Electronic Supplementary Information to:

Toward Efficient Dual-Emissive Carbon Dots through Sulfur and Nitrogen Co-Doped

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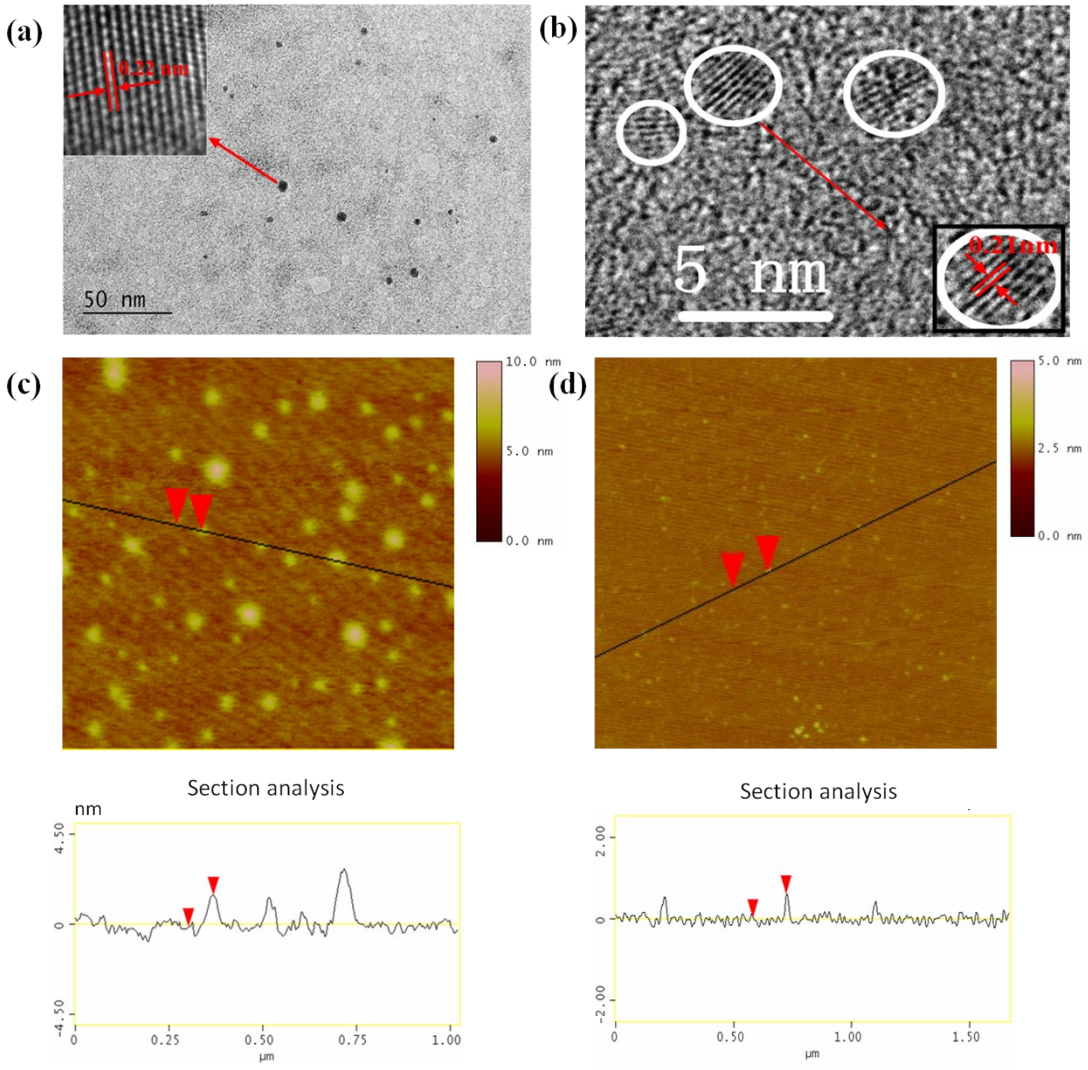


Figure S1. (a) TEM and HRTEM images of the of N-C-dots; (b) TEM and HRTEM images of the of S-C-dots; (c) AFM images of N -C-dots and height profiles analysis along the corresponding lines; (d) AFM images of S -C-dots and height profiles analysis along the corresponding lines.

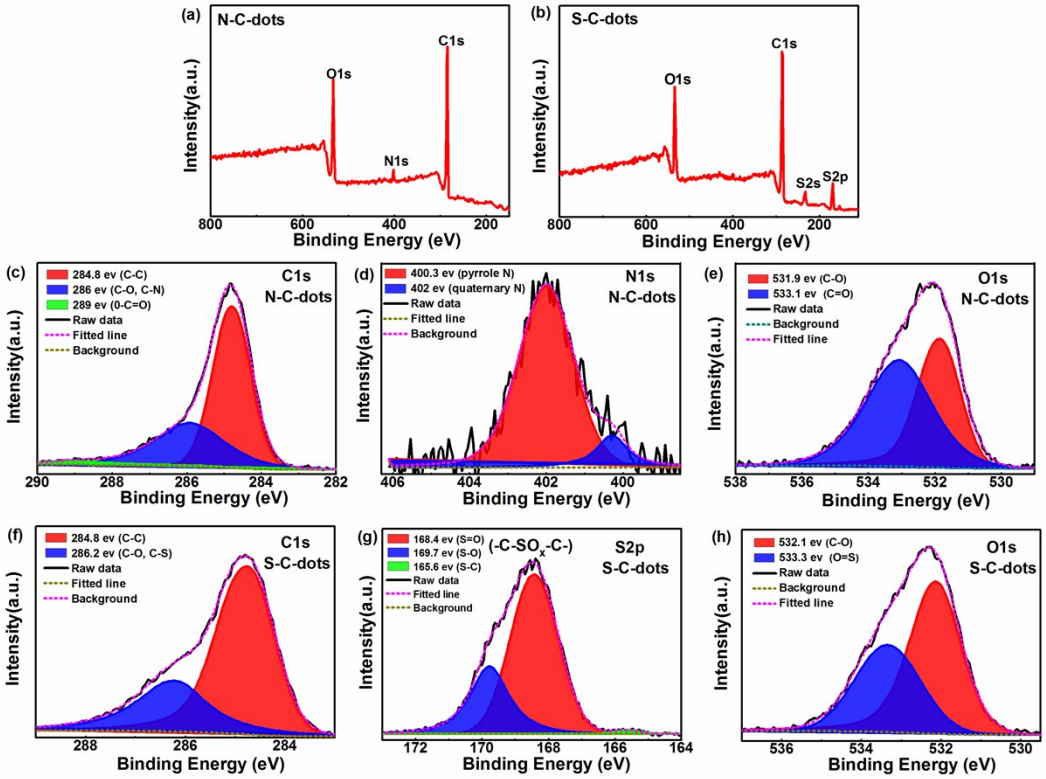


Figure S2. (a)/(b) XPS survey of N-C-dots and S -C-dots. (c)-(h) High-resolution XPS spectra of N-C-dots and S -C-dots.

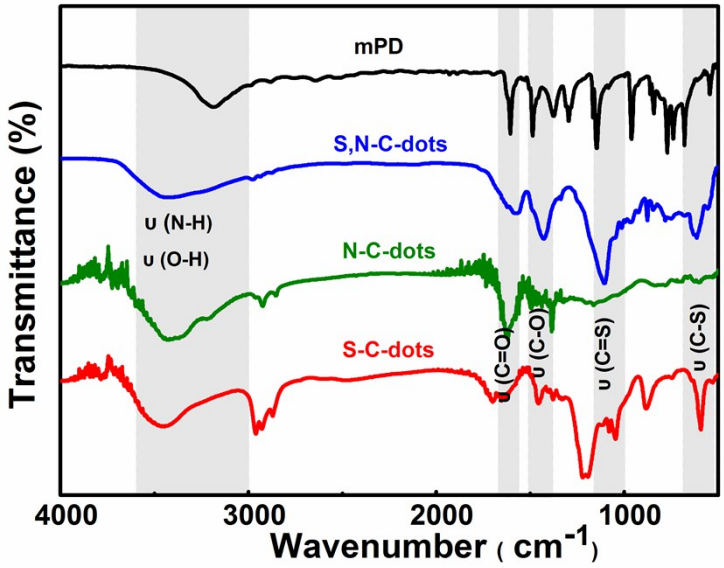


Figure S3. (a) FTIR spectra of S,N-C-dots, N-C-dots, S -C-dots and mPD.

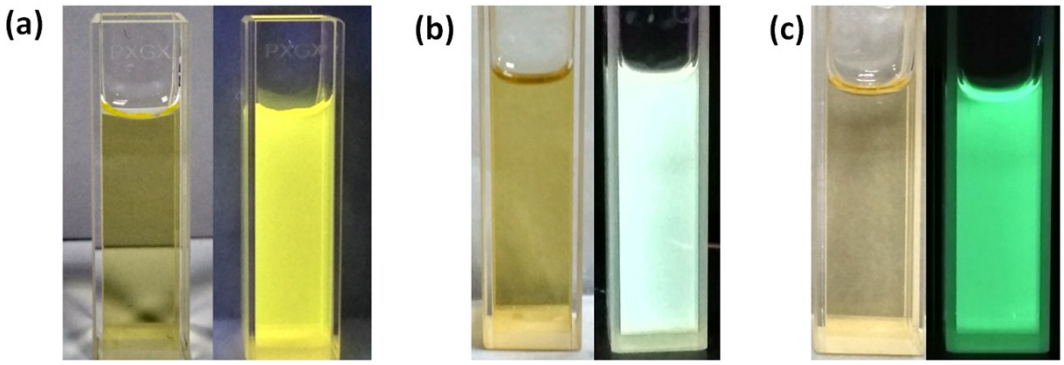


Figure S4. The photograph of the three C-dots dispersed in aqueous solution under the irradiation of daylight (left) and 365 nm UV light (right). (a) S,N-C-dots; (b) N-C-dots; (c) S-C-dots.

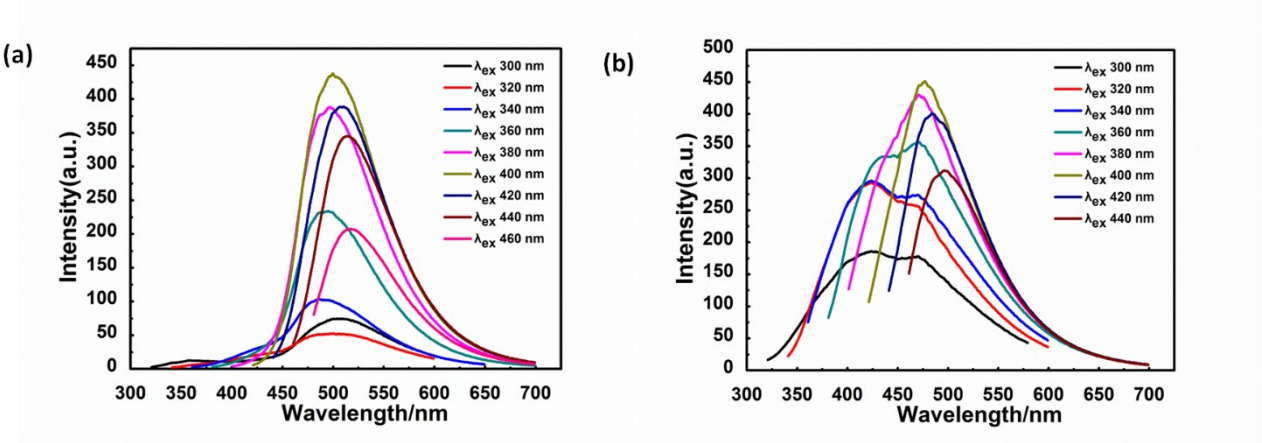
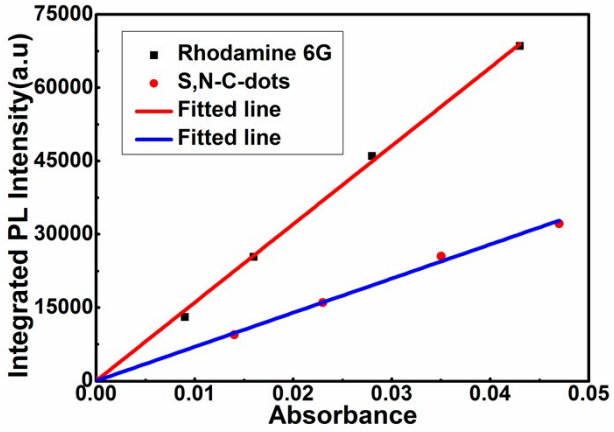


Figure S5. PL spectra of N-C-dots (a) and S-C-dots (b) at different excitation wavelengths.



	S,N-C-dots					Rhodamine 6G				
Absorbance	0	0.014	0.023	0.035	0.047	0	0.009	0.016	0.028	0.043
Integrated PL	0	10470	19005	30508	40138	0	13050	25403	46020	68560
Slope	6.98×10^5					1.603×10^6				
QY(%)	41.37					95				

Figure S6. Plots of integrated PL intensity of S,N-C-dots and rhodamine 6G as a standard of optical absorbance at 460 nm and relevant data.

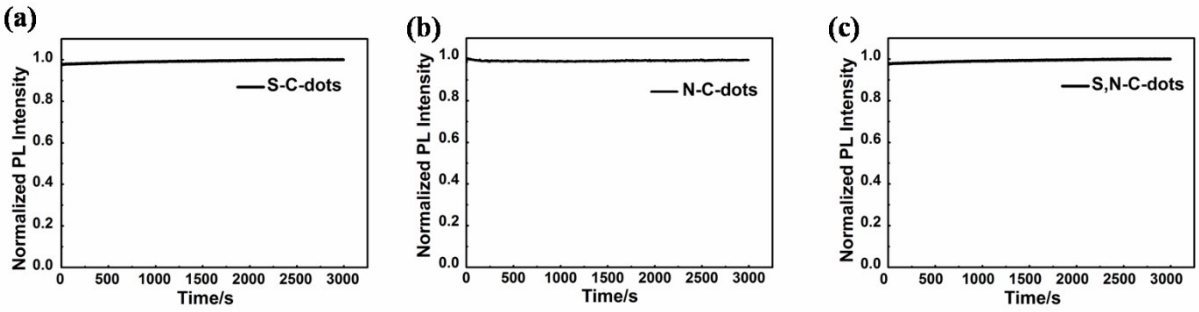


Figure S7. Photostability of S-C-dots, N-C-dots and S,N-C-dots in aqueous solutions (a-c) under continuous excitation at 360 nm for 3000s using a spectrofluorometer equipped with an xenon lamp (150 W).

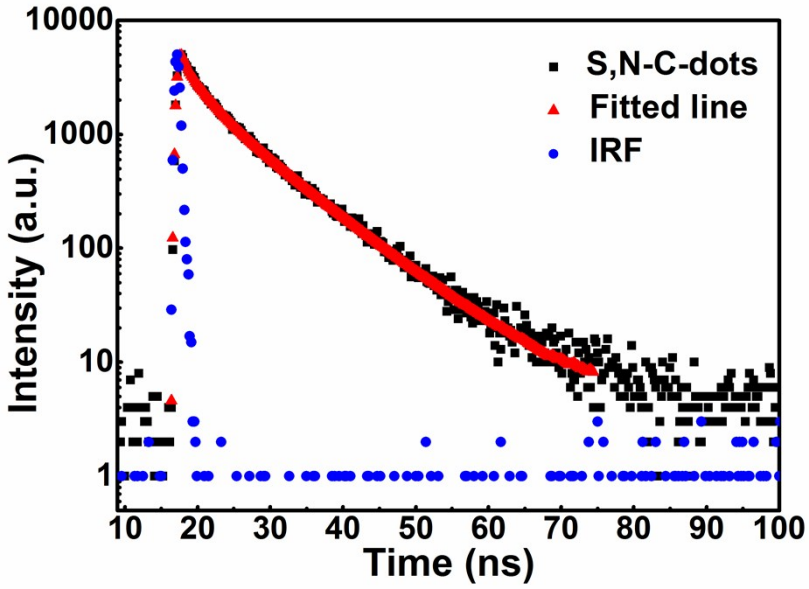


Figure S8. PL decay spectra and fitting curves of S,N-C-dots.