

1. Record Nr.	UNINA9910462862903321
Titolo	Advanced synthesis and processing technology for materials : selected, peer reviewed papers from the 1st International Symposium on Advanced Synthesis and Processing Technology for Materials, November 14-17, 2008, Wuhan, China // edited by Takashi Goto [and three others]
Pubbl/distr/stampa	Stafa-Zurich, Switzerland ; ; Enfield, New Hampshire : , : Trans Tech Publications, , [2009] ©2009
ISBN	3-03813-305-1
Descrizione fisica	1 online resource (306 p.)
Collana	Advanced materials research, , 1022-6680 ; ; volume 66
Altri autori (Persone)	GotoTakashi
Disciplina	620.110287
Soggetti	Materials science Materials - Analysis Electronic books.
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 indexes.
Nota di contenuto	Advanced Synthesis and Processing Technology for Materials; Sponsors, Committees, Preface; Table of Contents; Ceramics; Investigation of Curing Process on Melt Spun Polymethylsilsesquioxane Fiber as Precursor for Silicon Oxycarbide Fibers; Synthesis of SiC Based Fibers with Continuous Pore Structure by Melt- Spinning and Controlled Curing Method; Effect of Nd <sub>2</sub> O <sub>3</sub> and Sm <sub>2</sub> O <sub>3</sub> on the Microstructure and Electrical Properties of WO <sub>3</sub> Capacitor-Varistor Ceramics; The Effect of Particle Morphology and Particle Size Distribution on the Property of Slip Casting SiC Preparation and Thermoelectric Properties of Bi-Doped Mg <sub>2</sub> Si NanocompositesThe Effect of Water-Soluble Plasticizer on Barren Raw Material Hard Plastic Extruding Course; Stoichiometric Controlling of Spark Plasma Sintered Boron-Carbon Ceramics; Optimal Design for Ceramic Radomes with A-Sandwich Structure; Effect of Bi Doping on the Thermoelectric Properties of Mg <sub>2</sub> Si <sub>0.5</sub> Sn <sub>0.5</sub> Compound; Effect of CaO on Sintering and Crystallization of CaO-Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> System Phosphorus Slag Glass-Ceramic; Reinforcement of B <sub>4</sub> C Ceramics with

Multi-Walled Carbon Nanotubes

Damping Properties and Mechanism of 0-3 PMN/CB/EP

CompositesField-Assisted Isothermal Oriented Crystallization of SrO-

TiO<sub>2</sub>-SiO<sub>2</sub> Polar Glass-Ceramics; Structure and Property of Ti-Al-

C/TiB<sub>2</sub> Composite Ceramics; Synthesis, Characterization and Catalytic

Properties of La<sub>4</sub>BaCu<sub>5-x</sub>Ni<sub>x</sub>O<sub>13+</sub> (x=0, 1, 2, 3, 4, 5); Oxidation of

ZrB<sub>2</sub>/ZrO<sub>2</sub> and ZrB<sub>2</sub>/ZrO<sub>2</sub>/SiC Ceramics; Molten Salt Synthesis and

Photoluminescence of YVO<sub>4</sub>:Eu Microcrystalline Phosphors; Synthesis,

Characterization and Electromagnetic Wave Absorption Properties of Z-

Type Hexaferrites Prepared by Molten Salt Method

Carbothermal Reduction and Nitridation Synthesis of -AlON Powder

under High Heating RateSynthesis of Ultra-Fine ZrB<sub>2</sub> Powder by

Borothermal Reaction under High Heating Rate; Microstructure and

Properties of Mullite-FeCr Multifunctional Composite; Effect of Sintering

Temperature on the Properties of Porous Silicon Nitride Ceramics;

Effects of Coated Nano-BN Particles on Microstructure and Properties of

BN-AlN Composite ; Erosion Resistance of Al<sub>2</sub>TiO<sub>5</sub>/Al<sub>2</sub>O<sub>3</sub> Composites

to Molten Aluminum; Fabrication of Indium Tin Oxide Targets by Spark

Plasma Sintering and Hot-Pressing Sintering

Superfast Sintering of Nanocrystalline Y<sub>2</sub>O<sub>3</sub> CeramicsLow-Temperature

Sintering and Microwave Dielectric Properties of the Zn<sub>2</sub>SiO<sub>4</sub> Ceramics;

Thermal Shock-Resistance Performance of Al<sub>2</sub>TiO<sub>5</sub>/Al<sub>2</sub>O<sub>3</sub> Composites

; Effect of LaCl<sub>3</sub> on the Properties of LAS Ceramics; Preparation of Fine

Mullite Powder in a SHS Chemical Furnace System; Low Dimensional

Materials; Investigation of Bipolar Resistance Switching Properties in

SrTiO<sub>3</sub> Thin Films with Symmetric Electrodes Structure; The Effect of

Oxygen Annealing on the Resistance Switching Properties of the La<sub>0.7</sub>

Ca<sub>0.3</sub>MnO<sub>3</sub> Films

Fabrication and Resistance-Switching Behaviors of NiO Thin Films by

Thermal Oxidation of Evaporated Ni Films

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#### Sommario/riassunto

This special collection of 73 papers covers the intriguing topic of the synthesis and processing of inorganic materials using non-traditional technologies such as SHS, SPS, mechanical alloying, wet chemistry and aerosol deposition; as well as techniques involving laser, microwave, plasma, electron beam and high-field magnetron exposure. It is divided into chapters covering: Ceramics, Low-Dimensional Materials and Materials with Designed Structure and provides an authoritative and useful introduction to the subject.

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