Supporting Information

Reconstitution of bacteriorhodopsin with cationic poly (dimethylaminoethyl acrylate)-block-poly (methylacrylate) for bio-hybrid materials

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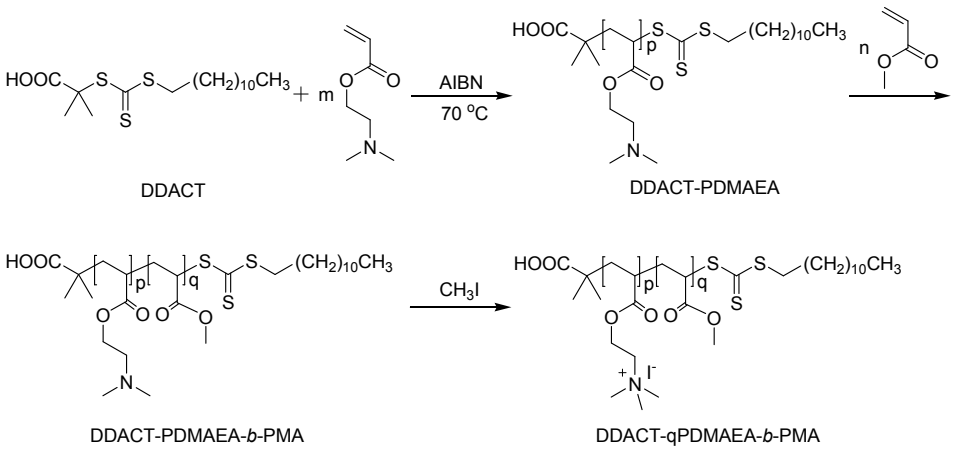

Scheme S1. Synthetic route of cationic amphilphilic copolymer by RAFT procedure.

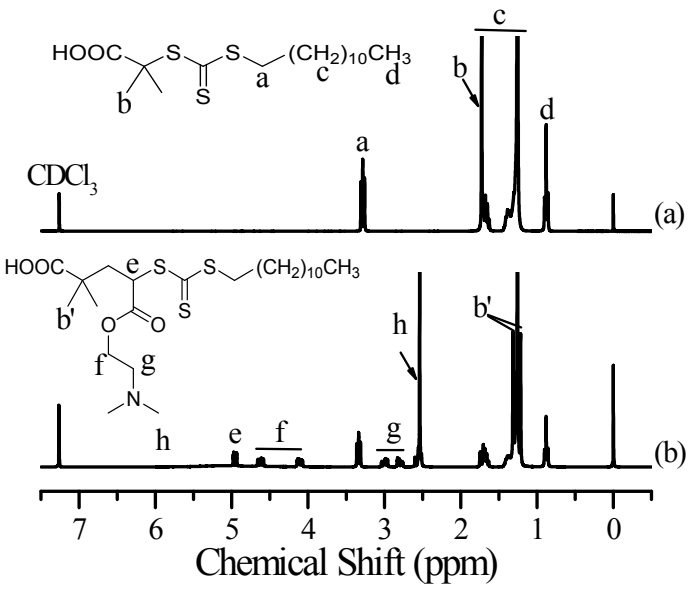

Fig. S1 ^{1}H NMR spectra of (a) DDACT and (b) DDACT-PDMAEA$_1$ (400 MHz, $CDCl_3$).

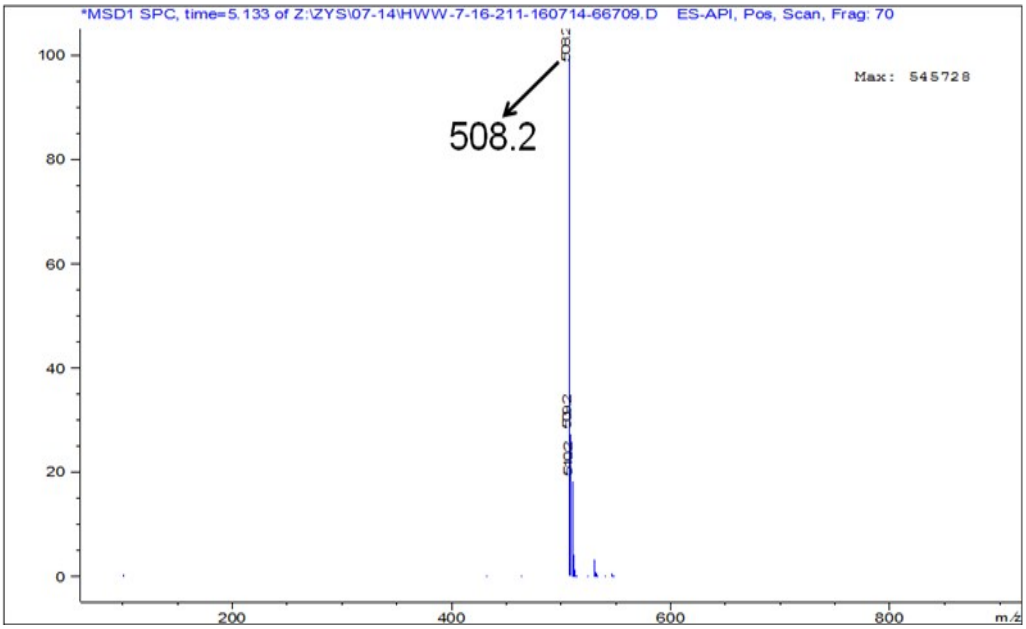

Fig. S2 MS spectrum of DDACT-PDMAEA$_1$.

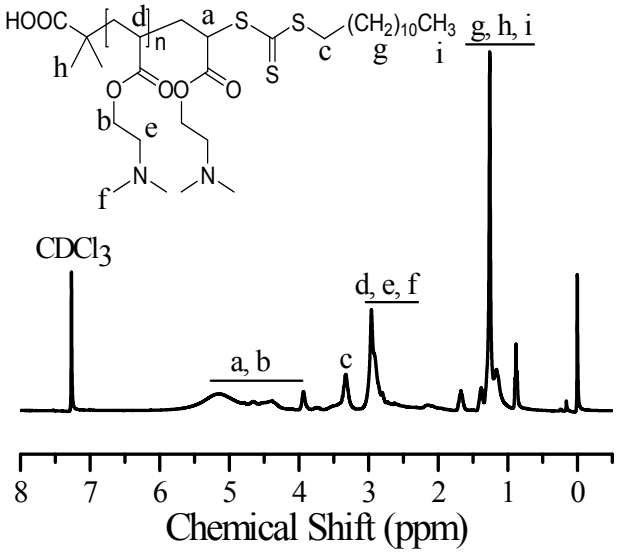

Fig. S3 ^{1}H NMR spectra of DDACT-PDMAEA$_3$ (400 MHz, $CDCl_3$).

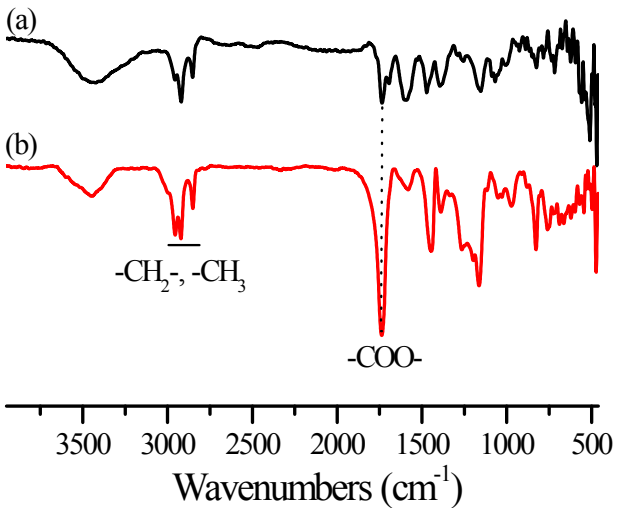

Fig. S4 FT-IR spectra of (a) DDACT-PDMAEA$_3$ and (b) DDACT- PDMAEA$_3$-*b*-PMA$_{27}$.

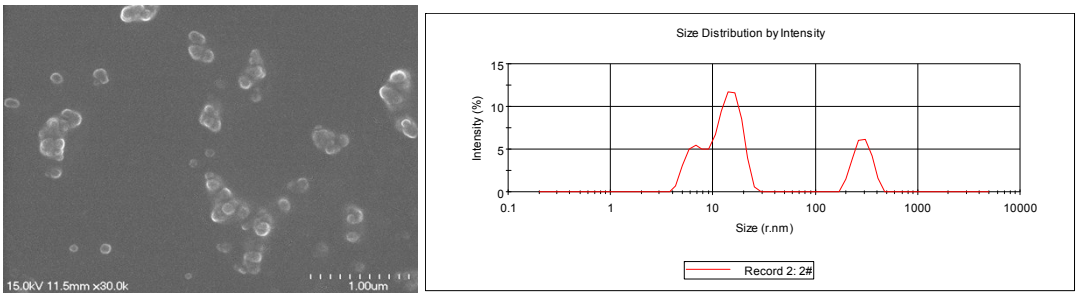

Fig. S5 SEM image (left) and size distribution (right) of self-assembly of DDACT-qPDMAEA$_1$-*b*-PMA$_7$.

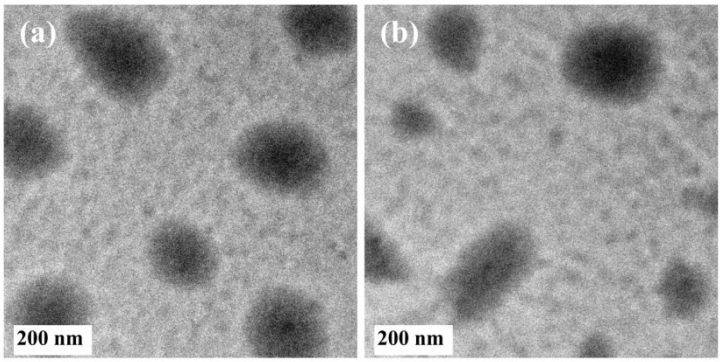

Fig. S6 TEM images of assembly of DDACT-qPDMAEA$_3$-*b*-PMA$_{27}$ (a) without and (b) with BR. Scale bar = 200 nm.

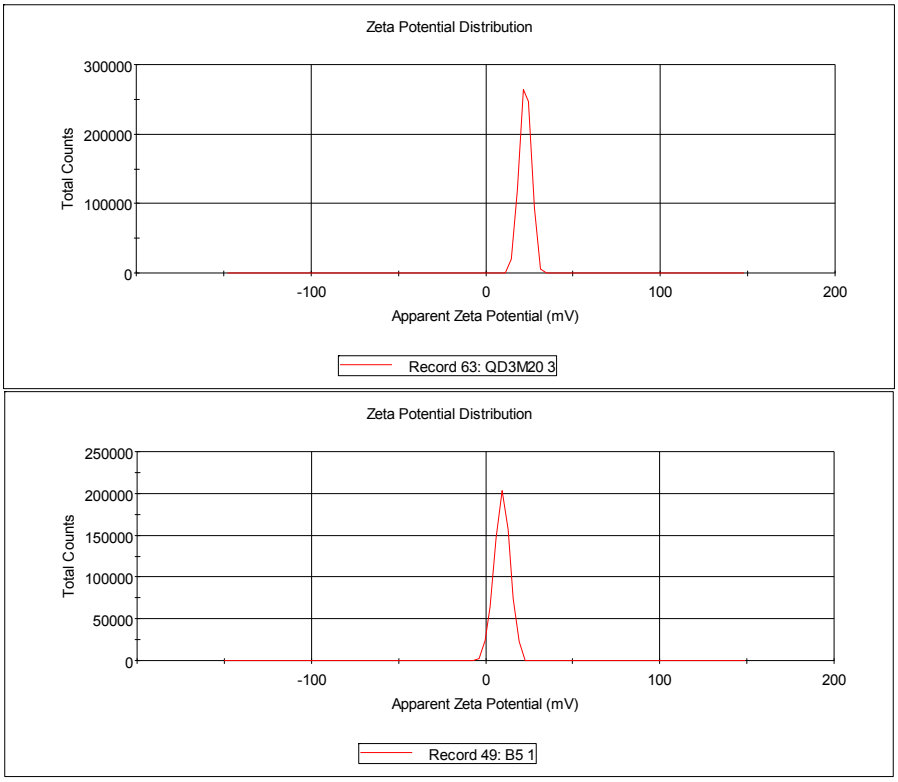

Fig. S7 Zeta potentials of particles from DDACT-qPDMAEA$_3$-*b*-PMA$_{18}$ before (top, 22.7 mV) and after (bottom, 9.46 mV) combination with BR.