

## **Synthesis and Structures of Complexes with Axially Chiral Isoquinolinyl-Naphtholate Ligands**

Ruth H Howard, Carlos Alonso-Moreno,<sup>†</sup> Lewis Broomfield, David L. Hughes, Joseph A. Wright and Manfred Bochmann\*

### **SUPPORTING INFORMATION**

**Structure diagrams of 1-bromo-2-methoxy-3,6-di-*t*-butylnaphthalene (3), and [PdBr(PPh<sub>3</sub>)(μ-isoquinolinyl)]<sub>2</sub>·CH<sub>2</sub>Cl<sub>2</sub>.**

**NMR characterisation of 16**

**Polymer analysis data.**

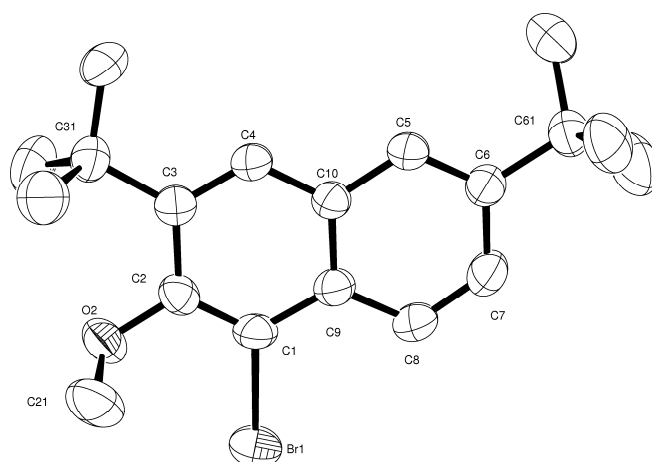


Figure S1. Molecular structure of **3**. Thermal ellipsoids are drawn at the 50 % probability level; hydrogen atoms have been omitted for clarity. Selected bond lengths (Å): Br(1)–C(1) 1.904(2), C(2)–O(2) 1.376(2), C(21)–O(2) 1.440(3); C(2)–C(1)–Br(1) 119.01(16), C(2)–O(2)–C(21) 115.68(19).

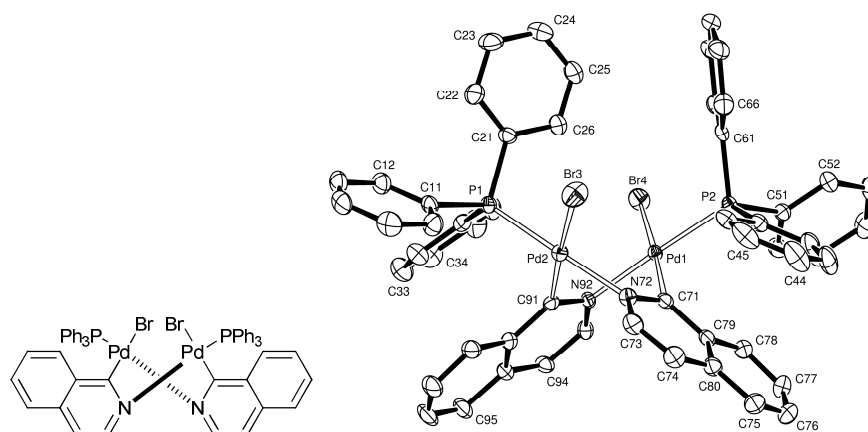


Figure S2. Molecular structure of  $[\text{PdBr}(\text{PPh}_3)(\mu\text{-isoquinoliny})]_2 \cdot \text{CH}_2\text{Cl}_2$ . Thermal ellipsoids are drawn at the 50 % probability level; hydrogen atoms have been omitted for clarity. Selected bond lengths (Å): Pd(1)–P(2) 2.2779(9); Pd(1)–Br(4) 2.4844(5); Pd(1)–C(71) 2.007(3); Pd(1)–N(92) 2.086(3).

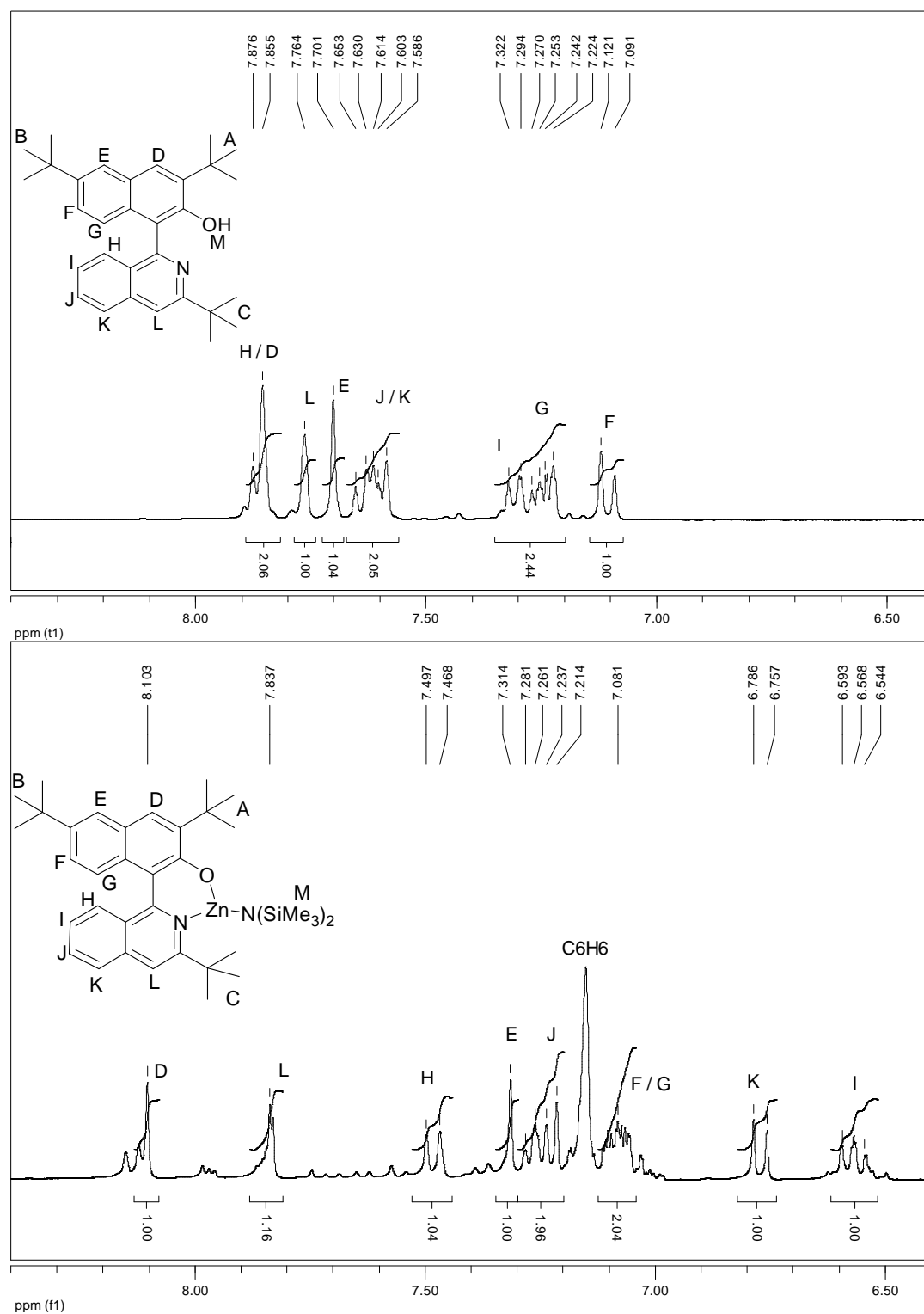


Figure S3. <sup>1</sup>H NMR spectra of **L<sup>Bu</sup>-H** and complex **16**, in the region of 6.4–8.4 ppm, showing the signal changes on complex formation.

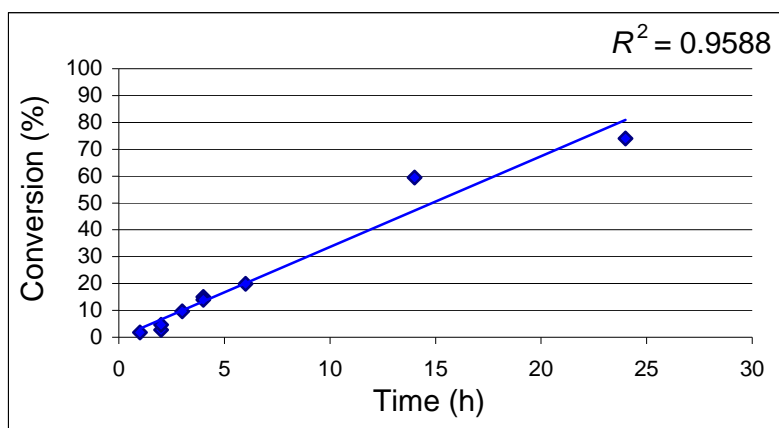


Figure S4. Conversion *versus* time plot for CL in the presence of **16** (20 ml toluene, 25 °C).

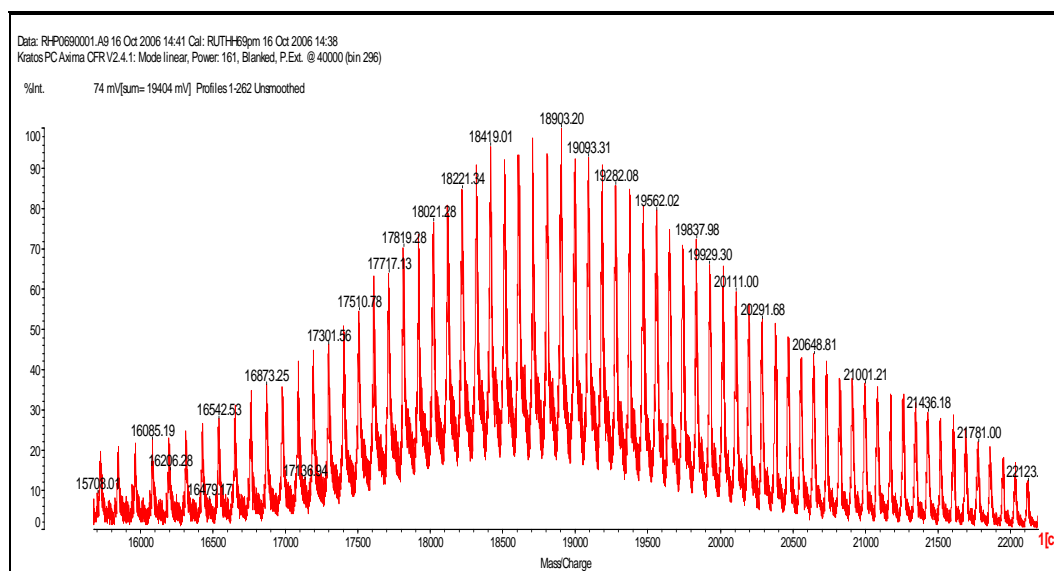


Figure S5. MALDI-TOF spectrum for PCL produced with complex **16** at 74 % conversion (20 ml toluene, Table 2 entry 18).

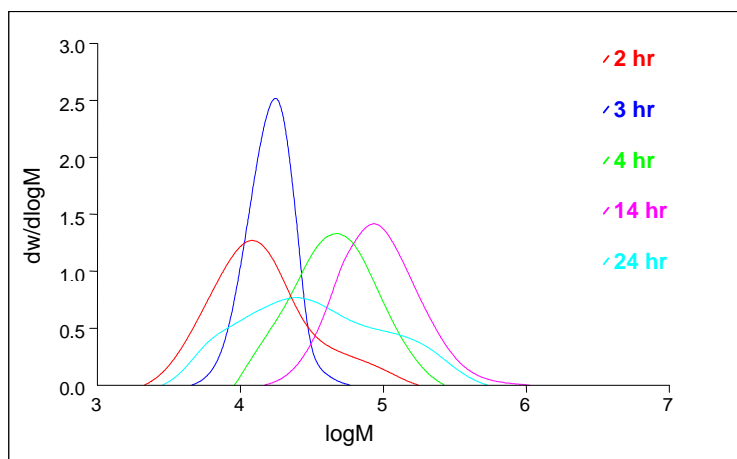


Figure S6. GPC traces for poly(caprolactone) produced with **16** (20 ml toluene, 25 °C) as a function of reaction time.

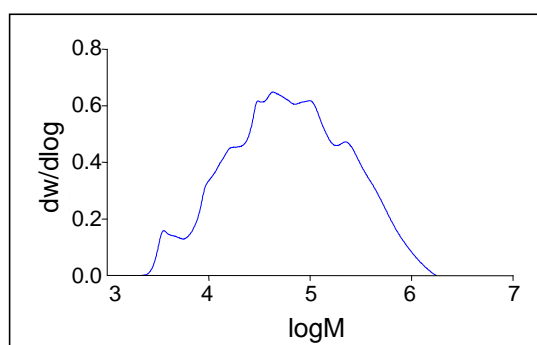


Figure S7. GPC trace for PCL produced using  $Zn[N(SiMe_3)_2]_2$ .

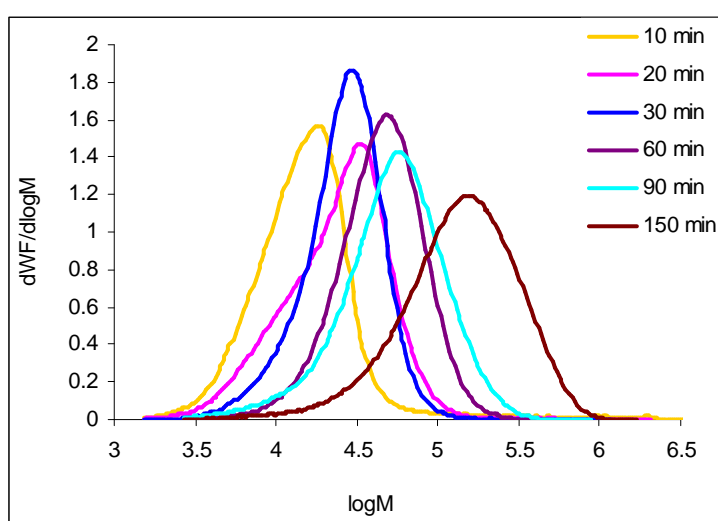


Figure S8. GPC traces for PCL produced with **16** (50 ml toluene, 60 °C) as a function of reaction time.