Electronic Supplementary Information

Topological transformations of isotropic droplets with breakup and formation of topological defects in a confined nematic geometry

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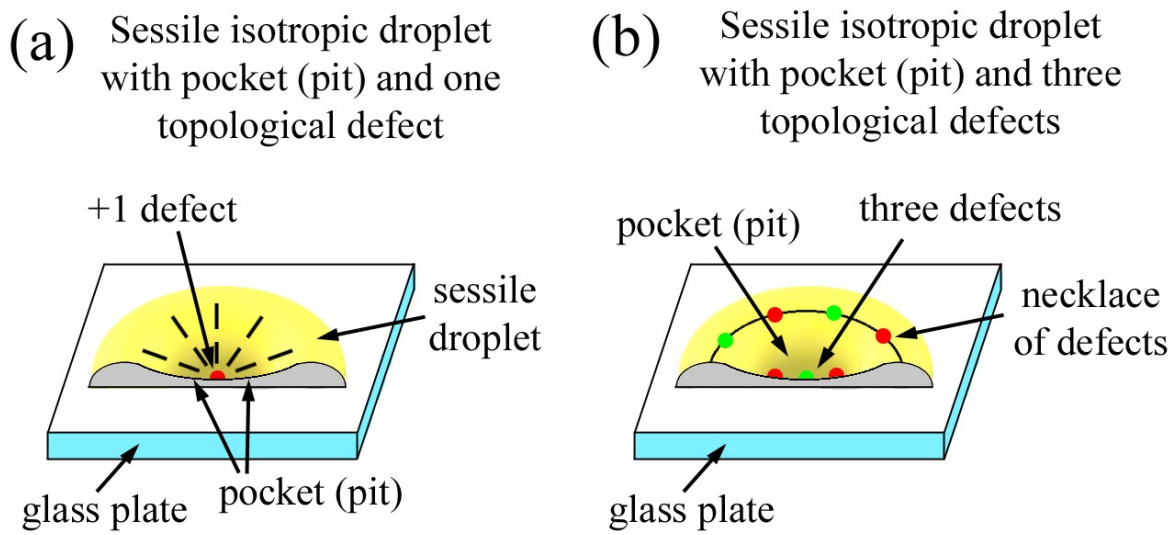

Fig. S-1

Schematic representation of sessile isotropic droplet with a pocket in nematic environment. (a) A droplet with s=+1 defect (red dot), χ=S=+1. Lines show the projection of the nematic director on the nematic-isotropic interface. (b) A droplet with three defects in the central part: two +1 defects (red dots) and one -1 defect (green dot) and with a circular chain of defects (necklace).

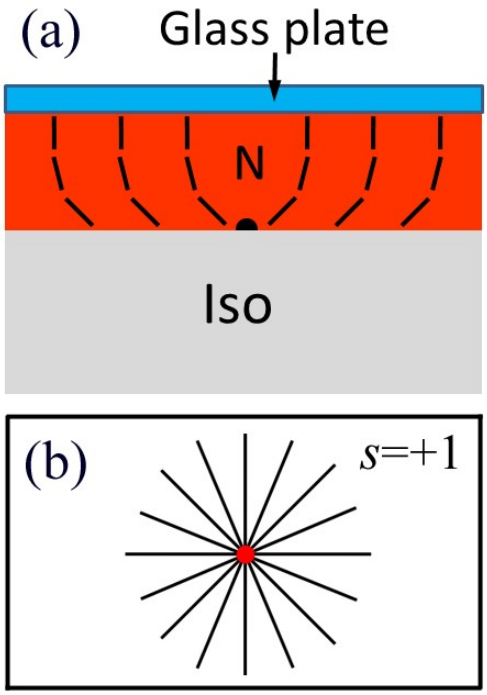

Fig. S-2

Point topological defect in nematic layer with hybrid director orientation. The director anchoring is homeotropic at the solid surface and oblique at the nematic-isotropic interface. (a) Side view of director distribution in the center of nematic pocket. The nematic phase is shown by red and the isotropic phase by light grey. (b) Top view of the projection of director on the nematic-isotropic interface near a topological defect with s=+1.

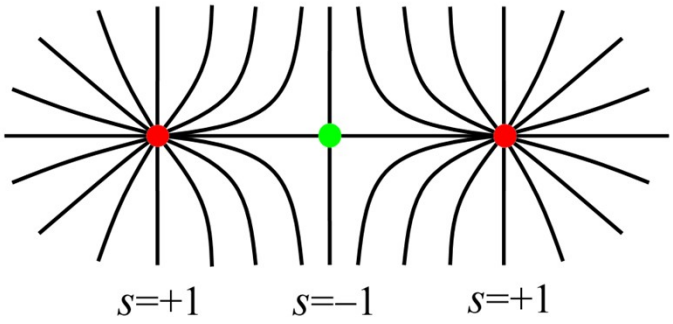

Fig. S-3

Schematic representation of director field in the vicinity of two s=+1 and one s=-1 topological defects.