

Supporting Information

Highly Efficient Carbon Dots Based Room-Temperature Fluorescence– Phosphorescence Dual Emitter

Biao Zhao,^{a,b} Runnan Yu,^a Kunxiang Xu,^a Chao Zou,^{*b} Huanyu Ma,^a Songnan Qu,^c
Zhan'ao Tan^{*a}

^aBeijing Advanced Innovation Center for Soft Matter Science and Engineering, State
Key Laboratory of Organic–Inorganic Composites, Beijing University of Chemical
Technology, Beijing 100029, China.

^bCollege of Chemistry and Materials Engineering, Wenzhou University, Wenzhou
325027, China.

^cJoint Key Laboratory of the Ministry of Education, Institute of Applied Physics and
Materials Engineering, University of Macau, Avenida da Universidade Taipa 999078,
Macau, China

*Corresponding author: tanzhanao@mail.buct.edu.cn; zouchao@wzu.edu.cn



Figure S1. Digital photograph of the FP-CDs under daylight.

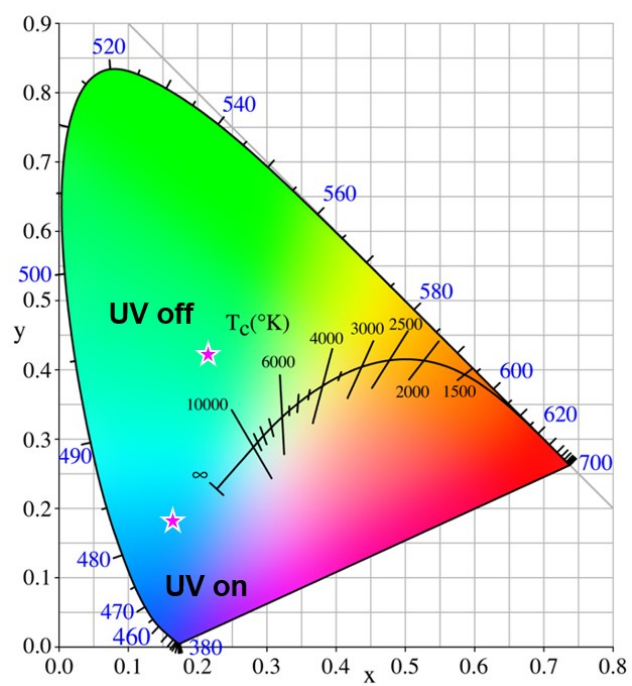


Figure S2. CIE coordinates of the FP-CDs before and after turning off 365 nm UV light.

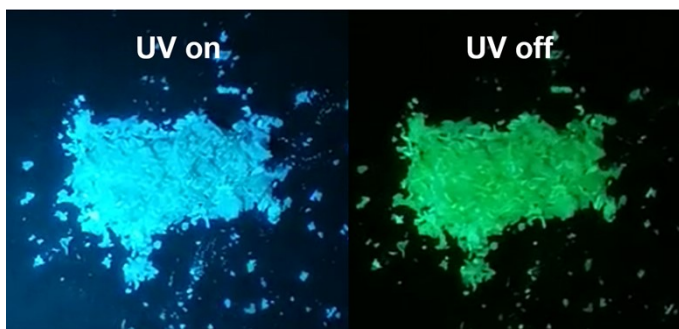


Figure S3. Digital photographs of the FP-CDs under 365 nm UV-on and UV-off after six months stored under ambient conditions.

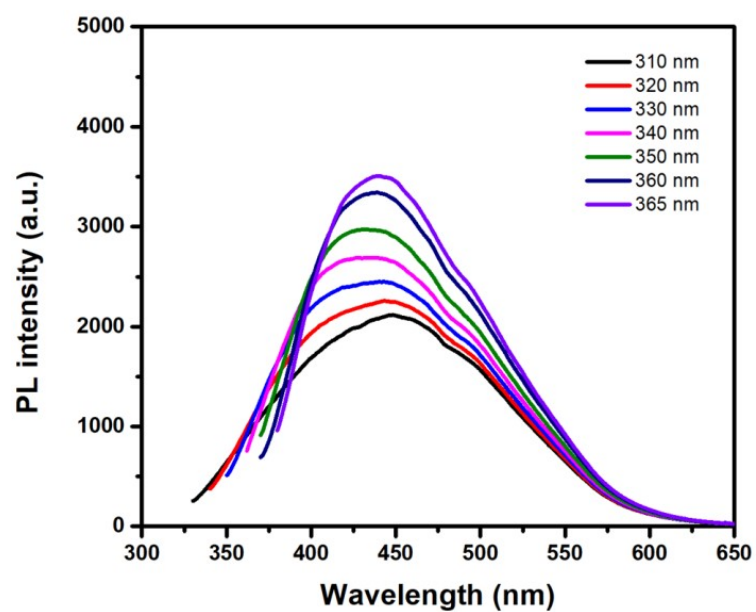


Figure S4. Fluorescence spectra of the FP-CDs powder under different excitation wavelength.

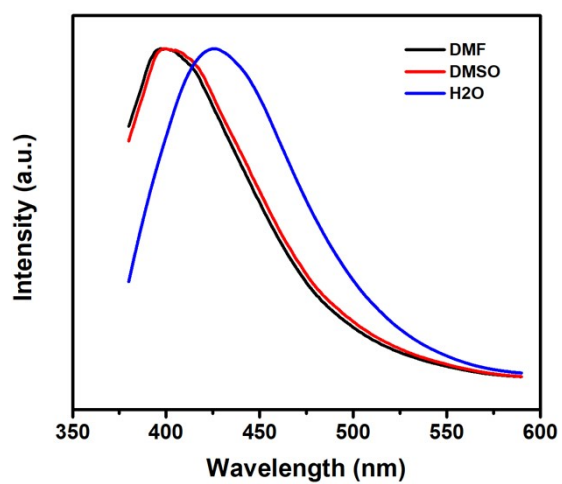


Figure S5. Fluorescence spectra of FP-CDs in different solvents.

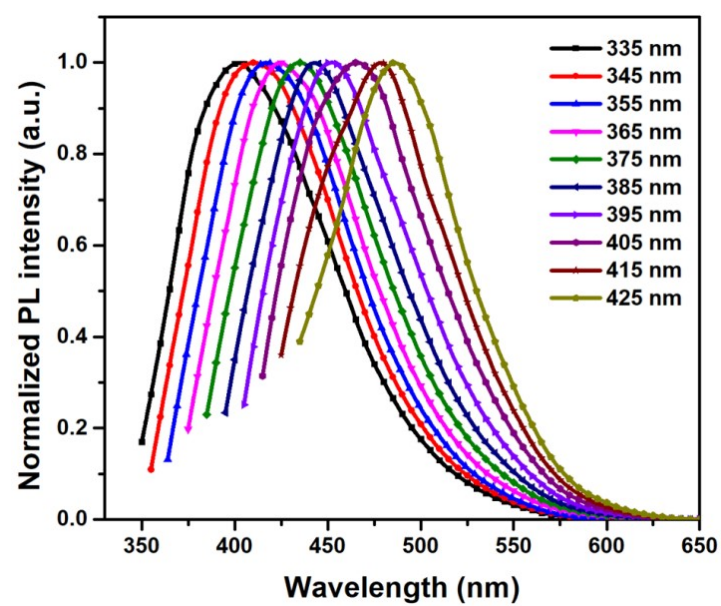


Figure S6. Fluorescence spectra of the FP-CDs' aqueous solution under different excitation wavelength.

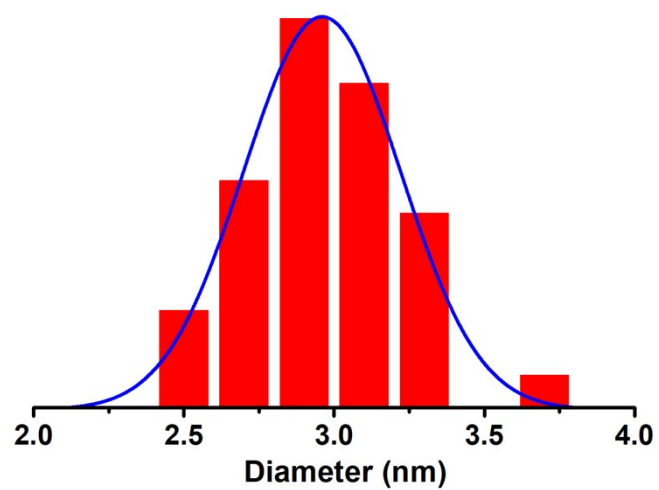


Figure S7. Size distribution of the FP-CDs.

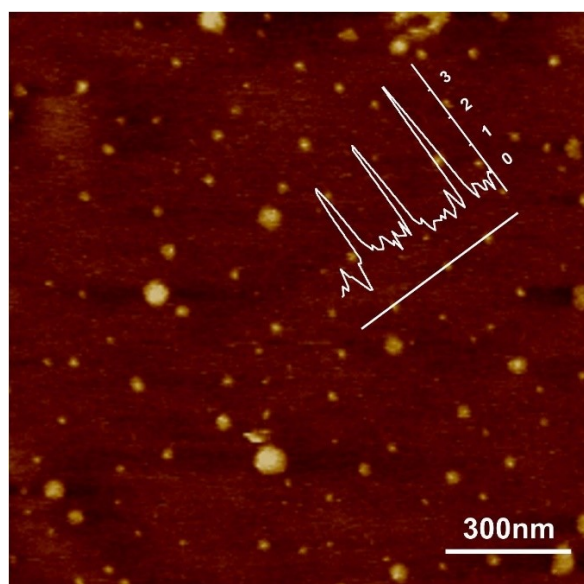


Figure S8. AFM image of the FP-CDs.

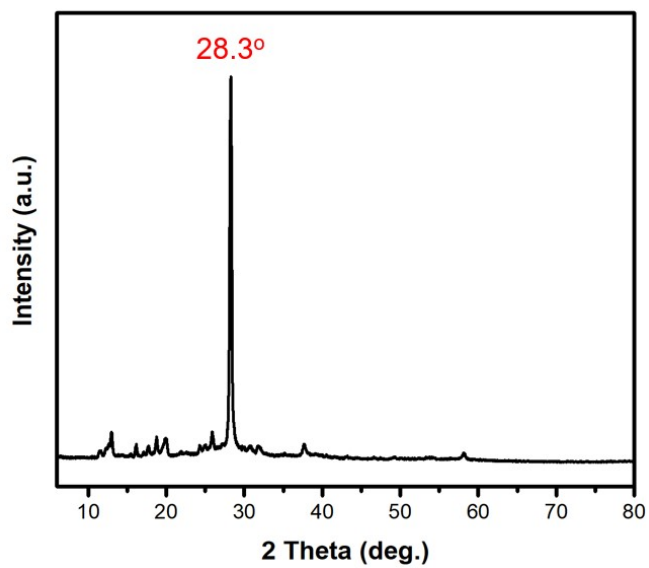


Figure S9. XRD pattern of the FP-CDs.

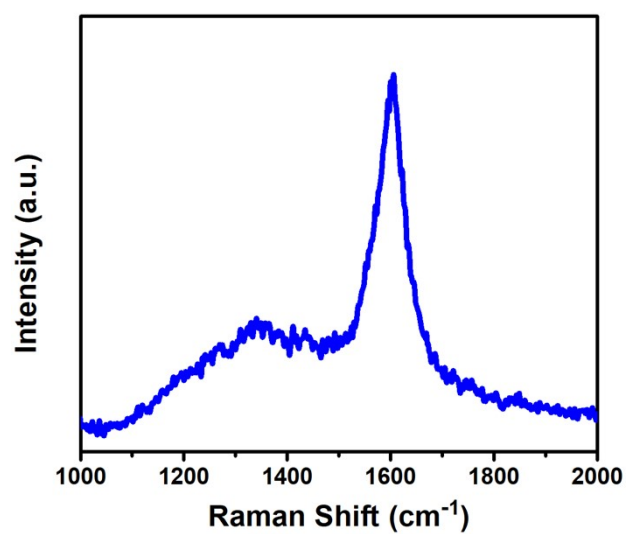


Figure S10. Raman spectrum of the FP-CDs.

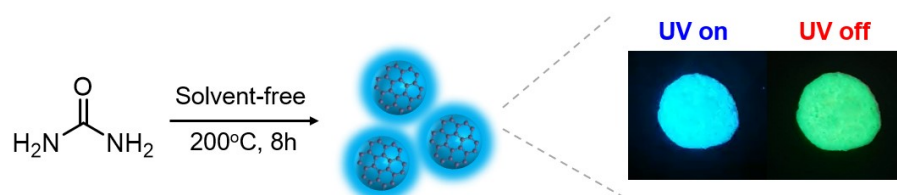


Figure S11. Schematic illustration of the pyrolysis treatment of urea.

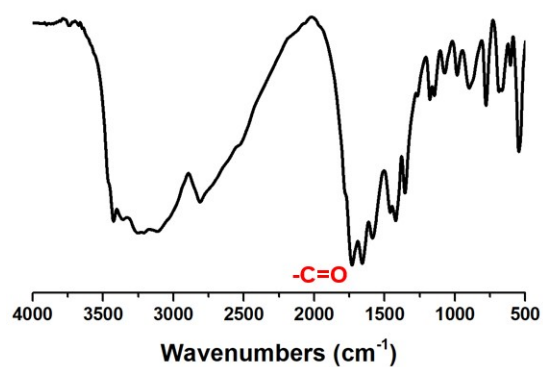


Figure S12. FT-IR spectrum of the pyrolysis product prepared from urea.

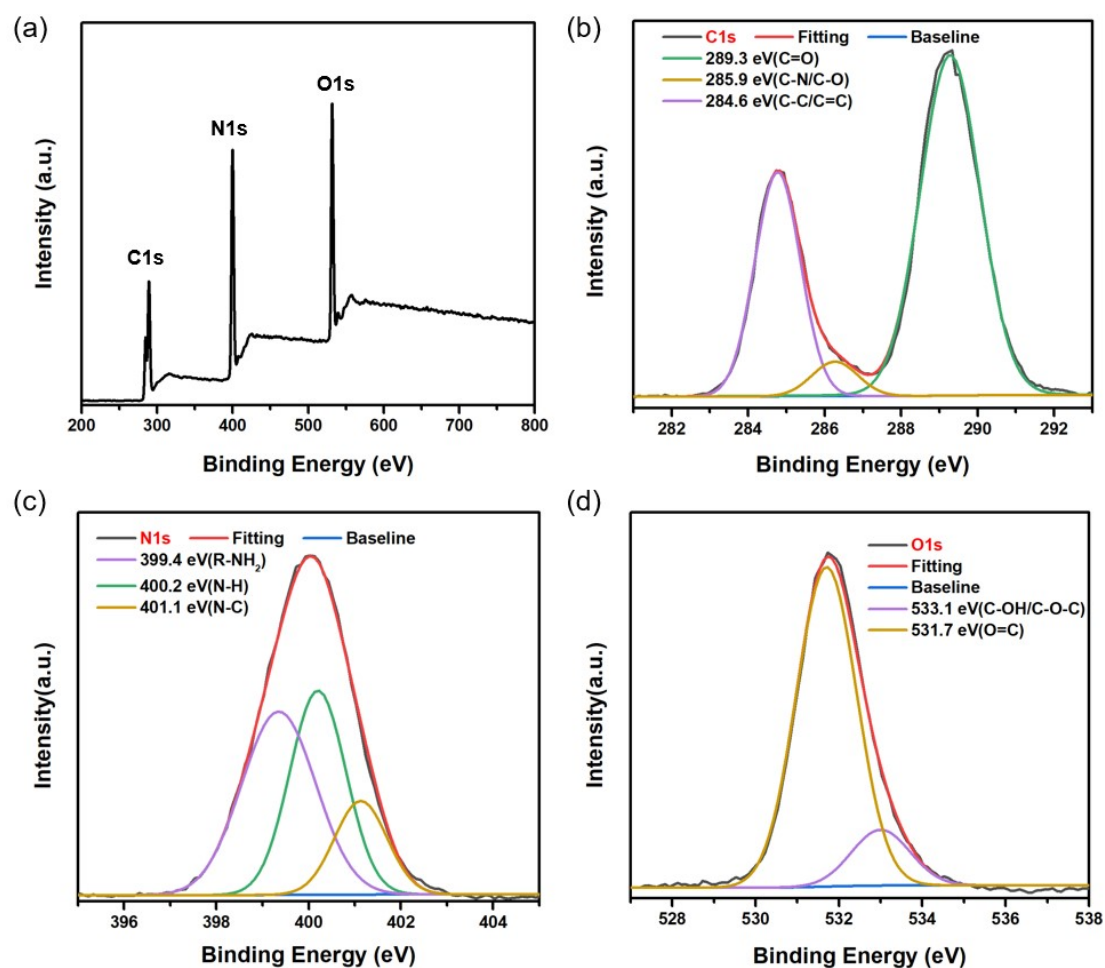


Figure S13. (a) XPS spectrum and high-resolution (b) C1s, (c) N1s and (d) O1s XPS spectra of the pyrolysis product prepared from urea.