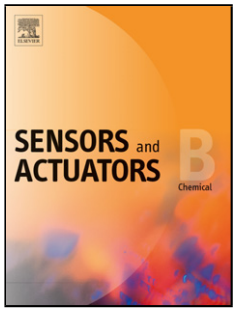

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NO_2 sensing properties of $SmFeO_3$ porous hollow microspheres

Hao-Tian Huang, Wen-Lu Zhang, Xiao-Dong Zhang*, Xin Guo*

Laboratory of Solid State Ionics, School of Materials Science and Engineering, Huazhong University of Science and Technology, Wuhan 430074, P. R. China

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** Corresponding authors.*

Tel: +86-27-87559804; Fax: +86-27-87559804;

E-mail: xdzhang@hust.edu.cn, xguo@hust.edu.cn

Research Highlights:

- Facile synthesis of $SmFeO_3$ porous hollow microspheres via a MOF self-templated precipitation process.
- Excellent comprehensive performance on NO_2-sensing, including high sensitivity with very low detection limit, fast response and recovery, and high selectivity.
- NO_2 sensing mechanism probed with XPS and DRIFT spectroscopy.

Abstract

Porous hollow microspheres of $SmFeO_3$ were prepared from a simple process involving a metal organic framework (MOF) compound as the templating precursor. With a diameter of about 2 μm, these hollow-centered microspheres are formed by nanoporous thin walls of $SmFeO_3$. Chemoresistive gas sensors based on these microspheres exhibits excellent sensing performance on NO_2 at 200 °C, including