

## Accepted Manuscript

Title: An electrochemical nitric oxide biosensor based on immobilized cytochrome c on a chitosan-gold nanocomposite modified gold electrode

Authors: Ehsan Pashai, Ghasem Najafpour Darzi, Mohsen Jahanshahi, Fatemeh Yazdian, Mostafa Rahimnejad



PII: S0141-8130(17)34245-9  
DOI: <https://doi.org/10.1016/j.ijbiomac.2017.11.157>  
Reference: BIOMAC 8637

To appear in: *International Journal of Biological Macromolecules*

Received date: 29-10-2017  
Revised date: 25-11-2017  
Accepted date: 25-11-2017

Please cite this article as: Ehsan Pashai, Ghasem Najafpour Darzi, Mohsen Jahanshahi, Fatemeh Yazdian, Mostafa Rahimnejad, An electrochemical nitric oxide biosensor based on immobilized cytochrome c on a chitosan-gold nanocomposite modified gold electrode, *International Journal of Biological Macromolecules* <https://doi.org/10.1016/j.ijbiomac.2017.11.157>

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.

## **An electrochemical nitric oxide biosensor based on immobilized cytochrome c on a chitosan-gold nanocomposite modified gold electrode**

Ehsan Pashai<sup>a</sup>, Ghasem Najafpour Darzi<sup>a,\*</sup>, Mohsen Jahanshahi<sup>a</sup>, Fatemeh Yazdian<sup>b</sup>, Mostafa Rahimnejad<sup>a</sup>

<sup>a</sup> Faculty of Chemical Engineering, Babol Noshirvani University of Technology, Babol, Iran

<sup>b</sup> Faculty of New Science and Technology University of Tehran, Tehran, Iran

\* Corresponding author:

Tel. / Fax No: +981132334204

Email address: [najafpour@nit.ac.ir](mailto:najafpour@nit.ac.ir); [najafpour8@yahoo.com](mailto:najafpour8@yahoo.com)

Postal address: Faculty of Chemical Engineering

Babol Noshirvani University of Technology

Babol, Iran

### Highlights

- A biosensor based on immobilized Cyt c at the CS-MPA-AuNPs nanocomposite layer was successfully fabricated for nitric oxide detection.
- The electrochemical and electrocatalytic behaviors of the resultant Nafion/Cyt c/CS-MPA-AuNPs /SAMS-Au electrode were investigated by cyclic voltammetry (CV), chronoamperometry and impedance techniques.
- The fabricated biosensor exhibited fast response time, low detection limit and wide linear range with good sensitivity, selectivity and stability.

Download English Version:

<https://daneshyari.com/en/article/8328343>

Download Persian Version:

<https://daneshyari.com/article/8328343>

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