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Authors: Hongran Zhao, Tong Zhang, Rongrong Qi, Jianxun

Dai, Sen Liu, Teng Fei, Geyu Lu

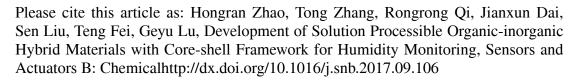
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Development of Solution Processible Organic-inorganic Hybrid Materials with

Core-shell Framework for Humidity Monitoring

Hongran Zhao, Tong Zhang, Rongrong Qi, Jianxun Dai, Sen Liu, Teng Fei*, Geyu Lu

State Key Laboratory on Integrated Optoelectronics, College of Electronic Science

and Engineering, Jilin University, Changchun 130012, P.R. China

*Corresponding author:

E-mail address: feiteng@jlu.edu.cn (T. Fei)

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

Highlights

A novel organic-inorganic hybrid material PSS@SNs with the core-shell framework was

prepared.

The small SNs size and the modification of hydrophilic polyelectrolyte endow the ability of

preparing films with the solution process method.

The obtained sensor is applied for respiratory rate monitoring due to the particularly rapid

response.

The impedance analysis under different frequencies is used to support equivalent circuit modes of

the sensor at different RH.

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