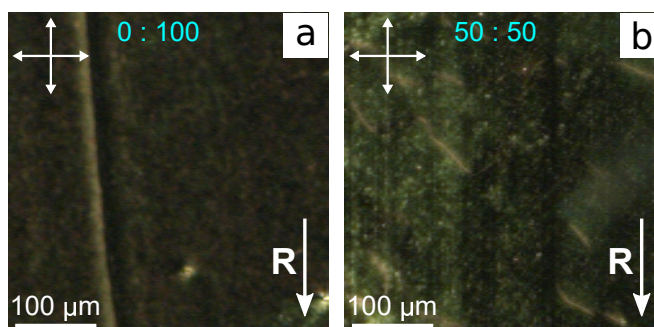


# Supplementary Materials: Nematic structures under conical anchoring at various director tilt angles specified by polymethacrylate compositions

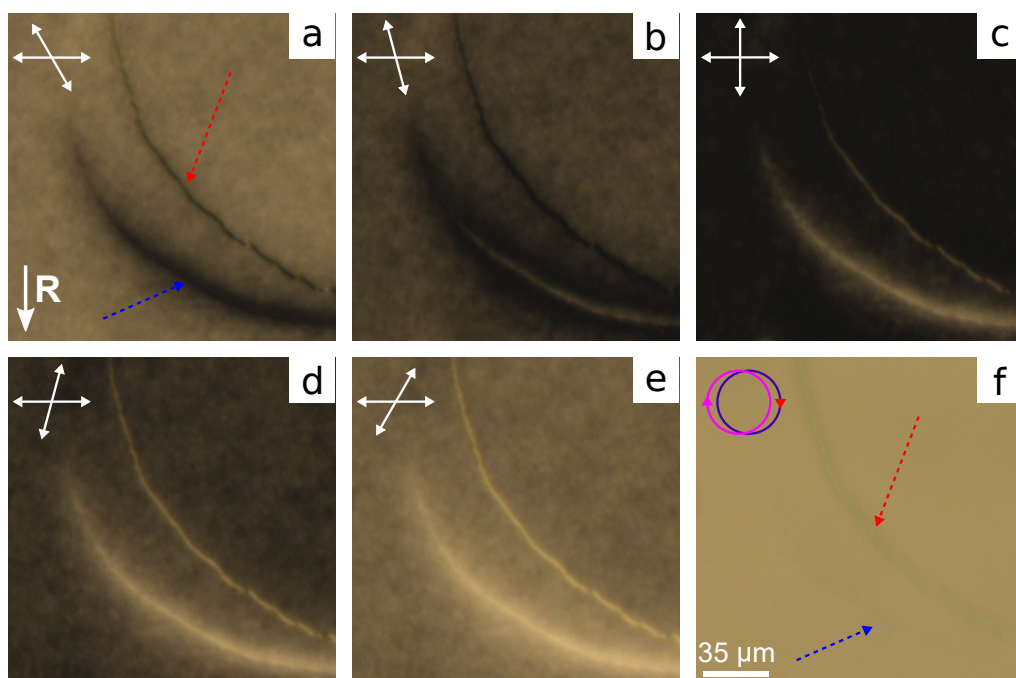
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## 1. Flow effect in LC cells with the one substrate covered by a mixture of PiBMA : PMMA without the addition of nematic LN-396



**Figure S1.** POM photos of LC cells with the bottom substrate covered by the rubbed PVA film and the top substrate covered by the film of polymer mixture PiBMA : PMMA = 0 : 100 (a) and 50 : 50 (b). The solid arrow indicates the rubbing direction **R**, the polarizer directions are indicated by double arrows.

## 2. Azimuthal orientation of the director near the domain border and the "trace", and violation of the director tilt angle at the domain border only.



**Figure S2.** POM photos of LC cell with the bottom substrate covered by the rubbed PVA film and the top substrate covered by the film of PiBMA:PMMA: LN-396=80:20:20. Photos are taken at the angle between polarizer and analyzer  $-30^\circ$  (a),  $-60^\circ$  (b),  $90^\circ$  (c),  $60^\circ$  (d),  $30^\circ$  (e), and in crossed circular polarizers (f). The solid arrow indicates the rubbing direction **R**; the linear polarizer directions are indicated by double arrows; the circular polarizer directions are indicated by the circles. The domain border and "trace" are marked by red and blue dashed arrows, respectively.