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somatostatin was discovered in 1971 by guillemin and his colleagues during their search for the hypothalamic growth hormone releasing factor a peptide was found in ovine hypothalamus which inhibited the release of growth hormone from cultured anterior pituitary cells 1 2 determination 3 of its amino acid sequence indicated that it was a tetradecapeptide with a molecular weight of 1639 figure lj an identical peptide was later isolated from porcine hypothalamus by schally and his coworkers 4 the peptide was named somatostatin in the belief that it was a hypothalamic releasing factor whose sole function was to inhibit the secretion of growth hormone it soon became evident however that a peptide with identical immunologic characteristics and biologic activity was present in the d cells of pancreatic islets in d like cells of the gastrointestinal tract in parafollicular cells of the thyroid gland and in extrahypo thalamic neurons of both the central and peripheral nervous system in various species including man moreover studies employing synthetic somatostatin5 demonstrated that the peptide possessed a wide spectrum of biologic activities in addition to its inhibition of growth hormone 56 s 0 mat 0 s tat i n 6 1 2 3 4 5 7 ala gly cys lys asn phe phe i i s trp 8 l s 9 i i cys ser thr phe thr 14 13 12 11 10 fig 1 structure of somatostatin 57 ii general distribution and actions somatostatin is widely distributed within both the central and peripheral nervous systems and in various other tissues table 1 this two volume set constitutes reviewed and selected papers from the 12th international advanced computing conference iacc 2022 held in hyderabad india in december 2022 the 72 full papers and 6 short papers presented in the volume were thorougly reviewed and selected from 415 submissions the papers are organized in the following topical sections ai in industrial applications application

of ai for disease classification and trend analysis design of agricultural applications using ai disease classification using cnn innovations in ai system security and communication using ai use of ai in human psychology use of ai in music and video industries written and edited by leading international authorities in the field this book provides an in depth review of knowledge of tuberculosis of the central nervous system with emphasis on clinical diagnostics and therapeutic features tuberculosis one of the most lethal diseases in human history still poses a serious threat in the world together with economic and social problems although a great progress in the fight against this infectious disease in the last century it covers the full range of tuberculosis of central nervous system and the chapters are organized into six sections 1 the cranial 2 the spinal and 3 the peripheral portions of the nervous system followed by 4 a section on the laboratory studies in tuberculosis 5 a section on medical and surgical therapy and 6 further insights into tuberculosis this comprehensive reference book will be an ideal source for neurosurgeons neurologists and specialists upon infectious diseases seeking both basic and more sophisticated information and surgical procedures relating to the complications associated with tuberculosis involving the spine brain and peripheral nerves current vision systems are designed to perform in normal weather condition however no one can escape from severe weather conditions bad weather reduces scene contrast and visibility which results in degradation in the performance of various computer vision algorithms such as object tracking segmentation and recognition thus current vision systems must include some mechanisms that enable them to perform up to the mark in bad weather conditions such as rain and fog rain causes the spatial and temporal intensity variations in images or video frames these intensity changes are due to the random distribution and high velocities of the raindrops fog causes low contrast and whiteness in the image and leads to a shift in the color this book has studied rain and fog from the perspective of vision the book has two main goals 1 removal of rain from videos captured by a moving and static camera 2 removal of the

fog from images and videos captured by a moving single uncalibrated camera system the book begins with a literature survey pros and cons of the selected prior art algorithms are described and a general framework for the development of an efficient rain removal algorithm is explored temporal and spatiotemporal properties of rain pixels are analyzed and using these properties two rain removal algorithms for the videos captured by a static camera are developed for the removal of rain temporal and spatiotemporal algorithms require fewer numbers of consecutive frames which reduces buffer size and delay these algorithms do not assume the shape size and velocity of raindrops which make it robust to different rain conditions i e heavy rain light rain and moderate rain in a practical situation there is no ground truth available for rain video thus no reference quality metric is very useful in measuring the efficacy of the rain removal algorithms temporal variance and spatiotemporal variance are presented in this book as no reference quality metrics an efficient rain removal algorithm using meteorological properties of rain is developed the relation among the orientation of the raindrops wind velocity and terminal velocity is established this relation is used in the estimation of shape based features of the raindrop meteorological property based features helped to discriminate the rain and non rain pixels most of the prior art algorithms are designed for the videos captured by a static camera the use of global motion compensation with all rain removal algorithms designed for videos captured by static camera results in better accuracy for videos captured by moving camera qualitative and quantitative results confirm that probabilistic temporal spatiotemporal and meteorological algorithms outperformed other prior art algorithms in terms of the perceptual quality buffer size execution delay and system cost the work presented in this book can find wide application in entertainment industries transportation tracking and consumer electronics table of contents acknowledgments introduction analysis of rain dataset and performance metrics important rain detection algorithms probabilistic approach for detection and removal of rain impact of camera motion on detection of rain meteorological approach

for detection and removal of rain from videos conclusion and scope of future work bibliography authors biographies this volume contains the lectures presented at the nato advanced study institute that took place at the university of delaware newark delaware july 18 27 1982 the purpose of this institute was to provide an international forum for exchange of ideas and dissemination of knowledge on some selected topics in mechanics of fluids in porous media processes of transport of such extensive quantities as mass of a phase mass of a component of a phase momentum and or heat occur in diversified fields such as petroleum reservoir engineer ing groundwater hydraulics soil mechanics industrial filtration water purification wastewater treatment soil drainage and irri gation and geothermal energy production in all these areas scientists engineers and planners make use of mathematical models that describe the relevant transport processes that occur within porous medium domains and enable the forecasting of the future state of the latter in response to planned activities the mathe matical models in turn are based on the understanding of phenomena often within the void space and on theories that re late these phenomena to measurable quantities because of the pressing needs in areas of practical interest such as the develop ment of groundwater resources the control and abatement of groundwater contamination underground energy storage and geo thermal energy production a vast amount of research efforts in all these fields has contributed especially in the last t o decades to our understanding and ability to describe transport phenomena the most feared attribute of the human pathogen vibrio cholerae is its ability to cause outbreaks that spread like wildfire completely overwhelming public health systems and causing widespread suffering and death this volume starts with a description of the contrasting patterns of outbreaks caused by the classical and el tor biotypes of v cholerae subsequent chapters examine cholera outbreaks in detail including possible sources of infection and molecular epidemiology on three different continents the emergence of new clones through the bactericidal selection process of lytic cholera phages the circulation and transmission of clones of the

pathogen during outbreaks and novel approaches to modeling cholera outbreaks a further contribution deals with the application of the genomic sciences to trace the spread of cholera epidemics and how this information can be used to control cholera outbreaks the book closes with an analysis of the potential use of killed oral cholera vaccines to stop the spread of cholera outbreaks theory of electric polarization volume ii dielectrics in time dependent fields focuses on the processes reactions and principles involved in the application of dielectrics in time dependent fields as well as the kerr effect statistical mechanics and polarization the publication first examines the phenomenological theory of linear dielectrics in time dependent fields empirical description of dielectric relaxation and the relationship between macroscopic and molecular dielectric relaxation behavior concerns cover the relationship between macroscopic and microscopic correlation functions statistical mechanics of linear dissipative systems and the relationship between response functions and correlation functions superpositions of distribution functions and the use of complex dielectric constant in problems with time dependent field sources the book then ponders on the dipole correlation function polarization in the infrared and optical frequency range and the kerr effect and related phenomena discussions focus on the kerr effect in condensed systems extensions of the kerr effect extrapolation of the refractive index to infinite wavelength results obtained from computer simulations rotational diffusion and general aspects of molecular reorientation the manuscript tackles the dielectric properties of molecular solids and liquid crystals and experimental determination of permanent dipole and quadrupole moments the text is a valuable source of data for researchers interested in the application of dielectrics in time dependent fields this book comprises select peer reviewed papers from the international conference on emerging trends in electromechanical technologies management temt 2019 the focus is on current research in interdisciplinary areas of mechanical electrical electronics and information technologies and their management from design to market the book covers a wide range

of topics such as computer integrated manufacturing additive manufacturing materials science and engineering simulation and modelling finite element analysis operations and supply chain management decision sciences business analytics project management and sustainable freight transportation the book will be of interest to researchers and practitioners of various disciplines in particular mechanical and industrial engineering this book tells the story of how the science of computational multiphase flow began in an effort to better analyze hypothetical light water power reactor accidents including the loss of coolant accident written in the style of a memoir by an author with 40 years engineering research experience in computer modeling of fluidized beds and slurries multiphase computational fluid dynamics and multiphase flow most recently at argonne national laboratory the book traces how this new science developed during this time into relap5 and other computer programs to encompass realistic descriptions of phenomena ranging from fluidized beds for energy and chemicals production slurry transport pyroclastic flow from volcanoes hemodynamics of blood borne cells and flow of granular particulates such descriptions are not possible using the classical single phase navier stokes equations whereas many books on computational techniques and computational fluid dynamics have appeared they do not trace the historical development of the science in any detail and none touch on the beginnings of multiphase science a robust process rich account of technologic evolution the book is ideal for students and practitioners of mechanical chemical nuclear engineering and the history of science and technology pratiyogita darpan monthly magazine is india s largest read general knowledge and current affairs magazine pratiyogita darpan english monthly magazine is known for quality content on general knowledge and current affairs topics ranging from national and international news issues personality development interviews of examination toppers articles write up on topics like career economy history public administration geography polity social environment scientific legal etc solved papers of various examinations essay and debate contest quiz and knowledge testing features are covered every month in

this magazine as a spectroscopic method nuclear magnetic resonance nmr has seen spectacular growth over the past two decades both as a technique and in its applications today the applications of nmr span a wide range of scientific disciplines from physics to biology to medicine each volume of nuclear magnetic resonance comprises a combination of annual and biennial reports which together provide comprehensive of the literature on this topic this specialist periodical report reflects the growing volume of published work involving nmr techniques and applications in particular nmr of natural macromolecules which is covered in two reports nmr of proteins and acids and nmr of carbohydrates lipids and membranes for those wanting to become rapidly acquainted with specific areas of nmr this title provides unrivalled scope of coverage seasoned practitioners of nmr will find this an in valuable source of current methods and applications specialist periodical reports provide systematic and detailed review coverage in major areas of chemical research compiled by teams of leading authorities in the relevant subject areas the series creates a unique service for the active research chemist with regular in depth accounts of progress in particular fields of chemistry subject coverage within different volumes of a given title is similar and publication is on an annual or biennial basis vols for 1963 include as pt 2 of the jan issue medical subject headings access to accurate evidence based and clinically relevant information is essential to anyone who uses or recommends herbal products with input from some of the most respected experts in herbal and integrative medicine this completely revised edition of the american herbal products association s botanical safety handbook reviews both traditional knowledge and contemporary research on herbs to provide an authoritative resource on botanical safety the book covers more than 500 species of herbs and provides a holistic understanding of safety through data compiled from clinical trials pharmacological and toxicological studies medical case reports and historical texts for each species a brief safety summary is provided for quick reference along with a detailed review of the literature easily understood

classification systems are used to indicate the safety of each listed species and the potential for the species to interact with drugs enhancements to the second edition include classification of each herb with both a safety rating and a drug interaction rating more references listed for each individual herb vetted for accuracy specific information on adverse events reported in clinical trials or case reports safety related pharmacology and pharmacokinetics of each herb including drug interactions additional information on the use of herbs by pregnant or lactating women toxicological studies and data on toxic compounds representing the core of the botanical trade and comprising the finest growers processors manufacturers and marketers of herbal products the mission of the ahpa is to promote the responsible commerce of herbal products the american herbal products association botanical safety handbook second edition ensures that this vision is attained the book will be a valuable reference for product manufacturers healthcare practitioners regulatory agencies researchers and consumers of herbal products advances in bio based fibres moving towards a green society describes many novel natural fibers their specific synthesis and characterization methods their environmental sustainability values their compatibility with polymer composites and a wide range of innovative commercial engineering applications as bio based fiber polymer composites possess excellent mechanical electrical and thermal properties along with highly sustainable properties they are an important technology for manufacturers and materials scientists seeking to improve the sustainability of their industries this cutting edge book draws on the latest industry practice and academic research to provide advice on technologies with applications in industries including packaging automotive aerospace biomedical and structural engineering provides technical data on advanced material properties including electrical and rheological gives a comprehensive guide to appraising and applying this technology to improve sustainability including lifecycle assessment and recyclability includes advice on the latest modeling techniques for designing with these materials water resource conflicts and international security a global

perspective is an edited collection by dhirendra k vajpeyi which analyzes the increasing global demand for water in economic and social development and the dire need to efficiently manage this vital natural resource particularly in water scarce countries in the middle east asia and africa several environmental and human induced factors such as urbanization industrialization climate change and agricultural needs have created a near crisis situation in many countries subsequently there is an increasingly intense competition to utilize available water resources in these most heavily affected regions transboundary rivers lakes and streams which are shared by more than one country pose potential for political conflict armed conflict and in the best of cases cooperation the contributors of water resource conflicts and international security present ten case studies in seven chapters highlighting the competition between countries in asia africa and the middle east in his conclusion dhirendra k vajpeyi suggests several policy measures that governments may implement in order to minimize the potential for conflict useful it is my honor to welcome all of you to chicago usa to participate in the 2014 international conference on social science and management icssm2014 which will be held during march 15 to 16 2014 the icssm2014 is co sponsored by advanced information science research center aisrc khon kaen university dalhousie university and university of stirling the conference proceeding is published by destech publications inc icssm2014 provides an excellent international forum for sharing knowledge and results in theory methodology and applications of social science and management the conference looks for significant contributions to all major fields of the modern social science and management in theoretical and application aspects the aim of the conference is to provide a platform to the global researchers and practitioners from both academia as well as industry to meet and share cutting edge development in the fields this icssm2014 proceedings tends to collect the up to date comprehensive and worldwide state of art knowledge on social science and management including sociology law information management innovation management engineering management etc all of accepted papers

were subjected to strict peer reviewing by 2 4 expert referees the papers have been selected for this volume because of quality and the relevance to the conference we hope this book will not only provide the readers a broad overview of the latest research results but also provide the readers a valuable summary and reference in these fields icssm2014 organizing committee would like to express our sincere appreciations to all authors for their contributions to this book we would like to extend our thanks to all the referees for their constructive comments on all papers especially we would like to thank to organizing committee for their hard working spectroscopic properties of inorganic and organometallic compounds provides a unique source of information on an important area of chemistry divided into sections mainly according to the particular spectroscopic technique used coverage in each volume includes nmr with reference to stereochemistry dynamic systems paramagnetic complexes solid state nmr and groups 13 18 nuclear quadrupole resonance spectroscopy vibrational spectroscopy of main group and transition element compounds and coordinated ligands and electron diffraction reflecting the growing volume of published work in this field researchers will find this specialist periodical report an invaluable source of information on current methods and applications specialist periodical reports provide systematic and detailed review coverage in major areas of chemical research compiled by teams of leading experts in their specialist fields this series is designed to help the chemistry community keep current with the latest developments in their field each volume in the series is published either annually or biennially and is a superb reference point for researchers rsc org spr there is an urgent need for innovative cost effective and sustainable approaches to reduce the tremendous environmental impact of conventional cement and cement based technologies consuming a significantly lower quantity of natural resources than conventional cements with the added ability to effectively sequestering carbon magnesia cements offer great potential in this area magnesia cements from formulation to application explores the latest developments in this exciting area reviewing the unique

properties offered by these cements including superior strength fire resistance and exceptional ability to bond to a wide range of aggregates and highlighting their potential role in making cement production and usage more sustainable providing detailed analysis of the chemistry properties manufacture and both traditional and novel applications magnesia cements from formulation to application is ideally suited for materials scientists cement chemists ceramicists and engineers involved with the design development application and impact assessment of magnesia cements across both academia and industry provides formulary information research into more environmentally friendly cement systems discusses chemical phase analysis and the impact of formulation applies analysis and history of global uses to provide support for future environmentally stable industrial building and non building applications clathrate hydrates all inclusive reference on clathrate hydrates from a molecular perspective clathrate hydrates are crystalline water based inclusion compounds many of which form at high pressures and low temperatures molecular science has provided the foundation for many areas of modern hydrate research and applications ranging from desalination processes to flow assurance in oil and gas pipelines clathrate hydrates provides detailed information on the molecular science aspects of hydrate research covering the structural compositional spectroscopic thermodynamic and mechanical properties of clathrate hydrates as well as simulation methods and selected engineering applications edited and authored by recognized leaders in the field this comprehensive resource introduces readers to clathrate hydrates and reviews the state of the art of the field in depth chapters address different areas of specialization such as characterization of clathrate hydrates using nmr spectroscopy infrared and raman spectroscopy and x ray and neutron diffraction and scattering highlights recent developments in clathrate hydrate research and applications such as natural gas recovery desalination and gas separation reviews various molecular simulation methods for characterizing clathrate hydrates including quantum mechanical calculations and monte carlo results contains tables of known

guest molecules summaries of structural and physical properties and different classes of clathrate hydrate phase equilibria introduces unconventional guest host interactions related non hydrate clathrates and space filling cages using the frank kasper approach covers the molecular motion of guest and host molecules and the relationship between cage geometry and guest dynamics presents the rate and mechanisms of hydrate formation and decomposition from both macroscopic and microscopic points clathrate hydrates molecular science and characterization is an indispensable reference for materials scientists physical chemists chemical engineers geochemists and graduate students in relevant areas of science and engineering this book introduces the concept of combining artificial intelligence ai and internet of things iot with real human organs to form a cybernetic organism or cyborg it is a concept of man machine mixture which helps in restoring or enhancing the ability of a body part by integrating some technology or artificial component with that body part these smart artificial organs act as a substitute for real organs having various capabilities like scanning the body detecting and transmitting the diagnostic data to machines for example an artificial heart is capable of monitoring the overall health of a person and lungs can inform the doctor of abnormalities this book benefits academic researchers and industrialist who work in the field cyborgization and iot within human bodies the book discusses the evolution of future generation technologies through internet of things iot in the scope of artificial intelligence ai the main focus of this volume is to bring all the related technologies in a single platform so that undergraduate and postgraduate students researchers academicians and industry people can easily understand the ai algorithms machine learning algorithms and learning analytics in iot enabled technologies this book uses data and network engineering and intelligent decision support system by design principles to design a reliable ai enabled iot ecosystem and to implement cyber physical pervasive infrastructure solutions this book brings together some of the top iot enabled ai experts throughout the world who contribute their knowledge regarding different iot

based technology aspects in this report we present a severe test of the effective stress and air void porosity constitutive models by using them to simulate experiments in which small sale explosions were detonated in grout spheres high quality reproducible particle velocity data were obtained from these experiments we show that an effective stress law coupled with the irreversible collapse of air filled porosity provide a very simple straightforward explanation of this data these results have served to reenforce our confidence in the validity of these models and their importance in determining seismic coupling author this book promotes and facilitates exchanges of research knowledge and findings across different disciplines on the design and investigation of machine learning based data analytics of iot infrastructures this book is focused on the emerging trends strategies and applications of iot in both healthcare and industry data analytics perspectives the data analytics discussed are relevant for healthcare and industry to meet many technical challenges and issues that need to be addressed to realize this potential the iot discussed helps to design and develop the intelligent medical and industry solutions assisted by data analytics and machine learning at the end of every chapter readers are encouraged to check their understanding by means of brainstorming summary discussion exercises and solutions focused on the emerging trends strategies and applications of iot in both healthcare and industry data analytics perspectives promotes an exchange of research across disciplines on the design and investigation of machine learning based data analytics of iot infrastructures features case studies emphasizing social and research perspectives on cyber physical systems data analytics intelligence and security this unique work compiles the latest knowledge around veterinary nutraceuticals commonly referred to as dietary supplements from ingredients to final products in a single source more than sixty chapters organized in seven sections collate all related aspects of nutraceutical research in animal health and disease among them many novel topics common nutraceutical ingredients section i prebiotics probiotics synbiotics enzymes and antibacterial alternatives

section ii applications of nutraceuticals in prevention and treatment of various diseases such as arthritis periodontitis diabetes cognitive dysfunctions mastitis wounds immune disorders and cancer section iii utilization of nutraceuticals in specific animal species section iv safety and toxicity evaluation of nutraceuticals and functional foods section v recent trends in nutraceutical research and product development section vi as well as regulatory aspects for nutraceuticals section vii the future of nutraceuticals and functional foods in veterinary medicine seems bright as novel nutraceuticals will emerge and new uses of old agents will be discovered international contributors to this book cover a variety of specialties in veterinary medicine pharmacology pharmacognosy toxicology chemistry medicinal chemistry biochemistry physiology nutrition drug development regulatory frameworks and the nutraceutical industry this is a highly informative and carefully presented book providing scientific insight for academia veterinarians governmental and regulatory agencies with an interest in animal nutrition complementary veterinary medicine nutraceutical product development and research

Irrigation Engineering and Hydraulic Structures

1987

somatostatin was discovered in 1971 by guillemin and his colleagues during their search for the hypothalamic growth hormone releasing factor a peptide was found in ovine hypothalamus which inhibited the release of growth hormone from cultured anterior pituitary cells 1 2 determination 3 of its amino acid sequence indicated that it was a tetradecapeptide with a molecular weight of 1639 figure lj an identical peptide was later isolated from porcine hypothalamus by schally and his coworkers 4 the peptide was named somatostatin in the belief that it was a hypothalamic releasing factor whose sole function was to inhibit the secretion of growth hormone it soon became evident however that a peptide with identical immunologic characteristics and biologic activity was present in the d cells of pancreatic islets in d like cells of the gastrointestinal tract in parafollicular cells of the thyroid gland and in extrahypo thalamic neurons of both the central and peripheral nervous system in various species including man moreover studies employing synthetic somatostatin5 demonstrated that the peptide possessed a wide spectrum of biologic activities in addition to its inhibition of growth hormone 56 s 0 mat 0 s tat i n 6 1 2 3 4 5 7 ala gly cys lys asn phe phe i i s trp 8 l s 9 i i cys ser thr phe thr 14 13 12 11 10 fig 1 structure of somatostatin 57 ii general distribution and actions somatostatin is widely distributed within both the central and peripheral nervous systems and in various other tissues table 1

Comprehensive Workshop Technology (Manufacturing

Processes)

2009

this two volume set constitutes reviewed and selected papers from the 12th international advanced computing conference iacc 2022 held in hyderabad india in december 2022 the 72 full papers and 6 short papers presented in the volume were thorougly reviewed and selected from 415 submissions the papers are organized in the following topical sections ai in industrial applications application of ai for disease classification and trend analysis design of agricultural applications using ai disease classification using cnn innovations in ai system security and communication using ai use of ai in human psychology use of ai in music and video industries

Cumulated Index Medicus

2000

written and edited by leading international authorities in the field this book provides an in depth review of knowledge of tuberculosis of the central nervous system with emphasis on clinical diagnostics and therapeutic features tuberculosis one of the most lethal diseases in human history still poses a serious threat in the world together with economic and social problems although a great progress in the fight against this infectious disease in the last century it covers the full range of tuberculosis of central nervous system and the chapters are organized into six sections 1 the cranial 2 the spinal and 3 the peripheral portions of the nervous system followed by 4 a section on the laboratory studies in tuberculosis 5 a section

on medical and surgical therapy and 6 further insights into tuberculosis this comprehensive reference book will be an ideal source for neurosurgeons neurologists and specialists upon infectious diseases seeking both basic and more sophisticated information and surgical procedures relating to the complications associated with tuberculosis involving the spine brain and peripheral nerves

Progress in Hormone Biochemistry and Pharmacology

2012-12-06

current vision systems are designed to perform in normal weather condition however no one can escape from severe weather conditions bad weather reduces scene contrast and visibility which results in degradation in the performance of various computer vision algorithms such as object tracking segmentation and recognition thus current vision systems must include some mechanisms that enable them to perform up to the mark in bad weather conditions such as rain and fog rain causes the spatial and temporal intensity variations in images or video frames these intensity changes are due to the random distribution and high velocities of the raindrops fog causes low contrast and whiteness in the image and leads to a shift in the color this book has studied rain and fog from the perspective of vision the book has two main goals 1 removal of rain from videos captured by a moving and static camera 2 removal of the fog from images and videos captured by a moving single uncalibrated camera system the book begins with a literature survey pros and cons of the selected prior art algorithms are described and a general framework for the development of an efficient rain removal algorithm is explored temporal and spatiotemporal properties of rain pixels are analyzed and using these properties two rain removal algorithms for the videos captured by a static camera are developed for the removal of rain temporal and spatiotemporal algorithms require fewer numbers of consecutive frames which reduces

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Advanced Computing

2023-07-13

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Tuberculosis of the Central Nervous System

2017-06-13

the most feared attribute of the human pathogen vibrio cholerae is its ability to cause outbreaks that spread like wildfire completely overwhelming public health systems and causing widespread suffering and death this volume starts with a description of the contrasting patterns of outbreaks caused by the classical and el

tor biotypes of v cholerae subsequent chapters examine cholera outbreaks in detail including possible sources of infection and molecular epidemiology on three different continents the emergence of new clones through the bactericidal selection process of lytic cholera phages the circulation and transmission of clones of the pathogen during outbreaks and novel approaches to modeling cholera outbreaks a further contribution deals with the application of the genomic sciences to trace the spread of cholera epidemics and how this information can be used to control cholera outbreaks the book closes with an analysis of the potential use of killed oral cholera vaccines to stop the spread of cholera outbreaks

Irrigation Engineering And Hydraulic Structures

2009

theory of electric polarization volume ii dielectrics in time dependent fields focuses on the processes reactions and principles involved in the application of dielectrics in time dependent fields as well as the kerr effect statistical mechanics and polarization the publication first examines the phenomenological theory of linear dielectrics in time dependent fields empirical description of dielectric relaxation and the relationship between macroscopic and molecular dielectric relaxation behavior concerns cover the relationship between macroscopic and microscopic correlation functions statistical mechanics of linear dissipative systems and the relationship between response functions and correlation functions superpositions of distribution functions and the use of complex dielectric constant in problems with time dependent field sources the book then ponders on the dipole correlation function polarization in the infrared and optical frequency range and the kerr effect and related phenomena discussions focus on the kerr effect in condensed systems extensions of the kerr effect extrapolation of the refractive index to infinite wavelength results obtained

from computer simulations rotational diffusion and general aspects of molecular reorientation the manuscript tackles the dielectric properties of molecular solids and liquid crystals and experimental determination of permanent dipole and quadrupole moments the text is a valuable source of data for researchers interested in the application of dielectrics in time dependent fields

Combating Bad Weather Part I

2022-06-01

this book comprises select peer reviewed papers from the international conference on emerging trends in electromechanical technologies management temt 2019 the focus is on current research in interdisciplinary areas of mechanical electrical electronics and information technologies and their management from design to market the book covers a wide range of topics such as computer integrated manufacturing additive manufacturing materials science and engineering simulation and modelling finite element analysis operations and supply chain management decision sciences business analytics project management and sustainable freight transportation the book will be of interest to researchers and practitioners of various disciplines in particular mechanical and industrial engineering

Fundamentals of Transport Phenomena in Porous Media

2012-12-06

this book tells the story of how the science of computational multiphase flow began in an effort to better analyze hypothetical light water power reactor accidents

including the loss of coolant accident written in the style of a memoir by an author with 40 years engineering research experience in computer modeling of fluidized beds and slurries multiphase computational fluid dynamics and multiphase flow most recently at argonne national laboratory the book traces how this new science developed during this time into relap5 and other computer programs to encompass realistic descriptions of phenomena ranging from fluidized beds for energy and chemicals production slurry transport pyroclastic flow from volcanoes hemodynamics of blood borne cells and flow of granular particulates such descriptions are not possible using the classical single phase navier stokes equations whereas many books on computational techniques and computational fluid dynamics have appeared they do not trace the historical development of the science in any detail and none touch on the beginnings of multiphase science a robust process rich account of technologic evolution the book is ideal for students and practitioners of mechanical chemical nuclear engineering and the history of science and technology

Cholera Outbreaks

2014-06-13

pratiyogita darpan monthly magazine is india s largest read general knowledge and current affairs magazine pratiyogita darpan english monthly magazine is known for quality content on general knowledge and current affairs topics ranging from national and international news issues personality development interviews of examination toppers articles write up on topics like career economy history public administration geography polity social environment scientific legal etc solved papers of various examinations essay and debate contest quiz and knowledge testing features are covered every month in this magazine

Inclusion Compounds: Physical properties and applications

1984

as a spectroscopic method nuclear magnetic resonance nmr has seen spectacular growth over the past two decades both as a technique and in its applications today the applications of nmr span a wide range of scientific disciplines from physics to biology to medicine each volume of nuclear magnetic resonance comprises a combination of annual and biennial reports which together provide comprehensive of the literature on this topic this specialist periodical report reflects the growing volume of published work involving nmr techniques and applications in particular nmr of natural macromolecules which is covered in two reports nmr of proteins and acids and nmr of carbohydrates lipids and membranes for those wanting to become rapidly acquainted with specific areas of nmr this title provides unrivalled scope of coverage seasoned practitioners of nmr will find this an in valuable source of current methods and applications specialist periodical reports provide systematic and detailed review coverage in major areas of chemical research compiled by teams of leading authorities in the relevant subject areas the series creates a unique service for the active research chemist with regular in depth accounts of progress in particular fields of chemistry subject coverage within different volumes of a given title is similar and publication is on an annual or biennial basis

Dielectrics in Time-Dependent Fields

2012-12-02

vols for 1963 include as pt 2 of the jan issue medical subject headings

Regional Hydrological Impacts of Climatic Change: Impact assessment and decision making

2005

access to accurate evidence based and clinically relevant information is essential to anyone who uses or recommends herbal products with input from some of the most respected experts in herbal and integrative medicine this completely revised edition of the american herbal products association s botanical safety handbook reviews both traditional knowledge and contemporary research on herbs to provide an authoritative resource on botanical safety the book covers more than 500 species of herbs and provides a holistic understanding of safety through data compiled from clinical trials pharmacological and toxicological studies medical case reports and historical texts for each species a brief safety summary is provided for quick reference along with a detailed review of the literature easily understood classification systems are used to indicate the safety of each listed species and the potential for the species to interact with drugs enhancements to the second edition include classification of each herb with both a safety rating and a drug interaction rating more references listed for each individual herb vetted for accuracy specific information on adverse events reported in clinical trials or case reports safety related pharmacology and pharmacokinetics of each herb including drug interactions additional information on the use of herbs by pregnant or lactating women toxicological studies and data on toxic compounds representing the core of the botanical trade and comprising the finest growers processors manufacturers and marketers of herbal products the mission of the ahpa is to promote the responsible commerce of herbal products the american

herbal products association botanical safety handbook second edition ensures that this vision is attained the book will be a valuable reference for product manufacturers healthcare practitioners regulatory agencies researchers and consumers of herbal products

Current Medicinal Chemistry

1999-03

advances in bio based fibres moving towards a green society describes many novel natural fibers their specific synthesis and characterization methods their environmental sustainability values their compatibility with polymer composites and a wide range of innovative commercial engineering applications as bio based fiber polymer composites possess excellent mechanical electrical and thermal properties along with highly sustainable properties they are an important technology for manufacturers and materials scientists seeking to improve the sustainability of their industries this cutting edge book draws on the latest industry practice and academic research to provide advice on technologies with applications in industries including packaging automotive aerospace biomedical and structural engineering provides technical data on advanced material properties including electrical and rheological gives a comprehensive guide to appraising and applying this technology to improve sustainability including lifecycle assessment and recyclability includes advice on the latest modeling techniques for designing with these materials

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1979

water resource conflicts and international security a global perspective is an edited collection by dhirendra k vajpeyi which analyzes the increasing global demand for water in economic and social development and the dire need to efficiently manage this vital natural resource particularly in water scarce countries in the middle east asia and africa several environmental and human induced factors such as urbanization industrialization climate change and agricultural needs have created a near crisis situation in many countries subsequently there is an increasingly intense competition to utilize available water resources in these most heavily affected regions transboundary rivers lakes and streams which are shared by more than one country pose potential for political conflict armed conflict and in the best of cases cooperation the contributors of water resource conflicts and international security present ten case studies in seven chapters highlighting the competition between countries in asia africa and the middle east in his conclusion dhirendra k vajpeyi suggests several policy measures that governments may implement in order to minimize the potential for conflict

Advances in Electromechanical Technologies

2020-09-24

useful

The History of Multiphase Science and Computational Fluid Dynamics

2017-10-10

it is my honor to welcome all of you to chicago usa to participate in the 2014 international conference on social science and management icssm2014 which will be held during march 15 to 16 2014 the icssm2014 is co sponsored by advanced information science research center aisrc khon kaen university dalhousie university and university of stirling the conference proceeding is published by destech publications inc icssm2014 provides an excellent international forum for sharing knowledge and results in theory methodology and applications of social science and management the conference looks for significant contributions to all major fields of the modern social science and management in theoretical and application aspects the aim of the conference is to provide a platform to the global researchers and practitioners from both academia as well as industry to meet and share cutting edge development in the fields this icssm2014 proceedings tends to collect the up to date comprehensive and worldwide state of art knowledge on social science and management including sociology law information management innovation management engineering management etc all of accepted papers were subjected to strict peer reviewing by 2 4 expert referees the papers have been selected for this volume because of quality and the relevance to the conference we hope this book will not only provide the readers a broad overview of the latest research results but also provide the readers a valuable summary and reference in these fields icssm2014 organizing committee would like to express our sincere appreciations to all authors for their contributions to this book we would like to extend our thanks to all the referees for their constructive comments on all papers especially we would like to thank to organizing committee for their hard working

Poetry of an idler

2023-03-30

spectroscopic properties of inorganic and organometallic compounds provides a unique source of information on an important area of chemistry divided into sections mainly according to the particular spectroscopic technique used coverage in each volume includes nmr with reference to stereochemistry dynamic systems paramagnetic complexes solid state nmr and groups 13 18 nuclear quadrupole resonance spectroscopy vibrational spectroscopy of main group and transition element compounds and coordinated ligands and electron diffraction reflecting the growing volume of published work in this field researchers will find this specialist periodical report an invaluable source of information on current methods and applications specialist periodical reports provide systematic and detailed review coverage in major areas of chemical research compiled by teams of leading experts in their specialist fields this series is designed to help the chemistry community keep current with the latest developments in their field each volume in the series is published either annually or biennially and is a superb reference point for researchers rsc org spr

Computer Modeling of Coal Gasification Reactors

1977

there is an urgent need for innovative cost effective and sustainable approaches to reduce the tremendous environmental impact of conventional cement and cement based technologies consuming a significantly lower quantity of natural resources than conventional cements with the added ability to effectively sequestering carbon magnesia cements offer great potential in this area magnesia cements from formulation to application explores the latest developments in this exciting area reviewing the unique properties offered by these cements including superior strength fire resistance and exceptional ability to bond to a wide range of aggregates and highlighting their potential role in making cement production and usage more

sustainable providing detailed analysis of the chemistry properties manufacture and both traditional and novel applications magnesia cements from formulation to application is ideally suited for materials scientists cement chemists ceramicists and engineers involved with the design development application and impact assessment of magnesia cements across both academia and industry provides formulary information research into more environmentally friendly cement systems discusses chemical phase analysis and the impact of formulation applies analysis and history of global uses to provide support for future environmentally stable industrial building and non building applications

Pratiyogita Darpan

2009-08

clathrate hydrates all inclusive reference on clathrate hydrates from a molecular perspective clathrate hydrates are crystalline water based inclusion compounds many of which form at high pressures and low temperatures molecular science has provided the foundation for many areas of modern hydrate research and applications ranging from desalination processes to flow assurance in oil and gas pipelines clathrate hydrates provides detailed information on the molecular science aspects of hydrate research covering the structural compositional spectroscopic thermodynamic and mechanical properties of clathrate hydrates as well as simulation methods and selected engineering applications edited and authored by recognized leaders in the field this comprehensive resource introduces readers to clathrate hydrates and reviews the state of the art of the field in depth chapters address different areas of specialization such as characterization of clathrate hydrates using nmr spectroscopy infrared and raman spectroscopy and x ray and neutron diffraction and scattering highlights recent developments in clathrate hydrate research and

applications such as natural gas recovery desalination and gas separation reviews various molecular simulation methods for characterizing clathrate hydrates including quantum mechanical calculations and monte carlo results contains tables of known guest molecules summaries of structural and physical properties and different classes of clathrate hydrate phase equilibria introduces unconventional guest host interactions related non hydrate clathrates and space filling cages using the frank kasper approach covers the molecular motion of guest and host molecules and the relationship between cage geometry and guest dynamics presents the rate and mechanisms of hydrate formation and decomposition from both macroscopic and microscopic points clathrate hydrates molecular science and characterization is an indispensable reference for materials scientists physical chemists chemical engineers geochemists and graduate students in relevant areas of science and engineering

Nuclear Magnetic Resonance

1972-10

this book introduces the concept of combining artificial intelligence ai and internet of things iot with real human organs to form a cybernetic organism or cyborg it is a concept of man machine mixture which helps in restoring or enhancing the ability of a body part by integrating some technology or artificial component with that body part these smart artificial organs act as a substitute for real organs having various capabilities like scanning the body detecting and transmitting the diagnostic data to machines for example an artificial heart is capable of monitoring the overall health of a person and lungs can inform the doctor of abnormalities this book benefits academic researchers and industrialist who work in the field cyborgization and iot within human bodies

Index Medicus

2004

the book discusses the evolution of future generation technologies through internet of things iot in the scope of artificial intelligence ai the main focus of this volume is to bring all the related technologies in a single platform so that undergraduate and postgraduate students researchers academicians and industry people can easily understand the ai algorithms machine learning algorithms and learning analytics in iot enabled technologies this book uses data and network engineering and intelligent decision support system by design principles to design a reliable ai enabled iot ecosystem and to implement cyber physical pervasive infrastructure solutions this book brings together some of the top iot enabled ai experts throughout the world who contribute their knowledge regarding different iot based technology aspects

American Herbal Products Association's Botanical Safety Handbook, Second Edition

2013-03-15

in this report we present a severe test of the effective stress and air void porosity constitutive models by using them to simulate experiments in which small sale explosions were detonated in grout spheres high quality reproducible particle velocity data were obtained from these experiments we show that an effective stress law coupled with the irreversible collapse of air filled porosity provide a very simple straightforward explanation of this data these results have served to

reenforce our confidence in the validity of these models and their importance in determining seismic coupling author

Advances in Bio-Based Fiber

2021-12-01

this book promotes and facilitates exchanges of research knowledge and findings across different disciplines on the design and investigation of machine learning based data analytics of iot infrastructures this book is focused on the emerging trends strategies and applications of iot in both healthcare and industry data analytics perspectives the data analytics discussed are relevant for healthcare and industry to meet many technical challenges and issues that need to be addressed to realize this potential the iot discussed helps to design and develop the intelligent medical and industry solutions assisted by data analytics and machine learning at the end of every chapter readers are encouraged to check their understanding by means of brainstorming summary discussion exercises and solutions focused on the emerging trends strategies and applications of iot in both healthcare and industry data analytics perspectives promotes an exchange of research across disciplines on the design and investigation of machine learning based data analytics of iot infrastructures features case studies emphasizing social and research perspectives on cyber physical systems data analytics intelligence and security

Index Veterinarius

2001

this unique work compiles the latest knowledge around veterinary nutraceuticals commonly referred to as dietary supplements from ingredients to final products in a single source more than sixty chapters organized in seven sections collate all related aspects of nutraceutical research in animal health and disease among them many novel topics common nutraceutical ingredients section i prebiotics probiotics synbiotics enzymes and antibacterial alternatives section ii applications of nutraceuticals in prevention and treatment of various diseases such as arthritis periodontitis diabetes cognitive dysfunctions mastitis wounds immune disorders and cancer section iii utilization of nutraceuticals in specific animal species section iv safety and toxicity evaluation of nutraceuticals and functional foods section v recent trends in nutraceutical research and product development section vi as well as regulatory aspects for nutraceuticals section vii the future of nutraceuticals and functional foods in veterinary medicine seems bright as novel nutraceuticals will emerge and new uses of old agents will be discovered international contributors to this book cover a variety of specialties in veterinary medicine pharmacology pharmacognosy toxicology chemistry medicinal chemistry biochemistry physiology nutrition drug development regulatory frameworks and the nutraceutical industry this is a highly informative and carefully presented book providing scientific insight for academia veterinarians governmental and regulatory agencies with an interest in animal nutrition complementary veterinary medicine nutraceutical product development and research

Water Resource Conflicts and International Security

2011-12-16

A Textbook of Microbiology

1999

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2007-10-31

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2020-05-30

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Verification of the Effective Stress and Air Void Porosity Constitutive Models

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