Supporting Information

Synthesis and characterization of triblock copolymer of PLA-*b*-PBT-*b*-PLA and its effect on crystallization of PLA

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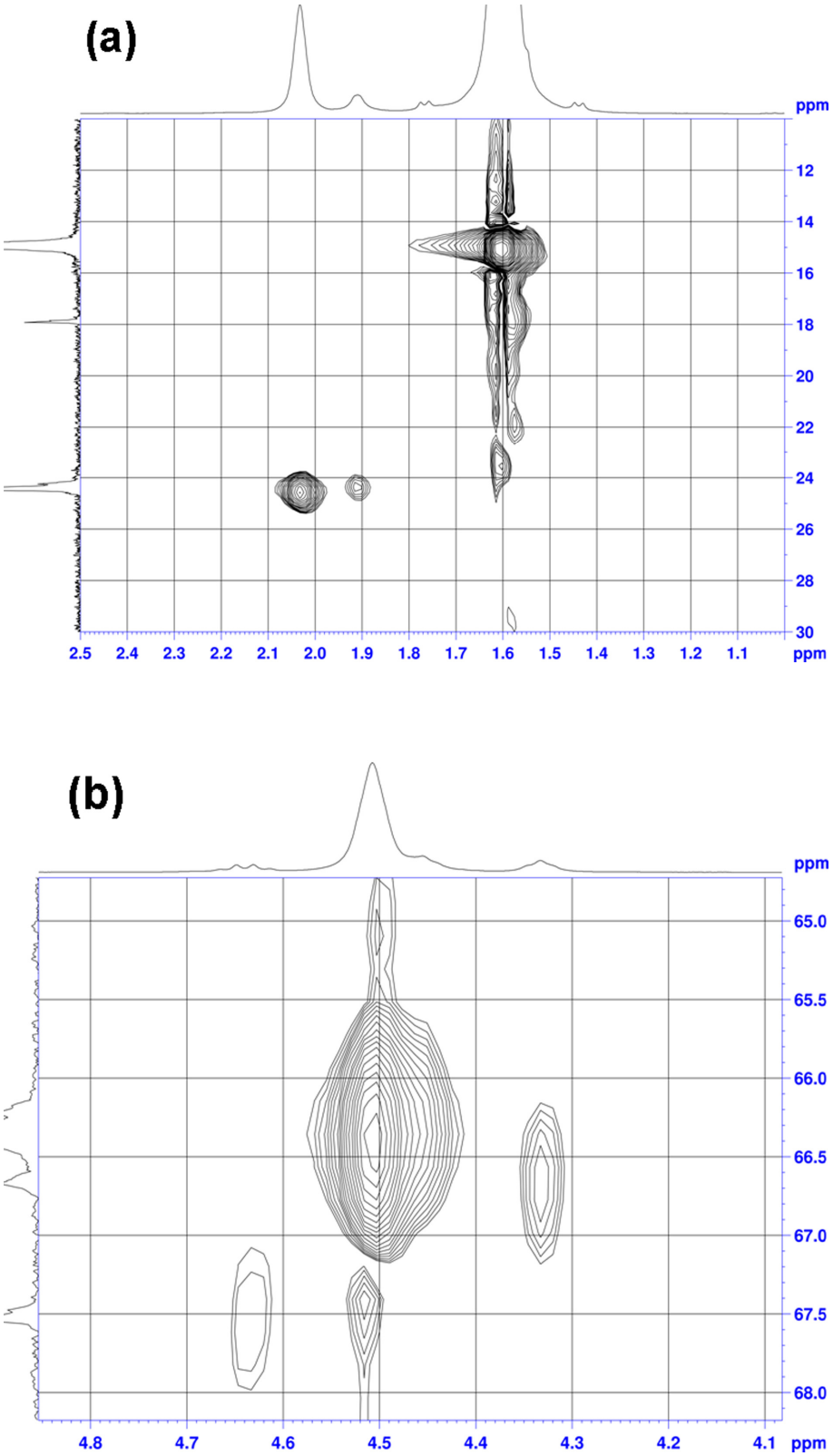
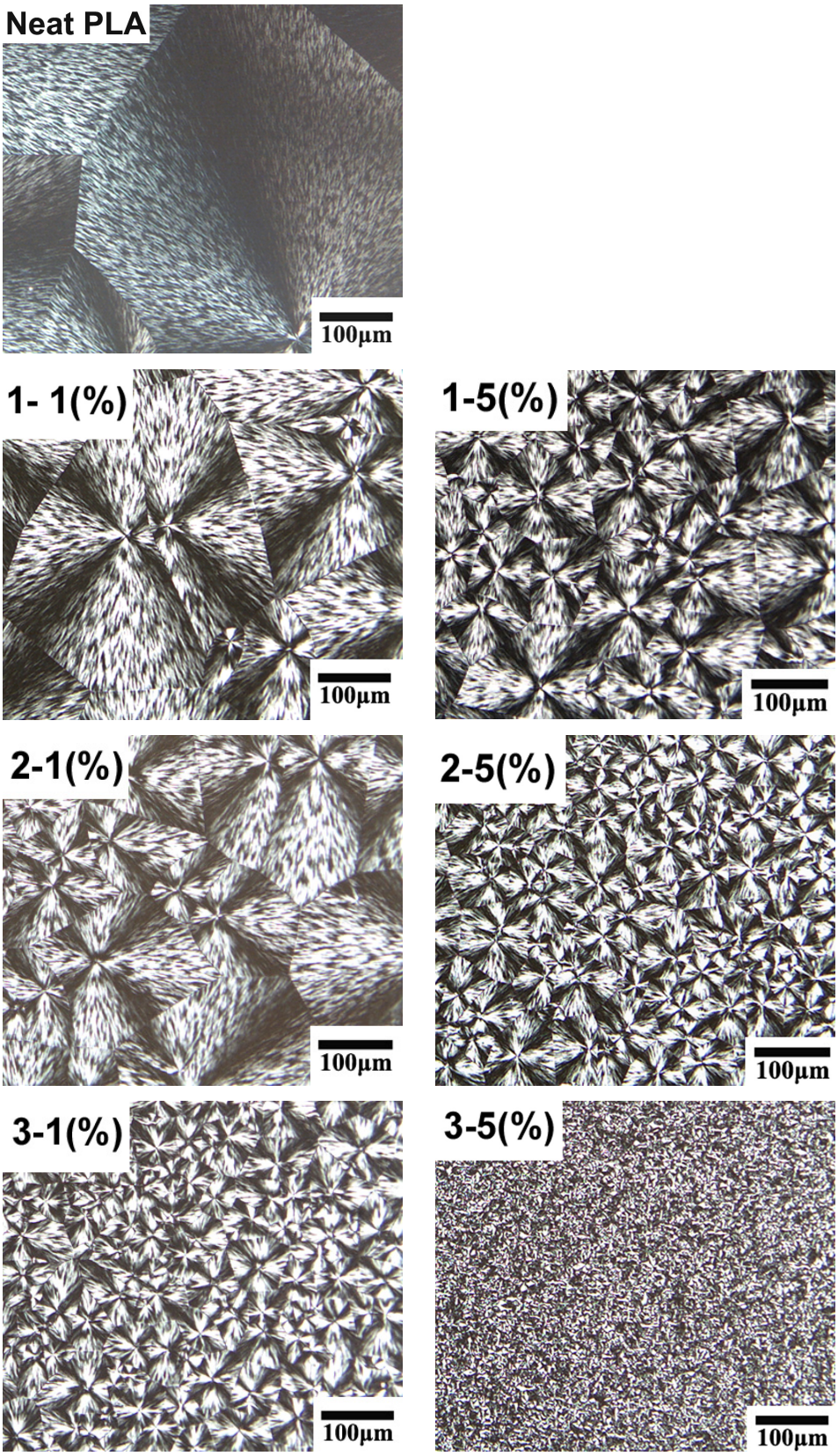


Fig. S1 ^{1}H-^{13}C HSQC NMR spectra of Copolymer 1 with particular regions enlareged.



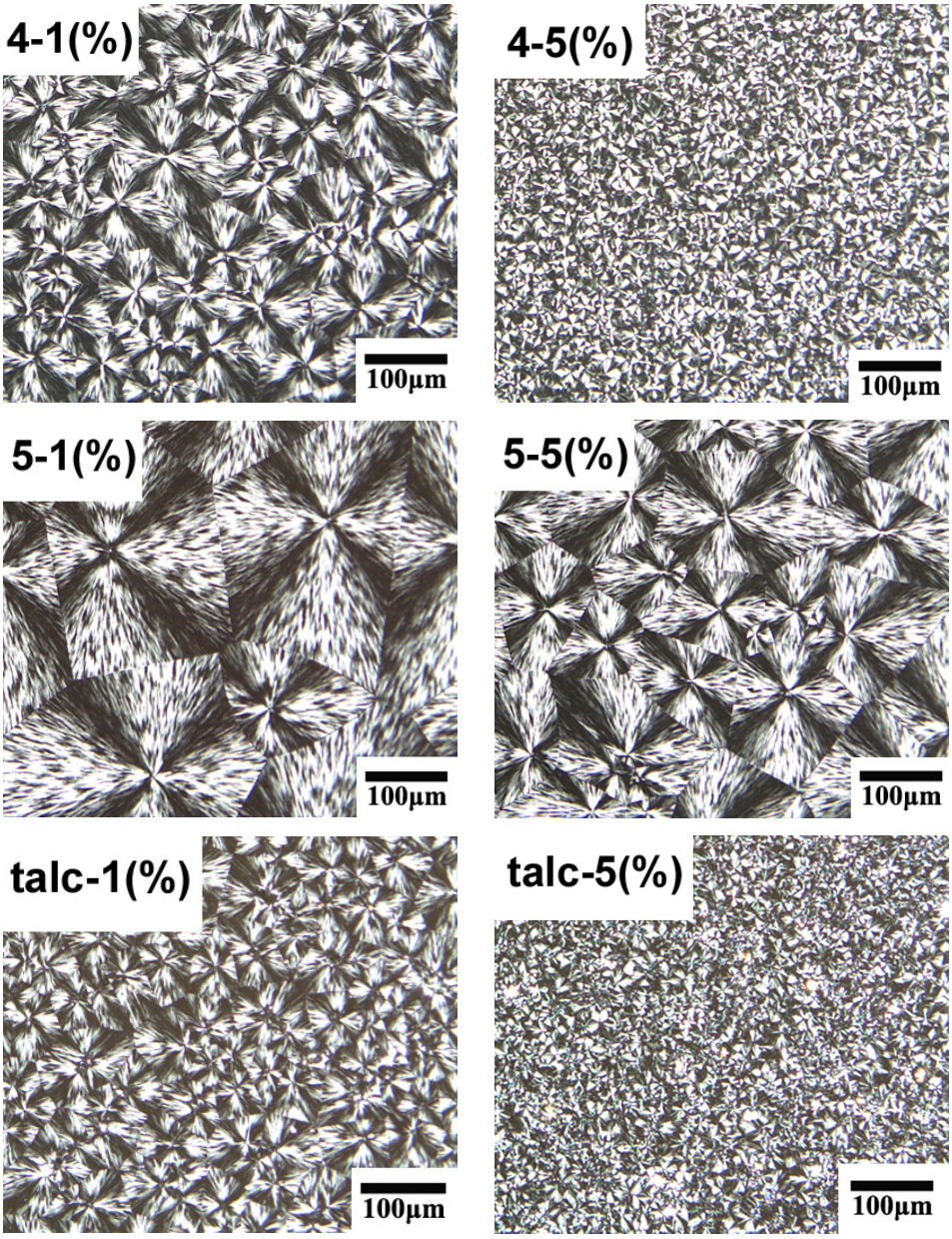


Fig.S2 Polarized optical micrographs of neat PLA, PLA containing 1wt%, 5 wt% Copolymers 1-5 or talc crystallized at 122 °C after quenched from 180 °C.

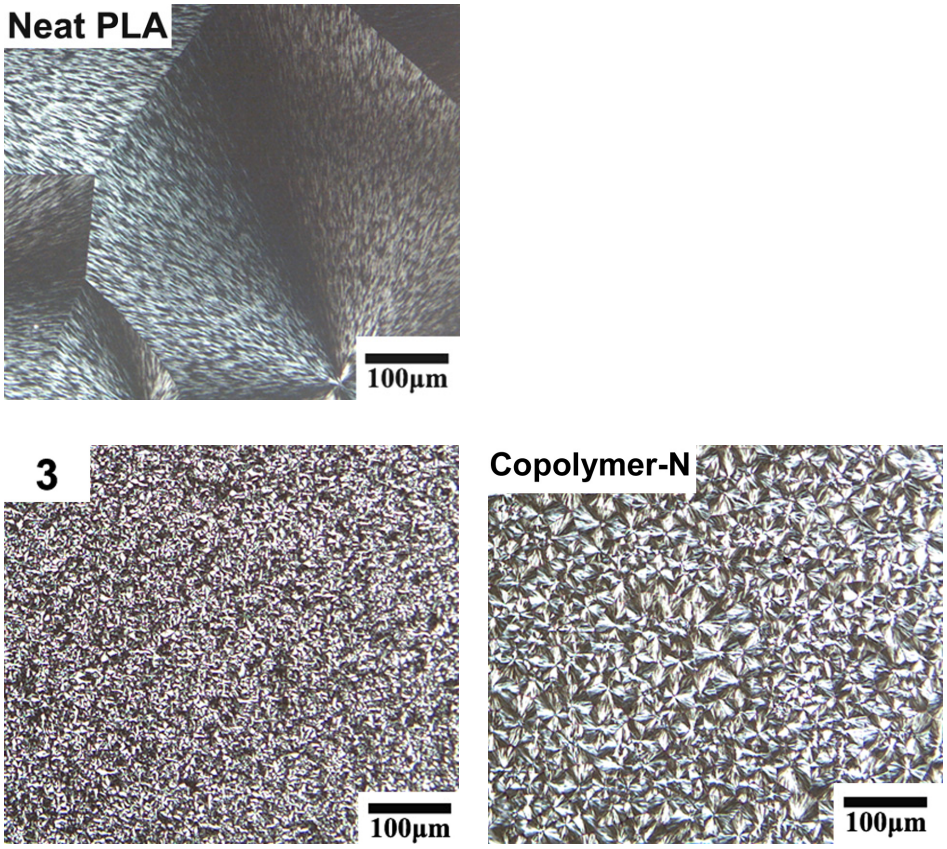


Fig.S3 Polarized optical micrographs of neat PLA, PLA containing 5 wt% Copolymer 3 or Copolymer-N crystallized at 122 °C after quenched from 180 °C.

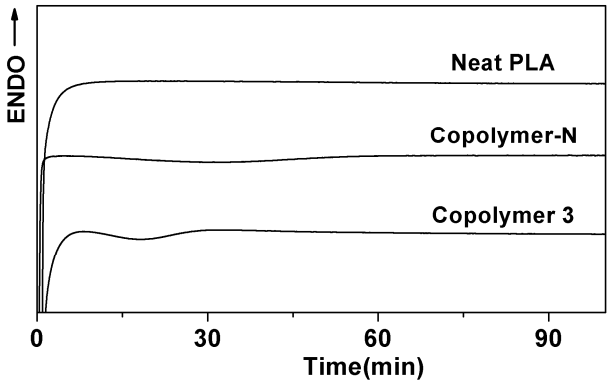


Fig.S4 DSC curves during isothermal crystallization at 122 °C for neat PLA, PLA contain 5 wt% Copolymer 3 or Copolymer-N.

Table S1. Chemical composition, molecular weight characteristics and thermal properties of PBT prepolymers and copolymers.

Sample	LA/BT(wt/wt)[a]	$M_n \times 10^{-3}$ kg mol^{-1}	PDI[b]	T_c[d] (°C)	T_m[d] (°C)
PBT		1.6 [b]		193.0	210.6
PBT-H		3.0 [b]		200.5	215.8
Copolymer 3	34:1	19.8 [c]	1.42	118.2	170.8
Copolymer-N	16:1	23.3 [c]	1.52	115.5	170.0

[a] Weight ratios of LA to BT in the copolymers calculated by ^{1}H-NMR;

[b] Number average molecular weight calculated by ^{1}H-NMR;

[c] Molecular weights and polydispersity indexes were measured by GPC with PS standards;

[d] The values of T_c and T_m were taken at the minima of the corresponding peaks.

Table S2. Kinetic parameters of isothermal crystallization for neat PLA and PLA blends containing 5 wt% copolymers at 122 °C

Sample	t_o (min)	$t_{1/2}$ (min)	log$k$	n
Neat PLA	25.20	109.91	-4.42	2.21
Copolymer 3	9.07	19.18	-2.37	2.20
Copolymer-N	7.93	33.45	-3.06	2.07