Short Communication

Nano-Pt Skin Coated Carbonized Wood Chips with High Catalytic Activity for Electrocatalytic Oxidation of Methanol

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doi: 10.20964/2018.03.62

Received: 20 November 2017 / Accepted: 15 January 2018 / Published: 5 February 2018

A exquisite structure of Nano-Pt Skin (NPS) with high catalytic activity for electrocatalytic oxidation of methanol was fabricated by an in-situ electrodeposition method. Bio-renewable carbonized wood chips (CWCs) were acted as the precursor of substrate material for the electro. X-ray diffraction (XRD) pattern and scanning electron microscopy (SEM) indicated that the NPS had a high degree of Pt crystallinity. Electrocatalytic oxidation of methanol showed that there was a significant oxidation peak in the cyclic voltammetry (CV) of NPS/CWCs with a peak current density of 705 mA/cm². Compared with CWCs, the impedance of NPS/CWCs was small with fast electron transfer rate and had good stability. The unique structure of Nano-Pt Skin Coated Carbonized Wood Chips can be remarkably attributed to the increased activity for electrocatalytic oxidation of methanol at room temperature.

Keywords: Nano-Pt; Carbonized Wood Chips; Electrocatalytic Oxidation; Carbonized Wood Chips; Electrodeposition.

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