

## THERMODYNAMICS

### MCFC动态性能数值模拟

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**摘要** A three dimension of dynamic mathematical model of the molten carbonate fuel cell is established, in which the heat generation, mass transfer and electrochemical characteristics are described. The performance of the fuel cell including the distributions of the temperature and the velocity is predicted numerically. Then the experimental data including the output performance of the fuel cell generation system and the temperature distributions are compared. The numerical results are in agreement with the experiment results.

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### Numerical Simulation of Dynamic Performance of the Molten Carbonate Fuel Cell

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**Abstract** A three dimension of dynamic mathematical model of the molten carbonate fuel cell is established, in which the heat generation, mass transfer and electrochemical characteristics are described. The performance of the fuel cell including the distributions of the temperature and the velocity is predicted numerically. Then the experimental data including the output performance of the fuel cell generation system and the temperature distributions are compared. The numerical results are in agreement with the experiment results.

**Key words** [molten carbonate fuel cell](#); [computation fluid dynamics](#); [numerical simulation](#)

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