

Novel cookie with chocolate carbon dots and showing extremely acidophilic high luminescence

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Figure S1. TEM of CDF-SA

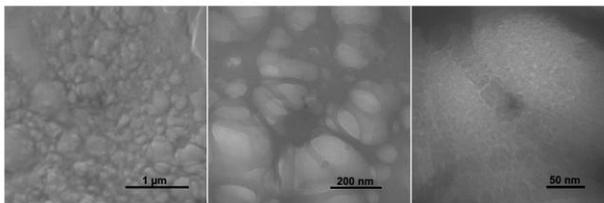


Figure S2. FTIR spectra of CDs. It contains the -OH, epoxy, C=O, C-N (C=N), NH and CH groups.

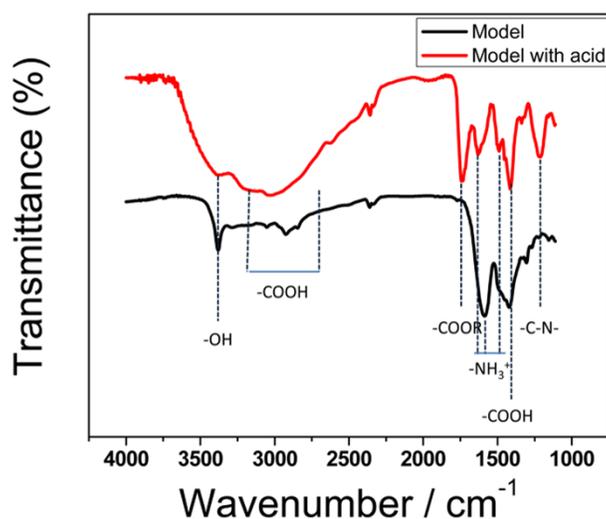


Figure S3. TEM and HRTEM of CDF-300

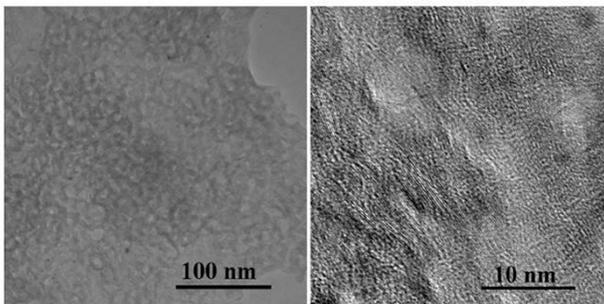


Figure S4. a) PL spectra of G-CDs in aqueous solution at different excitation wavelengths (in 20 nm increment starting from 300 nm to 420 nm). b) UV-vis absorption of G-CDs dispersed in aqueous solution. c) PL spectra of CDF-300 in aqueous solution at different excitation wavelengths. (in 20 nm increment starting from 300 nm to 400 nm). d) UV-vis absorption of CDF-300 dispersed in aqueous solution.

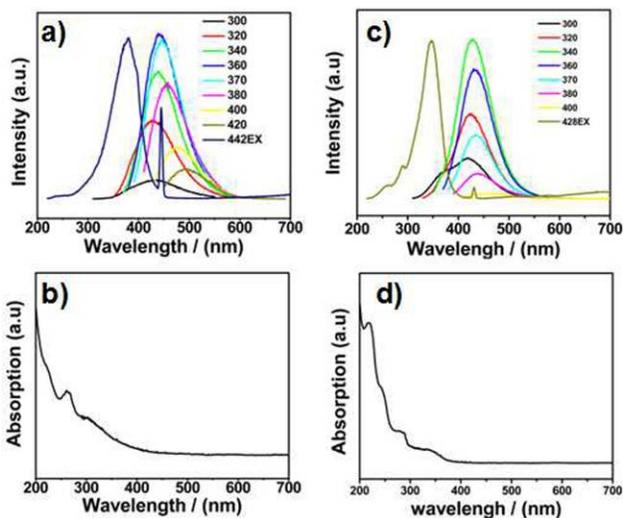


Figure S5. the simulative absorption spectrum of indolyl (left) and protonization of indolyl (right)

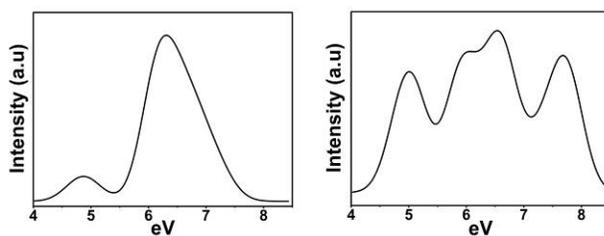


Figure S6. Effect of ionic strengths on the fluorescence intensity of CDs (ionic strengths were controlled by various concentrations of KCl).

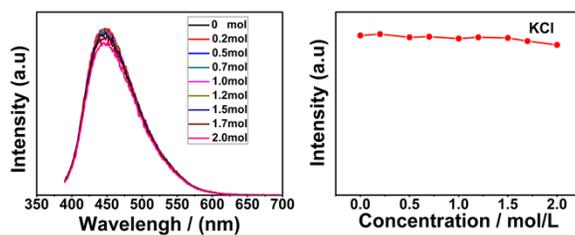


Figure S7. Dependence of fluorescence intensity on UV excitation time for CDs in DI water

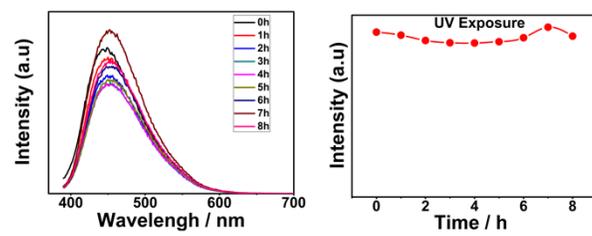


Figure S8 The typical PL spectra of the model CDs solution and absence of various metal ions.