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Titolo	Advanced processing and manufacturing technologies for structural and multifunctional materials III [[electronic resource]] : a collection of papers presented at the 33rd International Conference on Advanced Ceramics and Composites, January 18-23, 2009, Daytona Beach, Florida // edited by Tatsuki Ohji, Mrityunjay Singh; volume editors: Deep Singh, Jonathan Salem
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Nota di contenuto	Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials III; Contents; Preface; Introduction; Solid-state Reactive Sintering of Polycrystalline Nd:YAG Ceramic Laser Host Materials Using an 83 GHz Millimeter Wave System; Microwave Assisted Large Scale Sintering of Multilayer Electroceramic Devices; Influence of the Secondary Phase Composition on the Microwave Sintering Process; Optimization of Microwave-Assisted Rapid Debinding of CIM Parts in

Multi-Mode Applicators

Characterization of a Potential Superplastic Zirconia-Spinel Nanocomposite Processed by Spark Plasma Sintering; Densification Enhancement of Alumina by Sandwich Process Design; Processing Factors Involved in Sintering -Si,N,-Based Ceramics in an Air Atmosphere Furnace; Pressureless Sintering of Boron Carbide in an Ar Atmosphere Containing Gaseous Metal Species; Processing Strategy for Producing Ultra-Highly Porous Cordierite; Issues in the Synthesis and Fabrication of Refractory Carbides, Borides, Silicides and their Mixtures; Shrinkage Reduction of Clay Through Addition of Alumina ITO Thin Film Coatings Obtained from Developed Ceramic Rotary Sputtering Targets; Ultrasonic Non-Destructive Testing of Ceramic Sputtering Targets; Morphology Control of Metal Oxides for Environmental Sensors; Basic Study of Joint Interface Formation in Magnetic Pressure Seam Welding; Joining of Silicon Nitride by Slurry or Paste; Segregation Mechanism in (M=Al, Ga) Zn_{1-x}MxO Ceramics and its Influence on the Thermoelectric Properties; Production of Novel Architectures Through Controlled Degradation of Electrospun Precursors Millimeter Wave Properties of Titania Photonic Crystals with Diamond Structures Fabricated by Using Micro-stereolithography; Sintering Kinetic Study of 2Y-TZP/Al₂O₃ Composite during Initial Stage of Sintering; Investigations of Phenolic Resins as Carbon Precursors for C-Fiber Reinforced Composites; Aluminum Nitride Multi-Walled Nanotube (MWNTs) Nanocomposite by Direct In-situ Growth of CNTs on Aluminum Nitride Particles; Microstructural Characterization of C/C-SiC Composites after Oxidation with Oxyacetylene Gas in Open Atmosphere The Effect of Interparticle Interactions on the Rheological Properties of Paraffin-Wax Suspensions; Preparation of Highly Concentrated Nanosized Alumina Suspensions for Spray-Drying; Author Index

Sommario/riassunto

This issue contains 25 invited and contributed papers, all peer reviewed according to the American Ceramic Society Review Process. The latest developments in processing and manufacturing technologies are covered, including smart processing, advanced composite manufacturing, novel forming and sintering technologies, microwave-processing, polymer-based processing, and film deposition technologies. These papers discuss the most important aspects necessary for understanding and further development of processing and manufacturing of ceramic materials and systems.