

Supporting Information

Exploration of immobilization conditions of cellulosic lyotropic liquid crystal in monomeric solvents by *in-situ* polymerization and achievement of dual mechanochromism at room temperature

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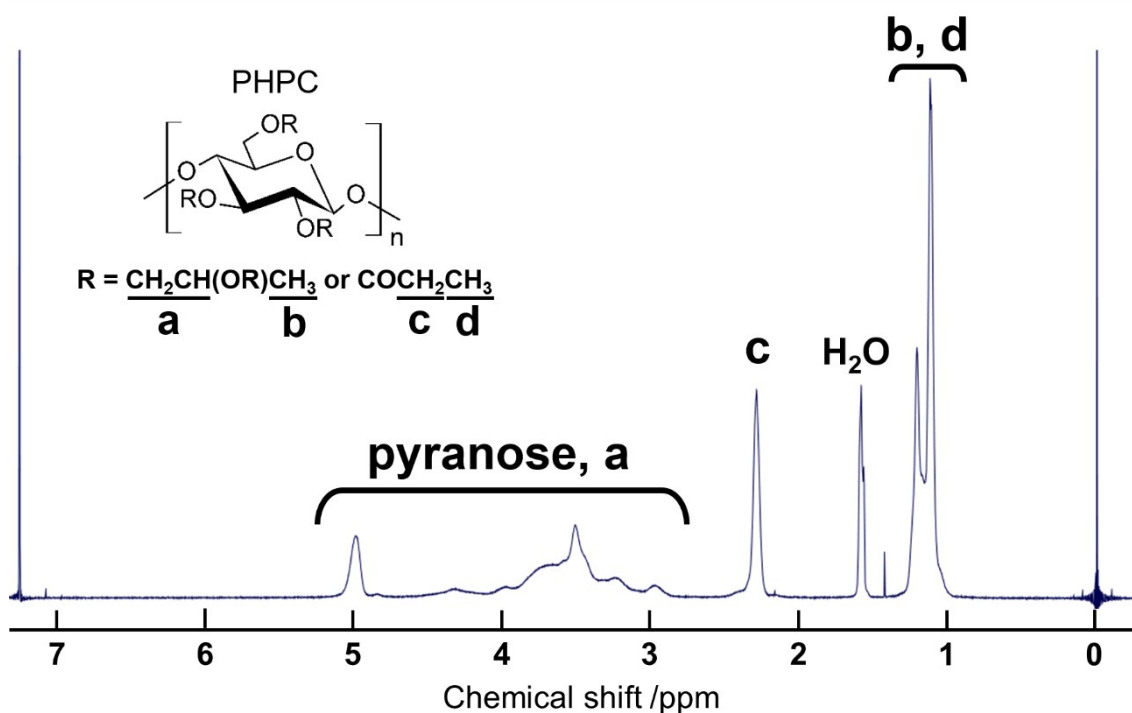


Figure S1 ¹H NMR spectrum of PHPC in CDCl₃.

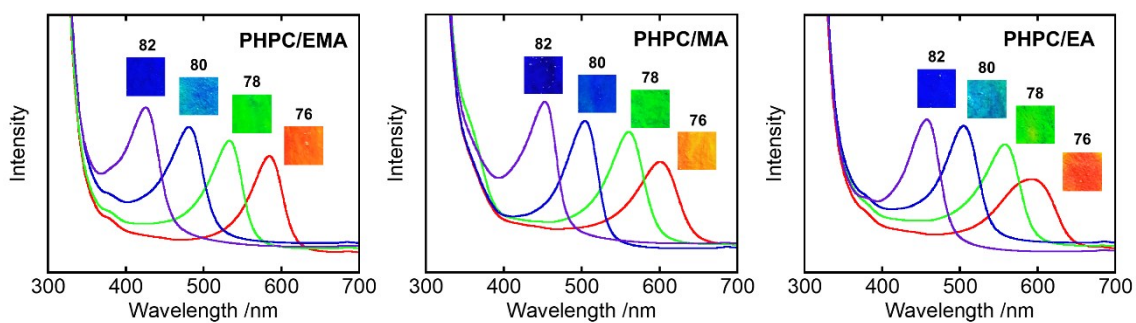


Figure S2 Visual appearances and UV-Vis spectra of PHPC/EMA, PHPC/MA, and PHPC/EA solutions. Numerals inserted represent the concentrations (wt%) of PHPC in the solutions.

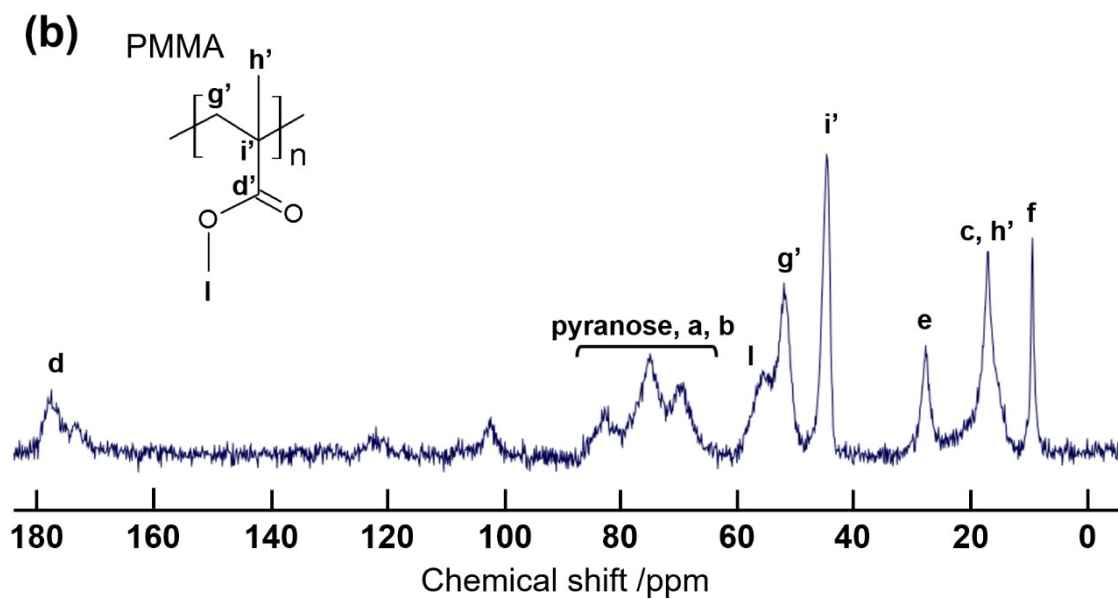
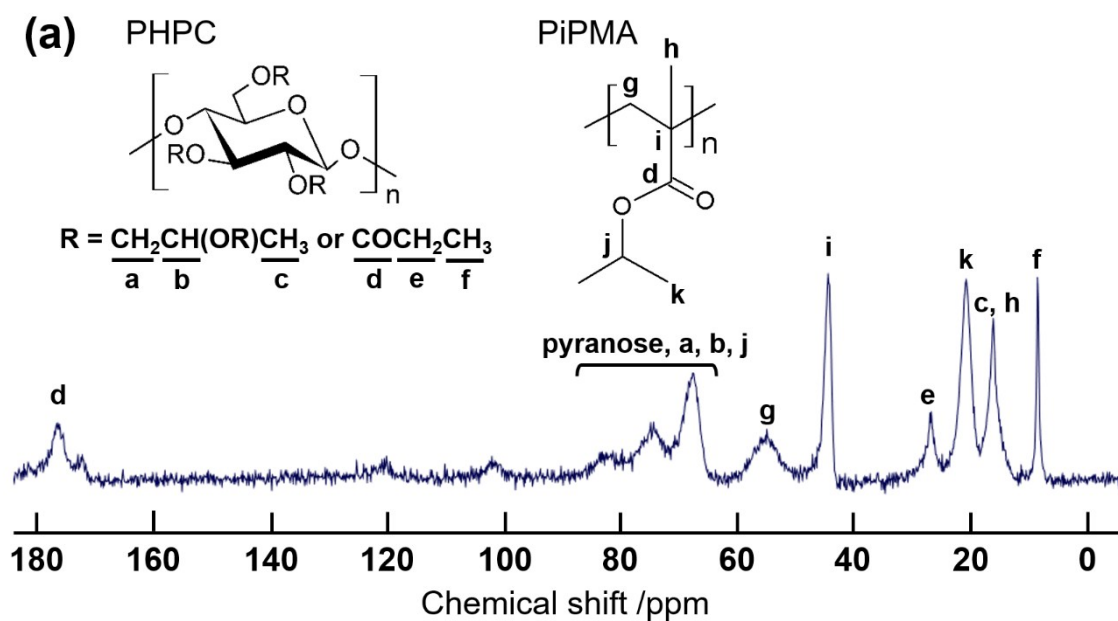


Figure S3 Solid-state ^{13}C CP/MAS NMR spectra of 76-wt% (a) PHPC/PiPMA, (b) PHPC/PMMA, and (c) PHPC/PACMO films.

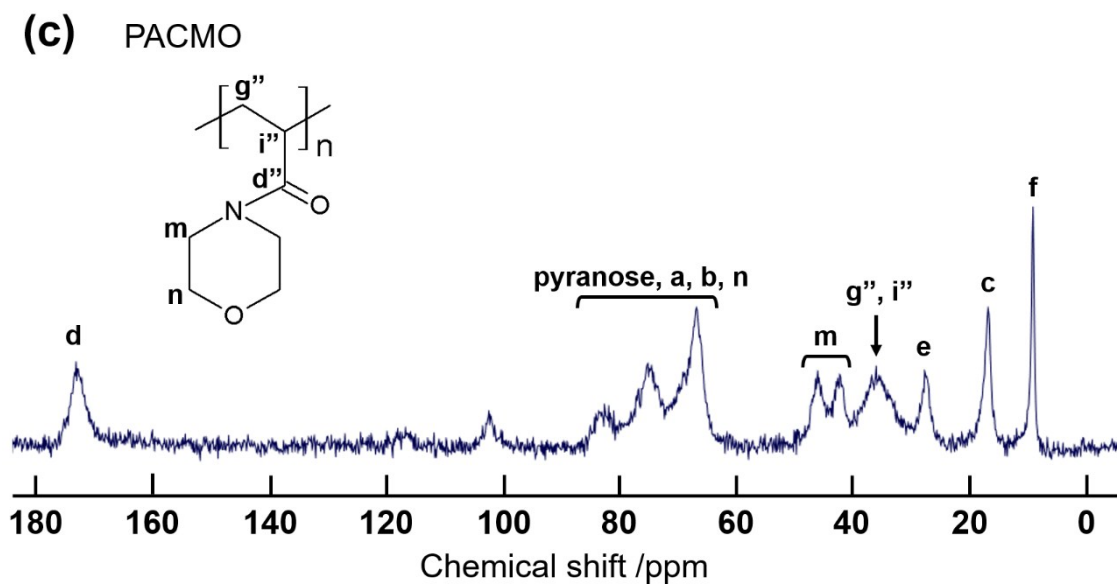


Figure S3 (Continued).

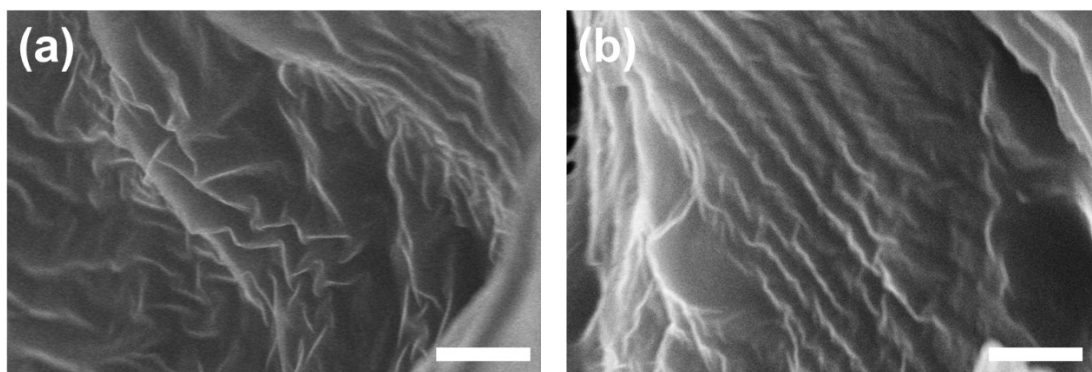


Figure S4 SEM images of fracture surface morphologies of 76 wt% (a) PHPC/PiPMA and (b) PHPC/PACMO films. Scale bar denotes 1 μm.

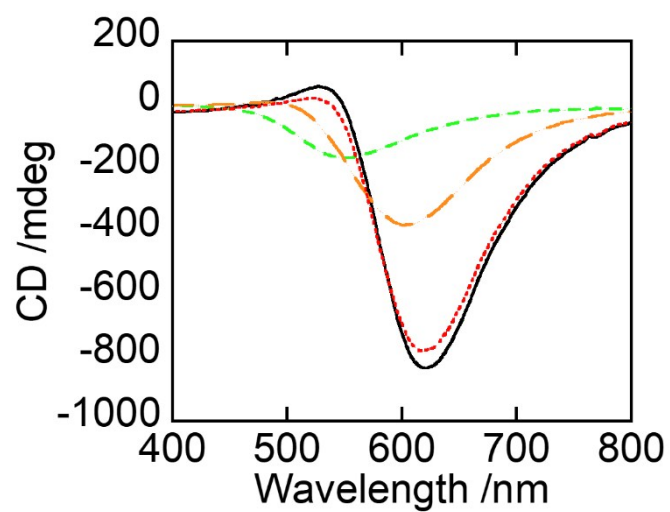


Figure S5 CD spectra of 76 wt% PHPC/PACMO film after the compression at 30°C and subsequent heat treatment at 100°C for 0 s (---), 5 s (---), and 10 s (.....) with the spectrum of the as-polymerized one (—).