Electronic Supplementary Material (ESI) for Analyst

Supporting Information

Enhanced peroxydisulfate electrochemiluminescence for dopamine biosensing based on Au nanoparticles decorated reduced graphene oxide

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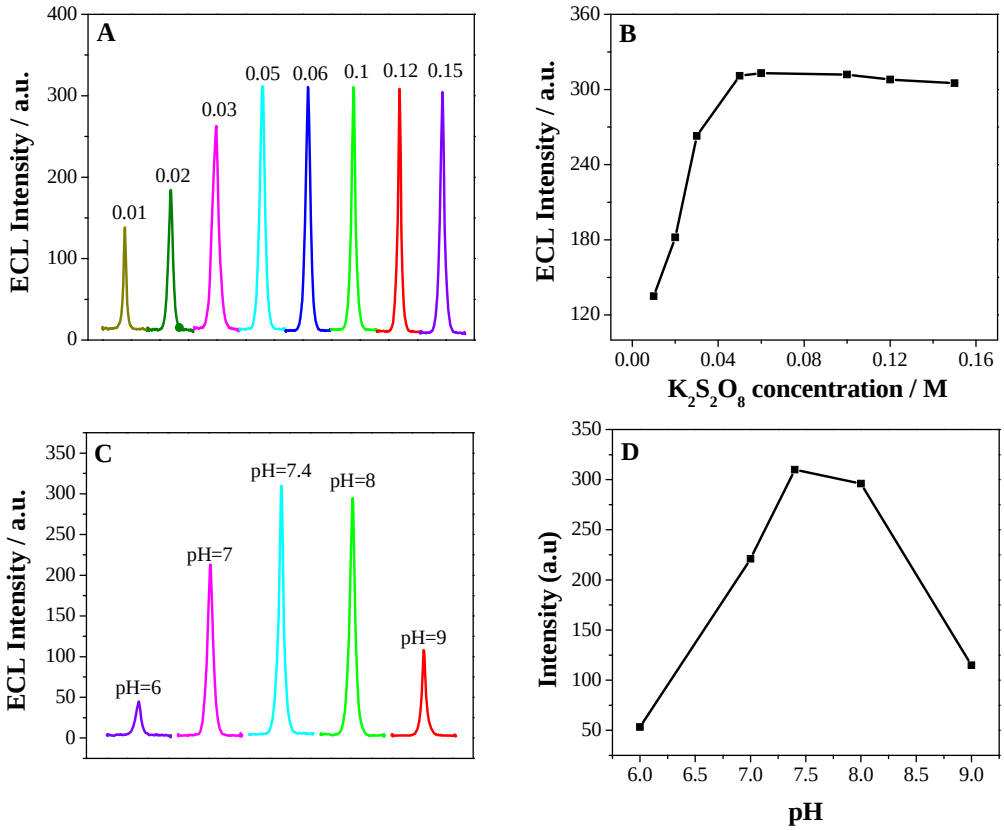

Fig. S1 (A) ECL-potential curves of the Au NPs-RGO/GCE in 0.1 M PBS (pH 7.4) containing different $K_2S_2O_8$ concentration. (B) Effect of the $K_2S_2O_8$ concentration versus ECL intensity. (C) ECL-potential curves of the Au NPs-RGO/GCE in 0.1 M PBS containing 0.05 M $K_2S_2O_8$ with different pH values. (D) Effect of the pH value versus the ECL intensity.

Table S1

The analytical performances for DA detection by various methods.

Method	Linear range	Detection limit	Correlation coeffcient
ECL[40]	0.5 ~ 70 μM	0.5 μM	0.992
ECL[41]	0.5 ~ 19 μM	0.1 μM	0.992
ECL[12]	2.5 ~ 47.5 μM	—	—
ECL[42]	0.05 ~ 10 μM	0.012 μM	0.999
Present work	0.02 ~ 40 μM	0.0067 μM	0.996

Table S2

Determination of DA in human plasma sample.

Sample number	Detected (μM)	Added (μM)	Total found (μM)	Recovery (%)	RSD (% n = 3)
1	1.3	5.0	6.4	101.5	1.7
2	1.8	5.0	6.6	97.0	2.1
3	2.1	5.0	6.9	97.2	1.4

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