Accepted Manuscript

Title: A novel limiting current oxygen sensor prepared by slurry spin coating

Authors: Cheng Wang, Tao Liu, Xiangnan Wang, Jingyun Li, Hongbin Jin, Jingkun Yu, Maoyi Yi, Yangcheng Mo

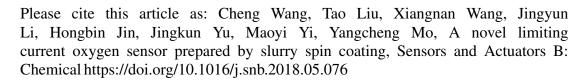
PII: S0925-4005(18)30978-X

DOI: https://doi.org/10.1016/j.snb.2018.05.076

Reference: SNB 24732

To appear in: Sensors and Actuators B

Received date: 14-3-2018 Revised date: 30-4-2018 Accepted date: 14-5-2018



This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



A novel limiting current oxygen sensor prepared by slurry spin coating

Cheng Wang[#], Tao Liu[#], *, Xiangnan Wang, Jingyun Li, Hongbin Jin, Jingkun Yu, Maoyi Yi,

Yangcheng Mo

School of Metallurgy, Northeastern University, Shenyang 110819, China

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:

La_{0.7}Sr_{0.3}MnO₃ (LSM) and Y_{0.08}Zr_{0.92}O₂ (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

These authors contributed equally to this work.

*Corresponding author.

E-mail address: <u>liut@smm.neu.edu.cn</u> (T. Liu).

1

Download English Version:

https://daneshyari.com/en/article/7139208

Download Persian Version:

https://daneshyari.com/article/7139208

Daneshyari.com