

## Support Information: Facile synthesis of Copper Doped Carbon Dots and their application as “turn-off” fluorescent probe in the detection of Fe<sup>3+</sup> ion

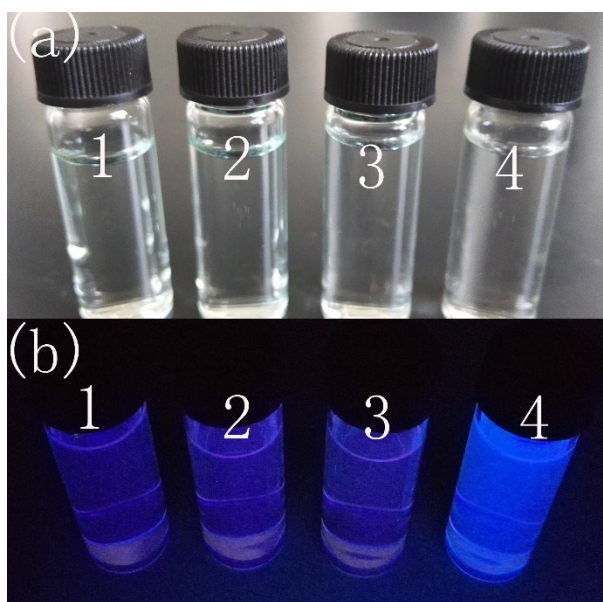


Figure S1 the photographs of the solution of CDs under natural light (a) and UV light (b). CDs are synthesized from sodium citrate(2), citric acid and cuprous chloride(3), sodium citrate and cuprous chloride(4), respectively. 1 is water.

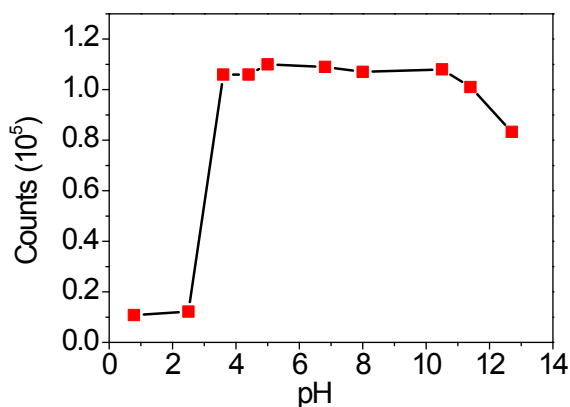


Figure S2 The fluorescent intensity in 440 nm excited by 350 nm as a function of pH.

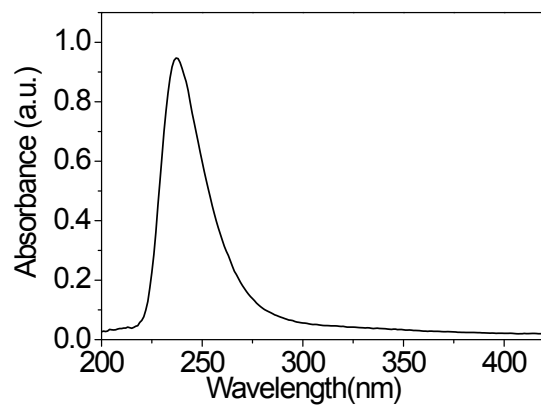


Figure S3 UV absorption spectrum of Cu-CDs

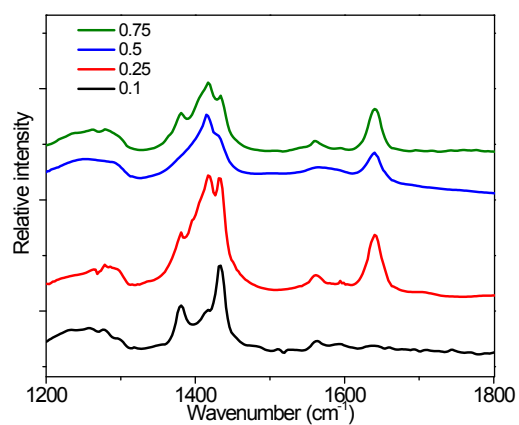


Figure S4 Raman spectra for Cu-CDs at different sources ratio

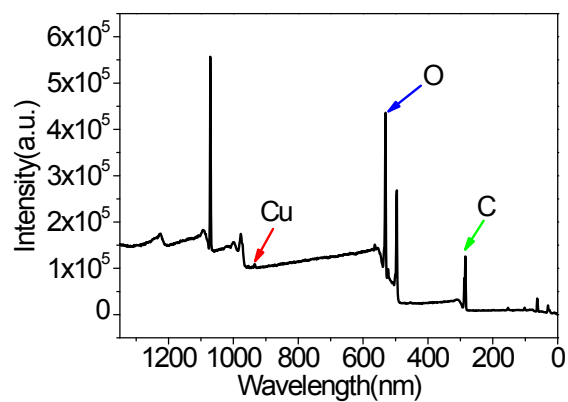


Figure S5 Survey scan spectra of Cu-CDs

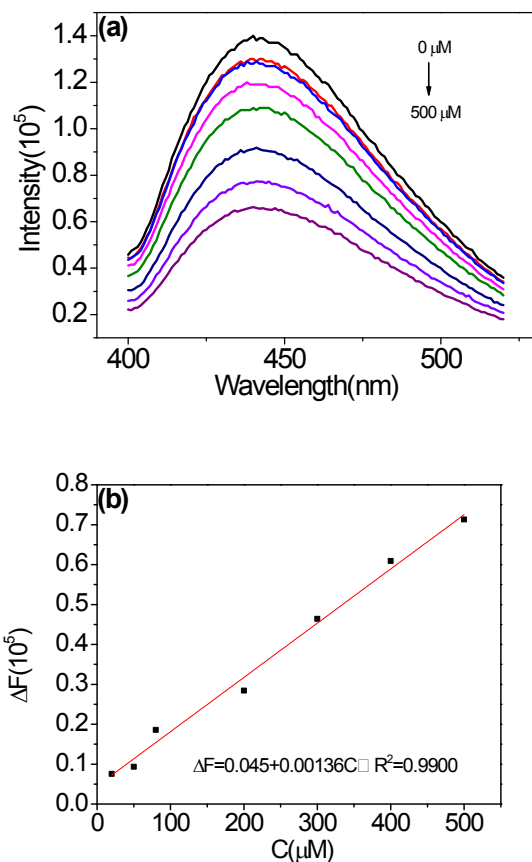


Figure S6 (a) Emission spectra of the Cu-CDs solution with different concentrations of Fe<sup>3+</sup> in tap water (0, 20, 50, 80, 200, 300, 400 and 500 μM); (b) the change of fluorescence intensity of Cu-CDs solution versus the concentration of Fe<sup>3+</sup> in tap water

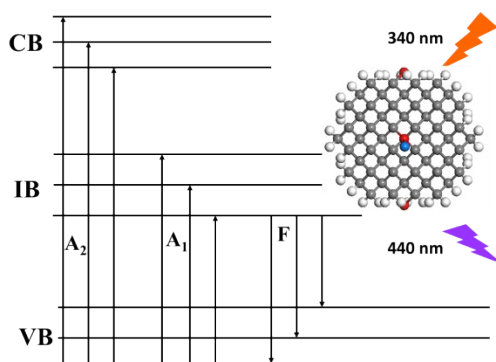


Fig. S7. The mechanism of fluorescence generating of Cu-CDs.