

ПН
780/e

Volumes 717-718

15 March 2014

ISSN 1572-6657



ELSEVIER

Journal of Electroanalytical Chemistry

An International Journal
also devoted to
All Physicochemical Aspects of
Fundamental and Applied Electrochemistry

Editors:
J.M. Feliu
T. Kakiuchi
P. Unwin
X.H. Xia

Available online at www.sciencedirect.com

ScienceDirect

In collaboration with
the International Society
of Electrochemistry



Contents

Abstracts and/or contents lists of this journal are published in: Analytical Abstracts, Metals Abstracts, World Aluminum Abstracts, Chemical Abstracts, Current Contents (Physical, Chemical & Earth Sciences), Engineering Index, INSPEC. Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.

- A facile one-pot strategy for the electrochemical synthesis of poly(3,4-ethylenedioxythiophene)/Zirconia nanocomposite as an effective sensing platform for vitamins B₂, B₆ and C
T. Nie, K. Zhang, J. Xu, L. Lu and L. Bai 1
- Comparative study of Na₂Li₂Ti₆O₁₄ prepared by different methods as advanced anode material for lithium-ion batteries
K. Wu, D. Wang, X. Lin, L. Shao, M. Shui, X. Jiang, N. Long, Y. Ren and J. Shu 10
- High sensitive sensor based on functionalized carbon nanotube/ionic liquid nanocomposite for simultaneous determination of norepinephrine and serotonin
M. Mazloum-Ardakani and A. Khoshroo 17
- Voltammetric and spectroscopic studies on the binding of the antitumor drug dacarbazine with DNA
A.-E. Radi, A. Eissa and H.M. Nassef 24
- Electrochemical sensor for sensitive determination of nitrite based on the PAMAM dendrimer-stabilized silver nanoparticles
D. Ning, H. Zhang and J. Zheng 29
- Electrochemical behavior of methamphetamine and its voltammetric determination in biological samples using self-assembled boron-doped diamond electrode
Ľ. Švorc, M. Vojs, P. Michniak, M. Marton, M. Rievaj and D. Bustin 34
- A sensitive nonenzymatic hydrogen peroxide sensor using cadmium oxide nanoparticles/multiwall carbon nanotube modified glassy carbon electrode
N. Butwong, L. Zhou, W. Ng-eontae, R. Burakham, E. Moore, S. Srijaranai, J.H.T. Luong and J.D. Glennon 41
- Square-wave voltammetry assays for glycoproteins on nanoporous gold
B. Pandey, J.K. Bhattarai, P. Pornsuriyasak, K. Fujikawa, R. Catania, A.V. Demchenko and K.J. Stine 47
- Large scale inkjet-printing of carbon nanotubes electrodes for antioxidant assays in blood bags
A. Lesch, F. Cortés-Salazar, M. Prudent, J. Delobel, S. Rastgar, N. Lion, J.-D. Tissot, P. Tacchini and H.H. Girault 61
- Electroactive NiHCF/PANI hybrid films prepared by pulse potentiostatic method and its performance for H₂O₂ detection
X. Li, X. Du, Z. Wang, X. Hao, G. Guan, H. Zhang, A. Abuliti and G. Ma 69
- Effect of anions on the morphology of Co₃O₄ nanostructures grown by hydrothermal method and their pH sensing application
M. Hussain, Z.H. Ibupoto, M.A. Abbasi, O. Nur and M. Willander 78
- Amperometric immunosensor of *Brucella abortus* CE-protein antigen shows post-zone phenomena
A.K. Gupta, V.K. Rao, D.T. Selvam, A. Kumar and R. Jain 83

(Contents continued on inside back cover)



(Contents continued from outside back cover)

Novel Cu/CuO/ZnO hybrid hierarchical nanostructures for non-enzymatic glucose sensor application S. SoYoon, A. Ramadoss, B. Saravanakumar and S.J. Kim	90
Graphene-polyamidoamine dendrimer-Pt nanoparticles hybrid nanomaterial for the preparation of mediatorless enzyme biosensor E. Araque, C.B. Arenas, M. Gamella, J. Reviejo, R. Villalonga and J.M. Pingarrón	96
Supramolecular interaction of dopamine with β -cyclodextrin: An experimental and theoretical electrochemical study M. Palomar-Pardavé, S. Corona-Avenidaño, M. Romero-Romo, G. Alarcón-Angeles, A. Merkoçi and M.T. Ramírez-Silva	103
Galvanodynamic synthesis of polyaniline: A flexible method for the deposition of electroactive materials A. Eftekhari and P. Jafarkhani	110
Electrochemical immunoassay based on aptamer-protein interaction and functionalized polymer for cancer biomarker detection Z. Taleat, C. Cristea, G. Marrazza, M. Mazloum-Ardakani and R. Săndulescu	119
One-step electrodeposition of chitosan/phosphonate iron(III) hybrids film and its pH-controlled switchable electrocatalytic behavior H. Liu, D. Lu, P. Li, Y. Chen, Y. Zhou and T. Lu	125
Effect of prolonged electrode potential cycling on the charge transport parameters of poly(o-aminophenol) films. A study employing rotating disc electrode voltammetry and surface resistance R. Tucceri	131
Shape-controlled growth of surface-confined Au nanostructures for electroanalytical applications A.K. Das and C.R. Raj	140
Electrochemical detection of butylated hydroxyanisole based on glassy carbon electrode modified by iridium oxide nanoparticles M. Roushani and M. Sarabaegi	147
Enhanced electrochemical performance of CuCrO ₂ anode material by Ag ₂ O coating L. Shao, K. Wu, X. Lin, M. Shui, R. Ma, D. Wang, N. Long, Y. Ren and J. Shu	153
Investigation of the reduction process of dopamine using paired pulse voltammetry D.H. Kim, Y. Oh, H. Shin, C.D. Blaha, K.E. Bennet, K.H. Lee, I.Y. Kim and D.P. Jang	157
The preparation and electrochromic properties of the polyurethanes containing triphenylamine moiety C. Zhang, Y. Hou, H. Niu, Y. Lian, X. Bai, C. Wang and W. Wang	165
A signal-enhanced electrochemical immunosensor based on dendrimer functionalized-graphene as a label for the detection of α -1-fetoprotein G. Shen, X. Hu and S. Zhang	172
Determination of the "NiOOH" charge and discharge mechanisms at ideal activity M. Merrill, M. Worsley, A. Wittstock, J. Biener and M. Stadermann	177
Electrochemical behaviour of iodine redox couples in aprotic and protic RTILs: 1-Butyl-1-methylpyrrolidinium bis(trifluoromethanesulfonyl)imide and ethylammonium nitrate R. Zarrougui, M. Dhahbi and D. Lemordan	189
Physico-chemical properties of PbO ₂ -anodes doped with Sn ⁴⁺ and complex ions O. Shmychkova, T. Luk'yanenko, R. Amadelli and A. Velichenko	196
Designating a logical electrochemical mechanism through a combined electrochemical and computational method M.H. Parvin	202
Differential pulse anodic stripping voltammetric determination of Pb ion at a montmorillonites/polyaniline nanocomposite modified glassy carbon electrode Y. Dong, Y. Ding, Y. Zhou, J. Chen and C. Wang	206
Elimination of Pb ²⁺ through electrocoagulation: Applicability of adsorptive stripping voltammetry for monitoring the lead concentration during its elimination M.M.S.G. Eiband, K.C. de A. Trindade, K. Gama, J.V. de Melo, C.A. Martínez-Huitle and S. Ferro	213

(Contents continued on facing page)

(Contents continued from inside back cover)

Electrochemically controlling oxygen functional groups in graphene oxide for the optimization in the electro-catalytic oxidation of dihydroxybenzene isomers and L-methionine D. Zhang, C. Xu, S. Li, R. Zhang, H. Yan, H. Miao, Y. Fan and B. Yuan	219
Electrochemical preparation of Ag nanoparticles/poly(methylene blue) functionalized graphene nanocomposite film modified electrode for sensitive determination of rutin S. Yang, G. Li, J. Zhao, H. Zhu and L. Qu	225
Ethanol vs. glycerol: Understanding the lack of correlation between the oxidation currents and the production of CO ₂ on Pt nanoparticles C.A. Martins, P.S. Fernández, H.E. Troiani, M.E. Martins and G.A. Camara	231
Voltammetric determination of 2-amino-6-nitrobenzothiazole and 5-nitrobenzimidazole using a silver solid amalgam electrode modified by a microcrystalline natural graphite-polystyrene composite film D. Deýlová, V. Vyskočil and J. Barek	237
A novel approach for the preparation of textured CuO thin films from electrodeposited CuCl and CuBr S. Emin, F.F. Abdi, M. Fanetti, W. Peng, W. Smith, K. Sivula, B. Dam and M. Valant	243