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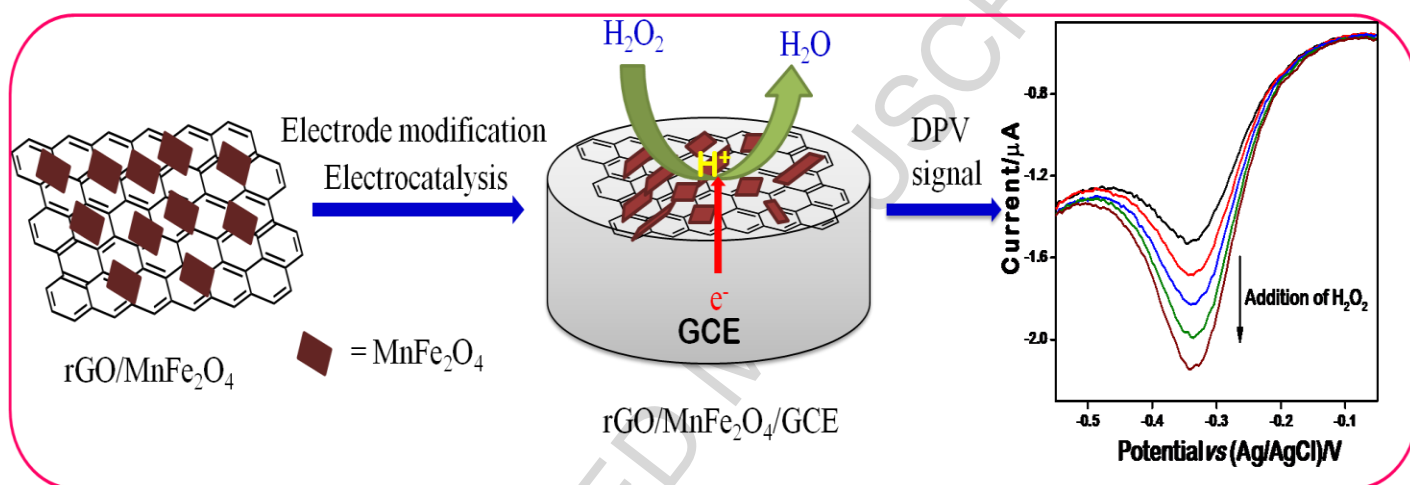
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Nanosheet-like manganese ferrite grown on reduced graphene oxide for non-enzymatic electrochemical sensing of hydrogen peroxide

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Graphical Abstract



In-situ formation of manganese ferrite (MnFe₂O₄) nanosheets anchored reduced graphene oxide (rGO) was synthesized through one-pot hydrothermal method. The rGO/MnFe₂O₄ nanocomposite modified glassy carbon electrode was used for the electrochemical reduction and detection of hydrogen peroxide (H₂O₂). The nanocomposite modified electrode showed the highest catalytic current response for H₂O₂ reduction and the detection limit was estimated to be 50 nM using differential pulse voltammetry. Moreover, the modified electrode showed good stability, reproducibility and selectivity in the presence of many interferents.

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