

Colloidal aggregates in liquid crystals

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Colloids in a liquid crystal matrix exhibit very anisotropic interactions. Further, these interactions can be altered by both properties of the colloid and of the liquid crystal. This gives a potential for creating specific colloidal aggregates and crystals by manipulating the interactions between colloids. However, modelling these interacting colloids in a liquid crystal is very challenging. We use a hybrid particle-lattice Boltzmann scheme that incorporates hydrodynamic forces and forces from the liquid crystal field. I will discuss static configurations that we have studied, as well as some structures created by dynamic interactions.

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