

Supplementary Information

Syntheses of Mono- and Dinuclear Silylplatinum Complexes Bearing a Diphosphino Ligand via Stepwise Bond Activation of Unsymmetric Disilanes

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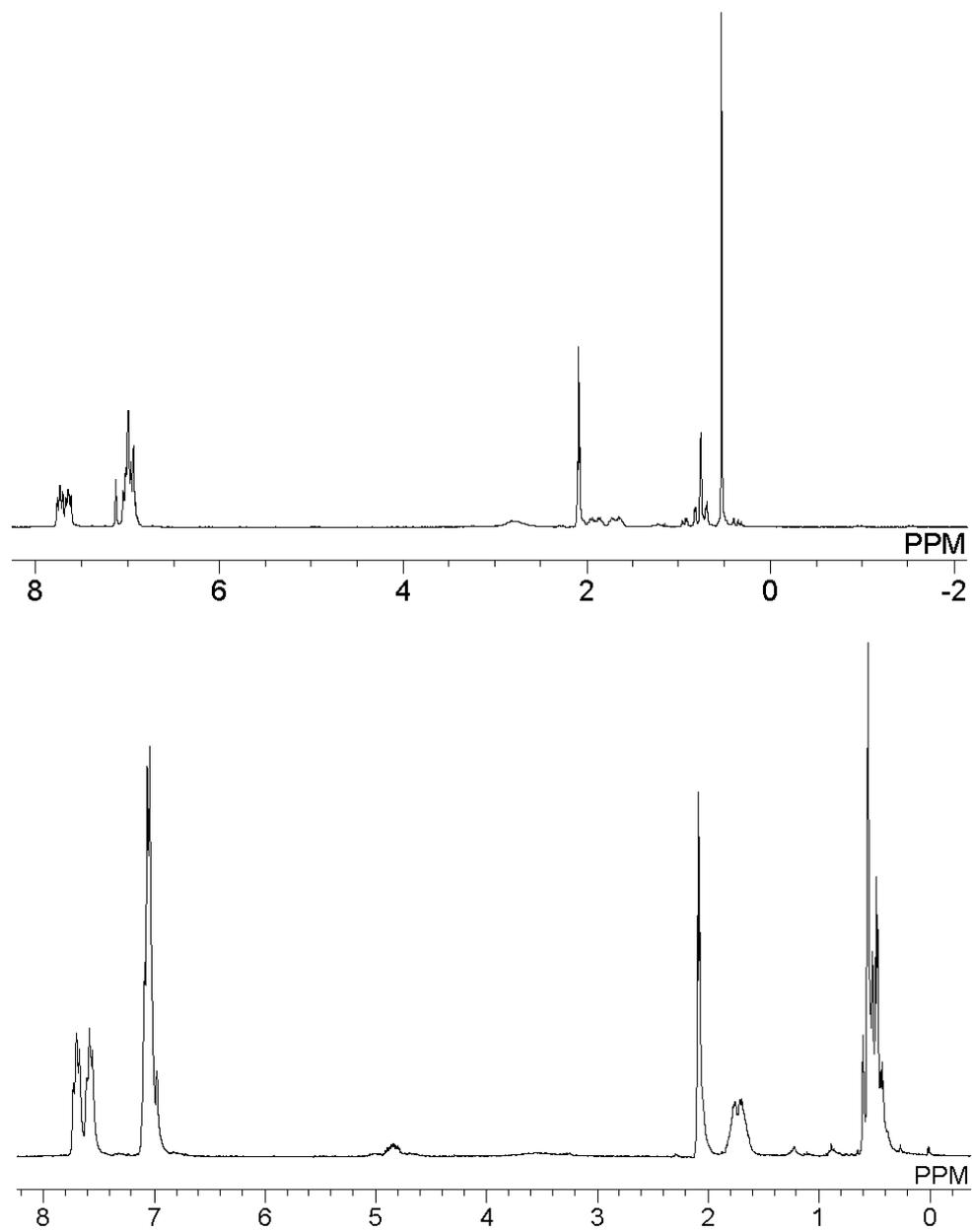


Fig. S1 ¹H NMR spectra of **2a** in toluene-*d*₈ at -30 °C (top) and **3a** in toluene-*d*₈ at RT (bottom).

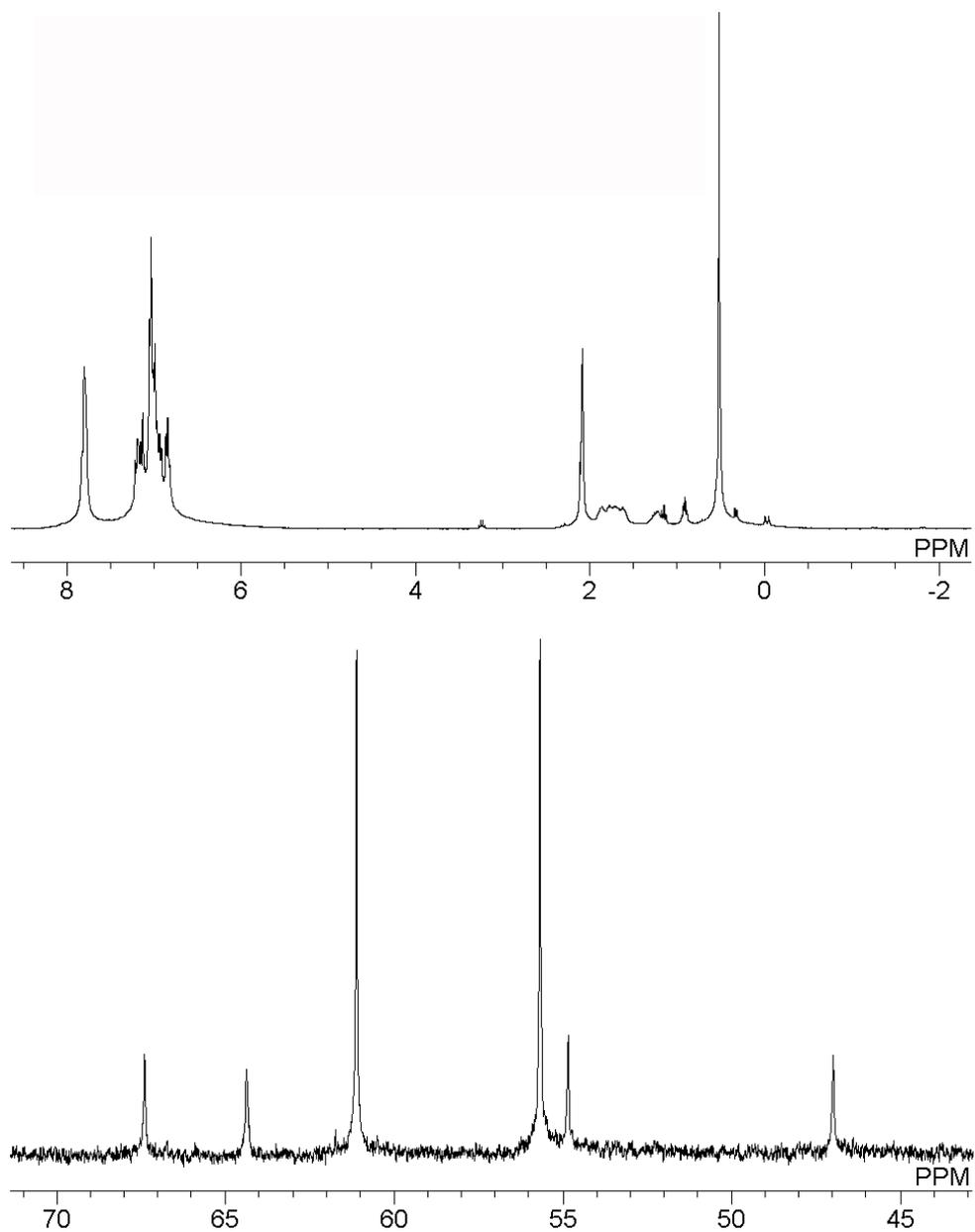


Fig. S2 ¹H NMR (top) and ³¹P{¹H} NMR (bottom) spectra of **2b** in toluene-*d*₈ at -30 °C.

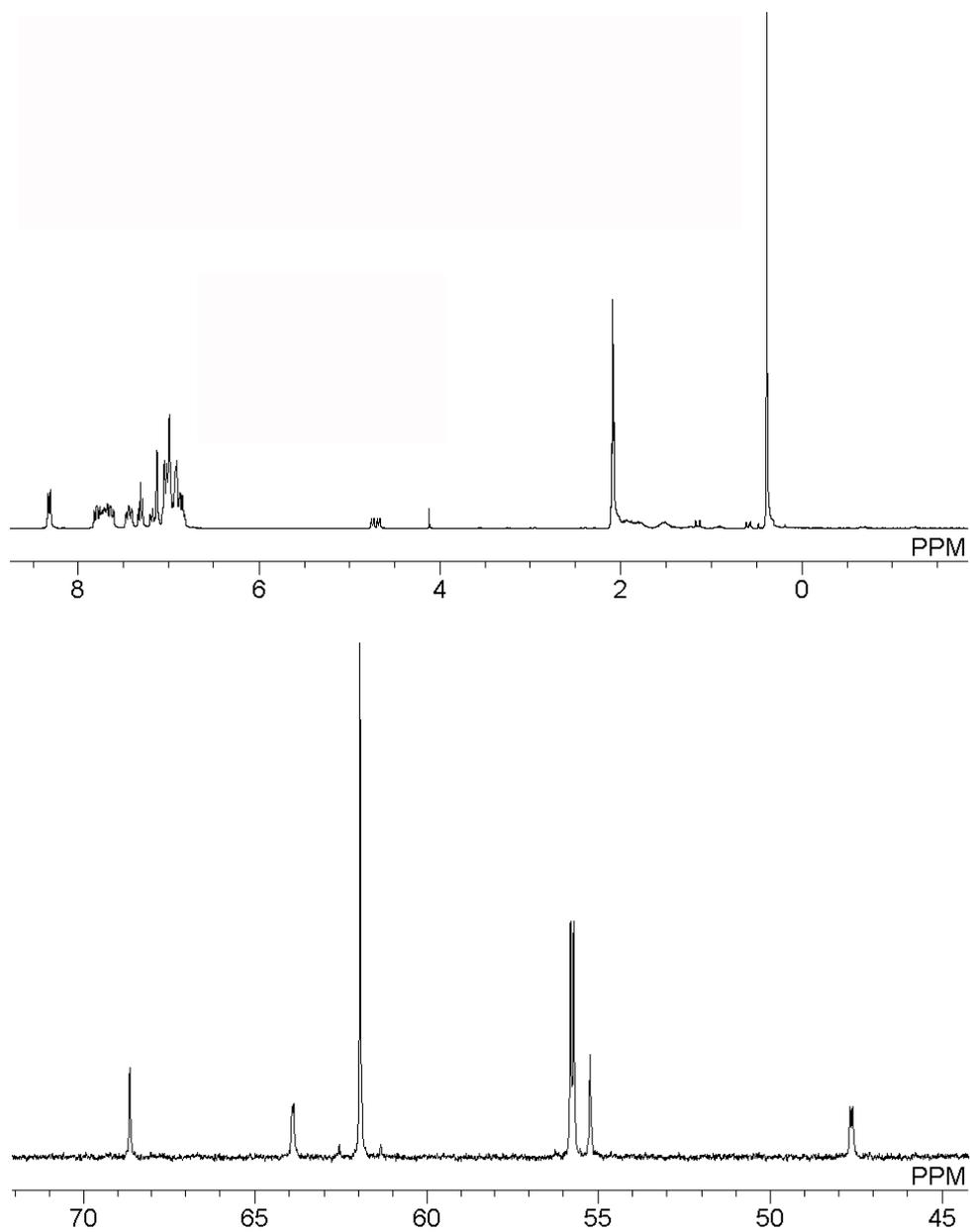


Fig. S3 ¹H NMR (top) and ³¹P{¹H} NMR (bottom) spectra of **2c** in toluene-*d*₈ at -30 °C.

Table S1. The first-order rate constant of **2a** and **2b** at various temperature

T/K	$1000k/s^{-1}$ (2a)	T/K	$1000k/s^{-1}$ (2b)
298	0.72(2)	313	0.386(4)
302	0.99(1)	318	0.618(8)
306	1.33(4)	323	1.10(2)
310	2.00(3)	328	1.71(9)

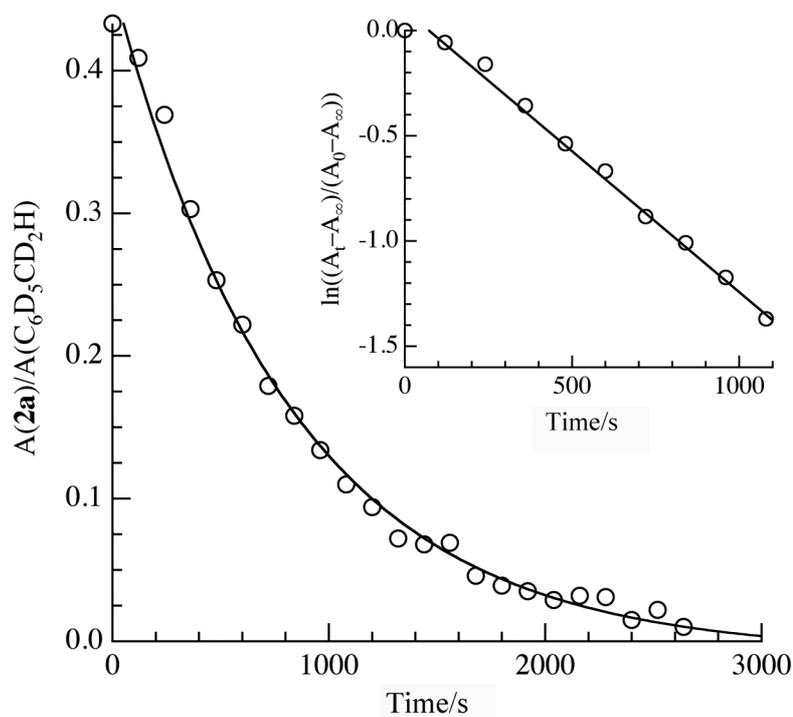


Fig. S4 Time course of the peak area change of **2a** during the conversion into **3a** in toluene- d_8 at 306 K. Inset: first-order plot based on the peak area change at 0.66 ppm.

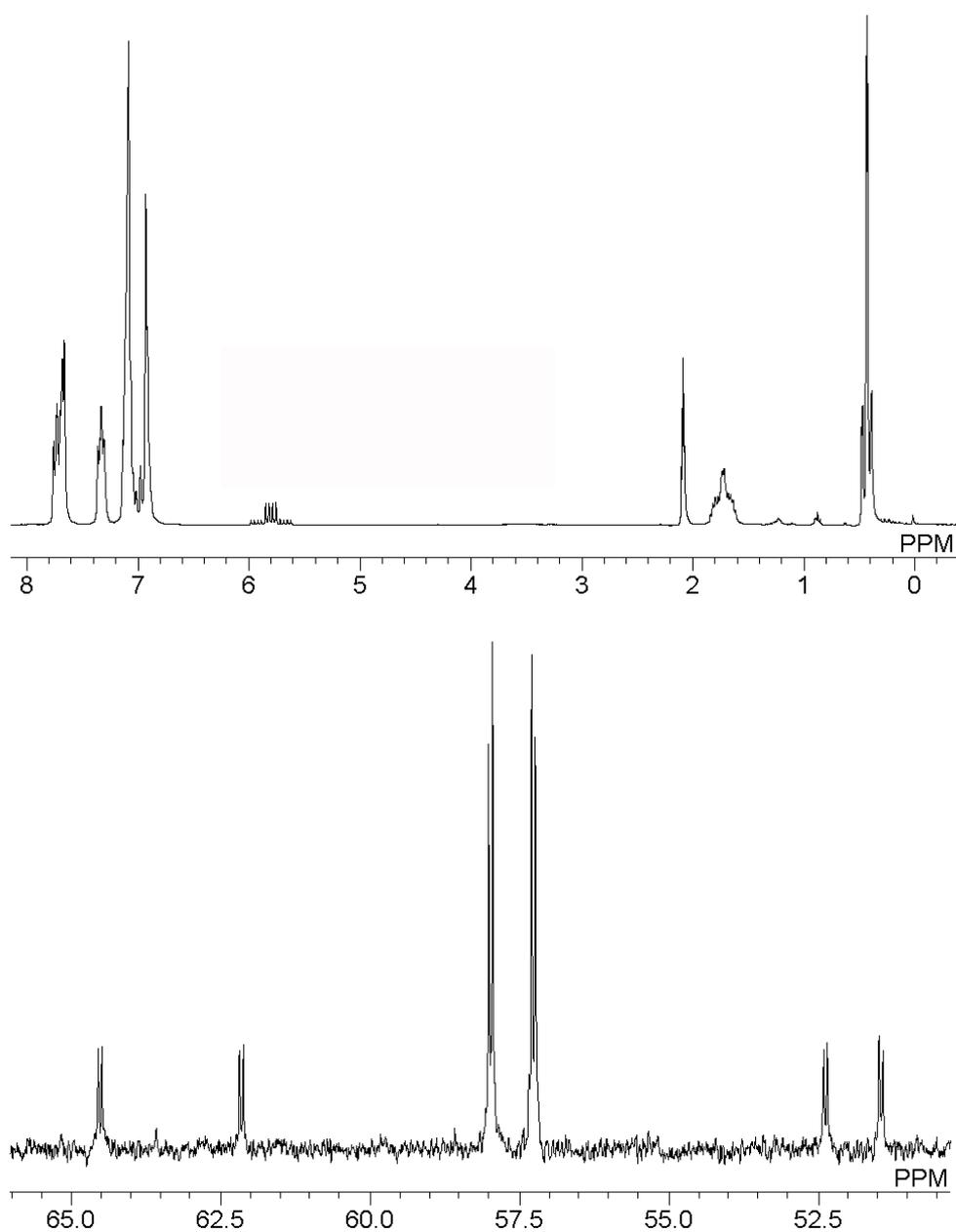


Fig. S5 ¹H NMR (top) and ³¹P{¹H} NMR (bottom) spectra of **3b** in toluene-*d*₈ at RT.

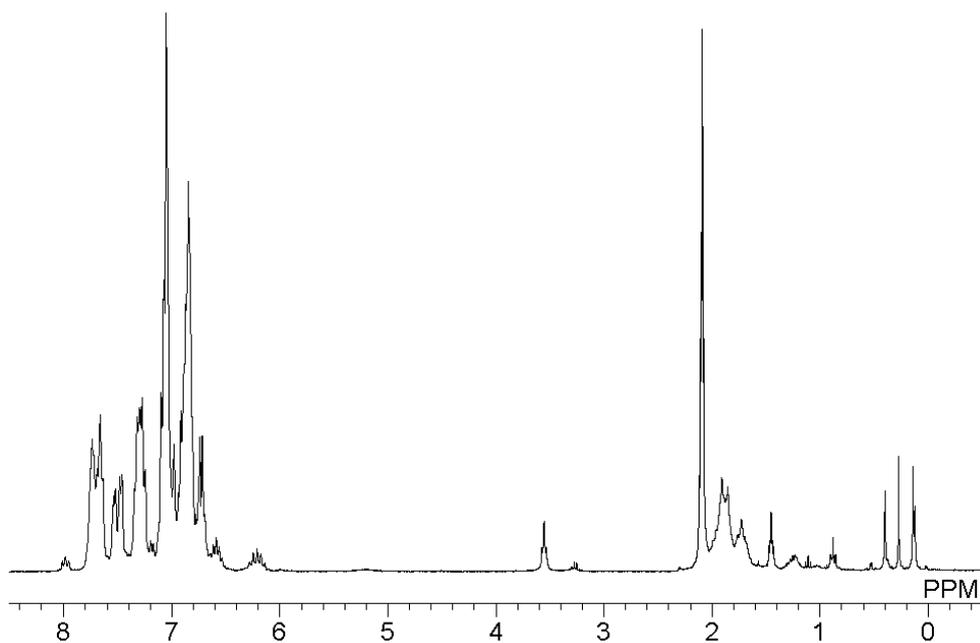


Fig. S6 ^1H NMR spectrum of **4c** in toluene- d_8 at RT.

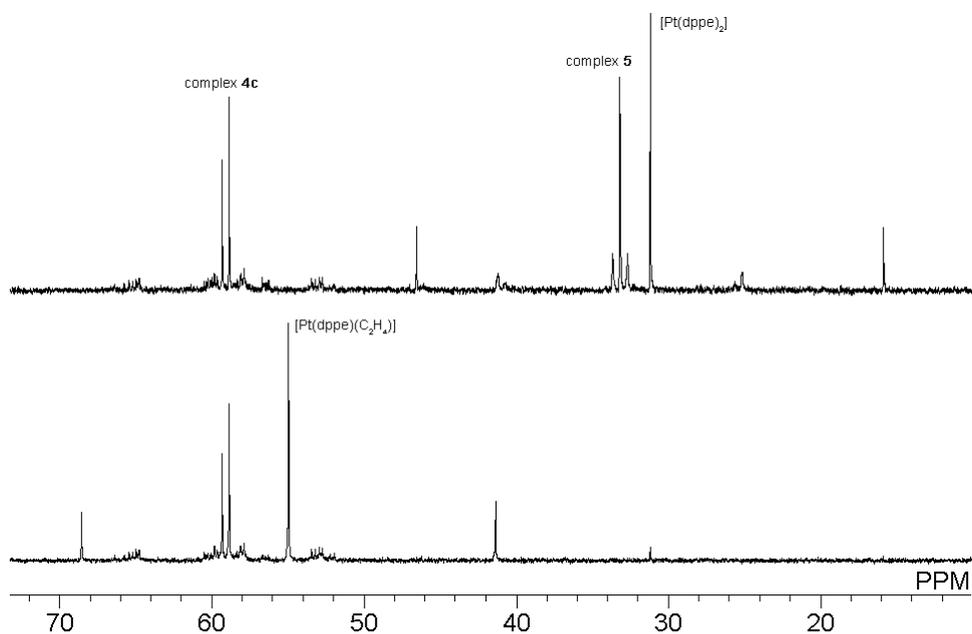


Fig. S7 $^{31}\text{P}\{^1\text{H}\}$ NMR spectral change for the reaction of **4c** with **1** in toluene- d_8 at RT after mixing for 10 min (bottom), which stood at 60 °C for 3 hours (top).