

Figure S1. ¹H NMR spectrum of ligand **L4** run in CDCl₃ at room temperature

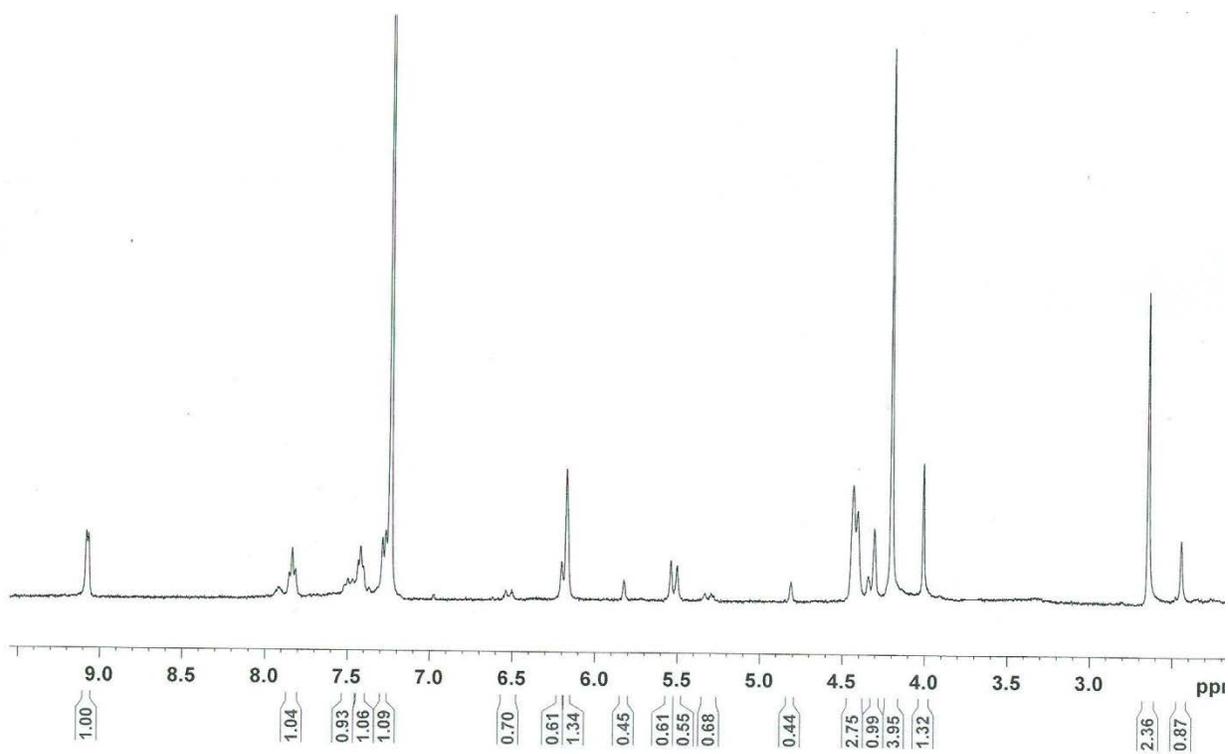


Figure S2. ¹H NMR spectrum complex **4** run in CDCl₃ at room temperature

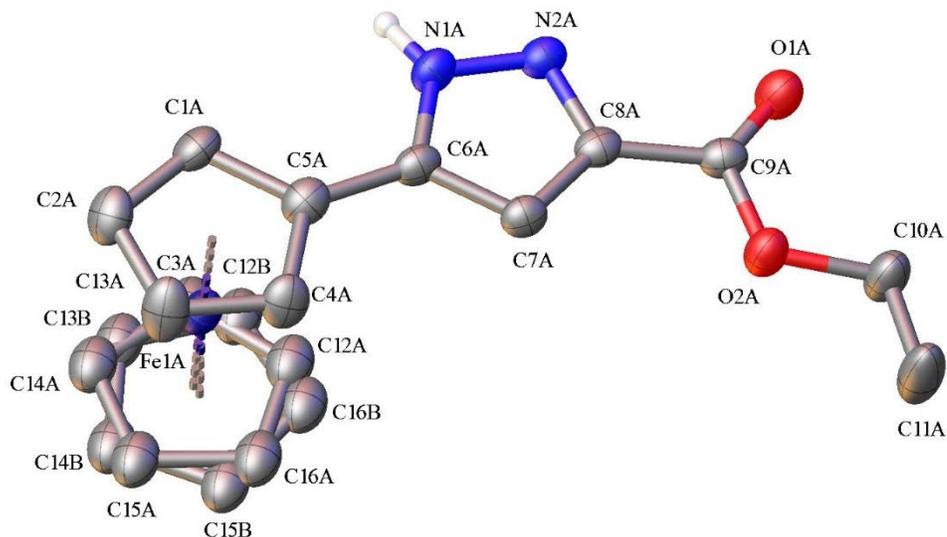


Figure S3: A molecular drawing of **L2b** with 50% probability ellipsoids. Both disordered components of Cp group are shown. Hydrogen atoms were removed for clarity. Selected bond length [Å] and angles [°]: N1A-N2A, 1.338(5); Fe1A-C1A, 2.036(5); Fe1A-C2A, 2.055(5); Fe1A-C16A, 1.985(6); Fe1A-C13B, 2.083(11); C5A-C6A, 1.460(7); N1A-C6A, 1.356(6); C6A-C7A-C8A, 104.70(4); N2A-N1A-C6A, 112.80(4); N2A-C8A-C7A, 111.90(4); N1A-C(6^a)-C(7A), 106.20(4); C9A-O2A-C10A, 115.10(3); O2A-C10A-C11A, 107.20(4).

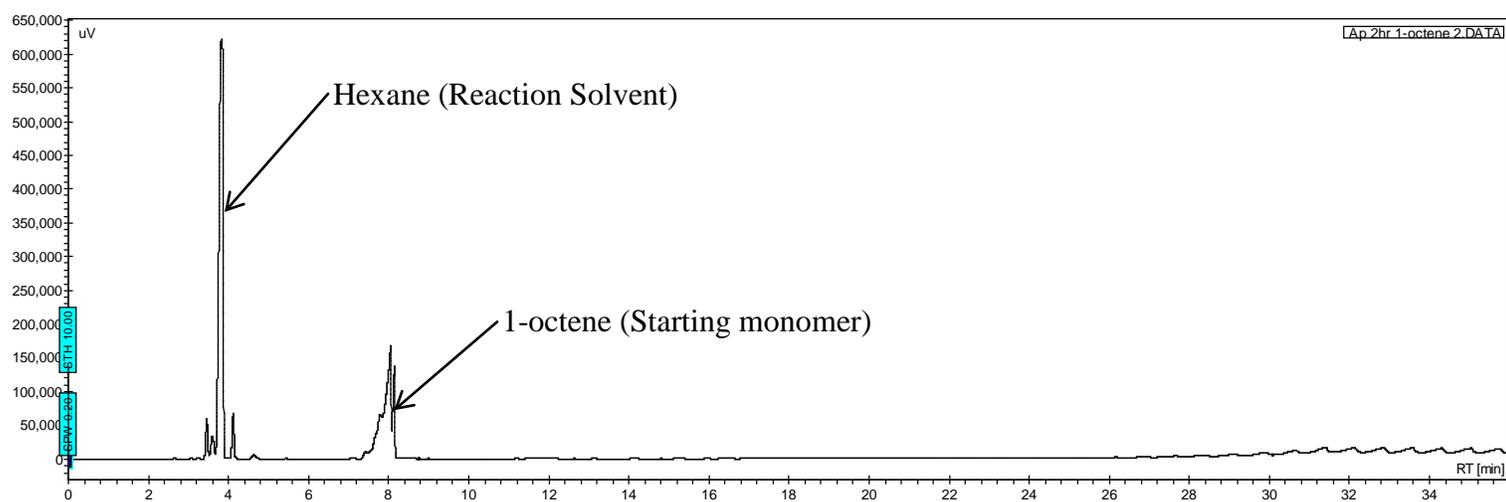


Figure S4. GC chromatogram of the product from 1-octene using **3** as pre-catalyst.

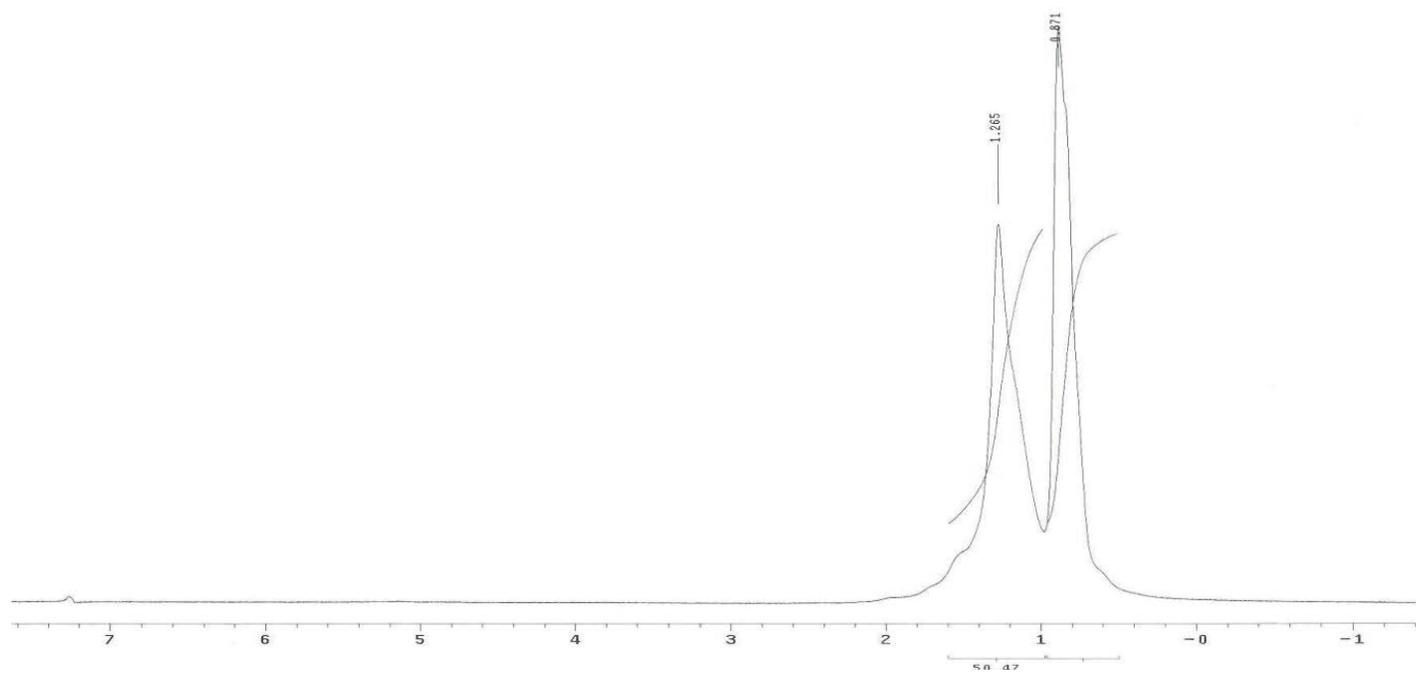


Figure S5. ^1H NMR spectrum of the product from 1-heptene using pre-catalyst **1** run in CDCl_3 at room temperature

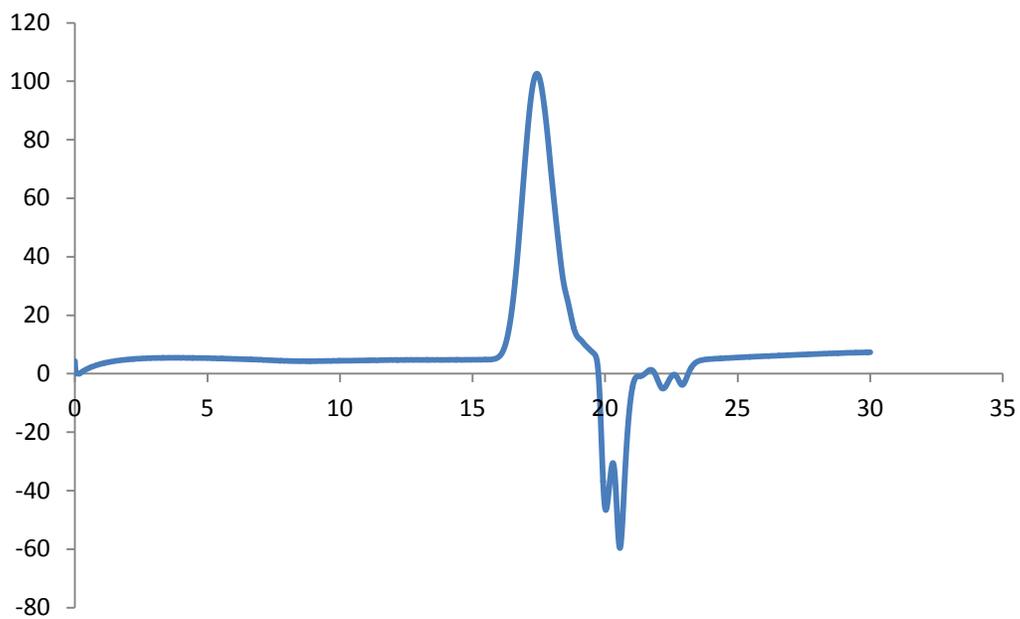


Figure S6: GPC trace of poly-1-octene using pre-catalyst **3** with EtAlCl₂ at 25 °C for 7 h