

Supporting information

for

Hybrid amino/iminopyridines with auxiliary phosphines enhancing their zinc complex catalysts for the ring-opening polymerization of lactide

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Table of Contents Pages

1. ¹ H NMR spectra of Diphenylphosphinoethylamine and monoimino pyridines SI-S5 (Figures S1 – S6)	S2-S4
2. ¹ H/ ¹³ C/ ³¹ P NMR spectra of L1 – L6 (Figures S7 – S23)	S5-S13
3. ¹ H/ ¹³ C/ ³¹ P NMR spectra of Zn1 – Zn6 (Figures S24 – S38)	S13-S20
4. Decoupled ¹ H NMR of poly(rac-LA) by Zn4 (Figure S39)	S21
5. Table SI-1 Comparison of the ³¹ P NMR chemical shifts for L1 - L5 with those in Zn1 - Zn5	S21

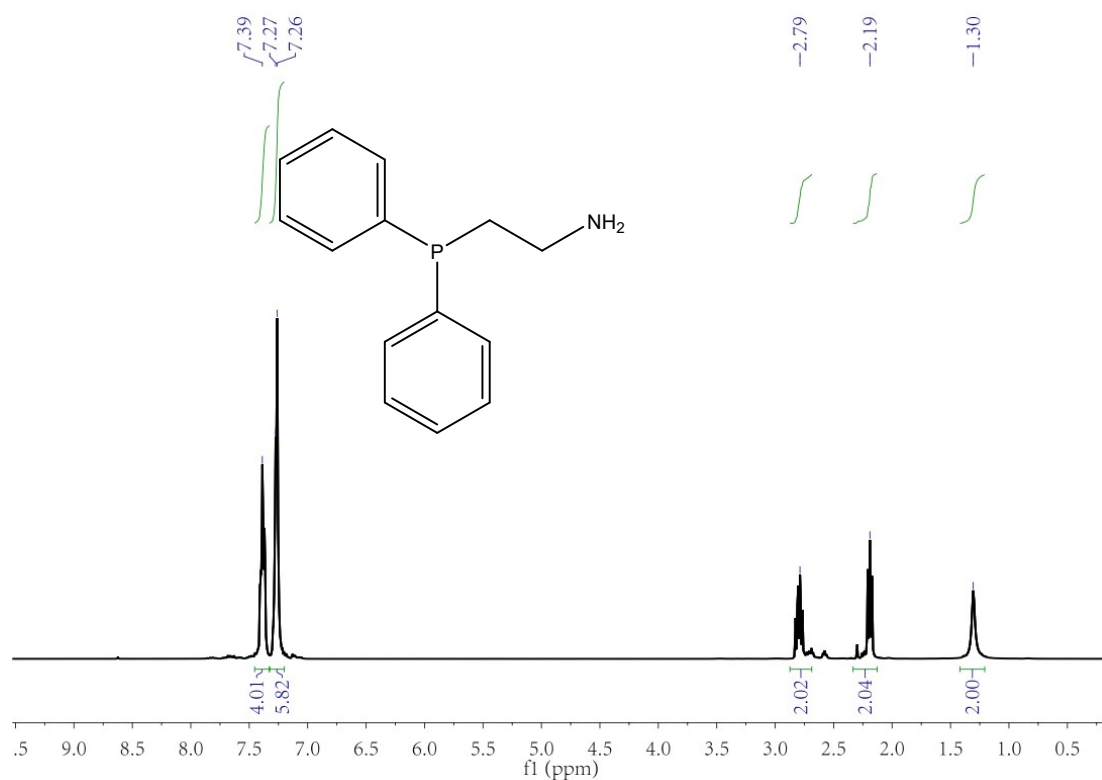


Figure S1 ¹H NMR spectrum of Diphenylphosphinoethylamine; recorded in CDCl₃ at 25 °C

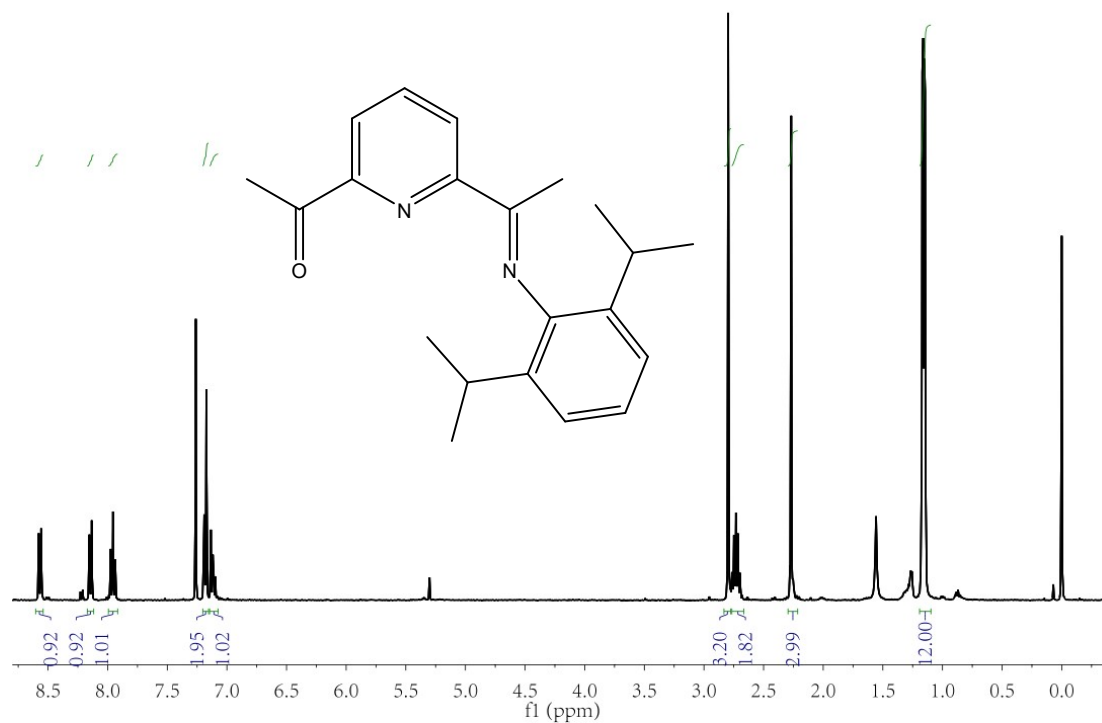


Figure S2 ¹H NMR spectrum of monoimino SI recorded in CDCl₃ at 25 °C

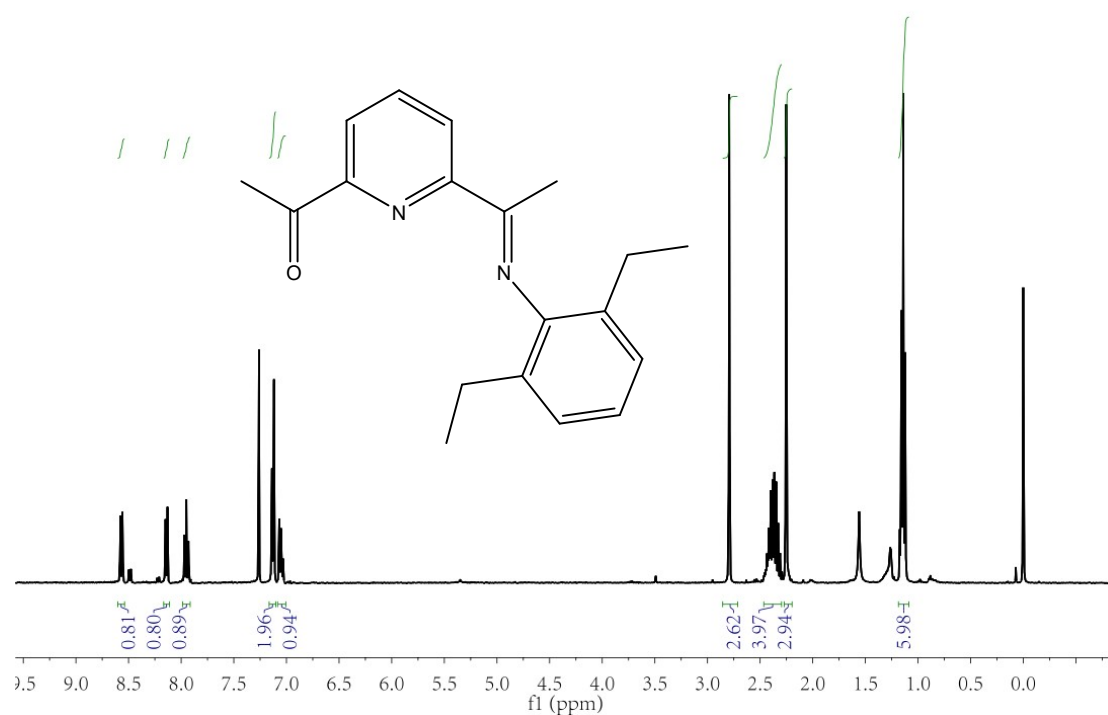


Figure S3 ¹H NMR spectrum of monoimino S2 recorded in CDCl₃ at 25 °C

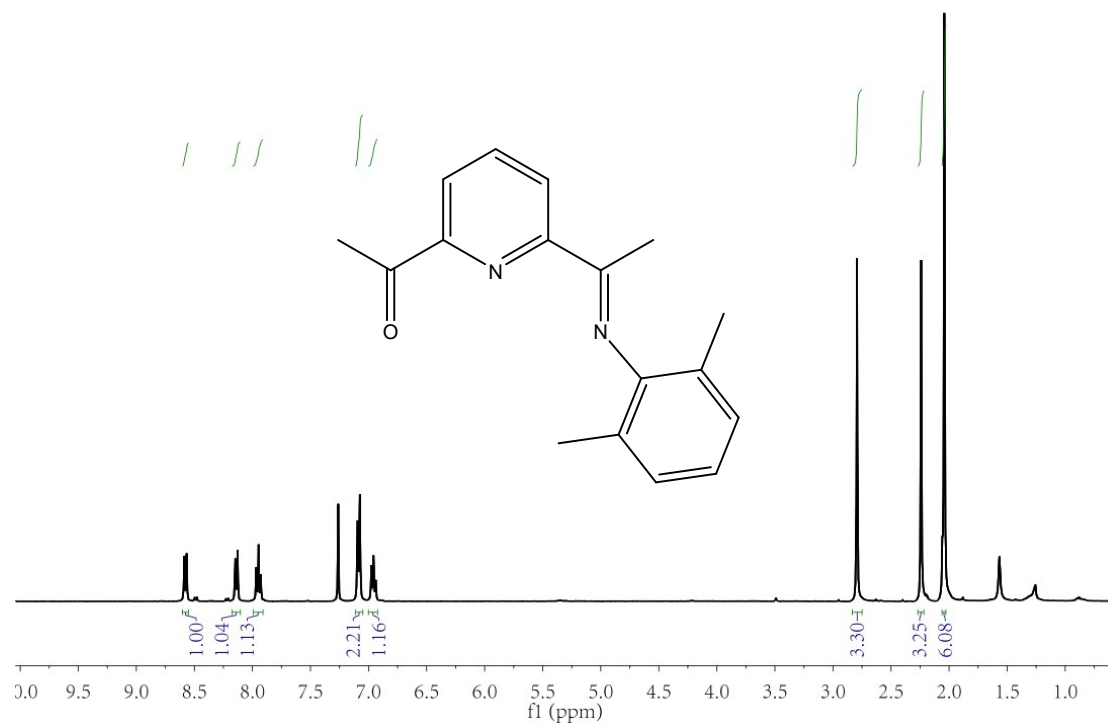


Figure S4 ¹H NMR spectrum of monoimino S3 recorded in CDCl₃ at 25 °C

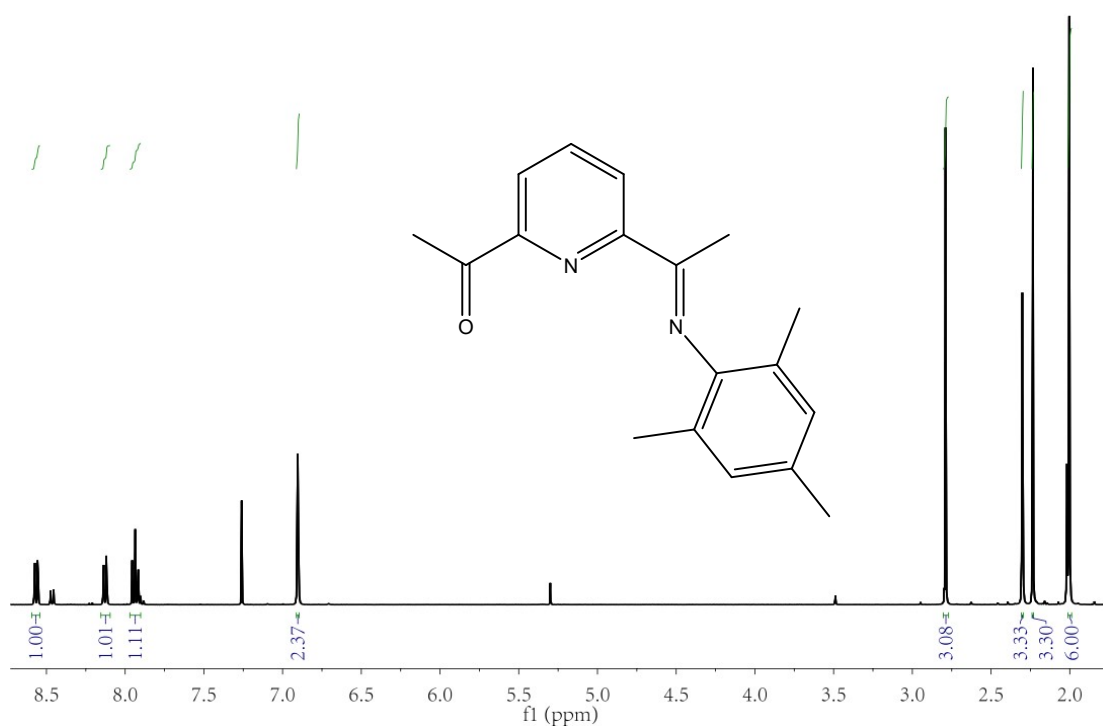


Figure S5 ¹H NMR spectrum of monoimino S4 recorded in CDCl₃ at 25 °C

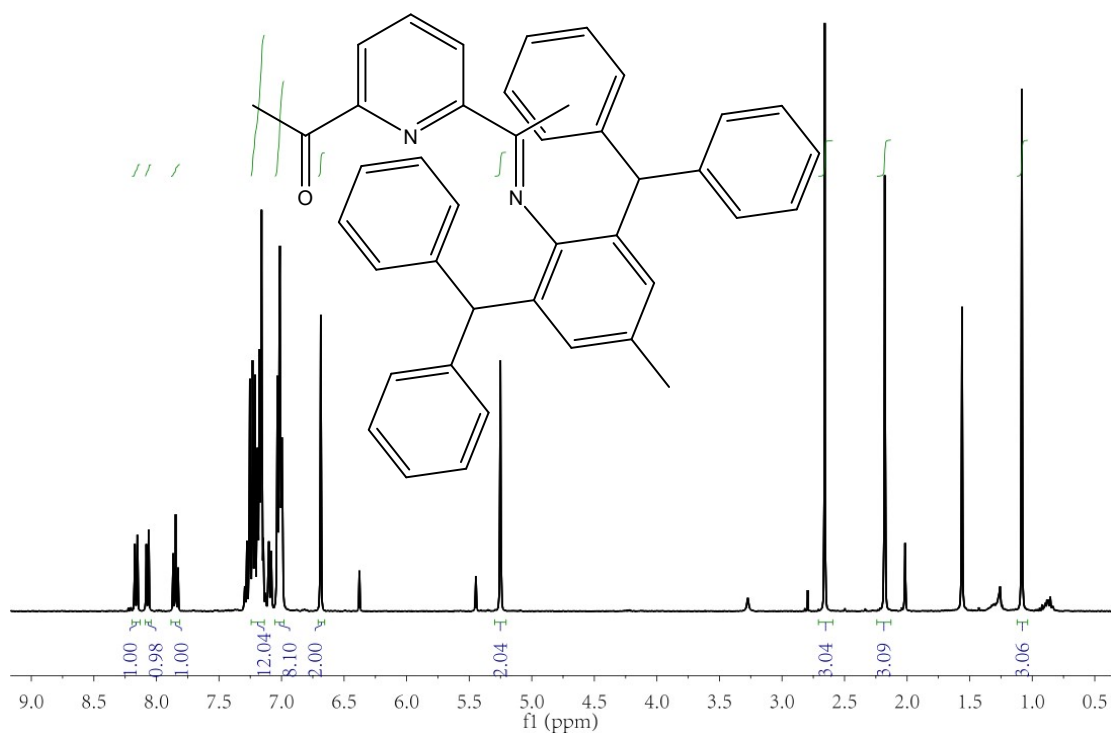


Figure S6 ¹H NMR spectrum of monoimino S5 recorded in CDCl₃ at 25 °C

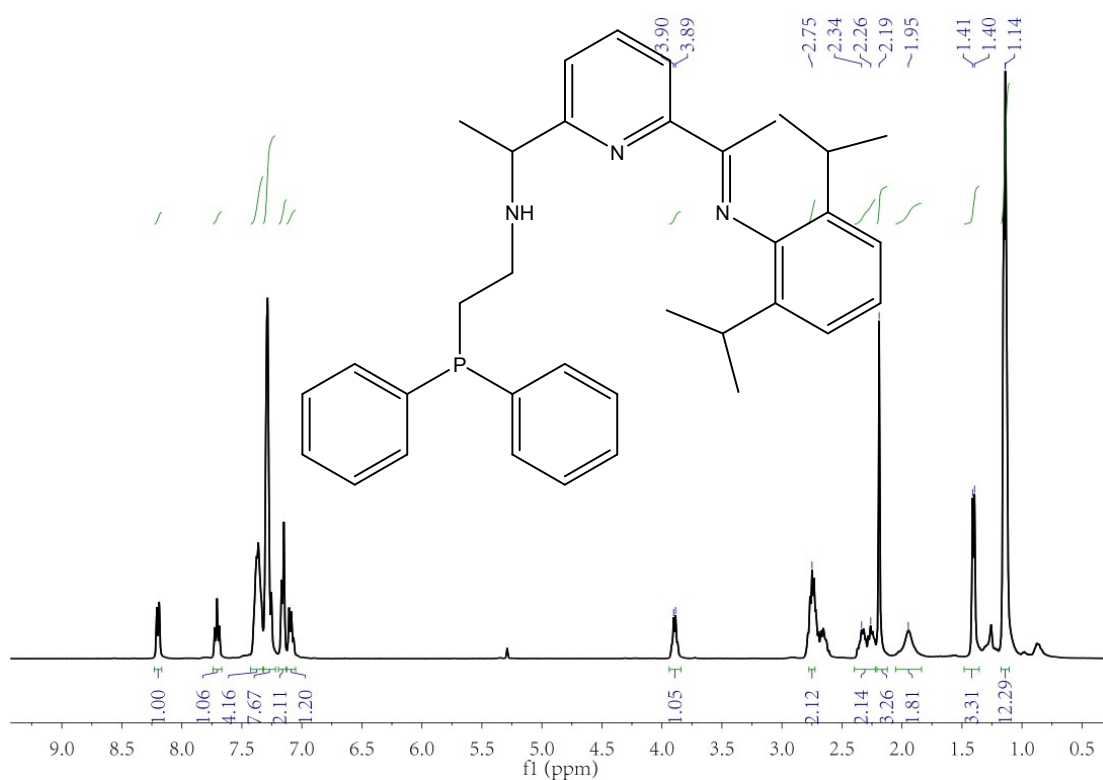


Figure S7 ¹H NMR spectrum of L1 recorded in CDCl₃ at 25 °C

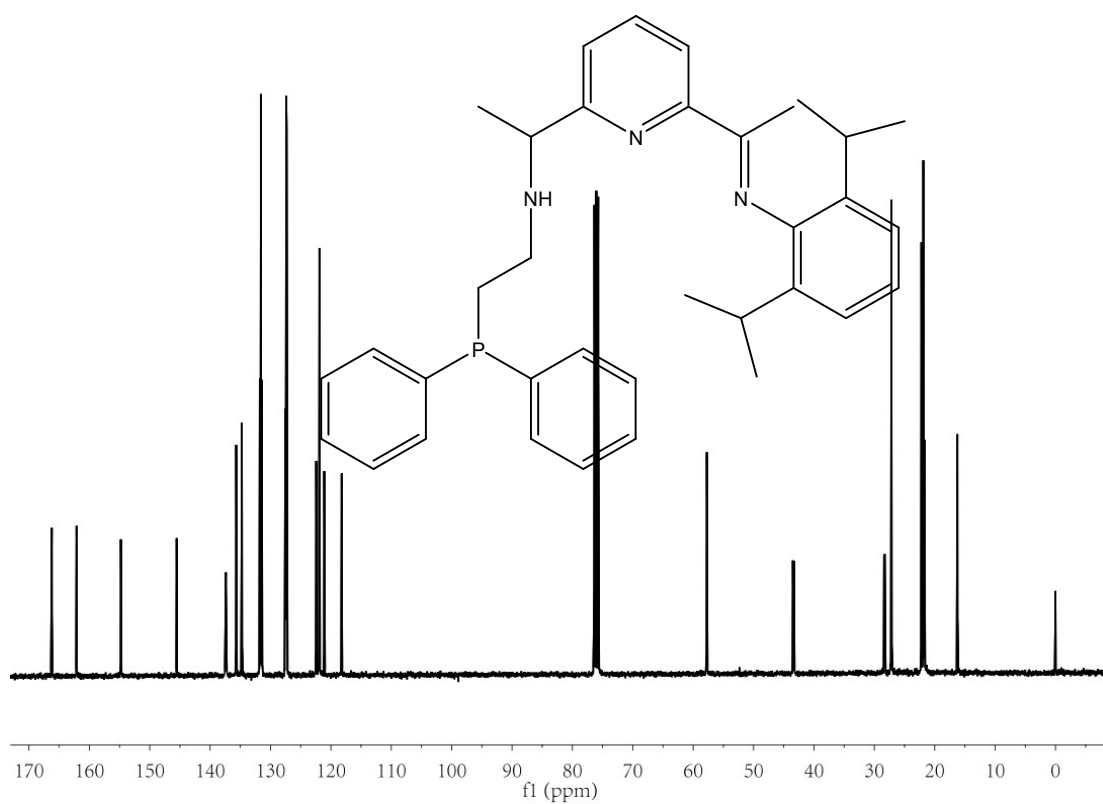


Figure S8 ¹³C NMR spectrum of L1 recorded in CDCl₃ at 25 °C

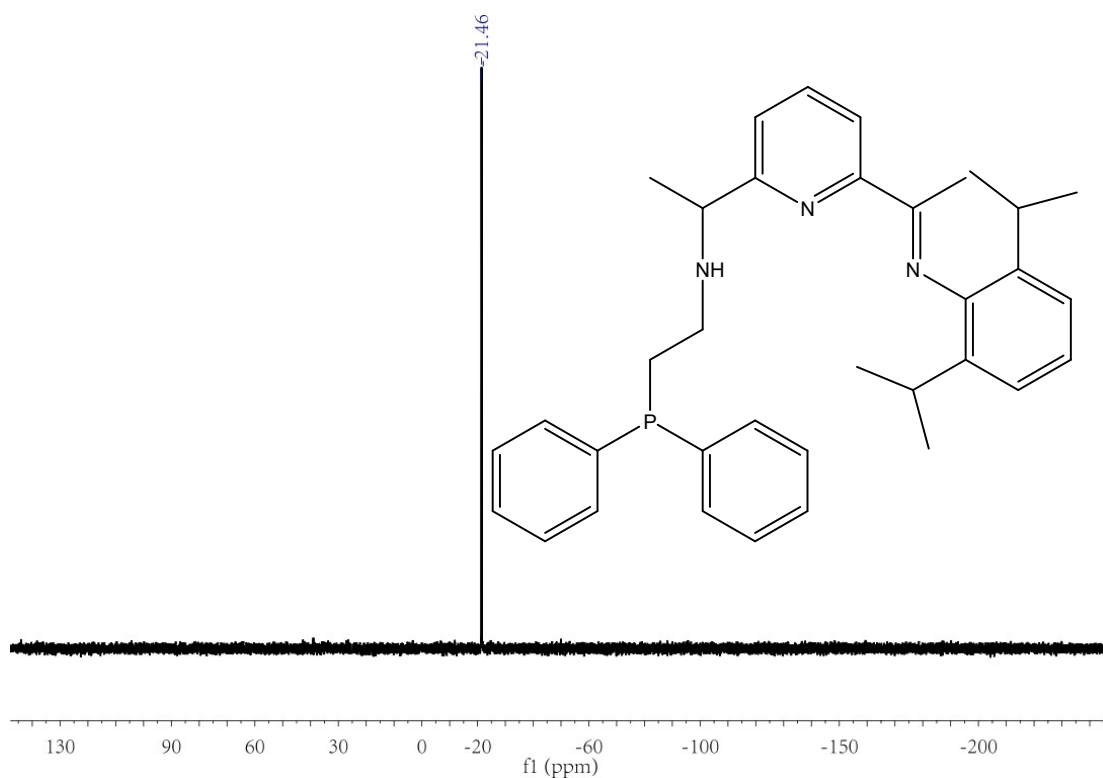


Figure S9 ³¹P NMR spectrum of L1 recorded in CDCl₃ at 25 °C

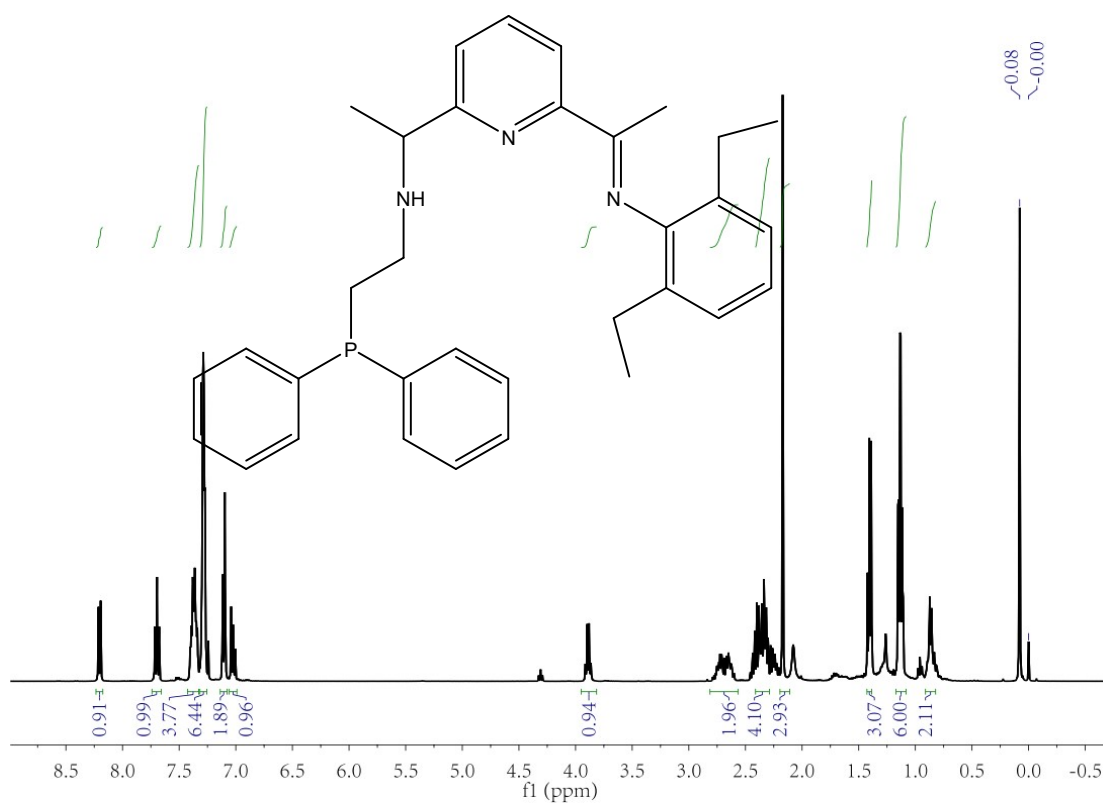


Figure S10 ¹H NMR spectrum of L2 recorded in CDCl₃ at 25 °C

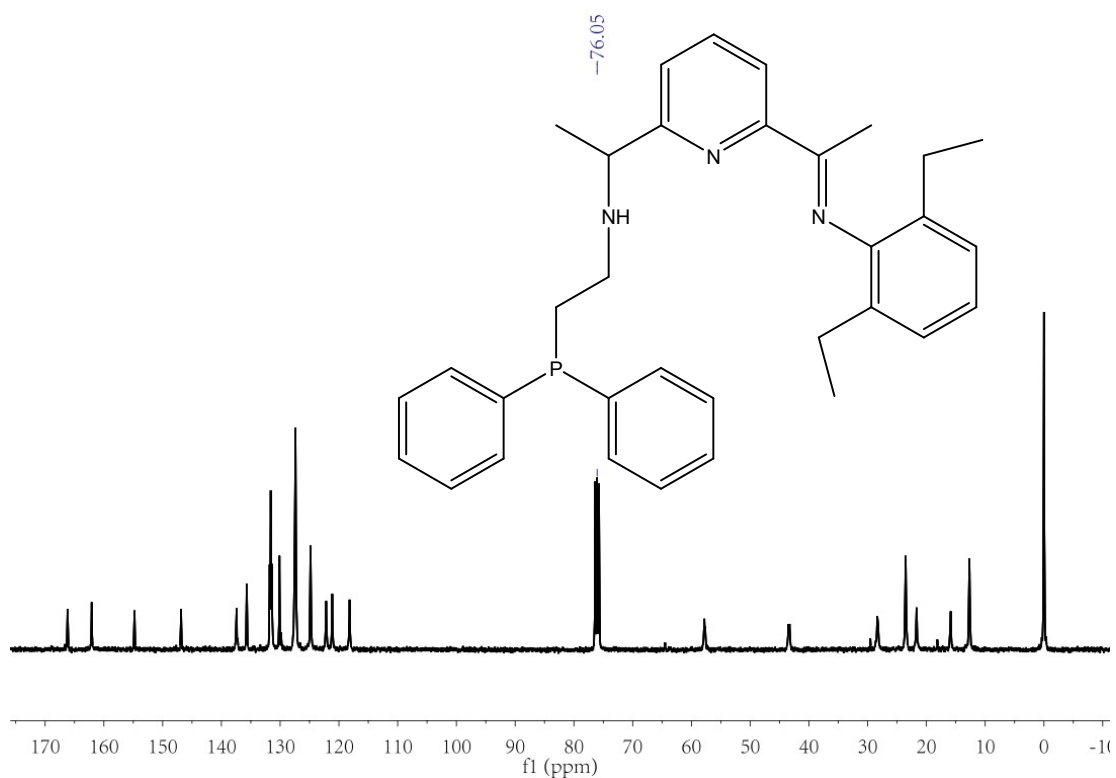


Figure S11 ¹³C NMR spectrum of L2 recorded in CDCl₃ at 25 °C

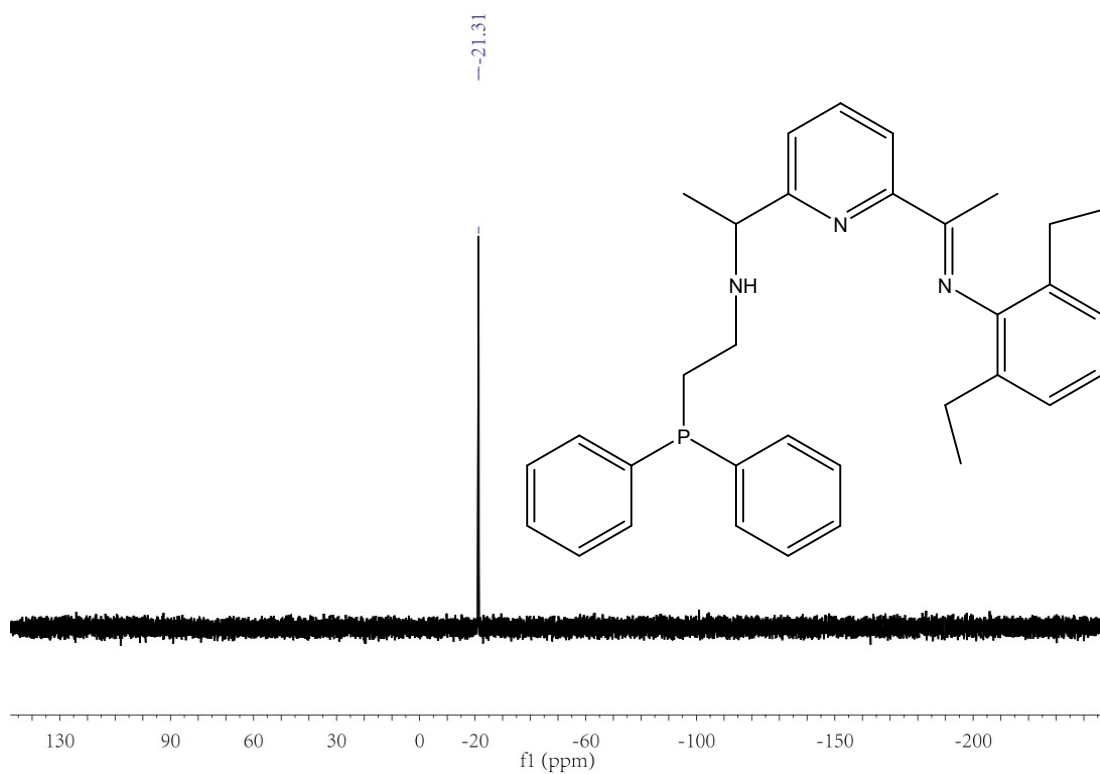


Figure S12 ³¹P NMR spectrum of L2 recorded in CDCl₃ at 25 °C

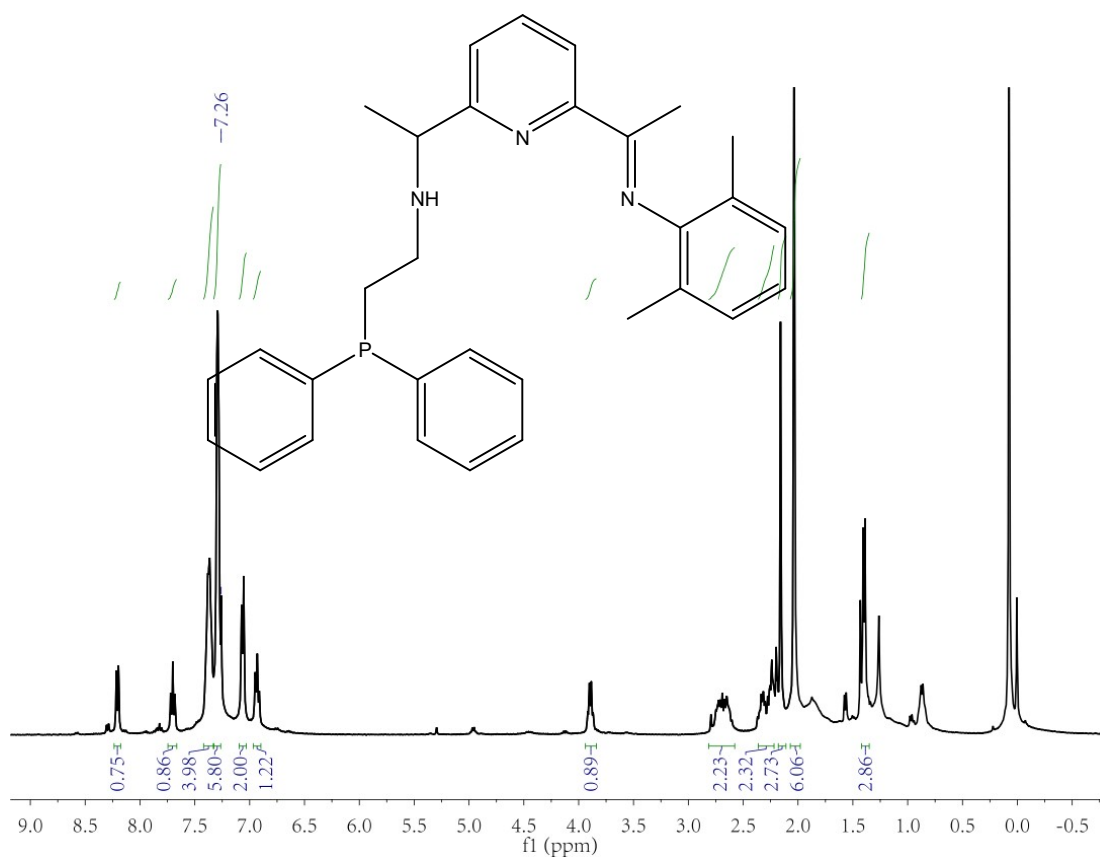


Figure S13 ¹H NMR spectrum of L3 recorded in CDCl₃ at 25 °C

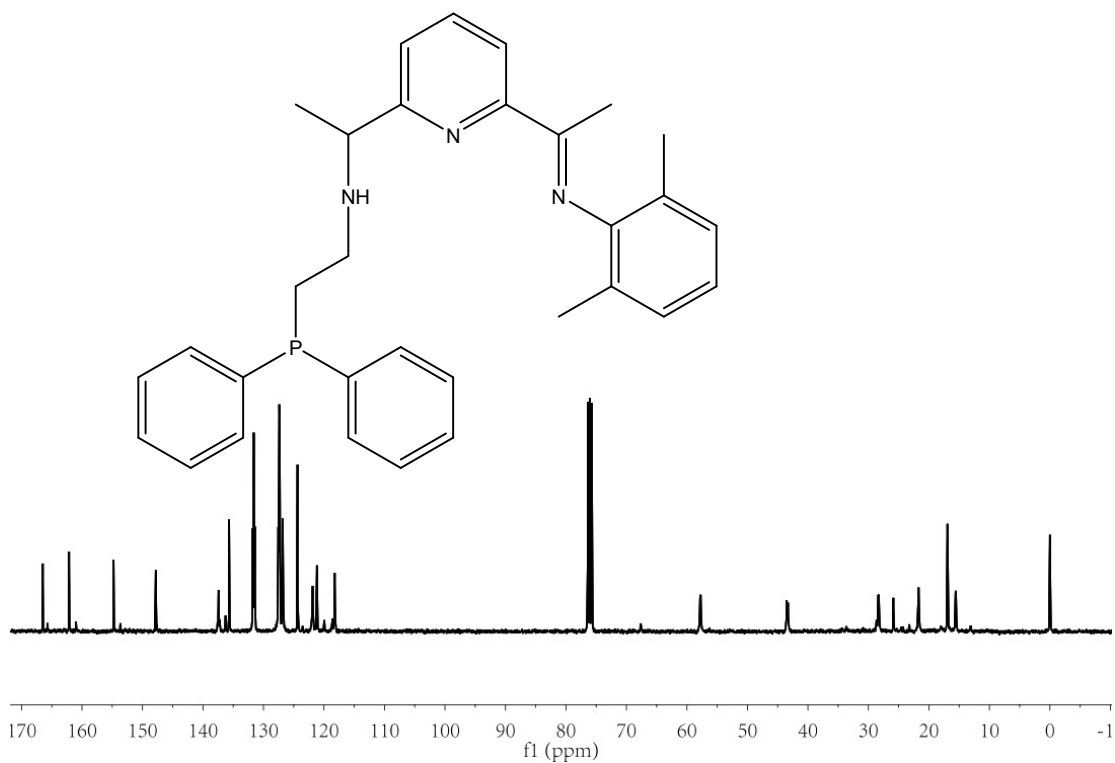


Figure S14 ¹³C NMR spectrum of L3 recorded in CDCl₃ at 25 °C

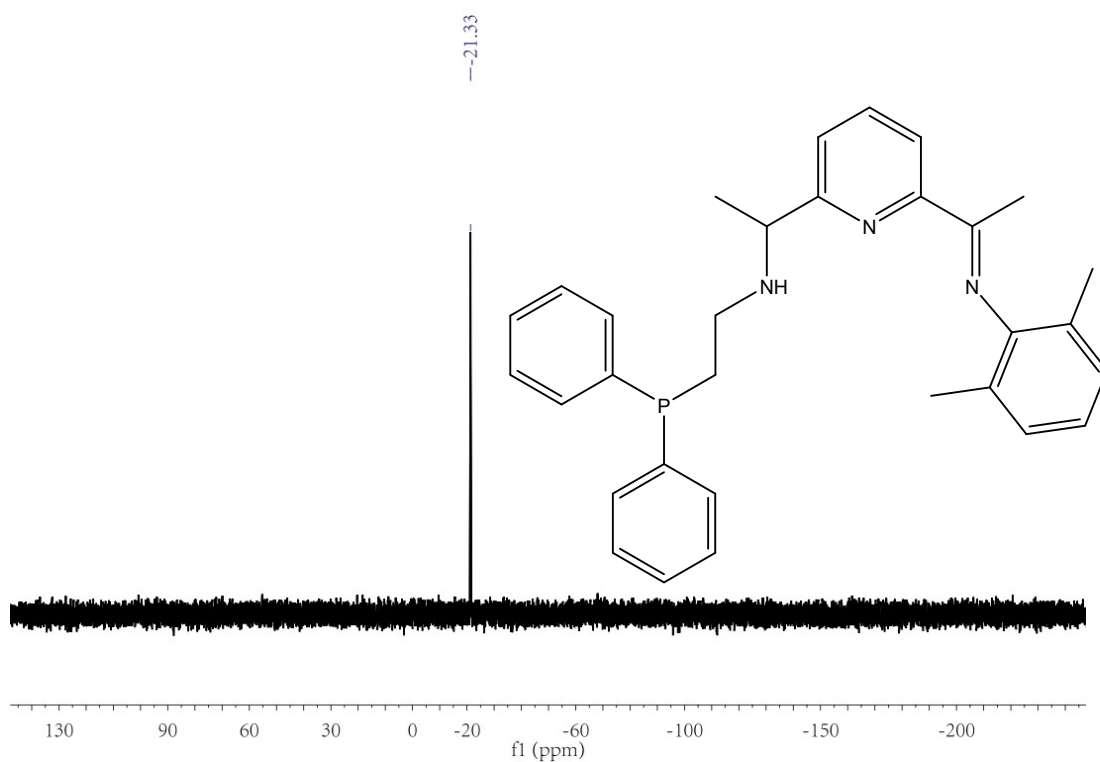


Figure S15 ^{31}P NMR spectrum of L3 recorded in CDCl_3 at 25 °C

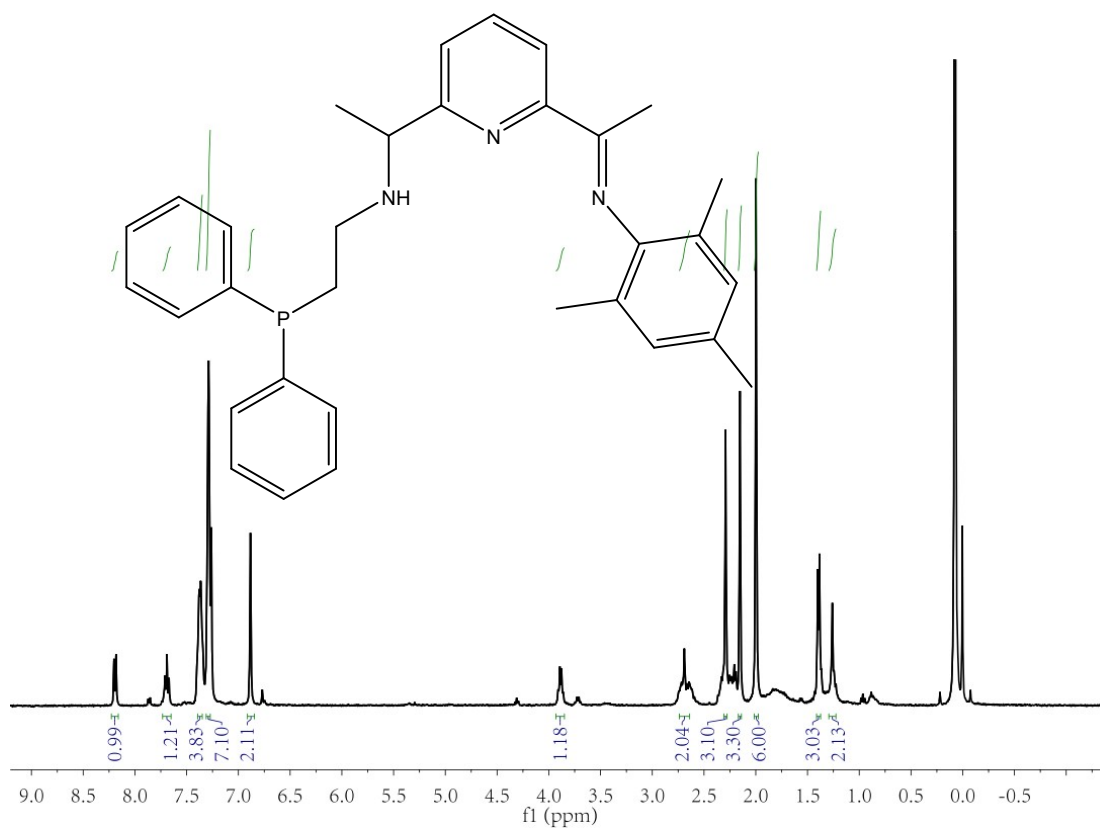
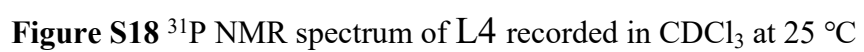
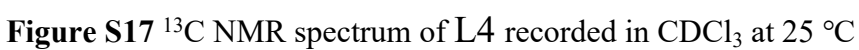


Figure S16 ^1H NMR spectrum of L4 recorded in CDCl_3 at 25 °C



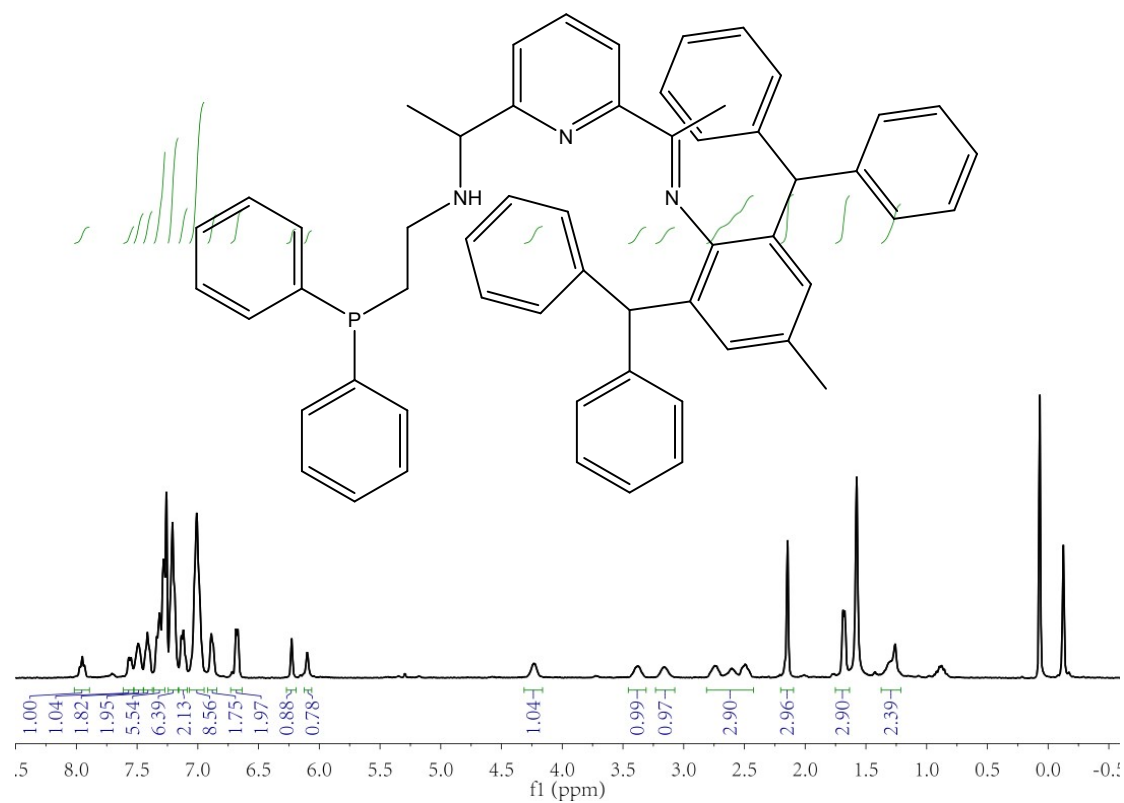


Figure S19 ^1H NMR spectrum of L5 recorded in CDCl_3 at 25 $^\circ\text{C}$

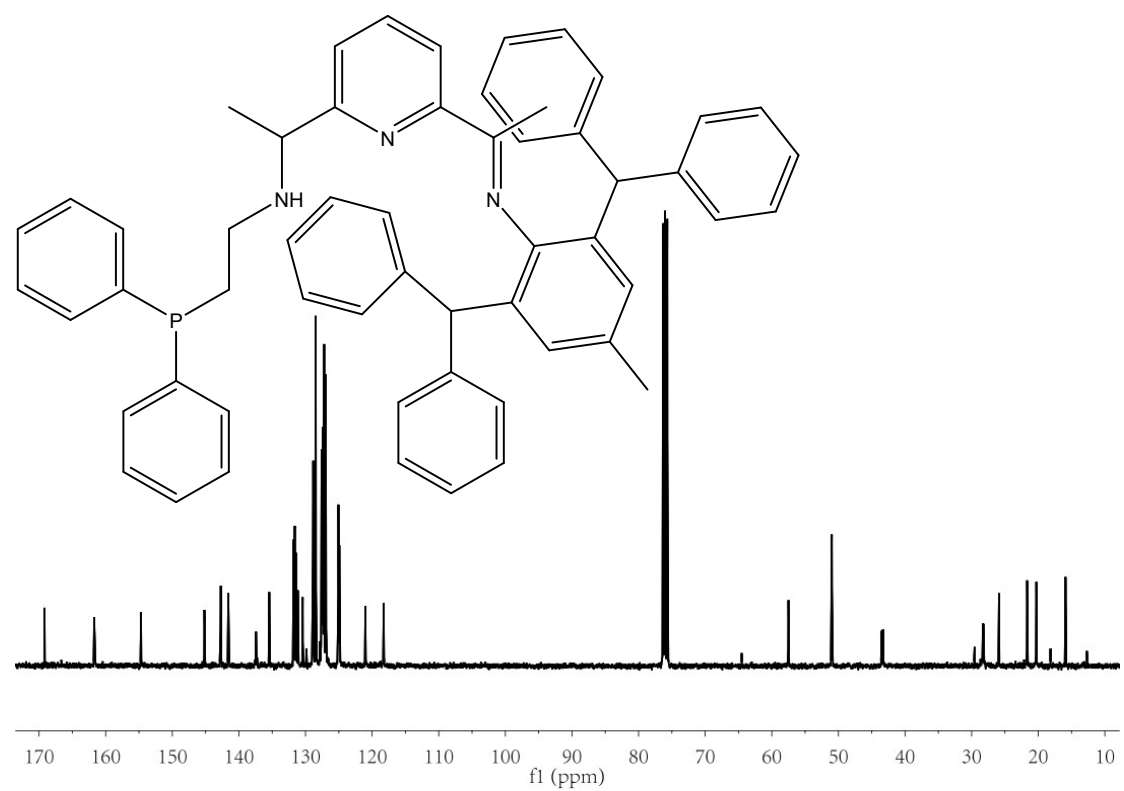


Figure S20 ^{13}C NMR spectrum of L5 recorded in CDCl_3 at 25 °C

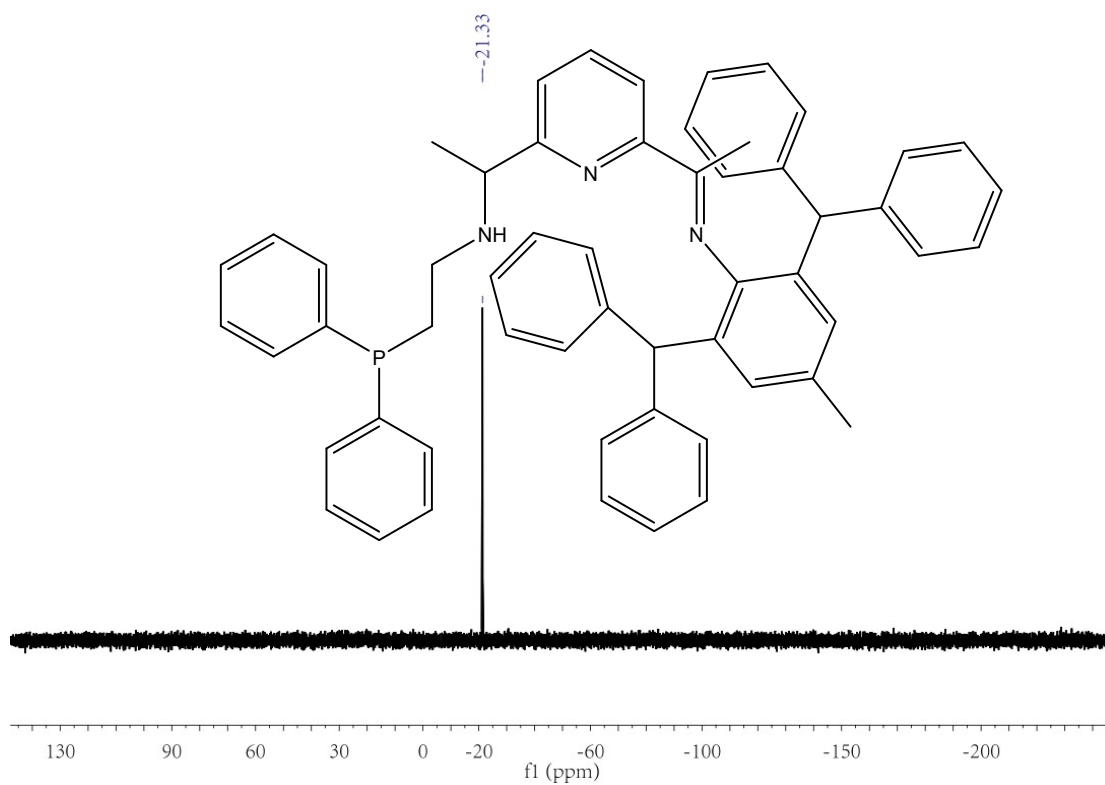


Figure S21 ^{31}P NMR spectrum of L5 recorded in CDCl_3 at 25 °C

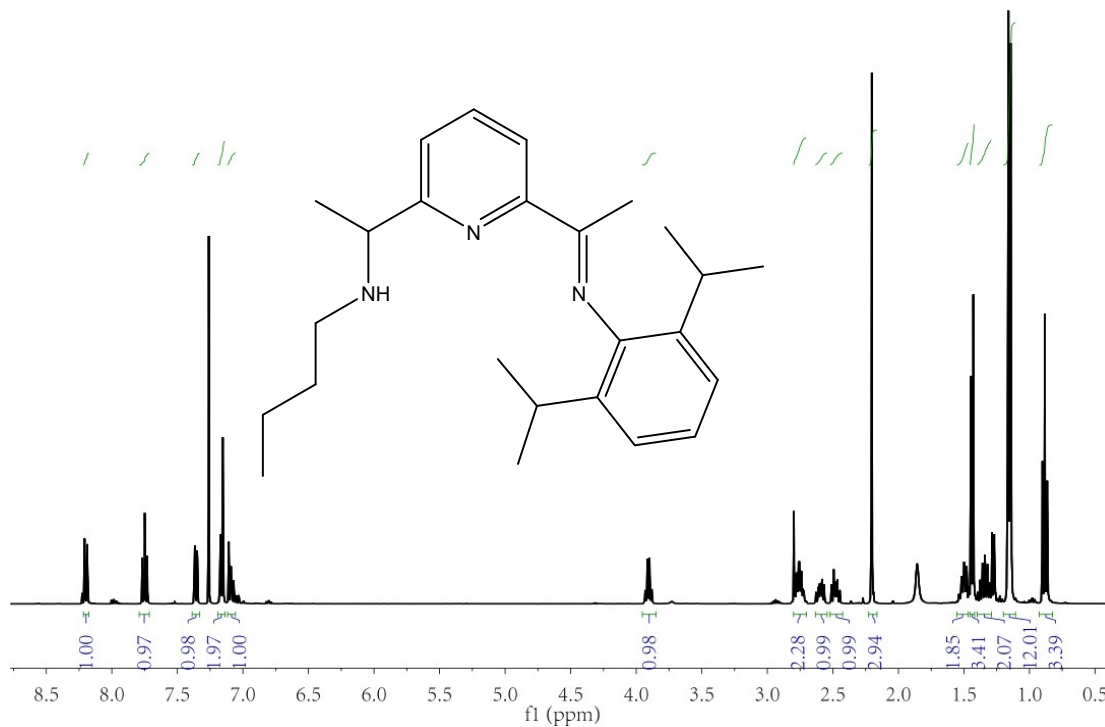


Figure S22 ^1H NMR spectrum of L6 recorded in CDCl_3 at 25 °C

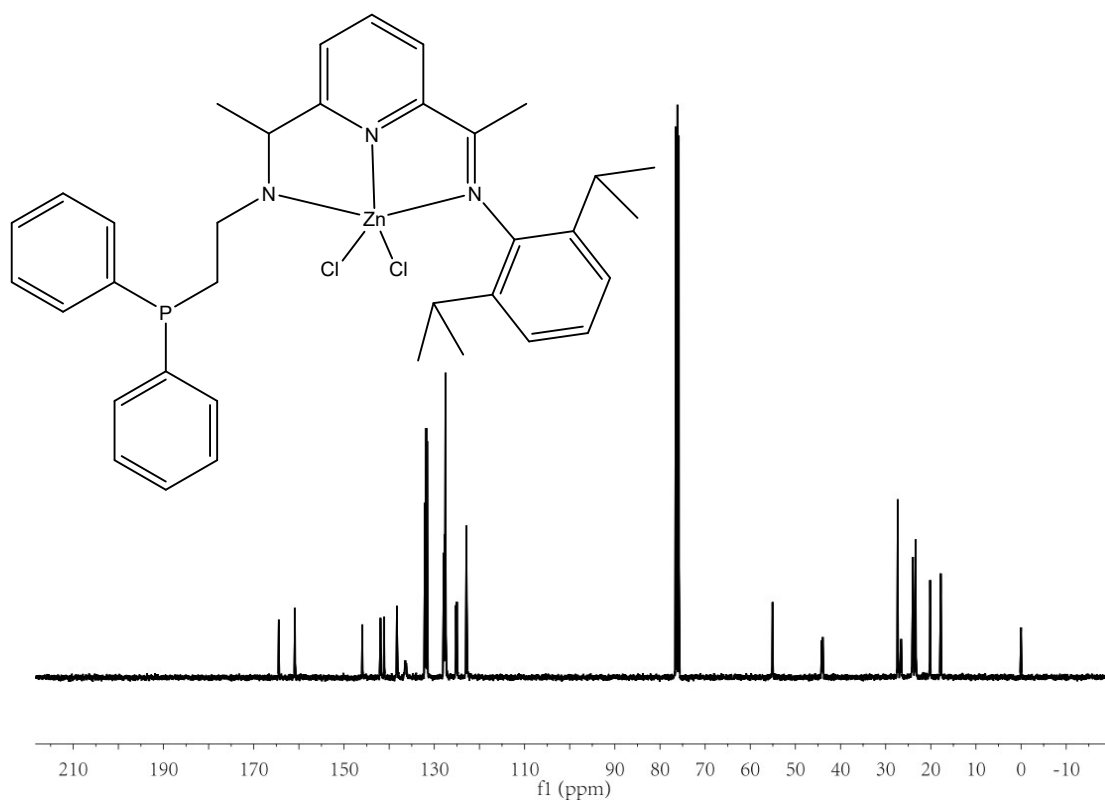


Figure S25 ^{13}C NMR spectrum of Zn1 recorded in CDCl_3 at 25°C

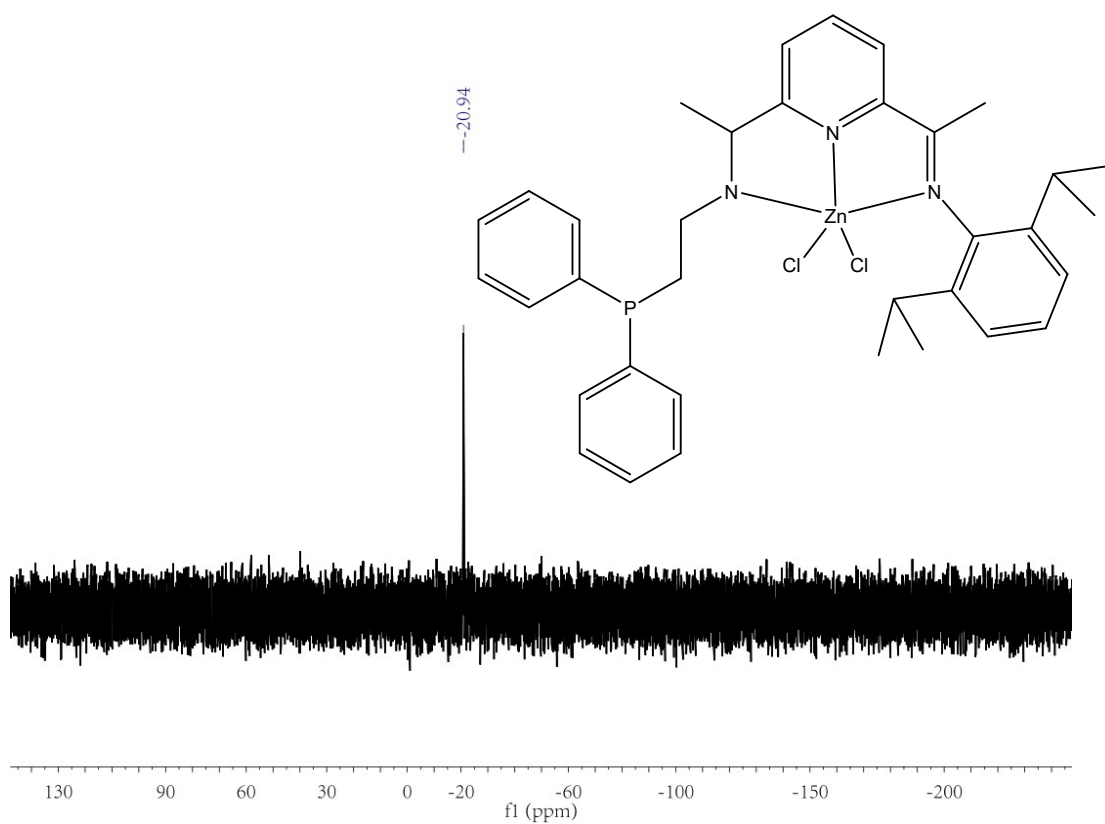


Figure S26 ^{31}P NMR spectrum of Zn1 recorded in CDCl_3 at 25°C

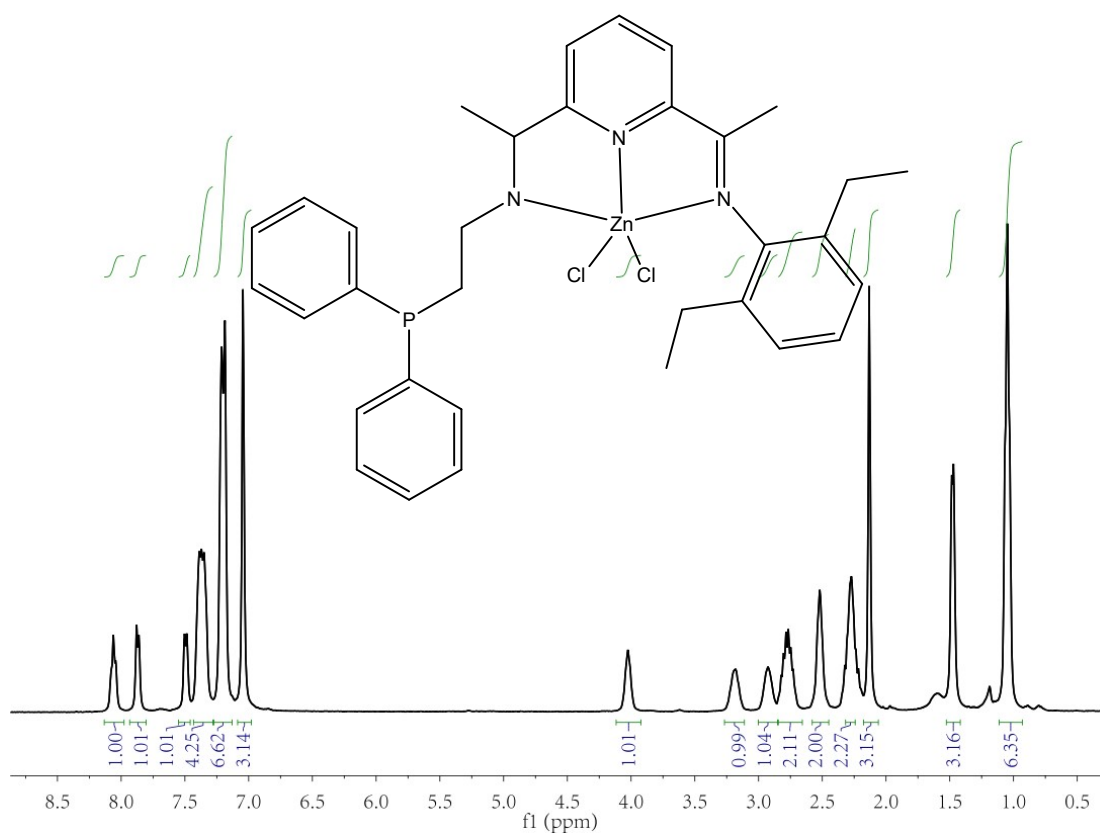


Figure S27 ¹H NMR spectrum of Zn2 recorded in CDCl₃ at 25 °C

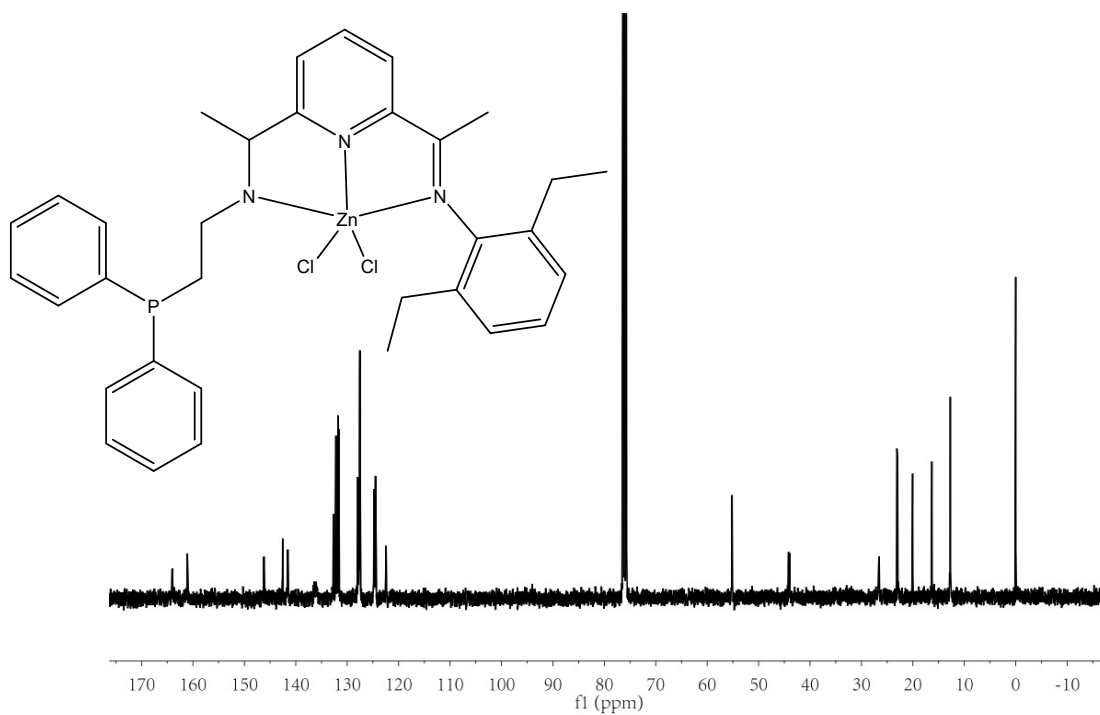


Figure S28 ¹³C NMR spectrum of Zn2 recorded in CDCl₃ at 25 °C

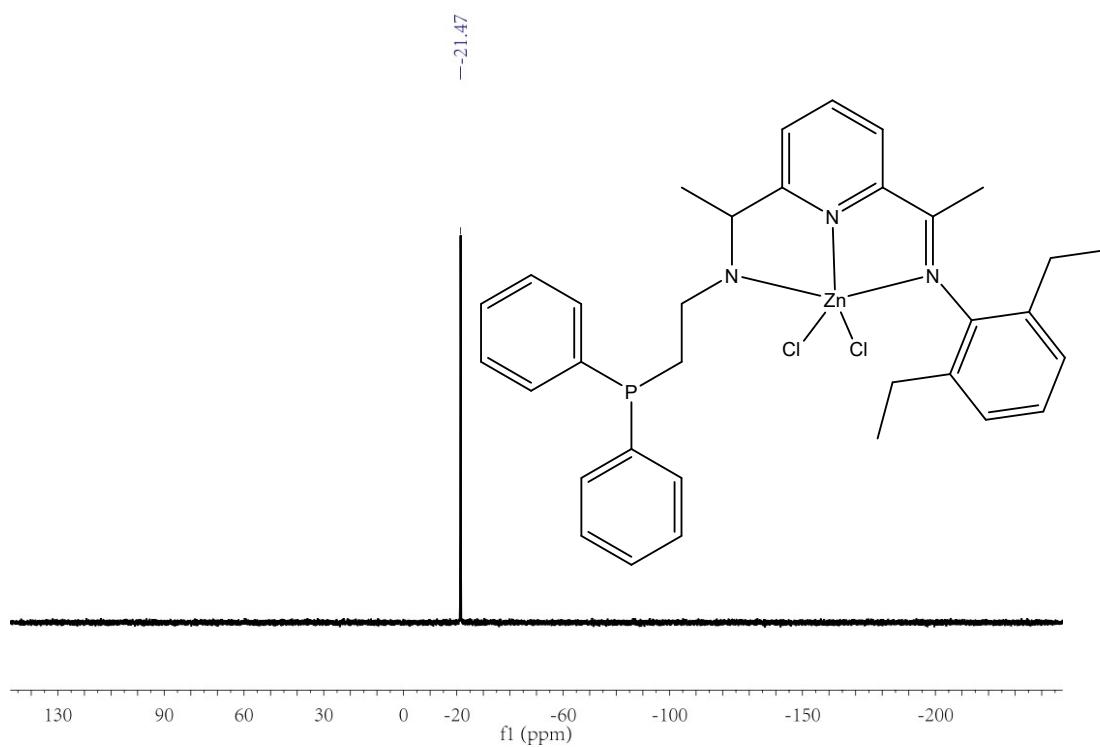


Figure S29 ^{31}P NMR spectrum of Zn2 recorded in CDCl_3 at 25 °C

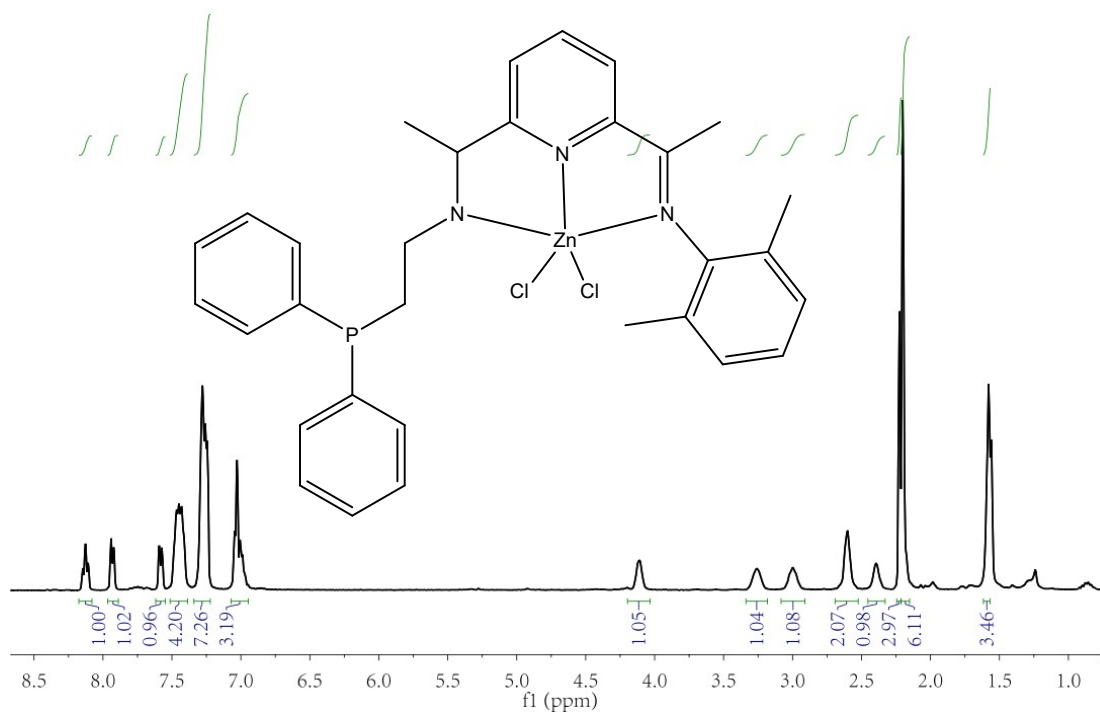


Figure S30 ^1H NMR spectrum of Zn3 recorded in CDCl_3 at 25 °C

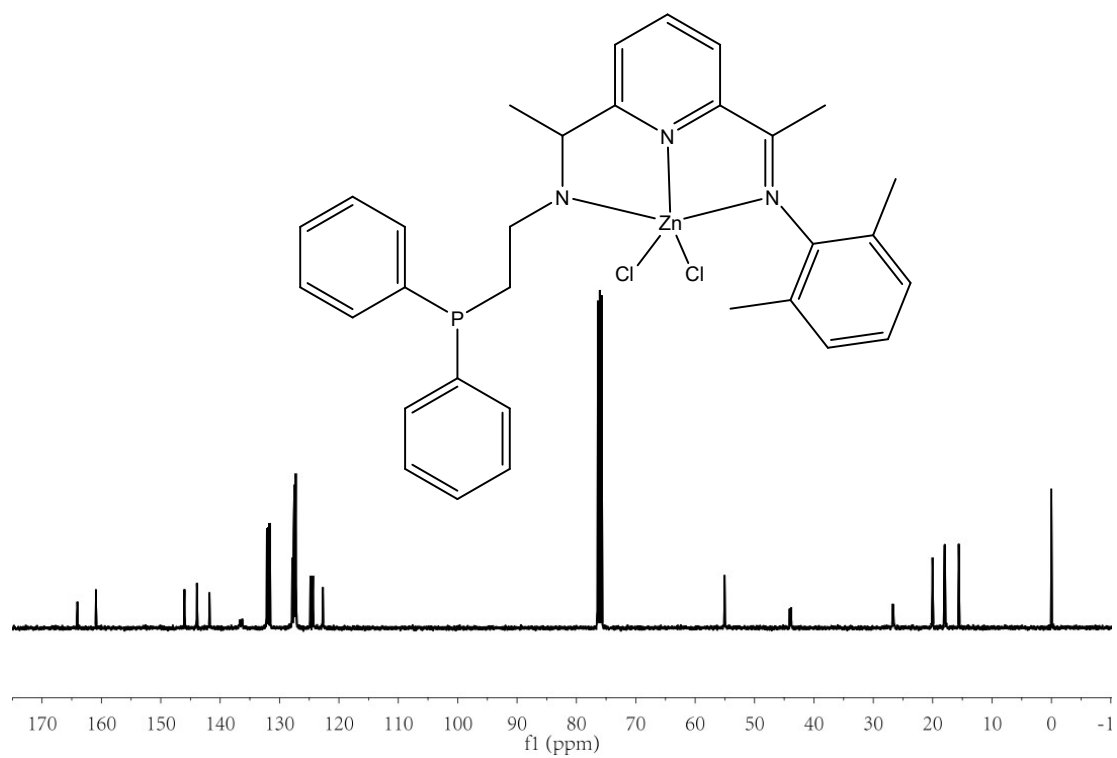


Figure S31 ^{13}C NMR spectrum of Zn3 recorded in CDCl_3 at 25 °C

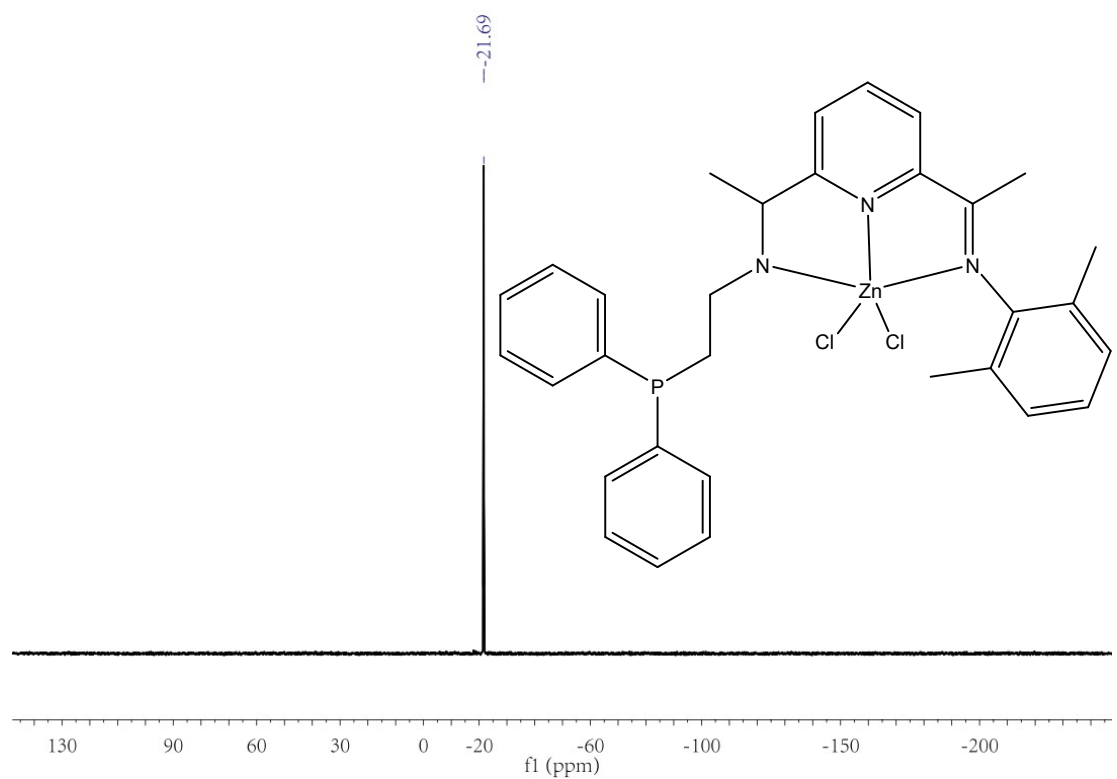


Figure S32 ^{31}P NMR spectrum of Zn3 recorded in CDCl_3 at 25 °C

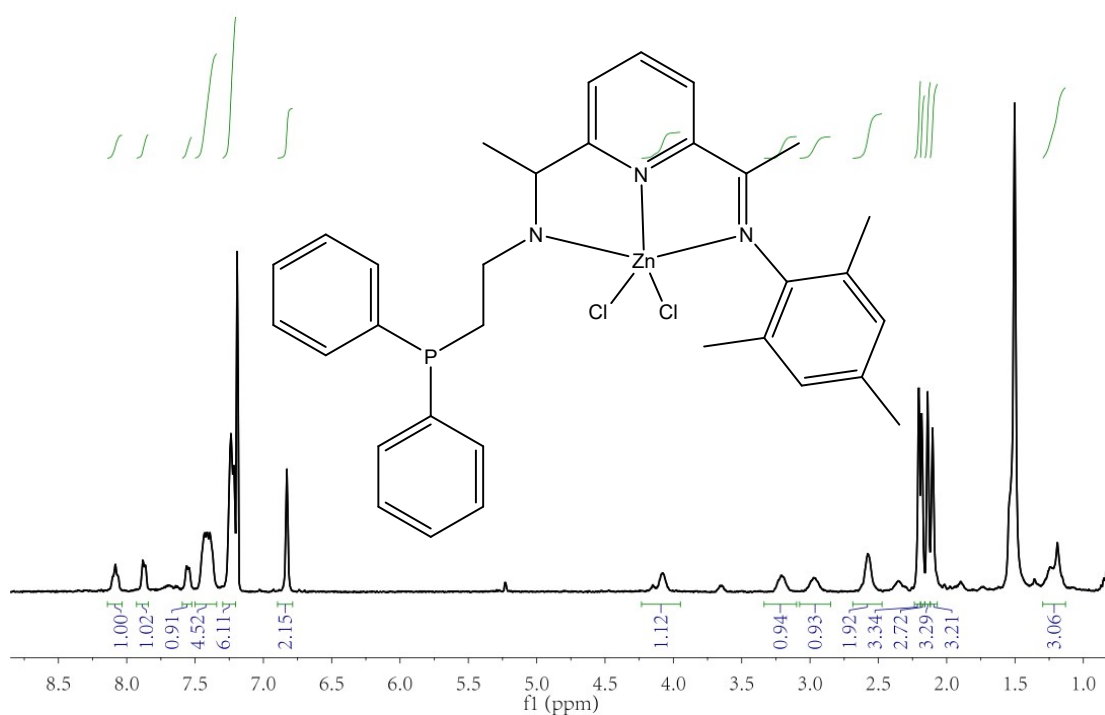


Figure S33 ¹H NMR spectrum of Zn4 recorded in CDCl₃ at 25 °C

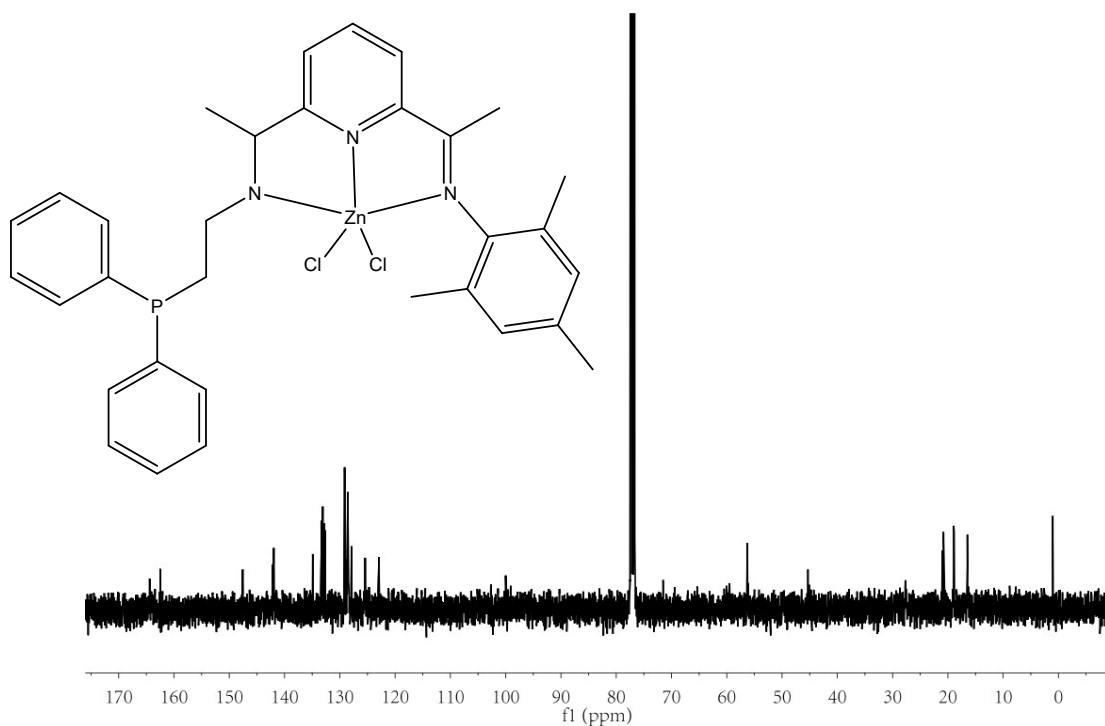


Figure S34 ¹³C NMR spectrum of Zn4 recorded in CDCl₃ at 25 °C

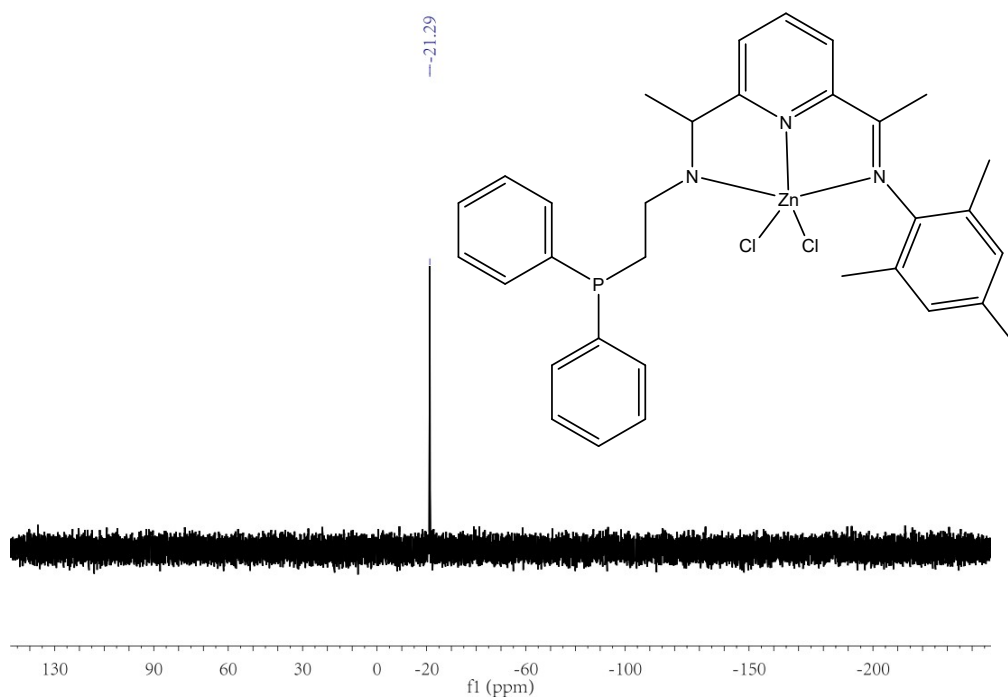


Figure S35 ^{31}P NMR spectrum of Zn4 recorded in CDCl_3 at 25 °C

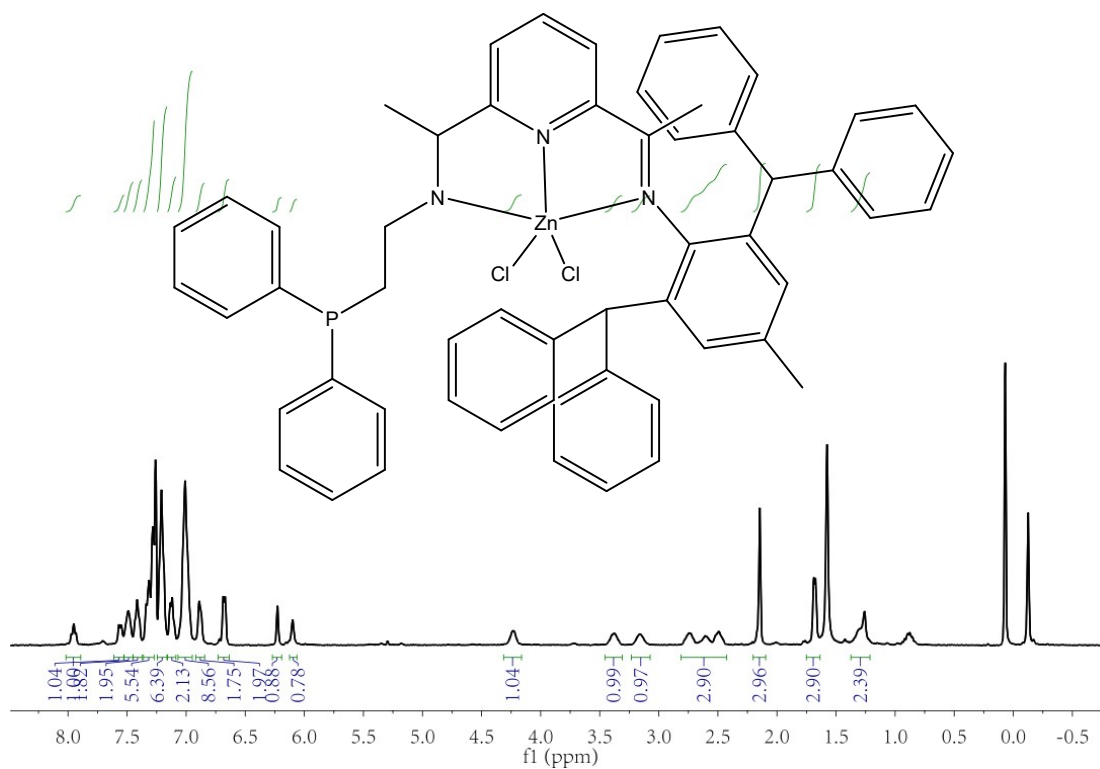


Figure S36 ^1H NMR spectrum of Zn5 recorded in CDCl_3 at 25 °C

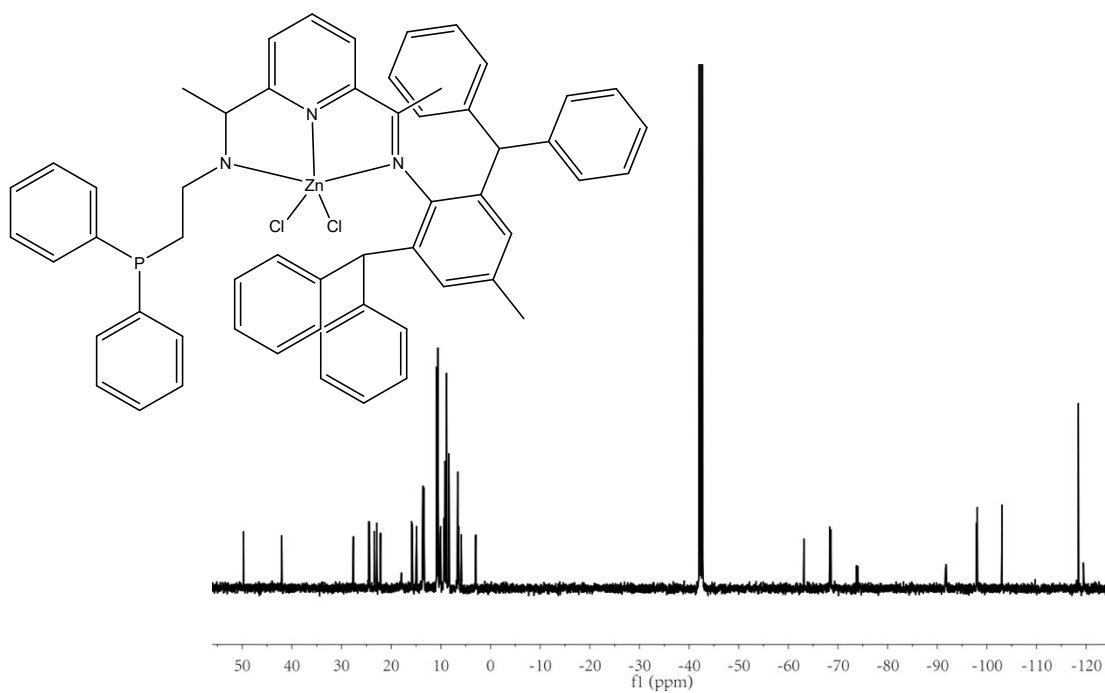


Figure S37 ^{13}C NMR spectrum of Zn5 recorded in CDCl_3 at 25°C

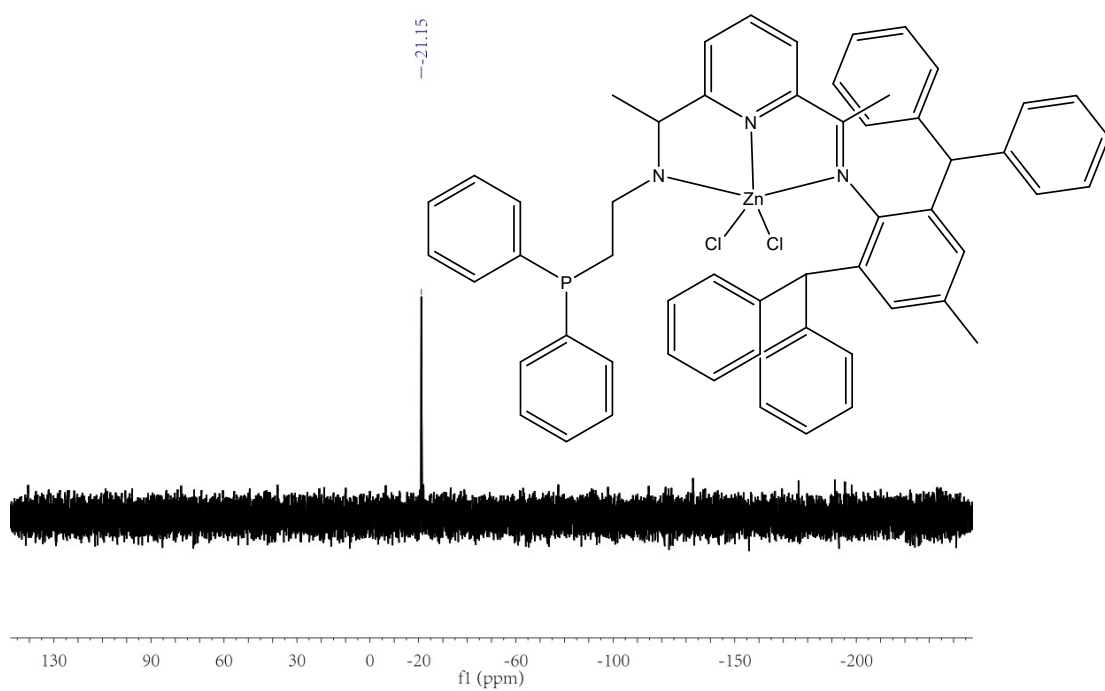


Figure S38 ^{31}P NMR spectrum of Zn5 recorded in CDCl_3 at 25°C

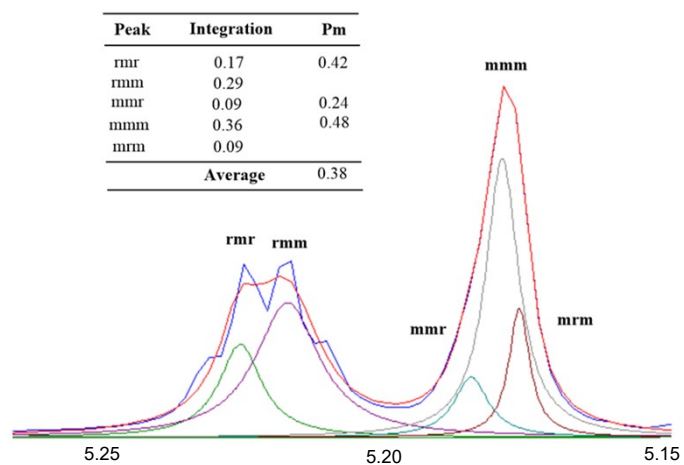


Figure S39 Decoupled ^1H NMR spectra of PLAs by **Zn4** (run 6 in Table 3)

Table SI-1 Comparison of the ^{31}P NMR chemical shifts for **L1 - L5** with those in **Zn1 - Zn5**

Compound	^{31}P NMR	Complex	^{31}P NMR
	chemical shift (ppm, in CDCl_3)		chemical shift (ppm, in CDCl_3)
L1	21.46	Zn1	20.94
L2	21.31	Zn2	21.47
L3	21.33	Zn3	21.69
L4	21.29	Zn4	21.29
L5	21.33	Zn5	21.15