## Author's Accepted Manuscript

Efficient Capture, Rapid Killing and Ultrasensitive Detection of Bacteria by a Nano-Decorated Multi-Functional Electrode Sensor

Runrun Wu, Yue Ma, Jianming Pan, Shih-Hui Lee, Jinxin Liu, Hengjia Zhu, Runxin Gu, Kenneth J. Shea, Guoqing Pan



PII: S0956-5663(17)30664-4

https://doi.org/10.1016/j.bios.2017.10.003 DOI:

BIOS10028 Reference:

To appear in: Biosensors and Bioelectronic

Received date: 31 August 2017 30 September 2017 Revised date: Accepted date: 2 October 2017

Cite this article as: Runrun Wu, Yue Ma, Jianming Pan, Shih-Hui Lee, Jinxin Liu, Hengjia Zhu, Runxin Gu, Kenneth J. Shea and Guoqing Pan, Efficient Capture, Rapid Killing and Ultrasensitive Detection of Bacteria by a Nano-Decorated Multi-Functional Electrode Sensor, Biosensors and Bioelectronic, https://doi.org/10.1016/j.bios.2017.10.003

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 galley proof before it is published in its final citable 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.

### ACCEPTED MANUSCRIPT

# Efficient Capture, Rapid Killing and Ultrasensitive Detection of Bacteria by a Nano-Decorated Multi-Functional Electrode Sensor

Runrun Wu<sup>a</sup>, Yue Ma<sup>a</sup>, Jianming Pan<sup>a</sup>\*, Shih-Hui Lee<sup>b</sup>, Jinxin Liu<sup>a</sup>, Hengjia Zhu<sup>a</sup>, Runxin Gu<sup>a</sup>, Kenneth J. Shea <sup>b</sup>, Guoqing Pan<sup>a,c,d\*</sup>

<sup>a</sup>School of Chemistry and Chemical Engineering, Jiangsu University, Zhenjiang, Jiangsu 212013, China

<sup>b</sup>Department of Chemistry, University of California Irvine, Irvine, California 92697, USA

<sup>c</sup>Institute for Advanced Materials, School of Materials Science and Engineering, Jiangsu University, Zhenjiang, Jiangsu, 212013, China

<sup>d</sup>Department of Biomedical Sciences, Faculty of Health and Society, Malmö University, SE 205 06 Malmö, Sweden

pjm@ujs.edu.cn

tepid2010@gmail.com

panguoqing@ujs.edu.cn

## \*Corresponding Author

#### **Abstract:**

In this work, we demonstrated a nano-decorated porous impedance electrode sensor for efficient capture, rapid killing and ultrasensitive detection of bacteria. The multi-functional sensor was prepared by a facile sonochemical method via *in situ* deposition of antibacterial prickly Zn-CuO

#### Download English Version:

## https://daneshyari.com/en/article/5030739

Download Persian Version:

https://daneshyari.com/article/5030739

<u>Daneshyari.com</u>