#### Accepted Manuscript

Title: In Situ Enhanced Electrochemiluminescence Based on Co-reactant Self-generated for Sensitive Detection of microRNA

Authors: Liping Lu, Chang Liu, Tianfang Kang, Xiayan

Wang, Guangsheng Guo, Wujian Miao

PII: S0925-4005(17)31451-X

DOI: http://dx.doi.org/doi:10.1016/j.snb.2017.08.029

Reference: SNB 22896

To appear in: Sensors and Actuators B

Received date: 22-5-2017 Revised date: 25-7-2017 Accepted date: 3-8-2017

Please cite this article as: Liping Lu, Chang Liu, Tianfang Kang, Xiayan Wang, Guangsheng Guo, Wujian Miao, In Situ Enhanced Electrochemiluminescence Based on Co-reactant Self-generated for Sensitive Detection of microRNA, Sensors and Actuators B: Chemicalhttp://dx.doi.org/10.1016/j.snb.2017.08.029

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.



## ACCEPTED MANUSCRIPT

# In Situ Enhanced Electrochemiluminescence Based on Coreactant Self-generated for Sensitive Detection of microRNA

 $\label{eq:Liping Lu1*} Liping \ Lu1^*, \ Chang \ Liu^1, \ Tianfang \ Kang^1, \ Xiayan \ Wang^{1*}, \ Guangsheng \ Guo^1,$  and Wujian Miao  $^{1,2}$ 

<sup>1</sup> College of Environmental and Energy Engineering, Beijing University of Technology, Beijing 100124, China

<sup>2</sup> Department of Chemistry and Biochemistry, The University of Southern Mississippi, Hattiesburg, MS 39406, USA

\*Corresponding author, E-mail: lipinglu@bjut.edu.cn; xiayanwang@bjut.edu.cn;Fax: +86 10 67391983; Tel: +86 10 67391659

## **Highlights**

- An ECL system based on co-reactant self-generated was successfully established.
- GOD was used to block non-specific sites for generating necessary co-reactant-H<sub>2</sub>O<sub>2</sub> in situ.
- ECL of luminol was further enhanced with the catalysis of hemin.
- This miRNA biosensor manifests high sensitivity, excellent

#### Download English Version:

## https://daneshyari.com/en/article/5008590

Download Persian Version:

https://daneshyari.com/article/5008590

<u>Daneshyari.com</u>