Supplementary Informations (SI)

SI Fig. 1. Electrical conductivity vs. complex (2) concentration in aqueous solutions.

SI Fig. 2. Absorption spectra of complex (2) (Above cmc): in the absence (dotted line) and in the presence (solid lines) of increasing amounts of CT DNA. (Inset: Plot of [DNA] / (ε_a-ε_d) vs. [DNA]). [complex] =1.0 × 10^{-4} M; [DNA] = 0.91 × 10^{-5} M.
SI Fig. 3. Absorption spectra of complex (2) (Below cmc): in the absence (dotted line) and in the presence (solid lines) of increasing amounts of CT DNA. [Inset: Plot of [DNA] / (ε_a - ε_f) vs. [DNA]]. [complex] = 1.0 × 10^{-6} M; [DNA] = 0-9.1 × 10^{-5} M.

SI Fig. 4. Optimized geometries of surfactant Co(III) complexes (1) and (2).
SI Fig. 5. Calculated frontier molecular orbitals of the surfactant Co(III) complexes (1) and (2) at B3LYP/LANL2DZ level.

SI Fig. 6. DNA melting curves at 260 nm in the absence and presence surfactant Co(III) complexes (1) and (2) at 8 µM; [DNA] 80 µM.
SI Fig. 7. Emission spectra of EB bound to CT DNA: in the absence and in the presence of surfactant Co(III) complex (2).

SI Fig. 8: Fluorescence quenching curves of EB bound to DNA by surfactant Co(III) complexes (red), [Co(ip)$_2$(C$_{12}$H$_{25}$NH$_2$)$_2$](ClO$_4$)$_3$ and (blue), [Co(dpq)$_2$(C$_{12}$H$_{25}$NH$_2$)$_2$](ClO$_4$)$_3$; Plot of [complex]/[DNA] vs. $I_0/I$. [DNA] = 1 $\times$ 10$^{-4}$ M ; [complex] = 5 $\times$ 10$^{-4}$ M.
SI Fig. 9. CV spectra of complex (1) in the absence (black solid line) and in the presence (red solid line) of CT DNA. [Complex] = 1 × 10^{-3} M; [DNA] = 0 – 2.68 × 10^{-5} M.

SI Fig. 10. CV spectra of complex (2) in the absence (black solid line) and in the presence (red solid line) of CT DNA. [Complex] = 1 × 10^{-3} M; [DNA] = 0 – 2.68 × 10^{-5} M.
SI Fig. 11. Circular dichroism spectra in the absence (dotted line) and in the presence of surfactant Co(III) complex (1) and (2). \([\text{complex}] = 5 \times 10^{-5} \text{ M}; \ [\text{DNA}] = 1 \times 10^{-4} \text{ M}\). 

SI Fig. 12. Effects of increasing amounts of surfactant Co(III) complexes in presence of CT DNA on the relative viscosities of calf thymus DNA at 29.0 (± 0.1)°C.
SI Fig. 13. IR spectrum of \( \text{cis-}[\text{Co(ip)}_2(\text{DA})_2](\text{ClO}_4)_3 \)

SI Fig. 14. IR spectrum of \( \text{cis-}[\text{Co(dpq)}_2(\text{DA})_2](\text{ClO}_4)_3 \)
SI Fig. 15. ¹H NMR spectrum of cis-[Co(ip)₂(DA)₂](ClO₄)₃

SI Fig. 16. ¹H NMR spectrum of cis-[Co(dpq)₂(DA)₂](ClO₄)₃
SI Fig. 17. $^{13}$C NMR spectrum of $cis$-$[Co(ip)_{2}(DA)_{2}](ClO_{4})_{3}$

SI Fig. 18. $^{13}$C NMR spectrum of $cis$-$[Co(dpq)_{2}(DA)_{2}](ClO_{4})_{3}$
**SI Tables**

SI Table 1. CMC values of the surfactant Co(III) complex (2) in aqueous solution.

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<th>Temperature</th>
<th>CMC × 10^5</th>
<th>-ΔG^0_{mic} (kJ mol^{-1})</th>
<th>-ΔH^0_{mic} (kJ mol^{-1})</th>
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