

Supporting Information

Complexes of the Tripodal Phosphine Ligands $\text{PhSi}(\text{XPPH}_2)_3$ ($\text{X} = \text{CH}_2, \text{O}$): Synthesis, Structure and Catalytic Activity in the Hydroboration of CO_2

Alicia Aloisi, Jean-Claude Berthet,* Caroline Genre, Pierre Thuéry and Thibault Cantat*

NIMBE, CEA, CNRS, Université Paris-Saclay, CEA Saclay 91191 Gif-sur-Yvette, France.

ESI: NMR spectra

Content :

Figure S1: ^1H NMR of 3 in d_3 -acetonitrile	2
Figure S2: $^{13}\text{C}\{^1\text{H}\}$ NMR of 3 in d_3 -acetonitrile.....	2
Figure S3: $^{31}\text{P}\{^1\text{H}\}$ NMR of 3 in d_3 -acetonitrile.....	3
Figure S4: ^1H NMR of 3' in d_3 -acetonitrile	3
Figure S5: $^{13}\text{C}\{^1\text{H}\}$ NMR of 3' in d_3 -acetonitrile.....	4
Figure S6: $^{31}\text{P}\{^1\text{H}\}$ NMR of 3' in d_3 -acetonitrile.....	4
Figure S7: ^1H NMR of 4 in d_8 -THF	5
Figure S8: ^1H NMR of 4' in d_8 -THF	6
Figure S9: ^1H NMR of 5 in d_2 - CH_2Cl_2	7
Figure S10: $^{13}\text{C}\{^1\text{H}\}$ NMR of 5 in d_2 - CH_2Cl_2	8
Figure S11: $^{31}\text{P}\{^1\text{H}\}$ NMR of 5 in d_2 - CH_2Cl_2	9
Figure S12: ^1H NMR of 5'' in d_8 -THF	9
Figure S13: $^{31}\text{P}\{^1\text{H}\}$ NMR of 5'' in d_8 -THF	10
Figure S14: ^1H NMR of 5' in d_2 - CH_2Cl_2	10
Figure S15: $^{13}\text{C}\{^1\text{H}\}$ NMR of 5' in d_2 - CH_2Cl_2	11
Figure S16: $^{31}\text{P}\{^1\text{H}\}$ NMR of 5' in d_2 - CH_2Cl_2	11
Figure S17: ^1H NMR of entry 4 (Table 4) in d_8 -THF	12

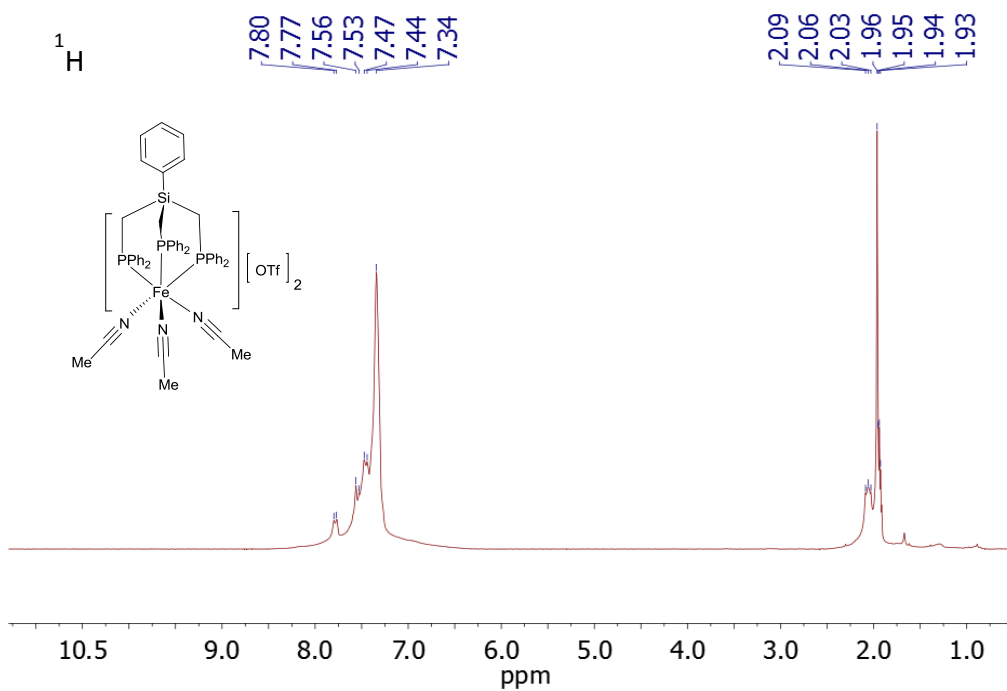


Figure S1: ¹H NMR of **3** in *d*₃-acetonitrile

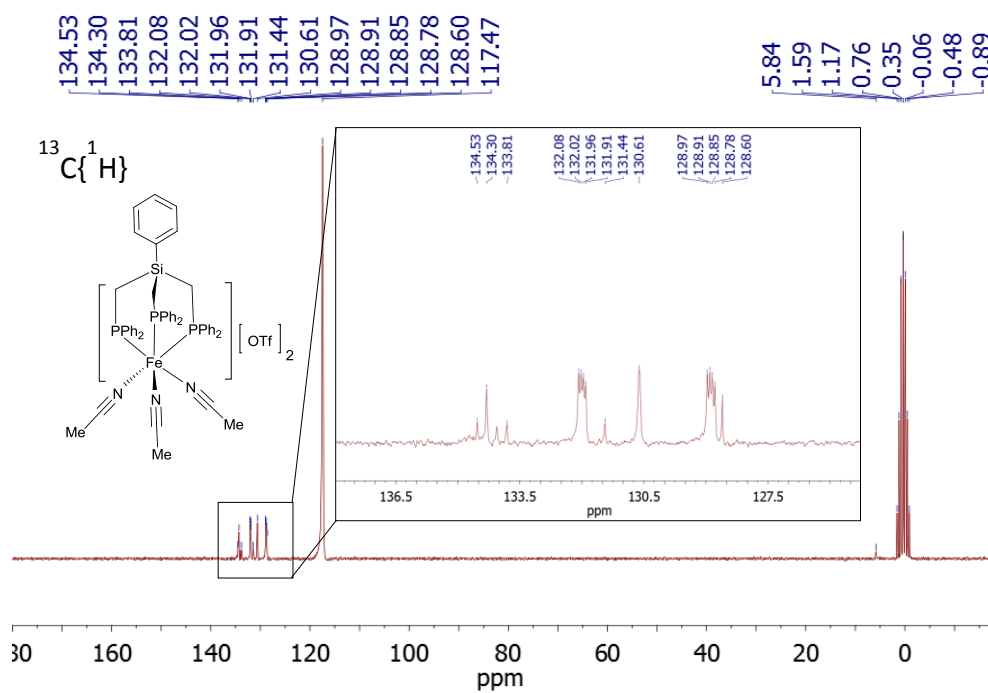


Figure S2: ¹³C {¹H} NMR of **3** in *d*₃-acetonitrile

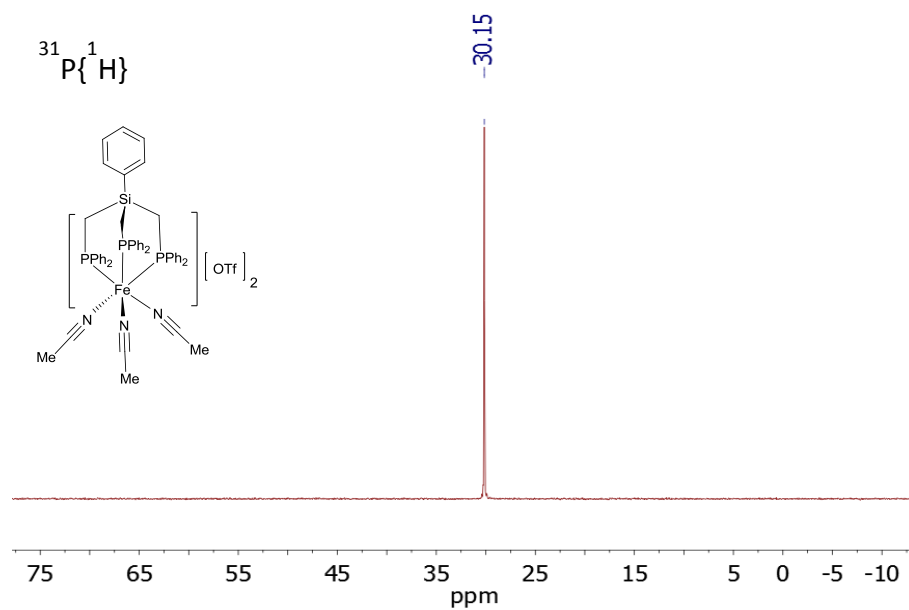


Figure S3: $^{31}\text{P}\{^1\text{H}\}$ NMR of **3** in d_3 -acetonitrile

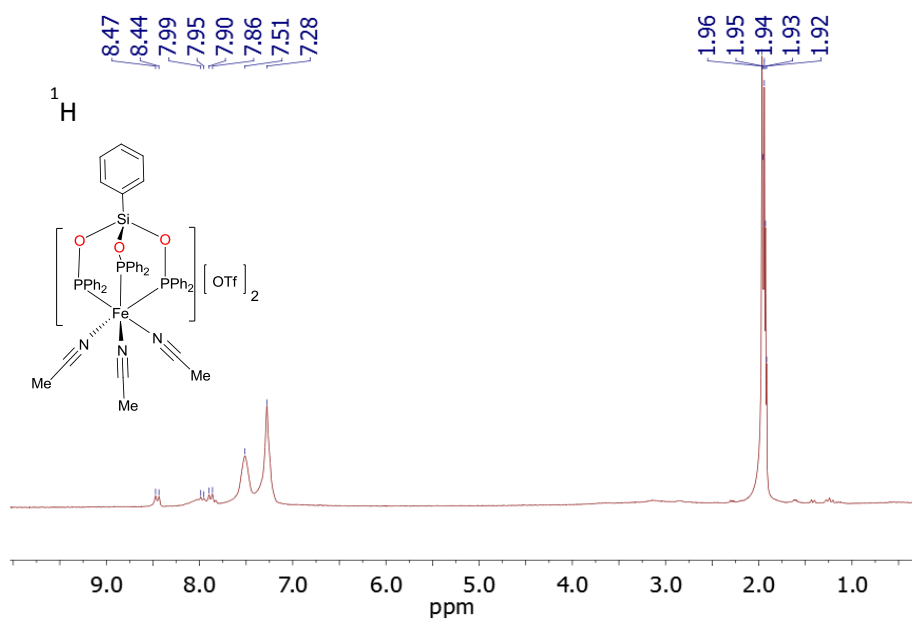


Figure S4: ^1H NMR of **3'** in d_3 -acetonitrile

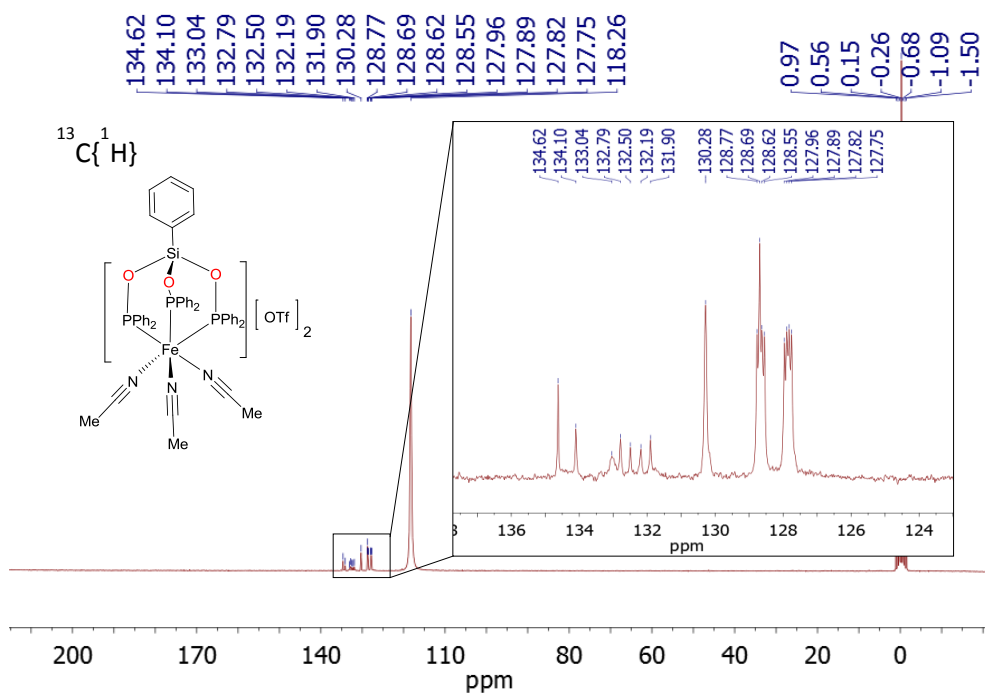


Figure S5: $^{13}\text{C}\{^1\text{H}\}$ NMR of **3'** in d_3 -acetonitrile

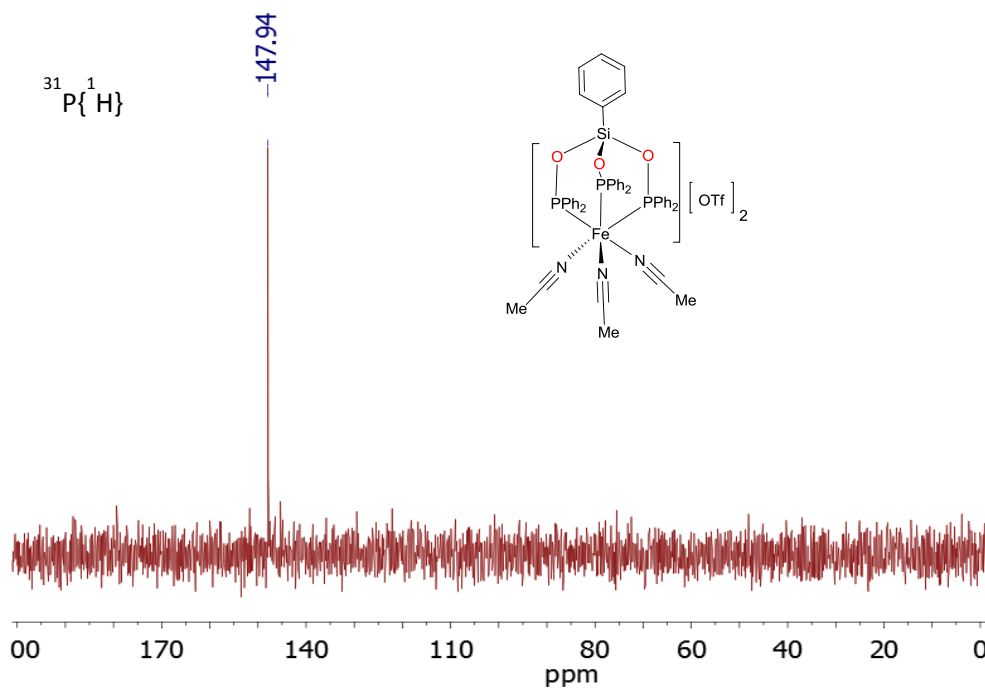


Figure S6: $^{31}\text{P}\{^1\text{H}\}$ NMR of **3'** in d_3 -acetonitrile

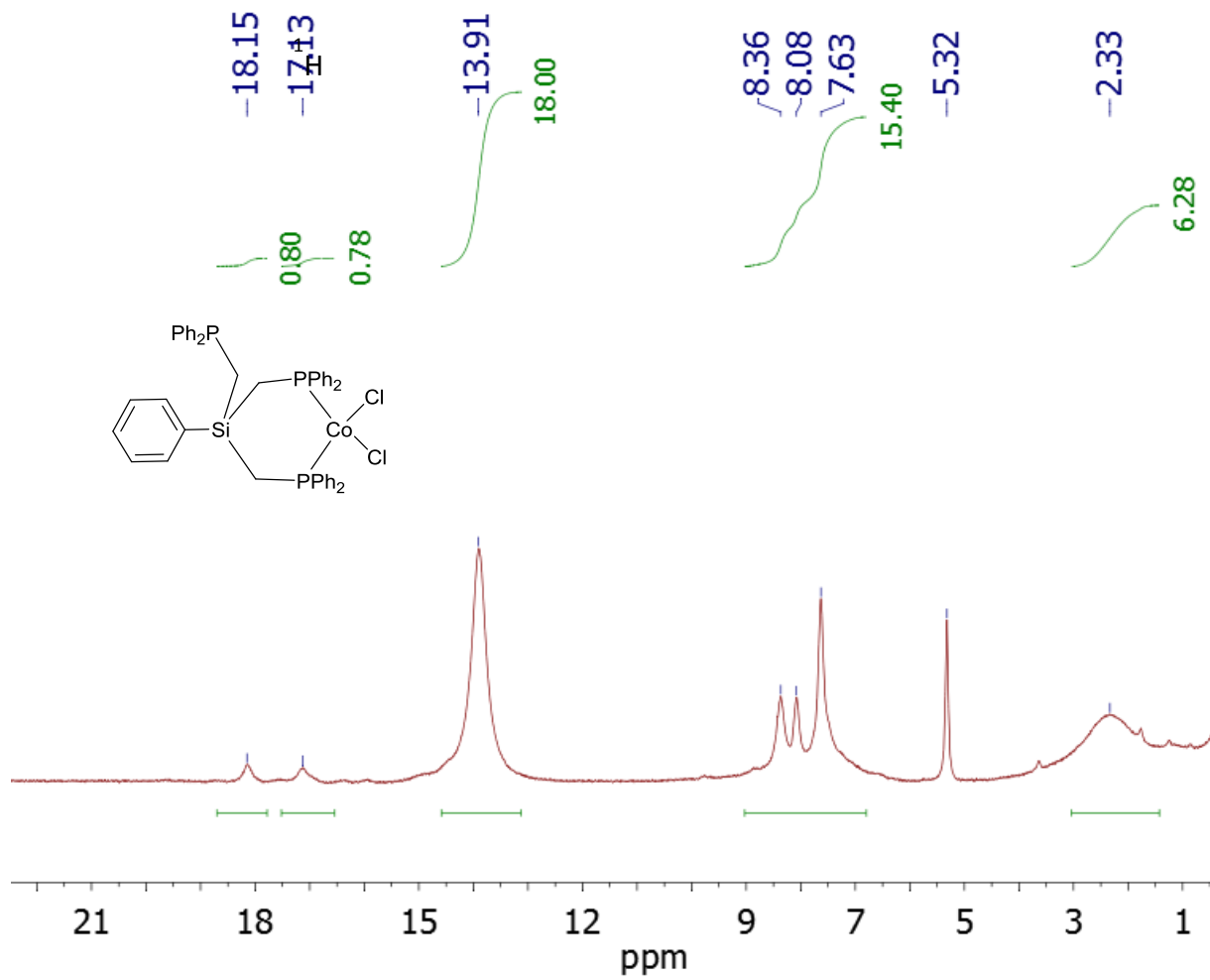


Figure S7: ^1H NMR of 4 in d_8 -THF

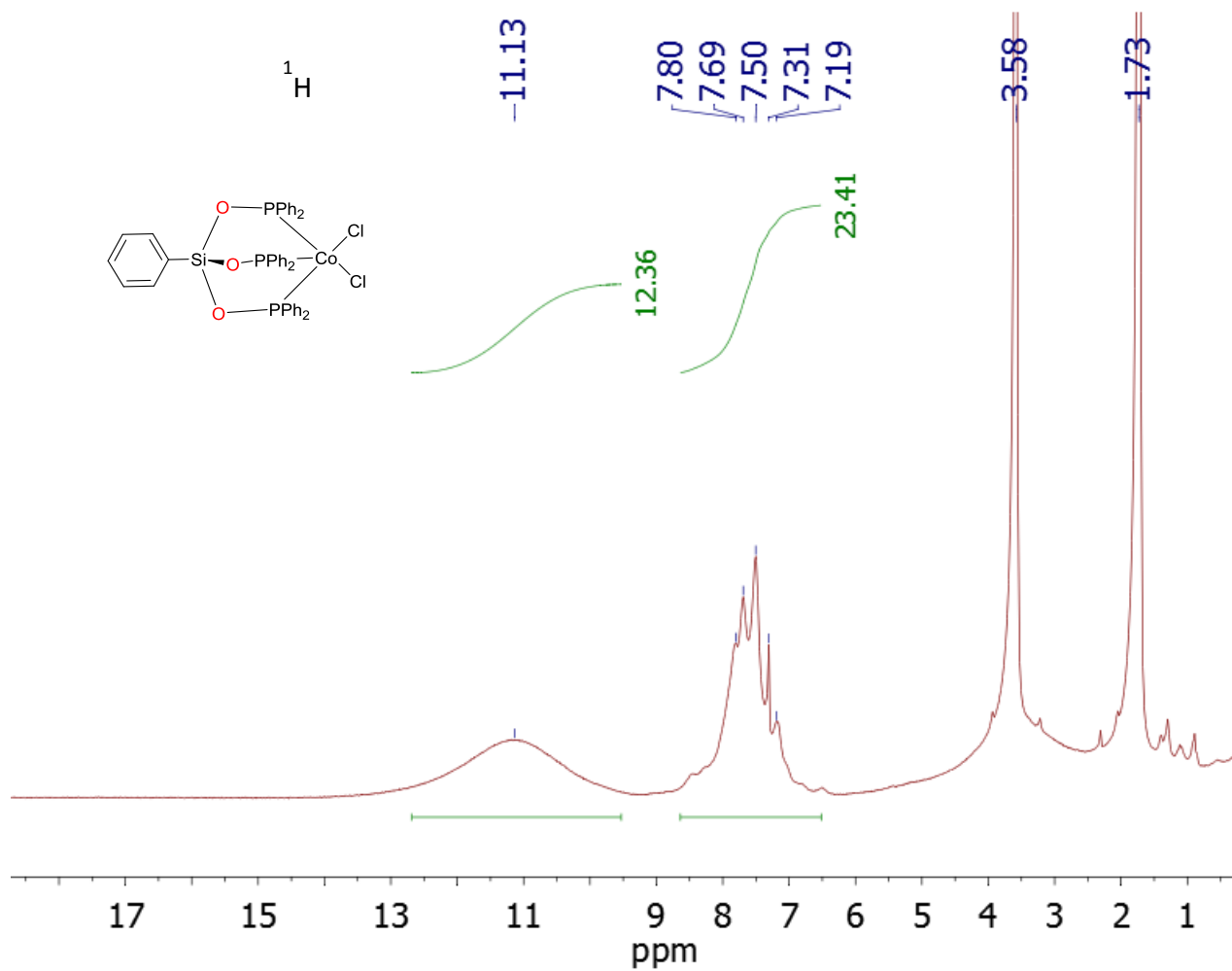


Figure S8: ¹H NMR of 4' in *d*₈-THF

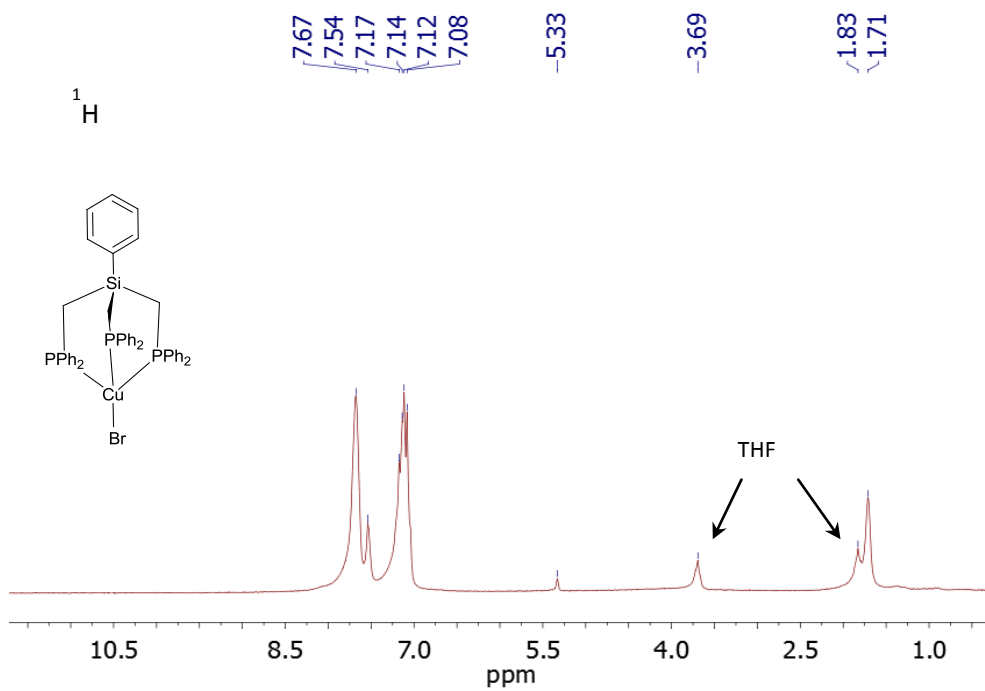


Figure S9: ¹H NMR of 5 in *d*₂-CH₂Cl₂

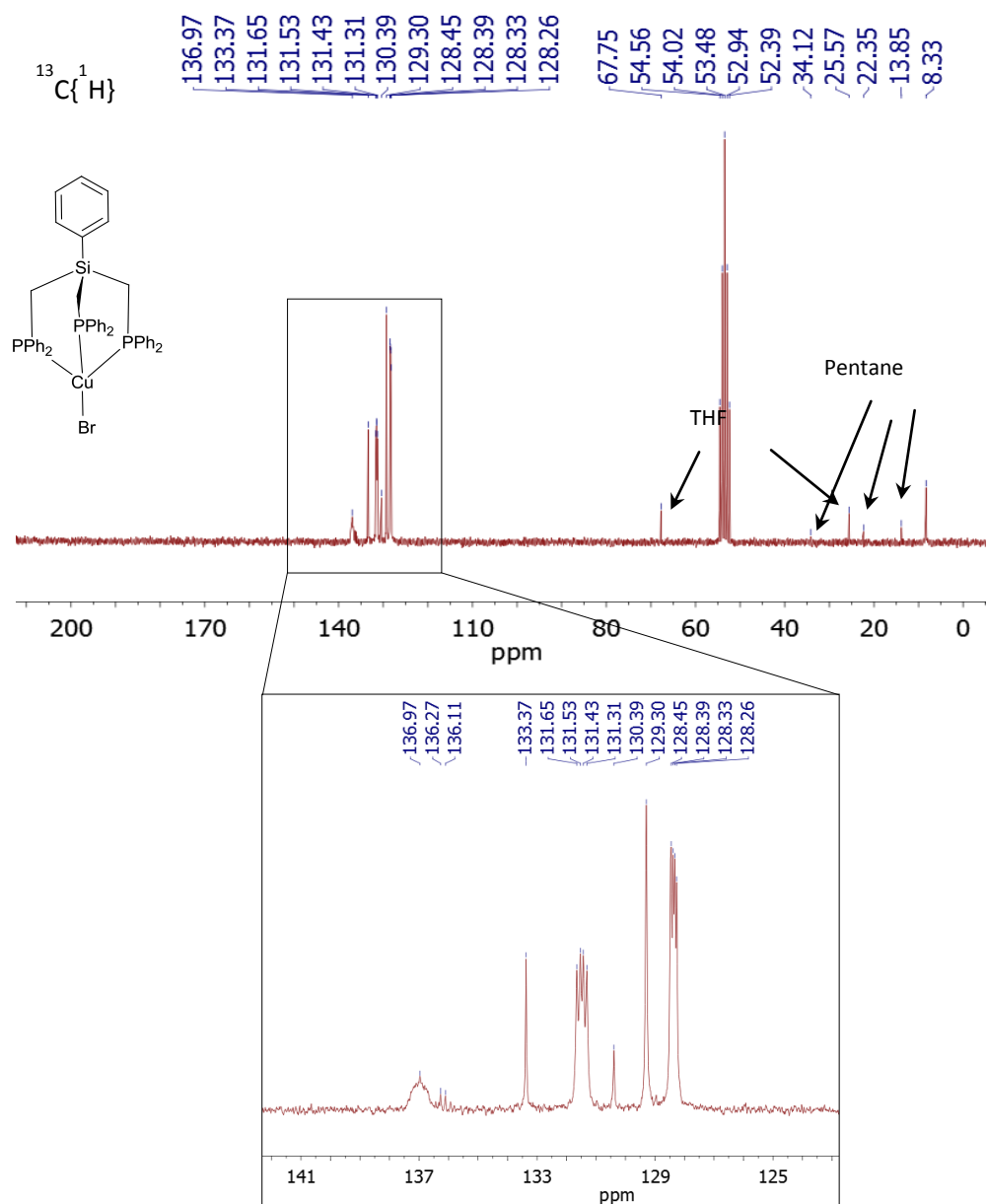


Figure S10: $^{13}\text{C}\{^1\text{H}\}$ NMR of 5 in $d_2\text{-CH}_2\text{Cl}_2$

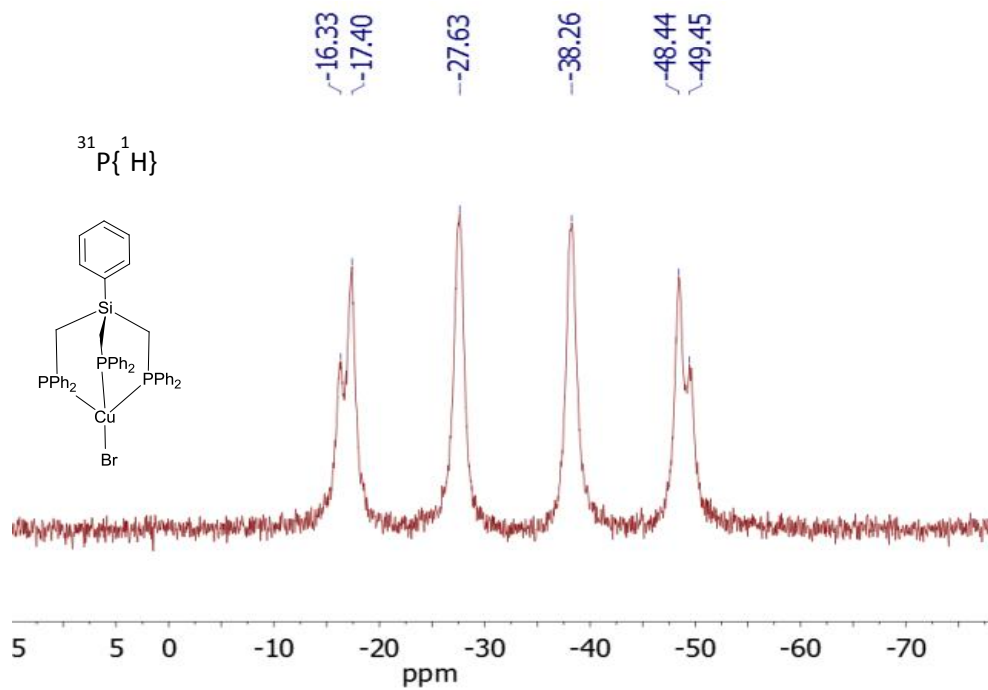


Figure S11: $^{31}\text{P}\{^1\text{H}\}$ NMR of 5 in $d_2\text{-CH}_2\text{Cl}_2$

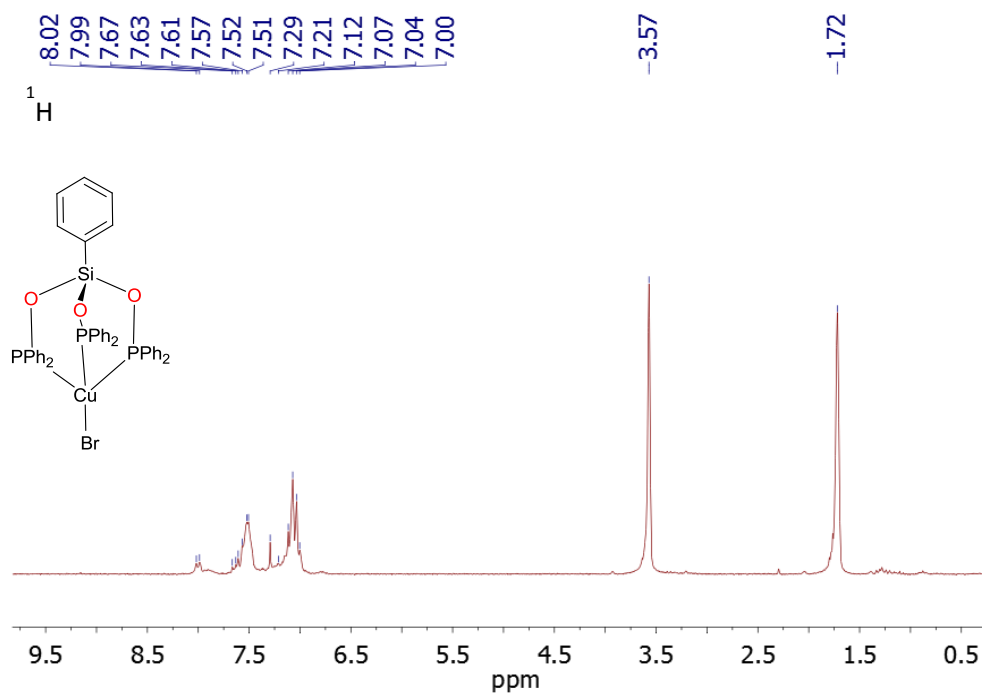


Figure S12: ^1H NMR of 5'' in $d_8\text{-THF}$

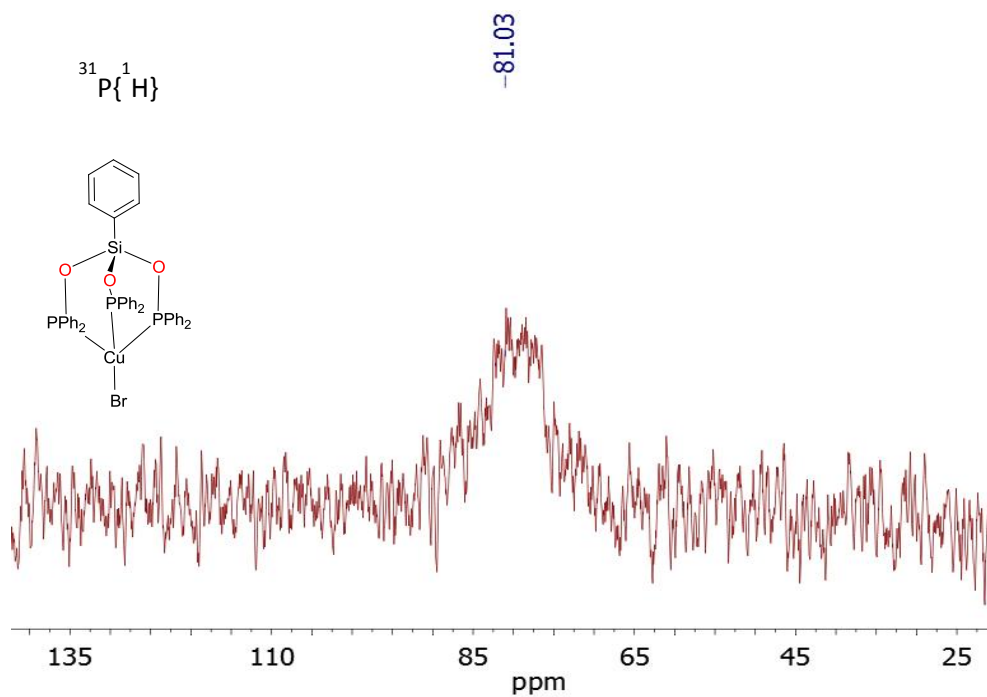


Figure S13: $^{31}\text{P}\{^1\text{H}\}$ NMR of **5''** in d_8 -THF

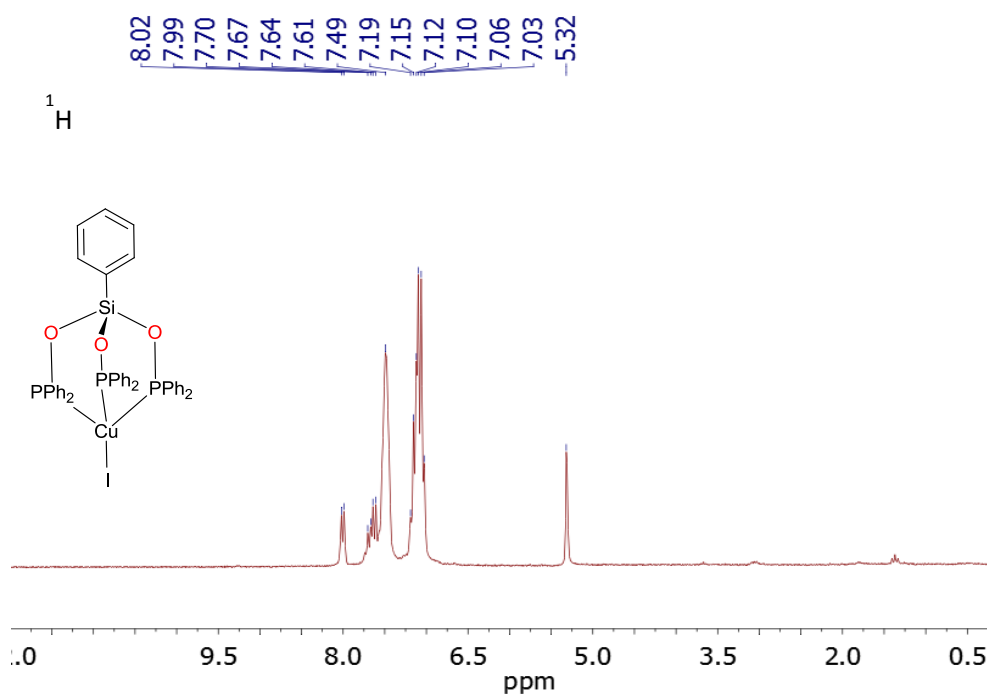


Figure S14: ^1H NMR of **5'** in d_2 - CH_2Cl_2

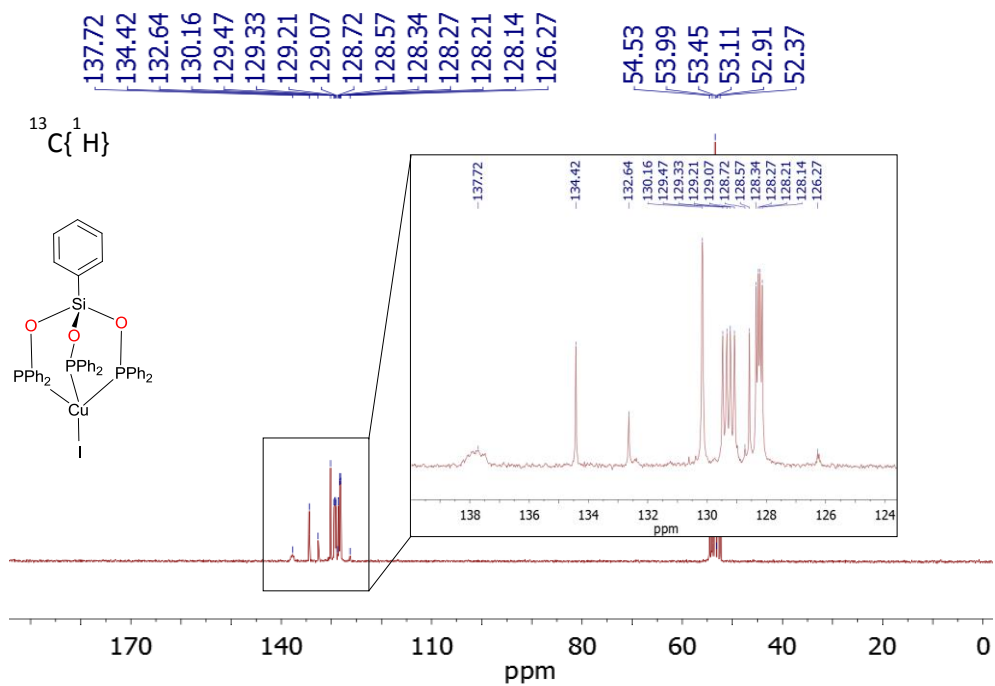


Figure S15: $^{13}\text{C}\{^1\text{H}\}$ NMR of **5'** in $d_2\text{-CH}_2\text{Cl}_2$

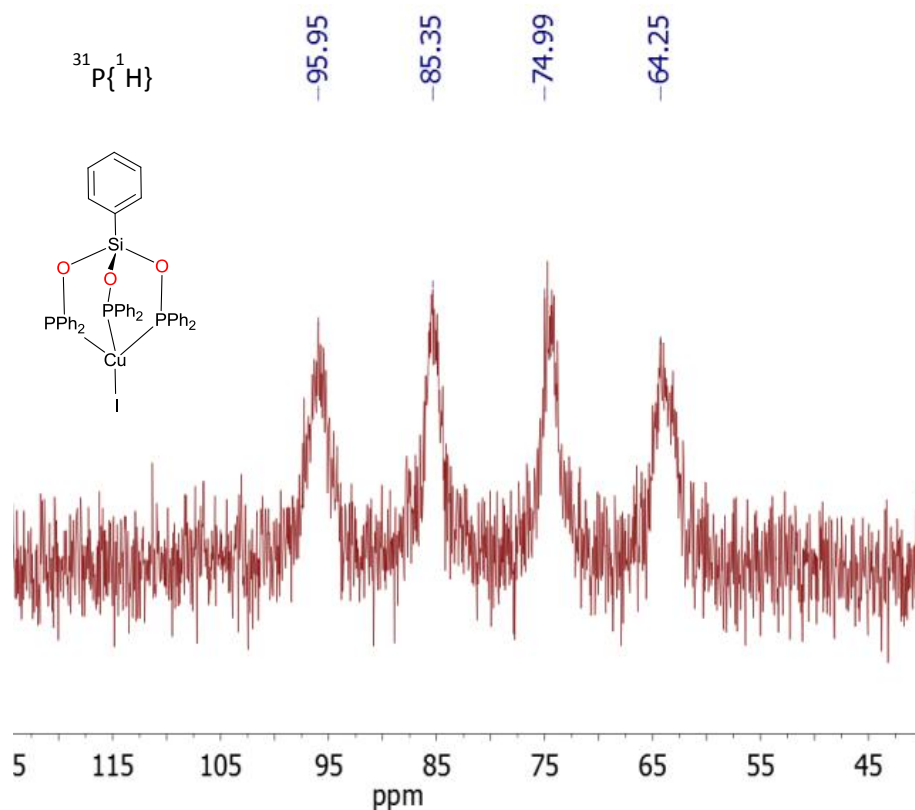


Figure S16: $^{31}\text{P}\{^1\text{H}\}$ NMR of **5'** in $d_2\text{-CH}_2\text{Cl}_2$

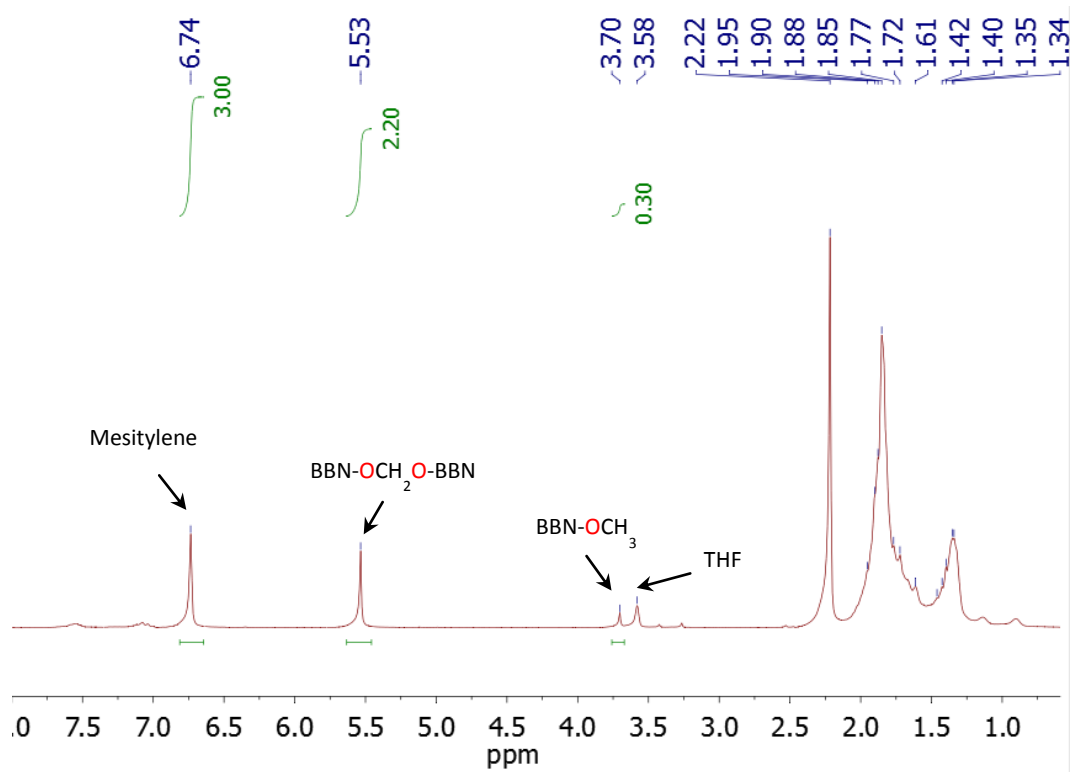


Figure S17: ¹H NMR for catalytic run of entry 4 (Table 4) in *d*₆-THF