

Supplementary Materials for **Control of colloidal placement by modulated molecular orientation in nematic cells**

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The PDF file includes:

- fig. S1. Self-assembly of colloids with homeotropic anchoring in the regions of photopatterned splay distortions during the filling of the LC into the cell.
- Legend for movie S1

Other Supplementary Material for this manuscript includes the following: (available at advances.sciencemag.org/cgi/content/full/2/9/e1600932/DC1)

- movie S1 (.avi format). Colloidal sphere with dipolar director is transported from one splay region to the next splay distortion due to elastic interaction.

Supplementary Materials

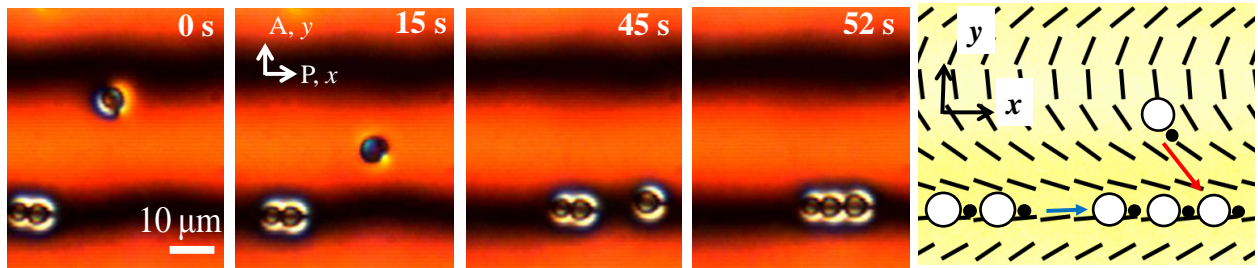


fig. S1. Self-assembly of colloids with homeotropic anchoring in the regions of photo-patterned splay distortions during filling of the LC into the cell. Homeotropically anchored colloid of diameter $5 \mu\text{m}$ migrates from the bend region to the splay region and self-assembles with other homeotropically anchored colloids to form a chain aligned parallel to the stripe direction.

Supplementary Movies

movie S1. This movie file shows the sphere placed by the tweezers in the splay region in such a way that the dipole $\hat{\mathbf{p}}$ is antiparallel to the x -axis. This configuration is unstable, since $\hat{\mathbf{p}}$ should be parallel to the x -axis in equilibrium. The sphere with the “wrong” orientation of $\hat{\mathbf{p}}$ moves across the stripe pattern, rotating $\hat{\mathbf{p}}$ in accordance with the local director, until it reaches the neighboring splay region with $\hat{\mathbf{p}}$ being parallel to the x -axis, i.e. completing a 180 degrees rotation through a shift by $|\Delta y| = l$. The movie is acquired at 1 frames/s and played at 10 frames/s.