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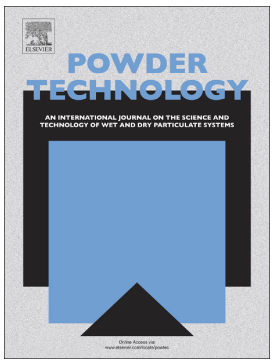

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Numerical simulation of temperature distribution in a planar solid oxide fuel cell using lattice Boltzmann method

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Abstract

The present paper deals with a numerical simulation of heat sources effects on temperature field inside a solid oxide fuel cell component. The temperature distribution is investigated using a co-flow planar SOFC comprising the air and fuel channel and two-ceramic electrodes, separated by an electrolyte. The Lattice Boltzmann Method is used for the numerical simulation of the physical problem. Once the numerical code is validated against published

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