Liquid Crystals under Con nement in Submicrometer Capsules

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Figure 1. (a) SEM image (inset: TEM image) of the SLCs microcapsules with a diameter of 325

the microcapsule is able to increase the nematic ordering thus to increase the phase transition temperature. We can further predict that a stronger confinement would be generated in

these uorescence features, we reconstruct the size-dependent director structures (Figure 5Sh).

Because of the tangential alignment of SLCs molecules along the inner SiO_2 shell surface, the director conguration depends on the competition between the surface anchoring energy and the bulk elasticity of SLCs. Taking account of the bulk elastic energy scaling as $F_e \sim KR$ and the surface anchoring energy scaling as $F_s \sim WR^2$, the director of SLCs relies on the radius of LC droplet confined inside the SiO_2 shell, R, where K i.28879.2(tnt)]TJ-31288957 -1.1055 TD.9(elast-4)-333(recoant,t-4)7389.8dere