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Supplementary Information

Enhanced electrocatalytic performance of cobalt oxide nanocubes incorporated reduced graphene oxide as a modified platinum electrode for methanol oxidation

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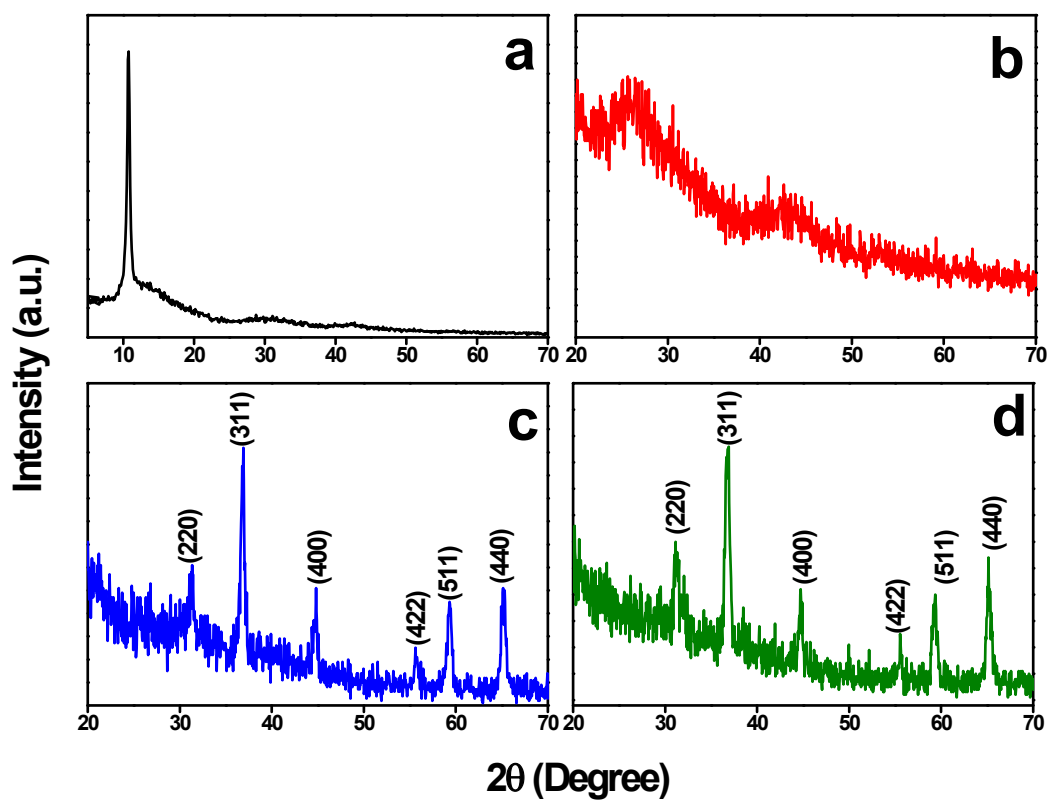


Fig. S1 X-ray diffraction patterns of (a) GO, (b) rGO, (c) Co₃O₄ nanocubes, and (d) rGO-Co₃O₄ nanocubes.

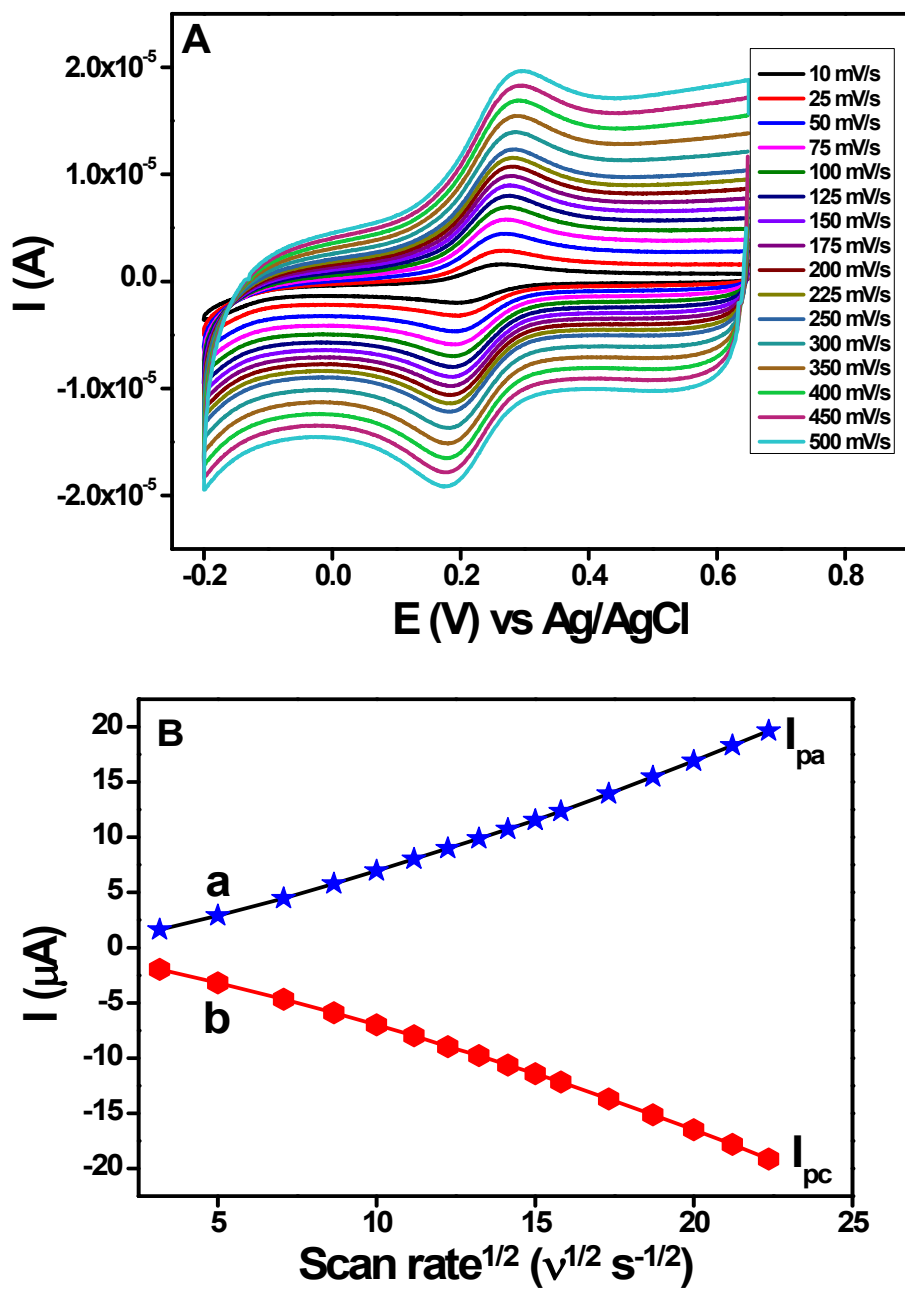


Fig. S2 (A) Cyclic voltammograms recorded for rGO-Co₃O₄ nanocubes modified electrodes for 1×10^{-3} M K₃[Fe(CN)₆] in 0.1 M KCl at different scan rates in range of 10–500 mVs⁻¹. (B) Calibration plot obtained for scan rate against (a) anodic and (a) cathodic peak currents.

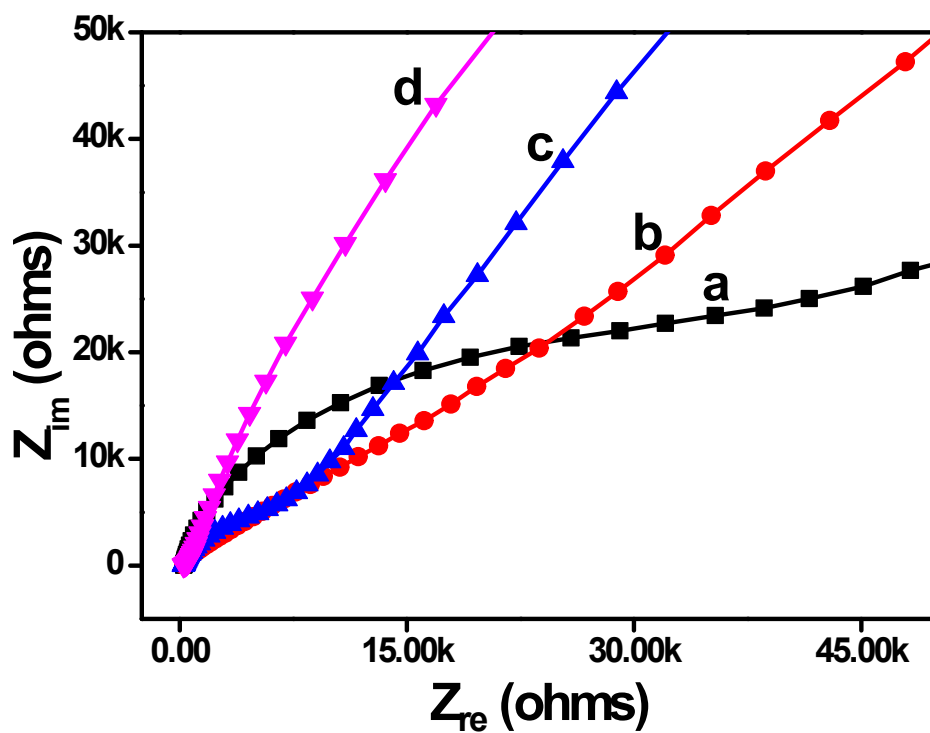


Fig. S3. Expanded view of Nyquist plots obtained for (a) bare Pt, (b) rGO, (c) Co_3O_4 nanocubes and (d) rGO- Co_3O_4 nanocubes modified Pt electrodes for 1×10^{-3} M $\text{K}_3[\text{Fe}(\text{CN})_6]$ in 0.1 M KCl.

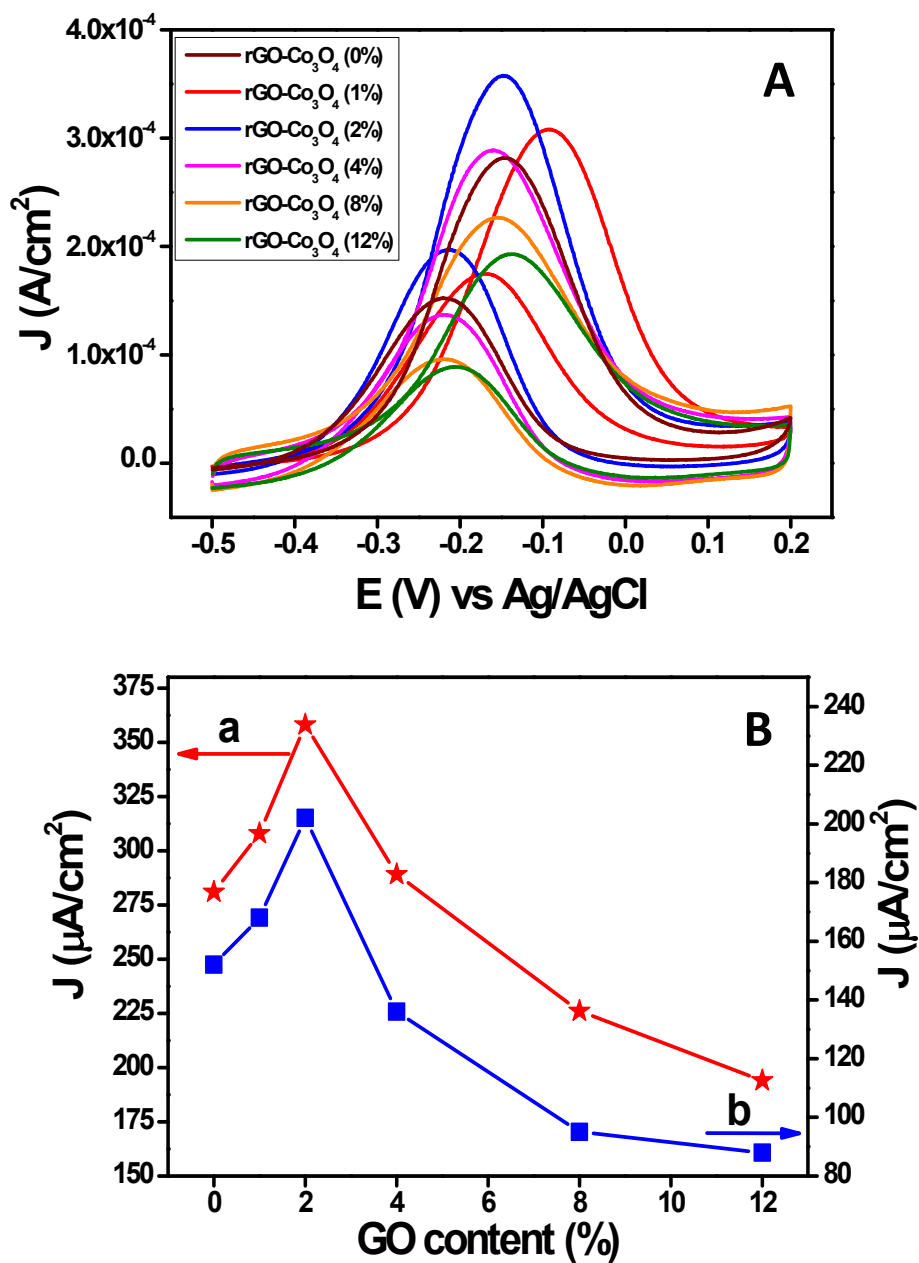


Fig. S4 (A) CV recorded for rGO-Co₃O₄ nanocubes modified electrodes with different wt. % of GO in presence of 0.1 M CH₃OH and 0.1 M KOH at scan rate of 50 mVs⁻¹. (B) Plots of GO content (wt. %) in rGO-Co₃O₄ vs. peak current density obtained during (a) forward and (b) reverse scans.