Supporting information

C₁-symmetric Penta-coordinate Anilidopyridylpyrrolide Zr(IV) Complexes as Highly Isospecific Olefin Polymerization Catalysts

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1. NMR spectra of ligands

Figure S1. 1H NMR spectrum of H_2L^1 (CD_2Cl_2 , 25 °C)

Figure S2. ^{13}C NMR spectrum of H_2L^1 (CD_2Cl_2 , 25 °C)

Figure S3. 1H NMR spectrum of H_2L^2 (CD_2Cl_2 , 25 °C)

Figure S4. ^{13}C NMR spectrum of H_2L^2 (CD_2Cl_2 , 25 °C)

2. NMR spectra of complexes

Figure S5: ¹H NMR spectrum of complex **2** (CDCl₃, 25 °C)

Figure S6: ¹³C NMR spectrum of complex **2** (CDCl₃, 25 °C)

Figure S7: ¹H NMR spectrum of complex **3** (CDCl₃, 25 °C)

Figure S8: ¹³C NMR spectrum of complex **3** (CDCl₃, 25 °C)

3. Fractionation experiment

Polypropylene sample (table 2, run 3) was packed into a thimble and capped with filter paper (whatman1#). A 250 mL round-bottom flask attached to a Kumagawa extractor was charged with 100 mL of solvent. Extraction was conducted overnight. After the extraction, the solvent was removed. The polymer fractions were dried under vacuum at 40 °C overnight. Boiling hexane-insoluble fraction was 91 wt% of the entire sample. This fraction was extracted with boiling n-heptane. Boiling heptane-insoluble fraction was 48 wt % of the entire sample.

Table S1. Solvent fractionation of a polypropylene sample (run 3, Table 2)

	wt%	[<i>mmmm</i>]%	T_m (°C)	M_w (Kg/mol)	PDI
Hexane-soluble fraction	9	52	n.d.	37	3.4
Hexane-insoluble fraction	91	95	n.d.	765	2.4
Heptane-soluble fraction	52	96	149.87	587	6.7
Heptane-insoluble fraction	48	96	150.36	972	1.9