Short Communication

Rich-grain-boundary PtRuNi with network structure as efficient catalysts for methanol oxidation reaction

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doi: 10.20964/2019.11.49

Received: 3 July 2019 / Accepted: 8 September 2019 / Published: 7 October 2019

Fabricating a network structure is an efficient way to increase the electrocatalytic activity of a catalyst. In this study, a network-like structure of PtRuNi with rich grain boundaries characterized *via* scanning electron microscopy and transmission electron microscopy was prepared by an electrochemical dealloying process. For methanol oxidation, PtRuNi networks show an onset potential of 0.40 V with a mass activity of 220 mA mg_{Pt}⁻¹ for methanol oxidation. The good catalytic activity of PtRuNi networks could be ascribed to the unique structure of a net framework with rich grain boundaries.

Keywords: PtRuNi; Nanoparticle; Catalyst; Direct methanol fuel cell.

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