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An Electrochemical Selective Detection of Nitrite Sensor For Polyaniline Doped Graphene Oxide Modified Electrode

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A PANI@GO (Polyaniline@Graphene Oxide) nanocomposite prepared by the facile synthesis method and applied as an active material for nitrite sensor. Numerous characterization techniques were carried out to identify the physiochemical properties of PANI@GO composite material. Notably, the electrocatalytic properties of PANI@GO modified glassy carbon electrode (GCE) towards the nitrite sensing were obtained by using Cyclic Voltammetry (CV) and amperometric (*i-t*). Fortunately, the PANI@GO/GCE exhibited high sensitivity, linear range and limit of detection of about 117.23 µA mM^{-1} cm^{-2}, 0.002 to 44 mM and 0.5 µM respectively. In addition, the PANI@GO/GCE was found as more applicable for the real time application.

Keywords: polyaniline, GO, nitrite, electrochemical sensor.

FULL TEXT