Supporting Information for:

Creation of liquid-crystal periodic zigzags by surface treatment and thermal annealing

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**Fig. S1** DRLM images of the zigzag structures as increasing sample thickness. The scale bar is 20 μm.
**Figure S2**

Fig. S2 DRLM images of the zigzag structure as rotating crossed polarizers at (a) 0°, (b) 20°, and (c) 45°.

The scale bar is 10 μm.
**Figure S3**

The fluorescent intensities in LSFCM images at (a and b) $z = 0\ \mu m$ and (c and d) $z = 8\ \mu m$. The scale bar is 10 $\mu m$.

**Fig. S3** The fluorescent intensities in LSFCM images at (a and b) $z = 0\ \mu m$ and (c and d) $z = 8\ \mu m$. The scale bar is 10 $\mu m$. 
**Figure S4**

**Fig. S4** The AFM phase image of the zigzag structure. The blue box is the same area shown in the Figure 4(a). The scale bar is 10 μm.
**Fig. S5** Structural transition behaviour of the zigzag disclination lines upon cooling from N-SmA transition to SmA phase. The scale bare is 50 μm.
**Fig. S6** A AFM study of the rubbed PI-coated Si substrate. (a) The AFM topographic image of the rubbed PI-coated Si substrate and (b) its height profile. The scale bar is 2 μm.