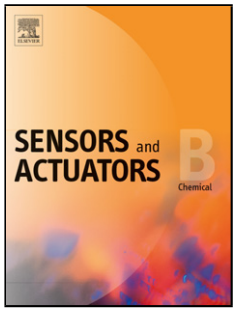

Title: Study on TiO_2-SnO_2 core-shell heterostructure nanofibers with different work function and its application in gas sensor

Author: Feng Li Xing Gao Rui Wang Tong Zhang Geyu Lu

PII: S0925-4005(16)31971-2
DOI: http://dx.doi.org/doi:10.1016/j.snb.2016.12.009
Reference: SNB 21383

To appear in: *Sensors and Actuators B*

Received date: 2-9-2016
Revised date: 28-11-2016
Accepted date: 2-12-2016

Please cite this article as: Feng Li, Xing Gao, Rui Wang, Tong Zhang, Geyu Lu, Study on TiO2-SnO2 core-shell heterostructure nanofibers with different work function and its application in gas sensor, Sensors and Actuators B: Chemical http://dx.doi.org/10.1016/j.snb.2016.12.009

Study on TiO_2-SnO_2 core-shell heterostructure nanofibers with different work function and its application in gas sensor

Feng Li[1], *Xing Gao*[1], *Rui Wang*[1], *Tong Zhang*[*, 1, 2], *Geyu Lu*[1]

[1]State Key Laboratory on Integrated Optoelectronics, College of Electronic Science and Engineering, Jilin University, Changchun 130012, P.R. China

[2]State Key Laboratory of Transducer Technology, Chinese Academy of Science

E-mail address: zhangtong@jlu.edu.cn

*Corresponding author:

E-mail address: zhangtong@jlu.edu.cn

Tel.: +86 431 85168385; Fax: +86 431 85168270

Highlights

- The TiO_2-SnO_2 core-shell nanofibers were successfully synthesized by a coaxial electrospinning method.
- The sensors exhibited excellent sensing properties [quick response to acetone (2 s), high response to acetone (13.7) and good selectivity] at 280 ^oC operating temperature.
- The mechanism relies on the changes of amount of adsorbed oxygen species and