

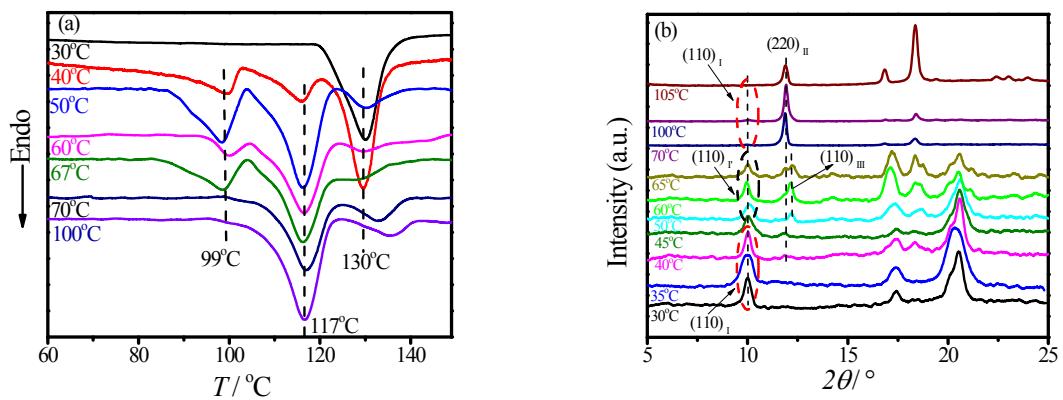
## Supporting Information

### Role of conformation in crystal formation and transition of polybutene-1

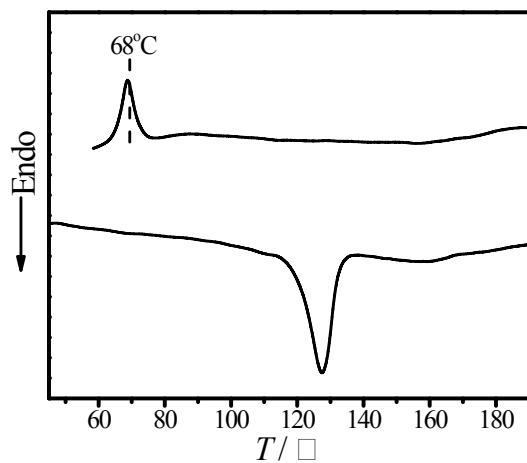
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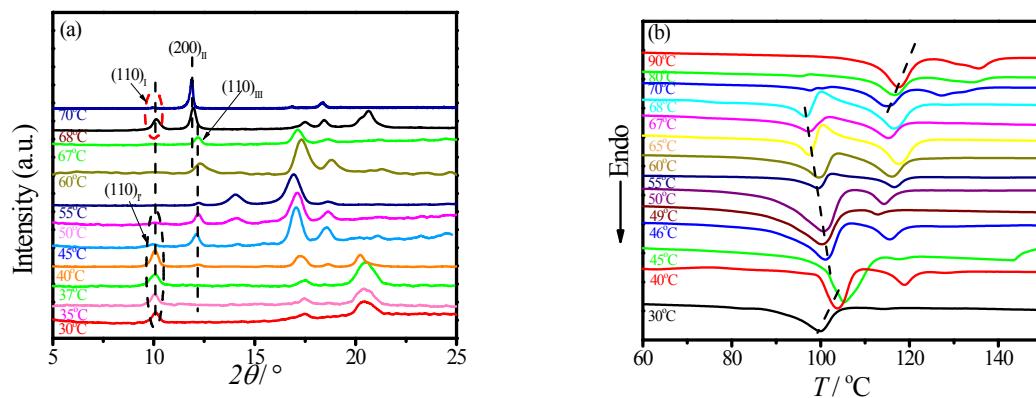
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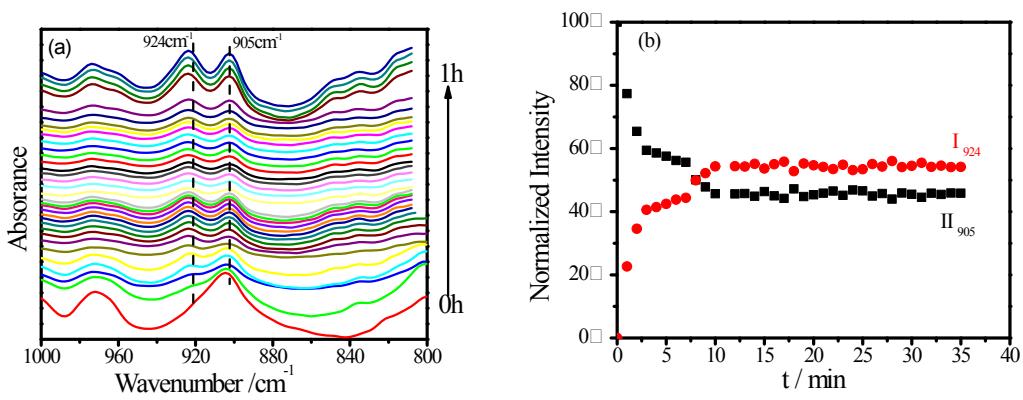
**Figure S1** (a) DSC curves of DCM treated thin iPB-1 films between 30 °C and 100 °C, (b) corresponding WAXD profiles



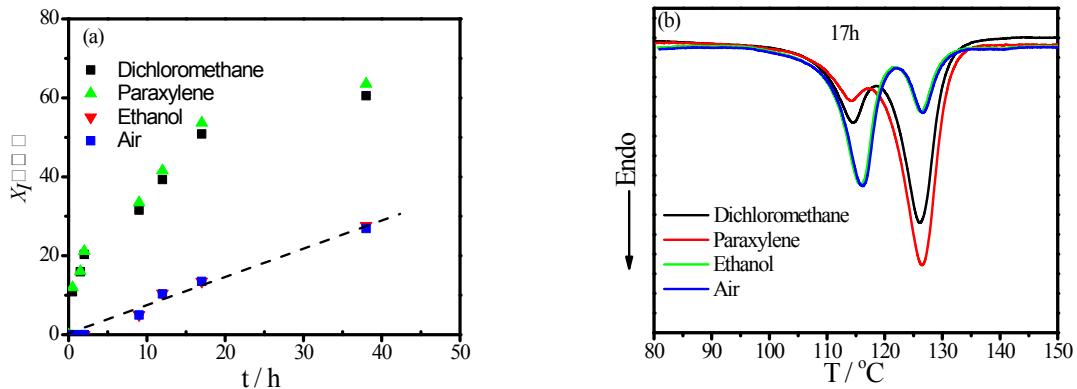
**Figure S2** DSC curves of iPB-1 melt and crystallization



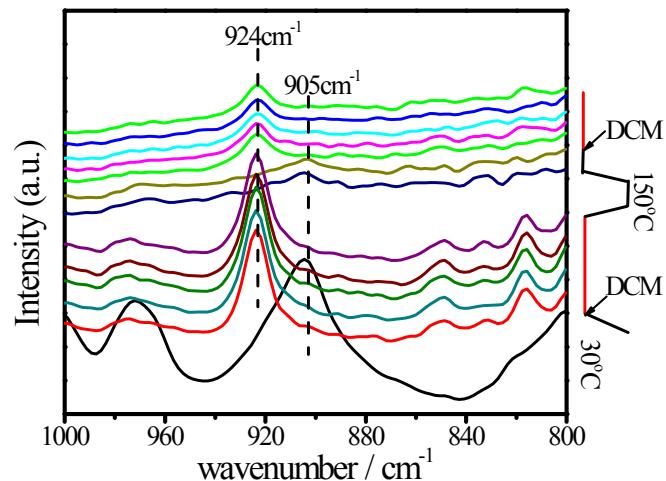
**Figure S3** WAXD profiles and DSC curves of solution crystallization between 30 °C and 100 °C



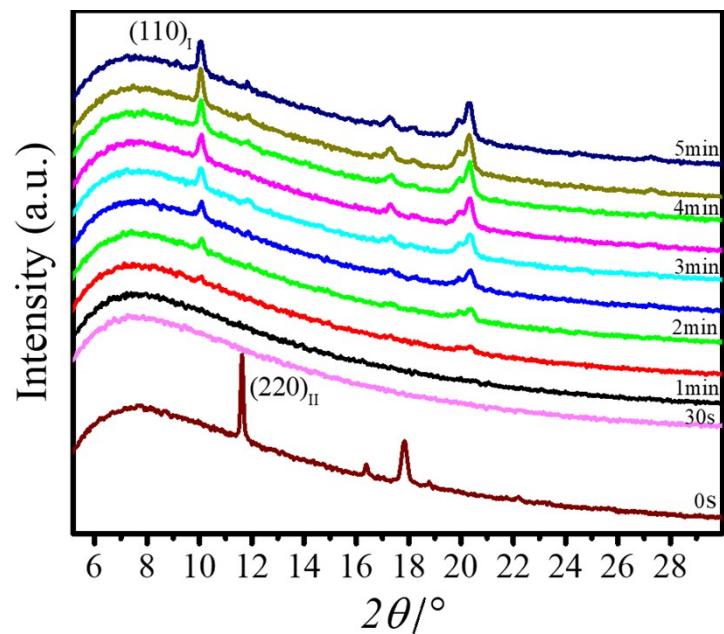
**Figure S4** (a) Selected FTIR curves of thick iPB-1 film after dripping dichloromethane (DCM) at 30 °C, (b) crystallinity evolution of form I and form II as a function of time after dripping dichloromethane on the 10 multiples iPB-1 film at 30 °C



**Figure S5** (a) Crystallinity evolution of form I with time after solvent dropping, (b) DSC melting curves of the 17h crystallized iPB-1 after solvent dropping



**Figure S6** Selected FTIR curves of iPB-1 film after dripping DCM at 30 °C.



**Figure S7** WAXD profiles integrated from corresponding in-situ WAXS patterns of thin iPB-1 films after dripping DCM at 30 °C.

**Table S1** Solubility parameters of used solvents and iPB-1

Solvent	Dichlormethane	P-xylene	Ethanol	Water	iPB-1
$\delta / \left( \frac{4.1868}{\text{cm}^3} \right)^{\frac{1}{2}}$	9.7	8.8	14.5	23.1	8.4