Short Communication

FeMoO₄ Nanoprism Supported on Nickel Foam as Electrocatalyst for Oxygen Evolution Reaction

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doi: 10.20964/2019.12.61

Received: 4 June 2019 / Accepted: 24 August 2019 / Published: 29 October 2019

Developing electrocatalyst with high efficiency and low cost for oxygen evolution reaction (OER) is of paramount importance to explore sustainable energy technologies. In this work, bimetallic FeMoO₄ nanoprism supported on nickel foam is synthesized through a simple one-step hydrothermal method. The optimal molar ratio of molybdenum to iron (1:1) of FeMoO₄ is investigated for OER. Benefiting from unique nanoprism structure, fast transmission of electrons or ions, rich exposure of surface active sites, and excellent conductivity enhanced by the substrate of nickel foam (NF), FeMoO₄-1/NF electrode exhibits excellent electrocatalytic performance with an overpotential of 284 mV to reach 100 mA cm⁻² in 1.0 M KOH. This work provides a promising strategy for water oxidation in alkaline solution.

Keywords: FeMoO₄; bimetallic; nanoprism; nickel foam; oxygen evolution reaction

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