Pirocloros de zirconato de tierras raras $A_2Zr_2O_7$ (A^{3+} = Nd, Sm, Pr y Er) utilizados como posibles candidatos para el rendimiento termoeléctrico y para aplicaciones de alta temperatura

Abstract:

The increasing interest in ecological aspects related to the reduction of harmful emissions to the atmosphere and, at the same time, the need to achieve higher efficiencies of energy production are the driving forces that justify the current development of advanced ceramic materials for high temperature applications, namely those associated to energy and transportation industries. Ceramic matrix composites (CMCs), thermal barrier coatings (TBCs), environmental barrier coatings (EBCs) and solid oxide fuel cells (SOFCs) are increasingly used to work under the new demanding conditions. In this review, the recent progress and trends in the research and development of CMCs, TBCs, EBCs and SOFCs based on ceramic materials for high temperature applications are highlighted.

Keywords:

Solid-state reaction, pyrochlore compounds, Crystal structure

Article Outline:

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