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Synthesis and characterization of NiO nanoplatelet and its application in electrochemical sensing of sulphite

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ABSTRACT

Nanostructured NiO such as nanoplatelet, nanoflower, nanosheet and nanoflakes were prepared by simple precipitation and hydrothermal methods. Physical properties, morphology and porous nature were studied using several characterization techniques. The studies confirm the formation of NiO and its nano-porous morphologies. Nanostructured NiO was used as an electrocatalyst to detect sulphite. Electrocatalytic oxidation behaviour of sulphite on nanostructured NiO was evaluated using cyclic voltammetry and amperometric methods. All the synthesized materials display good electrocatalytic response towards sulphite oxidation. Amongst, NiO nanoplatelet acts as best sensitive and selective material for sulphite sensing with

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