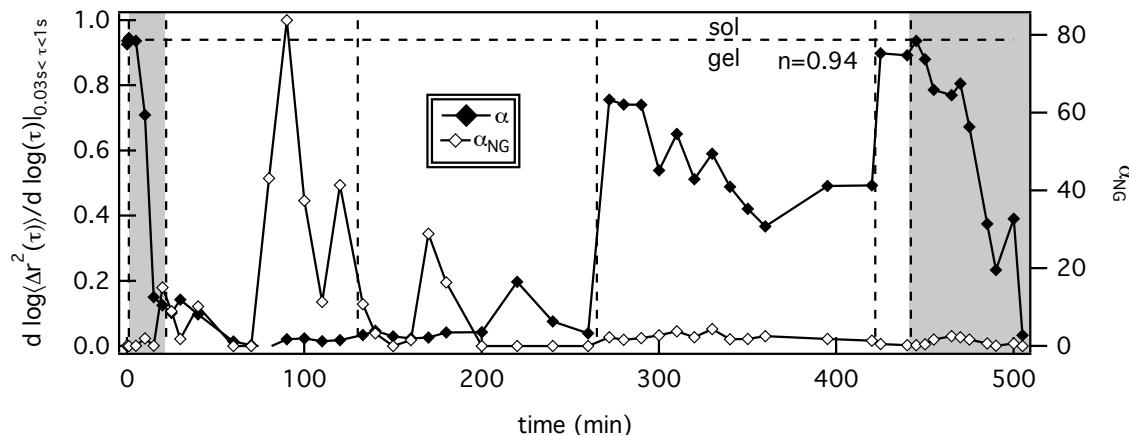
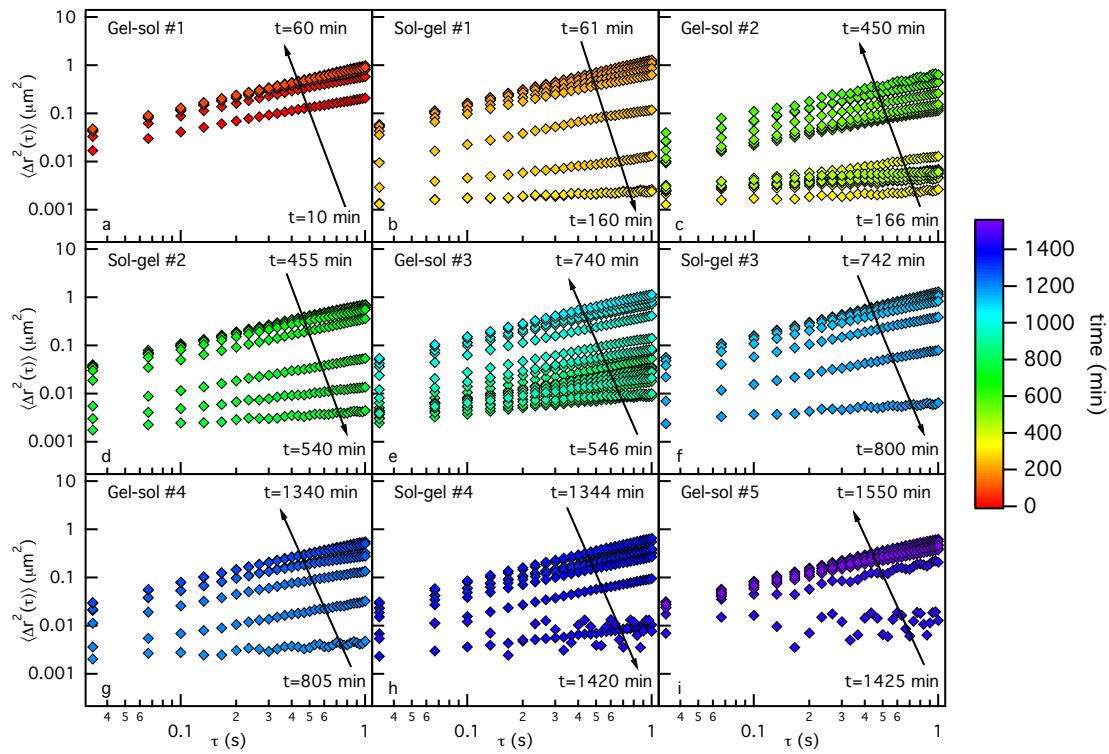


Electronic Supplementary Information



Supplemental Figure 1. Logarithmic slope (α , closed) and non-Gaussian parameter (α_{NG} , open) for repeated phase transitions starting with a 0.125 wt% HCO solution. The horizontal dotted line indicates the critical transition, determined from previous microrheological experiments, while vertical lines indicate solvent or gelling agent additions. Shaded grey areas have gelling agent in the solvent basin and white backgrounds have water.



Supplemental Figure 2. Mean-squared displacements curves for the degradation (a,c,e,g,i) and gelation (b,d,f,h) of an HCO system starting as a 4 wt% gel.