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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 TECHNIQUEPREPARATION 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 MEMBRANESSYNTHESIS 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 DESIGNSDEVELOPMENT OF BUNDLE/STACK FABRICATION TECHONOLOGY 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 LAITICE STRAIN ON THE Ce0.5Zr0.5O2 AND Al2O3 DOPED Ce0.5Zr0.5O2 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
