Electronic Supplementary Material (ESI) for Analytical Methods

Graphene layers modified glassy carbon electrode for the determination of norepinephrine and theophylline in pharmaceutical formulations

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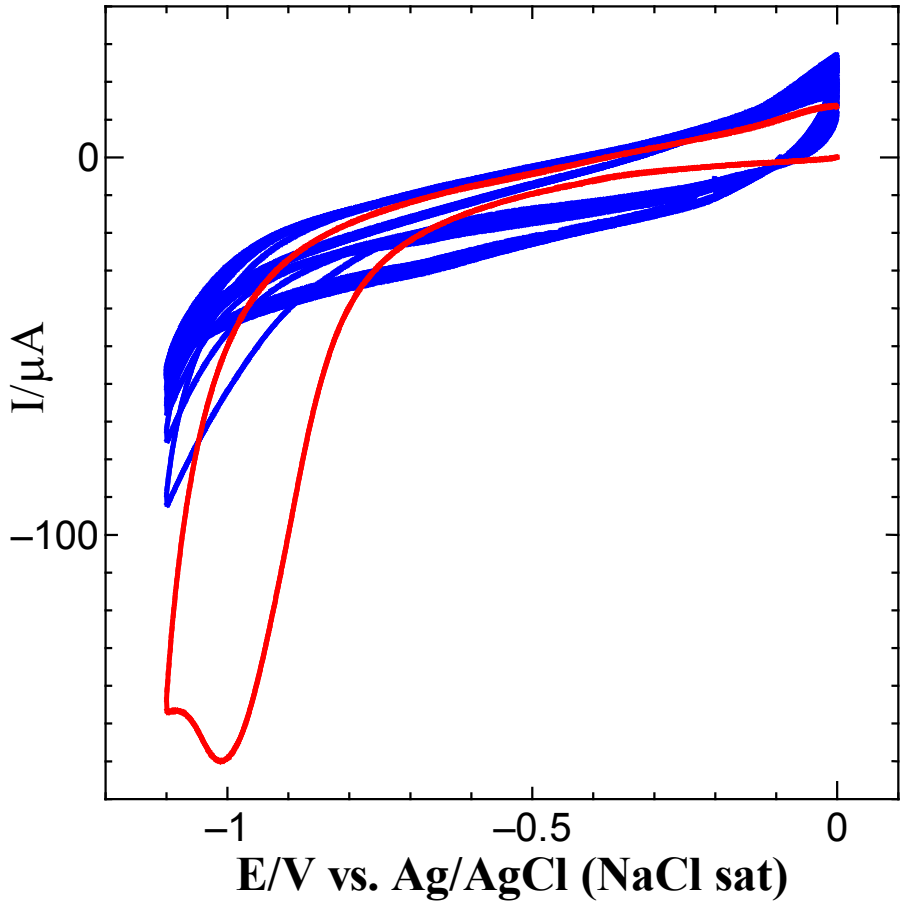

Fig. S1. Electrochemical reduction of electrostatically assembled GO on ITO/HDA electrode (15 cycles) in PB solution (pH 7.2; 0.2 M) at a scan rate of 100 mV s^{-1}.

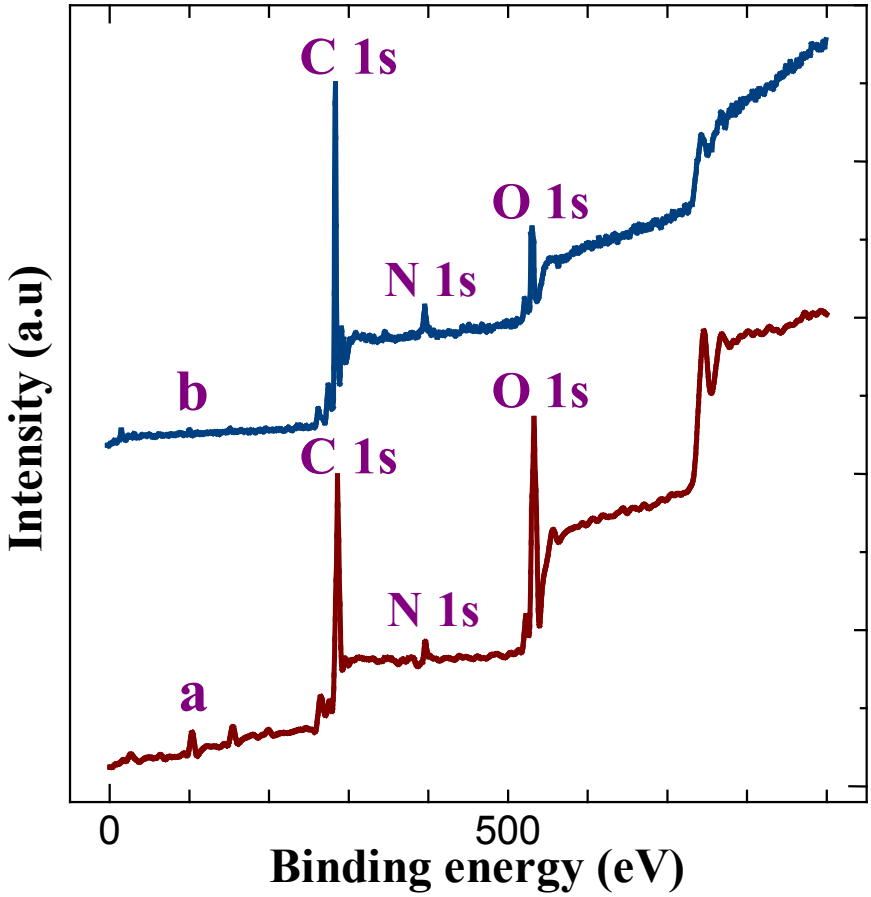

Fig. S2. XPS survey spectra obtained for (a) ITO/HDA/GO and (b) ITO/HDA/ERGO substrates.

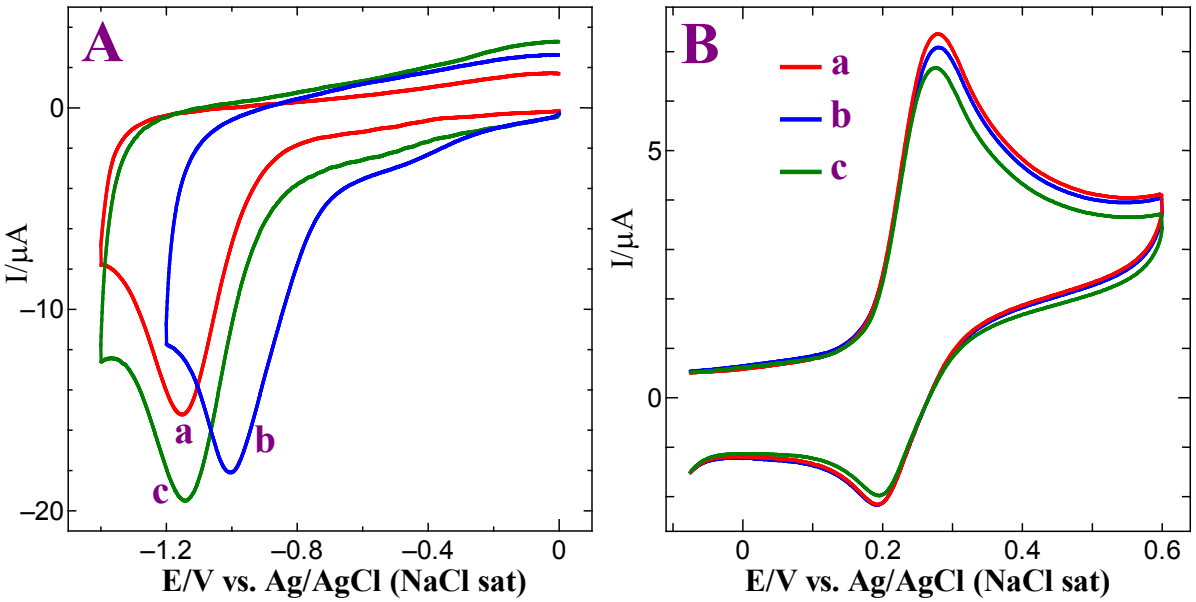

Fig. S3 (A) Electrochemical reduction of electrostatically assembled GO prepared by (a) Hummer's Method, (b) Modified Hummer's method reported by Tour et al., and (c) Tour's method on GC/HDA electrode in 0.2 M PB solution (pH 7.2) at a scan rate of 100 mV s^{-1}. **(B)** CVs obtained for 0.5 mM NE at ERGO modified electrodes fabricated by the electrochemical reduction of GO which was prepared by (a) Hummer's Method, (b) Modified Hummer's method reported by Tour et al., and (c) Tour's method.

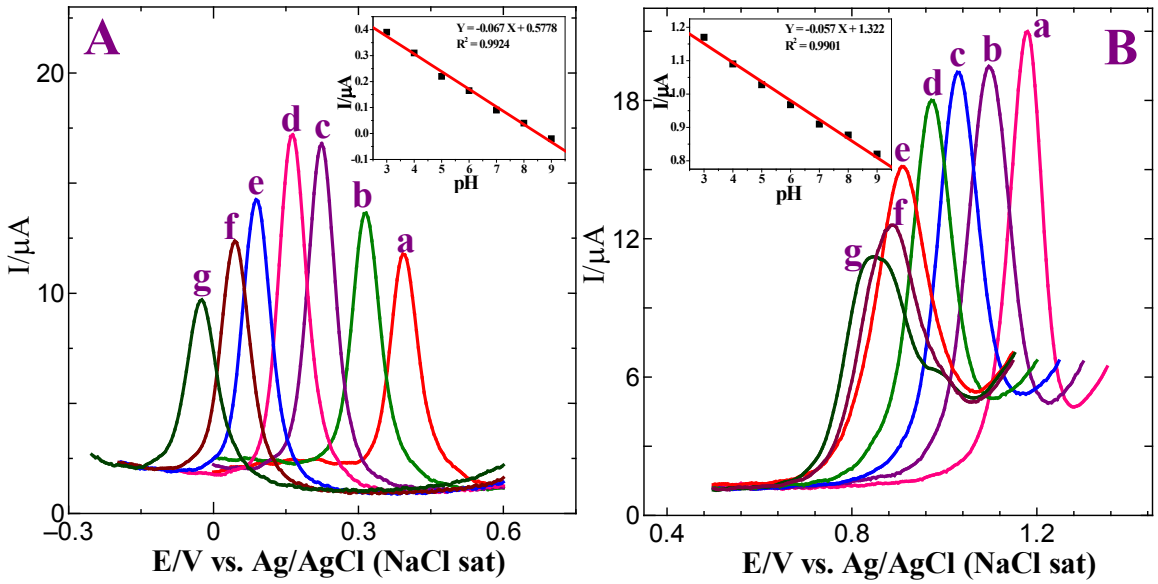

Fig. S4. DPVs obtained for 0.5 mM (A) NE and (B) TP at GC/HDA/ERGO electrode in 0.2 M PB solution of pH solution (a) 3, (b) 4, (c) 5, (d) 6, (e) 7 (f) 8 and (g) 9. **Inset**: Plot of pH versus anodic peak potential of AP.

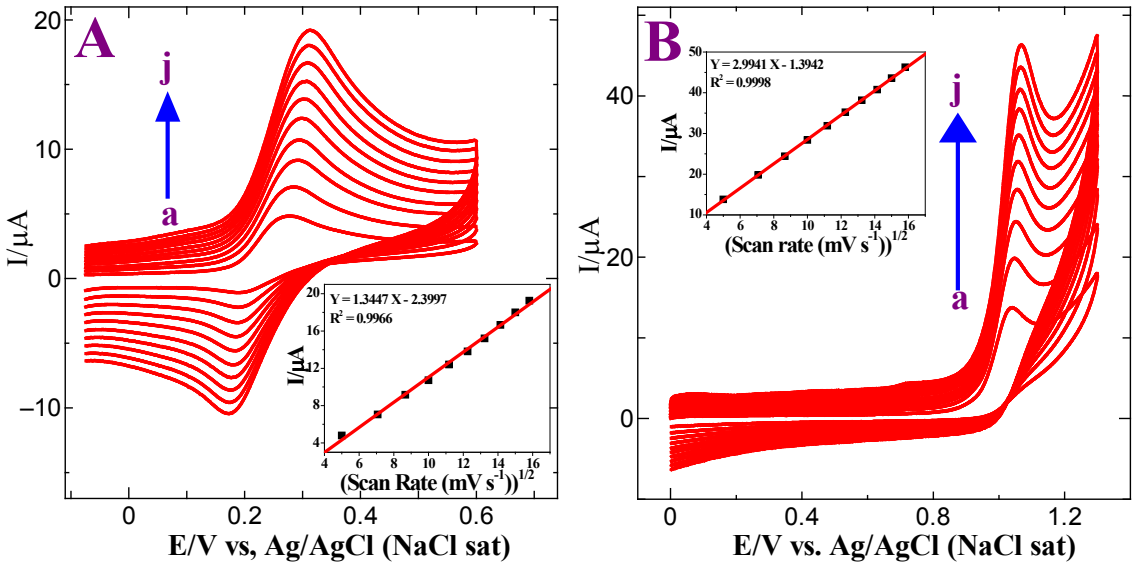

Fig. S5. CVs obtained for the oxidation of 0.5 mM of **(A)** NE and **(B)** TP at GC/HDA/ERGO electrode in PB solution (pH 6; 0.2 M) at different scan rates (a) 25, (b) 50, (c) 75, (d) 100, (e) 125, (f) 150, (g) 175, (h) 200, (i) 225 and (j) 250 mV s^{-1}. Insets: Plots of current versus square root of scan rate.

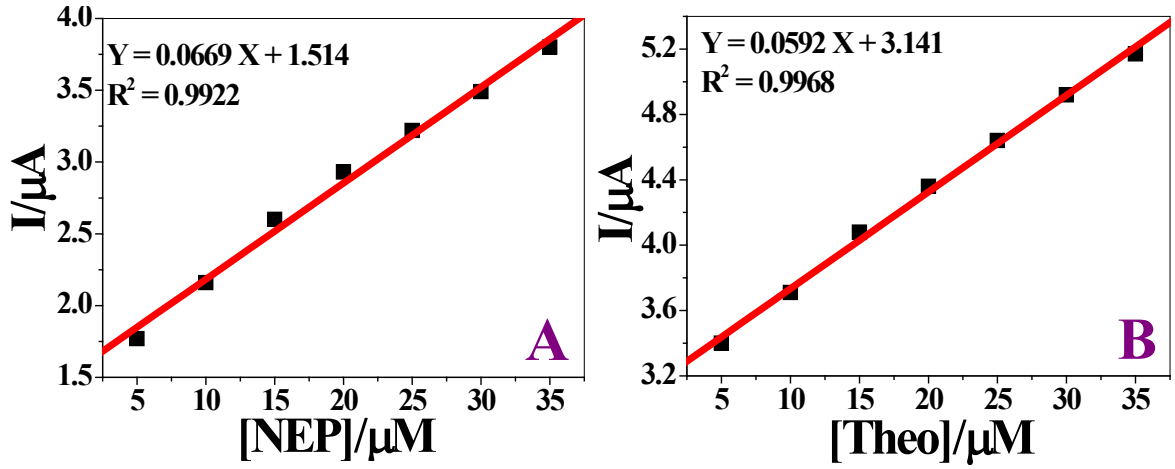

Fig. S6. Plots of concentration versus peak current for the simultaneous determination of **(A)** NE and **(B)** TP at GC/HDA/ERGO electrode in PB solution (pH 6; 0.2 M).

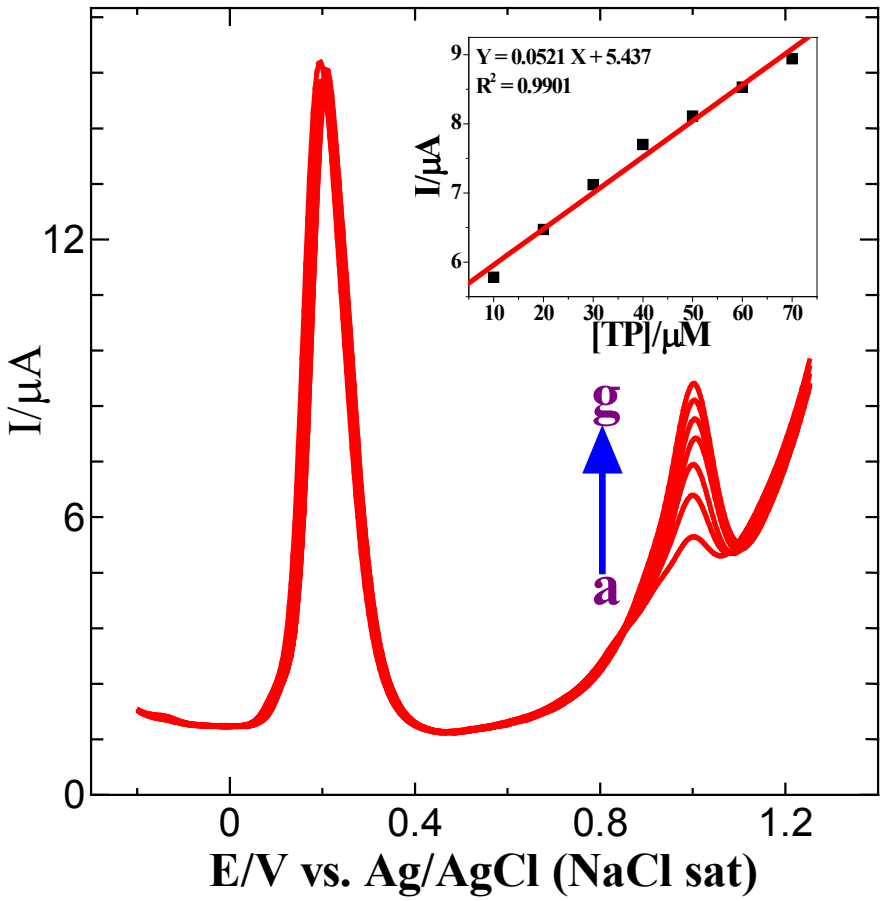

Fig. S7. DPVs obtained for the increment of 10 μM TP in the presence of 500 μM NE at GC/HDA/ERGO electrode in PB solution (pH 6; 0.2 M). Inset: Plot of concentration of TP versus oxidation current.

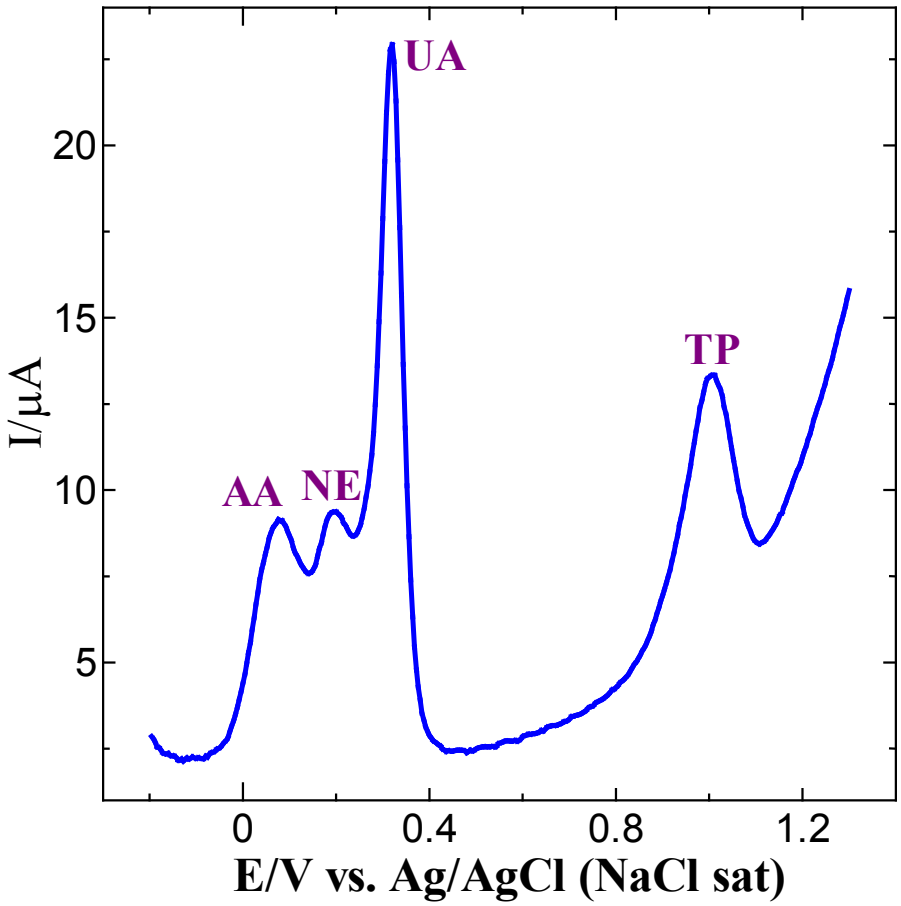

Fig. S8. DPVs obtained for 20 μM NE in the presence of 1 mM AA, 500 μM UA and 200 μM TP at GC/HDA/ERGO electrode in 0.2 M PB solution.