)

Edited by Naser A Anjum

The desire for a more efficient life coupled with the methods of production and pollution brought about by the Industrial Revolution have degraded the environment. Reports concerning sustainable strategies for the control of pollutants released into the environment are meager at best. Notably, the significance of sustainable/bio-remediation energy using either plants or bacteria has been elucidated recently as a primary method to decontaminate such polluted environments. Through different scholarly manuscripts contributed by eminent researchers and scientists from all over the globe, this edited volume aims to discuss insights into the control of pollutants in environmental sectors with microorganisms. The designing and execution of innovative studies encompassing microorganisms and their role in making our planet free of chemical pollutants can be provoked by the outcomes of the deliberations of scientists and researchers. This book can be useful for graduate and research (MPhil/PhD) students in the fields of environmental science and environmental pollution control.

HB 9781536110340 £152.50 June 2017 Nova Science Publishers 250 pages 155x230mm



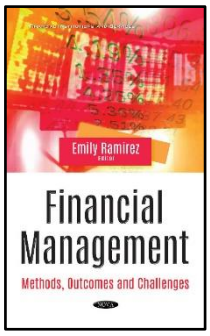
Sewage Sludge
Assessment, Treatment & Environmental Impact
(Waste & Waste Management Series)

Edited by Eric Danso-Boateng

Sewage sludge is the product resulting from wastewater treatment plants and aquaculture systems. It is an abundant waste biomass, as its production keeps increasing due to population growth, particularly in developing countries and intensified wastewater treatment plants in the developed world due to industrialisation. Effective management and handling of sewage sludge in an environmentally friendly way has become a matter of increasing importance globally, due to the potential health risks on the environment. Importantly, sewage sludge contains large amounts of organic components and nutrients; hence, resource recovery from such an abundant biomass is necessary. This comprehensive book presents an assessment into the impact of sewage sludge on the environment and provides the various treatment options for converting the sludge into useful resources. Biochemical (or biological) and thermochemical (or thermal) methods of sewage sludge treatment are covered.

HB 9781536110722 £152.50 May 2017 Nova Science Publishers 224 pages 155x230mm

FINANCE & ACCOUNTING



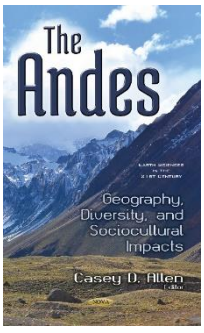
Financial Management
Methods, Outcomes & Challenges (Financial Institutions & Services Series)

Emily Ramirez

Financial knowledge is crucial to helping individuals make better financial decisions as well as the financial markets to function well. What is neglected in these popular analyses is that the observed USD metrics are also impacted by changes in exchange rates. Thus, this book examines the extent to which exchange rate changes have potentially impacted perceptions of the rate of change in the global financial influence of the United States and Europe. Event study methodology has been extensively used in the finance literature to capture how stock markets react to certain information events such as mergers and acquisitions, financial crises, terrorist activities, changes to financial and environmental regulations, natural catastrophes, and many other events. Also, exchange Traded Funds have become one of the most innovative and popular financial instruments, with their diversification benefits at the core of their success. Nonetheless, the inherent link between ETFs and their underlying securities has cast doubts on their usage.

HB 9781536118278 £90.50 June 2017 Nova Science Publishers 115 pages 155x230mm

GEOGRAPHY

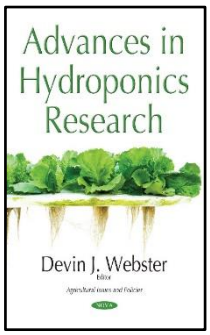


Andes
Geography, Diversity, & Sociocultural Impacts
(Earth Sciences in the 21st Century Series)

Edited by Casey D Allen

Second only to the Himalayas in size, the Andes represent a fascinating region of our world. Written by regional experts and drawing on field-based endeavors of several researchers, each chapter encompasses a timely topic, from climate-related studies and historical occupations to indigenous manufacturing and recent archaeological evidence.

HB 9781536110944 £90.50 May 2017 Nova Science Publishers 165 pages 155x230mm

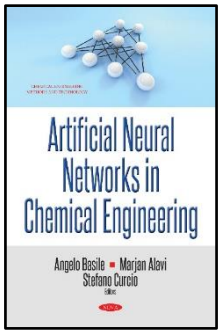


Advances in Hydroponics Research (Agriculture Issues & Policies Series)

Edited by Devin J Webster

This book begins by describing the irrigation management techniques that are currently used for scheduling irrigation in a hydroponic culture, presented in Chapter One. Chapter Two covers research information about the nitrogen forms used in hydroponics, their relationships and peculiarities, as well as information on the use of silicon, its available sources and role in mitigating the toxic effects of ammonium. In Chapter Three, Centella asiatica was tested for the effects of Pb exposure on Cu accumulation and antioxidant activities which includes the activities of ascorbate peroxidase (APX), catalase (CAT), superoxide dismutase (SOD), and guaiacol peroxidase (GPX). Chapter Four discusses the phytoextraction potential of the free floating aquatic plant for heavy metals from aqueous solution. Chapter Five analyses the use of wastewaters to formulate nutritive solutions represents a rational alternative to wastewaters disposal and adds value to what is currently considered a waste product. Chapter Six provides a brief review of hydroponics used in fishery waste reuse. Chapter Seven discusses the results of physicochemical characterisation of Human urine, Cassava Wastewater and alternative nutrient solution prepared through these effluents as an alternative for its use in agroecological systems of agricultural cultivation. Chapter Eight describes recent progress and findings on the hydroponic culture of edible Opuntia. Finally, the book concludes with an expert commentary that argues that plant factories are powerful tools to cultivate and improve the quality of edible cacti.

PB 9781536121315 £152.50 July 2017 Nova Science Publishers 133 pages 155x230mm



Artificial Neural Networks in Chemical Engineering (Chemical Engineering Methods & Technology Series)

Edited by Angelo Basile, Marjan Alavi, Stefano Curcio

This book introduces readers to the Artificial Neural Network (ANN) and Hybrid Neural (HN) models: two effective tools, which can be exploited to design and control industrial processes. Different topics including modeling, simulation and process design are covered. More efficient analyses and descriptions of real case studies, ranging from membrane technology to the obtaining of second-generation biofuels are also provided. One of the major advantages of the described techniques is represented by the possibility of obtaining accurate predictions of complex systems, whose behaviors might be difficult to describe by conventional first-principle models. One of the major impacts of the present book is to show the true interactions and interconnectivities among different topics belonging to chemical, bio-chemical engineering, energy, bio-processes and bio-technique research fields. Some of the main goals are here are to provide a deep and detailed knowledge about the main features of both ANN and HN models, and to iterate possible topologies to integrate in these ANN and mechanistic models; to cover a wide spectrum of different problems as well as innovative and unconventional modeling techniques; to show how various kinds of advanced models can be exploited either to predict the behavior or to optimize the performance of real processes.

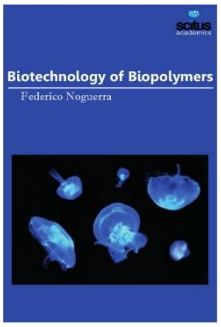
HB 9781536118445 £90.50 June 2017 Nova Science Publishers 180 pages 155x230mm

Aspects on Fundamentals & Applications of Conducting Polymers (Chemical Engineering Series)

Edited by Eckbert Freund

Since the establishment of the conductive properties of intrinsic conductive polymers, an enormous variation of basic and applied research has been carried out, including different polymers, co-polymers, blends, mixtures and composites. Until about 30 years ago all carbon based polymers were rigidly regarded as insulators. The notion that plastics could be made to conduct electricity would have been considered to be absurd. Indeed, plastics have been extensively utilised by the electronics industry for this very property. They are used as inactive packaging and insulating material. This very narrow perspective is rapidly changing as a new class of polymers known as intrinsically conductive polymers or electroactive polymers are being discovered. Consequently, ultimate understanding of physical and chemical properties of these materials has been pursued, while the applied facets have advanced very rapidly, crossing the boundaries between disciplines. Conductive polymers or, more precisely, intrinsically conducting polymers are organic polymers that conduct electricity. Such compounds may have metallic conductivity or can be semiconductors. The biggest advantage of conductive polymers is their processability, mainly by dispersion. Conductive polymers are generally not thermoplastics. But, like insulating polymers, they are organic materials. They can offer high electrical conductivity but do not show similar mechanical properties to other commercially available polymers. This book delivers information about the development of fundamentals, and about some applications of conductive polymers.

HB 9781681173191 £160.99 January 2017 Scitus Academics 308 pages 155x230mm

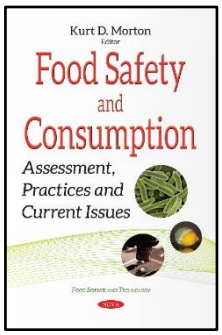


Biotechnology of Biopolymers (Chemical Engineering Series)

Edited by Federico Noguerra

Biopolymers are polymers that occur in nature. Carbohydrates and proteins, for example, are biopolymers. Many biopolymers are already being produced commercially on large scales, although they usually are not used for the production of plastics. Even if only a small percentage of the biopolymers already being produced were used in the production of plastics, it would significantly decrease our dependence on manufactured, non-renewable resources. These polymers have been present on earth for billions of years. It is older than synthetic polymers such as plastics. The DNA biopolymer is the most important for humans. The entire body structure as well as genetic behaviors that pass from parents to children is based on it. Both DNA and RNA are composed of nucleic acids that alternate in definite patterns to encode huge amount of genetic data. The most common biopolymer is Cellulose. It is also the most abundant organic compound on this planet. It comprises of 33% of all plant component on Earth. These polymers play an essential role in nature. They are extremely useful in performing functions like storage of energy, preservation and transmittance of genetic information and cellular construction. Biotechnology of Biopolymers deals with occurrence, synthesis, isolation and production, properties and applications, biodegradation and modification, the relevant analysis methods to disclose the structures and properties of biopolymers, experimental and mathematical models of biopolymers. This book will hopefully be compassionate to many scientists, physicians, pharmaceutics, engineers and other professionals in a wide variety of different disciplines, in academia and in industry.

HB 9781681175348 £160.99 January 2017 Scitus Academics 326 pages 155x230mm

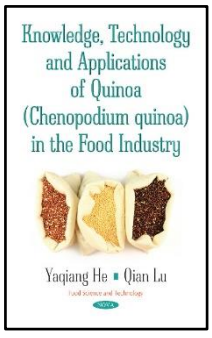


Food Safety & Consumption Assessment, Practices & Current Issues (Mechanical Engineering Theory & Applications Series)

Edited by Kurt D Morton

Molecular detection is arguably one of the fastest growing areas in current laboratory-based food pathogen screening and identification. Chapter One discusses how growth of the so called 'omics' technologies has, over the last decade, led to a gradual migration away from the 'one test, one pathogen' paradigm, toward multiplex approaches to foodborne pathogen detection and identification, which have led to significant improvements in food safety. Chapter Two covers the antimicrobial potential of metals against foodborne pathogens, including bacteria, viruses, and molds as well as the mechanism(s) behind their antimicrobial effect. Chapter Three links various challenges in food processing companies – from legislative to company specific – to the poor adoption of acknowledged quality assurance standards and guidelines, improvement and assessment of FSMS in developing countries. In Chapter Four, the authors demonstrate that there exist conspicuous cohort effects in favour of the older generations, born before the high economic growth started in 1960, in at-home consumption of fresh fish in Japan and that even the older segments of the population, such as those who will be above their 50s in 2025, are predicted to eat substantially less fish than in the past.

PB 9781536121223 £78.50 July 2017 Nova Science Publishers 75 pages 155x230mm

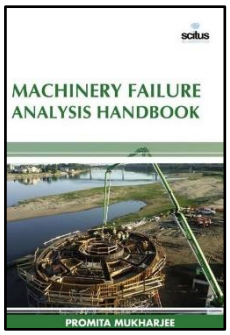


Knowledge, Technology & Applications of Quinoa (Chenopodium Quinoa) in the Food Industry (Food Science & Technology Series)

Qian Lu, Yaqiang He

Due to recent studies, quinoa is regarded as a new food resource with great benefits for human beings. Due to its high value in nutrients, this kind of wheat is being exploited in the food industry as a new food resource. However, currently some questions relating to quinoa have been raised: (1) How to scientifically exploit and process quinoa? (2) What are the functional nutrients in quinoa? (3) What are the bottlenecks for quinoa processing? (4) How to eliminate or mitigate the technical bottlenecks for quinoa? Without answering these questions, the academic research and industrial application of quinoa would be negatively impacted. This book reviews the history and culture associated with quinoa. The cultivation model and growth conditions of quinoa are discussed as well how to direct the technicians on farms to manage the quinoa cultivation. This book uses experimental data to describe how to use quinoa in food production. The strengths of quinoa will be summarised by the comparison between quinoa and other types of wheat. The processing technologies and potential solutions to current technical problems are also emphasised in this book. Both academic research and industrial applications are included in this book. This book could be used by technicians to cultivate quinoa and produce quinoa based food products as well as by the researchers to promote their research on active compounds in quinoa.

HB 9781536120790 £90.50 July 2017 Nova Science Publishers 100 pages 155x230mm

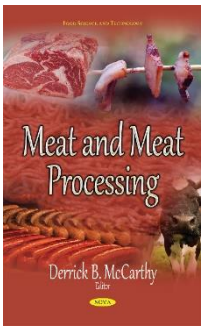


Machinery Failure Analysis Handbook (Chemical Engineering Series)

Edited by Promita Mukharji

Understanding why and how failures occur is critical to failure prevention, as even the slightest breakdown can lead to catastrophic loss of life and asset as well as widespread pollution. This book helps anyone involved with machinery reliability, whether in the design of new plants or the maintenance and operation of existing ones, to understand why process equipment fails and thereby prevent similar failures. Process industries are home to a huge number of machines, most of them critical to the industry mission. Failures of these machines can result in consequences that range from the simple replacement of a cheap bearing to an accident that may cost millions in lost production or cause injuries or pollution. Competition forces corporations to try to keep a pace in optimisation. On the machinery side of the history, that means improving efficiencies, reliability, and reducing maintenance cost. Designs and purchase specifications, shop testing, installation, maintenance and operation all play a role in these efforts. The objective of this book is to help anyone involved with machinery reliability, be it in the design of new plants or the maintenance and operation of existing ones, to understand why the process machine fails, so some preventive measures can be taken to avoid another failure of the same kind.

HB 9781681174099 £170.50 January 2016 Scitus Academics 265 pages 160x235mm

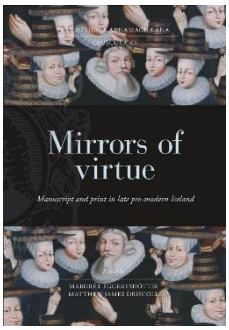


Meat & Meat Processing (Food Science & Technology Series)

Edited by Derrick B McCarthy

Meat products occupy quite an exceptional position in the preferences of the consumers and the interest of food industry, since they provide human organism with high quality proteins, vitamins and minerals. At the same time, a constant challenge is faced by the health sector around the world to uncover the causes associated with the etiology of several diseases. Much attention has therefore been paid to develop meat products with physiological functions that promote human health. CONTENTS: Preface; Incorporation of Agro-Industrial By-Products in the Diets of Animals: Improvement of Meat Quality Characteristics with Minimal Cost; Lipid & Protein Oxidation in Meat; Dry-Cured Meats: Quality, Safety & Nutritional Aspects; Analytical Techniques for Trace-Element Determination in Meat Samples; The Use of Electrical Stimulation in Meat Production; Quality & Nutritional Characteristics of Donkey Meat; Nitrites/Nitrates in Processed Meat: Risks & Benefits; Index.

HB 9781536122107 £90.50 July 2017 Nova Science Publishers 175 pages 155x230mm

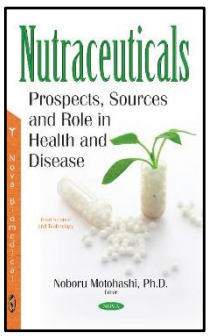


Mirrors of Virtue
Manuscript & Print in Late Pre-Modern Iceland (Opuscula XV Series)

Edited by Margret Eggertsdottir, Matthew James Driscoll

As a departure from previous practice, this volume of Opuscula presents ten articles on a single theme: manuscript and print in late pre-modern Iceland, the period between the advent of print in the early sixteenth century to the establishment of the Icelandic State Broadcasting Service in the early twentieth. Throughout this period, manuscript transmission continued to exist side-by-side with print, the two media serving different, but overlapping, audiences and transmitting different, but overlapping, types of texts. The authors take their point of departure in recent developments within literary and cultural studies which focus on the artefactuality of texts and the social, historical and cultural contexts in which they are produced and consumed. The volume's title refers not only to the popular late medieval and early modern genre of exemplary and/or admonitory 'mirror' literature -- several examples of which are discussed -- but also to the idea that both manuscripts and printed books are reflections of 'virtue' in a broader sense.

HB 9788763545556 £39.99 July 2017 Museum Tusculanum Press 399 pages 170x240mm

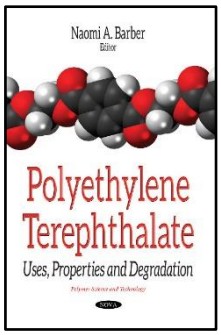


Nutraceuticals
Prospects, Sources & Role in Health & Disease (Food Science & Technology Series)

Edited by Noboru Motohashi

Bioactive phytochemicals contribute immensely to the operations and functions that occur within human beings. Scientists have coined the term "nutraceuticals" to describe any plant-based biochemical substances that positively affect physical condition and status. They promote health benefits and serve many purposes, such as acting as antioxidants, cancer inhibitors, hepatoprotectants, hypertensive inhibitors, and possessing antidiabetic and antidepressant properties, among other qualities. With these characteristics in mind, the authors describe how these nutraceuticals aid in the prevention and treatments of diseases. The authors intend for their research to aid in the further exploration and discovery of new drug designs and applications for nutraceuticals.

HB 9781536117851 £90.50 June 2017 Nova Science Publishers 140 pages 155x230mm

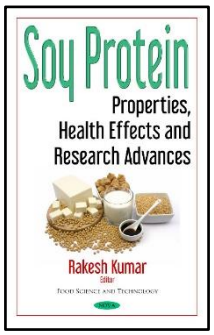


Polyethylene Terephthalate
Uses, Properties & Degradation (Polymer Science & Technology Series)

Edited by Naomi A Barber

Polyethylene terephthalate (PET) is an aliphatic-aromatic and semicrystalline thermoplastic polyester of prime commercial and industrial importance. Namely, PET is a very important industrial polymer due to its excellent properties such as processability, chemical resistance, high tensile impact strength, high thermal stability and clarity. Chapter One summarises the synthesis and physicochemical properties of PET. In Chapter Two, the authors review the frequency-dependent parameters of the PET substrate, developments of the flexible RF electronics on PET substrate, and the challenges and potentials of RF applications using flexible electronics fabricated on PET films. Chapter Three presents a background of the current state of knowledge with respect to PET recycling.

PB 9781536119916 £78.50 July 2017 Nova Science Publishers 140 pages 155x230mm



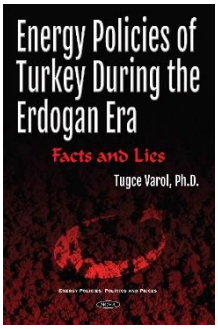
Soy Protein
Properties, Health Effects & Research Advances (Food Science & Technology Series)

Edited by Rakesh Kumar

Soy protein is abundantly present in soybeans, which have in the past been termed as “wonder beans”. Soy flour, soy protein concentrate and soy protein isolate can be extracted from soybeans after removing the oil components. After the removal of oil components, one can use protein components as milk, paneer, cheese and sauce. The best feature of soybean is that it possesses medicinal properties, and hence can be consumed as a main course for nutrients and sustenance. Consumption of soy-based products is also helpful in reducing the chances of several hormone dependent diseases such as cancer, osteoporosis, cardiovascular disease and menopausal symptoms. Additionally, soybean can be used to prepare bioplastics and biofibres. The book contains ten chapters and is written so as to give the readers the multiple benefits of soy protein as food. This book also discusses the properties of edible soy protein films, with special emphasis on their mechanical properties; these mechanical properties can be determined experimentally. Theoretically, the mechanical properties of soy protein film can be determined by a statistical tool known as the Response Surface Methodology (RSM). The basic concept of RSM is discussed in one of the chapter of this book. The reader will benefit greatly by reading this book.

HB 9781536120721 £90.50 July 2017 Nova Science Publishers 155 pages 155x230mm

INDUSTRY & INDUSTRIAL STUDIES

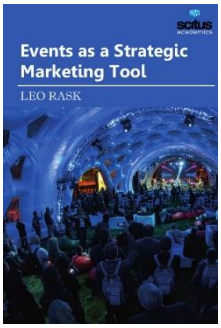


Energy Policies of Turkey During the Erdogan Era
Facts & Lies (Energy Policies, Politics & Prices Series)

Tugce Varol

Erdogan discovered in 2002 that energy policies and the energy sector would create a mechanism to institute his dynasty in Turkey. The energy policies of the Erdogan era include how the Erdogan family engaged in the international energy business in Turkey and neighboring countries, and how they became wealthy. After many years of supporting the Calik Holding, the former CEO, Berat Albayrak, Erdogan’s son-in-law, was appointed Turkey’s Minister of Energy by Erdogan in 2015. Since Erdogan came to power in 2002, many books and articles were published on Turkey’s foreign policy and domestic politics by scholars. However, this is the first book that combines Erdogan’s energy policy actions (country by country in chronological order) as well as describing the underlying corruption allegations, the Zarrab case, and the smuggling of ISIS oil. As a result of the research through official Turkey institutions and international institutions, it is shown that an overseas Turkish energy company was and continues to be involved in the energy blocks of Iraqi Kurdistan, thanks to Erdogan’s agreement with the Barzani administration. This book aims to analyse Turkey’s energy relations with Russia, Azerbaijan, Iran, Iraq-Iraqi Kurdistan, Eastern Mediterranean and Central Asian countries since 2002. One of the notable outcomes of the book is to reveal how Erdogan contributed to Israel’s energy security despite his anti-Israeli rhetoric. The reader will learn the details of the energy projects between Turkey and other countries. In addition, the reader will also learn the roles of Turkey’s energy companies close to the Erdogan family. The book emphasises the deterioration of Turkey-Russia relations and its impact on Turkey’s energy security, thanks to the Erdogan-Putin rivalry over Syria. Erdogan has been in power since 2002 (President since 2014), and is trying to convert Turkey’s political regime to remain in power for as long as possible. Appointing his son-in-law as Turkey’s Minister of Energy is not a coincidence, but rather a business strategy.

HB 9781536105896 £185.99 May 2017 Nova Science Publishers 270 pages 180x260mm

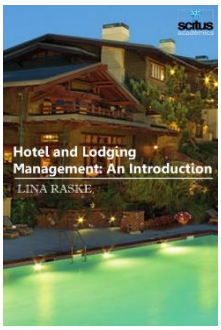


Events as a Strategic Marketing Tool (Hospitality & Tourism Series)

Leo Rask

Have you ever been tempted by a credit card company giving away free blankets or T-shirts at a football game in exchange for a credit card application? Have you been approached by a skimpily-dressed young woman offering samples of fruity alcohol at a local bar? Each of these unique experiences offers a glimpse at what twenty-first century event marketing can be. Experiences, encounters and events have come to play an ever-growing role in marketing as their impact is more fully understood. As a profession, however, event marketing is still a relatively new field, with most available literature covering practical project management rather than the strategy behind including events in a marketing campaign. The events industry now includes events of all sizes from the Olympics down to business breakfast meetings. Many industries, charitable organisations, and interest groups hold events in order to market themselves, build business relationships, raise money or celebrate achievement. Events are considered one of the strategic marketing and communication tools by companies of all sizes. From product launches to press conferences, companies create promotional events to help them communicate with clients and potential clients. A number of elements such as music, live entertainment or even the particular venue may be used to influence the tone and atmosphere of an event. Event marketing strategies leave a lasting, brand-focused impression of fun by grabbing the attention of a group of people who are gathered together. If executed successfully, event marketing will provide each of them with an experience that will resonate in their minds. This book describes how events can be used as a strategic tool in marketing practices. The book addresses the development of the experience economy, events, and event marketing. The book covers the various areas of marketing within which experiences play a role, such as branding, relationship marketing and city marketing.

HB 9781681174235 £141.99 January 2017 Scitus Academics 272 pages 155x230mm

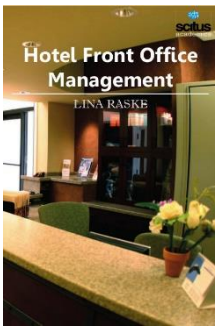


Hotel & Lodging Management An Introduction (Hospitality & Tourism Series)

Lina Raske

People traveling for business or leisure reasons look for a home away from home when they travel. A competent staff, good food, and a secure and restful room can go a long way toward making people enjoy travelling, and lodging managers ensure all those things. A hotel manager, hotelier, or lodging manager is a person who manages the operation of a hotel, motel, resort, or other lodging-related establishment. Management of a hotel operation includes, but is not limited to management of hotel staff, business management, upkeep and sanitary standards of hotel facilities, guest satisfaction and customer service, marketing management, sales management, revenue management, financial accounting, purchasing, and other functions. Lodging manager's work at all kinds of establishments from traditional hotels, to camping areas, inns, motels, ranches, and resorts. Lodging managers have many different duties as well. They make sure guests' needs are taken care of by providing amenities like television and fitness rooms, and making sure everything is kept in order. They may also provide services for business travellers like helping arrange conferences and providing meeting rooms and electronic equipment. Being a lodging manager requires some personal attributes. This book prepares readers to succeed as managers in the hotel and lodging industry, while developing a solid foundation for a long and successful career. The book combines detailed presentations of each department in a hotel or lodging establishment along with a close examination of organisational structure and the interdependent relationship among departments.

HB 9781681174365 £160.99 January 2017 Scitus Academics 300 pages 155x230mm

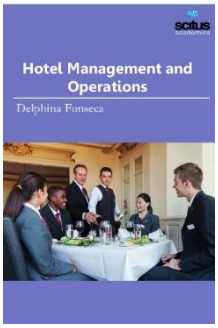


Hotel Front Office Management (Hospitality & Tourism Series)

Lina Raske

The front office is the nerve centre of a hotel property. Communications and accounting are two of the most important functions of a front desk operation. Front office/reception is the first place where guests/customers arrive and come in touch with the staff. Front office/reception is the mirror of a hotel. The function of the front office is to directly get in touch with customers. The front office can discover more information about the customer by asking them questions and give answer ask by guest/customer also helping the customers out. Broadly speaking, front office includes roles that affect the right side (revenues) of trading statement of the business. Effective communications -- with guests, employees, and other departments of the hotel -- are paramount in projecting a hospitable image. Answering guest inquiries about hotel services and other guests, marketing and sales department requests for information on guest room availability, and housekeeping department inquiries concerning guest reservations are but a few of the routine tasks performed almost constantly by a hotel front desk in its role as communications hub. Accounting procedures involving charges to registered and nonregistered hotel guest accounts are also important in the hospitality field. Staff working in the front office can also deal with simple tasks, such as sorting emails and helping on printing and typing tasks. Front office staff needs to use different skills on technologies too, such as using the printers, fax machines and phone. This book addresses the demands for instructing future leaders of the hotel industry. Educators who are preparing professionals for roles as front office managers and general managers in hotels are required to meet the challenges of operations, technology, training, empowerment, and international applications.

HB 9781681174372 £160.99 January 2017 Scitus Academics 334 pages 155x230mm

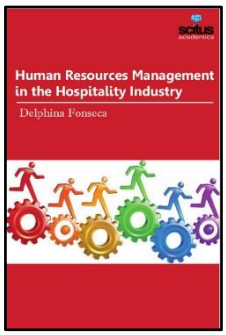


Hotel Management & Operations (Hospitality & Tourism Series)

Edited by Delphina Fonseca

Hotel Management is an area of study that covers a wide range of topics concerned with the operational aspects of hoteliery. Hotel operations are varied and cover topics as wide ranging as marketing, eco-tourism, leisure, business administration and management. It is the job of the Hotel Manager to coordinate the many operational tasks of running a successful hotel. Managing a hotel requires knowledge and skills within a wide variety of fields. A hotel manager, hotelier, or lodging manager is a person who manages the operation of a hotel, motel, resort, or other lodging-related establishment. Management of a hotel operation contains, but is not limited to management of hotel staff, business management, upkeep and sanitary standards of hotel facilities, guest satisfaction and customer service, marketing management, sales management, revenue management, financial accounting, purchasing, and other functions. The size and complexity of a hotel management organisational structure varies significantly depending on the size, features, and function of the hotel or resort. Administrative functions for a small-scale hotel such as Accounting, Payroll, and Human Resources may normally be handled by a centralised corporate office or solely by the Hotel Manager. This book presents a variety of viewpoints on the duties, responsibilities, problems, and opportunities encountered there. The book continues to provide a comprehensive and lucid coverage of the subject. The text gives a practical approach, challenge readers to recognise the central issues involved in complex management problems, understand the structure and resources of the department in question, and offer solutions that may help in other hotel resources and departments.

HB 9781681175454 £141.50 January 2017 Scitus Academics 290 pages 155x230mm

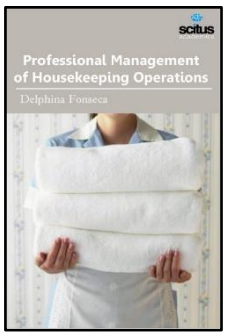


Human Resources Management in the Hospitality Industry (Hospitality & Tourism Series)

Edited by Delphina Fonseca

To have maintained its place as an essential text for so many years “Human Resource Management in the Hospitality Industry” has had to remain relevant to its broad audience. Today’s hospitality professional must be an expert at managing many functions. Altogether, human resource management is the process of proper and maximises utilisation of available limited skilled workforce. The core purpose of the human resource management is to make efficient use of existing human resource in the organisation. Managing the workforce effectively is perhaps the single most important issue in delivering first-class service which underpins a hotel’s performance, reputation and profitability. At the international level, the countries of origin of hotel staff, particularly management and supervisors, have changed dramatically. In the past, companies, in order to preserve their brand integrity in new countries, tended to post skilled staff from their own already successful properties. In many countries, however, immigration rules have changed in order to protect local employment, ensuring that home-grown employees have employment priority. In addition, more international companies can now rely on a more abundant source of local trained labor in domestic markets, as a result of local education and training initiatives. Even so, restrictions on importing senior management and skilled supervisors present companies with challenges as they work to protect the integrity of their brand. This book provides the reader with an essential understanding of the purpose, policies and processes concerned with managing an enterprise’s workforce within the current business and social environment. The book examines the nature and assesses the impact of HRM within a highly under-researched division of the service sector, namely the hospitality industry. The book provides comprehensive overview of the hospitality and tourism industries, and emphasizes the importance of effective human resources management to all organisations within them.

HB 9781681175478 £160.99 January 2017 Scitus Academics 310 pages 155x230mm

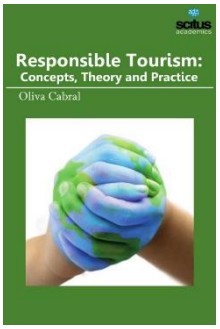


Professional Management of Housekeeping Operations (Hospitality & Tourism Series)

Edited by Delphina Fonseca

Every house, whether private, like yours, or commercial like offices, shops, hotels, hospitals, clubs, etc., needs to be kept clean and tidy, so that it looks inviting to all. This is where housekeeping comes in. Cleaning and maintenance services can be spotted very easily anywhere. Today’s professional housekeeper must be knowledgeable about staff diversity issues, building relations with unions, and maximising the uses of available technology while staying aware of the bottom line. The professional housekeeper must also be aware of growing health and safety concerns. A Professional Housekeeper is an extra pair of hands -- whether it’s cleaning, laundry, ironing or any other household chores. A housekeeper is a person employed to manage a household, and the domestic staff. Housekeeping managers see to it that hotel guests have adequate supplies both within their hotel rooms and in the public areas that they visit, such as the spa and washrooms. Different categories of hotel rooms entitle guests to different supplies. For example in a standard room, guests might receive only bathroom supplies, while in executive rooms, hotel services could include mini-bars, laundry and pressing services. It is the responsibility of the housekeeping manager to ensure that a hotel guest receives all the housekeeping services he purchased. Housekeeping managers receive and act on complaints from hotel guests relating to the state of their rooms or public areas. A hotel housekeeping manager is in a unique position to make recommendations about improvements to the hotel services due to his close interaction with the guests.

HB 9781681175546 £141.50 January 2017 Scitus Academics 282 pages 155x230mm

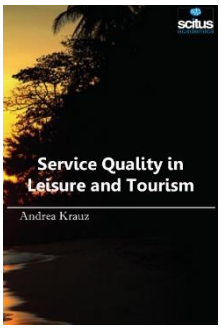


Responsible Tourism
Concepts, Theory & Practice (Hospitality & Tourism Series)

Oliva Cabral

Tourism is one of the world's biggest industries. Responsible tourism is concerned with the effects of tourism on people, ecology, and communities, and seeks to ameliorate these impacts by providing tourism which benefits host communities, improves working conditions, involves the local community, promotes cultural heritage, and benefits the environment. Simply put, responsible tourism is tourism 'that creates better places for people to live in, and better places to visit'. It generates greater economic benefits to local people and enhances the wellbeing of local communities. It also makes positive contributions to the conservation of natural and cultural heritage, and maintenance of the world's diversity. This book discusses responsible tourism as a whole, including the politics, policy and planning behind it, and the major subject sub-topics, such as poverty reduction, the environment, transport, governance, wildlife tours and heritage. It is suitable for university libraries, policy makers and researchers in responsible and sustainable tourism. Responsible tourism is an approach to the management of tourism, aimed at maximising economic, social and environmental benefits and diminishing costs to destinations. A responsible tourism approach aims to achieve the triple bottom-line outcomes of sustainable development. The distinguishing characteristic of the approach is the emphasis on the duty of role-players in the tourism sector, and destinations in general, to take action to accomplish sustainable tourism development.

HB 9781681176215 £141.50 January 2017 Scitus Academics 300 pages 155x230mm

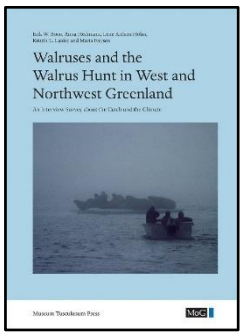


Service Quality in Leisure & Tourism
(Hospitality & Tourism Series)

Edited by Andrea Krauz

Tourism has been one of the world's fastest growing industries, and there are large societies entirely dependent upon the visitor for their sustenance. The quality of service in hotel industry is an important factor of successful business. The existing trend of complete quality management in hotel industry ensures the achievement of competitive advantage of hotel companies and is therefore the subject of contemporary research into service quality in hotel industry. Much of the attention given to service quality is motivated by the premise that it will increase customer satisfaction and ultimately lead to better financial performance. The quality of products and services has also been related to external indicators of customer satisfaction such as complaints, warranty, litigation and market share. Satisfied customers often lead to loyal customers who continuously repurchase the product or service. However, all organisations are dependent upon repeat purchases that lead to higher profitability. Empirical evidence suggests that customer satisfaction mediates the relationship between service quality and firm performance. This book aims to develop an awareness of the underpinning theories of quality as applicable to leisure and tourism. It deals with the impact of service quality in tourism and customer satisfaction; presents the theoretical model of the research indicating the dimensions of quality in tourism. It shows that such dimensions as Quality of accessibility, accommodation, venue and their components contribute directly in satisfaction of tourists, their intend to return and eventually development of tourism industry in a region. Delivering high quality service within the hospitality industry positively influences a customer's perception of value. Tourist satisfaction is the result of the interaction between a tourist's experience in the destination area and his or her previous expectations about the destination. Satisfying the tourist is critical because it has an effect on the expectations and intentions for the customer's next destination purchasing decision. Practitioners and educators alike will find this book to be invaluable in their businesses and in preparing students for the business world.

HB 9781681176222 £141.50 January 2017 Scitus Academics 284 pages 155x230mm



Walruses & the Walrus Hunt in West & Northwest Greenland
An Interview Survey About the Catch & the Climate
(Monographs on Greenland Series)

Erik W Born, Anna Heilmann, Lene Kielsen Holm, Kristin L Laidre, Maria Iversen

This volume presents the results of an interview survey among Greenland subsistence hunters on walruses and the catch of walruses in West and Northwest Greenland. In these areas, the catch of walruses is still an important part of the traditional subsistence hunting culture. The Greenland walrus hunting grounds have experienced marked environmental changes due to climate change and quotas were introduced for the catch across all of Greenland in 2006. Thus, we wanted to explore how these changes had affected the local communities by interviewing seventy-six experienced walrus hunters living in twenty-two settlements and towns along the ca. 1,700 km coast from Maniitsoq in the south to Siorapaluk in the north. The interviews resulted in a wealth of detailed information about how climate changes and introduction of quotas have affected the walruses and the walrus hunting practice. The main text summarises the broad findings while more details are provided in the individual hunter statements in four appendices.

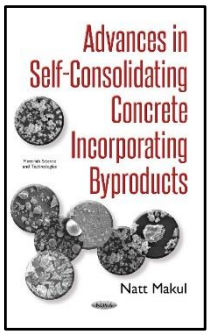
HB 9788763545488 £39.99 May 2017 Museum Tusculanum Press 255 pages 190x270mm

Advances in Materials Science Research Volume 29 (Advances in Materials Science Research Series)

Edited by Maryann C Wythers

This book provides readers with the latest developments in materials science research. Chapter One reviews the advances achieved over the last three years by exploiting photo-induced polymerization processes for the obtainment of functional (and often nanostructured) coatings. Chapter Two analyzes superalloy machining. Chapter Three examines a mechanistic exposure of welded Ni-Mo-Cr-Fe alloys in coal gasification syngas plants for morphological and microstructural examination and corrosion mechanism study. Chapter Four discusses atomistic investigations of ion migration in electroactive polymers. Chapter Five focuses on the property and electron shift kinetics of glassy carbon electrodes, and explores biosensor technology that bred diverse trends in detecting heavy metal ions with the adoption of glassy carbon electrode. Chapter Six provides a review of studies regarding antioxidant reaction mechanisms and their electroanalytical applications in glassy carbon electrodes. Chapter Seven investigates the effect of A-site and B-site isovalent doping in Bismuth Titanate ceramics on its dielectric and ferroelectric properties. Chapter Eight concludes with the current progress in the synthesis and luminescence properties of doped Bismuth complex oxides.

HB 9781536117905 £238.50 June 2017 Nova Science Publishers 200 pages 155x230mm

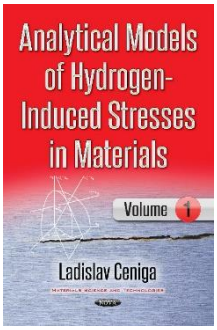


Advances in Self-Consolidating Concrete Incorporating Byproducts (Materials Science & Technologies Series)

Natt Makul

As a fundamental building material in modern times, concrete has been subject to continual development. It has evolved from a simple mixture of basic elements (ie: hydraulic cement, water, and aggregates) to become a modern high-performance material -- a material designed to respond to the environment and in some versions to preserve it. This book reflects the recent research developments in regards to concrete technology. As such, it focuses on the innovative high-performance concrete known as self-consolidating concrete (SCC). This kind of concrete has outstanding properties such that it can flow and become compact by its own weight without bleeding and with minimal reliance on energy. Originating in Japan in 1983 in response to a labor supply shortage in the construction industry, SCC requires less work to compact in the production process than conventional concrete does. That is, unlike conventional concrete, SCC can flow by its own weight and requires very little vibration to compact. This book is for readers who want to become well-versed in the most important current research in the field of novel SCC. The book will be useful for students, researchers, concrete scientists and technologists, and practicing engineers. This book consists of eight chapters. Each chapter is comprised of an introduction, a discussion of the concept of the design and the concrete's development, and the properties and testing of the concrete in fresh and hardened stages of SCC.

HB 9781536122084 £185.99 July 2017 Nova Science Publishers 205 pages 155x230mm

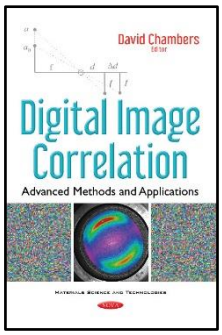


Analytical Models of Hydrogen-Induced Stresses in Materials I (Materials Science & Technologies Series)

Ladislav Ceniga

This book deals with analytical models of hydrogen-induced stresses in metallic materials. The analytical models, which are presented in this first volume, are determined for isotropic metallic materials. In general, hydrogen is accumulated in metallic materials in the form of various types of molecules (e.g. hydrogen molecules, molecules of methane, molecules of water vapour, etc.). With regard to the analytical modelling of the hydrogen-induced stresses, the isotropic metallic material with finite dimensions is replaced by a multi-hollow system with infinite dimensions, which consists of an infinite isotropic metallic matrix with periodically distributed spherical hollows. The various types of molecules are then accumulated in these spherical hollows. The analytical determination of the hydrogen-induced stress-strain state is based on the cell model, which considers cubic cells with central spherical hollows. The analytical modelling results from mutually different mathematical procedures, which are applied to fundamental equations of solid continuum mechanics (Hooke's law, Cauchy's law and equilibrium equations). The hydrogen-induced stress-strain state is thus determined by several different solutions, which fulfil boundary conditions. Due to these different solutions, the principle of minimal total potential energy of an elastic solid body is then required to be considered. In addition to the hydrogen-induced stresses and strains, the analytical model of the hydrogen-induced crack formation is also presented. The analytical model of this crack formation includes the determination of the limit state with respect to the crack initiation and the mathematical description of the crack shape propagated in the isotropic metallic material. Results of this book are applicable within basic research (solid continuum mechanics, theoretical physics, materials science, etc.), within engineering practices and within the undergraduate and postgraduate studies at universities and research institutes.

PB 9781536119060 £78.50 June 2017 Nova Science Publishers 108 pages 155x230mm

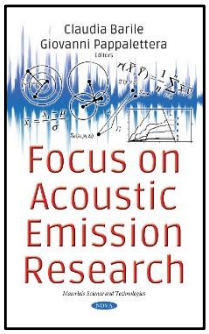


Digital Image Correlation
Advanced Methods & Applications (Materials Science & Technologies Series)

Edited by David Chambers

During surface deformations measurements in objects, materials or structural element samples, which move in the space, recorded speckle images are transformed by these displacements. In Chapter One, an algorithm for speckle image relative geometrical transformations parameters determination is proposed on the basis of Fourier-Mellin transform. Usage of this algorithm will allow increasing reliability of deformation fields' determination for constructional materials after appropriate correction of speckle-images, which are used during calculations. In Chapter Two, methods are presented to determine forming limit curves (FLCs) for sheets of advanced high strength steels (AHSS) using digital image correlation (DIC). FLC is a valuable tool for failure prediction in forming simulation at design stage and die try-out in press shops. Chapter Three presents a novel algorithm for recovering the trajectories of mechanism components from high speed video by means of multidimensional simplex optimisation and conformal templates. The focus of this chapter is on a simplex-based approach to digital image correlation (DIC) with arbitrarily shaped subsets that provides a number of advantages over the traditional gradient based approach with strictly square subsets. Finally, Chapter Four aims to develop a different technique that allows the obtention of the stress-strain evolution of materials while they are under axial loads.

PB 9781536118599 £78.50 June 2017 Nova Science Publishers 75 pages 155x230mm

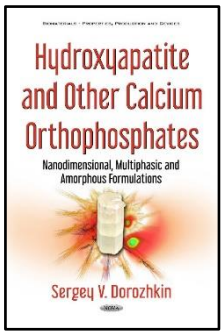


Focus on Acoustic Emission Research
(Materials Science & Technologies Series)

Edited by Claudia Barile, Giovanni Pappalettera

This book is a practical and intermediate level handbook written to describe acoustic emission technique, focusing on the results obtained from different kinds of materials through an engineering point of view. Internal structural modifications of materials such as dislocation motion, plastic deformation, grain boundary sliding or crack propagation are connected to the production of acoustic waves. The possibility of detecting these low amplitude waves, which are known as acoustic emissions, in order to prevent failure represents an interesting and very promising approach that has been applied in several engineering fields. The possibility to monitor the whole history of materials without scanning and accessing from one side only is a great advantage connected with this method, especially if compared or even combined with other traditional techniques. "Focus on Acoustic Emission Research" offers the reader the information needed to understand the basic principle of the acoustic emission phenomenon and to provide updated information about results obtained for different kinds of materials and large-sized structures. Each chapter, written by invited experts, follows a focused and practical arrangement with subsections describing the measurement principle, the experimental procedures, the results and references. The reader of the book will benefit by the significant hands-on experience that each author transfers into their respective chapter. The volume illustrated provides, in fact, a practical approach to acoustic emission that makes this volume attractive to industrial experts, academic researchers and students.

HB 9781536118483 £90.50 June 2017 Nova Science Publishers 150 pages 155x230mm

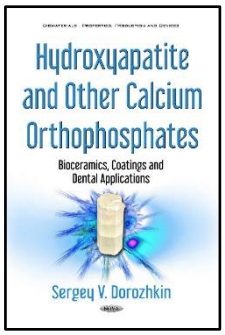


Hydroxyapatite & Other Calcium Orthophosphates
Nanodimensional, Multiphasic & Amorphous Formulations
(Biomaterials -- Properties, Production & Devices Series)

Sergey V Dorozhkin

As the inorganic constituents of skeletons, dentine and the enamel of teeth in all vertebrates, as well as antlers of male deer, calcium orthophosphates (CaPO4) appear to be the key materials to sustain all life on Earth. Therefore, biologically relevant CaPO4 possess all the necessary features of the biomaterials, such as biocompatibility, bioactivity, bioresorbability, osteoconductivity, osteoinductivity, and appear to be non-toxic, non-inflammatory and non-immunogenic. In this book, the author presents current state-of-the-art applications on three popular types of CaPO4: nano-scaled (nano-dimensional), multiphasic (polyphasic) and amorphous CaPO4. Topics discussed include the preparation, structure, composition, properties and biomedical applications of these types of CaPO4 combined with the specific information for each type. Namely, occurrence in the calcified tissue of mammals is discussed for both nano-scaled and amorphous types of CaPO4; both known and potential formulations, as well as their stability are discussed for multiphasic CaPO4, while both the morphology and the available knowledge on amorphous-to-crystalline transformations are discussed for amorphous CaPO4.

HB 9781536119022 £185.99 June 2017 Nova Science Publishers 300 pages 180x260mm

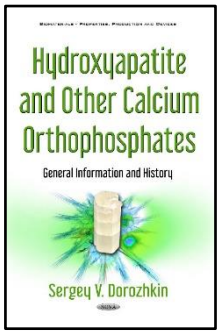


Hydroxyapatite & Other Calcium Orthophosphates
Bioceramics, Coatings & Dental Applications
(Biomaterials -- Properties, Production & Devices Series)

Sergey V Dorozhkin

As the inorganic constituents of skeletons, dentine and the enamel of teeth in all vertebrates, as well as antlers of male deer, calcium orthophosphates (CaPO4) appear to be the key materials to sustain all life on Earth. Therefore, biologically relevant CaPO4 possess all the necessary features of the biomaterials, such as biocompatibility, bioactivity, bioresorbability, osteoconductivity, osteoinductivity, and appear to be non-toxic, non-inflammatory and non-immunogenic. In this book, the author presents current state-of-the-art applications of CaPO4 as bioceramics, deposits (coatings, films and layers) and in dentistry. Topics discussed include chemical composition and preparation, forming and shaping, sintering and firing for CaPO4-based bioceramics, chemical composition and preparation, pre- and post-deposition treatments for CaPO4-based deposits, followed by the detailed description of their major properties, biomedical applications and in vivo behavior.

HB 9781536118971 £219.50 June 2017 Nova Science Publishers 435 pages 180x260mm



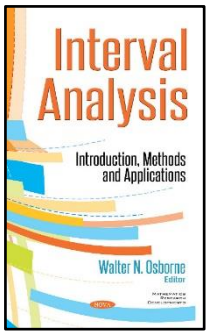
Hydroxyapatite & Other Calcium Orthophosphates
General Information & History
(Biomaterials -- Properties, Production & Devices Series)

Sergey V Dorozhkin

As the inorganic constituents of skeletons, dentine and the enamel of teeth in all vertebrates, as well as antlers of male deer, calcium orthophosphates (CaPO4) appear to be the key materials to sustain all life on Earth. Therefore, biologically relevant CaPO4 possess all the necessary features of the biomaterials, such as biocompatibility, bioactivity, bioresorbability, osteoconductivity, osteoinductivity, and appear to be non-toxic, non-inflammatory and non-immunogenic. In this book, the author presents current state-of-the-art applications on the occurrence, major properties and biomimetic crystallisation of CaPO4, as well as information on their history. Topics discussed include the geological and biological occurrences, a brief description of all known members of the CaPO4 family, their presence and major functions in the hard tissues of living organisms as both desired (normal) and undesired (pathological) calcifications, as well as the available information on biomimetic crystallisation. The detailed description of the historical development of our knowledge on CaPO4 is given in the second section of this book.

HB 9781536119015 £185.99 June 2017 Nova Science Publishers 270 pages 180x260mm

MATHEMATICS

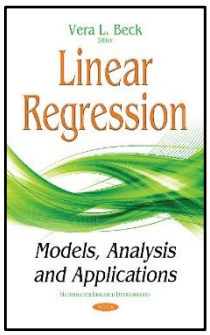


Interval Analysis
Introduction, Methods & Applications
(Mathematics Research Developments Series)

Walter N Osborne

This book begins by presenting a method for Interval Analysis based on simple statistical tools applied on a space of Gaussian variables in Chapter One. Chapter Two describes how using interval analysis the main part of optimisation techniques will allow to partially solve global optimisation problems. Chapter Three covers the applications of interval computations in computer graphics. The final chapter addresses the synthesis of Cable-Driven Parallel Manipulators (CDPMs) using interval analysis.

HB 9781536120288 £90.50 July 2017 Nova Science Publishers 70 pages 155x230mm

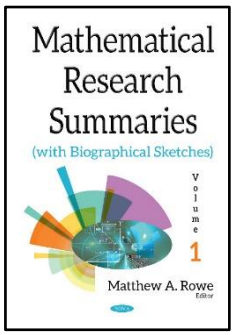


Linear Regression
Models, Analysis & Applications (Mathematics Research Developments Series)

Edited by Vera L Beck

Chapter One addresses the importance of weighted linear regression in fitting straight lines. In Chapter Two, the authors cover the homocedastic condition. The chapter also covers topics such as prediction (using the regression line in reverse), leverage, goodness of fit, comparison between models with and without intercept, uncertainty, polynomial regression models without intercept, and an overview of robust regression through the origin. Chapter Three focuses on linear regression for interval-valued data within the framework of random sets, and proposes a new model that generalises a series of existing ones. Chapter Four provides an investigation on modeling of adsorption of heavy metal ions onto surface-functionalised polymer beads. Linear and non-linear regressions were employed for each of the isotherm models considered to describe the equilibrium data. To reliably assess model validity, various error functions (whose mathematical expressions contain the number of experimental measurements, the numbers of independent variables and parameters in the regression equation as well as the measured and predicted equilibrium adsorption capacities) were used.

HB 9781536119923 £90.50 July 2017 Nova Science Publishers 75 pages 155x230mm

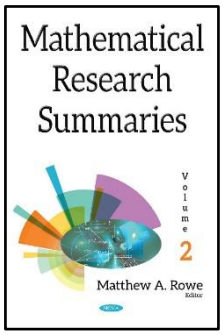


Mathematical Research Summaries (with Biographical Sketches) Volume 1 (Mathematical Research Summaries Series)

Matthew A Rowe

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

HB 9781536120219 £219.50 July 2017 Nova Science Publishers 328 pages 180x260mm

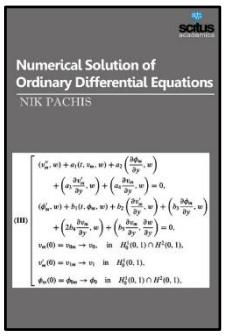


Mathematical Research Summaries (with Biographical Sketches) Volume 2 (Advances in Mathematics Research Series)

Edited by Matthew A Rowe

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

HB 9781536120226 £219.50 July 2017 Nova Science Publishers 350 pages 180x260mm



Numerical Solution of Ordinary Differential Equations (Mathematics Series)

Edited by Nik Pachis

Numerical methods for ordinary differential equations are methods used to find numerical approximations to the solutions of ordinary differential equations (ODEs). Their use is also known as "numerical integration", although this term is sometimes taken to mean the computation of integrals. An ordinary differential equation or ODE is a differential equation containing one or more functions of one independent variable and its derivatives. The term "ordinary" is used in contrast with the term partial differential equation which may be with respect to more than one independent variable. Ordinary differential equations are ubiquitous in science and engineering: in geometry and mechanics from the first examples onwards (Newton, Leibniz, Euler, Lagrange), in chemical reaction kinetics, molecular dynamics, electronic circuits, population dynamics, and many more application areas. They also arise, after semi discretisation in space, in the numerical treatment of time-dependent partial differential equations, which are even more impressively omnipresent in our technologically developed and financially controlled world. This book offers a complete and easy-to-follow introduction to classical topics in the numerical solution of ordinary differential equations. The book's approach not only explains the presented mathematics, but also helps readers to understand how these numerical methods are used to solve real-world problems.

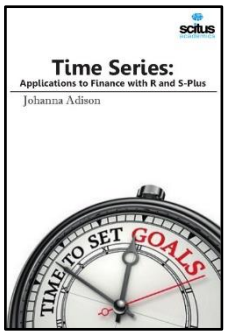
PB 9781681174488 £151.50 January 2017 Scitus Academics 280 pages 155x230mm

Statistical Methods for Quality Improvement (Mathematics Series)

Jacek Fabian

Quality Control is very important for everywhere. Quality control includes service quality given to customer, company management leadership, commitment of management, continuous improvement, fast response, actions based on facts, employee participation and a quality driven culture. The main objectives of the quality control module are to control of material reception, internal rejections, clients, claims, providers and evaluations of the same corrective actions are related to their follow-up. These systems and methods guide all quality activities. The development and use of performance indicators is linked, directly or indirectly, to customer requirements and satisfaction, and to management. Statistical quality control refers to the use of statistical methods in the monitoring and maintaining of the quality of products and services. Statistical methods for quality improvement deal numerous benefits for industry and business, both through identifying existing trouble spots and alerting management and technical personnel to potential problems. It provides quality control and design of experiments at the upper-undergraduate and graduate levels. The book also serves as a valuable reference for practicing statisticians, engineers, and physical scientists interested in statistical quality improvement.

HB 9781681175706 £141.50 January 2017 Scitus Academics 276 pages 155x230mm



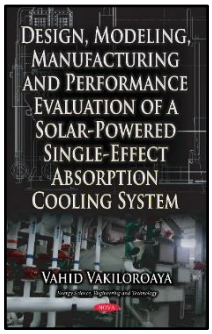
Time Series
Applications to Finance with R & S-Plus (Mathematics Series)

Johanna Adison

The study of time series is concerned with time correlation structures. It has diverse applications ranging from oceanography to finance. The celebrated CAPM model and the stochastic volatility model are examples of financial models that contain a time series component. Time series analysis can be useful to see how a given asset, security or economic variable changes over time or how it changes compared to other variables over the same time period. The Financial Time Series applications provide a convenient interface for creating, managing, and manipulating financial time series objects. In the past few years there have been several changes in the financial landscape as well as developments in using time series techniques for financial modelling. The book aims to highlight several of these standard as well as non-standard techniques applied in finance using S-Plus and R as statistical analysis tools. The book covers practical aspects of these models including estimation and testing of the models and shows practical examples. The book is designed to help readers grasp the conceptual underpinnings of time series modelling in order to gain an understanding of the ever-changing dynamics of the financial world.

HB 9781681176536 £141.50 January 2017 Scitus Academics 256 pages 155x230mm

MECHANICAL ENGINEERING

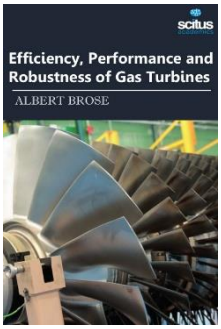


Design, Modeling, Manufacturing & Performance Evaluation of a Solar-Powered Single-Effect Absorption Cooling System
(Energy Science, Engineering & Technology Series)

Vahid Vakiloroaya

Book & CD. Conventional HVAC systems rely heavily on energy generated from fossil fuels, which are being rapidly depleted. This -- together with a growing demand for cost-effective infrastructure and appliances – has necessitated new installations and major retrofits in occupied buildings to achieve energy efficiency and environmental sustainability. As such, the development of clean energy air conditioning units remains an urgent engineering challenge. Solar HVAC systems, which convert thermal energy into cool air, are known to be an efficient source of heating and cooling. Unlike traditional HVAC systems, solar air conditioning units produce maximum cooling capacity when the sun is fierce; that is, they are most efficient during the hottest part of the day, in stark contrast to traditional air conditioning units, which are less effective as temperatures increase. This book represents a synergetic framework of system identification, design, development and performance evaluation for a newly-configured air conditioning system to target energy efficiency and environmental sustainability in buildings. In this study, we have originally designed and developed a single-effect lithium bromide (LiBr)-water absorption air-conditioning system, in which hot water is fully supplied by vacuum solar collectors without using any other energy sources such as gas or electricity. The water-cooled condenser of the chiller is supported by a cross-flow cooling tower. In this system, by using water as the working fluid (refrigerant), one can avoid the use of ozone-depletion chlorofluorocarbons and hydro chlorofluorocarbons. Thermodynamic and heat transfer models for absorption chiller components are described in detail.

HB 9781536108828 £152.50 June 2017 Nova Science Publishers 230 pages 155x230mm

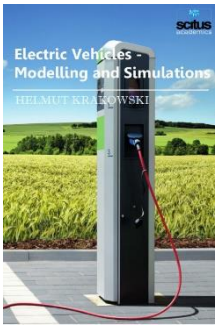


Efficiency, Performance & Robustness of Gas Turbines
(Mechanical Engineering Series)

Edited by Albert Brose

Gas turbine is the engine at the heart of the power plant that produces electric current. A gas turbine, also called a combustion turbine, is a type of internal combustion engine. It has an upstream rotating compressor coupled to a downstream turbine, and a combustion chamber in between. The basic operation of the gas turbine is similar to that of the steam power plant except that air is used instead of water. Fresh atmospheric air flows through a compressor that brings it to higher pressure. Energy is then added by spraying fuel into the air and igniting it so the combustion generates a high-temperature flow. This high-temperature high-pressure gas enters a turbine, where it expands down to the exhaust pressure, producing a shaft work output in the process. The turbine shaft work is used to drive the compressor and other devices such as an electric generator that may be coupled to the shaft. A gas turbine convert natural gas or other liquid fuels to mechanical energy. This energy then drives a generator that produces electrical energy. It is electrical energy that moves along power lines to homes and businesses. To generate electricity, the gas turbine heats a mixture of air and fuel at very high temperatures, causing the turbine blades to spin. The spinning turbine drives a generator that converts the energy into electricity. The purpose of the gas turbine determines the design so that the most desirable energy form is maximized. Gas turbines are used to power aircraft, trains, ships, electrical generators, and tanks. This book, Efficiency, Performance and Robustness of Gas Turbines, covers a wide range of issues related to analysis of gas turbines and their engineering applications. Gas turbine engine defect diagnostic and condition monitoring systems, operating conditions of open gas turbines, reduction of jet mixing noise, recovery of exhaust heat from gas turbines, appropriate materials and coatings, ultra micro gas turbines and applications of gas turbines are discussed.

HB 9781681173078 £160.99 January 2017 Scitus Academics 306 pages 155x230mm

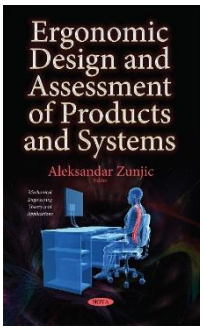


Electric Vehicles
Modelling & Simulations (Mechanical Engineering Series)

Helmut Krakowski

An electric vehicle (EV), also referred to as an electric drive vehicle, uses one or more electric motors or traction motors for propulsion. All-electric vehicles (EVs) run on electricity only. They are propelled by one or more electric motors powered by rechargeable battery packs. EVs have several advantages over vehicles with internal combustion engines. Electric vehicles convert about 59%-62% of the electrical energy from the grid to power at the wheels -- conventional gasoline vehicles only convert about 17%-21% of the energy stored in gasoline to power at the wheels. EVs emit no tailpipe pollutants, although the power plant producing the electricity may emit them. Electricity from nuclear-, hydro-, solar-, or wind-powered plants causes no air pollutants. Electric motors provide quiet, smooth operation and stronger acceleration and require less maintenance than ICEs. However, researchers are working on improved battery technologies to increase driving range and decrease recharging time, weight, and cost. These factors will ultimately determine the future of EVs. EVs first came into existence in the mid-19th century, when electricity was among the preferred methods for motor vehicle propulsion, providing a level of comfort and ease of operation that could not be achieved by the gasoline cars of the time. The internal combustion engine (ICE) has been the dominant propulsion method for motor vehicles for almost 100 years, but electric power has remained commonplace in other vehicle types, such as trains and smaller vehicles of all types. This book focuses on modelling and simulation of electric vehicles and their components. Mathematical models for electrical vehicles and their components were introduced and merged together to make this book a guide for industry, academia and policy-makers.

HB 9781681174143 £141.50 January 2017 Scitus Academics 286 pages 155x230mm

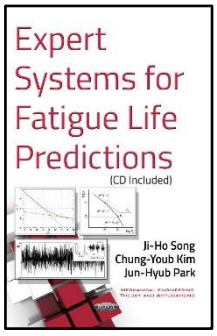


Ergonomic Design & Assessment of Products & Systems
(Mechanical Engineering Theory & Applications Series)

Edited by Aleksandar Zunjic

Ergonomic design is an applicative part of ergonomics, which deals with the adjustment and adaptation of design solutions for various objects and systems according to the user's needs, such as technical products or other products for daily use. The application of ergonomics in product design contributes to the creation of new solutions that are comfortable, safe, efficient, and which contribute to the satisfaction of customers. In this book, certain topics that were not previously treated from the ergonomic aspect are represented. In this regard, topics related to the ergonomic design of certain furniture elements and traffic route evaluation can be pointed out. For the first time collectively, the interdependence of ergonomics, safety and aesthetics in relation to the design of consumer products and certain systems are considered. Also, the original method for assessing the comfort of bus interiors that are intended for the public transport of passengers is also presented. In the larger part of the publication, the emphasis is on the original approach in solving various problems of ergonomic design as well as the evaluation of products and systems. Although this publication retains an academic agenda, special attention is devoted to the applicability of the publication in terms of its accessibility and understandability for the general population.

HB 9781536117844 £152.50 June 2017 Nova Science Publishers 200 pages 155x230mm

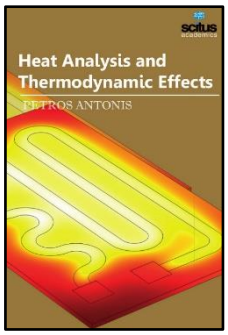


Expert Systems for Fatigue Life Predictions
(Mechanical Engineering Theory & Applications Series)

Ji-Ho Song, Chung-Youb Kim, Jun-Hyub Park

Book & CD. Fatigue of materials is very important in designing mechanical structures and components. Recently, fatigue databases, databanks and some computer software have been developed for fatigue analysis or fatigue life predictions, and some of them have been commercially available. Those fatigue databases and fatigue analysis software tools are clearly very helpful for the design and analysis engineers to select materials, analyse fatigue performance or estimate fatigue life of structures and components. In order to utilise those databases and software tools successfully in practice, engineers as users are implicitly required to have, more or less, wide and deep, and sometimes even advanced knowledge of fatigue; in other words, this book conveys considerable expertise in fatigue. However, most of the design and analysis engineers do not always have sufficient knowledge in fatigue and therefore, it is not yet easy for them to conduct fatigue design and analysis successfully, although there are many databases and software tools available. An expert system is a very useful, convenient and powerful tool for ordinary engineers to treat complicated engineering problems such as fatigue design and analysis, which require considerable expertise. Although the importance of fatigue expert systems has long been recognized, there is hardly any practically available fatigue expert system to date. Over many years, the authors have been developing some expert systems for fatigue assessment, particularly for the estimation of fatigue properties and for fatigue crack initiation life prediction under variable loading. Recently, in response to a scientific research result, the authors have developed a practically applicable version. They think that the expert system developed is probably the first and only fatigue expert system in the world. This book introduces in detail the expert systems developed and provides the expert system software, most probably in CD. Although it is not developed for commercial purposes, the system software is very easy to use.

PB 9781536108804 £78.50 July 2017 Nova Science Publishers 40 pages 155x230mm

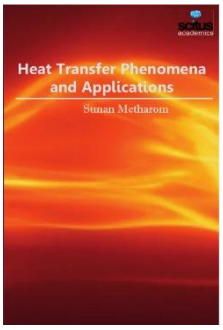


Heat Analysis & Thermodynamic Effects (Mechanical Engineering Series)

Petros Antonis

Heat is defined in physics as the transfer of thermal energy across a well-defined boundary around a thermodynamic system. The transfer of heat is normally from a high temperature object to a lower temperature object. Heat transfer changes the internal energy of both systems involved according to the First Law of Thermodynamics. Heat transfer is the exchange of thermal energy between physical systems. The rate of heat transfer is dependent on the temperatures of the systems and the properties of the intervening medium through which the heat is transferred. The direction of heat transfer is from a region of high temperature to another region of lower temperature, and is governed by the Second Law of Thermodynamics. Heat transfer changes the internal energy of the systems from which and to which the energy is transferred. Heat transfer will occur in a direction that increases the entropy of the collection of systems. The heat transfer and analysis on heat pipe and exchanger, and thermal stress are significant issues in a design of wide range of industrial processes and devices. This book covers mainly thermodynamic effects and thermal stress, heat pipe and exchanger, gas flow and oxidation, and heat analysis. The advanced concepts and information described in this book will be fruitful for the readers to find a sustainable solution in an industrialised society.

HB 9781681173108 £160.99 January 2017 Scitus Academics 300 pages 155x230mm

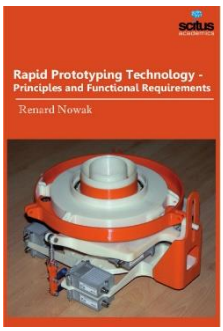


Heat Transfer Phenomena & Applications (Mechanical Engineering Series)

Sunan Metharom

Heat transfer is one of the three basic tenants of chemical engineering and engineering science, and contains many basic and practical concepts that are utilised in countless industrial applications. Heat transfer deals with the transfer of energy in the form of heat; the applications almost exclusively occur with heat exchangers that are employed in the chemical, petrochemical, petroleum (refinery), and engineering processes. The transfer of heat occurs between a hot and a cold body, normally referred to as the source and receiver, respectively. Heat is associated with the internal potential and kinetic energy of a system. The transfer or dispersion of heat can occur by means of three main mechanisms, conduction, convection and radiation. In conduction, heat flows from a higher temperature region to regions of lower temperature. This occurs within solid, liquid, or gaseous mediums or between different mediums that make direct physical contact with each other. In convection, the combined action of heat conduction, energy storage, and mixing motion serve to transport energy. In radiation, heat flows from a higher temperature body to a lower temperature body when the bodies are separated in space, even across a vacuum. This book emphasises on heat transfer calculations in various facets of engineering applications which are essential to aid engineering design of heat exchanging equipment. This interdisciplinary book comprises topics dealing with combined action of heat transfer and concomitant processes. Some numerical and experimental information are presented with ultimate skill. Equally, the analytical solution of heat transfer is touched in this book. Study of heat transfer phenomena and applications are equally emphasised in this subject. The text would hopefully serve as a valuable tool for those individuals in industry and academia involved directly, or indirectly, with heat transfer applications.

HB 9781681175188 £160.99 January 2017 Scitus Academics 316 pages 155x230mm

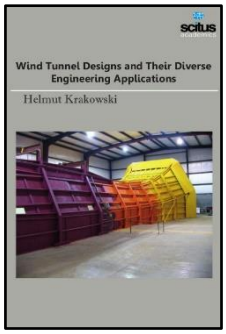


Rapid Prototyping Technology Principles & Functional Requirements (Mechanical Engineering Series)

Renard Nowak

Modern engineering often deals with customised design that requires easy, low-cost and rapid fabrication. Rapid prototyping (RP) is a popular technology that enables quick and easy fabrication of customised forms/objects directly from computer aided design (CAD) model. The needs for quick product development, decreased time to market, and highly customised and low quantity parts are driving the demand for RP technology. Rapid prototyping is a group of techniques used to quickly fabricate a scale model of a physical part or assembly using three-dimensional computer aided design data. Construction of the part or assembly is usually done using 3D printing or “additive layer manufacturing” technology. Until recently, prototypes had to be constructed by skilled model makers from 2D engineering drawings. This is a time-consuming and expensive process. With the advent of new layer manufacturing and CAD/CAM technologies, prototypes may now be rapidly produced from 3D computer models. There are many different rapid prototyping (RP) technologies available. This book delivers up-to-date information about RP technology focusing on the overview of the principles, functional requirements, design constraints etc. of specific technology.

HB 9781681175379 £141.50 January 2017 Scitus Academics 286 pages 155x230mm



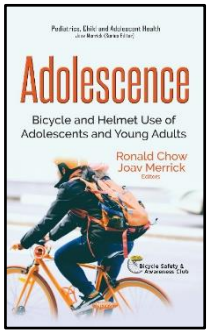
Wind Tunnel Designs & Their Diverse Engineering Applications (Mechanical Engineering Series)

Helmut Krakowski

Within the last 30 years wind tunnels have evolved as an indispensable aid to the practice of civil engineering. A wind tunnel is a tool used in aerodynamic research to study the effects of air moving past solid objects. A wind tunnel consists of a tubular passage with the object under test mounted in the middle. The earliest wind tunnels were invented towards the end of the 19th century, in the early days of aeronautic research, when many attempted to develop successful heavier-than-air flying machines. The wind tunnel was envisioned as a means of reversing the usual paradigm: instead of the air standing still and an object moving at speed through it, the same effect would be obtained if the object stood still and the air moved at speed past it. Wind tunnels are designed for a specific purpose and speed range and there is a wide variety of wind tunnel types and model instrumentation. Applications of wind-tunnel research range from routine testing of airframes to fundamental research on the boundary layer, the slow-moving layer of air adjacent to any wind-exposed body surface. Measurements of air pressure and other characteristics at many points on the model yield information about how the total wind load is distributed. In addition to aircraft and spacecraft, aerodynamic studies in wind tunnels have been highly profitable devices for solving design problems in automobiles, boats, trains, bridges, and building structures.

HB 9781681176642 £160.99 January 2017 Scitus Academics 304 pages 155x230mm

MEDICINE

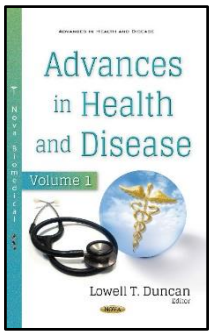


Adolescence
Bicycle & Helmet Use of Adolescents & Young Adults (Pediatrics, Child & Adolescent Health Series)

Edited by Ronald Chow, Joav Merrick

Sport and recreation is a positive influence on the lives of children and youths. Bicycling is great for human health and getting/keeping in shape. It can be a part of physical activities or it can be a means of transportation. However, there are also risks, and bicycle accidents happen and can cause serious injury. Helmet use can substantially reduce the risks associated with bicycle injuries, as these protective devices can prevent an array of serious facial and cranial injuries. In this book, the authors present survey studies conducted in various settlements around the world, looking into the bicycle and helmet use of adolescents and young adults.

HB 9781536120394 £90.50 July 2017 Nova Science Publishers 160 pages 155x230mm

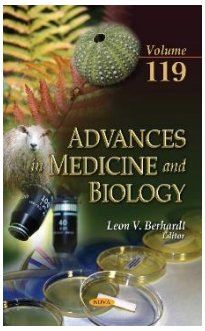


Advances in Health & Disease
Volume 1 (Advances in Health & Disease Series)

Edited by Lowell T Duncan

Bariatric surgery (BS) is a set of effective surgical procedures used for weight reduction and improvement of insulin sensitivity in morbidly obese patients, in comparison with non-invasive techniques such as drug treatment or changes in lifestyle. CONTENTS: Preface; Effect of Bariatric Surgery on Weight & Diabetes; Bariatric Surgery: Postoperative Complications; A Chondroitin Sulfate- & Hyaluronic Acid-Based Dietary Formulation Improves Non-Erosive Gastroesophageal Reflux Disease-Related Symptoms: An Open-Label Uncontrolled Study; TGF -- A Signaling Pathway Regulation by Transcriptional Cofactors Ski & Snow in Health & Disease; Food Allergy Management & Nutrition Strategies; Toxic Metals in Cosmetics: A Review of Analytical Determination, Human Health Risk & International Regulation for Safe Use; Friend & Family Influence on Electronic Cigarette Use among Hispanic Adolescents Nationwide; Index.

HB 9781536120707 £235.80 July 2017 Nova Science Publishers 200 pages 155x230mm

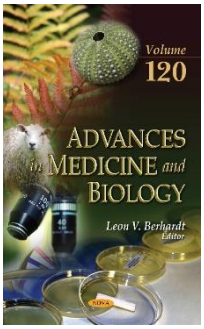


Advances in Medicine & Biology
Volume 119 (Advances in Medicine & Biology Series)

Edited by Leon V Berhardt

The chapters in this volume present the latest developments in medicine and biology. CONTENTS: Preface; Ectopic Pregnancy: Risk Factors, Medical Management & Potential Complications; The Role of Glucocorticoid Receptor Sensitivity in Immunopathology; The Usefulness of an Initial Intravenous Immunoglobulin Therapy with a Delayed Use of Anti-Inflammatory Drugs for Kawasaki Disease; Advanced Glycation End Products: Formation, Metabolism & Role in Diabetic Vascular Complications; Analytical Methods for the Determination of Fluoroquinolones in Pharmaceutical Preparations, Biological Fluids & Degraded Solutions; Theoretical Characterization of Carvacrol, Thymol & Related Compounds: Structural Requirements for Their Antibacterial Activity; Collagen Triple Helix Repeat Containing 1 (CTHRC1), a Pituitary Hormone; Nitric Oxide & Abdominal Aortic Aneurysm; Cloud Point Extraction of Parabens from Water Samples; The Pacific Sleeper Shark Somniosus pacificus: A Deterrence for Existing Fisheries or a Promising Target?; Index.

HB 9781536111057 £238.50 May 2017 Nova Science Publishers 240 pages 155x230mm

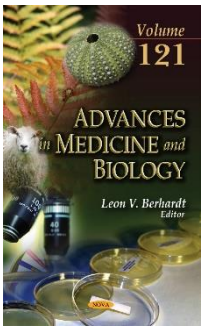


Advances in Medicine & Biology
Volume 120 (Advances in Medicine & Biology Series)

Edited by Leon V Berhardt

The chapters in this volume present the latest developments in medicine and biology. Chapter One begins with a review of the clinical aspects, side effects and potential complications of intrauterine devices (IUD). Chapter Two analyzes new strategies to reduce the burst release effect of copper-based IUDs. Chapter Three discusses ubiquitin-conjugating enzymes. Chapter Four provides some advanced research and treatment methods in the enhancement of innate immune response to prevent infections or infections leading to diseases. Chapter Five focuses on Basiliximab. Chapter Six studies bismuth ions, gastrins, and their biological activity in the gastrointestinal tract. Chapter Seven analyzes the risks and benefits of the barium enema. Chapter Eight investigates the complications caused by ventilation in patients with acute respiratory distress syndrome. Chapter Nine includes a critical discussion on the management of a quadricep hematoma from acute injury to the end stage of rehabilitation. The final chapter provides an updated review on the mechanisms linking obesity with inflammation, and analyzes the importance of inflammatory biomarkers such as TNF-alpha, IL-6, C-reactive protein and Ceruloplasmin as connecting links between inflammation, obesity and associated complications.

HB 9781536117912 £238.50 June 2017 Nova Science Publishers 190 pages 155x230mm

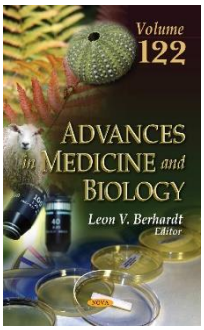


Advances in Medicine & Biology
Volume 121 (Advances in Medicine & Biology Series)

Edited by Leon V Berhardt

The chapters in this volume present the latest developments in medicine and biology. CONTENTS: Preface; Nipah Virus: What Has Been Learned since the Discovery of This Deadly Virus Nearly Two Decades Ago?; Bursitis in Polymyalgia Rheumatica; Fetal Sinus Bradycardia; The Physiology of Natriuretic Peptides; Detoxification of Singlet Oxygen: Raising up Crop Yield & the Clinical Application; Physical Training Possibilities for Patients with Carpal Tunnel; Load Cell Applicability to Outcome Measurement; Cdk5 & Catalase: Interaction of Neuronal Regulation Systems; Index.

HB 9781536119138 £238.50 June 2017 Nova Science Publishers 180 pages 155x230mm

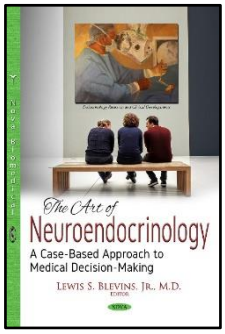


Advances in Medicine & Biology
Volume 122 (Advances in Medicine & Biology Series)

Edited by Leon V Berhardt

The chapters in this volume present the latest developments in medicine and biology. CONTENTS: Preface; Bacterial Biofilms: The Structure, Development & Potential of Plant Compounds for Alternative Control; Bactericidal Agents: Common Mechanisms of Action & Strategy; Food Choices after Bariatric Surgery: Are There Changes in Oral Medium Characteristics & Food Perception?; Taxane-Induced Peripheral Neurotoxicity: A Review; The Clinical Significance of Pathological Findings in the Long-Term Prognosis & Biochemical Response to Ursodeoxycholic Acid in Primary Biliary Cholangitis; Gastrointestinal IgG4 Related Disease; Retinol as an Active Molecule; Whiplash: Risk Factors, Management & Long-Term Effects; Index.

HB 9781536120691 £235.80 July 2017 Nova Science Publishers 185 pages 155x230mm

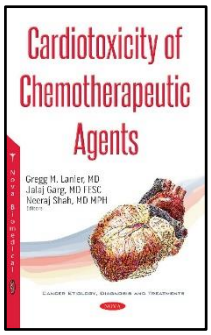


Art of Neuroendocrinology
A Case-Based Approach to Medical Decision-Making
(Endocrinology Research & Clinical Developments

Edited by Lewis S Blevins

This is not your standard textbook of pituitary endocrinology. This comprehensive collection of works presents unique, interesting, and often challenging patient cases. These reports illustrate the complexities of medical decision-making, incorporating evidence-based medicine and the practice of the art of medicine, in the evaluation and management of patients with various pituitary disorders. Experts in the field present their illustrative case studies, a related state-of-the-art review of the literature on one or more relevant topics, discuss the diagnostic and/or therapeutic dilemmas, share their thought processes to reflect their medical decision-making, and review the outcomes of the decisions in their patients. The purpose of this textbook is to bring together the art of the practice of neuroendocrinology, evidence-based medicine, pertinent clinical guidelines, and everyday problem-solving skills that we employ in the surgical/non-surgical evaluation and management of patients. While oriented towards healthcare professionals, this text will also be useful to patients and their families.

HB 9781536109177 £219.50 May 2017 Nova Science Publishers 420 pages 180x260mm

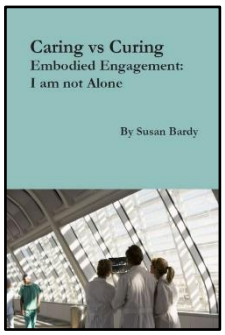


Cardiotoxicity of Chemotherapeutic Agents (Cancer Etiology, Diagnosis & Treatments Series)

Edited by Gregg Lanier, Jalaj Garg, Neeraj Shah

Cardiotoxicity is a well-established complication of antineoplastic agents. Cardiomyopathy resulting from anthracyclines is a classic example. In the past decade, an explosion of novel cancer therapies, often targeted and more specific than conventional therapies, has revolutionised oncology therapy and dramatically changed cancer prognosis. However, some of these therapies have introduced an assortment of cardiovascular complications. At times, these devastating outcomes have only become apparent after drug approval and have limited the use of potent therapies. There is a growing need for better testing platforms, both for cardiovascular toxicity screening and for elucidating mechanisms of cardiotoxicity of approved cancer therapies. Our book is a comprehensive summary of information of numerous antineoplastic agents and their cardiovascular adverse effects. Cardiac oncology is an exciting and ever-changing field, and we have attempted to synthesise information from all the major and relevant studies in the field in our book.

PB 9781536121193 £152.50 July 2017 Nova Science Publishers 140 pages 155x230mm

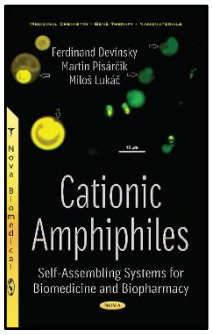


Caring vs Curing

Susan Bardy

In this volume the personal journey of why a nurse chose to leave Acute Care nursing to be involved in Palliative Care nursing connect with a broader culture of Palliative Care nursing by interviewing those who chose palliative care nursing and examine the reasons for changes in careers from acute, curing based, nursing to Palliative Caring for those in end of life nursing. The longest section of the study travels the world of Palliative nursing with participant observers. It is about the actively working nurse and includes extensive analytical discussion of an attempt to understand the sense of professional change, and the significance of beliefs for the reasoning behind vocational transformation. The second section examines the interviews, the third addresses the heart of the research question and examines nursing moving from a curing model to a caring only approach when death of the patient is inevitable. The volume ends with a letter written by the author to her sons asking them to be there when her time comes at the end of life through a life limiting illness and requests her sons and the Palliative Care professionals observe her final wishes.

PB 9781925309300 £19.50 July 2016 ATF Press 112 pages 155x230mm

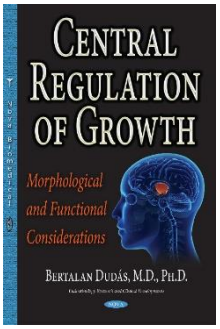


Cationic Amphiphiles Self-Assembling Systems for Biomedicine & Biopharmacy (Pharmacology -- Research, Safety Testing & Regulation Series)

Ferdinand Devinsky, Martin Pisarcik, Milos Lukac

Surfactants play an essential role in our daily lives. Their form of usage varies from detergents and cleaning agents through disinfectants and solubilisers up to industrial applications such as paints, oil recovery, anti-corrosion protective coatings, etc. A special distinct class of surfactants is represented by a double-chain, double-head form of surfactant molecules, which are called gemini surfactants. Gemini surfactants show physicochemical and aggregation properties which are superior to those of conventional, single-chain surfactants. From the perspective of applications, an important group of gemini surfactants is represented by cationic gemini surfactants. They have found numerous applications in the various fields such as solubilisation, textile coating, organic and polymer synthesis, electrochemistry, paper industry, etc. One of the most developing areas of cationic gemini surfactants application is the field of pharmaceutical applications. Interaction of cationic surfactants with the oppositely charged cell membrane has been known for a long time. Cationic gemini surfactants turned out to be very efficient bactericidal and antimicrobial agents. Moreover, recent development in this field indicates a cancerostatic effect of cationic geminis through a selective interaction of cationic gemini molecules with cancer cells. Another revolutionary field of cationic gemini surfactants application is their interaction with an oppositely charged electrolyte such as DNA. The interaction of DNA with various positively charged systems such as cationic surfactants, polymers and lipids is of great importance with respect to gene transmission through a biological cell membrane to achieve a therapeutic effect in a cell nucleus. The ambition of this monograph is to provide a complex view of synthesis, structure-aggregation, properties-biological activity relationship and recent applications of cationic gemini surfactants in the pharmaceutical field. Individual chapters in the monograph discuss the synthetic preparation of cationic surfactants, the effect of the structure of these compounds on their physical and physicochemical properties, particularly their aggregation properties and associated phenomena. A significant part of this publication is devoted to gemini surfactants, a relatively new class of surfactants whose special and surprising properties increasingly continue to draw the attention of the research community. The final part of the monograph is oriented on the use of cationic surfactants in biomedicine and pharmaceutical applications, where a special emphasis is put on their antimicrobial and antineoplastic activities. Finally, cationic surfactants as potent non-viral gene delivery vehicles are analysed and evaluated.

HB 9781536119794 £90.50 July 2017 Nova Science Publishers 195 pages 155x230mm

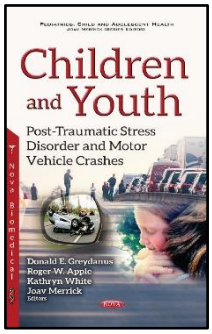


Central Regulation of Growth
Morphological & Functional Considerations
(Endocrinology Research & Clinical Developments Series)

Bertalan Dudas

Somatic growth is a crucial component in the development of an organism. Growth is manifested in many levels during an organism's lifespan; rapid intrauterine growth is followed by extrauterine development that subsides with age. The control of growth is exerted via particularly complex and multifaceted mechanisms that affect every cell of the body, regulating the balance between the anabolic and catabolic processes, and it is intimately entwined with almost every physiological function. The central component of this regulatory system is the hypothalamo-hypophyseal axis that controls not only all of the endocrine organs of the body, but also regulates the growth of every cell via growth hormone (GH) release. It would certainly exceed the scope of the present book to summarize the growth-related complex peripheral actions of the various hormonal systems of the hypothalamo-hypophyseal axis. GH secretion is modulated primarily by the somatotropic axis, which is one of the functional components of the hypothalamo-hypophyseal axis and integrates the stimulatory and inhibitory actions of growth hormone-releasing hormone (GHRH) and somatostatin upon GH release, respectively. Therefore, in the present volume we attempt to give an overview of the regulatory components of a somatotropic axis with a special emphasis on the regulatory input provided by hypothalamic hormonal and neurotransmitter/neuromodulator systems.

HB 9781536118988 £152.50 June 2017 Nova Science Publishers 205 pages 180x260mm

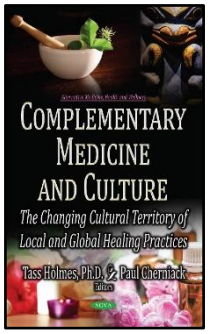


Children & Youth
Post-Traumatic Stress Disorder & Motor Vehicle Crashes
(Pediatrics, Child & Adolescent Health Series)

Edited by Donald E Greydanus, Roger W Apple, Kathryn White, Joav Merrick

This book explores various issues concerning this far-reaching problem in the 21st century. The authors look at a historical reflection from the 20th and 21st centuries as society became more aware of post-traumatic stress disorder (PTSD) and vehicular crashes affecting the pediatric population. This book also includes the demographics of current as well as past national crash statistics, factors involved in dangerous driving, PTSD assessment concepts, PTSD differential diagnoses and comorbidities, the psychological impact of PTSD, issues for teachers, PTSD and resilience, and management principles for PTSD. The authors conclude with potential concepts of future predictions, including the emerging role of artificial intelligence.

HB 9781536111026 £152.50 May 2017 Nova Science Publishers 190 pages 155x230mm

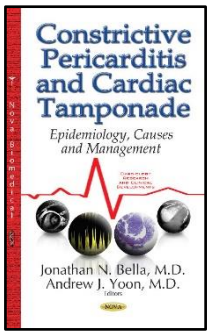


Complementary Medicine & Culture
The Changing Cultural Territory of Local & Global Healing Practices
(Alternative Medicine, Health & Wellness Series)

Edited by Tass Holmes, Paul Cherniack

This book engages topical and problematic issues regarding the impacts of cultural change on traditional healing beliefs and practices in both developing and developed nations. It describes issues ranging from the attrition of cultural heritage knowledge, or traditional knowledge (TK), to the implications of unconventional modern and traditional healing in various guises encountered during projects that entailed research fieldwork in communities of Australia, Africa and within institutions of mainstream healthcare in the United States. Furthermore, it explores philosophical aspects of contemporary complementary medicine practices. This book has pertinence for many practitioners and consumers of traditional "non-medical" forms of health practices, and relevance for the theoretical body of understanding related to these diverse fields. In particular, the individual chapters describe topics important to indigenous persons, people living in rural areas, those with mental illnesses, practitioners of Chinese medicine and massage therapy, practitioners and consumers of traditional Western herbal medicine, social theorists interested in unconventional health domains, and US veterans seeking adjunctive wellbeing care and advice alongside medical treatment, It also provides a chapter with information dedicated to their medical and complementary wellbeing providers. In the contemporary context, for Western countries such as US, UK and Australia, non-biomedical treatments are generally grouped together under the common term Complementary and Alternative Medicine (CAM), or more recently Complementary and Integrative Healthcare (CIH). In developing countries such as Africa, and in relation to indigenous healing (for instance, in many communities in remote Australia where there is a concentrated population of Aboriginal and Torres Strait Islander people), heritage healing practices and unconventional approaches to healthcare, including spiritually-focused and specific cultural approaches to managing diseases, may instead be termed "traditional healing". Much health research today is geared towards securing quantitative outcomes that fortify the significant gains advanced by biomedicine in treating disease. However, the global spread of biomedical practices and ways of conceptualising health unfortunately follows in the footsteps of centuries of Western social and economic global colonisation, and thereby represents a current ongoing process of "deep colonisation". The cultural shift brought about by this process has wrought deep and lasting changes in the body of heritage practices and beliefs that belong to culturally-situated healing traditions, and in the retention of TK associated with such healing.

HB 9781536119817 £90.50 July 2017 Nova Science Publishers 190 pages 155x230mm

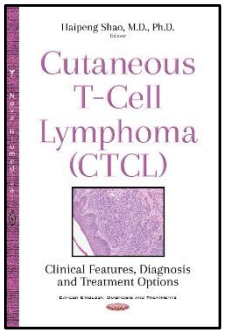


Constrictive Pericarditis & Cardiac Tamponade
Epidemiology, Causes & Management
(Cardiology Research & Clinical Developments Series)

Edited by Jonathan N Bella, Andrew Yoon

The major impetus for the design and execution of Constrictive Pericarditis and Cardiac Tamponade: Epidemiology, Causes and Management has been the extraordinary wave of breakthrough discoveries in the diagnosis and management of pericardial diseases over the past few decades. Modern advancements in cardiac imaging, including tissue Doppler imaging, cardiovascular computed tomography (CT), and cardiac magnetic resonance imaging (MRI), have allowed for increased accuracy and earlier detection of both constrictive pericarditis and cardiac tamponade. This book is designed to summarise and critically analyse the current understanding of these disease states for a broad audience of internists and cardiologists. There are an abundance of books, review articles, and internet sources that do an excellent job of describing the physiology/pathophysiology of the pericardium and the many pericardial diseases. Constrictive Pericarditis and Cardiac Tamponade: Epidemiology, Causes and Management differs from those other sources in that a conscious effort was made to present the information in this textbook in a "how to" format, with the chapters and text structured in such a way as to provide the reader with a clear step-by-step narrative. Clinical signs and symptoms are reviewed in detail first, followed sequentially by echocardiographic, CT, MRI, and invasive hemodynamic findings. High-quality images, figures, and illustrations were also specifically chosen and arranged to accompany the text in order to provide easy visual reference for the reading physician, whenever the diagnosis of pericardial disease is relevant to their patient's care. As such, this book seeks to provide reassurance to clinically-oriented internists and cardiologists when caring for patients with suspected pericardial disease.

HB 9781536106633 £90.50 January 2017 Nova Science Publishers 160 pages 155x230mm

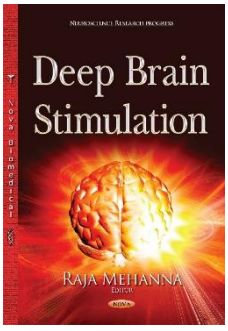


Cutaneous T-Cell Lymphoma (CTCL)
Clinical Features, Diagnosis & Treatment Options
(Cancer Etiology, Diagnosis & Treatments Series)

Edited by Haipeng Shao

Cutaneous T-cell lymphomas (CTCLs) are a heterogeneous group of Non-Hodgkin lymphomas with a variety of clinical presentation and outcomes. The diagnosis and treatment of CTCLs have evolved significantly with advances in our understanding of their pathogenesis and biological behaviors through immunophenotypic, molecular, and cytogenetic analysis and clinical correlation. The diagnosis and classification of CTCLs depend on integration of clinical presentation, histology, immunophenotype, molecular and/or cytogenetic findings. Accurate diagnosis and staging are essential for proper treatment and prognosis of the patients. The book Cutaneous T-Cell Lymphoma (CTCL): Clinical Features, Diagnosis and Treatment Options aims to provide the most up-to-date knowledge of the diagnosis, prognosis and treatment strategies of CTCL. Each chapter focuses on a different aspect of CTCL: clinical presentation, pathology, therapeutic options, role of radiation therapy, and in-depth discussion of the specific subtypes of CTCL classified under the most recent World Health Organization (WHO) classification of lymphoid neoplasms. The authors are practicing physicians in major medical centers and university hospitals, and are familiar with the challenges of diagnosing and treating patients with CTCL. The book is written for the practicing physicians and provides practical information and advice for their daily practice. Residents, fellows and other trainees will also find the contents of this book useful for their education and board preparation. The authors hope that the material covered in this book will serve as a foundation for the readers to keep up with future developments in the field.

HB 9781536118995 £219.50 July 2017 Nova Science Publishers 280 pages 155x230mm

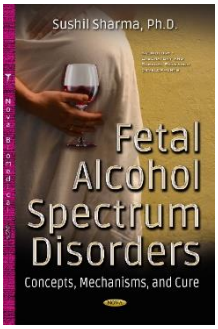


Deep Brain Stimulation
(Neuroscience Research Progress Series)

Edited by Raja Mehanna

This is a comprehensive, yet practical guide for any physician interested in this life changing therapy for patients with Parkinson's disease, tremor, dystonia or obsessive-compulsive disorders. Written by experts in the field from different world renowned institutions, this book gives a unique and comprehensive insight into the universe of deep brain stimulation. Filled with tables and colored figures, this book covers all the aspects of deep brain stimulation, including a historical review, the underlying neurophysiologic mechanism of treatment, intra-operative details from the neurosurgical and the neurophysiologic standpoint, a review of the evidence supporting the use of deep brain stimulation for each disorder, algorithms for patient selection, programming strategies, as well as troubleshooting and prospective indications. It will be useful to residents and fellows, as well as neurologists and psychiatrists already managing or looking into managing the care of patients with deep brain stimulation.

PB 9781536120271 £75.50 July 2017 Nova Science Publishers 290 pages 180x260mm

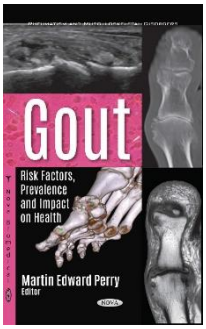


Fetal Alcohol Spectrum Disorders
Concepts, Mechanisms & Cure
(Neurology -- Laboratory & Clinical Research Developments Series)

Sushil Sharma

Alcoholism exerts a high genetic as well as epigenetic load and may be regarded as one of the most prevalent, identifiable, and preventable neuropsychiatric illnesses afflicting modern society today. Alcohol constituted 3.2% of all worldwide deaths in the year 2006 and is associated with >60 diseases, including foetal alcohol spectrum disorder (FASD), cancers, cardiovascular diseases, liver cirrhosis, neuropsychiatric disorders and life-threatening injuries. Fatal alcohol spectrum disorder (FASD) is a collective term representing foetal abnormalities associated with maternal alcohol abuse. FASD is a devastating developmental disorder resulting from alcohol exposure during foetal development. It is a considerable public health problem worldwide and is characterised by CNS abnormalities, dysmorphic facial features, and growth deficiency. Although it is well-established that intra-uterine alcohol exposure can lead to FASD, characterised by cognitive and behavioural impairments, alcohol abuse is still highly prevalent and contributes to a significant loss of economy and productivity throughout the entire world. Children with FASD become a serious and persistent socioeconomic burden to society, as they require specialised healthcare liabilities throughout their entire lives as a consequence of their parents' irresponsible drinking behaviour. The primary aim of the inter-disciplinary and integrated genome research network (consisting of molecular biologists, psychopharmacologists, system biologists with mathematicians, human geneticists, and clinicians) is to better understand the genetics and epigenetics of alcohol addiction by identifying candidate genes and molecular mechanisms involved in the etiopathogenesis of FASD, and to provide recommendations to the government and scientific community for global dissemination of emerging knowledge and implementation of FASD interventions. In this book the author has presented the novel concept of charnolopharmacology, which plays a crucial role in determining the life and death of the foetus during intrauterine foetal alcohol exposure.

HB 9781536119459 £295.50 June 2017 Nova Science Publishers 476 pages 180x260mm

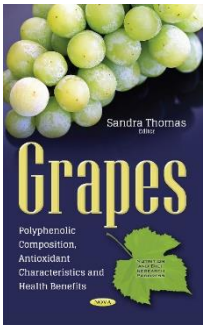


Gout
Risk Factors, Prevalence & Impact on Health
(Rheumatism & Musculoskeletal Disorders Series)

Edited by Martin Edward Perry

It may have once been known as "Disease of King's," but gout is a growing problem for ordinary people around the world. This book brings together multinational expertise to draw out an understanding of this disease that will be useful for the academic, the clinician and indeed the sufferer of gout. Highlighting recent understandings of the genetic background to the condition, with detailed pathophysiology and epidemiology, this book brings together and illustrates the disease mechanisms that cause gout. There follows both an academic and practical appraisal of the dietary risk factors for the development of gout, and the cardiovascular associations that heighten morbidity. With state of the art imaging modalities, the process and sequelae of the disease is captured within the human body, describing in pictures the damage and effect that gout crystals can produce. That damage can be avoided however, if simple principles of treatment and lifestyle modifications are followed. Horizon scanning for yet more drugs to address this growing and unmet need is highlighted as new options that have either recently become available or will be accessible in the near future are explored. With the increasing incidence and prevalence of this condition we are all going to have greater exposure to gout. This book is a timely resource, written by experts, yet accessibly written for all, and certainly not just for "kings".

HB 9781536117813 £90.50 June 2017 Nova Science Publishers 180 pages 155x230mm

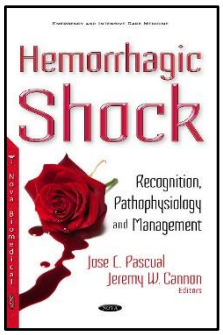


Grapes
Polyphenolic Composition, Antioxidant Characteristics & Health Benefits
(Nutrition & Diet Research Progress Series)

Edited by Sandra Thomas

The grape is one of the most important horticultural crops in the world with an annual production greater than 77 million tons in the year 2013. The majority of harvested fruit is processed into wine, but it is also consumed fresh, processed into raisins, juices, jams, etc. Grapes, wines and derived products contain large amounts of phytochemicals especially phenolic compounds which offer health benefits. This book discusses antioxidant activities and health benefits of grapes in further detail.

HB 9781536110685 £90.50 May 2017 Nova Science Publishers 160 pages 155x230mm

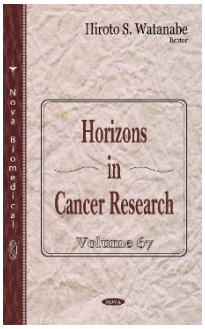


Hemorrhagic Shock
Recognition, Pathophysiology & Management
(Emergency & Intensive Care Medicine Series)

Edited by Jose L Pascual

In this first version of the book Hemorrhagic Shock: Recognition, Pathophysiology and Management, the entire spectrum of hemorrhage in various pathologic conditions is explored with a particular emphasis on bleeding from injury. World class experts have summarised their benchtop or clinical investigation of severe bleeding and the subsequent host's response. Furthermore, contemporary content experts have been assembled to relate their own clinical expertise flanked by literature consensus in the subject. Navigation through the different chapters reveals succinct discussions about epidemiology, pathophysiology, bedside assessment and laboratory investigations. In addition, an important part of the content is practical approaches to the management and/or control of difficult hemorrhage sites including the diagnosis, management, adjunct, pharmaceutical and operative options available for the care of these patients. Additionally, separate chapters are presented for exploring areas related to bleeding in unique patients, including maternal-fetal medicine, prehospital and austere environment settings. Finally, the most novel and cutting edge materials, adjuncts and pharmacological agents are discussed as well as a concerted vision of what the future is likely going to bring to the care of these patients. The authorship reflects a multitude of backgrounds and disciplines, all focused on mitigating the impact of hemorrhage and hemorrhagic shock in its multiple facets.

HB 9781536109641 £295.50 June 2017 Nova Science Publishers 510 pages 180x260mm

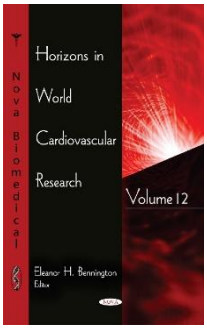


Horizons in Cancer Research
Volume 67 (Horizons in Cancer Research Series)

Edited by Hiroto S Watanabe

This book presents original results on the leading edge of cancer research. Chapter One reviews microRNAs as a novel diagnostic and predictive biomarker in human cancer. Chapter Two provides an overview of the miR-10b functions, exploring its utility as a bio-marker and a potential drug target. Chapter Three discusses the deregulated expression and function of S100 proteins in cancer cells. Chapter Four studies the current management of nasopharyngeal carcinoma and future directions in clinical research. Chapter Five examines the human papillomavirus vaccine.

HB 9781536110388 £238.50 June 2017 Nova Science Publishers 210 pages 155x230mm

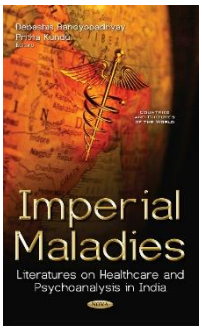


Horizons in World Cardiovascular Research
Volume 12 (Horizons in World Cardiovascular Research Series)

Edited by Eleanor H Bennington

Hypertension is the most common chronic disease in developed societies, affecting >25% of adults. CONTENTS: Preface; Exercise Training for Blood Pressure: Perspectives on Resistant Hypertension Management; Using a Mesh Free Particle Approach for the Modeling of the Blood Flow in Abdominal Aortic Aneurysms; Thoracoabdominal Aortic Aneurysm Repair: Current Discoveries & Operative Management; Allergy & Coronary Artery Disease; Sinus Bradycardia: Diagnosis, Management & Prognosis; Potential Uses of BNP & NT-Pro-BNP Other Than Mainstream; Psychosocial Aspects of Undergoing a Cardiac Catheterization Procedure; Index.

HB 9781536119978 £238.50 July 2017 Nova Science Publishers 185 pages 155x230mm

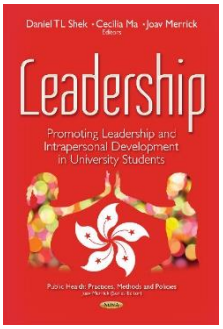


Imperial Maladies
Literatures on Healthcare & Psychoanalysis in India
(Countries & Cultures of the World Series)

Edited by Debashis Bandyopadhyay, Pritha Kundu

The thrust-area of this book is the connection between imperial anxieties and tropical health situations along with intriguing psychological questions involving race, politics, gender, history and colonial modernity. For a long time, the focus has largely been Eurocentric: the effects of European medicine and healthcare policies introduced to the sub-continental colonies have been viewed in relation to the strategies of governing the colonial subjects. David Arnold's Colonising the Body considers the State's role in introducing European medicine as instrumental to the British imperial project in India. In literary representations, especially in the Late Victorian and early twentieth century fiction and memoirs by Rudyard Kipling, Philip Meadows Taylor, Flora Annie Steel and George Orwell, we have several pictures of a palliative, medically-oriented imperialism. Waltraud Ernst's Mad Tales of the Raj (1998) and Christiane Hartnack's Psychoanalysis in Colonial India (2001) offer thoughtfully documented analyses of the early developments of psychology and psychotherapy in colonial India. Indian medical historians like Poonam Bala and Projit Mukharji question the tendency of looking at western medicine only in terms of monopoly and power. However, the question of "Indianness" in psychoanalytic philosophy, trying to understand how the East hopes to locate Western psychoanalysis in a post-therapeutic journey, or how the anti-Oedipal or an-Oedipal manifests itself in Indian cultures of psychoanalysis, still remains an area demanding further attention.

HB 9781536118636 £185.99 June 2017 Nova Science Publishers 260 pages 155x230mm

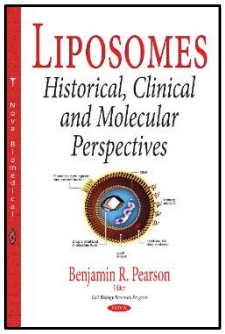


Leadership
Promoting Leadership & Intrapersonal Development in University Students (Public Health -- Practices, Methods & Policies Series)

Edited by Daniel TL Shek, Cecilia Ma, Joav Merrick

Since we think university students are the “cream of the crop”, it is important to ask whether or not they thrive well. To what extent can university students in Hong Kong develop in a holistic manner? How should we nurture university students to become the leaders and talents of tomorrow? Leadership and intrapersonal development are inherent requirements for university students in Hong Kong, transposing as 3-credit courses that each student must complete in order to graduate. To meet this requirement, a subject entitled “Tomorrow’s Leaders” was developed and piloted twice during the 2010-2012 academic years, which was offered to over 2,100 students annually. The design of the subject, curriculum materials, reflection of the teachers and evaluation findings in connection with this subject are presented in this book.

HB 9781536119503 £185.99 June 2017 Nova Science Publishers 260 pages 155x230mm

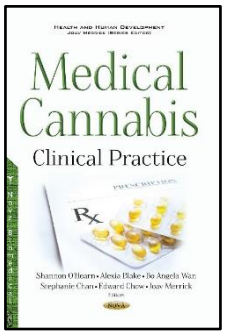


Liposomes
Historical, Clinical & Molecular Perspectives (Advances in Chemistry Research Series)

Edited by Benjamin R Pearson

Chapter One offers a comprehensive revision of the bibliography regarding the emergence of liposomes and the first steps in their design, the type of systems (components and structures), their classification and properties. Chapter Two discusses the possibility of creating living ‘synthetic’ cells. Chapter Three provides an overview of the development and application of liposomes in biomedical sciences, with special emphasis on recent advances in the investigation of multifunctional liposomes that target cells and cellular organelles with a single delivery system. In Chapter Four, the authors review the mechanisms of drug transport through the BBB using liposomes, and the design strategies for optimum liposomal properties. In Chapter Five, the development rationales and structural types of pH-sensitive liposomes is discussed Chapter Six presents the characteristic, classification and preparation methods of liposomes. To develop liposomal drug delivery system, functional liposomes including antibody-conjugating liposomes known as immunoliposomes and stimuli-triggered liposomes such as pH- and thermo-sensitive liposomes have been investigated in Chapter Seven. Chapter Eight covers the use of thermosensitive liposomes for drug delivery and cancer therapy, because the side-effects of anticancer drugs are restrained and drug release can be controlled in combination with local hyperthermia. In Chapter Nine, the authors summarise the potential of OMLs as a novel adjuvant and antigen delivery vehicle for induction of encased antigen-specific strong T cell immunity. Chapter Ten presents the recent advances of liposomes in drug and vaccine delivery and shed light to the application of DSC to thermodynamic characterisation of liposomal delivery platforms. Chapter Eleven focuses on liposomal delivery systems that are currently being explored to overcome the anatomical and physiological obstacles to improve the delivery efficiency of BNCT to brain glioma cells.

HB 9781536121322 £219.50 July 2017 Nova Science Publishers 325 pages 155x230mm

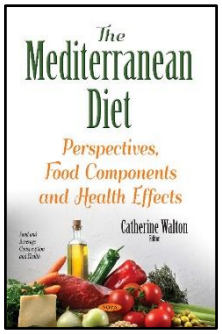


Medical Cannabis
Clinical Practice (Health & Human Development Series)

Edited by Shannon O’Hearn, Alexia Blake, Bo Angela Wan, Stephanie Chan, Edward Chow, Joav Merrick

Medical cannabis is emerging as an effective treatment option for the management of a variety of common chronic conditions and symptoms, but a lack of scientific evidence demonstrating its efficacy for treating specific indications is hindering the widespread clinical adoption of medical cannabis. Between January 2015 and December 2016, patients who were prescribed medical cannabis in Canada from a single licensed medical cannabis provider were invited to complete an online survey approximately 15-25 minutes in length that assessed baseline demographics. Patients who completed the baseline survey were subsequently invited to complete follow-up surveys at 4 months and 10 months after the completion of the initial survey. The results are described in this book, and the authors hope the information will further facilitate the use of medical cannabis for the benefit of various populations in need.

PB 9781536119077 £78.50 June 2017 Nova Science Publishers 110 pages 155x230mm

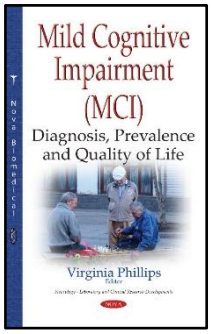


Mediterranean Diet
Perspectives, Food Components & Health Effects
(Food & Beverage Consumption & Health Series)

Edited by Catherine Walton

Non-communicable diseases are currently the leading cause of mortality in the world. It is noteworthy that many cases of these complex diseases can be prevented through the consumption of a healthy diet. The Mediterranean diet (MD) is frequently considered as the dietary 'elixir' that is effective in reducing the risk of non-communicable diseases and in improving longevity. CONTENTS: Preface; The Health Benefits of the Mediterranean Diet Using Nutrigenetics; Constituents of the Mediterranean Diet & Their Effects on the Prevention & Management of Cardiovascular Disorders; The Nutrient & Phytochemical Profile of the Mediterranean Diet & Its Effectiveness in the Reduction of Risk for the Development of Cancer; Mediterranean Seafood: Functional Properties; Adaptation of the Mediterranean Diet to Different Dietary Cultural Settings: What Is Important for Prevention?; Index.

HB 9781536119114 £152.50 June 2017 Nova Science Publishers 235 pages 155x230mm

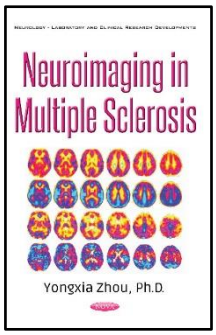


Mild Cognitive Impairment (MCI)
Diagnosis, Prevalence & Quality of Life
(Neurology -- Laboratory & Clinical Research Developments Series)

Edited by Virginia Phillips

Emerging imaging techniques have recently enabled visualizing intracellular neurofibrillary tau tangles in human brains in vivo with PET tracers. Results confirm the current notion of the new tau tracer for in vivo labeling tau deposition and the agreement with the tau-pathological Braak stage in early stage of dementia. Recent studies have also identified brain atrophy regions including medial temporal lobe, especially hippocampus and entorhinal cortex, and posterior cingulate cortex as being more predictive of disease progression. The effects of multivitamin supplements on serum homocysteine level, and depression of Korean older adults with mild cognitive impairment (MCI) in care facilities is examined. An investigation was done on the impact of mild cognitive impairment (MCI) on incidence of early and long-term postoperative cognitive dysfunction (POCD) and MCI-related postoperative changes in cortical activity in patients after coronary artery bypass grafting (CABG).

HB 9781536118216 £90.50 June 2017 Nova Science Publishers 145 pages 155x230mm

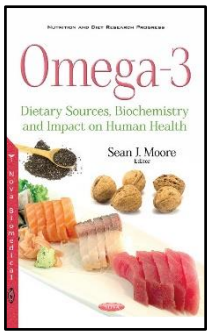


Neuroimaging in Multiple Sclerosis
(Neurology -- Laboratory & Clinical Research Developments Series)

Yongxia Zhou

Multiple sclerosis (MS) is a chronic inflammatory demyelinating disease that affects the whole brain. Neuroimaging techniques that can help elucidate and characterise the nature and mechanism of tissue injury and disease progression in MS are of particular importance, given their roles in seeking successful preventive and therapeutic treatments for the disease. Imaging biomarkers of MS include multiple lesions, brain atrophy and normal appearing brain tissue abnormalities. Although MS is considered to be an autoimmune inflammatory disease that primarily activates haematogenous macrophages that destroy myelin, growing evidence strongly suggests that MS is a diffused neurodegenerative disease. Imaging myelin in the brain has great potential in revealing the myelination and maturation process in the brain, and can help further explain the link between the initial inflammatory event and subsequent degenerative processes of the disease. While myelin is most abundant in white matter, forefront studies suggest that demyelination could occur in grey matter during aging and MS. Further improvements are expected in this active research field in terms of quantification and improvement of myelin detection accuracy. The neuroimaging techniques in MS detection can be further extended to other neurodegenerative diseases including Alzheimer's disease, schizophrenia and white matter injuries following stroke. Furthermore, cerebrovascular reactivity (CVR) describes the compensatory dilatory capacity of cerebral vasculature in upregulating perfusion. Investigating the hypercapnia-induced CVR characteristics using well-validated pseudo-continuous ASL (pCASL) for CBF and BOLD fMRI acquisitions could provide a physiological clue to the underlying neurovascular and vascular inflammatory mechanism in the aetiology of MS. The authors hope to introduce the readers to some perspectives using multi-modality imaging for MS disease detection and diagnosis, including two imaging hallmark-demyelination and inflammation. Various advanced technical developments and applications will be demonstrated, including conventional and homotopic functional and structural connectivity, underlying pathological investigation with robust blood-flow and BOLD-based vascular reactivity techniques, and longitudinal monitoring of multiparametric MRI data. Therefore, the book will present some forefront, up-to-date and interesting examples in the MS research field. This book will hopefully capture the interests of colleagues in this challenging field and help convey the technical and developmental information of the neuroimaging applications in MS.

PB 9781536119480 £78.50 June 2017 Nova Science Publishers 80 pages 155x230mm

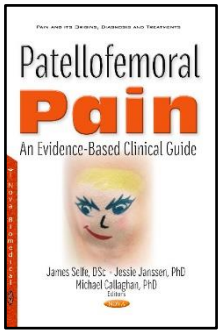


Omega-3
Dietary Sources, Biochemistry & Impact on Human Health
(Nutrition & Diet Research Progress Series)

Edited by Sean J Moore

Compelling data shows cardiovascular beneficial effects in consuming fatty acids highly present in fish, such as omega 3, docosahexanoic acid (DHA 22:6 omega 3), and eicosapentanoic acid (EPA 20:5 omega 3). These fatty acids regulate cell membrane physicochemical properties (i.e., fluidity, organization and permeability) that affect signalling pathways, with probable antioxidant and anti-inflammatory effects on cardiac and vascular tissue. Interest in the physiological and pharmacological effects of omega-3 polyunsaturated fatty acids (PUFA), in particular those of docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), has increased significantly in recent years. Omega-3 PUFA, which are recognized as nutraceuticals, have been demonstrated to have clinical benefits for the prevention of and / or treatment of certain pathological conditions. Omega-3 polyunsaturated fatty acids (omega-3 PUFAs) are increasingly being used to prevent cardiovascular disease. Omega-3 PUFAs may prevent atherosclerosis and cardiovascular disease development by targeting arterial stiffness and endothelial dysfunction administration.

HB 9781536118247 £90.50 June 2017 Nova Science Publishers 140 pages 155x230mm

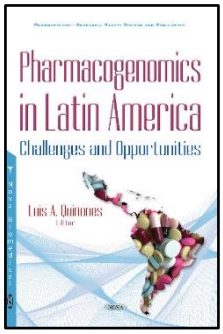


Patellofemoral Pain
An Evidence-Based Clinical Guide
(Pain & its Origins, Diagnosis & Treatments Series)

Edited by James Selfe, Jessie Janssen, Michael Callaghan

The aim of this book is to provide an evidence-based guide to the management of patellofemoral pain. We envisage this book being used in real world clinical settings to help practitioners manage their patients rather than being used exclusively by students in university libraries. The book draws from the collective experiences of a number of world researchers/doctors who have written and published extensively on different aspects of the research as well as clinical management of patients suffering from patellofemoral pain. Although biomechanics has historically been important in developing our understanding of this condition, it does not provide a holistic understanding of the condition, nor does it provide a singular successful management approach to this notoriously difficult, complex and sometimes very recalcitrant condition. The authors have carefully reviewed the evidence and a number of important psychosocial factors are presented, which may help clinicians design appropriate management strategies for their patients. The book is presented in two sections: Section One covers the assessment process and looks at how you interact with your patients when they first walk through the clinic door, seeking help for their patellofemoral pain. Section Two covers the management and treatment processes, and includes a chapter on appropriate imaging.

PB 9781536117806 £78.50 June 2017 Nova Science Publishers 100 pages 155x230mm

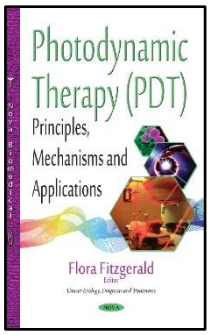


Pharmacogenomics in Latin America
Challenges & Opportunities
(Pharmacology -- Research, Safety Testing & Regulation Series)

Edited by Luis A Quiñones

Worldwide, adverse drug reactions are a major cause of morbidity and mortality in patients, as well as increased healthcare costs. Published data show that there are around 2 million adverse drug reactions, including 100,000 deaths, which are established as the fourth leading cause of mortality. This culminates an estimated cost of 136 billion dollars to the global healthcare system. However, these values are underestimated, because in many parts of the world there are no reliable records of pharmacovigilance. This is the case in Latin America, where the records of adverse reactions are still insufficient, and therefore it is not possible to properly establish the extent of its effects on public health. At the same time, treatment failure due to sub-therapeutic levels of drugs is not evaluated in healthcare systems, especially in Latin America, where the "importation" of dosages and results from clinical trials form the fundamental basis of the application and acquisition of pharmaceutical products. This is due mainly to current protocols, which assume that patients are a single entity; therefore, drugs effective and well-tolerated in some patients are equally effective in the rest. Clinical experience shows that drugs that work well in some patients are ineffective or cause adverse reactions in others, and may even prove fatal to intolerant patients. The main objective of this book is to catalog the most relevant information concerning healthcare drug effects in Latin America. This could provide a huge benefit for Latin American patients, where it is estimated that there are plenty of side effects and treatment failure due to the "importation" of dosages and therapies regardless of population variability. It should encourage discussion and concern about the implementation and validation of pharmacogenomic testing and clinical guidelines for specific mixed populations of the region. It will also be valuable to demonstrate this research to health professionals (prescribers, insurers and regulators) in the region and the impact of pharmacogenomics on pharmacotherapy cost-effectiveness.

HB 9781536110319 £185.99 June 2017 Nova Science Publishers 284 pages 155x230mm

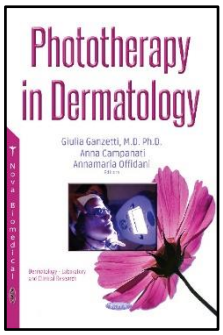


Photodynamic Therapy (PDT)
Principles, Mechanisms & Applications
(Cancer Etiology, Diagnosis & Treatments Series)

Edited by Flora Fitzgerald

As a new concept of cancer treatment, photodynamic therapy (PDT) has gained great attention in the last few decades. Compared to classical treatments such as surgery, chemotherapy and radiotherapy, PDT is a noninvasive, localized treatment of lesions that shows fewer side effects and has low systemic toxicity. CONTENTS: Preface; Photodynamic Therapies: Basic Mechanism, Applications & Functional Nanomaterial-Based Drug Delivery System for Cancer; Carbon Based Nanomaterials as Agents for Photodynamic Therapy; Chemi- & Bioluminescence in Self-Illuminating Photodynamic Therapy; The Synthesis & Characterization of Novel 5,10,15,20-Tetrakis(Benzo[B]Thiophene) Porphyrin & 5,10,15,20-Tetrakis (7- Sulfonatobenzo[B]Thiophene) Porphyrin as Photodynamic Therapy Agents against Human Breast Cancer Cells; Photodynamic Therapy for Gastric Cancer Patients on Oral Antithrombotic Therapy; The Need for a Parameter of Sensitizer's Concentration in Cancer Tissue to Estimate PDT Effects; Index.

HB 9781536119121 £152.50 June 2017 Nova Science Publishers 145 pages 155x230mm

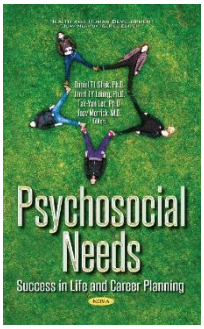


Phototherapy in Dermatology
(Dermatology -- Laboratory & Clinical Research Series)

Edited by Giulia Ganzetti, Anna Campanati, Annamaria Offida

The therapeutic use of ultraviolet radiation for medical purposes has a long history, whether it be sunlight in heliotherapy or artificial lamps in phototherapy, to name a few. The interest in ultraviolet radiation as treatment for various cutaneous diseases increased exponentially in the second half of the twentieth century. UV-based therapies, which include narrowband (NB) UVB, broad-band (BB) UVB, and psoralen and UVA (PUVA), are well-established treatment options for diverse dermatologic conditions such as atopic dermatitis, vitiligo, cutaneous T-cell lymphoma, and psoriasis either as monotherapy or as an adjuvant to systemic therapy. This monography focuses on the principal indications of phototherapy in dermatology.

PB 9781536110616 £78.50 May 2017 Nova Science Publishers 104 pages 155x230mm

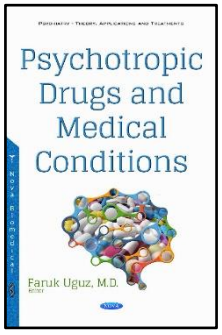


Psychosocial Needs
Success in Life & Career Planning (Health & Human Development Series)

Edited by Daniel TL Shek, Janet TY Leung, Tak Yan Lee, Joav Merrick

With the conclusion of adolescence, a child develops into a teenager that may experiment with dating, smoking and drinking, and they may make important decisions without parental knowledge or guidance. These teenagers may also engage in risky behaviour, which may pose as a threat to their well-being and successful transition into adulthood. With this in mind, how can we can prevent adolescent risk behaviour? Traditionally, prevention scientists propose three forms of prevention. Primarily, attempts to reduce the harmful consequences of risk behaviour, such as treatment of risk behaviour (ie: mental disorders or substance abuse) are ideal. For some problematic behaviour which has already occurred, a better approach is to identify those who are "at-risk" as early as possible (ie: secondary prevention). For example, youth workers may identify those who have suicidal ideation and intervene as early as possible so that they will not harm themselves. In this book, the authors assess whether a community-based program in Hong Kong was effective in promoting adolescent development and explore what factors were associated with the program effects. The authors hope that the studies included in this book can help to reveal the successful experience of the project and provide some pointers for the development of programs for adolescents with greater psychosocial needs.

HB 9781536119510 £90.50 June 2017 Nova Science Publishers 180 pages 155x230mm

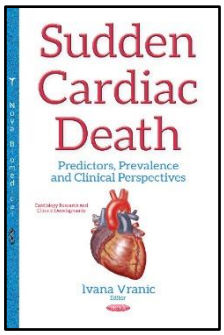


Psychotropic Drugs & Medical Conditions
(Psychiatry -- Theory, Applications & Treatments Series)

Edited by Faruk Uguz

Pharmacotherapy is the most commonly used treatment method for psychiatric disorders. Many patients experience medical diseases concurrent with psychiatric disorders. In addition, some patients suffer from medical problems such as metabolic complications, neutropenia and electrolyte imbalance due to the use of psychopharmacological treatments. Therefore, current medical conditions and the medical history of patients with psychiatric disorders are important factors that can affect the choice of psychotropic drugs in the treatment of psychiatric disorders. Recently, there has been growing interest in the use of psychotropic drugs in patients with general medical conditions. This book summarises recent advances regarding reciprocal effects between the use of psychotropic drugs and general medical conditions.

HB 9781536119381 £219.50 June 2017 Nova Science Publishers 405 pages 180x260mm

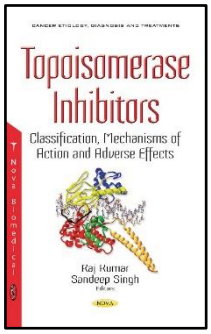


Sudden Cardiac Death
Predictors, Prevalence & Clinical Perspectives
(Cardiology Research & Clinical Developments Series)

Edited by Ivana Vranic

This is a detailed clinical compilation on sudden cardiac death causes. From the various geographical regions of the world comes different clinical perspectives toward the SCD problem that shed light on the predictors and estimated prevalence in genetic inheritance worldwide. For many centuries, the mysterious deaths of prominent professional sportsmen have preoccupied the attention of the media and medical professionals. In some cases, it was possible to obtain the medical histories of the victims, data on the presence of some specific diseases, and conditions or potential symptoms preceding the fatal episode. Various rare inherited syndromes that are associated with congenital heart disease are focused on in this study, and the interrelationship between ventricular premature beats, sustained/non-sustained ventricular tachycardias and ventricular fibrillations are discussed. Cardio-oncology is an emerging field where more and more patients face consequences from radiotherapy and chemotherapy because these individuals become more prone to SCD. Among the most notable developments, three-dimensional echocardiography and myocardial strain imaging are worth noting and might inexpensively improve the current risk stratification process. Recently, a strain that reflects the change of length and thickness of myocardial fibres has been incorporated into the routine clinical practice. The risk of sudden cardiac death is not the same in patients with Chagas disease, and newly predicted factors are to blame. The prevalence of SCD, hypertrophic cardiomyopathy and the accurate risk are extremely challenging, so much so that they recently became a source of argument between European and American experts. This is a must-have book for those interested in a clinical approach to the SCD phenomenon.

HB 9781536119831 £185.99 July 2017 Nova Science Publishers 295 pages 180x260mm



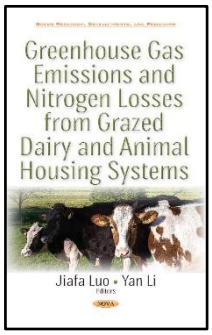
Topoisomerase Inhibitors
Classification, Mechanisms of Action & Adverse Effects
(Cancer Etiology, Diagnosis & Treatments Series)

Edited by Raj Kumar, Sandeep Singh

This book aims to assist the scientists working with the medicinal, biochemical, biophysical, genetic and pharmacological aspects of topoisomerases and their inhibitors. The book has covered various aspects of topoisomerases like classification, structural aspects, basic genetics and mutations, disease implications and cell signaling networks, which may be helpful for researchers of the field for better therapeutics. Chapter One deals with structure, functions and role and of human topoisomerase-I in cancer progression. It describes a detailed classification, mechanism of action and recent updates on the development of camptothecin and non-camptothecin derivatives, along with their Structure-Activity Relationships (SAR) as topoisomerase-I inhibitors. Chapters Two and Three cover X-ray co-crystal structures, biological functions and the significant role of topoisomerase-II isoforms in cancer. A thorough discussion on classification and various pharmacoinformatics techniques employed in delineating the binding mode of topoisomerase-II inhibitors and their mechanism of action is well presented. Chapter Four deals not only with adverse effects associated with the use of topoisomerase-I and II inhibitors, but also includes approaches to overcome them. Chapter Five discusses various disorders associated with SNPs in topoisomerases and risks associated with their pharmacogenetics. Chapter Six sheds light on interactions and cross-talks between topoisomerases and histone deacetylases, leading to their significant role in drug resistance. The work is expected to assist the scientists to selectively design dual/multi-inhibitors of topoisomerases and histone deacetylases. The authors are thankful to the reviewers, who were so kind in reviewing and making suggestions for improving this book. This book could not have been completed without their commendable efforts.

HB 9781536118414 £90.50 June 2017 Nova Science Publishers 185 pages 155x230mm

PHYSICS

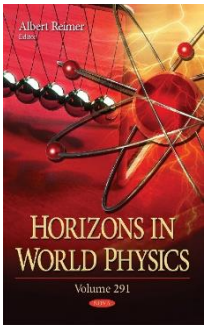


Greenhouse Gas Emissions & Nitrogen Losses from Grazed Dairy & Animal Housing Systems (Green Research, Developments, & Programs Series)

Edited by Jiafa Luo, Yan Li

Stand-off pads and animal housing practices (i.e., animal confinement) are increasingly being used in animal grazing systems; these methods are introduced to avoid crop and soil damage, and because it makes herd management easier. The use of animal houses and stand-off pads to avoid grazing during the risk periods for nitrogen (N) losses could be an effective greenhouse gas (GHG) mitigation technology, and contribute to the overall goal to reduce GHG emissions from agriculture. However, there is uncertainty about unintended consequences (or 'pollution swapping') from these farm systems. Such consequences include potential nitrous oxide (N2O), ammonia (NH3) and methane (CH4) losses from the animal confinement facilities themselves, and following land application of effluent/manure collected from these facilities. In this book, impacts of the use of stand-off pads and animal housing on farm system GHG emissions and N losses are assessed.

HB 9781536111002 £90.50 May 2017 Nova Science Publishers 150 pages 155x230mm

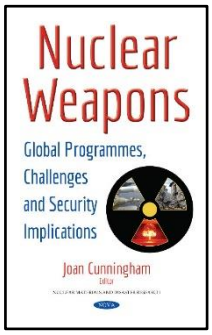


Horizons in World Physics
Volume 291 (Horizons in World Physics Series)

Edited by Albert Reimer

This book presents the latest developments in world physics. Chapter One discusses quantum spectral imaging research. Chapter Two analyses resonant interaction of acoustic phonons with localises vibrational modes in superlattices. Chapter Three describes the fabrication and functions of organic superlattices. Chapter Four presents specific features of the thermopower behavior of calcium-containing Y-based high-temperature superconductors. Chapter Five examines peculiarities of two-photon holograms of nonlinear quantum optics and their connections with detection possibilities. Chapter Six studies material science and impact crater formation.

HB 9781536110081 £238.50 June 2017 Nova Science Publishers 155x230mm

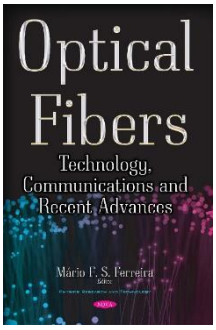


Nuclear Weapons
Global Programmes, Challenges & Security Implications
(Nuclear Materials & Disaster Research Series)

Joan Cunningham

Chapter One offers an overview of the international obligations and cooperation mechanisms concerning nuclear preparedness and response, with a special focus on those established by the European Union. The authors proceed to a critical review of multilateral treaties that have been established and they emphasise international obligations and cooperation mechanisms at the universal level. The aim of Chapter Two is to evaluate what is the potential nuclear explosive yield of a Hypothetical Nuclear Explosive Device (HNED) of the implosion type, based on reactor-grade plutonium and low technology, i.e. a technology comparable to that of the earliest plutonium weapons. Chapter Three discusses how South Korea is standing at a strategic crossroads of “keeping a policy of denuclearisation” and “turning to nuclear armament.” Confronted by North Korea’s growing nuclear arsenal during the past decade, the idea of nuclear armament in South Korea is now regarded as “one possible option,” not a “political taboo” anymore. Chapter Four covers the missed opportunity to eliminate all nuclear weapons between 1945 and 1949, when only one country has this type of weapons in their military arsenals. Chapter Five argues that the nuclear-weapon states should be challenged to fulfil the terms of this article literally.

HB 9781536118605 £90.50 June 2017 Nova Science Publishers 180 pages 155x230mm

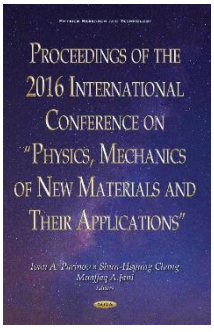


Optical Fibers
Technology, Communications & Recent Advances
(Physics Research & Technology Series)

Edited by Mário F S Ferreira

This book provides an overview of several topics concerning the design, fabrication, and application of optical fibres, namely in the areas of communication systems, sensing, and photonic devices development. It consists of ten chapters. The first two chapters are concerned with different kinds of problems that can affect the performance of advanced optical fiber communication systems. CONTENTS: Preface; Impact of Polarization-Mode Dispersion in Optical Fiber Transmission Systems; Limitations Imposed by Nonlinearities in Fiber-Optic Communications; Space-Division Multiplexing in Fiber-Optic Transmission Systems; Few-Mode Fiber Nonlinearity for Optical Communications & Sensing Applications; The Study of the Performance of Photonics Components & Their Consequences in the Area of Optical Communication & Sensing; A Brief Review of Fiber Cavity Ring-Down Technology; Sensors Based on Microstructured Optical Fibers Modal Interferometers; Dispersive & Nonlinear Properties of Gas-Filled Kagomé Photonic Crystal Fibers; Twisted Clad Optical Guides; Nano-Engineering Optical Materials for Fiber Laser, Amplifier & Broad-Band Light Source: A Review; Index.

HB 9781536109665 £185.99 June 2017 Nova Science Publishers 234 pages 180x260mm

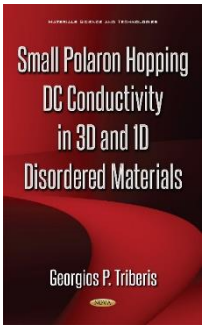


Proceedings of the 2016 International Conference on "Physics, Mechanics of New Materials & Their Applications" (Physics Research & Technology Series)

Edited by Ivan A Parinov, Shun-Hsyung Chang, Muaffaq A Jani

Advanced materials and composites are very important for modern sciences, technologies, techniques and industrial development. Intense chemical, physical, mechanical researches and development of modern numerical approaches and methods of mathematical modeling are required to develop and improve their properties. These PHENMA 2016 proceedings are devoted to the development and solution of different problems concerning the framework of the pointed research directions. The book presents processing techniques, physics, mechanics, chemistry and applications of advanced materials, and also issues of industry and management. The book covers broad classes of modern materials, structures and composites with specific properties.

HB 9781536110333 £257.50 June 2017 Nova Science Publishers 680 pages 180x260mm



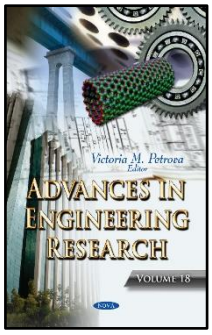
Small Polaron Hopping DC Conductivity in 3D & 1D Disordered Materials (Materials Science & Technologies Series)

Georgios P Triberis

Introducing the Generalised Molecular Crystal Model, as a more realistic model for the study of the small polaron transport in disordered materials, in the book the "microscopic" kinetics of small polaron transport is fully described. The percolation theory bridges smoothly the gap between the "microscopic" mechanisms responsible for the small polaron site-to-site transport, and the calculation of the "macroscopic" DC electrical conductivity, ignoring and taking into account correlations. Analytical expressions for the dc electrical conductivity are produced, in 3D and 1D disordered materials, under the influence of an electric field and the temperature. The interplay of these two stimuli is discussed, for the high and low-temperature small polaron hopping regime, and a wide range of electric field values. The effect of energy dependent densities of states is also presented. Taking into account the directionality imposed by the electric field on the transport path of the small polaron, an extensive study is presented concerning the effect of the magnitude of the density of states and the extent of the electronic wave function upon the calculated dc conductivity of 1D disordered materials. The validity and the significance of the theoretical expressions produced, are systematically tested, interpreting experimental data reported, concerning the behaviour of the DC electrical conductivity of various 3D and 1D disordered materials. The results are extensively discussed, revealing, among others, the importance of correlations. Comparison is also made with other theories. The book aims to be used by the Condensed Matter Physics theoreticians and the experimentalists, as a road map to find their way travelling across the complex paths of small polaron transport in 3D or 1D disordered materials, studying their dc electrical conductivity. Parts of it could also be used in a postgraduate course on transport and percolation theory.

HB 9781536119435 £90.50 July 2017 Nova Science Publishers 175 pages 155x230mm

TECHNOLOGY

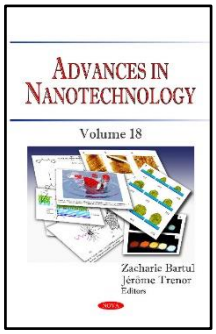


Advances in Engineering Research Volume 18 (Advances in Engineering Research Series)

Edited by Victoria M Petrova

This book focuses on the latest developments in the field of engineering. Chapter One proposes and evaluates a fuzzy logic based freeway traffic control strategy to overcome the limitations of existing strategies. Chapter Two shows how the particle swarm optimization technique, PSO, can be successfully applied to elucidate several applied mathematical and chemical engineering problems. Chapter Three reviews off-state leakage currents of semiconductor devices and their performances. Chapter Four is directed towards estimating sensor failure of a networked control system subject to a random packet dropout. Chapter Five examines epitaxial oxide materials for functional and nano-electronic device applications. Chapter Six focuses on thermal deviation management in large machine tools. The final chapter reviews the most typical kinds of geotechnical damage caused by natural disasters, and presents the construction methods using geosynthetics that can be applied in order to minimize the consequences of natural disasters.

HB 9781536117899 £238.50 June 2017 Nova Science Publishers 250 pages 155x230mm

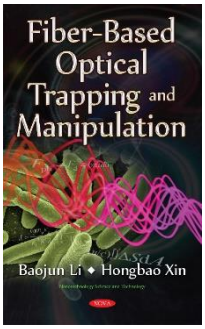


Advances in Nanotechnology Volume 18 (Advances in Nanotechnology Series)

Edited by Zacharie Bartul, Jerome Trenor

Nanomaterials (NMs) or nanoparticles (NPs) are the small objects which behave as a simple single unit ranging in size from 1-100 nm. Chapter One is intended to provide detailed information on various aspects of nanomaterials including the types, characterisation, methods of preparation, physicochemical properties, optical and thermal properties and various applications. Chapter Two provides comprehensive information regarding the characteristics, advantages, composition, methods of preparation, factors affecting formulation, characterisation, applications, safety and toxicological considerations and future prospects for the use and preparation of nanosponges (NS). In Chapter Three, the fundamentals and applications of the mainstream top-down nanolithography techniques, which have been successfully applied in the fabrication of the graphene-based nano devices (such as the graphene nano-ribbon electronics, graphene quantum dot devices, graphene-based nano sensors and so on) are described. And in Chapter Four, the detailed method of tuning the bias voltage effect and the force effect during the AFM electric lithography is introduced and analysed.

HB 9781536119954 £238.50 July 2017 Nova Science Publishers 215 pages 155x230mm



Fiber-Based Optical Trapping & Manipulation (Nanotechnology Science & Technology Series)

Baojun Li, Hongbao Xin

Since its first report in 1970 by A. Ashkin, optical trapping and manipulation has been widely used in the interdisciplines of micro- and nano-photonics, biophotonics, biomedicine, etc. A conventional tool for optical trapping and manipulation is the conventional optical tweezer (COT), the core part of which is a free-space focused laser beam. However, manipulation with COTs has some limitations such as manipulation inflexibility, bulky structure, diffraction limitation for nanoparticles, and limited integration functions. The introduction of optical fiber-based optical trapping and manipulation has solved these limitations. Using optical fibers with different configurations, optical trapping and manipulation with multiple functions can be realised with high flexibility, precision, and integration. By launching laser beams with different wavelengths into the fiber, both the photothermal effect and optical force can be used for optical trapping and manipulation. For the optical force manipulation, both evanescent fields at the surface of a subwavelength optical fiber and light output from a fiber end can be used for optical manipulation. The manipulation with light output from a fiber end can be divided into dual fiber tweezers and single fiber tweezers. For single fiber tweezers, one can realise the stable trapping of single particles both in a contact and non-contact manner for further applications. In addition, single fiber tweezers can also be used for multiple particle trapping and cell assembly, which can further be used for the assembly of biophotonic components and devices. Furthermore, by placing microparticles, which act as microlens at the end facet of an optical fiber, the microlens can be served as a photonic nanojet. This fiber supported photonic nanojet can be easily used for the trapping and detection of nanoparticles and biomolecules. Optical fiber-based optical trapping and manipulation have the advantages of easy fabrication, compact configuration, flexible manipulation, easy integration, wide applicability, etc., which provides for a wide application of prospects in micro- and nano-photonics, biophotonics, and biomedicine.

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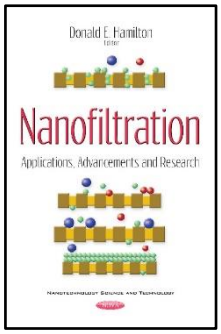

Nanofiltration
Applications, Advancements & Research (Nanotechnology Science & Technology Series)

Donald E Hamilton

Molecular scale separations have been possible since the latter part of the 20th century with the advent of reverse osmosis and nanofiltration for separation of ions and other molecules. Nanofiltration (NF) membranes have come a long way since it was first introduced during the late 80's. Until recently, industrial applications of separation techniques have been almost exclusively used in the treatment of waste water and desalination but in the last years several applications in the food, beverage, pharmaceutical and biotechnology industries have been developed, including with non-aqueous solvents. Chapter One covers the membrane separation of molecules dissolved in organic liquids, a new area of membrane science with huge potential for applications across chemical-related industry sectors. Chapter Two is devoted to the mathematical modelling of nanofiltration and describes discontinuous diafiltration by periodically added solvent at a constant pressure difference. In Chapter Three, basic theory on the critical, threshold and boundary flux theories will be covered, leading to measurement methods of the corresponding parameters and the use of these data for optimised process design. The objective of this approach is to operate the process without incurring in irreversible or high fouling issues for a long period of time in the plant. Chapter Four gives an overview regarding nanofiltration application for recovering high added-value compounds from the above mentioned agroindustrial by-products and waste streams. For example, in cheese making production, NF has been recently used to recover the components of cheese whey ultrafiltration (UF) permeates of a molecular weight lower than 1000 Da, aiming for its selective separation, concentration and/or demineralisation, with advantages over other techniques.

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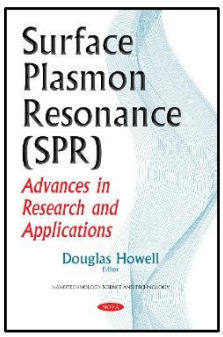

Surface Plasmon Resonance (SPR)
Advances in Research & Applications (Nanotechnology Science & Technology Series)

Edited by Douglas Howell

Chapter One demonstrates the applicability of devices based on surface plasmon resonabnce phenomenon (SPR) for investigations in the fields of medicine, veterinary, microbiology, and food industry. Considered here are the results of SPR measurements for two suspensions of erythrocytes – the dense one (erythrocyte mass after centrifuging) and loose solution (whole blood). Chapter Two is focused on the variation of properties in the host liquid crystals (LCs) and dopant gold nanoparticles (GNPs). Surface-induced self-ordering of LC molecules in the vicinity of GNPs has been widely studied in the literature due to the fact that the optical, mechanical and electronic properties of both LCs and GNPs are found modulated to build the next generation of plasmonic devices. In Chapter Three, the authors present an overview of the recent research advances in the field of localised surface plasmon resonance (LSPR) spectroscopy, focusing on the works done to improve LSPR based biosensing by optimising shape, size, and materials of the nanostructure. They discuss biosensing/bioassay strategies performed on the surface of the noble metal nanostructures focusing on carbohydrate-protein and protein-protein interactions.

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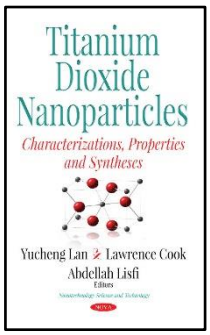

Titanium Dioxide Nanoparticles
Characterization, Properties & Synthesis
(Nanotechnology Science & Technology Series)

Edited by Yucheng Lan, Lawrence Cook, Abdellah Lisfi

Over the past few decades, titanium dioxide has been an important material for different sectors of modern technology. More precisely, this ceramic has been synthesised in the form of nanomaterial and applied in buildings, dye-sensitised solar cells, hydrogen production, sensors, rechargeable batteries, electrocatalysis, self-cleaning, environmental pollution, and antibacterial actions based on its enhanced optical properties. This book describes preparation, photocatalytic properties, and applications of nanostructured titanium dioxide with a particular focus on non-traditional syntheses and brookite. Titanium oxide nanoparticles are produced by hydrothermal processes, ionic liquid-assisted reactions, biological approaches, ball-milling techniques, etc. Physical properties and potential future applications of the produced nanostructured titanium dioxide nanoparticles are reviewed. Toxicity of titanium oxide nanoparticles and titanium oxide nanowires are also discussed.

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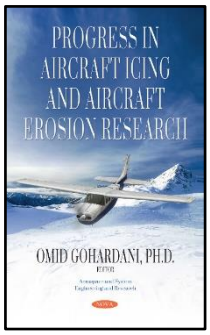

Progress in Aircraft Icing & Aircraft Erosion Research
(Aerospace & System Engineering & Research Series)

Edited by Omid Gohardani

The subject of aircraft icing has a major impact on aviation safety. In this book, interdisciplinary topics related to aircraft icing are addressed with a specific emphasis on various types of icing, ice formation, icing terminology used in aeronautical applications, and ice prevention systems. Through a historical overview, designated milestones of aircraft icing research, development of scientific solutions, and improvement of icing detection systems are revisited for the purposes of shedding light on icing physics and related flight applications. The book explores contributions made by the National Aeronautics and Space Administration (NASA) and the Federal Aviation Administration (FAA) for aircraft icing and investigates a wide range of aircraft icing efforts, including mathematical models of air-droplet two-phase flow and computational methods for droplet impingement, in addition to experimental research in icing wind tunnels. With objectives to expand the core area of aircraft icing to interrelated topics, the erosion terminology is addressed from an aeronautical perspective. Erosion research in the aviation industry and the threat of solid particle erosion damages to aircraft underlines opportunities and challenges to ensure aviation safety. This is an essential reference book for aircraft icing, the interdisciplinary topics of icing physics, and erosion testing in aeronautical applications.

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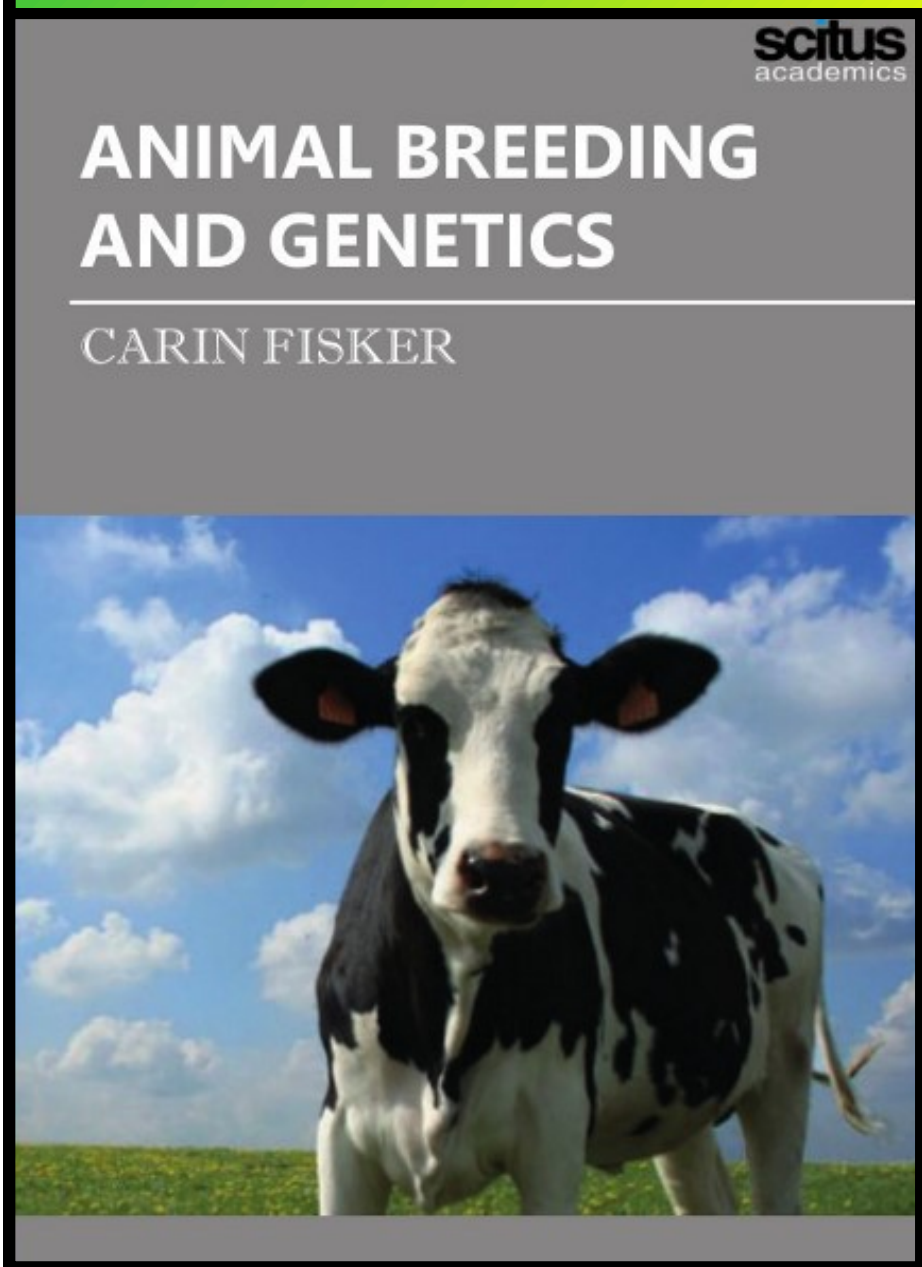

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