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Effect of an additive TAB-1 on crystallization behaviors and tensile properties of iPB-1

Jingqing Li*, Ruo Bai, Shichun Jiang*

School of Materials Science and Engineering, Tianjin University, Tianjin 300072, China

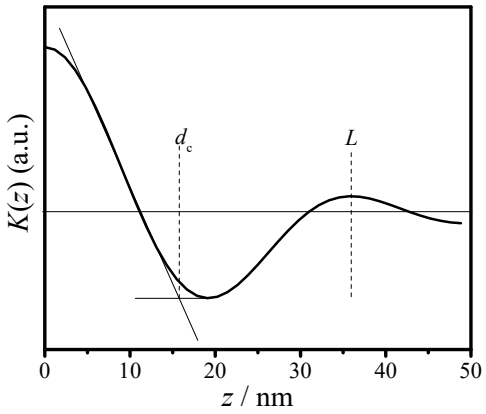

Figure S1 Schematics of crystalline lamella thickness d_c determination from the one dimension electron density correlation function as shown in Equation (1).

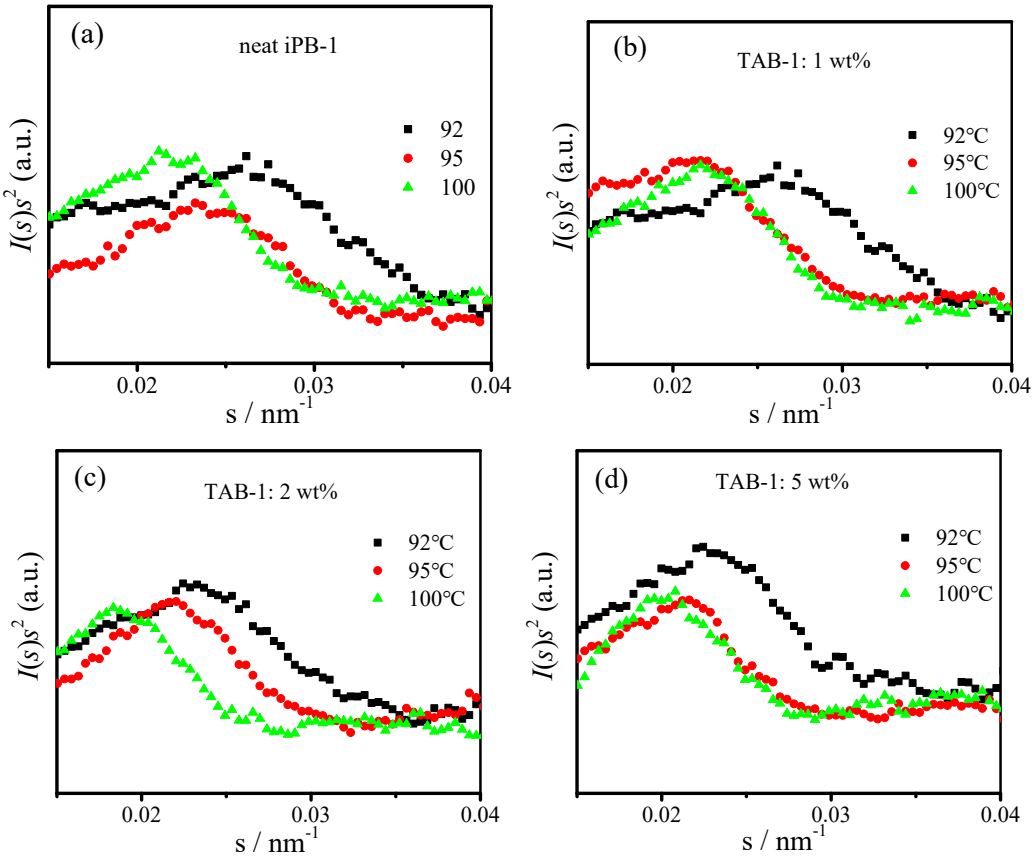

Figure S2 The Lorentz-corrected SAXS data of the isothermally crystallized iPB-1/TAB-1 with various TAB-1 weight proportions in comparison with neat iPB-1

* Corresponding authors: jqli11103@tju.edu.cn, scjiang@tju.edu.cn

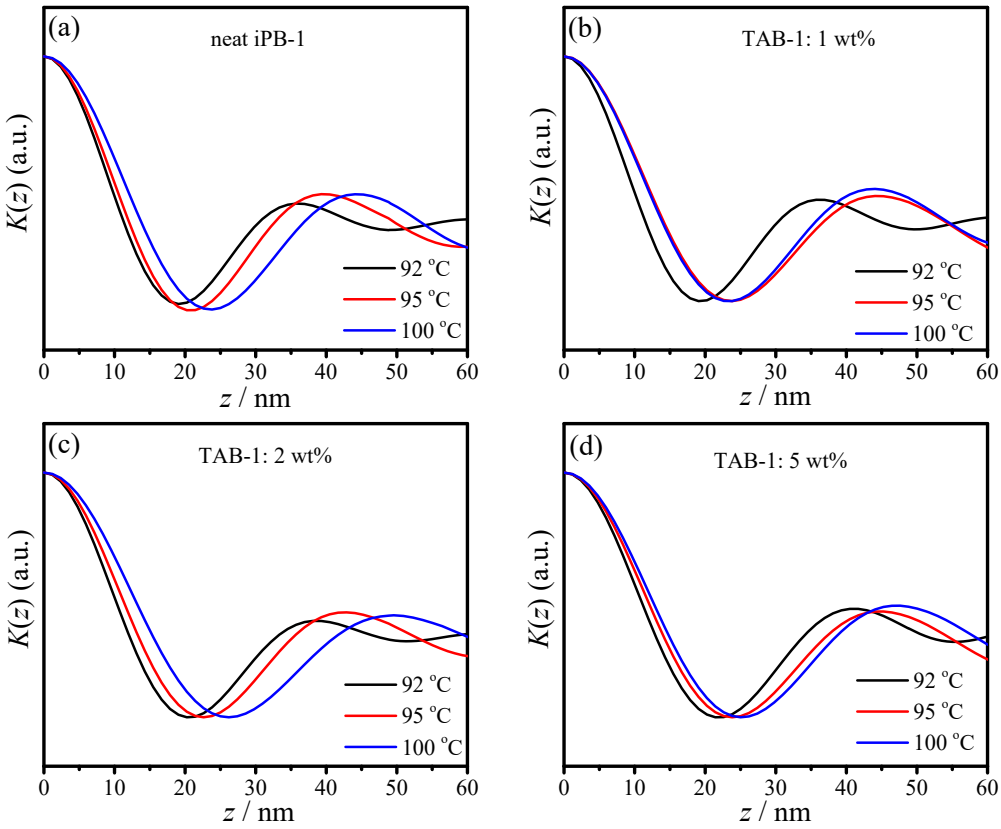

Figure S3 One dimension electron density correlation function plots of the isothermally crystallized iPB-1/TAB-1 with various TAB-1 weight proportions in comparison with neat iPB-1

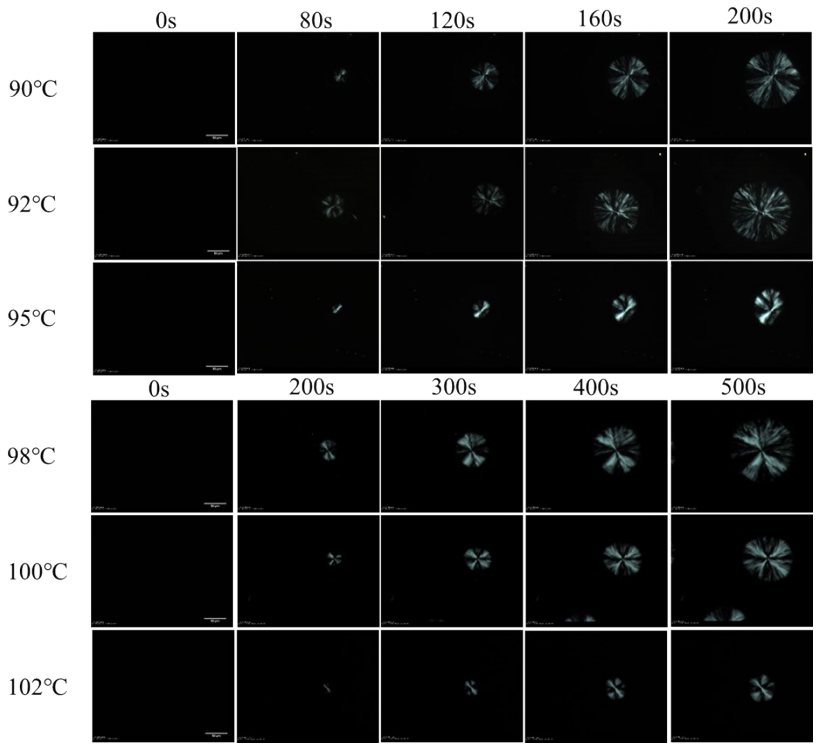

Figure S4 POM images of neat iPB-1 obtained at various isothermal crystallization temperatures T_cs for different time after melting at 180 °C for 3 min and soon cooling to the T_cs

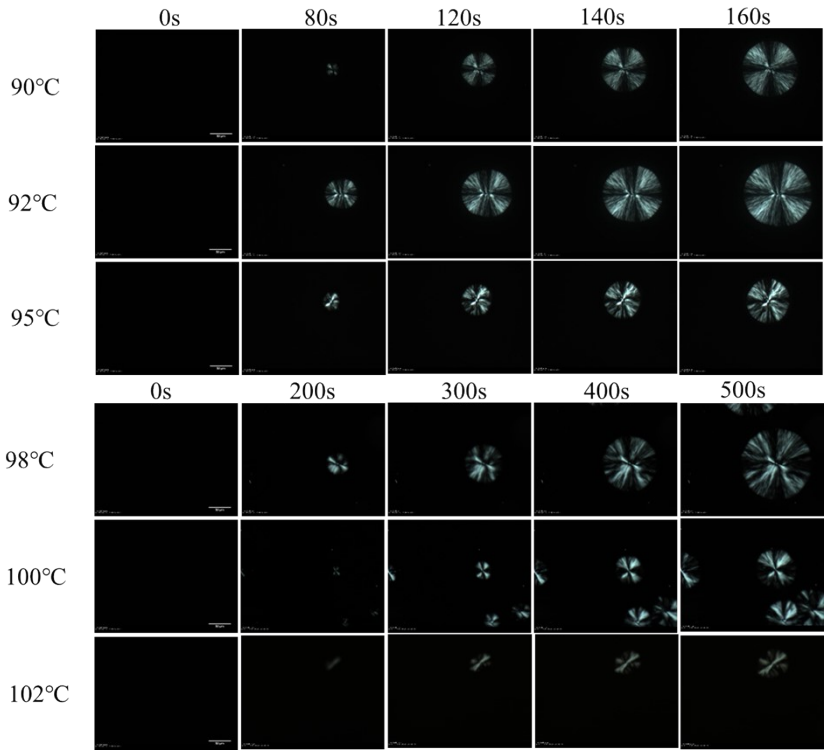

Figure S5 POM images of the iPB-1/TAB-1 with TAB-1 weight proportion of 1 wt% obtained at various isothermal crystallization temperatures T_cs for different time after melting at 180 °C for 3 min and soon cooling to the T_cs

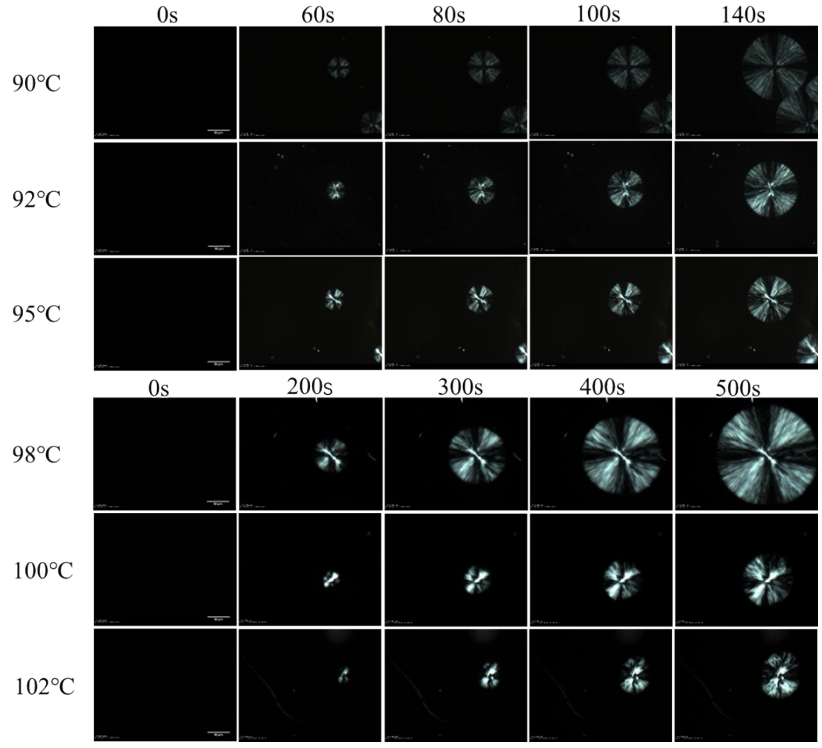

Figure S6 POM images of the iPB-1/TAB-1 with TAB-1 weight proportion of 5 wt% obtained at various isothermal crystallization temperatures T_cs for different time after melting at 180 °C for 3 min and soon cooling to the T_cs

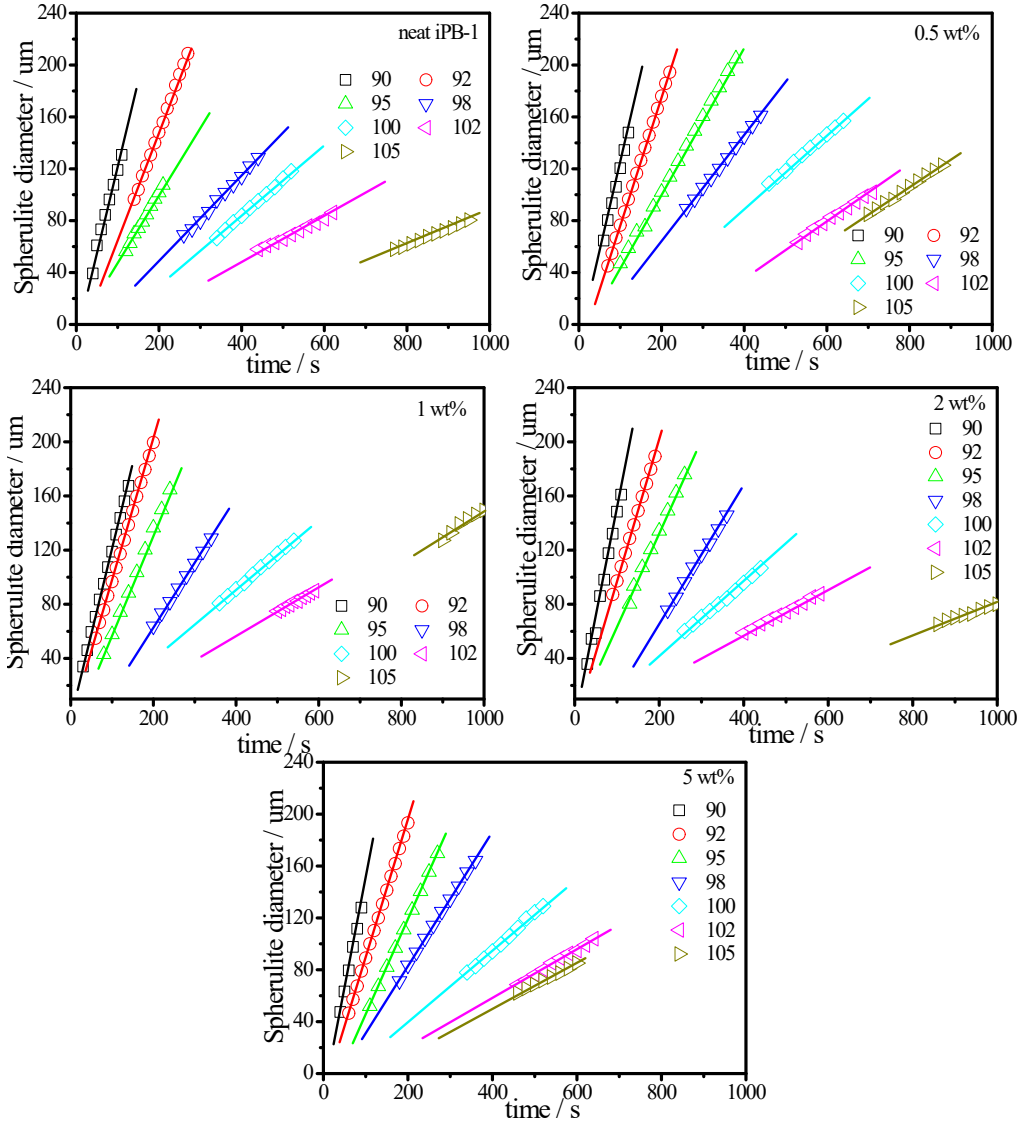

Figure S7 POM images of the iPB-1/TAB-1 with TAB-1 weight proportion of 5 wt% obtained at various isothermal crystallization temperatures T_cs for different time after melting at 180 °C for 3 min and soon cooling to the T_cs

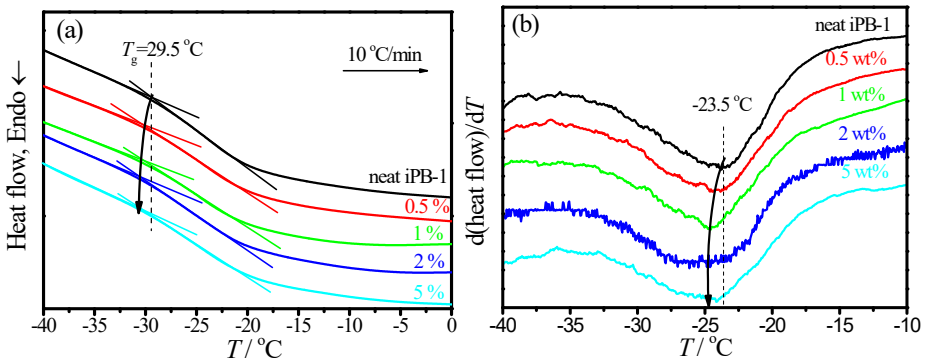

Figure S8 Variation of glass transition temperature T_g of iPB-1 in iPB-1/TAB-1 with various TAB-1 weight proportions determined by DSC from the curves shown in (a) and (b) at a heating rate of 10 °C/min after melting at 200 °C for 5 min and then cooling at 30 °C/min to -60 °C for 5 min.

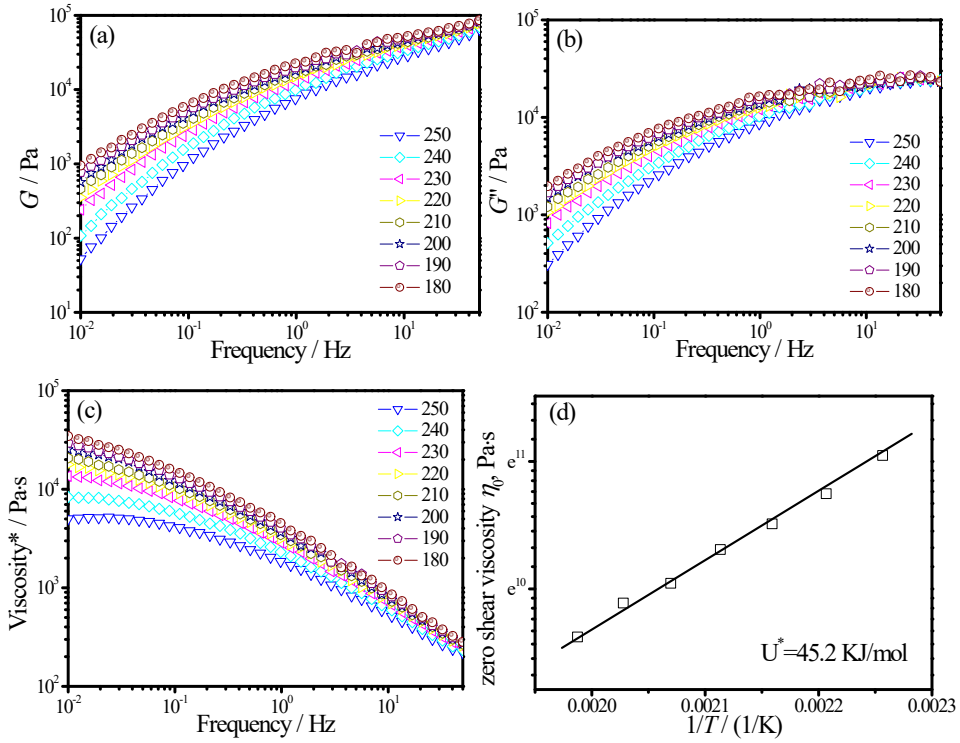

Figure S9 Frequency-dependent storage modulus *G*', loss modulus *G*", viscosity* within linear viscoelastic regime and determination of U^* by linear fitting of the resulting $\eta_0 \sim 1/T$ curve via time-Temperature-Supposition (tTS) to estimate the η_0 values at various temperatures *T*s.

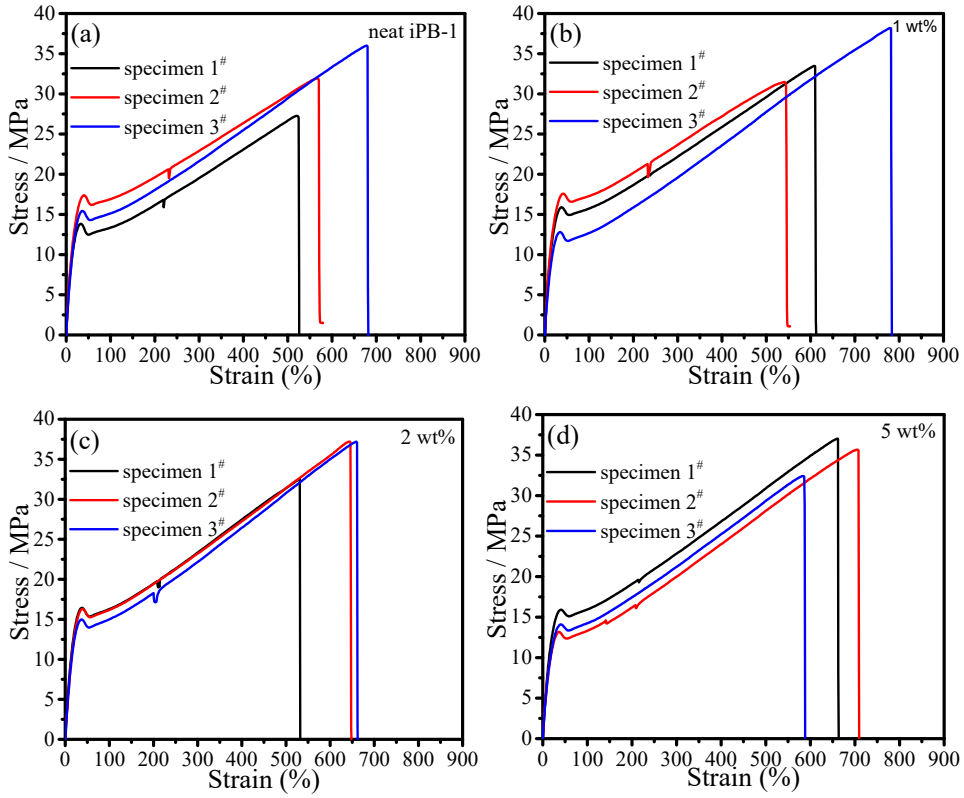

Figure S10 Engineering stress-strain curves of the iPB-1/TAB-1 with various TAB-1 weight proportions obtained at 30 °C at a speed of 5 mm/min

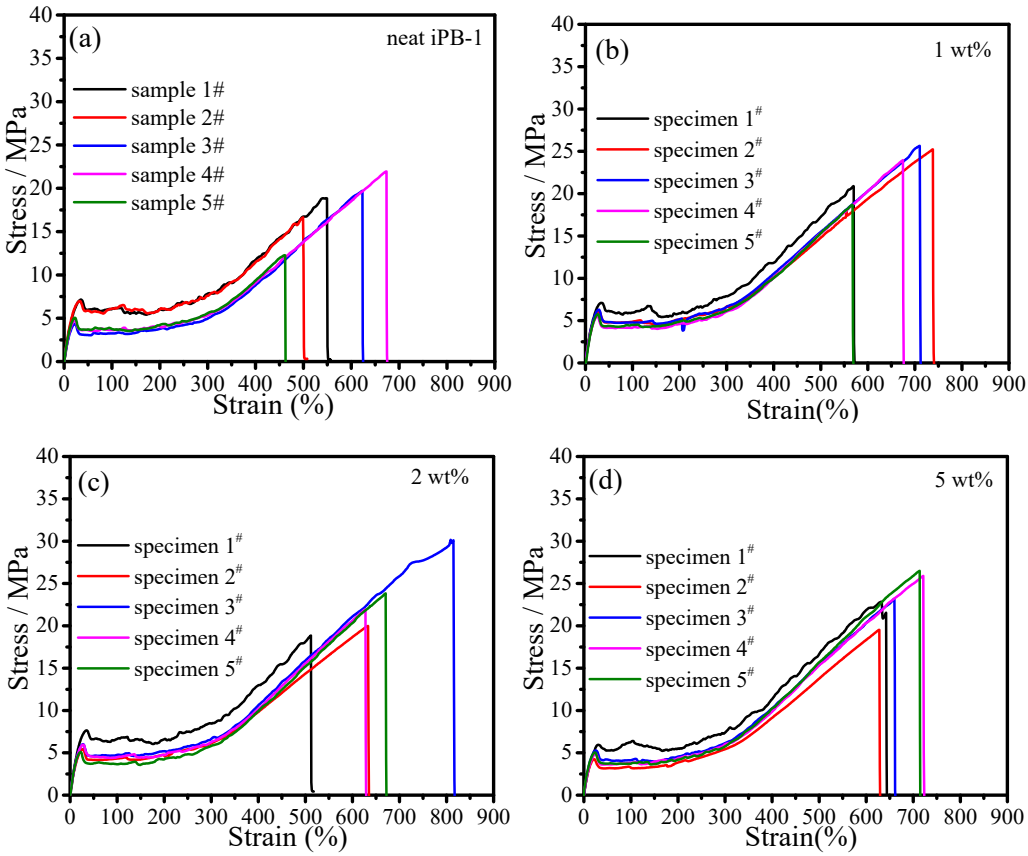

Figure S11 Engineering stress-strain curves of the iPB-1/TAB-1 with various TAB-1 weight proportions obtained at 95 °C at a speed of 5 mm/min