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On the manufacturing of low temperature activated $Sr_{0.9}La_{0.1}TiO_{3-\delta}$-$Ce_{1-x}Gd_xO_{2-\delta}$ anodes for solid oxide fuel cell

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Abstract

Lanthanum doped strontium titanate – gadolinium doped cerium oxide (LST-GDC) anodic layers are sintered in air and further reduced *in-situ* at low temperature (750°C) avoiding usually performed pre-reduction treatment at high temperature. The influence of various milling techniques and of powders with different specific surface area, on the microstructures of screen-printed anodes, is investigated. The combination of milling and sonication processes is efficient in reducing aggregation of the anode powders. The anode performance is improved when a planetary milling step is involved in the preparation of the screen printing inks. The