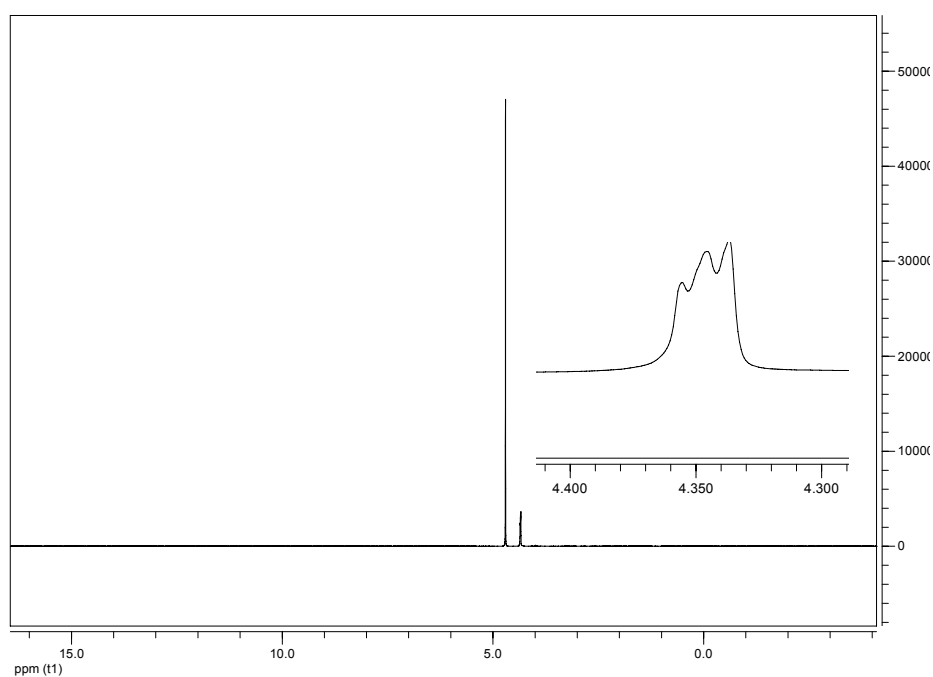


**Anti-aggregation of gold nanoparticles based colorimetric sensor for glutathione  
with excellent selectivity and sensitivity**

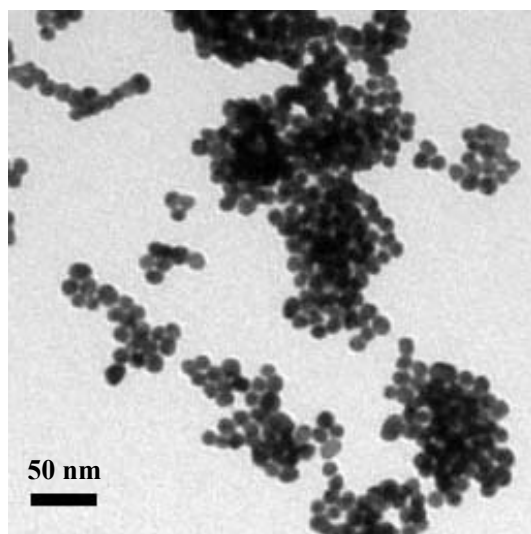
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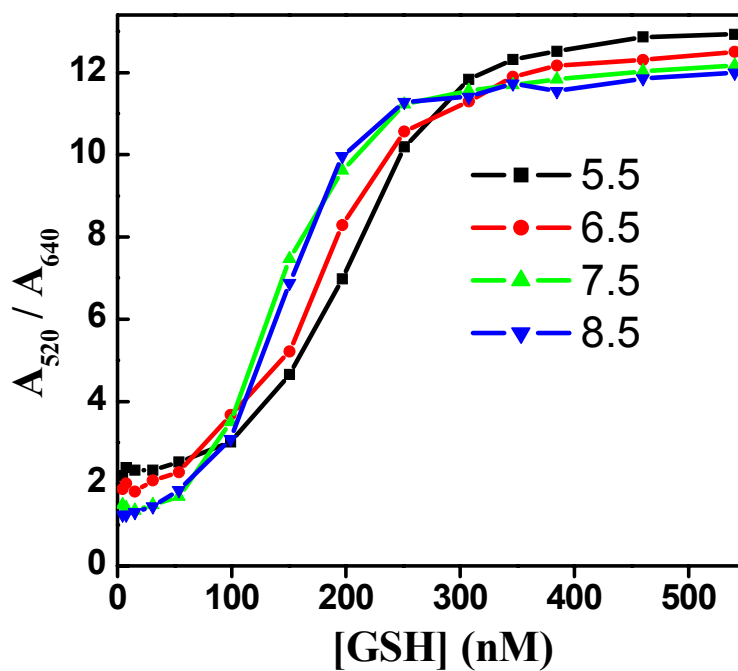
**Fig. S1** <sup>1</sup>H NMR of spectrum of ppzdtc ligand in D<sub>2</sub>O.

**TEM image**



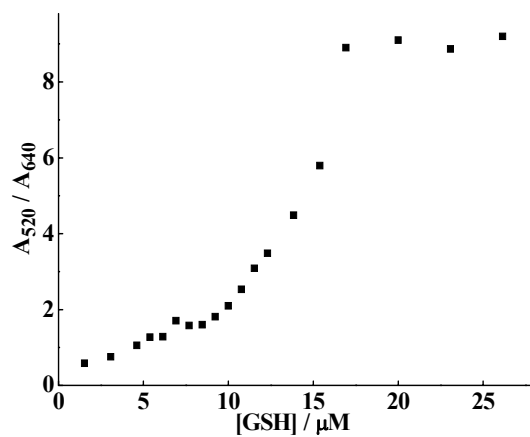
**Fig. S2** The TEM images of the aggregated AuNPs in solution with the presence of 1.5  $\mu\text{M}$  ppzdtc and 0.25  $\mu\text{M}$  Cys.

### pH effect on the determination of GSH



**Fig. S3** Calibration curves of  $A_{520}/A_{640}$  vs. GSH concentration in the AuNPs suspension under different pH values.

### Dynamic range dependent on the concentration of aggregation reagent ppzdtc



**Fig. S4** Calibration curve of  $A_{520}/A_{640}$  vs. GSH concentration under the concentration of aggregation reagent ppzdtc of 5.4  $\mu\text{M}$ .