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Supplementary Materials

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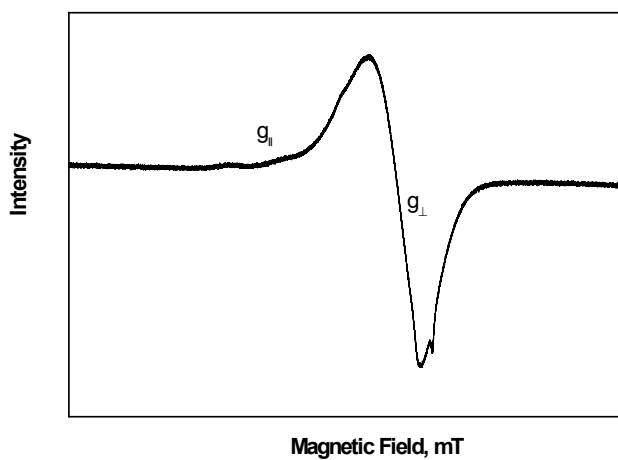
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SI Fig. 1 EPR spectrum of $\text{Cu}(\text{dppz})_2\text{DA}](\text{ClO}_4)_2$ in liquid nitrogen temperature

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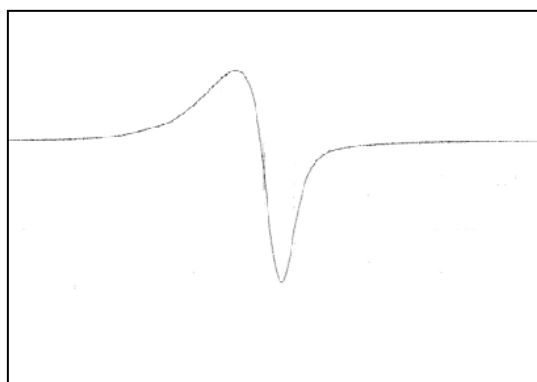
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SI Fig. 2 EPR spectrum of $\text{Cu}(\text{dppz})_2\text{DA}](\text{ClO}_4)_2$ in Room temperature

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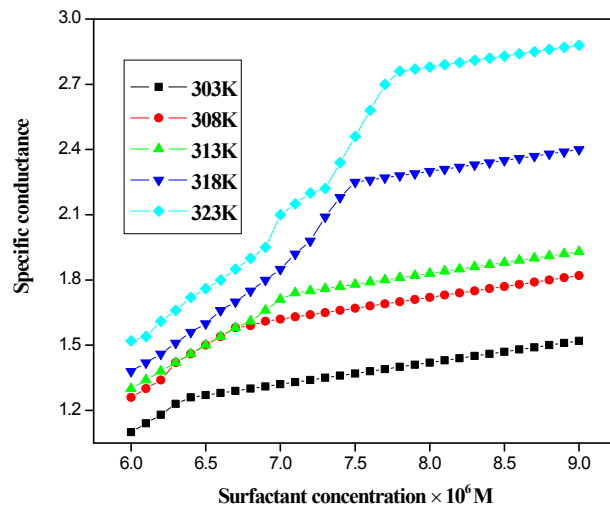
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38 **SI Fig. 3** Electrical conductivity vs. surfactant copper(II) complex concentration for aqueous $[\text{Cu}(\text{dppz})_2\text{DA}](\text{ClO}_4)_2$ solutions

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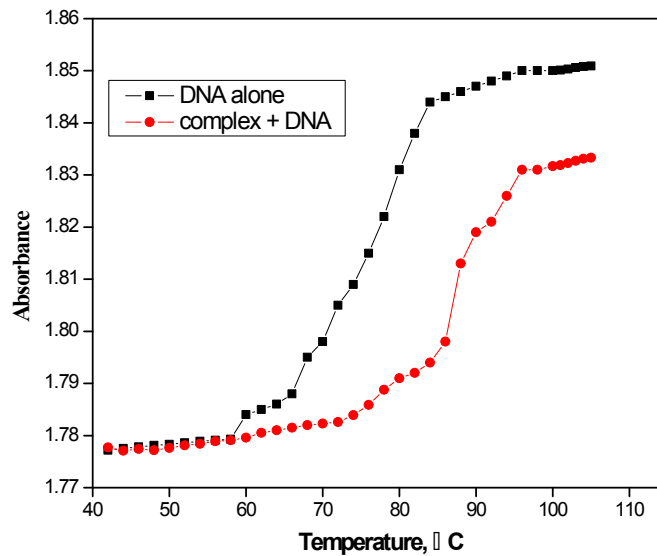
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49 **SI Fig. 4** DNA melting curves at 260 nm in the absence and presence of complex at $8 \mu\text{M}$; $[\text{DNA}] = 80 \mu\text{M}$.

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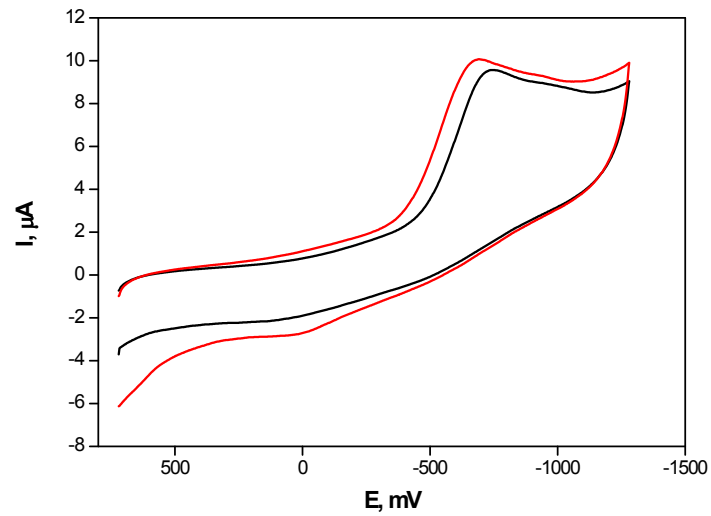
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62 **SI Fig. 5** CV spectra of Surfactant copper(II) complex in the absence (black line) and in the presence (red line) of DNA;

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$$[\text{complex}] = 1 \times 10^{-3} \text{ M}; [\text{DNA}] = 0 - 2.68 \times 10^{-5} \text{ M}$$

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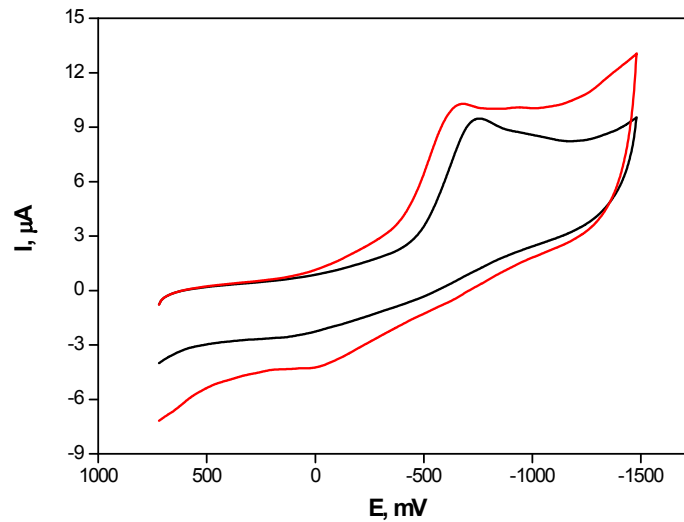
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74 **SI Fig. 6** CV spectra of Surfactant copper(II) complex in the absence (black line) and in the presence (red line) of RNA;

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$$[\text{complex}] = 1 \times 10^{-3} \text{ M}; [\text{RNA}] = 0 - 2.68 \times 10^{-5} \text{ M}$$

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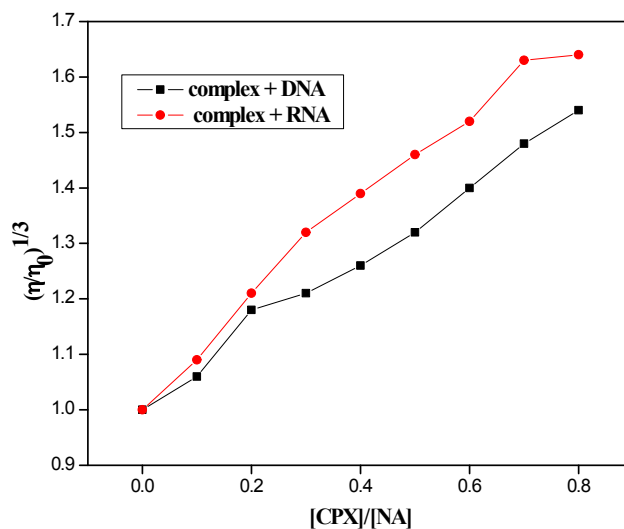
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86 **SI Fig. 7** Effects of increasing amounts of presence complex on the relative viscosities of Nucleic acids at 29.0 (± 0.1) $^{\circ}$ C.

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88 **SI Table 1.** CMC values of the surfactant copper(II) complex $[\text{Cu}(\text{dppz})_2\text{DA}](\text{ClO}_4)_2$ in aqueous solution

Temperature	CMC $\times 10^6$	$-\Delta G_{\text{mic}}^0$ (kJ mol ⁻¹)	$-\Delta H_{\text{mic}}^0$ (kJ mol ⁻¹)	$T\Delta S_{\text{mic}}^0$ (kJ mol ⁻¹)
303K	6.41 \pm 0.1	59.29 \pm 0.4	13.07 \pm 0.1	46.22 \pm 0.1
308K	6.86 \pm 0.1	60.32 \pm 0.3	13.59 \pm 0.1	46.72 \pm 0.4
313K	7.10 \pm 0.2	60.99 \pm 0.3	14.01 \pm 0.3	46.98 \pm 0.2
318K	7.50 \pm 0.4	61.29 \pm 0.1	14.37 \pm 0.2	46.92 \pm 0.2
323K	7.81 \pm 0.1	62.36 \pm 0.1	14.90 \pm 0.2	47.46 \pm 0.1

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