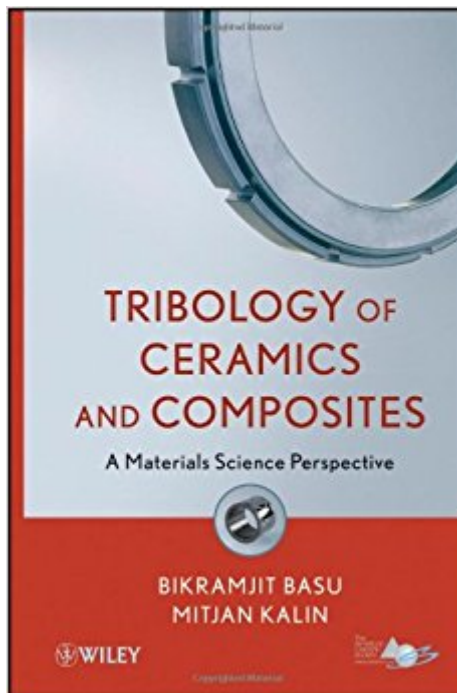




Ebook Directory
the best source of ebook

The book was found

Tribology Of Ceramics And Composites: Materials Science Perspective



Synopsis

This book helps students and practicing scientists alike understand that a comprehensive knowledge about the friction and wear properties of advanced materials is essential to further design and development of new materials. With important introductory chapters on the fundamentals, processing, and applications of tribology, the book then examines in detail the nature and properties of materials, the friction and wear of structural ceramics, bioceramics, biocomposites, and nanoceramics, as well as lightweight composites and the friction and wear of ceramics in a cryogenic environment.

Book Information

Hardcover: 550 pages

Publisher: Wiley-American Ceramic Society; 1 edition (October 11, 2011)

Language: English

ISBN-10: 0470522631

ISBN-13: 978-0470522639

Product Dimensions: 6.4 x 1.3 x 9.5 inches

Shipping Weight: 2 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #4,447,286 in Books (See Top 100 in Books) #65 in Books > Engineering & Transportation > Engineering > Mechanical > Tribology #5336 in Books > Engineering & Transportation > Engineering > Materials & Material Science > Materials Science #715973 in Books > Textbooks

Customer Reviews

Explore the principles of friction, lubrication, and wear from a materials science perspective Any engineered product assembly, wherein one material slides over or rubs against another is affected by complex tribological interactions, and understanding the science behind these interactions is essential for anyone working to improve the efficacy of new materials and manufacturing technologies. Tribology of Ceramics and Composites provides a rigorous study of how materials science can be used to understand, explore, and harness these interactions. Including introductory chapters on the fundamentals, processing, and applications of tribology, the book is designed primarily to provide students and practicing scientists with a comprehensive understanding of the fundamentals of the nature and properties of ceramic and composite materials as well as the friction and wear of structural ceramics in unlubricated, water-lubricated, and cryogenic environments. This

book also includes thematic sections on tribological properties of bioceramics, biocomposites, and nanoceramics, as well as lightweight composites. "Ceramics and composites represent an important class of engineering materials. The authors are commended for an excellent compilation that brings together some of the fundamental issues and applications of this class of materials as related to their tribological properties." â "Dr. Said Jahanmir, Mohawk Innovative Technology, Inc., Albany, NY, USA "This book very well describes attractive tribo-properties of ceramics and composites with fundamentals of friction and wear and many examples of modern applications. Students, engineers, and researchers will find this book very useful for understanding the present state of the tribology of ceramics and composites and as an introduction to modern high-tech needs." â "Prof. Koji Kato, Tohoku University and Nihon University, Japan With Forewords by Profs. Ian Hutchings and K. H. Zum Gahr

Bikramjit Basu, PhD, is Associate Professor in the Department of Materials Science and Engineering at the Indian Institute of Technology Kanpur (on leave) and currently at the Materials Research Center, Indian Institute of Science, Bangalore, India. Mitjan Kalin, PhD, is Professor and Head of the Centre for Tribology and Technical Diagnostics at the University of Ljubljana, Slovenia, where he is also Vice-Dean for Research and International Affairs in the Faculty of Mechanical Engineering.

This is a very good book that was clearly written by two experts. The book gives really good insights into the following: areas that ceramics are now being used, areas where they could be used, and how ceramics and ceramic based composites wear and break. The book also gives a great review of structural ceramics and ceramics used as biomaterials. The book gives a readable explanation of the wear mechanisms in ceramics as well. The book contains illustrations that show SEM analysis of many worn materials and the mechanisms that are responsible for the wear. The book does provide in my opinion excess information on many types of ceramics the average engineer may never encounter. However, the information in this book could be used to develop a more efficient machine that lasts much longer if one was willing to try a material other than steel.

[Download to continue reading...](#)

Tribology of Ceramics and Composites: Materials Science Perspective Draw in Perspective: Step by Step, Learn Easily How to Draw in Perspective (Drawing in Perspective, Perspective Drawing, How to Draw 3D, Drawing 3D, Learn to Draw 3D, Learn to Draw in Perspective) Ceramics: 1-2-3 Easy Steps To Mastering Ceramics! (Ceramics, Scrapbooking, Candle Making, Jewelry, Pottery)

Tribology of Polymeric Nanocomposites, Volume 55, Second Edition: Friction and Wear of Bulk Materials and Coatings (Tribology and Interface Engineering) Tribology of Plastic Materials: Their Characteristics and Applications to Sliding Components (Tribology Series) Coatings Tribology, Volume 56, Second Edition: Properties, Mechanisms, Techniques and Applications in Surface Engineering (Tribology and Interface Engineering) Ceramic Matrix Composites: Fiber Reinforced Ceramics and their Applications Tribology of Elastomers, Volume 47 (Tribology and Interface Engineering) Tribology in Electrical Environments, Volume 49 (Tribology and Interface Engineering) Engineering Tribology (Tribology Series) Freezing Colloids: Observations, Principles, Control, and Use: Applications in Materials Science, Life Science, Earth Science, Food Science, and Engineering (Engineering Materials and Processes) Engineered Materials Handbook: Ceramics and Glasses (Engineered Materials Handbook, Vol. 4) Antique Trader Pottery & Porcelain Ceramics Price Guide (Antique Trader Pottery and Porcelain Ceramics Price Guide) Ceramics for Beginners!: Techniques, Tools & Tips To Get Started With Ceramics, Pottery & Sculpting Made in Japan Ceramics Book III: Identification & Values (Collector's Guide to Made in Japan Ceramics) Ceramics for Beginners: Wheel Throwing (A Lark Ceramics Book) Surface Design for Ceramics (A Lark Ceramics Book) Dental Ceramics: Proceedings of the First International Symposium on Ceramics Wheel-Thrown Ceramics: Altering, Trimming, Adding, Finishing (Lark Ceramics Book) Handbook of Micro/Nano Tribology, Second Edition (Mechanics & Materials Science)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)