Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.
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Supplementary Information

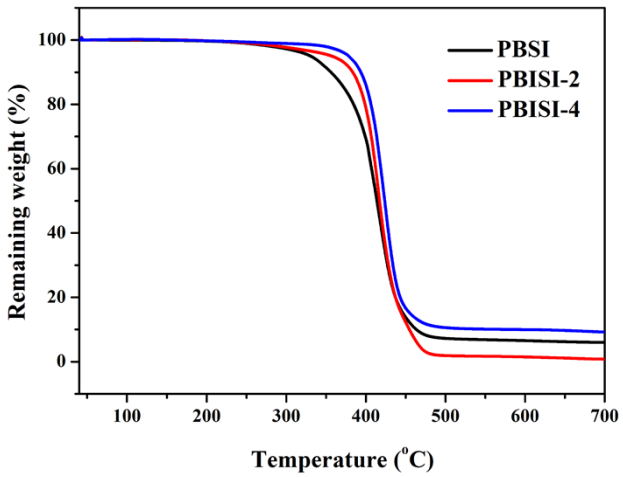

Fig. S1 TGA traces of PBISI copolyesters under inert atmosphere.

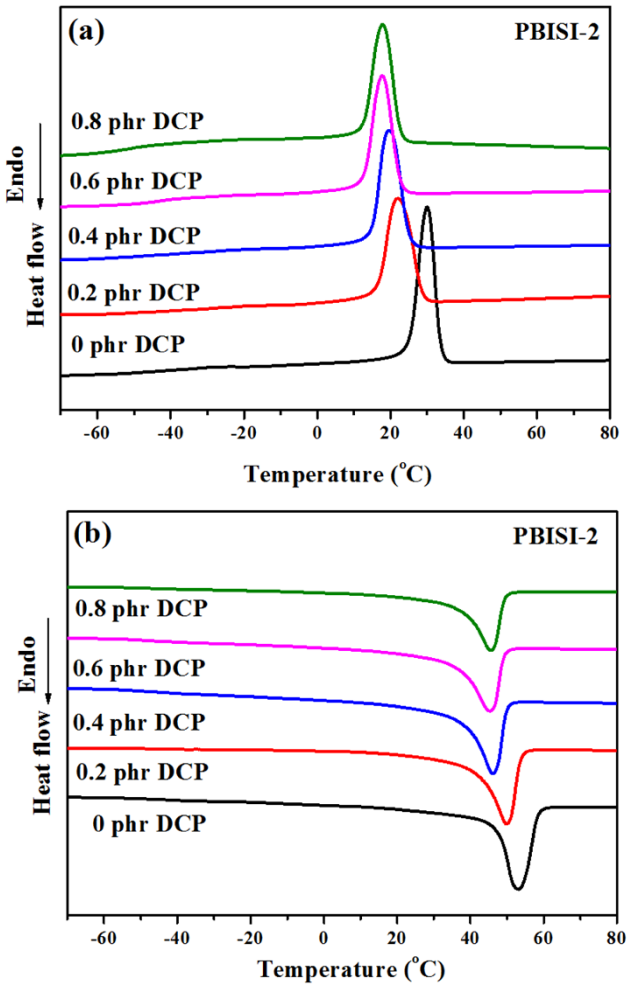

Fig. S2 DSC traces of PBISI-2 copolyester with different DCP content: (a) cooling; (b) second heating.

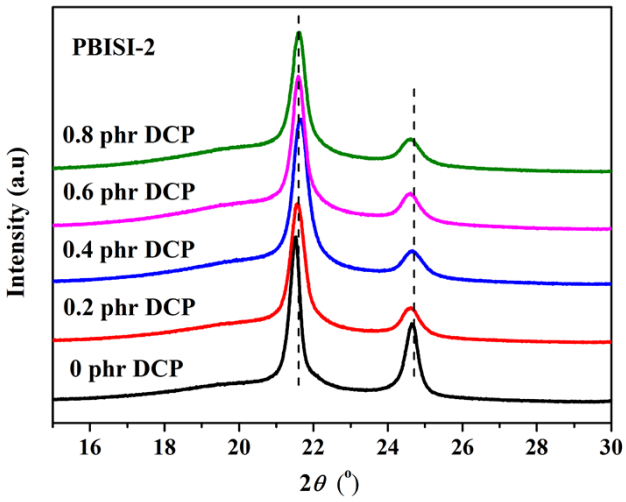

Fig. S3 WAXD patterns of PBISI-2 copolyester with different DCP content.

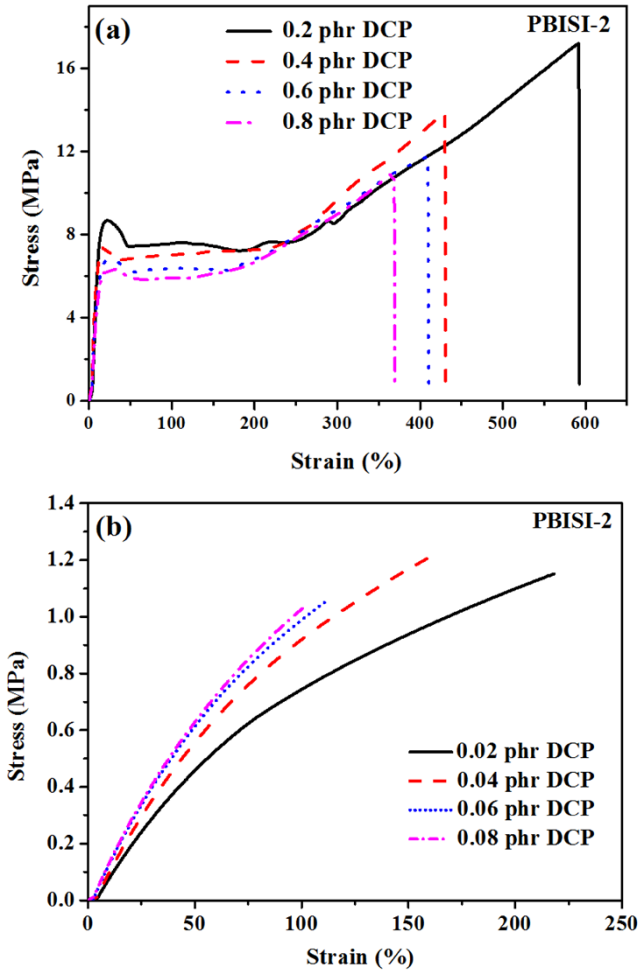

Fig. S4 Typical stress-strain curves of PBISI-2 copolyester with different DCP content: (a) at room temperature; (b) at T_m+20 °C.

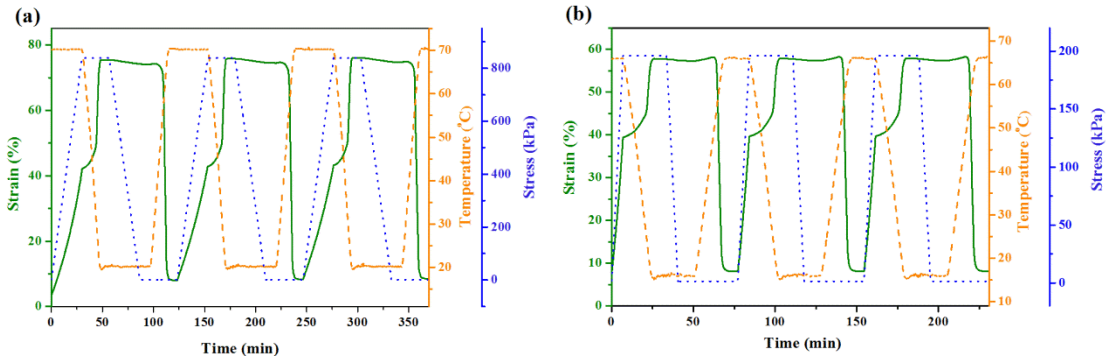

Fig. S5 The two-dimensional recovery curves for (a) PBSI SMP and (b) PBISI-2 SMP.

The samples were cured with 0.4 phr of DCP.

Table S1. Mechanical properties of crosslinked PBISI copolyesters. The samples were cured with 0.4 phr of DCP.

Samples	Room temperature			High temperature	
	Yield strength (MPa)	Tensile strength (MPa)	Elongation at break (%)	Tensile strength (MPa)	Elongation at break (%)
PBSI	9.6±0.3	16.4±0.7	427±25	1.3±0.2	138±7
PBISI-1	8.6±0.3	14.0±0.3	381±24	1.1±0.1	130±4
PBISI-2	7.3±0.2	13.9±0.4	421±22	1.2±0.1	157±9
PBISI-3	6.6±0.2	11.2±0.5	397±31	0.6±0.2	151±6
PBISI-4	5.2±0.2	6.1±0.3	241±10	0.4±0.1	180±10

Table S2. Mechanical properties of PBISI-2 copolyester with different DCP content.

DCP content (phr)	Room temperture			High temperture	
	Yield strength (MPa)	Tensile strength (MPa)	Elongation at break (%)	Tensile strength (MPa)	Elongation at break (%)
0.2	8.9±0.2	17.0±0.9	597±31	1.1±0.2	210±10
0.4	7.5±0.1	14.1±0.7	418±20	1.2±0.1	159±7
0.6	6.8±0.2	11.8±1.0	410±29	1.0±0.1	115±6
0.8	6.4±0.3	11.1±0.8	360±21	1.0±0.1	103±5