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Bisphenol A electrochemiluminescence Sensor Based on Reduced Graphene Oxide-Bi₂ZnS₄ Nanocomposite

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Abstract

In this study, reduced graphene oxide-bismuth zinc sulfide nanocomposite (RGO-Bi₂ZnS₄) with excellent electrochemiluminescence (ECL) signal amplification were prepared by a solvothermal method and successfully used to fabricate ECL sensors to rapidly detect bisphenol A (BPA). Bi₂ZnS₄ can form numerous nanosheet clusters uniformly distributed on the surface of a graphene sheet, which not only avoids the phenomenon of stacking of the graphene layers due to π - π interactions, but also greatly increases the specific surface area of graphene, thus providing a wider active area and channel for the oxidation-reduction reaction on the electrode. Chitosan

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