

Supporting Information for

Biothiols as chelators for preparation of
N-(aminobutyl)-N-(ethylisoluminol)/Cu²⁺
Complexes Bifunctionalized Gold
Nanoparticles and Sensitive Sensing of
Pyrophosphate Ion

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S1. Structural formulas of ABEI and N-(aminobutyl)-N-(ethylphthalate).

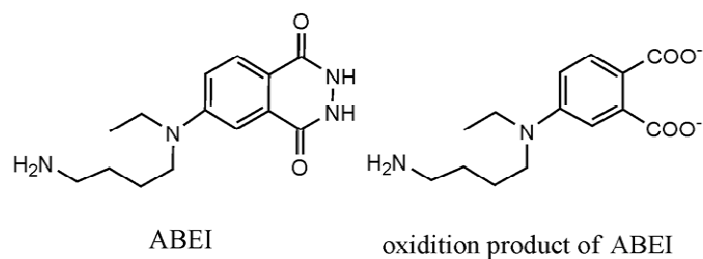


Figure S-1. Structural formulas of ABEI and its oxidation product N-(aminobutyl)-N-(ethylphthalate).

S2. Effect of pH of dispersion solution on CL intensity of Cu²⁺-Cys/ABEI-AuNPs.

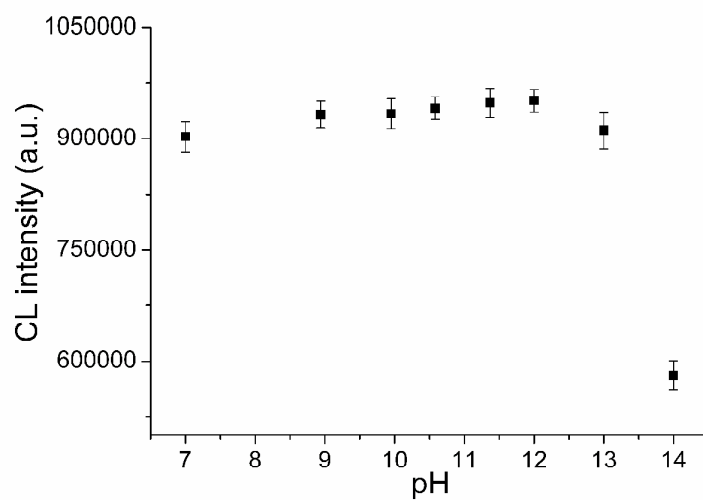


Figure S-2. The effect of pH of dispersion solution on the CL intensity of Cu²⁺-Cys/ABEI-AuNPs. Reaction conditions: 100 μ L 0.1 M H₂O₂ in 0.1 M NaOH (pH 13.0) was injected into 100 μ L Cu²⁺-Cys/ABEI-AuNPs dispersion in a microwell.

S3. A comparison of different chemosensors for the detection of PPI.

Table S-1

A comparison of the proposed CL chemosensor with other chemosensors for the detection of PPI.

Method	Sensing probe	Linear range (μM)	Detection limit (nM)	Reference
colorimetry	Au-NPs	0.13-1300	130	1
fluorescence	ISH ^a	1-6	1710	2
fluorescence	BSA-AuNCs	0.16-78.1	83	3
fluorescence	PDI-GlyAsp/Cu ²⁺	0.1-30	200	4
fluorescence	Tm(QS) ₃	0.16-10	23	5
fluorescence	AuNCs@GSH-Fe ⁺	50-500	28000	6
fluorescence	spiropyran	1.0-500	400	7
fluorescence	ZnCl ₂ L	0.02-0.18	0.8	8
CL	Pi	0.1-100	100	9
bioluminescence	ATP	0.76-6.0	624	10
CL	BF-AuNPs	0.01-100	3.6	this work

^a ISH, isophthaloyl salicylaldehyde hydrazone

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