

# Supporting information

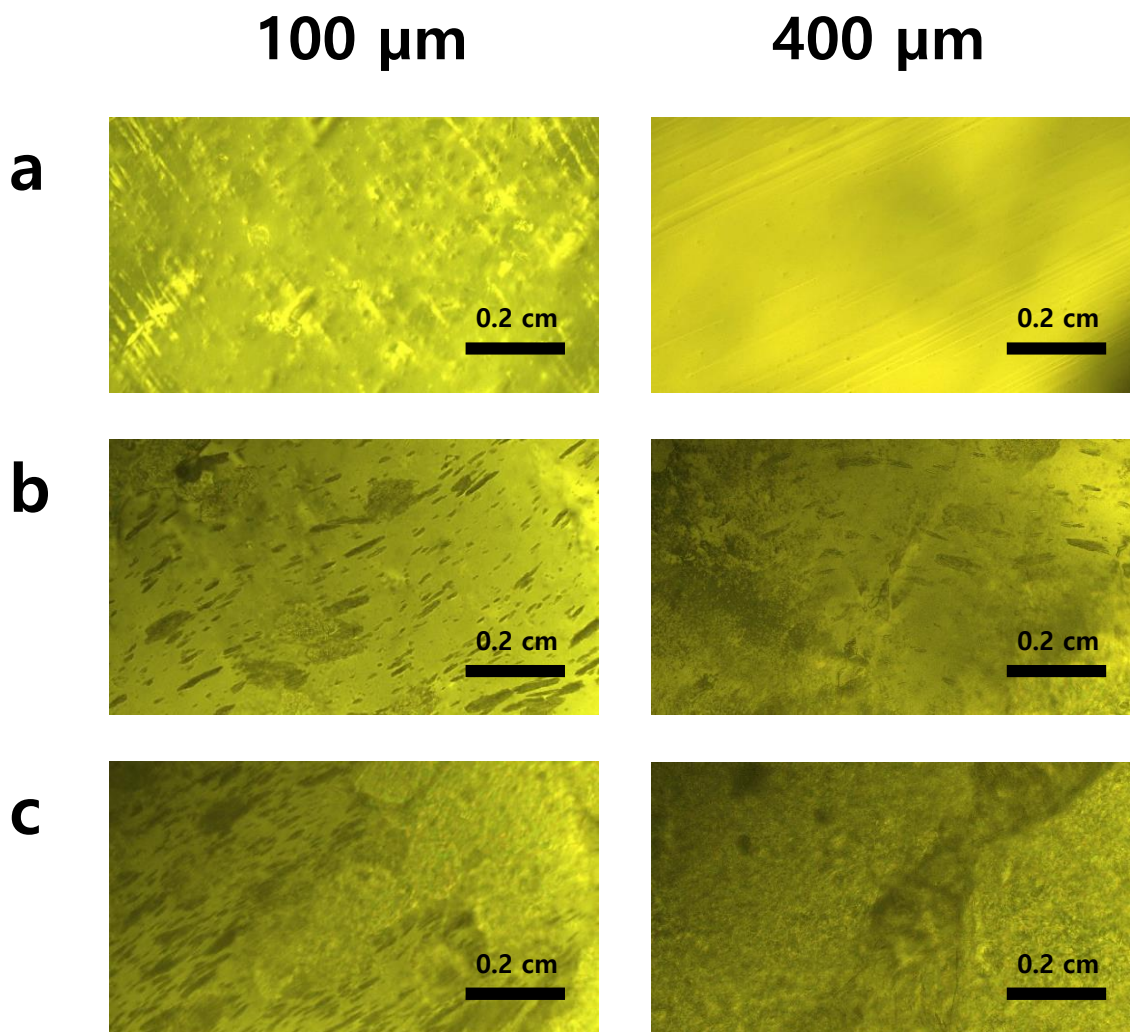
## Evaluation of surface-active agent hexadecyltrimethylammonium bromide with vertical self-alignment property to align liquid crystals for various cell gap conditions

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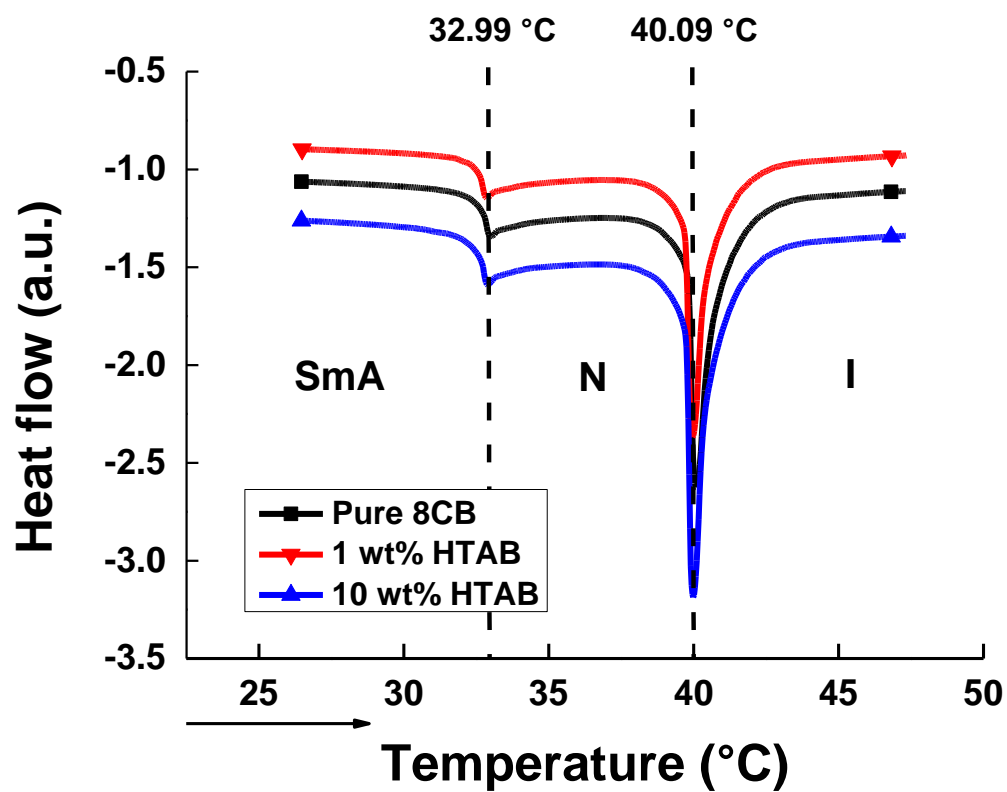
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**Fig. S1.** The POM images about the no-alignment state caused by a thick cell gap. The left side depicts 100  $\mu\text{m}$  cells, and the right side shows 400  $\mu\text{m}$  cells. And each line represents concentration of (a) 1 wt% HTAB, (b) 5 wt% HTAB, and (c) 10 wt% HTAB.



**Fig. S2.** The differential scanning calorimetry (DSC) heat flow results about 8CB+HTAB solutions are indicated over a temperature range from 25 to 47 °C with HTAB concentrations; pure, 1 wt%, and 10 wt%. The heat flow was analyzed by heating the sample.