A Novel Fluorescent Sensor for Water in Organic Solvents Based on Dynamic Quenching of Carbon Quantum Dots

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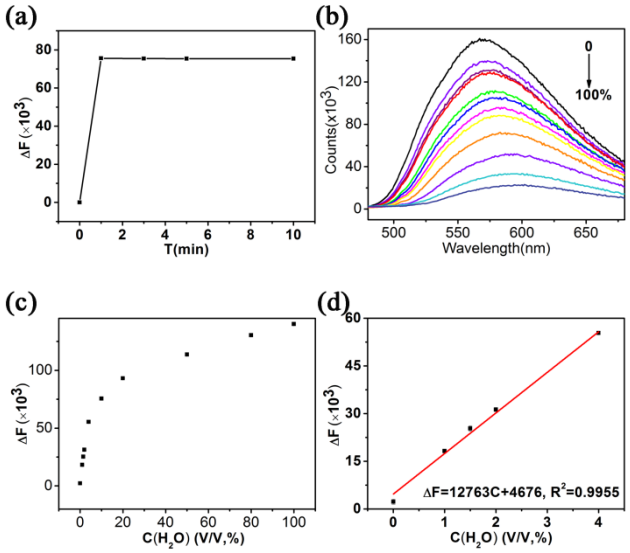

Fig. s1 (a) time-dependent fluorescence quenching of CQDs dispersed in 1,4-Dioxane in the presence of H_2O (10%,V/V); (b) the fluorescence emission spectra of CQDs dispersed in 1,4-Dioxane with different concentration of H_2O (0, 2, 4, 6, 8, 10, 20, 50, 80, 100 V/V, %); (c) the change of fluorescence intensity of CQDs solution versus the concentration of H_2O; (d) a linear relationship between ΔF and concentration of H_2O from 0.001 % to 4 %. Error bars in (c) and (d) represent the standard deviations of five independent measurements

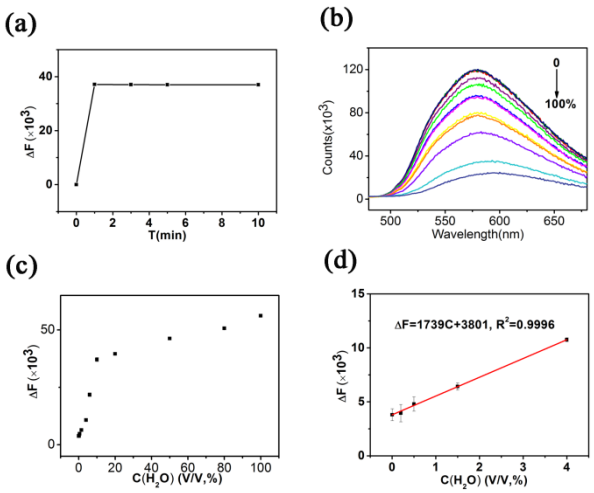

Fig. s2 (a) time-dependent fluorescence quenching of CQDs dispersed in ethanol in the presence of H_2O (10%,V/V); (b) the fluorescence emission spectra of CQDs dispersed in ethanol with different concentration of H_2O (0, 2, 4, 6, 8, 10, 20, 50, 80, 100 V/V, %); (c) the change of fluorescence intensity of CQDs solution versus the concentration of H_2O; (d) a linear relationship between ΔF and concentration of H_2O from 0.001 % to 4 %. Error bars in (c) and (d) represent the standard deviations of five independent measurements.

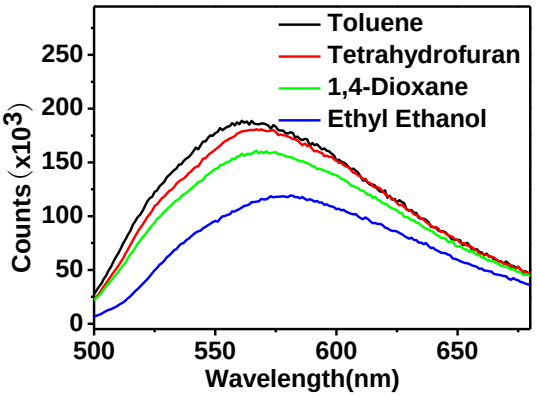

Fig. S3 The fluorescence emission spectra (excited by the light of 440 nm) of CQDs dispersed in different organ solvents (toluene, tetrahydrofuran, 1,4-Dioxane, ethyl ethanol). (The polarity: toluene< tetrahydrofuran< 1,4-Dioxane< ethyl ethanol)