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Electronic Supplementary Material

One-Step Hydrothemal Synthesis of Photoluminescent Carbon Nitride Dots Derived from Ionic Liquid

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Table S1 Condition optimization for the preparation of CNDs

No. of CNDs	The amount of ion liquid (g)	The volume of water (mL)	T(◦C)	Time(h)	Quantum yield (%)
1	0.5	20	100	12	0.00
2	0.5	20	160	12	3.81
3	0.5	20	200	6	6.37
4	0.5	20	200	24	8.29
5	0.25	20	200	12	7.67
6	0.75	20	200	12	8.16
7	0.5	10	200	12	4.69
8	0.5	15	200	12	7.52
9	0.5	20	200	12	8.34

Table S2. The quantum yields of CNDs.

Substance	Integrated emission	Abs. at 355 nm	Refractive index	Quantum yield of

	intensity (I)			solvent (η)
Quinine sulfate	51424.233	0.006	1.33	0.54 (known)
CNDs	59581.938	0.045	1.33	0.0834

Table S3. Elemental analysis of [Bmim]BF4 and CNDs

Sample	Element Contents		
	%C	%N	%H
[Bmim]BF4 (calculated)	42.47	12.39	6.64
CNDs	48.97	8.56	5.72

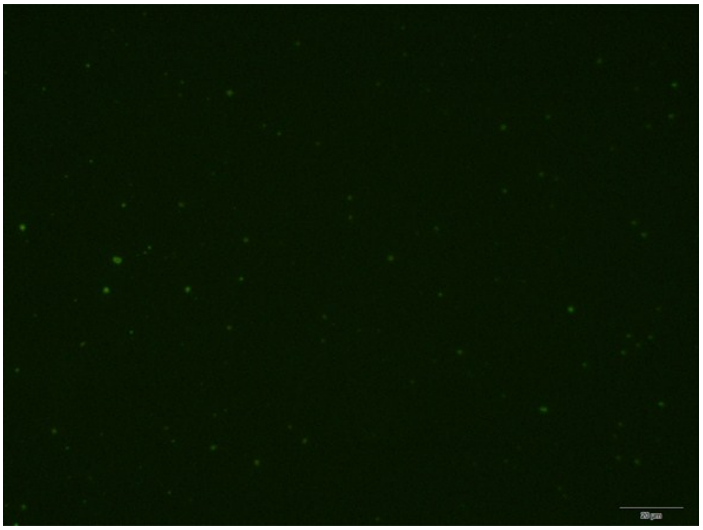

Fig. S1 FL images for CNDs.

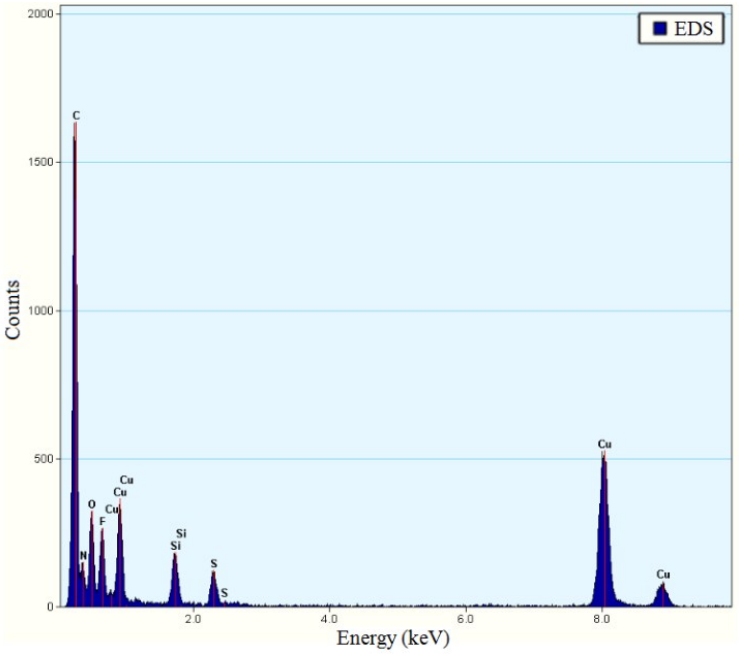

Fig. S2 EDS spectrum of CNDs thus formed.

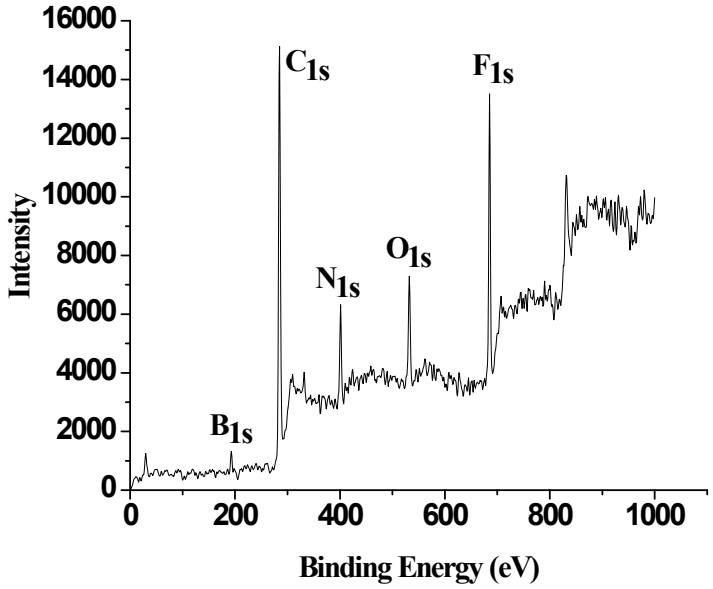

Fig. S3 XPS spectrum of CNDs thus formed.

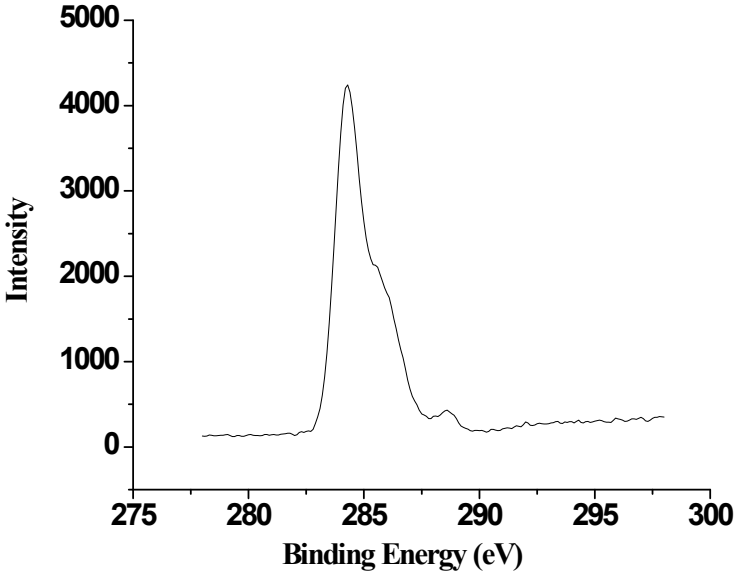

Fig. S4 C_{1s} spectrum of CNDs thus formed.

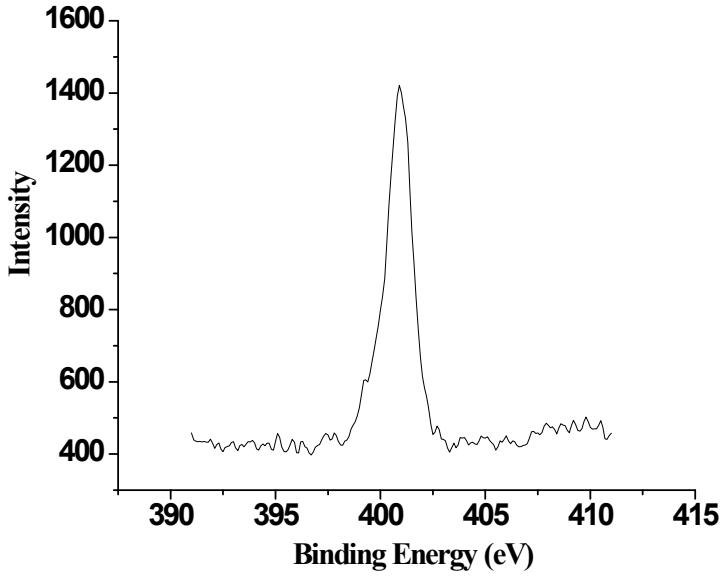

Fig. S5 N_{1s} spectrum of CNDs thus formed.

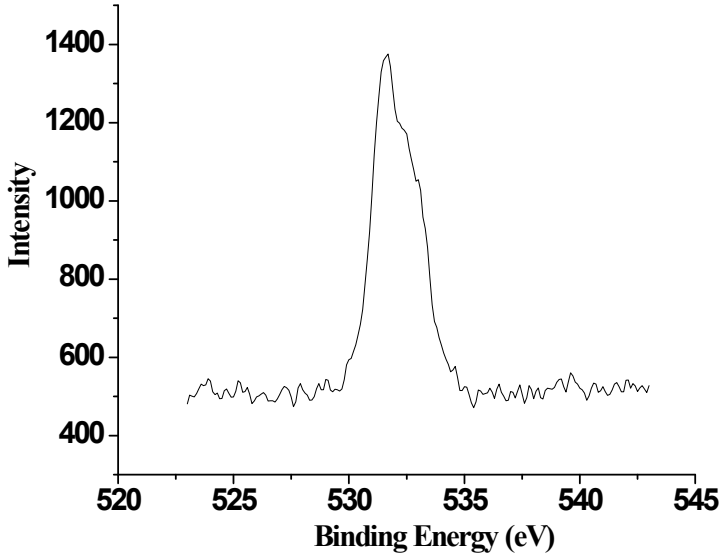

Fig. S6 O_{1s} spectrum of CNDs thus formed.

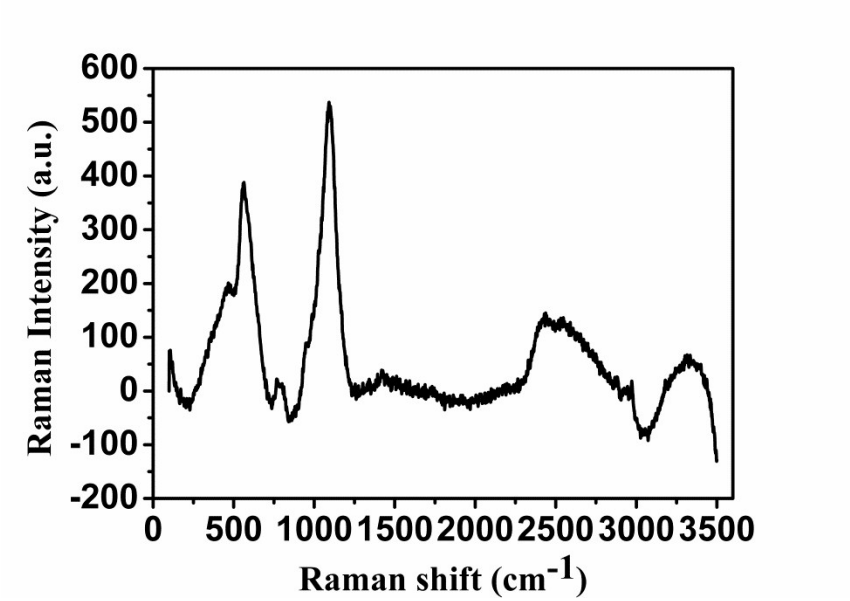

Fig. S7 Raman spectra of CNDs measured with 532 nm laser.

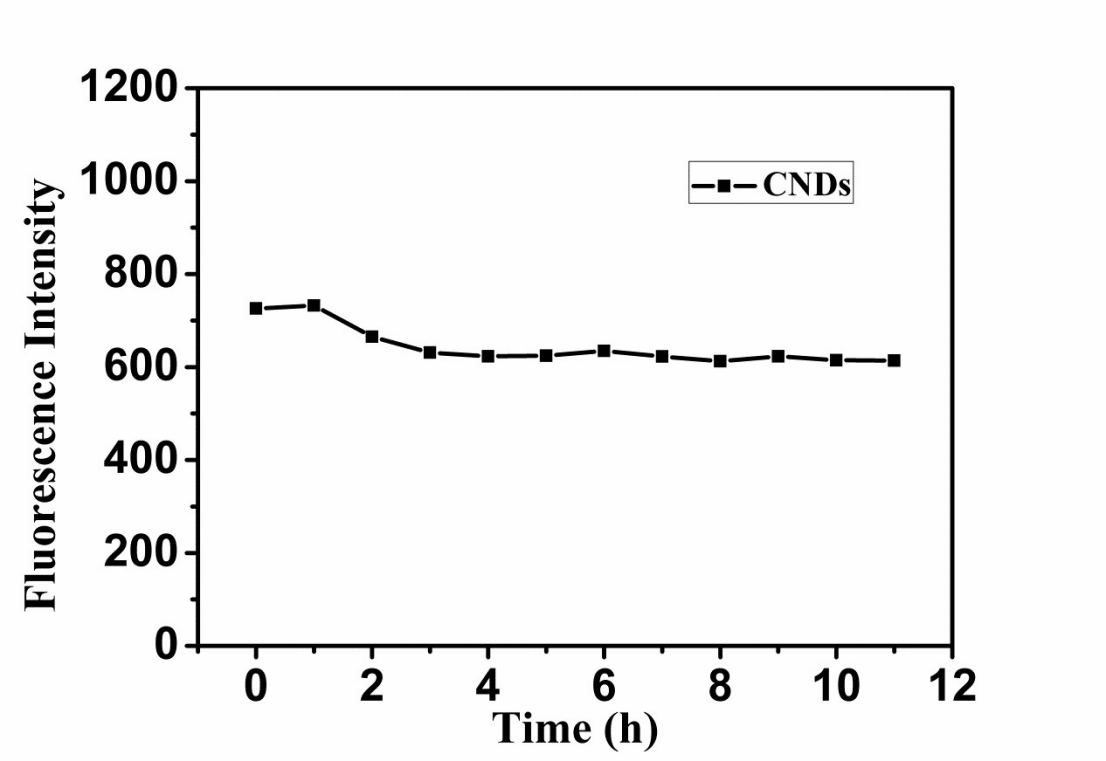

Fig. S8 Photostability test of the fluorescent CNDs in a fluorescence spectrophotometer with a 150 W Xe lamp under 365 nm excitation