

Sintering Kinetics of Nanostructured Gadolinia-Doped Ceria

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Sintering is a key step in the processing of ceramic materials allowing for defining their final properties. The mechanisms of sintering have been investigated over the last 60 years, and good knowledge on the relationship between basic concepts and experimental parameters was achieved. One relevant development for studying the sintering kinetics is the construction of the Master Sintering Curve (MSC), which allows on forecasting the evolution of microstructure during sintering. The MSC has been constructed for a number of ceramic materials with success. In this work, results on the application of MSC to nanostructured gadolinia-doped ceria with different specific surface areas are discussed.