

Electroanalysis

Electrochemical deposition of PdBiSn catalyst for glycerol oxidation in alkaline medium

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Abstract

PdBiSn thin film on Au substrate was prepared by means of the electrochemical atomic layer deposition (E-ALD) technique. The morphology and elemental distribution of the catalysts was determined using scanning electron microscope equipped with energy dispersive spectroscopy (EDS) detector. The catalysts contained all the deposited elements distributed evenly on the surface. Electro-oxidation of glycerol was tested in alkaline media using cyclic voltammetry (CV) and chronoamperometry (CA). The activity of the catalysts towards the oxidation of glycerol improved with the addition of Sn and Bi with the binary PdBi catalyst being the most improved.