Supporting information

Opposite changing dual-emissions luminescent of gold nanoparticles by sulfhydryl to develop pesticides biosensing strategy

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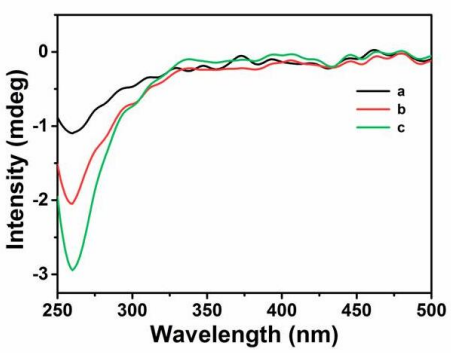

Figure S1. CD spectra of the GS-AuNPs without (a) or with (b, c) cysteine. Data for GS-AuNPs was shown for comparison (a). Curve a, b and c represented GS-AuNPs with different concentration of cysteine: GS-AuNPs 12 μL per 100 μL solution, cysteine 1.67 mM (b) and 6.67 mM (c).

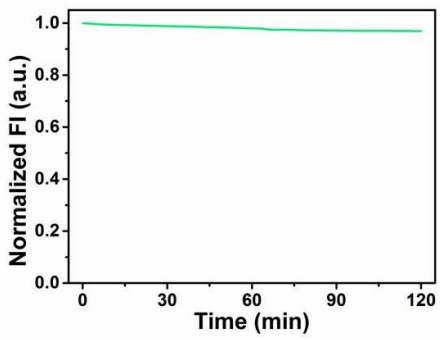

Figure S2. Photostability of GS-AuNPs.

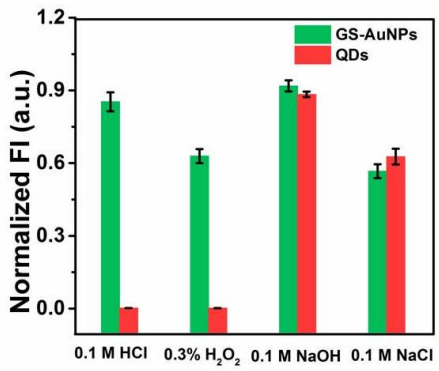

Figure S3. Comparison of chemical stability between GS-AuNPs and MPA-coated CdTe QDs in different media. The fluorescence emission from control experiment (see **Figure 1**) was set to 1. GS-AuNPs and CdTe QDs were both added to 0.3 % H_2O_2, 0.1 M HCl, 0.1 M NaCl, or 0.1 M NaOH, and were recorded with an excitation wavelength at

400 nm and 474 nm respectively.

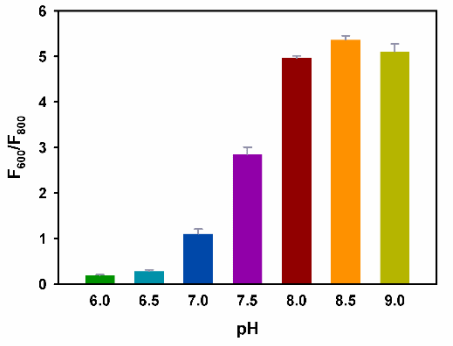

Figure S4. The optimization of pH.

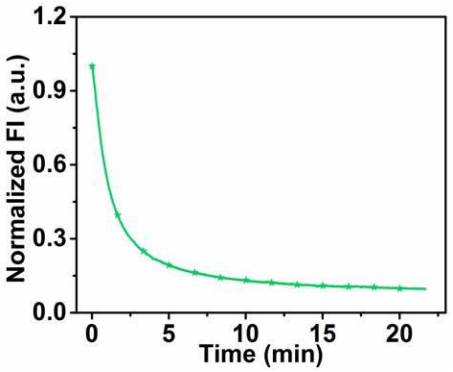

Figure S5. The reaction kinetics of AChE, ATCh and GS-AuNPs system at 800 nm emission.

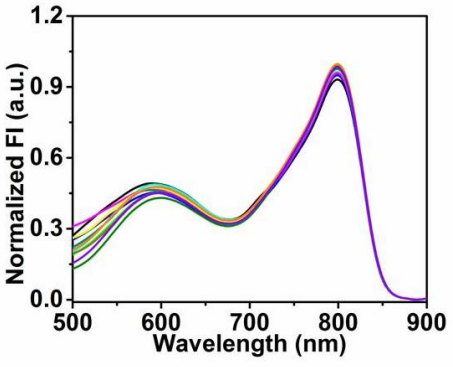

Figure S6. The influence of these ten pesticides upon the whole reaction system. (pesticides: 2 μg/mL, GS-AuNPs: 3 μL per 100 μL solution)