

Supplementary Information

Regioselective Post-Functionalization of Isotactic Polypropylene by Amination in Presence of *N*-Hydroxyphthalimide

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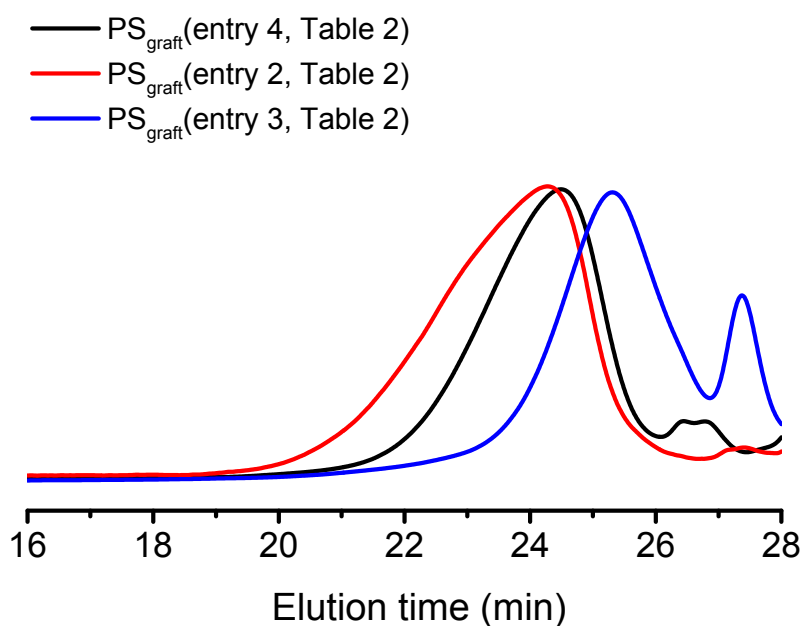


Figure S1. GPC curves of cleaved polystyrene grafted to PP with THF as eluent.

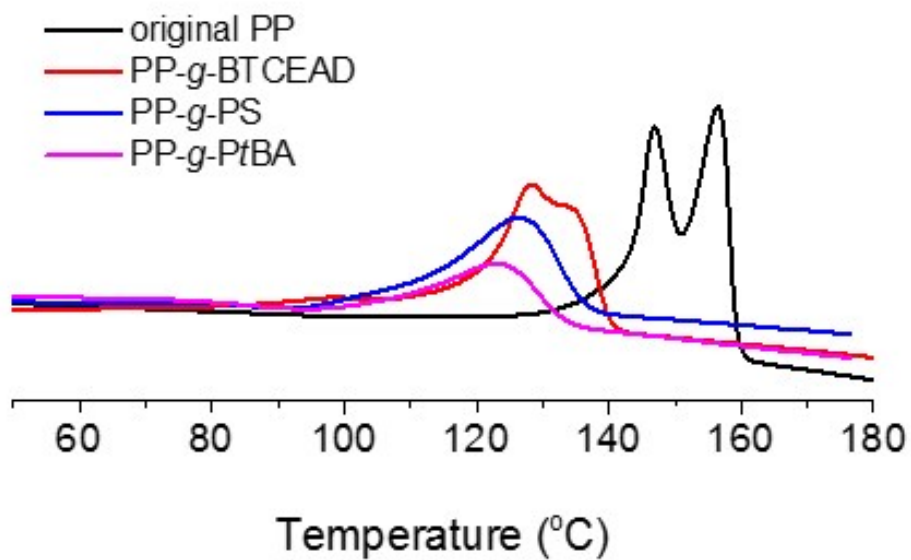
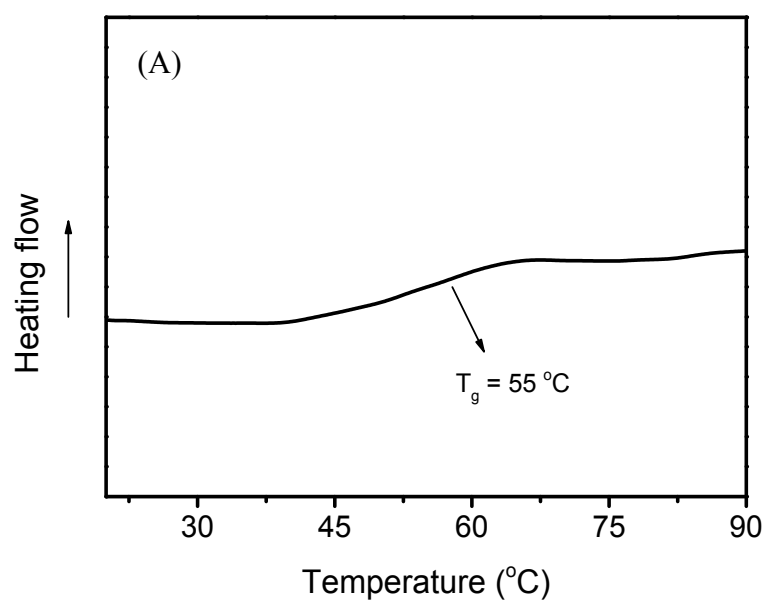


Figure S2. DSC curves of original PP, PP-g-BTCEAD (entry 3, Table 1), PP-g-PS (entry 3, Table 2) and PP-g-PtBA (entry 6, Table 3).



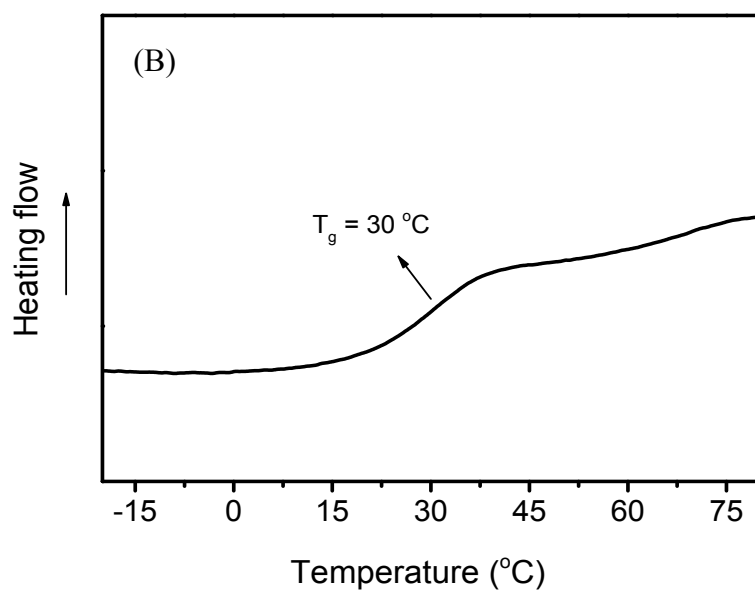


Figure S3. Glass transition temperature of (A) PP-g-PS (entry 3, Table 2) and (B) PP-g-PtBA (entry 6, Table 3) based on DSC curves.

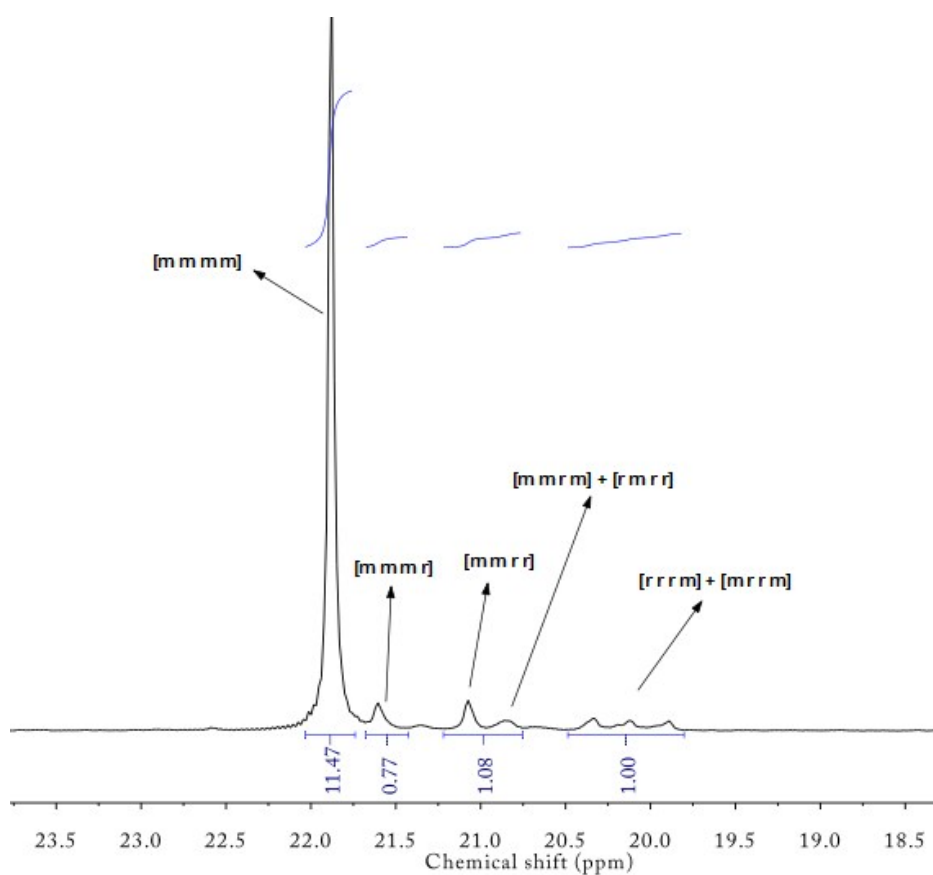


Figure S4. The assignment of tacticity of original isotactic PP from ^{13}C NMR.

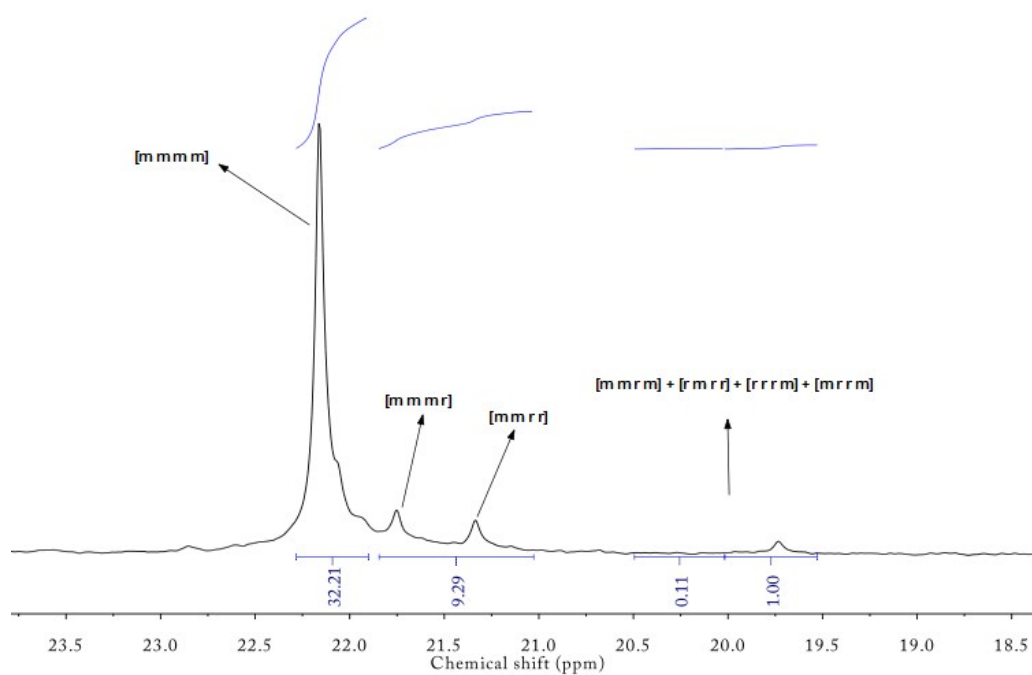


Figure S5. The assignment of tacticity of PP-g-BTCEAD (entry 3, Table 1) from ^{13}C NMR.

Calculation method¹:

tacticity of original isotactic PP:

$$\begin{aligned}
 & [\text{m m m m}] \% = \\
 & \frac{[\text{m m m m}]}{[\text{m m m m}] + [\text{m m m r}] + [\text{m m r r}] + [\text{m m r m}] + [\text{r m r r}] + [\text{r r r m}] + [\text{m r r m}]} \times 100\% \\
 & = \frac{11.47}{11.47 + 0.77 + 1.08 + 1.00} \times 100\% \\
 & = 80.1\%
 \end{aligned}$$

tacticity of PP-g-BTCEAD:

$$\begin{aligned}
 & [\text{m m m m}] \% = \\
 & \frac{[\text{m m m m}]}{[\text{m m m m}] + [\text{m m m r}] + [\text{m m r r}] + [\text{m m r m}] + [\text{r m r r}] + [\text{r r r m}] + [\text{m r r m}]} \times 100\% \\
 & = \frac{32.21}{32.21 + 9.29 + 0.11 + 1.00} \times 100\%
 \end{aligned}$$

= 75.6%

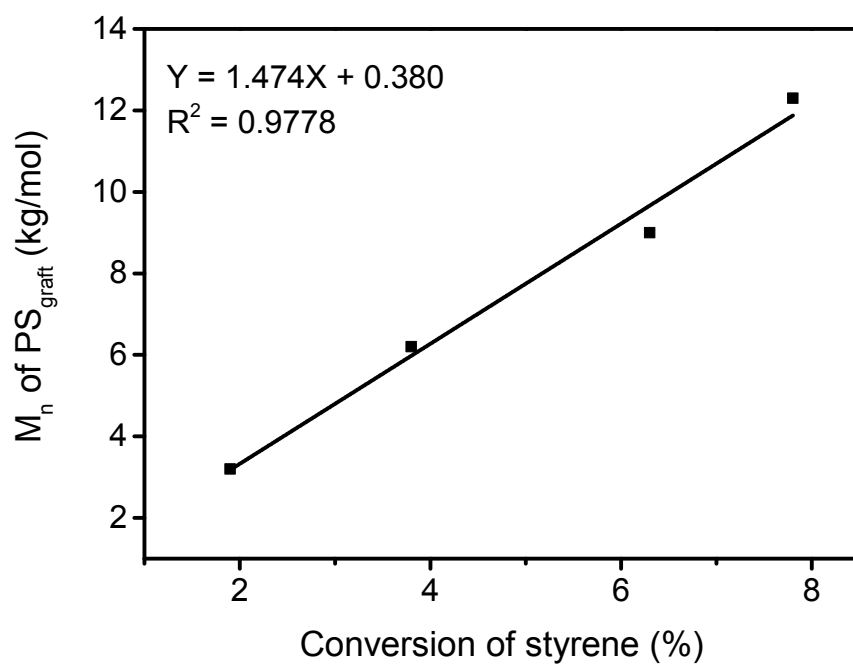


Figure S6. Fitting curve of M_n against conversion of styrene.

Reference:

1. V. Busico and R. Cipullo, *Prog. Polym. Sci.* 2001, **26**, 443-533.