

Electronic Supplementary Information

**Green synthesis of amphiphilic carbon dots from organic solvents:  
application in fluorescent polymer composites and bio-imaging**

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**Table S1.** Refractive index of various carbon dots (CDs).

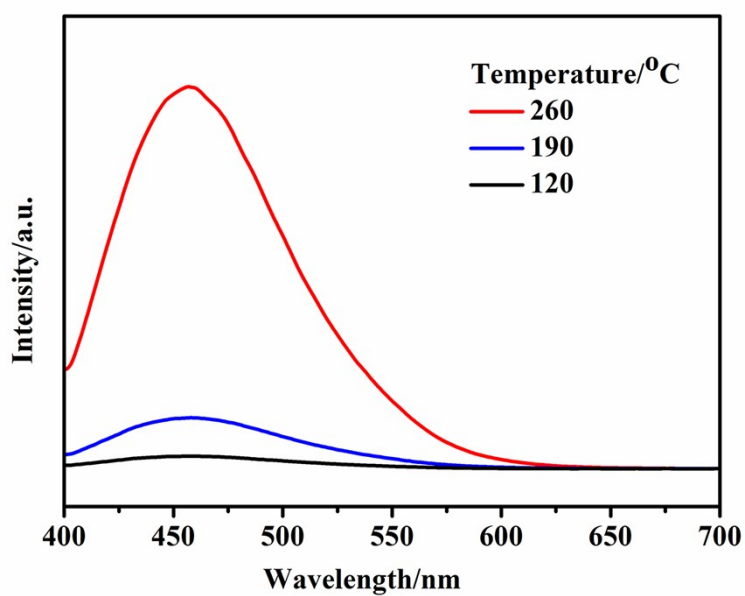
Reagent	Water	DMF	xylene	n-hexane	cyclohexane	DMAc
Refractive index	1.333	1.437	1.497	1.388	1.426	1.435

**Table S2.** Quantum yields and photographs of solutions containing different CDs.

Reagent	DMF	xylene	n-hexane	cyclohexane	DMAc
Quantum yields	33.9%	12.5%	9.7%	6.9%	31.8%
Photographs of CDs under white light					
Photographs of CDs under UV light at 365 nm					

**Table S3.** The comparison of different CDs derived from organic solvents

Carbon source	Method	Quantum yield	Reference
DMF	Microwave irradiation	9%	S1
Ethanol	Electrochemistry	15%	S2
Dimethylamine	Microwave heating	8.9%	S3
DMF	Hydrothermal treatment	33.9%	This work
DMAc	Hydrothermal treatment	31.8%	This work



**Fig. S1.** PL emission spectra of DMF-CDs under different hydrothermal temperature.

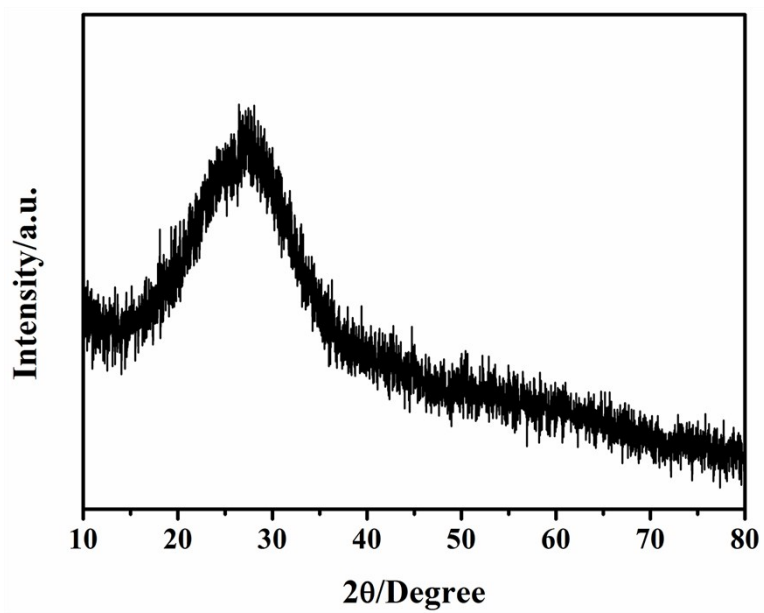


Fig. S2. XRD pattern of DMF-CDs.

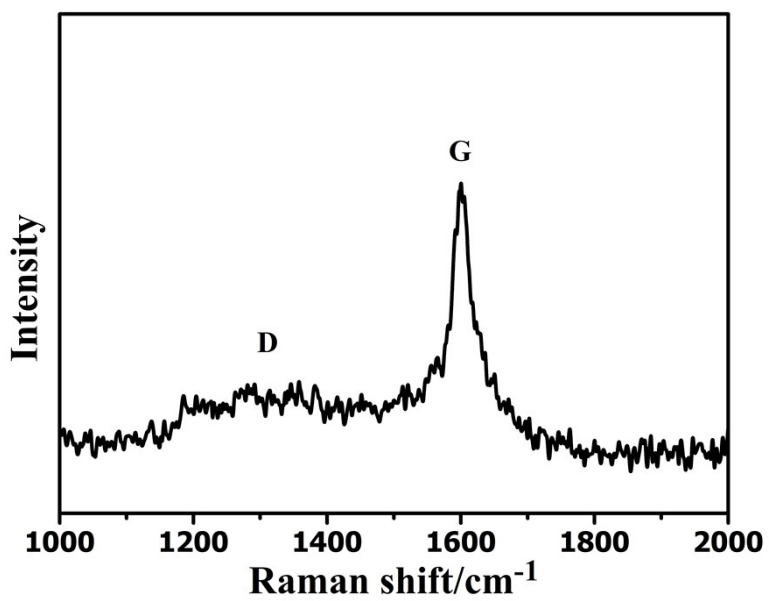
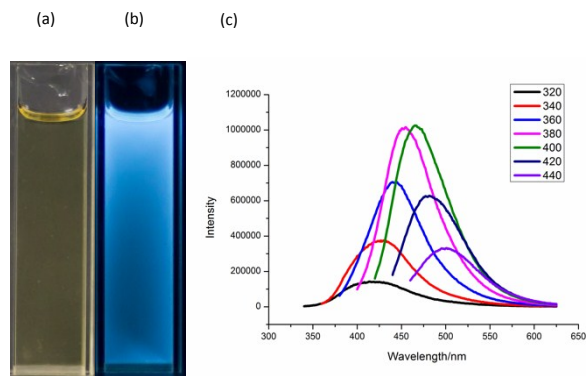
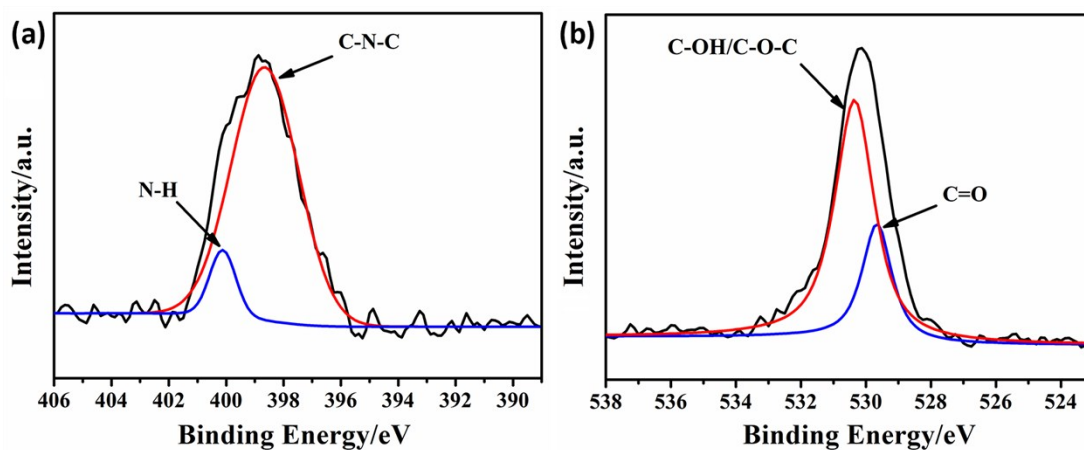


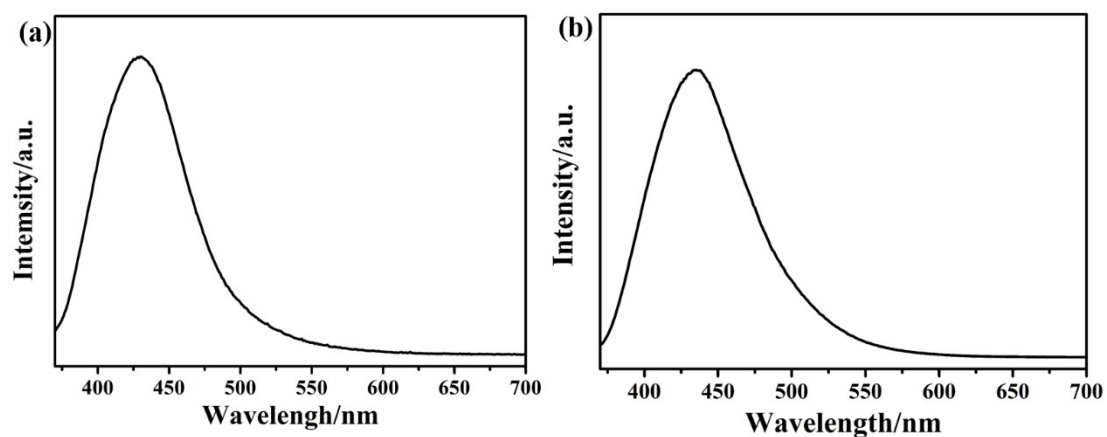
Fig. S3. Raman spectrum of DMF-CDs.



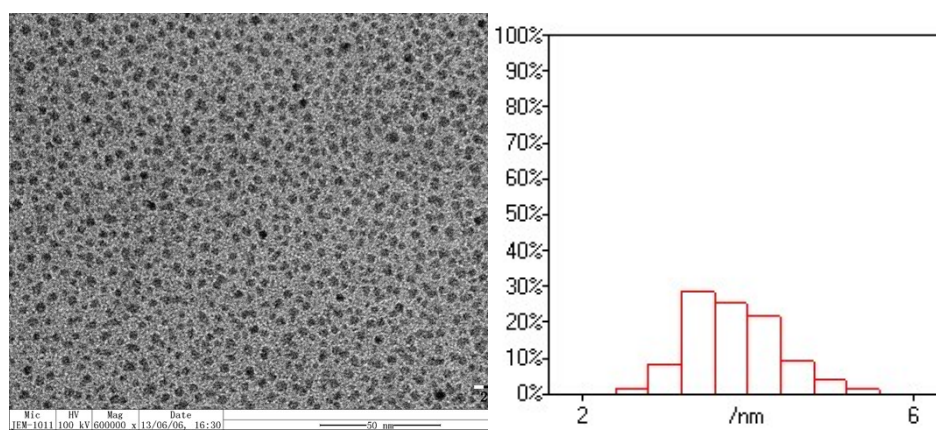
**Fig. S4.** Photographs of DMF-CDs under (a) white light, (b) UV light (365 nm), and (c) photoluminescence (PL) emission spectra of DMF-CDs.



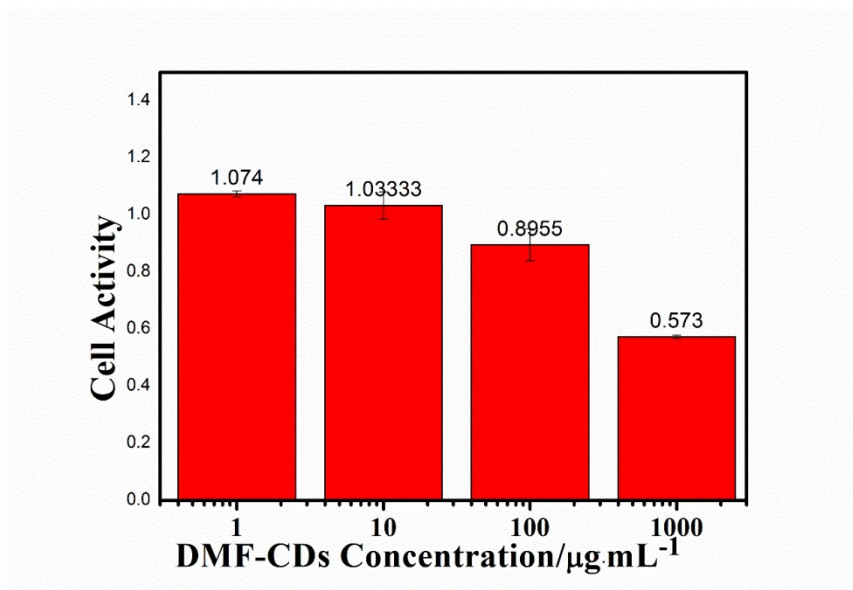
**Fig. S5.** XPS fitting of N 1s (a) and O 1s (b) in DMF-CDs.



**Fig. S6.** PL emission spectra of DMF-CDs in (a) DMF and (b) H<sub>2</sub>O.



**Fig. S7.** (a) TEM image and (b) particle size distribution of DMF-CDs in H<sub>2</sub>O.



**Fig. S8.** Cell toxicity tests of DMF-CDs.

## References

- S1. S. Liu, L. Wang, J. Tian, J. Zhai, Y. Luo, W. Lua and X. Sun, *RSC Adv.*, 2011, **1**, 951.
- S2. J. Deng, Q. Lu, N. Mi, H. Li, M. Liu, M. Xu, L. Tan, Q. Xie, Y. Zhang and S. Yao, *Chem. Eur. J.*, 2014, **20**, 4993.
- S3. S. Liu, J. Tian, L. Wang, Y. Luo and X. Sun, *RSC Adv.*, 2012, **2**, 411.