## **Supporting Information**

## Semicrystalline polymer networks with swelling enhanced water-triggered two-way shape-memory effect for programmable deformation and smart actuation

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Fig. S1. Fabrication process of PEGCL-PF networks.



Fig. S2. FTIR spectra of PF127 and PF127-AC.



Fig. S3. <sup>1</sup>H NMR spectrum of PF127-AC.



Fig. S4. Gel content of PEGCL-PF networks with different PF127 contents.



Fig. S5. DSC curves of PEGCL-PF $_{0\%}$  before and after immersing in water for 1 h.



**Fig. S6**. (A) The shape fixity ratio and shape recovery ratio in 1W-SME. (B) The PEGCL-PF was bent or folded into various shapes to investigate the programmable property.