Supplementary Information (SI) for Soft Matter. This journal is © The Royal Society of Chemistry 2025

All videos are in real time. For all videos: $C_m = 173 \text{ mM}$

Video A: Formation of a cluster.

 $R = 70 \mu m$

 $r_d = 9.4 \ \mu \text{m}$

Video B: Formation of a cluster.

 $R = 93 \mu m$

 $r_d = 10.2 \ \mu \mathrm{m}$

Video C: Formation of a satellite cluster. (Same cluster shown in Fig. 3 on manuscript)

 $R = 93 \mu m$

 $r_d = 4.9 \, \mu \mathrm{m}$