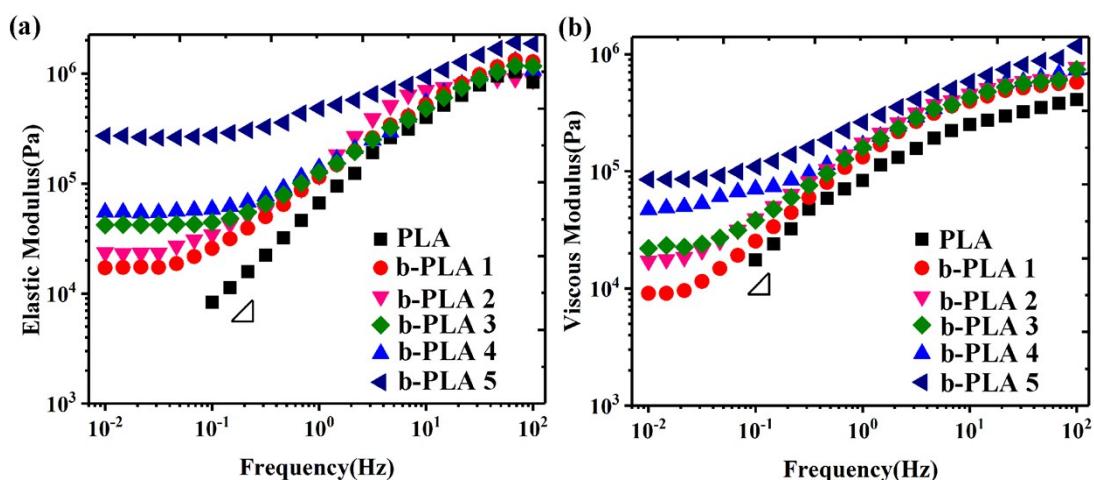
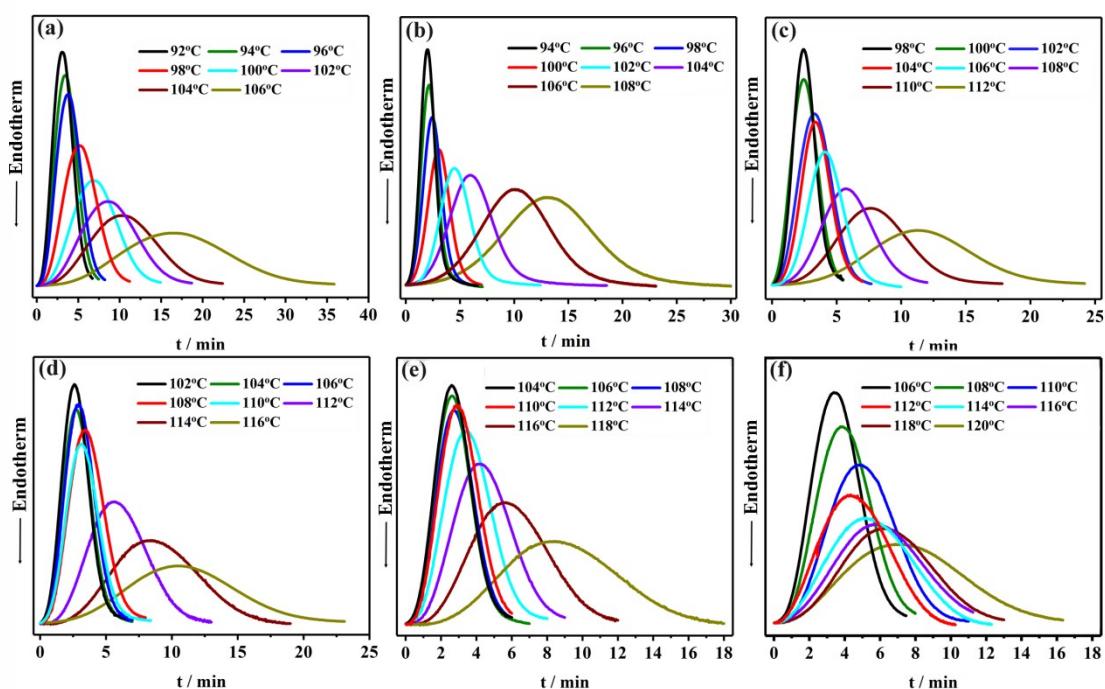


**Table S1. The data of molecular weight and PDI of samples.**

Samples	$M_n$ (g/mol)	$M_w$ (g/mol)	$M_w/M_n$
PLA	88137	112621	1.27
b-PLAs 1	95012	127890	1.34
b-PLAs 2	98844	132450	1.34
b-PLAs 3	108479	147531	1.36
b-PLAs 4	115253	163058	1.37
b-PLAs 5	117810	168478	1.39

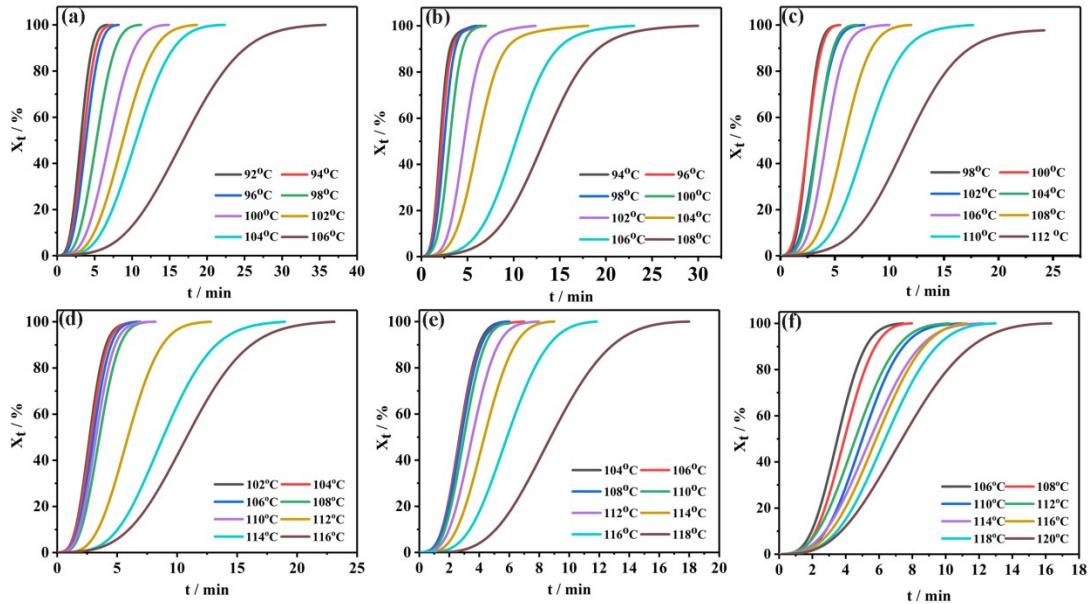


**Fig. S1. Dynamic mechanical spectra: (a) storage modulus ( $G'$ ) and (b) viscous modulus ( $G''$ ).**



**Fig. S2 DSC curves of isothermal melt crystallization for (a) linear PLA; (b) b-PLAs 1;**

(c) b-PLAs 2; (d) b-PLAs 3; (e) b-PLAs 4; (f) b-PLAs 5.



**Fig. S3 Relative crystallinity ( $X_t$ ) variation as a function of isothermal crystallization time for (a) linear PLA; (b) b-PLAs 1; (c) b-PLAs 2; (d) b-PLAs 3; (e) b-PLAs 4; (f) b-PLAs 5.**

**Table S2 DSC parameters of PLA and b-PLAs**

Samples	$T_m(^{\circ}\text{C})$	$\Delta H(\text{J/g})$	$X_c(\%)$
PLA	157.2	16.9	18.1
m-PLA 1	156.7	18.1	19.3
m-PLA 2	156.2	23.1	24.6
m-PLA 3	155.6	25.9	27.7
m-PLA 4	155.7	27.5	29.4
m-PLA 5	155.5	29.2	31.2