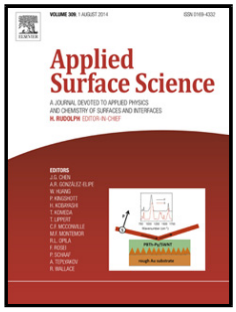

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An efficient route for catalytic activity promotion via hybrid electro-depositional modification on commercial nickel foam for hydrogen evolution reaction in alkaline water electrolysis

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Abstract: In this paper, the single- and hybrid-layered Cu, Ni and Co thin films were electrochemically deposited onto the three-dimensional nickel foam as composite cathode catalyst for hydrogen evolution reaction in alkaline water electrolysis. The morphology, structure and chemical composition of the electrodeposited composite catalysts were investigated using X-ray diffraction (XRD), scanning electron microscopy (SEM) and energy dispersive X-ray analysis (EDX). Electrochemical measurement depicted that, for the case of the monometallic layered samples, the general activity for hydrogen evolution reaction followed the sequence: Ni-foam/Ni > Ni-foam/Co >

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