

## **SUPPORTING INFORMATION**

### **Fabrication of Multilayered $\beta$ -form Transcrystallinity in Isotactic Polypropylene for Achieving Optimized Mechanical Performances**

Lu He<sup>a, b</sup>, Shanshan Luo<sup>a b, c</sup>, Jiabin Shen<sup>a, b, \*</sup>, Shaoyun Guo<sup>a, b</sup>

<sup>a</sup> State Key Laboratory of Polymer Materials Engineering, Polymer Research Institute  
of Sichuan University, Chengdu 610065, China

<sup>b</sup> Sichuan Provincial Engineering Laboratory of Plastic/Rubber Complex Processing  
Technology, Chengdu 610065, China

<sup>c</sup> National Engineering Research Center for Compounding and Modification of  
Polymer Materials, Guiyang 550014, China

\* Corresponding author:

Jiabin Shen

Email: [shenjb@scu.edu.cn](mailto:shenjb@scu.edu.cn)

Tel/Tax: 86-28-85466077

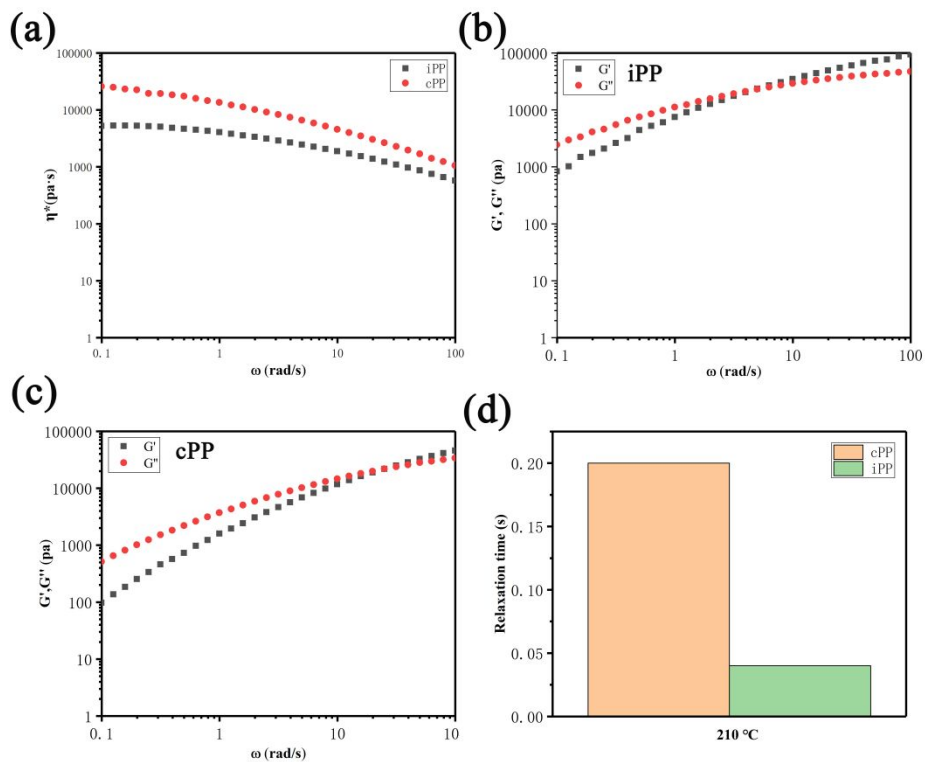


Figure S1. (a) complex viscosities ( $\eta^*$ ) of iPP and cPP versus angular frequency ( $\omega$ ) at 210 °C; Results of SAOS measurement at 210 °C for (b) iPP and (c) cPP; (d) Relaxation time of iPP and cPP melting at 210 °C (calculated according to ref (s1)).

[s1] Jiabin Shen, et al. Polym. Adv. Technol. 201, 22, 237-245.

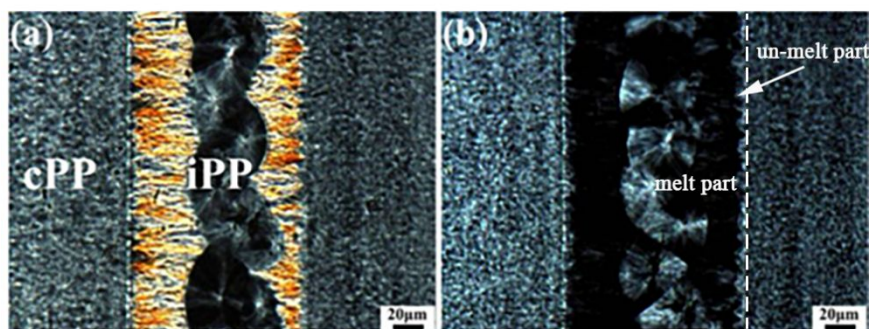


Figure S2. The POM images of 8-layer cPP/iPP specimen (a) before and (b) after selective melting at 158 °C.

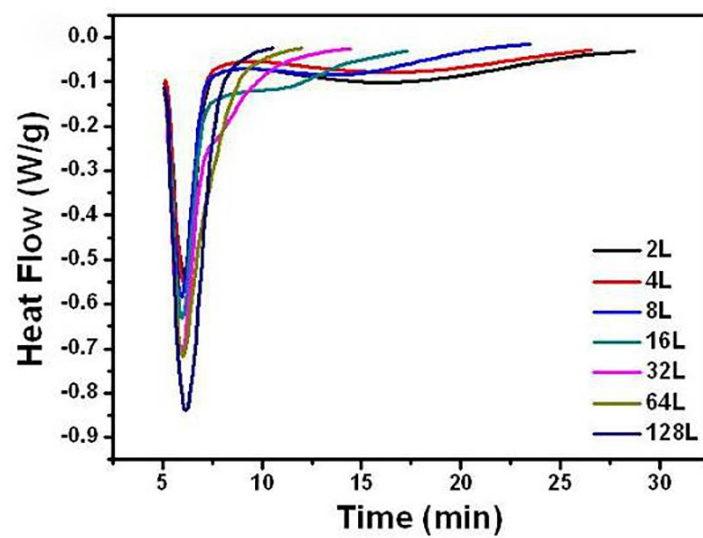


Figure S3. DSC thermographs of cPP/iPP multilayer specimens isothermally crystallized at 130 °C.

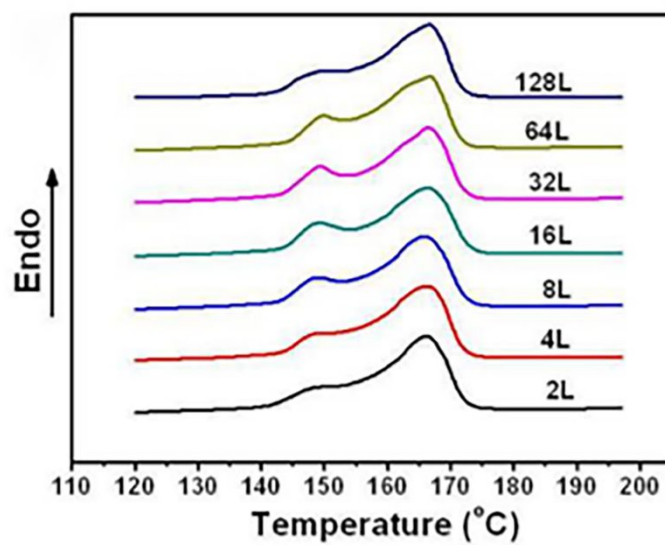


Figure S4. DSC melting curves of cPP/iPP multilayer materials after isothermally crystallizing at 130 °C in oil for 2h.