Electronic Supporting Information (ESI)

Facile synthesis of S, N co-doped carbon dots and their photoluminescence properties investigation

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The fluorescence quantum yield of the CDs was estimated using quinine sulphate solution in 0.1 M sulphuric acid (quantum yield 54%) as a reference (See Fig. S1).

The following equation was used to calculate the CDs quantum yield:

$$Y_{CD} = Y_{QS} * \frac{F_{CD}}{A_{CD}} \Big/ \frac{F_{Qs}}{A_{Qs}}$$

where Y_{CD} and Y_{QS} are the quantum yields of CDs and quinine sulfate; F_{CD} and F_{QS} are defined as the photoluminescence integrals of CDs and quinine sulfate. A_{CD} and A_{QS} represent the absorbance of CDs and quinine sulfate.

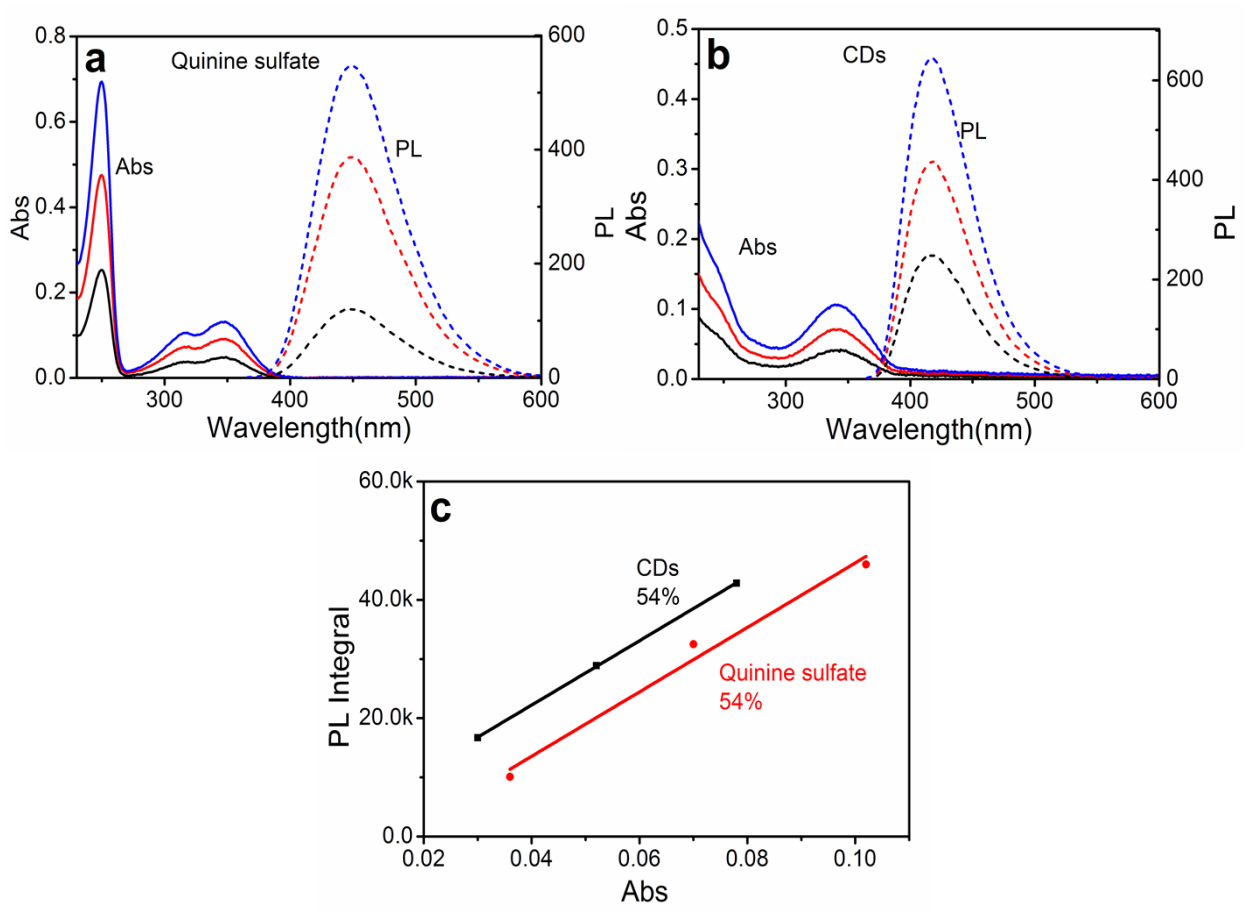

Fig. S1 Quantum yield measurement of CDs. (a-b) Absorption and emission spectra for Quinine sulfate and CDs. (c) linear relationship between Abs and PL integral for CDs and Quinine sulfate respectively.

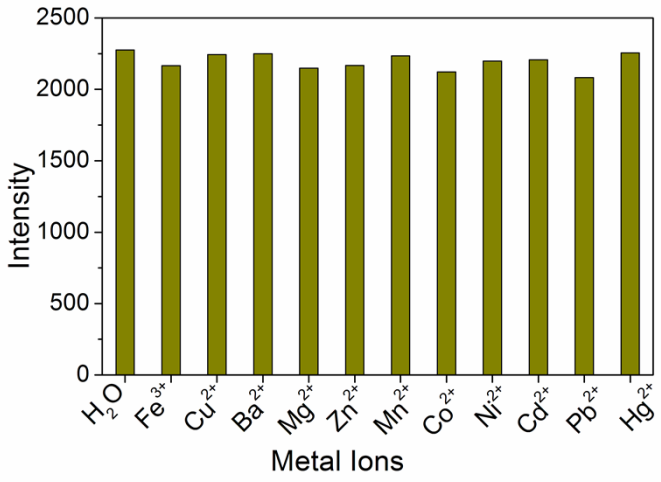

Fig. S2 Fluorescence intensities of CDs in the presence of different metal ions (100 μM)