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Nota di contenuto	Nitrides and Oxynitrides III; Table of Contents; Oxynitride Research in the Nano Era; Oxynitride Glasses: Preparation, Properties and Implications for Mechanical Behaviour of Silicon Nitride ; An Introduction to the Glass Formation and Properties of Ca-Si-Al-O-N-F Glasses ; Effect of Cooling Rate on Glass Formation for Some Oxynitride Glasses ; Effect of Fluorine and Nitrogen Anions on Properties of Ca-Si-Al-O Glasses; Jasminaldehyde Synthesis Catalyzed by Al(Ga)PON Oxynitrides: Influence of the Reaction Conditions ; Local Structures of Si ₂ (O,N) ₇ Ditetrahedra in J-Phase Mechanochemical Nitride SynthesisThe New Top-To-Bottom Method of SiAlON Precursor Preparation by Activation in a Planetary Mill with a High Acceleration ; CVD Synthesis of Tungsten Nitride and Its Deposition Behavior; Utilization of a Phosphate Ester as a Dispersant for SiAlON Based Ceramics; Textured -SiAlON Ceramics via Templated Grain Growth; Fabrication of Porous -SiAlON Preforms from Kaolin for Liquid Metal Infiltration ; SPS-Technology - A New Range of Possibilities for the FAST Consolidation of Innovative Material ; Densification of Sr-Mg Doped SiAlONs with GPS and SPS

Role of -SiAlON Nuclei Addition on the Rod-Like Y-Sm -SiAlON Formation; Vacuum Heat Treatment of MgO -Densified Pressureless Sintered Silicon Nitride Ceramics ; The Intergranular Oxynitride Microstructure in Silicon Nitride Based Ceramics; Influence of Type of Cations on Intergranular Phase Crystallisation of SiAlON Ceramics; Silicon Nitride - Carbon Nanotube Composites; Particle -Reinforced SiAlONs for Cutting Tools; ZrO₂-TiN Composites; Effect of Fibre Heat-Treatment on Nicalon SiC Fibre Reinforced -SiAlON Matrix Composites; Corrosion Resistance of -SiAlON-Based Ceramics Against Molten Steel; From Earth Minerals to Nitrides; The Growth and the Reaction Mechanism of Si₃N₄ Powder from Silica; Carbothermal Reduction and Nitridation of Quartz Mineral for the Production of Alpha Silicon Nitride Powders ; Carbothermal Reduction and Nitridation of Canakkale Origin Kaolin for SiAlON Powder Production; Transformation Potential of Kalemaden Clay - 220 to Technological Ceramics ; Liquid Phase Sintering of Aluminum Nitride; Aqueous Processing of AlN Powder; Microstructural Aspects of the Hot-Pressed Hexagonal Boron Nitride Ceramics with Limited Content of Boron Oxide; An Investigation of the Mechanical Properties and Fracture Characteristic of Hot-Pressed Boron Nitride Ceramics ; Pressureless Sintering of Hexagonal Boron Nitride Powders; Characterization of Niobium Carbonitride Coating on AISI D2 Steel ; Structural Characterization of Titanium Nitride Coatings on AISI M2 Steel; Keywords Index; Authors Index

Sommario/riassunto

This volume is dedicated to the ever-expanding fields of application of nitrides in ceramics, metals, glasses, composites and coatings. The papers cover all of those branches of materials science and engineering which concern the role of nitrogen in the improvement and modification of the properties of materials; particularly those destined for novel applications. The contents are organised into six sections: Preparation and Crystal Chemistry of Nitrides and Oxynitrides; Oxynitride Glasses and Glass-Ceramics; Silicon Nitride Based Ceramics; Nitride-Based Composites; Characterisation and Modell
