SUPPLEMENTARY INFORMATION

The impact of base stacking on the conformations and electrostatics of single-stranded DNA

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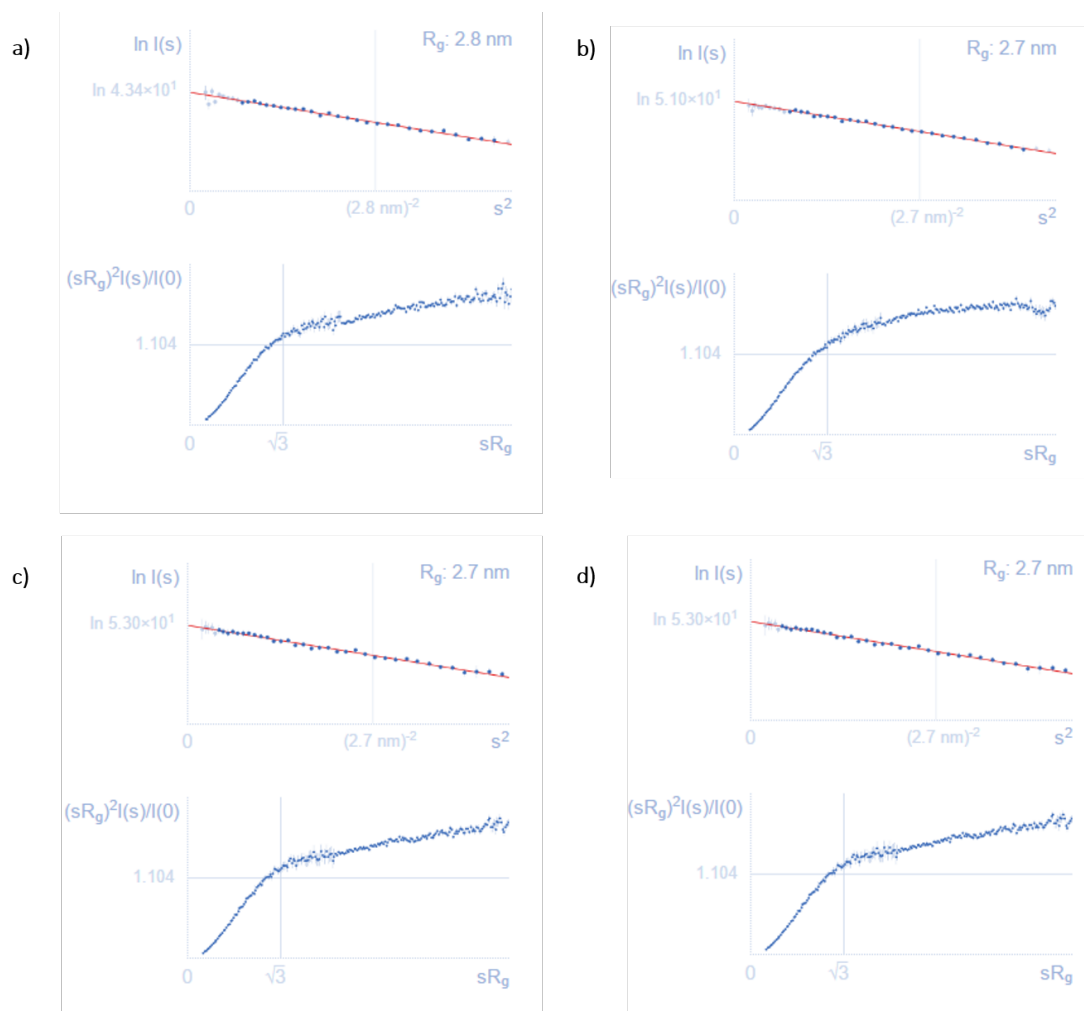
Supplementary Figure 1: Additional analysis of the SAXS data. *A reproduction of the Kratky plots and Guinier fits one will find online under the SASBDB ID's referenced in the text. Data for dT$_{30}$ at 100mM and 200mM NaCl are shown in **a)** and **c)** respectively. The corresponding plots for dA$_{30}$ are shown in **b)** and **d)**.*
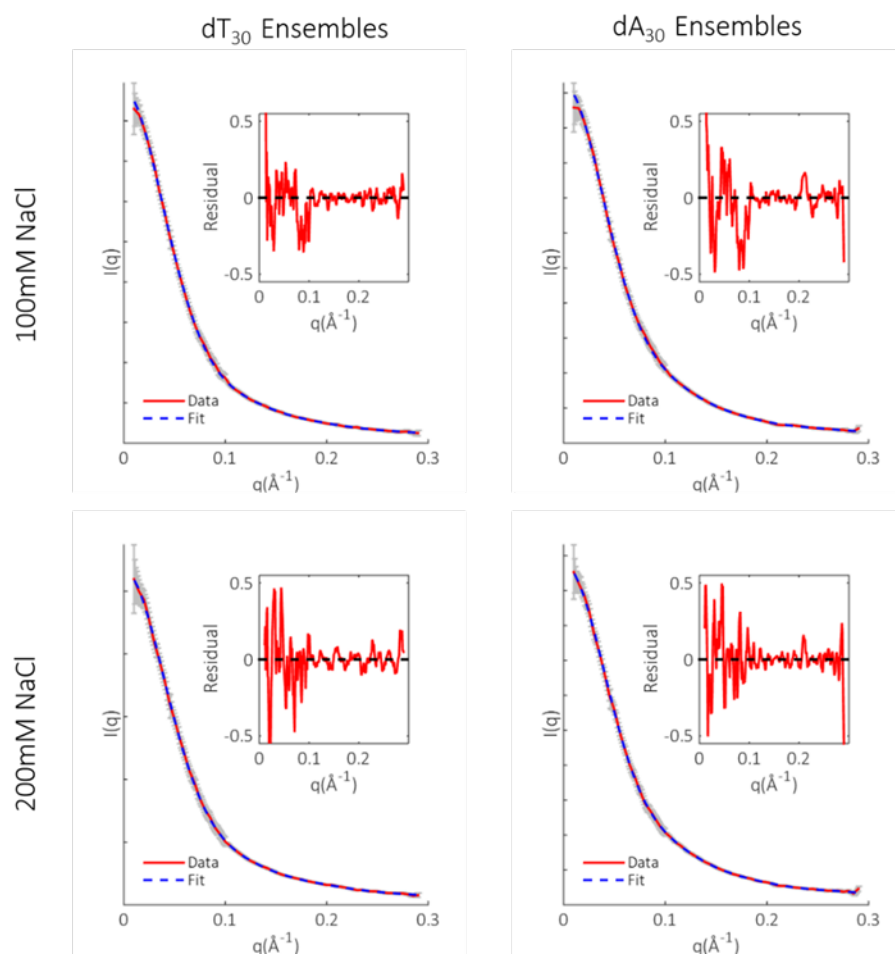
Supplementary Figure 2: Fits to the experimental data. *An enlarged version of Figure 2c is given for each experimental condition. The fits (dashed blue) to the experimental data (solid red) with associated experimental uncertainties (grey) are shown, together with the residual plot of the fit to the data (inset).*
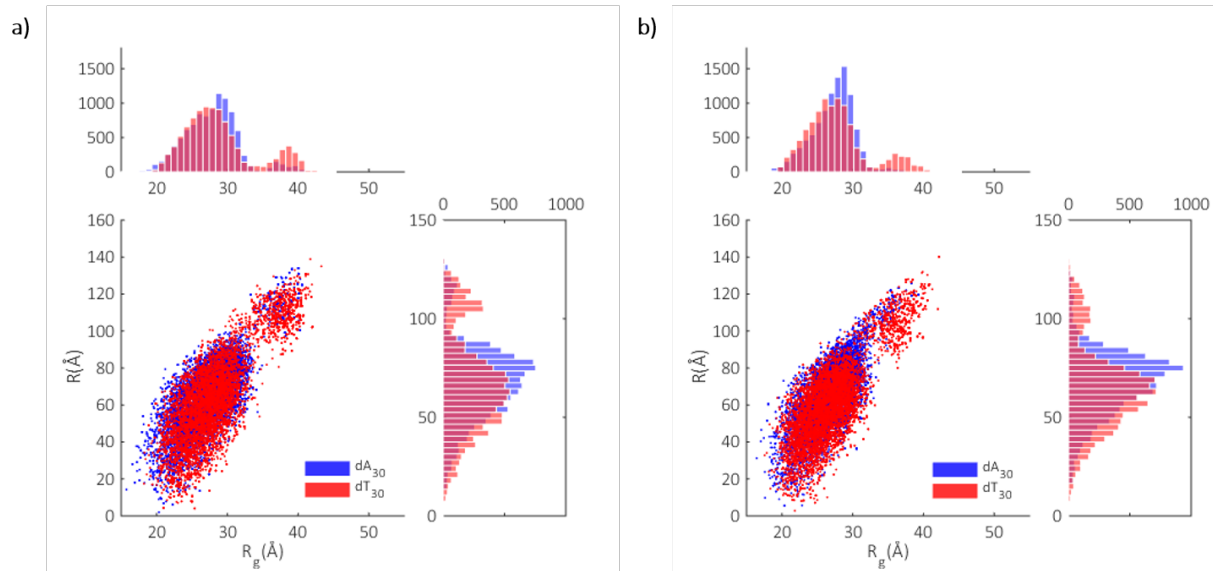
Supplementary Figure 3: Similarity of conformational space for dA and dT. An overlay of the conformational spaces for dA_{30} and dT_{30} presented in Figure 3 at 100mM NaCl (a) and 200mM NaCl (b).

Construct	$M_{1/2}$ (mM)	n	F_{Mg}	F_{Na}
25bp duplex	0.48±0.01	0.79±0.02	0.491±0.004	0.74±0.03
dT_{30}	1.09±0.04	0.88±0.02	0.490±0.007	0.68±0.02
dA_{30}	1.13±0.03	0.84±0.01	0.498±0.005	0.71±0.01

Supplementary Table 1: Fit parameters for Mg-Na competition around single- and double-stranded DNA. Parameters derived fitting the ICP-AES data (Figure 6 points) to the Hill equation (described in the Methods section, Eq. (2) and Eq. (3)).