Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Exploring the interaction of phenothiazinium dyes methylene blue, new methylene blue, azure A and azure B to $tRNA^{phe}$: Spectroscopic, thermodynamic, voltammetric and molecular modeling approach

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Supplementary Data

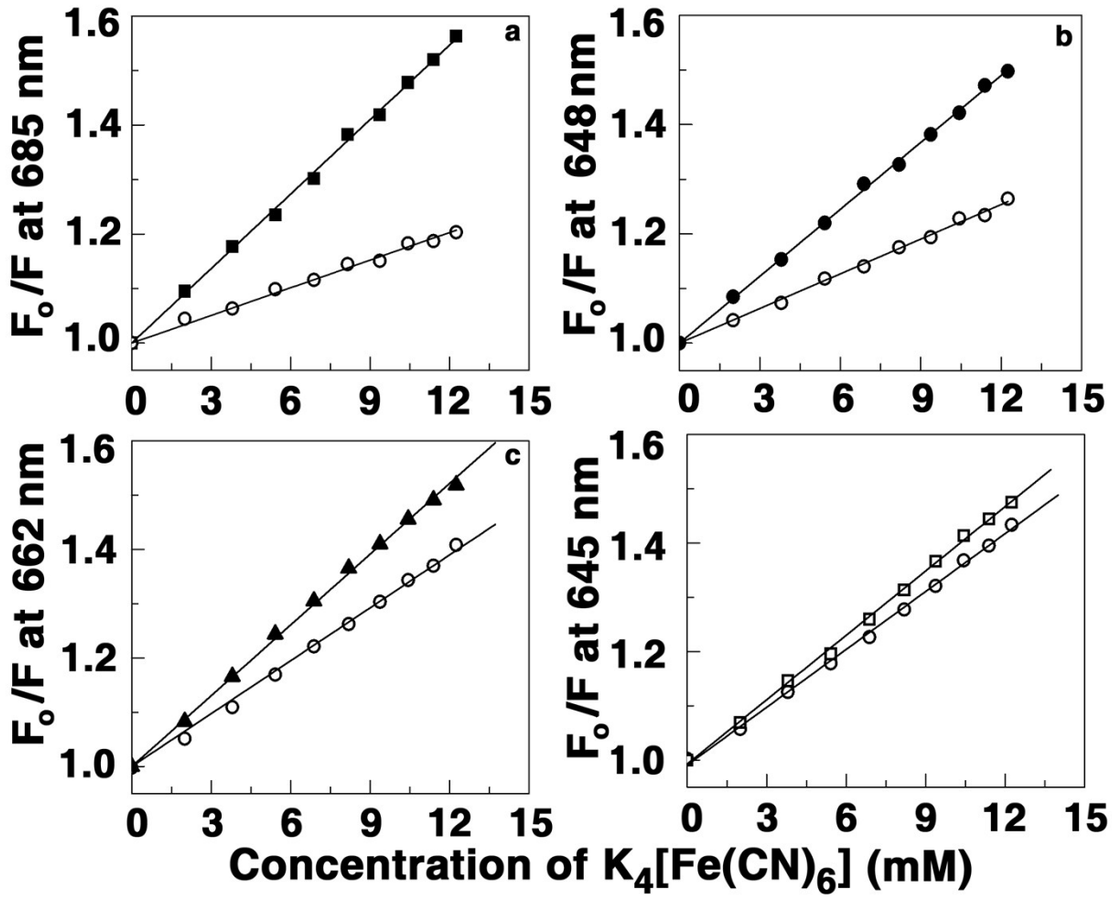

Fig. S1 Stern-Volmer plots for the quenching of (a) MB (■), (b) NMB (●), (c) AZB (▲) and (d) AZA (□) and their respective complexes (all ○) with increasing concentration of $K_4[Fe(CN)_6]$ in presence of 20 mM sodium cacodylate buffer at pH 7.2.

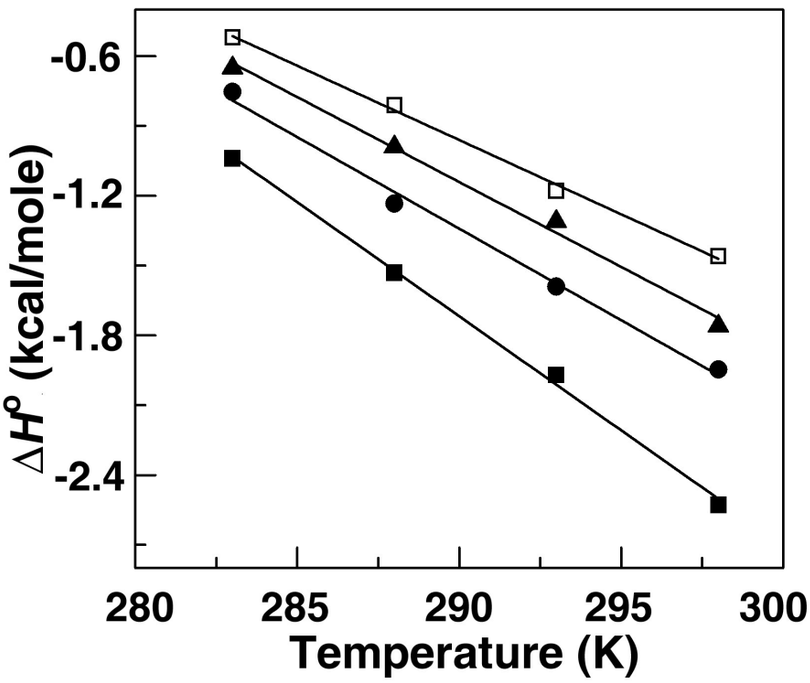

Fig. S2 Plot of variation of standard enthalpy of binding (ΔH^o) with temperature for the binding of (a) MB (■), (b) NMB (●), (c) AZB (▲) and (d) AZA (□) with tRNA.

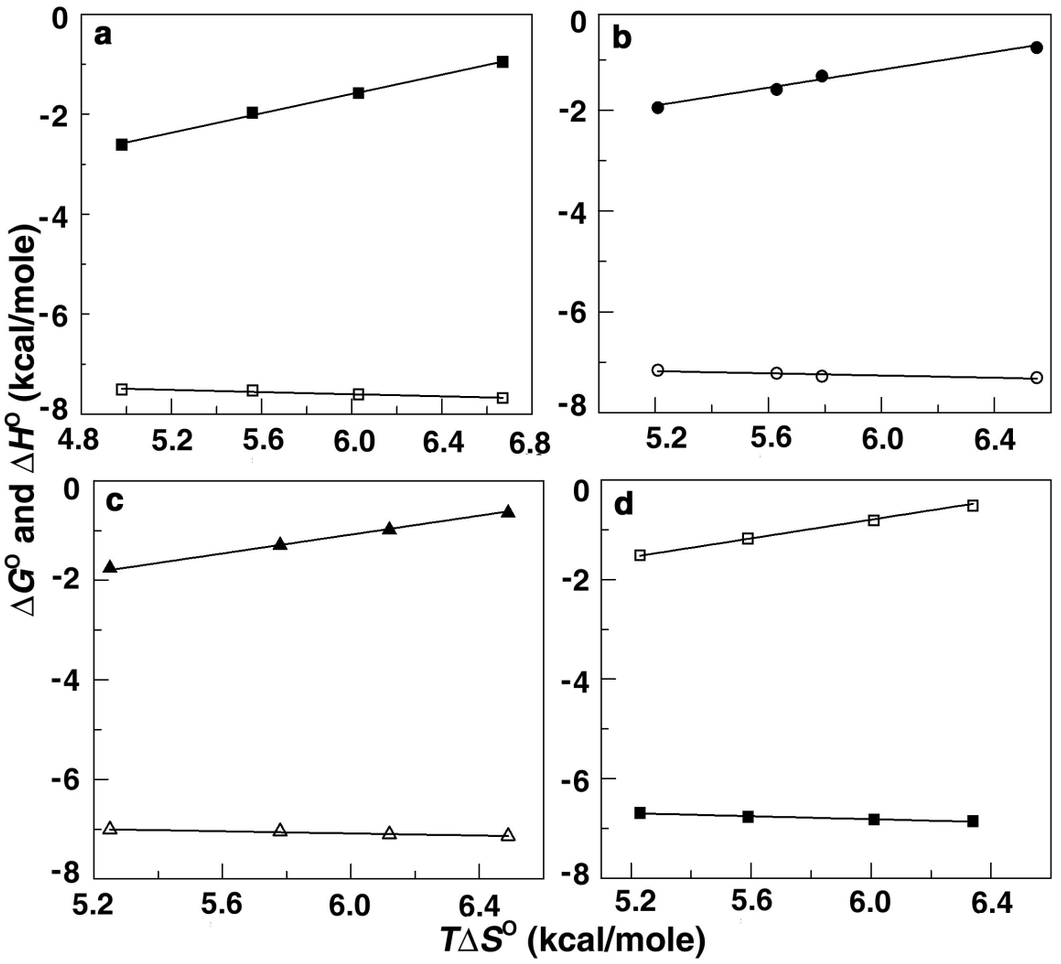

Fig. S3 Plot of ΔG^o and ΔH^o versus $T\Delta S^o$ for the binding of (a) MB (⊠,■), (b) NMB (O,●), (c) AZB (Δ,▲) and (d) AZA (■,□) and with tRNA.

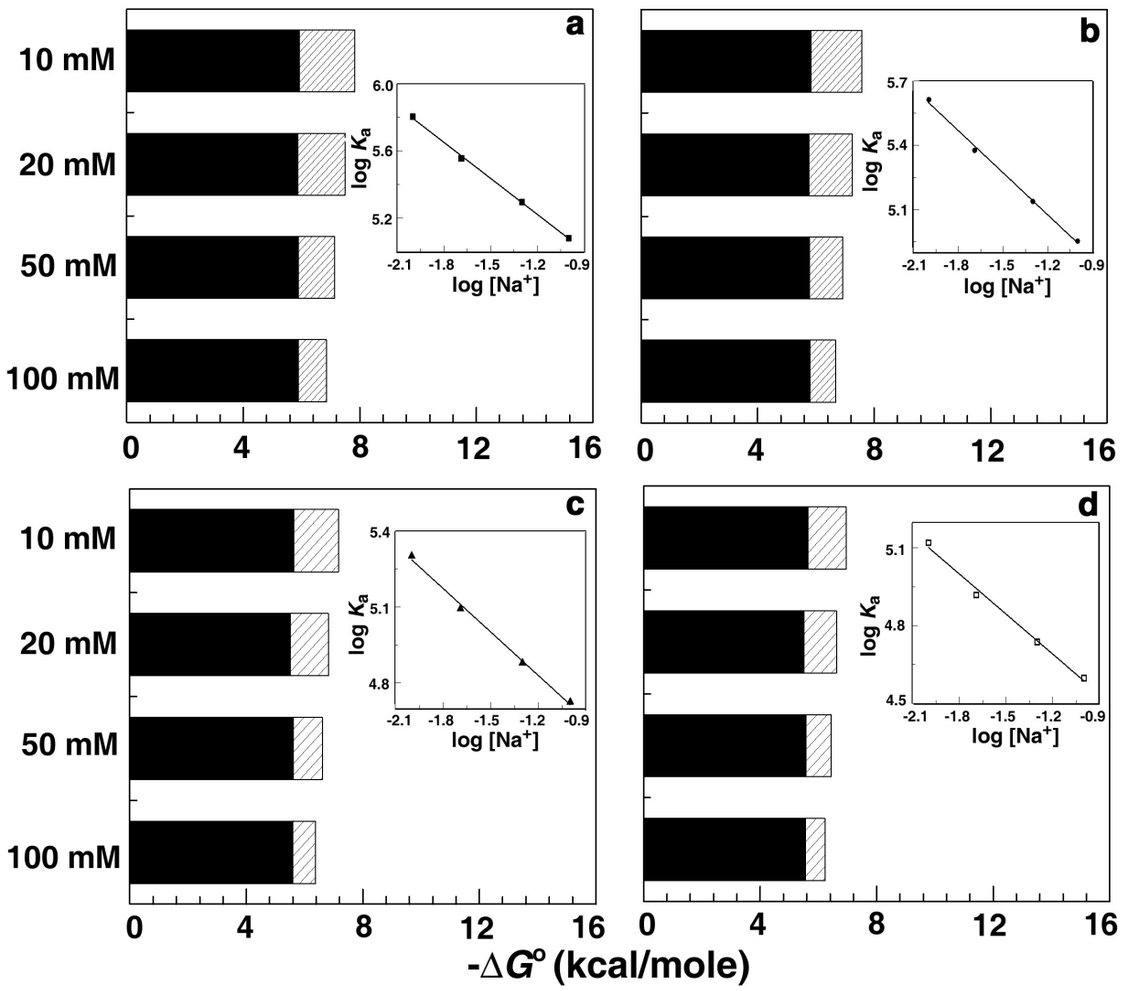

Fig. S4 Polyelectrolyte (ΔG^o_{pe}) (hatched area) and non-electrostatic (ΔG^o_t) (black area) contribution to the standard Gibbs energy change of the complexation for (a) MB, (b) NMB, (c) AZB and (d) AZA. Inset: Variation of log K_a versus log [Na^+] for (a) MB (■), (b) NMB (●), (c) AZB (▲) and (d) AZA (□).