Electronic Supplementary Material (ESI) for Soft Matter.

Supplementary Information

Colloidal aggregation in anisotropic liquid crystal solvent

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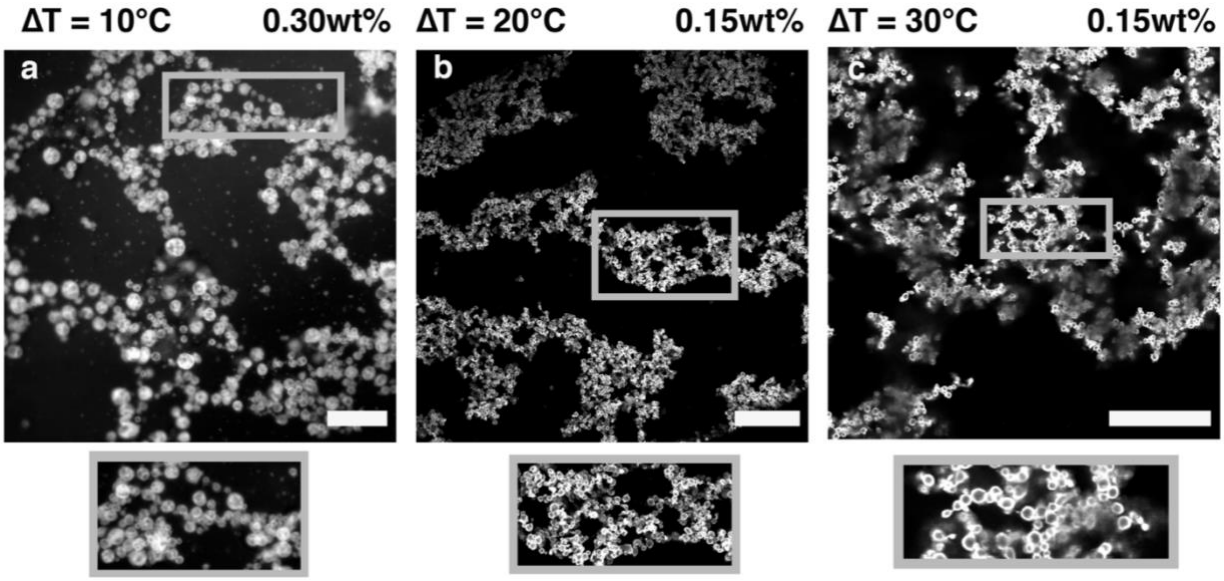
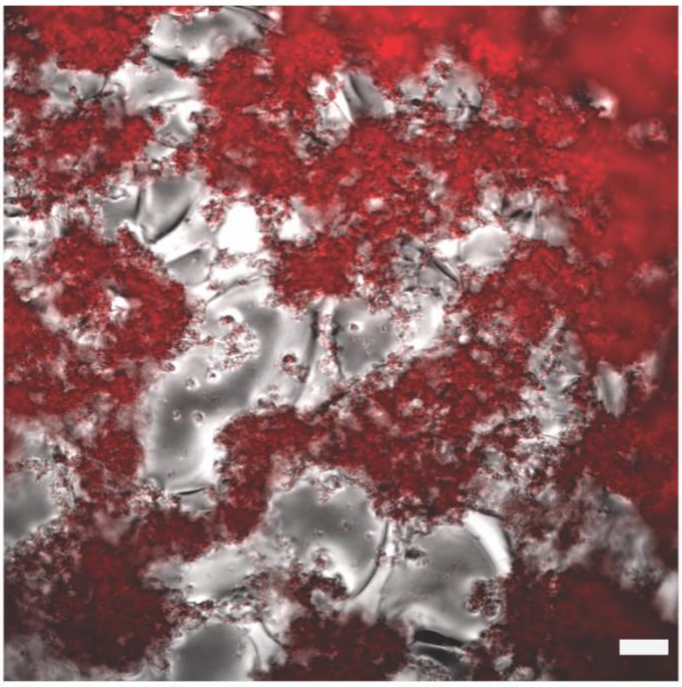


Supplementary Figure S1. Additional examples of aggregate structures with enlarged highlighted insets showing colloid chaining features. **a)** Fluorescence microscopy image of aggregate formed at a quench depth ΔT = 10°C and 0.30 wt% of ligand modified QDs in 5CB liquid crystal, scale bar 100µm. Laser scanning confocal tile scan images of aggregate formed at quench depth **b)** ΔT = 20°C (scale bar 100µm) and **c)** ΔT = 30°C (scale bar 20µm) at 0.30 wt% ligand modified QDs in 5CB liquid crystal.



Supplementary Figure S2. Overlaid fluorescence microscopy image (red) of an aggregate (quench depth ΔT = 35°C, 0.45 wt% QDs in 5CB liquid crystal), with the corresponding birefringence image using crossed polarizers to highlight defect lines in the nematic phase. Scale bar 100μm.

Supplementary Movie Captions

Supplementary Movie 1. Fluorescence microscopy video showing the initial 2 min of the aggregation process for a quench depth ΔT = 20°C with 0.30 wt% ligand modified QDs in 5CB liquid crystal.

Supplementary Movie 2. Fluorescence microscopy video recorded 200s after the initial quench showing aggregate ageing. Quench depth ΔT = 20°C with 0.30 wt% ligand modified QDs in 5 CB liquid crystal. Total time = 30 min.

Supplementary Movie 3. Fluorescence microscopy video highlighting line contraction and void formation for an aggregate formed at a quench depth ΔT = 10°C and 0.30 wt% ligand modified QDs in 5CB liquid crystal.