Supporting Information

Yolk–shell structured Au@Ag@mSiO₂ as probe for sensing of cysteine enantiomers and Cu²⁺ based on circular dichroism

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Figure S1 UV-Vis absorption spectra of the Au@Ag@mSiO₂ and YS-Au@Ag@mSiO₂.



Figure S2 CD spectra of the pure L/D-Cys solutions.



Figure S3 CD spectra of the Au@Ag@mSiO₂-L-Cys and YS-Au@Ag@mSiO₂-L-Cys.



Figure S4 (a) CD spectra of the YS-Au@Ag@mSiO₂ responded to different concentration of D-Cys. D-Cys molecules reached saturated adsorption on the surface Au@Ag when the concentration of L-Cys was ~90 μM. (b) Linear relationship between the CD intensity (258 nm) and concentration of D-Cys.



Figure S5 CD spectra of the YS-Au@Ag@mSiO $_2$ with different composition of L-Cys.



Figure S6 UV-Vis absorption spectra of the YS-Au@Ag@mSiO₂ responded to different concentration of Cu^{2+} (1, 5, 10, 25, 50, 100 and 250 nM, respectively).



Figure S7 The evolutions of CD spectra of the YS-Au@Ag@mSiO₂ in the presence of various metal ions.