

Supplementary Information

Figure S1. Digital photographs and topographic surface images of crosslinked PCL with reversibly tunable (a) elasticity and (b) surface nano-roughness. AFM images at various temperatures were obtained in the $50\ \mu\text{m} \times 50\ \mu\text{m}$ scan range.

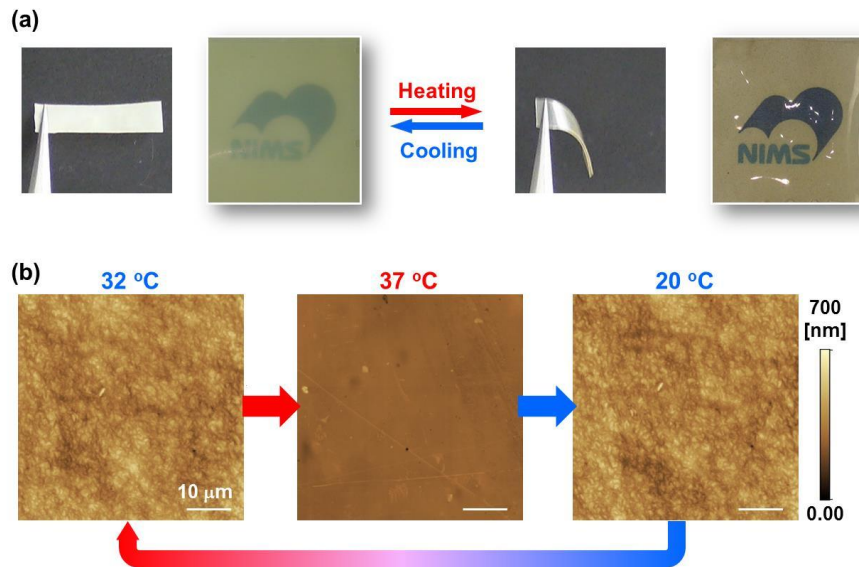


Figure S2. Stress-strain curves of crosslinked PCL with various 2b/4bPCL-m ratios at 25, 30, 35, 40 and 45 °C.

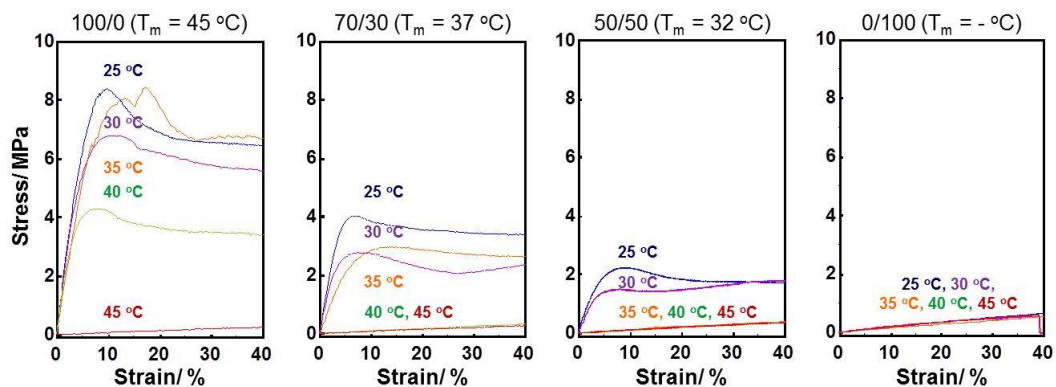


Figure S3. Phase images of PLC films observed by AFM at 25 °C (left) and 45 °C (right). All images were obtained in the $20\ \mu\text{m} \times 20\ \mu\text{m}$ scan range.

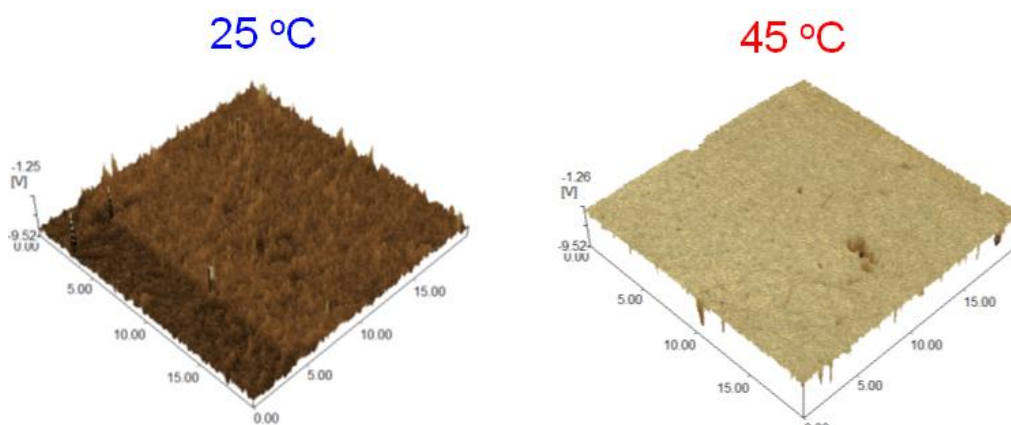


Figure S4. (a) Topographic surface and (b) 3D AFM images of 50/50 PCL films observed by AFM at 32 °C (left) and 37 °C (right). All images were obtained in the 20 μm × 20 μm scan range.

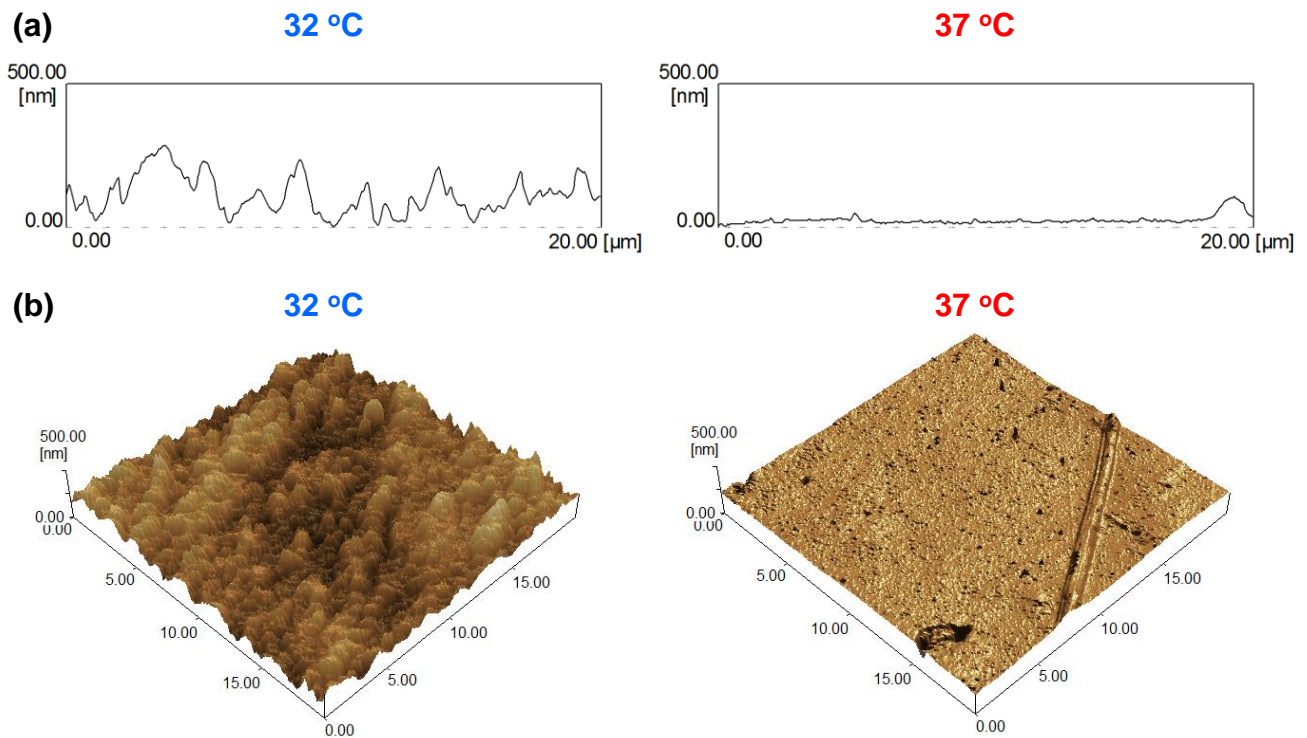


Table S1. Summary of the physical property (elasticity and surface roughness) of 50/50 PCL films in cell culture conditions (32 and 37 °C).

2b/4bPCL	Elasticity (MPa)		Roughness (nm)	
	32 °C	37 °C	32 °C	37 °C
50/50	26.4 (±2.7)	1.1 (±0.3)	63.4	12.4