

1. Record Nr.	UNINA9911019658603321
Titolo	Ceramic materials and components for energy and environmental applications : a collection of papers presented at the 9th International Symposium on Ceramic Materials for Energy and Environmental Applications and the Fourth Laser Ceramics Symposium, November 10-14, 2008, Shanghai, China // edited by Dongliang Jiang ... [et al.]
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, c2010
ISBN	9786612707780 9781282707788 1282707787 9780470640845 0470640847 9780470640838 0470640839
Descrizione fisica	1 online resource (680 p.)
Collana	Ceramic transactions ; ; 210
Altri autori (Persone)	JiangDongliang
Disciplina	300 620.14
Soggetti	Ceramic materials Ceramic materials - Environmental aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"American Ceramic Society".
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Ceramic Materials and Components for Energy and Environmental Applications; Contents; Preface; Acknowledgements; I. Basic Science, Design, Modeling and Simulation; FRACTURE STATISTICS OF SMALL SPECIMENS; STRUCTURE AND PROPERTY OF Ti-Al-C/TiB ₂ COMPOSITE CERAMICS; THE EFFECT OF DOPED SINTERING AIDS FOR Nd(Mg _{0.5} Ti _{0.5})O ₃ MICROWAVE DIELECTRIC CERAMICS PROPERTIES; MICROWAVE DIELECTRIC PROPERTIES OF (1 -x)(Mg _{0.6} Zn _{0.4}) _{0.95} Co _{0.05} TiO ₃ CERAMIC SYSTEM; OXYNITRIDE GLASSES: EFFECTS OF COMPOSITION ON GLASS FORMATION AND PROPERTIES WITH IMPLICATIONS FOR HIGH TEMPERATURE BEHAVIOUR OF SILICON NITRIDE CERAMICS THE HYDROLYSIS OF ALUMINIUM NITRIDE: A PROBLEM OR AN ADVANTAGEPREPARATION AND COMPARISION OF TWO TYPICAL CVD

FILMS FROM CH₄ AND C₃H₆ AS CARBON RESOURCES; KINETIC INVESTIGATION ON THE DEPOSITION OF SiC FROM METHYLTRICHLOROSILANE AND HYDROGEN; II. Nanomaterials and Nanotechnologies; SYNTHESIS OF HEMATITE-ZIRCON-SILICA NANO COMPOSITE AS A NON TOXIC CERAMIC PIGMENT BY SOL-GEL METHOD; FORMATION OF NANOCRYSTALLINE -ALUMINAS IN DIFFERENT MORPHOLOGY FROM GEL POWDER AND BOEHMITE POWDER: A COMPARATIVE STUDY; SYNTHESIS AND IN VITRO RELEASE OF GENTAMICIN FROM CaMCM-41/PLLA COMPOSITE MICROSPHERES HIGHLY ORDERED CUBIC MESOPOROUS COBALT OXIDE BY AN ACCURATELY CONTROLLED INCIPIENT WETNESS TECHNIQUE PREPARATION OF Fe₃O₄ NANOPARTICLES BY TWO DIFFERENT METHODS; NANO-ZIRCONIA/MULLITE COMPOSITE CERAMICS PREPARED BY IN-SITU CONTROLLED CRYSTALLIZATION FROM THE Si-Al-Zr-O AMORPHOUS BULK; PREPARATION AND CHARACTERIZATION OF Er:Gd₂O₃ POWDERS; III. Ceramics in Energy Conversion Systems; CMC MATERIALS AND BIOMORPHIC SiSiC FOR ENERGY APPLICATIONS; CRYSTALLIZATION, MICROSTRUCTURE AND PHYSICAL PROPERTY OF NEW TYPES OF BOROSILICATE GLASS-CERAMICS A STUDY OF Al₂O₃ AND YSZ CERAMIC SUPPORTS FOR PALLADIUM MEMBRANES SYNTHESIS OF OLIVINE (LiFePO₄) and Ni/OLIVINE (LiFePO₄) CATALYSTS FOR UPGRADING SYN-GAS PRODUCTION; FABRICATION AND CHARACTERIZATION OF CERMET MEMBRANE FOR HYDROGEN SEPARATION; POROUS CERAMICS FOR HOT GAS CLEANING; DEGRADATION MECHANISMS OF SiC-BASED FILTERS CAUSED BY LONG TERM WATER VAPOUR EXPOSURE; IV. Solid Oxide Fuel Cells (SOFCs): Materials and Technologies; DEVELOPMENT OF NANO-STRUCTURED YSZ ELECTROLYTE LAYERS FOR SOFC APPLICATIONS VIA SOL-GEL ROUTE DEVELOPMENT OF SINGLE-CHAMBER SOLID OXIDE FUEL CELLS: PERFORMANCE OPTIMIZATION AND MICRO-STACK DESIGNS DEVELOPMENT OF BUNDLE/STACK FABRICATION TECHNOLOGY FOR MICRO SOFCs; AN OVERVIEW OF SCANDIA STABILIZED ZIRCONIA ELECTROLYTE DEVELOPMENT FOR SOFC APPLICATION; FABRICATION OF Ni-GDC ANODE SUBSTRATE BY TAPE CASTING PROCESS; V. Ceramics in Environmental Applications; INFLUENCE OF LATTICE STRAIN ON THE Ce_{0.5}Zr_{0.5}O₂ AND Al₂O₃ DOPED Ce_{0.5}Zr_{0.5}O₂ CATALYTIC POWDERS; MICROSTRUCTURE AND PROPERTIES OF CORDIERITE-BONDED POROUS SiC CERAMICS PREPARED BY IN SITU REACTION BONDING FABRICATION OF LIGHTWEIGHT CLAY BRICKS FROM RECYCLED GLASS WASTES

Sommario/riassunto

This volume of the Ceramic Transactions series compiles a number of papers presented at the 9th International Conference on Ceramic Materials and Components for Energy and Environmental Applications (9th CMCEE) in Shanghai, China and was the continuation of a series of international conferences held all over the world over the last three decades. This volume contains selected peer reviewed papers from more than 300 presentations from all over the world. The papers in this volume also highlight and emphasize the importance of synergy between advanced materials and componen