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Hierarchical oxygen-implanted MoS_2 nanoparticle decorated graphene for the non-enzymatic electrochemical sensing of hydrogen peroxide in alkaline media

Yudong Xue [a,b], Govindhan Maduraiveeran [c], Mingyong Wang [a], Shili Zheng [a], Yi Zhang [a], Wei Jin [a,*]

[a] *National Engineering Laboratory for Hydrometallurgical Cleaner Production Technology, Key Laboratory of Green Process and Engineering, Institute of Process Engineering, Chinese Academy of Sciences, Beijing 100190, China*

[b] *University of Chinese Academy of Sciences, Beijing 100049, China*

[c] *Research Institute, Department of Chemistry, SRM University, Chennai 603203, India*

**Corresponding author: E-mail: wjin@ipe.ac.cn (Wei Jin), Tel: +86 10 62584427.*

Abstract：Owing to the extensive applications of hydrogen peroxide (H_2O_2) in biological, environmental and chemical engineering, it is of great importance to investigate sensitive and selective sensing platform towards the detection of H_2O_2. Herein, oxygen-implanted MoS_2 nanoparticles decorated graphene nanocomposite is synthesized via a facile one-pot solvothermal method for the sensitive detection of H_2O_2 in alkaline media. The structure and morphology of the MoS_2/graphene nanocomposites were systematically characterized, showing that Mo-O bonds are