

## Supplementary material

# A voltammetric sensor based on $\text{MgFe}_2\text{O}_4$ decorated on reduced graphene oxide-modified electrode for sensitive and simultaneous determination of catechol and hydroquinone

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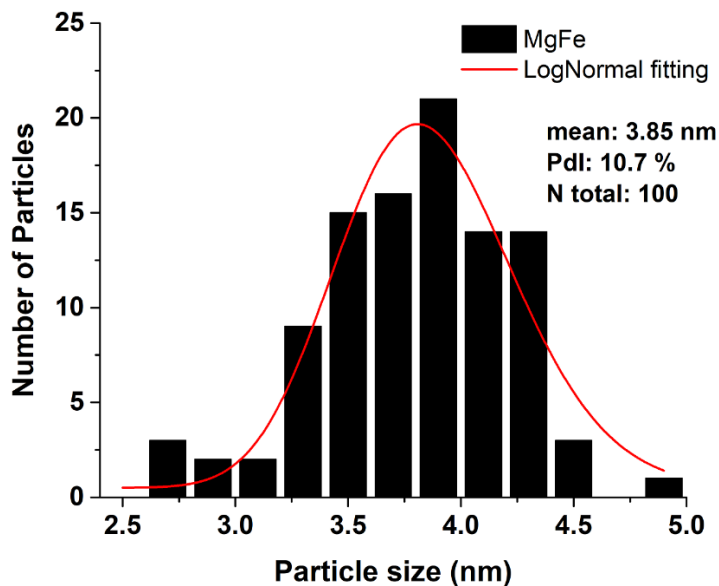


Fig. S1 Log-normal distribution function from fitting the TEM particle size data.

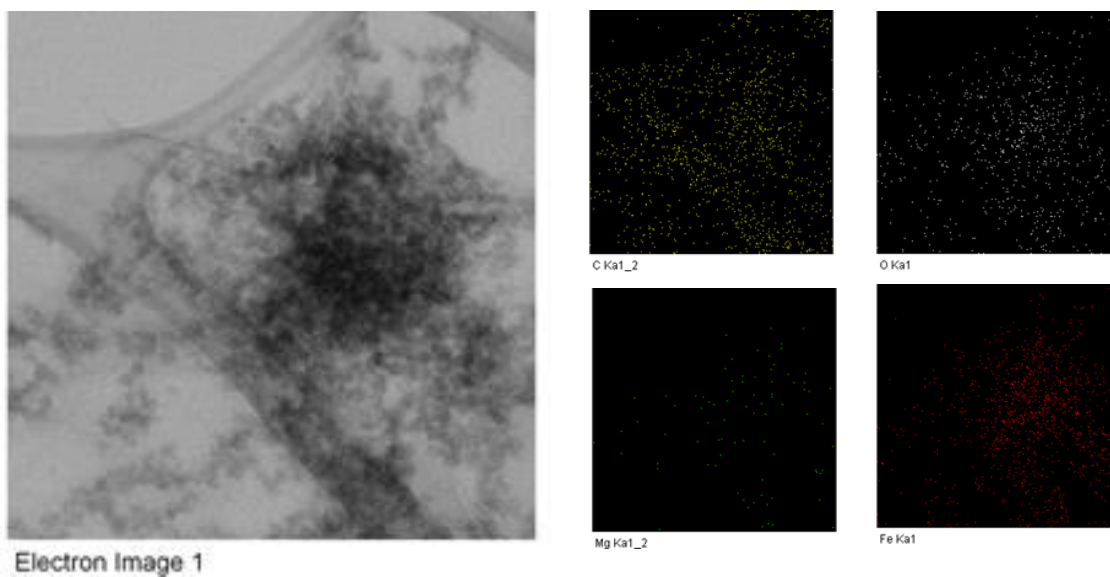
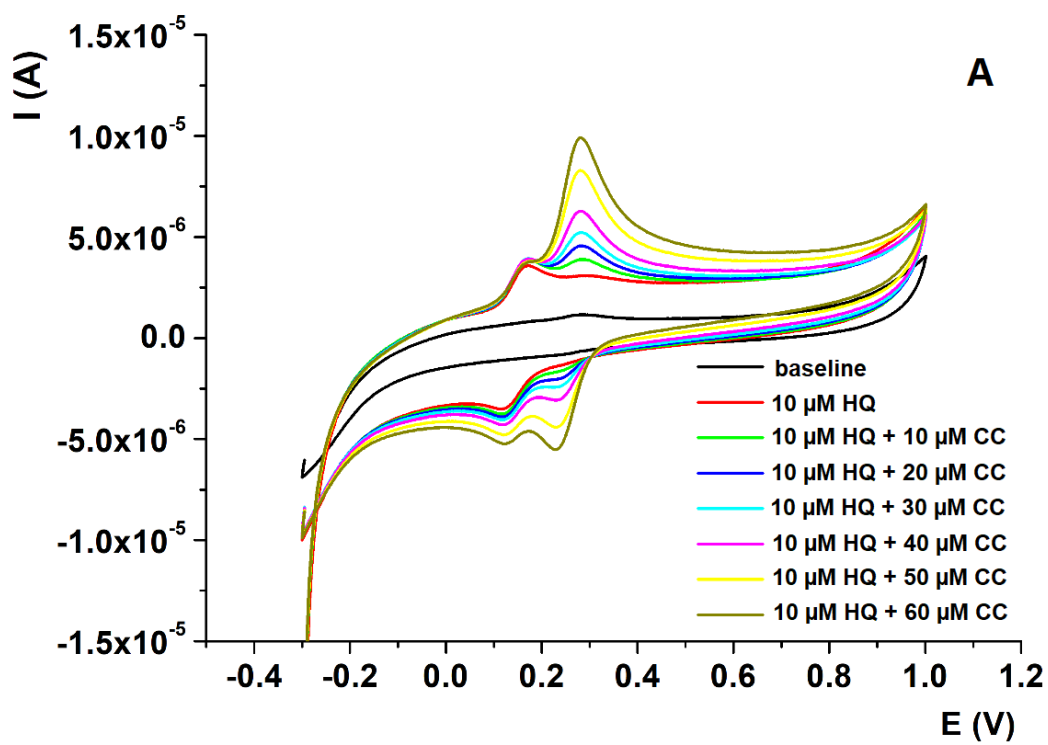


Fig. S2 EDS mapping for MgFe@RGO composite.



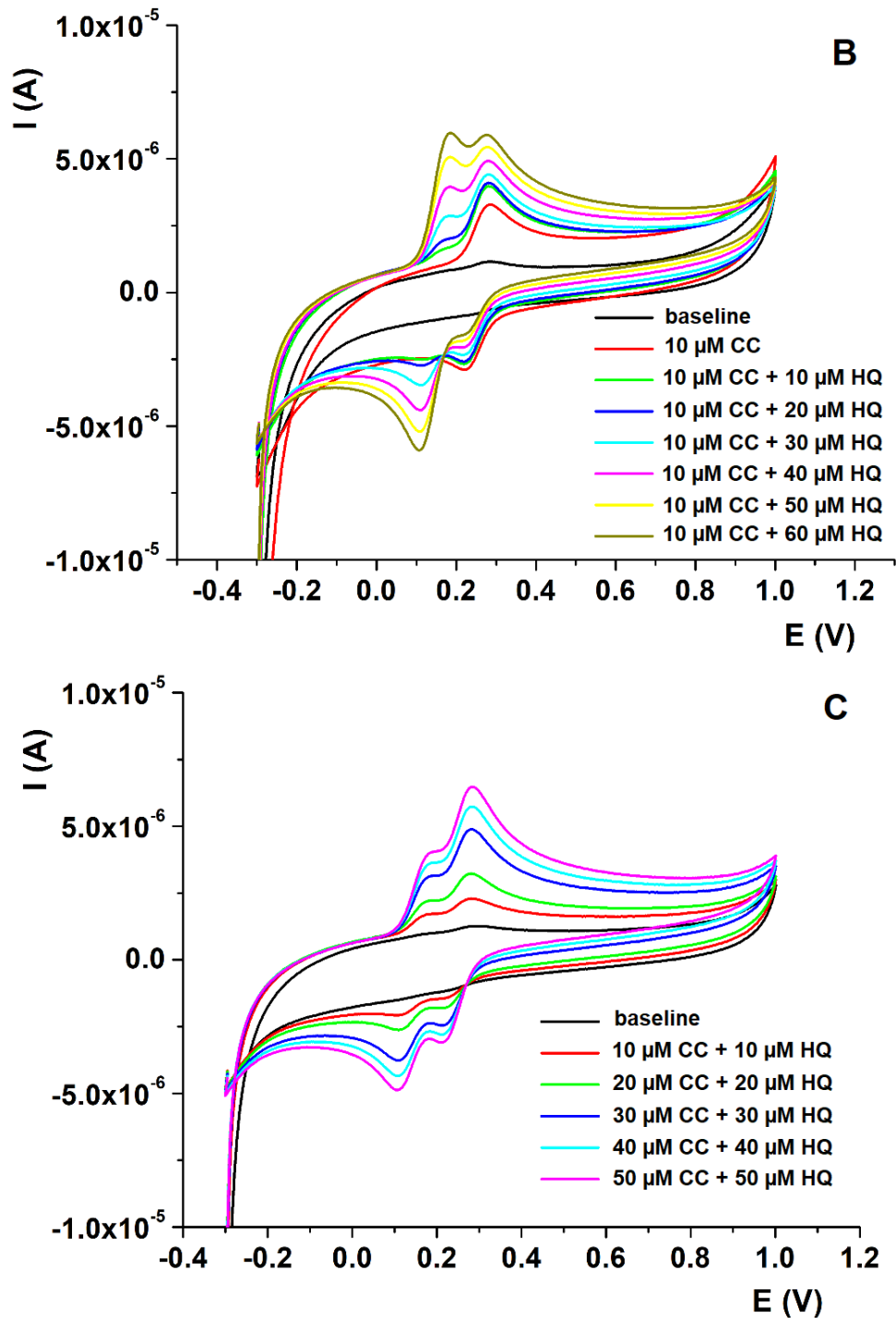


Fig. S3 CV voltammograms of: (A) different CC concentration in presence of constant HQ concentration in solution; (B) different HQ concentration in presence of constant CC concentration in solution; (C) different CC and HQ concentrations. Supporting electrolyte Ac-buffer, scan rate 100 mV/s. working electrode MgFe@RGO composite modified electrode.

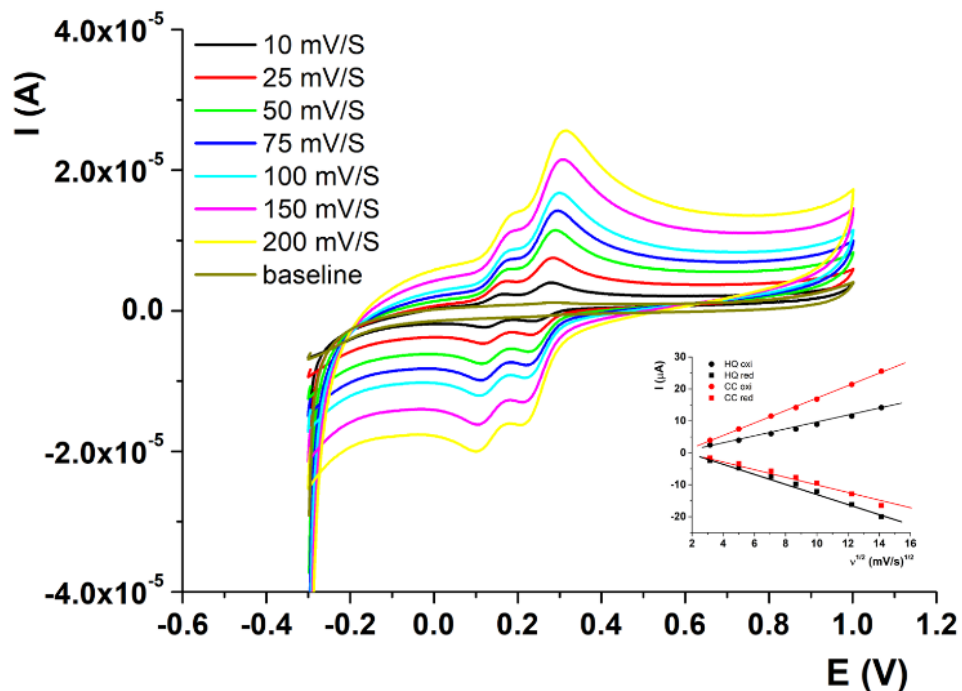


Fig. S4 CV voltammograms of CC and HQ at various scan rates in the range from 10 to 200 mV/s. Supporting electrolyte Ac-buffer, working electrode MgFe@RGO composite modified electrode. Dependence of peak currents and square root of the scan rate (inset).

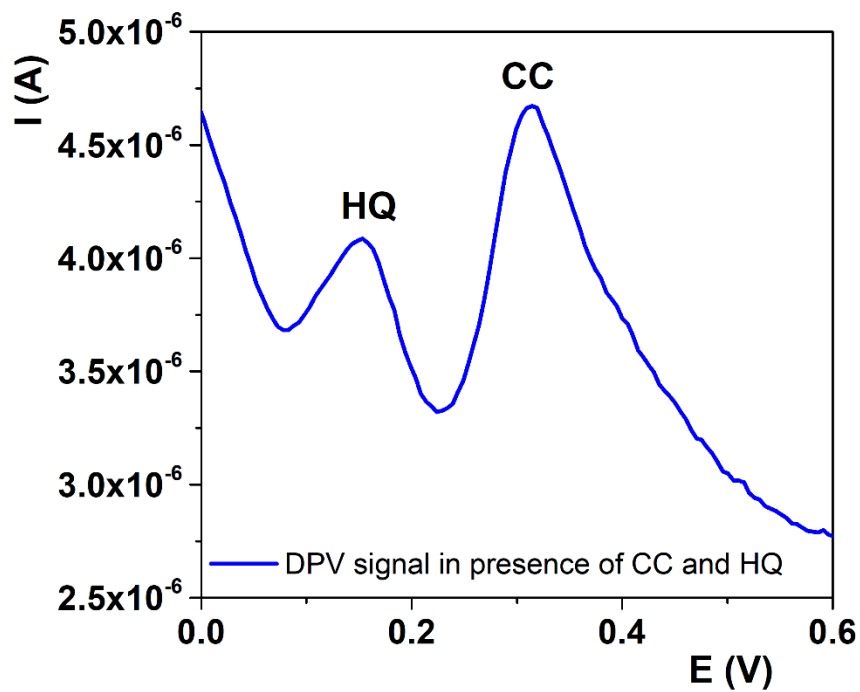


Fig. S5 DPV voltammogram in the presence of 0.1 mM of both analytes.