Electronic Supplementary Material (ESI) for Soft Matter.

List of movies

- Movie S1: Dynamical evolution of an isotropic droplet embedded into a nematic liquid crystal with defects located on its surface. Homeotropic anchoring of the director field is set on the droplet surface.
- Movie S2: Dynamical evolution of an isotropic droplet embedded into a nematic liquid crystal with defects persistently rotating along the surface. Homeotropic anchoring of the director field is set on the droplet surface.
- Movie S3: Dynamical evolution of a single bound (SB) state, in which one of the two defects detaches from the droplet. Homeotropic anchoring of the director field is set on the droplet surface.
- Movie S4: Dynamical evolution of an unbound (U) state, in which both defects detach from the droplet. Homeotropic anchoring of the director field is set on the droplet surface.
- Movie S5: Dynamical evolution of an isotropic droplet embedded into a nematic liquid crystal when tangential anchoring of the director field is set on the droplet surface.
- Movie S6: Dynamical evolution of a three dimensional isotropic droplet embedded into a nematic liquid crystal for moderate shear. Homeotropic anchoring of the director field is set on the droplet surface. At equilibrium the strength of the surface anchoring is comparable with bulk elastic deformations.
- Movie S7: Dynamical evolution of a three dimensional isotropic droplet embedded into a nematic liquid crystal for high shear. Homeotropic anchoring of the director field is set on the droplet surface. At equilibrium the strength of the surface anchoring is comparable with bulk elastic deformations.
- Movie S8: Dynamical evolution of a three dimensional isotropic droplet embedded into a nematic liquid crystal for high shear. Homeotropic anchoring of the director field is set on the droplet surface. At equilibrium the strength of the surface anchoring is much larger than with bulk elastic deformations.

All parameters are given in the text.