Supporting Information

Electrostatically Driven Self-Assembly of CdTe Nanoparticles with Organic Chromophores Probed via Ham Effect

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1. DLS & Zeta Measurements of CdTe QDs

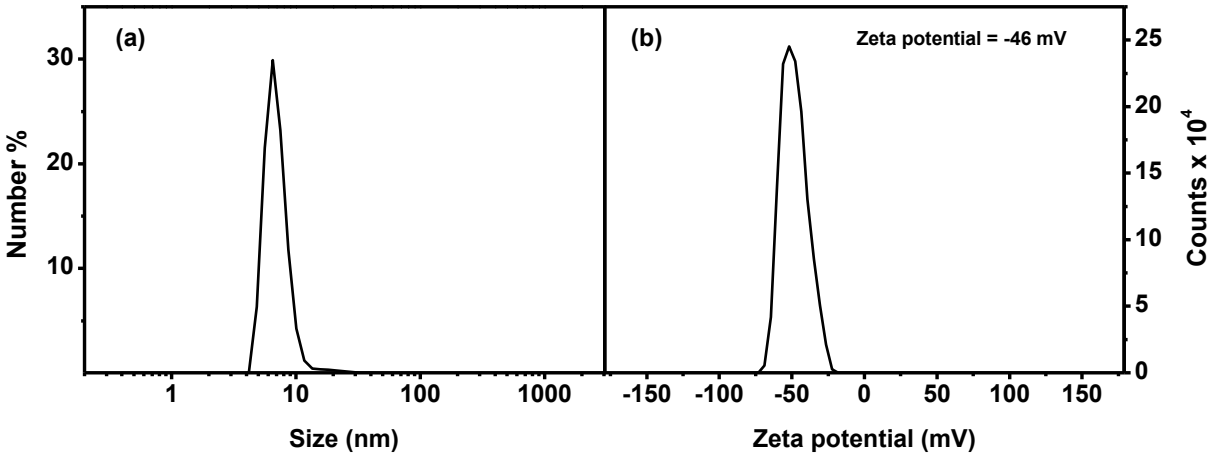

Figure S1. DLS data showing (a) size distribution curve and (b) zeta potential curve for CdTe@TGA nanoparticles

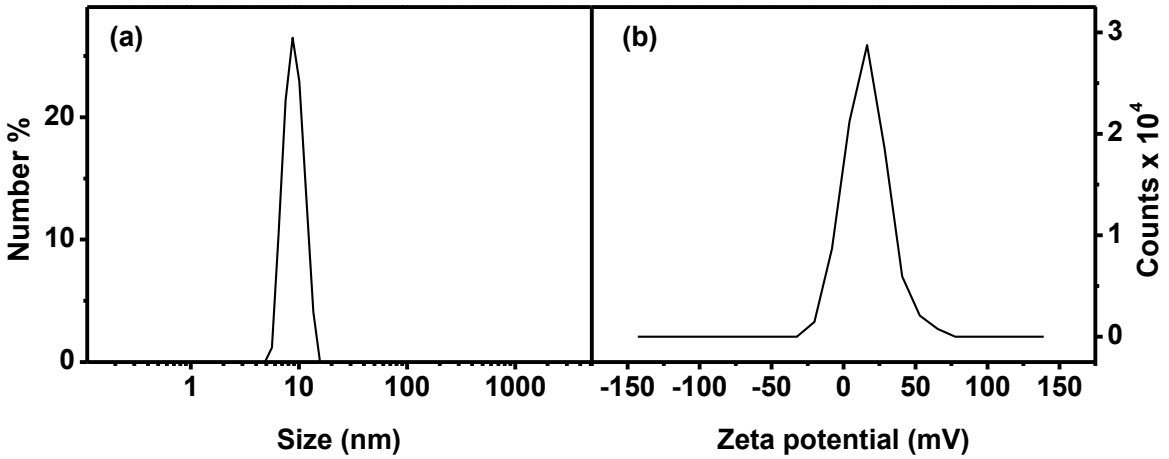

Figure S2. DLS data showing (a) Size distribution curve and (b) zeta potential curve for CdTe@Cyst nanoparticles

2. Emission spectra of PMAH in water and cyclohexane

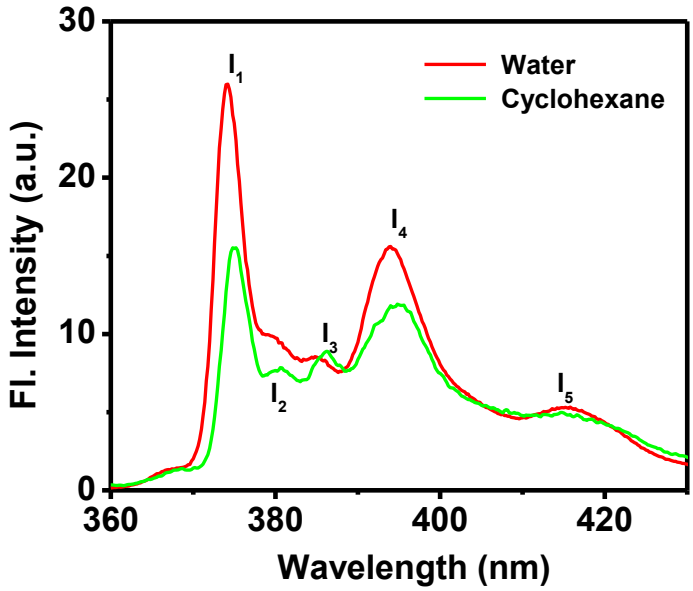

Figure S3. Emission spectra of PMAH in water (red) and cyclohexane (green) recorded after exciting at 340 nm. The I_3/I_1 values were estimated to 0.33 and 0.58 respectively in water and cyclohexane.

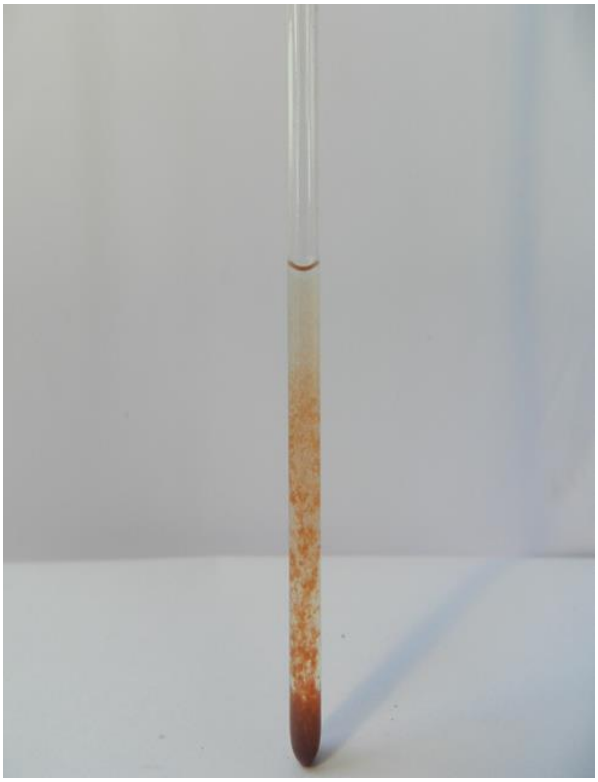

Figure S4. Photograph of the NMR tube showing the formation of precipitates when CdTe@TGA and PMAH were mixed in millimolar concentrations.

3. Absorption spectra of TGA in water

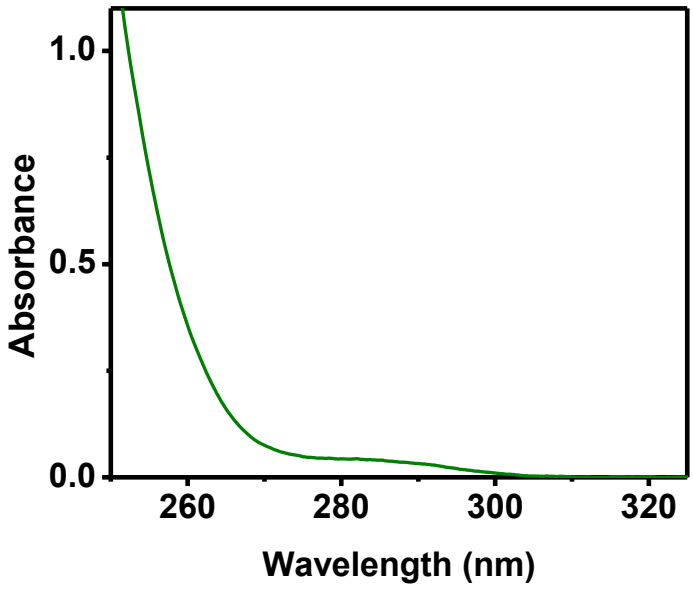

Figure S5. Absorption spectrum of 3 mM thioglycolic acid (TGA) in water.

4. Absorption spectra of PMAH in presence of CdTe@TGA QDs

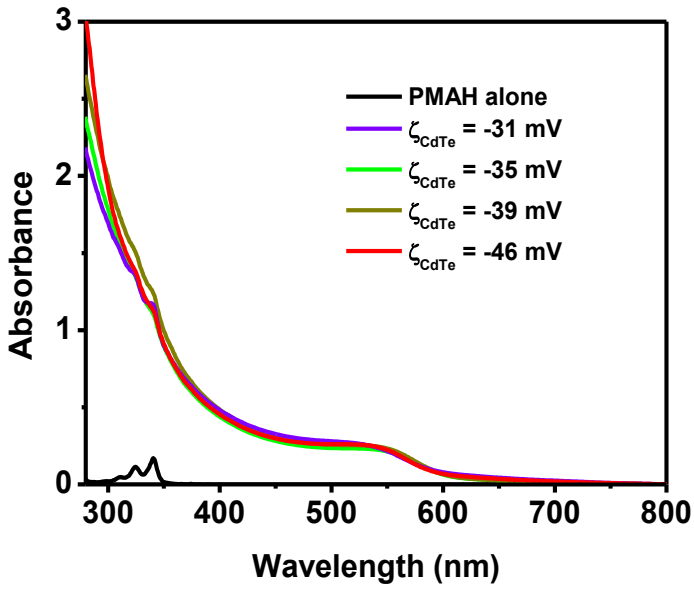

Figure S6. Absorption spectra of 2.5 µM PMAH in presence of CdTe@TGA nanoparticles having different surface charges and same optical density.

5. Interaction of positively charge CdTe QDs with pyrene chromophores

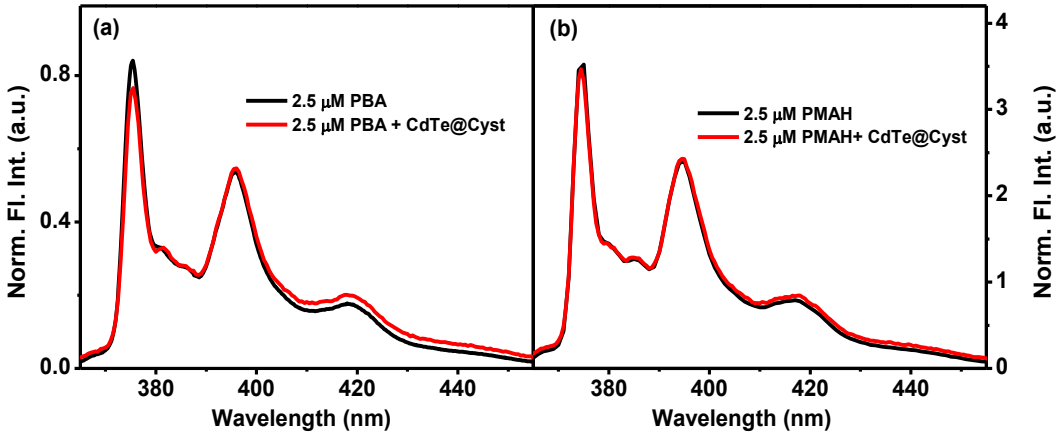

Figure S7. (a) Normalized fluorescence spectrum of 2.5 μM pyrene butyric acid in the absence (black) and presence (red) of cysteamine capped CdTe nanoparticles.(b) Normalized fluorescence spectrum of 2.5 μM PMAH in the absence (black) and presence (red) of cysteamine capped CdTe nanoparticles

6. Morphological Characterization of Nano hybrids

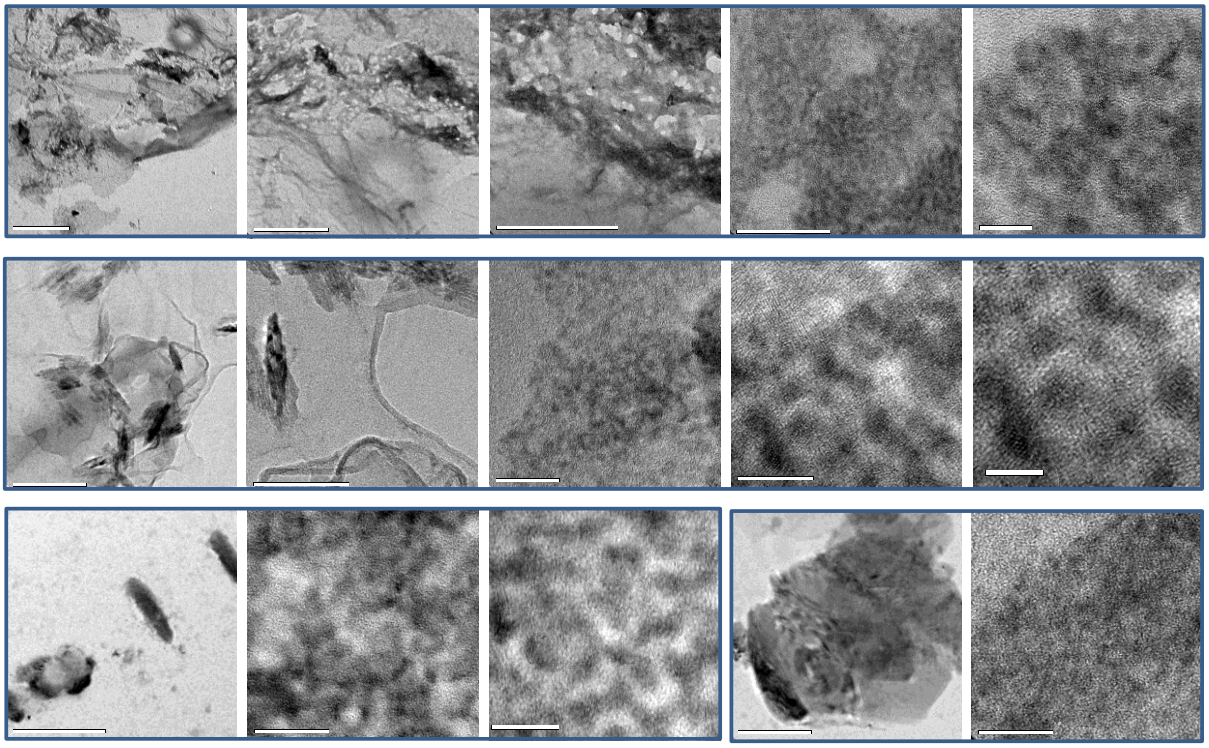

Figure S8. Typical TEM micrographs of various types of sheet like morphologies observed for CdTe@TGA:PMAH Nanohybrids; the higher magnifications images shows that these superstructures are composed of nonfused CdTe nanocrystals.

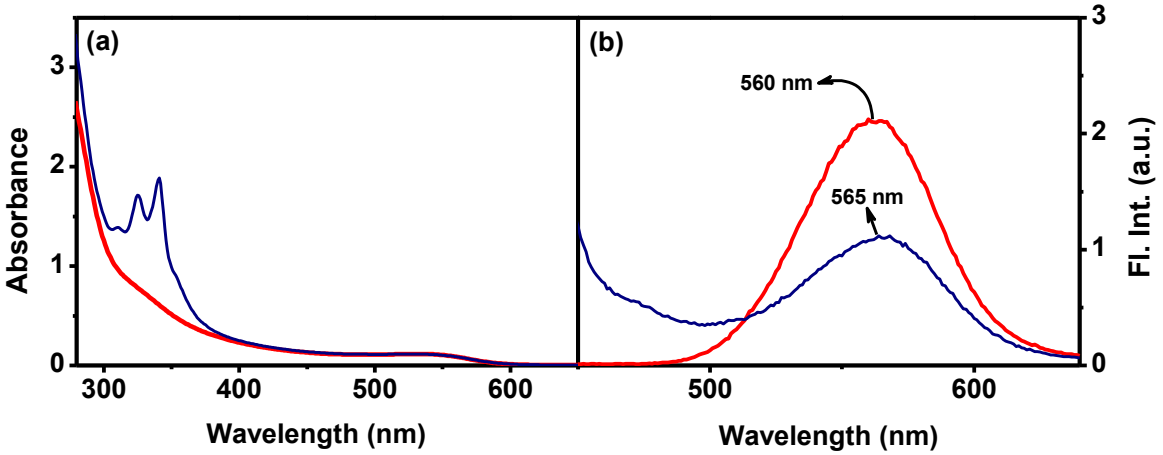

Figure S9. (a) Absorption and Emission spectra of CdTe@TGA nanoparticles in the absence (red) and presence of 30 μM PMAH.

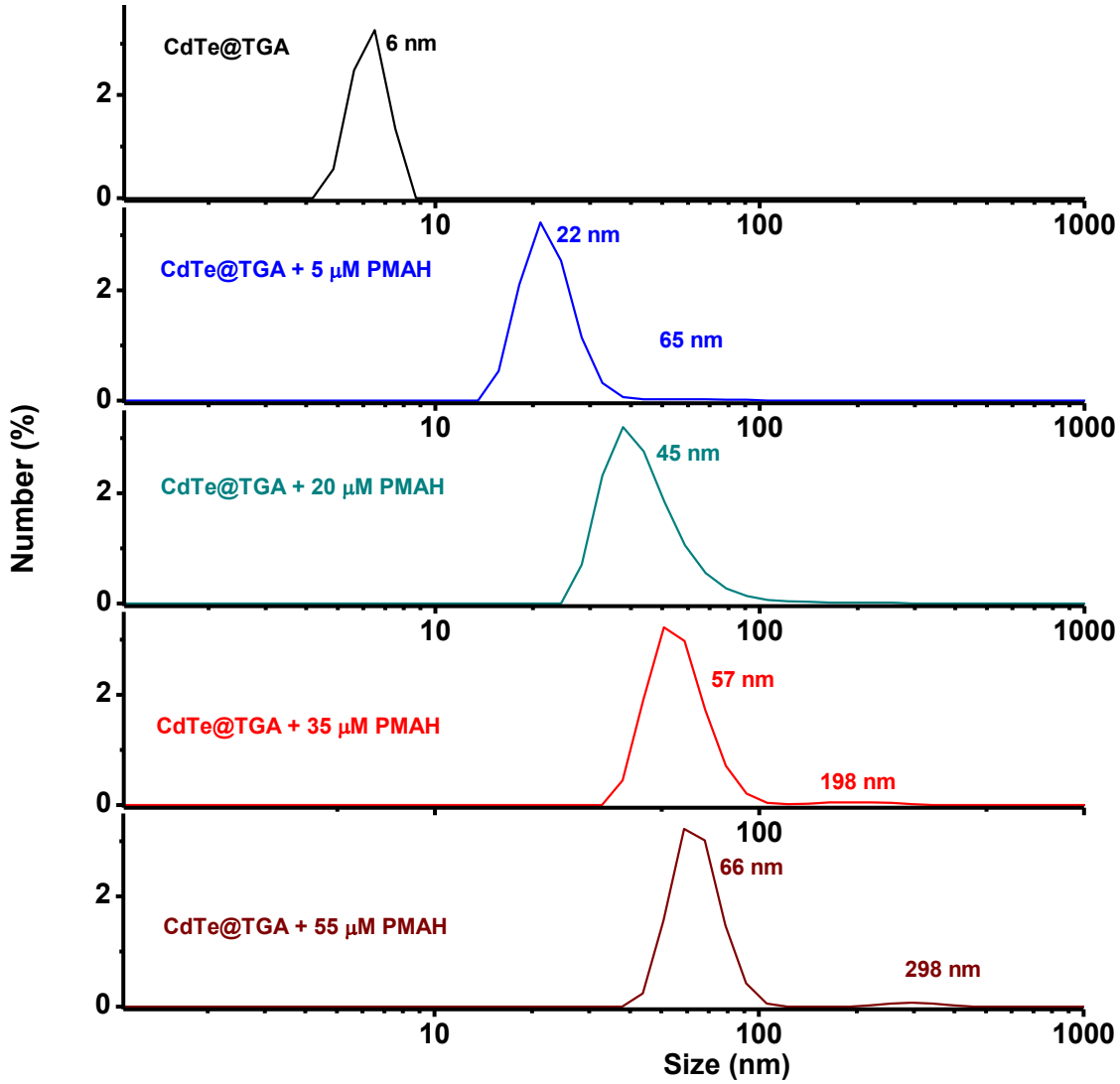

Figure S10. DLS data showing the variation of the size of the agglomerates in presence of increasing concentrations of PMAH