

## Accepted Manuscript

Title: Hydrogen sulfide detection properties of Pt-gated AlGaIn/GaN HEMT-sensor

Authors: Robert Sokolovskij, Jian Zhang, Elina Iervolino, Changhui Zhao, Fabio Santagata, Fei Wang, Hongyu Yu, Pasqualina M. Sarro, Guo Qi Zhang



PII: S0925-4005(18)31443-6  
DOI: <https://doi.org/10.1016/j.snb.2018.08.015>  
Reference: SNB 25162

To appear in: *Sensors and Actuators B*

Received date: 14-1-2018  
Revised date: 3-8-2018  
Accepted date: 4-8-2018

Please cite this article as: Sokolovskij R, Zhang J, Iervolino E, Zhao C, Santagata F, Wang F, Yu H, Sarro PM, Zhang GQ, Hydrogen sulfide detection properties of Pt-gated AlGaIn/GaN HEMT-sensor, *Sensors and amp; Actuators: B. Chemical* (2018), <https://doi.org/10.1016/j.snb.2018.08.015>

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.

# Hydrogen sulfide detection properties of Pt-gated AlGaIn/GaN

## HEMT-sensor

*Robert Sokolovskij<sup>a,b,c</sup>, Jian Zhang<sup>b,d</sup>, Elina Iervolino<sup>b</sup>, Changhui Zhao<sup>b</sup>, Fabio Santagata<sup>a</sup>, Fei Wang<sup>b,e</sup>, Hongyu Yu<sup>b,e</sup>, Pasqualina M. Sarro<sup>a</sup>, Guo Qi Zhang<sup>a,\*</sup>*

<sup>a</sup> Department of Microelectronics, Delft University of Technology, 2628 CD Delft, the Netherlands

<sup>b</sup> Department of Electrical and Electronic Engineering, Southern University of Science and Technology, 518055 Shenzhen, China

<sup>c</sup> State Key Laboratory of Solid State Lighting, 213161 Changzhou, China

<sup>d</sup> State Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, 200433 Shanghai, China

<sup>e</sup> Shenzhen Key Laboratory of the Third Generation Semi-conductor, 518055 Shenzhen, China

Email addresses: G.Q.Zhang@tudelft.nl (G.Q. Zhang), R.Sokolovskij@tudelft.nl (R. Sokolovskij).

### Highlights:

- Pt-AlGaIn/GaN HEMT H<sub>2</sub>S sensors processed using micro-fabrication technology
- Sensors exhibited large signal variation and high sensitivity upon H<sub>2</sub>S exposure
- HEMT sensors demonstrated high temperature operation capability and stability
- Excellent H<sub>2</sub>S sensing repeatability was observed in dry air ambient at 250 °C

Download English Version:

<https://daneshyari.com/en/article/7138791>

Download Persian Version:

<https://daneshyari.com/article/7138791>

[Daneshyari.com](https://daneshyari.com)