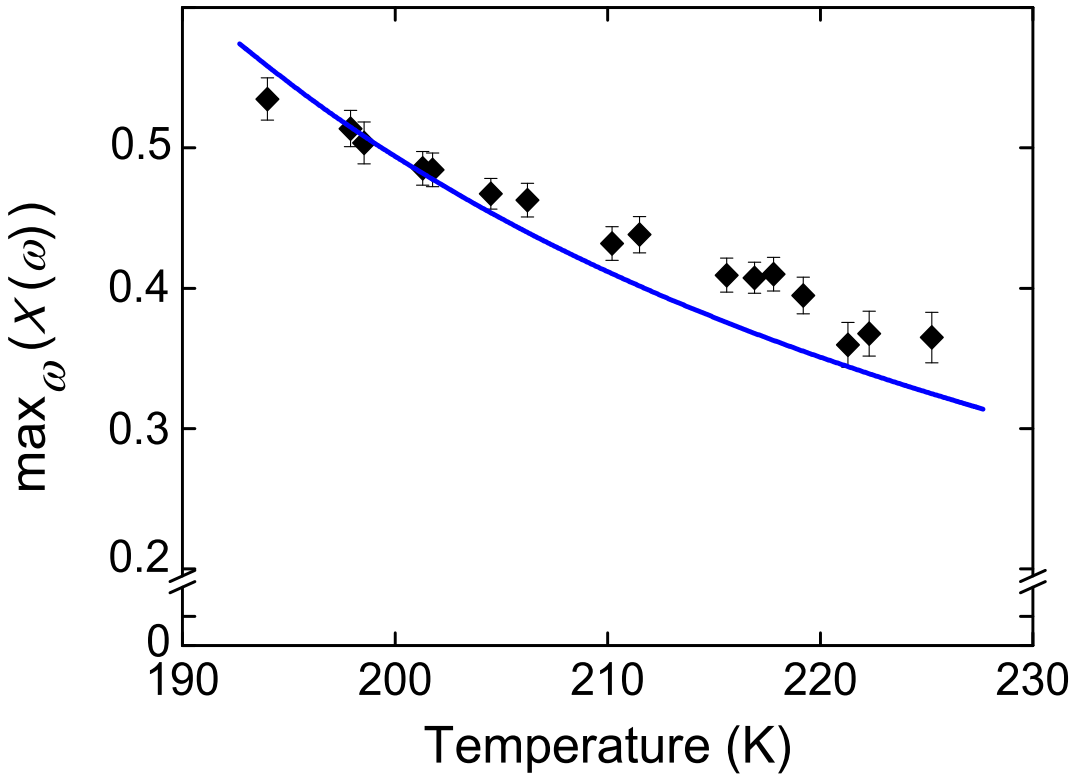

FIG. 3: (Color online) The measured quantity $\max_\omega [X(\omega, T)] = \max_\omega(|\chi_3(\omega, T)|) \times k_B T/[\epsilon_0(\Delta\chi_1)^2 a^3]$ plotted vs. temperature. The continuous line is the number of correlated molecules estimated from $T\chi_T$ (see [8]) with an arbitrary normalization chosen so that it coincides with the experimental points at 202 K.

and the phases collapse fairly well on a single master curve, as predicted by Eq. (1). A weak departure from scaling occurs at low ω for the highest T. This is not surprising: scaling should not hold far above T_g, where the dynamical correlations become short-ranged [12, 13]. Furthermore, the nonlinear response results both from trivial dielectric saturation effects [15, 21, 22] (always present for $\omega\tau < 1$), and from the non trivial dynamical correlations contribution. As the latter vanishes when $\omega \to 0$ ([12, 13]), the contribution of the trivial saturation effect should dominate at high T and low ω. The observed departure from scaling can thus be explained by the different T and ω dependencies of the two contributions.

Figure 3 gives the T dependence of the maximum value of $X(\omega, T)$, reached for $\omega = \omega^* = 2\pi f^*$. Since scaling is well obeyed, Eq. (1) tells us that this maximum value is proportional to $N_{corr}(T)$. A clear increase of this quantity as T decreases toward T_g is visible in Fig.