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

![ITC tracing curve](image)

**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_{6}C_{12}Br_{2} into Dex-15CACOONa solution.

**Fig. S2** Typical ITC curves for the titration of C_{12}C_{6}C_{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_{6}C_{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_{6}C_{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_{6}C_{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.