

Accepted Manuscript

Title: ENHANCED AND SYNERGISTIC CATALYSIS OF ONE-POT SYNTHESIZED PALLADIUM-NICKEL ALLOY NANOPARTICLES FOR ANODIC OXIDATION OF METHANOL IN ALKALI

Authors: Sreya Roy Chowdhury, Srabanti Ghosh, Swapan Kumar Bhattacharya

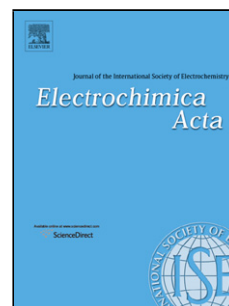
PII: S0013-4686(17)31688-2
DOI: <http://dx.doi.org/doi:10.1016/j.electacta.2017.08.050>
Reference: EA 30054

To appear in: *Electrochimica Acta*

Received date: 5-4-2017
Revised date: 21-7-2017
Accepted date: 8-8-2017

Please cite this article as: Sreya Roy Chowdhury, Srabanti Ghosh, Swapan Kumar Bhattacharya, ENHANCED AND SYNERGISTIC CATALYSIS OF ONE-POT SYNTHESIZED PALLADIUM-NICKEL ALLOY NANOPARTICLES FOR ANODIC OXIDATION OF METHANOL IN ALKALI, *Electrochimica Acta* <http://dx.doi.org/10.1016/j.electacta.2017.08.050>

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.



ENHANCED AND SYNERGISTIC CATALYSIS OF ONE-POT SYNTHESIZED PALLADIUM-NICKEL ALLOY NANOPARTICLES FOR ANODIC OXIDATION OF METHANOL IN ALKALI

Sreya Roy Chowdhury^a, Srabanti Ghosh^b, Swapan Kumar Bhattacharya^{a}*

^aPhysical Chemistry Section, Department of Chemistry, Jadavpur University, Kolkata – 700032, India.

^bDepartment of Chemical, Biological and Macromolecular Sciences, S. N. Bose National Centre for Basic Sciences, Block JD, Sector III, Salt Lake, Kolkata 700 098, India.

*Email – skbhatt7@yahoo.co.in

Tel.: +919831699643, Fax: +913324146584

ABSTRACT

In search for cost effective catalysts capable to oxidize methanol efficiently, nearly mono dispersed Pd_xNi_y binary electro catalysts of varying mutual composition have been synthesized using classical wet chemical protocol in a single pot in absence of any capping agent. The obtained Pd_xNi_y nanoalloys are stable in dispersion and powder form. The X-ray diffraction, spectroscopic and microscopic studies reveal crystallites with diameter of ca 5nm are agglomerated in nearly spherical shape on the base carbon electrode. The synthesized

Download English Version:

<https://daneshyari.com/en/article/4766731>

Download Persian Version:

<https://daneshyari.com/article/4766731>

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