Accepted Manuscript

Title: Electrochemical behavior of hydroquinone and catechol at glassy carbon electrode modified by electropolymerization of tetraruthenated oxovanadium porphyrin

Author: Gabriel H. Ribeiro Luana M. Vilarinho Thiago dos S.

PII: S0013-4686(15)30052-9

Ramos André L. Bogado Luis R. Dinelli

DOI: http://dx.doi.org/doi:10.1016/j.electacta.2015.06.139

Reference: EA 25264

To appear in: Electrochimica Acta

Received date: 25-3-2015 Revised date: 2-5-2015 Accepted date: 29-6-2015

Please cite this article as: Gabriel H.Ribeiro, Luana M.Vilarinho, Thiago dos S.Ramos, André L.Bogado, Luis R.Dinelli, Electrochemical behavior of hydroquinone and catechol at glassy carbon electrode modified by electropolymerization of tetraruthenated oxovanadium porphyrin, Electrochimica Acta http://dx.doi.org/10.1016/j.electacta.2015.06.139

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

Electrochemical behavior of hydroquinone and catechol at glassy carbon electrode modified by electropolymerization of tetraruthenated oxovanadium porphyrin

Gabriel H. Ribeiro ^{a,1}, Luana M. Vilarinho ^a, Thiago dos S. Ramos ^a, André L. Bogado ^a and Luis R. Dinelli*, ^a

^aFaculdade de Ciências Integradas do Pontal – Universidade Federal de Uberlândia – Rua Vinte, 1600 – CEP 38304-402 - Ituiutaba, MG – Brazil

*Corresponding author. Address: Rua vinte, 1600, Bairro Tupã, CEP 38.304-402 Ituiutaba – MG, Brazil Tel.: +55(34) 3271 5251; fax: +55 (34) 3271 5246.

E-mail address: dinelli@pontal.ufu.br (L.R. Dinelli).

¹ Present address: Departamento de Química – Universidade Federal de São Carlos - Rodovia Washington Luís, km 235 - SP 310 - CEP 13565-905 - São Carlos, SP – Brazil.

Graphical abstract

Highlights

- Electropolymerization of tetraruthenated oxovanadium porphyrin on the surface of the glassy carbon electrode (GCE), by cyclic voltammetry.
- Simultaneous detection of catechol and hydroquinone at the VOTPRu-GCE.
- The VOTPRu-GCE showed excellent catalytic activity for catechol and hydroquinone, with potential difference (ΔE_p) of 30 mV and 29 mV, respectively.
- The modified electrode exhibited good sensitivity, reproducibility and lower limit of detection toward catechol and hydroquinone.

Download English Version:

https://daneshyari.com/en/article/6610891

Download Persian Version:

https://daneshyari.com/article/6610891

<u>Daneshyari.com</u>