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Nota di contenuto	Mechanical Properties and Performance of Engineering Ceramics and Composites IV; Contents; Preface; Introduction; MECHANICAL PROPERTIES AND PERFORMANCE; R&D of Advanced Ceramics Activities in China and Shanghai Institute of Ceramics Chinese Academy of Sciences (SICCAS); Fabrication of Silicon Nitride-Multi-Walled Nanotube Composites by Direct In-Situ Growth of Nanotubes on Silicon Nitride Particles; Synthesis of Ytria Stabilized Zirconia (3YTZP)-Multi-Walled Nanotube (MWNTs) Nanocomposite by Direct In-Situ Growth of MWNTs on Zirconia Particles

Processing, Microstructure and Mechanical Properties of Ultra High Temperature Ceramics Fabricated by Spark Plasma Sintering; Fabrication of Carbon Fiber Reinforced Ceramic Matrix Composites Potential for Ultra-High-Temperature Applications; Estimation of Sintering Warpage of a Constrained Ceramic Film; Long-Term Temperature Gradient Stress Relaxation Testing and Modeling of Ceramic Insulation Materials; From Conventional to Fast Sintering of Zirconia Toughened Alumina Nanocomposites
Fatigue Characterization of a Melt-Infiltrated Woven HI-NiC-SiC/SiC Ceramic Matrix Composite (CMC) Using a Unique Combustion Test Facility; Effect of SiC Content and Third Phase Metal Additions on Thermal and Mechanical Properties of Si/SiC Ceramics; Compressive Strength Degradation in ZrB₂-SiC AND ZrB₂-SiC-C Ultra High Temperature Composites; SiC Nanometer Sizing Effect on Self Healing Ability of Structural Ceramics; Creep and Fatigue Behavior of MI SiC/SiC Composites at Temperature; Self-Crack-Healing Behavior Under Combustion Gas Atmosphere
Selection of a Toughened Mullite for a Miniature Gas Turbine Engine; Comparison in Foreign Object Damage between SiC/SiC and Oxide/Oxide Ceramic Matrix Composites; Ti₃(Si,Al)C₂ for Nuclear Application: Investigation of Irradiation Effects Induced by Charged Particles; Heavy Ions Induced Damages in Ti₃SiC₂: Effect of Irradiation Temperature; Titanium Carbide and Silicon Carbide Thermal Conductivity Under Heavy Ions Irradiation; Corrosion Resistance of Ceramics in Vaporous and Boiling Sulfuric Acid
Unlubricated Clutch System Based on the Function Relevant Friction Pairing Advanced Non-Oxide Ceramic vs. Steel; Nondestructive Inspection of Ceramic Bearing Balls Using Phased Array Ultrasonics; Thermal Expansion Coefficient of SiO₂-Added Leucite Ceramics; GEOPOLYMERS; Inorganic Polymers (Geopolymers) as Advanced Materials; Properties and Performance of Si-Rich Geopolymer Binder Systems; Cold Setting Inorganic Networks Including Phosphates; Properties of Phosphorus-Containing Geopolymer Matrix and Fiber-Reinforced Composite; Formation of an Iron-Based Inorganic Polymer (Geopolymer)
Consolidated Geo-Materials from Sand or Industrial Waste

Sommario/riassunto

Gain insight into the mechanical properties and performance of engineering ceramics and composites. This collection of articles illustrates the Mechanical Behavior and Performance of Ceramics & Composites symposium, which included over 100 presentations representing 10 countries. The symposium addressed the cutting-edge topics on mechanical properties and reliability of ceramics and composites and their correlations to processing, microstructure, and environmental effects.
