Short Communication

Development of a Graphene Oxide-ZnO Nanorod Composite for Sensitive Determination of Catecholamine

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The present study proposed a facile hydrothermal method for the preparation of a reduced graphene oxide-ZnO (RGO-ZnO) nanorod composite. A GCE modified by this nanocomposite was used for the determination of catecholamine (CA). The proposed biosensor showed a linear dependence on the CA concentration in the range of 1 to 800 μM . The limit of detection was obtained as 0.322 μM based on the signal-to-noise ratio of 3. Furthermore, our developed biosensor proved highly stable and reproducible, with good anti-interference properties towards the detection of CA.

Keywords: Eosinophil cationic protein; Aptamer sensor; Graphene; Electrochemical determination; Childhood asthmatic attack

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