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| 1. Record Nr. | UNINA9911019328703321 |
| Titolo | Mechanical properties and performance of engineering ceramics and composites VII : a collection of papers presented at the 36th International Conference on Advanced Ceramics and Composites, January 22-27, 2012, Daytona Beach, Florida // edited by Dileep Singh, Jonathan Salem ; volume editors, Michael Halbig, Sanjay Mathur |
| Pubbl/distr/stampa | Hoboken, N.J., : Wiley, c2013 |
| ISBN | 9781118217467 1118217462 9781283869454 1283869454 9781118530351 1118530357 |
| Descrizione fisica | 1 online resource (342 p.) |
| Collana | Ceramic engineering and science proceedings ; ; v. 33, issue 2 |
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| Disciplina | 620.14 666 |
| Soggetti | Ceramic materials Ceramic engineering |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Mechanical Properties and Performance of Engineering Ceramics and Composites VII; Contents; Preface; Introduction; NONDESTRUCTIVE EVALUATION OF CERAMICS SYSTEMS; Damage Sensitivity and Acoustic Emission of SiC/SiC Composite During Tensile Test and Static Fatigue at Intermediate Temperature after Impact Damage; Determination of Acoustic Emission Sources Energy and Application towards Lifetime Prediction of Ceramic Matrix Composites; Nondestructive Evaluation of Thermal Barrier Coatings by Optical and Thermal Imaging Methods Visualization of Internal Defects in Ceramic Products by using a UT |

Probe Array Evaluation of Ceramic Materials and Joints using UT and X-Ray; Investigation of Non-Destructive Evaluation Methods Applied to Oxide/Oxide Fiber Reinforced Ceramic Matrix Composite; WEAR, CHIPPING, AND FATIGUE OF CERAMICS AND COMPOSITES; Edge Chip Fracture Resistance of Dental Materials; High Pressure Seawater Impingement Resistance of Low Silica Aluminum Oxides; Wear Behavior of Ceramic/Metal Composites; Use of Ceramic Sliding Systems in a Prototype Gasoline Pump with Operating Pressures of up to 80 MPa Machinability Studies of Al/SiC/B₄C Metal Matrix Hybrid Composites using PCD 1600 Grade Insert Fretting Fatigue Failure of Engineering Ceramics; MICROSTRUCTURE AND MECHANICAL PROPERTIES OF MONOLITHIC AND COMPOSITE SYSTEMS; Low CTE and High Stiffness Diamond Reinforced SiC Based Composites with Machineable Surfaces for Mirrors and Structures; Tailoring Microstructures in Mullite for Toughness Enhancement; Microstructures of La-Doped Low Thermal Expansion Cordierite Ceramics; Strategies to Optimize the Strength and Fracture Resistance of Ceramic Laminates Investigation of Critical Fiber Length in Phenol Matrix Based Short Fiber CFRP by Double Overlap Joints Mechanical and Microstructural Characterization of C/C-SiC Manufactured Via Triaxial and Biaxial Braided Fiber Preforms; Influence of Fiber Fabric Density and Matrix Fillers as well as Fiber Coating on the Properties of OXIPOL Materials; Weave and Fiber Volume Effects in a PIP CMC Material System; Innovative Clay-Cellulosic Biosourced Composite: Formulation and Processing; Processing and Testing Re₂Si₂O₇ Matrix Composites Reaction Bonded Si/SiB₆: Effect of Carbon Additions on Composition and Properties Kinetics of Passive Oxidation of Hi-NICALON-S SiC Fibers in Wet Air: Relationships between SiO₂ Scale Thickness, Crystallization, and Fiber Strength; Study on the Stiffness of Comeld Composites Joints; High-Temperature Interlaminar Tension Test Method Development for Ceramic Matrix Composites; Tensile Fracture Mechanism of Silicon Impregnated C/C Composite; Effects of Target Supports on Foreign Object Damage in an Oxide/Oxide CMC Experimental and Numerical Study on Application of a CMC Nozzle for High Temperature Gas Turbine

Sommario/riassunto

This collection of 33 papers deals with mechanical behaviors associated with systems ranging from diamond reinforced silicon carbide to rare earth pyrosilicates. Presented at The Mechanical Behavior and Performance of Ceramics & Composites Symposium in January 2012 during the 36th International Conference on Advanced Ceramics and Composites (ICACC), it offers researchers from around the world the opportunity to explore new and emerging issues in all aspects of the field.
