Supplementary Material

Hydrothermal synthesis of carbon quantum dots as fluorescent probe for sensitive and rapid detection of picric acid

Yingte Wang*, Xiaoyue Chang, Na Jing and Yong Zhang*

School of Chemistry and Chemical Engineering, Shanxi University, Taiyuan, Shanxi Province, 030006, P.R.China

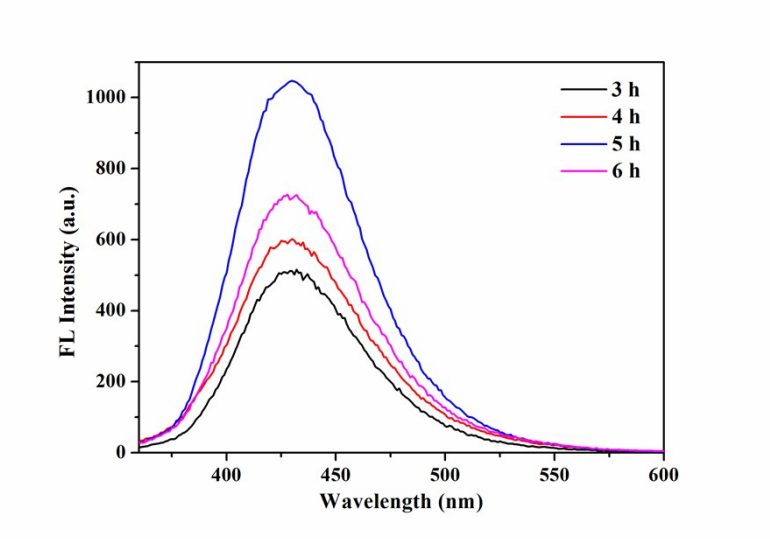

Fig S1. Fluorescence emission spectra of N-CDs with different reaction time.

* Corresponding author,

Email address: yingtew@sxu.edu.cn (Yingte Wang); zhangyong@sxu.edu.cn (Yong Zhang)

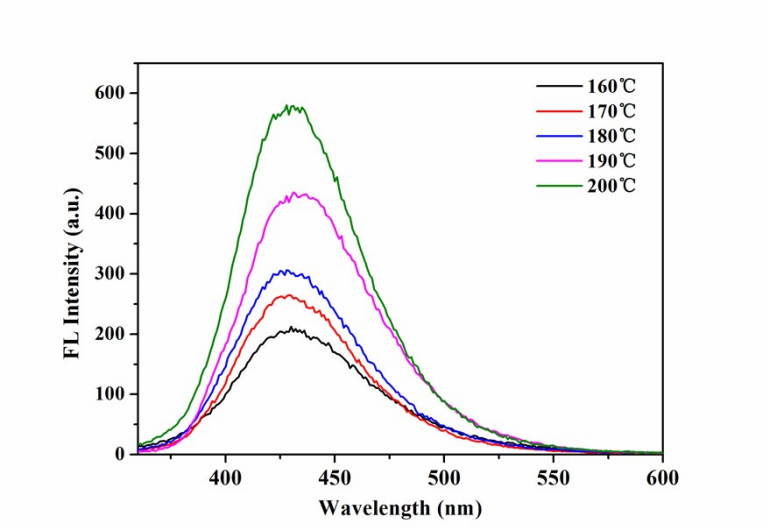

Fig S2. Fluorescence emission spectra of N-CDs with different temperature.

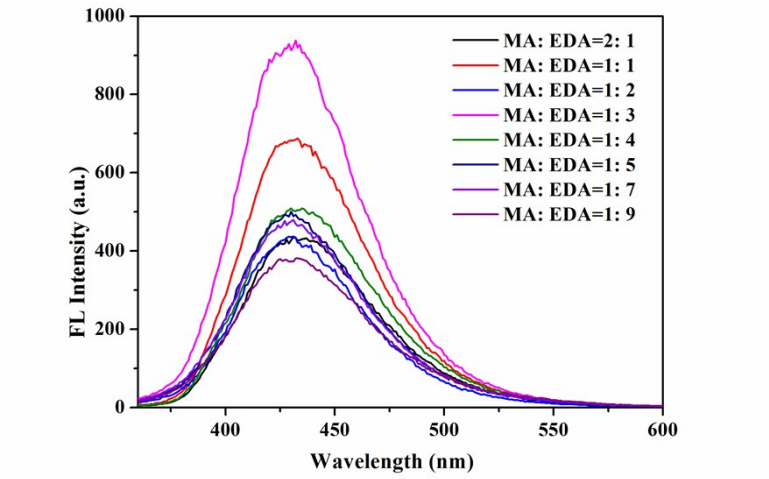

Fig S3. Fluorescence emission spectra of N-CDs with different ratio of mandelic acid with ethylenediamine.

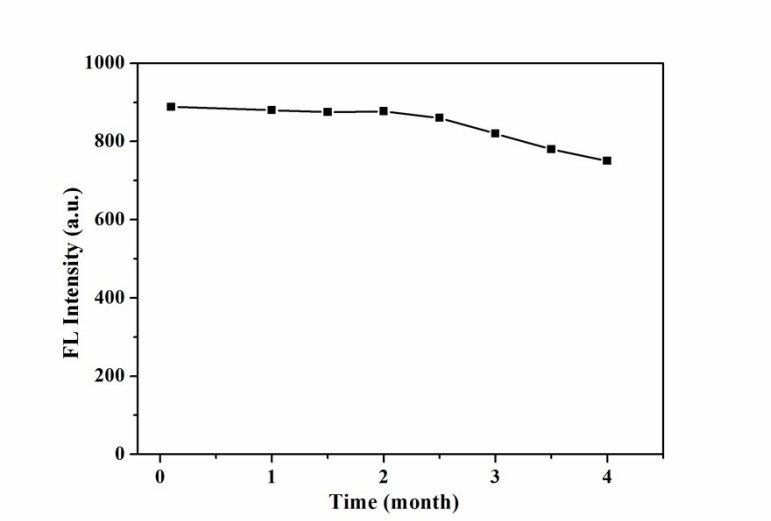

Fig S4. Effects of the storage time on the fluorescence intensity of the N-CDs at 429 nm.

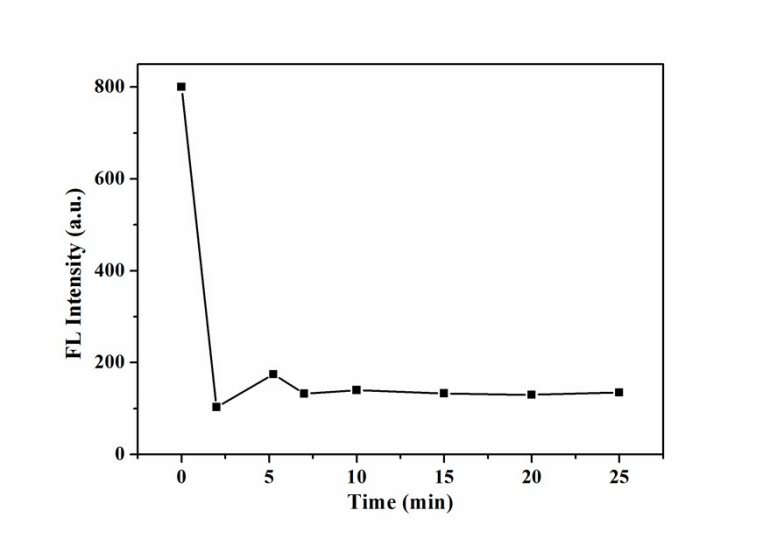

Fig S5. The effect of reaction time.

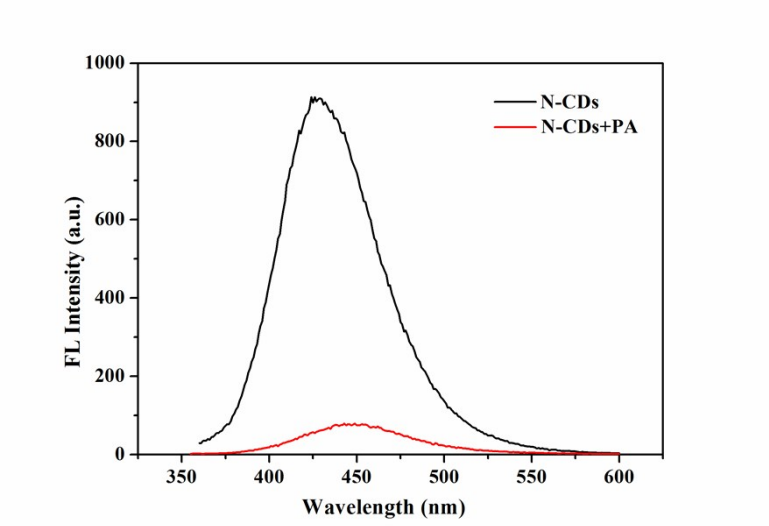

Fig S6. Fluorescence emission spectra of N-CDs in the abscence and present of PA, respectively.

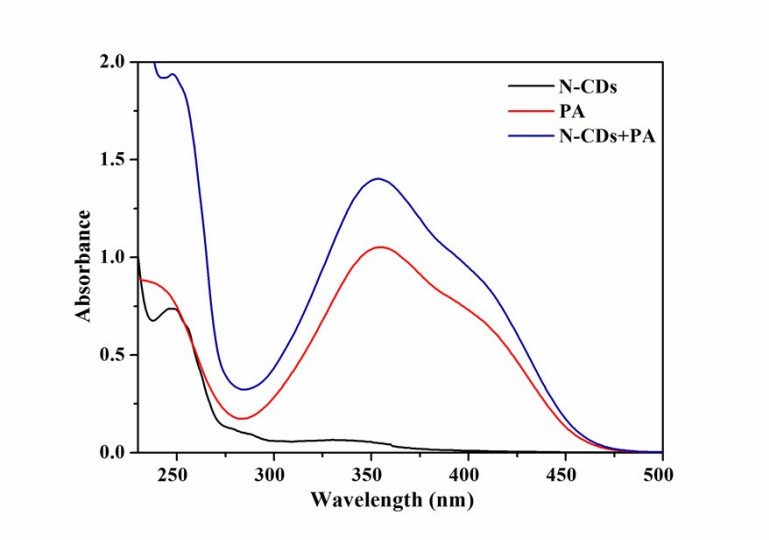

Fig S7. UV-vis absorption spectra of N-CDs (black), PA (red), and N-CDs in the presence of PA (blue).

System	τ_1(ns)	Percentage (%)	τ_2 (ns)	Percentage (%)	τ_3 (ns)	Percentage (%)	τ_{avg} (ns)
N-CDs	10.62	19.06	0.09261	38.92	1.729	42.01	2.787
N-CDs+PA	2.554	61.76	0.082	12.4	1.0349	25.84	1.855

Table S1. The fluorescence lifetimes of N-CDs in the absence and presence of PA.