

## Supplementary Information

### Stimuli-Responsive Liquid Crystal Physical Gels Based on the Hierarchical Superstructures of Benzene-1,3,5-Tricarboxamide Macrogelators

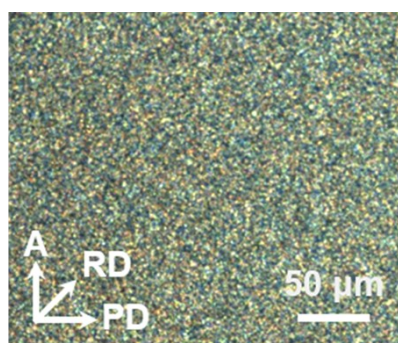
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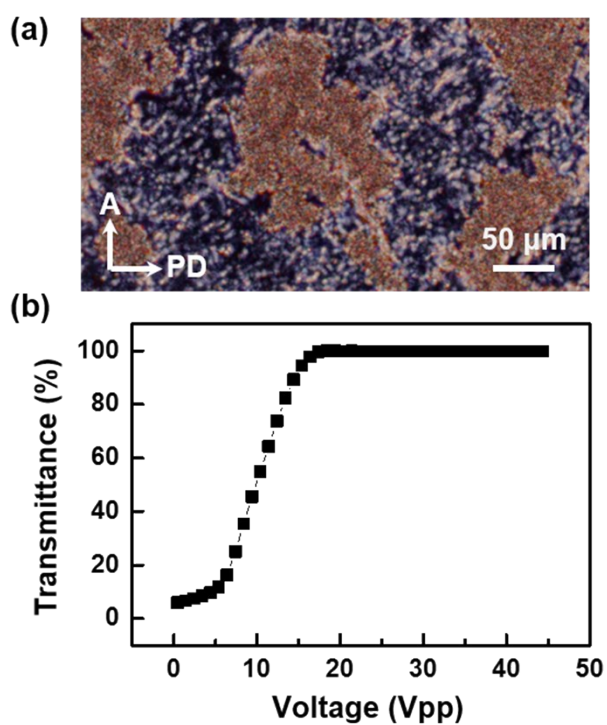
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#### Experimental method

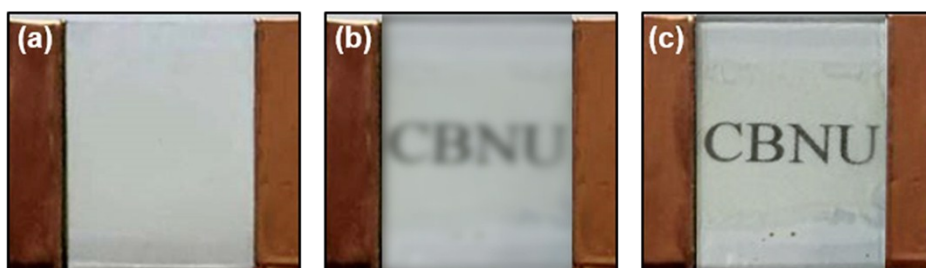
**Materials:** Raney-Nickel catalyst (Ni,  $\geq 89\%$ , Al  $\geq 6\%$ , TCI), hydrazine monohydrate (98%, Sigma-Aldrich), 1-bromooctane (99%, TCI), 4-nitrophenol (99%, TCI), phenol (99%, TCI), 18-crown-6-ether (99%, TCI), trimethylamine (99%, Sigma-Aldrich), methyl *p*-toluenesulfonate (98%, TCI), methyl 3,4,5-trihydroxybenzoate (98%, TCI), *p*-phenylenediamine (99%, Sigma-Aldrich), N,N'-diisopropylcarbodiimide (99%, TCI), 4-(dimethylamino) pyridinium 4-toluene sulfonate (99%, TCI), benzene-1,3,5-tricarbonyl chloride (98%, TCI), pyridine (anhydrous, TCI), hydrochloric acid (37%, Showa), potassium carbonate (99.5%, Showa), and sodium nitrite (97%, Showa) were used without further purifications. The BTA3AZO molecules were synthesized according to the references (24, 40).



**Fig. S1** POM image of polyimide (PI) planar alignment cell filled with 1 wt% BTA3AZO LCPGs. POM is taken when the rubbing direction (RD) is 45°-tilted with respect to the polarization axis.



**Fig. S2** POM image of LC test cells filled with 1 wt% BTA3AZO LCPGs with vertical ALs, and their corresponding electro-optical response upon increasing the applied voltage.



**Fig. S3** Macroscopic images of LC test cells filled with 1 wt% BTA3AZO LCPGs (a) without PI ALs as well as with (b) planar and (c) vertical ALs.