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Porosity; Physical Properties in the Bi203-Fe203 System Containing Y203 and CaO Dopants; Electrical Properties of Ceo8Gdo201O19 Ceramics Prepared by an Aqueous Process; Structural Study and Conductivity of BaZro90Gac10O295; Hydrogen Flux in Terbium Doped Strontium Cerate Membrane
A Mechanical-Electrochemical Theory of Defects in Ionic SolidsElectrodes; Nanostructured Ceramic Suspensions for Electrodes and the Brazilian SOFC Network "Rede PaCOS"; Modeling of MIEC Cathodes: The Effect of Sheet Resistance; Cathode Thermal Delamination Study for a Planar Solid Oxide Fuel Cell with Functional Graded Properties: Experimental Investigation and Numerical Results; Electrochemical Characteristics of Ni/Gd-Doped Ceria and Ni/Sm-Doped Ceria Anodes for SOFC Using Dry Methane Fuel
Control of Microstructure of NiO-SDC Composite Particles for Development of High Performance SOFC AnodesElectrochemical Characterization and Identification of Reaction Sites in Oxide Anodes; Interconnects and Protective Coatings; Corrosion Performance of Ferritic Steel for SOFC Interconnect Applications; High Temperature Corrosion Behavior of Oxidation Resistant Alloys Under SOFC Interconnect Dual Exposures; Electro-Deposited Protective Coatings for Planar Solid Oxide Fuel Cell Interconnects; Properties of (Mn,Co)3O4 Spinel Protection Layers for SOFC Interconnects
Fuel Cell Interconnecting Coatings Produced by Different Thermal Spray TechniquesSurface Modification of Alloys for Improved Oxidation Resistance in SOFC Applications; Seals; Composite Seal Development and Evaluation; Investigation of SOFC-Gaskets Containing Compressive Mica Layers Under Dual Atmosphere Conditions; Performance of Self-Healing Seals for Solid Oxide Fuel Cells (SOFC); Properties of Glass-Ceramic for Solid Oxide Fuel Cells; Mechanical Behavior of Solid Oxide Fuel Cell (SOFC) Seal Glass-Boron Nitride Nanotubes Composite Mechanical Behaviour of Glassy Composite Seals for IT-SOFC Application

Sommario/riassunto

Due to its many potential benefits, including high electrical efficiency and low environmental emissions, solid oxide fuel cell (SOFC) technology is the subject of extensive research and development efforts by national laboratories, universities, and private industries. In these proceedings, international scientists and engineers present recent technical progress on materials-related aspects of fuel cells including SOFC component materials, materials processing, and cell/stack design, performance, and stability. Emerging trends in electrochemical materials, electrodics, interface engineering,