

Supplementary material

Letter

N-doped reduced graphene oxide/gold nanoparticles composite as an improved sensing platform for simultaneous detection of dopamine, ascorbic acid and uric acid

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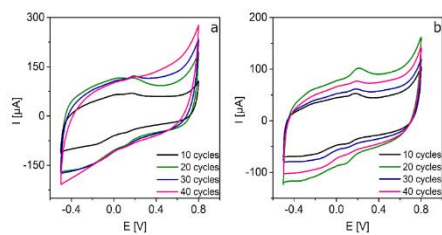


Figure S1. CVs recorded on (a) GCE/rGO-Au and (b) GCE/N-rGO-Au electrodes at different number of electrodeposition cycles in 0.1 M PBS (pH 7.4) with 100 μM DA.

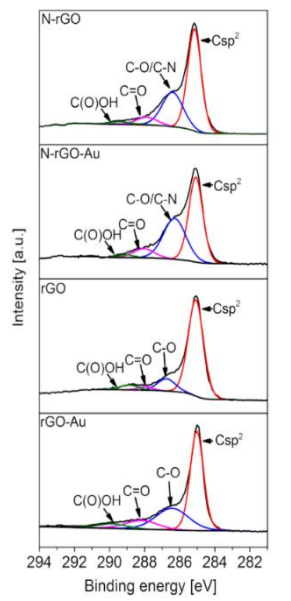


Figure S2. Deconvolutions of the C1s core-level XPS spectra of (a) N-rGO, (b) N-rGO-Au, (c) rGO and (d) rGO-Au.

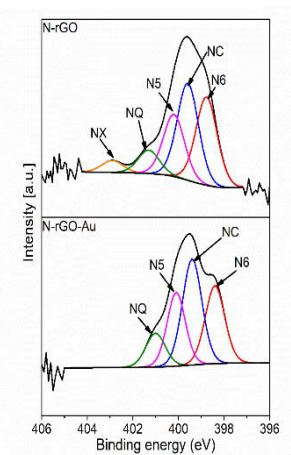


Figure S3. Deconvolutions of the N1s core-level XPS spectra of N-rGO and N-rGO-Au.

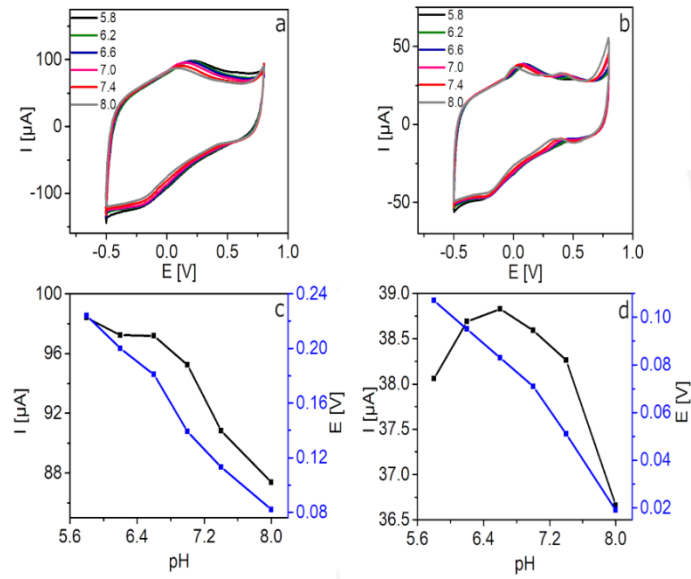


Figure S4. CVs recorded on (a) GCE/rGO-Au and (b) GCE/N-rGO-Au electrodes at different pH values in 0.1 M PBS containing 300 μM AA. Effect of the pH on the anodic peak current and potential values related to the oxidation of AA on (c) GCE/rGO-Au and (d) GCE/N-rGO-Au.

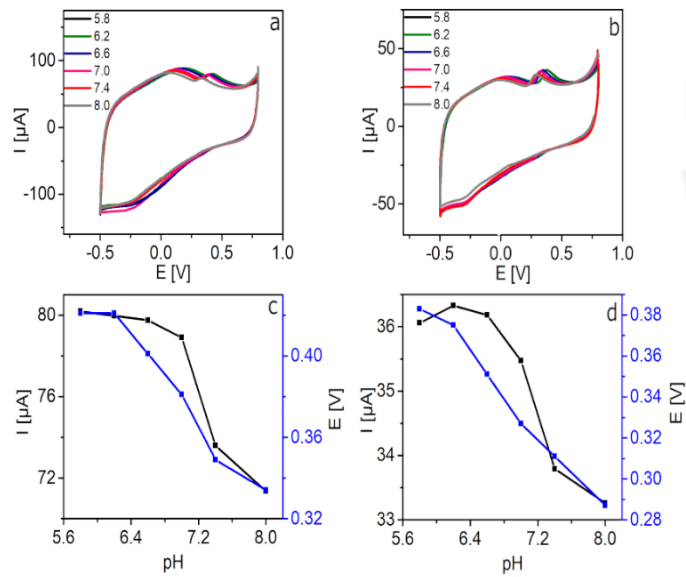


Figure S5. CVs recorded on (a) GCE/rGO-Au and (b) GCE/N-rGO-Au electrodes at different pH values in 0.1 M PBS containing 300 μM UA. Effect of the pH on the anodic peak current and potential values related to the oxidation of UA on (c) GCE/rGO-Au and (d) GCE/N-rGO-Au.

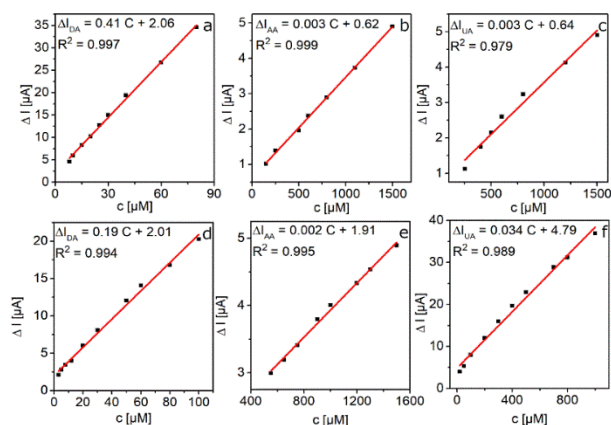


Figure S6. Calibration curves for (a, b, c) GCE/rGO-Au and (d, e, f) GCE/N-rGO-Au for (a, d) DA; (b, e) AA; and (c, f) UA in simultaneous detection.

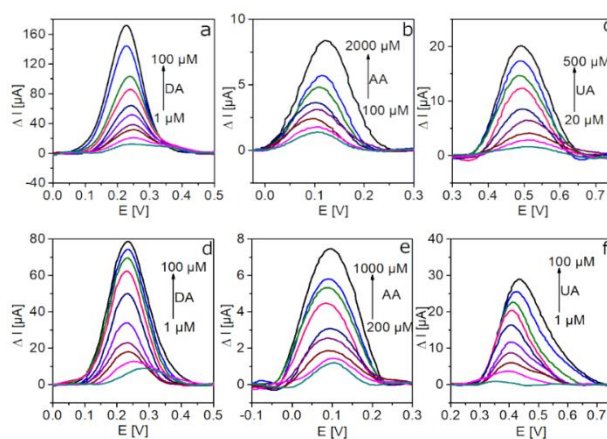


Figure S7. DPVs of the individual detections recorded on the (a, b, c) GCE/rGO-Au and (d, e, f) GCE/N-rGO-Au electrodes in 0.1 PBS (7.0) for (a, d) DA; (b, e) AA; and (c, f) UA.

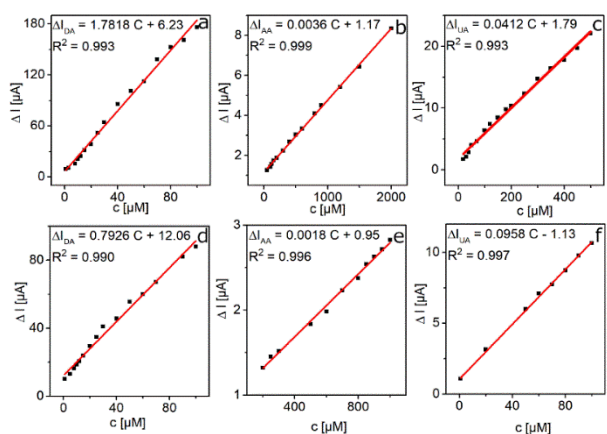


Figure S8. Calibration curves for (a, b, c) GCE/rGO-Au and (d, e, f) GCE/N-rGO-Au electrodes in 0.1 PBS (7.0) for (a, d) DA; (b, e) AA; and (c, f) UA.