International Journal of ChemTech Research
CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.5, pp 712-717,2017

Investigation of isopropanol electrooxidation onto depositedPtparticlessupported on different materials

AbhikChatterjee

Departmentof Chemistry, Raiganj University, Raiganj, Uttardinajpur,733134,India

Abstract: In this article, graphite and potassium expanded graphite acts as support material for Pt deposition. The graphite plate electrode had been expanded by doping with potassium (K) vapour using simplevapour incorporation method. After expansion, the expanded graphite and normal graphite electrodes were platinised by galvanostaticelectro-deposition technique.In this paper catalytic properties of the electrodes towards isopropanol havebeen presented using cyclicvoltammetry technique at different scan rates and amperometry studies. From the study it is found that anodic peak potentials as well as the corresponding peak currents vary with scan rate. It is also observed that oxidation current of the alcohol using the expanded graphite as the electrode material are higher. Amperometry studies shows that expandedsupportedelectrocatalyst is more long-lasting than unexpanded support electrocatalyst. So Pt deposited on potassium expanded graphite acts as a better electrocatalyst.

Keywords: Electrocatalyst,electrooxidation, isopropanol, cyclic voltammetry, expanded graphite.

AbhikChatterjee /International Journal of ChemTech Research, 2017,10(5): 712-717..

*****