STRUCTURE AND PERFORMANCE OF SOFC ELECTRODES

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11 de MAYO de 2017
Seminario de Física Nuclear
Facultad de Ciencias
Universidad de Zaragoza
12:30 h

Electrodes of solid oxide fuel cells (SOFCs) are typically submicron-scale porous materials, and their microstructure has a significant influence on the performance of SOFCs, through the transport of chemical species and the electrochemical reaction. Recent advancement in the nano-scale 3D imaging techniques, such as focused ion beam scanning electron microscopy (FIB-SEM), have enabled us to access to the details of complex microstructures of the electrodes. The quantification methods of microstructure parameters of SOFC electrodes on the basis of the 3D imaging technique will be presented with its application to numerical simulations.

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