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ELECTROCATALYTIC REDUCTION OF NITRITE IN WATER AT CuO/Cu ELECTRODE

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Abstract : Nitrite plays an important role in environment and life process. As an alarming pollutant to the environment and human health, various techniques have been developed to determine nitrite. Electrochemical methods, especially the chemically modified electrodes (CMEs) have utilized extensively, due to several advantages in comparison with other methods, such as quick response, high sensitivity, low detection limit and simple use.Nanostructured CuO was directly grown on copper foam by cyclic voltammetry method, The electrocatalytic reduction of nitrite at CuO/Cu has been investigated using 0.5 M H2SO4 solution.The proposed method was successfully applied in the detection of nitrite in real water samples and obtained satisfactory results.

Keywords : Cupper substrate, Cupper oxide, nitrite reduction, Electrocatalyst.