

Effect of the Palladium Content on the Oxidation of Ethylene Glycol Oxidation

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ABSTRACT

AuPd/Polyaniline was synthesized by a chemical/electrochemical method at various Pd content and used as anode for ethylene glycol (EG) oxidation. The AuPd/Polyaniline composites were characterized by means of cyclic voltammetry, SEM, EDS, and XRD. The results show some dependence of the electrocatalytic properties related with the metal content. The composites were used in a novel microfluidic fuel cell (MFC) operated at room temperature. The device exhibited high electrocatalytic performance and stability for the conversion of cheap and fully available EG as fuel.

Keywords: bimetallic catalyst, polyaniline, ethyleneglycol

