Manipulation of Crystallization Sequence in PEO-*b*-PCL Films Using Solvent Interactions

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SUPPORTING INFORMATION

Materials:

Homopolymer poly(ethylene oxide) (PEO) and poly(ε-caprolactone) (PCL) were purchased from Polymer Source Inc. The molecular weights were 10,200 g/mol (PDI = 1.07) and 9,500 g/mol (PDI = 1.2), respectively. All sample preparation procedures were the same as reported for the diblock copolymers.

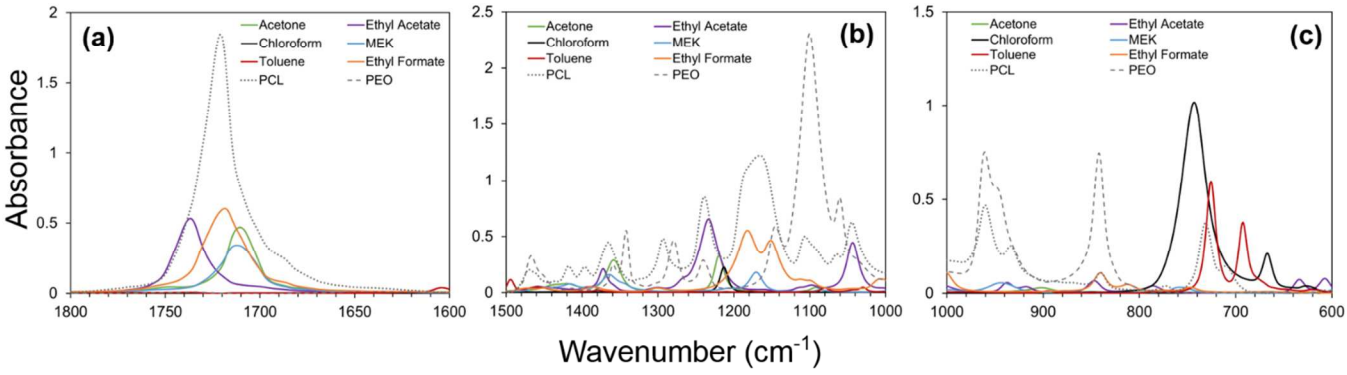

Figure S1. ATR-FTIR spectra (a-c) for homopolymer PEO (dashed gray line), homopolymer PCL (dotted gray line), and all solvents used in this study (acetone [green], chloroform [black], toluene [red], ethyl acetate [purple], methyl ethyl ketone [blue], and ethyl formate [orange]). The scale of the polymer spectra is enlarged to easily show band similarities with the solvents.

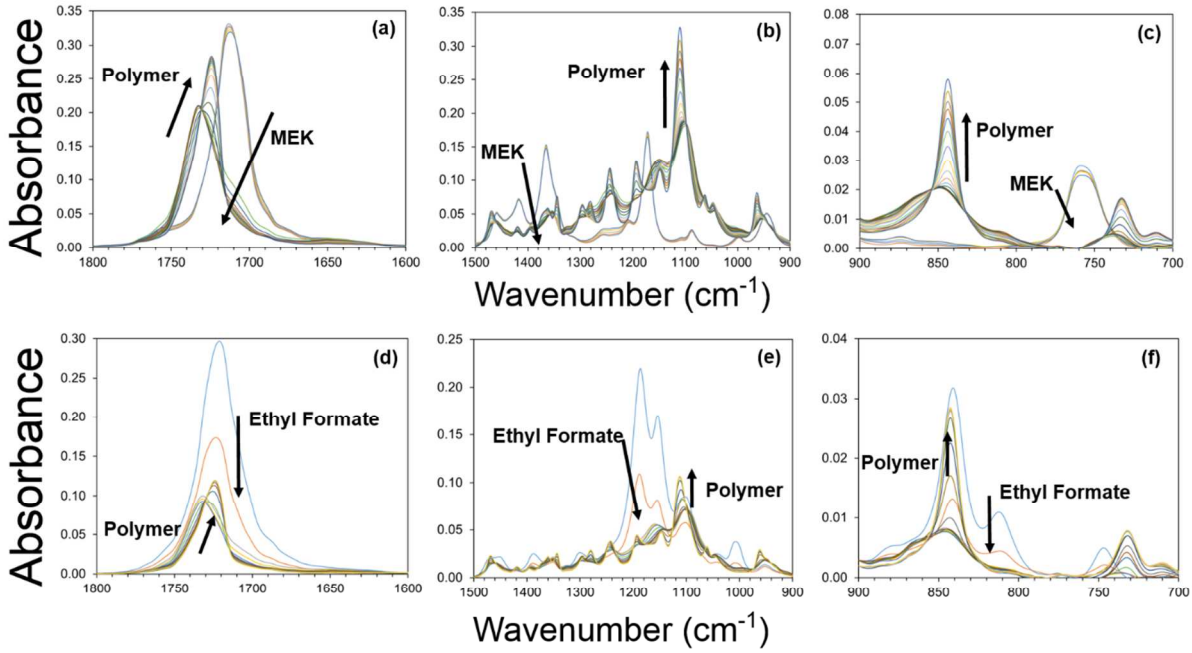

Figure S2. ATR-FTIR spectra for the drying of the PEO-b-PCL 10k-10.3k sample from methyl ethyl ketone (a-c) and ethyl formate (d-f). Solvent bands are labeled showing the decrease in signal with time; whereas, polymer bands are labelled showing the increase in absorbance with time.

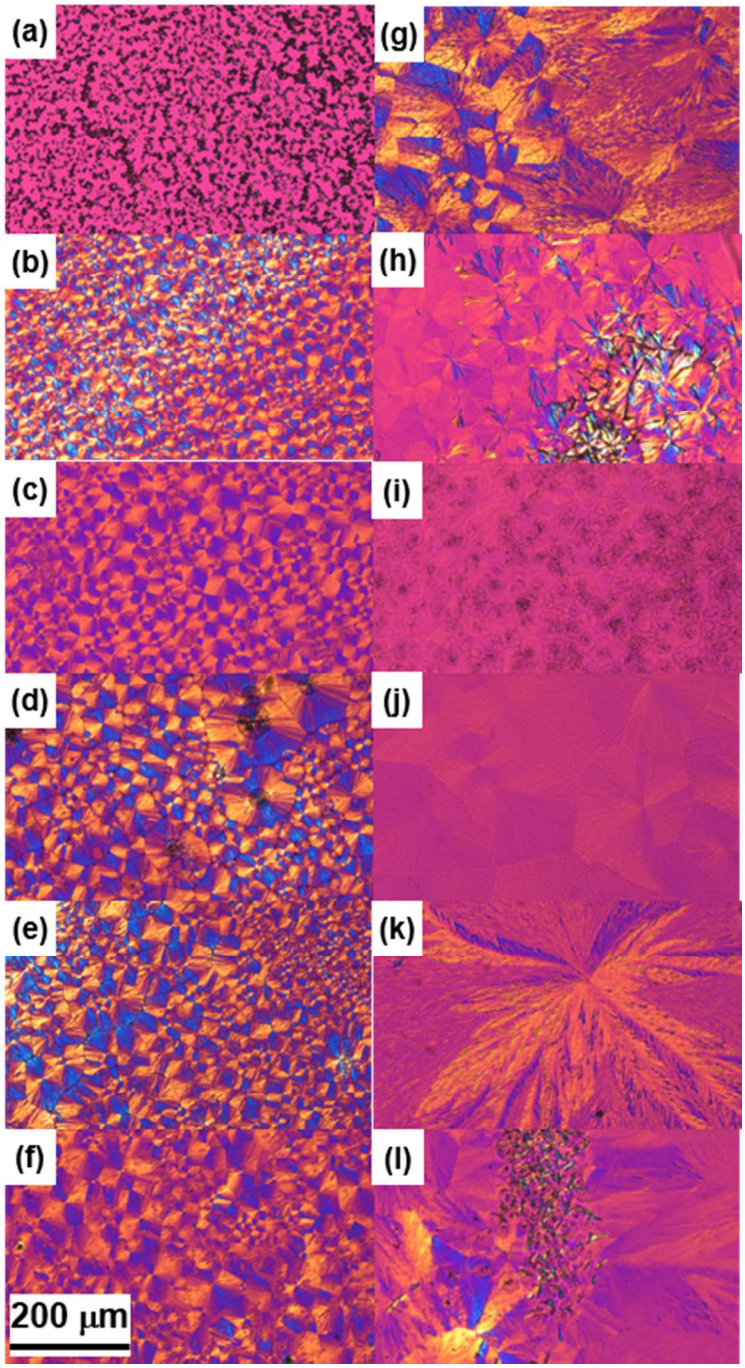

Figure S3. Polarized optical micrographs of homopolymer films cast from each solvent. Homopolymer PCL morphologies are shown in (a-f), and homopolymer PEO morphologies are shown in (g-l). Casting solvents are acetone (a, g), chloroform (b, h), toluene (c, i), ethyl formate (d, j), MEK (e, k), and ethyl acetate (f, l).