

**La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O protective coatings for solid oxide fuel cell
interconnect deposited by screen printing**

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Abstract

$\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_3$ (LSCF) is synthesized by a screen printing method as a Crofer22 APU interconnect for solid oxide fuel cells (SOFC). The above (LSCF) coated alloys were first checked for their compositions, morphology and interface conditions. It was then treated in a simulated oxidizing environment, 800C for 200hrs. The results showed that the LSCF film can change the oxidation behavior of Crofer22 APU. The alloy coated with LSCF sintering at 1050°C in N_2 atmosphere, the adhesion between the LSCF layer/alloy interface is excellent. After long-term electric resistance measurement, ASR for alloy coated with LSCF was less. The alloy coated with LSCF use for metallic interconnect could reduce working temperature for SOFC.

Keywords: Solid Oxide Fuel Cell (SOFC); Interconnect; Screen Printing