Short Communication

Assembling of NiO_x/MWCNTs-GC Anodic Nanocatalyst for Water Electrolysis Applications

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Glassy carbon (GC) electrode is intended to be modified with nickel oxide (NiO_x) and multiwalled carbon nanotubes (MWCNTs) in the anodic reaction of water electrolysis. NiO_x deposition time is optimized and a 5 min was enough to attain the maximum activity. A further modification of the catalyst with MWCNTs could greatly enhance its stability during continuous electrolysis. As an outcome, an energy amount of 21.7 kWh/KgO₂ is minimized. Several electrochemical and materials characterization setups will be utilized to test the catalyst activity and to know its geometry and structure.

Keywords: Catalysis; Water splitting; Nickel; MWCNTs.

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