Supplementary Information

for

One-pot hydrothermal synthesis of orange fluorescent silver nanoclusters as a general probe for sulfides

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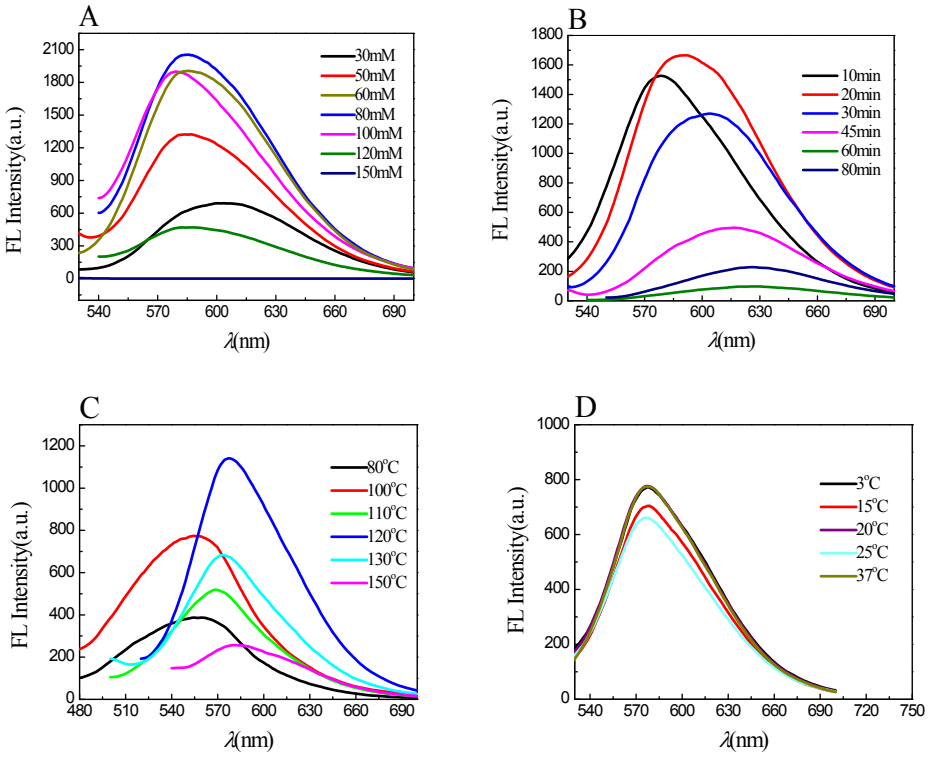

Fig. S1 Relationship between fluorescence properties of PMAA-AgNCs and conditions: (A).the concentration of Ag^{+}, (B).reaction time, (C).reaction temperature, (D).mixing temperature.

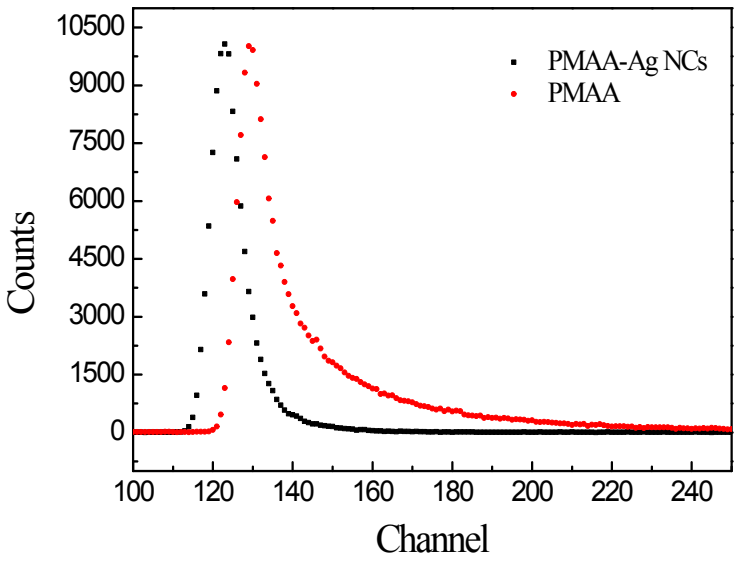

Table 1 Fluorescence lifetimes calculated with two exponential fit of the photoluminescence decays of PMAA-AgNCs

	□□□ns□	□□□ns□	A_1%	A_2%	□□ns□
PMAA	0.996	6.97	47.52	52.48	4.13
PMAA-Ag NCs	0.604	1.75	74.04	25.96	0.902

Fig. S2 The fluorescence decay curves of PMAA (red) and PMAA-Ag NCs (black).

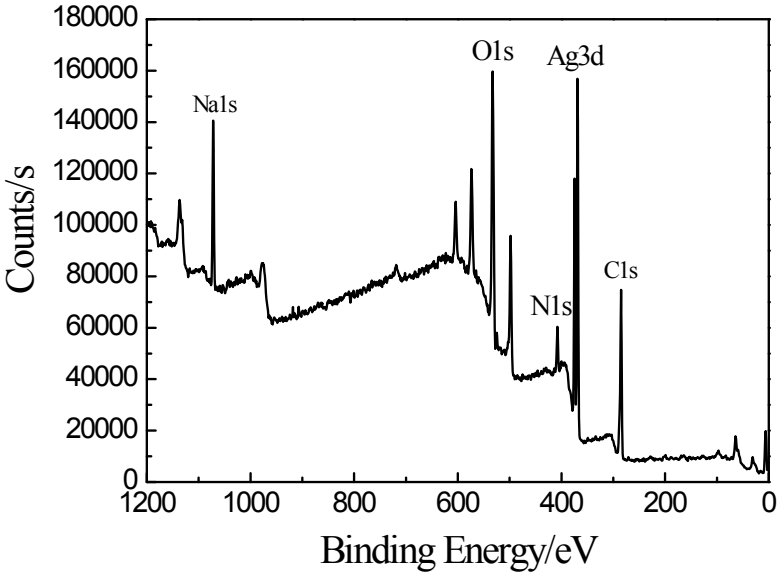

Fig. S3 The XPS of as-prepared PMAA-AgNCs.

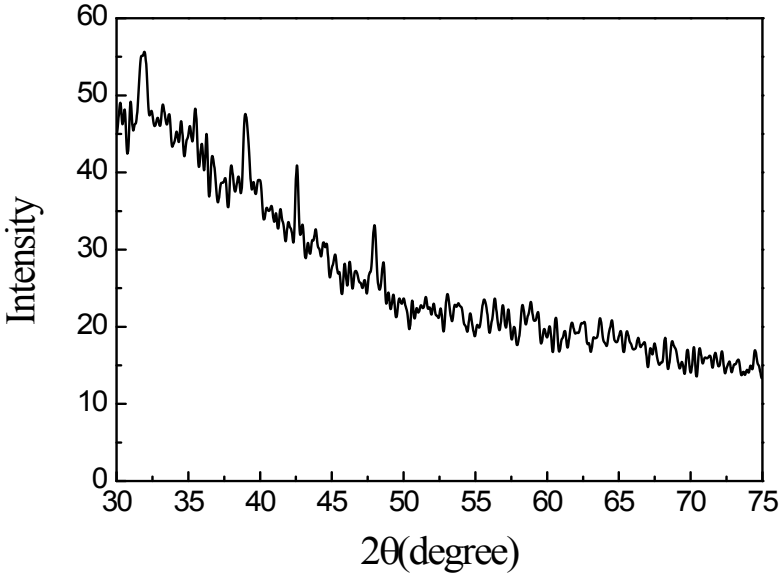

Fig. S4 The XRD of as-prepared PMAA-AgNCs.

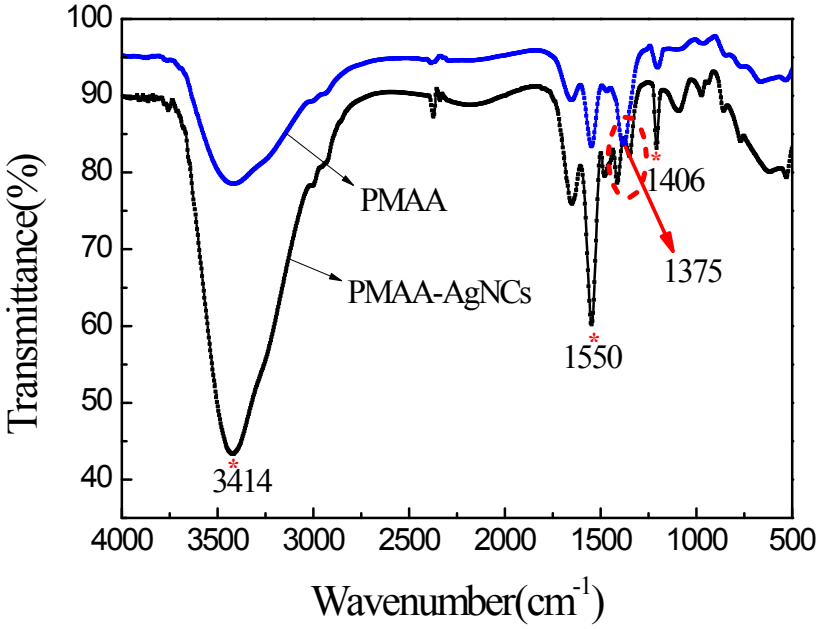

Fig. S5 The FTIR spectrum of the as-prepared PMAA-AgNCs.

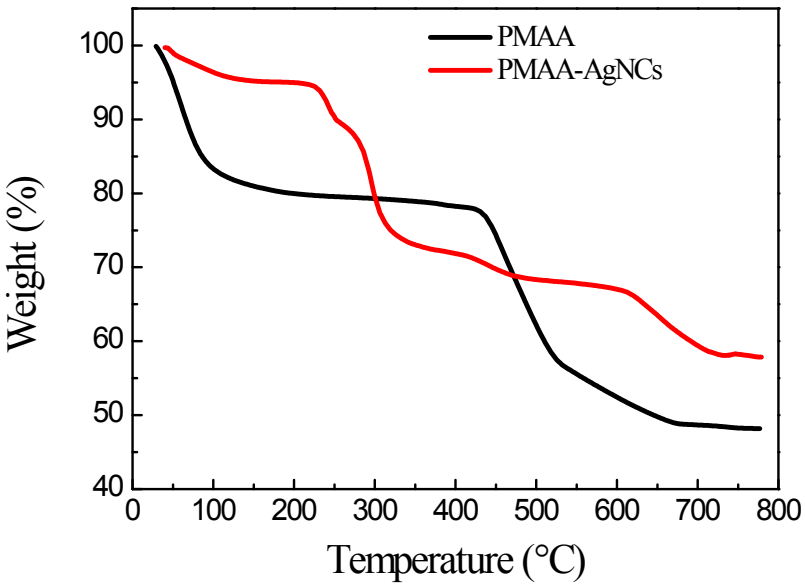

Fig. S6 The TGA analysis of PMAA and as-prepared PMAA-AgNCs in air.

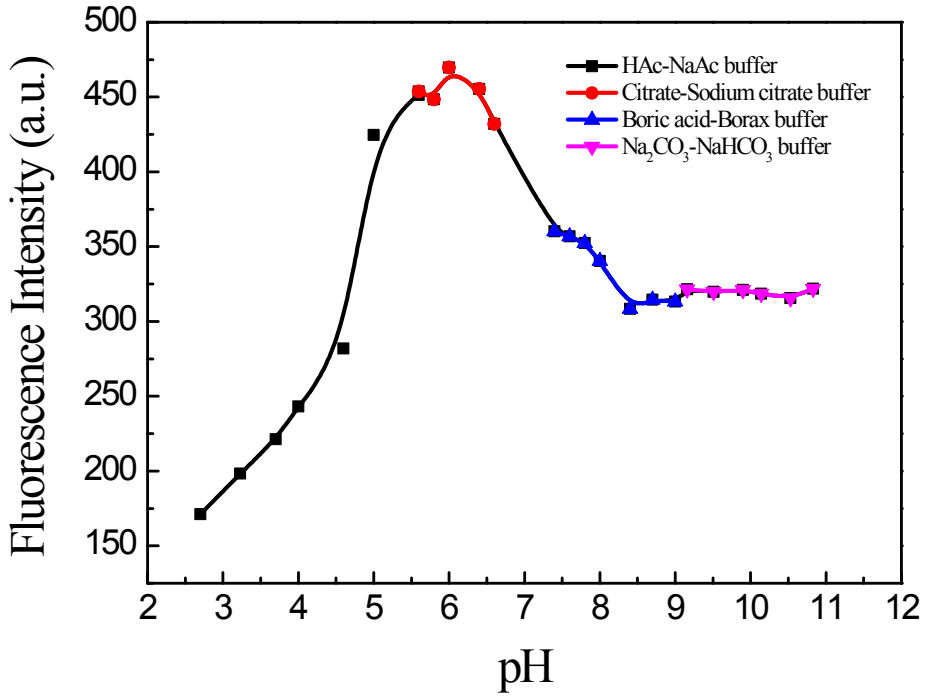

Fig. S7 Fluorescence intensity of PMAA-templated AgNCs measured at 579 nm for different pH.

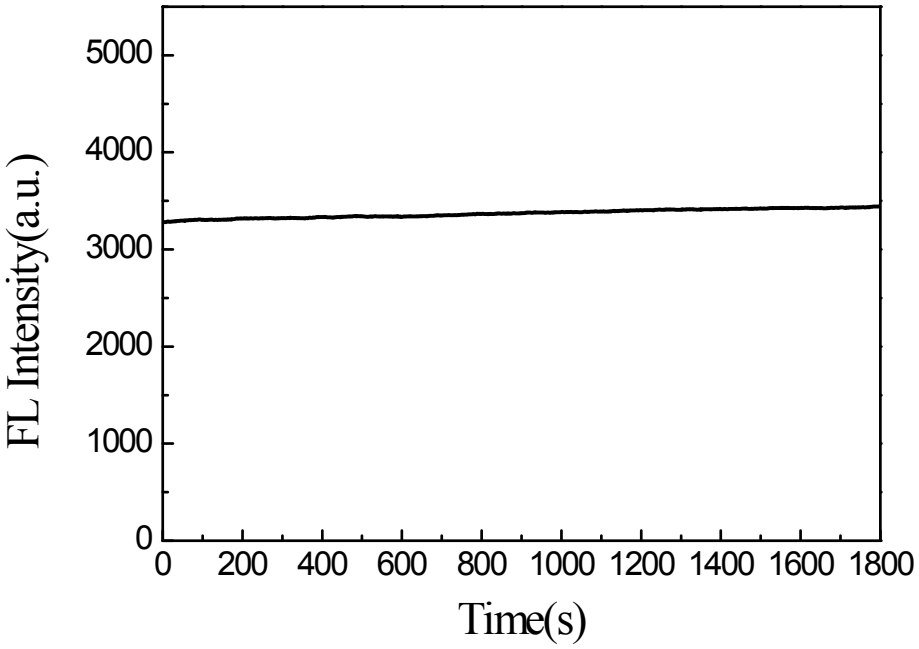

Fig. S8 Fluorescence intensity of PMAA-templated Ag NCs measured at 579 nm for continuous excitation.

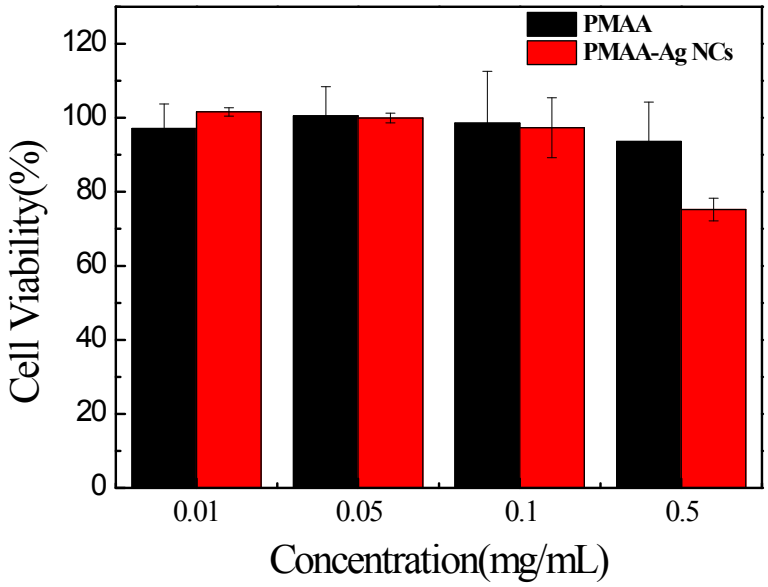

Fig. S9 Cellular toxicity of AgNCs (Cell viability by Hep-2).

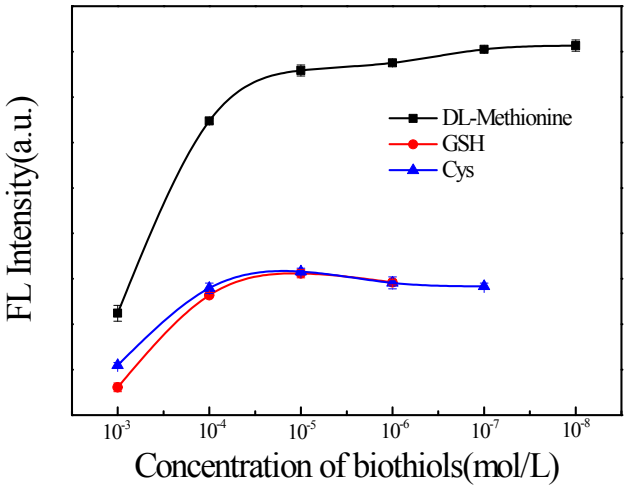

Fig. S10 The fluorescence emission spectra of the as-prepared PMAA-AgNCs in the presence of biothiols with various concentrations.

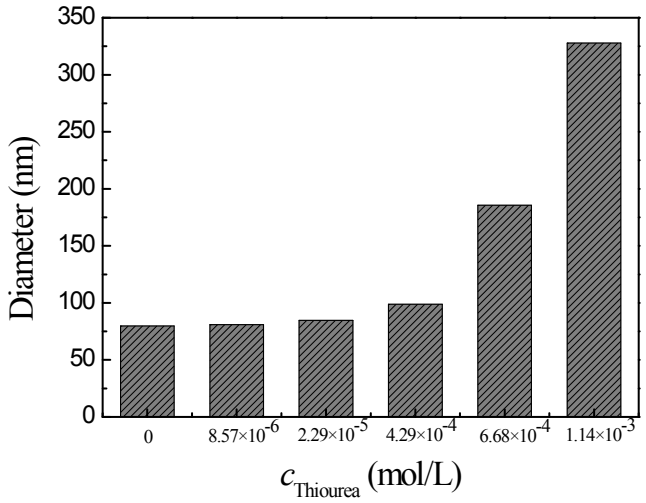

Fig. S11 The average hydrodynamic diameter of AgNCs without and with different concentrations of thiourea.

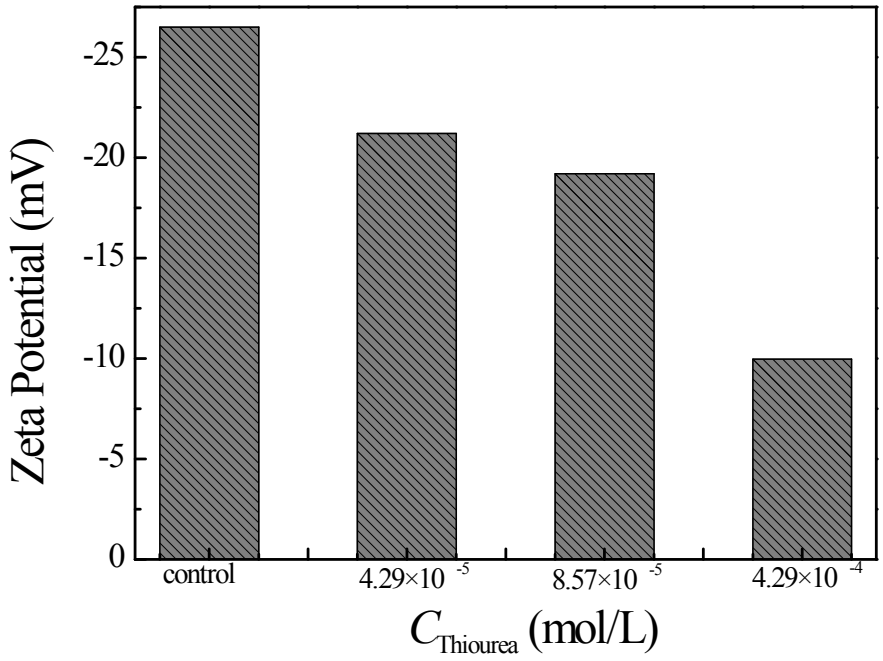

Fig. S12 The zeta potentials of PMAA-AgNCs without and with different concentrations of thiourea.