Electronic Supplementary Material (ESI) for Analytical Methods.

Supporting information for fluorescent detection of dopamine based on nitrogen-doped graphene quantum dots and visible paper based test strips

Xueqian Chen, Na zheng, Shufan Chen and Qiang Ma*

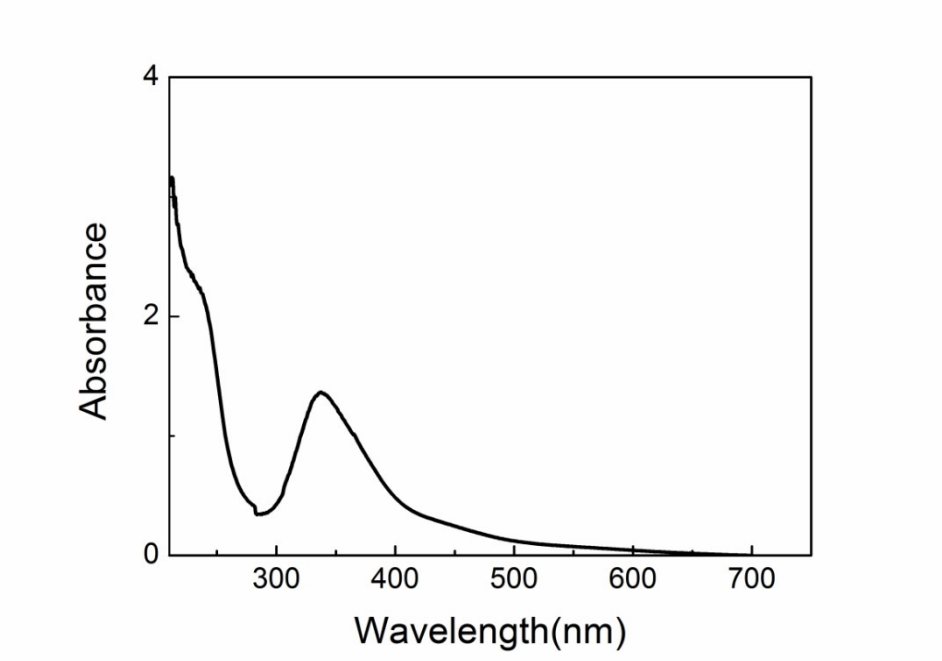

Fig.S1 absorption spectrum of the N-GQDs.

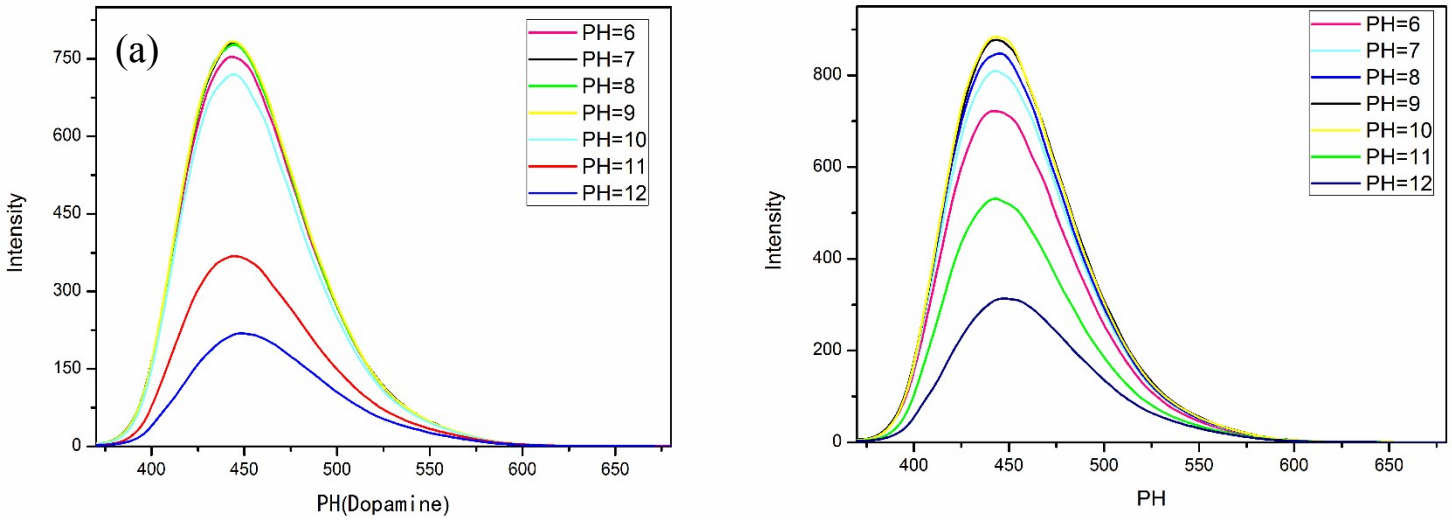

Fig.S2(a) the effect of pH on the fluorescence intensity of the N-GQDs. **Fig.S2(b)** the effect of pH on the fluorescence intensity of the N-GQDs/AD system.

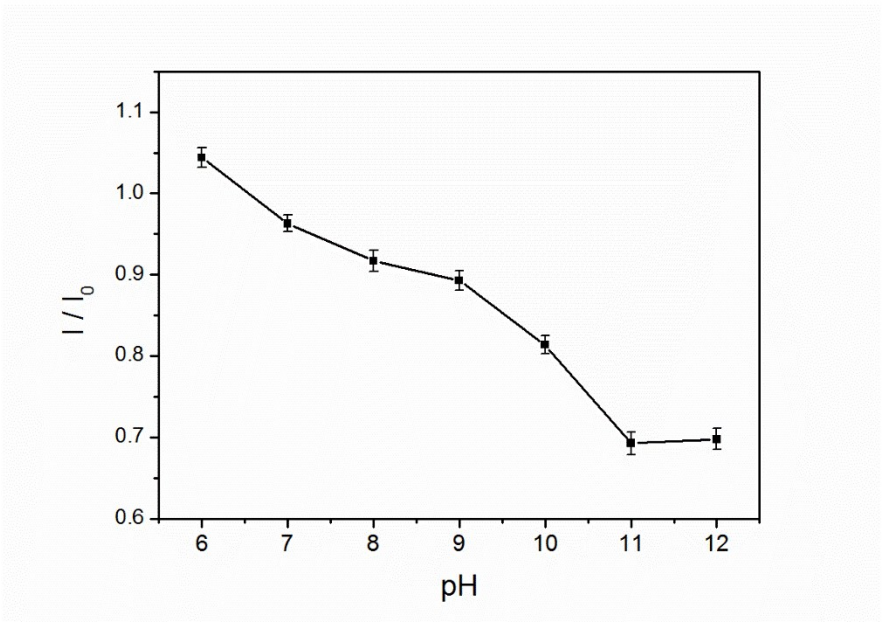

Fig.S3 the effect of pH. The pH values were 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, respectively. I_0 was the fluorescence intensity of the N-GQDs and I was the fluorescence intensity of the N-GQDs with DA. The concentration of DA was 100 μM.

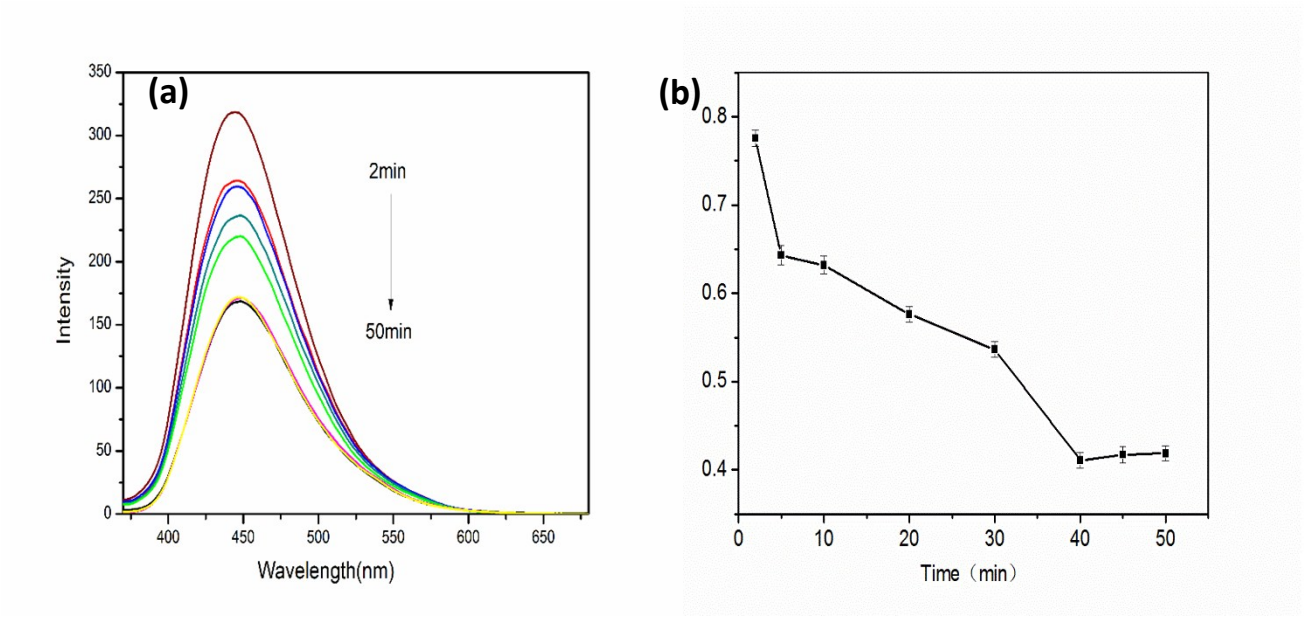

Fig.S4 the effect of reaction time. The time were 2 min, 5 min，10 min，20 min，30 min，40 min，45 min, 50 min, respectively. I_0 was the fluorescence intensity of the N-GQDs and I was the fluorescence intensity of the N-GQDs with DA. The concentration of DA was 100 μmol/L.

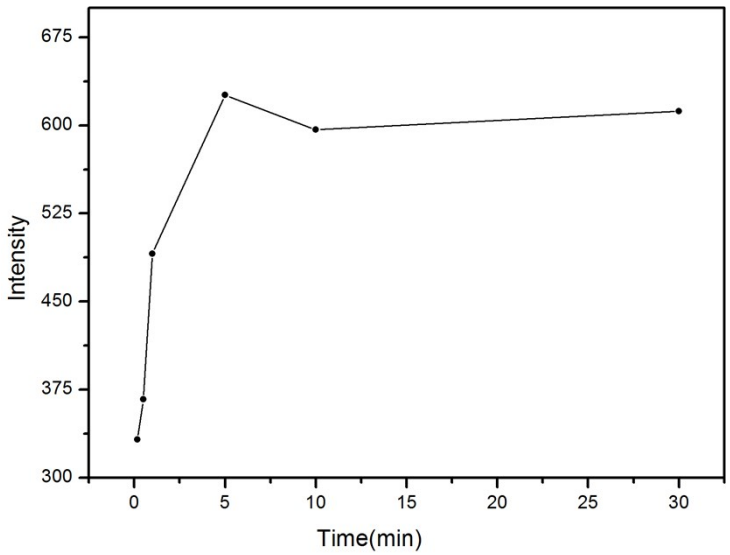

Fig.S5 Fluorescence intensity of filter paper immersed in N-GQDs solution for different time.

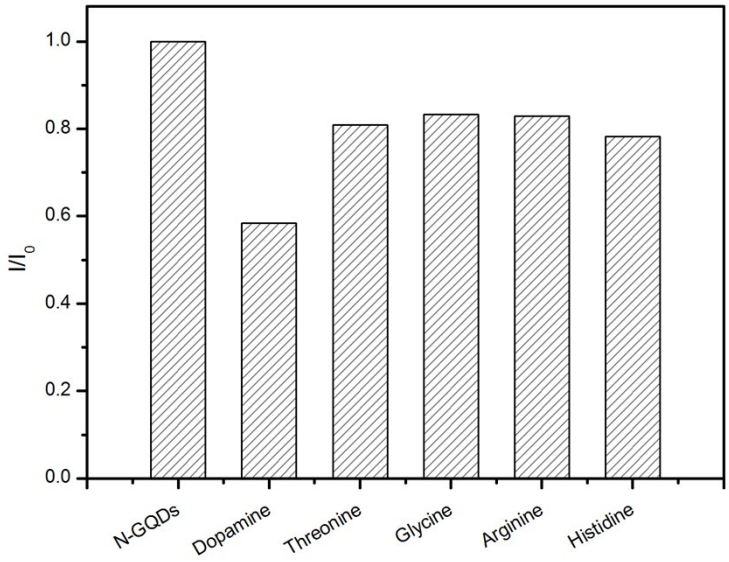

Fig.S6 the effect of reaction substance on fluorescence intensity of N-GQD_S.

Table.S1 the interference of coexisting substances in the DA determination.

Coexisting substance	**concentration (μM)**	**$\Delta I / I_0$(%)**
Threonine	3000	+0.94
Arginine	3000	-3.17
Histidine	3000	+7.09
Mg^{2+}	3000	+0.69
K^+	3000	+0.95
Na^+	3000	+0.72

Note: 1. $\Delta I = I - I_0$ I and I_0 was the fluorescence intensity of the N-GQDs/DA system in the absence and presence of coexisting substance, respectively.

2. The concentration of DA is 30 μM.