Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information Part

Controlled Self-Assembly of Amphiphilic Monotailed Single-chain Nanoparticles

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Characterization. ^{1}H NMR measurements were performed on a Varian UNITY-plus 400 M nuclear magnetic resonance spectrometer using deuterated $CDCl_3$ as the solvent at room temperature. SEC experiments were carried on a gel permeation chromatograph equipped with Hitachi L-2130 HPLC pump, Hitachi L-2350 column oven operated at 40 ^oC, three Varian PL columns with 1000K-100K (100000 Å), 100K-10K (10000 Å), and 100-10K (1000 Å) molecular ranges, and a Hitachi L-2490 refractive index detector. THF was used as eluent at a flow rate of 1.0 mL/min. The apparent molecular weight was calculated based on PS standards. Transmission electron microscopy (TEM) images were obtained on a Tecnai G2 20 S-TWIN electron microscope equipped with a Model 794 CCD camera (512×512) at an operating voltage of 200 kV. In order to prepare TEM specimens, each polymer solution was deposited onto a Formvar coated copper grid and then blotted with filter paper to remove excess solution. The hydrodynamic diameters of the micelles were measured on a Malvern Zetasizer Nano-ZS equipped with a 10 mW HeNe laser at a wavelength of 633 nm. The results were analyzed in CONTIN mode.

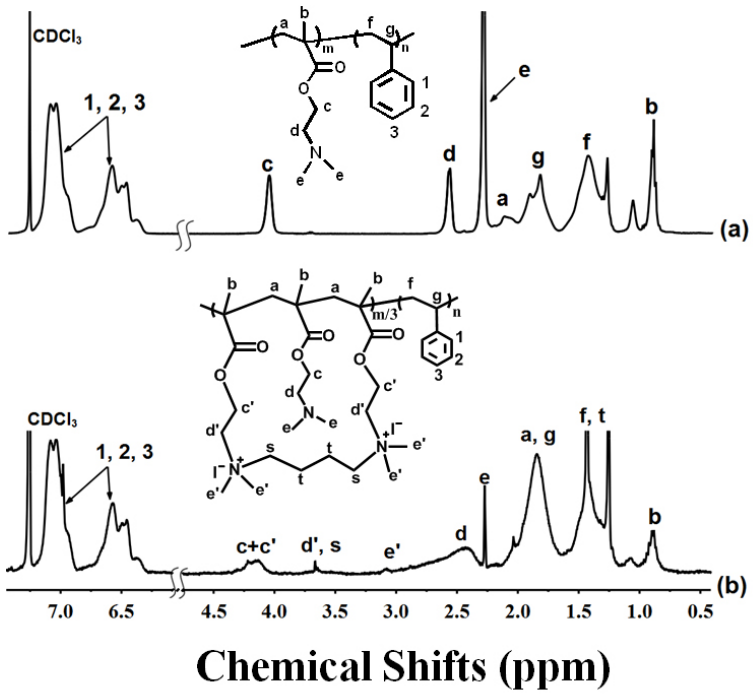

Figure S1. ^{1}H NMR spectra of PDMAEMA$_{30}$-*b*-PS$_{169}$ and NP$_{0.2}$-PDMAEMA$_{30}$-*b*-PS$_{169}$.

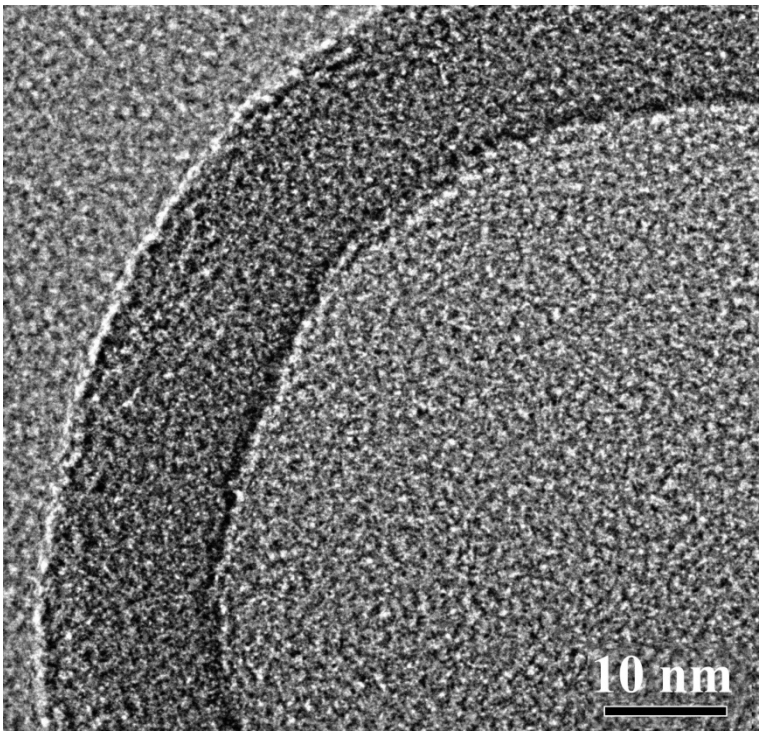

Fig. S2 A magnified TEM image of a vesicle made from NP$_{0.68}$-PDMAEMA$_{74}$-*b*-PS$_{100}$ in aqueous solution.