

Supporting Information

Decoration of GO with Fe spinel-Naf/DMAP: an electrochemical sensing probe for H₂O₂ reduction

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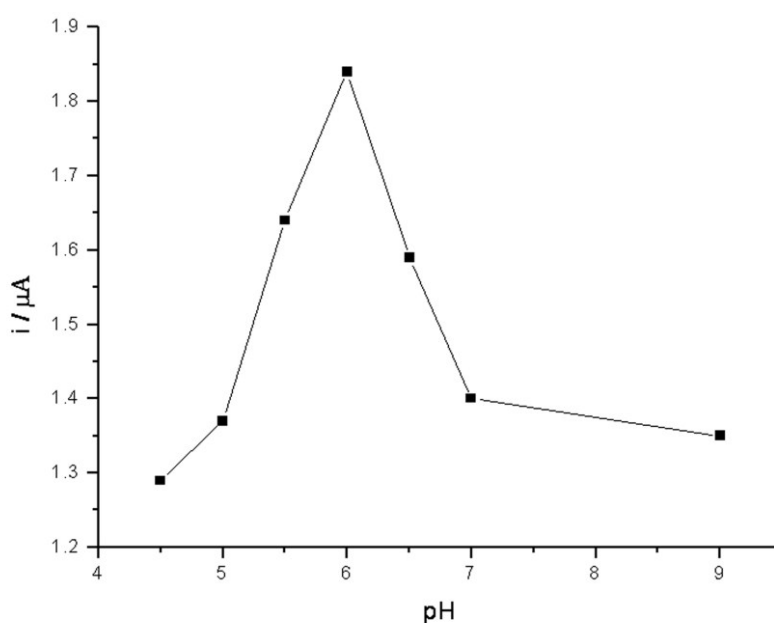


Fig S1: Effect of pH

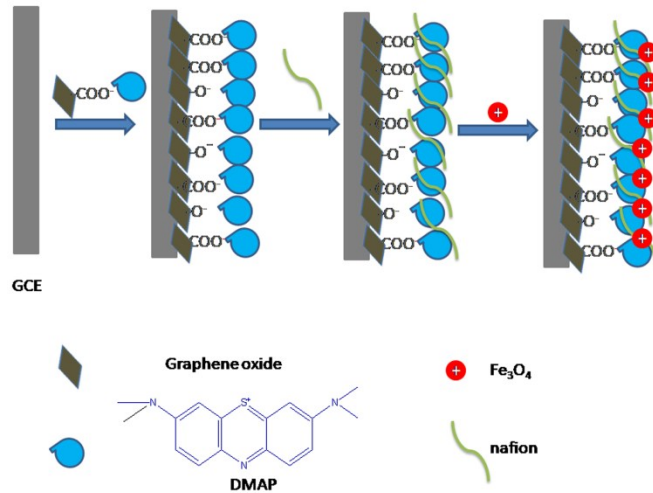


Fig S2: Schematic diagram of stepwise fabrication of Fe_3O_4 -Naf/DMAP-GO hybrid film on GC electrode

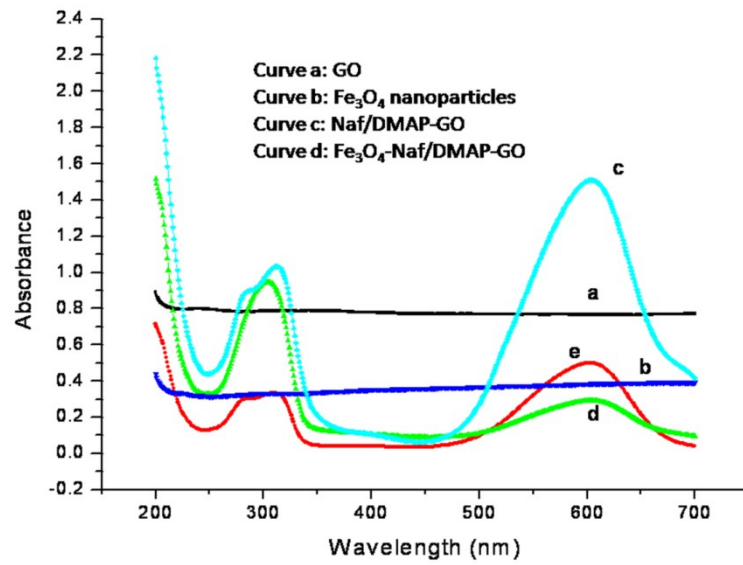


Fig S3 : UV-Visible spectra

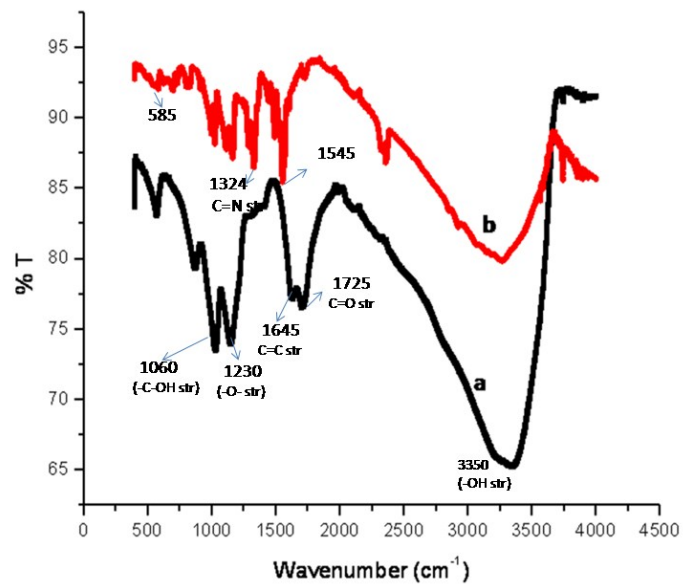


Fig S4: FTIR

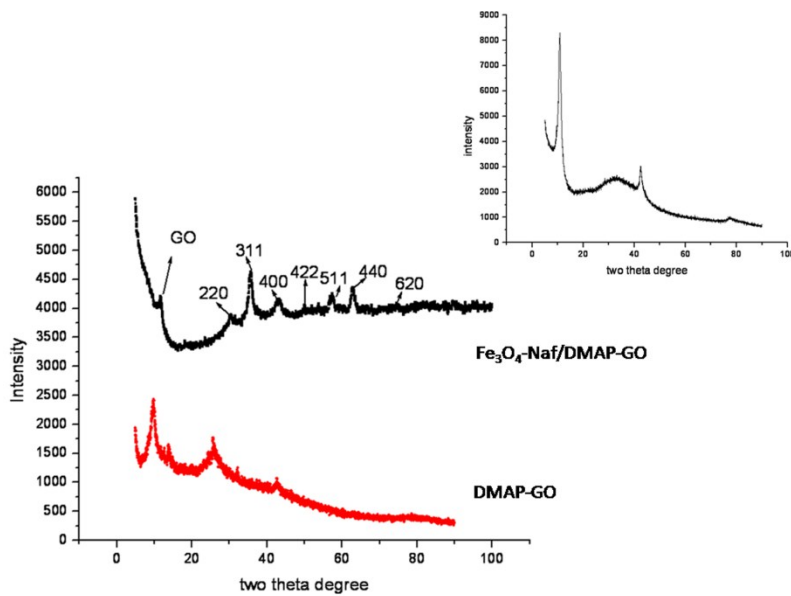


Fig S5 (a) : XRD of DMAP-GO and Fe₃O₄-Naf/DMAP-GO

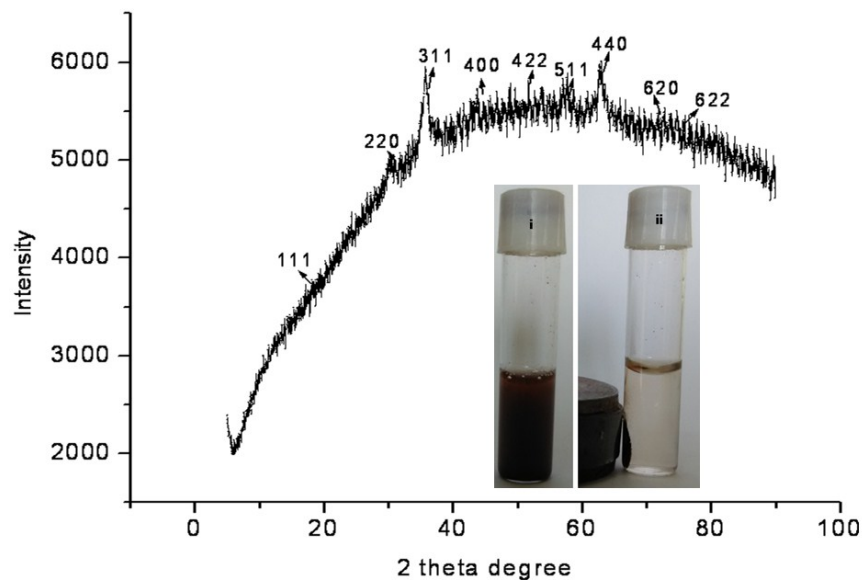


Fig S5: XRD of Fe₃O₄ (Inset: magnetic behavior of Fe₃O₄)

Table S1: Comparative study of different electrode films

Film modified GCE	Cathodic current(at 5 mV/s)	Anodic current(at 5 mV/s)	Peak Separation (ΔE) mV	Linear range	LOD (μM)
Naf/GO/Fe ₃ O ₄	0.06 μA	0.16 μA	0.194	6 μM -200 μM	8.3
Naf/DMAP-GO	0.12 μA	0.19 μA	0.132	5.5 μM -1 mM	3.4
Fe ₃ O ₄ -Naf/DMAP	0.14 μA	0.23 μA	0.201	5.5 μM - 700 μM	1.6
Fe₃O₄-Naf/DMAP-GO	0.16 μA	0.28 μA	0.134	5.5 μM-2.4 mM	0.6