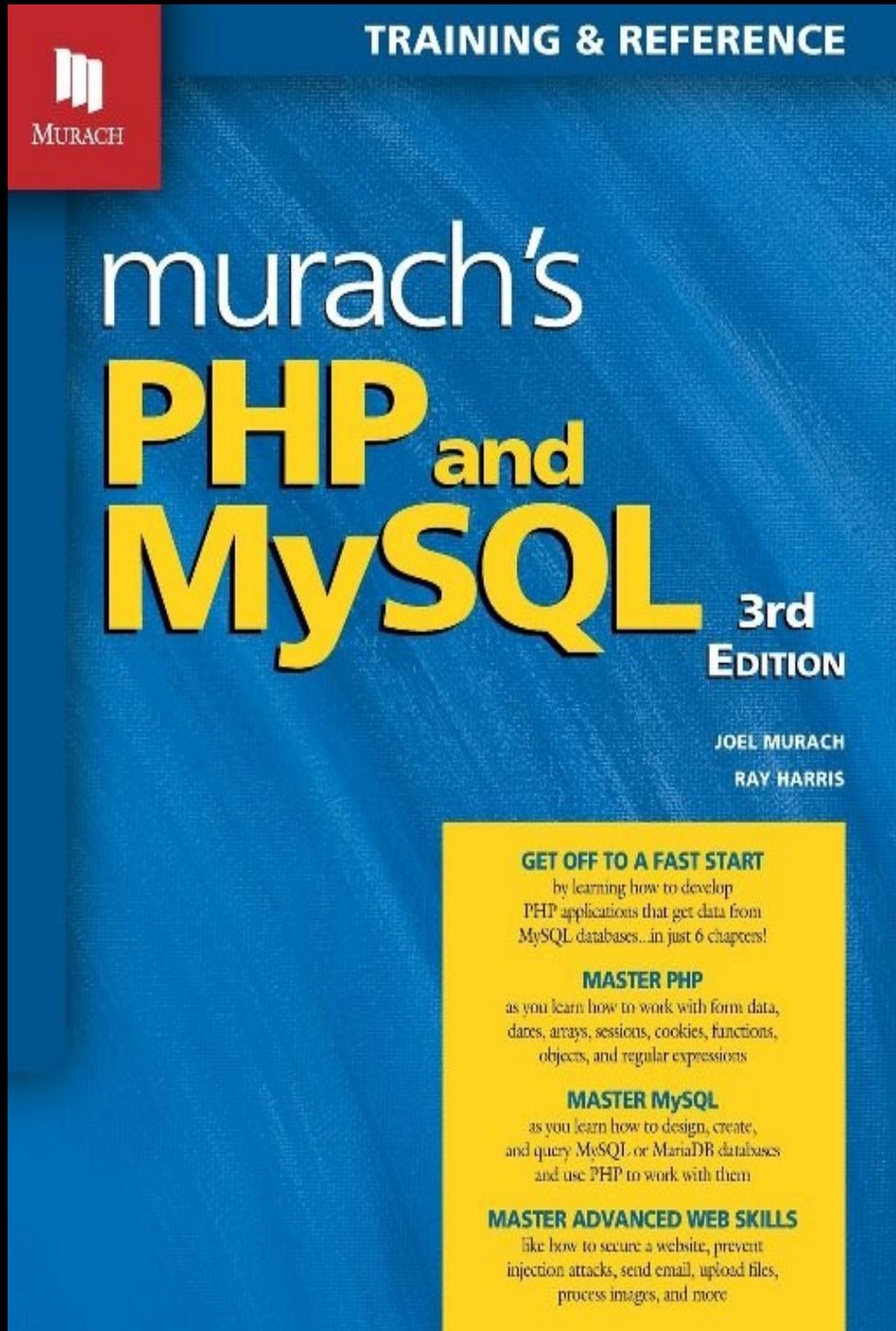




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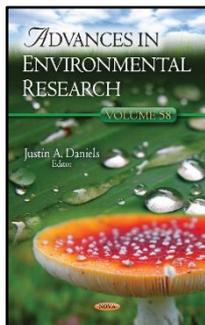
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Agriculture & Farming

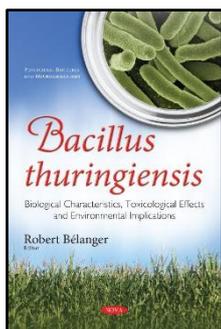


Advances in Environmental Research Volume 58 (Advances in Environmental Research Series)

Justin A Daniels

Chapter One begins by deliberating on the problem of spectrophotometric determination of gas medium composition in its customary formulation and then define a method of accounting for the errors from different sources, thus allowing for estimation of uncertainties in the contents of individual components. Chapter Two gives an overview of current research on the pipeline-soil interaction modelling, examining a variety of modeling approaches, and describe the environment for correct application of different soil models. Chapter Three studies the spectral properties of clusters of water that have absorbed NO_x molecules. Chapter Four recommends two consecutive points of sewage and wastewater treatment, including dispersed treatment at the pollutant production facility or at the source. Chapter Five explores the application of an AnSBBR (anaerobic sequencing batch biofilm reactor) of 3.0 L treating 1.0 L per cycle with agitation operated at 30°C in batch and fed-batch mode in the co-digesting cheese whey with glycerin for methane production. Chapter Six researches the chemical weathering process of detrital sediments in the hyper-arid area, basing his study on major-element components of deposits from the Taklamakan Desert in China. Chapter Seven presents a study using 100 different samples collected from a variety of manufacturing processes within a chemical synthesis pharmaceutical manufacturing plant. Lastly, Chapter Eight presents a study investigating the application of an anaerobic sequencing batch biofilm reactor of .0 L treating 1.0 L per cycle with recirculation of the liquid phase operated at 30°C in batch and fed-batch mode in the treatment of xylose based wastewater, with the core intent of producing methane.

HB 9781536126211 £238.50 December 2017 Nova Science Publishers 274 pages



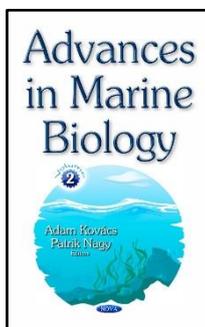
Bacillus thuringiensis Biological Characteristics, Toxicological Effects & Environmental Implications (Pesticides, Bacteria & Microorganisms Series)

Edited by Robert Bélanger

In Chapter One, André L de A Melo, Ph.D. discusses the spore-forming bacterium *Bacillus thuringiensis* and its uses as a bio-insecticide, also touching on ways to combat insect resistance. In Chapter Two, Karim Ennouri proposes the bacterium *Bacillus thuringiensis* as an important biopesticide because of the entomopathogenic effect of delta-endotoxins as well as its efficiency against insects resistant to chemical insecticides. In conclusion, Rafael C Lajmanovich, Candela S Martinuzzi, Carlina Colussi, Paola M Peltzer, Agustín Bassó, Andrés M Attademo, and Lucila M Curi present a study exploring the impact of a GM Bt-soybean-based diet, as opposed to a lettuce diet, on tadpoles.

PB 9781536127249 £78.50 December 2017 Nova Science Publishers 95 pages

Biology & Life Sciences

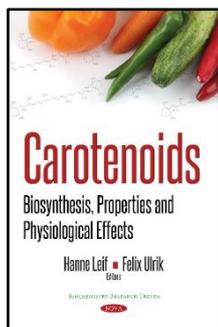


Advances in Marine Biology Volume 2 (Advances in Marine Biology Series)

Edited by Adam Kovács & Patrik Nagy

Chapter One examines events linked to lipophilic marine biotoxins (OA-, AZA-, PTX- and YTX-group) and the way they interrelate in the mussels sp. environment in the Austral Pacific fjords. Chapter Two explores the anatomical adaptations allowing for gregarious behaviour in schools of fish to suggest modifying capturing methods for fisheries. Chapter Three provides a study lipophilic marine biotoxins in the environment and their connection to concentration levels in shellfish. Chapter Four examine Spanish turbot aquaculture beginning in 1983 and ending with the future challenges it will face. Chapter Five presents a study on White Sea mussel adaptations to environmental salinity changes. Chapter Six presents a study on the effect of salinity and acidification on food detection in *Nassarius festivus*, a marine gastropod. Chapter Seven reviews the distribution of a nautiloid in the Late Triassic. Chapter 8 presents a review on the jumbo flying squid, or *Dosidicus gigas*. Lastly, Chapter Nine examines the species composition, abundance, and spatial distribution of zooplankton through a study conducted with Chinese squid jigging vessels in the Pacific Ocean.

HB 9781536127492 £238.50 December 2017 Nova Science Publishers 199 pages

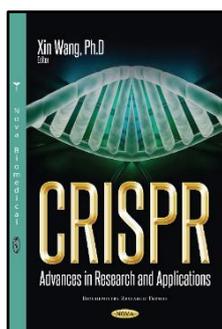


Carotenoids **Biosynthesis, Properties & Physiological Effects** **(Biochemistry Research Trends Series)**

Edited by Hanne Leif & Felix Ulrik

In the first chapter, Saraid Mora Rochín, Ph.D., Jorge Milán Carrillo, Ph.D., and Cuahtémoc Reyes Moreno, Ph.D. review the function of food carotenoids in oxidative stress-induced human disease prevention. In the second chapter, Andrêssa S Fernandes, Pricila N Pinheiro, Mariany C Deprá, Eduardo Jacob-Lopes, and Leila Q Zepka discuss the biosynthesis of carotenoids and bioactive caortenoids from microalgae, as well as their applications. Alexis Marsol-Vall, Albert Tomàs, Mercè Balcells, Francisca Vilaró, and Ramon Canela-Garayoa present a study where cuticles of four apple varieties were studied for their carotenoid content in the third chapter. In the fourth chapter, Joanna Igielska-Kalwat reviews the cosmetic applications of carotenoids, including their antiaging properties.

PB 9781536126853 £78.50 December 2017 Nova Science Publishers 137 pages

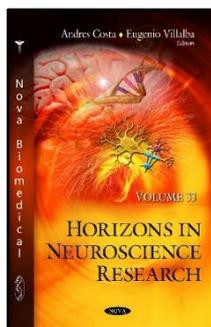


CRISPR **Advances in Research and Applications (Biochemistry Research Trends Series)**

Xin Wang

Genome editing using CRISPR has been identified as one breakthrough technology in recent research. Today, it is difficult to open a journal or a newspaper without reading about the application of CRISPR gene editing technology to basic research, public health, therapeutics or diagnostics. Although some problems of CRISPR remain to be solved, such as bio-safety and ethical issues, it may change people's futures. This book is to meet the needs of basic molecular biochemists, pharmacologists, medical students, clinical practitioners and scientists, as well as a broad spectrum of readers who wish to understand the advances in research and applications of CRISPR. The contributing authors are basic scientists as well as students who major in biochemistry and pharmacology. The book presents the current research in the CRISPR model, focusing on its advances and applications. Topics discussed in this compilation include: Targeting of hepatic diseases using CRISPR; applications and advances of CRISPR in animal models; gene targeting on the Cyp2c Locus in rats via CRISPR; applications of CRISPR for therapy in human genetic diseases; utilization of CRISPR in gene function and drug target validation; applications of CRISPR in plant genome editing; and genome editing on human embryos using CRISPR.

PB 9781536129465 £90.50 December 2017 Nova Science Publishers 160 pages

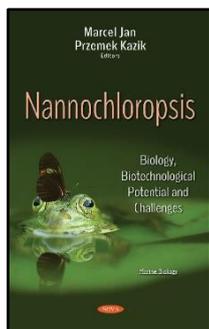


Horizons in Neuroscience Research **Volume 33 (Horizons in Neuroscience Research Series)**

Edited by Andres Costa & Eugenio Villalba

This book provides readers with the latest developments in neurosciences research. Chapter One summarised the progress of this area over the past two decades by showing that inflammatory mediators (ligands in a positive feedback loop and/or other inflammatory mediators through receptor cross-talk) released from inflamed or injured tissues increase cell surface trafficking of nociceptive receptors in primary sensory neurons and dorsal horn neurons. The aim of Chapter Two is to discuss and detail well-established stress animal models, discussing their validity to mimic human neuropsychiatric disorders (i.e. depression, anxiety and cognitive deficiency). Chapter Three discusses post-dural puncture headache (PPH) which is the most common major complication following neuraxial anaesthesia and usually happens in obstetrics. Chapter Four reviews the known pharmacological mechanisms of action of first- and second-generation synthetic cathinones in the central nervous system in comparison to those of cocaine and amphetamines. These studies of the efficacy of Cognitive Behaviour Therapy in adults with ADHD are reviewed in Chapter Five. As reported in Chapter Six, adult hippocampal neurogenesis is mediated by many factors and plays an important role in several diseases, such as Alzheimer disease, stroke, depression and epilepsy. In Chapter Seven, cognitive maps' characteristics and the brain systems involved in spatial navigation of cognitive maps are the main focus. Chapter Eight reports on the improvement of human cognition and its precision due to technological advancement within the field of neuroscience. Chapter Nine demonstrates that low concentrations of N-acyl dopamines (below 1 am) stimulate cell proliferation, intermediate ones (1-20 gm.) induce differentiation, and higher ones lead to apoptosis.

HB 9781536124644 £238.50 December 2017 Nova Science Publishers 199 pages

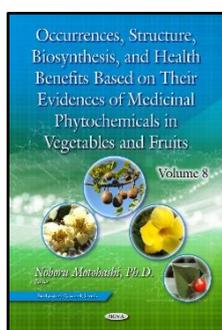


Nannochloropsis **Biology, Biotechnological Potential & Challenges (Marine Biology Series)**

Edited by Marcel Jan & Przemek Kazik

This book opens with a review suggesting that transgenic *Nannochloropsis* microalgae have a broad spectrum of applications in marine and plant biotechnology and that have the propensity to be a source of raw material for a wide range of industries. The authors express this while going on to present an overview of the future uses of this genus in the context of genetic improvement for new biotechnological applications. The provision of nitrogen from different sources is presented as a strategy used to modify the biomass composition. Nitrate is the ideal nitrogen source and gives the highest biomass concentration and specific growth rate when compared with urea and ammonium. Additionally, modern advancements in the application of *Nannochloropsis* biomass for commodity chemicals, feeds, high value products, biofuels, cosmetics, fertilisers, and materials production are presented, in conjunction with challenges and future perspectives in the utilisation of *Nannochloropsis* biomass for biorefinery development in microalgae-based industries. The characteristic of *Nannochloropsis oculata* are described using an integrated biorefinery approach based on palm oil milling as a model system. Subjects addressed include the bioengineering aspects for the conversion of light into biomass, co-location strategy to take advantages of the industrial wastes of energy, water and nutrients, productivities of the different reactor systems and configuration, use of palm oil mill effluent (POME) as a substitute source of nutrients, biomaterials co-utilisation, bioenergy co-generation, downstream processing aspects for extraction, purification and conversion into value-added products for pharmaceuticals and functional foods.

PB 9781536128437 £185.99 December 2017 Nova Science Publishers 192 pages



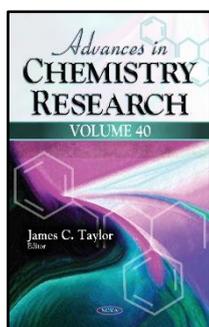
Occurrences, Structure, Biosynthesis & Health Benefits Based on Their Evidences of Medicinal Phytochemicals in Vegetables & Fruits **Volume 8 (Biochemistry Research Trends Series)**

Edited by Noboru Motohashi

The bioactive components of plants comprehensively continue to represent the nutritional and functional actions for the healthy daily lives of humans. Through these components, scientists and researchers are able to promote healthy lifestyles and help people live for a long time without diseases and disorders. Recently, many beneficial health effects of plant components have been demonstrated via epidemiological surveys, experimental results and clinical evidence. This book is the eighth volume of a series that has mainly contained information concerning phytochemicals and their effects, including preventions and treatments. The chapters are divided as follows: Chapter One: "Medicinal Phytochemicals and Health Effects of *Patrinia scabiosaefolia* Fisch" (*patrinia*, *bai jiang cao*); Chapter Two: "Furanocoumarins from the Genus *Ficus*: Occurrence, Analysis, Health and Toxic Properties"; Chapter 3: "Neuroprotective Effects of a Water-Soluble Extract from the Culture Mediums of *Lentinus edodes* and *Ganoderma lucidum* Mycelia: The Possible Reduction Mechanism of Endoplasmic Reticulum Stress through Antioxidation"; and Chapter Four: "The Phytochemicals and their Health Benefits of *Moringa oleifera* Lam (Family: Moringaceae)". These chapters provide more advanced information to researches for the development of new nutraceutical drug designs.

HB 9781536119886 £90.50 September 2017 Nova Science Publishers 175 pages

Chemistry

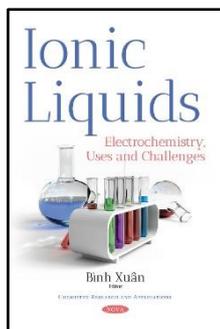


Advances in Chemistry Research **Volume 40 (Advances in Chemistry Research Series)**

Edited by James C Taylor

Chapter One discusses the function of polyphenols and polyphenolic fingerprinting profiles to achieve the classification and verification of natural food products. Chapter Two provides cases for the combination of commoners, as well as gives a thorough review on the application potentials of homo- and copolyesters used in the biomedical field. Chapter Three explores water vapour's influence on the growth stresses developed at high temperature in the oxide scale. Chapter Four examines the synthesis and applications of chalcone compounds and its complexes. Chapter Five reviews the cataclysmic mechanisms used by glycolytic enzymes. Chapter Six provides an overview on the chemical characterisation and quantification of tartaric acid in grapes and wines. Chapter Seven reviews experimental data she collected in the field of biological decomposition of L-malic acid in musts. In conclusion, Chapter Eight deliberates on results acquired for the application of a new procedure to increase the analytical capacity of instruments for analysis of rocks, minerals, ores, soils, and sediments.

HB 9781536127911 £238.50 December 2017 Nova Science Publishers 180 pages



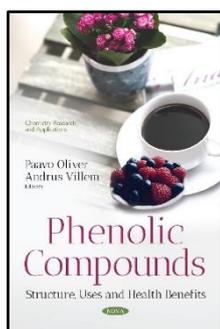
Ionic Liquids

Electrochemistry, Uses & Challenges (Chemistry Research & Applications Series)

Edited by Binh Xuân

Chapter One examines the effect of water addition on some physicochemical properties of deep eutectic solvents through experimentation. Chapter Two deliberates on ionic liquids electrochemical behaviour for corrosion inhibition of different metals. Chapter Three presents the process and mechanism of electrochemical synthesis of DMC in ionic liquids. Chapter Four provides an overview of the applications of ionic liquids on the electrochemical reduction of CO₂. Chapter Five studies the biocatalyst process for the esterification of dihydrocaffeic acid (DHCA) with different ionic liquids: 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl) imide, 1-butyl-3-methylimidazoliumhexafluorosphosphate, 1-hexyl-3-methylimidazoliumhexafluorosphosphate, 1-octyl-3-methylimidazoliumhexafluorosphosphate. Chapter Six continues with a study on predicting wine quality, with the suggestion that investors should further their knowledge on all aspects of winemaking. Chapter Seven reviews the advantages of ionic liquids in biorefinery processes.

PB 9781536126891 £90.50 December 2017 Nova Science Publishers 119 pages



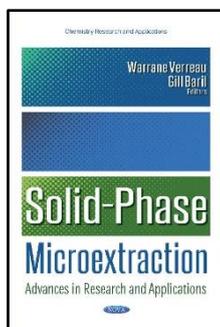
Phenolic Compounds

Structure, Uses and Health Benefits (Chemistry Research and Applications Series)

Edited by Paavo Oliver & Andrus Villem

Phenolic Compounds: Structure, Uses and Health Benefits opens with a discussion on phenolic substances such as gallic acid, catechin, chlorogenic acid, caffeic acid, p-coumaric acid, ferulic acid, and quercetin. The most common analytical methods (based on spectrophotometric, chromatographic or electrochemical techniques) for determining phenolic compounds applied to a wide range of sample sources are presented. Additionally, the authors study the high concentrations of bioactive substances in fruit berries in order to determine the link between daily fruit intake and human health. A review of the modern literature on extraction, filtration, and adsorption that may be combined with advanced oxidation treatments to minimise the environmental impact of the remaining wastes is presented, especially focusing on phenolic compounds recovery from olive mill liquidwastes. Lastly, the authors provide an overview on the antiradical and antioxidizing properties of calix[n]arenes and calix[n]resorcinols as part of a larger discussion on the impact of "preorganization" of antioxidant fragments attached to calix[n]arene and calix[n]resorcinol scaffolds and their intramolecular synergy on antioxidant activity.

PB 9781536128819 £90.50 December 2017 Nova Science Publishers 109 pages



Solid-Phase Microextraction

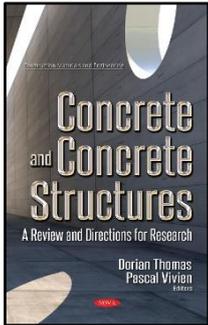
Advances in Research & Applications (Chemistry Research & Applications Series)

Edited by Warrane Verreau & Gill Baril

In Chapter One, the specific patterns and applications of micro extraction techniques in bionalysis are reviewed. The various micro-extraction techniques can be classified into two rudimentary categories: solid-phase micro-extraction and liquid-phase micro-extraction, which are derived from conventional solid-phase extraction and liquid-liquid extraction, correspondingly. Next, an overview of the application of solid-phase micro-extraction in assessing target chemical families in different alcoholic beverages is provided. The results re-count the last 10 years of scientific publications, concentrating on the extraction conditions used for investigating different compounds in wines, beer and spirits according to the chemical families. Additionally, the authors discuss optimisation strategies for achieving accurate quantification. Chapter Three presents research on solid phase micro-extraction its advantages. Since solid phase micro-extraction was presented in the early 1990s, there has been an increase in research on new methodical solutions in many research facilities around the world that could potentially increase use of this technique. In Chapter Four, modern uses of new sorbent coatings in solid-phase micro-extraction are analysed. The combination of molecularly imprinted polymers with solid phase micro-extraction results in a possible technique for sample preparation, predominantly considering their described success in recent literature.

PB 9781536128291 £90.50 December 2017 Nova Science Publishers 124 pages

Civil Engineering



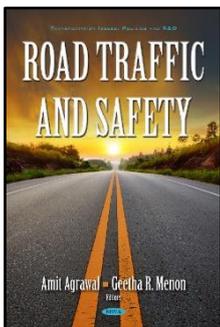
Concrete & Concrete Structures

A Review & Directions for Research (Construction Materials & Engineering Series)

Edited by Dorian Thomas & Pascal Vivien

Concrete and Concrete Structures: A Review and Directions for Research opens with a chapter by Juan M Moro, Romina S Meneses, and Néstor F Ortega presenting research on recycled concrete in an effort to improve durability. Next, Germán D Ercolani, Néstor F Ortega, and Daniel H Felix examine different methods of crack detection to determine the best course of repair. Rina (Irina) Wasserman discusses a study on alkali-solutions-caused changes in cement pastes and concretes, after which Romina S Meneses, Juan M Moro, and Néstor F Ortega deliberate on research on corrosion in structural elements of reinforced concrete exposed to flexion. Following this, Alireza Joshaghani explores the durability of concrete prepared with sugarcane bagasse ash. Behrouz Behnam investigates the post-earthquake fire resistance of reinforced concrete structures. Continuing, Néstor F Ortega exhibits results of a study focusing on the performance of reinforced concrete beams exposed to accelerated corrosion. In closing, Alireza Joshaghani studies self-compacting concrete mixtures by using blended binders comprised of sugarcane bagasse ash and rice husk ash.

HB 9781536127959 £185.99 November 2017 Nova Science Publishers 180 pages



Road Traffic & Safety

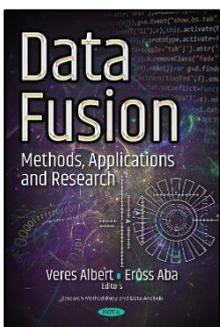
(Transportation Issues, Policies & R&D/Safety & Risk in Society Series)

Edited by Amit Agrawal & Geetha R Menon

Road space is shared by multiple vehicles (ie: cars, taxis, buses, trucks, motorcycles, and mopeds), pedestrians, animals and many other categories of travellers. Easy availability of motor vehicles and advancements in their technology has made road travel easy; on the other hand, this has also resulted in a significant increase in the number of motor vehicle related injuries. Road traffic related injuries remain an important public health problem globally. It has been estimated that approximately 1.25 million people succumb to road traffic injuries annually worldwide, and between 20 and 50 million people sustain non-fatal injuries. It is a cause of great concern that 59% of the severely injured population is young adults aged between the age of 15 and 44 years. At present, globally road traffic injuries are ranked as the eighth leading cause of mortality, and if the current trends continues, it is expected to be the seventh leading cause of mortality at the global level by 2030. Road traffic safety is one of the most significant concerns of the United Nations and a 5-tiered approach has been proposed to combat traffic accidents and fatalities. This includes improvements in health care services focusing on injury care, road safety management, road network safety, vehicular safety, and implementation of road safety legislation. Changes in practices like speed control, use of seatbelts and helmets, respecting traffic signals and signs, avoiding drunken driving (or use of drugs), following traffic rules (lane driving) and avoiding mobile phones while driving are some of the behavioural changes that can bring about a significant reduction in the number of road traffic related injuries. The present book consists of fifteen chapters related to various aspects concerning road traffic and safety, including epidemiology of road traffic injuries, occupant protection and safety devices, risk factors, a manual of safety measures, road safety in hilly terrain and conflict zones, prevention of head injuries, the role of alcohol and bicycle related injuries. The authors hope that the book shall help the readers to get an overview of various aspects related to global road traffic and safety.

HB 9781536124897 £185.99 December 2017 Nova Science Publishers 79 pages

Computing



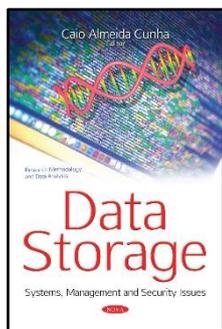
Data Fusion

Methods, Applications & Research (Research Methodology & Data Analysis Series)

Edited by Veres Albert & Eröss Ába

In the first chapter, Sergey A Sakulin, Ph.D. and Alexander N Alfimtsev, Ph.D. discuss fuzzy integral, a powerful metaoperator, and its applications. In the second chapter, Bruno G Botelho and Adriana S Franca discuss the concept of data fusion and how it might be applied in different areas of food analysis to improve the information range regarding samples. In the third and final chapter, Carlo Quaranta and Giorgio Balzarotti compare a new data fusion equation with an approach that has been familiarised in previous literature.

PB 9781536127201 £78.50 December 2017 Nova Science Publishers 108 pages

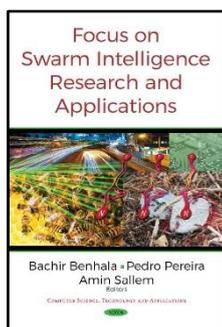


Data Storage Systems, Management & Security Issues (Research Methodology & Data Analysis Series)

Edited by Caio Almeida Cunha

Data Storage: Systems, Management and Security Issues begins with a chapter comparing digital or electronic storage systems, such as magnetic, optical, and flash, with biological data storage systems, like DNA and human brain memory. In the main part of the chapter, the following quantitative storage traits are discussed: data organisation, functionality, data density, capacity, power consumption, redundancy, integrity, access time, data transfer rate. Afterwards, various facets of data warehouses as well as the necessity for security measures are reviewed. Because the significance of security tools is greater than ever before, the pertinent strategies and economics are discussed. The final chapter supplements this by discussing media and storage systems reliability and confidentiality in order to make a greater claim about storage security. Confidentiality, integrity and availability are three aspects of security identified as ones that should be preserved during data transmission, processing and storage.

PB 9781536128277 £78.50 November 2017 Nova Science Publishers 121 pages

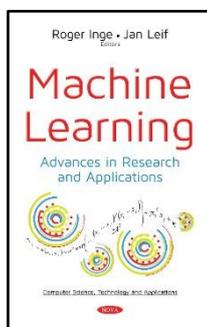


Focus on Swarm Intelligence Research & Applications (Computer Science, Technology & Applications Series)

Edited by Bachir Benhala, Pedro Pereira & Amin Sallem

Swarm intelligence techniques are among the most talented and successful approaches that gained a lot of popularity over the past two decades. They are inspired by animal behaviour (such as ants, termites and bees) and insect conduct (by swarm, herd, flock and shoal phenomena) in order to develop these techniques in terms of mimicking their problem/solution abilities. These techniques provide good approximate solutions in a reasonable time for solving hard and complex problems in many engineering fields. This book is intended for researchers, engineers and graduate students with interests in swarm intelligence algorithms and their applications. It discusses and describes the various swarm intelligence techniques as useful tools for solving practical problems, such as urban traffic optimisation, electrical engineering problems and the design of integrated analogue circuits.

PB 9781536124521 £90.50 October 2017 Nova Science Publishers 229 pages

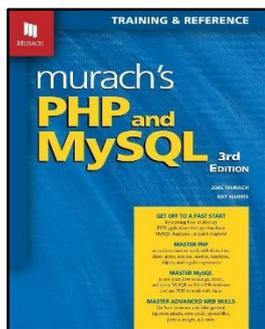


Machine Learning Advances in Research & Applications (Computer Science, Technology & Applications Series)

Edited by Roger Inge & Jan Leif

In chapter one, Lei Jia, PhD and Hua Gao, PhD analyze machine learning applications in small molecule and macromolecule drug discovery and development while comparing the similarities and differences between the two. They also examine their advantages and limitations with the intent to encourage further creative machine learning applications in drug discovery and development. During chapter two, Oscar Claveria, Enric Monte, and Salvador Torra present a study on the extrapolative performance of several machine learning models in a multiple-input multiple-output setting that permits cross-correlation between the inputs. Bojan Ploj, Germano Resconi, and Ali Yaghoubi parallel the solution of a system by logic gates and by a neural network, in which considerations are computed by the designated one step method during chapter three. In chapter four, Loris Nannia, Nicolò Zaffonatoa, Christian Salvatoreb, Isabella Castiglionib, and the Alzheimer's Disease Neuroimaging Initiative propose a method that could aid in the early diagnosis of Alzheimer's disease. Afterwards, F. Dornaika and I. Kamal Aldine present and experimentally assess two non-linear data self-representativeness coding schemes based on Hilbert space and column generation. Lastly, Christos Chrysoulas, Grigorios Kalliatakis, and Georgios Stamatiadis give an overview of Apache Hadoop, an open-source software framework used to distribute storage and process big data using the MapReduce programming model.

PB 9781536125702 £78.50 November 2017 Nova Science Publishers 124 pages

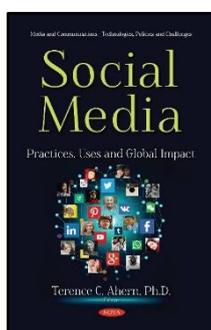


Murach's PHP and MySQL

Joel Murach & Ray Harris

"I can't count how many PHP books I have purchased over the years trying to learn the language. Murach's was the first book that helped me grasp the concepts and got me onto actually scripting in PHP." That's what one developer posted on the first edition of Murach's PHP and MySQL. Now, this 3rd Edition does a better-than-ever job of delivering the skills you need to develop database-driven websites using PHP and MySQL, the way today's top web professionals do. Section 1 is a quick-start course that shows how to use the latest versions of PHP, MySQL (or MariaDB), and the Apache web server to build your first PHP applications. Right from the start, you'll learn to create applications that conform to the MVC pattern, so they'll be easier to maintain as they grow. In addition, you'll learn how to create applications that prevent SQL injection attacks and guard against XSS attacks. Section 2 takes you deeper into PHP by covering the skills you'll use every day, like how to work with form data, dates, arrays, sessions, cookies, functions, objects, regular expressions, and exceptions. Likewise, Section 3 dives into MySQL, teaching you how to design and create a database, as well as how to access and maintain database data from your PHP programs. Section 4 teaches you important web programming skills like how to secure web pages, send email, upload files, and process images. Along the way, you'll find out how to take advantage of PHP 7 enhancements like scalar data type declarations and improved error handling, as well as new operators and functions. Complete sample applications and chapter exercises provide training support throughout.

PB 9781943872381 £54.99 November 2017 Mike Murach & Associates 866 pages 377 illus



Social Media

Practices, Uses & Global Impact

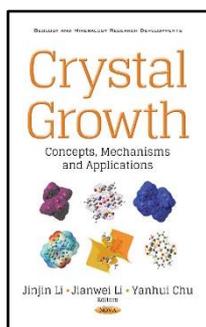
(Media & Communications -- Technologies, Policies & Challenges Series)

Edited by Terence C Ahern Ph.D.

Over 50 years ago, Pepsi sponsored the UNICEF pavilion at the 1964 New York World's Fair's. They worked with the Walt Disney Company to develop an attraction called the "Children of the World" which boasted a song and included a boat ride that passed by "animated figures frolicking in miniature settings of many lands of the world". This song correctly anticipated the effect communication technology has on how people interact with one another. A line in the song declares that "Though the mountains divide and the oceans are wide / It's a small world after all". Indeed, computer mediated-communication technologies, through cell phones, satellite phones, or the computer-based technologies of Skype or Facetime have trivialised the ability to connect to anyone at anytime, anywhere on the planet. Fast forward 25 years and the software phenomenon known as social media has further compressed not only time and space, but has also democratised news and information. Pundits talk about the 24/7 news cycles where news is available from anyone around the world and from around the clock.

PB 9781536127348 £90.50 December 2017 Nova Science Publishers 166 pages

Earth Sciences



Crystal Growth

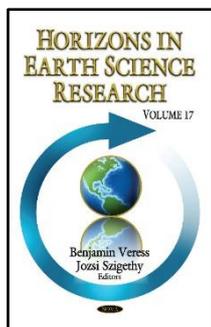
Concepts, Mechanisms & Applications

(Geology & Mineralogy Research Developments Series)

Edited by Jinjin Li, Jianwei Li & Yanhui Chu

With the highly competitive development of pharmaceutical and chemical industries, mastering crystal growth is becoming increasingly important. Modern industrial manufacturers place high importance on the ability to grow novel crystals with a specific habit and improve the performance of existed crystals using tailored operating conditions. Therefore, the ability to synthesise a particular morphology and to predict the crystal morphology of new compounds is becoming even more desirable. The recent development of crystal growth is vital for researchers in crystallography and crystallisation to respond and realise this objective. With this need in mind, this book mainly targeted at introducing crystal growth from three aspects ranging from basic concepts and detailed mechanisms to advanced applications in hot areas of materials science. This book introduces various experimental and theoretical methods to grow different crystals, which includes the techniques to grow single crystals, CaCO₃ polymorphs, metal-organic crystals, liquid crystals, fenamate crystals, cocrystals, and the theoretical models to predict the crystal morphologies within a different environment. From these carefully selected contents, readers will not only learn of the basic theory and experimental techniques implemented, but also keep abreast with both state-of-the-art crystal growth and its overlap with other subjects.

HB 9781536122039 £152.50 September 2017 Nova Science Publishers 240 pages



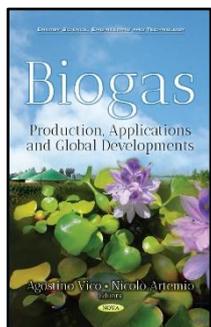
Horizons in Earth Science Research Volume 17 (Horizons in Earth Science Research Series)

Edited by Benjamin Veress & Jozsi Szigethy

Horizons in Earth Science Research. Volume 17 opens with a discussion about the attainment of a new multichannel seismic profile in the Volturmo Basin, located in the Northern Campania continental shelf of the Southern Tyrrhenian margin of Italy. This multichannel seismic profile has permitted geological sections to be constructed and interpreted to study the correlation between seismic units individuated through the seismo-stratigraphic techniques. Next, a conversation about the idea that human built structures can be studied as a geological system is presented. It will be argued that considering human works in the context of geological processes can be traced back, at least, to Lyell's works that set the foundations of modern Geology. One of the largest plutonic bodies in the European Variscan belt, Moldanubian batholith, is studied for composition, with the findings including coarse-grained, porphyritic I/S-type biotite granites to granodiorites of the Weinsberg suite, (2) two-mica S-type granites of the Eisgarn suite and (3) fine to medium-grained, and I/S-type biotite granodiorites of the Freistadt/Mauthausen suite. An analysis of satellite gravimetry is presented using several applied methodologies including entropial and information transformations, computing of various derivatives, coherence features and multistatistical characteristics, inverse probability, and advanced downward continuation. This book includes a chapter focused on the chemical and biological properties of the water in salt lakes in order to understand the mechanisms of the organisms adaptation to extreme conditions in hypersaline biotope. The history of the application of radiometric dating of speleothems physically related to rock art is reviewed to show that there are significant issues with both radiocarbon analysis and $^{230}\text{Th}/^{234}\text{U}$ analysis of carbonate precipitates in limestone caves. A geochemical and thermochronological study designed for the elucidation of the burial and exhumation history of an extensive pull-apart basin conducted on the East Eurasian longstanding convergent margin is presented. Several tests are described using an S8 Tiger spectrometer from Bruker Co., belonging to LARIN (Ionizing Radiations Laboratory) and UNESPetro (Geosciences Center Applied to Petroleum), IGCE-UNESP-Rio Claro (SP), Brazil. Next, Ions in water samples collected from rivers and wells are examined. In closing, a study comparing surface-to-volume (SV) allometries of natural water bodies and of the living systems inhabiting them is presented.

PB 9781536128314 £90.50 November 2017 Nova Science Publishers 183 pages

Energy Technology

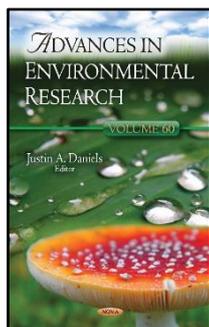


Biogas Production, Applications & Global Developments (Energy Science, Engineering & Technology Series)

Edited by Agostino Vico & Nicolò Artemio

In Chapter One, Antonio Colmenar-Santos, Enrique Rosales-Asensio, David Borge-Diez, and Manuel Castro-Gil present an overview of current research on equitable alternatives for recently constructed concentrated solar power plants in Spain. Next, Chapter Two by Dian Andriani, Arini Wresta, Arifin Santosa, and Kusnadi discusses the idea that various raw materials can be used for biogas production. Additionally, the authors discuss modern biogas production technologies. In Chapter Three, Caroline Borges Agustini and Mariliz Gutterres provide a review on the significance of biogas production in conjunction with its characteristics and handling problems. Following this, the authors go on to review current microorganism identification techniques as well as crop optimisation techniques. In Chapter Five, Sina Gilassi, Seyed Mohammad Taghavi, Serge Kaliaguine, and Denis Rodrigue suggest commercial polymer hollow fibres could be used to improve separation efficiency and CH_4 purity in biogas production. Vladimir I. Shcherbakov, Nadezhda V. Kuznetsova, and Tatiana V. Shchuykina present research with the goal of determining favourable conditions for methane forming bacteria vital functions, fermentation processes intensification methods, and developing advance capacity reactors in Chapter Six. Afterwards, Chapter Seven by Spyridon Achina and Vasileios Achinas deliberates on the physicochemical properties of biogas and the need for further research on the subject. In Chapter Eight, Kevin N. Nwaigwe, Uchenna C. Egbufor, Sambas N. Asoegwu, and Christopher C. Enweremadu propose water hyacinth as a substrate for biogas production. Chapter Nine by Preseela Satpathy, PhD examines recent trends in biogas technology advancements. Next, Chapter Ten by Caroline Borges Agustini and Mariliz Gutterres explores the anaerobic process characteristics of anaerobic digestion, as well as its efficiency. In Chapter Eleven, Mohamed Habib Sellami exhibits a modelling approach designed to hypothesise the performance, impact, and profitability of systems cogenerating energy from released biogas. In conclusion, Chapter Twelve by K. N. Nwaigwe, E. E. Anyanwu and C. C. Enweremadu presents a synopsis on bioreactor technology development trends.

HB 9781536127874 £219.50 December 2017 Nova Science Publishers 265 pages

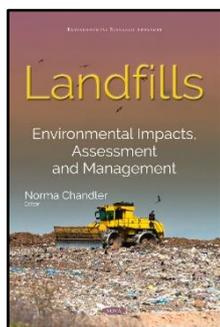


Advances in Environmental Research Volume 60 (Advances in Environmental Research Series)

Edited by Justin A Daniels

The first chapter of *Advances in Environmental Research. Volume 60* by Daniel Figueira de Barros and Daniel Marcos Bonotto gives an overview on the way legislation regarding geological repositories and the protection of the environment, human health, and living beings has evolved in France, Germany, Japan, and the USA. In the second chapter, Douglas Paton, PhD and Petra T. Buergelt, PhD discuss how a disaster risk reduction philosophy founded on social-environmental co-existence can aid in comprehending how people interpret environmental risks and make decisions to manage them. Next, the third chapter by Aleksey Sidorchuk centres on soil erosion in the East European Plain. In the fourth chapter, Makiko Nakataa and Sonoyo Mukaib present regional and seasonal variations in atmospheric dust particles using satellite measurements and model simulations. Maria Fernanda Kauling, Pitagoras J Bindé, PhD, and Flavio Augusto Serra Kauling methodically analyse the environmental indicators application process in the fifth chapter. Following this, the sixth chapter by Isabella Grishkan, Pnina Schlesinger, and Yaacov Mamane discusses the qualitative and quantitative facets of dust-associated culturable fungal communities sampled during dust events 2004-2005 in Haifa, Israel, comparing these with the communities sampled in the neighbouring days. In the seventh chapter by Shaila Islam Satu, M. Abul Kashem, and Mohammad Zabed Hossain, data on the extent of soil salinity in selected areas of Bangladesh is presented. Afterwards, the eighth chapter by José Ignacio Rojas-Sola and María Isabel Alba-Dorado investigates the theoretical ideologies and advancements made at the international level relative to environmental research from the second half of the 20th century to today. In the ninth chapter, Lubos Matejcek provides an environmental assessment involving the processing and analysis of spatial data concerning renewable resources. Sandrine Gaynard focuses on associating traffic psychology with sustainable development in the tenth chapter. In the eleventh and final chapter, Xiaofeng Yang and Xingping Wen present a study determining the effect of sky view factor to land surface temperature using remote sensing imaging.

HB 9781536127898 £238.50 December 2017 Nova Science Publishers 171 pages



Landfills Environmental Impacts, Assessment & Management (Environmental Research Advances Series)

Edited by Norma Chandler

In chapter one, Abdelhakim El Maguiri, Yassine Zegzouti, Salah Souabi, Laila Idrissi, Miloud El Hadek, and Mohamed Hafidi discuss result, initiatives in the cities of Meknes and Marrakech where the objective is to create compost production units from green waste and certain types of mixed organic waste for the amendment of agricultural land in their landfills. Afterwards, Okunola A. Alabi and Adekunle A. Bakare speak on the necessity for assessment of the potential DNA damaging effects of a new exposure scenario in chapter two. In chapter three, Hiroshi Asakura uses the ratio of oxygen flow rate by aeration to oxygen consumption rate of waste layer as a parameter to determine the reaction rate of organic matter in leachate from landfilled MSW residue and incombustible waste. In chapter four, Dorota Kulikowska and Magdalena Zielińska discuss adsorption and membrane methods and their advantages and disadvantages. Next, Ratiba Irinislimane, Hanane Tounsi, Billel Malouadjmi, Saad Djediat, and Naima Belhaneche Bensemra present a study in chapter five wherein a count of microbial biomass is studied before and after respirometry in order to investigate the loss of mass. In chapter six, N. Lardjane and N. Belhaneche-Bensemra study the evolution of density and mechanical properties, with the results showing that the nature of the plasticizer and heat stabilizer affects the properties of PVC. In chapter seven, Mohamad Anuar Kamaruddin, Hamidi Abdul Aziz, Rasyidah Alrozi, and Mohd Hafiidz Jaafar discuss the fact that cooperation between public and the authorities in formulating suitable mechanisms is necessary for the attainment of integrated SWM goals. Following this, chapter eight by Dorota Kulikowska and Katarzyna Bernat present an overview of characteristics of landfill leachate from the perspective of biological nitrogen removal. In chapter nine, J. Faitlia, T. Magyarb, R. Romendac, A. Erdélyid, and C.S. Boldizsáre was to extract the decomposition heat from MSW landfills in order to study the processes. In the final chapter, Islam Safia Abdelli, Fatiha Abdelmalek and Ahmed Addou propose methodology for efficient waste management to improve the exploitation of S.L and concrete proposition of valorization channels based on the 3R-VE principle.

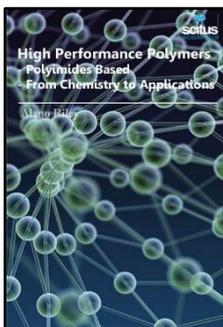
HB 9781536125566 £185.99 November 2017 Nova Science Publishers 260 pages



Advances in Materials Science Research
Volume 31 (Advances in Materials Science Research Series)
Edited by Maryann C Wythers

In the first chapter Yahong Liu, Kun Song, and Xiaopeng Zhao explore metamaterials such as nonlinear left-handed metamaterials, impedance-matched near-zero index metamaterials, chiral metamaterials, and metasurfaces. The second chapter by Anett Király and Ferenc Ronkay discusses processing methods of conductive polymer composites as well as their properties. Next, the third chapter by Xiaogang Chen and Shengnan Min provides a review on current knowledge on protective composite helmet shells reinforced by continuous textile structure. G Mansoura, K Tsongasa, and D Tzetzisb determine an effective modal testing system to investigate dynamic mechanical properties of elastomeric composite materials in the fourth chapter. Continuing, the fifth chapter by Vineetha Vinayakumar, Sadasivan Shari, David Avellaneda, and Bindu Krishnan, presents an overview on inorganic chalcogenide photovoltaics and their applications. In the sixth chapter, Mohammad K. Hossain, Mahmudur R Chowdhury, MD, and Nydeia W Bolden present a study and analysis on fibre reinforced polymeric composites. Afterwards, D Luca Motoc, Ph.D. discusses the properties of hybrid synthetic/natural reinforcements and challenges faced by material designers. In the eighth and final chapter, Anis Rahman and Aunik K Rahman propose the use of the kinetics spectrum for quantifying an impact-caused deformation event in layered materials used in Soldiers' helmets.

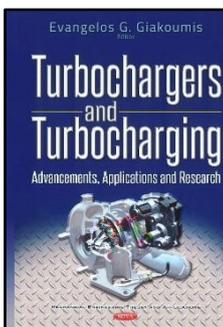
PB 9781536127683 £90.50 December 2017 Nova Science Publishers 197 pages



High Performance Polymers
Polyimides Based -- From Chemistry to Applications (Materials Engineering Series)
Edited by Alano Riley

Polymers are substances whose molecules have high molar masses and are composed of a large number of repeating units. There are both naturally occurring and synthetic polymers. Among naturally occurring polymers are proteins, starches, cellulose, and latex. Synthetic polymers are produced commercially on a very large scale and have a wide range of properties and uses. High performance plastics differ from standard plastics and engineering plastics primarily by their temperature stability, but also by their chemical stability and mechanical properties, production quantity, and price. There are many synonyms for the term high-performance plastics, such as: high temperature plastics, highperformance polymers, high performance thermoplastics or high-tech plastics. We are using high-performance polymers in almost every aspect of our lives from fairly obvious areas like automotive, aerospace, defence and many parts of the energy industry, through to areas you may not automatically think of like electronics, medical, sport and even food-related applications. Without these high-performing plastics, elastomers and composites, there is so much that just wouldn't be either technically possible or economically viable. In most applications the conditions that these materials endure are very harsh in terms of temperature, pressure, mechanical stress/strain or chemical environment and so the correct materials must be carefully selected in order to balance the necessary properties, performance level and durability with cost. High Performance Polymers - Polyimides Based - From Chemistry to Applications review synthesis, mechanisms, ultimate properties, physico-chemical properties, processing and applications of such high performance materials needed in advanced technologies. This book should be of immense valuable for materials scientists, polymer chemists, manufacturers of electronic components and process engineers.

HB 9781681174693 £160.99 January 2017 Scitus Academic 324 pages



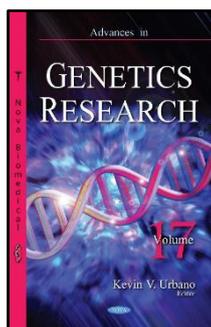
Turbochargers & Turbocharging
Advancements, Applications & Research
(Mechanical Engineering Theory & Applications Series)
Edited by Evangelos G Giakoumis

Supercharging has long been established as the most successful means to maximise power output from a specific engine size. Through supercharging, the inlet air density is increased, usually by means of a compressor, and by doing so the amount of air trapped in the cylinders is increased accordingly. As a result, efficient burning of a proportionately higher amount of fuel is enabled. By far, the most successful version of supercharging is turbocharging. Here, the expansion in a turbine of the exhaust gases leaving the cylinders supplies the power needed to drive the compressor. At the moment, practically all diesel engines are turbocharged, with a continuously increasing penetration in the highly competitive market of SI-powered vehicles. The current book on turbochargers and turbocharging, comprising fifteen chapters, gathers important and novel research on many modern aspects of turbocharging for all kinds of gasoline and diesel-powered engine applications (automotive, truck, marine and aircraft). For example,

characterisation of the value proposition of turbocharged vehicles, marine engines turbo-compounding, fundamental issues of turbocharger lag and its relation with engine-out PM emissions, variable geometric compressors, automotive two-stage turbocharging, and dynamic operation of turbochargers including VGT and surging effects are amongst the topics analysed. Review papers form a very important part of the book, namely the discussion and in-depth analysis of various automotive boosting systems, turbocharger reduced-order modeling, heat transfer and pulsating flows in turbomachinery, mathematical models for turbocharged engines, and turbomachine-based engine throttling. A considerable portion of the book (seven chapters) deals with control-oriented modeling techniques relating to the turbocharger and/or the whole engine power-plant. Such models have proven valuable during the design of both turbochargers and turbocharged engines, and are described and discussed in detail for a variety of automotive and aircraft applications. The book is written for post-graduate students, engineers and researchers in the field of internal combustion engines (diesel and SI) and turbochargers.

HB 9781536122398 £219.50 September 2017 Nova Science Publishers 435 pages

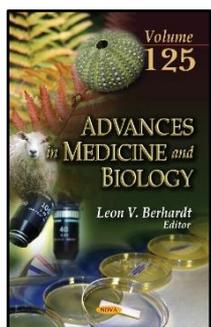
Medical



Advances in Genetics Research Volume 17 (Advances in Genetics Research Series) Edited by Kevin V Urbano

The book opens by presenting an overview of modern research on the evolution and genetics of entomopathogenic fungi in Chapter One, including their function in the environment, relationship with the insect immune system, and their genetic diversity, among other things. Following this, Manuel Ruiz-García, Nicolás Lichilín-Ortíz, Yolanda Mejía, Juan Manuel Ortega, and Joseph Mark Shostell discuss a study in Chapter Two where it was found that the genetic diversity levels for samples of *Eira Barbara* were very high. In Chapter Three, Stephen M Modell, Sharon L R Kardia, and Toby Citrin compare and contrast methods of cancer treatment for three cancer types: lung, breast, and colorectal. Anne-Sophie Pezzino, Nathalie Marec-Breton, and Agnès Lacroix review the current research on the neuropsychological profiles of persons with Williams syndrome, focusing on the heterogeneity of the observed profiles, in Chapter Four. In Chapter Five, Chun Kyu Lim presents a study on chromosome rearrangements and preimplantation genetic diagnosis. In conclusion, Chapter Six by Alan López-López, Miriam Margot Rivera-Angles, Carlos Alfonso Tovilla-Zárate, Roberto Molina-Solís, Araceli Valencia-Hernández, Luis Gómez-Valencia, Thelma Beatriz González-Castro, Isela E Juárez-Rojop, María Lilia López-Narváez, Ana Fresan, and Yazmin Hernández-Díaz attempt to determine a family-based link between three polymorphisms of the brain-derived neurotrophic factor gene and attention deficit hyperactivity disorder in a Tabascan-Mexican population.

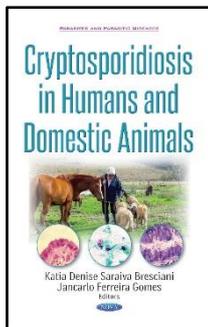
PB 9781536127225 £90.50 December 2017 Nova Science Publishers 211 pages



Advances in Medicine & Biology Volume 125 (Advances in Medicine & Biology Series) Edited by Leon V Berhardt

In Chapter One, Olga Chub, MD, Ph.D., and Professor Oleksandr V Bilchenko, MD present a study exploring the occurrence of plasmid-mediated resistance genes in gram-negative uropathogens. Next, Chapter Two by Daniela Baconi, Miriana Stan, and Ana Maria Vlasceanu reviews recent knowledge on hallucinogenic drugs. In Chapter Three, recent advances in ultrasound imaging are presented. Following this, Chapter Four by Jinhua Dong, Ph.D., and Hiroshi Ueda, Ph.D. provides an overview on the modern applications of open sandwich immunoassay detection systems. Khaled Habas, Martin H. Brinkworth, and Diana Anderson review the impact of nonsteroidal oestrogen diethylstilbestrol on genetic reliability of male germ cells in Chapter Five. In Chapter Six, Petr Slama and Chaivat Kittigul discuss the effect of *Staphylococcus aureus* infections on leukocytes of bovine mammary gland. Continuing, Chapter Seven by Deryk Jones, MD and Angie Botto-van Bemden, Ph.D. expresses the benefits of using the "Sandwich-ACI" procedure on patients with OCD lesions. Chapter Eight by Seiji Kojima, Tomonobu Kusanom and Yoshiyuki Kamio elaborates on biosynthesis and the function of peptidoglycan-linked cadaverine. Afterwards, Leticia Petersen Schmidt Rosito, MD, Ph.D., Sady Selaimen da Costa, MD, Ph.D., and Daniela Pernigotti Dall'Igna, MD present research on the pathogenesis of middle ear cholesteatoma to discern potential future treatment methods in Chapter Nine. Finally, Chapter Ten by Natsuko Kakudo, Naoki Morimoto, Takeshi Ogawa, Fangyuan Lai, Masakatsu Hihara, and Kenji Kusumoto examines the in vitro proliferative capacity of adipose-derived stem cells in order to promote the development of culture methodologies.

HB 9781536127409 £180.99 December 2017 Nova Science Publishers 193 pages

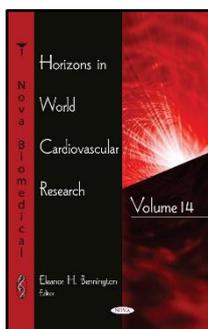


Cryptosporidiosis in Humans & Domestic Animals (Parasites & Parasitic Diseases Series)

Edited by Katia Denise Saraiva Bresciani & Jancarlo Ferreira Gomes

The aim of this book is to clarify the epidemiologic aspects and control related to cryptosporidiosis in humans and domestic animals. Obligate intracellular parasites, the protozoa of the genus *Cryptosporidium* develop in the microvilli of the epithelial cells of the gastrointestinal tract, respiratory and urinary tracts of mammals, birds, reptiles and fish, and cause disease of high socioeconomic impact worldwide. Infected animals, especially cattle, are a source of infection for the environment and humans, because they eliminate large numbers of oocysts in their feces. In people, the implementation of the control includes preventive measures that promote the early diagnosis of this infection. This book discusses the importance (zoonotic aspects), history, etiology, epidemiology, clinical aspects, diagnosis, prognosis, treatment and control of cryptosporidiosis in humans, the hydric veiculation as well as aspects of this disease in dogs, cats, chickens, pigeons, psittacines, pigs, horses, goats, buffaloes, bovine and lambs. Unlike other conventional techniques and commercial kits, a technique with high efficiency in the laboratory diagnosis of gastrointestinal parasites of humans and animals has been outstanding in recent years. Under the zoonotic aspect, health professionals may be aware of these clinical signs and take preventive measures for their control. Additionally, the importance of cryptosporidiosis in terms of public health and zoonosis is critiqued.

HB 9781536121605 £185.99 December 2017 Nova Science Publishers 160 pages

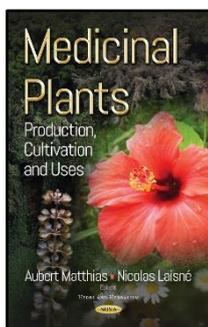


Horizons in World Cardiovascular Research Volume 14 (Horizons in World Cardiovascular Research Series)

Edited by Eleanor H Bennington

In the first chapter of Horizons in World Cardiovascular Research. Volume 14, the secondary mechanical complications of acute coronary syndrome are discussed while presenting initial treatment methods by way of pharmacology. These complications typically occur swiftly (acute phase and subacute phase) and they originate in the severe cardiac expansion zones, in border regions with the healthy tissue as well as the infarcted tissue. The second chapter explains that preeclampsia, a pregnancy-specific syndrome of reduced organ perfusion secondary to vasospasm and endothelial activation, is a major complication in pregnancy, occurring in 7-10% of all pregnant women, and is one of the major causes of maternal morbidity and mortality, preterm birth, intrauterine growth restriction (IUGR), and perinatal mortality. The author explores the way in which markers of endothelial dysfunction could be used to predict hypertensive disorders in pregnancy. The third chapter examines modern percutaneous technologies for the controlling of valvular heart disease, with the goal of pinpointing new opportunities for research. Additionally, the utility of various emerging balloon valvuloplasty techniques, MitraClip, and valve-in-valve approaches are explained in the hopes that understanding their limitations might aid in new research. Molecular domains in heart muscles in family members are classified in the fourth chapter, with the intention of ascertaining the effect of vasodilator agents, sugar, and hypoxia on the operation of protein domains. The domains inside the heart aorta and vein of a slaughtered domestic pig are studied to ascertain how acetylsalicylic acid (ASA), ramipril, sugar, heat and physical exertions influenced them. Next, research on the link between family history of depression and atherosclerotic coronary artery disease is presented in the fifth chapter. Depression is one of the leading contributors to the global burden of diseases, and is one of the major risk factors for cardiovascular disease, therefore it is essential to develop a link between how genetics and inheritance in families may worsen the prognosis of cardiovascular disease in offspring. The sixth chapter supports the claim that ivabradine should be the primary pharmacologic treatment for patients with symptoms of inappropriate sinus tachycardia by ruling out other possible causes.

PB 9781536128352 £90.50 November 2017 Nova Science Publishers 191 pages



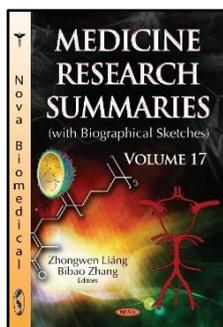
Medicinal Plants Production, Cultivation & Uses (Herbs & Herbalism Series)

Edited by Aubert Matthias & Nicolas Laisné

Mladenka Pestorić, Ph.D., Bojana Filipčević, Ph.D., Aleksandra Mišan, Ph.D., Olivera Šimurina, Ph.D. explore modern traditional and genomic breeding methods as they apply to medicinal and aromatic plants. They go on to discuss participatory crop breeding, the significance of genomic tools, and traditional methods of selection throughout Chapter One. In Chapter Two, Jelena Vladica, Senka Vidovica, Milica Acimovicb, Aleksandra Gavarica, and Stela Jokicc discuss the properties and uses of medicinal herbs, especially *Satureja montana* L, noting the way its chemical composition has large inconsistencies that make it difficult to produce products from it. Next, Senka Vidovic, Katarina Savikin, Milica Acimovic, Jelena Vladic, Nada Cujic, Aleksandra Gavaric, and Teodora Jankovic present insight on *Aronia* (also known as chokeberry) in Chapter Three, mainly deliberating on its cultivation, phytochemical properties, health effects and applications, and challenges of use. Similarly, Aleksandra Gavarica, Stela Jokicb, Maja Molnarb, Senka Vidovica, Jelena Vladica, and Milica Acimovicc present a review on *Helichrysum* in Chapter Four. Chapter

Five by Maria Andreza Freitas Martins, Melise Pessôa Araújo, and Jesus Rodrigues Lemos offers a study intending to identify the diversity of native and exotic vegetables in Baixa da Carnaúba backyards in Parnaíba, PI. In Chapter Six, Mladenka Pestorić, Ph.D., Bojana Filipčević, Ph.D., Aleksandra Mišan, Ph.D., and Olivera Šimurina, Ph.D. discuss the propensity for medicinal plants to be used in cereal based product production to combat metabolic disorders. Following this, Chapter Seven by Jorge Izaquiel Alves de Siqueira, Edna Maria Ferreira Chaves, and Jesus Rodrigues Lemos introduce a study aiming to detect medicinal plants in agroforestry yards in Franco, Cocal, Piauí. Usman Ali Ashfaq and Quratulain Tariq provide an overview of the gram positive aerobic bacterium *Staphylococcus* in Chapter Eight. Lastly, Chapter Nine by Anuradha Singh and Anamika Singh elaborates on the biochemical aspects of Tulsi, a medicinal plant worshipped in India as holy.

HB 9781536127287 £219.50 December 2017 Nova Science Publishers 252 pages

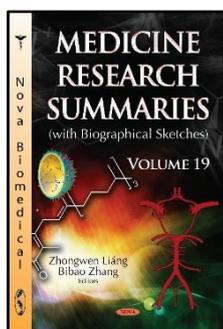


**Medicine Research Summaries (with Biographical Sketches)
Volume 17 (Medicine Research Summaries Series)**

Edited by Zhongwen Liang & Bibao Zhang

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

HB 9781536127515 £185.99 December 2017 Nova Science Publishers 110 pages

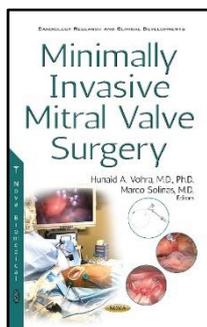


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HB 9781536128086 £185.99 November 2017 Nova Science Publishers 424 pages

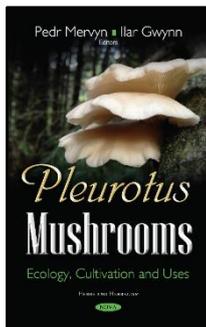


**Minimally Invasive Mitral Valve Surgery
(Cardiology Research & Clinical Developments Series)**

Edited by Hunaid A Vohra

Minimally invasive mitral valve surgery is a relatively new field that cardiac surgeons are increasingly embracing. Its adoption is exponentially increasing, and patients and cardiologists are demanding this with more enthusiasm. This is a current subject of great interest and contemporary results are already present, with more awaiting to be published. The book describes the whole journey through the set-up of a minimally invasive mitral valve surgery program, pertinent investigations, patient selection, different approaches (including endoscopic and robotic), cardio-pulmonary bypass, re-operations and its application with tricuspid and atrial fibrillation surgery. This book is directed to all training cardiac surgeons and cardiologists, consultant cardiac surgeons and cardiologists, anaesthetists, intensive care specialists and perfusionists. This is the first book authored exclusively on this subject. The two editors are leading authorities on this subject in UK and are mentors for many surgical programs. Every chapter is authored by specialists in that particular aspect of minimally invasive mitral valve surgery discussed. The contributors are mainly from USA and Europe.

HB 9781536123609 £152.50 September 2017 Nova Science Publishers 228 pages

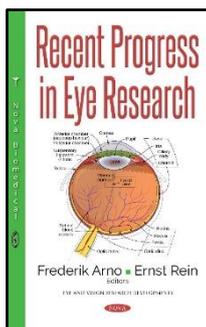


Pleurotus Mushrooms **Ecology, Cultivation & Uses (Herbs & Herbalism Series)**

Edited by Pedr Mervyn & Ilar Gwynn

The first chapter provides an overview of the current knowledge on degradation of natural compounds and xenobiotics via *Pleurotus* fungi, especially focusing on the involvement of metabolic pathways and the catalytic properties of the enzymes. In the second chapter, Maura Téllez-Téllez and Gerardo Díaz-Godínez discuss the fungus *Pleurotus ostreatus* and its nutritious properties and therapeutic applications. Continuing, Hesham El Enshasy, Farid Agouillal, Zarani Mat, Roslinda Abd Malek, Zulaiha Hanapi, and Ong Mei Leng discuss *Pleurotus ostreatus* and its production of enzymes with beneficial properties in the third chapter. In the fourth chapter, Gerhard Gramss and Klaus-Dieter Voigt present data that showcases the role fungi play in food production, as well as their impact on growth technology and enzyme production. Lastly, Noé Aguilar-Rivera, Régulo Carlos Larena-Hernández, Rosalía Núñez-Pastrana, Christian Michel-Cuello, Jie Chen, and Luis Enrique Aquino-Solis present a study evaluating the potential for sugar cane harvest in Veracruz, Mexico.

HB 9781536127386 £152.50 December 2017 Nova Science Publishers 230 pages

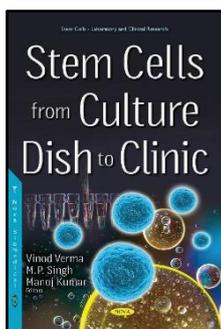


Recent Progress in Eye Research **(Eye & Vision Research Developments Series)**

Edited by Frederik Arno & Ernst Rein

Tania Martín-Pérez, Ángel Criado-Fornelio, Manuel Ávila-Blanco, and Jorge Pérez-Serrano begin this book by reviewing studies that propose species identification should be established on complete gene sequence rather than small fragments that might be unreliable. Afterwards, Eva García Millán, Ana Castro-Balado, Anxo Fernández-Ferreiro, and Francisco J. Otero-Espinar suggest that soft contact lenses have potential to be used as drug delivery systems by way of a medicated lens. Next, Maria J Giraldez, Ph.D., Carlos Garcia-Resua, Ph.D., and Eva Yebra-Pimentel, Ph.D. examine the properties of contact lenses in order to determine a means of reducing microbial contamination. Pablo J Franco, Pablo H Sande, Florencia González Fleitas, Julián D Devouassoux, Georgia Milnes, Hernán H Dieguez, Marcos L Aranda, Damián Dorfman, and Ruth E. Rosenstein present research that shows biologic treatments could be used in uveitis treatment. Following this, Rodrigo Mora-Martínez and Ernesto Suaste-Gómez, Ph.D. explore the impact of chromatic stimuli on various pupillary phenomena to reveal divergences between separate chromaticities. Frederick R Burgess and Roly Megaw provide an overview of the known literature on mesenchymal stem cells physiology. Then, David Lozano Giral, MD, Enrique Graue-Hernández, MD, and Alejandro Navas MD, Ph.D. review the cornea and its properties. Sivan M Elyashiv and Richard B Rosencompare in face OCT images with OCT angiograms in an effort to identify the level of capillary dropout, remodelling, and development of neo-vascularisation.

HB 9781536127614 £152.50 December 2017 Nova Science Publishers 234 pages

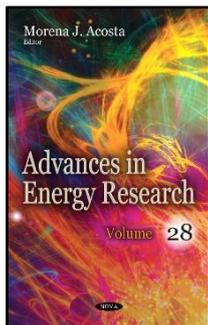


Stem Cells from Culture Dish to Clinic **(Stem Cells -- Laboratory & Clinical Research Series)**

Edited by Vinod Verma, M P Singh, Dr Manoj Kumar

Despite extensive research and medical advancements in the prevention, diagnosis and treatment of dreaded diseases like Diabetes, Cancer, Neurodegenerative and Heart diseases, continue to impose a great threat to human life. Research in human developmental biology has led to the discovery of stem cells which has the potential to cure wide range of dreaded diseases. Stem cells are the unicellular equivalent to the entire animal. In optimum culture milieu they can be differentiated into all cell types of an adult animal. The capability of potency and the relative ease to isolate and expand these cells are invaluable properties for regenerative medicine. Stem cells hold tremendous promise to unravel the key developmental pathways involved in organogenesis and may serve as an essential tissue source for regenerative therapy. Stem cell biology is a fast growing field that is providing new insights into the molecular mechanisms that control developmental processes. At the same time, stem cells may have potential uses in the treatment of devastating diseases such as cardiovascular disease, neurodegenerative disease, musculoskeletal disease, diabetes and cancer. The enormous clinical potential of cardiac regeneration has generated great expectations in both clinicians and patients. Regenerative medicine in the field of skin, cartilage, bone, adipose tissue, and cornea is already well established and is used clinically. Stem cell research harbours potential to have a significant impact on human health. The book will help to increase the awareness vis-à-vis stem cell research in developing countries in particular India. The book pronounces the ways which may help us to extract maximum benefits from state of the art technology. The thrust areas of the proposed book are induced pluripotent stem cells, cord blood stem cells, mesenchymal stem cells, livestock stem cells, amniotic fluid stem cells, role of epigenetics in stem cells, tissue engineering, cancer stem cells, bioinformatics strategies for stem cell research, Protocols for iPS generation and so on.

HB 9781536127324 £219.50 December 2017 Nova Science Publishers 327 pages

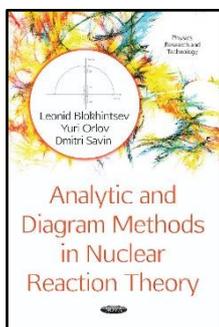


Advances in Energy Research Volume 28 (Advances in Energy Research Series)

Edited by Morena J Acosta

In Chapter One, Zahra Sayyar, Navideh Anarjan, Hoda Jafarizadeh Malmiri, and Aydin Berenjian discuss nanoemulsions and their low-energy and high-energy production methods. They also examine modern techniques for the identification of nanoemulsions and review their stability. Next, Chapter Two by Bogdan-Constantin Neagu and Gheorghe Grigoraş proposes the use of artificial intelligence techniques like clustering and fuzzy modelling to determine slow voltage variations among other things. In Chapter Three, Navideh Anarjan, Hamideh Vaghari, Hoda Jafarizadeh-Malmiri, and Aydin Berenjian explore bioreactor models applied to bioprocesses and solid-state fermentation processes in order to produce pertinent biomolecules for industrial applications. Akihiro Otsuka, PhD explores the correlation between fluctuating electricity rates and demand in Chapter Four. In Chapter Five, Samuel Olusegun David and Gulum Mert present a study wherein biodiesel production via waste cooking oil is examined. Oludolapo and Caroline C Olanrewaju review studies on energy consumption prediction through the application of neural networks, as well as machine and equipment processes, in Chapter Six. Lastly, Takeo Oku and Tatsuo Oku explore the development of carbon/copper-based materials through the addition of titanium in Chapter Seven.

HB 9781536126990 £90.50 December 2017 Nova Science Publishers 165 pages

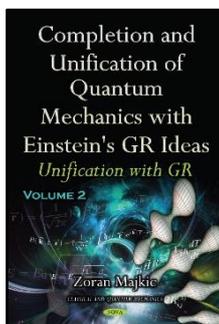


Analytic & Diagram Methods in Nuclear Reaction Theory (Physics Research & Technology Series)

Leonid Blokhintsev, Yuri Orlov, Dmitri Savin

Using the analyticity property of the amplitudes of physical processes allows one to obtain important relations connecting various physical quantities. These relations can be established without specifying the concrete form of the interaction between particles, which is often poorly known. The analytic methods make use of the unitarity property of the S-matrix and the formalism of the Feynman diagrams. The present book is devoted to a systematic description of the analytic and diagram methods in the theory of nuclear reactions at low and intermediate energies. First, a general overview of the unitarity and analyticity properties of the S- and T-matrices is presented. Then the general theory of non-relativistic Feynman diagrams, their specific features and the analytic properties of their amplitudes is described. Three- and four-prong vertex functions of the non-relativistic Feynman diagrams are among the topics that are addressed and discussed, including the important relation between vertex functions and the asymptotic form of the nuclear bound-state wave functions. Specific approaches to describing nuclear reactions, which use analytic and diagram methods are outlined. These methods include the dispersion K-matrix approach, the dispersion relations, and the Trojan horse method. A part of the book deals with the asymptotic normalisation coefficients. ANCs are fundamental nuclear characteristics that are important in nuclear reaction and nuclear structure physics as well as in nuclear astrophysics. They are used actively in the analysis of nuclear reactions, in particular in considering the creation of elements in the Universe. Various methods of determining ANCs are overviewed. One chapter is devoted to the methods of obtaining information on the features of bound nuclear states by an analytic continuation of the scattering data. The analytic continuation of the Lippmann-Schwinger and Faddeev integral equations onto unphysical energy sheets, which can be used for finding the position and width of resonances and the virtual (antibound) states is described. A generalisation of wave function normalisation to the Gamow states is outlined.

PB 9781536128093 £78.50 November 2017 Nova Science Publishers 89 pages



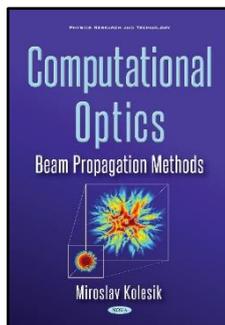
Completion & Unification of Quantum Mechanics with Einstein's GR Ideas Part II -- Unification with GR (Classical & Quantum Mechanics Series)

Zoran Majkic

The proposed completion of QM theory, with the new non-probabilistic equations and a new mathematical basis for the deterministic quantum mechanics is presented here as a conservative extension of the Standard QM by 3-dimensional (of rest mass energy density) elementary particles. This theory can reshape our view of the quantum world, allowing us to include also classical gravity and to answer some of the deep unresolved questions at the heart of quantum mechanics. This new theory of particles is a constructive approach, alternative to the string theory. Thus, it avoids the infinitary problems of the inverse square for gravitational and electric forces, and may be used as a formal basis for Einstein's unification theory. This second volume is the continuation of Part I and is dedicated to its unification with General Relativity (GR) and with higher dimensions used for the particle's properties, such as electrical charge, spin, colours, etc. In Chapter One, after a brief presentation of the main results obtained in Part I, the concepts of GR theory,

tensors, and differential pseudo-Rimannian 4-dimensional time-space manifolds are gradually introduced sufficiently for a self-contained presentation and derivation of these new covariant equations. Then, the unification of this newly completed deterministic QM with the GR theory is provided. Chapter Two introduces and examines the extremely small, compacted higher dimensions in order to integrate the charge and spin properties of the elementary particles in a complete quantum physics theory for elementary particles. Chapter Three considers the higher dimensional wave packets of the particles and their reduction to the 4-dimensional time-space, and particles' vector kets in the higher-dimensional manifold framework. These are composed of Minkowski time-space and new small, compacted dimensions: a spacelike extra dimension for the quantised spin vectors of the particles and time-like extra dimensions for the quantised charges.

HB 9781536119473 £219.50 December 2017 Nova Science Publishers 360 pages



Computational Optics

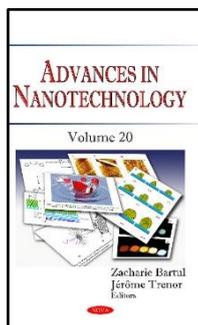
Beam Propagation Methods (Physics Research & Technology Series)

Miroslav Kolesik

This book gives a comprehensive discussion of the theory, numerical methods, and best practices in the field of computer-aided modelling of optical-beam propagation. Derived from a course taught by the author, the textbook is designed to support both independent self-paced study and a traditional semester-long lecture. The book combines two complementary tracks. The theory part provides a detailed, incremental exposition of the physics of optical beam propagation, and a description of the relevant numerical techniques. The practice-track gives an opportunity to put the theory into use by guiding the reader through increasingly sophisticated examples, which cover program design and simulation execution as well as a critical assessment of the results. Written for a readership with modest experience in numerical simulations and programming, this textbook integrates both tracks into a story owing to easy-to-digest increments, covering topics from the basics to the state of the art in the field.

HB 9781536123340 £219.50 September 2017 Nova Science Publishers 330 pages

Technology



Advances in Nanotechnology

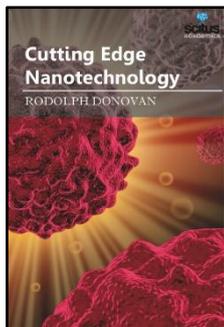
Volume 20 (Advances in Nanotechnology Series)

Edited by Zacharie Bartul, Jérôme Trenor

In this compilation, the authors discuss nanopowders, or powders with a particle size of less than 100 nanometers. Several nanopowder types have effectively been synthesised with potential applications as follows: Fe₃O₄ and BaFe₆O₁₉ (as magnetic materials, microwave absorbent, magnetic fluid and gel), SiO₂ (as fillers to enhance mechanical strength), and CaCO₃ (as coating for corrosive protection, food additives, cosmetics and drugs). This method allows for the production of high purity nanopowders with a moderately narrow crystal size distribution and unique morphology. Next, the innovative approaches to address the lightning strikes and EMI shielding effects on composite aircraft are examined, noting that composite aircraft protection against lightning is more complex due to the anisotropic nature of composite structure and high resistance of carbon in epoxy resins. The authors go on to present results of studies of composite electrochemical coatings modified by nano- and microparticles of various natures are presented, considering the operational properties and structural features of main types of composite coatings. Later, recent advances in synthesising highly ordered Titana nanotubes are explored, with regard to selection of suitable titanium based substrate and electrolyte apart from process parameters.

The authors maintain that by applying individual ingenuity to the described frugal techniques, the reader should be able to form nanofilms of various materials with properties tailored to suit the intended application. Afterwards, the authors describe the soft, hard templated, and hierarchically ordered strategies concerning nanotechnology applied to fabricate porous carbon materials. Additionally, relevant advantages and disadvantages aim to provide the vital information about the growing field for future energy to minimize the potential environmental risks. Moving on, the authors introduce new research and related literature concerning the synthesis of cobalt diselenide nanoneedle arrays for efficient hydrogen evolution electrolysis. Future aspects for improving the performance of transition metal dichalcogenide-based electrocatalytic electrodes are also examined. Lastly, a study on formation of nanoporous silicon and germanium layers with silver nanoparticles by low-energy high-dose ion implantation is presented. The authors suggest ion implantation for the formation of nanoporous semiconductor thin layers, which could be easily combined with the crystalline matrix for various applications.

HB 9781536129021 £238.50 December 2017 Nova Science Publishers 194 pages

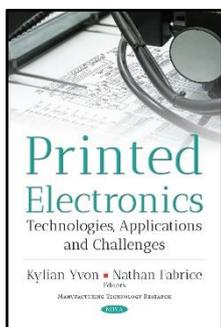


Cutting Edge Nanotechnology (Nanotechnology Series)

Rodolph Donovan

Nanotechnology is science, engineering, and technology conducted at the nanoscale, which is about 1 to 100 nanometers. Nanotechnology is the study and application of extremely small things and can be used across all the other science fields, such as chemistry, biology, physics, materials science, and engineering. This covers both current work and concepts that are more advanced. In its original sense, nanotechnology refers to the projected ability to construct items from the bottom up, using techniques and tools being developed today to make complete, high performance products. That world is the field of nanotechnology, the realm of atoms and nanostructures. Nanotechnology is so new, no one is really sure what will come of it. Even so, predictions range from the ability to reproduce things like diamonds and food to the world being devoured by self-replicating nanorobots. Scientists currently discuss the future implications of nanotechnology. Nanotechnology may be able to create many new materials and devices with a vast range of applications, such as in medicine, electronics, biomaterials energy production, and consumer products. On the other hand, nanotechnology raises many of the same issues as any new technology, including concerns about the toxicity and environmental impact of nanomaterials, and their potential effects on global economics, as well as speculation about various doomsday scenarios. The main aim of this book, Cutting Edge Nanotechnology, is to describe important concerns in innumerable types of devices ranging from conventional transistors to molecular electronic devices. The book can serve as a guide for identifications of important areas of research in micro, nano and molecular electronics.

HB 9781681173153 £141.50 January 2017 Scitus Academic 296 pages



Printed Electronics Technologies, Applications & Challenges (Manufacturing Technology Research Series)

Edited by Kylian Yvon & Nathan Fabrice

In the first chapter, Urška Vrabič; Brodnjak, Ph.D., Deja Muck, Ph.D., Helena Gabrijel; Tomc, Ph.D., and Igor Karlovits, Ph.D. provide a review of the many facets of printed smart labels in packaging, including the categorisation, materials, techniques, environmental impacts, applications, and future trends. In the second chapter, Maja Klan;nik, Ph.D., Helena Gabrijel; Tomc, Ph.D., Diana Gregor Svetec, Ph.D., Marica Starešini; Ph.D., and Tatjana Rijavec, Ph.D. give an overview of electrically conductive materials, fibres, inks, and printing solutions. In the third and final chapter, Umit Y. Ogras, Ujjwal Gupta, Jaehyun Park, and Ganapati Bhat compare FHE systems-on-polymer with traditional systems-on-chip.

PB 9781536127973 £78.50 November 2017 Nova Science Publishers 88 pages



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