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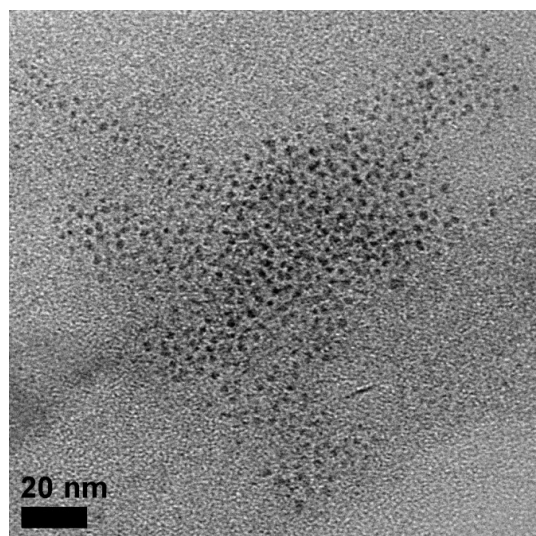


Figure S1. TEM image of CDs-1.

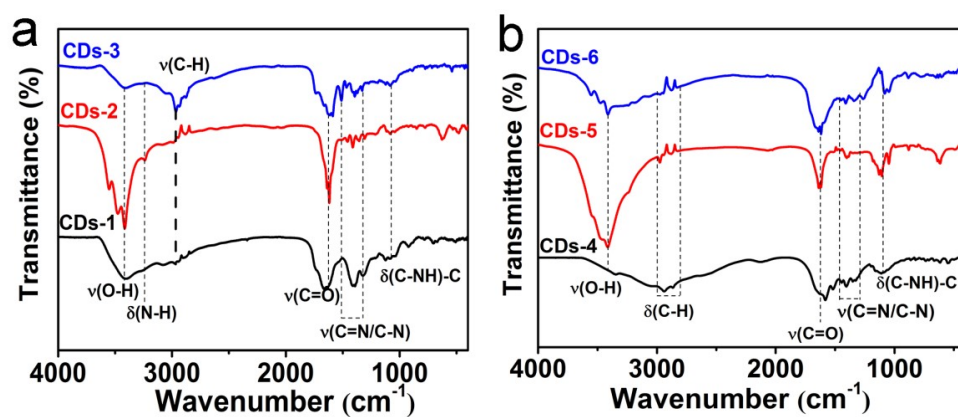


Figure S2. FT-IR spectra of (a) CDs-1, CDs-2, and CDs-3; and (b) CDs-4, CDs-5, and CDs-6.

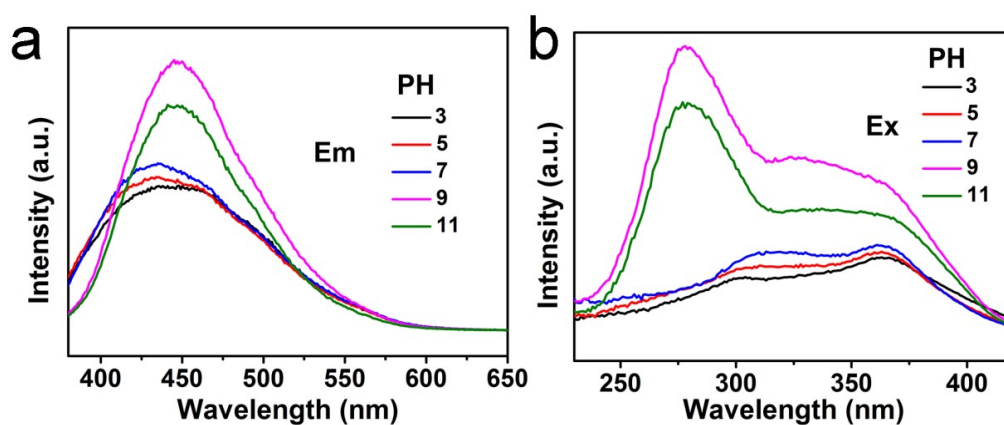


Figure S3. (a, b) Emission (Em) and excitation (Ex) spectra of CDs-6 by adjustment of different pH values (1, 4, 9, 11, 14) via adding CH_3COOH and $\text{NH}_3\cdot\text{H}_2\text{O}$.

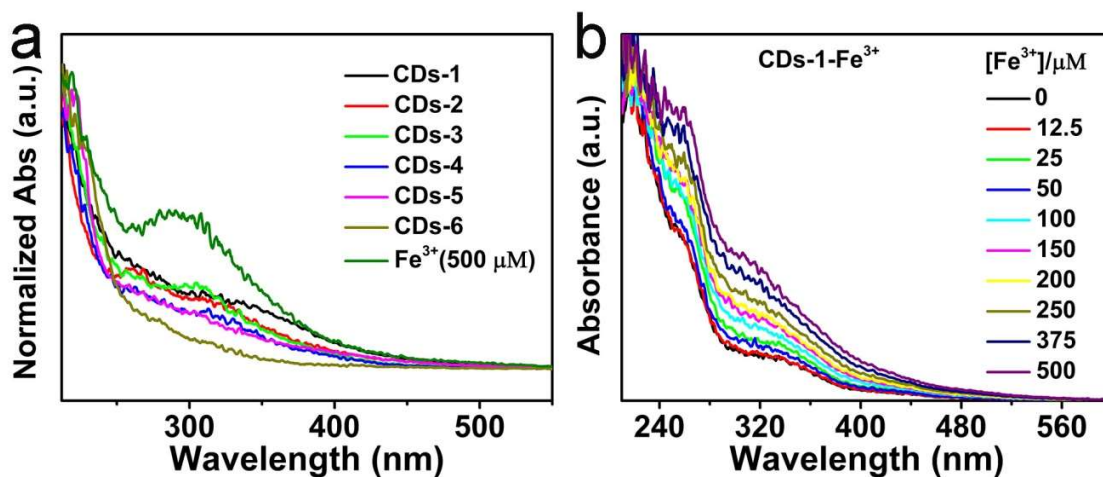


Figure S4. (a) Absorption spectra of CDs-1, CDs-2, CDs-3, CDs-4, CDs-5, CDs-6, and Fe^{3+} ion solution. (b) Absorption spectra of CDs-1 in the presence of different concentrations of Fe^{3+} ions.

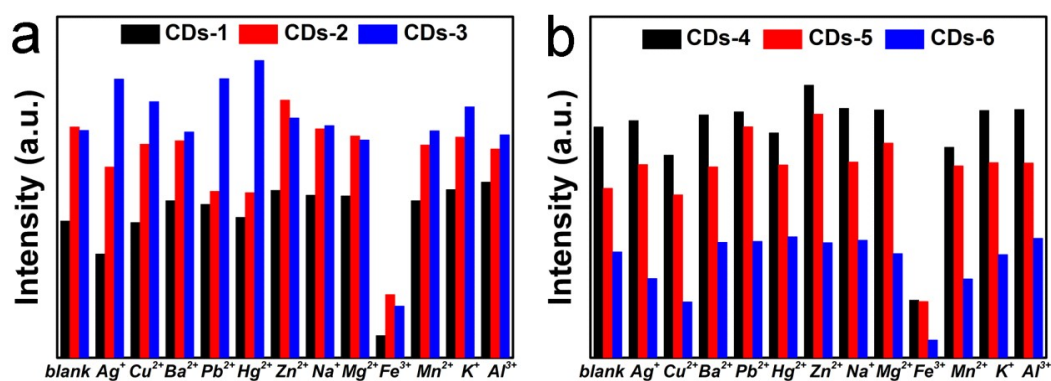


Figure S5. Comparison of fluorescence intensities of CDs under 365 nm excitation (including CDs- x , $x = 1, 2, 3, 4, 5, 6$) in the presence of different metal ions (the concentration of metal ions is 500 μM ; the concentration of CDs-1 is 1 mg/mL).