Supplementary information

We have verified the reliability of refined parameters by calculating their confidence intervals. The reduced standard deviations (*rsd*) $\Delta R/R$, $\Delta\sigma/\sigma$, $\Delta N/N$, of the refined parameters R, σ and N are plotted as a function of the time in Fig. 1a, 1b, 1c, respectively. For $t<t_0$, $\Delta N/N$, $\Delta R/R$, $\Delta\sigma/\sigma$, are quite large; as the reaction takes place, the *rsd* on the refined parameters R, σ, N, (describing the $I_P(q)$ term) exceeds 20% before the instants t^*_{20}=50s, t^*_{40}=20s and t^*_{60}=15s at 20 °C, 40 °C and 60 °C respectively. In this time ranges, $\Delta P_E/P_E$ generally assume small reasonable values (Fig. 2), although we note large $\Delta P_E/P_E$ values at the beginning of the reaction at T=20 °C due to noisy scattering in the high q region. These observations indicate that the contribution $I_p(q)$ to the model of eq.1 is almost negligible before the starting of the reactions; plus, considering *rsd* < 0.2, as a reasonable threshold for the reliability of refined parameters, the model of Fig.1 starts to work properly at the t* instants.

The model of eq. 1 has been derived considering the interference effects due to monodisperse hard spheres; in Fig. 3 we can check the reliability of this approximation. We observe that the standard deviation of both R_{HS} and η assume sufficiently small values as the reaction takes place and goes on at T=40 °C and T=20 °C, while large fluctuations of η take place at 60 °C also at t>50s.

Figures

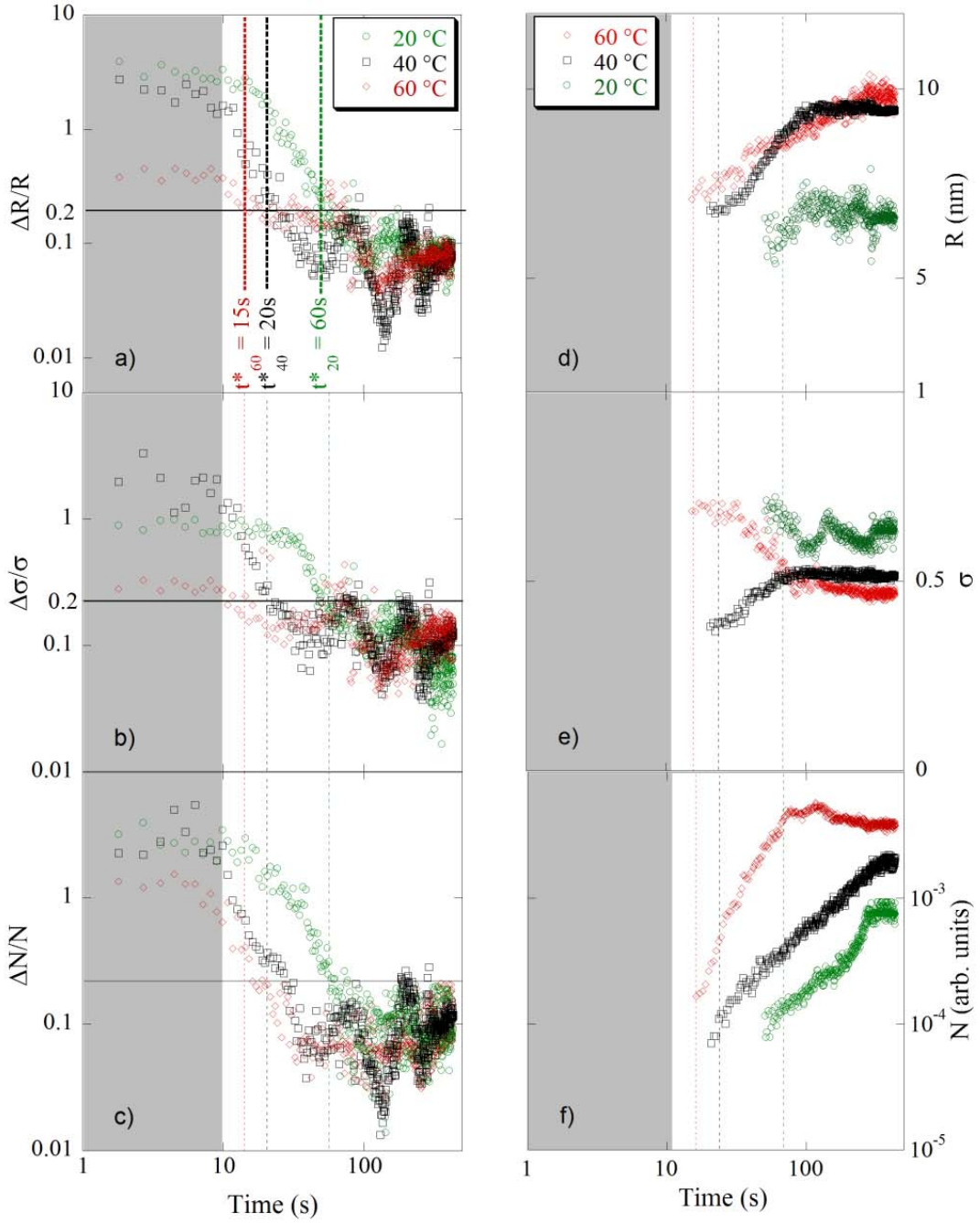

Figure 1: a) *ΔR/R*, b) *Δσ/σ*, c) *ΔN/N* d) *R*, e) *σ* and f) *N* plotted as a function of the time.

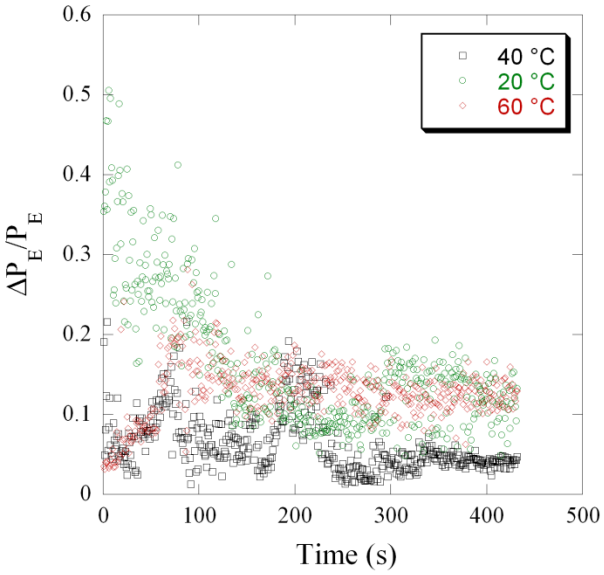

Figure 2: $\Delta P_E/P_E$ as a function of the time.

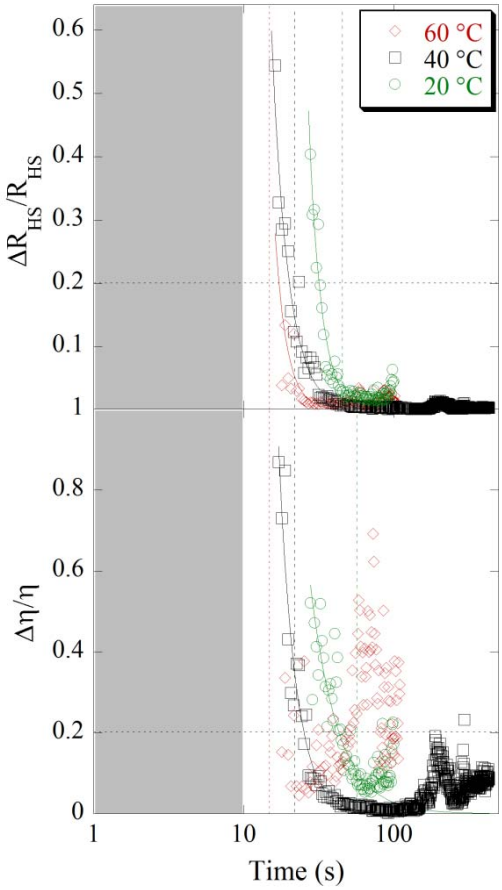

Figure 3: (upper panel) $\Delta R_{HS}/R_{HS}$ and (lower panel) $\Delta\eta/\eta$ as a function of the time.