Electronic Supplementary Material (ESI) for RSC Advances.

Parent and nano-encapsulated ytterbium(III) complex toward binding with biological macromolecules, *in vitro* cytotoxicity, cleavage and antimicrobial activity studies

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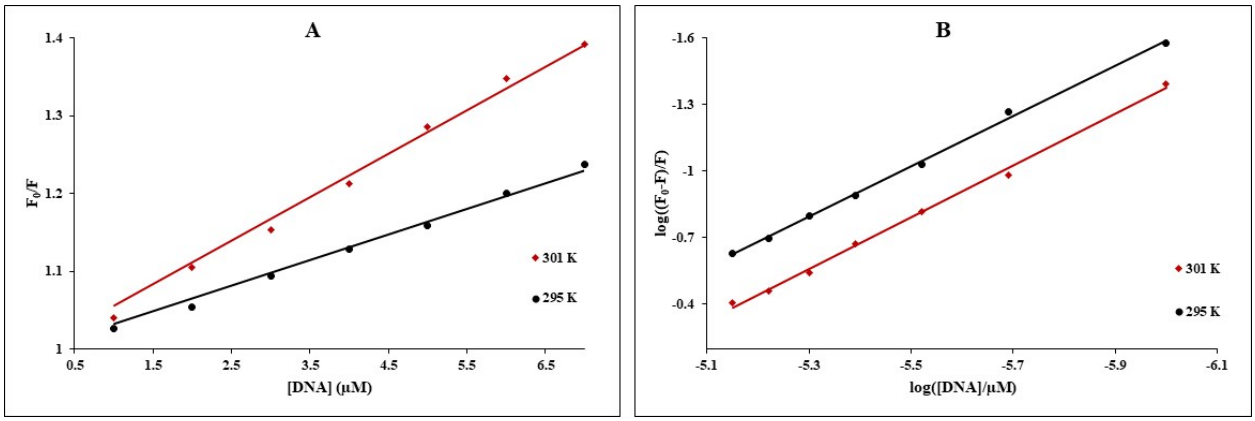

Fig. S1 (A) Stern–Volmer curves for the binding of Yb complex with DNA at 295 and 301 K, (B) The plot of log((*F*$_0$-*F*)/*F*) *against* log([DNA]/μM) at 295 and 301 K ([DNA]= 0 to 14.3 μM and [Complex]= 0.1 μM).

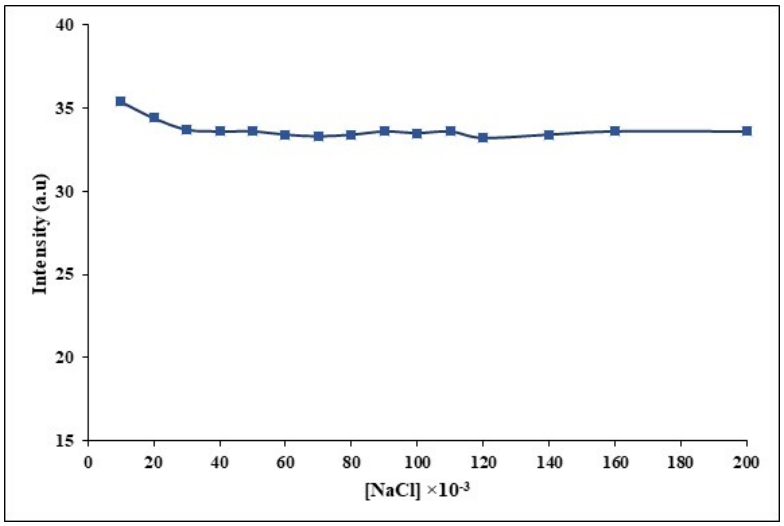

Fig. S2 The influence of sodium chloride (0.05 to 0.6 *M*) on the emission of the Yb complex in the existence of FS-DNA (4.4 μM).

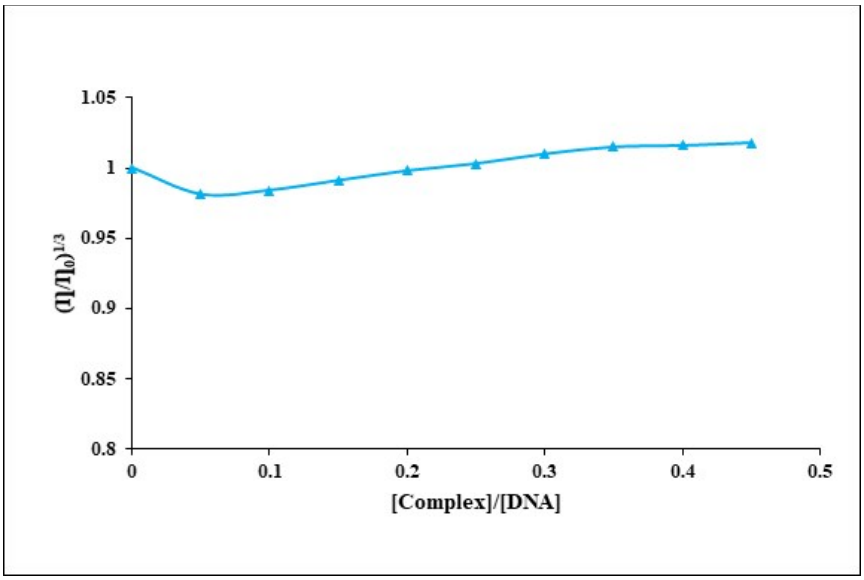

Fig. S3 Effect of enhancing amounts of Yb complex on the FS- DNA viscosity, [Complex]= 2.0×10^{-5} *M* and [DNA] = 5.9 *mM*.

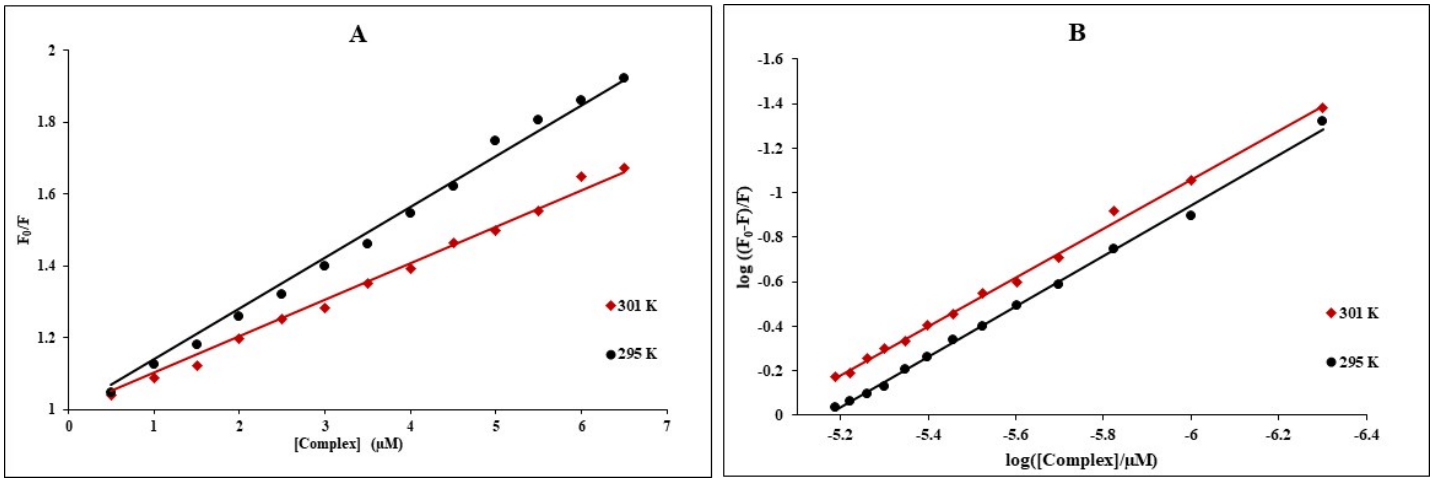

Fig. S4 (A) Stern–Volmer curves for the binding of Yb complex with BSA at 295 and 301 K, (B) The plot of log((F_0-F)/F) *against* log([Complex]/μM) at 295 and 301 K ([Complex] = 0 - 6.0 μM and [BSA] = 3 μM).

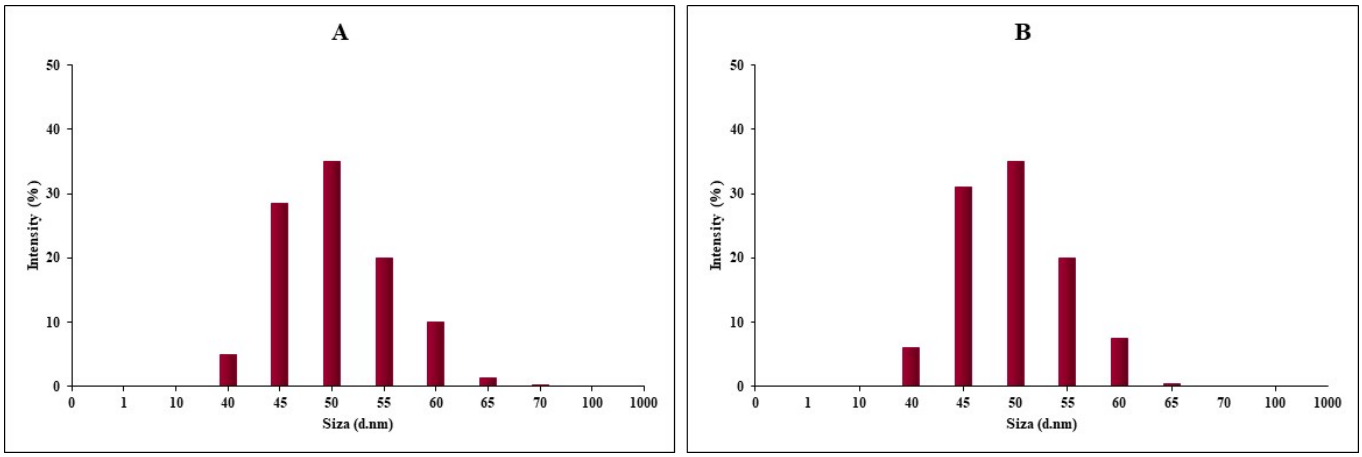

Fig. S5 (A) and (B) zeta potential measurement of SNPE and LNPE, respectively.