

Supporting Information

L-Aspartic Acid Capped CdS Quantum Dots as a High Performance Fluorescence Assay for Silver Ions (I) Detection

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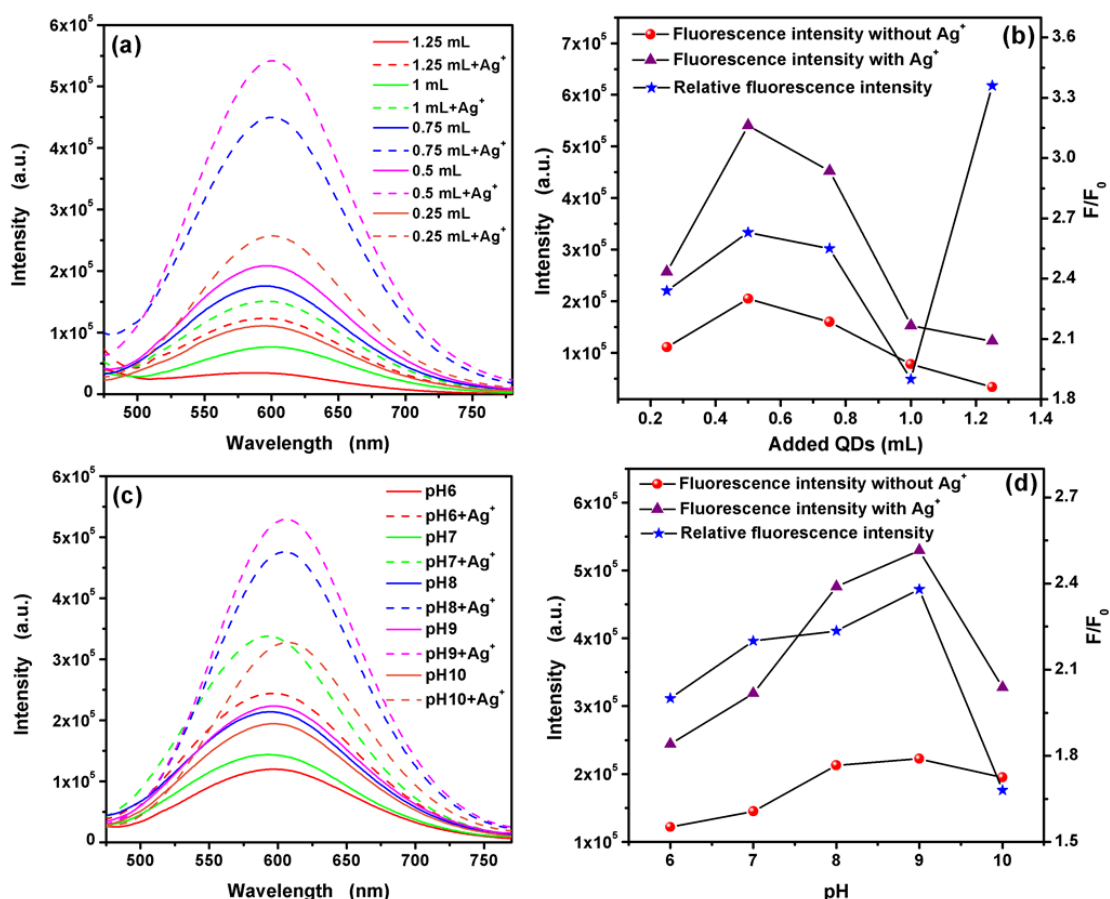


Figure S1. (a) Fluorescence spectra at different volumes of L-Asp@CdS QDs in buffer solution at pH 9 and (b) fluorescence intensity without (red) and with (violet) 10 μM Ag^+ , and the relative fluorescence intensity of volume dependence (blue) of L-Asp@CdS QDs, (c) effect of pH on the fluorescence intensity and (d) fluorescence intensity without (red) and with (violet) 10 μM Ag^+ , and relative fluorescence intensity of pH dependence (blue) of L-Asp@CdS QDs.

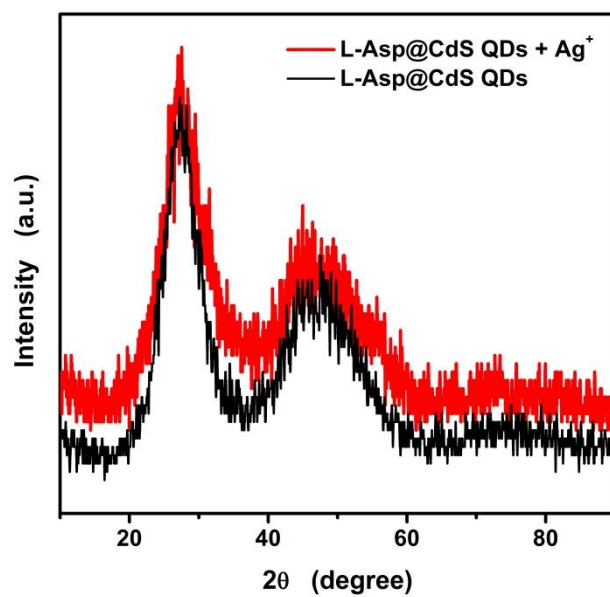


Figure S2. XRD patterns of L-Asp@CdS QDs in the absence and presence of Ag^+ ions.

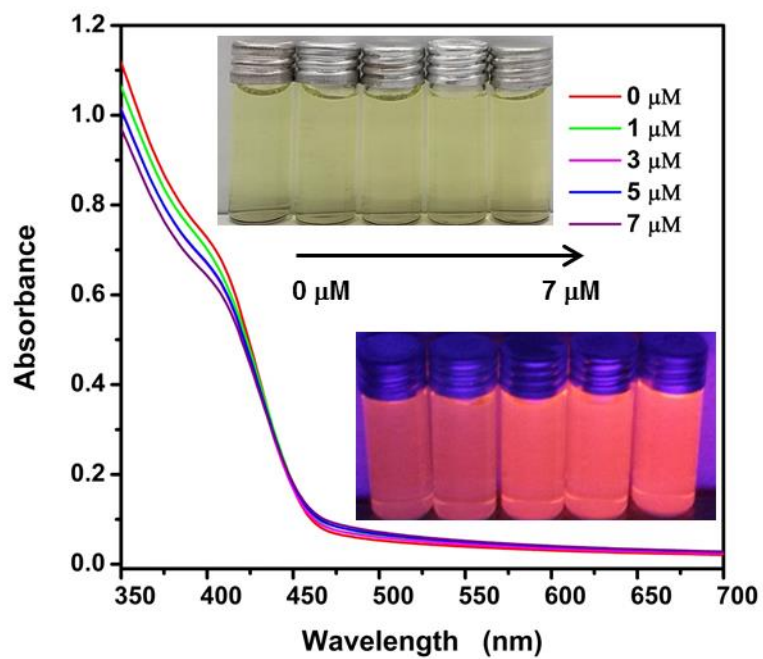


Figure S3. UV-vis absorption spectra of L-Asp@CdS QDs in the presence of various concentrations of Ag^+ ions, inset, the photographs under exposure of white and UV (365 nm) light.

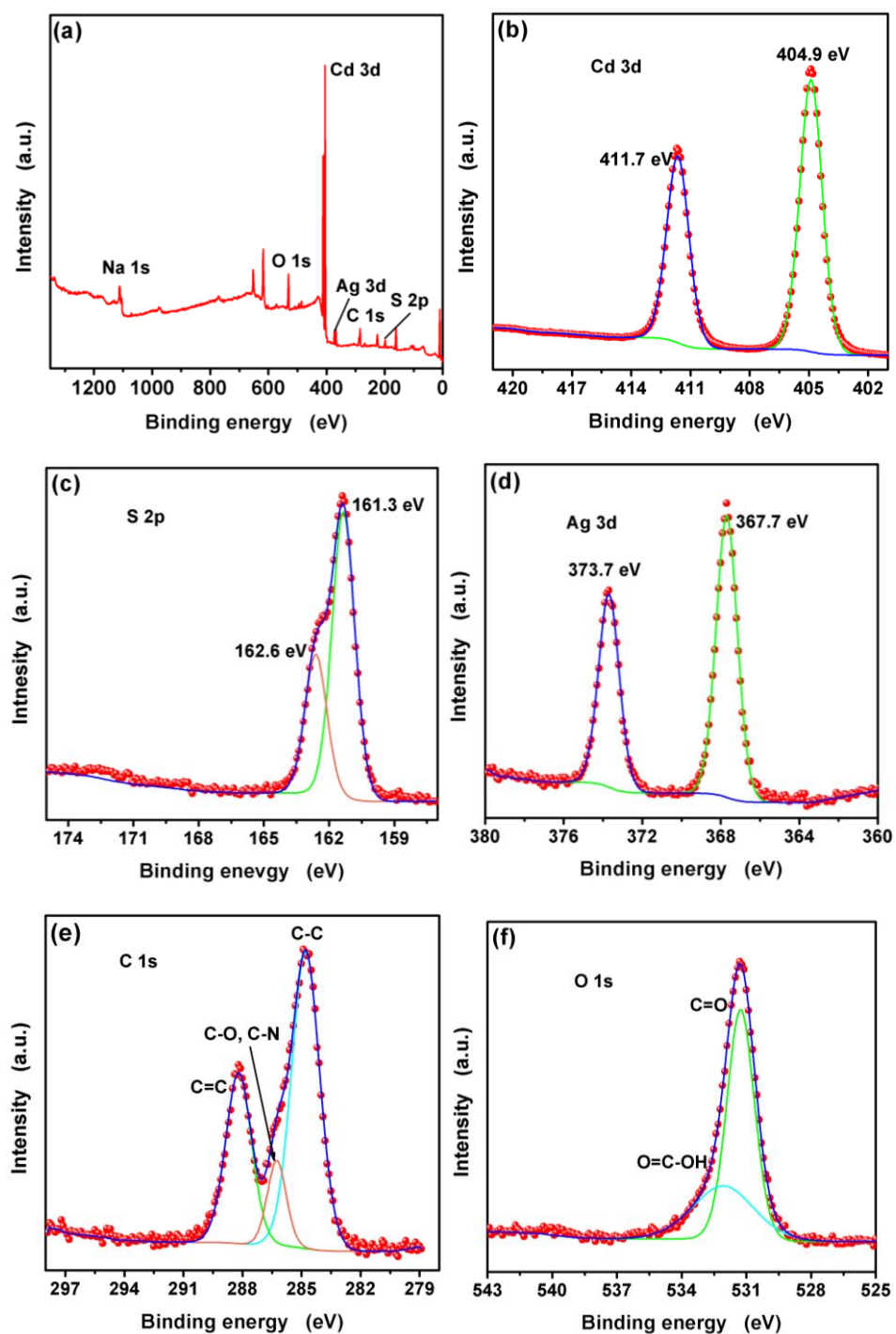


Figure S4. XPS spectra of the L-Asp@CdS QDs upon addition of Ag⁺ ions: (a) survey, (b) Cd 3d spectrum, (c) S 2p spectrum, (d) Ag 3d, (e) C 1s and (f) O 1s spectrum.

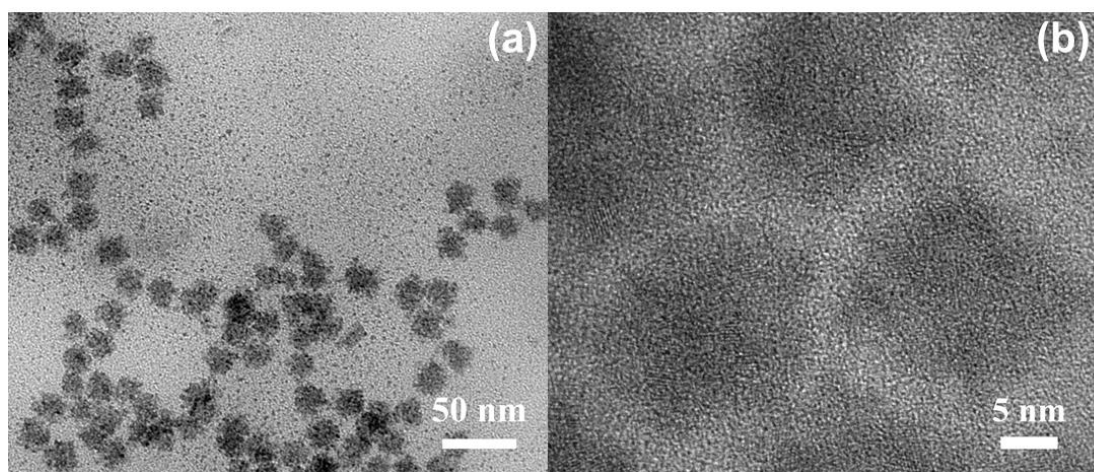


Figure S5. The TEM and HRTEM images of L-Asp@CdS QDs upon addition of Ag⁺ ions.

Table S1. The information of Yunnan Spring.

Mineral composition (mg/L)		Total dissolved solids (mg/L)	pH
H ₂ SiO ₃	20.0–60.0	45.0–150.0	6.5–8.5
Ca ²⁺	3.0–15.0		
Mg ²⁺	0.03–5.0		