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**Crystallization Behavior of Polypropylene Filled with
Nano Carbon Particles**

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Polypropylene (PP)-nano carbon particles composites were fabricated via direct melt compounding in a Haake Rheomix internal mixer. The nano carbon particles(NCB) were prepared from carbon black (CB).Crystallization behavior of PP was investigated by means of wide angle X-ray diffraction (WAXD) and differential scanning calorimetry (DSC). Moreover, the non-isothermal behaviors of PP,PP/1wt%CB and PP/1wt%NCB composites at different cooling rates were also studied. The analysis of exothermic peaks was carried out in terms of crystallization parameters, such as the peak temperature (T_p), the onset temperature (T_o) and the width of half-height($W_{1/2}$). The experimental results showed that an addition of 1 wt% NCB accelerates the crystallization rate of PP and narrows the crystallite size distribution. The modified Avrami method as well as the method proposed by Mo is able to give satisfactory results. Finally, the nucleation activities of CB and NCB on the polypropylene matrix were compared and it was found that when adding the same content, the nucleation of NCB is improved.