Supporting Information

for

Binuclear Half-metallocene Chromium(III) Complexes Mediated Ethylene Polymerization with Alkylaluminum as Cocatalyst

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Table S1. Results of ethylene polymerization using precatalysts **1**[a]

Run	Precatalyst (μmol)	Al/Cr	Yield (g)	Activity[b]	M_w[c]× 10^{-4}	M_w/M_n[c]	Tm[d] (°C)
1	1(1)	50	1.32	1320	17.1	2.79	136.9
2	1(1)	100	1.03	1030	19.4	2.84	137.9
3[e]	1(1)	25	1.06	1060	16.8	2.85	137.8
4[f]	1(1)	25	0.93	930	16.5	2.86	137.6
5[g]	1(1)	25	0.52	520	14.2	2.86	137.5
6[h]	1(1)	25	0.32	320	13.6	2.71	137.4

[a] Polymerization conditions: solvent 80 mL of toluene, temperature 20 °C. ethylene pressure 5 bar, time 30 min. [b] kg PE (mol Cr)$^{-1}$ h^{-1}. [c] Measured by GPC analysis. [d] Determined by DSC at a heating rate of 10 °C min^{-1}. [e] Temperature 40 °C. [f] Temperature 60 °C. [g] Et_3Al as cocatalyst. [h] $^{i}Bu_3Al$ as cocatalyst.

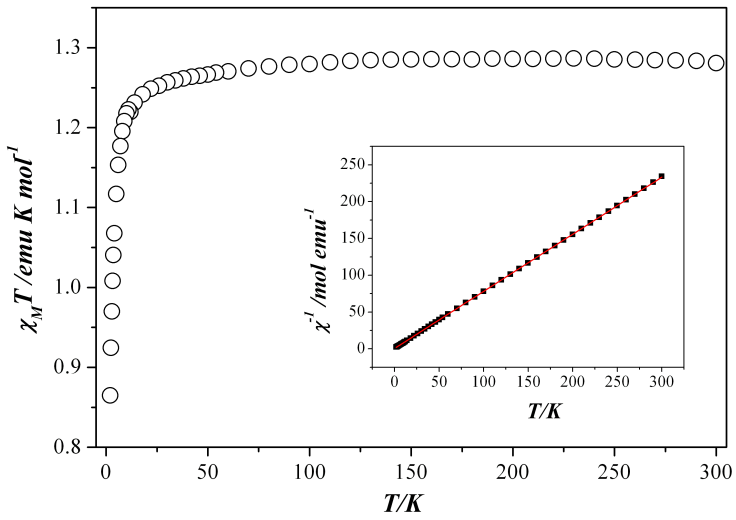

Fig. S1 The temperature dependence of reciprocal magnetic susceptibility χ_M^{-1} (square) and the product $\chi_M T$ (circle) for complex **6**.