Electronic Supplementary Information (ESI) available: calorimetric tracing curves

Cationic Gemini Surfactant as a Dual Linker for a Cholic Acid Modified Polysaccharide in Aqueous Solution: Thermodynamics of Interaction and Phase Behavior

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I. The ITC tracing curve for titration of Dex-15CACOONa (1.0 (w/v)%) into water

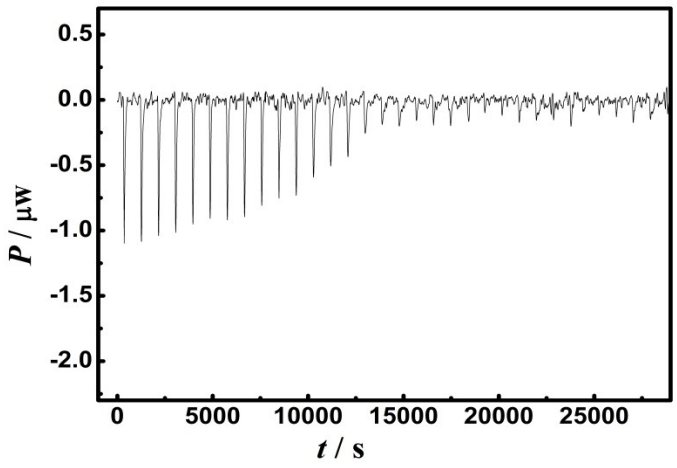

Fig. S1 The obtained calorimetric tracing for the dilution of the polyelectrolyte, Dex-15CACOONa (1.0 (w/v)%), into water at 298.15K.

II. The ITC tracing curves for gemini surfactant $C_{12}C_6C_{12}Br_2$ into Dex-15CACOONa solution.

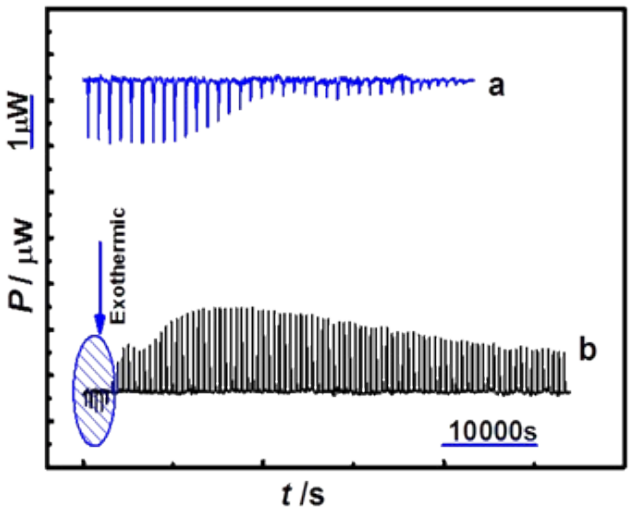

Fig. S2 Typical ITC curves for the titration of $C_{12}C_6C_{12}Br_2$ solution into Dex-15CACOONa solution (in the cell) at 298.15 K. The initial concentration of polymer side group in the cell (C_{sg}) is 4.72 mmol·dm^{-3}; the concentrations of $C_{12}C_6C_{12}Br_2$ (C_{gemini}) in the syringe are (**a**) 2.5 mmol·dm^{-3} and (b) 10.0 mmol·dm^{-3}.

Notes: The titration performed with lower concentration (2.5 mmol·dm^{-3}) of $C_{12}C_6C_{12}Br_2$ into Dex-15CACOONa produces an exothermic effect, that starts decreasing steeply (in absolute value) at the eighth injection until a plateau at a small exothermic value for some injections, and decreasing again to an almost zero heat effect thereafter (curve (**a**)). When a higher $C_{12}C_6C_{12}Br_2$ concentration was used (10.0 mmol·dm^{-3}) there is a change from an exothermic effect at the beginning of the titration (the first five injections) to an endothermic effect for the remaining titration (curve (**b**)). The energetic information we can extract about the interaction is critical for an explanation of the phase behavior and the change in aggregate morphologies.