Electronic Supplementary Material (ESI) for Analytical Methods.

Graphene quantum dots decorated with Fe_3O_4 nanoparticles/functionalized multiwalled carbon nanotubes as a new sensing platform for electrochemical determination of L-DOPA in agricultural products

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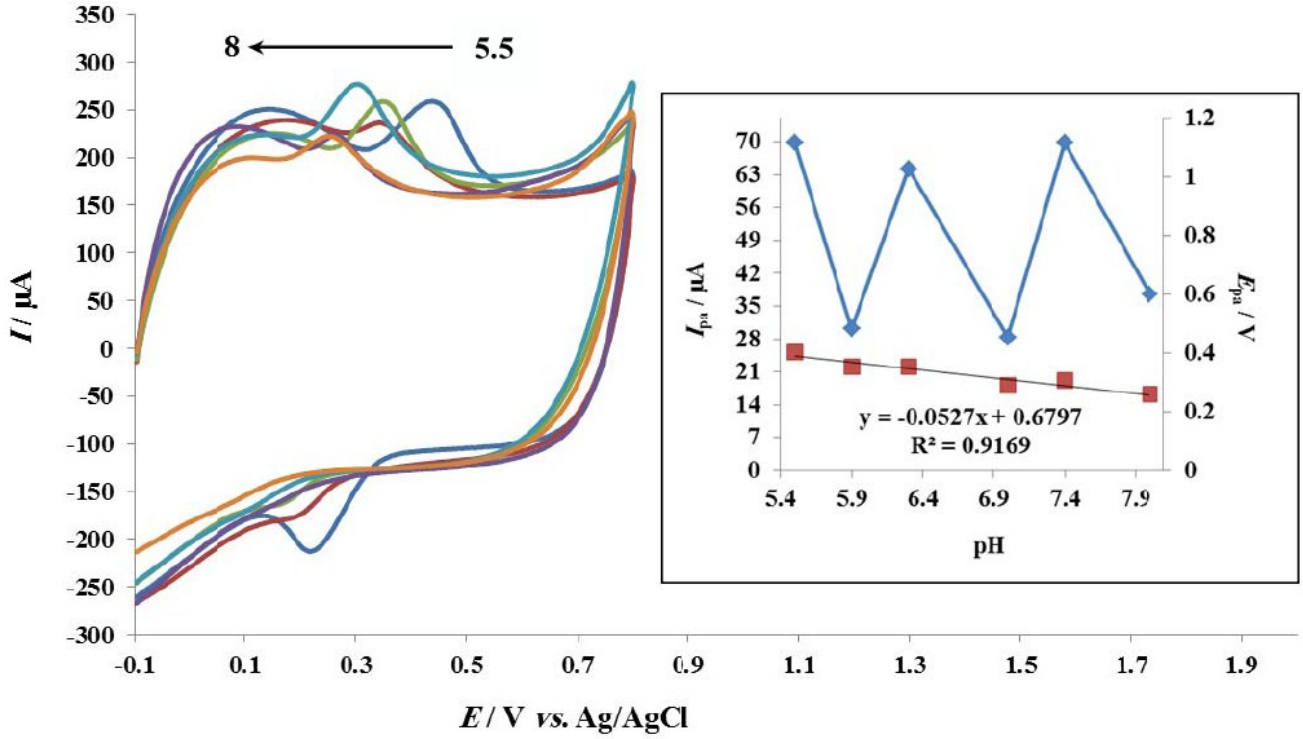
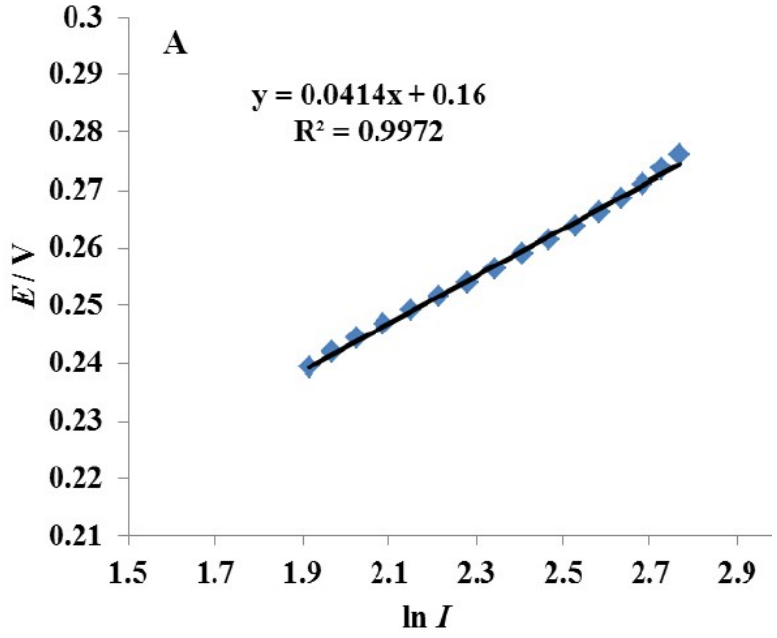
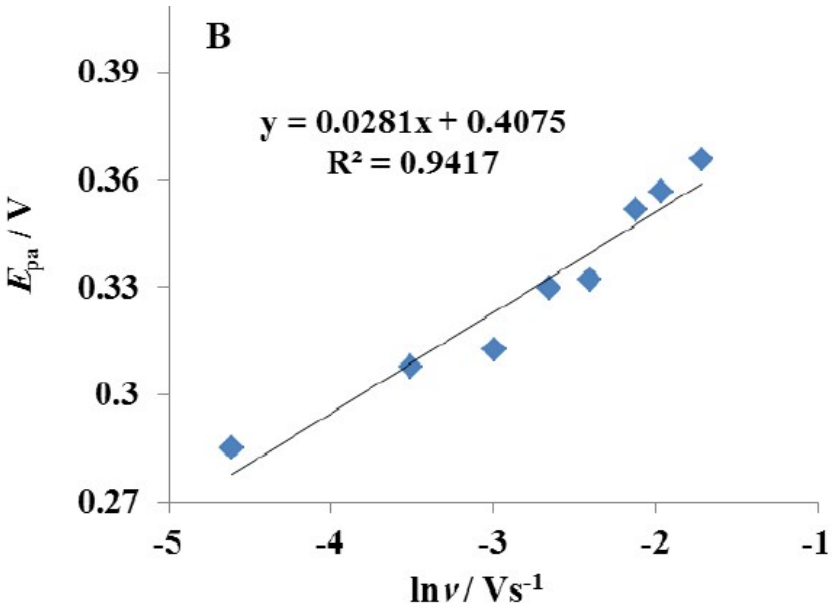


Fig. S1. Cyclic voltammograms of 0.1 mmol L^{-1} L-DOPA on the surface of Fe_3O_4@GQDs/f-MWCNTs/GCE at different pH values (5.5, 5.9, 6.3, 7.0, 7.4, 8).


A
y = 0.0414x + 0.16
R² = 0.9972
E / V
ln I
0.3
0.29
0.28
0.27
0.26
0.25
0.24
0.23
0.22
0.21
1.5
1.7
1.9
2.1
2.3
2.5
2.7
2.9


B
y = 0.0281x + 0.4075
R² = 0.9417
Epa / V
ln ν / Vs-1
0.39
0.36
0.33
0.3
0.27
-5
-4
-3
-2
-1

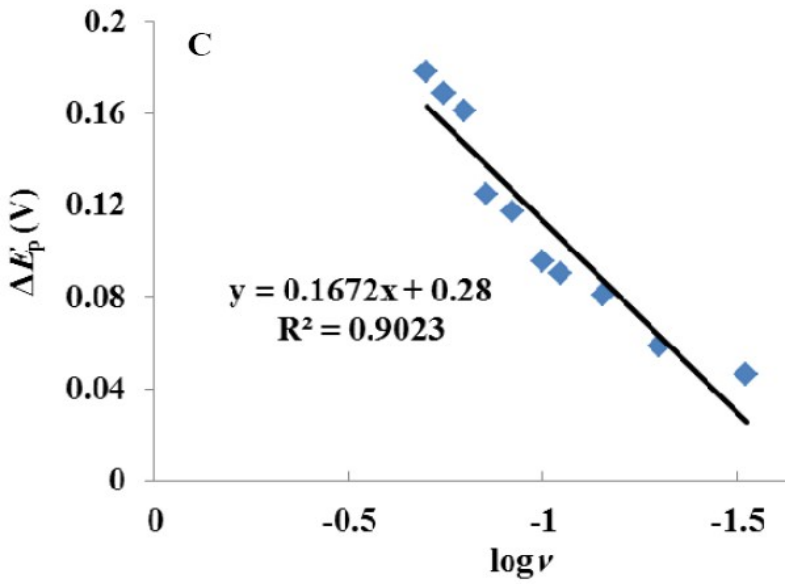


Fig. S2. (A) Tafel plot derived from the current potential curve recorded at scan rate 0.01 V s^{-1}. (B) Dependence of anodic peak potential (E_{pa}) to lnυ. (C) Dependence of the separation of peak potential (ΔE_{pa}) to the logυ.