Xg Series Xg 3358 Hardware Manual Apnet Co Jp

2.6.2 Electrodes for Electrochemistry

This book is a printed edition of the Special Issue "Transport of Fluids in Nanoporous Materials" that was published in Processes

This book provides comprehensive coverage of 3D vision systems, from vision models and state-of-the-art algorithms to their hardware architectures for implementation on DSPs, FPGA and ASIC chips, and GPUs. It aims to fill the gaps between computer vision algorithms and real-time digital circuit implementations, especially with Verilog HDL design. The organization of this book is vision and hardware module directed, based on Verilog vision modules, 3D vision modules, parallel vision architectures, and Verilog designs for the stereo matching system with various parallel architectures. Provides Verilog vision simulators, tailored to the design and testing of general vision chips Bridges the differences between C/C++ and HDL to encompass both software realization and chip implementation; includes numerous examples that realize vision algorithms and general vision processing in HDL Unique in providing an organized and complete overview of how a real-time 3D vision system-on-chip can be designed Focuses on the digital VLSI aspects and implementation of digital signal processing tasks on hardware platforms such as ASICs and FPGAs for 3D vision systems, which have not been comprehensively covered in one single book Provides a timely view of the pervasive use of vision systems and the challenges of fusing information from different vision modules Accompanying website includes software and HDL code packages to enhance further learning and develop advanced systems A solution set and lecture slides are provided on the book's companion website The book is aimed at graduate students and researchers in computer vision and embedded systems, as well as chip and FPGA designers. Senior undergraduate students specializing in VLSI design or computer vision will also find the book to be helpful in understanding advanced applications.

This book contains eight chapters that discuss the manufacturing methods, surface treatment, composite interfaces, microstructure-property relationships with underlying fundamental physical and mechanical principles, and applications of carbon fibers and their composites. Recently, carbon-based materials have received much attention for their many potential applications. The carbon fibers are very strong, stiff, and lightweight, enabling the carbon materials to deliver improved performance in several applications such as aerospace, sports, automotive, wind energy, oil and gas, infrastructure, defense, and semiconductors. However, the use of carbon fibers in cost-sensitive, high-volume industrial applications is limited because of their relatively high costs. However, its production is expected to increase because of its widespread use in high-volume industrial applications; therefore, the methods used for manufacturing carbon fibers and carbon-fiber-reinforced composites and their structures and characteristics need to be investigated.

Synthesis, Characteristics and Applications

From Design to Applications

Fundamentals of Power System Protection

Proceedings of ICMLCI 2019

Operations Research Handbook

Smart Technologies for Energy, Environment and Sustainable Development

PCMag.com is a leading authority on technology, delivering Labs-based, independent reviews of the latest products and services. Our expert industry analysis and practical solutions help you make better buying decisions and get more from technology.

Aeronautical Engineer's Data Bookis an essential handy guide containing useful up to date information regularly needed by the student or practising engineer. Covering all aspects of aircraft, both fixed wing and rotary craft, this pocket book provides quick access to useful aeronautical engineering data and sources of information for further in-depth information. Quick reference to essential data Most up to date information available

The Kenya Gazette is an official publication of the government of the Republic of Kenya. It contains notices of new legislation, notices required to be published by law or policy as well as other announcements that are published for general public information. It is published every week, usually on Friday, with occasional releases of special or supplementary editions within the week.

The term 'nonclassical states' refers to the quantum states that cannot be produced in the usual sources of light, such as lasers or lamps, rather than those requiring more sophisticated apparatus for their production. Theory of Non-classical States of Light describes the current status of the theory of nonclassical states of light including many new and important results as well as introductory material and the history of the subject. The authors concentrate on the most important types of nonclassical states, namely squeezed, even/odd ('Schrodinger cat') and binomial states, including their generalizations. However, a review of other types of nonclassical is also given in the introduction, and methods for generating nonclassical states on various processes of light-matter interaction, their phase-space description, and the time evolution of nonclassical states in these processes is presented in separate chapters. This contributed volume contains all of the necessary formulae and references required to gain a good understanding of the principles and current status of the field. It will provide a valuable information resource for advanced students and researchers in quantum physics.

Preparation, Properties, and Applications
Aeronautical Engineer's Data Book
Lithium-ion Batteries
Polystyrene
Select Proceedings of ICSTEESD 2018
Plasmonics and its Applications

Rubber Nanocomposites: Preparation, Properties and Applications focuses on the preparation, characterization and properties of natural and synthetic rubber nanocomposites. The book carefully debates the preparation of unmodified and modified nanofillers, various manufacturing techniques of rubber nanocomposites, structure, morphology and properties of nanocomposites. The text reviews the processing; characterization and properties of 0-, 1D and 2D nanofiller reinforced rubber nanocomposites. It examines the polymer/filler interaction, i.e., the compatibility between matrix and filler using unmodified and modified nanofillers. The book also examines the applications of rubber nanocomposites in various engineering fields, which include tyre engineering. The book also examines the current state of the art, challenges and applications in the field of rubber nanocomposites. The handpicked selection of topics and expert contributions make this survey of rubber nanocomposites an outstanding resource for anyone involved in the field of polymer materials design. A handy "one stop" reference resource for important research accomplishments in the area of rubber nanocomposites. Covers the various aspects of preparation, characterization, morphology, properties and applications of rubber nanocomposites. Summarizes many of the recent technical research accomplishments in the area of nanocomposites, in a comprehensive manner It covers an up to date record on the major findings and observations in the field

This book comprises select proceedings of the International Conference on Smart Technologies for Energy, Environment, and Sustainable Development (ICSTEESD 2018). The chapters are broadly divided into three focus areas, viz. energy, environment, and sustainable development, and discusses the relevance and applications of smart technologies in these fields. A wide variety of topics such as renewable energy, energy conservation and management, energy policy and planning, environmental management, marine environment, green building, smart cities, smart transportation are covered in this book. Researchers and professionals from varied engineering backgrounds contribute chapters with an aim to provide economically viable solutions to sustainable development challenges. The book will prove useful for academics, professionals, and policy makers interested in sustainable development.

Active Coatings for Smart Textiles presents the latest information on active materials and their application to textiles in the form of coatings and finishes for the purpose of improving performance and creating active functional effects. This important book provides detailed coverage of smart coating types, processes, and applications. After an introduction to the topic, Part One introduces various types of smart and active coatings, including memory polymer coatings, durable and self-cleaning coatings, and breathable coatings. Technologies and related processes for the application of coatings to textiles is the focus of Part Two, with chapters devoted to microencapsulation technology, plasma surface treatments, and nanotechnology-based treatments. The book ends with a section on applications of smart textiles with responsive coatings, which are increasingly finding commercial niches in sportswear, protective clothing, medical textiles, and architecture. Introduces various types of smart and active coatings for textiles Covers technologies and application processes for the coating and finishing of textiles Reviews commercial applications of such coatings, including in sportswear, protective clothing, medical textiles and architecture

Gas separation membranes offer a number of benefits over other separation technologies, and they play an increasingly important role in reducing the environmental impacts and costs of many industrial processes. This book describes recent and emerging results in membrane gas separation, including highlights of nanoscience and technology, novel polymeric and inorganic membrane materials, new membrane approaches to solve environmental problems e.g. greenhouse gases, aspects of membrane engineering, and recent achievements in industrial gas separation. It includes: Hyperbranched polyimides, amorphous glassy polymers and perfluorinated copolymers Nanocomposite (mixed matrix) membranes Polymeric magnetic membranes Sequestration of CO2 to reduce global warming Industrial applications of gas separation Developed from sessions of the most recent International Congress on Membranes and Membrane Processes, Membrane Gas Separation gives a snapshot of the current situation, and presents both fundamental results and

applied achievements.
Thermochemical Aspects of Combustion
Monuments Illustrating New Comedy
Stem Cells in Aesthetic Procedures
Carbons for Electrochemical Energy Storage and Conversion Systems
Metal-Organic Framework
From Algorithm to Chip with Verilog
Lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the NASA Scientific and Technical Information Database.
Architectures for Computer VisionFrom Algorithm to Chip with VerilogJohn Wiley & Sons
"This is the first machine-generated scientific book in chemistry published by Springer Nature. Serving as an innovative prototype defining the current status of the technology, it also provides an overview about the latest trends of lithium-ion batteries research. This book explores future ways of informing researchers and professionals. State-of-the-art computer algorithms were applied to: select relevant sources from Springer Nature publications, arrange these in a topical order, and provide succinct summaries of these articles. The result is a cross-corpora auto-summarization of current texts, organized by means of a similarity-based clustering routine in coherent chapters and sections. This book summarizes more than 150 research articles published from 2016 to 2018 and provides an informative and concise overview of recent research into anode and cathode materials as well as further aspects such as separators, polymer electrolytes, thermal behavior and modelling. With this prototype, Springer Nature has begun an innovative journey to explore the field of machine-generated content and to find answers to the manifold questions on this fascinating topic. Therefore it was intentionally decided not to manually polish or copy-edit any of the texts so as to highlight the current status and remaining boundaries of machine-generated content. Our goal is to initiate a broad discussion, together with the research community and domain experts, about the future opportunities, challenges and limitations of this technology."--Publisher's website.
Plants have to manage a series of environmental stresses throughout their entire lifespan. Among these, abiotic stress is the most detrimental; one that is responsible for nearly 50% of crop yield reduction and appears to be a potential threat to global food security in coming decades. Plant growth and development reduces drastically due to adverse effects of abiotic stresses. It has been estimated that crop can exhibit only 30% of their genetic potentiality under abiotic stress condition. So, this is a fundamental need to understand the stress responses to facilitate breeders to develop stress resistant and stress tolerant cultivars along with good management practices to withstand abiotic stresses. Also, a holistic approach to understanding the molecular and biochemical interactions of plants is important to implement the knowledge of resistance mechanisms under abiotic stresses. Agronomic practices like selecting cultivars that is tolerant to wide range of climatic condition, planting date, irrigation scheduling, fertilizer management could be some of the effective short-term adaptive tools to fight against abiotic stresses. In addition, “system biology” and “omics approaches” in recent studies offer a long-term opportunity at the molecular level in dealing with abiotic stresses. The genetic approach, for example, selection and identification of major conditioning genes by linkage mapping and quantitative trait loci (QTL), production of mutant genes and transgenic introduction of novel genes, has imparted some tolerant characteristics in crop varieties from their wild ancestors. Recently research has revealed the interactions between micro-RNAs (miRNAs) and plant stress responses exposed to salinity, freezing stress and dehydration. Accordingly transgenic approaches to generate stress-tolerant plant are one of the most interesting researches to date. This book presents the recent development of agronomic and molecular approaches in conferring plant abiotic stress tolerance in an organized way. The present volume will be of great interest among research students and teaching community, and can also be used as reference material by professional researchers.
Statistics of the Foreign Trade of India by Countries
Gulf War and Health
Foundations of Trusted Autonomy
PC Mag
United Methodist Church Book of Discipline 2016
Membrane Gas Separation
The term “total petroleum hydrocarbons” (TPHs) is used for any mixture of several hundred hydrocarbons found in crude oil, and they represent the sum of volatile petroleum hydrocarbons and extractable petroleum hydrocarbons. The petrol-range organics include hydrocarbons from C6 to C10, while diesel-range organics are C10-C28 hydrocarbons. Environmental pollution by petroleum hydrocarbons is one of the major global concerns, particularly in oil-yielding countries. In fact, there are more than five million potentially contaminated areas worldwide that represent, in general, a lost economic opportunity and a threat to the health and well-being of humans and the environment. Petroleum-contaminated sites constitute almost one-third of the total sites polluted with chemicals around the globe. The land contamination caused by industrialization was recognized as early as the 1960s, but less than a tenth of potentially contaminated lands have been remediated due to the nature of the contamination, cost, technical impracticability, and insufficient land legislation and enforcement. This book is the first single source that provides comprehensive information on the different aspects of TPHs, such as sources and range of products, methods of analysis, fate and bioavailability, ecological implications including impact on human health, potential approaches for bioremediation such as risk-based remediation, and regulatory assessment procedures for TPH-contaminated sites. As such, it is a valuable resource for researchers, graduate students, technicians in the oil industry and remediation

practitioners, as well as policy makers.

This book provides a comprehensive overview of contemporary basic research, emerging technology, and commercial and industrial applications associated with the electrophoretic deposition of nanomaterials. This presentation of the subject includes an historical survey, the underlying theory of electrophoresis, dielectrophoresis, and the colloidal deposition of materials. This is followed by an assessment of the experimental equipment and procedures for electrophoretic and dielectrophoretic aggregation, manipulation, and deposition of nanoparticles, nanotubes, and other nanomaterials. Additional chapters explore the specific science and technology of electrophoretic film formation, using widely studied and application-driven nanomaterials, such as carbon nanotubes, luminescent nanocrystals, and nano-ceramics. The concluding chapters explore industrial applications and procedures associated with electrophoretic deposition of nanomaterials.

The series Topics in Current Chemistry Collections presents critical reviews from the journal Topics in Current Chemistry organized in topical volumes. The scope of coverage is all areas of chemical science including the interfaces with related disciplines such as biology, medicine and materials science. The goal of each thematic volume is to give the non-specialist reader, whether in academia or industry, a comprehensive insight into an area where new research is emerging which is of interest to a larger scientific audience.Each review within the volume critically surveys one aspect of that topic and places it within the context of the volume as a whole. The most significant developments of the last 5 to 10 years are presented using selected examples to illustrate the principles discussed. The coverage is not intended to be an exhaustive summary of the field or include large quantities of data, but should rather be conceptual, concentrating on the methodological thinking that will allow the non-specialist reader to understand the information presented. Contributions also offer an outlook on potential future developments in the field.

This third edition of the classic on the thermochemical aspects of the combustion of propellants and explosives is completely revised and updated and now includes a section on green propellants and offers an up-to-date view of the thermochemical aspects of combustion and corresponding applications. Clearly structured, the first half of the book presents an introduction to pyrodynamics, describing fundamental aspects of the combustion of energetic materials, while the second part highlights applications of energetic materials, such as propellants, explosives and pyrolants, with a focus on the phenomena occurring in rocket motors. Finally, an appendix gives a brief overview of the fundamentals of aerodynamics and heat transfer, which is a prerequisite for the study of pyrodynamics. A detailed reference for readers interested in rocketry or explosives technology.

Risk Factors for Alzheimer's Disease

Electrophoretic Deposition of Nanomaterials

Environmental Fate, Toxicity, and Remediation

Plant Abiotic Stress Tolerance

A Machine-generated Summary of Current Research

Architectures for Computer Vision

As carbons are widely used in energy storage and conversion systems, there is a rapidly growing need for an updated book that describes their physical, chemical, and electrochemical properties. Edited by those responsible for initiating the most progressive conference on Carbon for Energy Storage and Environment Protection (CESEP), this book undoub

Welcometotheproceedingsofthe2ndInternationalSymposiumonParalleland Distributed Processing and Applications (ISPA2004) which was held in Hong Kong, China, 13–15 December, 2004. With the advance of computer networks and hardware technology, parallel and distributed processing has become a key technology which plays an imp- tant part in determining future research and development activities in many academic and industrial branches. It provides a means to solve computati- ally intensive problems by improving processing speed. It is also the only - ableapproachtobuildinghighlyreliableandinherentlydistributedapplications. ISPA2004 provided a forum for scientists and engineers in academia and ind- try to exchange and discuss their experiences, new ideas, research results, and applications about all aspects of parallel and distributed computing. There was a very large number of paper submissions (361) from 26 countries and regions, including not only Asia and the Paci?c, but also Europe and North America. All submissions were reviewed by at least three program or technical committee members or external reviewers. It was extremely di?cult to select the presentations for the conference because there were so many excellent and interesting submissions. In order to allocate as many papers as possible and keep the high quality of the conference, we ?nally decided to accept 78 regular papers and 38 short papers for oral technical presentations. We believe that all of these papers and topics not only provide novel ideas, new results, work in progress and state-of-the-art techniques in this ?eld, but also stimulate the future research activities in the area of parallel and distributed computing with applications.

Many veterans returning from the conflicts in Iraq and Afghanistan have health problems they believe are related to their exposure to the smoke from the burning of waste in open-air "burn pits" on military bases. Particular controversy surrounds the burn pit used to dispose of solid waste at Joint Base Balad in Iraq, which burned up to 200 tons of waste per day in 2007. The Department of Veterans Affairs asked the

IOM to form a committee to determine the long-term health effects from exposure to these burn pits. Insufficient evidence prevented the IOM committee from developing firm conclusions. This report, therefore, recommends that, along with more efficient data-gathering methods, a study be conducted that would evaluate the health status of service members from their time of deployment over many years to determine their incidence of chronic diseases.

This revised second edition is improved linguistically with multiple increases of the number of figures and the inclusion of several novel chapters such as actin filaments during matrix invasion, microtubuli during migration and matrix invasion, nuclear deformability during migration and matrix invasion, and the active role of the tumor stroma in regulating cell invasion.

Kenya Gazette

Art, Science, and Clinical Techniques

Physics of Cancer

Advances in Machine Learning and Computational Intelligence

Volume 11: Generational Health Effects of Serving in the Gulf War

Biomaterials for Bone Regeneration

Interest in the use of stem cells in aesthetic procedures has been increasing rapidly, reflecting the widespread acknowledgment of the tremendous potential of stem cell fat transfer. This is, however, the first book to be devoted entirely to the subject. The book opens by reviewing the history of the development of pluripotent stem cells and the results of research into the biochemistry and physiology of stem cells. Adipose tissue anatomy and survival are discussed and the wide range of aesthetic procedures involving stem cell fat transfer are then described in detail. These procedures relate to the face, breast, buttocks, legs, hands, penis and Poland syndrome. In addition, potential risks and complications are identified. The book has been written by leading experts and will be an invaluable source of information for students, beginners and experienced surgeons in a range of specialties.

This book gathers selected high-quality papers presented at the International Conference on Machine Learning and Computational Intelligence (ICMLCI-2019), jointly organized by Kunming University of Science and Technology and the Interscience Research Network, Bhubaneswar, India, from April 6 to 7, 2019. Addressing virtually all aspects of intelligent systems, soft computing and machine learning, the topics covered include: prediction; data mining; information retrieval; game playing; robotics; learning methods; pattern visualization; automated knowledge acquisition; fuzzy, stochastic and probabilistic computing; neural computing; big data; social networks and applications of soft computing in various areas.

Plasmonics is a rapidly developing field that combines fundamental research and applications ranging from areas such as physics to engineering, chemistry, biology, medicine, food sciences, and the environmental sciences. Plasmonics appeared in the 1950s with the discovery of surface plasmon polaritons. Plasmonics then went through a novel propulsion in the mid-1970s, when surface-enhanced Raman scattering was discovered. Nevertheless, it is in this last decade that a very significant explosion of plasmonics and its applications has occurred. Thus, this book provides a snapshot of the current advances in these various areas of plasmonics and its applications, such as engineering, sensing, surface-enhanced fluorescence, catalysis, and photovoltaic devices.

A compilation of researchers' experience in the areas of bioanalysis, pharmacokinetics, and drug metabolism, to present an up-to-date and comprehensive treatise on the application of these and related technologies in drug discovery, development, and clinical use. Contents cover descriptions of analytical methods, in vitro metabolism technology and membrane transport, reappraisal of classical pharmacokinetic problems, and the time course of drug action. The book concludes with a description of PET and imaging methods in pharmacokinetics and an appendix containing a critical appraisal of computer methods and pharmacokinetic software available for PCs.

Pharmacokinetics of Drugs

Bacteriological Analytical Manual

Parallel and Distributed Processing and Applications

Agronomic, Molecular and Biotechnological Approaches

Popular Photography

Second International Symposium, ISPA 2004, Hong Kong, China, December 13-15, 2004, Proceedings

Polystyrene represents one of the oldest and the most widespread polymers in the world. Its starts as far back as 1839 when a German apothecary Edmon Simon distilled an oily liquid named styrol from the

resin of Turkish sweet gum trees. In several days, the sterol converted into a jelly product that he thought resulted from the oxidation process. For that reason, the jelly product received the name styroloxide. This book discusses the synthesis of polystyrene, as well as the characteristics and applications of this polymer.

Since the publication of the second edition of this handbook in 1993, the field of photochemical sciences has continued to expand across several disciplines including organic, inorganic, physical, analytical, and biological chemistries, and, most recently, nanosciences. Emphasizing the important role light-induced processes play in all of these fie

This book establishes the foundations needed to realize the ultimate goals for artificial intelligence, such as autonomy and trustworthiness. Aimed at scientists, researchers, technologists, practitioners, and students, it brings together contributions offering the basics, the challenges and the state-of-the-art on trusted autonomous systems in a single volume. The book is structured in three parts, with chapters written by eminent researchers and outstanding practitioners and users in the field. The first part covers foundational artificial intelligence technologies, while the second part covers philosophical, practical and technological perspectives on trust. Lastly, the third part presents advanced topics necessary to create future trusted autonomous systems. The book augments theory with real-world applications including cyber security, defence and space.

Novel Biomaterials for Bone Regeneration provides a comprehensive review of currently available biomaterials and how they can be applied in bone regeneration. In recent decades, there has been a shift from the idea of using biomaterials as passive substitutes for damaged bones towards the concept of biomaterials as aids for the regeneration of a host's own bone tissue. This has generated an important field of research and a range of technological developments. Part one of this book discusses a wide range of materials, including calcium phosphate cements, hydrogels, biopolymers, synthetic polymers, and shape memory polymers. Part two then turns to the processing and surface modification of biomaterials, as well as how biomaterials can be evaluated both for their mechanical properties and for immunocompatibility with the host. Finally, part three covers a variety of cellular approaches, and production and delivery of biomaterials for bone regeneration. Chapters also consider the potential of electromagnetic and ultrasonic stimulation of biomaterials to aid in the regenerative process. Novel Biomaterials for Bone Regeneration represents an important resource for academics, clinicians, and industry professionals working in the area of biomedical materials, providing them with both an overview of the current state-of-the-art, and an indication of potential future developments. Provides comprehensive coverage of novel materials, techniques, and applications of biomaterials for bone regeneration Provides vital information on the various types of materials used in bone regeneration Discusses processing, modification, and evaluation techniques of biomaterials, and looks at cellular approaches and stimulation of biomaterials for bone regeneration

Transport of Fluids in Nanoporous Materials

Carbon Fibers

Liquid Cell Electron Microscopy

Novel Techniques and Applications

Handbook of Photochemistry

Long-Term Health Consequences of Exposure to Burn Pits in Iraq and Afghanistan

For the United States, the 1991 Persian Gulf War was a brief and successful military operation with few injuries and deaths. However, soon after returning from duty, a large number of veterans began reporting health problems they believed were associated with their service in the Gulf. At the request of Congress, the National Academies of Sciences, Engineering, and Medicine has been conducting an ongoing review of the evidence to determine veterans' long-term health problems and potential causes. Some of the health effects identified by past reports include post-traumatic stress disorders, other mental health disorders, Gulf War illness, respiratory effects, and self-reported sexual dysfunction. Veterans' concerns regarding the impacts of deployment-related exposures on their health have grown to include potential adverse effects on the health of their children and grandchildren. These concerns now increasingly involve female veterans, as more women join the military and are deployed to war zones and areas that pose potential hazards. Gulf War and Health: Volume 11 evaluates the scientific and medical literature on reproductive and developmental effects and health outcomes associated with Gulf War and Post-9/11 exposures, and designates research areas requiring further scientific study on potential health effects in the descendants of veterans of any era.

Rubber Nanocomposites

Active Coatings for Smart Textiles

Standard Algorithms and Methods with Examples

Theory of Nonclassical States of Light

Propellants and Explosives