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Nota di contenuto

Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials V: A Collection of Papers Presented at the 35th International Conference on Advanced Ceramics and Composites January 23-28, 2011 Daytona Beach, Florida; Contents; Preface; Introduction; Seeds Innovation and Bearing Applications of Silicon Nitride Ceramics; Comparison of Microwave and Conventionally Sintered Yttria Doped Zirconia Ceramics and Hydroxyapatite-Zirconia Nanocomposites; Recent Developments in High Thermal Conductivity Silicon Nitride Ceramics
Microstructure Maps for Unidirectional Freezing of Particle Suspensions
Interactions of Si₃N₄-Based Ceramics in Water Environment Under Sub-Critical Conditions; Smart Recycling of Composite Materials; High Thermal Conductivity and High Strength Sintered Reaction - Bonded Silicon Nitride Ceramics Fabricated by Using Low Grade Si Powder; Electrical Conductive CNT-Dispersed Si₃N₄ Ceramics with Double Percolation Structure; Fabrication of CNT-Dispersed Si₃N₄ Ceramics by Mechanical Dry Mixing Technique; Joining of Silicon Nitride Long Pipe by Local Heating
Joining of Silicon Nitride with Pyrex® Glass by Microwave Local Heating
Mechanical Properties of Chemical Bonded Phosphate Ceramics with Fly Ash as Filler; Ceramics Micro Processing of Photonic Crystals: Geometrical Patterning of Tania Dispersed Polymer for Terahertz Wave Control; Intergranular Properties and Structural Fractal Analysis of BaTiO₃-Ceramics Doped by Rare Earth Additives; Development of Numerical Method for Evaluating Microstructural Fracture in Smart Materials; Fabrication of Ceramic Dental Crowns by Using Stereolithography and Powder Sintering Process
Large-Sized Structural Ceramic Manufacturing by the Shaping of Thixotropic Slurries Oriented Alumina Ceramics Prepared from Colloidal Processing in Magnetic Field; Densification Mechanisms of Yttria-Stabilized Zirconia Based Amorphous Powders by Electric Current Assisted Sintering Process; Microstructure Control of Si₃N₄ Ceramics Using Nanocomposite Particles Prepared by Dry Mechanical Treatment; Author Index

Sommario/riassunto

This book is a collection of papers from The American Ceramic Society's 35th International Conference on Advanced Ceramics and Composites, held in Daytona Beach, Florida, January 23-28, 2011. This issue includes papers presented in the 5th International Symposium on Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials and Systems on topics such as Design-Oriented Manufacturing and Novel Forming and Sintering. Papers from a special session held in honor of Katsutoshi Komeya of Yokohama National University, Japan are also included.