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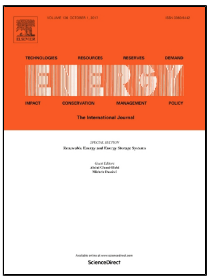

Electrochemical performance of solid oxide fuel cell: Experimental study and calibrated model

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Highlight

-Electrochemical performance of solid oxide fuel cell is investigated with both H2/H2O and H2/N2 mixtures.

- Numerical model is calibrated and validated with experimental data.

- Effects of hydrogen molar fraction and fuel flow rate on the cell performance are investigated.

-Dependence of the ohmic, activation and concentration overpotentials on the operating temperature are performed