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 μL.
**Fig. S2** Pictures of the as-prepared AuNPs by the following solutions: (A), H\textsubscript{AuCl\textsubscript{4}}-H\textsubscript{2}O\textsubscript{2}-NaHCO\textsubscript{3}-FSN with 30 s reaction time at 60\textdegree C; (B), H\textsubscript{AuCl\textsubscript{4}}-NaHCO\textsubscript{3}-FSN with 1 min reaction time at 60\textdegree C; (C), H\textsubscript{AuCl\textsubscript{4}}-H\textsubscript{2}O\textsubscript{2}-NaHCO\textsubscript{3} with 1 min reaction time at 60\textdegree C; (D), another 12 hours incubation of (C) at room temperature without stirring; (E), H\textsubscript{AuCl\textsubscript{4}}-H\textsubscript{2}O\textsubscript{2}-FSN with 30 s reaction time at 60\textdegree C.
**Fig. S3** The quenching coefficient of CL intensity by adding different compounds: 1.0 μM 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** = \( \frac{(I_0 - I)}{I_0} \), 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 (---), homocysteine (---) and glutathione (---) 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 μL.