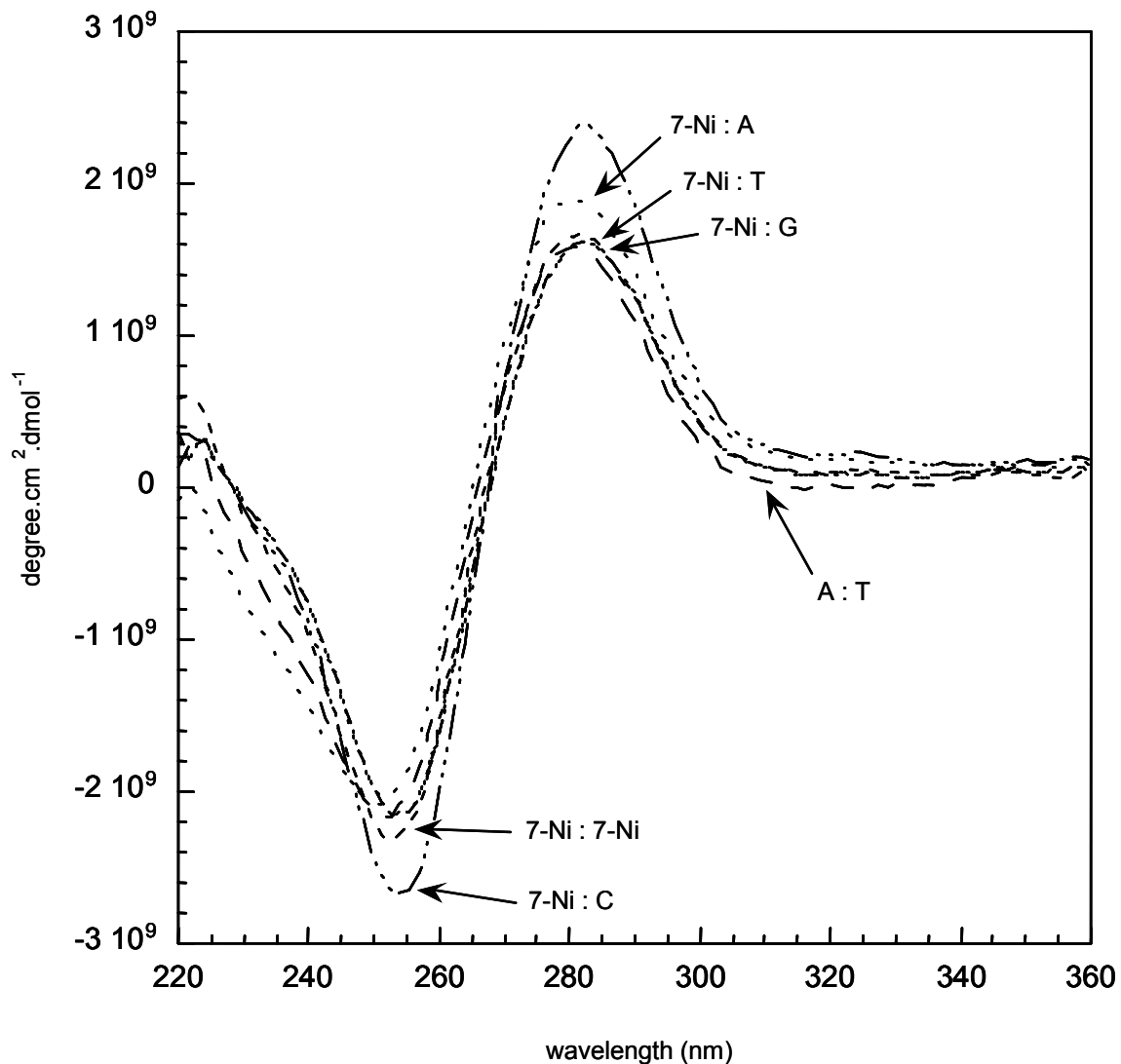


### Circular dichroism measurements

*Materials and Methods:* The CD spectra were collected on a Jasco J810 spectropolarimeter. Samples used for CD measurements were similar to those for absorbance measurements (3  $\mu\text{M}$  strand concentration, 10 mM sodium phosphate buffer, pH 7, 100 mM NaCl, 1 mM EDTA). A 600  $\mu\text{l}$  fraction of each samples were placed in 0.2 cm path length cell. Temperature of the samples was maintained to 25 degrees C. Data were collected from 340 to 220 nm at a rate of 50 nm/min and wavelength increment of 4 nm. CD data were transformed into molar ellipticity in the units of  $\text{degree}\cdot\text{cm}^2/\text{dm}$  of monomer subunits.



**Figure:** CD spectra of DNA duplexes containing self pair 7-Ni: d7-Ni, natural base pair A:T or unnatural base pair 7-Ni:N, (N= A, C, G or T).