عنوان مقاله:

Cu۲O/AlZn-LDH Preparation on FTO Electrode Substrate for Enhanced Water Oxidation

محل انتشار:

فصلنامه شیمی معدنی, دوره 5, شماره 2 (سال: 1400)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Karim Asadpour-Zeynali - *Department of Analytical Chemistry, Faculty of Chemistry, University of Tabriz, Tabriz, Iran*

Paeisa Beikzadeh - *Department of Analytical Chemistry, Faculty of Chemistry, University of Tabriz, Tabriz, Iran*

Leila Jafari Foruzin - *Department of Chemistry, Faculty of Basic Sciences, Azarbaijan Shahid Madani University, P.O. BOX ۵۳۷۱۴-۱۶۱, Tabriz, Iran*

Kamellia Nejati - *Department of Chemistry, Payame Noor University, Tabriz center, Iran*

خلاصه مقاله:

The electrochemical activity of the Cu۲O/AlZn-LDH, deposited on the FTO electrode, was investigated in NaOH (۰.۱ M) media. The thin film Cu۲O/AlZn-LDH was characterized by techniques such as X-ray diffraction (XRD), scanning electron microscopy (SEM), and energy-dispersive X-ray spectroscopy (EDX). Based on the obtained results from XRD, Cu۲O/AlZn-LDH was prepared in the nanometer size with good crystalline quality. The SEM images were shown the synthesis of a thin film Cu۲O/AlZn-LDH nanocomposite on the FTO electrode. The water oxidation results show that Cu۲O-Zn/Al-LDH modified FTO electrode is an improved electrocatalyst and has high activity at water oxidation in alkaline media with the onset potential about ۰.۶ V vs. SCE and overpotential of ۳۸۰ mV at۱۰ mA/cm. The improved water oxidation activity at Cu۲O/AlZn-LDH can be attributed to the good conductivity of the nanocomposite.

کلمات کلیدی:

(Electrocatalyst, Layered Double Hydroxide (LDH), FTO Electrode, Oxygen evolution reaction (OER

لینک ثابت مقاله در پایگاه سیویلیکا: