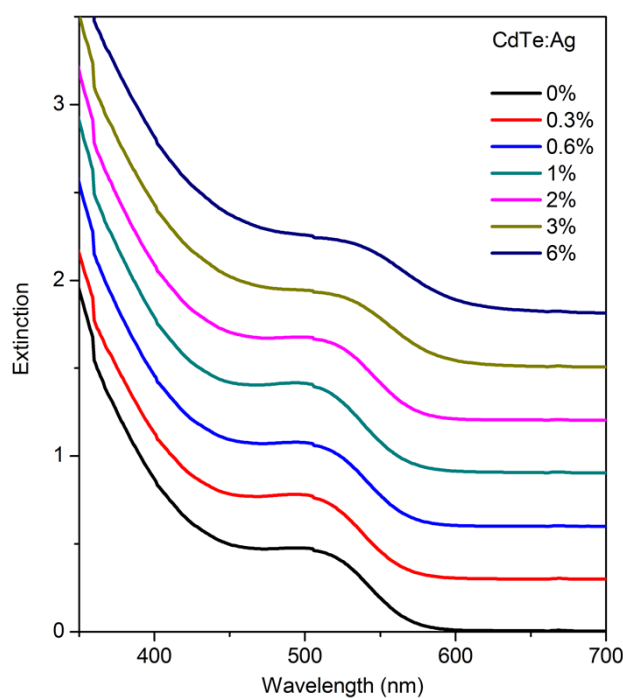


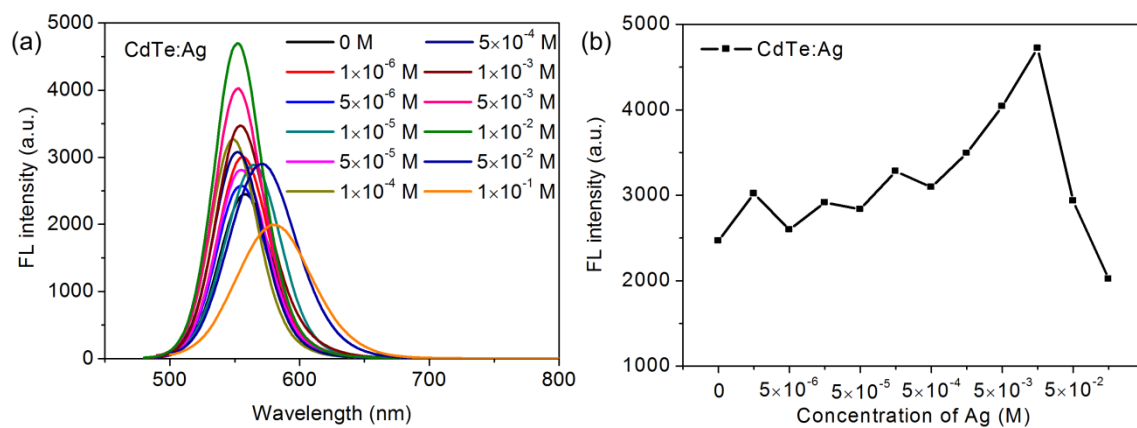
Supplementary Information for  
“Synthesis and enhanced fluorescence of Ag doped CdTe semiconductor  
quantum dots”

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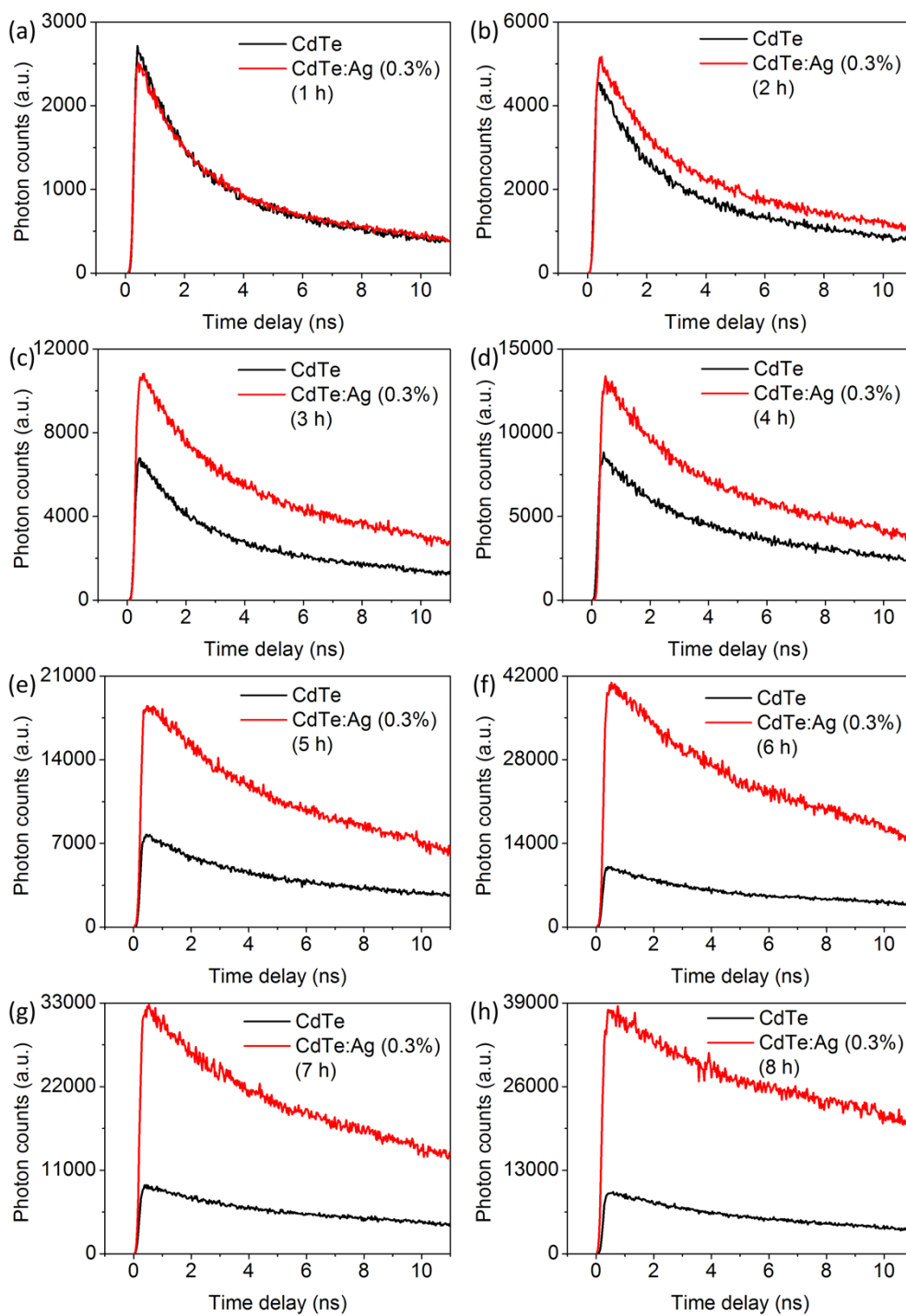
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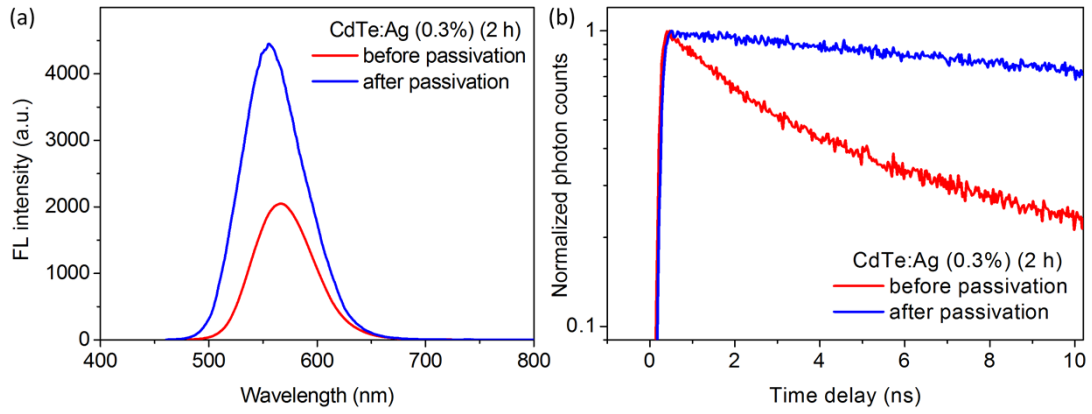
**Figure S1.** Absorption spectra of the undoped CdTe and CdTe:Ag (0.3%, 0.6%, 1%, 2%, 3%, and 6%) SQDs with the reaction time of 4 h.



**Figure S2. (a)** Fluorescence spectra of the CdTe and CdTe:Ag ( $1 \times 10^{-6}$ ,  $5 \times 10^{-6}$ ,  $1 \times 10^{-5}$ ,  $5 \times 10^{-5}$ ,  $1 \times 10^{-4}$ ,  $5 \times 10^{-4}$ ,  $1 \times 10^{-3}$ ,  $5 \times 10^{-3}$ ,  $1 \times 10^{-2}$ ,  $5 \times 10^{-2}$ , and  $1 \times 10^{-1}$  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  $1 \times 10^{-2}$  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  $8$  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.