Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Synthesis of Thermally Cleavable Multisegmented Polystyrene by Atom Transfer Nitroxide Radical Polymerization (ATNRP) Mechanism

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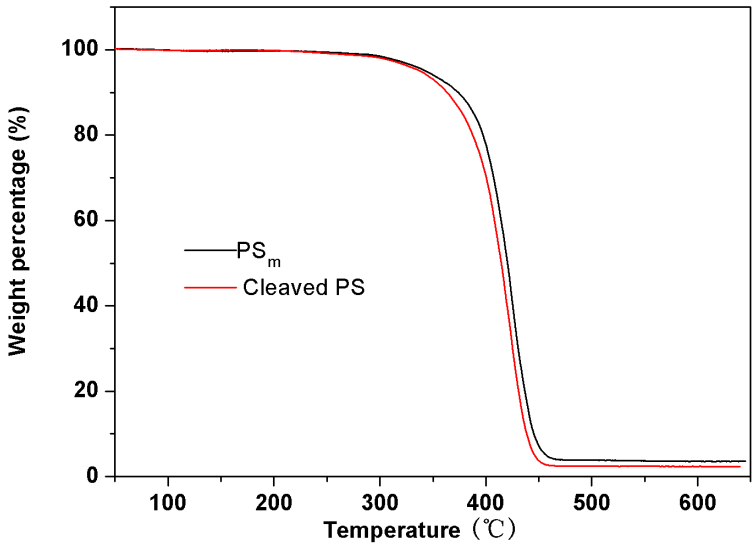

Fig. S1. TGA curves of the PS_m and cleaved PS under a heating rate of 10 ℃/min.

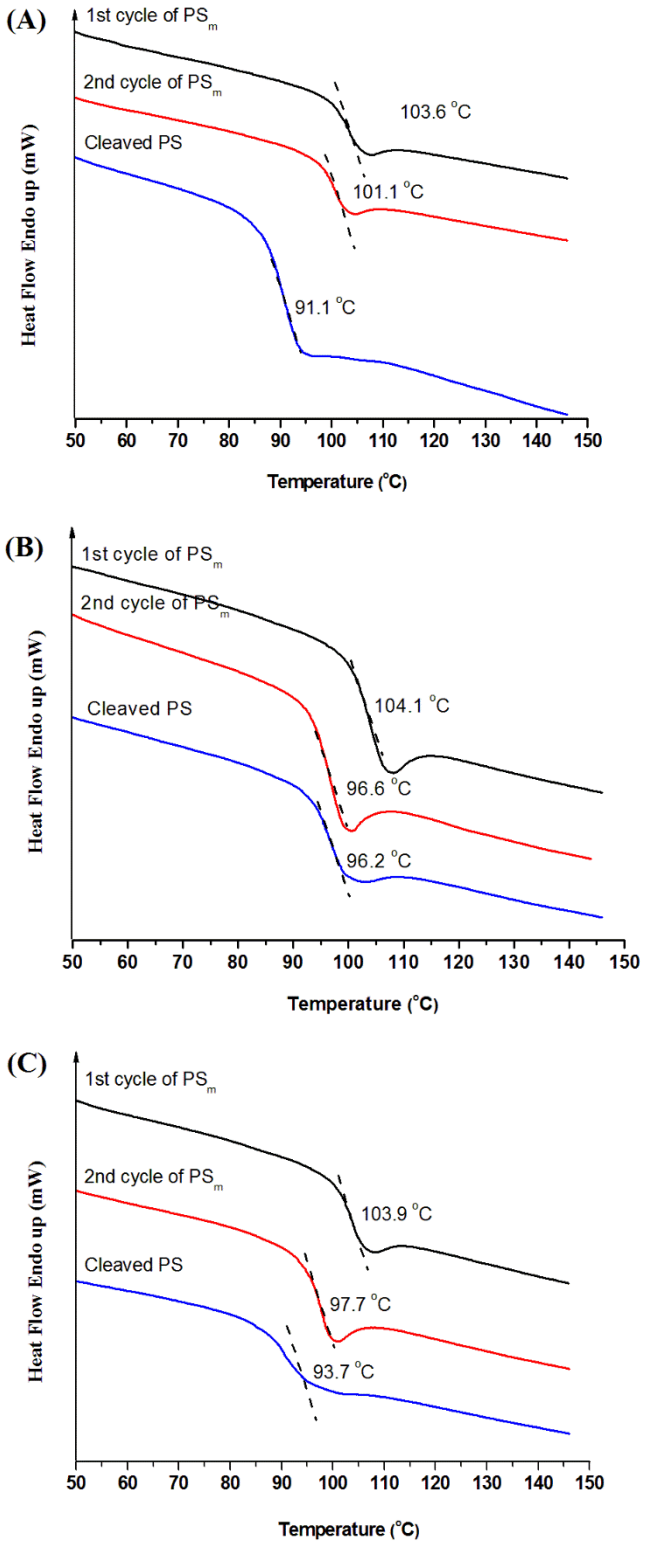

Fig. S2. DSC curves of the PS_m subjected to two heating-cooling cycles between 40~150 ℃ and cleaved PS (A, Entry 2; B, Entry 3; C, Entry 4 in **Table S1**).

Table S1. The DSC data for the PS_m and cleaved PS.

Entry	PS_m					Cleaved PS			
	M_p (g/mol)	M_n (g/mol)	PDI	$T_{g,1st}$[a] (℃)	$T_{g,2nd}$[a] (℃)	M_p (g/mol)	M_n (g/mol)	PDI	T_g (℃)
1	113,400	41,100	2.51	102.0	98.0	10,800	9,100	1.18	94.2
2	140,800	72,700	2.08	103.6	101.1	26,600	21,300	1.24	91.1
3	125,200	50,700	2.62	104.1	96.6	11,700	9,300	1.23	96.2
4	125,100	55,500	2.21	103.9	97.7	17,900	14,900	1.18	93.7

[a] The $T_{g,1st}$ and $T_{g,2nd}$ were the glass-transition temperature (T_g) of PS_m measured in the first and second heating cycles, respectively.