Electronic Supplementary Information (ESI)

Shape-Memory Balloon Offering Simultaneous Thermo/Chemotherapies to Improve Anti-Osteosarcoma Efficacy

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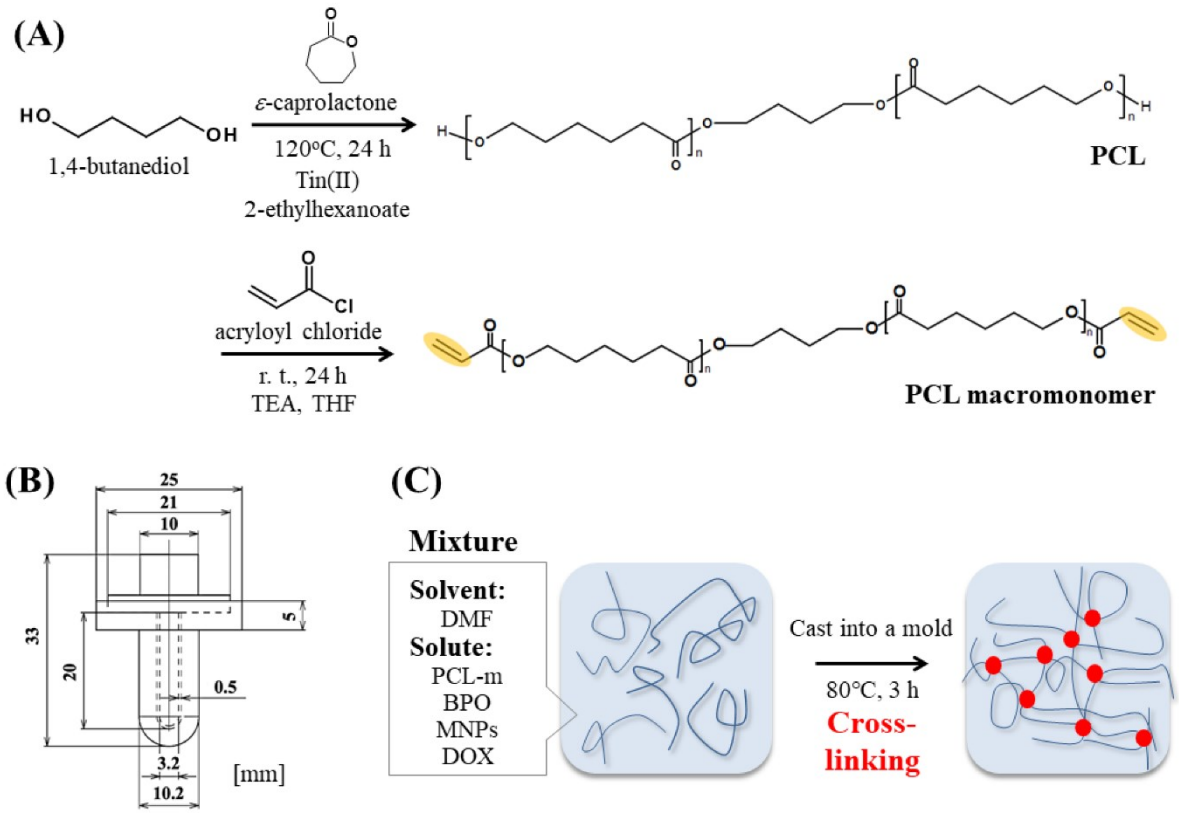

Fig. S1 Synthetic reaction and polymerization of shape-memory PCL balloon. (A) Synthetic reactions of PCL and PCL macromonomer; (B) illustration of PTFE-based mold, exhibiting a post-molding thickness of 0.5 mm; (C) schematic illustration of shape-memory PCL polymerization. The red mark on the right shows the crosslinking point.

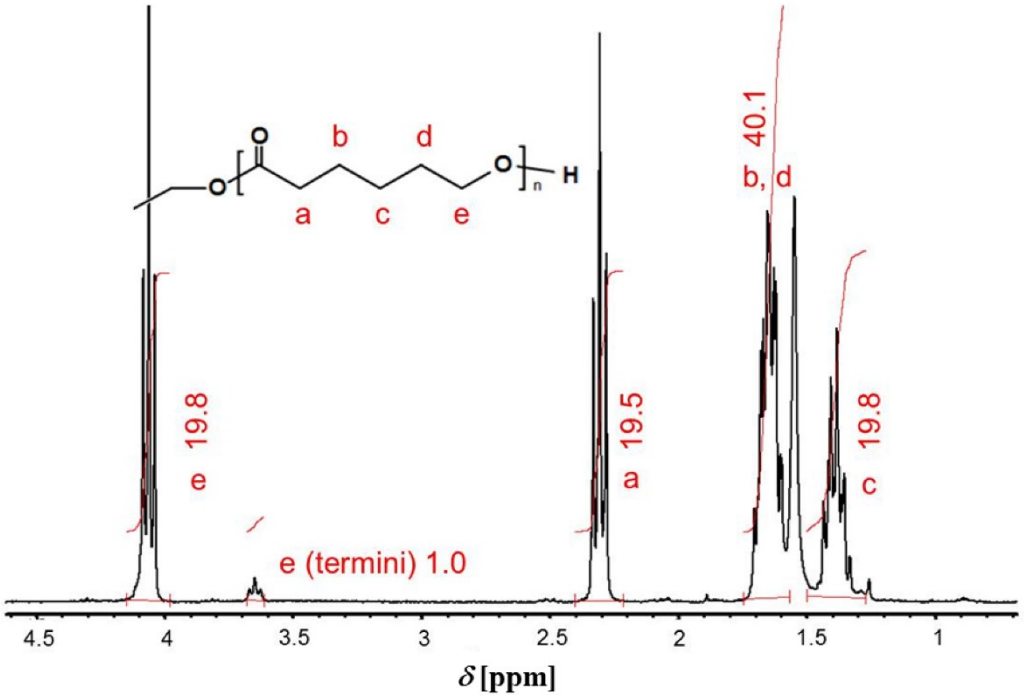

Fig. S2 ^{1}H NMR spectrum of the synthesized PCL in a deuterated solvent ($CDCl_3$).

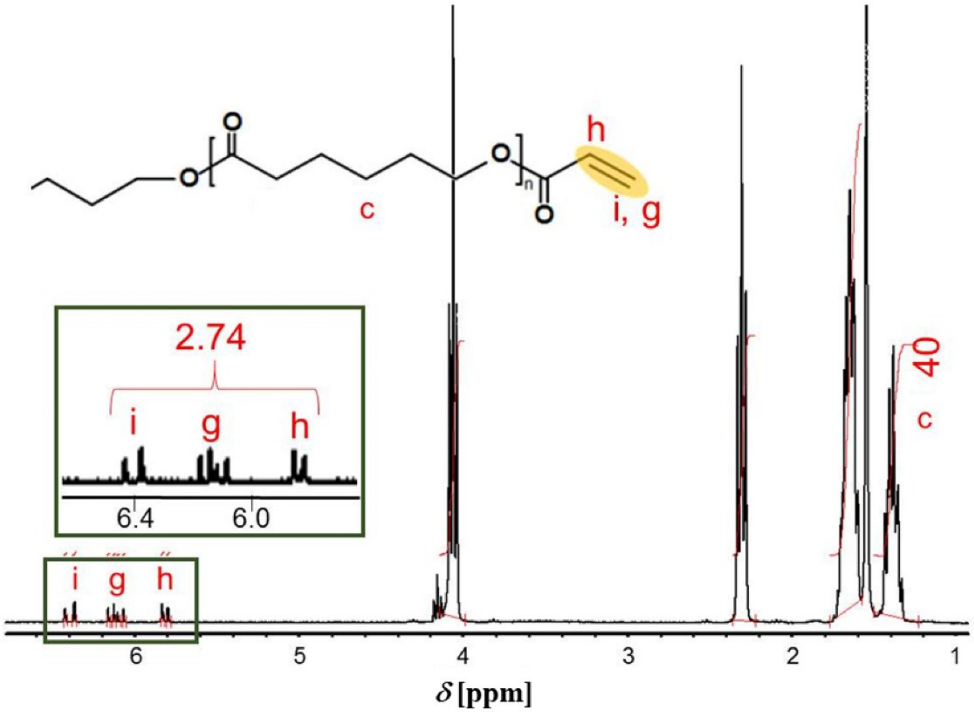

Fig. S3 ^{1}H NMR spectrum of the synthesized PCL macromonomer in a deuterated solvent ($CDCl_3$).

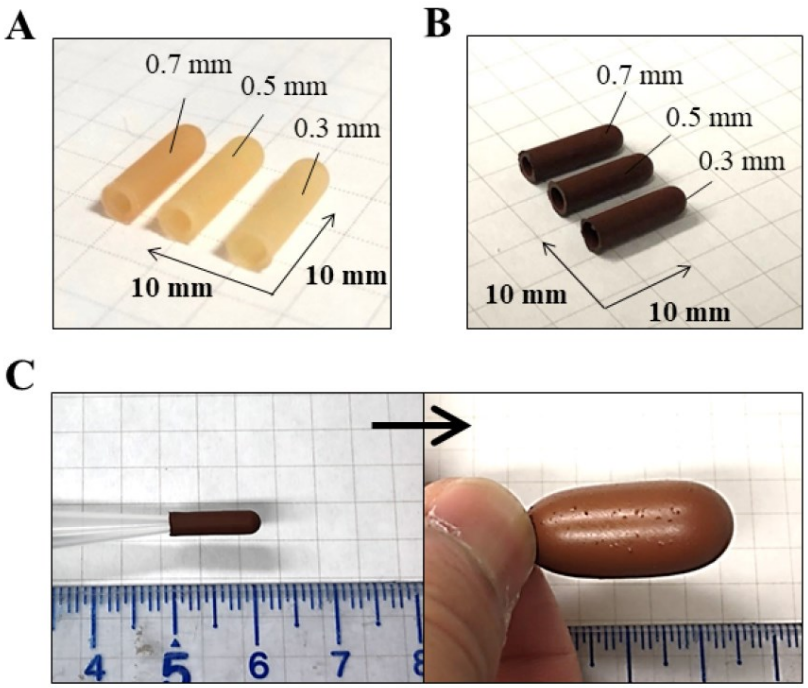

Fig. S4 Three types of SMB with different thicknesses: 0.3, 0.5, and 0.7 mm (A) without and (B) with MNP loading. (C) Shape-memory property of fabricated SMB with a thickness of 0.3 mm and containing 31.6 wt% MNP. Blow molding above the shape-transition temperature expanded the SMB and memorized its shape by cooling below 37 ℃.

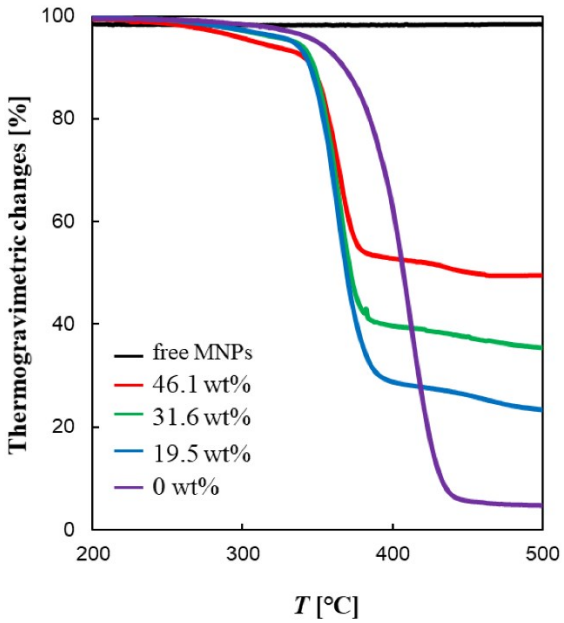

Fig. S5 Thermogravimetric changes of the PCL film containing different MNP contents identified by TG-DTA analysis.

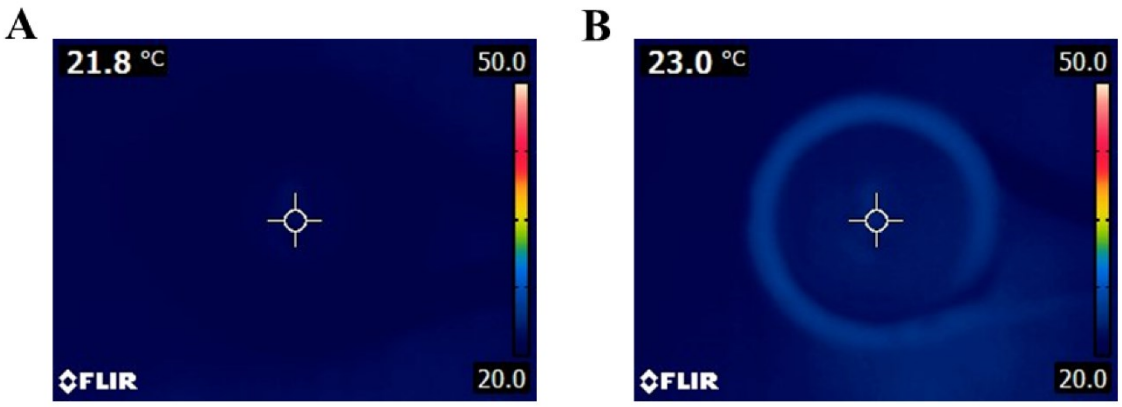

Fig. S6 Infrared thermal images of the PCL film without MNP loading in a copper coil at (A) 0 and (B) 360 s after AMF irradiation.