

Alignment and Anchoring Transition of Liquid Crystals on the Surface of Self-Assembled Block Copolymer Films with Periodic Defects

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Supporting information

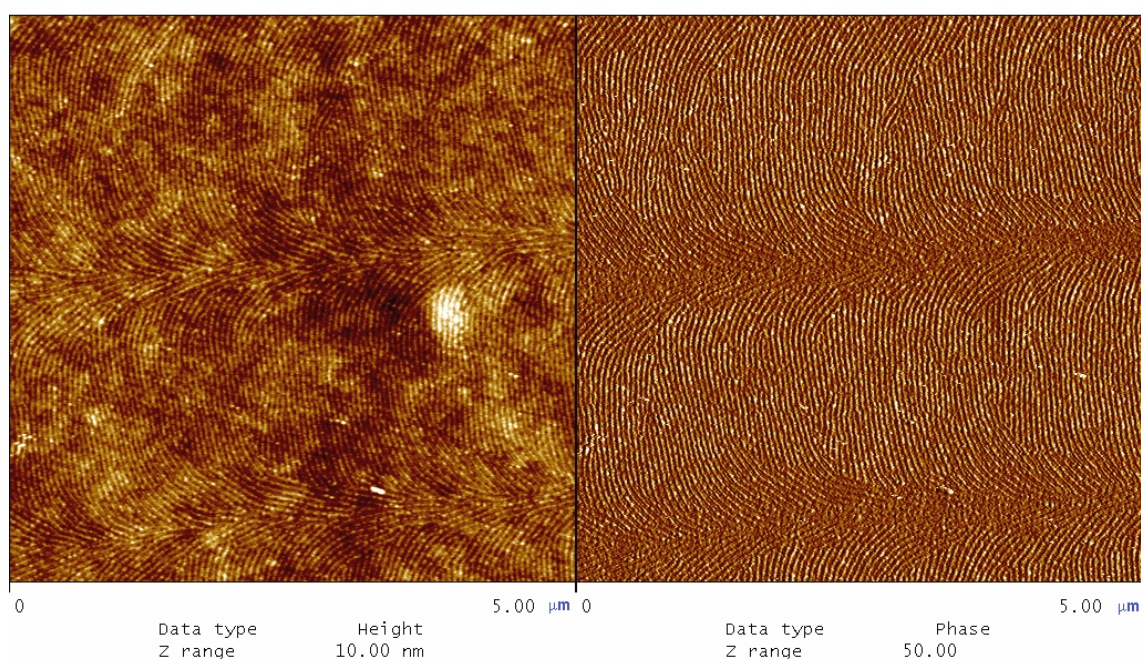


Fig. S1. Height(left) and phase(right) contrast tapping mode AFM image of the wall pattern in the BCP film cast on the glass substrate. The substrate with the drop-coated BCP film was immersed in water overnight, which enhanced the image contrast of the BCP microdomains constituting the wall pattern. This is probably caused by hydrolysis of triethoxysilyl groups in the PIC domains.

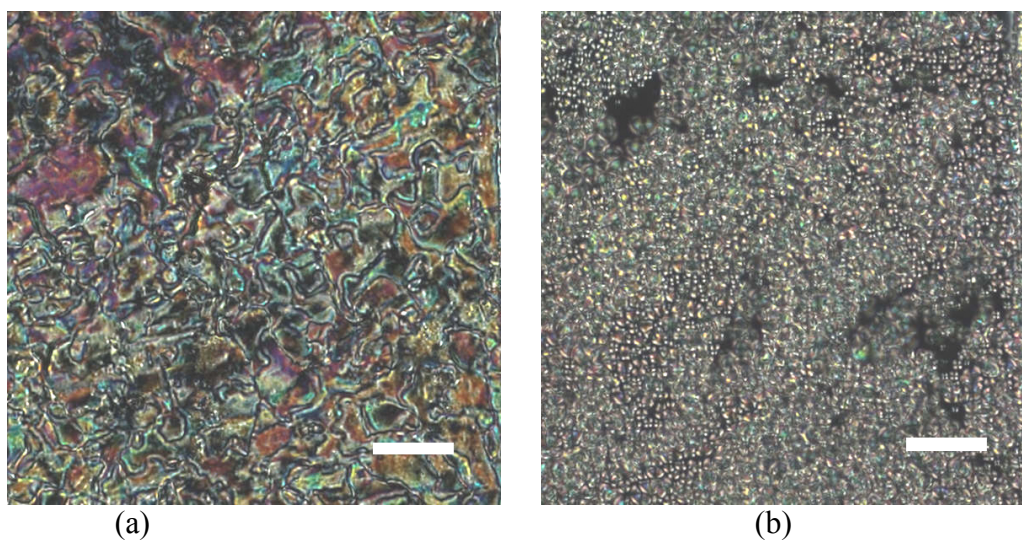


Figure S2. POM image of D7AOB between two glass plates in (a) the planar nematic state at 56°C and (b) in the smectic state at 48°C. Note that the smectic phase has a very high density of defects (focal conic). Scale bar = 50 μm.

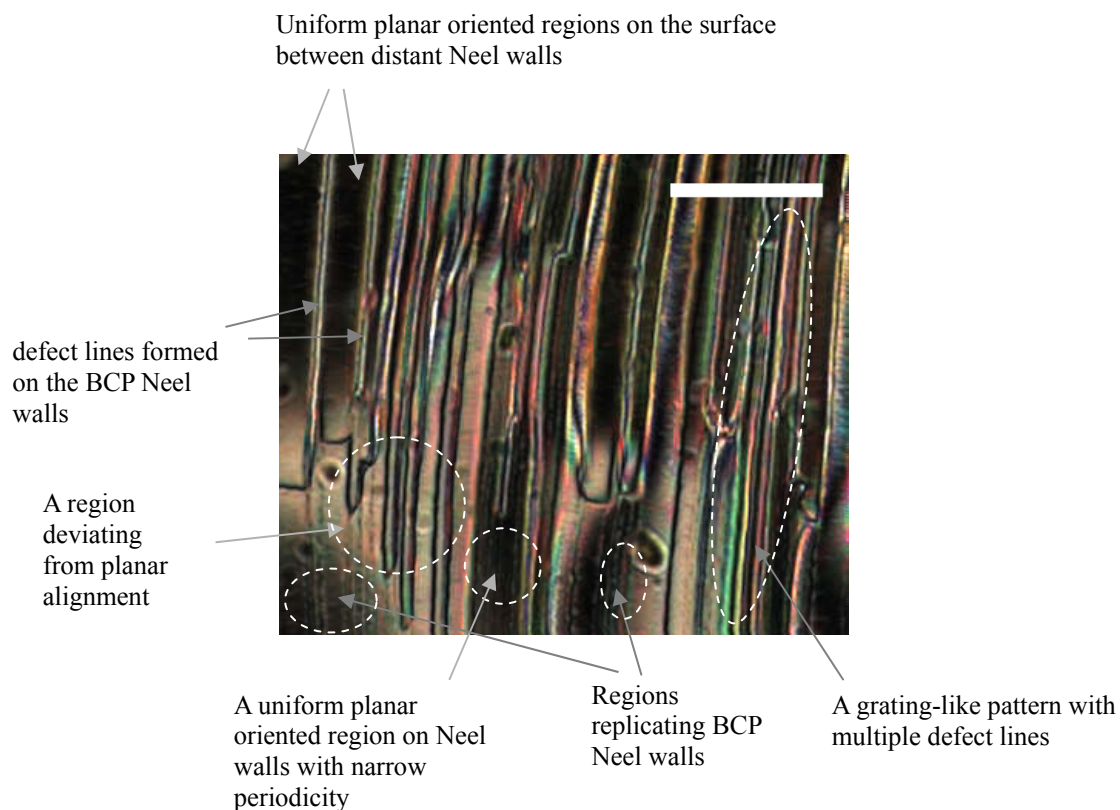


Figure S3. A POM image of D7AOB LC pattern under crossed polars in a thin cell constructed without a spacer between a BCP film and a cover glass. Regions showing different LC alignment characteristics are designated by arrows. Scale bar=20 μm .