Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information (Figure S1, S2, S3, S4, S5)

Composite Banded Core and Non-banded Shell Transition Patterns in Stereocomplexed Poly(lactide acid) Induced by Strongly Interacting Poly(p-vinyl phenol)

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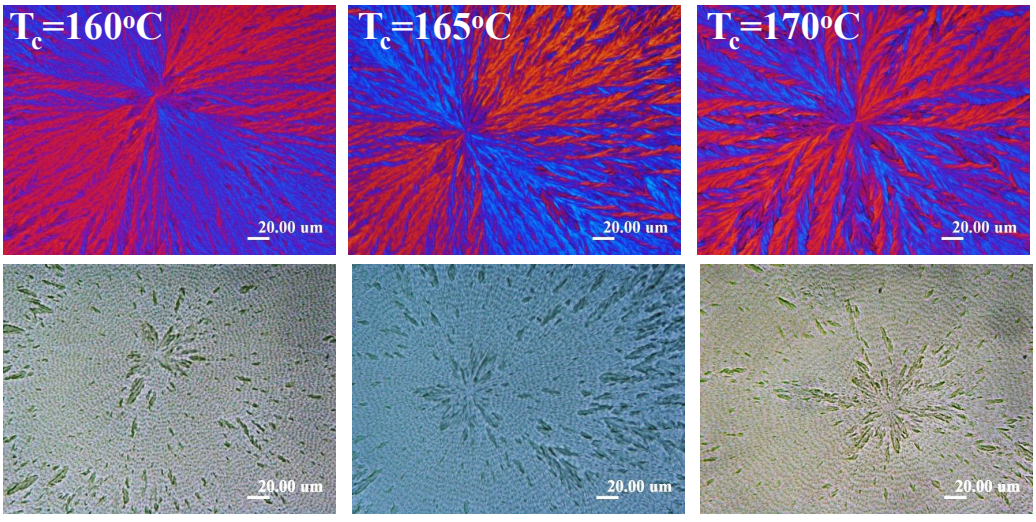

Figure S1. POM and OM images showing the crystalline morphology of sc-PLA/PVPh (80/20) blend at various crystallization temperatures (T_cs).

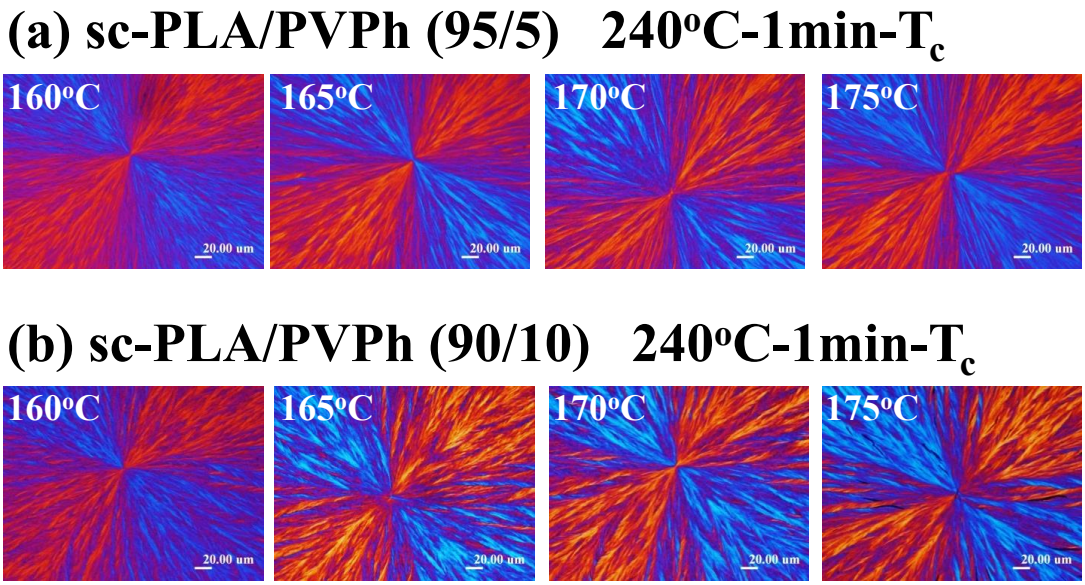

Figure S2. Crystalline morphology of (a) sc-PLA/PVPh (95/5) and (b) sc-PLA/PVPh (90/10) blends at various crystallization temperatures (T_cs).

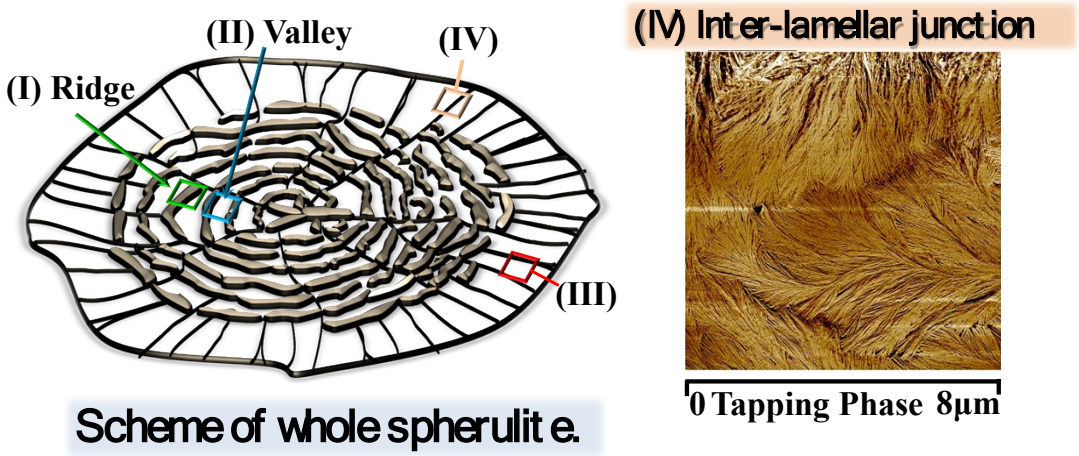

Figure S3. Scheme of whole spherulite and AFM micrograph of (IV) inter-lamellar junction in non-banded peripheral region of the spherulite. [Regions-I, II, III are discussed in the main texts.]

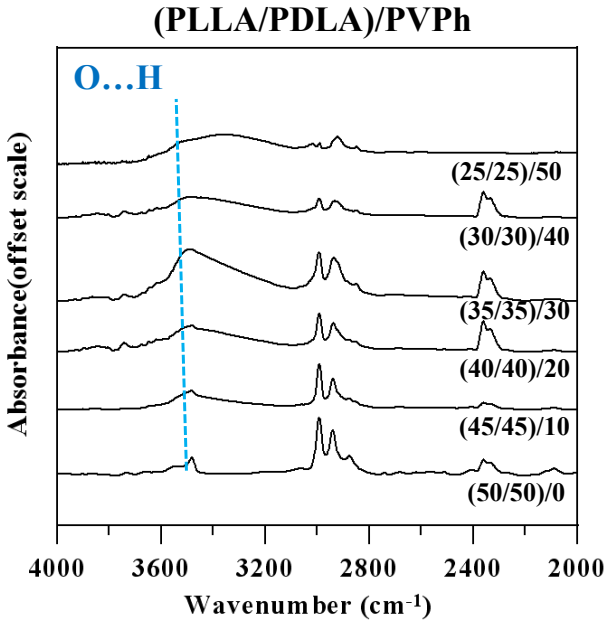

Figure S4. FTIR spectra in hydroxyl-stretching region for (PLLA/PDLA)/PVPh blend of various compositions as indicated on traces.

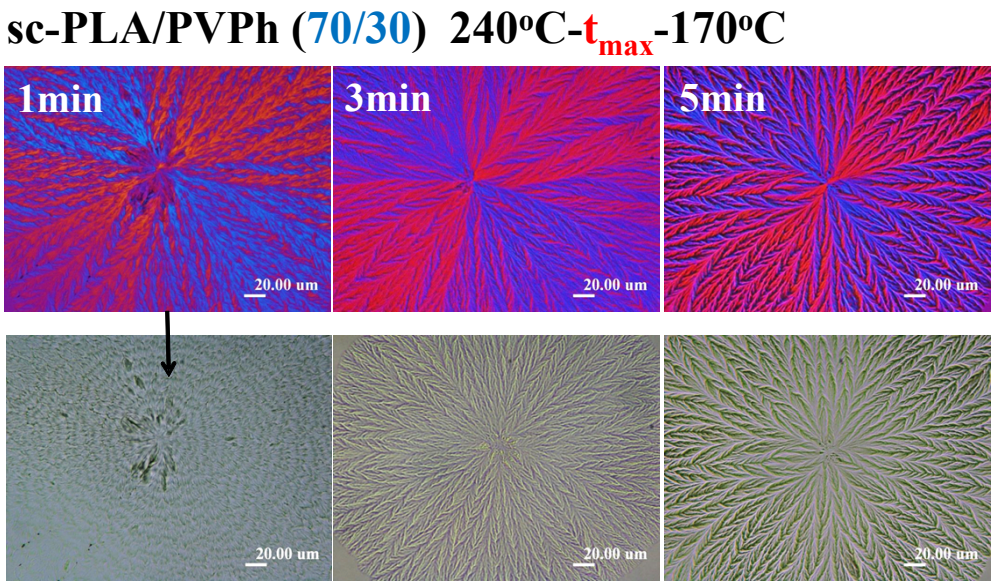

Figure S5. The crystalline morphology of sc-PLA/PVPh (70/30) blend at T_c=170°C and various t_{max}.

The results in Fig. S5 indicate that the time held at T_{max}=240°C (1, 3, 5 min, respectively) significantly influences the spherulite morphology. For short t_{max} (1 min), the spherulite assumes a morphology of ring-banded core superimposed on dendritic lamellae, while for t_{max} increased to 3 and 5 min, respectively, the ring-band pattern in the central core entirely disappears and the dendritic patterns further intensify to flower-petal shapes.