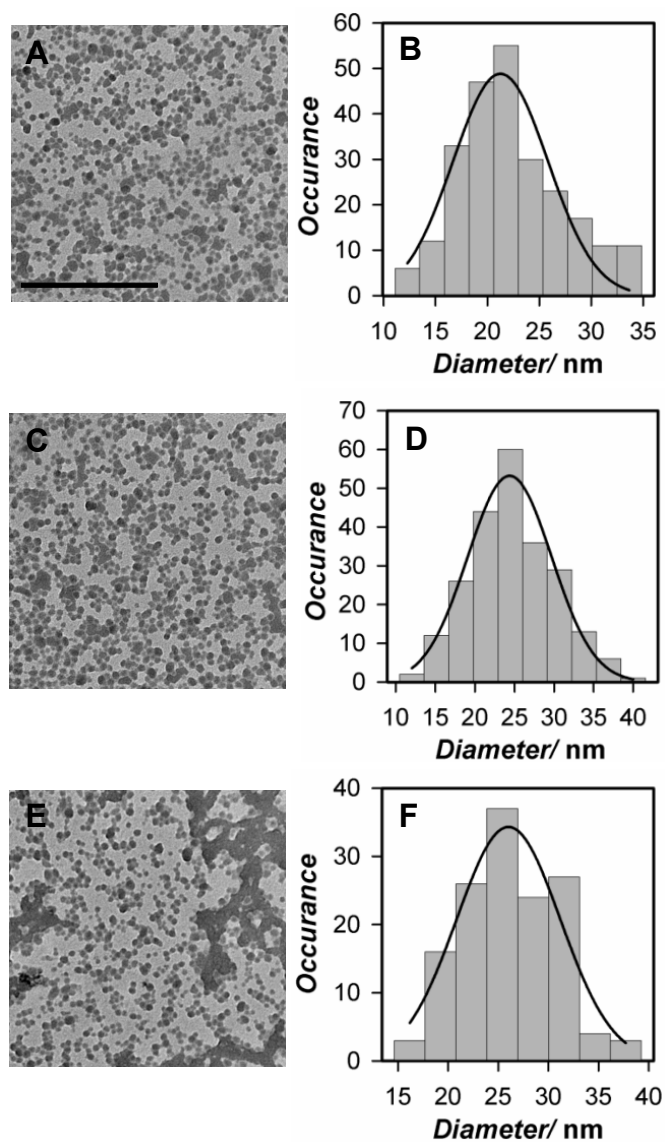
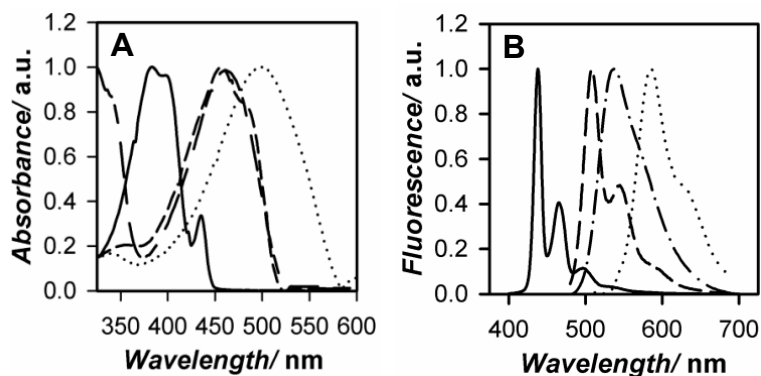


## Supporting Information

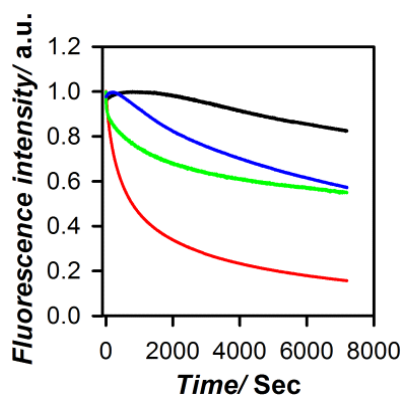


**Figure S1: Representative TEM images and/or size distribution for PEG lipid-CPNs.** (A, B) TEM image and size distribution of biotin 2000  $M_r$  PEG lipid-PFBT nanoparticles; (C, D) TEM image and size distribution histograms of methoxy 1000  $M_r$  PEG lipid-PFBT nanoparticles; (E, F) TEM image and size distribution of methoxy 550  $M_r$  PEG lipid-PFBT nanoparticles; All images shown were acquired at 120 kV on a cryostage at liquid nitrogen temperature at 120K X magnification. Scale bar is 500 nm. Histograms were fit (solid line) to a Gaussian distribution. Some clustering evident in Figure E is similar to that observed for unmodified particles (C. Szymanski et al., J. Phys. Chem. B, 2005, 109,

8543-8546.), and presumably reflects aggregation allowed by incomplete shielding of the hydrophobic CP core by shorter PEG chains.



**Figure S2. Absorption and fluorescence spectra of PEG lipid-CPNs.** (A) Normalized absorption spectra for biotin PEG lipid PFO (solid line), PFPV (dashed line), PFBT (dotted dashed line), and MEH-PPV (dotted line) nanoparticles; (B) Normalized fluorescence emission spectra for biotin PEG lipid PFO (solid line), PFPV (dashed line), PFBT (dotted dashed line), and MEH-PPV (dotted line) nanoparticles. Fluorescence emission spectra were acquired using excitation maxima ( $\lambda_{\text{ex}}$  (PFO)= 384 nm;  $\lambda_{\text{ex}}$  (PFPV) = 458 nm;  $\lambda_{\text{ex}}$  (PFBT) = 460 nm;  $\lambda_{\text{ex}}$  (MEH-PPV) = 498 nm).



**Figure S3: Photostability of biotin PEG lipid-CPNs.** Biotin 2000 M<sub>r</sub> PEG lipid-CPNs were continuously illuminated with 250 $\mu$ W excitation light at light source ( $\lambda_{\text{ex}}$  (PFO)= 384 nm;  $\lambda_{\text{ex}}$  (PFPV) = 458 nm;  $\lambda_{\text{ex}}$

(PFBT) = 460 nm;  $\lambda_{\text{ex}}$  (MEH-PPV) = 498 nm) for 2 hours. Fluorescence emission was monitored ( $\lambda_{\text{em}}$  (PFO)= 435 nm;  $\lambda_{\text{em}}$  (PFPV) = 518 nm;  $\lambda_{\text{em}}$  (PFBT) = 545 nm;  $\lambda_{\text{em}}$  (MEH-PPV) = 590 nm) over time.

**Table S1.**

Conjugated polymer nanoparticle (28 ppm; 2000 M <sub>r</sub> PEG)	Conjugated polymer M <sub>r</sub> (from manufacturer)	Conjugated polymer polydispersity (from manufacturer)	Diameter (DLS; nm)	Polydispersity Index (DLS)
Methoxy PEG lipid-PFO	29,000	3.0	83	0.20
Biotin PEG lipid-PFO	29,000	3.0	81	0.21
Carboxy PEG lipid-PFO	29,000	3.0	81	0.20
Methoxy PEG lipid-PFPV	85,000	5.4	71	0.13
Biotin PEG lipid-PFPV	85,000	5.4	69	0.09
Carboxy PEG lipid-PFPV	85,000	5.4	69	0.16
Methoxy PEG lipid-PFBT	48,000	2.7	55	0.15
Biotin PEG lipid-PFBT	48,000	2.7	55	0.14
Carboxy PEG lipid-PFBT	48,000	2.7	58	0.19
Methoxy PEG lipid-MEH-PPV	565,000	5.1	66	0.18
Biotin PEG lipid-MEH-PPV	565,000	5.1	70	0.17
Carboxy PEG lipid-MEH-PPV	565,000	5.1	68	0.17