## **Electronic supplementary information**

## Nitrogen-doped carbon dots as a "turn-off" fluorescence probe for mercury (II) detection and live cell imaging

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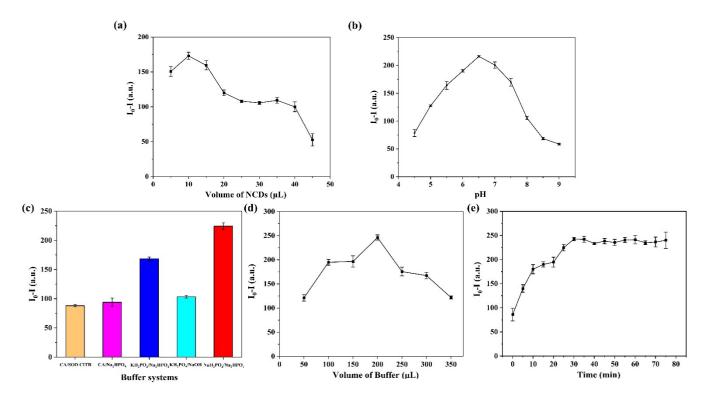
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**Fig. S1** Optimization of (a) NCDs dosage, (b) pH, (c) buffer systems, (d) buffer volume and (e) reaction time for Hg<sup>2+</sup> detection.

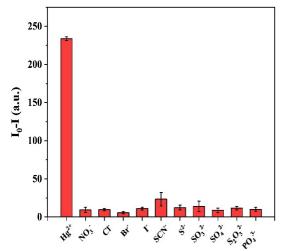


Fig. S2 Influence of different anions on the fluorescence of NCDs.

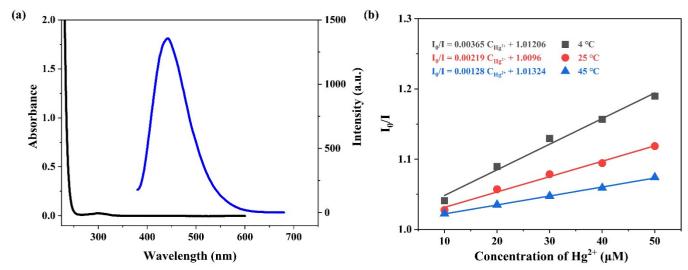


Fig. S3 (a) The UV-vis spectrum of  $Hg^{2+}$  (black line) and the fluorescence emission spectrum of NCDs (blue line). (b) Stern-Volmer plots for the solution systems of NCDs and  $Hg^{2+}$  at different temperatures.