

Fig. S1

Figure S1 Optical textures between crossed polarizers (a) circular domain texture in the B_{7A} phase of BC20 at 115°C, (b) schlieren texture in the SmA_b phase in Mix70 at 77.5 °C.

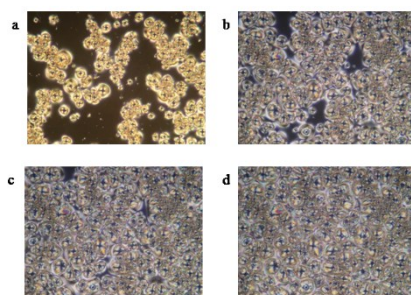


Fig. S2

Figure S2 Formation of a CS in Mix10 in cell treated for homeotropic alignment (a) Formation of TFCDs at 58°C (b) (c) and (d) TFCDs surrounded by a connected region at 57, 56.3 and 54°C respectively.

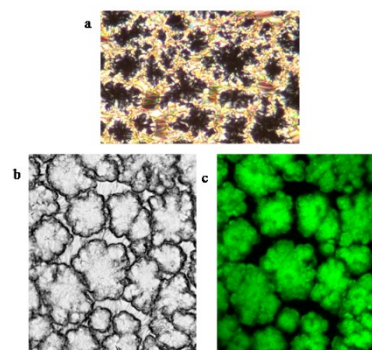


Fig. S3

Figure S3 CSs exhibited by a sample of Mix23 with BTBP dye viewed under (a) optical polarizing microscope between crossed polarizers, (b) and (c) confocal microscope in transmission and fluorescence modes respectively. The focal conic texture corresponding to the SmA_b phase can be observed in the connected regions in both (a) and (b) showing up the features of the CS and the concentration difference in the enclosed and connected regions.

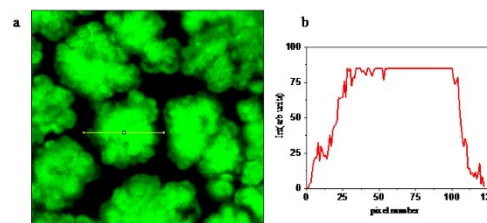


Fig. S4

Figure S4 (a) Confocal image of same sample shown in S3, (b) Intensity profile across the line marked in (a).

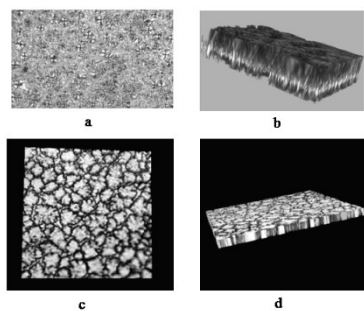


Fig. S5

Figure S5 Horizontal (left) and vertical (right) cross sections of the CSs obtained using the confocal microscope. (a) and (b) correspond to Mix10 and (c) and (d) correspond to Mix 20.

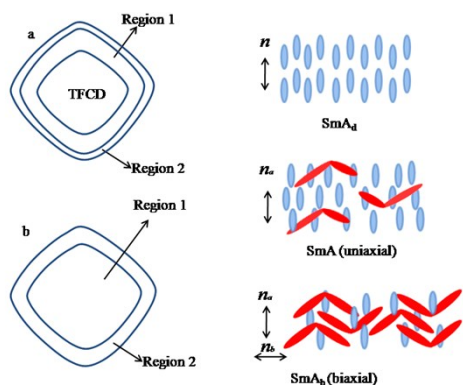


Fig. S6

Figure S6 Schematic representation of the organization of R and BC molecules in different regions of the CS at temperatures corresponding to the x-ray data for different mixtures. (a) Mix10, Region with TFCDs corresponds to SmA_d phase, Region1 to uniaxial SmA phase and Region2 to biaxial SmA_b phase (b) Mix20 and Mix30, Region1 and Region2 correspond to uniaxial SmA phase and biaxial SmA_b phase respectively.

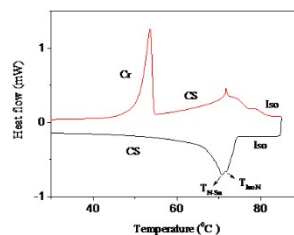


Fig. S7

Figure S7 Differential scanning calorimetry scans obtained at 5degC/min for Mix20. The cooling run clearly shows that the change into the CS is composed of two peaks, an initial transition into the N phase from the isotropic phase (T_{Iso-N} : $\Delta H=0.0566J/g$) followed immediately by a second transition (T_{N-Sm} : $\Delta H=0.43J/g$) depicting the onset of the smectic phase leading to the CS.

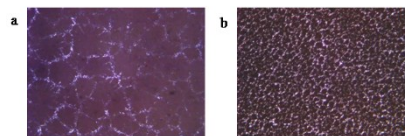


Fig. S8

Figure S8 CSs at 55°C formed in sample taken between untreated slide and coverslip. Cooling rate (a) 15°C/min, (b) 1°C/min.