

Supplementary Materials

Tremella-like graphene –Au composites used for amperometric determination of dopamine

Preparation of layer-stacking GN-Au composites

Briefly, 2 mL of 0.5 mmol/L HAuCl_4 water solution was added dropwise into the 5 mL 1 mg/mL GO solution. Subsequently, $\text{NH}_3\text{H}_2\text{O}$ was added to adjust the pH of the mixture to 10. Then NaBH_4 solution was added dropwise to reduce both Au^{3+} and GO under vigorous stirring. The mixture was filtered, and the RGO-Au composites was washed with doubly distilled water and dried at 50 °C.

Fig. S1

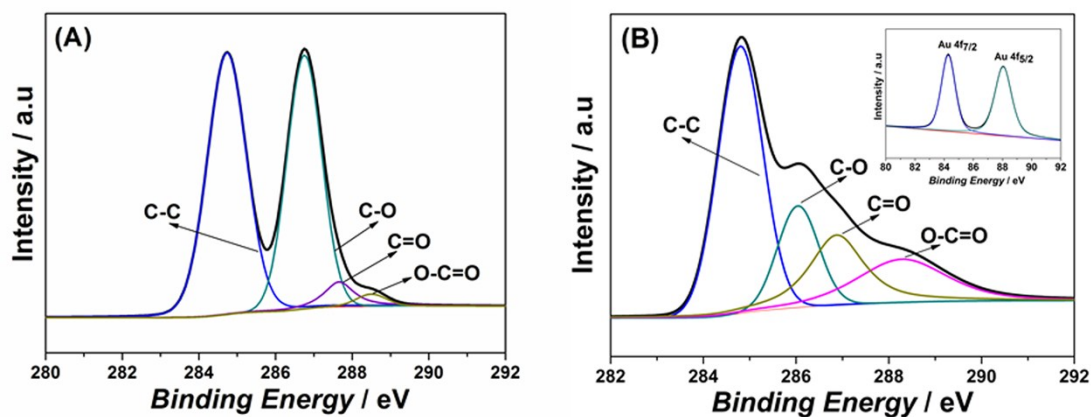


Fig. S1 (A) XPS C 1s spectra of GO. (B) XPS C 1s spectra of t-GN-Au. Insert: XPS Au 4f spectra of t-GN-Au.

Fig. S2

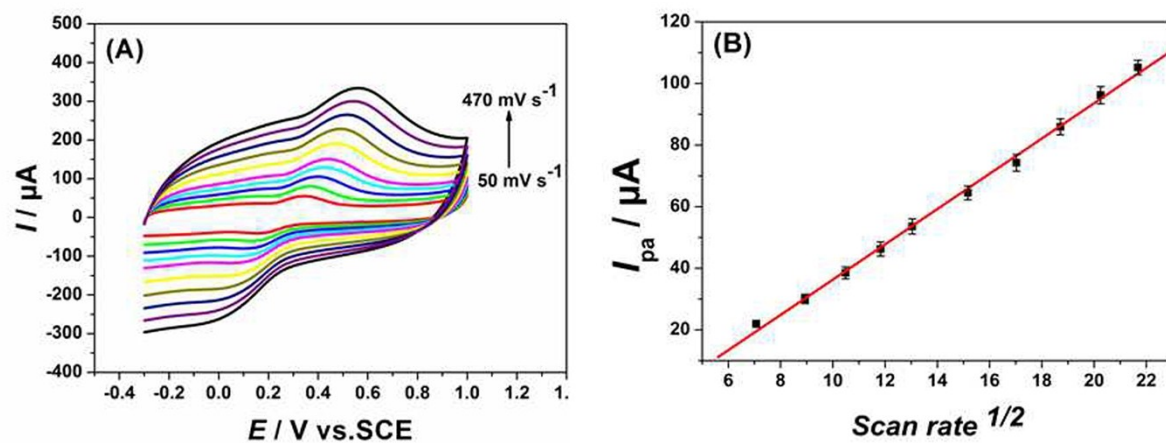


Fig. S2 (A) Cyclic voltammograms of 300 μM DA at the t-GN-Au modified GCE in BR buffer solution with different scan rate (50, 80, 110, 140, 170, 200, 230, 260, 290, 320, 350, 380, 410, 440, and 470 mV s^{-1}). (B) Plot of anodic peak current *versus* square root of scan rates (error bars show SD of three measurements).

Fig. S3

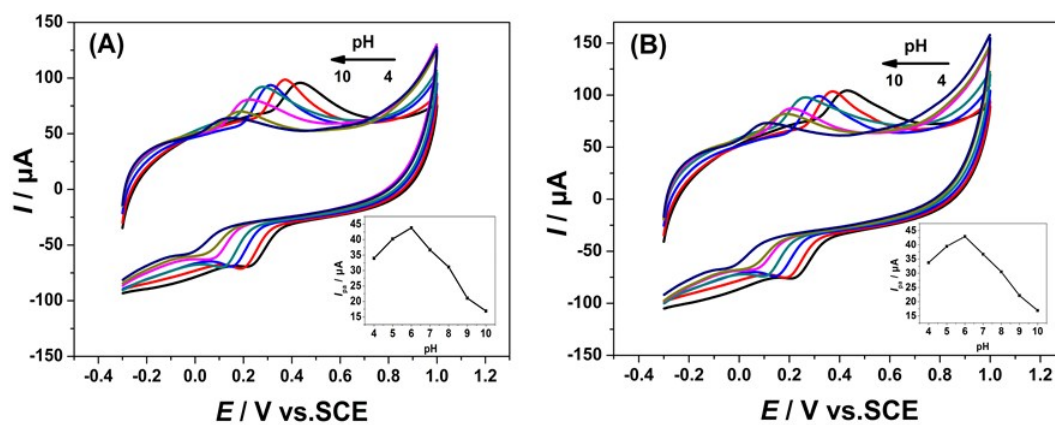


Fig. S3 Cyclic voltammograms of 300 μ M DA at the t-GN-Au modified GCE in a mixture of BR buffer solution and serum samples (A) or a mixture of BR buffer solution and urine samples (B) with different pH values (4.0-10.0). Scan rate: 100 mV s^{-1} . Insert: Plot of anodic peak current for DA *versus* pH values.