Supporting Information

Hierarchical Self-Assembly of Zwitterionic Dendrimer – Anionic Surfactant Complexes into Multiple Stimuli-Responsive Dynamic Nanotube

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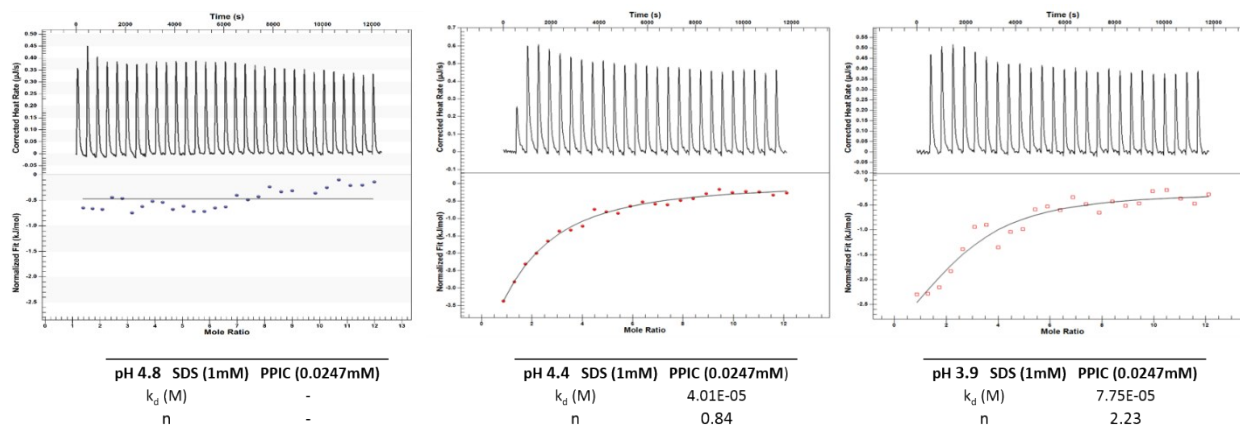b. Department of Chemical and Biomolecular Engineering, The University of Akron, Akron, Ohio 44325, USA

pH 4.8 SDS (1mM) PPIC (0.0247mM)	
k_d (M)	-
n	-

pH 4.4 SDS (1mM) PPIC (0.0247mM)	
k_d (M)	4.01E-05
n	0.84

pH 3.9 SDS (1mM) PPIC (0.0247mM)	
k_d (M)	7.75E-05
n	2.23

Fig. S1: Titration of 1 mM SDS solution into PPIC solution (24.7 µM) at (left) pH 4.4 and (right) pH 3.9. Total number of 25 injections of each 10 µL was conducted at same pH conditions at 25°C.
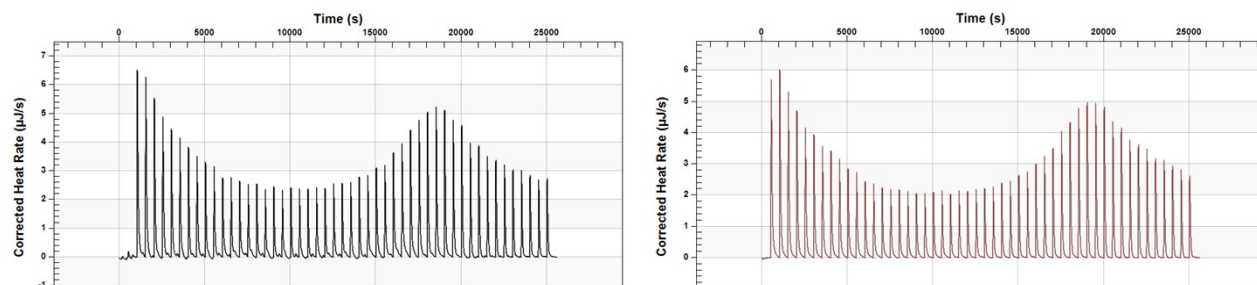

Fig. S2: Raw ITC results (before background subtraction) obtained from titration of diluted HCl solution into PPIC solution (3.3 acetate buffer) containing (left) 1-1 and (right) 1-2 SDS:PPIC molar ratios.
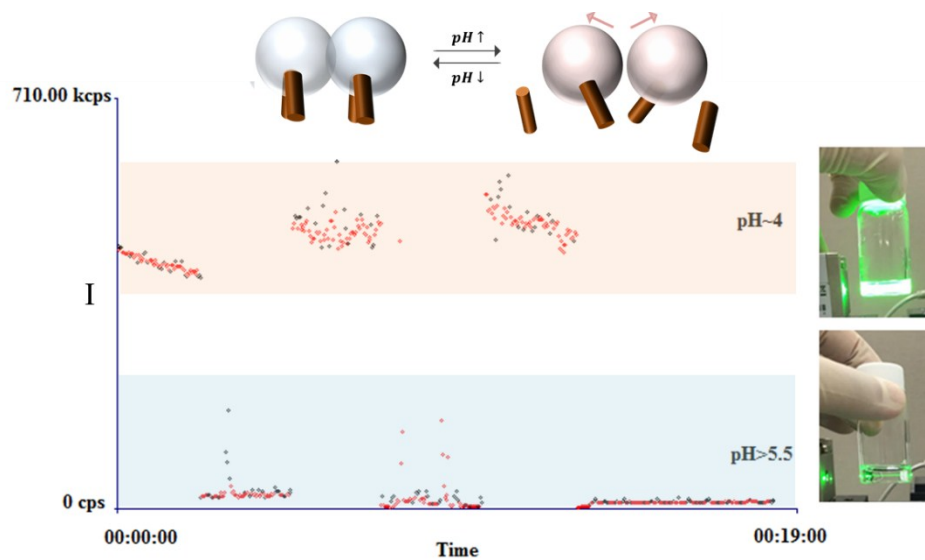
Fig. S3: pH responsive dynamic assembly/disassembly of tubules in solution. High scattered intensity in orange (top) shaded area represents the assembly of tubules while and the drop of the scattered intensity to background level in blue (bottom) shaded area is related to disassembly of them. Attenuation of (×10$^{-0.7}$) was used in scattered intensity measurements.
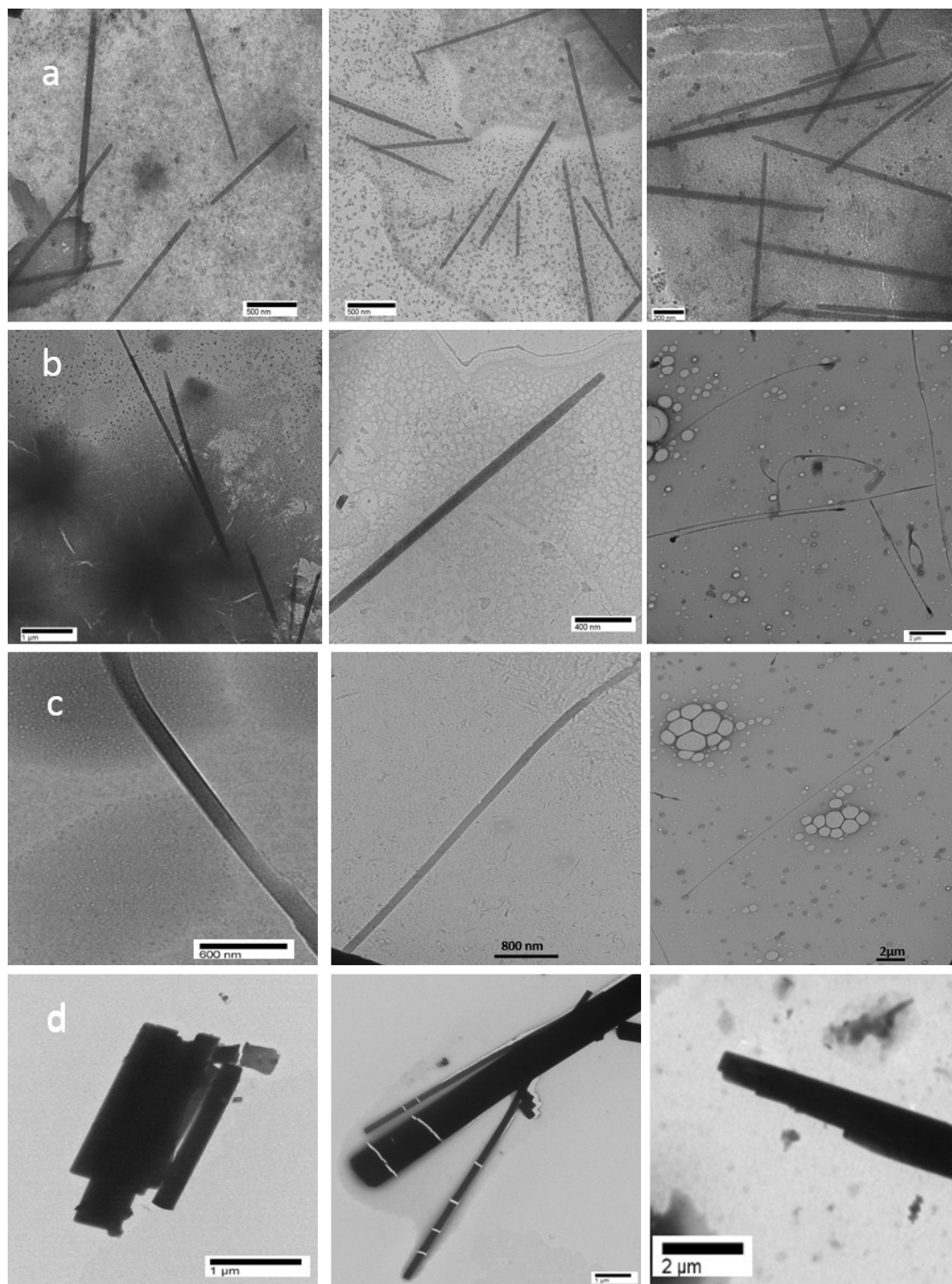
Fig. S4: TEM images of tubules after addition of (a) 0 µL (b) 100 µL (c) 200 µL and (d) 500 µL NaCl (0.1 M) into their solution.

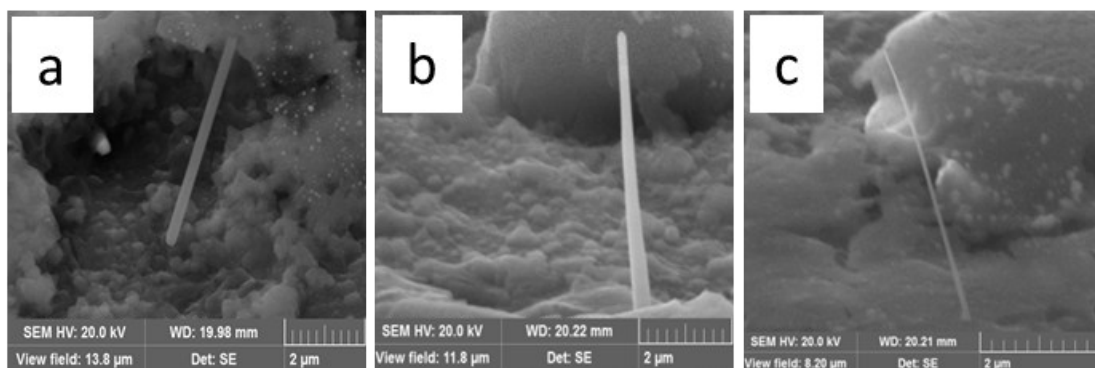Fig. S5: HR SEM images for 0.30 g/L PPIC solution at the presence of 200µL NaCl
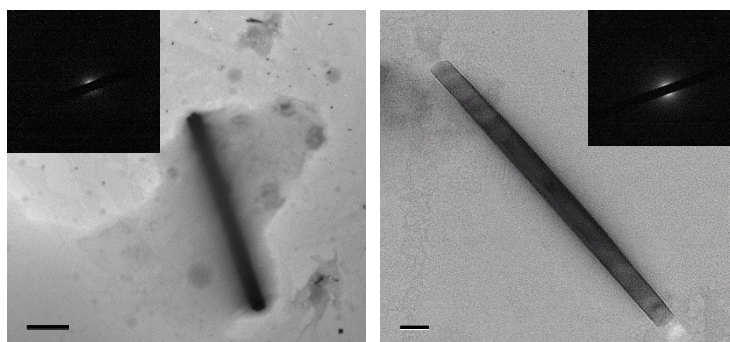

Fig. S6: TEM images of the amorphous nanotube samples (the inset shows the corresponding selected-area electron-diffraction pattern)