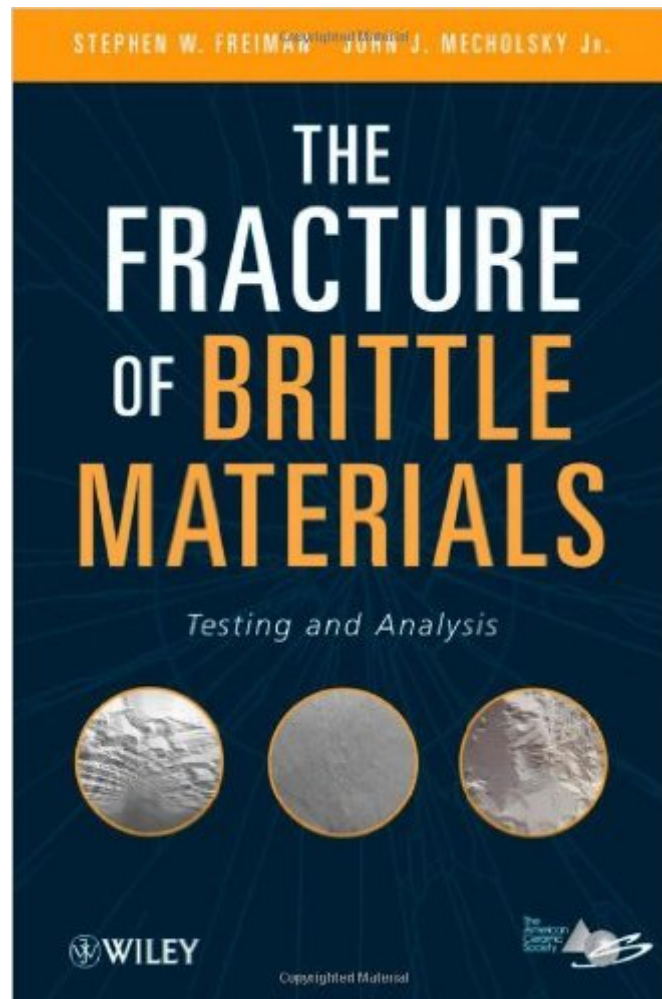


The book was found

# The Fracture Of Brittle Materials: Testing And Analysis



## Synopsis

Supports the use and development of strong, fracture-resistant, and mechanically reliable ceramic materials. The Fracture of Brittle Materials thoroughly sets forth the key scientific and engineering concepts underlying the selection of test procedures for fracture toughness, strength determination, and reliability predictions. With this book as their guide, readers can confidently test and analyze a broad range of brittle materials in order to make the best use of existing materials as well as to support the development of new materials. The authors explain the importance of microstructure in these determinations and describe the use of quantitative fractography in failure analysis. The Fracture of Brittle Materials is relevant to a broad range of ceramic materials (i.e., any inorganic non-metal), including semiconductors, cements and concrete, oxides, carbides, and nitrides. The book covers such topics as:

- Basic principles of fracture mechanics underlying brittle material tests and analysis procedures
- Theory and mechanisms of environmentally enhanced crack growth
- Fracture mechanics tests to determine a material's resistance to fast fracture
- Test and analysis methods to assess the strength of ceramics
- Methods to analyze the fracture process based on quantitative measurements of the fracture surface
- Effect of a material's microstructure
- Methods for predicting the lifetime of brittle components under stress

Throughout the book, figures and illustrations help readers understand key concepts and methods. Replete with real-world examples, this text enables engineers and materials and ceramics scientists to select and implement the optimal testing methods for their particular research needs and then accurately analyze the results.

## Book Information

Hardcover: 196 pages

Publisher: Wiley-American Ceramic Society; 1 edition (February 28, 2012)

Language: English

ISBN-10: 0470155868

ISBN-13: 978-0470155868

Product Dimensions: 6.5 x 0.7 x 9.6 inches

Shipping Weight: 1.1 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #3,100,431 in Books (See Top 100 in Books) #115 in Books > Engineering & Transportation > Engineering > Materials & Material Science > Fracture Mechanics #220

in Books > Engineering & Transportation > Engineering > Materials & Material Science > Strength of Materials #399 in Books > Engineering & Transportation > Engineering > Materials & Material

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

The Fracture of Brittle Materials: Testing and Analysis Fault and Joint Development: In Brittle and Semi-Brittle Rock Fracture of Brittle Solids (Cambridge Solid State Science Series) Fracture and Fatigue Control in Structures: Applications of Fracture Mechanics (Astm Manual Series) Fracture and Fatigue Control in Structures: Applications of Fracture Mechanics Faulting in Brittle Rocks: An Introduction to the Mechanics of Tectonic Faults Materials North American Edition w/Online Testing: Materials - North American Edition, Second Edition: engineering, science, processing and design The Basics of Hacking and Penetration Testing: Ethical Hacking and Penetration Testing Made Easy The Basics of Hacking and Penetration Testing: Ethical Hacking and Penetration Testing Made Easy (Syngress Basics Series) Deformation and Fracture Mechanics of Engineering Materials Hacking: How to Hack Computers, Basic Security and Penetration Testing (Hacking, How to Hack, Hacking for Dummies, Computer Hacking, penetration testing, basic security, arduino, python) Hacking: Basic Security, Penetration Testing and How to Hack (hacking, how to hack, penetration testing, basic security, arduino, python, engineering) Hacking: How to Computer Hack: An Ultimate Beginner's Guide to Hacking (Programming, Penetration Testing, Network Security) (Cyber Hacking with Virus, Malware and Trojan Testing) Daniels and Worthingham's Muscle Testing: Techniques of Manual Examination, 8e (Daniels & Worthington's Muscle Testing (Hislop)) Guide to DNA Testing: How to Identify Ancestors, Confirm Relationships, and Measure Ethnic Ancestry through DNA Testing Hacking: Beginner's Guide to Computer Hacking, Basic Security, Penetration Testing (Hacking, How to Hack, Penetration Testing, Basic security, Computer Hacking) Delay Fault Testing for VLSI Circuits (Frontiers in Electronic Testing) Ultrasonic Testing of Materials Business Analysis, Software Testing, Usability : A Quick Guide Book for Better Project Management and Faster IT Career Handbook of Plastics Testing and Failure Analysis

[Dmca](#)