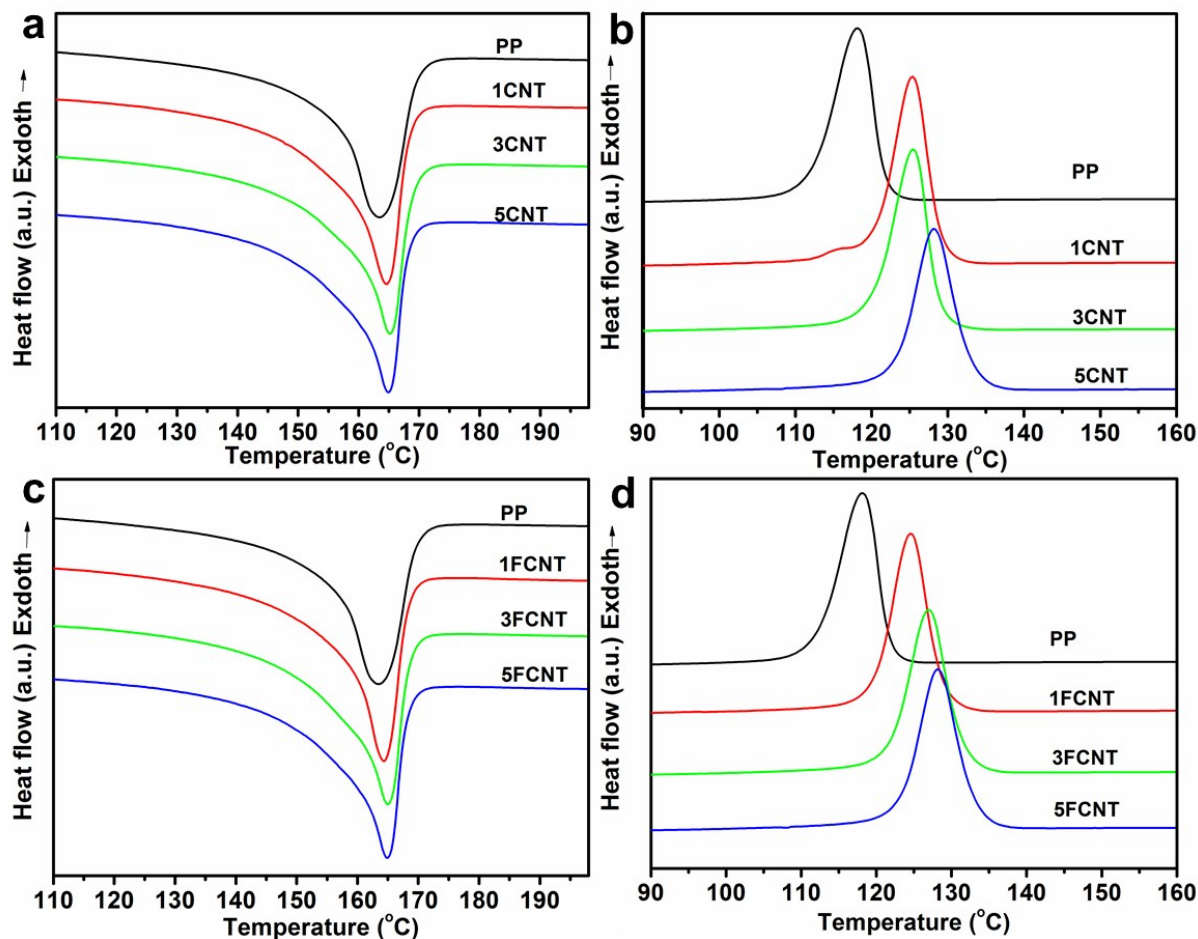Supporting Information for

Simultaneously improving the mechanical properties and flame retardancy of polypropylene using functionalized carbon nanotubes by covalently wrapping flame retardant followed by linking polypropylene

5 Hongfan Yang, Lin Ye, Jiang Gong, Minggang Li, Zhiwe Jiang, Xin Wen,* Hao Chen, Nana Tian, and Tao Tang*

Fig. S1 (a) Second heating curves of PP/CNTs composites; (b) Cooling curves of PP/CNTs composites; 10 (c) Second heating curves of PP/FCNT composites; (d) crystallization curves of PP/FCNT composites.

The crystallinity of the samples is calculated as the following equation: $X_c = \Delta H_m/(f\Delta H_0)$, where $\Delta H_0 = 209$ J g^{-1} is the theoretical melting enthalpy of the 100% crystalline PP, and f is the weight fraction of PP in the composite.

Table S1 Summary of the DSC results of PP and its composites.

Sample	T_c (°C)	T_m (°C)	ΔH_m (J g^{-1})	X_c (%)
PP	118.3	163.6	94.11	45.03
1CNT	125.7	164.7	95.62	46.21
3CNT	125.4	165.2	94.44	46.60
5CNT	126.4	165.1	91.88	46.28
1FCNT	124.4	164.4	94.01	45.43
3FCNT	127.0	165.0	94.04	46.38
5FCNT	127.9	165.0	91.06	45.86