

Supporting Information for:

Chemiluminescence sensing of aminothiols in biological fluids using
peroxymonocarbonate-prepared networked gold nanoparticles

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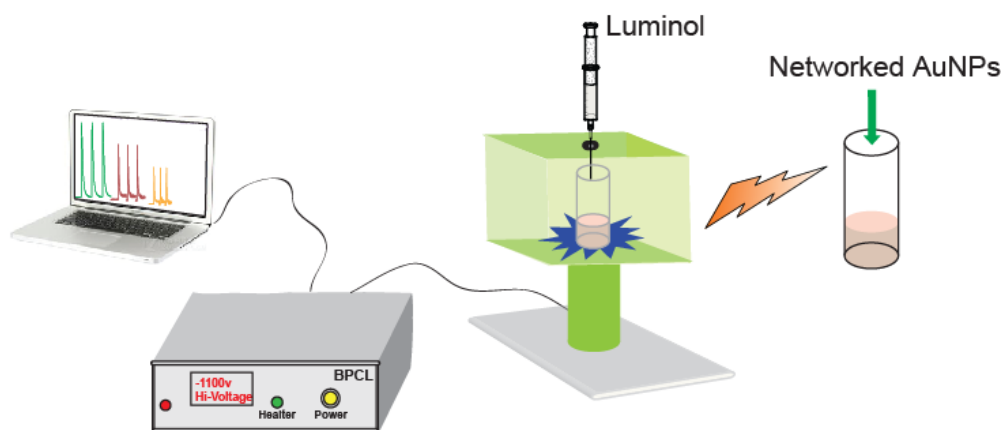


Fig. S1 Schematic diagram of the static injection CL method. The injection volume of the as-prepared spherical AuNP solution or basic luminol solution was 100 μ L.



Fig. S2 Pictures of the as-prepared AuNPs by the following solutions: (A), $\text{HAuCl}_4\text{-H}_2\text{O}_2\text{-NaHCO}_3\text{-FSN}$ with 30 s reaction time at 60°C ; (B), $\text{HAuCl}_4\text{-NaHCO}_3\text{-FSN}$ with 1 min reaction time at 60°C ; (C), $\text{HAuCl}_4\text{-H}_2\text{O}_2\text{-NaHCO}_3$ with 1 min reaction time at 60°C ; (D), another 12 hours incubation of (C) at room temperature without stirring; (E), $\text{HAuCl}_4\text{-H}_2\text{O}_2\text{-FSN}$ with 30 s reaction time at 60°C .

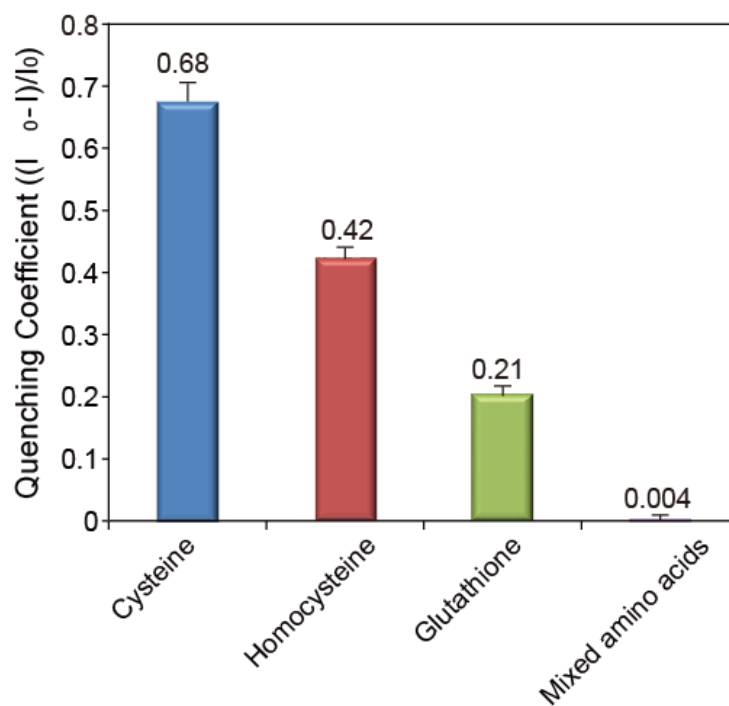


Fig. S3 The quenching coefficient of CL intensity by adding different compounds: 1.0 μ M cysteine, homocysteine, and glutathione; and mixed amino acids containing alanine, cystine, valine, histidine, asparagines, serine, aspartic acid, tryptophan, isoleucine, lysine, proline, methionine, tyrosine, arginine, threonine, leucine, phenylalanine, glutamic acid and glycine. Quenching coefficient = $(I_0 - I)/I_0$, where I_0 was the CL intensity in the absence of aminothiols and I was the CL intensity in the presence of aminothiols.

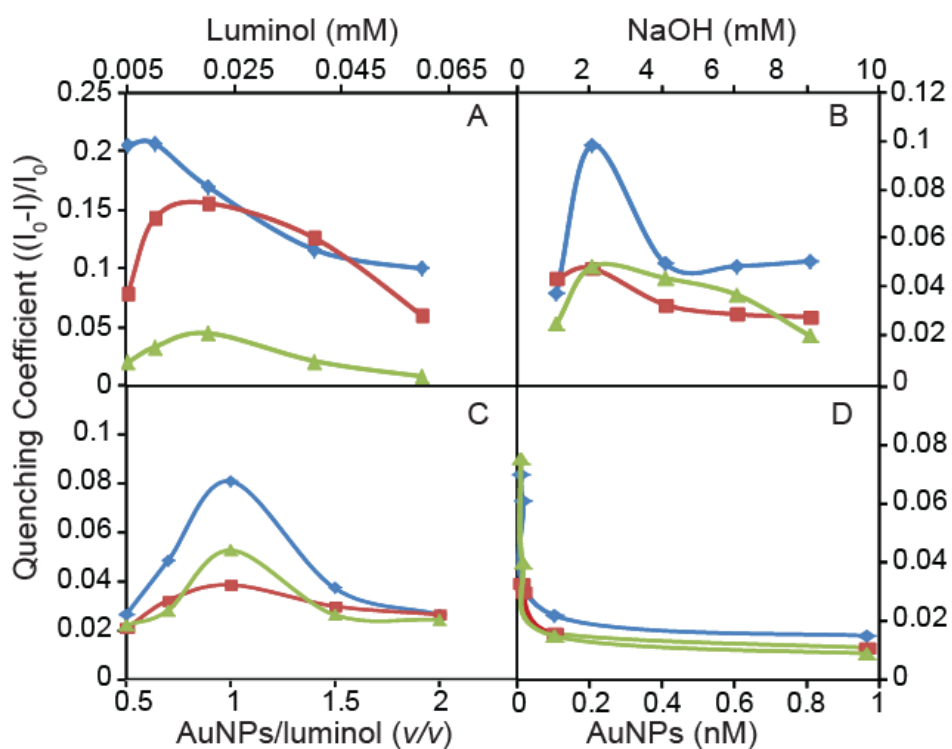


Fig. S4 Effects of the reaction conditions on the quenching coefficient of cysteine (\blacklozenge), homocysteine (\blacksquare) and glutathione (\blacktriangle) in the presence of the networked AuNPs: (A) concentration of luminol; (B) concentration of NaOH; (C) the volume ratio of the as-prepared spherical AuNPs to luminol; (D) concentration of the as-prepared spherical AuNPs. The injection volume of the as-prepared spherical AuNP solution or basic luminol solution was 100 μ L.