

Article

Polyethylenes and Polystyrenes with carbazole fluorescent tags

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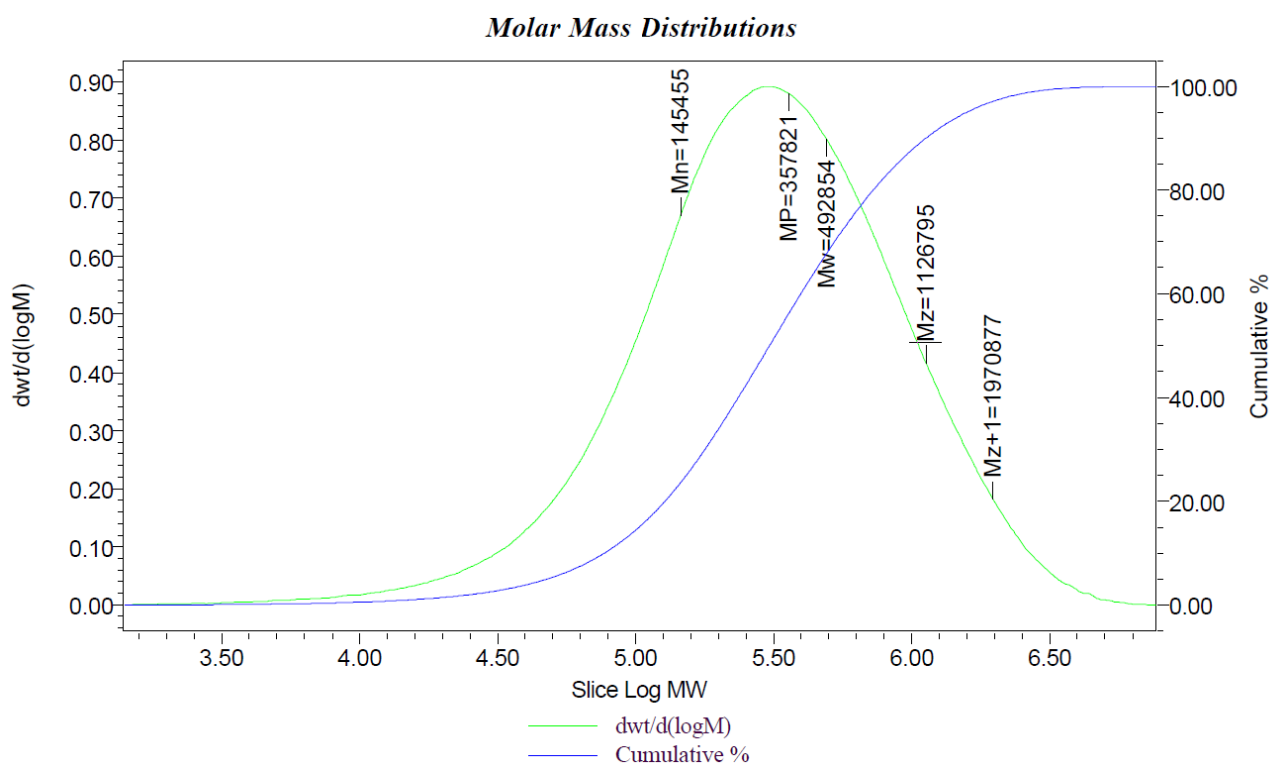


Figure S1. GPC trace of run 1 (P(E-co-PK sample))

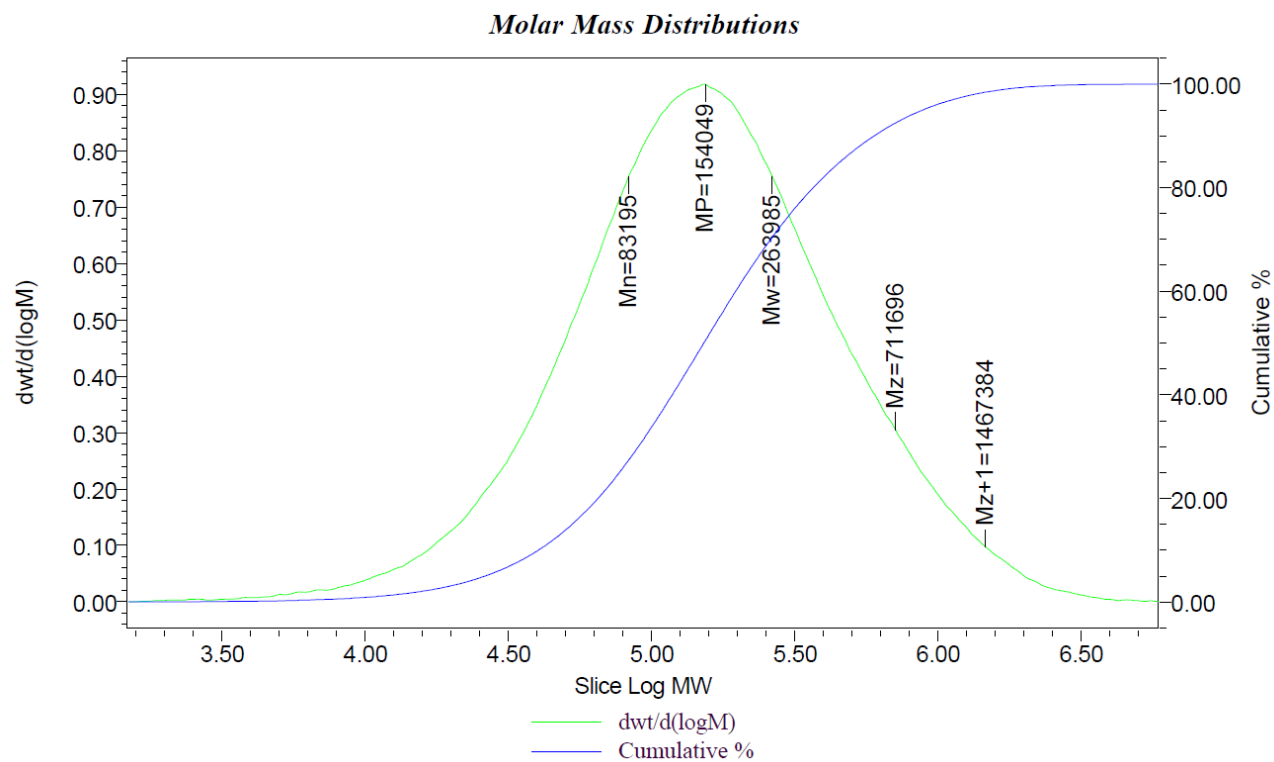


Figure S2. GPC trace of run 2 (P(E-co-PK sample))

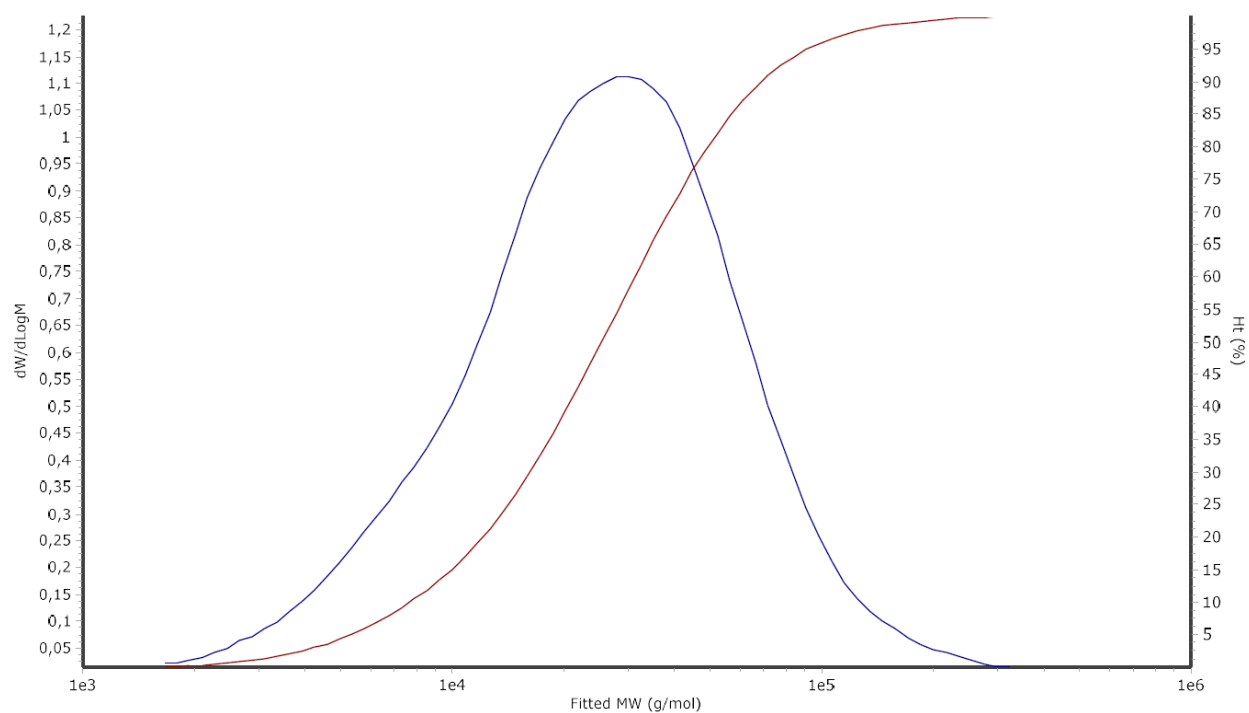


Figure S3. GPC trace of run **3** (P(S-co-SK sample))

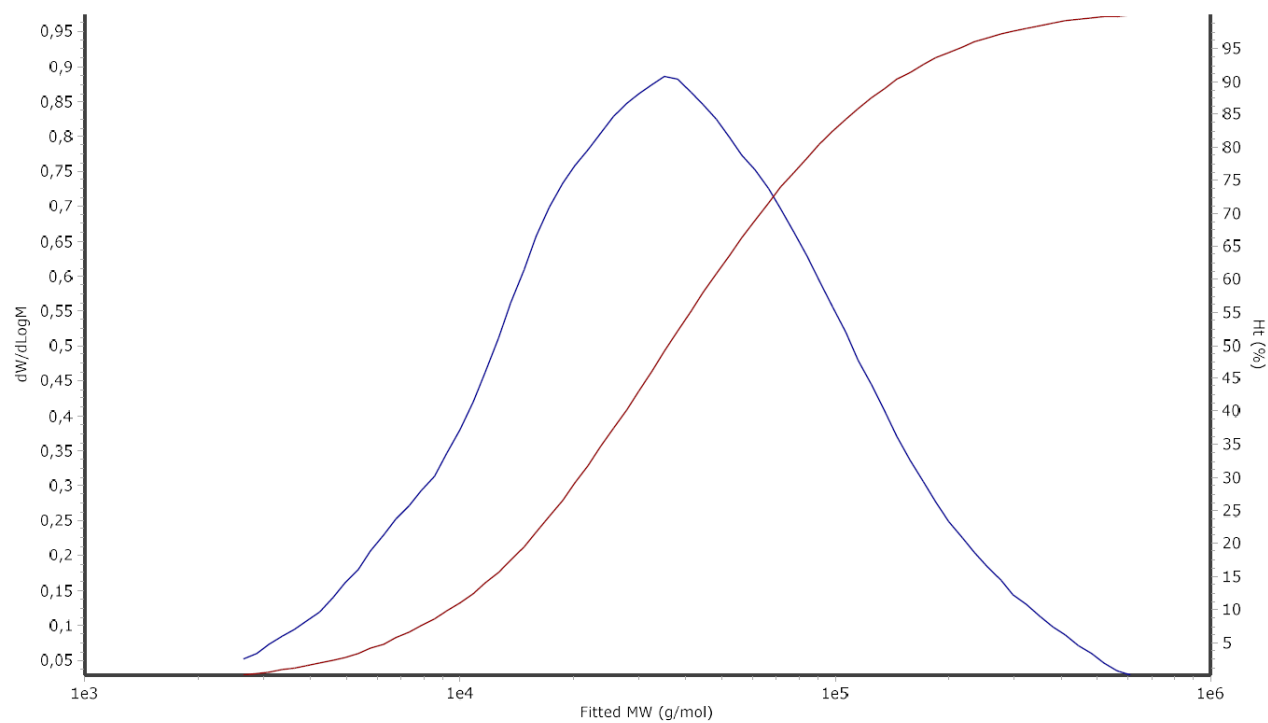


Figure S4. GPC trace of run **4** (P(S-co-SK sample))

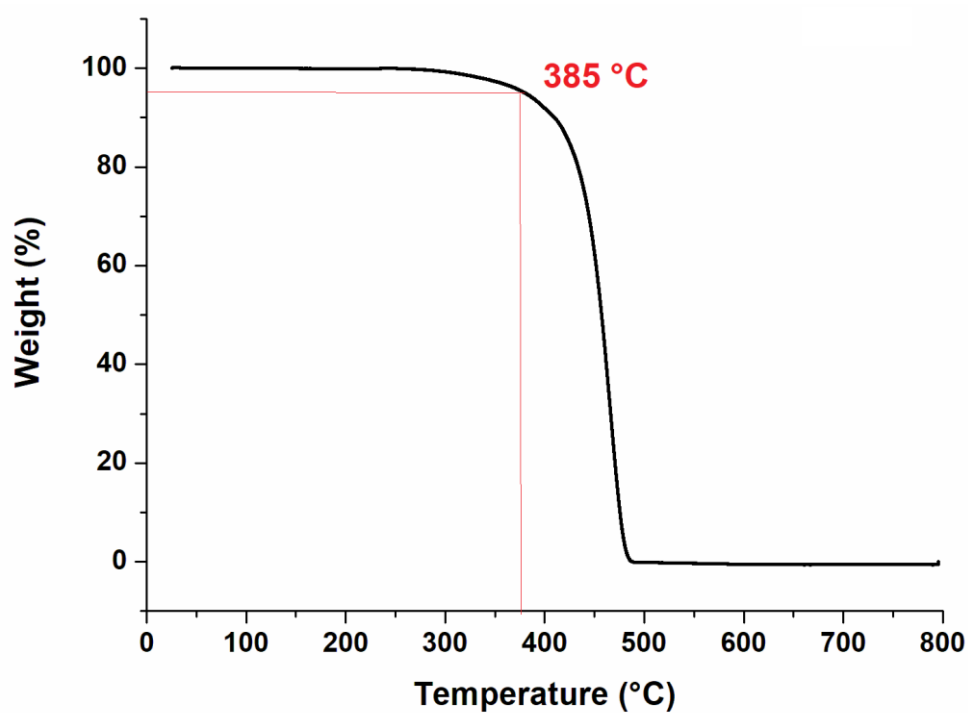


Figure S5. TGA trace of runs **1** (P(E-co-PK sample). (N₂, 10°C/min).

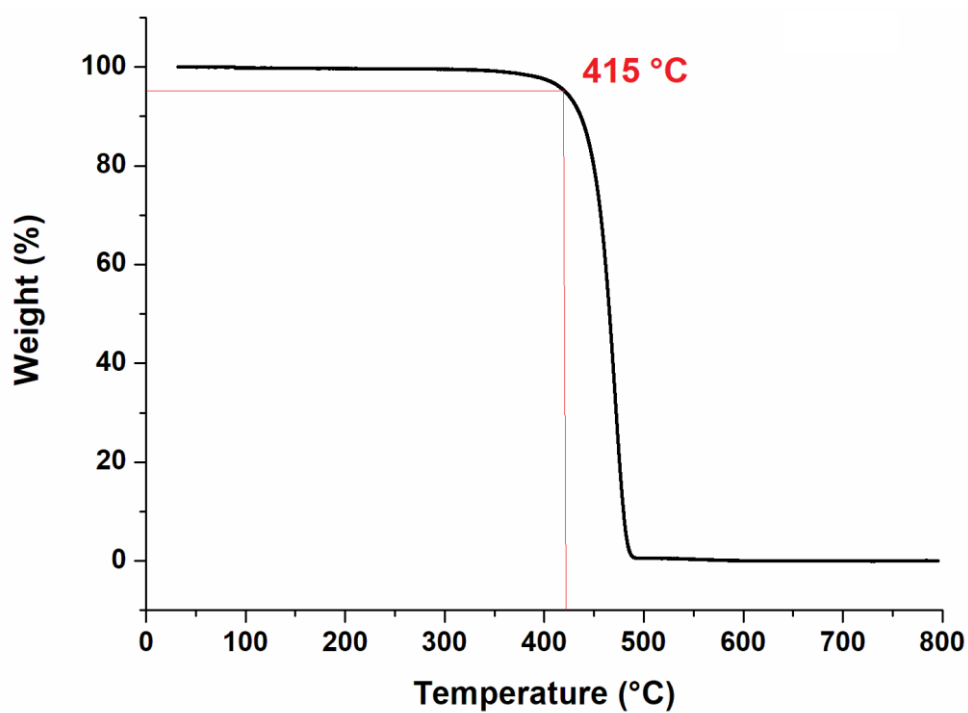


Figure S6. TGA trace of runs **2** (P(E-co-PK sample). (N₂, 10°C/min).

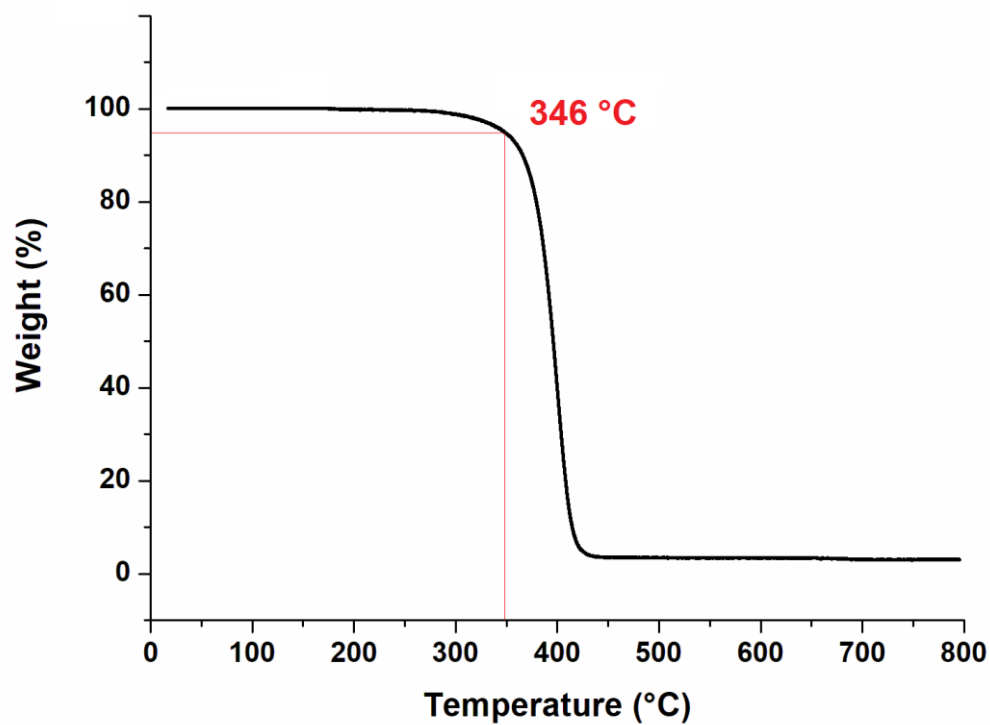


Figure S7. TGA trace of runs **3** (P(S-co-SK sample). (N₂, 10°C/min).

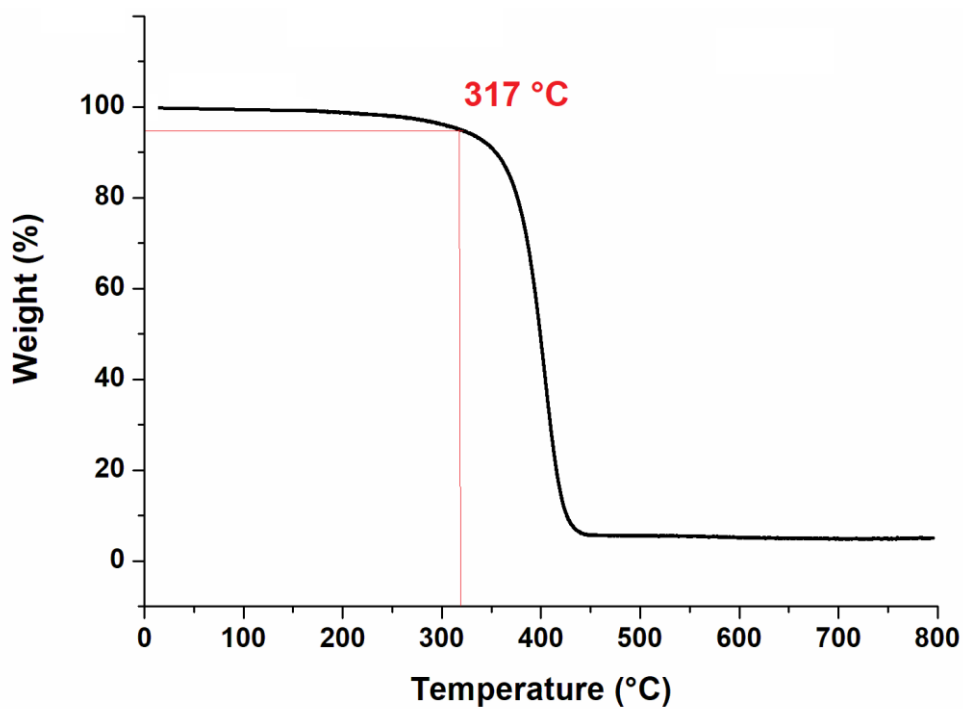


Figure S8. TGA trace of runs **4** (P(S-co-SK sample). (N₂, 10°C/min).

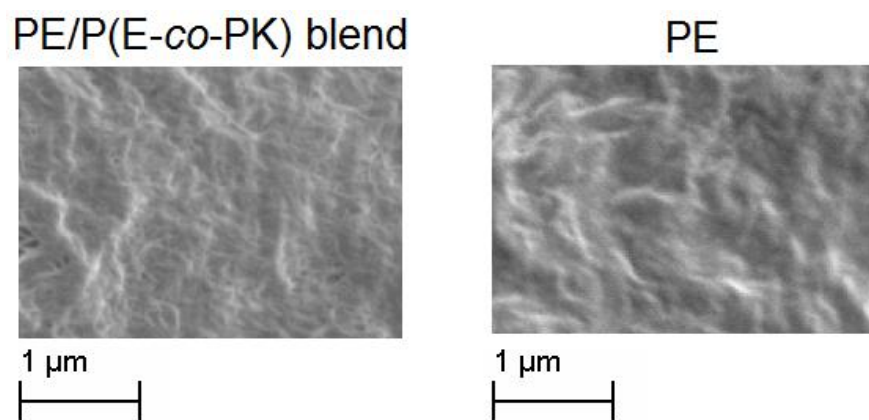


Figure S9. Comparison between the SEM images of PE/P(E-co-PK) blend and PE films.

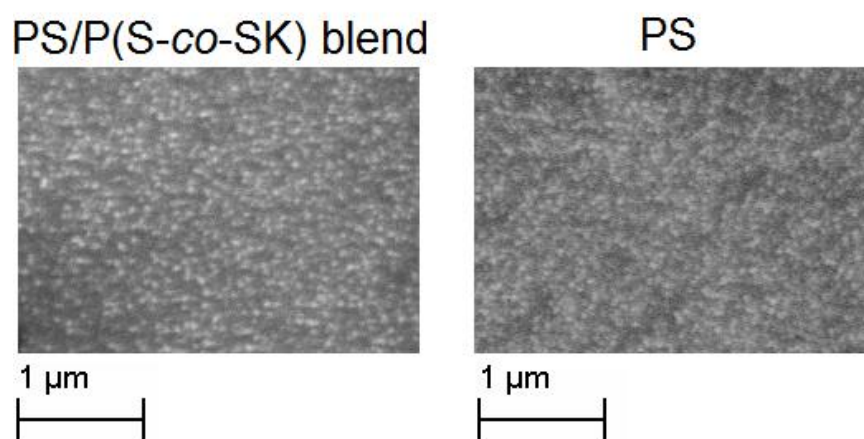


Figure S10. Comparison between the SEM images of PS/P(S-co-SK) blend and PS films.

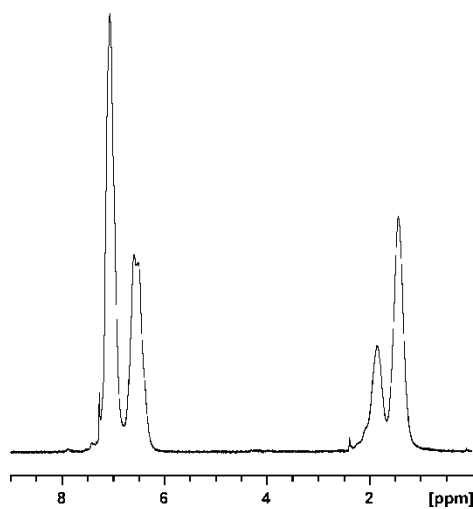


Figure S11. ^1H NMR spectrum of PS sample. (CHCl_3 solvent, TMS scale, 25 °C).

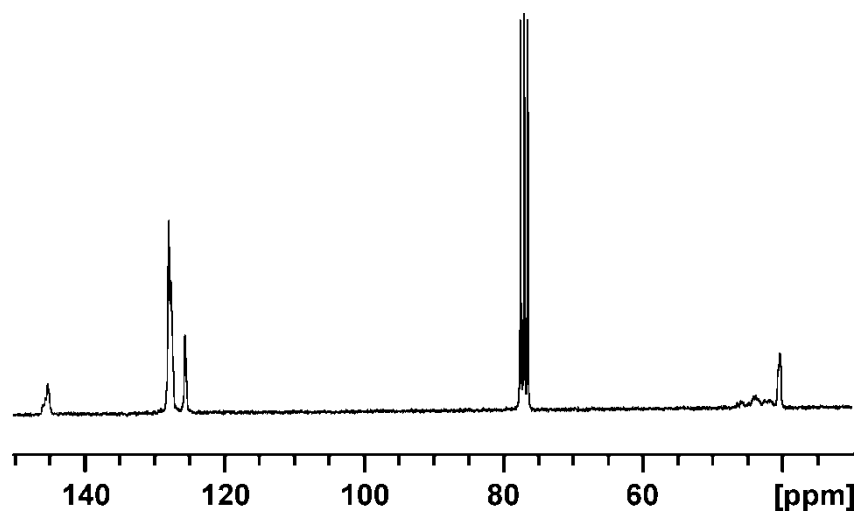


Figure S12. ^{13}C NMR spectrum of PS sample. (CHCl_3 solvent, TMS scale, 25 °C).

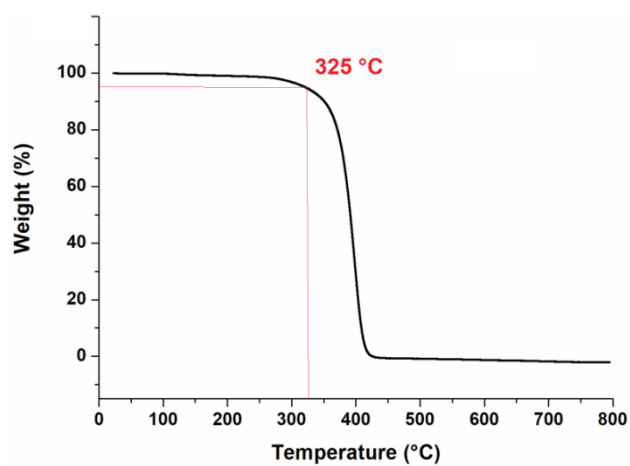


Figure S13. TGA trace of PS sample. (N_2 , 10°C/min).

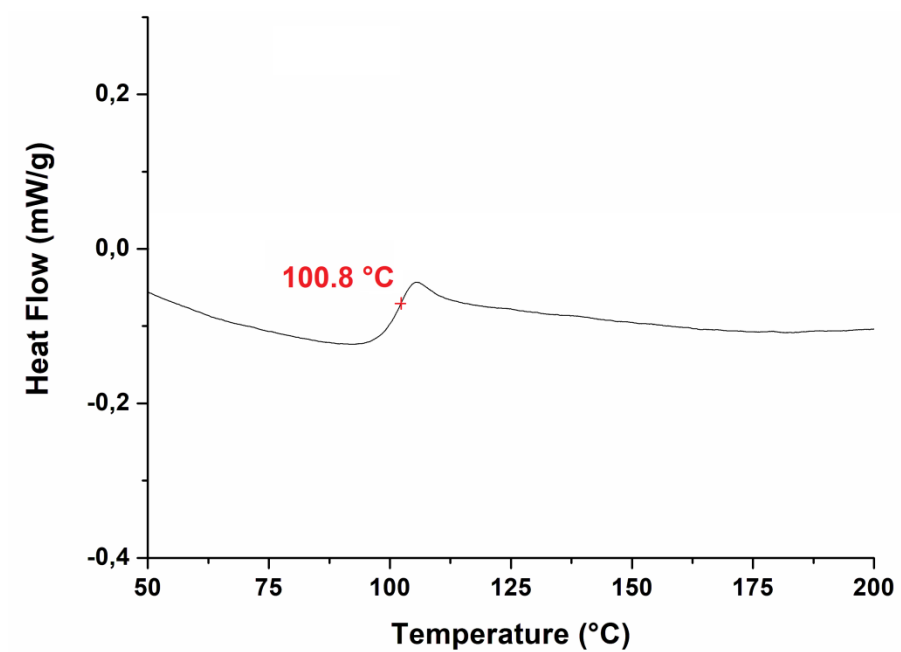
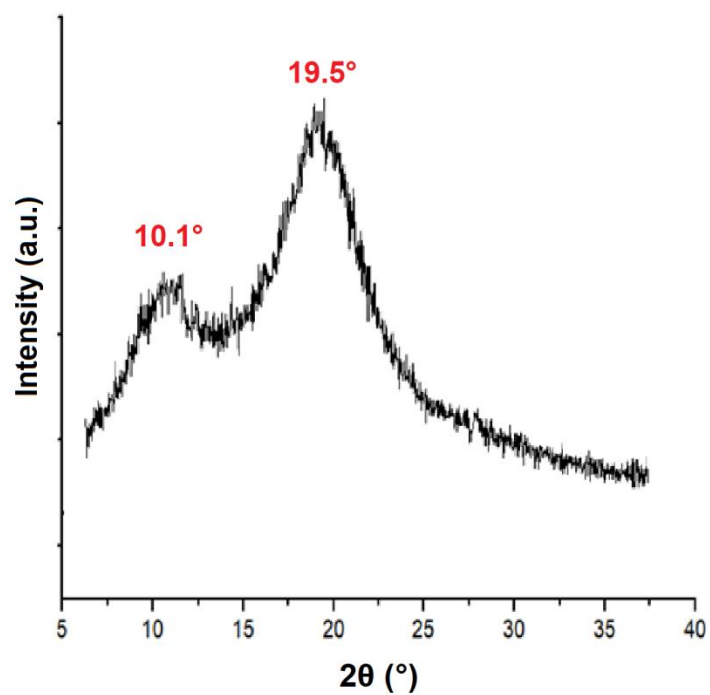


Figure S14. DSC curve (second heating run) of PS sample. (N₂, 10°C/min).



FigureS15. X ray diffraction pattern of PS sample.

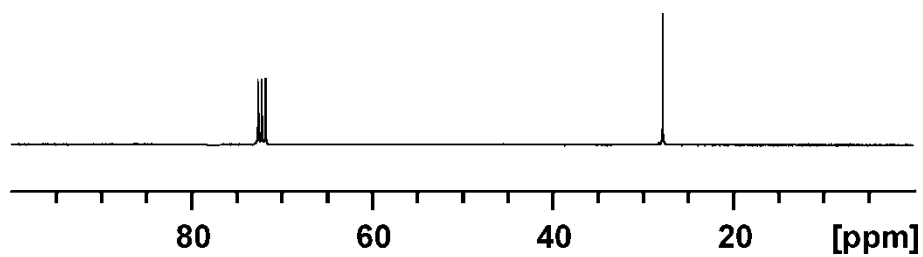


Figure S16. ^{13}C NMR spectrum of PE sample. (TCDE solvent, HMDS scale, 100 °C).

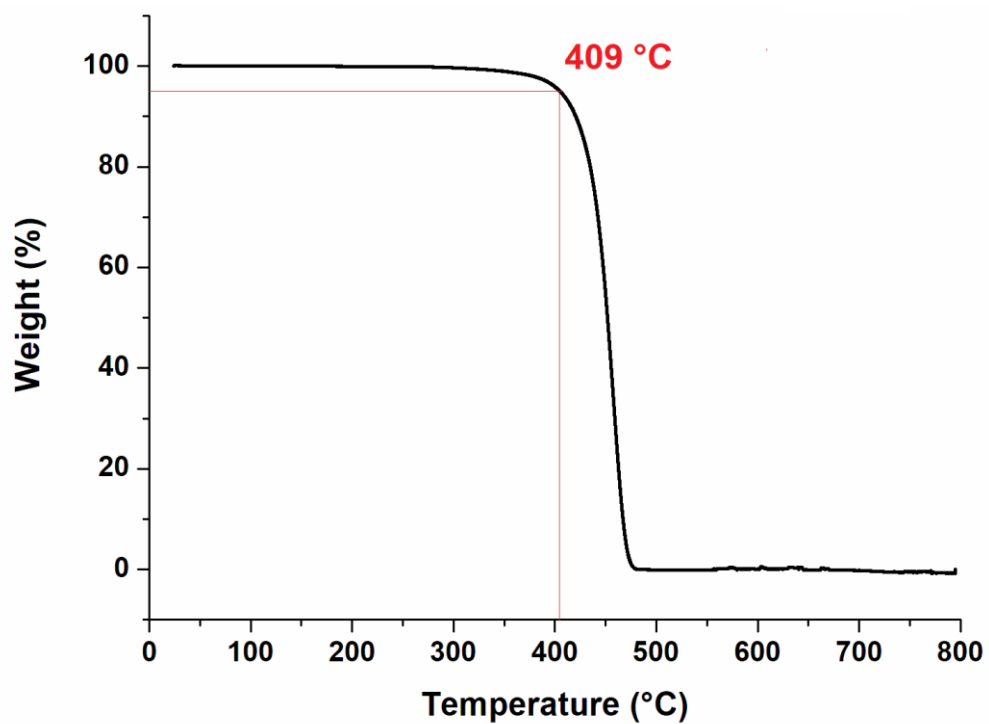


Figure S17. TGA trace of PE sample. (N_2 , 10°C/min).

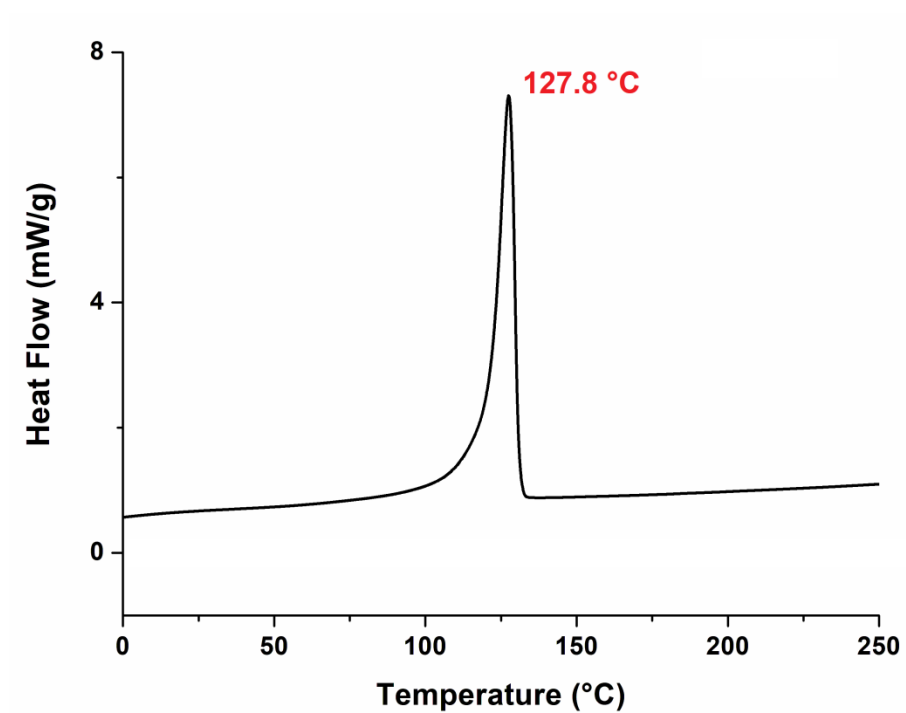
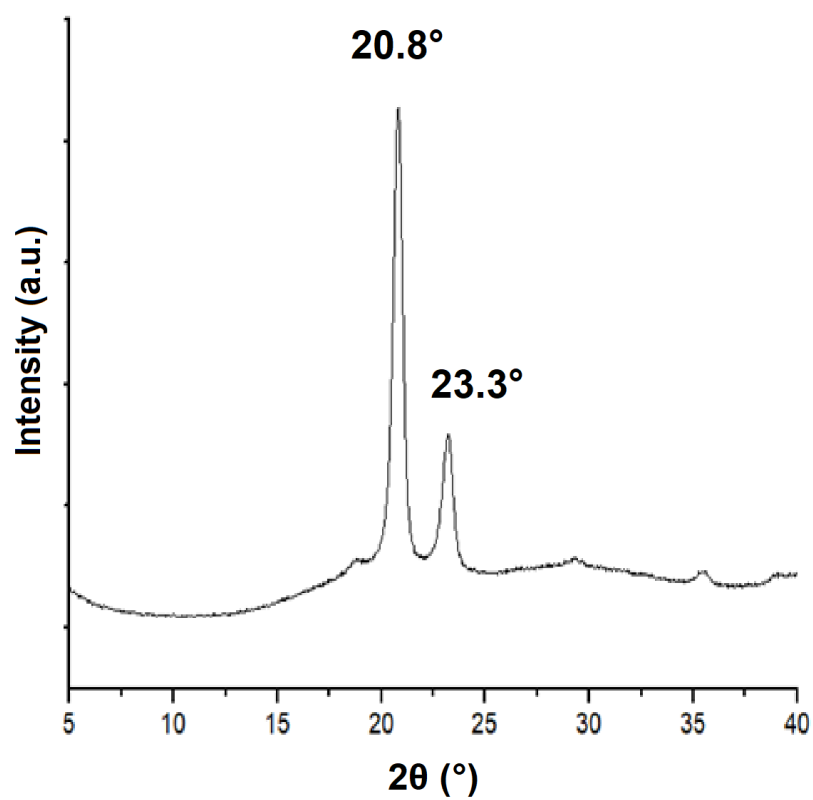
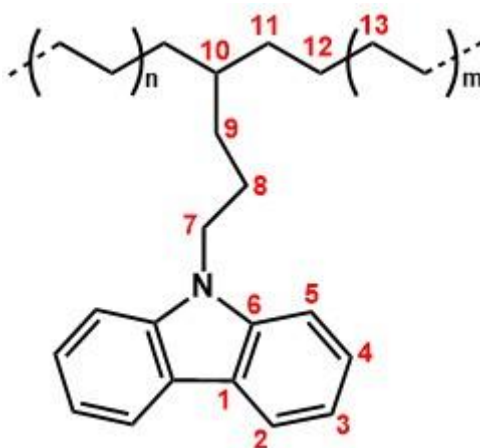


Figure S18. DSC curve (second heating run) of PE sample. (N₂, 10°C/min).



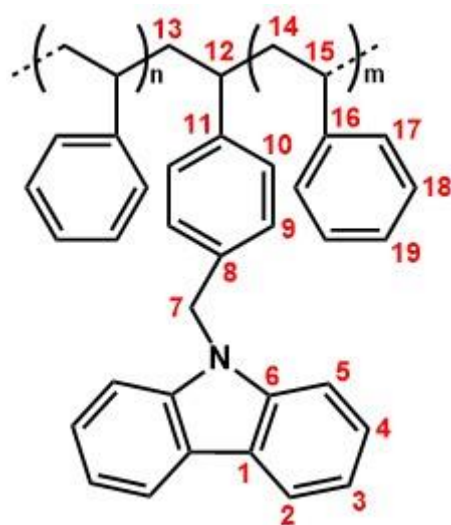
FigureS19. X ray diffraction pattern of PE sample.



P(E-co-PK) structure

Table T1.
¹³C NMR Assignments of run 1 (P(E-co-PK))

Carbon	Chem. Shift (ppm)
C1	121.15 ₄
C2	118.45 ₉
C3	117.00 ₈
C4	123.83 ₈
C5	106.93 ₉
C6	138.81 ₈
C7	41.86 ₅
C8	24.30 ₈
C9	32.23 ₁
C10	35.84 ₆
C11	29.64 ₉
C12	24.95 ₀
C13	27.82 ₁



P(S-*co*-SK) structure

Table T2.

¹³C NMR Assignments of run 3 (P(S-*co*-SK))

Carbon	Chem. Shift (ppm)
C1	123.21 ₀
C2	120.31 ₂
C3	119.42 ₃
C4,C19	125.62 ₅ -125.47 ₀
C5	108.94 ₆
C6	141.12 ₂
C7,C13,C14	46.42 ₀ -41.70 ₂
C8,C9,C10,C17,C18	128.27 ₁ -127.29 ₄
C11,C16	145.63 ₈ -145.08 ₄
C12,C15	40.35 ₃ -40.28 ₆