Short Communication

Synthesis of Au@PtAuAg Yolk–Shell Nanoalloy as an Electrocatalyst for Methanol Oxidation Reaction

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Au@PtAuAg yolk–shell nanoalloy composed of an Au nanoparticle core and a PtAuAg shell was synthesized via a simple wet-chemical method. The Au@PtAuAg nanoalloy was applied as an electrocatalyst for methanol oxidation reaction, and it shows a good electrocatalytic activity and better anti CO poison ability than that of commercial Pt/C catalysts. The better electrocatalytic performance of the Au@PtAuAg yolk–shell nanoalloy was possibly due to the electronic effect by Au and Ag that could facilitate the elimination of the intermediate during methanol oxidation.

Keywords: yolk–shell nanoalloy; Au@PtAuAg; methanol oxidation

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