Author's Accepted Manuscript

Electrochemically enhanced antibody immobilization on polydopamine thin film for sensitive surface plasmon resonance immunoassay

Daqun Chen, Yihong Mei, Weihua Hu, Chang Ming Li



 PII:
 S0039-9140(18)30146-2

 DOI:
 https://doi.org/10.1016/j.talanta.2018.02.038

 Reference:
 TAL18357

To appear in: Talanta

Received date: 18 December 2017 Revised date: 2 February 2018 Accepted date: 8 February 2018

Cite this article as: Daqun Chen, Yihong Mei, Weihua Hu and Chang Ming Li, Electrochemically enhanced antibody immobilization on polydopamine thin film for sensitive surface plasmon resonance immunoassay, *Talanta*, https://doi.org/10.1016/j.talanta.2018.02.038

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.

Electrochemically enhanced antibody immobilization on polydopamine thin film for sensitive surface plasmon resonance immunoassay

Dagun Chen, Yihong Mei, Weihua Hu^{*}, Chang Ming Li^{*}

Institute for Clean Energy & Advanced Materials, Faculty of Materials and Energy, Southwest University, Chongqing 400715, China; Chongqing Engineering Research Center for Rapid diagnosis of Fatal Diseases, Southwest University, 2 Tiansheng Road, BeiBei, Chongqing 400715, People's Republic of China teomani

whhu@swu.edu.cn

ecmli@swu.edu.cn

^{*}Corresponding authors.

ABSTRACT

For sensitive immunoassay, it is essentially important to immobilize antibody on a surface with high density and full retention of their recognition activity. Bio-inspired polydopamine (PDA) thin film has been widely utilized as a reactive coating to immobilize antibody on various surfaces. We herein report that the antibody immobilization capacity of PDA thin film is electrochemically enhanced by applying an oxidative potential to convert the surface catechol group to reactive quinone group.

Download English Version:

https://daneshyari.com/en/article/7677017

Download Persian Version:

https://daneshyari.com/article/7677017

Daneshyari.com