

## **Description of Additional Supplementary Files**

File Name: Supplementary Movie 1

Description: Self-reassembly dynamics of blue phase liquid crystals. Time-sequential microscope images comparing the platelet-merger rate in BPII with that in BPI.

File Name: Supplementary Movie 2

Description: Directional selective reflections from large blue-phase single crystals. Video of millimeter-sized BPI monocrystals illuminated from different angles. These crystals were grown by gradient-temperature scanning.

File Name: Supplementary Movie 3

Description: Growth dynamics of a centimeter-sized BPI single crystal during gradient-temperature scanning. Microscope video of a blue phase liquid crystal made in the process of surface-treatment assisted gradient-temperature scanning.