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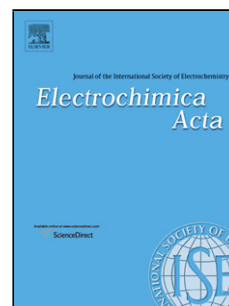
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The investigation of Cr deposition and poisoning effect on Sr-doped lanthanum manganite cathode induced by cathodic polarization for intermediate temperature solid oxide fuel cell

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Abstract

The impact of current density on Cr-poisoning of Sr-doped lanthanum manganite cathode is studied at 750 °C. The presences of SUS430 interconnect alloys cause rapid degradation in LSM cathode performance. The Cr deposits can be found not only on the LSM surface close to the electrode/electrolyte interface, but also on the YSZ surface. The deposition area is reach to 4.1 μm from the electrode/electrolyte interface after cathodic polarization with a current density of 400 mA cm^{-2} for 1200 min. TEM results clearly demonstrate that the particles on LSM surface are MnCr_2O_4

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