

# Supplementary Figures: Polarization-driven twisted states in ferroelectric nematic liquid crystals under confinement

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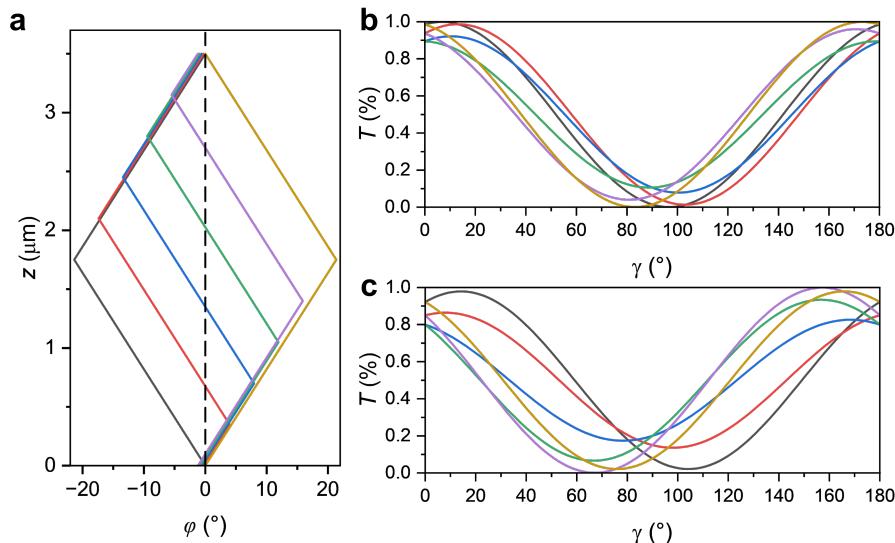
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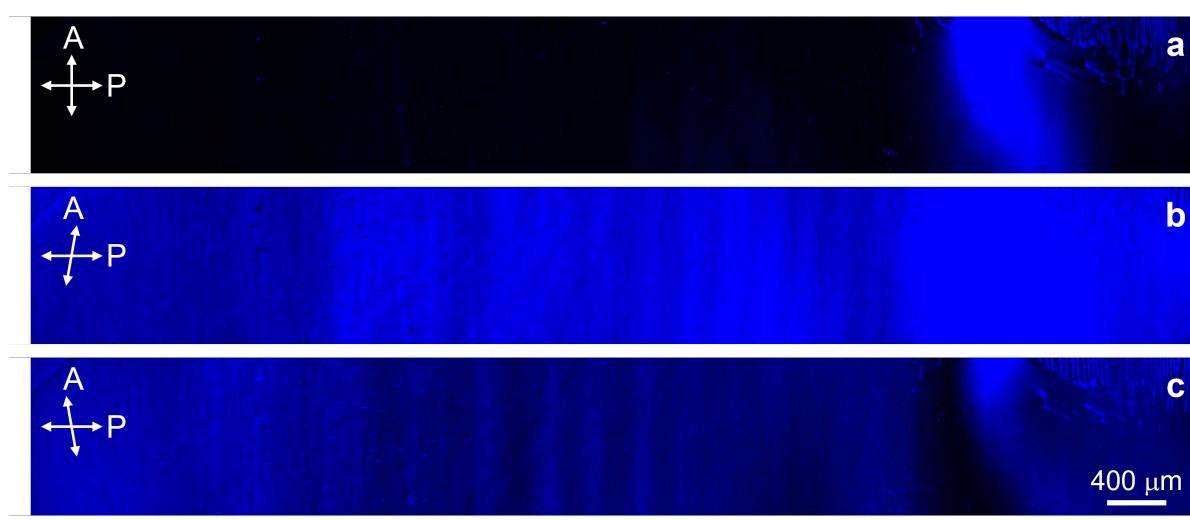
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**Figure 1.** Simulated transmitted light intensity in a synpolar cell with thickness  $3.5 \mu\text{m}$  for different combinations of mesotwisted structures. a) The simulated director structures. Here  $\phi$  represents the angle between the local director and the bottom alignment and  $z$  the distance from the bottom surface. In each structure the absolute value of the local twist is the same everywhere, about  $12^\circ/\mu\text{m}$ . The dashed black line shows the rubbing direction. A small offset has been added to  $\phi$  for each structure to make each line visible, but in the simulations  $\varphi_{z=0} = \varphi_{z=3.5} = 0$  for all structures. b) The simulated transmitted light intensity for the wavelength 500 nm. c) The simulated transmitted light intensity for the wavelength 600 nm.



**Figure 2.** Panorama picture of the thinner half of the synpolar wedge cell filled with the  $N_F$  phase under crossed (a) and  $\pm 25^\circ$  decrossed polarizers (b,c) with monochromatic light. The wavelength is  $\lambda = 450$  nm.