

### Supplementary Information

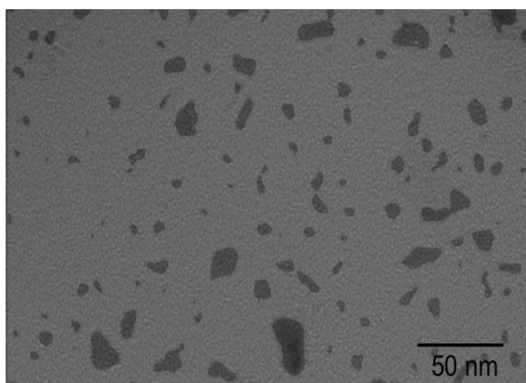


Fig. S1. TEM image of oleic acid capped harvested  $\text{LiNbO}_3$  nanoparticles

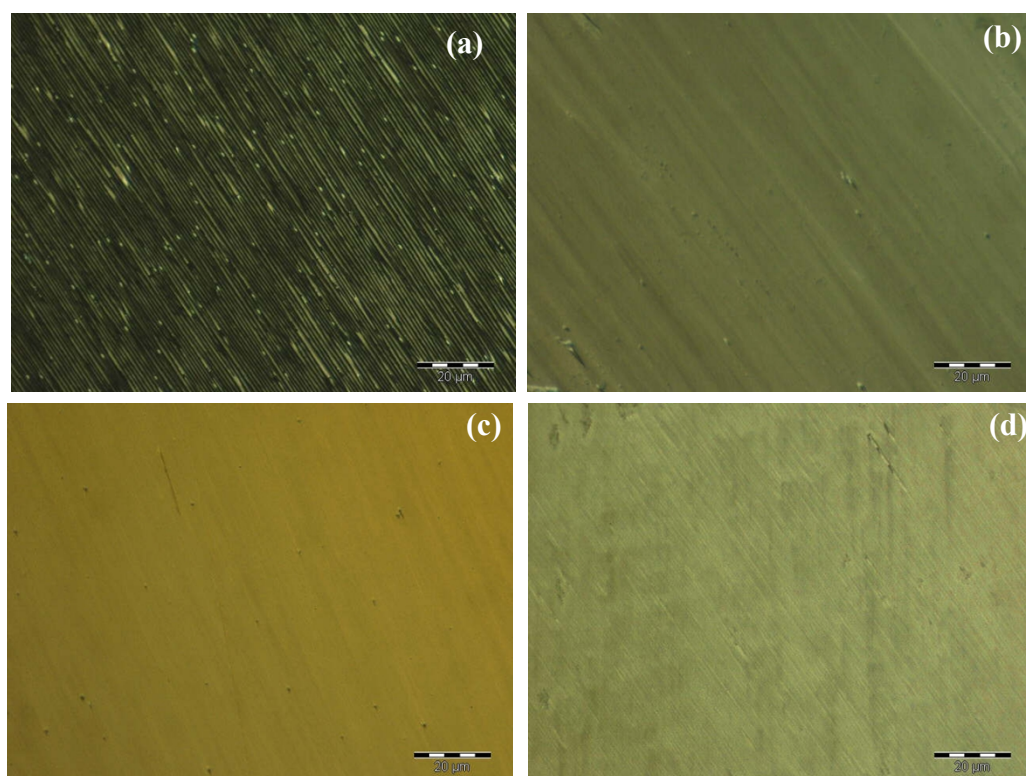


Fig. S2. Optical texture (a) non-doped FLC, (b) FLC nanocolloid with 0.01 wt. %  $\text{LiNbO}_3$ , (c) nanocolloid with 0.05 wt. %  $\text{LiNbO}_3$  and (d) FLC nanocolloid with 0.10 wt. %  $\text{LiNbO}_3$  at  $30^\circ\text{C}$

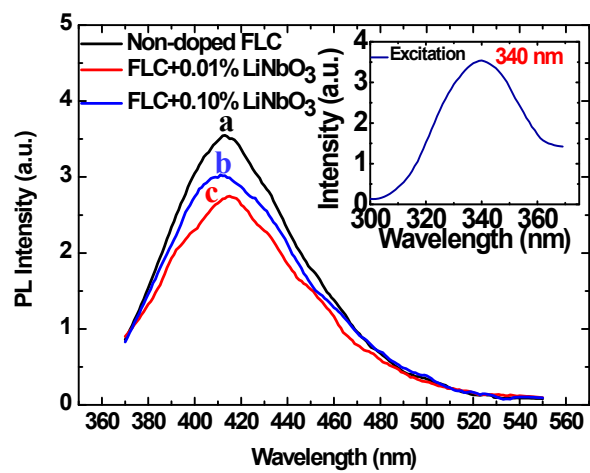


Fig. S3. Photoluminescence emission spectra (a) non-doped FLC (b) FLC nanocolloids with 0.01 wt. % LiNbO<sub>3</sub>, and (c) FLC nanocolloids with 0.10 wt. % LiNbO<sub>3</sub>. Inset represents the excitation wavelength spectra.