

**An Efficient Method for the Synthesis of Polymer Brush via
Click Chemistry and its Ultrasensitive Electrochemical
Detection of AFP**

Dongcheng Yang[‡], Jing Wang[‡], Hou Chen*, Hui Xu, Wenxiang Wang, Huawei Yang,
Donglei Wei, Liangjiu Bai*

*Key Laboratory of High Performance and Functional Polymer in the Universities of
Shandong Province, School of Chemistry and Materials Science, Ludong University,
Yantai 264025, China.*

[‡]These authors contributed equally to the work.

*Corresponding author. E-mail: ldupolymchen@163.com (H. Chen);

bailiangjiu@163.com (L. J. Bai)

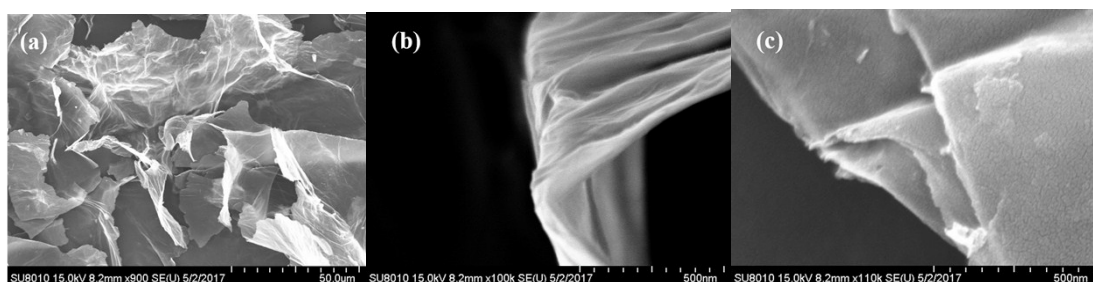


Fig. S1 SEM surface images of (a), (b) GO and (c) GO-DETA.

Table S1 Comparison of methods for the detection of AFP.

Method	Detection range	LODs	Reference
Amperometric Enzyme Immunosensor	0.05pg/mL-250 ng/mL	1.1 fg/mL	S1
Electrochemical Immunosensor	0.01 ng/mL-50 ng/mL	3 pg/mL	S2
Electrochemical Immunosensor	0.01 ng/mL-60 ng/mL	1.6 pg/mL	S3
Electrochemical Immunosensor	0.1 ng/mL-100 ng/mL	30 pg/mL	S4
Electrochemical Immunosensor	0.1-300 ng/mL	0.03 ng/mL	S5
Electrochemical Immunosensor	1-250 ng/mL	0.1 ng/mL	S6
Electrochemical Immunosensor	0.0025 -25ng/mL	0.285 pg/mL	This article

S1. K. Liu, J. Zhang, Q. Liu, H. Huang, *Electrochimica Acta*, 2013, **114**, 448-454.

S2. F. Yang, Y. Chai, R. Yuan, J. Han, Y. Yuan, N. Liao, Z. Yang, *Anal. Methods-UK*, 2013, **5**, 5279-5285.

S3. Y. Wei, Y. Li, N. Li, Y. Zhang, T. Yan, H. Ma, Q. Wei, *Biosens. Bioelectron.*, 2016, **79**, 482-487.

S4. J. Guo, X. Han, J. Wang, J. Zhao, Z. Guo, Y. Zhang, *Anal. Biochem.*, 2015, **491**, 58-64.

S5. Y. Hui, X. Ma, X. Hou, F. Chen, J. Yu, *Ionics*, 2015, **21**, 1751-1759.

S6. K. J. Huang, D. J. Niu, J. Y. Sun, J. J. Zhu, *Anal. Chim. Acta*, **656**, 72-77.