Electronic Supplementary Material (ESI) for Polymer Chemistry.

Electronic Supplementary Information

Stereoselective copolymerization of (N,N-diphenylamino)styreneand isopreneby a C_5H_5-ligated scandiumcatalyst: synthesis of amino-functionalized crystalline styrenic thermoplastic elastomers

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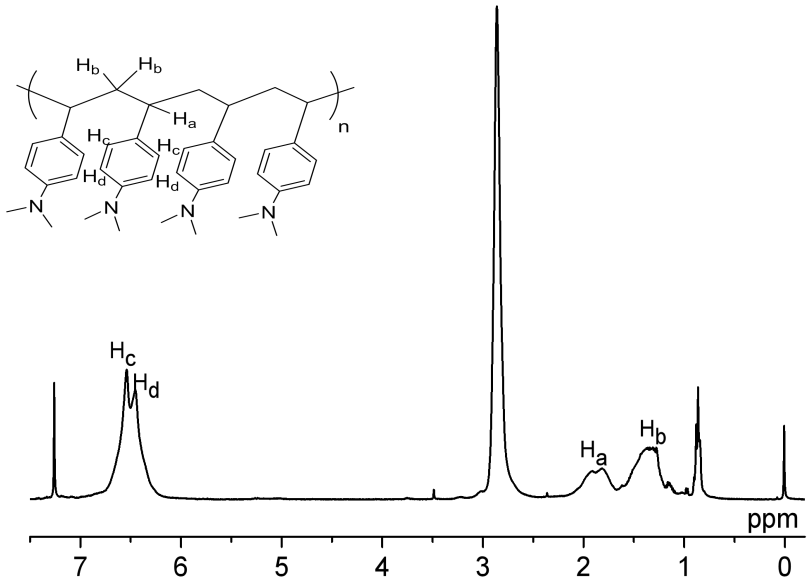

Fig. S1 ^{1}H-NMR spectrum of a DMAS polymer prepared by $(C_5H_5)Sc(CH_2C_6H_4NMe_2\text{-}o)_2/[Ph_3C][B(C_6F_5)_4]$ in chloroform-*d* at room temperature

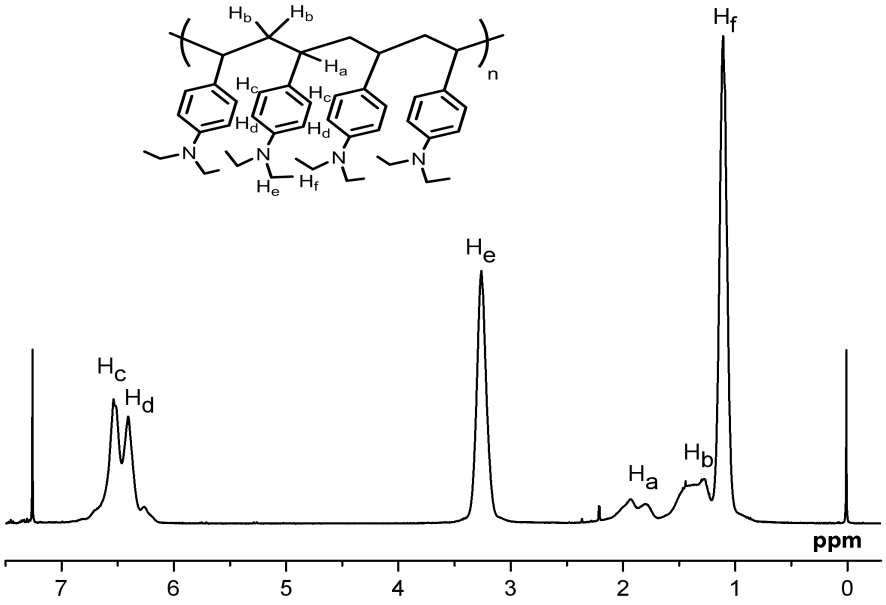

Fig. S2 ^{1}H-NMR spectrum of a DEAS polymer prepared by $(C_5H_5)Sc(CH_2C_6H_4NMe_2\text{-}o)_2/[Ph_3C][B(C_6F_5)_4]$ in chloroform-*d* at room temperature

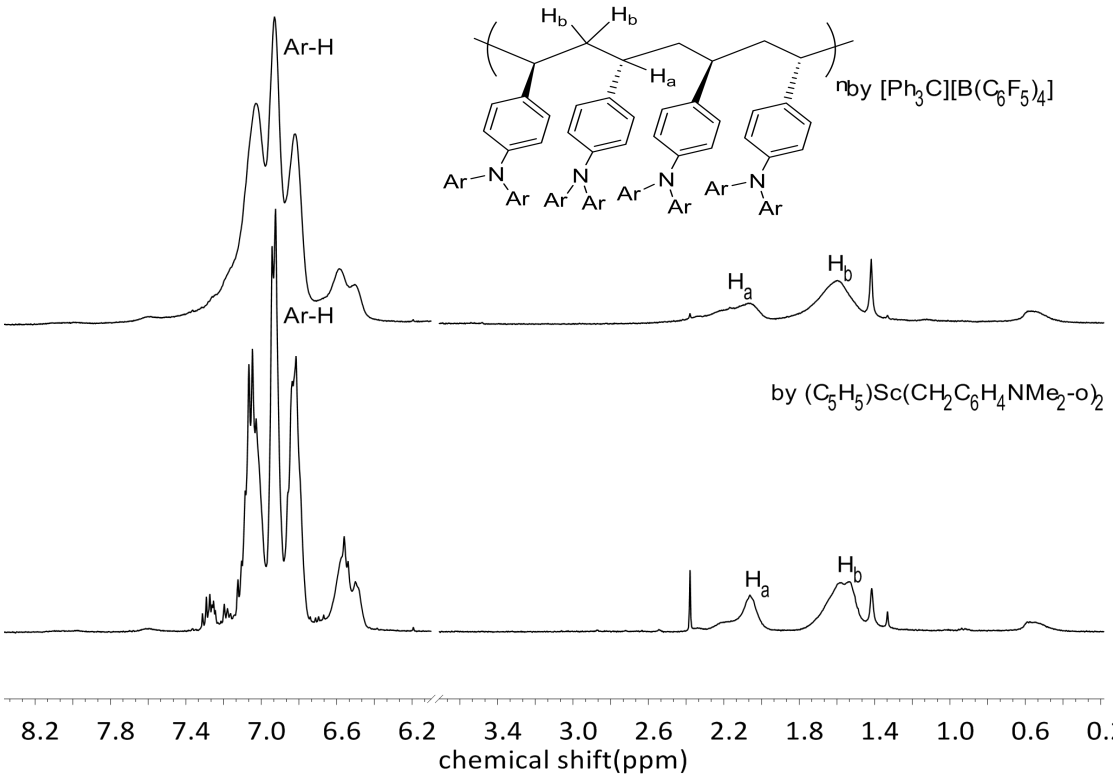

Fig. S3 ^{1}H-NMR spectra of a DPAS polymer prepared by $(C_5H_5)Sc(CH_2C_6H_4NMe_2\text{-}o)_2/[Ph_3C][B(C_6F_5)_4]$ or $[Ph_3C][B(C_6F_5)_4]$ in chloroform-*d* at room temperature

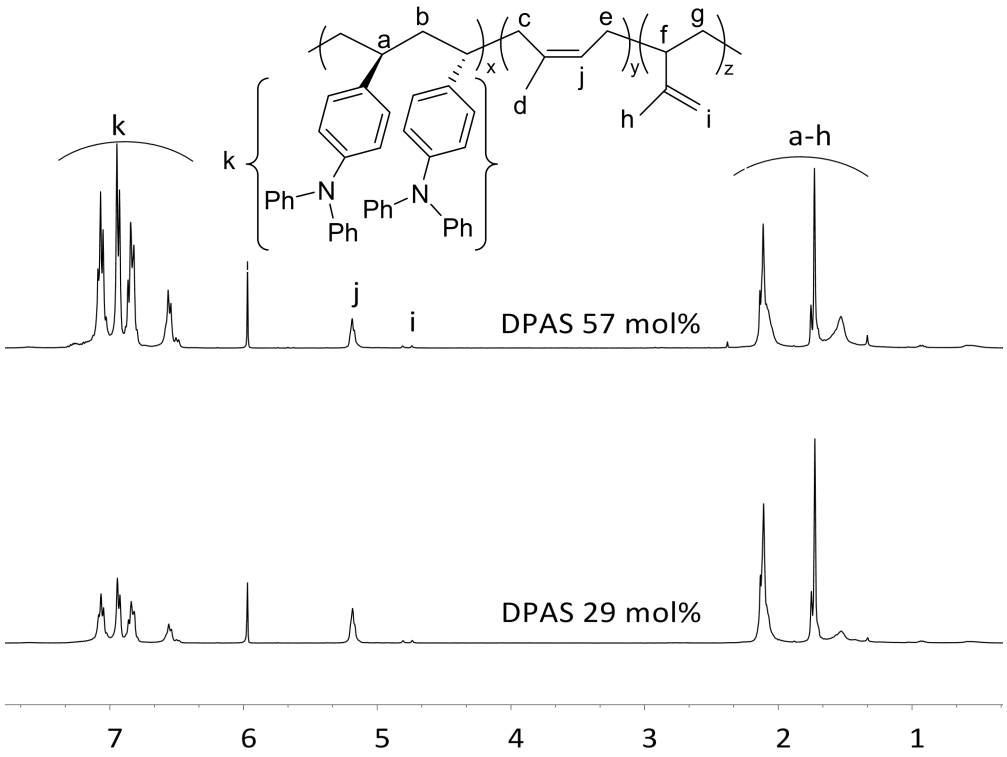

Fig.S4 ^{1}H-NMR spectra of DPAS-IP copolymers with different composition prepared by $(C_5H_5)Sc(CH_2C_6H_4NMe_2\text{-}o)_2/[Ph_3C][B(C_6F_5)_4]$ in 1,1,2,2-tetrachloroethane-d_2 at 110 °C

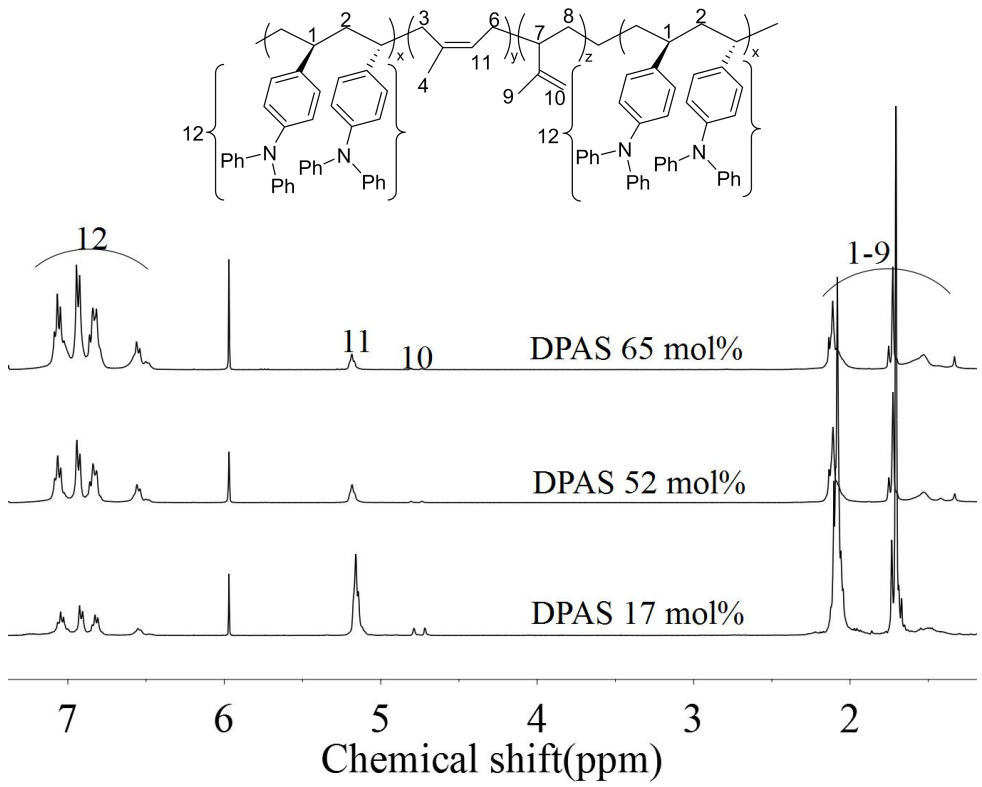

Fig.S5 ^{1}H-NMR spectra of DPAS-IP-DPAS terpolymers with different composition prepared by $(C_5H_5)Sc(CH_2C_6H_4NMe_2\text{-}o)_2/[Ph_3C][B(C_6F_5)_4]$ in 1,1,2,2-tetrachloroethane-d_2 at 110 °C

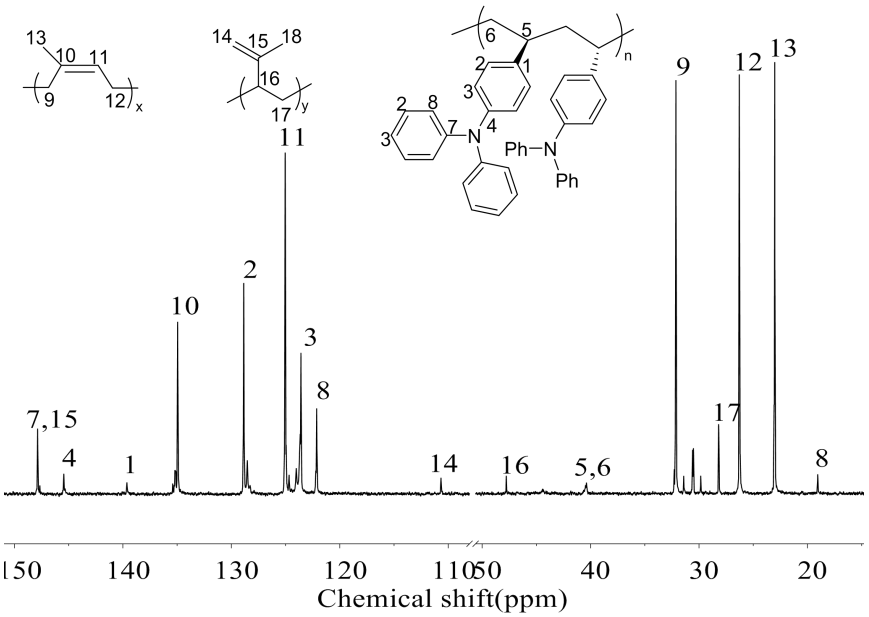

Fig.S6 ^{13}C-NMR spectrum of a DPAS-IP-DPAS terpolymer prepared by $(C_5H_5)Sc(CH_2C_6H_4NMe_2\text{-}o)_2/[Ph_3C][B(C_6F_5)_4]$ in 1,1,2,2-tetrachloroethane-d_2 at 110 °C

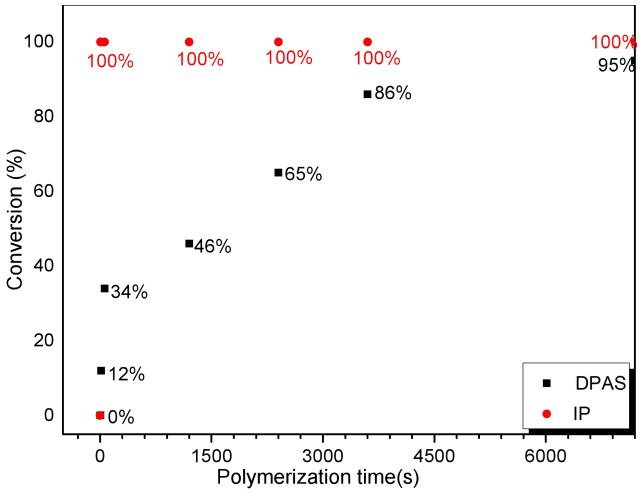

Fig. S7 Plots of the conversions of DPAS (black)and IP (red) versus the polymerization time.

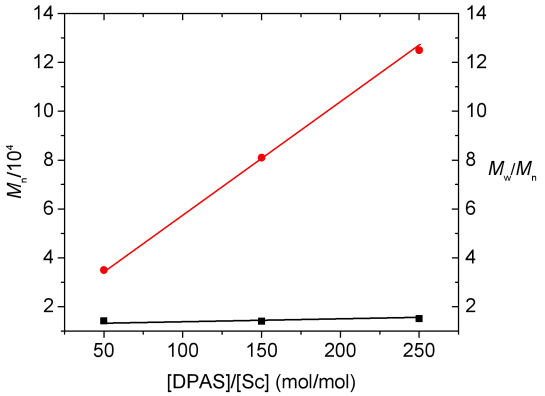

Fig. S8 Plots of M_n and M_w/M_n as a function of the DPAS/catalyst ratio for DPAS-IP copolymerization.

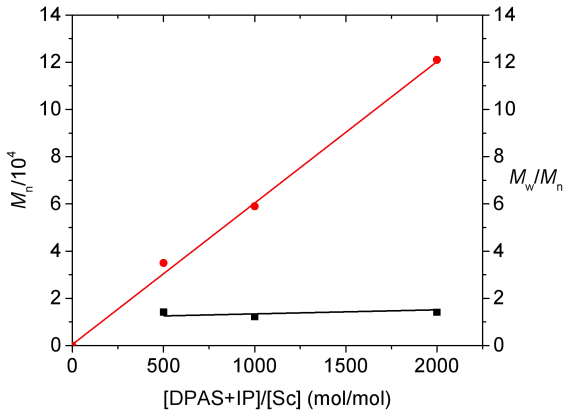

Fig. S9 Plots of M_n and M_w/M_n as a function of the [DPAS+IP]/catalyst ratio for DPAS-IP copolymerization.