

Supporting Information

for

**Isospecific Polymerization of 1-Hexene by C_1 -Symmetric Half-metallocene Dimethyl
Complexes of Group 4 Metals with Bidentate *N*-Substituted Iminomethylpyrrolyl
Ligands**

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1. ^1H and ^{13}C NMR Spectra of Hafnium Complexes

1-1. NMR Spectra of $\text{Cp}^*\text{HfMe}_2[\text{Bn-pyr}]$ (**4e**).

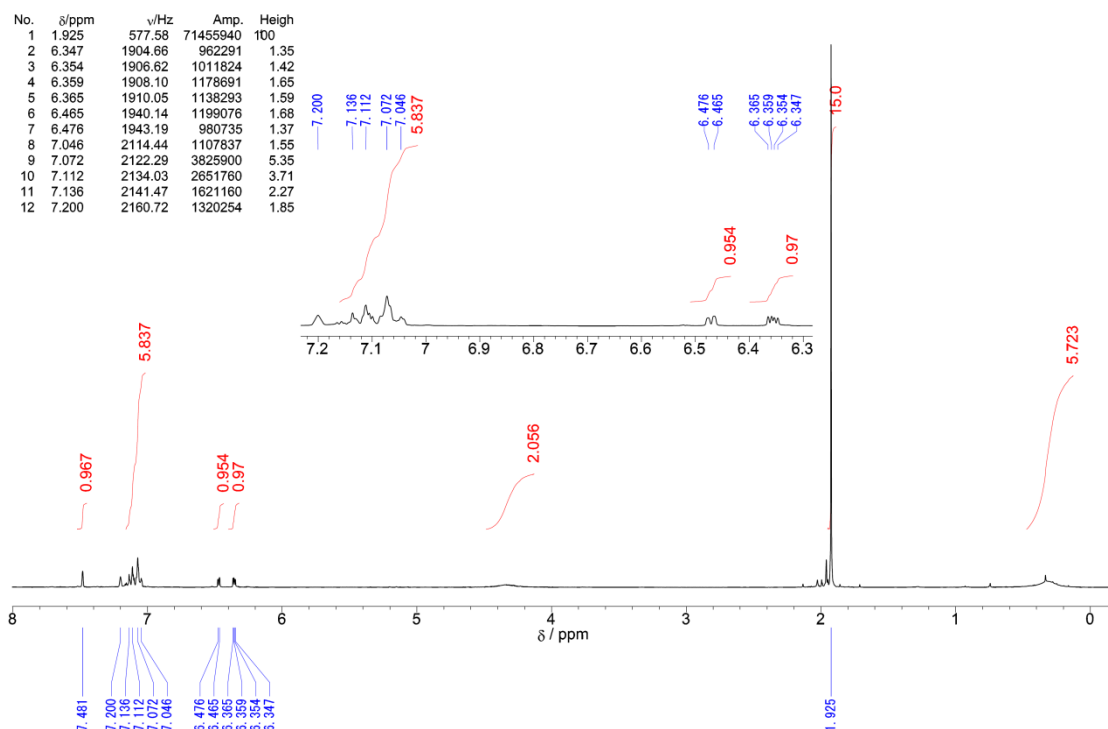


Figure S1. ^1H NMR spectra (300 MHz, C_6D_6 , 35 $^\circ\text{C}$) for complex **4e**.

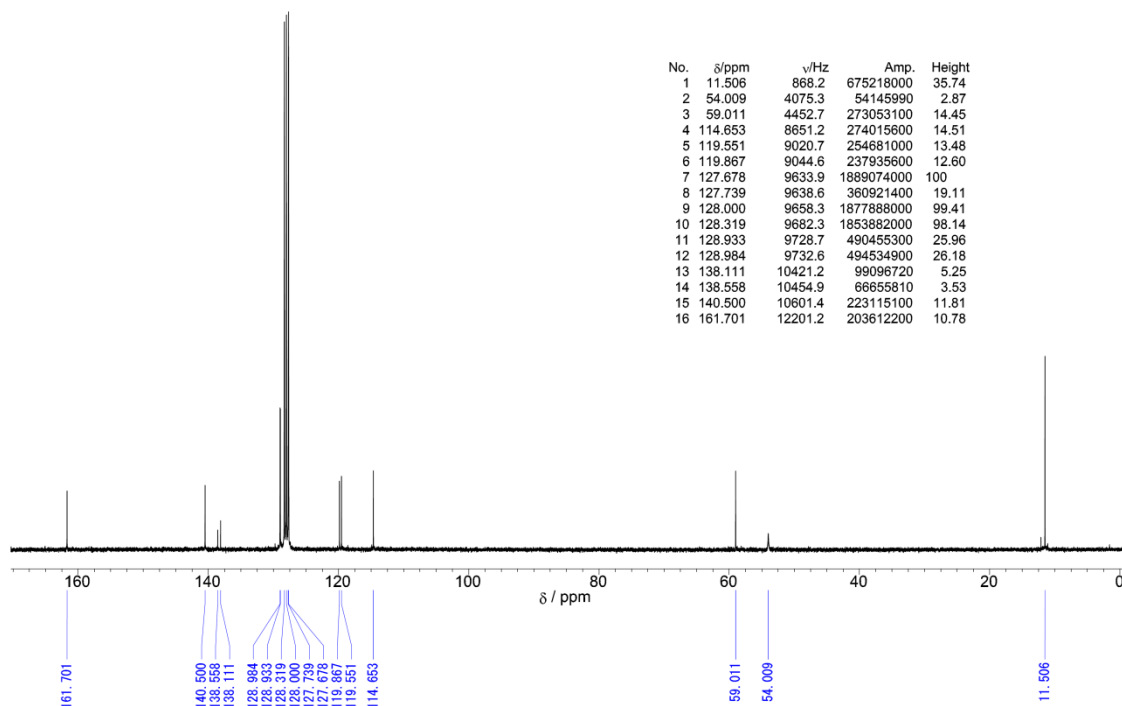


Figure S2. ^{13}C NMR spectra (75 MHz, C_6D_6 , 35 $^\circ\text{C}$) for complex **4e**.

1-2. NMR Spectra of Cationic Hafnium Species, [Cp*HfMe[p-ANI-pyr]][B(C₆F₅)₄] (5a).

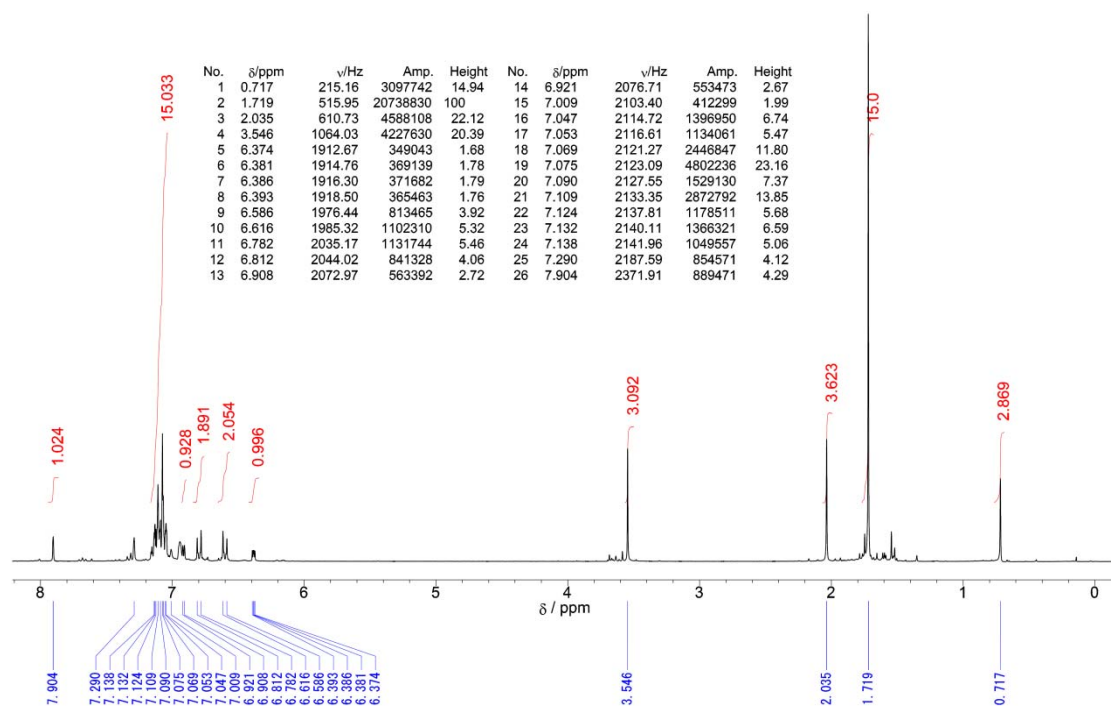


Figure S3. ¹H NMR spectra (300 MHz, C₆D₅Br, 35 °C) for complex 5a.

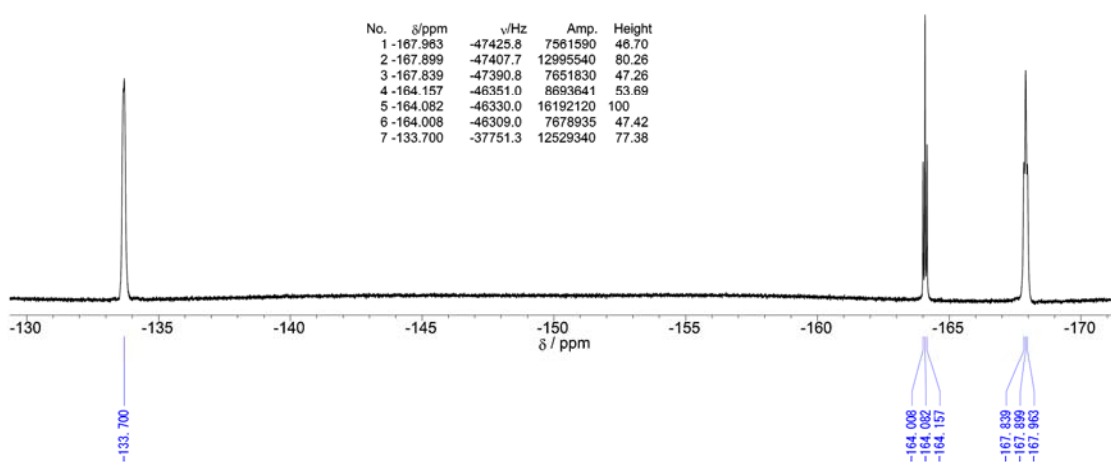


Figure S4. ¹⁹F NMR spectra (282 MHz, C₆D₅Br, 35 °C) for complex 5a.