Supplementary Information for
“Synthesis and enhanced fluorescence of Ag doped CdTe semiconductor quantum dots”

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Figure S1. Absorption spectra of the undoped CdTe and CdTe:Ag (0.3%, 0.6%, 1%, 2%, 3%, and 6%) SQDs with the reaction time of 4 h.
Figure S2. (a) Fluorescence spectra of the CdTe and CdTe:Ag (1×10⁻⁶, 5×10⁻⁶, 1×10⁻⁵, 5×10⁻⁵, 1×10⁻⁴, 5×10⁻⁴, 1×10⁻³, 5×10⁻³, 1×10⁻², 5×10⁻², and 1×10⁻¹ M) SQDs with the reaction time of 4 h. (b) Fluorescence peak intensity of CdTe:Ag SQDs as a function of the concentration of doped Ag. The fluorescence intensity of the CdTe:Ag SQDs reach the maxima at 1×10⁻² M.
Figure S3. (a-h) Time-resolved fluorescence of the CdTe and CdTe:Ag (0.3%) SQDs with the reaction time at $t_{\text{react}} = 1, 2, 3, 4, 5, 6, 7$, and $8 \text{ h.}$
**Figure S4.** (a) Fluorescence spectra of the CdTe:Ag (0.3%) SQDs ($t_{\text{react}} = 2$ h) before (red line) and after passivation (blue line). (b) Normalized time-resolved fluorescence decay traces of the CdTe:Ag (0.3%) SQDs ($t_{\text{react}} = 2$ h) before (red line) and after passivation (blue line). After surface passivation (simply placing the synthesized samples in the dark room for 1 week), the fluorescence peak blue-shifts 44 meV, the fluorescence intensity increases 2.2 times, and the fast decay process caused by the surface trapping is eliminated.