

## Supporting information

### **Synthesis and Characterization of Biobased Thermoplastic Polyester Elastomers Containing Poly(butylene 2,5- furandicarboxylate)**

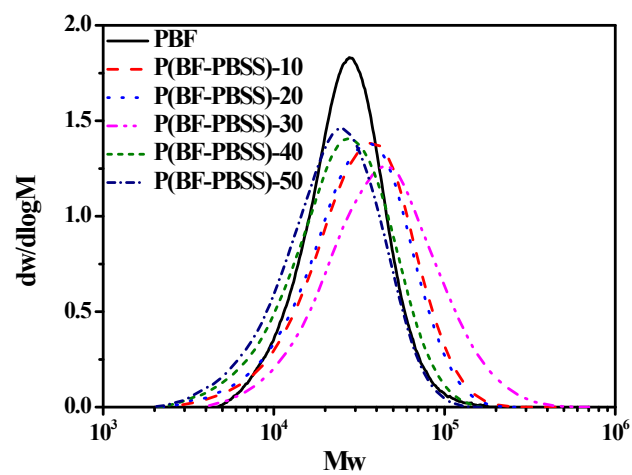
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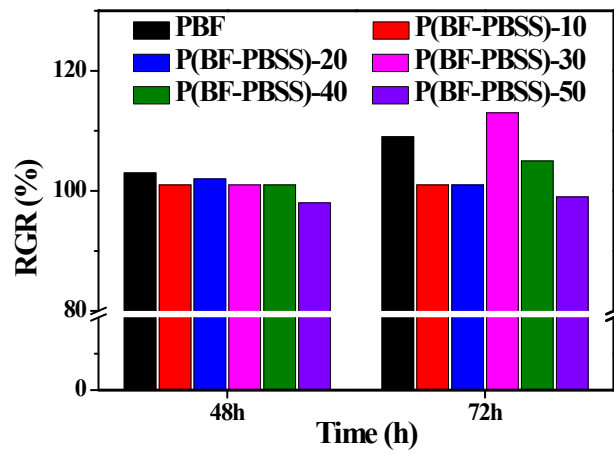
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**Fig. S1.** The GPC curve of PBF and P(BF-PBSS)s.



**Fig.S2.** RGR values of PBF and P(BF-PBSS)s at different incubation time.

**Table S1.** Thermal properties of PBF and P(BF-PBSS)s.

Samples	DSC								TGA		$X_c$ (%)
	Cooling		Second heating						$T_{d,5\%}$ (°C)	$T_{d,max}$ (°C)	
	$T_c$ (°C)	$\Delta H_c$ (J·g <sup>-1</sup> )	$T_g$ (°C)	$T_g^a$ (°C)	$T_{cc}$ (°C)	$\Delta H_{cc}$ (J·g <sup>-1</sup> )	$T_m$ (°C)	$\Delta H_m$ (J·g <sup>-1</sup> )			
PBF	112	32.5	48	51	/	/	171	40.5	385	413	29.4
P(BF-PBSS)-10	98	27.0	30	32	87	0.9	160	32.8	386	419	22.9
P(BF-PBSS)-20	77	5.6	19	25	89	20.4	147	26.0	381	414	21.8
P(BF-PBSS)-30	/	/	12	17	90	9.2	128	15.0	377	419	19.6
P(BF-PBSS)-40	/	/	1	5	87	0.7	117	0.8	377	421	16.5
P(BF-PBSS)-50	/	/	-6	-6	/	/	/	/	376	425	12.6

a  $T_g$  obtained by DMA results.

**Table S2** Relationship between cell relative growth rate (RGR) and cytotoxicity grade of a material.

RGR (%)	$\geq 100$	75-99	50-74	25-49	1-24	0
Cytotoxicity grade	0	1	2	3	4	5