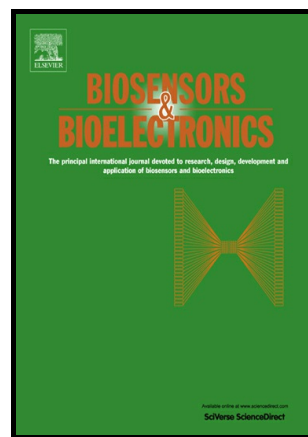


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Preparation of Co₃O₄/crumpled graphene microsphere as peroxidase mimetic for colorimetric assay of ascorbic acid

Sisi Fan^a, Minggang Zhao^{a*}, Longjiang Ding^a, Hui Li^b, Shougang Chen^{a*}

^aDepartment of Materials Science and Engineering, Ocean University of China,
266100, Qingdao, Peoples R China

^bOptoelectronic Materials and Technologies Engineering Laboratory of Shandong,
Physics Department, Qingdao University of Science and Technology, Qingdao
266100, PR China

*zhaomg@ouc.edu.cn

*sgchen@ouc.edu.cn

Abstract

The well-dispersed Co₃O₄ nanoparticles-decorated crumpled graphene microsphere (CGM) was successfully prepared by aerosol-assisted frying self-assembly and annealing process. It is found that the obtained Co₃O₄/CGM nanohybrid possessed enhanced intrinsic peroxidase-like activity and could catalytically oxidize 3,3',5,5'-tetramethylbenzidine by H₂O₂ to produce a typical blue product. But the presence of ascorbic acid could induce the reduction of oxTMB to TMB, resulting in a significant blue color fading. Therefore, a simple, sensitive and selective

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