The influence of doping the polyaniline films on the electrocatalytic oxidation of methanol

Bogdan TUTUNARU*, Adriana PĂTRU and Mircea PREDA

University of Craiova, Faculty of Chemistry, Calea Bucuresti, no. 107i, Craiova, Dolj, Romania

Abstract The present article systematizes the experimental results regarding the influence of doping polyaniline films on the electrocatalytic oxidation of methanol. Comparatively it has been studied the electrooxidation of methanol on the electrodes of Ti and Pt uncovered and covered electrochemically with conductive films of polyaniline, (Ti-PAni, Pt-PAni) and polyaniline doped with molybden (Ti-PAni-Mo, Pt-PAni-Mo). After the modification of the electrocatalytic properties of polyaniline through doping with molybden, it also takes place the modification of the mechanism and kynetics of the methanol electrooxidation, taking place practically at current densities of certain ranges, respectively at tens of ranges lower.

Keywords: polyaniline, electrocatalytic, methanol electrooxidation, electrochemical doping