Analytical and Bioanalytical Chemistry

Electronic Supplementary Material

One-pot green hydrothermal synthesis of fluorescent nitrogen-doped carbon nanodots for *in vivo* bioimaging

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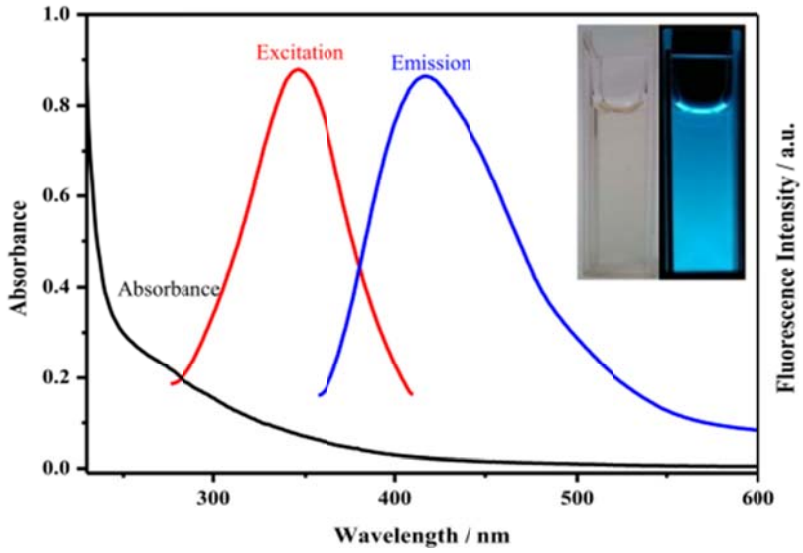

Fig. S1. The UV-vis absorption spectrum and fluorescence spectra of the CNDs. Inset: photographs taken under white light (left) and 365 nm UV light (right)

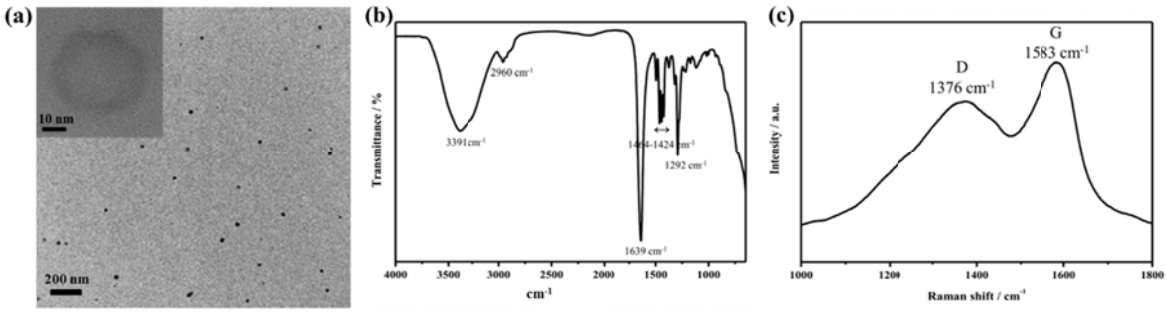

Fig. S2. (a) TEM images of CNDs (inset: the high resolution TEM image of CNDs. (b) Fourier transformed infrared spectra of CNDs. (c) Raman spectra of CNDs

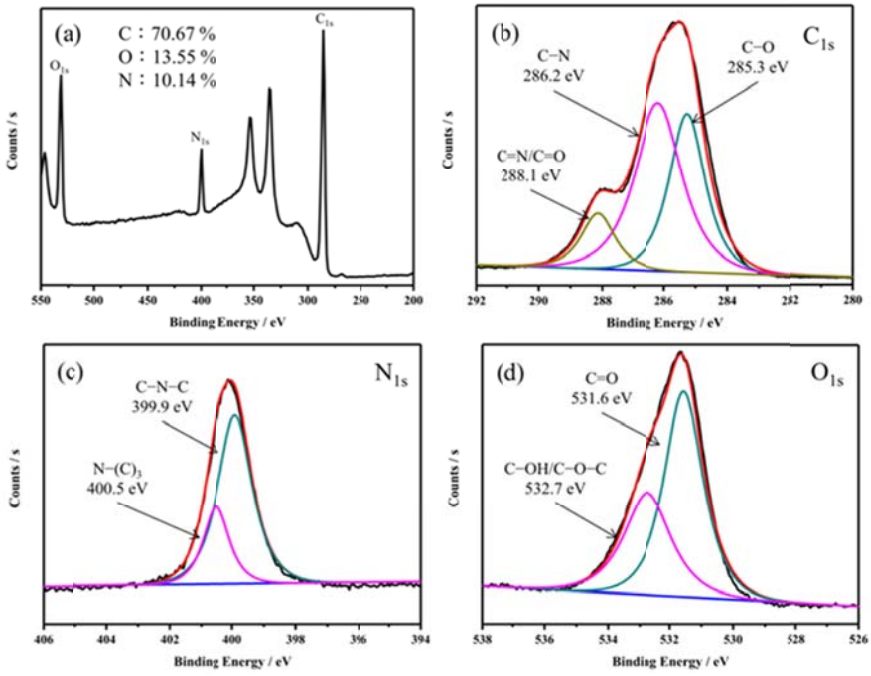

Fig. S3. (a) XPS survey spectrum of the CNDs. XPS (b) C_{1s}, (c) N_{1s} and (d) O_{1s} spectra of the CNDs

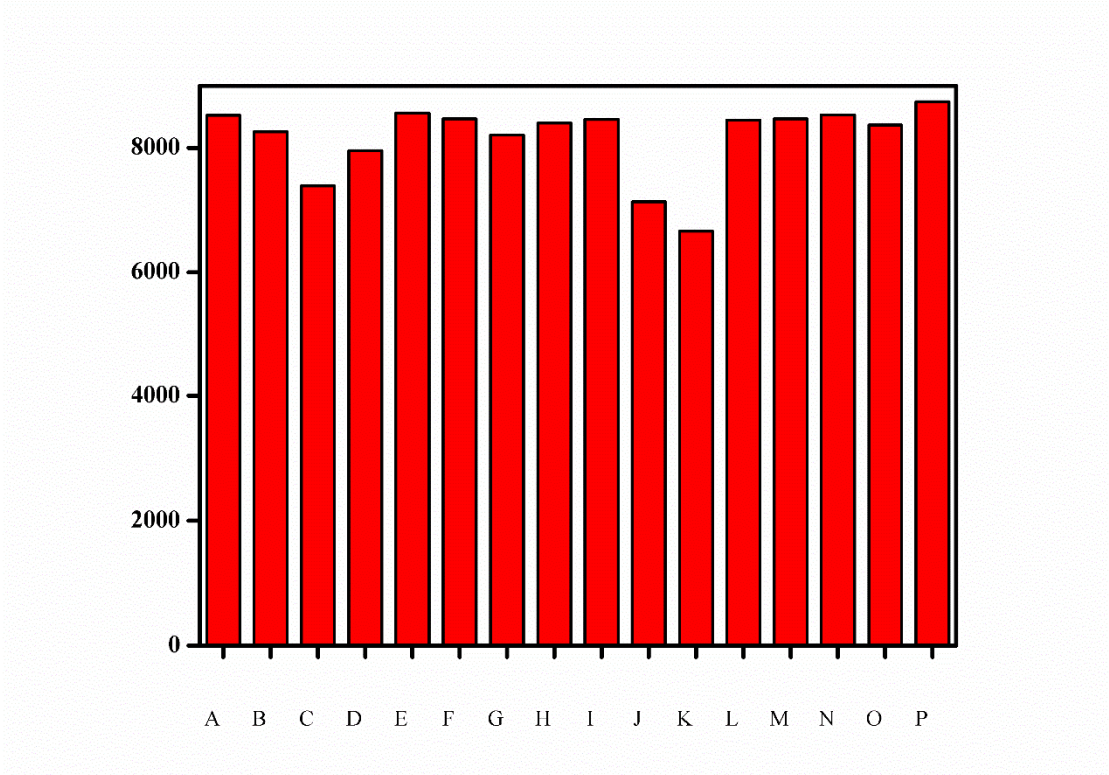

Fig. S4. Fluorescence responses of the CNDs aqueous solution in the presence of different metal ions (Excitation wavelength: 360 nm). A: blank, B: Ca^{2+}, C: Hg^{2+}, D: Pb^{2+}, E: Ag^{2+}, F: Al^{3+}, G: Ba^{2+}, H: Ca^{2+}, I: Co^{2+}, J: Fe^{2+}, K: Fe^{3+}, L: K^{+}, M: Li^{+}, N: Mg^{2+}, O: Mn^{2+}, P: Zn^{2+}

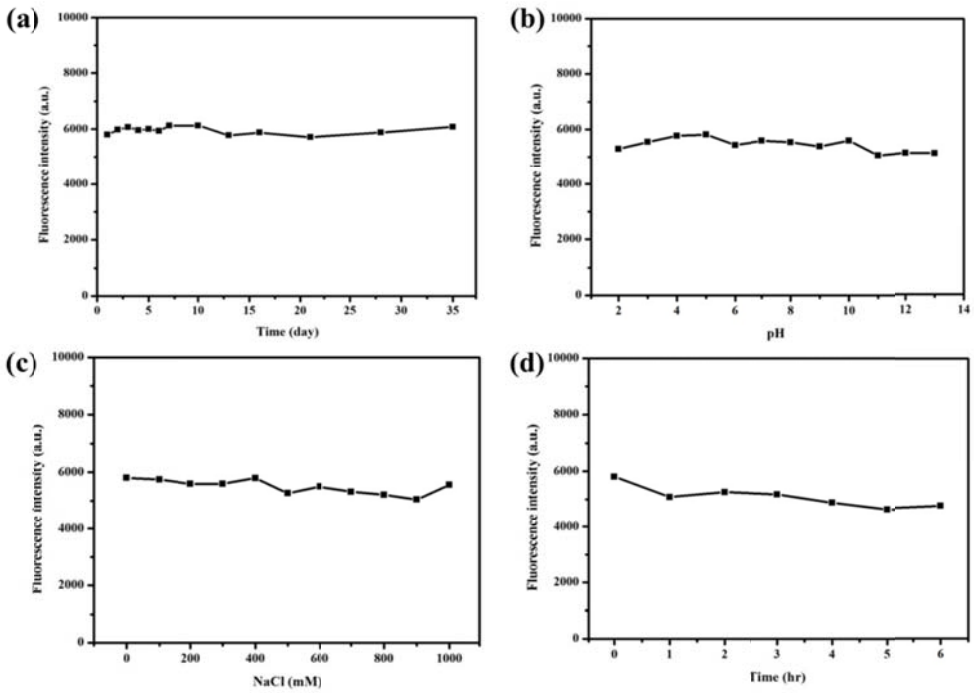

Fig. S5. The changes of fluorescence intensity of CNDs solution. (a) Within 35 days under 4 ºC condition (b) at various pH value (c) in various ionic strengths (d) under the UV irradiation

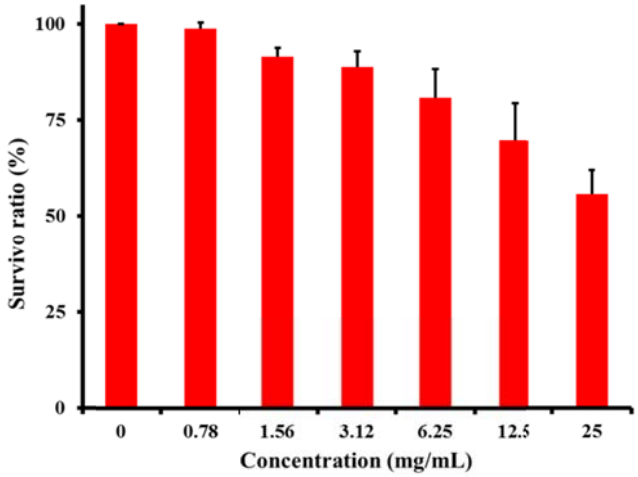

Fig. S6. The cytotoxicity evaluated by MTT assay in the range of 0.78~25 mg/mL of the CNDs. The Hela cells were incubated with the CNDs solution for 24 h

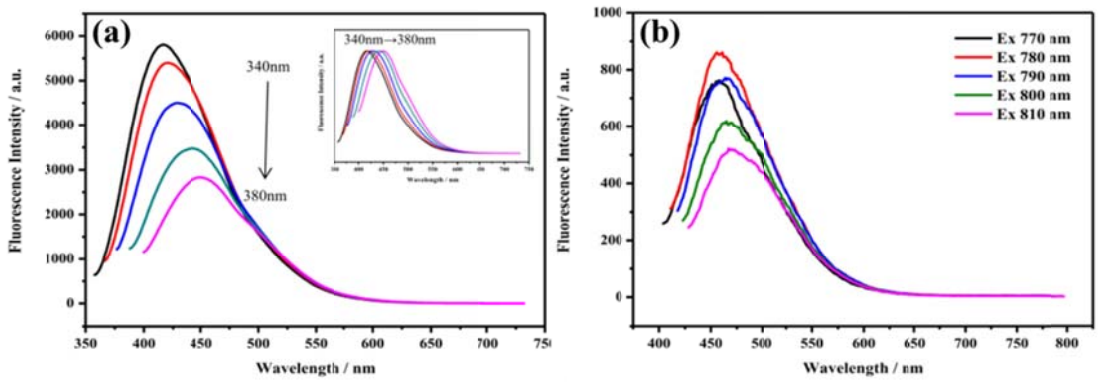

Fig. S7. (a) Emission spectra of the CNDs recorded for progressively longer excitation wavelengths with 10 nm increments from 340 nm to 380 nm. Inset: The normalized PL emission spectra. (b) The up-conversion photoluminescence spectra of the CNDs at different excitation wavelengths as indicated

Table S1. The quantum yields of carbon nanodots from different start materials

Experiments	Different Start Materials		Quantum Yields (%)
A	PVP, 1g	Glycine, 0 g	14.52
B	PVP, 1g	Glycine, 0.0563 g	21.19
C	PVP, 1g	Glycine, 0.1126 g	21.43
D	PVP, 1g	Glycine, 0.2252 g	16.75
E	PVP, 1g	Glycine, 0.5630 g	15.39