

Electronic Supplementary Material

For

**Solid Phase Behavior of Mixture Systems Based on Tripalmitoyl Glycerol and
Monounsaturated Triacylglycerols Forming a Molecular Compound**

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Table S1. Melting temperatures (°C) of stabilized PPP/PPO mixtures when heated at 2 °C·min⁻¹.

Polymorph	PPP	95PPP	90PPP	85PPP	80PPP	75PPP	70PPP	65PPP
β' -3L (PPO)	-	-	-	-	-	-	-	34.1 ± 0.5
β -2L (ss)	67.9 ± 0.7	66.4 ± 1.0	66.5 ± 0.7	65.8 ± 1.1	66.3 ± 2.0	64.3 ± 0.4	64.1 ± 0.7	63.2 ± 0.4
Polymorph	60PPP	50PPP	40PPP	30PPP	20PPP	10PPP	5PPP	PPO
β' -3L (PPO)	35.8 ± 0.6	36.0 ± 1.0	35.2 ± 0.6	35.5 ± 0.8	35.5 ± 0.3	35.6 ± 0.6	36.0 ± 0.3	36.1 ± 1.3
β -2L (ss)	62.9 ± 0.5	61.9 ± 0.8	60.3 ± 0.9	58.3 ± 0.6	55.5 ± 0.4	51.8 ± 0.6	45.4 ± 0.4	-

ss: solid solution

Table S2. Peak top temperatures (°C) of the main polymorphic events of PPP/PPO mixtures when heating at 2 °C·min⁻¹ soon after a melt crystallization process at the same rate.

PPP/PPO ratio	<i>α (PPP) + β' (PPP) → β (PPP)</i>		<i>β (PPP) melting</i>				
90/10	44.5 ± 0.4		65.6 ± 0.6				
	<i>β'_2 (PPO) melting</i>		<i>β' (PPP) → β (PPP)</i>		<i>β (PPP) melting</i>		
80/20	31.2 ± 0.8		41.6 ± 0.3		65.0 ± 0.4		
70/30	30.9 ± 0.5		39.5 ± 1.2		63.9 ± 0.6		
60/40	30.5 ± 1.1		39.0 ± 0.7		62.7 ± 0.9		
	<i>β'_2 (PPO) melting</i>		<i>β' (PPP) → melt → β (PPP)</i>		<i>β (PPP) melting</i>		
50/50	30.6 ± 0.8		42.4 ± 0.4		61.7 ± 0.6		
40/60	30.4 ± 0.6		40.5 ± 0.4		60.0 ± 0.4		
30/70	30.3 ± 0.6		39.3 ± 0.6		57.6 ± 0.8		
20/80	31.2 ± 0.7		39.4 ± 0.4		55.3 ± 0.4		
	<i>α_1 (PPO) melting</i>		<i>β'_2 (PPO) crystallization</i>		<i>β'_2 (PPO) melting</i>	<i>β' (PPP) → melt → β (PPP)</i>	<i>β (PPP) melting</i>
10/90	18.8 ± 0.3		19.7 ± 0.4		31.4 ± 0.3	41.5 ± 0.6	49.6 ± 0.5

Table S3. Melting temperatures (°C) of stabilized PPP/MC_{POP/PPO} mixtures when heated at 2 °C·min⁻¹.

Polymorph	PPP	95PPP	90PPP	85PPP	80PPP	75PPP	70PPP	65PPP	60PPP	55PPP	50PPP
β-2L (MC _{POP/PPO})	-	-	-	-	-	-	-	-	32.8 ± 0.4	33.4 ± 1.2	33.2 ± 0.5
β-2L (ss)	67.5 ± 0.6	66.4 ± 0.6	66.0 ± 0.5	65.7 ± 0.5	65.6 ± 1.5	65.0 ± 0.6	64.7 ± 1.0	63.4 ± 0.9	62.7 ± 0.4	62.0 ± 0.5	61.4 ± 0.8
Polymorph	45PPP	40PPP	35PPP	30PPP	25PPP	20PPP	15PPP	10PPP	5PPP	MC _{POP/PPO}	
β-2L (MC _{POP/PPO})	33.3 ± 0.2	33.7 ± 0.4	33.1 ± 0.3	33.6 ± 0.7	33.5 ± 0.6	33.6 ± 0.5	33.6 ± 0.8	33.2 ± 0.8	33.6 ± 0.6	33.6 ± 0.4	
β-2L (ss)	60.4 ± 0.6	59.7 ± 0.4	58.2 ± 0.3	58.2 ± 0.6	56.4 ± 0.6	54.5 ± 0.8	52.9 ± 0.7	49.6 ± 1.0	43.7 ± 0.6	-	

ss: solid solution

Table S4. Peak top temperatures (°C) of the main polymorphic events of PPP/MC_{POP/PPO} mixtures when heating at 2 °C·min⁻¹ soon after a melt crystallization process at the same rate.

PPP/MC_{POP/PPO} ratio	<i>α (PPP) + β' (PPP) → β (PPP)</i>		<i>β (PPP) melting</i>			
	90/10	44.1 ± 0.3		65.5 ± 0.5		
80/20	40.6 ± 0.3		64.5 ± 0.3			
	<i>α (MC_{POP/PPO}) melting</i>	<i>β' (MC_{POP/PPO}) melting</i>	<i>β' (PPP) → β (PPP)</i>	<i>β (PPP) melting</i>		
70/30	14.6 ± 0.3	28.6 ± 1.1	39.4 ± 0.6	63.5 ± 0.6		
60/40	14.7 ± 0.3	28.5 ± 0.4	38.7 ± 0.4	62.6 ± 0.4		
	<i>α (MC_{POP/PPO}) melting</i>	<i>β' (MC_{POP/PPO}) melting</i>	<i>β' (PPP) → melt → β (PPP)</i>	<i>β (PPP) melting</i>		
50/50	14.7 ± 0.5	28.0 ± 0.3	39.8 ± 0.2	61.1 ± 0.5		
40/60	14.7 ± 0.3	28.0 ± 0.4	40.3 ± 0.4	59.7 ± 0.3		
30/70	14.9 ± 0.3	27.2 ± 0.6	37.0 ± 0.9	57.3 ± 0.5		
20/80	15.1 ± 0.4	27.2 ± 0.5	34.0 ± 0.5	54.6 ± 0.7		
	<i>α (MC_{POP/PPO}) → melt → β' (MC_{POP/PPO})</i>	<i>β' (MC_{POP/PPO}) melting</i>	<i>β' (PPP) → melt → β (PPP)</i>	<i>β (PPP) melting</i>		
10/90	15.5 ± 0.5	28.0 ± 0.5	34.6 ± 1.2	48.9 ± 0.6		

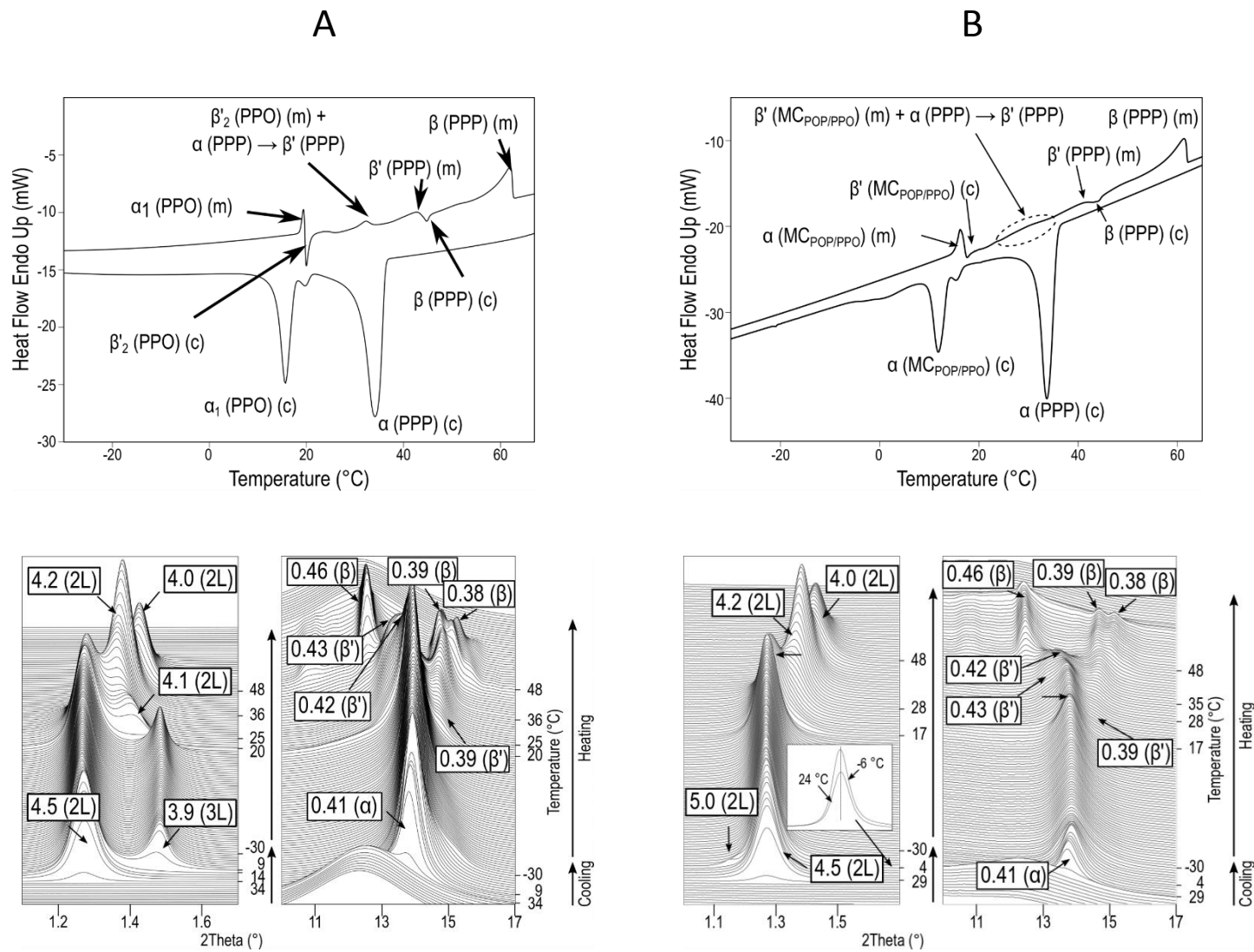


Figure S1. DSC thermograms (up) and SR-XRD patterns (down) obtained when equimolecular (A) PPP/PPO and (B) PPP/MCPOP/PPPO mixtures were cooled to -30 °C at 15 °C·min⁻¹ and subsequently heated at 2 °C·min⁻¹. (c): crystallization; (m): melting. *d*-spacing values are given in nm.