Supplementary Data

Facile synthesis of Dual-Emission Fluorescent Carbon Nanodots for a Multifunctional Probe

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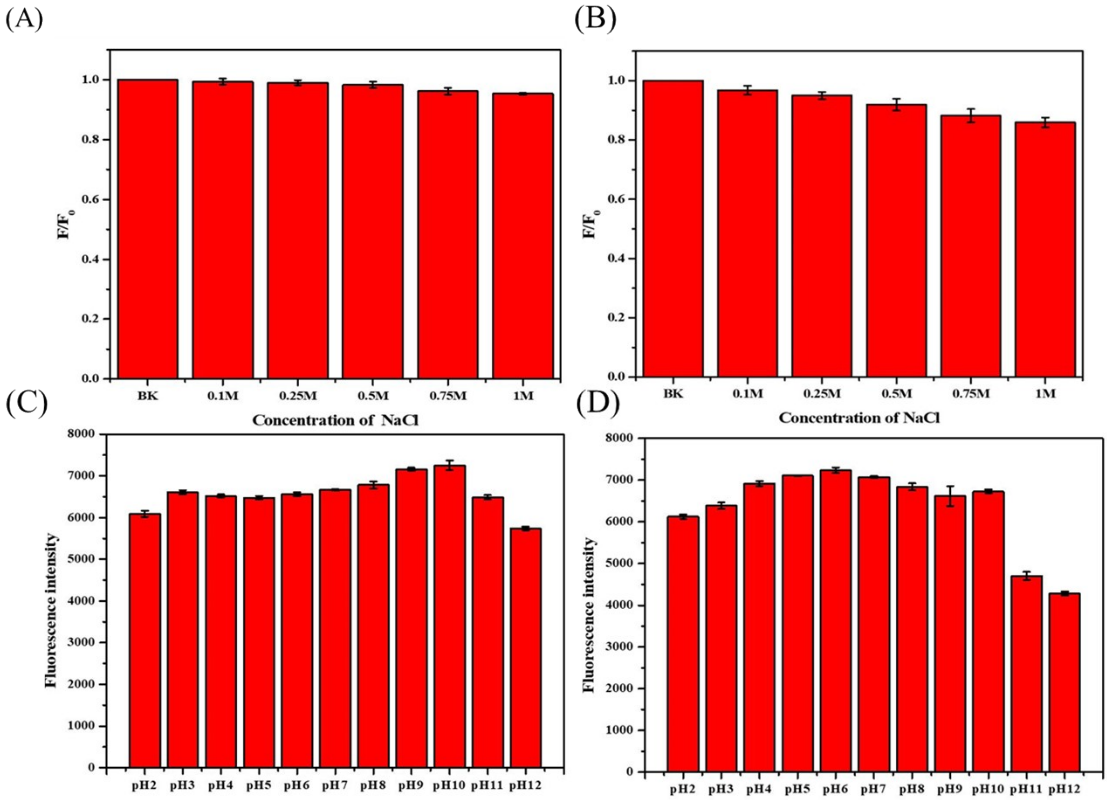

Figure S1 Effects of ionic strength at emission wavelength (A) 440 nm, (B) 510 nm, and effects of pH at emission wavelength (C) 440 nm, (D) 510 nm.

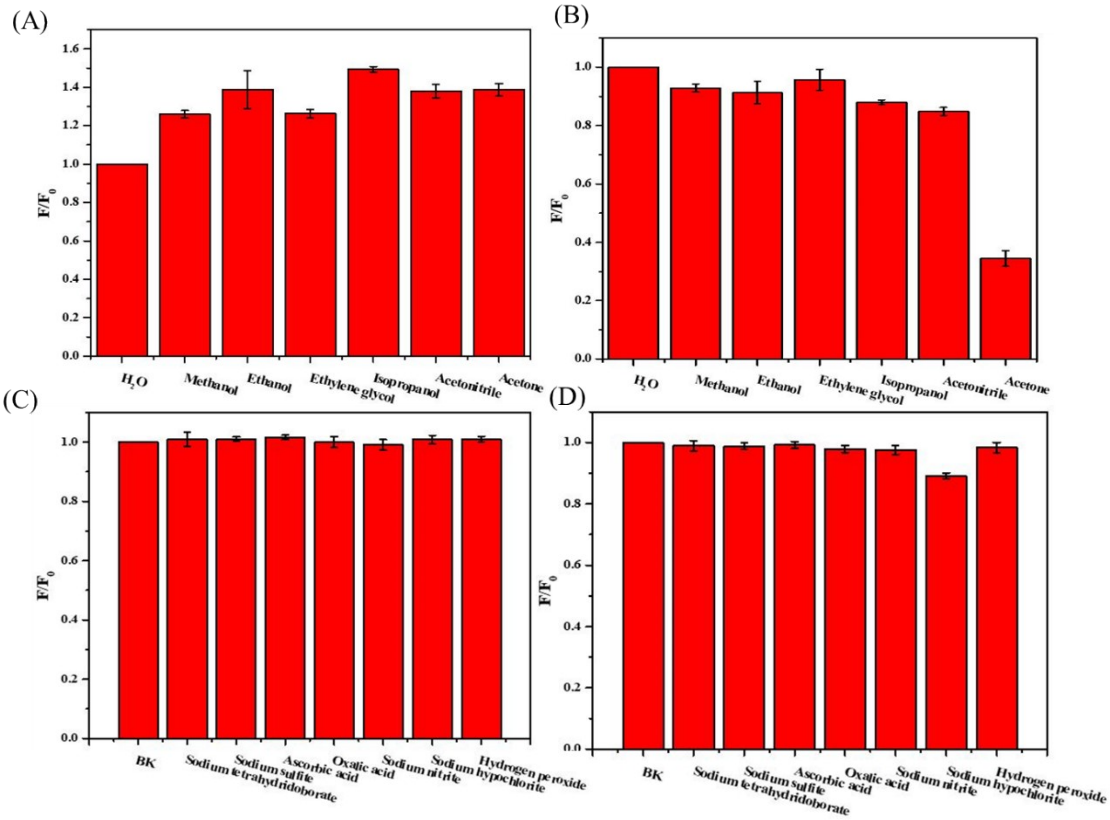

Figure S2 Effects of different solvents at emission wavelength (A) 440 nm, (B) 510 nm, and oxidizing/reducing agent at emission wavelength (C) 440 nm, (D) 510 nm.

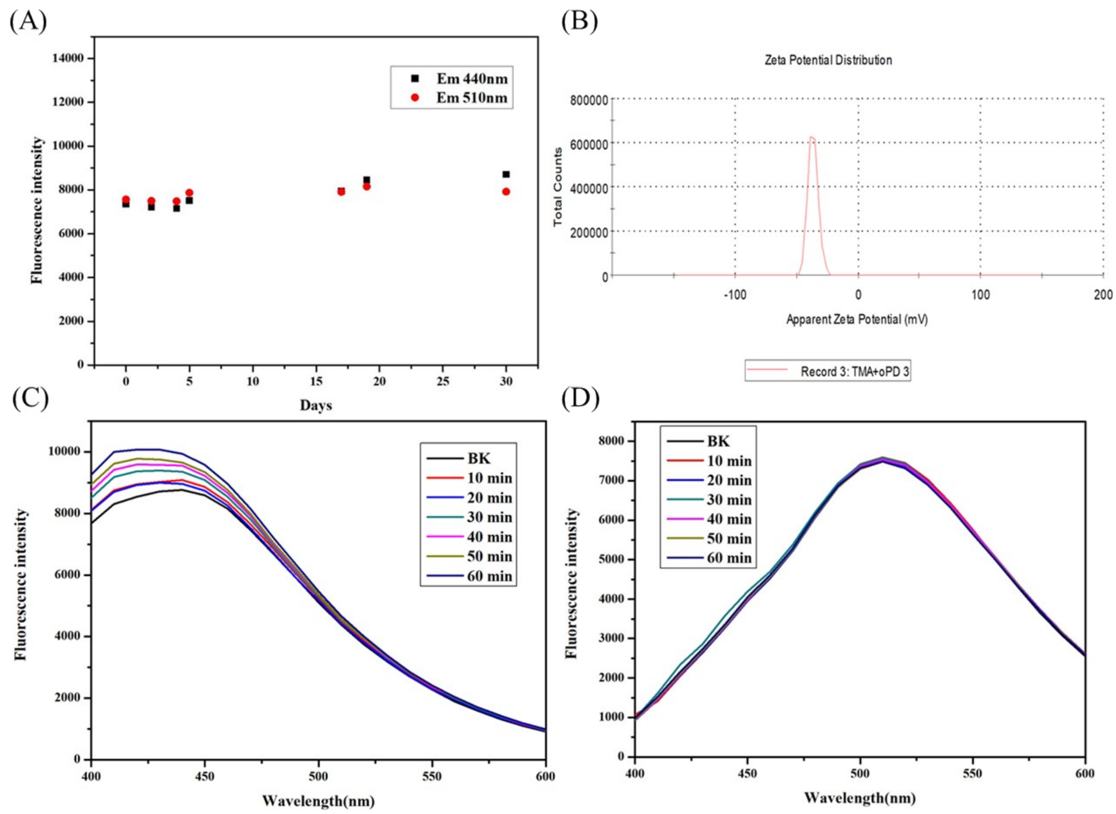

Figure S3 (A) Storage stability of CDs, and (B) Zeta potential histogram of the CDs Continuous irradiation by UV lamp with a wavelength of 254 nm on CDs at emission wavelength (C) 440 nm, (D) 510 nm.

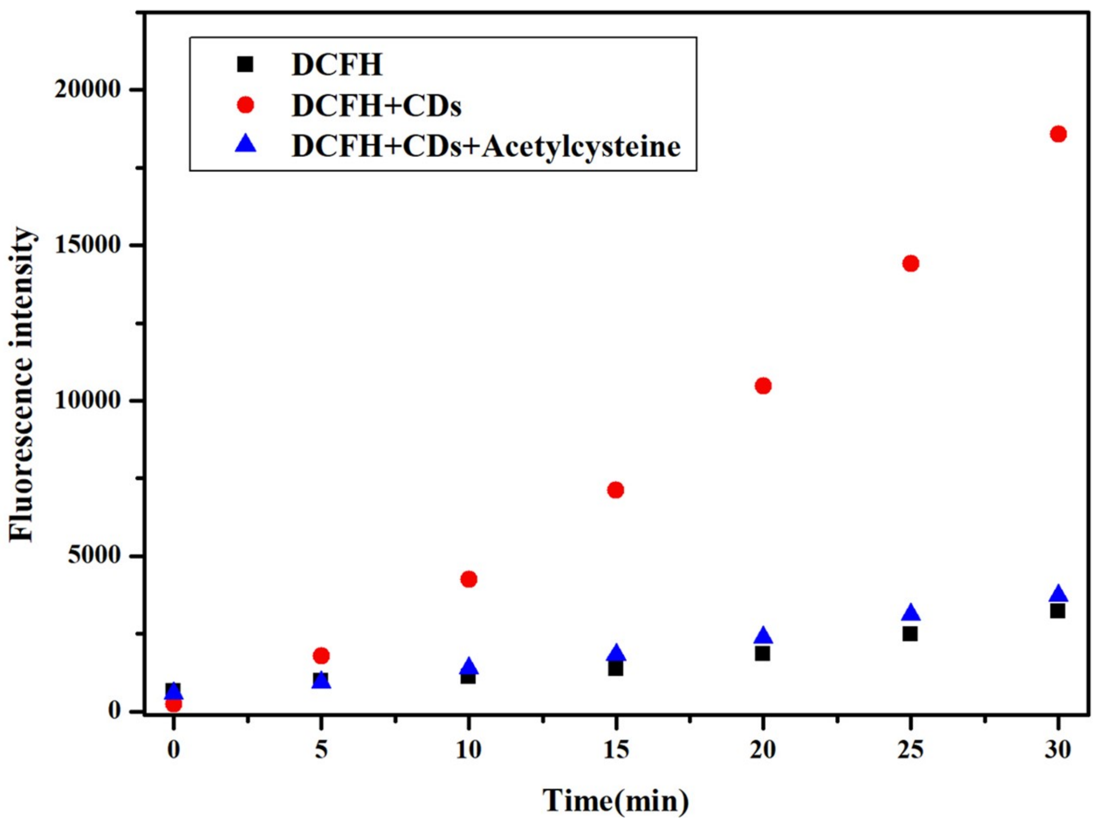

Fig. S4 Fluorescence intensity of DCHF at emission wavelength 525 nm under UV light irradiation (365 nm, 4W) in the CDs and CDs + acetylcysteine.

(A) (B)

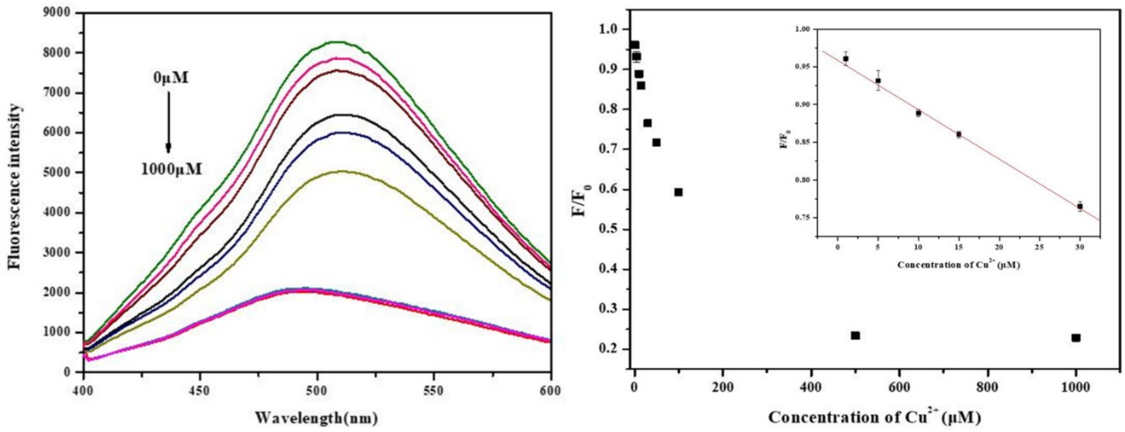

Fig. S5 (A) Dependence of fluorescence intensity of CDs on concentration of Cu^{2+}. (B) Linear plotting of F/F_0 versus concentration of Cu^{2+}.

Table. S1 Optimized ratio of reactants

oPD (mmole)	**TMA(mmole)**	**Excitation (nm)**	**Emission (nm)**	**Intensity**
0.6	0.3	325	440	5612
		390	510	5680
0.45	0.45	325	440	3469
		390	510	5143
0.85	0.05	325	440	5569
		390	510	7158
0.8	0.1	325	440	7229
		390	510	7115
0.9	0	415	525	6695

Table S2 Comparison of proposed method with the other analytical methods for Hg^{2+} detection

Probe	**Detection limit (μM)**	**Detection range (μM)**	**Ref**
CD	0.09	0-45	1
Rhodamine–glyoxylic acid	1	5-200	2
A-NPCD	0.018	0.03-0.20	3
N-SiQD	0.024	0.1-4	4
N,S/C-dots	2	0-40	5
Carbon dots	0.201	0-80	6
Carbon dot nanohybrids	0.00022	0.001-1	7
Carbon dots	0.1	1-18	8
CDs mixed Rhodamine B	0.025	0.5-10	9
CDs	0.42	5-50	This work

Table S3 Comparison of proposed method with the other analytical methods for glyphosate detection

Probe	Detection limit (mg L^{-1})	Detection range (mg L^{-1})	Ref
Carbon dot	0.012	0.025–2.5	10
Diffuse reflectance spectroscopy	7.28	50-500	11
Hydrophilic interaction Chromatography	0.1	0.1-34	12
CDs	0.0006	0.002-0.02	13
MWCNTs	0.00067	0.002 - 0.01	14
lgG-CDs	0.008	0.01-80	15
CQD-CdTe	0.008	0-0.03	16
CDs	1.1	2.5-25	This work

Reference

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