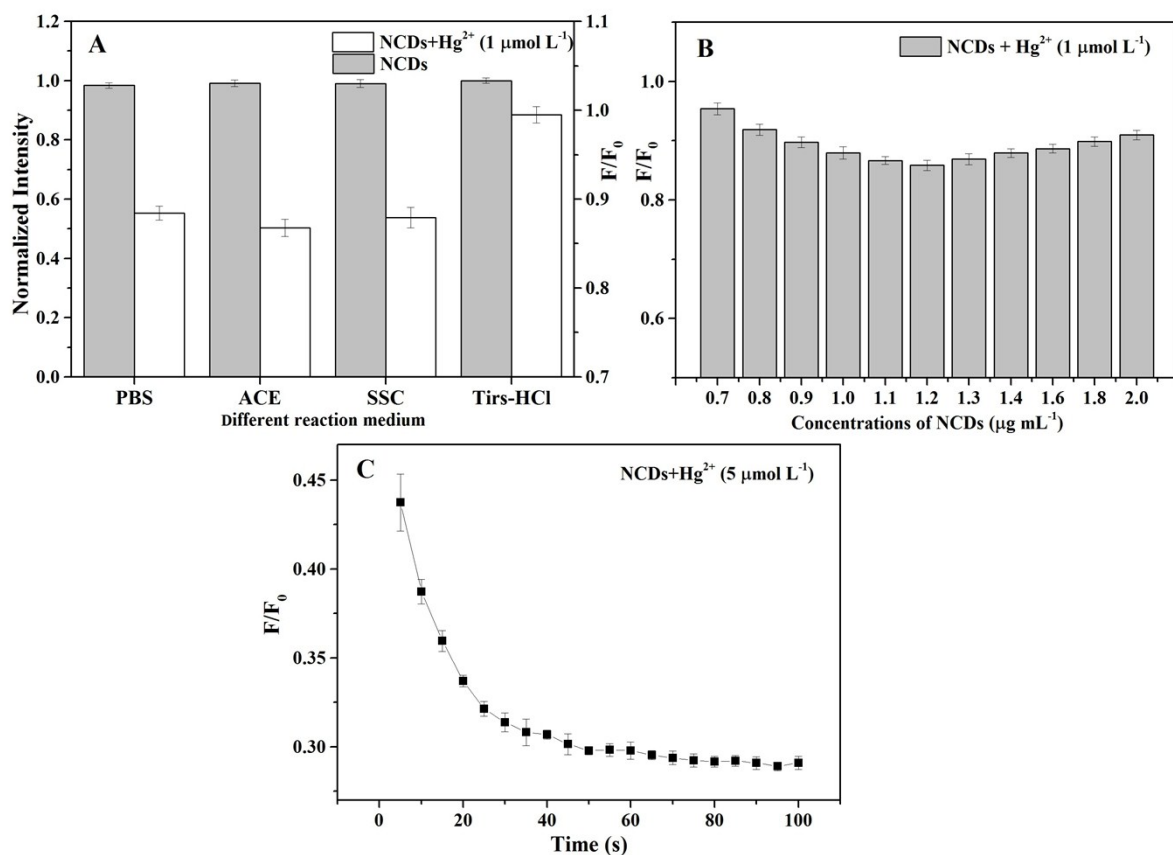
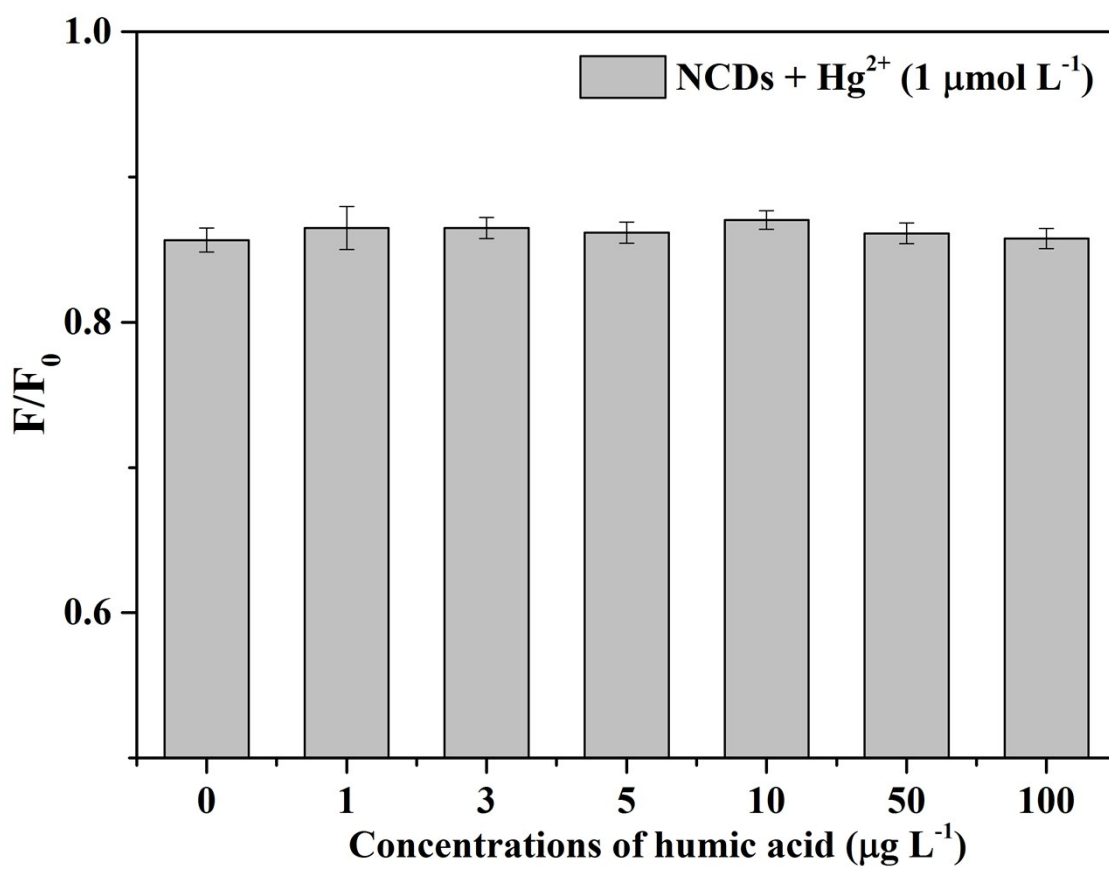


**Fig. S1.** Effect of reaction conditions on the fluorescent intensities of the NCDs excited at 340 nm at the same NCDs concentration. (A) Molar ratio of anhydrous citric acid and urea, (B) Reaction temperature, (C) Reaction time.



**Fig. S2.** (A) Influences of buffer compositions on the quenching effects of Hg<sup>2+</sup> (PBS: phosphate buffer, ACE: acetate buffer, SSC: citrate buffer). (B) Influences of NCDs concentrations on the quenching effects of Hg<sup>2+</sup> in 10 mmol L<sup>-1</sup> of acetate buffer (pH 6.0). (C) Influences of incubation times on the fluorescence quenching efficiencies (5 μmol L<sup>-1</sup> of Hg<sup>2+</sup>).



**Fig. S3.** Effect of humic acid concentrations on the fluorescent quenching efficiency of  $\text{Hg}^{2+}$ .