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Synthesis, Electrochemical Characterization Of MoO₃-CeO₂ Mixed Oxide Nano Particles

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Abstract: Nano MoO₃-CeO₂ mixed oxides were prepared by wet chemical method by mixing equimolar solutions of Ammonium molybdate(0.1M) and Cerium nitrate(0.1M) in aqueous Sodium hydroxide and refluxed at elevated temperature. The prepared nano MoO₃-CeO₂ mixed oxides were characterized by UV-Vis, TEM and CV studies. The absorption peak for MoO₃-CeO₂ mixed oxide has been found to be at 348nm. The blue shifted absorption peaks of simple and mixed metal oxide nano particles showed nano scale effect. The size of synthesized nano particles were further confirmed by TEM and it was found to be 170nm. Cyclic Voltammetric studies exhibit good adherent behaviour on electrode surface and good electroactivity at pH 1.0.
Keywords: MoO₃-CeO₂, UV-Vis, Cyclic Voltammetry, TEM.

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