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A novel limiting current oxygen sensor prepared by slurry spin coating

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Research Highlights

1. A limiting current oxygen sensor with dense diffusion barrier has been successfully fabricated by slurry spin coating method.
2. The optimum process parameters of slurry spin coating are: ethyl cellulose content of 5 wt%, coating cycle number of 7, and sintering temperature of 1400 °C.
3. The oxygen sensor exhibits excellent performances, and has great potential in automobile industry applications.

Abstract:

$\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ (LSM) and $\text{Y}_{0.08}\text{Zr}_{0.92}\text{O}_2$ (8YSZ) were synthesized by citric-nitrate and co-precipitation methods, respectively. Crystal structure and conductivity of the samples were characterized by X-ray diffraction (XRD) and DC van der Pauw measurements, respectively. A

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