

**Supplemental Information.**

Figure 1S shows values of values of the constants  $\left[ \frac{V_{disp}^{dip}}{V_{pp}}(\infty) \right]$  and  $c^*$  obtained from the fits to eq 21.

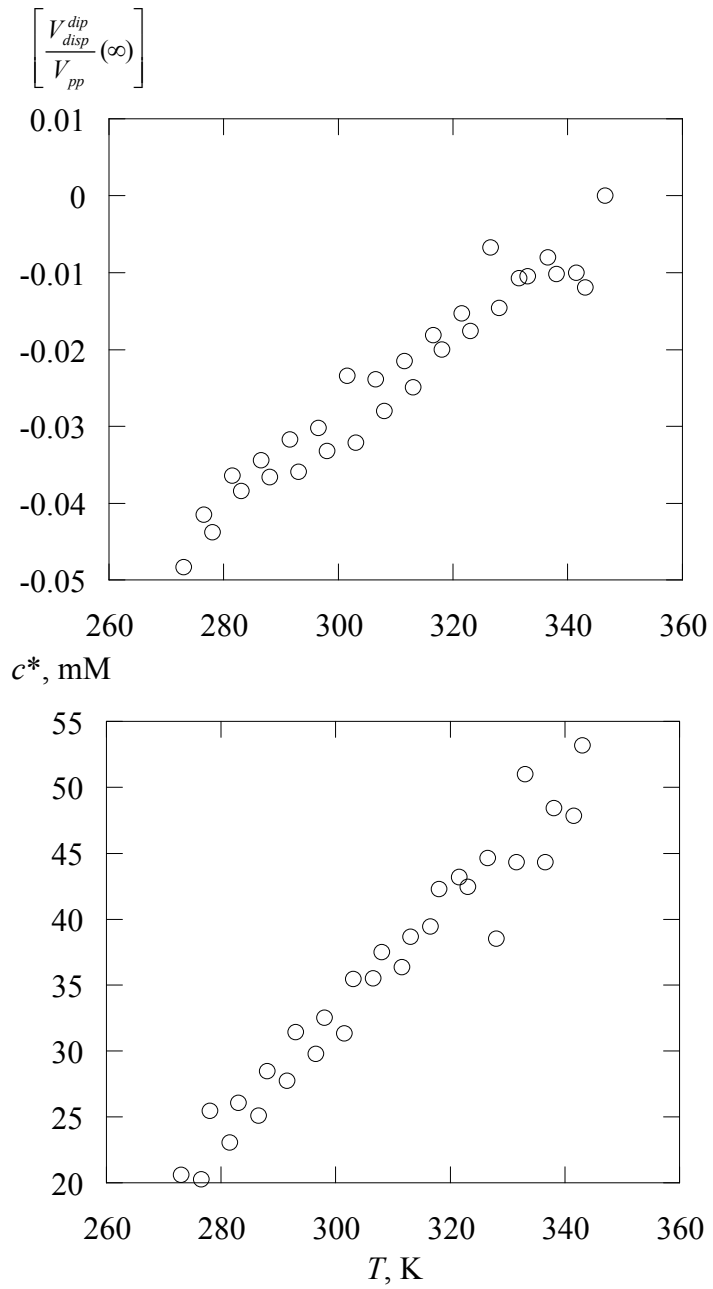


Figure 1S. Plateau values of dipolar dispersion, above, and characteristic concentrations where the plateau is approached,  $c^*$ , below vs. the temperature. Estimated uncertainties in the parameters obtained from the fits are about the size of the symbols.