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BRIGGS GIANNA

The Materials Science of Thin Films Pearson
The main sections/chapters of the book focus on the composition of nine types of bioceramics, other simple oxides and more and the medical applications of these materials in orthopaedics, dentistry and the treatment of cancerous tumors.
Advances in Engineering Materials Pearson College Division
This is a concise, up-to-date book that covers a wide range of important ceramic materials used in modern technology. Chapters provide essential information on the nature of these key ceramic raw materials including their structure, properties, processing methods and applications in engineering and technology. Treatment is provided on materials such as alumina, aluminates, Andalusite, kyanite, and sillimanite. The chapter authors are leading experts in the field of ceramic materials. An ideal text for graduate students and practising engineers in ceramic engineering, metallurgy, and materials science and engineering.
The Science and Engineering of Materials, Enhanced, SI Edition CRC Press
Prepared as a textbook complete with problems after each chapter, specifically intended for classroom use in universities.
CRC-Elsevier Materials Selector Prentice Hall
Develop a thorough understanding of the relationships between structure, processing and the properties of materials with Askeland/Wright's THE SCIENCE AND ENGINEERING OF MATERIALS, ENHANCED, SI, 7th Edition. This comprehensive edition serves as a useful professional reference for current or future study in manufacturing, materials, design or materials selection. This science-based approach to materials engineering highlights how the structure of materials at various length scales gives rise to materials properties. You examine how the connection between structure and properties is key to innovating with materials, both in the synthesis of new materials as well as in new applications with existing materials. You also learn how time, loading and environment all impact materials -- a key concept that is often overlooked when using charts and databases to select materials. Trust this enhanced edition for insights into success in materials engineering today. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.
Mechanical Behavior of Materials Butterworth-Heinemann
This book is based on Dr. Torraca's 2002 publication, Lezioni di scienza e tecnologia dei materiali per restauro dei monumenti. The English-language Lectures includes new and updated material. An excellent resource for architectural conservators, engineers, and conservation scientists.
Callister's Materials Science and Engineering McGraw-Hill Science Engineering
Volume is indexed by Thomson Reuters CPCI-S (WoS). The 1990's so far have seen significant developments in Materials Technology in a variety of materials classes such as Metals and Alloys, Ceramics and Coatings, Biomaterials, and Surfaces and Interfaces.
Outlines and Highlights for Introduction to Materials Science for Engineers by Shackelford, Isbn Wiley
CD-ROM contains: Dynamic phase diagram tool -- Over 30 animations of concepts from the text -- Photomicrographs from the text.
Introduction to Materials Science for Engineers Plus Masteringengineering -- Access Card Package CRC Press
Presents the fundamentals of the gas turbine engine, including cycles, components, component matching, and environmental considerations.
Introduction to Materials Science Routledge
Callister's Materials Science and Engineering: An Introduction promotes student understanding of the three primary types of materials (metals, ceramics, and polymers) and composites, as well as the relationships that exist between the structural elements of materials and their properties. The 10th edition provides new or updated coverage on a number of topics, including: the Materials Paradigm and Materials Selection Charts, 3D printing and additive manufacturing, biomaterials, recycling issues and the Hall effect.
Print Component for Materials Science and Engineering Cengage Learning
This book features influential scholarly research and technical contributions, professional trajectories, disciplinary shifts, personal insights, and a combination of these from a group of remarkable women within mechanical engineering. Combined, these chapters tell an important story about the dynamic field of mechanical engineering in the areas of energy and the environment, as seen from the perspective of some of its most extraordinary women scientists and engineers. The volume shares with the Women in Engineering and Science Series the primary aim of documenting and raising awareness of the valuable, multi-faceted contributions of women engineers and scientists, past and present, to these areas. Women in mechanical engineering and energy and the environment are historically relevant and continue to lead these fields as passionate risk takers, entrepreneurs, innovators, educators, and researchers. Chapter authors are members of the National Academies, winners of major awards and recognition that include Presidential Medals, as well as SWE, SAE, ASME, ASEE and IEEE Award winners and Fellows.
Materials for Civil and Construction Engineers: Pearson New International Edition Pearson Education India
ALERT: Before you purchase, check with your instructor or review your course syllabus to ensure that you select the correct ISBN. Several versions of Pearson's MyLab & Mastering products exist for each title, including customized versions for individual schools, and registrations are not transferable. In addition, you may need a CourseID, provided by your instructor, to register for and use Pearson's MyLab & Mastering products. Packages Access codes for Pearson's MyLab & Mastering products may not be included when purchasing or renting from companies other than Pearson; check with the seller before completing your purchase. Used or rental books If you rent or purchase a used book with an access code, the access code may have been redeemed previously and you may have to purchase a new access code. Access codes Access codes that are purchased from sellers other than Pearson carry a higher risk of being either the wrong ISBN or a previously redeemed code. Check with the seller prior to purchase. -- This book is intended for use in a first course in Materials Sciences and Engineering taught in the departments of materials science, mechanical, civil and general engineering. It is also a suitable reference for mechanical and civil engineers and machine designers. Introduction to Materials Science for Engineers provides balanced, current treatment of the full spectrum of engineering materials, covering all the physical properties, applications and relevant properties associated with engineering materials. It explores all of the major categories of materials while also offering detailed examinations of a wide range of new materials with high-tech applications. MasteringEngineering for Introduction to Materials Science for Engineers is a total learning package. This innovative online program emulates the instructor's office-hour environment, guiding students through engineering concepts from Introduction to Materials Science for Engineers with self-paced individualized coaching. Teaching and Learning Experience This program will provide a better teaching and learning experience--for you and your students. It provides: Individualized Coaching with MasteringEngineering : MasteringEngineering emulates the instructor's office-hour environment using self-paced individualized coaching. A Balanced Approach Designed for a First Course in Engineering Materials: This concise textbook covers concepts and applications of materials science for the beginning student. Coverage of the Most Important Advances in Engineering Materials: Content is refreshed to provide the most up-to-date information for your course. In-text Features that Reinforce Concepts: An assortment of case studies, examples, practice problems, and homework problems give students plenty of opportunities to develop their understanding. Enhance Learning with Instructor Supplements: An Instructors Solution Manual and PowerPoint slides are available to expand on the topics presented in the text. Note: Introduction to Materials Science for Engineerswith MasteringEngineering Access Card Package, 8/e contains: ISBN-10: 0133826651/ISBN-13: 9780133826654 Introduction to Materials Science for Engineers , 8/e ISBN-10: 0133828921/ISBN-13: 9780133828924 MasteringEngineering with Pearson eText -- Access Card -- for Introduction to Materials Science for Engineers , 8/e MasteringEngineering is not a self-paced technology and should only be purchased when required by an instructor.
Surreal Entanglements Academic Internet Pub Incorporated
Experts must be able to analyze and distinguish all materials, or combinations of materials, in use today—whether they be metals, ceramics, polymers, semiconductors, or composites. To understand a material’s structure, how that structure determines its properties, and how that material will subsequently work in technological applications, researchers apply basic principles of chemistry, physics, and biology to address its scientific fundamentals, as well as how it is processed and engineered for use. Emphasizing practical applications and real-world case studies, Materials Characterization Techniques presents the principles of widely used, advanced surface and structural characterization techniques for quality assurance, contamination control, and process improvement. This useful volume: Explores scientific processes to characterize materials using modern technologies Provides analysis of materials’ performance under specific use conditions Focuses on the interrelationships and interdependence between processing, structure, properties, and performance Details the sophisticated instruments involved in an interdisciplinary approach to understanding the wide range of mutually interacting processes, mechanisms, and materials Covers electron, X-ray-photoelectron, and UV spectroscopy; scanning-electron, atomic-force, transmission-electron, and laser-confocal-scanning-florescent microscopy, and gel electrophoresis chromatography Presents the fundamentals of vacuum, as well as X-ray diffraction principles Explaining appropriate uses and related technical requirements for characterization techniques, the authors omit lengthy and often intimidating derivations and formulations. Instead, they emphasize useful basic principles and applications of modern technologies used to characterize engineering materials, helping readers grasp micro- and nanoscale properties. This text will serve as a valuable guide for scientists and engineers involved in characterization and also as a powerful introduction to the field for advanced undergraduate and graduate students.
Ceramic and Glass Materials Springer Science & Business Media
This edited collection approaches the most pressing discourses of the Anthropocene and posthumanist culture through the surreal, yet instructive lens of Jeff VanderMeer’s fiction. In contrast to universalist and essentializing ways of responding to new material realities, VanderMeer’s work invites us to re-imagine human subjectivity and other collectivities in the light of historically unique entanglements we face today: the ecological, technological, aesthetic, epistemological, and political challenges of life in the Anthropocene era. Situating these messy, multi-scalar, material complexities of life in close relation to their ecological, material, and colonialist histories, his fiction renders them at once troublingly familiar and strangely generative of other potentialities and insight. The collection measures VanderMeer’s work as a new kind of speculative surrealism, his texts capturing the strangeness of navigating a world in which "nature" has become radically uncanny due to global climate change and powerful bio-technologies. The first collection to survey academic engagements with VanderMeer, this book brings together scholars in the fields of environmental literature, science fiction, genre studies, American literary history, philosophy of technology, and digital cultures to reflect on the environmentally, culturally, aesthetically, and politically central questions his fiction poses to predominant understandings of the Anthropocene.
Women in Mechanical Engineering Jacaranda Press

This fifth edition of a successful textbook continues to provide students with an introduction to the basic principles of materials science over a broad range of topics. The authors have revised and updated this edition to include many new applications and recently developed materials. The book is presented in three parts. The first section discusses the physics, chemistry, and internal structure of materials. The second part examines the mechanical properties of materials and their application in engineering situations. The final section presents the electromagnetic properties of materials and their application. Each chapter begins with an outline of the relevance of its topics and ends with problems that require an understanding of the theory and some reasoning ability to resolve. These are followed by self-assessment questions, which test students' understanding of the principles of materials science and are designed to quickly cover the subject area of the chapter. This edition of Materials Science for Engineers includes an expanded treatment of many materials, particulary polymers, foams, composites and functional materials. Of the latter, superconductors and magnetics have received greater coverage to account for the considerable development in these fields in recent years. New sections on liquid crystals, superalloys, and organic semiconductors have also been added to provide a comprehensive overview of the field of materials science.

Materials Characterization Techniques Trans Tech Publications Ltd

Retaining its proven concept, the second edition of this ready reference specifically addresses the need of materials engineers for reliable, detailed information on modern material characterization methods. As such, it provides a systematic overview of the increasingly important field of characterization of engineering materials with the help of neutrons and synchrotron radiation. The first part introduces readers to the fundamentals of structure-property relationships in materials and the radiation sources suitable for materials characterization. The second part then focuses on such characterization techniques as diffraction and scattering methods, as well as direct imaging and tomography. The third part presents new and emerging methods of materials characterization in the field of 3D characterization techniques like three-dimensional X-ray diffraction microscopy. The fourth and final part is a collection of examples that demonstrate the application of the methods introduced in the first parts to problems in materials science. With thoroughly revised and updated chapters and now containing about 20% new material, this is the must-have, in-depth resource on this highly relevant topic.

Materials Science and Engineering CRC Press

This book is intended for use in a first course in Materials Sciences and Engineering taught in the departments of materials science, mechanical, civil and general engineering. It is also a suitable reference for mechanical and civil engineers and machine designers. ¿ Introduction to Materials Science for Engineers provides balanced, current treatment of the full spectrum of engineering materials, covering all the physical properties, applications and relevant properties associated with engineering materials. It explores all of the major categories of materials while also offering detailed examinations of a wide range of new materials with high-tech applications. ¿ MasteringEngineering for Introduction to Materials Science for Engineers is a total learning package. This innovative online program emulates the instructor's office--hour environment, guiding students through engineering concepts from Introduction to Materials Science for Engineers with self-paced individualized coaching. ¿¿ Teaching and Learning Experience This program will provide a better teaching and learning experience-for you and your students. It provides: Individualized Coaching with MasteringEngineering : MasteringEngineering emulates the instructor's office-hour environment using self-paced individualized coaching. A Balanced Approach Designed for a First Course in Engineering Materials: This concise textbook covers concepts and applications of materials science for the beginning student. Coverage of the Most Important Advances in Engineering Materials: Content is refreshed to provide the most up-to-date information for your course. In-text Features that Reinforce Concepts: An assortment of case studies, examples, practice problems, and homework problems give students plenty of opportunities to develop their understanding. Enhance Learning with Instructor Supplements: An Instructors Solution Manual and PowerPoint slides are available to expand on the topics presented in the text. Note: You are purchasing a standalone product; MasteringEngineering does not come packaged with this content. If you would like to purchase both the physical text and MasteringEngineering¿ search for ISBN-10: 0133789713/ISBN-13: 9780133789713. That package includes ISBN-10: 0133826651/ISBN-13: 9780133826654¿ and ISBN-10: 0133828921 /ISBN-13: 9780133828924. MasteringEngineering is not a self-paced technology and should only be purchased when required by an instructor. ¿

Rock Fractures in Geological Processes Academic Internet Pub Incorporated

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Fundamentals of Gas Turbines Springer

Rock fractures control many of Earth's dynamic processes, including plate-boundary development, tectonic earthquakes, volcanic eruptions, and fluid transport in the crust. An understanding of rock fractures is also essential for effective exploitation of natural resources such as ground water, geothermal water, and petroleum. This book combines results from fracture mechanics, materials science, rock mechanics, structural geology, hydrogeology, and fluid mechanics to explore and explain fracture processes and fluid transport in the crust. Basic concepts are developed from first principles and illustrated with worked examples linking models of geological processes to real field observations and measurements. Many additional examples and exercises are provided online, allowing readers to practise formulating and quantitative testing of models. Rock Fractures in Geological Processes is designed for courses at the advanced undergraduate and graduate level but also forms a vital resource for researchers and industry professionals concerned with fractures and fluid transport in the Earth's crust.

Neutrons and Synchrotron Radiation in Engineering Materials Science Academic Press

Materials Science and Engineering: An Introduction promotes student understanding of the three primary types of materials (metals, ceramics, and polymers) and composites, as well as the relationships that exist between the structural elements of materials and their properties.

Bioceramics Springer

The Science and Engineering of Materials, Third Edition, continues the general theme of the earlier editions in providing an understanding of the relationship between structure, processing, and properties of materials. This text is intended for use by students of engineering rather than materials, at first degree level who have completed prerequisites in chemistry, physics, and mathematics. The author assumes these stu dents will have had little or no exposure to engineering sciences such as statics, dynamics, and mechanics. The material presented here admittedly cannot and should not be covered in a one-semester course. By selecting the appropriate topics, however, the instructor can emphasise metals, provide a general overview of materials, concentrate on mechani cal behaviour, or focus on physical properties. Additionally, the text provides the student with a useful reference for accompanying courses in manufacturing, design, or materials selection. In an introductory, survey text such as this, complex and comprehensive design problems cannot be realistically introduced because materials design and selection rely on many factors that come later in the student's curriculum. To introduce the student to elements of design, however, more than 100 examples dealing with materials selection and design considerations are included in this edition.