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Proceedings of the 2018 European Rock Mechanics Symposium
Progress in Clean Energy, Volume 1
Characterization, Measurement, and Mechanism
Structural Fire Loads: Theory and Principles
Design, Fabrication and Economy of Metal Structures
Micro and Nanostructured Epoxy / Rubber Blends
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Geology and Tectonics of Subduction Zones: A Tribute to Gaku Kimura
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Ultra-High Performance Concrete and Nanotechnology in Construction. Proceedings of Hipermat 2012. 3rd International Symposium on UHPC and Nanotechnology for High Performance Construction Materials
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Compendium of Thermophysical Property Measurement Methods
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Selected Papers from the 2018 European Rock Mechanics Symposium
bibliographisches Bulletin der Schweizerischen Landesbibliothek, Bern
Materials, Applications, and the Energy Market
Proceedings of Italian Concrete Days 2016
Introduction to Plastics Engineering
Preparation, Properties, and Applications
Mathematical Modeling Of Melting And Freezing Processes
Analysis and Modeling
Polymer Nanocomposites Containing Graphene

Tropical timber atlas
Theoretical Essentials and Practical Application
SEG-2018

MARKS CRANE

Proceedings of the 2018 European Rock Mechanics Symposium Springer
Das Buch gibt einen Überblick über das Wärmemanagement elektronischer Systeme.Neben den physikalischen Grundlagen der Wärmeübertragung werden passive und aktive Kühlmethoden vorgestellt. Dazu gehören Technologien auf Bauelement- und Substratebene, thermische Interfacematerialien, Kühlkörper, Lüfter und Heatpipes.Für die Analyse von Wärmepfaden werden etablierte und neue Messverfahren beschrieben. Diese liefern thermophysikalische Stoffwerte und thermische Kontaktwiderstände. Zahlreiche Beispiele unterstreichen den Praxisbezug.
Progress in Clean Energy, Volume 1 Springer Science & Business Media
This expansive reference on clean energy technologies focuses on tools for system modelling and analysis, and their role in optimizing designs to achieve greater efficiency, minimize environmental impacts and support sustainable development. Key topics ranging from predicting impacts of on-grid energy storage to environmental impact assessments to advanced exergy analysis techniques are covered. The book includes findings both from experimental investigations and functional extant systems, ranging from microgrid to utility-scale implementations. Engineers, researchers and students will benefit from the broad reach and numerous engineering examples provided.
Characterization, Measurement, and Mechanism Academic Press
This expansive volume presents the essential topics related to construction materials composition and their practical application in structures and civil installations. The book's diverse slate of expert authors assemble invaluable case examples and performance data on the most important groups of materials used in construction, highlighting aspects such as nomenclature, the properties, the manufacturing processes, the selection criteria, the products/applications, the life cycle and recyclability, and the normalization. Civil Engineering Materials: Science, Processing, and Design is ideal for practicing architects; civil, construction, and structural engineers, and serves as a comprehensive reference for students of these disciplines. This book also: · Provides a substantial and detailed overview of traditional materials used in structures and civil infrastructure · Discusses properties of natural and synthetic materials in construction and materials' manufacturing processes · Addresses topics important to professionals working with structural materials, such as corrosion, nanomaterials, materials life cycle, not often covered outside of journal literature · Diverse author team presents expect perspective from civil engineering, construction, and architecture · Features a detailed glossary of terms and over 400 illustrations
Structural Fire Loads: Theory and Principles Springer
In light of increasing human-induced global climate change, there is a greater need for clean energy resources and zero carbon projects. This new volume offers up-to-date coverage of the fundamentals as well as recent advancements in energy efficient thermal energy storage materials, their characterization, and technological applications. Thermal energy storage (TES) systems offer very high-energy savings for many of our day-to-day applications and could be a strong component for enhancing the usage of renewable/clean energy-based devices. Because of its beneficial environmental impact, this technology has received wide attention in the recent past, and dedicated research efforts have led to the development of novel materials, as well to innovative applications in very many fields, ranging from buildings to textile, healthcare to agriculture, space to automobiles. This book offers a valuable and informed systematic treatment of latent heat-based thermal energy storage systems, covering current energy research and important developmental work.
Design, Fabrication and Economy of Metal Structures Latent Heat-Based Thermal Energy Storage SystemsMaterials, Applications, and the Energy Market
This book collects selected full papers presented at the International Symposium on Energy Geotechnics 2018 (SEG-2018), held on 25th – 28th September 2018, at the Swiss Federal Institute of Technology in Lausanne (EPFL). It covers a wide range of topics in energy geotechnics, including energy geostructures, energy geostorage, thermo-hydro-chemo-mechanical behaviour of geomaterials, unconventional resources, hydraulic stimulation, induced seismicity, CO2 geological storage, and nuclear waste disposal as well as topics such as tower and offshore foundations. The book is intended for postgraduate students, researchers and practitioners working on geomechanics and geotechnical engineering for energy-related applications.
Micro and Nanostructured Epoxy / Rubber Blends John Wiley & Sons
Performance of Bio-based Building Materials provides guidance on the use of bio-based building materials (BBBM) with respect to their performance. The book focuses on BBBM currently present on the European market. The state-of-the-art is presented regarding material properties, recommended uses, performance expectancies, testing methodology, and related standards. Chapters cover both ‘old and traditional’ BBBM since quite a few of them are experiencing a comeback on the market. Promising developments that could become commercial in the near future are presented as well. The book will be a valuable reference resource for those working in the bio-based materials research community, architects and agencies dealing with sustainable construction, and graduate students in civil engineering. Takes a unique approach to bio-based materials and presents a broad overview of the topics on relevant areas necessary for application and promotion in construction Contains a general description, notable properties related to performance, and applications Presents standards that are structured according to performance types
10th International Conference on FRP Composites in Civil Engineering Springer Nature
The book presents the select proceedings of International Conference on Structural Health Monitoring and Engineering Structures (SHM&ES) 2020. It brings together different applied and technological aspects of structural health monitoring. The main topics covered in this book include damage assessment, structural health monitoring, engineering fracture mechanics, Inverse problem using optimization techniques, machine learning, deep learning, Artificial intelligent and non-

destructive evaluation. It will be a reference for professionals and students in the areas of civil engineering, applied natural sciences and engineering management.
International Conference Proceedings 2013, Miskolc, Hungary, April 24-26, 2013 C.F. Müller GmbH
This book contains keynote lectures and 54 technical papers, presented at the 23rd International Thermal Conductivity Conference, on various topics, including techniques, coatings and films, theory, composites, fluids, metals, ceramics, and organics, related to thermal conductivity.
Geology and Tectonics of Subduction Zones: A Tribute to Gaku Kimura kassel university press GmbH
Polymer Nanocomposites Containing Graphene: Preparation, Properties and Applications provides detailed up-to-date information on the characterization, synthesis, processing, properties and application of these materials. Key topics that are covered in the book include: the methods of synthesis and preparation of graphene as well as different processes and methods of functionalization and modification of graphene for improving composite properties. The preparation techniques focus on which method is advantageous for getting improvements in properties along with their drawbacks. The structure and property relationships are also discussed in detail. The issues related to graphene dispersion in polymer matrices is also addressed as well as the use of graphene as reinforcement in thermoset resins. The different properties of the composites like mechanical, electrical, dielectric, thermal, rheological, morphology, spectroscopy, electronic, optical, and toxicity are reviewed from the geometrical and functional point of view. Applications cover electrical and electronic fields, flame and fire retardancy, structural, sensing and catalysis, membrane, in fuel cell and solar energy, hydrogen production, aerospace engineering, packaging, and biomedical/bioengineering fields. Up-to-date patents on graphene-polymer nanocomposites are also covered. Those working in graphene-based materials will benefit from the detailed knowledge presented in this book on graphene synthesis, composite preparation methods, and the related problems associated with them. The book will enable researchers to select the appropriate composite as per their respective field of application. Presents novel approaches for the preparation of graphene, its modification and nanocomposites with enhanced properties for state-of-the-art applications Special attention is given to how graphene is synthesized through different routes, their functionality, dispersion related matters and structural aspects controlling the composite properties for various applications All synthesis methodology and functionalization procedure for graphene is discussed
Wärmemanagement in der Elektronik Geological Society of America
This book contains an introduction and 20 studies, each describing a recent research investigation in the area of sustainable and resilient buildings, built environment infrastructure and renewable energy. Contributions are from many different countries of the world and on a range of topics, representing a sample of research within the ‘sustainable energy and buildings’ field. The book begins with chapters on the sustainable design of buildings, followed by descriptions of issues relating to the renovation, restoration and reconstruction of existing buildings, or in one case a railway wagon. The next part of the book covers factors that form barriers or impediments to low or zero carbon buildings, followed by studies of issues relating to policy and certification. There then follow four chapters on various topics related to sustainable buildings – undergraduate courses, insurance issues, biophilia relating to buildings and thermal conductivity measurement. There are several chapters relating to renewable energy, followed by two chapters with a sustainable transport theme, one relating to electric vehicles, and the other about a sustainable road infrastructure. The final chapter is on the manufacture of sustainable building components for the UK housing sector. The book is of use to engineers, scientists, researchers, practitioners, academics and all those who are interested to develop and use sustainability science and technology for the betterment of our planet and humankind, and to mitigate climate change reality.
Ultra-High Performance Concrete and Nanotechnology in Construction. Proceedings of Hipermat 2012. 3rd International Symposium on UHPC and Nanotechnology for High Performance Construction Materials Woodhead Publishing
This book presents the main methods used for thermal properties measurement. It aims to be accessible to all those, specialists in heat transfer or not, who need to measure the thermal properties of a material. The objective is to allow them to choose the measurement method the best adapted to the material to be characterized, and to pass on them all the theoretical and practical information allowing implementation with the maximum of precision.
Analysis and Design of Energy Geostructures Editions Quae
Actionable strategies for the design and construction of fire-resistant structures This hands-on guide clearly explains the complex building codes and standards that relate to fire design and presents hands-on techniques engineers can apply to prevent or mitigate the effects of fire in structures. Dedicated chapters discuss specific procedures for steel, concrete, and timber buildings. You will get step-by-step guidance on how to evaluate fire resistance using both testing and calculation methods. Structural Fire Engineering begins with an introduction to the behavioral aspects of fire and explains how structural materials react when exposed to elevated temperatures. From there, the book discusses the fire design aspects of key codes and standards, such as the International Building Code, the International Fire Code, and the NFPA Fire Code. Advanced topics are covered in complete detail, including residual capacity evaluation of fire damaged structures and fire design for bridges and tunnels. Explains the fire design requirements of the IBC, IFC, the NFPA Fire Code, and National Building Code of Canada Presents design strategies for steel, concrete, and timber structures as well as for bridges and tunnels Contains downloadable spreadsheets and problems along with solutions for instructors
Compendium of Thermophysical Property Measurement Methods Springer
"A complete guide to designing structures to better withstand the effects of fires of various growthsStructural Fire Loads: Theory and Principles combines the disciplines of structural engineering and fire protection engineering by offering a screening tool that can be used by engineers to perform preliminary assessments of fire as a load and its impact on structures. The book covers slow, medium, fast, and ultra-fast fire growth and fires in combination with seismic loads.Neither the 2009 IBC nor ASCE-7 considers fire a structural design load in buildings when prescriptive resistive design methods are used. However, the ICC Performance Code for Building and Facilities requires that the structural integrity of a building be evaluated and maintained to limit fire impact. This practical guide bridges the gap between structural engineering and fire protection engineering when fire is considered a design load.Structural Fire Loads features: Practical examples for fire protection and structural engineering design presented in a simple, step-by-step

computational format Details on slow, medium, fast, and ultra-fast fire growth A Solutions Manual for equations presented in chapters 6 and 7 NIST Best Practices and Surveys for Fire Loads A single source that outlines how fire impacts structures Authoritative coverage: Overview of Current Practice; Structural Fire Load and Computer Models; Differential Equations and Assumptions; Simplifications of Differential Equations; Fire Load and Severity of Fires; Structural Analysis and Design"--

Science, Processing, and Design CRC Press

This book presents the latest advances in thermal energy storage development at both the materials and systems level. It covers various fields of application, including domestic, industrial and transport, as well as diverse technologies, such as sensible, latent and thermochemical. The contributors introduce readers to the main performance indicators for thermal storage systems, and discuss thermal energy storage (TES) technologies that can be used to improve the efficiency of energy systems and increase the share of renewable energy sources in numerous fields of application. In addition to the latest advances, the authors discuss the development and characterization of advanced materials and systems for sensible, latent and thermochemical TES, as well as the TES market and practical applications. They also report on and assess the feasibility of uniform characterization protocols and main performance indicators, compared to previous attempts to be found in the literature. The book will help to increase awareness of thermal energy storage technologies in both the academic and industrial sectors, while also providing experts new tools to achieve a uniform approach to thermal energy storage characterization methods. It will also be of interest to all students and researchers seeking an introduction to recent innovations in TES technologies.

Advances in Technical Nonwovens Springer Nature

An interdisciplinary introduction to key-concepts and project applications of energy geostructures

Geomechanics and Geodynamics of Rock Masses, Volume 1 Springer

Advances in Technical Nonwovens presents the latest information on the nonwovens industry, a dynamic and fast-growing industry with recent technological innovations that are leading to the development of novel end-use applications. The book reviews key developments in technical nonwoven manufacturing, specialist materials, and applications, with Part One covering important developments in materials and manufacturing technologies, including chapters devoted to fibers for technical nonwovens, the use of green recycled and biopolymer materials, and the application of nanofibres. The testing of nonwoven properties and the specialist area of composite nonwovens are also reviewed, with Part Two offering a detailed and wide-ranging overview of the many applications of technical nonwovens that includes chapters on automotive textiles, filtration, energy applications, geo- and agrotextiles, construction, furnishing, packaging and medical and hygiene products. Provides systematic coverage of trends, developments, and new technology in the field of technical nonwovens Focuses on the needs of the nonwovens industry with a clear emphasis on applied technology Contains contributions from an international team of authors edited by an expert in the field Offers a detailed and wide-ranging overview of the many applications of technical nonwovens that includes chapters on automotive textiles, filtration, energy applications, geo- and agrotextiles, and more

Scientific and Technical Aerospace Reports CRC Press

Beginning with 1937, the April issue of each vol. is the Fleet reference annual.

CISSP Boxed Set, Second Edition Woodhead Publishing

This reference book presents mathematical models of melting and solidification processes that are the key to the effective performance of latent heat thermal energy storage systems (LHTES), utilized in a wide range of heat transfer and industrial applications. This topic has spurred a growth in research into LHTES applications in energy conservation and utilization, space station power systems, and thermal protection of electronic equipment in hostile environments. Further, interest in mathematical modeling has increased with the speread of high powered computers used in most industrial and academic settings. In two sections, the book first describes modeling of phase change processes and then describes applications for LHTES. It is aimed at graduate students, researchers, and practicing engineers in heat transfer, materials processing, multiphase systems, energy conservation, metallurgy, microelectronics, and cryosurgery.

Volume 2 Recommended Measurement Techniques and Practices William Andrew

This book provides comprehensive coverage of all aspects of physical testing of elastomers (rubbers and thermoplastic elastomers) including mechanical, electrical, thermal and all aspects of durability. Elastomers are an important class of materials used in such products as tyres, seals and hose which have markedly different properties to other materials. The importance of testing of elastomers means that a comprehensive text on the subject is essential. The advantage over general materials testing books is being more specific while the advantage over general rubber technology books is that testing is dealt with in depth.

Materials for Construction and Civil Engineering CRC Press

This book is Volume 1 of the EUROCK 2018 proceedings. Geomechanics and Geodynamics of Rock Masses contains contributions presented at EUROCK 2018, the 2018 International Symposium of the International Society for Rock Mechanics (ISRM 2018, Saint Petersburg, Russia, 22-26 May 2018). Dedicated to recent advances and achievements in the fields of geomechanics and geotechnology, the main topics of the book include: - Physical and mechanical properties of fractured rock (laboratory testing and rock properties, field measurements and site investigations) - Geophysics in rock mechanics - Rock mass strength and failure - Nonlinear problems in rock mechanics - Effect of joint water on the behavior of rock foundation - Numerical modeling and back analysis - Mineral resources development: methods and rock mechanics problems - Rock mechanics and underground construction in mining, hydropower industry and civil engineering - Rock mechanics in petroleum engineering - Geodynamics and monitoring of rock mass behavior - Risks and hazards - Geomechanics of technogenic deposits Geomechanics and Geodynamics of Rock Masses will be of interest to researchers and professionals involved in the various branches of rock mechanics and rock engineering. EUROCK 2018, organized by the Saint Petersburg Mining University, is a continuation of the successful series of ISRM symposia in Europe, which began in 1992 in Chester, UK.