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Nota di contenuto	Processing and Properties of Advanced Ceramics and Composites; Contents; Preface; Microwave Processing; Continuous Microwave-Driven Polyol Process for Synthesizing Ytterbium-Doped Ytria Powder; Microwave Irradiation-Assisted Method for the Rapid Synthesis of Fine Particles of $\text{-Al}_2\text{O}_3$ and $\text{-(Al-XCrx)}_2\text{O}_3$ and Their Coatings of Si (100); CHEMICAL VAPOR DEPOSITION; Synthesis and Characterization of Si/Si <sub>2</sub> N <sub>2</sub> O/Si <sub>3</sub> N <sub>4</sub> Composites from Solid-Gas Precursor System Via CVD; Effect of Flow Rate, Nitrogen Precursor and Diluent on Si <sub>2</sub> N <sub>2</sub> O Deposition by HYSYCVD; COMBUSTION SYNTHESIS MgAl <sub>2</sub> O <sub>4</sub> /SiC Composite Ceramic Material Produced by Combustion SynthesisFinite Element Analysis of Self-Propagating High-Temperature

Synthesis of Strontium-Doped Lanthanum Manganate; REACTION FORMING AND POLYMER PROCESSING; Comparison of Bulk and Nanoscale Properties of Polymer Precursor Derived Silicon Carbide with Sintered Silicon Carbide; Process Design and Production of Boron Trichloride from Native Boron Carbide in Lab-Scale; SINTERING AND HOT PRESSING; Spark Plasma Sintered Alumina-Zirconia Nano-Composites by Addition of Hydroxyapatite  
Comparison of Slip Cast to Hot Pressed Boron Carbide AMORPHOUS CERAMICS; Mechanically Driven Amorphization and Bulk Nanocrystalline Synthesis of Ultra-High Temperature Ceramics; Preparation and Characterization of Fused Silica Based Ceramic Cores Used in Superalloy Casting; COATINGS AND FILMS; Photon Effects in Ultra-Thin Oxide Films: Synthesis and Functional Properties; Faradayic Process for Electrophoretic Deposition of Thermal Barrier Coatings for Use in Gas Turbine Engines; A Novel Method to Spray Tungsten Carbide Using Low Pressure Cold Spray Technology; Composites Foreign Object Damage Versus Static Indentation Damage in an Oxide/Oxide Ceramic Matrix Composite Distinguished Functions Making the Best Use of the Unique Composite Structures; Effects of Environment on Creep Behavior of NEXTELTM720/Alumina-Mullite Ceramic Composite at 1200°C; Performance of Composite Materials in Corrosive Conditions: Evaluation of Adhesion Loss in Polymers Via Cathodic Disbondment and a Newly Developed NDE Technique; Effect of Variations in Process Shear on the Mixedness of an Alumina-Titania System; MODELING  
Modeling of the Pressure in 1-D Green Ceramic Bodies during Depressurization from Conditions of Supercritical Extraction of Binder Models of the Strength of Green Ceramic Bodies as a Function of Binder Content and Temperature; Finite Element Modeling of Steel Wire Drawing through Dies Based on Encapsulated Hard Particles; Author Index

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Sommario/riassunto

A valuable reference for those interested in innovative approaches to the synthesis and processing of ceramics and composites, as well as their properties. Twenty-two papers describing the latest developments in the areas of combustion synthesis, microwave processing, reaction forming, polymer processing, chemical vapor deposition, electrophoresis, spark plasma sintering, mechanical amorphization, thin films, composites, and more are included in this volume.

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