

Supplementary Movie 1 | An initially extended tactoid with volume $644 \mu\text{m}^3$ undergoes shape relaxation while its configuration remains unchanged at homogenous configuration, corresponding to Fig. 1a.

Supplementary Movie 2 | An initially extended tactoid with volume $2,751 \mu\text{m}^3$ relaxes both its shape and structure recovering a bipolar configuration upon relaxation, corresponding to Fig. 1b.

Supplementary Movie 3 | An Initially extended tactoid with volume $16,414 \mu\text{m}^3$ relaxes to a cholesteric structure with three bands, corresponding to Fig. 1c.

Supplementary Movie 4 | Numerical simulation results capturing the relaxation of the initially extended tactoid to homogenous configuration, corresponding to Fig. 1a.

Supplementary Movie 5 | Numerical simulation results capturing the relaxation of the initially extended tactoid to bipolar configuration, corresponding to Fig. 1b.

Supplementary Movie 6 | Numerical simulation results capturing the relaxation of the initially extended tactoid to cholesteric configuration, corresponding to Fig. 1c