

Supplementary Materials

Cholesteric Liquid Crystals with Thermally Stable Reflection Color from Mixtures of Completely Etherified Ethyl Cellulose Derivative and Methacrylic Acid

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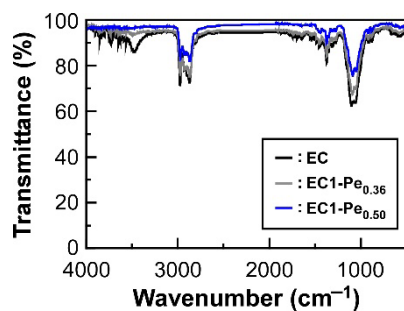


Figure S1. FT-IR spectra of pristine EC (black line), EC1-Pe_{0.36} (gray line), and EC1-Pe_{0.50} (blue line).

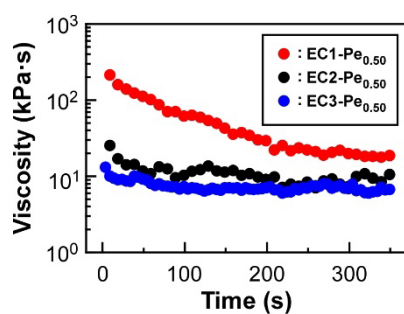


Figure S2. Changes in the viscosity of EC1-Pe_{0.50} (red points), EC2-Pe_{0.50} (black points), and EC3-Pe_{0.50} (blue points) as a function of shearing time.

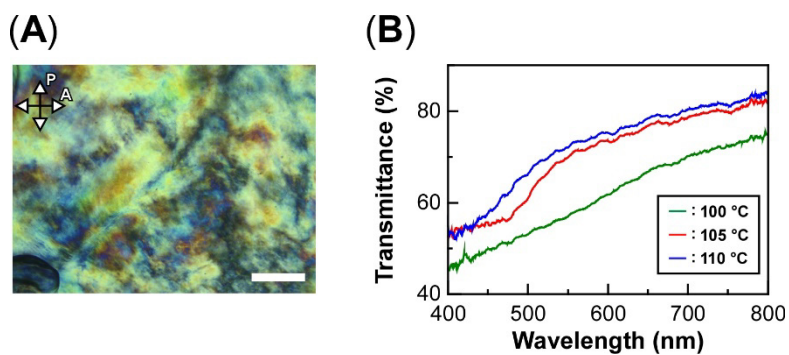


Figure S3. (A) Polarized optical microscopic image at 30 °C of **Sample 16** under cross-Nicols. White scale bar denotes 500 μm . The arrows in the upper left corner indicate the directions of polarizer and analyzer. (B) Transmission spectra of **Sample 16** measured at 100 °C (green line), 105 °C (red line), and 110 °C (blue line).

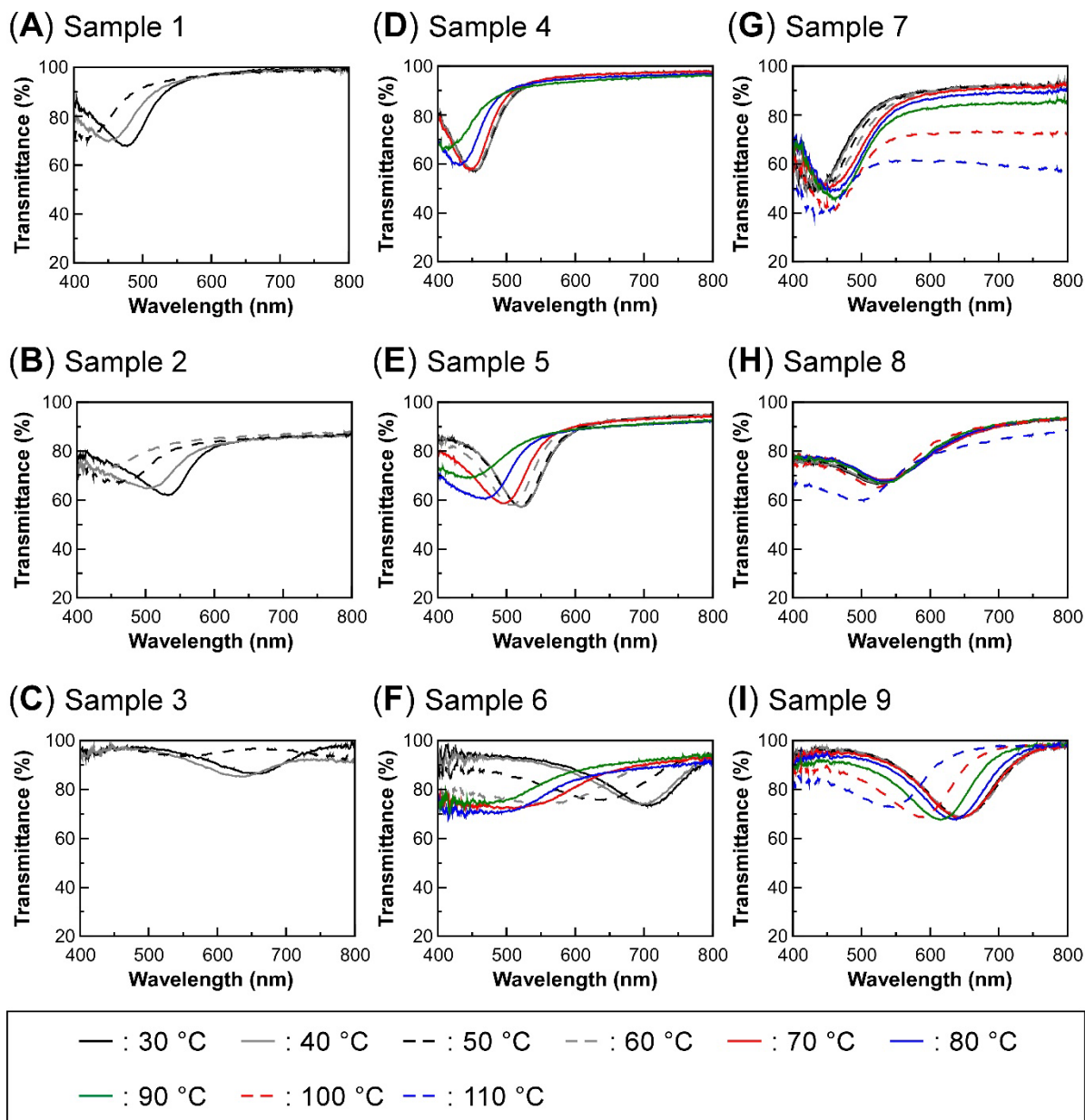


Figure S4. Changes in transmission spectra of these lyotropic CLCs upon heating process. (A) Sample 1. (B) Sample 2. (C) Sample 3. (D) Sample 4. (E) Sample 5. (F) Sample 6. (G) Sample 7. (H) Sample 8. (I) Sample 9.

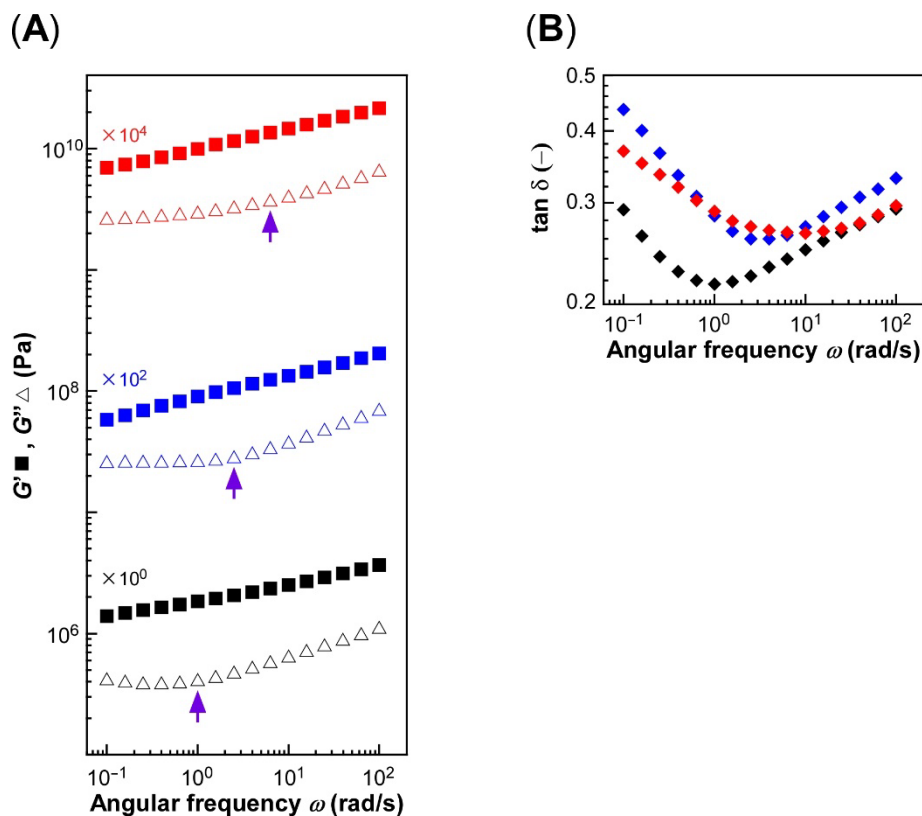


Figure S5. (A) Angular frequency (ω) dependence of the storage modulus (G' ; closed squares) and loss modulus (G'' ; open triangles) of **Sample 1** (red plots), **Sample 4** (blue plots), and **Sample 7** (black plots) measured at 30°C. Note that the G' and G'' of **Samples 1** and **4** are shifted in the vertical direction of profile values for the reader's clarity. The purple arrows are the inflection points of G'' . (B) Angular frequency (ω) dependence of the loss tangent (G''/G') of **Sample 1** (red plots), **Sample 4** (blue plots), and **Sample 7** (black plots) measured at 30°C.