Electronic Supplementary Material (ESI) for RSC Advances.

Investigation the interaction between protamine sulfate and CdTe quantum dots with spectroscopic techniques

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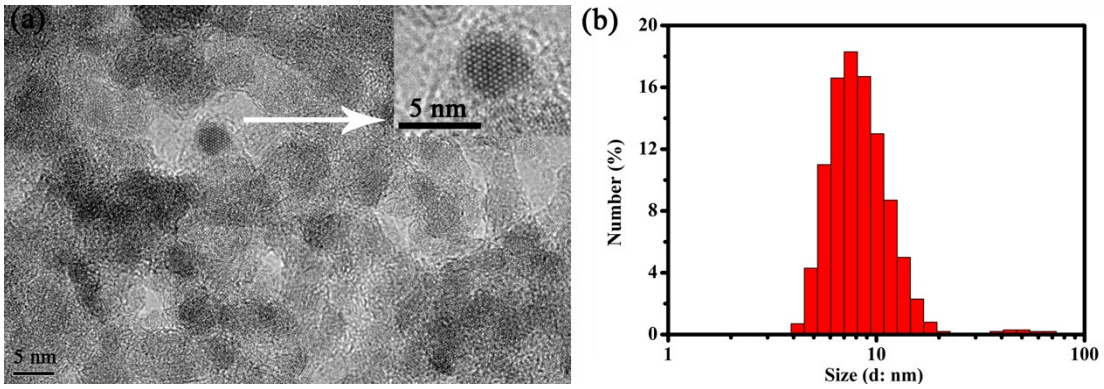

Fig. S1 HRTEM image (a) and dynamic light scattering histogram (b) of the as-prepared 545 nm CdTe QDs.

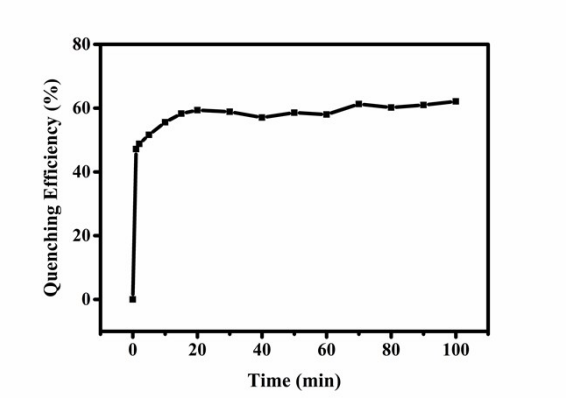

Fig. S2 The effect of incubation time on the interaction of CdTe QDs with protamine sulfate at 298K, pH 7.4.

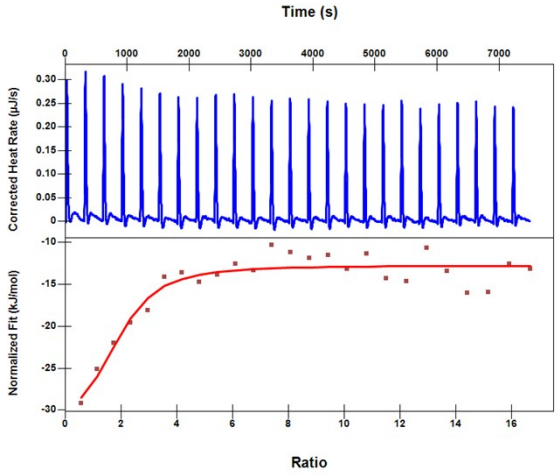

Fig. S3 Calorimetric titration of 545 nm CdTe QDs by protamine sulfate at 298 K, pH 7.4. (A) The corrected heat flow for each injection of 1.9 μL of 1.4×10^{-4} M protamine sulfate into 166 μL of 2.8×10^{-6} M QDs as a function of time. (B) The integrated corrected heats in each injection as a function of the molar ratio of protamine sulfate to QDs.

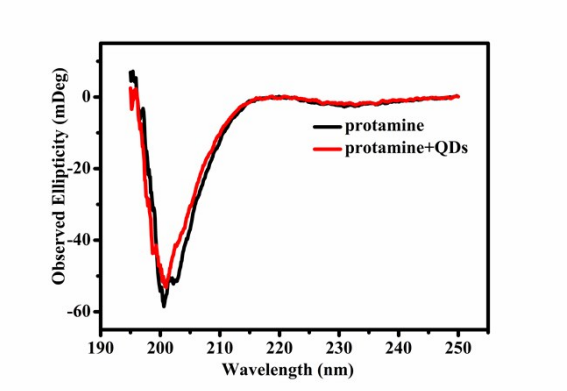

Fig. S4 The CD spectra of protamine in the absence and presence of QDs at 293K, pH 7.4. The concentrations of protamine and QDs were fixed at 1.2×10^{-4} M and 7.7×10^{-7} M, respectively.

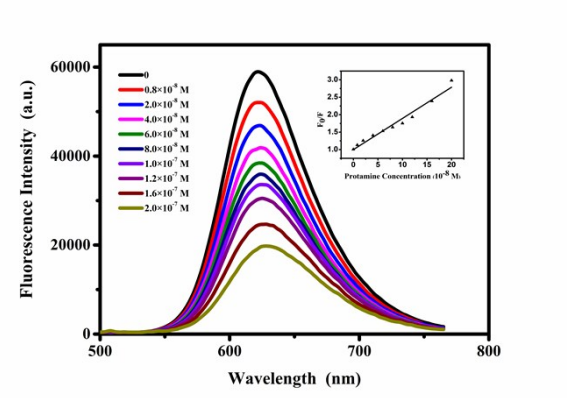

Fig. S5 The effect of protamine sulfate concentrations on fluorescence spectra of 620 nm QDs and the corresponding Stern-Volmer plot (inset) at 298K, pH 7.4. The concentration of QDs was fixed at 4.0×10^{-7} M and the concentrations of protamine sulfate were 0 to 2.0×10^{-7} M, respectively.

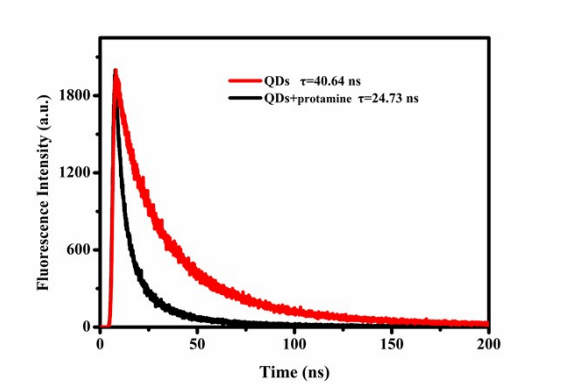

Fig. S6 Fluorescence decay curves of 620 nm QDs in the absence and presence of protamine sulfate at 298K, pH 7.4.