

Synthesis of Dendritic Pt Aggregates on Conductive Tungsten Oxides as Electrocatalysts for Methanol Oxidation

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A simple colloidal synthesis has been developed for nanocomposites comprised of Pt nanodendritic aggregates and tungsten oxide nanowires, using benzyl alcohol and ethylene glycol as solvents and reducing agents. The formation of tungsten oxide nanowires is essential for the growth of dendritic Pt nanostructures. The synthesized nanocomposites exhibited strong catalytic activity toward methanol electro-oxidation and high CO tolerance due to the highly branched structure of dendritic Pt aggregates. We hope that this simple method could be extended to synthesize various Pt nanostructures on metal oxides.