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Supplementary Information:

Simultaneous Stereocomplex Cocrystallization from Coexisting Two Types of Stereocomplexationable Poly(lactide) Systems

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S1. Crystallinity of samples

Table S1. Thermal properties of samples crystallized from the melt.

Sample	X(4-LD) [a] (wt%)	T_c [x] (°C)	X_c(H)[c] (%)	X_c(S)[c] (%)	X_c(tot)[d] (%)
4-LD	100	180	0.0	0.0	0.0
		160	0.0	7.4	7.4
		140	0.0	44.4	44.4
		120	0.0	49.3	49.3
		100	0.0	43.9	43.9
4-LD/1-L&1-D(H)	75	200	0.0	0.0	0.0
		180	0.0	0.0	0.0
		160	0.0	46.0	46.0
		140	0.0	50.3	50.3
		120	0.0	49.6	49.6
	50	200	0.0	0.0	0.0
		180	0.0	21.5	21.5
		160	0.0	53.8	53.8
		140	0.0	50.8	50.8
		120	0.0	52.1	52.1
	25	200	0.0	5.0	5.0
		180	0.0	59.4	59.4
		160	0.0	65.0	65.0
		140	0.0	55.9	55.9
		120	13.5	34.6	48.1
1-L&1-D(H)	0	200	0.0	75.8	75.8
		180	0.0	71.8	71.8
		160	0.0	50.1	50.1
		140	20.6	35.9	56.5
		120	33.1	27.0	60.1
4-LD/1-L&1-D(L)	75	180	0.0	0.0	0.0
		160	0.0	54.6	54.6
		140	0.0	57.6	57.6
		120	0.0	52.8	52.8
		100	0.0	53.1	53.1
	50	180	0.0	17.5	17.5
		160	0.0	62.7	62.7
		140	0.0	67.6	67.6
		120	0.0	65.0	65.0
		100	0.0	67.1	67.1
	25	180	0.0	0.0	0.0
		160	0.0	71.4	71.4
		140	0.0	73.9	73.9
		120	0.0	71.6	71.6
		100	0.0	72.2	72.2
1-L&1-D(L)	0	180	0.0	60.4	60.4
		160	0.0	79.2	79.2
		140	0.0	79.0	79.0
		120	0.0	82.4	82.4
		100	0.0	80.3	80.3

[a] Weight fraction of 4-LD (wt%).
[b] T_c is crystallization temperature.
[c] X_c(H) and X_c(S) are crystallinities of homo-crystallites and stereocomplex crystallites, respectively.
[d] X_c(tot)= X_c(H) + X_c(S).

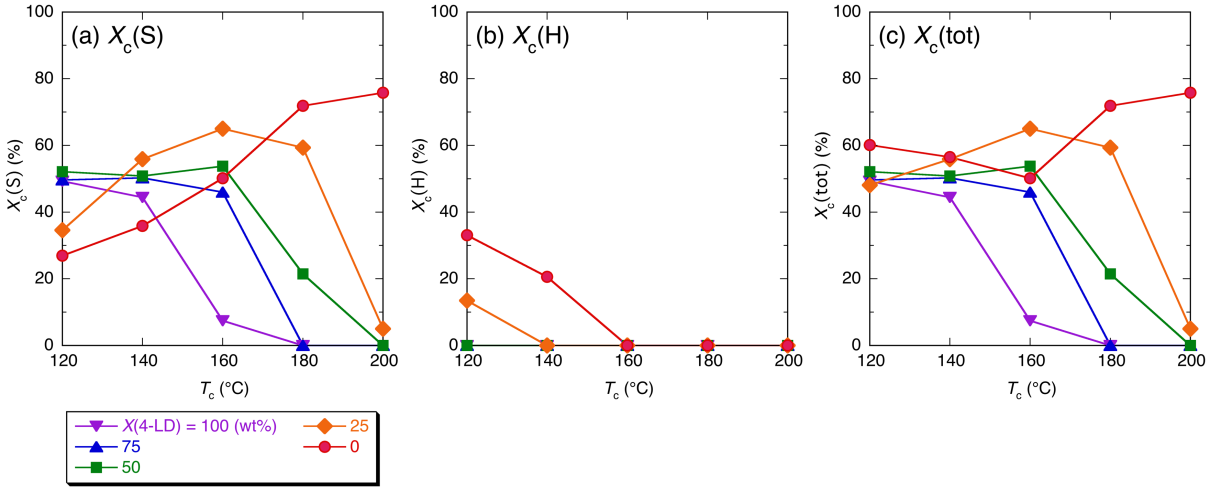

Figure S1. Crystallinities of SC crystallites [X_c(S)] (a), homo-crystallites [X_c(H)] (b), and X_c(tot) [= X_c(H) + X_c(S)] (c) of melt-crystallized 4-LD/1-L&1-D(H).

S2. Thermal properties of samples

Table S2. Thermal properties of 4-LD and 4-L polymers crystallized from the melt.

Sample	X(4-LD)[a] (wt%)	T_c [b] (°C)	T_g [c] (°C)	T_{cc} [c] (°C)	T_m(H) [c] (°C)	T_m(S) [c] (°C)	ΔH_{cc} [d] (J g^{-1})	ΔH_m(H) [d] (J g^{-1})	ΔH_m(S) [d] (J g^{-1})	ΔH(tot) [e] (J g^{-1})
4-LD	100	180	50.5	97.2		181.5	-37.0		38.1	1.1
		160	50.9	99.8		182.7	-14.1		31.0	16.9
		140	48.9			151.9, 183.1			38.2	38.2
		120	42.5			134.9, 182.9			39.0	
		100	52.9			116.8, 183.1			34.4	
4-LD/1-L&1-D(H)	75	200	45.7	90.2		187.1	-31.0		31.6	0.6
		180	44.9, 53.7	94.4		190.2	-34.1		34.4	0.3
		160	41.8, 52.1	94.4, 161.2		188.0, 198.2	-5.6, -0.6		32.8	26.7
		140	41.9			153.6,182.7, 197.3			32.9	32.9
		120	42.6			136.0, 193.5			38.6	38.6
	50	200	45.5	86.8		195.9	-29.9		30.3	0.4
		180	44.9, 53.5	88.5		206.6	-19.1		25.5	6.4
		160	42.4, 54.8			199.0, 212.2			43.6	43.6
		140	43.0			155.0, 192.1, 210.3, 231.9			24.5	24.5
		120	46.3			136.3, 212.7, 235.7			36.4	36.4
	25	200	45.9	83.5		213.1	-39.3		40.2	0.9
		180	41.8, 56.8	80.0, 87.9, 182.7		218.7	-1.4, -1.3		56.9	54.2
		160	45.7, 55.3			211.3, 222.5			48.5	48.5
		140	44.0			158.3, 202.5, 220.0, 233.6			42.5	42.5
		120	49.0	193.9	164.4	221.7, 235.9	-10.9	3.9	33.3	26.3
1-L&1-D(H)	0	200	44.3			234.2			64.5	64.5
		180	52.6			225.1			72.4	72.4
		160	44.0, 54.4	89.9, 202.9	166.6	227.8	-7.9, -4.0	8.0	38.7	34.8
		140	54.6	209.2	169.0	225.1	-12.8	15.6	38.2	41.0
		120		203.6	167.2	226.8, 239.0	-22.6	26.6	39.9	43.9
4-LD/1-L&1-D(L)	75	180	44.1	86.0		183.3	-29.4		29.6	0.2
		160	38.2	81.4		138.7, 187.8, 192.9	-1.2	2.3	47.1	48.2
		140	45.3, 53.3			183.1, 189.7	-1.4		35.9	35.9
		120	45.2			138.7, 179.1, 191.1			42.9	42.9
		100				117.3, 191.0			46.0	46.0
	50	180	40.4	70.2		191.7	-42.8		56.7	13.9
		160	34.2			144.6, 190.0, 195.5			58.7	58.7
		140	40.8			185.2, 193.2			46.4	46.4
		120	37.4			184.4, 194.4			56.1	56.1
		100				194.4			52.6	52.6
	25	180	35.0, 50.3	70.5		184.7, 186.9, 195.8	-22.6		23.0	0.4
		160				193.7, 196.8			49.4	49.4
		140	37.8			186.8, 193.9			46.0	46.0
		120				185.9, 194.9			50.9	50.9
		100				183.2, 193.4			44.1	44.1
1-L&1-D(L)	0	180	27.2	58.1		197.8	-18.8		73.7	54.9
		160				153.8, 196.2			86.5	86.5
		140	39.1			192.5, 198.3			77.1	77.1
		120				191.4, 198.0			79.8	79.8
		100				189.7, 197.1			74.7	74.7

[a] Weight fraction of 4-LD (wt%).

[b] T_c is crystallization temperature.

[c] T_g, T_{cc}, T_m(H), and T_m(S) are glass transition and cold crystallization temperatures, and melting temperatures of homo-crystallites and stereocomplex crystallites, respectively.

[d] ΔH_{cc}, ΔH_m(H), and ΔH_m(S) are enthalpies of cold crystallization enthalpy and melting enthalpy of homo-crystallites and stereocomplex crystallites, respectively.

[e] ΔH(tot) = ΔH_{cc} + ΔH_m(H) + ΔH_m(S).

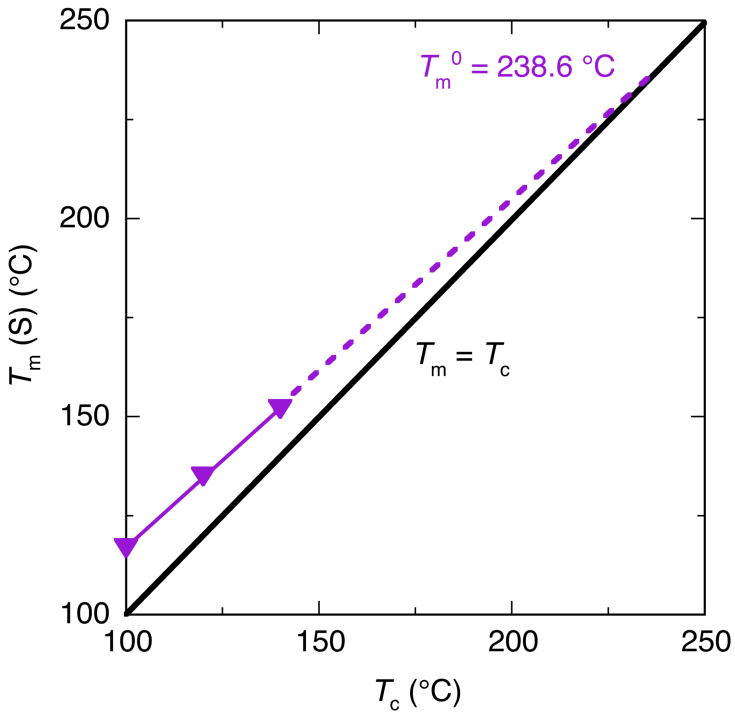

Figure S2. Hoffman-Weeks plot of the lowest T_m(S) for X(4-LD) =100 wt% (4-LD only) and equilibrium melting temperature (T_m^0).