

Electronic Supplementary information

Table S1

Summary of the optical properties of free and DNA bound dyes ^a		
Parameter	PSF	SO
Absorbance		
λ_{\max} (free)	520	521
λ_{\max} (bound)	536	536
ϵ_f (at λ_{\max})	33,000	25,000
λ_{iso}^b	538 (CP)/539 (CT) and 541 (ML)	537 (CP) and 538 (CT and ML)
ϵ_b (at λ_{\max}) with		
CP DNA	20,845	16,570
CT DNA	21,285	16,540
ML DNA	20,185	15,520
Fluorescence		
λ_{\max} (excitation)	520	521
λ_{\max} (emission)	571	572

^aUnits: λ nm; ϵ (molar extinction coefficient) $\text{M}^{-1} \text{cm}^{-1}$.

^bWavelengths at the isosbestic points.

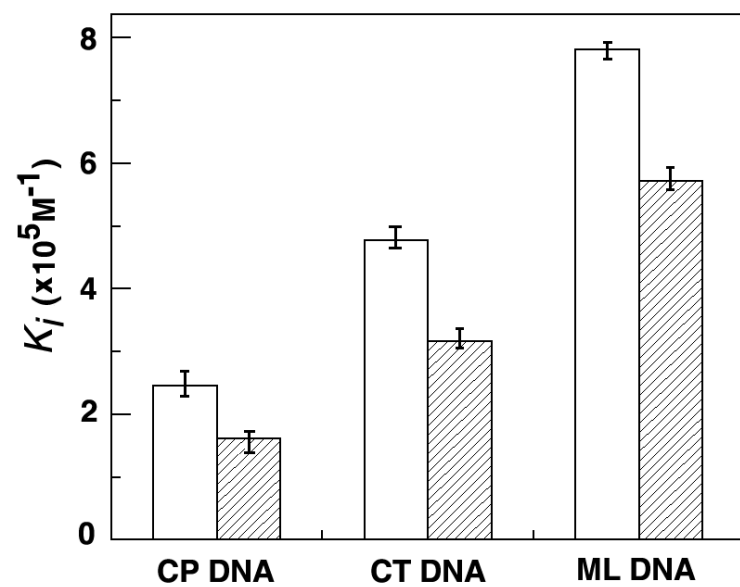


Fig. S1

Fig. S1. A comparative ordinal data of the binding affinity of PSF and SO to CP, CT and ML DNA

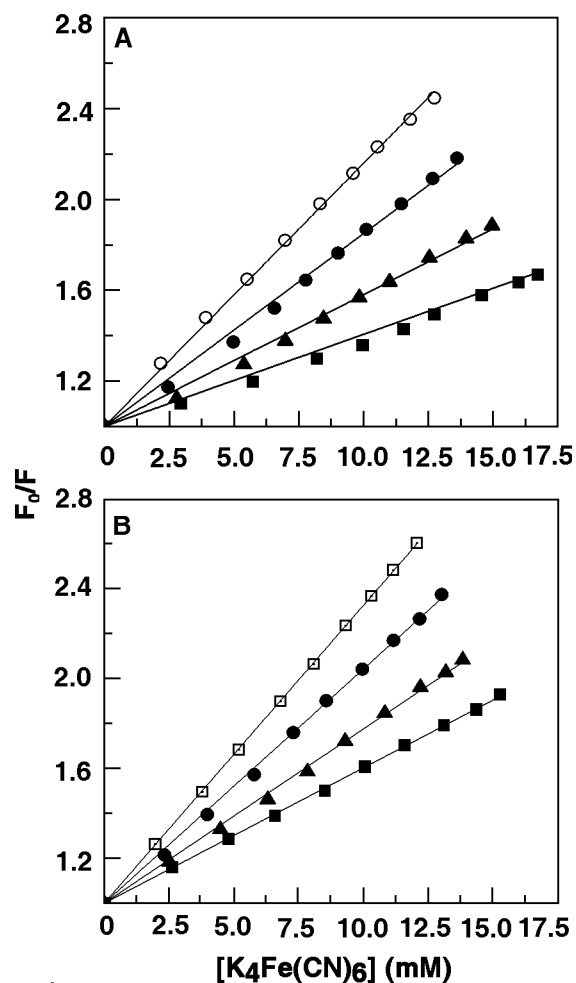


Fig. S2

Fig. S2. Stern-Volmer plots for the quenching of (A) PSF (o), and complexes of PSF with CP (●), CT (▲), ML (■) and (B) SO (□) and complexes of SO with CP (●), CT (▲), ML (■) with increasing concentration of $[Fe(CN)_6]^{4-}$ ion in 10 mM sodium cacodylate buffer, pH 7.0, at 20 ± 1.0 °C. Concentration of the dye, DNAs and $[K^+]$ ion were kept constant. The Stern-Volmer quenching constants for PSF and SO and their complexes with CP, CT and ML DNA were 29.0, 21.0, 14.4 and 10.0 $L mol^{-1}$ and 32.5, 25.5, 19.0 and 14.8 $L mol^{-1}$ respectively.

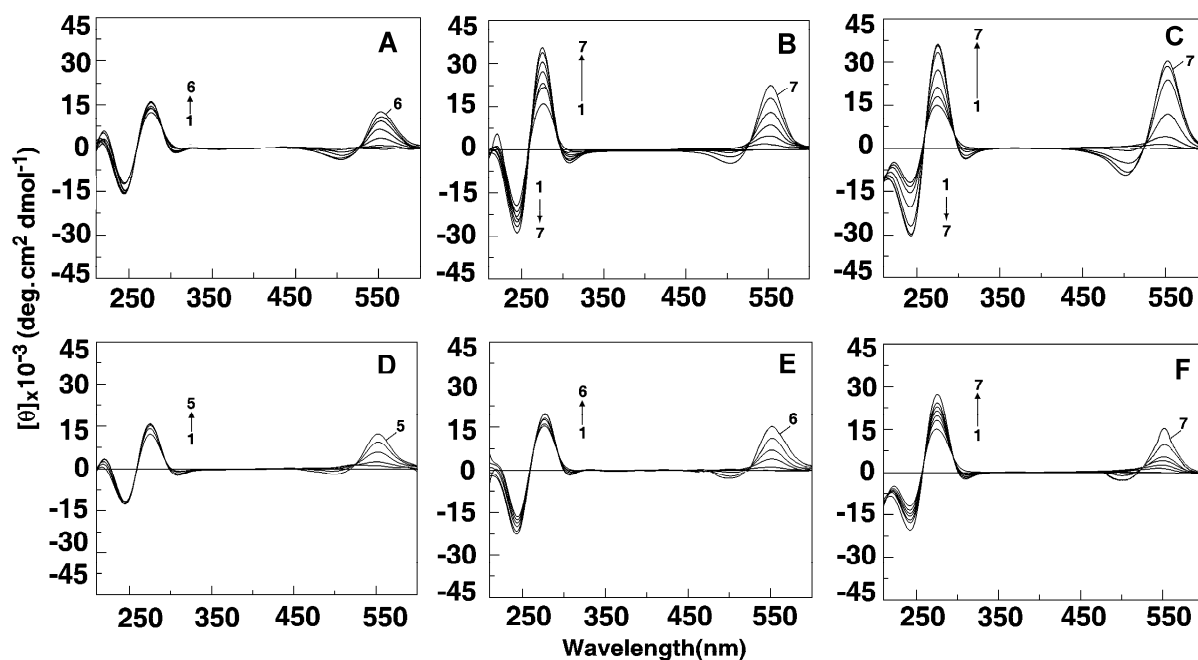


Fig. S3

Fig. S3. Representative intrinsic circular dichroic spectra of (A) 60 μM of CP DNA with 0, 12, 24, 48, 54, 60 μM of PSF (curves 1-6) (B) 60 μM of CT DNA with 0, 12, 18, 24, 30, 36, 42 μM of PSF (curves 1-7) and (C) 60 μM of ML DNA with 0, 6, 12, 18, 24, 30, 36 μM of PSF (curves 1-7) (D) 60 μM of CP DNA with 0, 18, 30, 54, 66 μM of SO (curves 1-5) (E) 60 μM of CT DNA with 0, 6, 18, 24, 42 μM of SO (curves 1-6) (F) 60 μM of ML DNA with 0, 6, 12, 18, 24, 36, 42 μM of SO (curves 1-7). The expressed molar ellipticity (θ) values are based on the DNA concentration.