Fabrication of Electrochemical Sensor for Hyaluronic Acid Determination

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This work employed a facile one-pot hydrothermal method to prepare a reduced graphene oxide-ZnO nanorods composite (RGO-ZnO). Glassy carbon electrode (GCE) was modified by the obtained nanocomposite, which was then used to realize the selective and sensitive detection of hyaluronan (HY). The fabricated biosensor was linearly related to HY concentration (1 - 800 μM), with a limit of detection (LOD) of 0.42 μM (S/N = 3). This biosensor for HY was stable, reproducible and characteristic of anti-interference. Furthermore, the proposed biosensor has potential for further application in HY detection in gecko extract specimens.

Keywords: Electrochemical sensor; Graphene; Zinc oxide; Hyaluronan; Gecko extract

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