Supporting Information

Amphibious Polymer-Functionalized CdTe Quantum Dots: Synthesis, Thermo-responsive Self-assembly, and Photoluminescent Properties

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Figure caption

Fig. S1 (a) FTIR spectra of pristine QDs, QD@PDMAEMA and neat PDMAEMA. (b) 1H NMR spectrum of QD@PDMAEMA3 in D2O.

Fig. S2 Representative TEM images of QD@PDMAEMA by dropping a sample onto the Cu grid at room temperature (a), 30 °C (b), 40 °C under higher magnification (c) and lower magnification (d).

Fig. S3 Dynamic light scattering (DLS) plots of QD@PDMAEMA4 at 28 (a), 32 (b), 34 (c), 36 (d), 38 (e), and 42 °C (f) during the heating process, and at 35 (g) and 32 °C (h) during the cooling process.

Fig. S4 (a) TGA curves of pristine SiO2 and SiO2-NH2, (b) FTIR spectra of pristine SiO2, SiO2-NH2, and SiO2 spheres after one LbL assembly cycle of PAANa/QD@PDMAEMA (Designed as SiO2–QD@PDMAEMA).
**Fig. S1** (a) FTIR spectra of pristine QDs, QD@PDMAEMA and neat PDMAEMA. (b) $^1$H NMR spectrum of QD@PDMAEMA3 in D$_2$O.
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Fig. S3 Dynamic light scattering (DLS) plots of QD@PDMAEMA4 at 28 °C (a), 32 °C (b), 34 °C (c), 36 °C (d), 38 °C (e), and 42 °C (f) during the heating process, and at 35 °C (g) and 32 °C (h) during the cooling process.
Fig. S4 (a) TGA curves of pristine SiO$_2$ and SiO$_2$-NH$_2$, (b) FTIR spectra of pristine SiO$_2$, SiO$_2$-NH$_2$, and SiO$_2$ spheres after one LbL assembly cycle of PAANa/QD@PDMAEMA (Designed as SiO$_2$–QD@PDMAEMA).