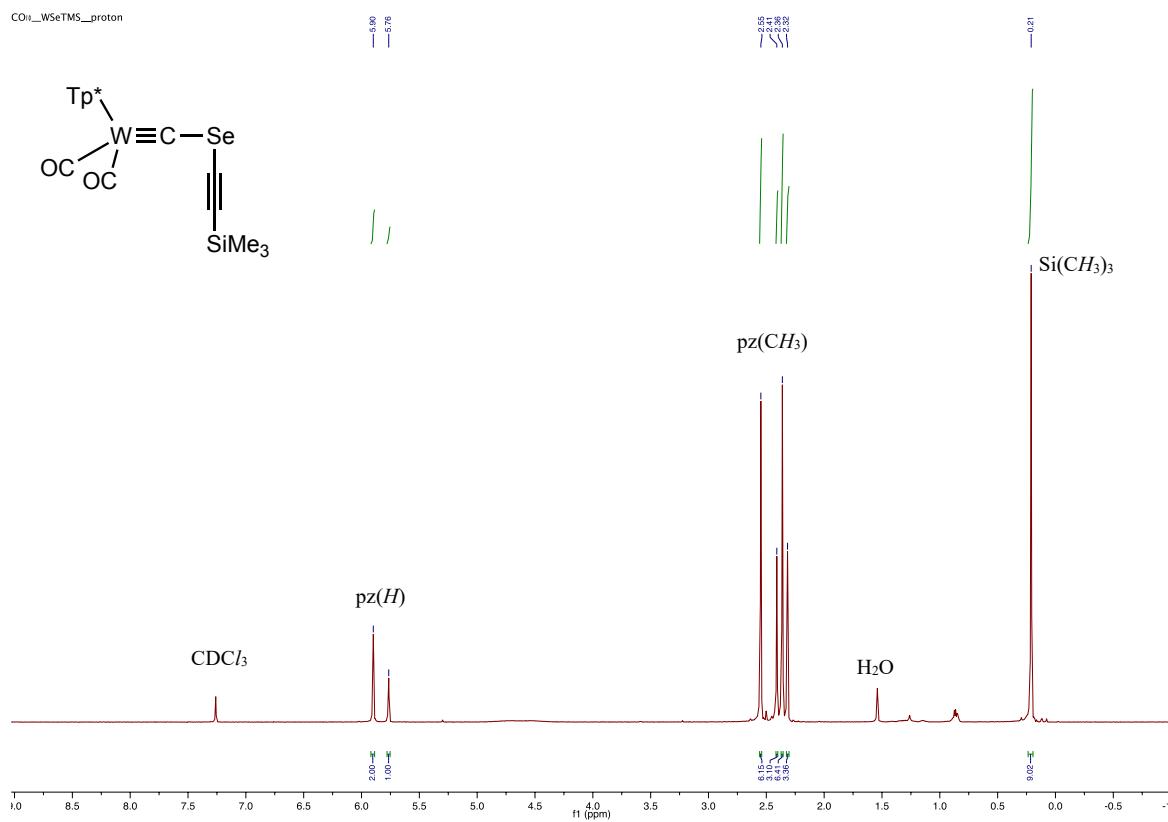
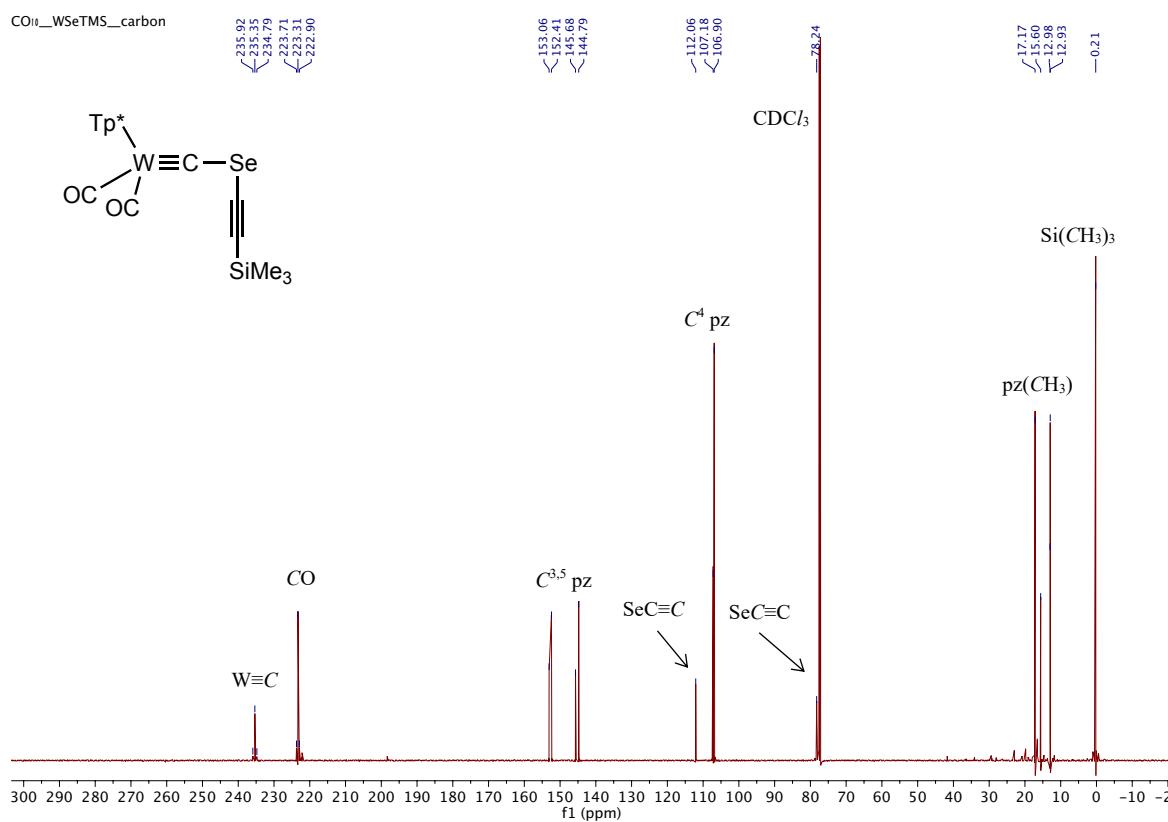
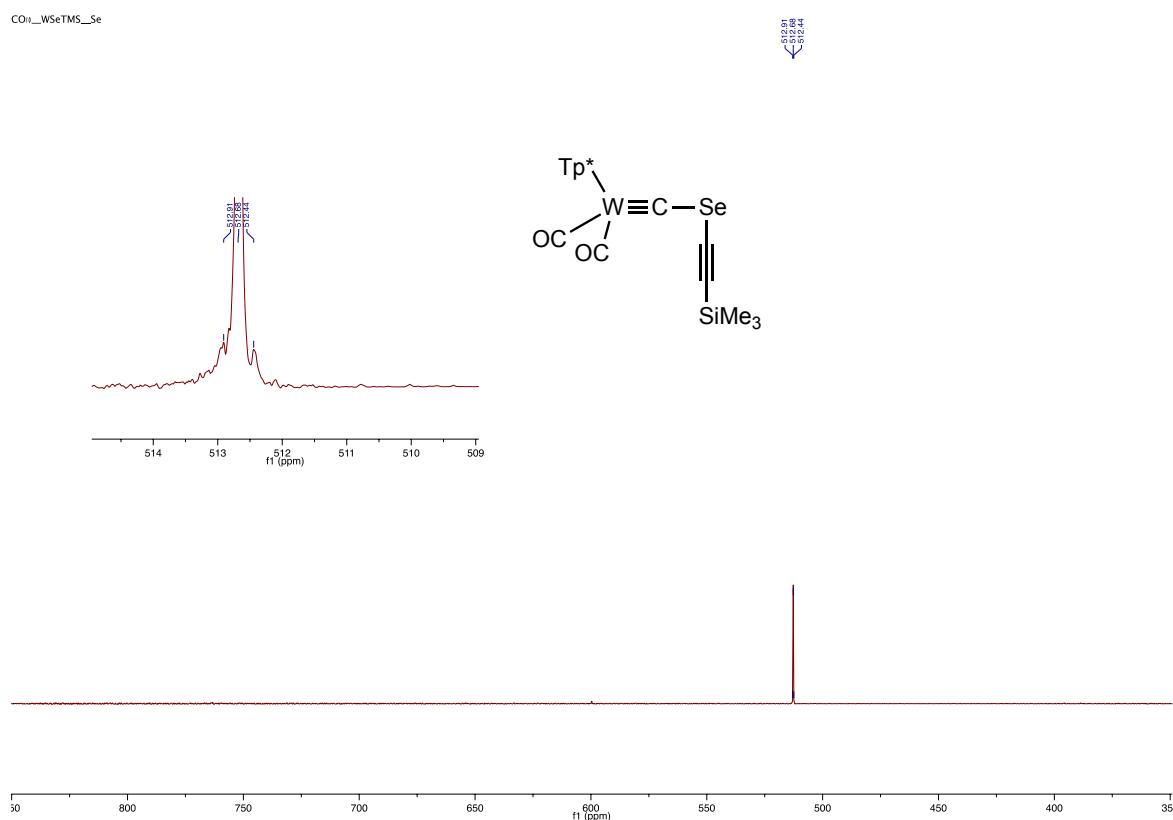
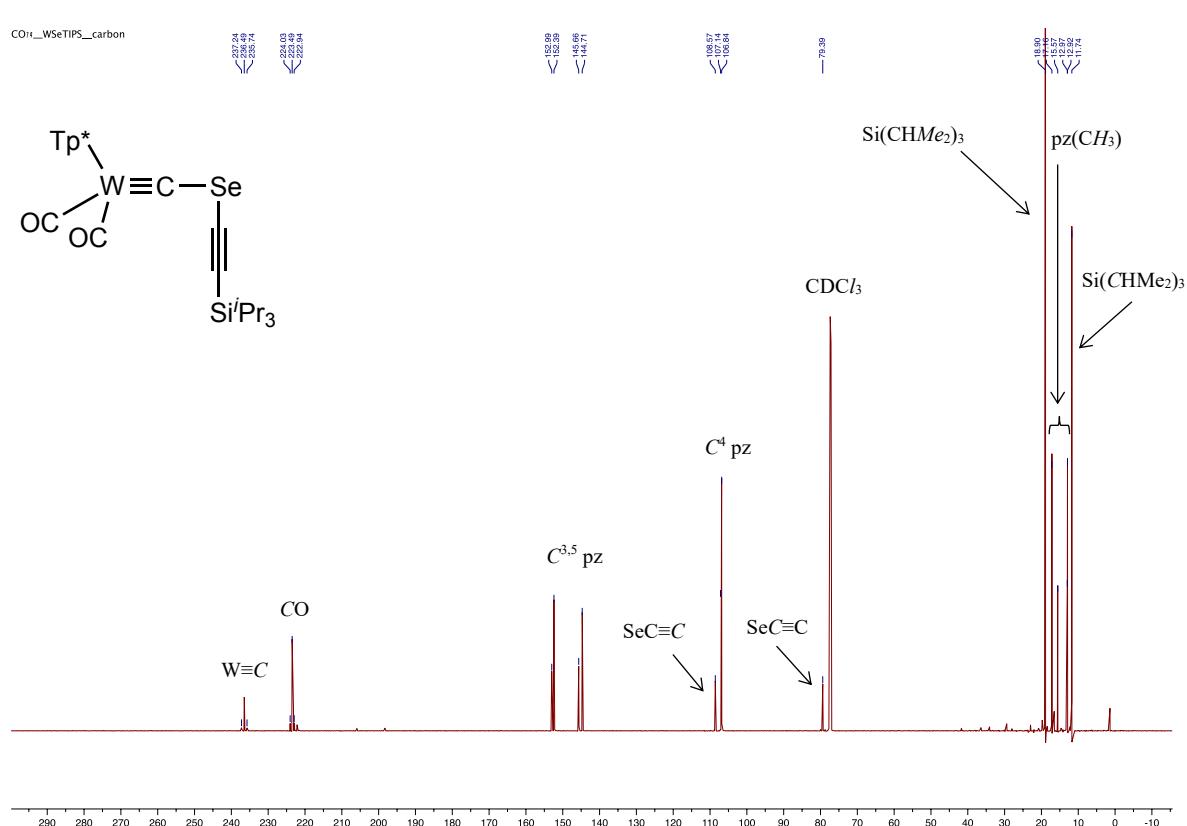
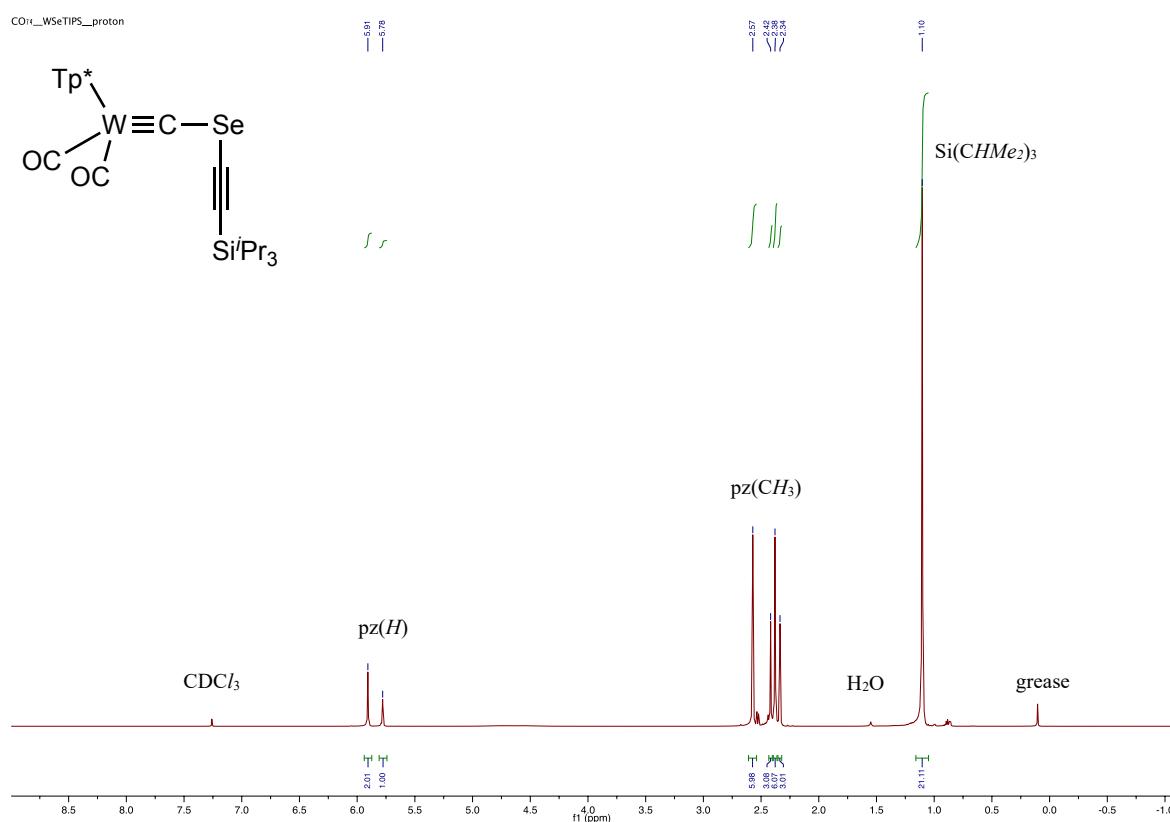
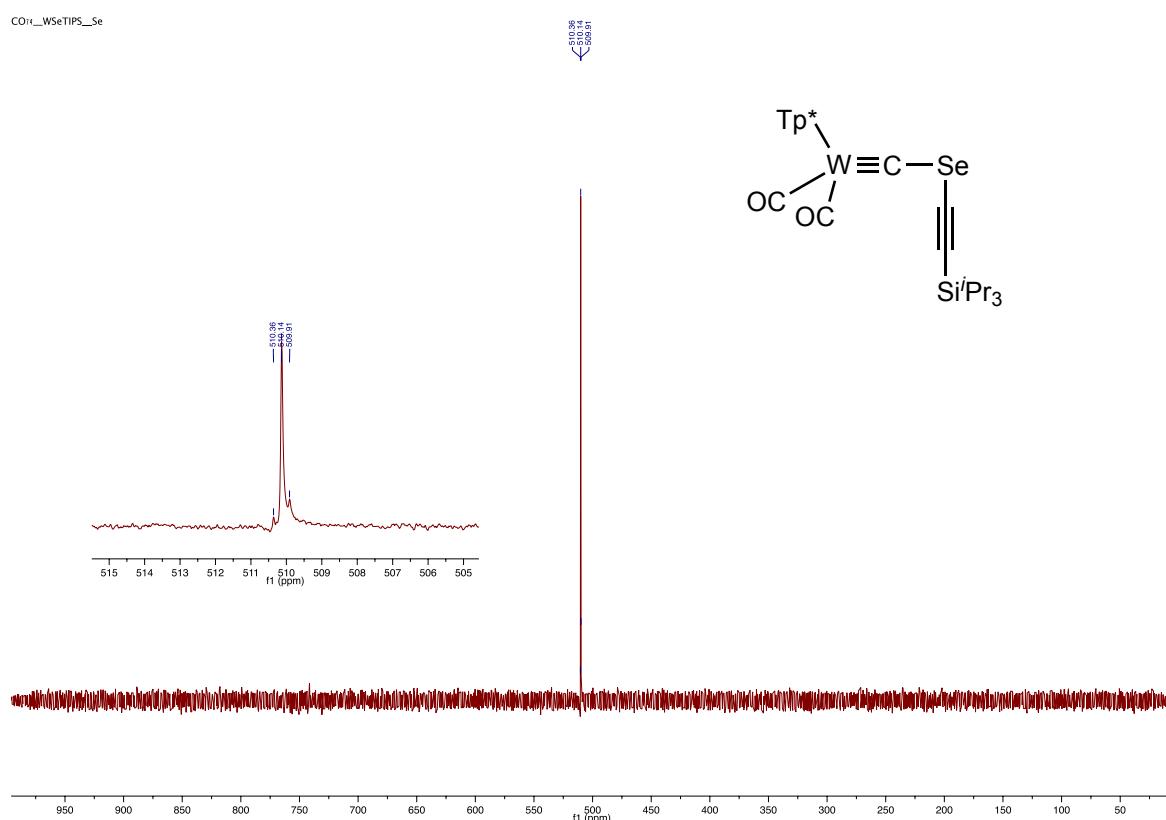


ESI – Chapter 2

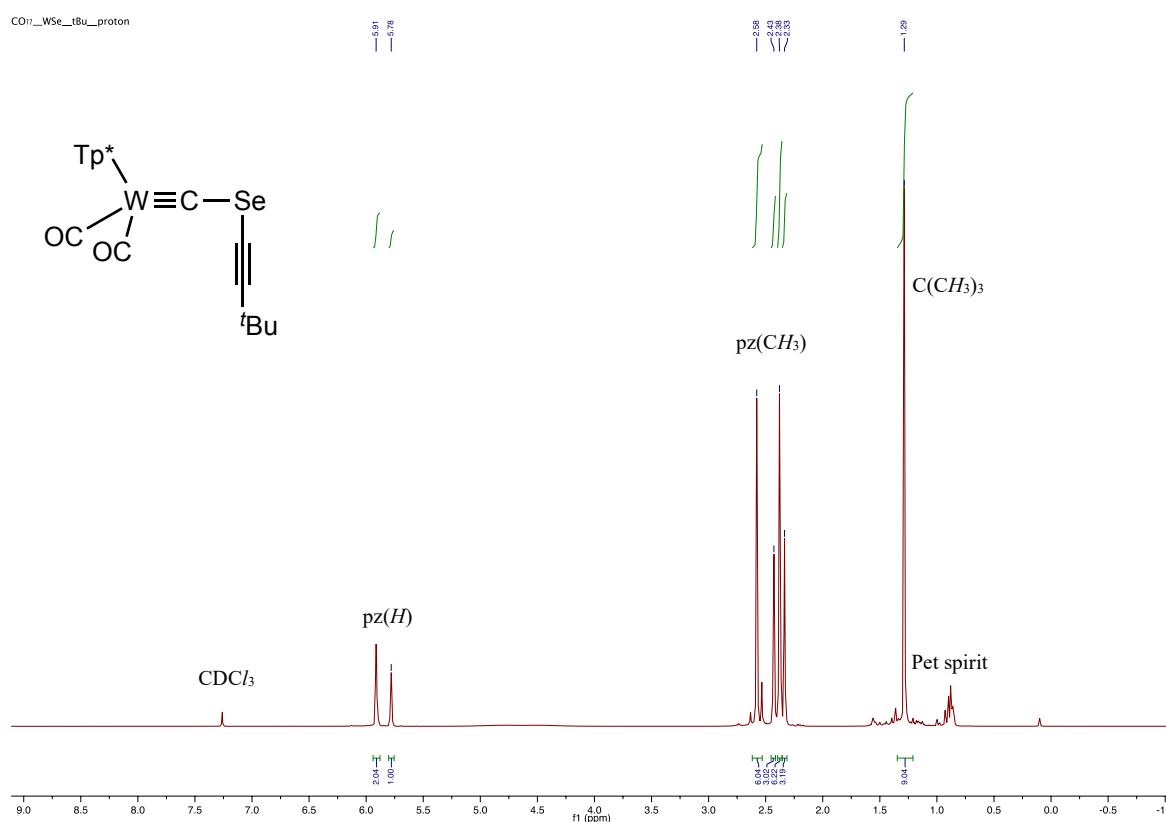
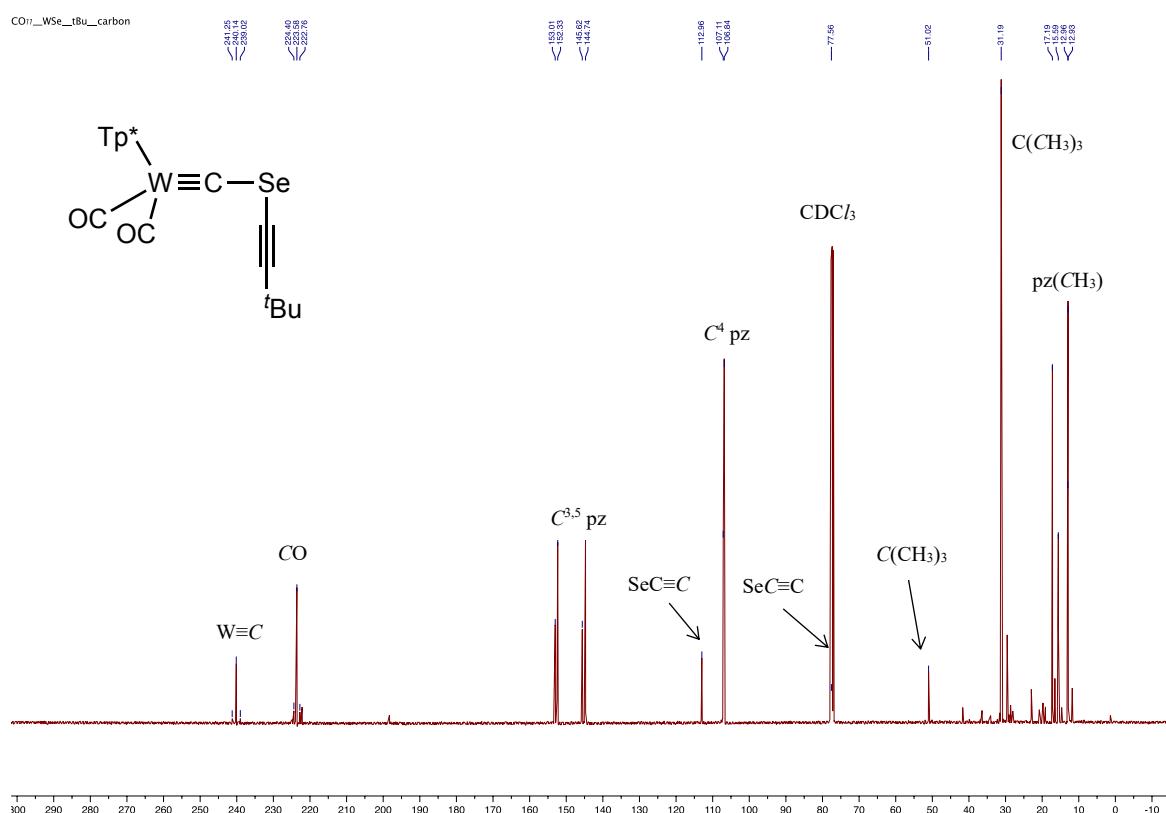
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 2.1.¹³C{¹H} NMR spectrum (201 MHz, CDCl₃, 25°C, δ) of compound 2.1.

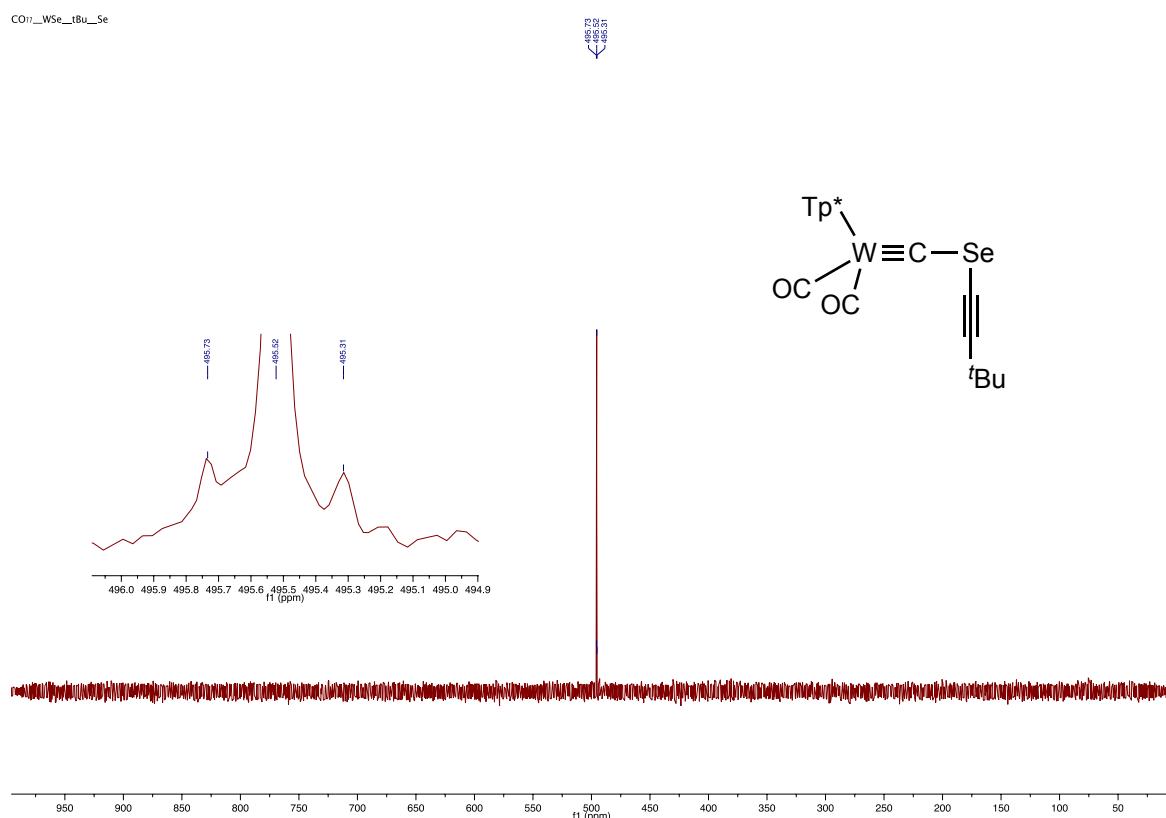


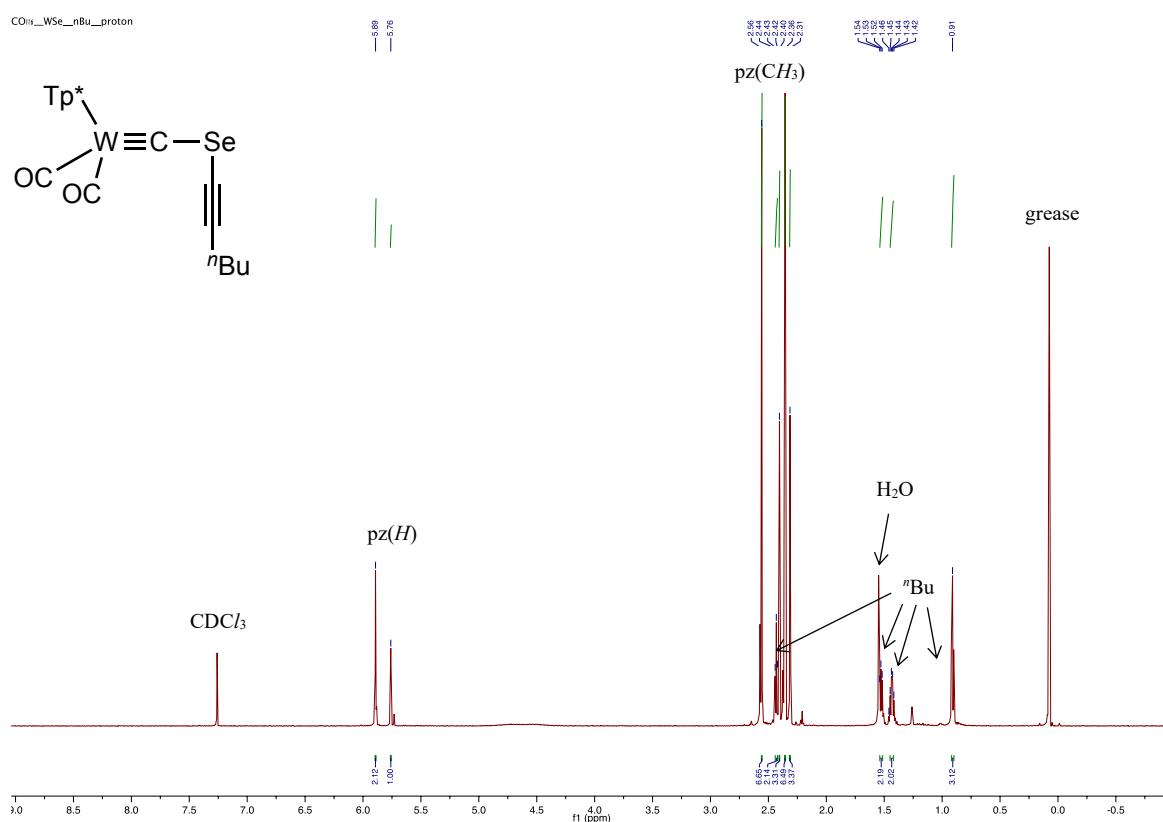
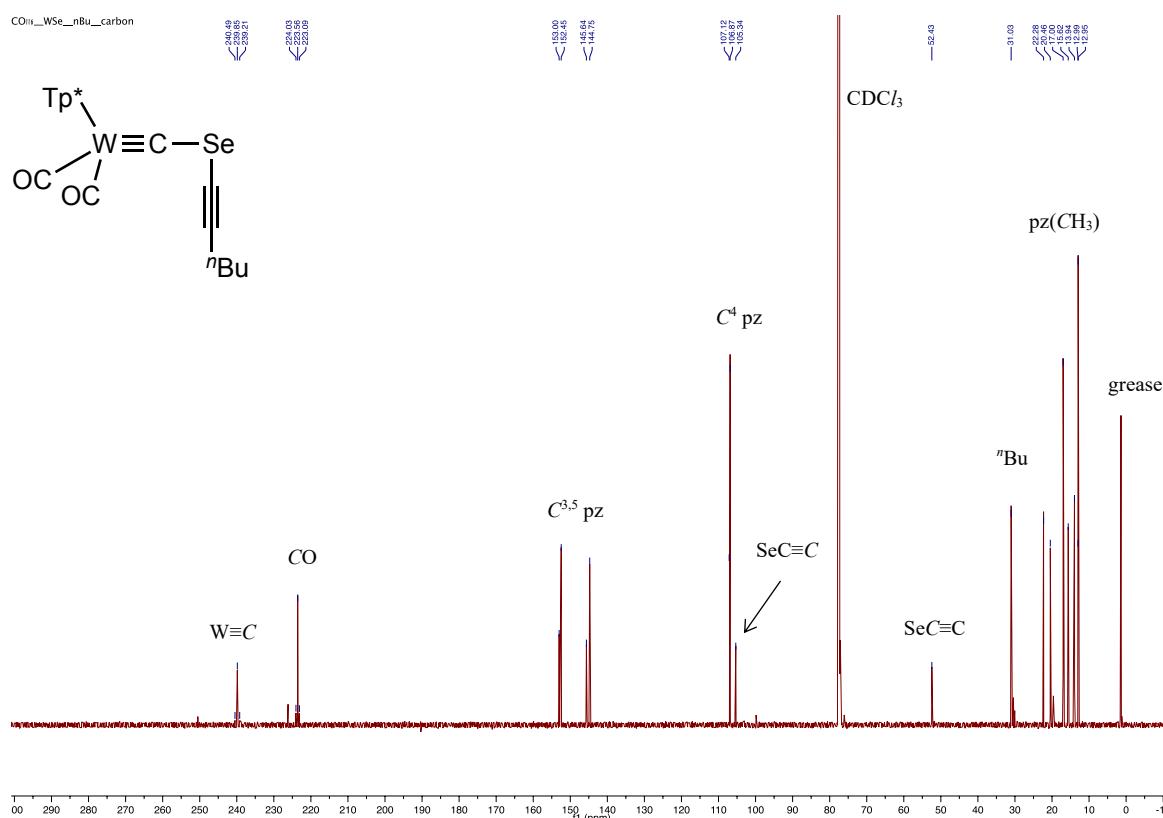


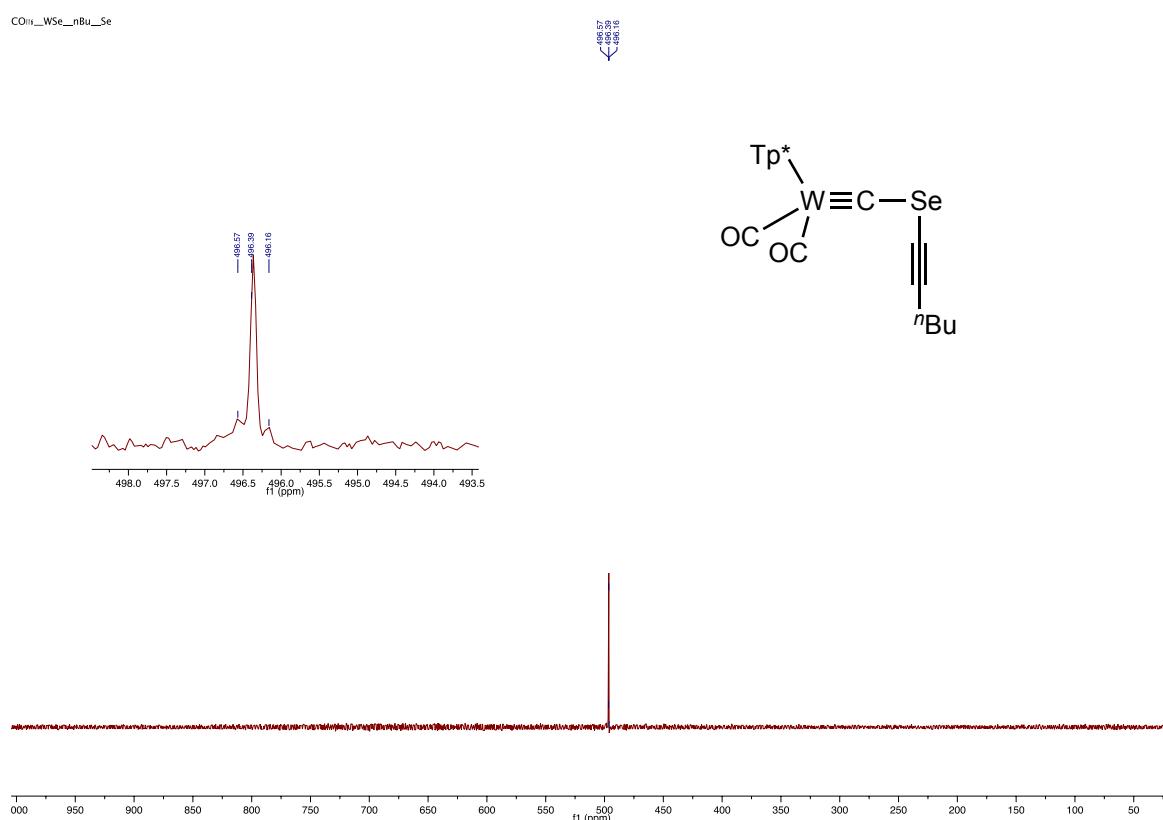


⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 2.2.

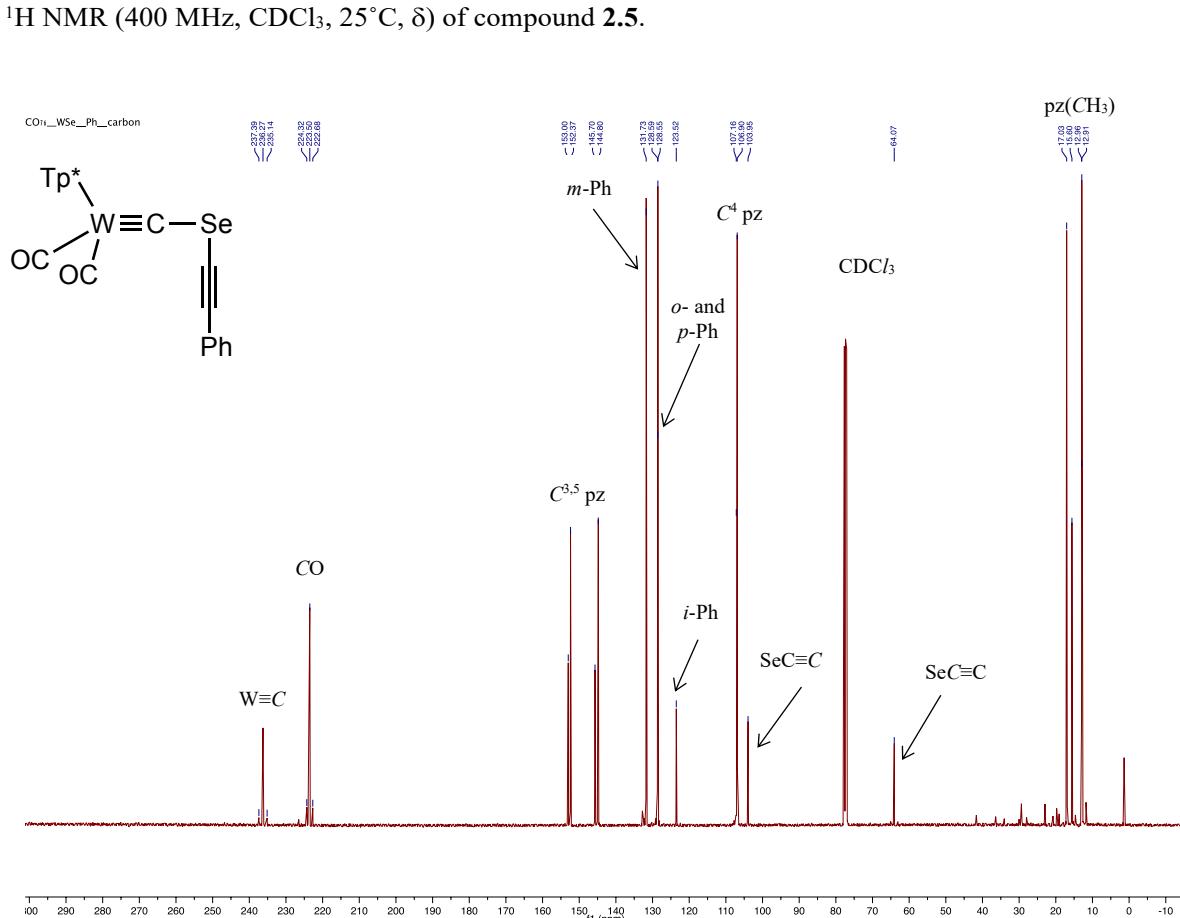
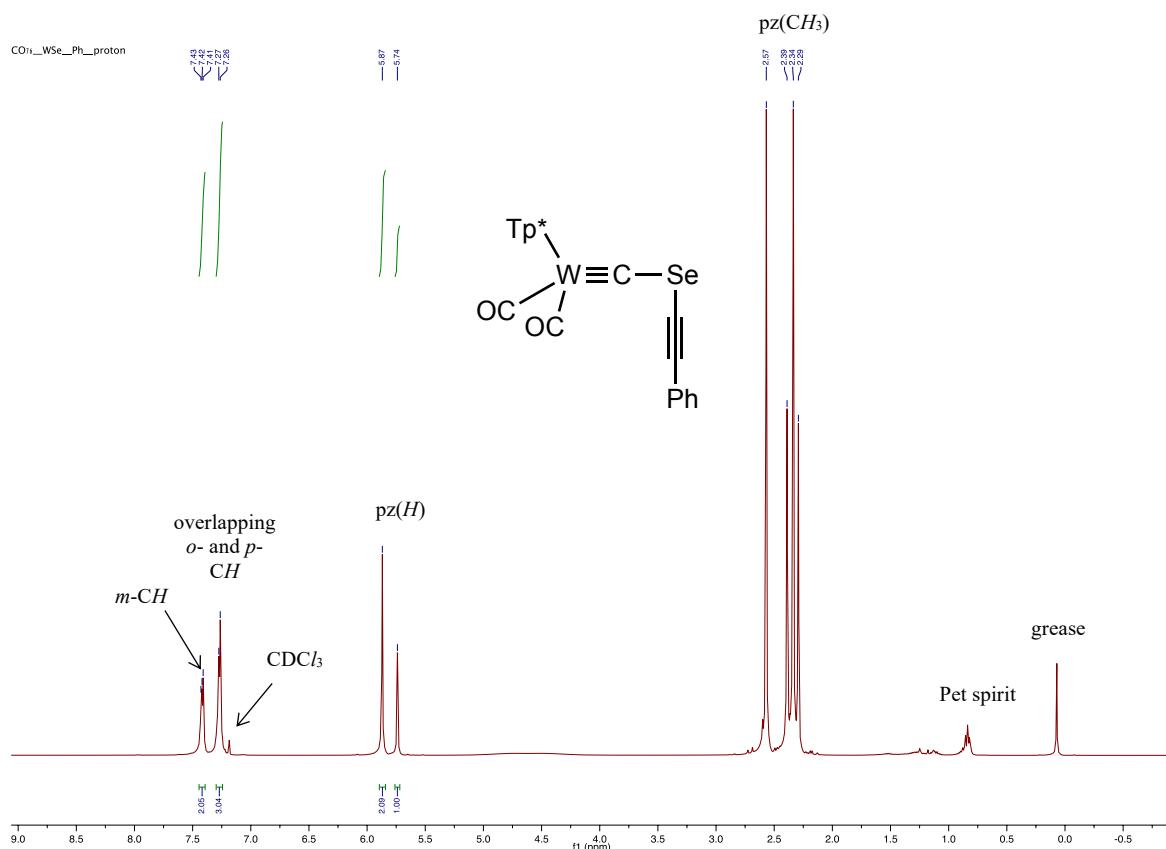
 ^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 2.3. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound 2.3.

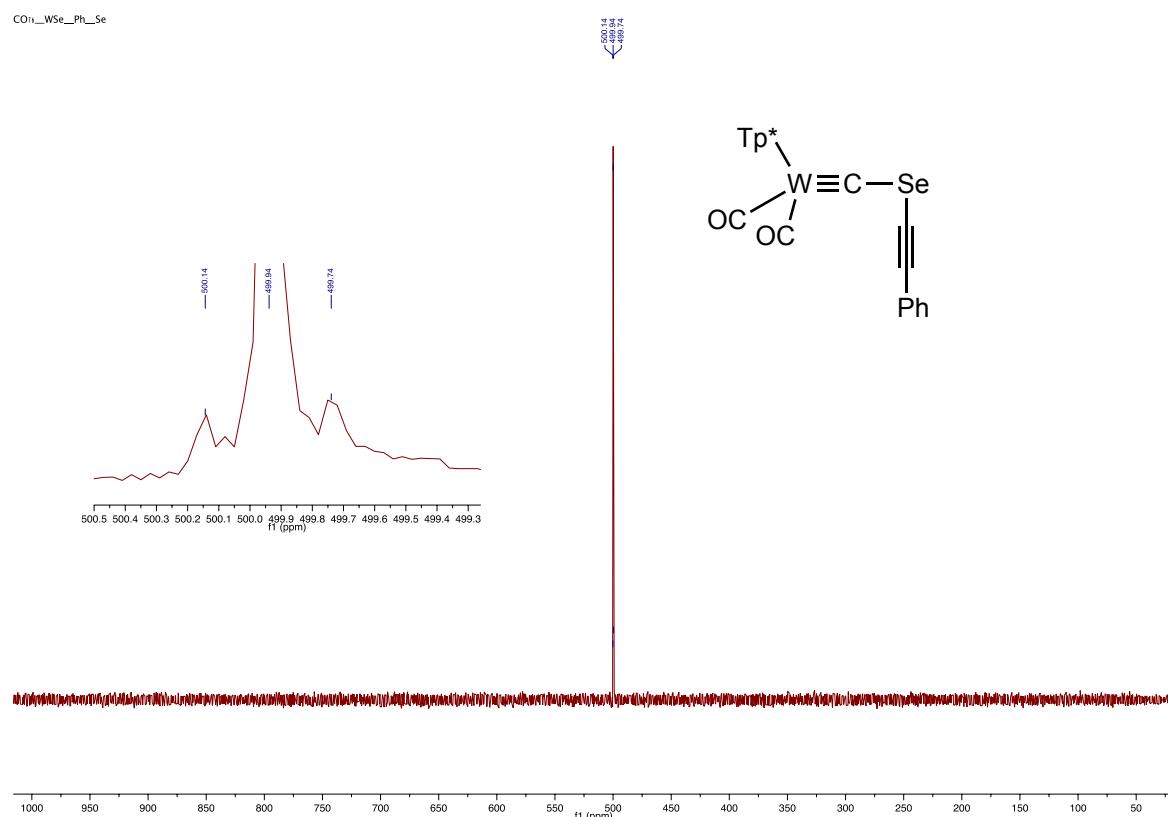


 ^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.4. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.4.

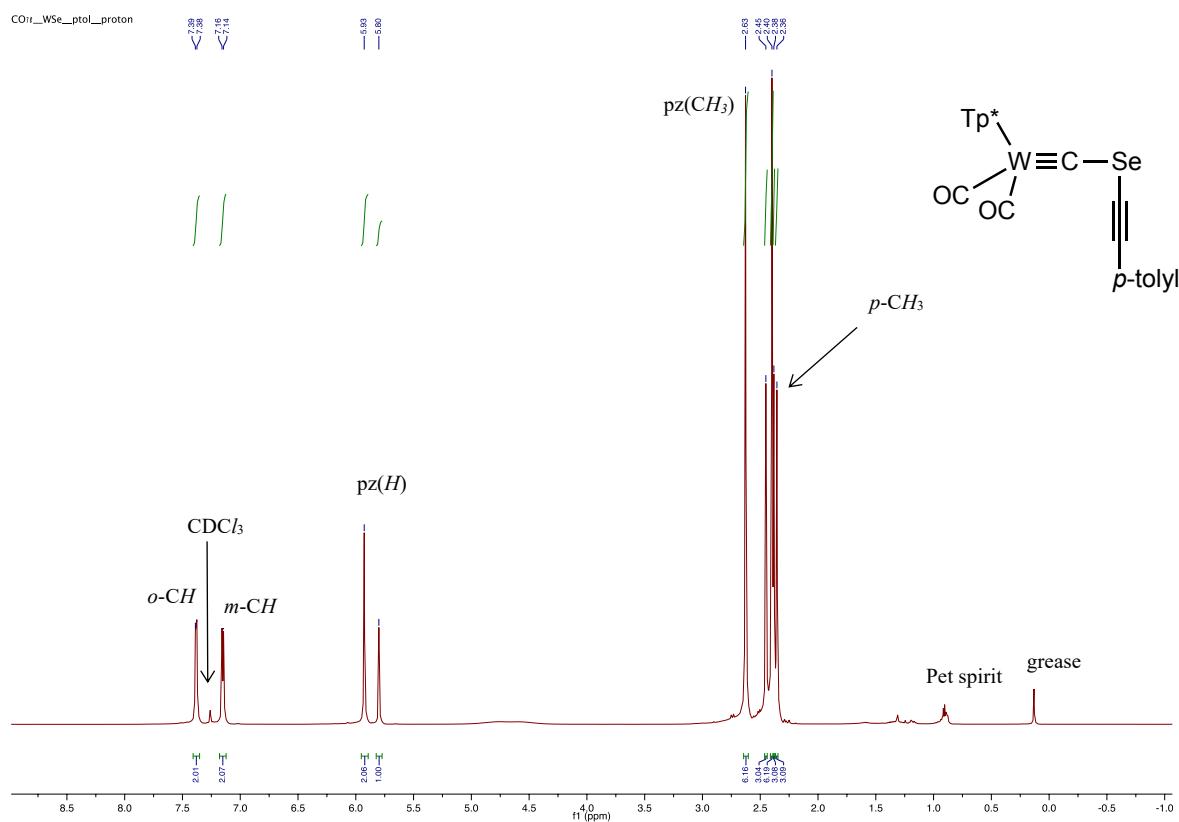
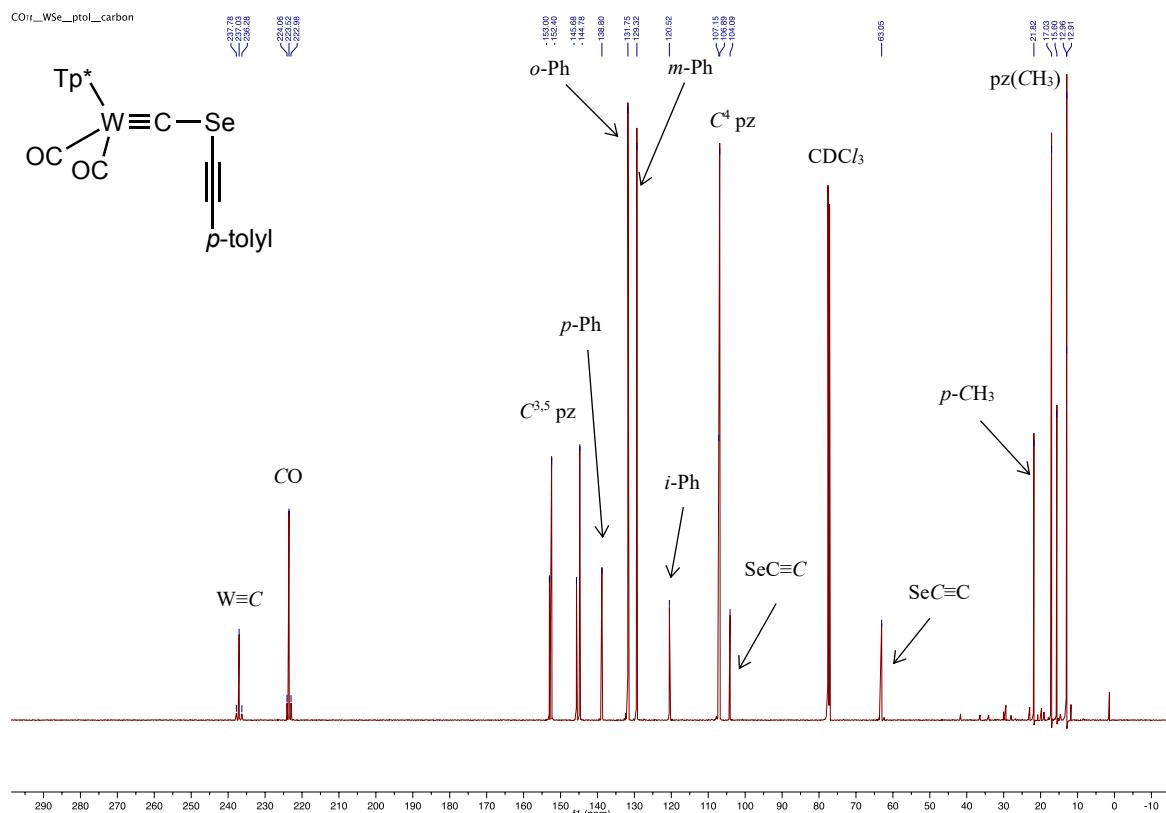


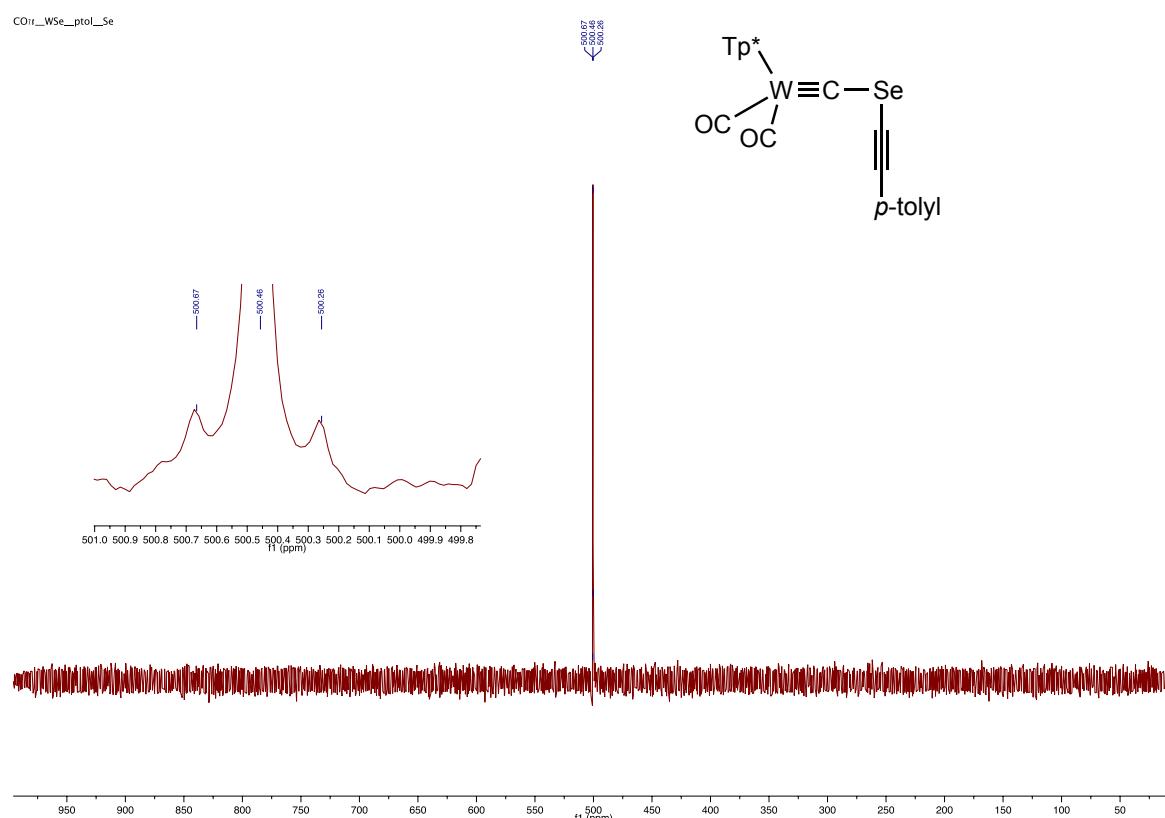
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 2.4.



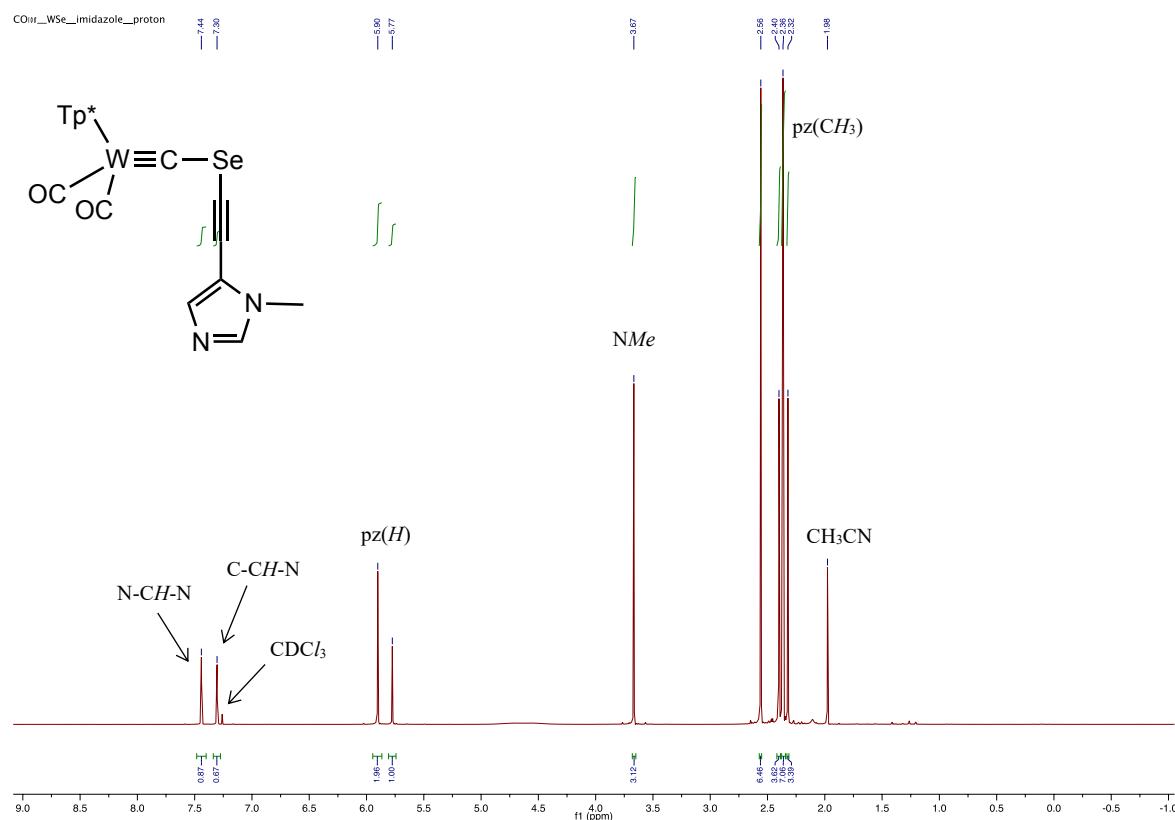
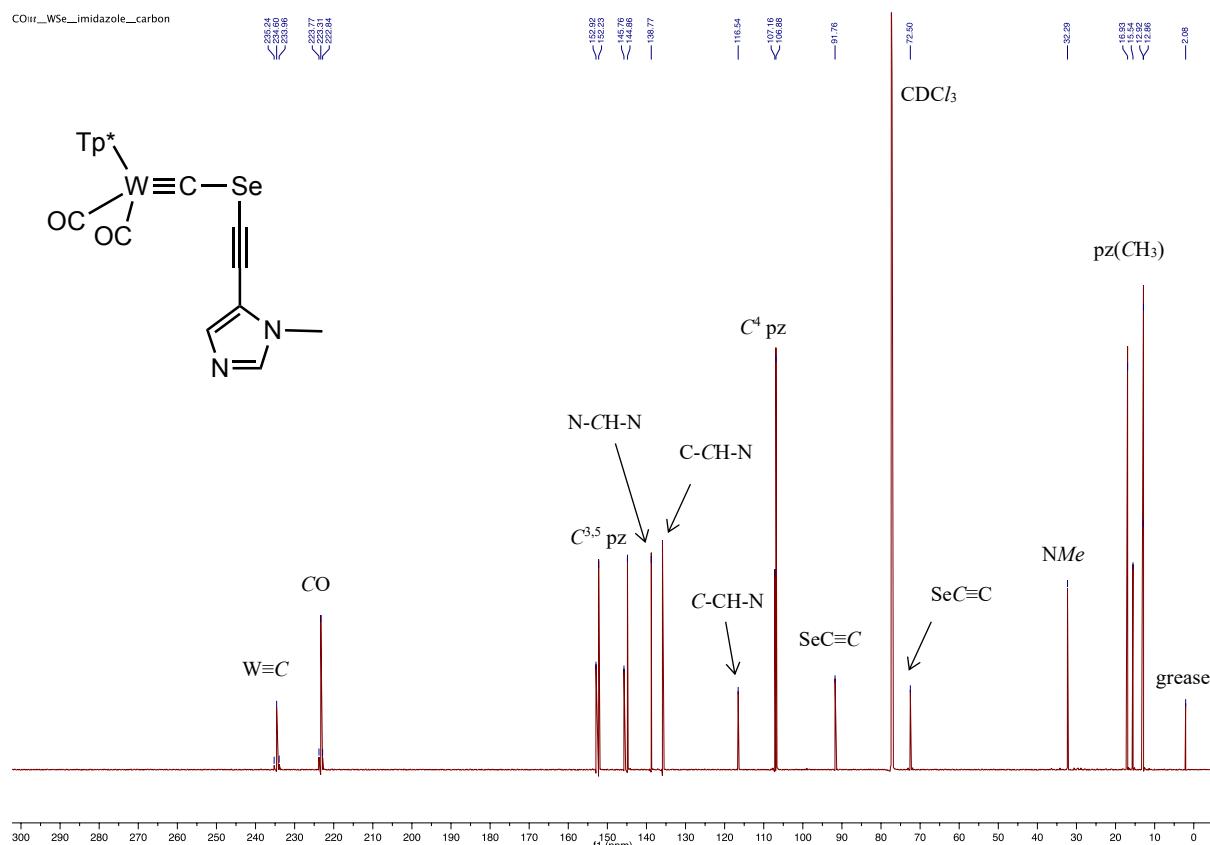


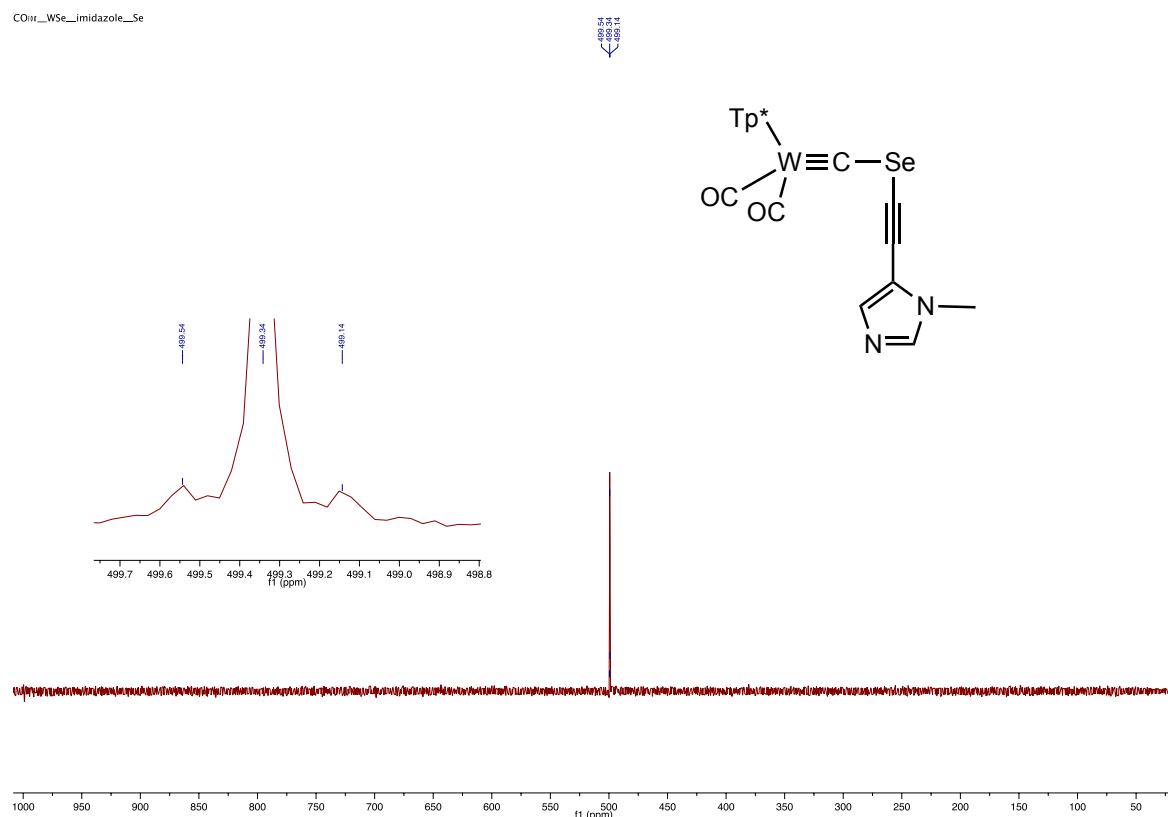
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.5**.

¹H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 2.6.¹³C{¹H} NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 2.6.

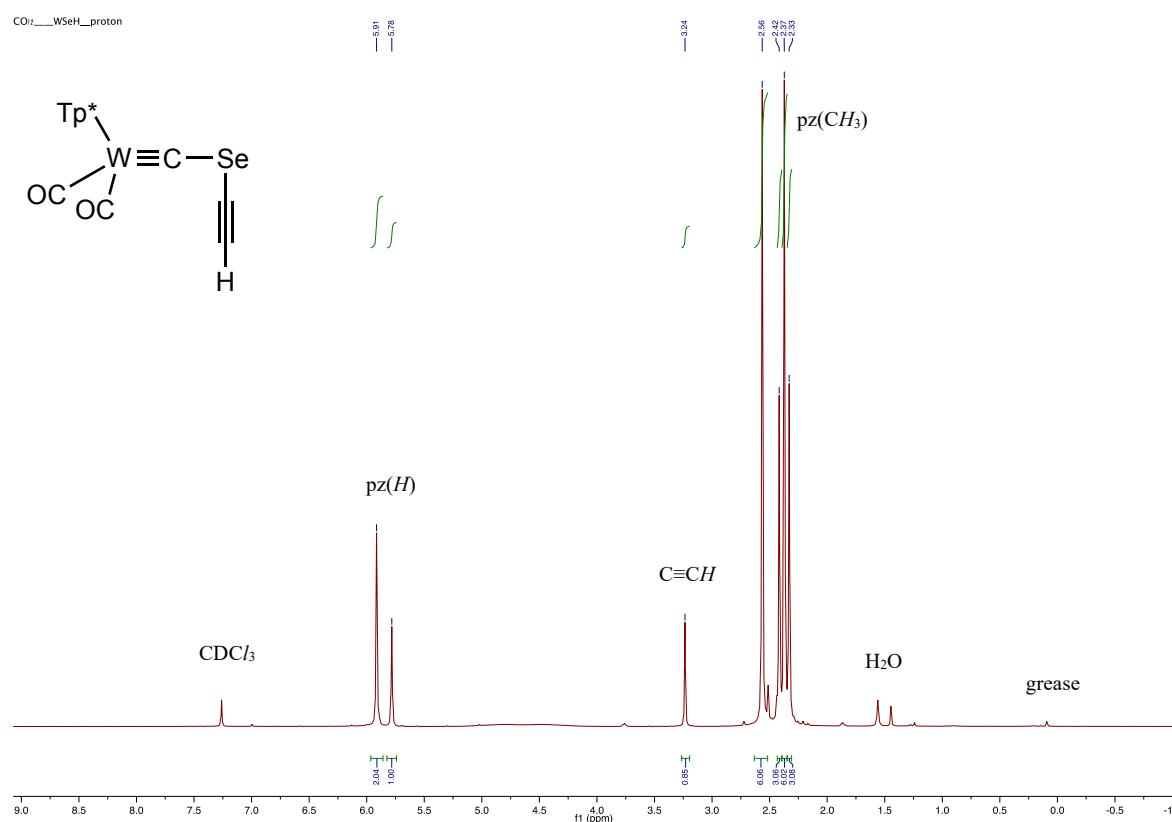


$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 2.6.

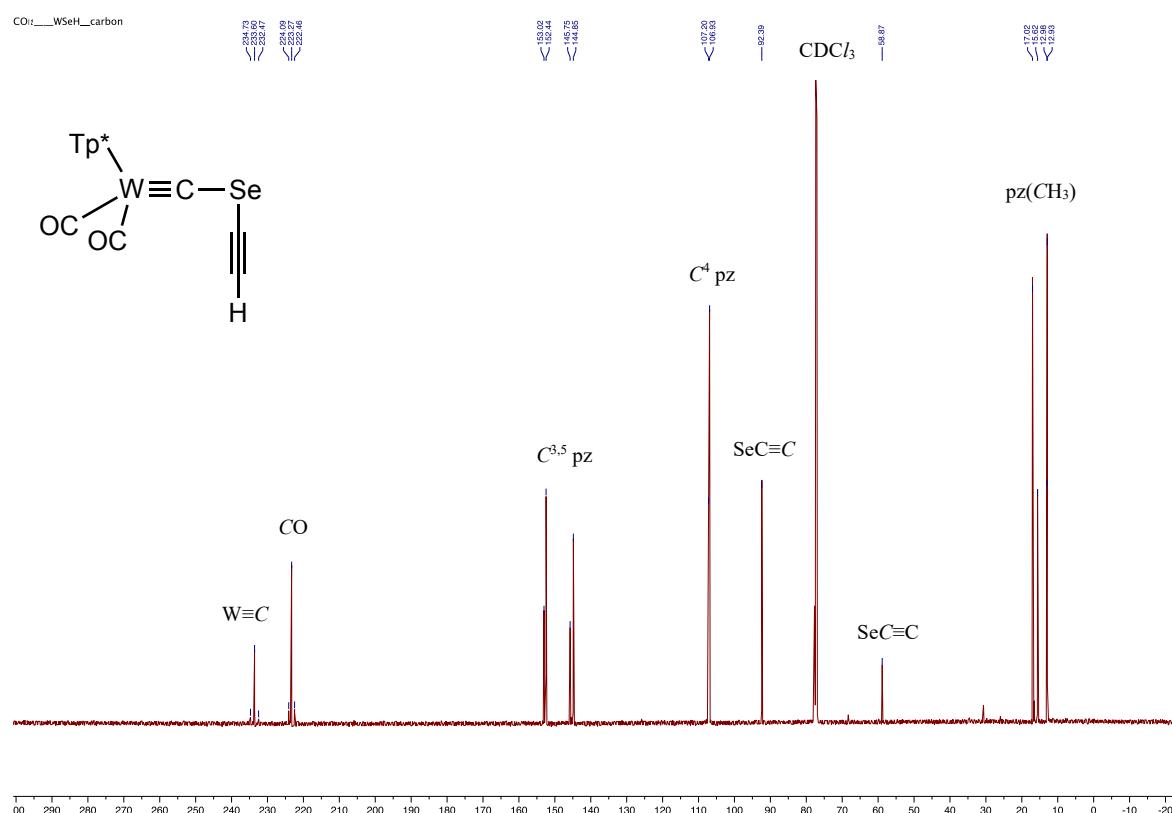
 ^1H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 2.7. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 2.7.



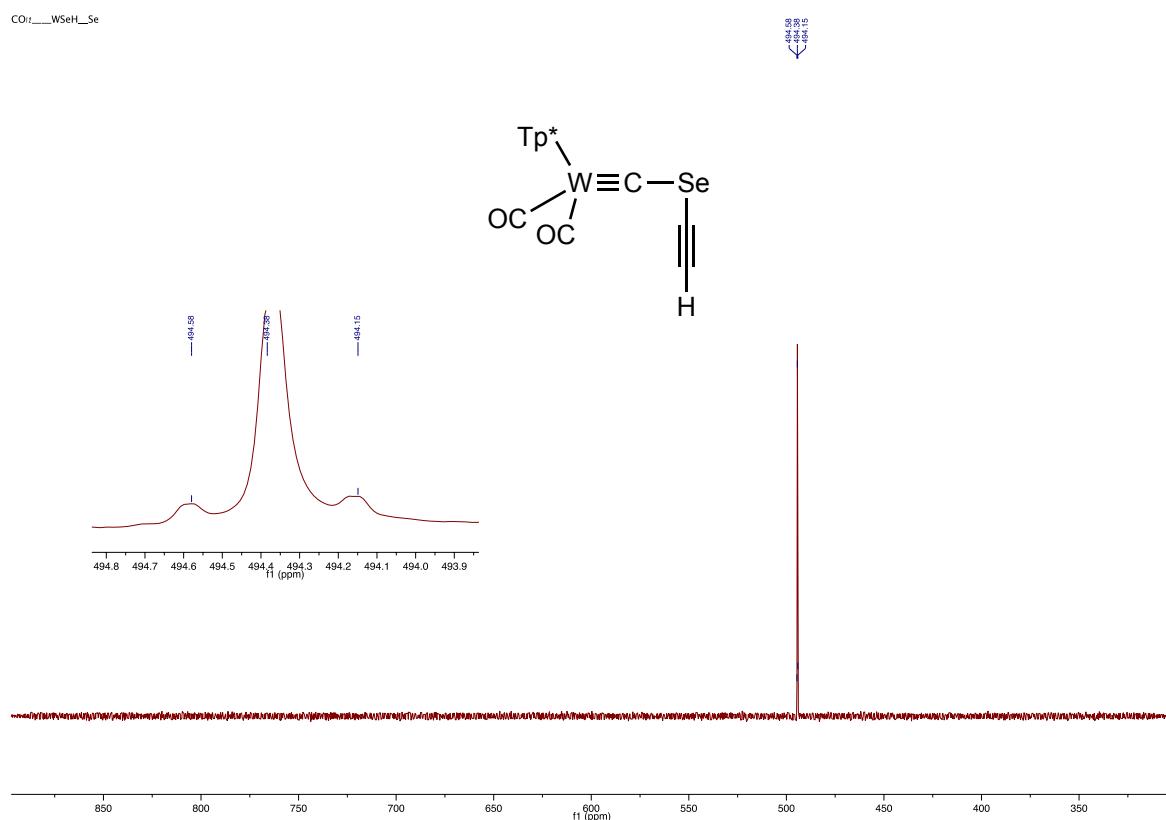
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 2.7.



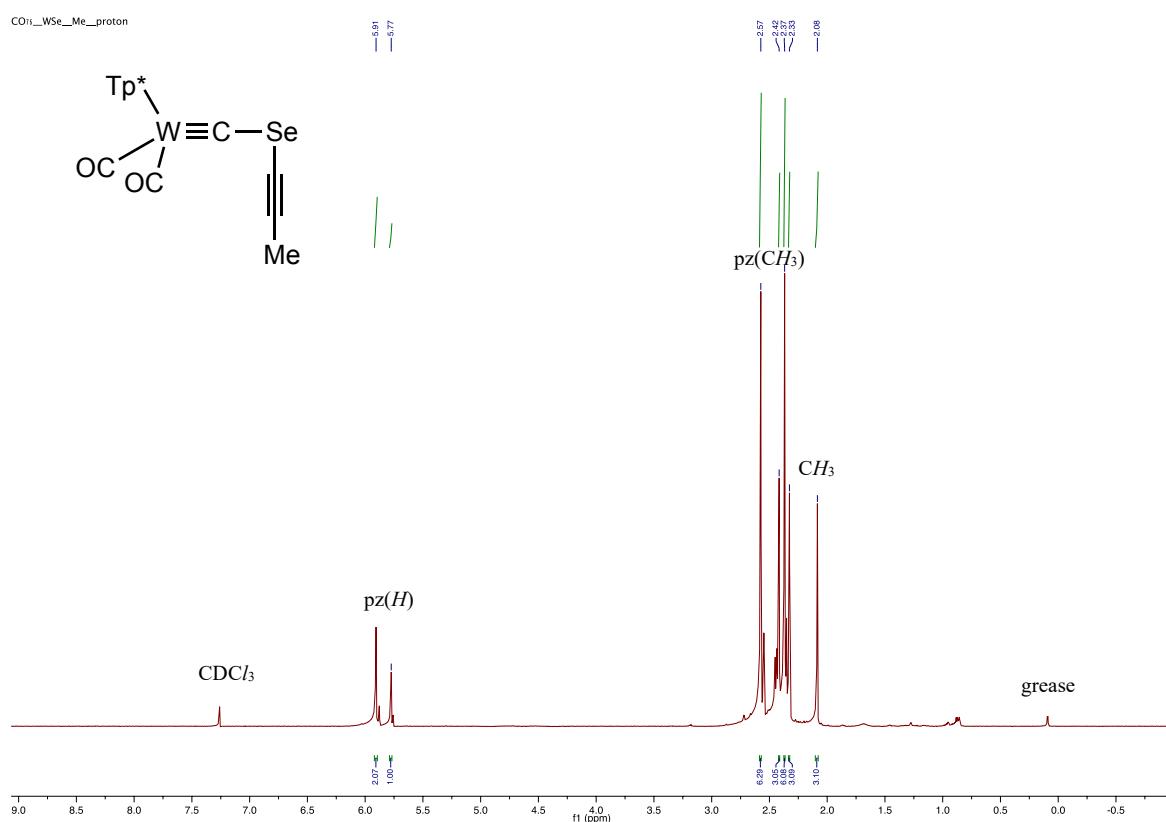
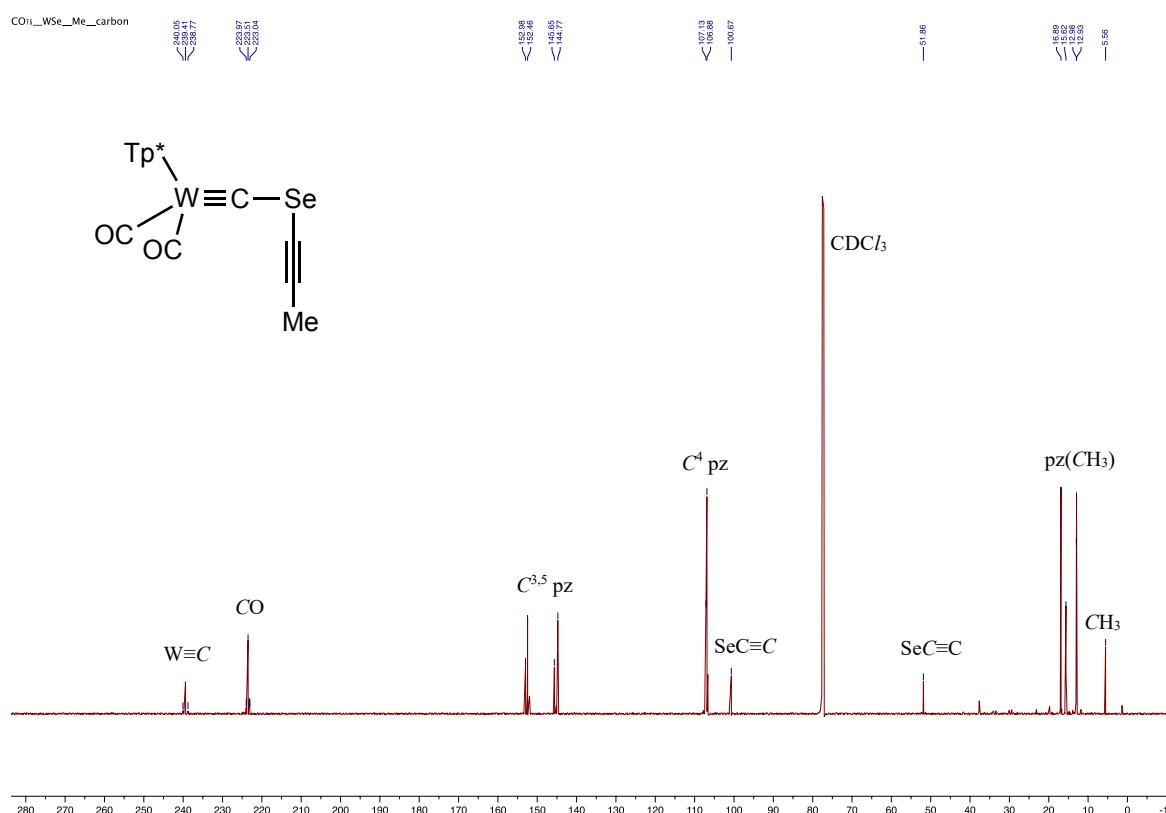
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 2.8.



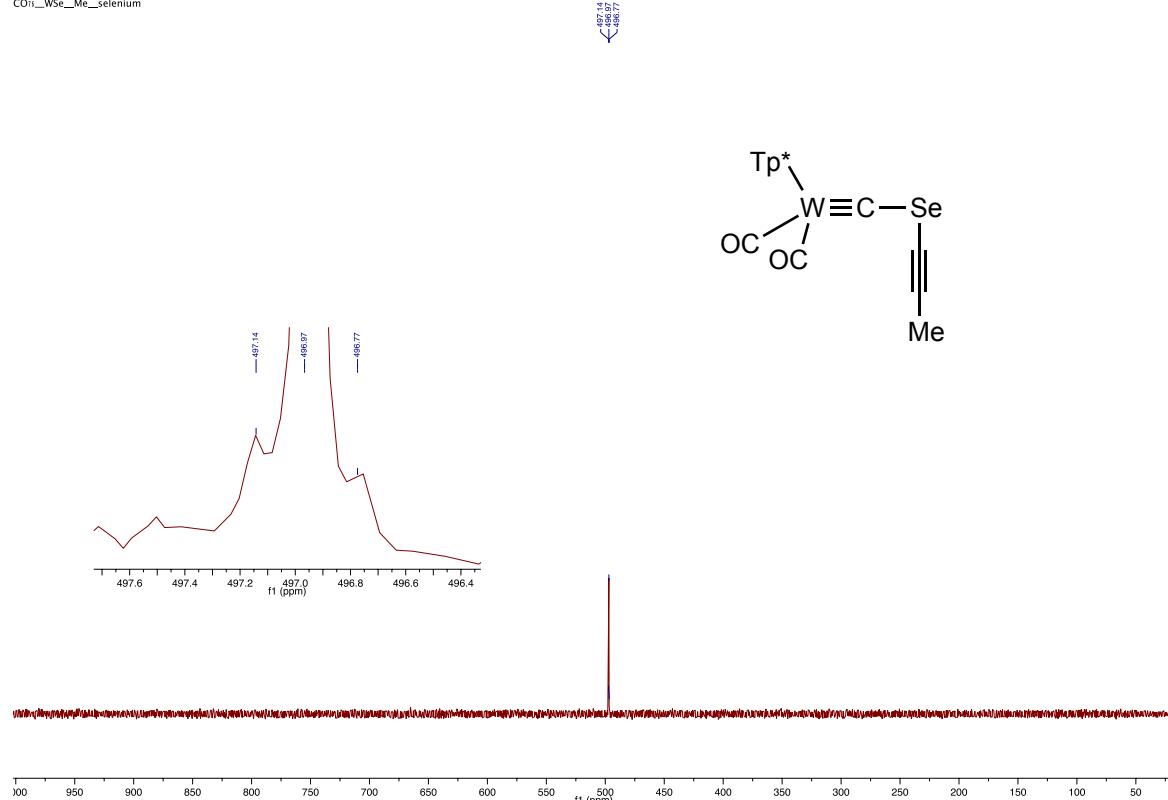
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound 2.8.



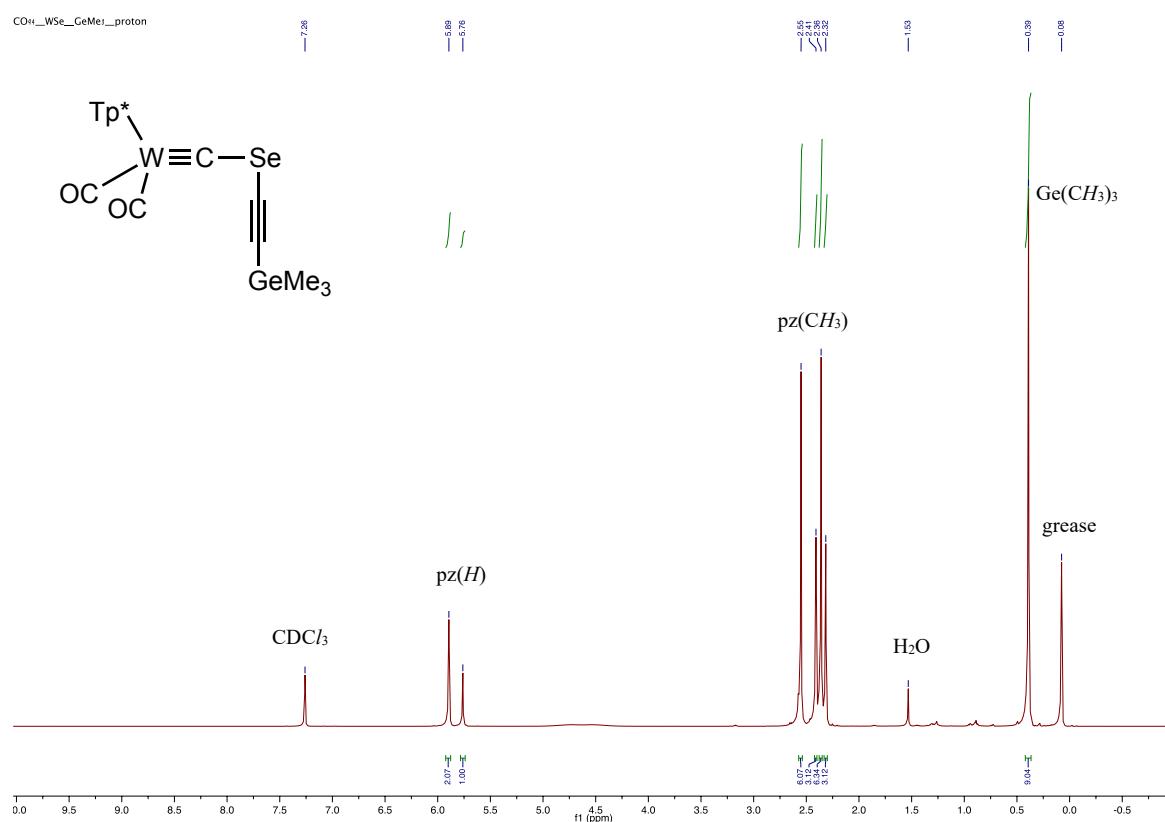
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 2.8.

 ^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.9. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.9.

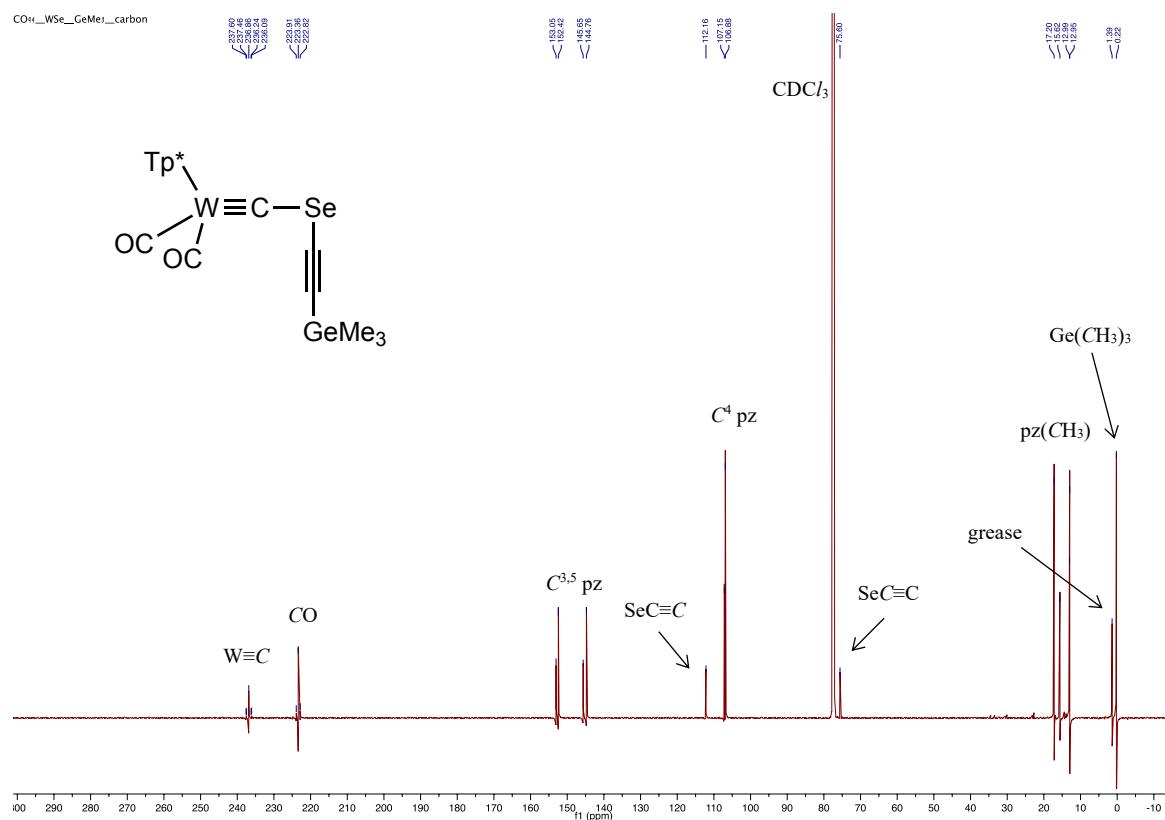
COH_WSe_Me_selenium



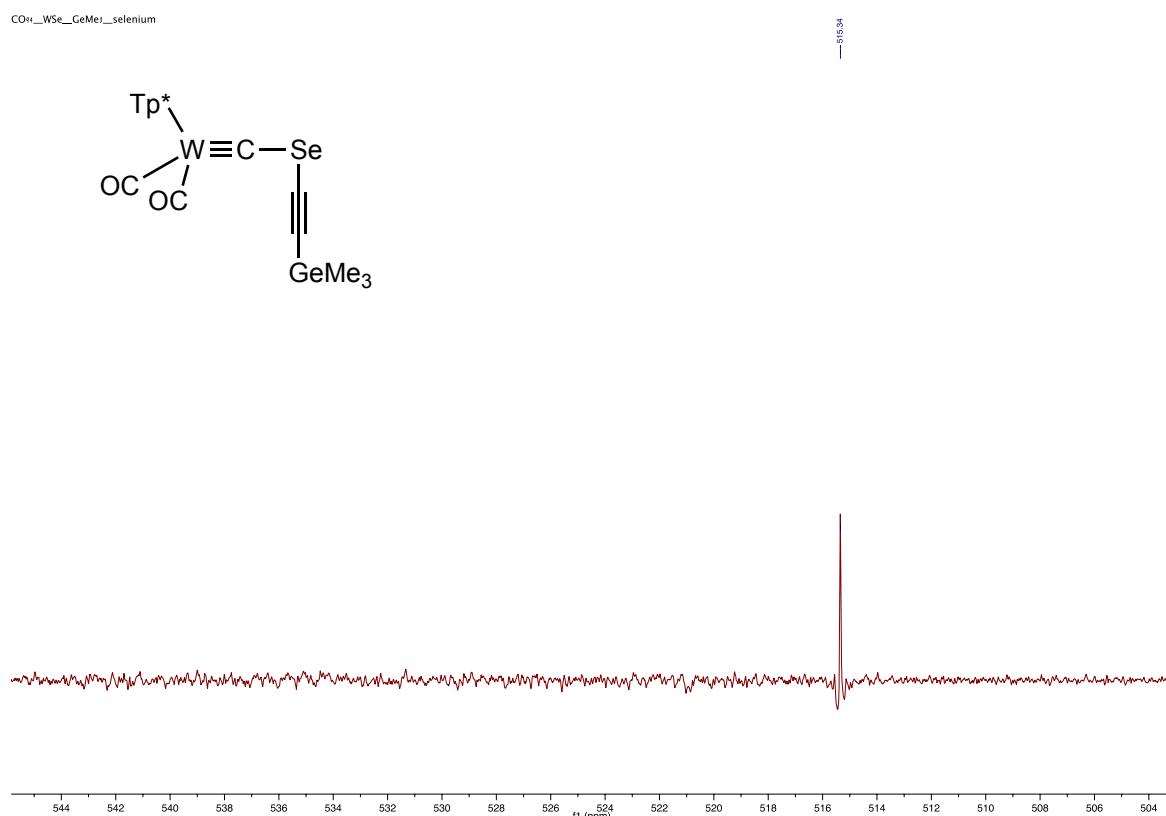
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C , δ) of compound **2.9**.



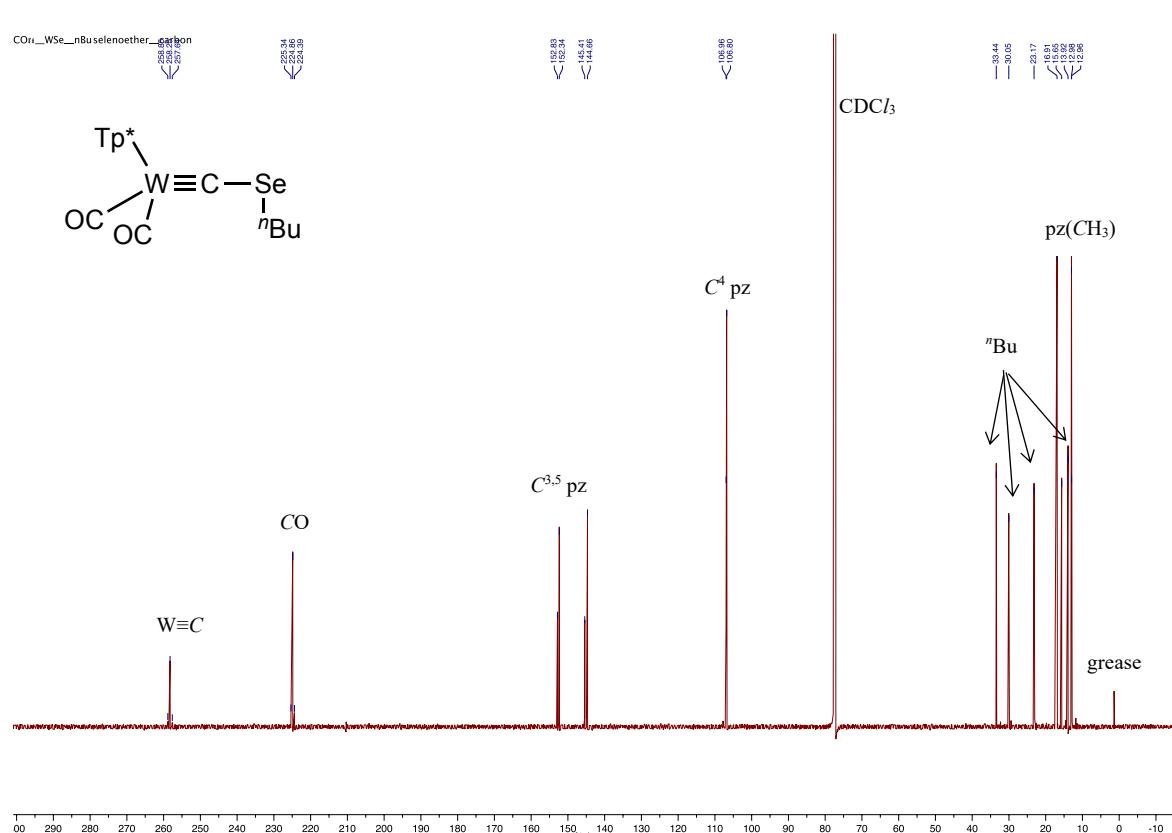
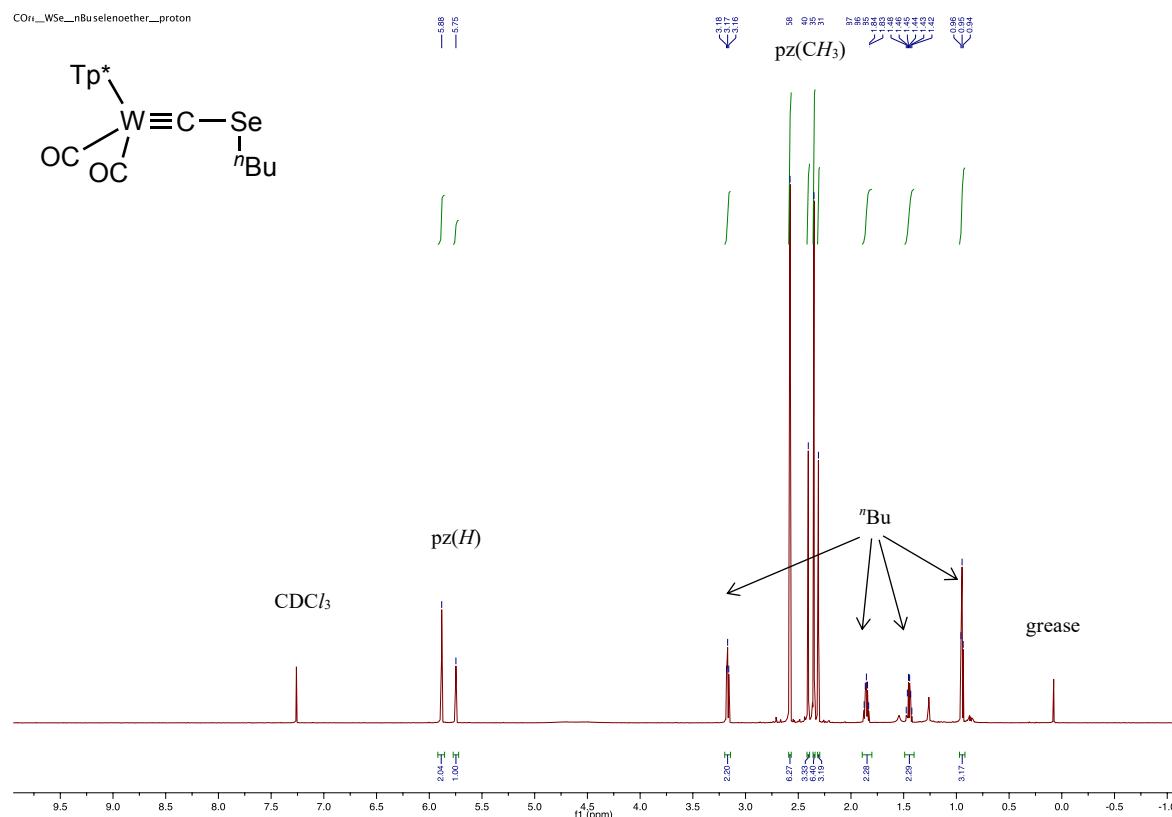
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 2.10.

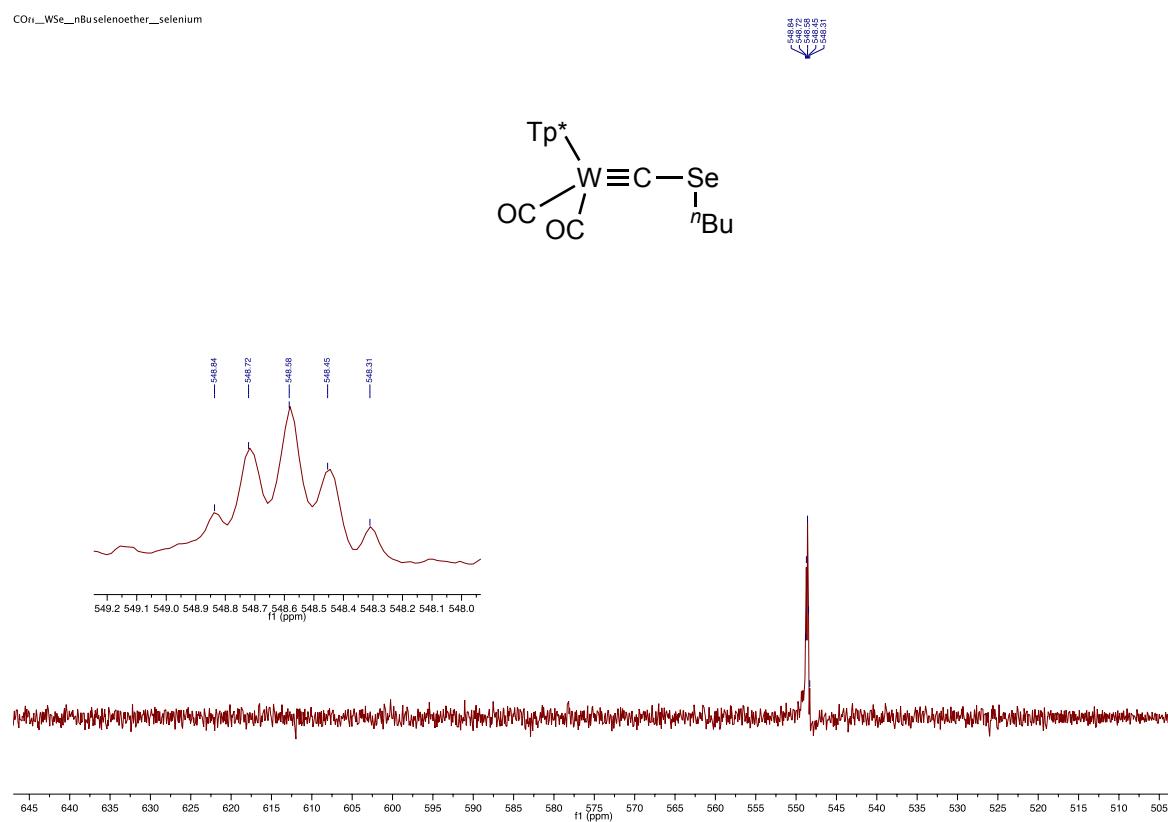


¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 2.10.

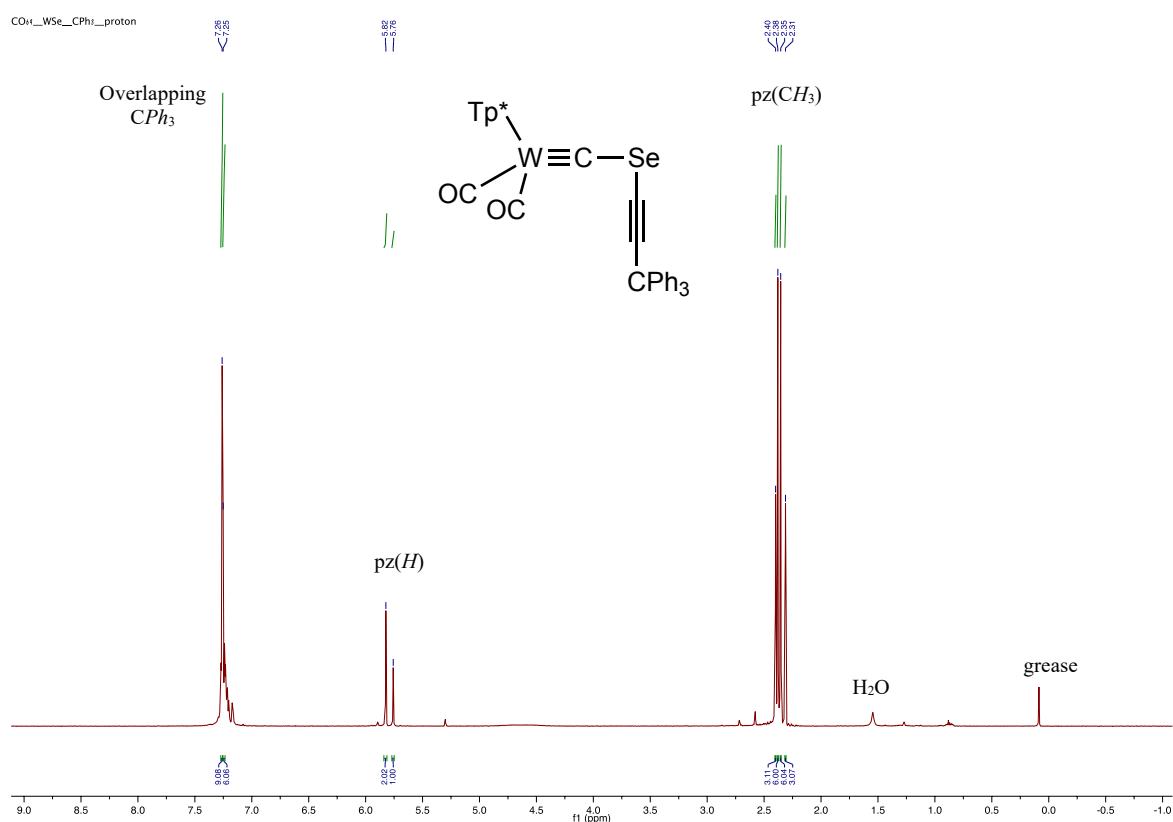


$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound **2.10**.

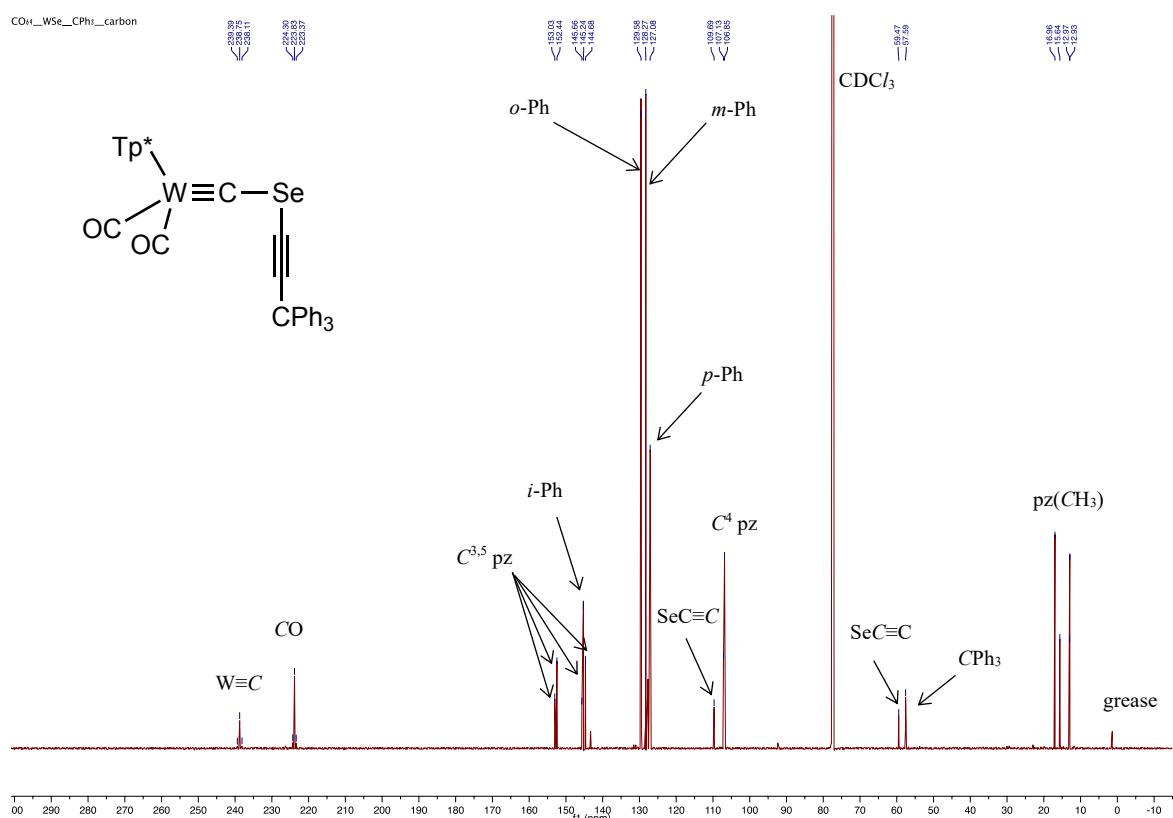




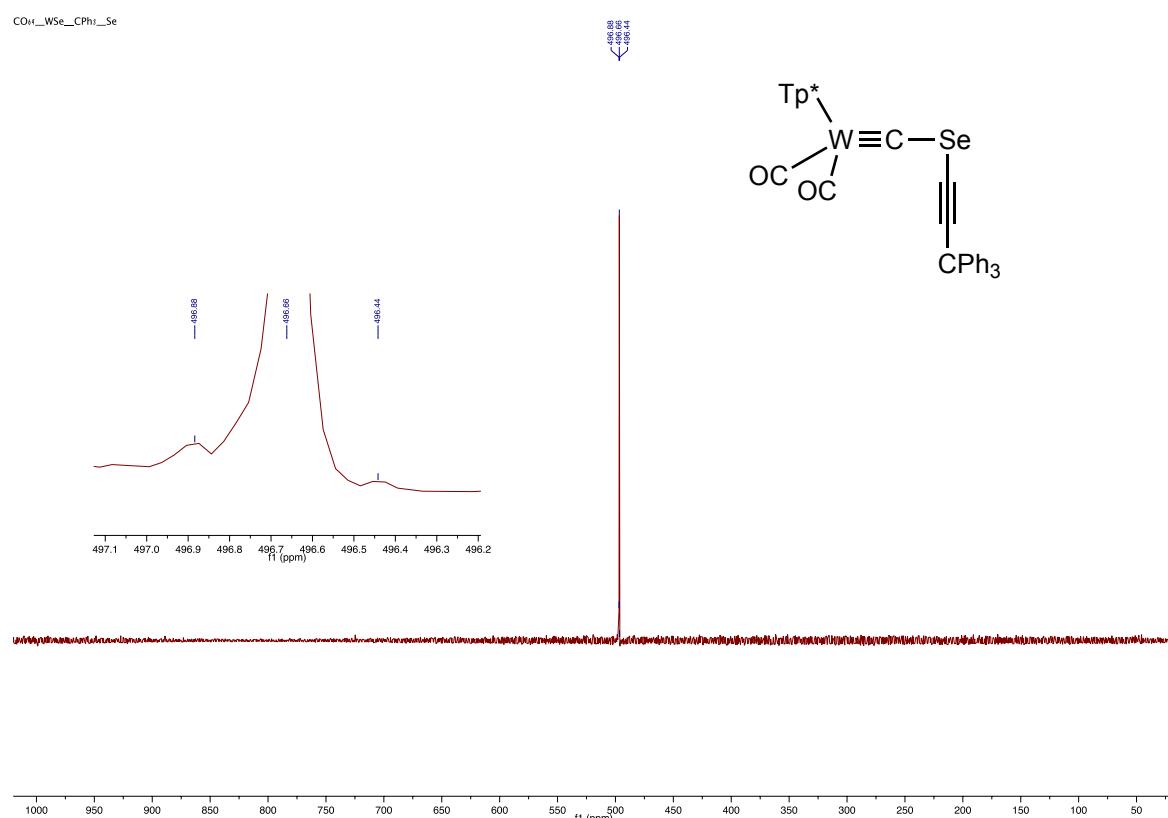
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.11**.



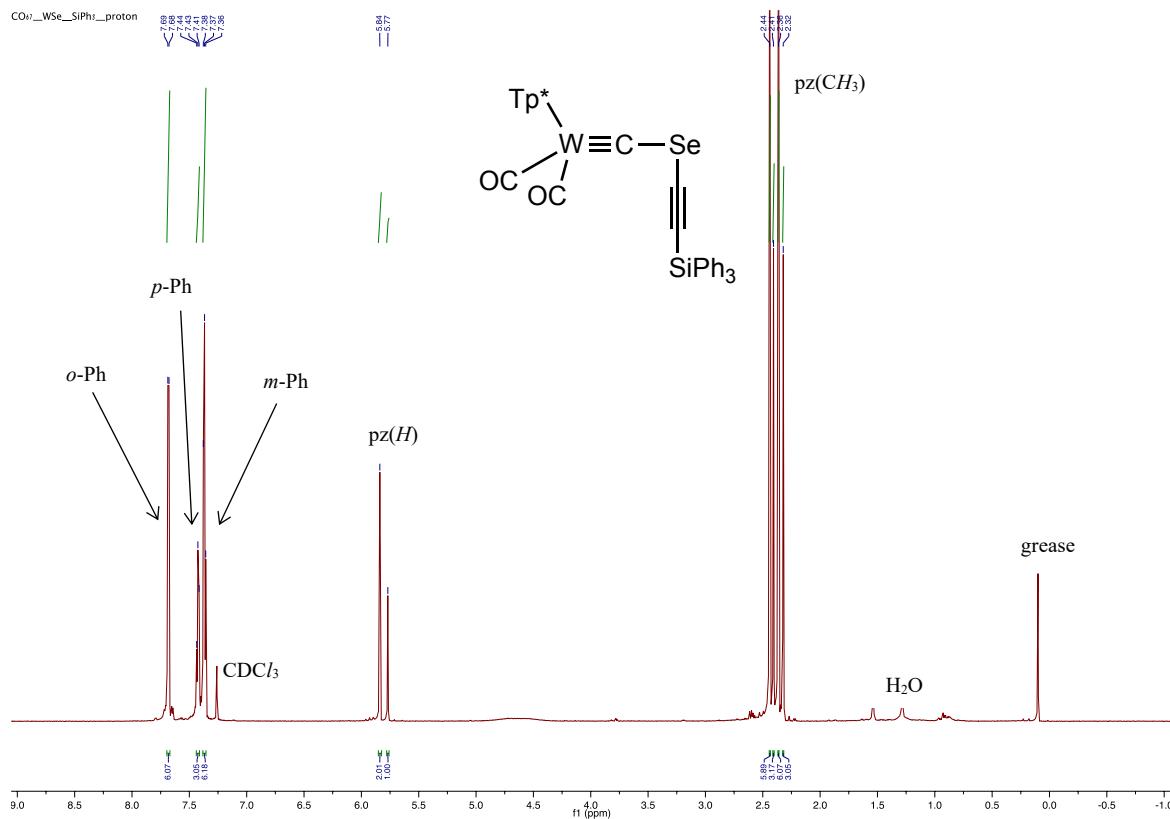
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 2.12.



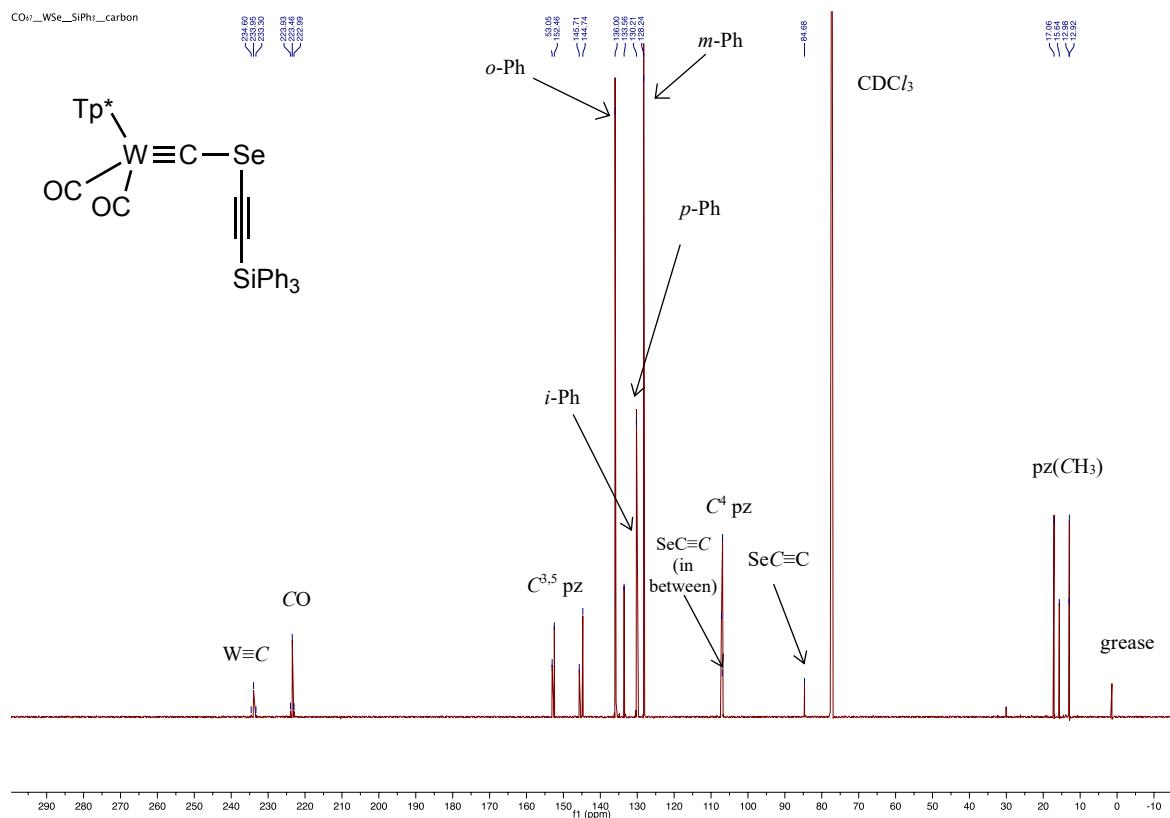
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 2.12.



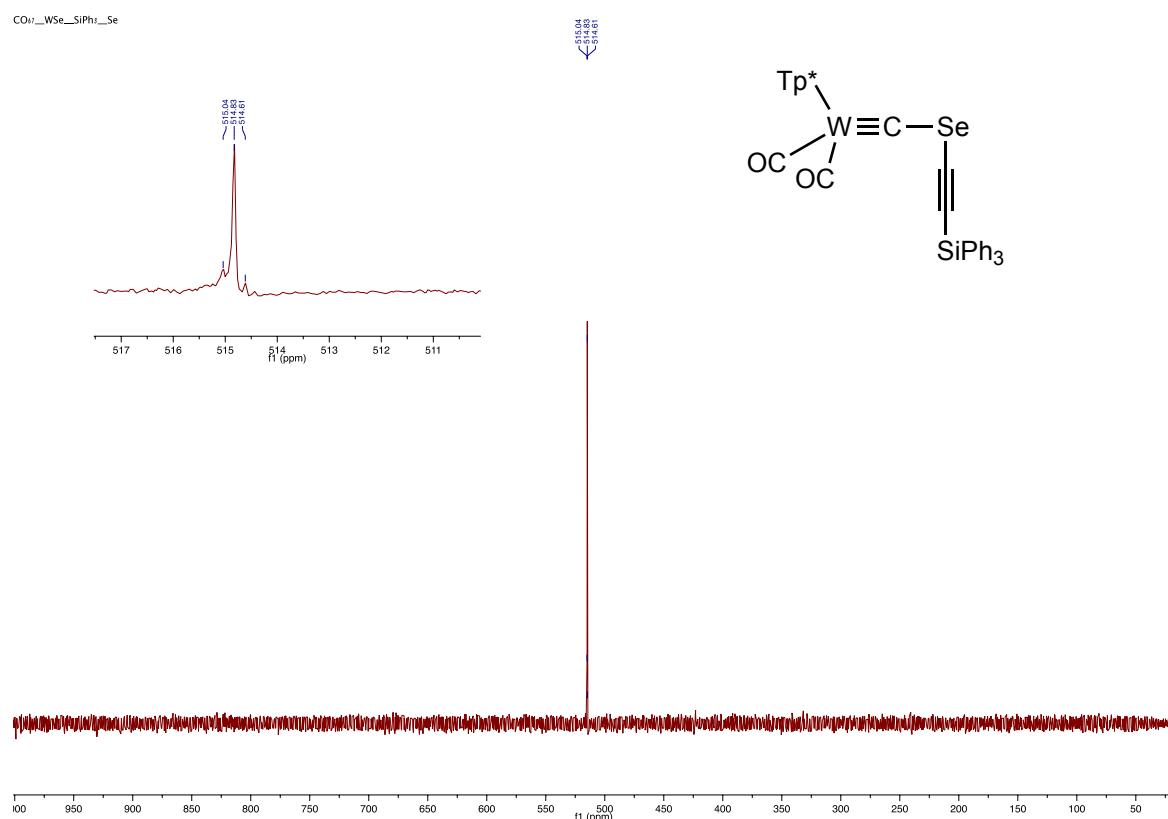
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.12**.



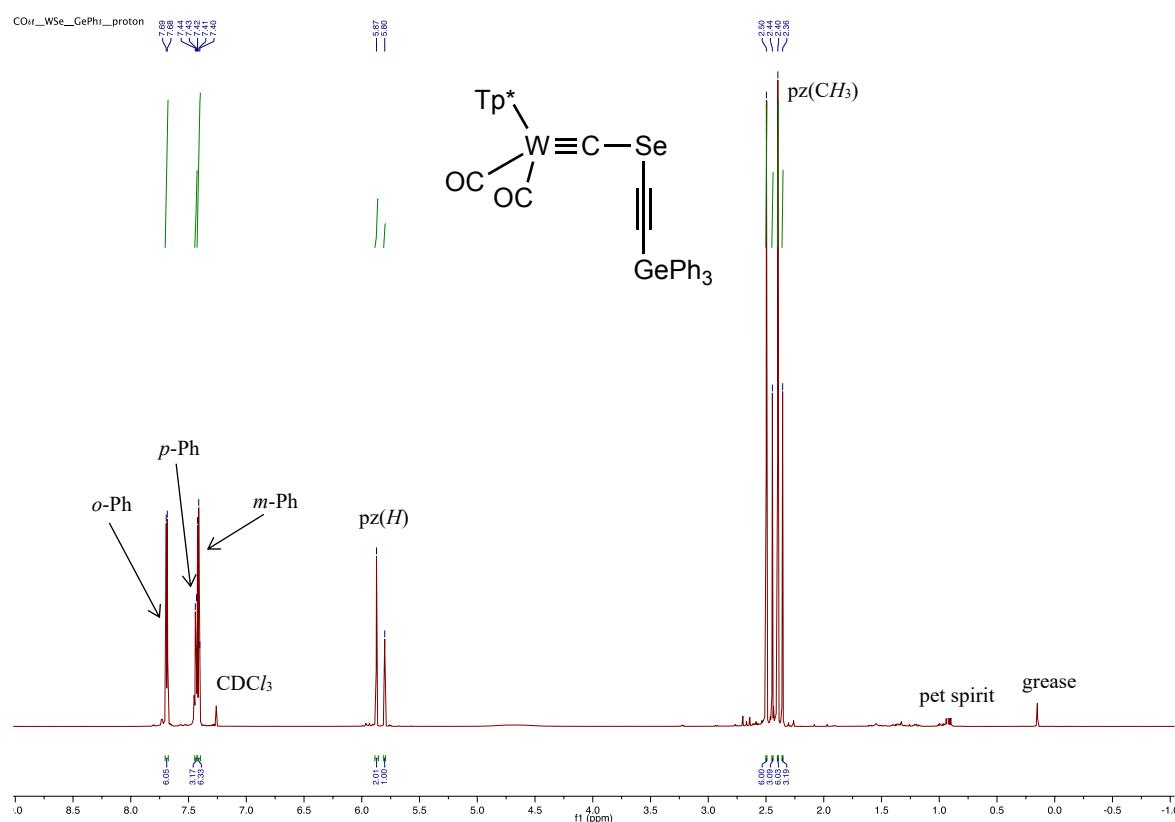
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.13.



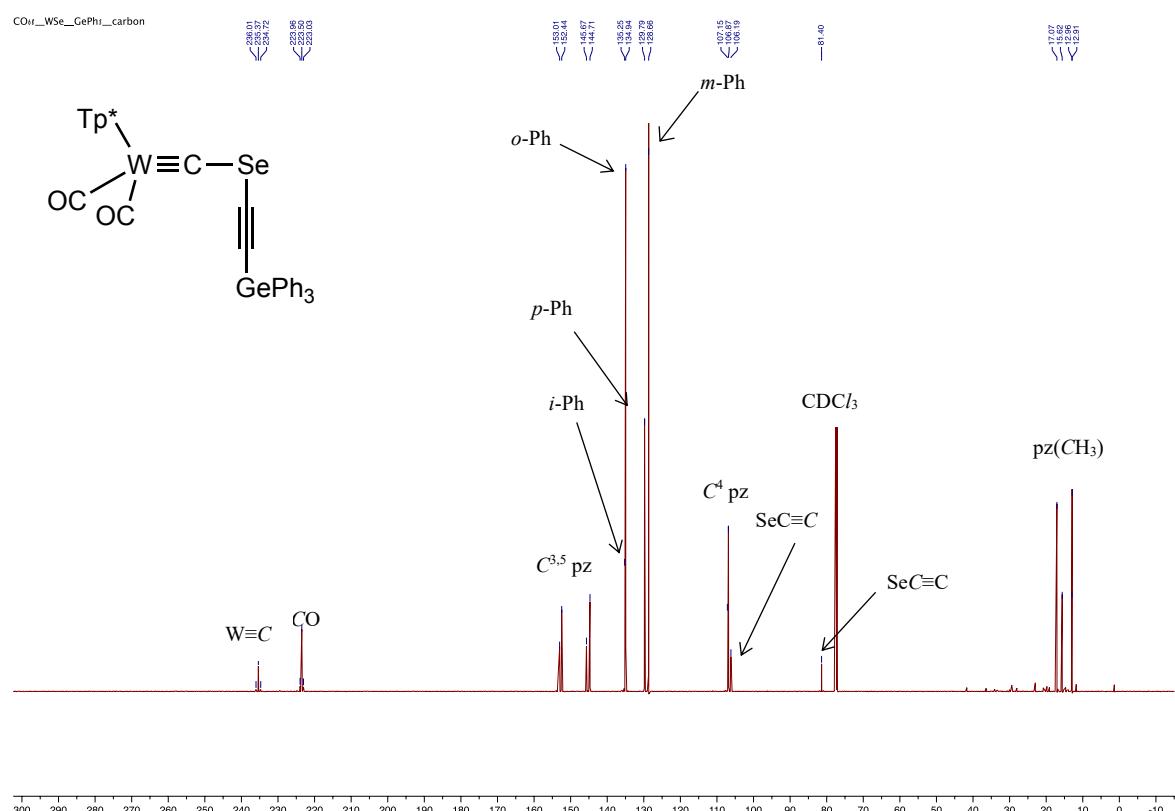
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.13.



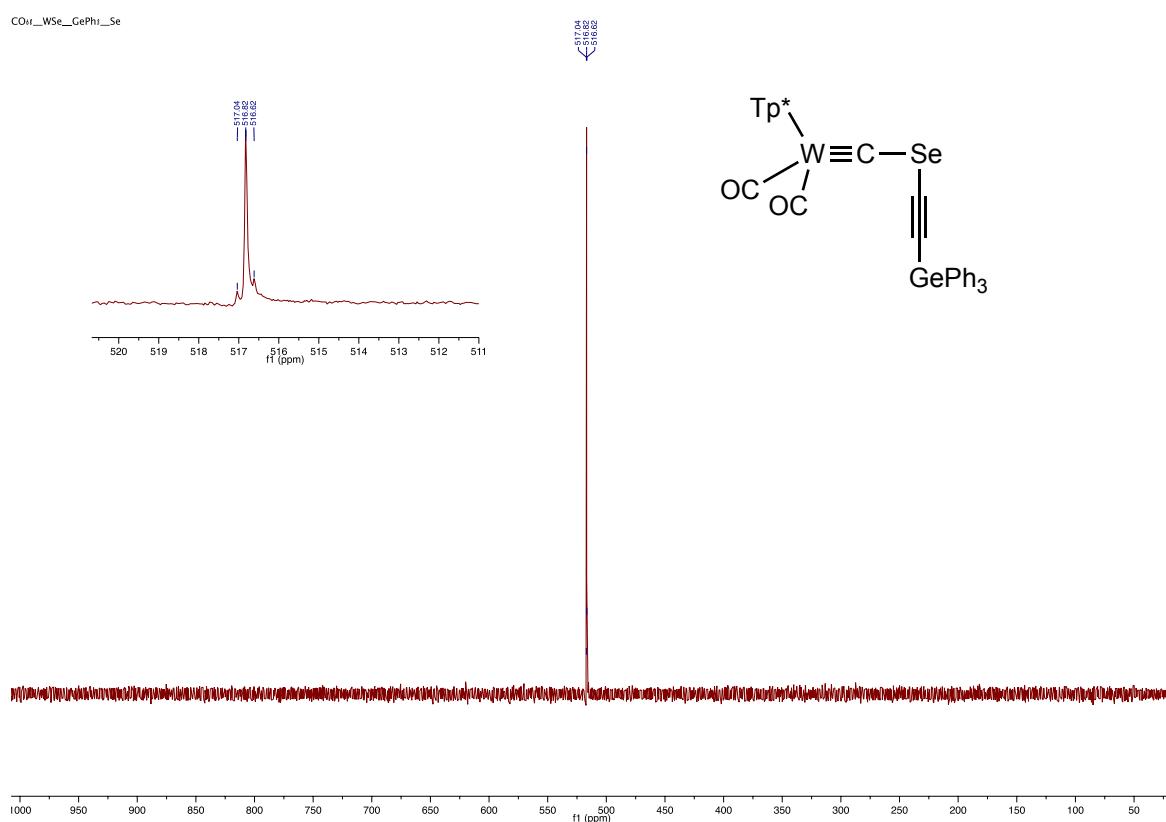
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.13**.

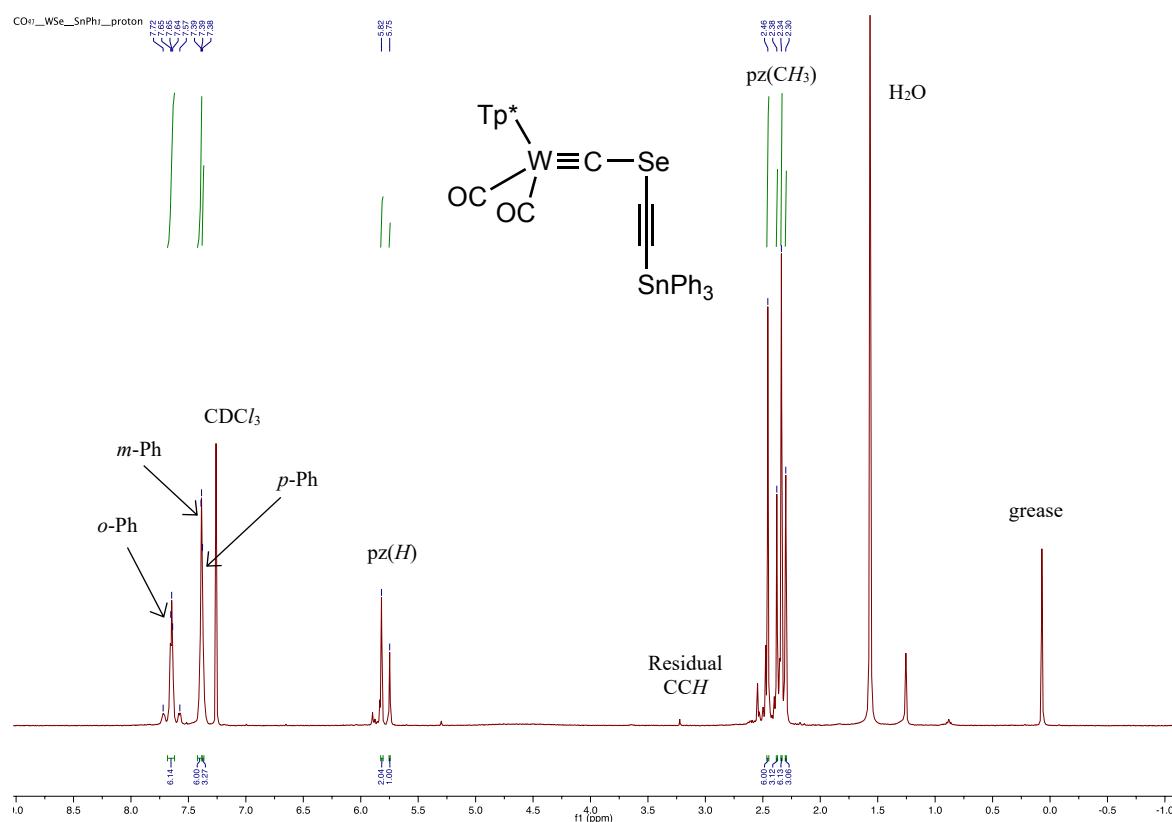


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 2.14.

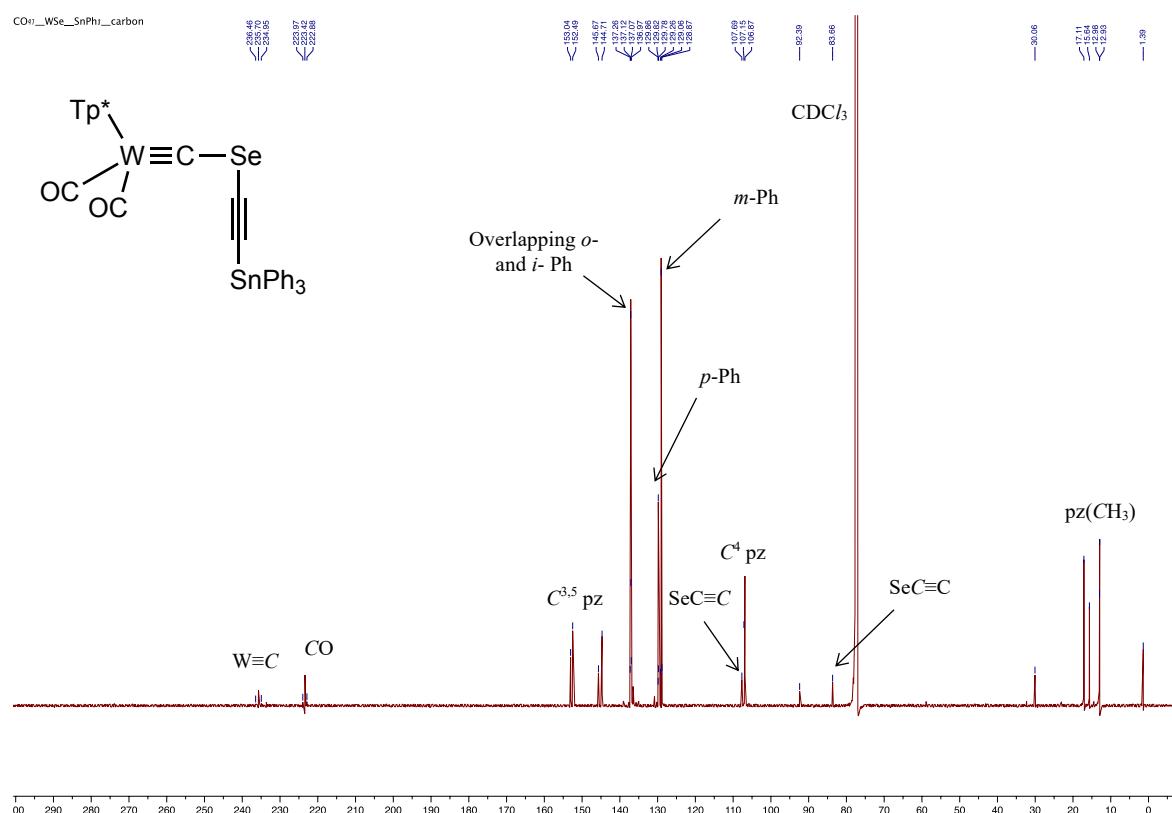


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.14.

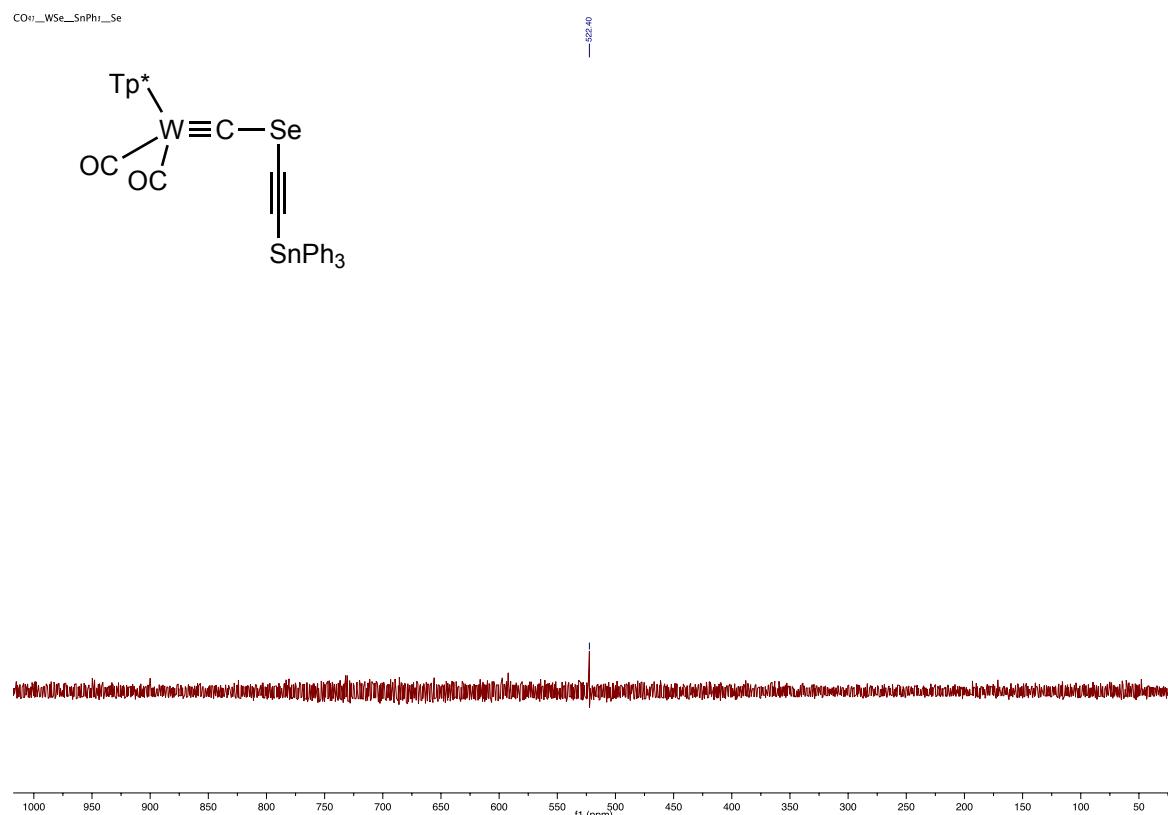
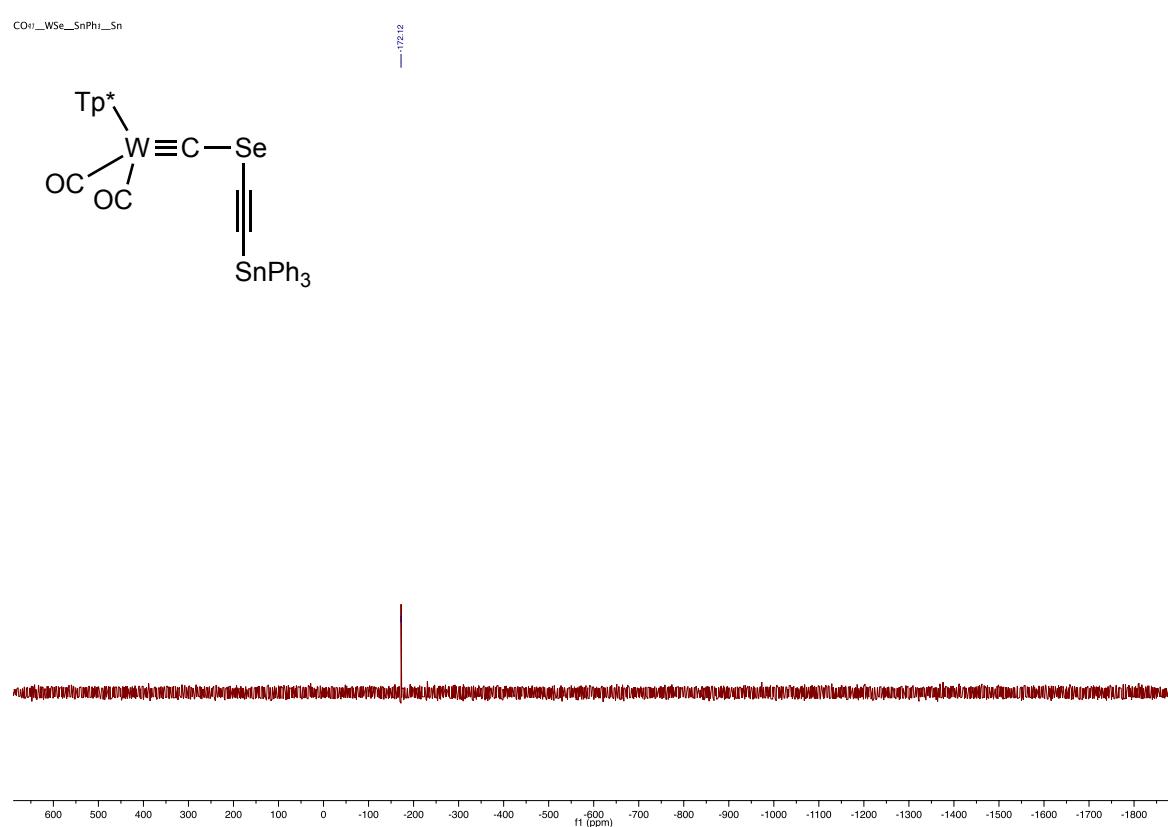


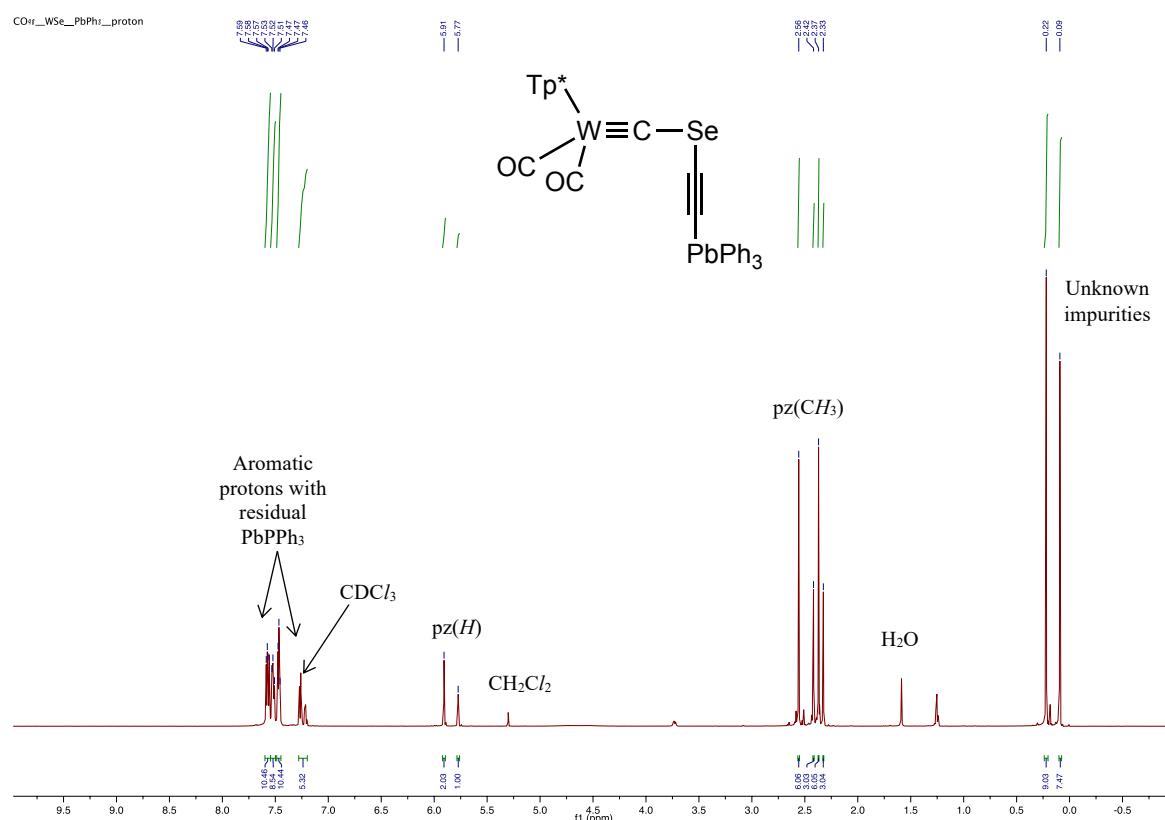


¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 2.15.

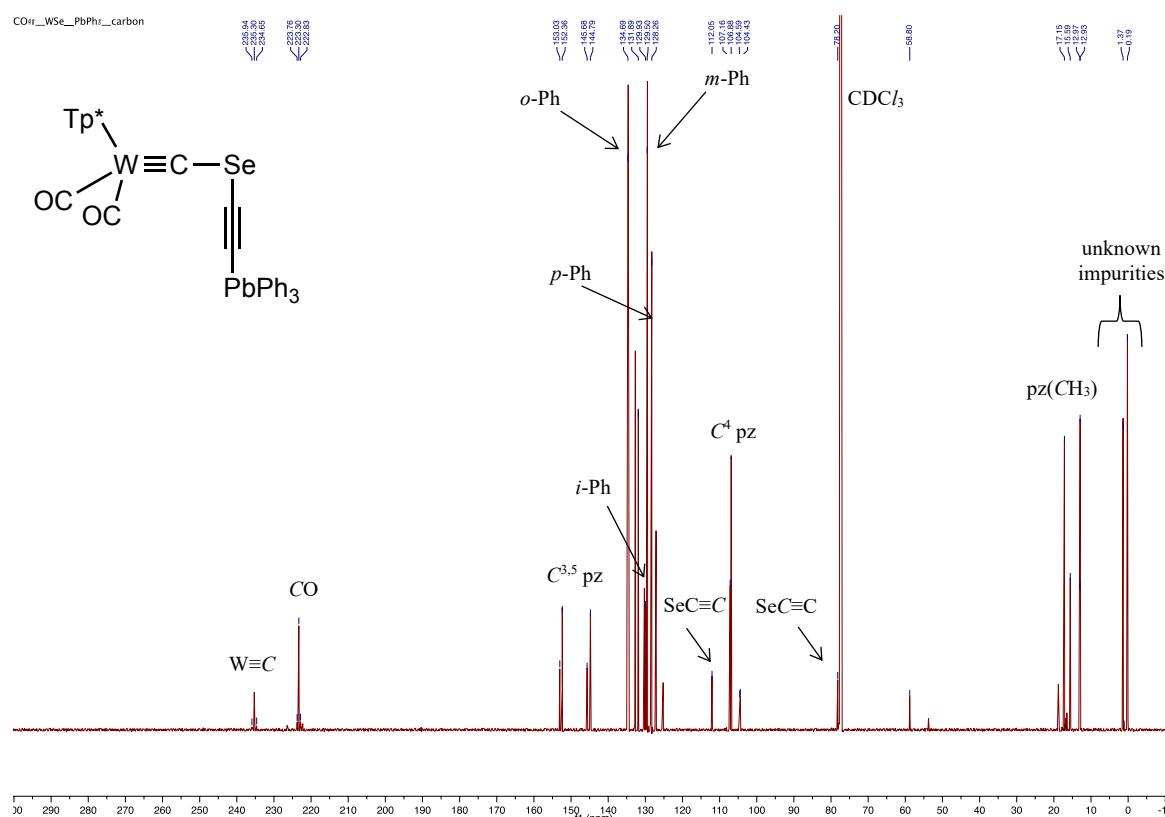


¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 2.15.

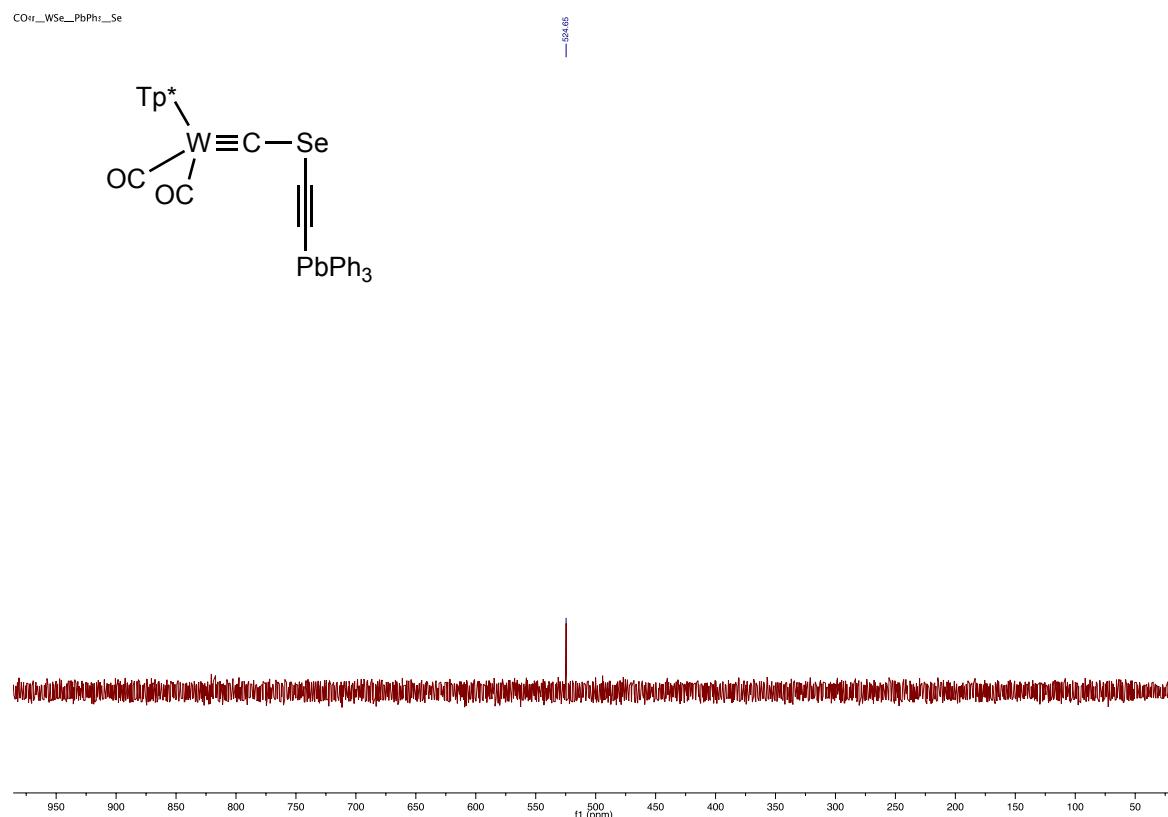
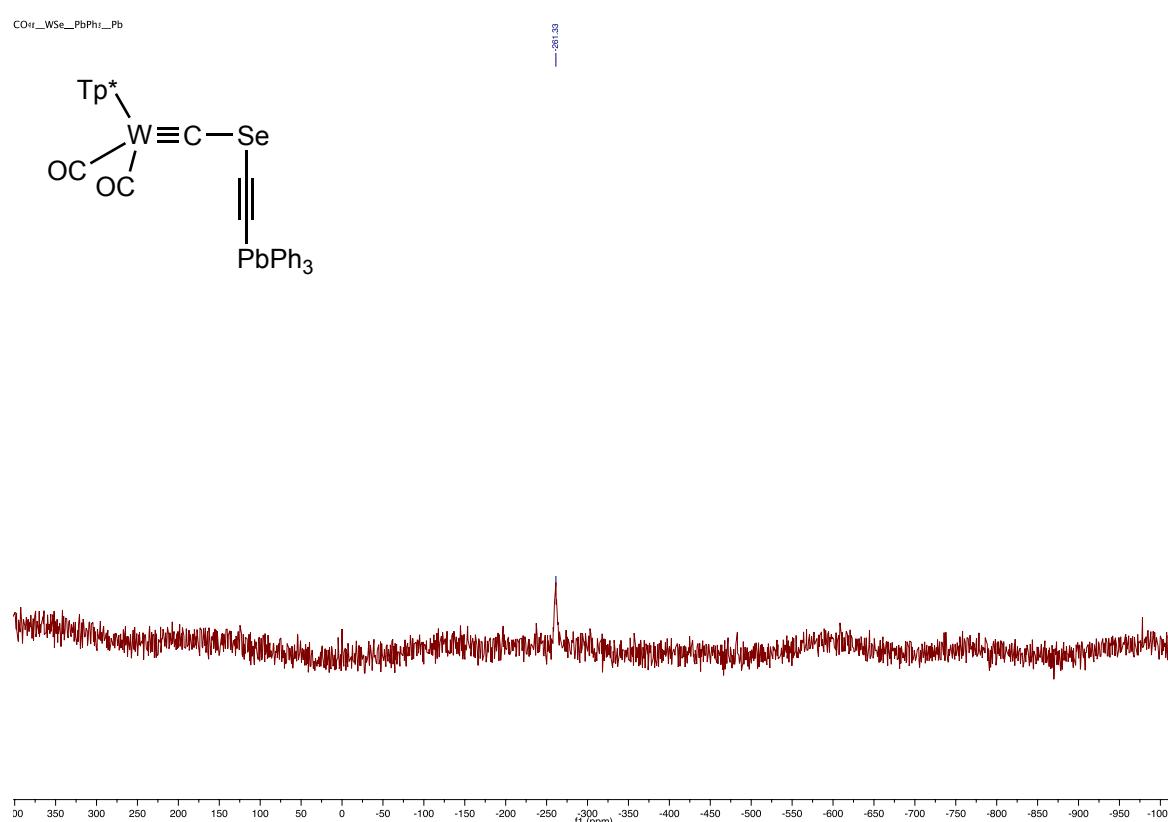
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.15**.¹¹⁹Sn NMR spectrum (149 MHz, CDCl₃, 25°C, δ) of compound **2.15**.

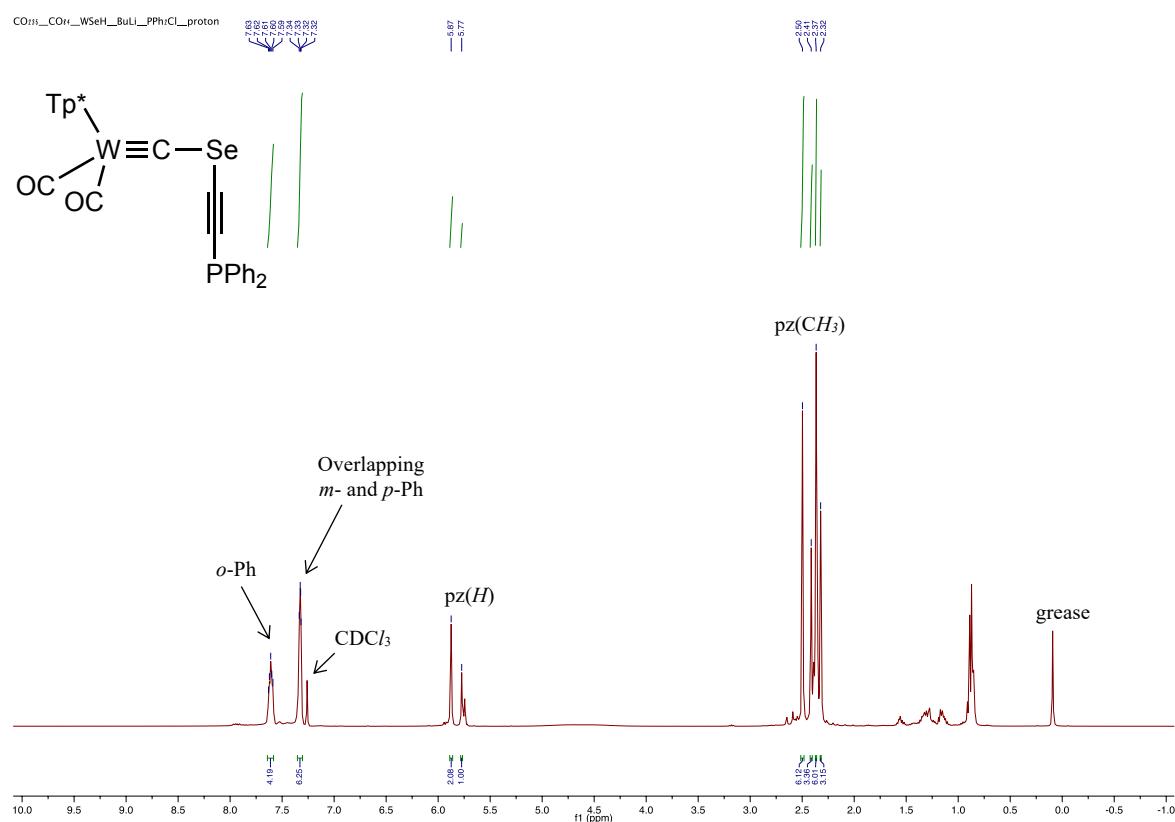


^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 2.16.

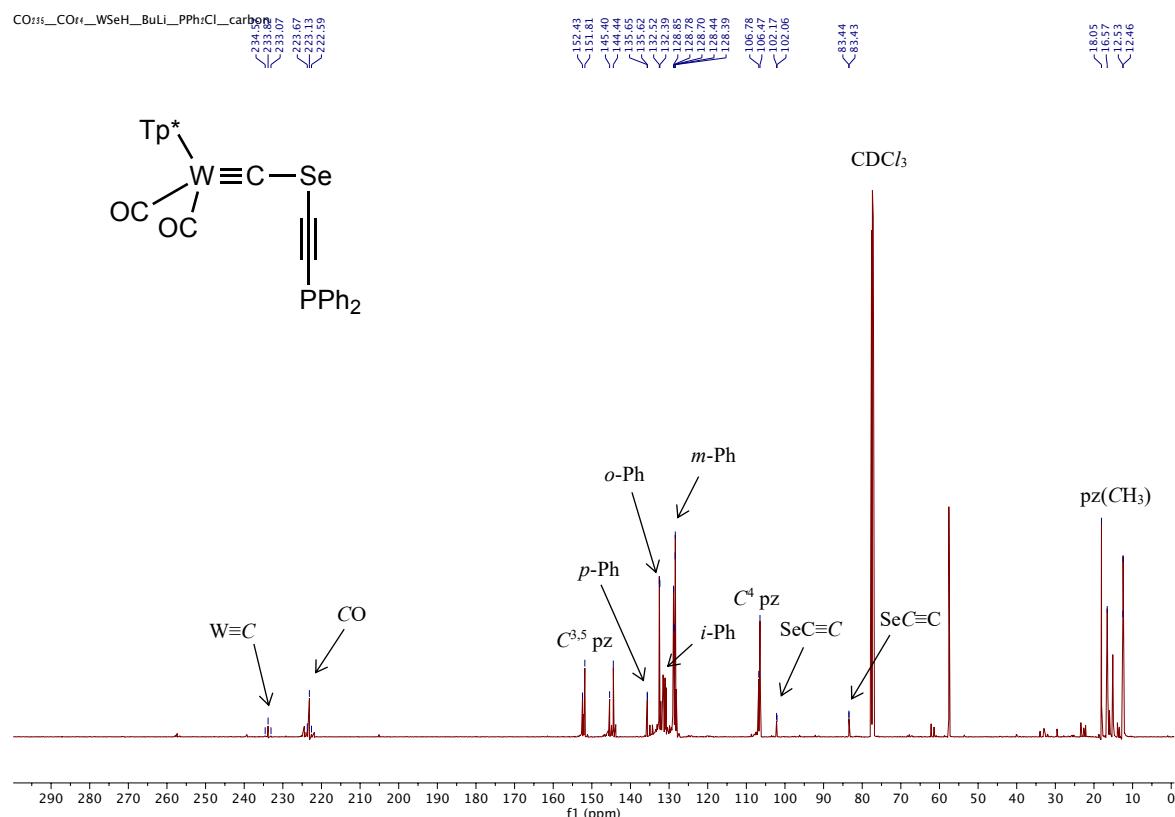


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound 2.16.

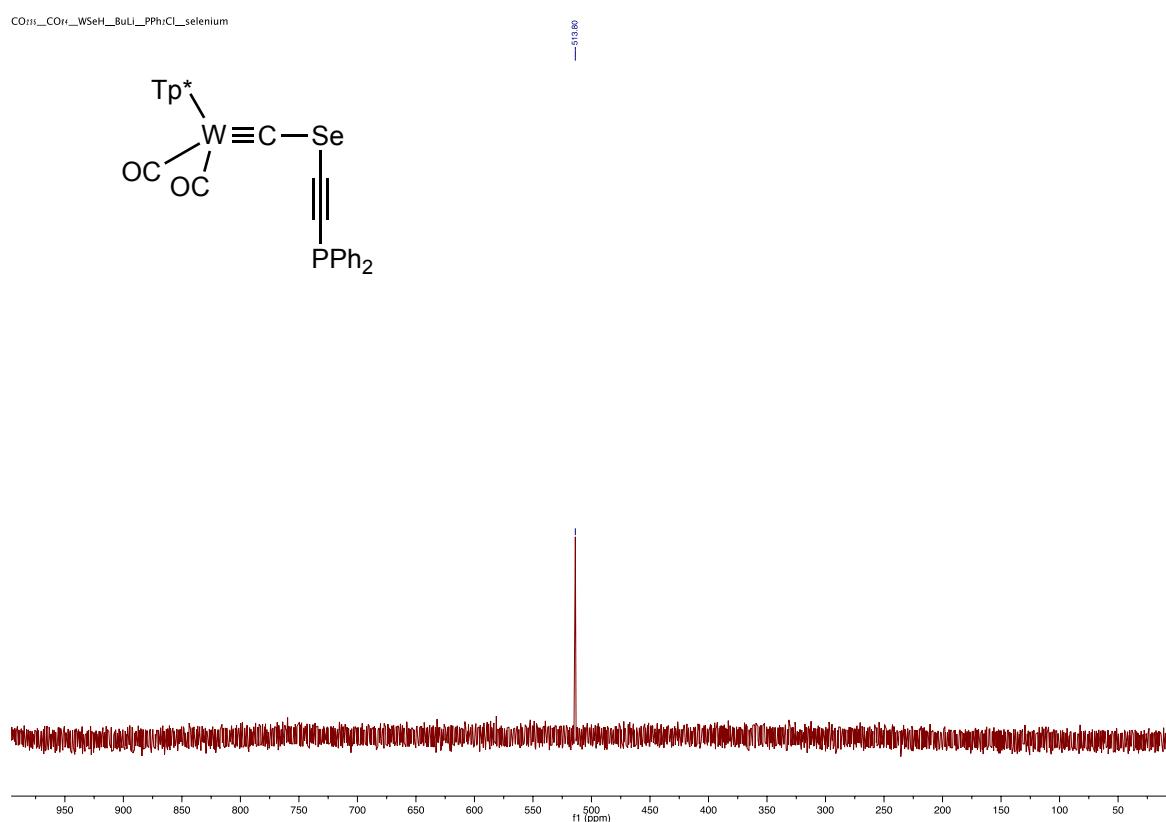
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.16**.²⁰⁷Pb NMR spectrum (84 MHz, CDCl₃, 25°C, δ) of compound **2.16**.



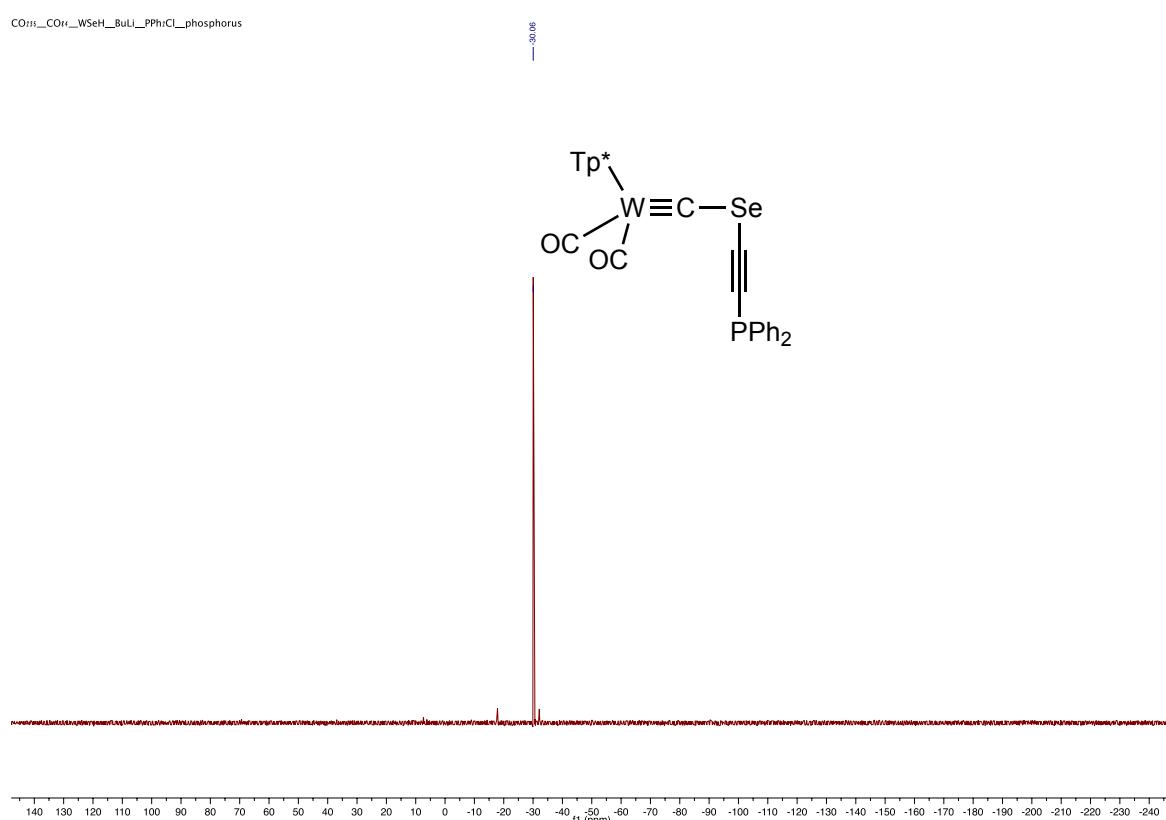
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 2.17.



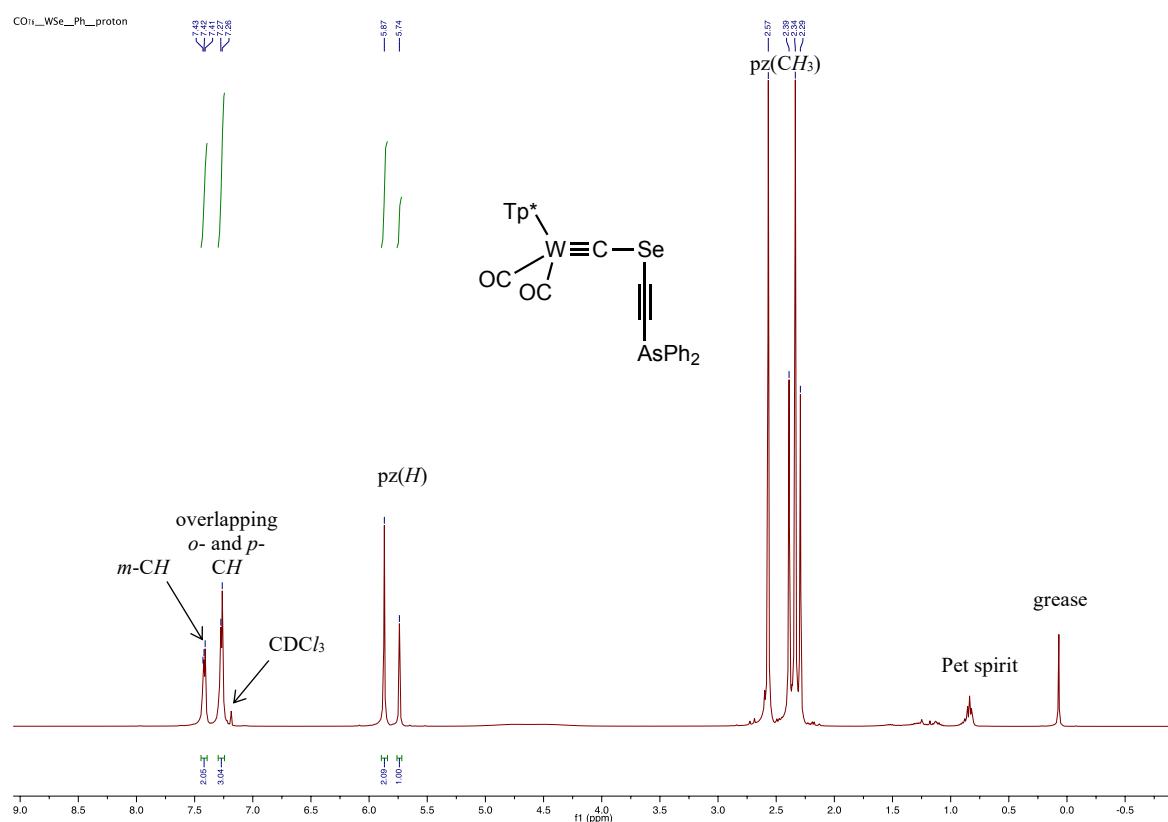
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 2.17.



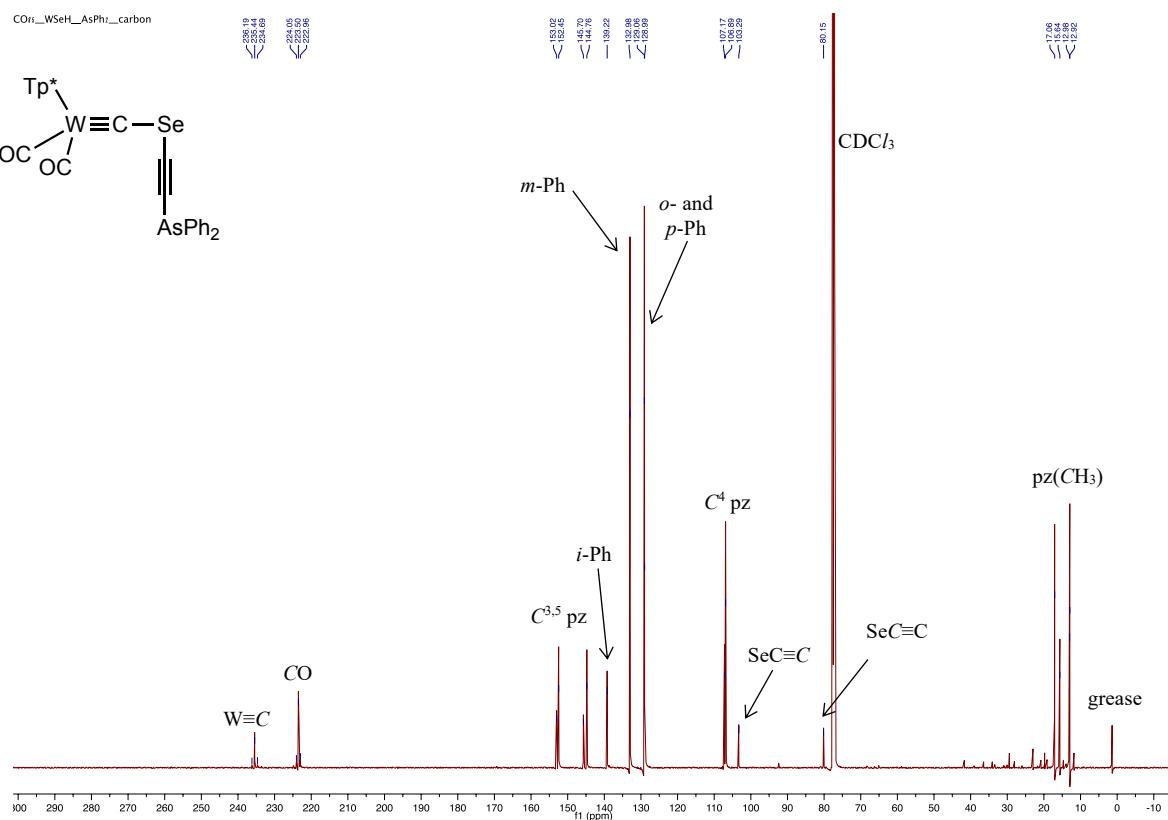
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 2.17.



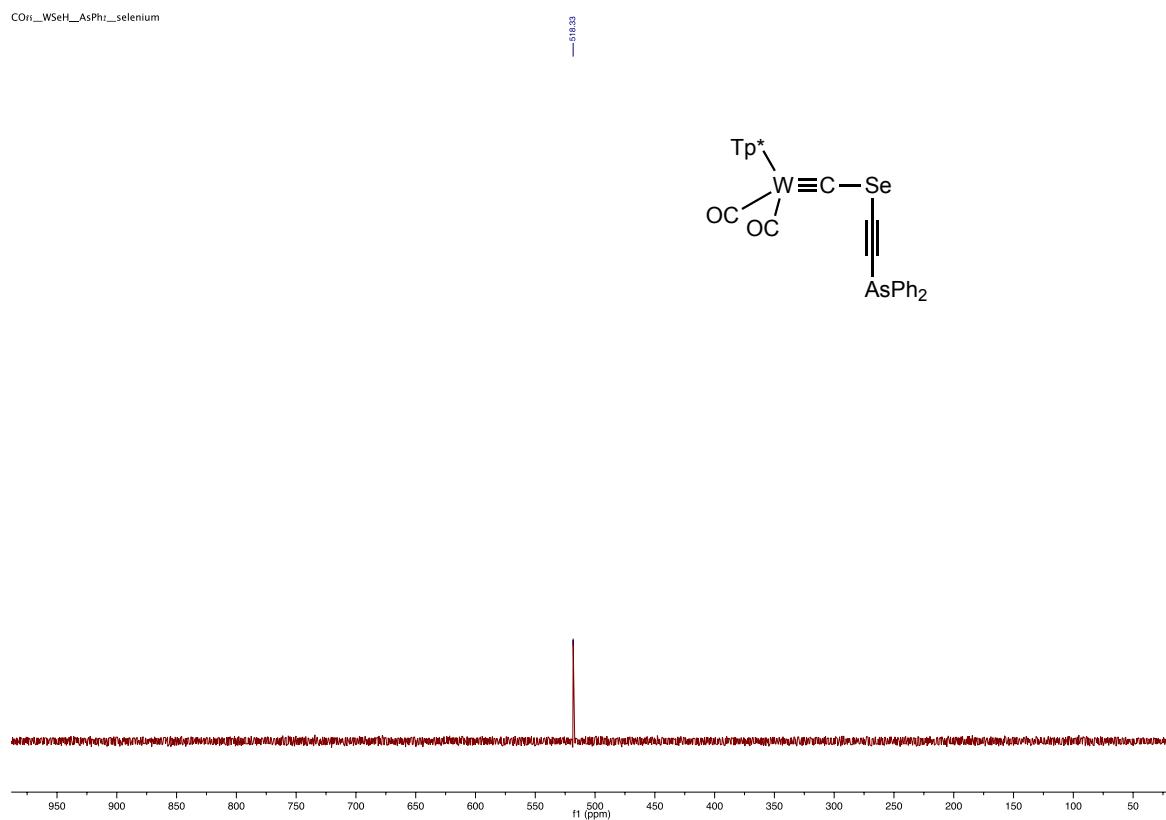
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 2.17.

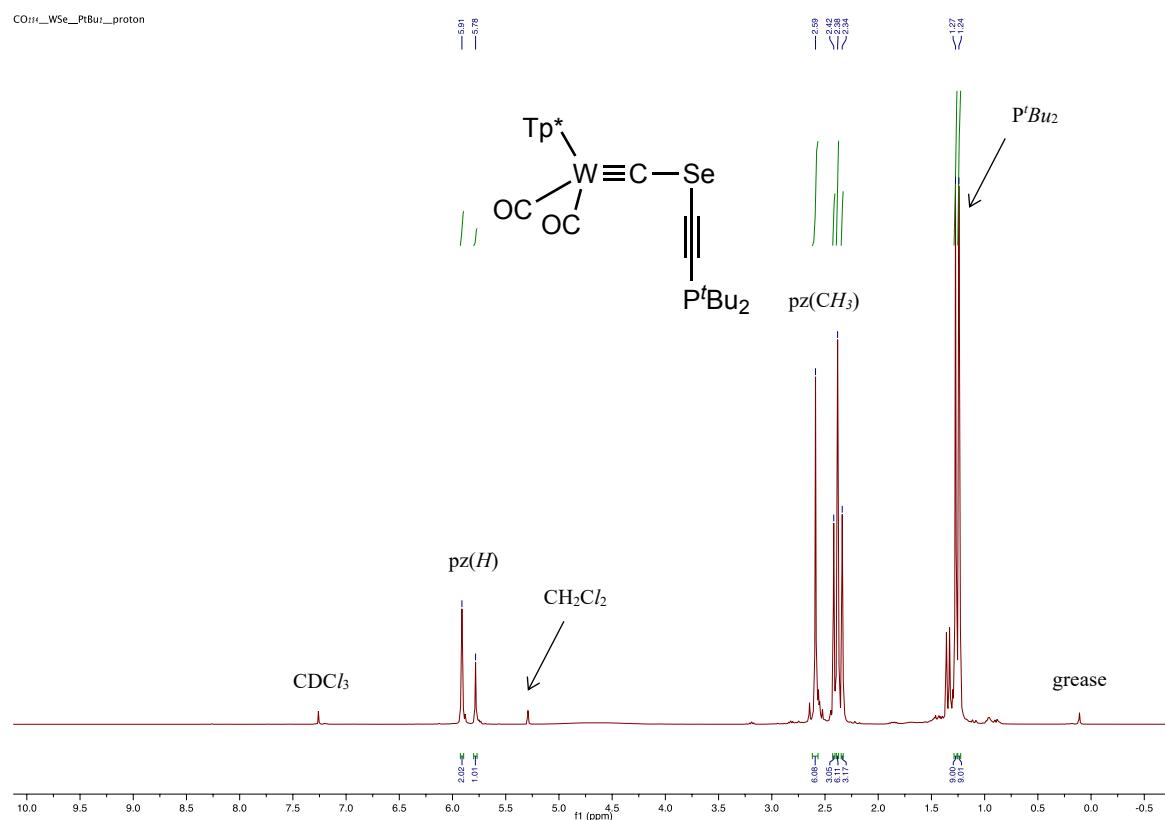


¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 2.18.

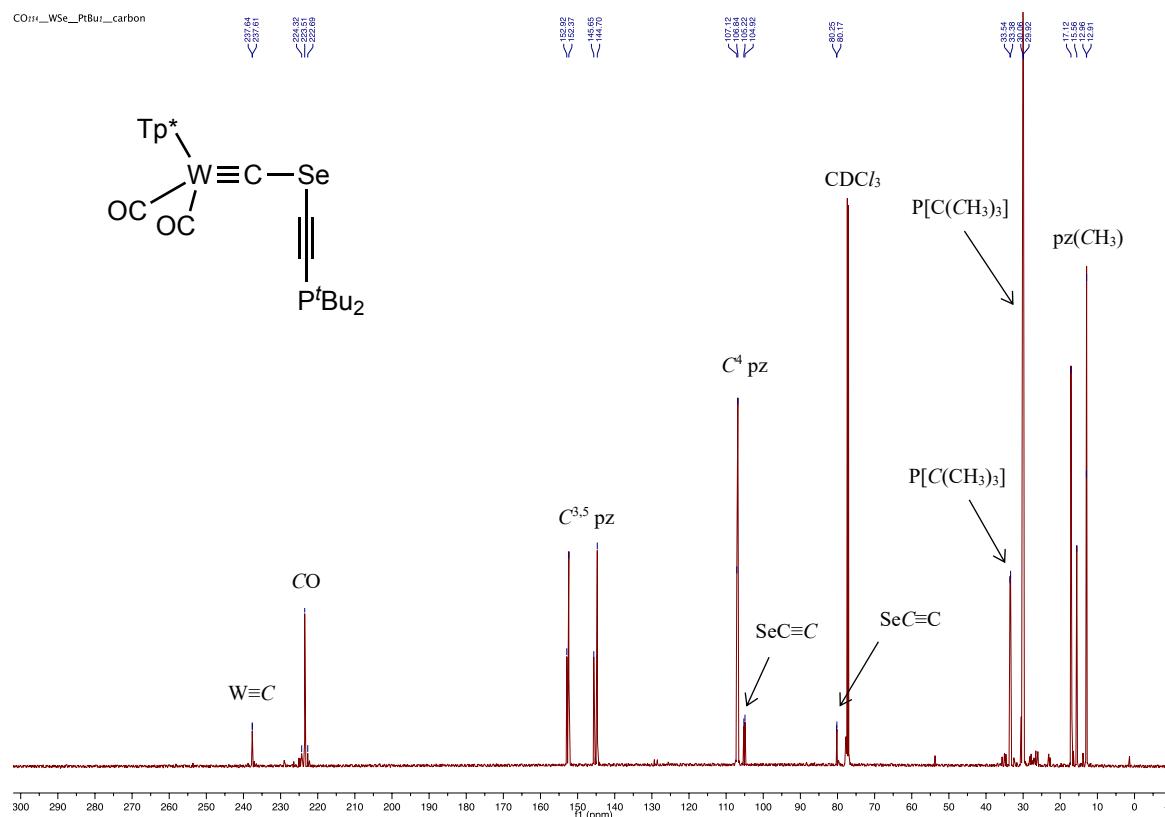


¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 2.18.

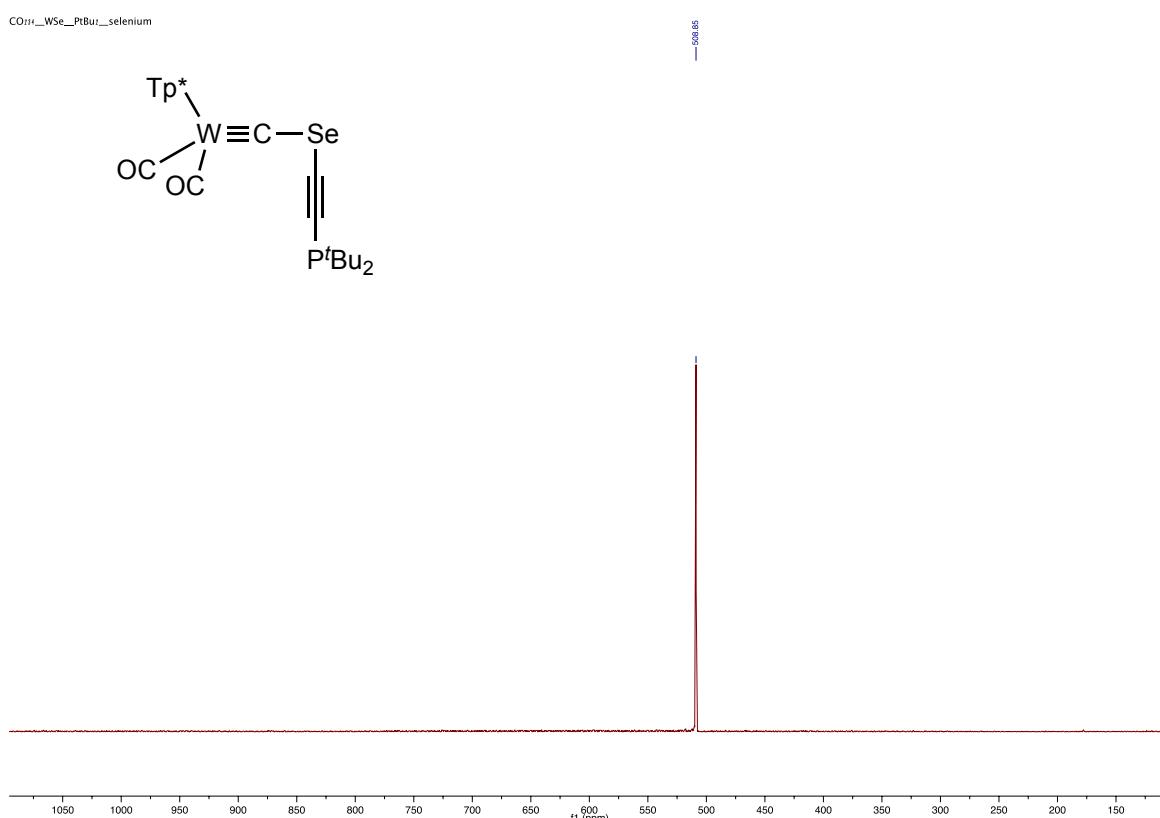




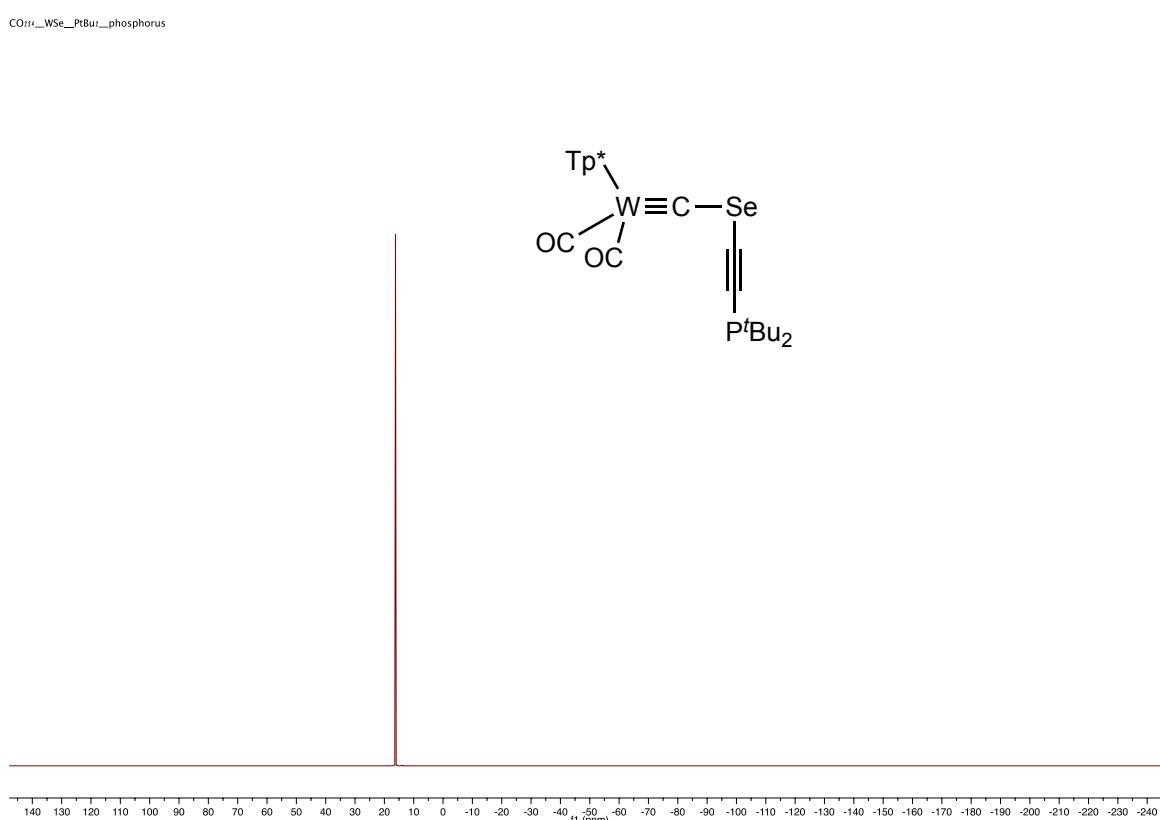
^1H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound **2.19**.



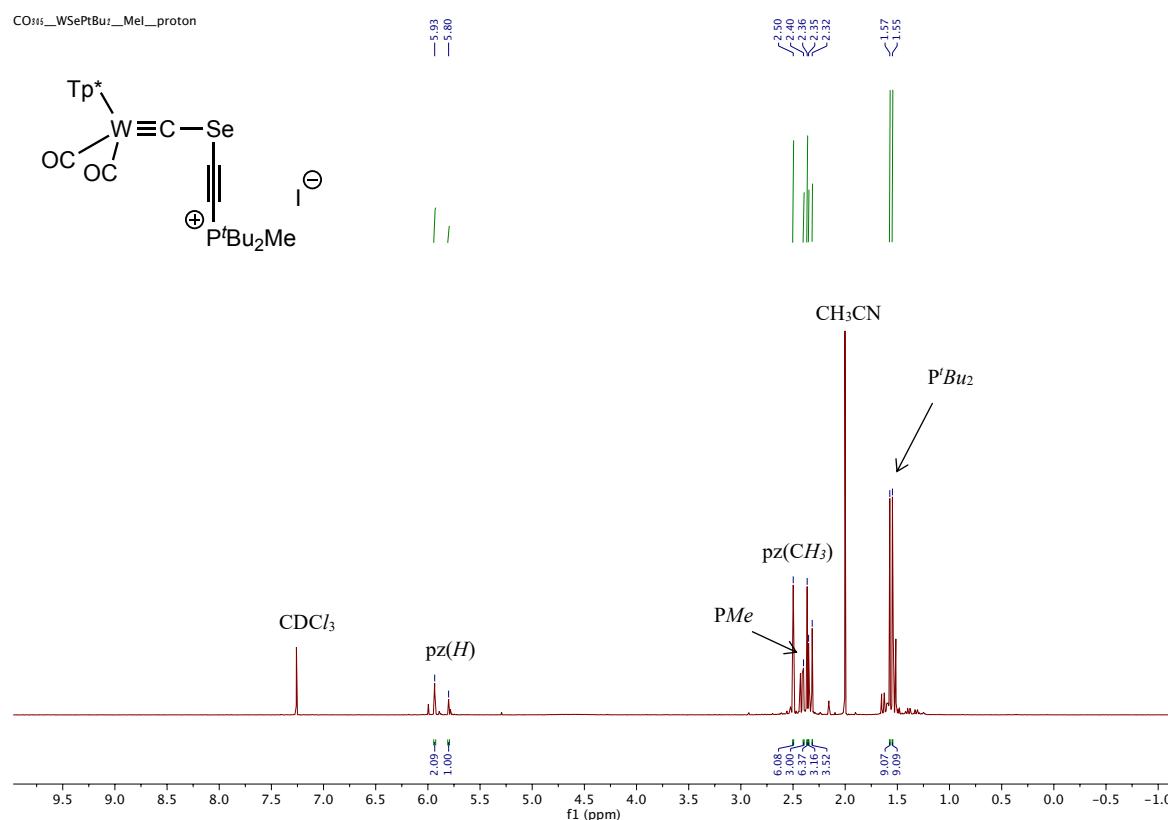
$^{13}\text{C}\{^1\text{H}\}$ NMR (101 MHz, CDCl₃, 25°C, δ) spectrum of compound **2.19**.



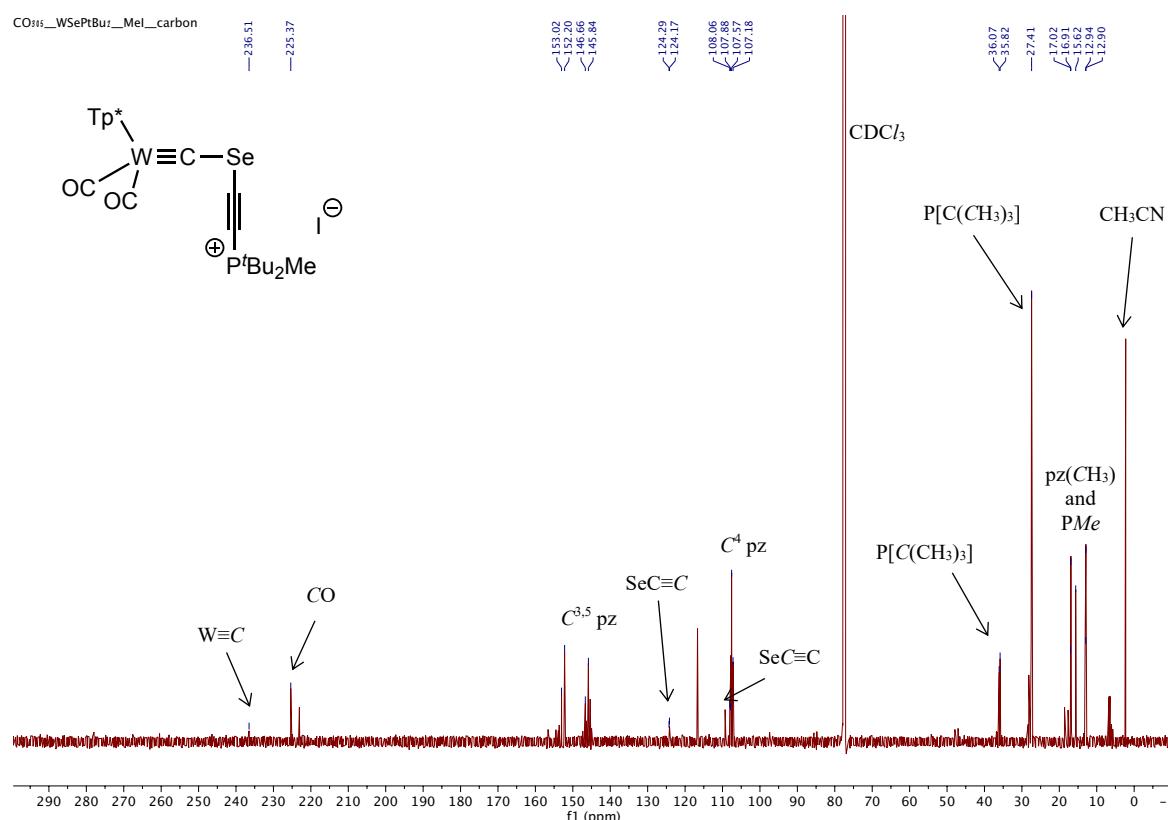
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.19**.



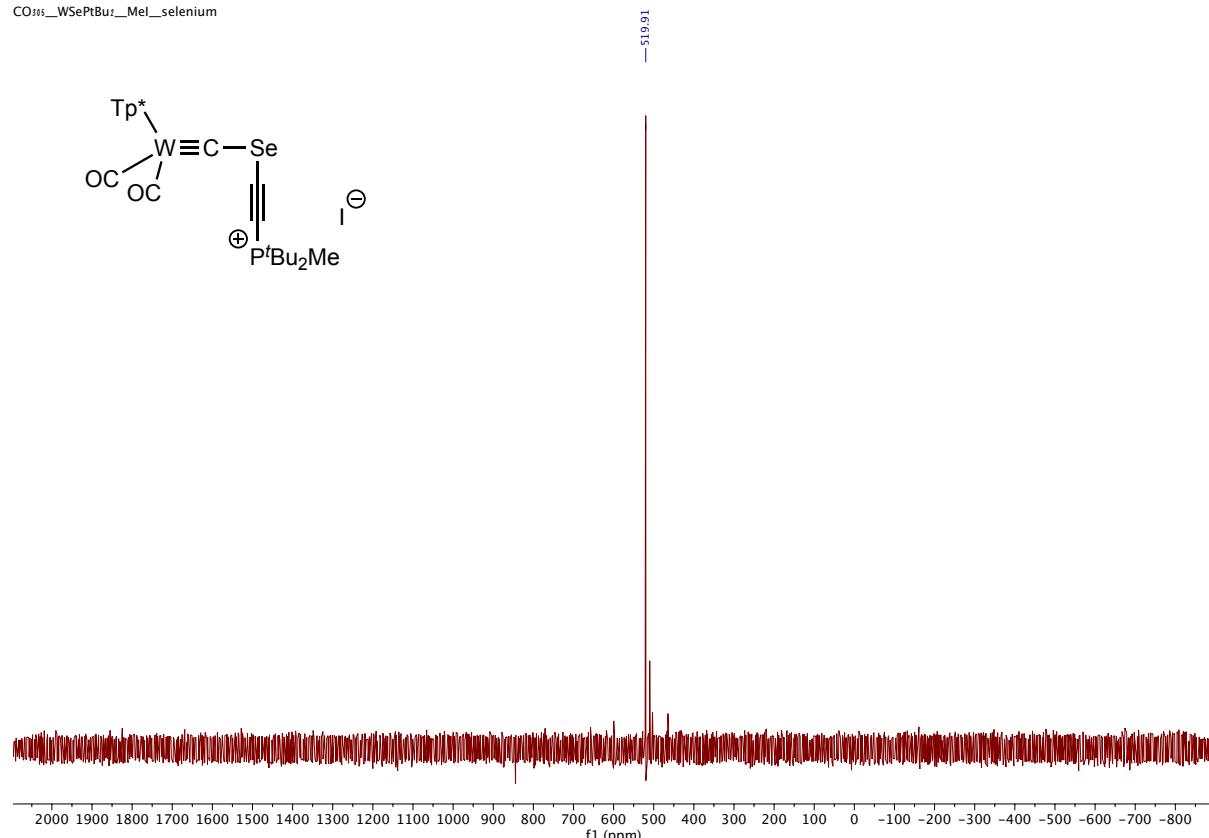
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound **2.19**.



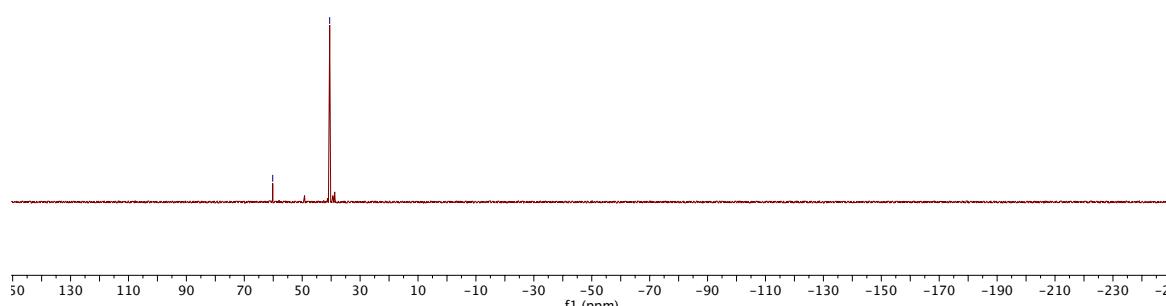
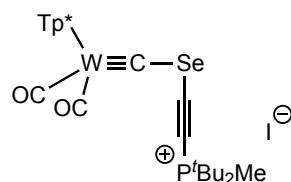
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound **2.20**.

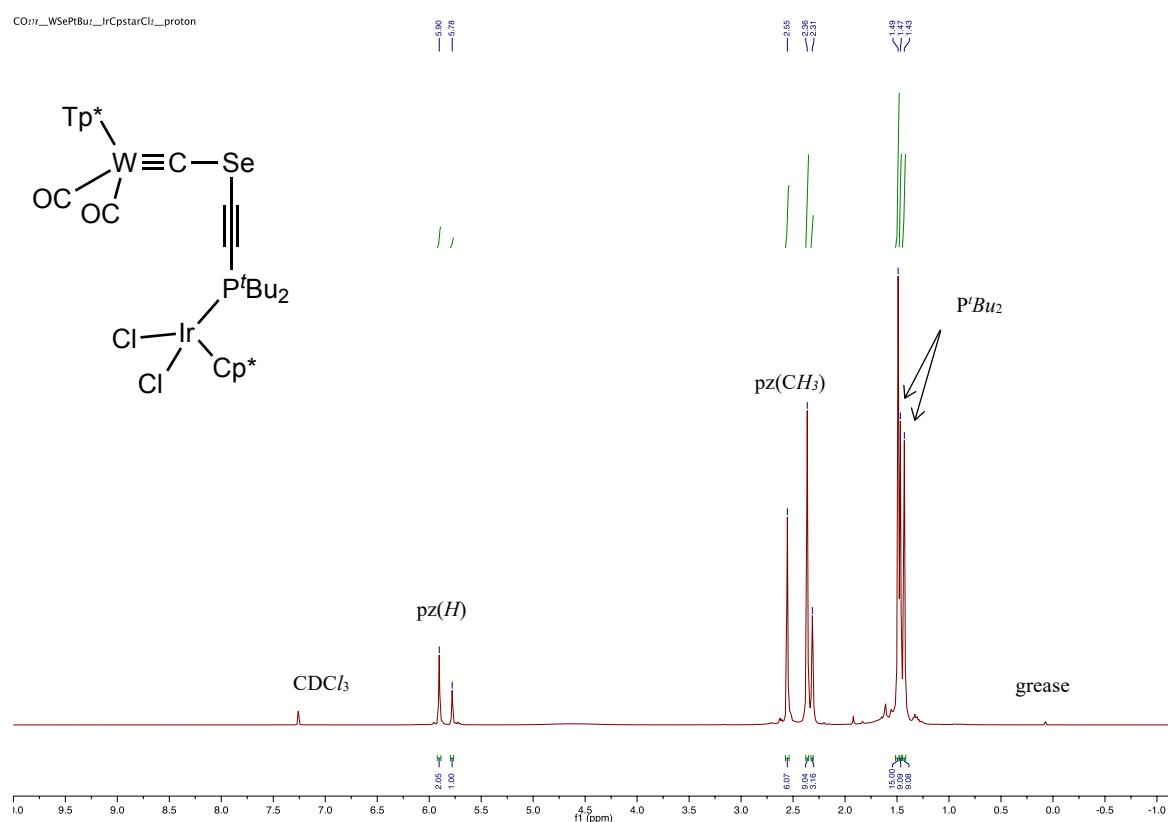


¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound **2.20**.

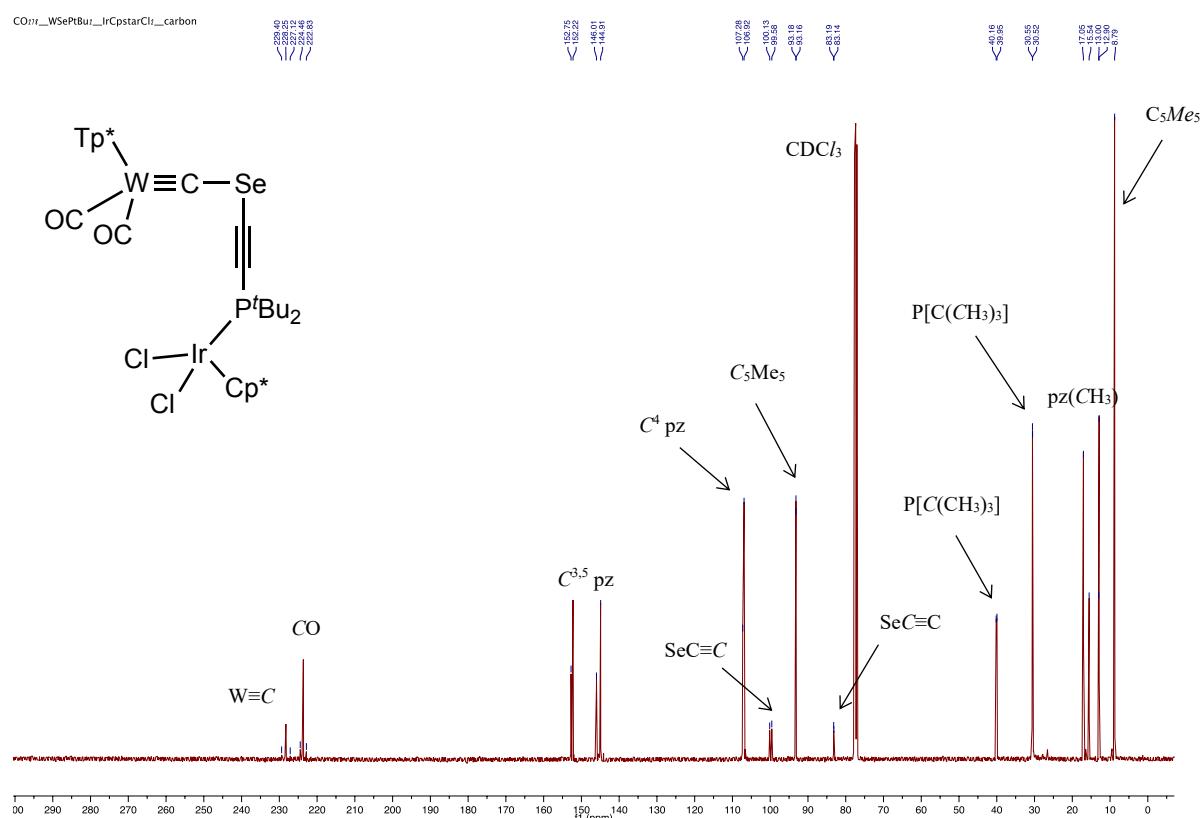
CO₂S—WSePtBu₂—MeI—selenium $^{77}\text{Se}\{\text{H}\}$ NMR spectrum (134 MHz, CDCl_3 , 25°C, δ) of compound **2.20**.CO₂S—WSePtBu₂—MeI—phosphorus

—60.19 —40.51

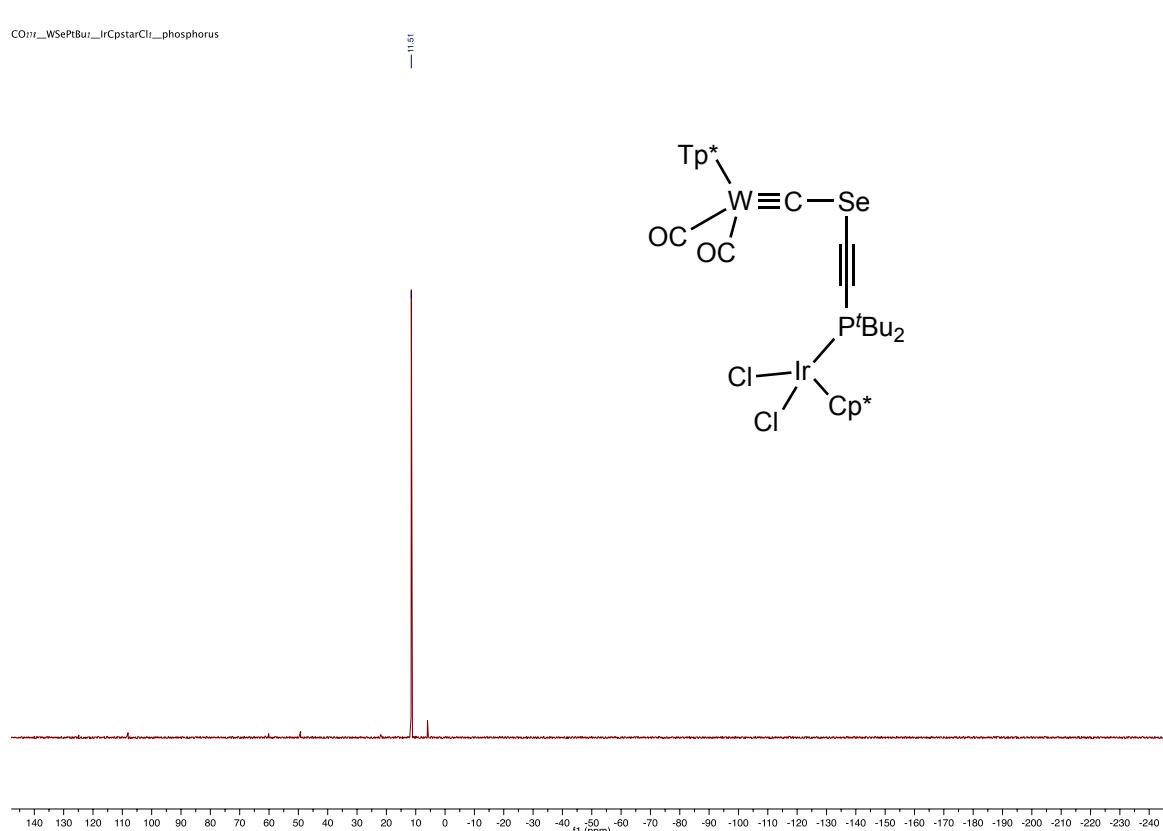
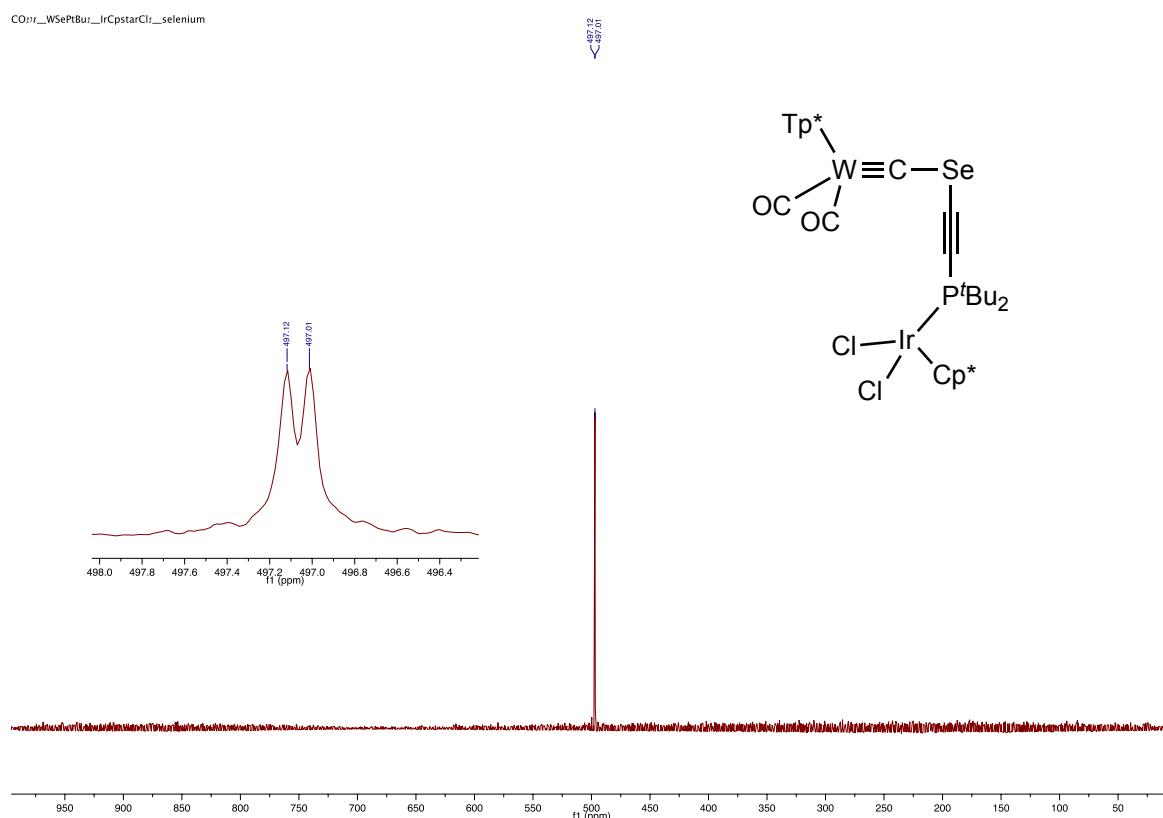
 $^{31}\text{P}\{\text{H}\}$ NMR spectrum (283 MHz, CDCl_3 , 25°C, δ) of compound **2.20**.

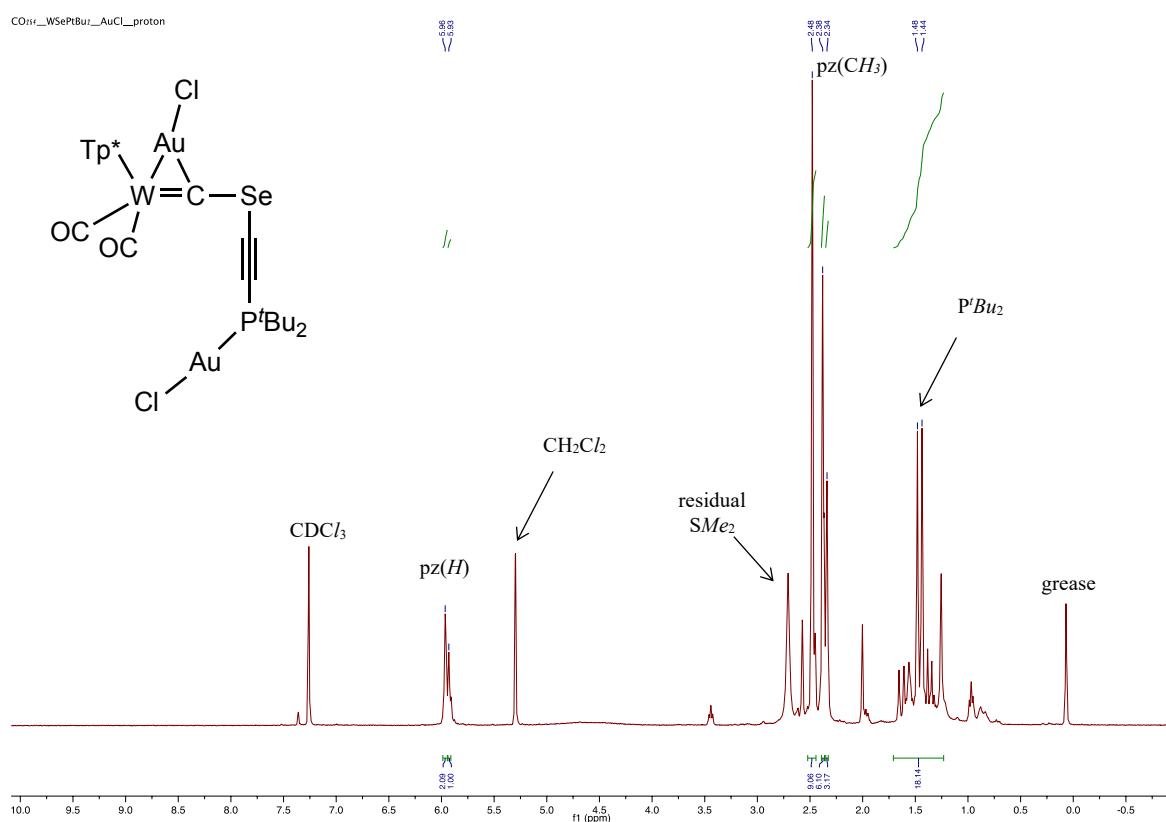


¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 2.21.

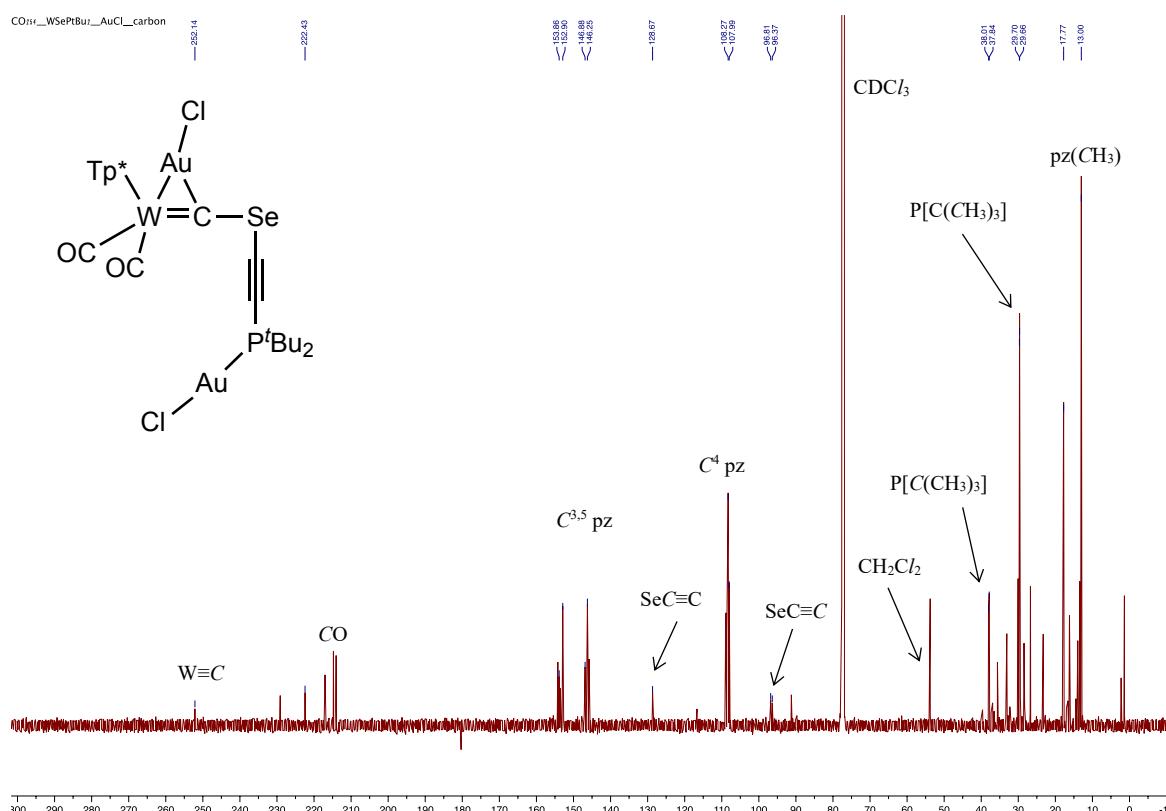


¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound 2.21.

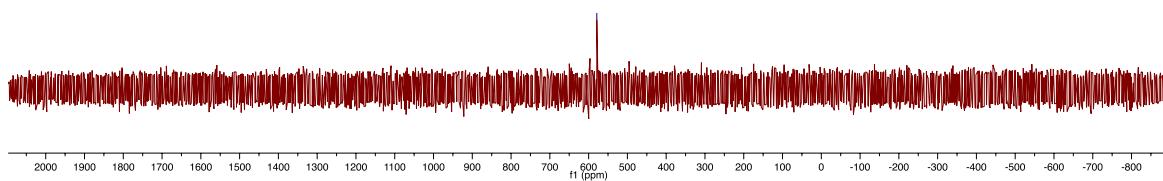
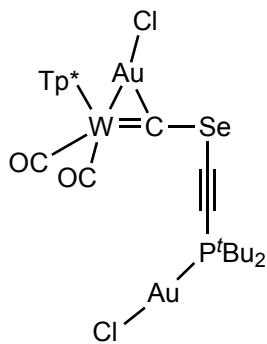
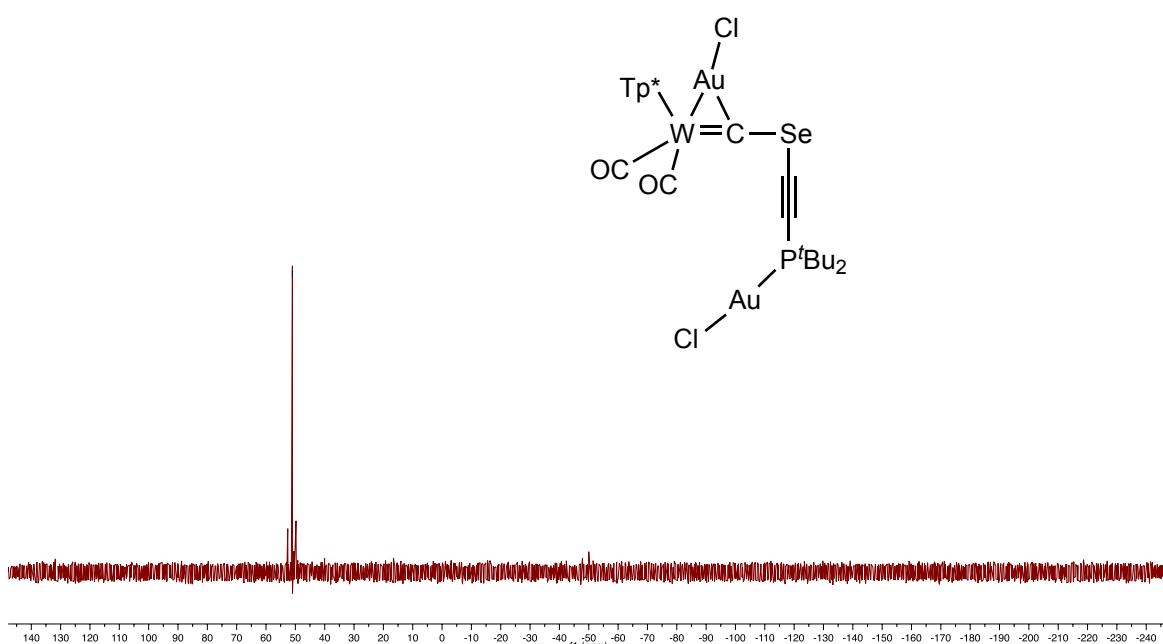


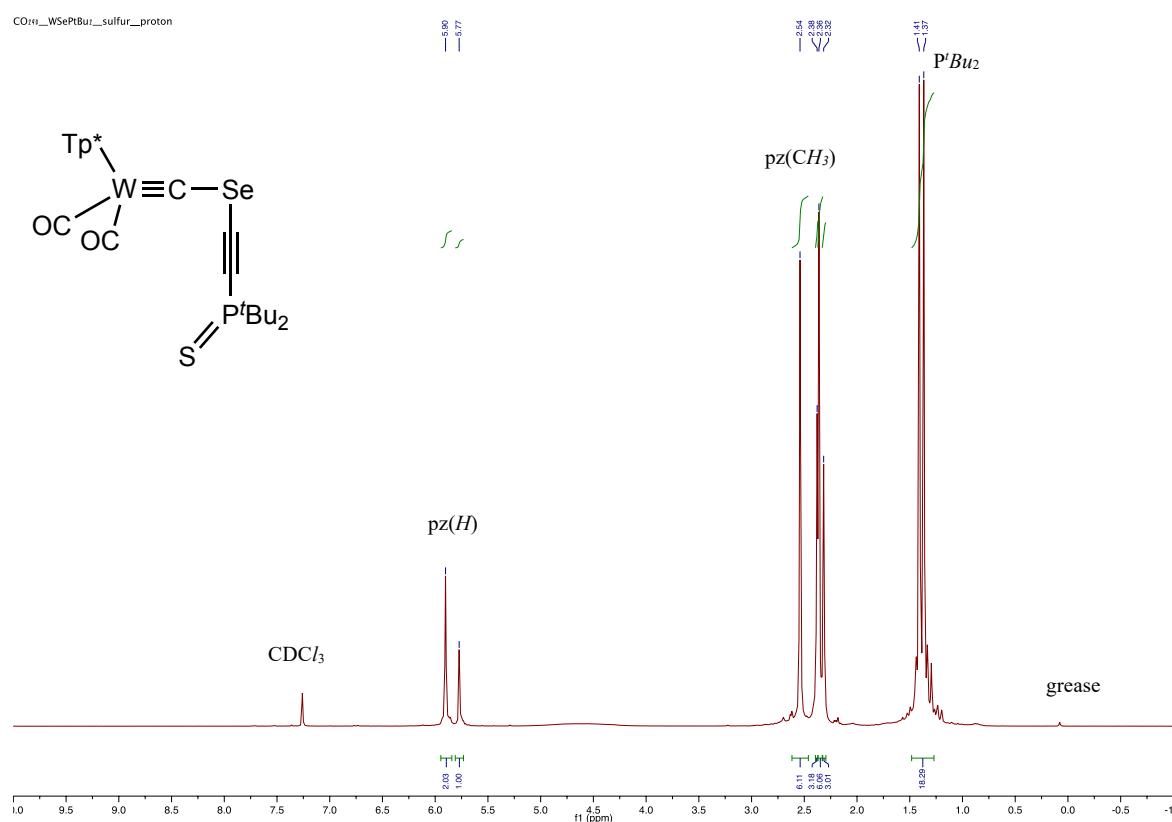


^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 2.22.

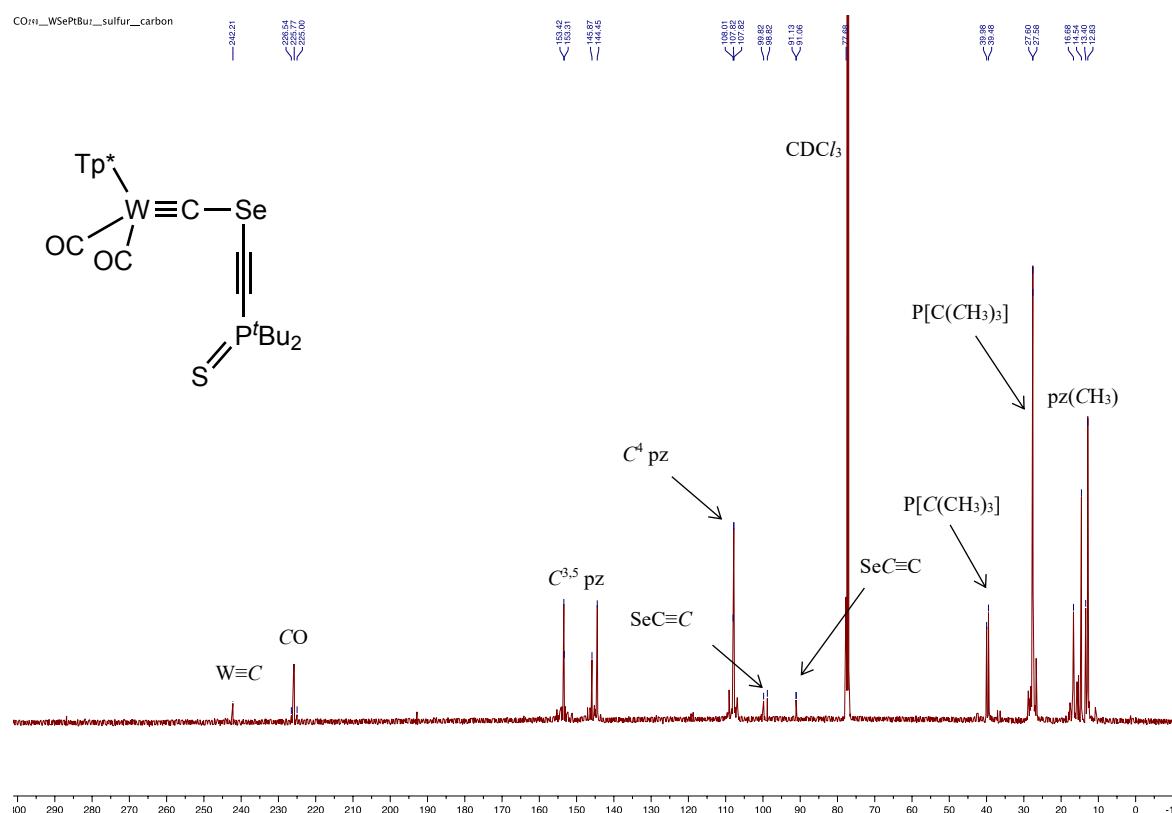


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.22.

COHr—WSePtBu₂—AuCl—selenium⁷⁷Se{¹H} NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound 2.22.COHr—WSePtBu₂—AuCl—phosphorus³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 2.22.

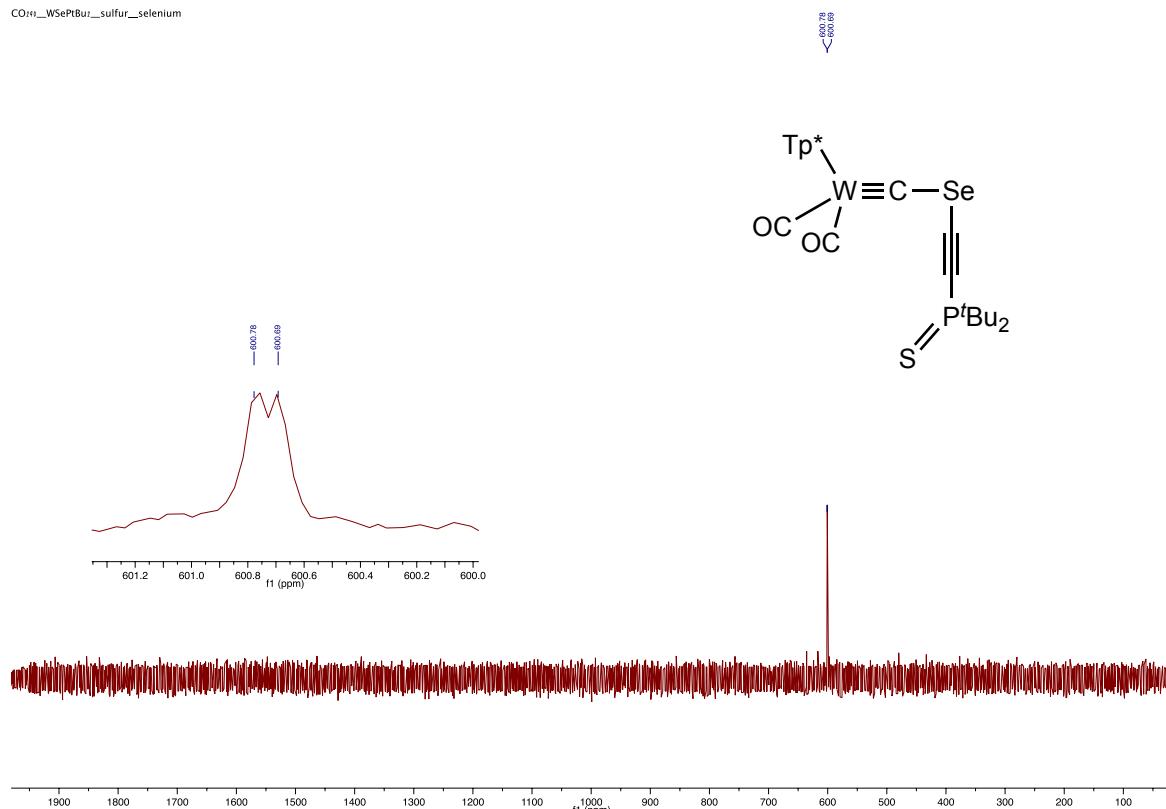


¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 2.23.

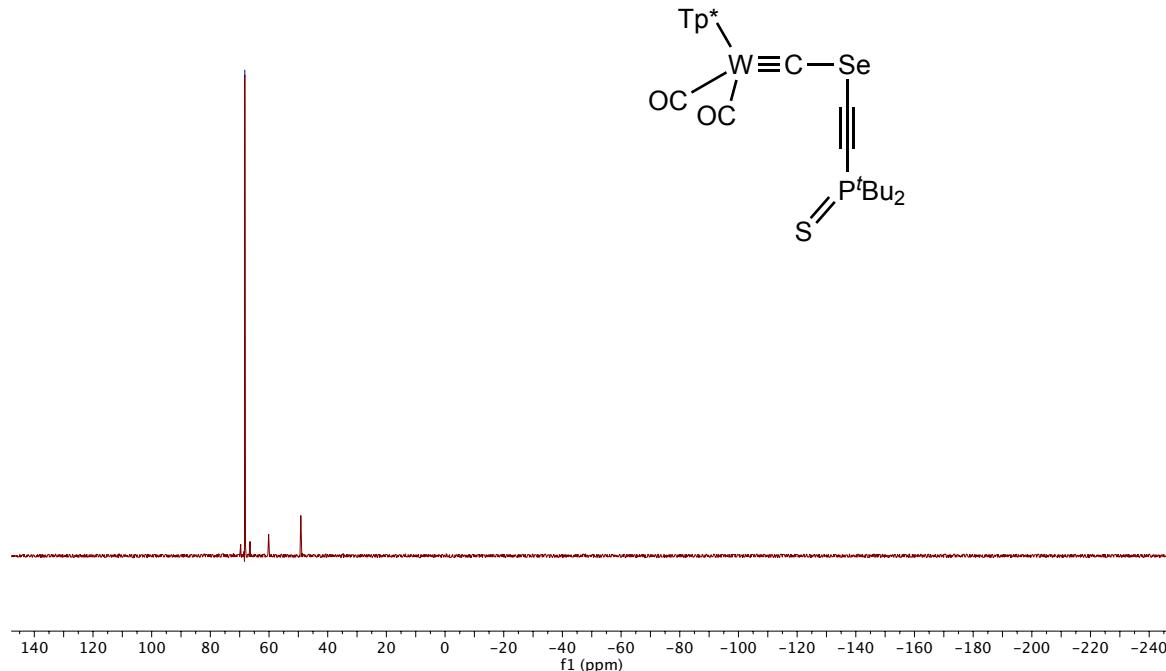


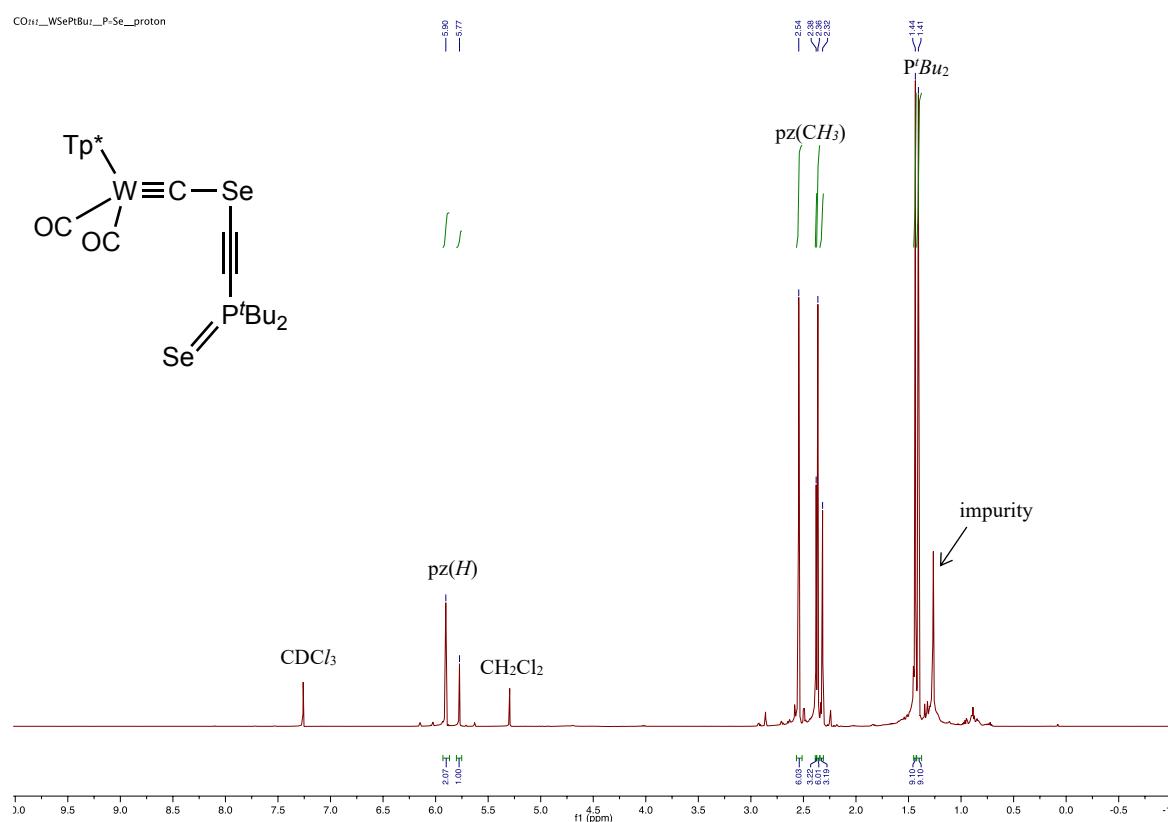
¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound 2.23.

CO:ti_WSePtBu2_sulfur_selenium

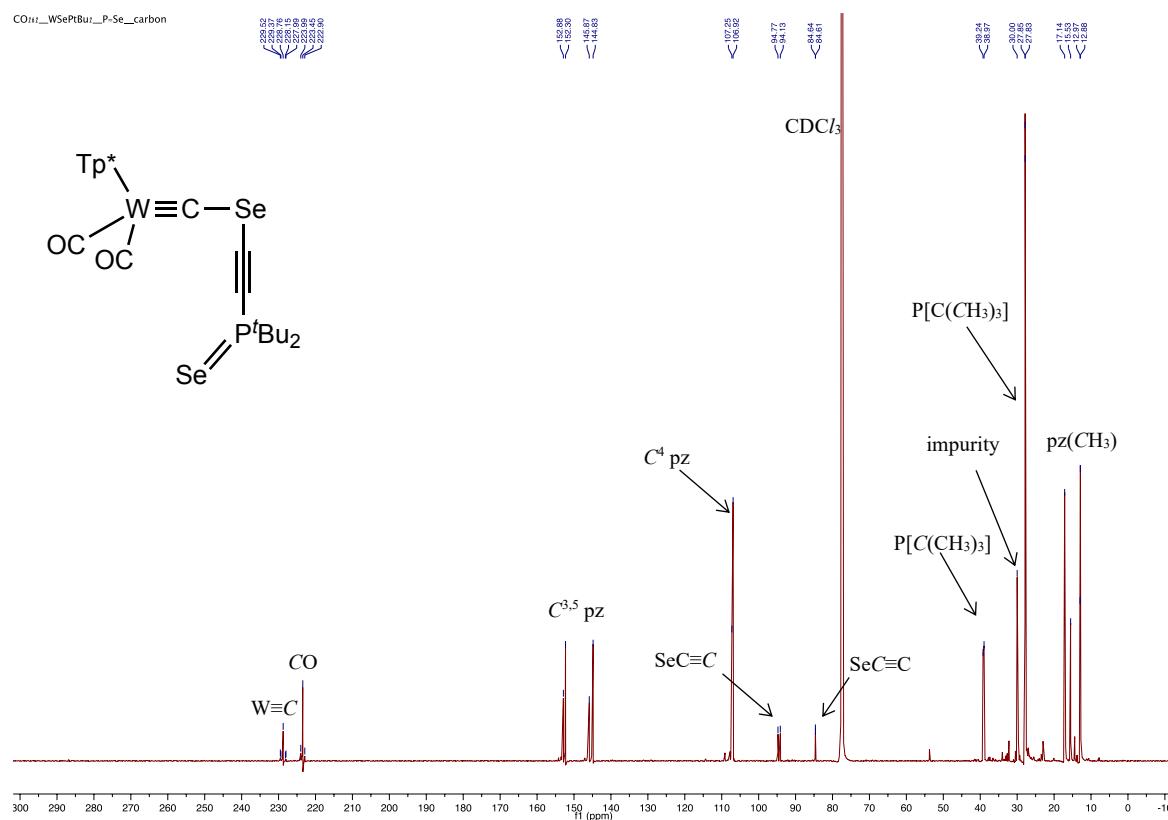
 $^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C , δ) of compound **2.23**.

CO:ti_WSePtBu2_sulfur_phosphorus

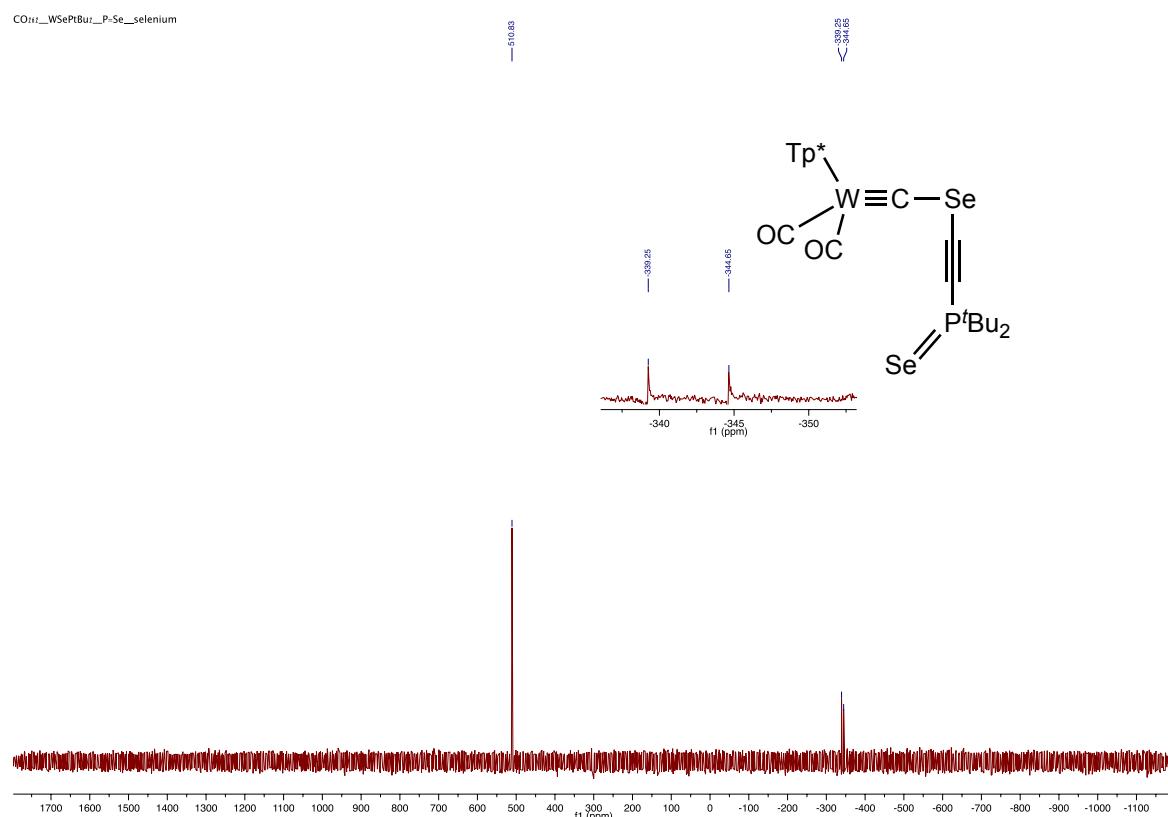
 $^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C , δ) of compound **2.23**.



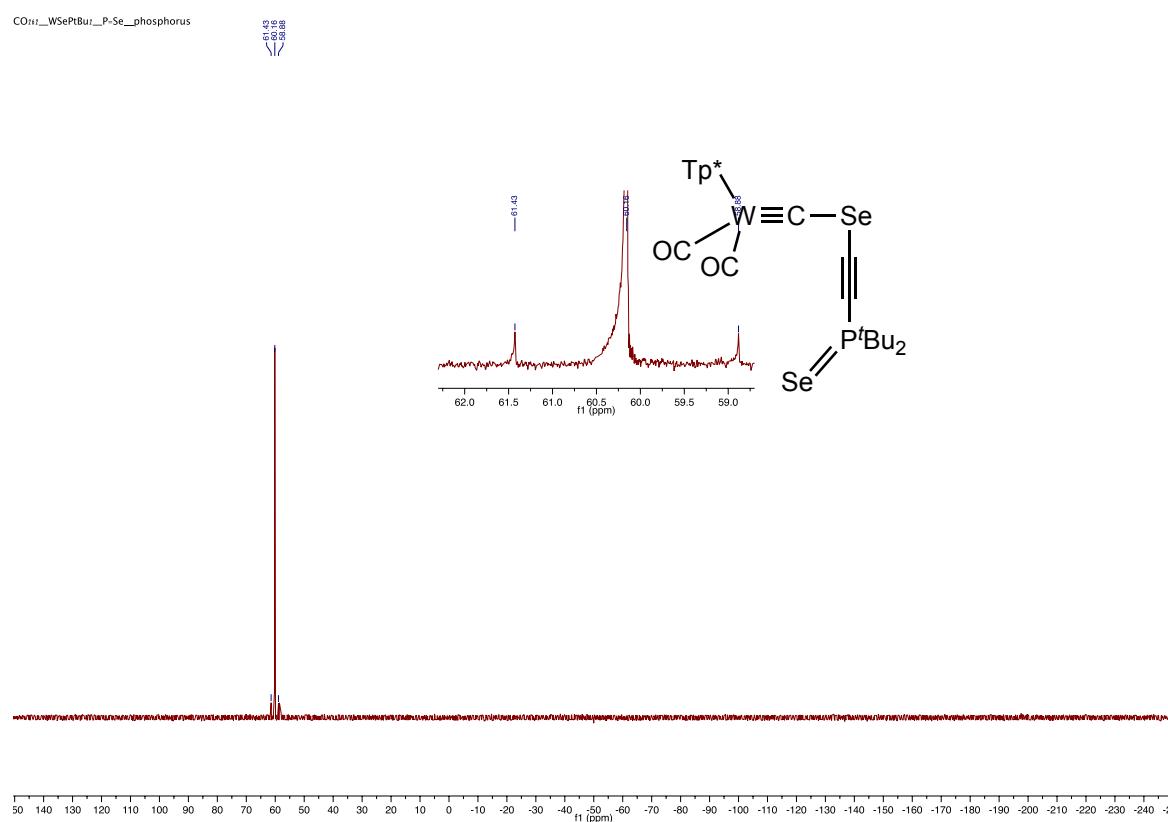
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 2.24.



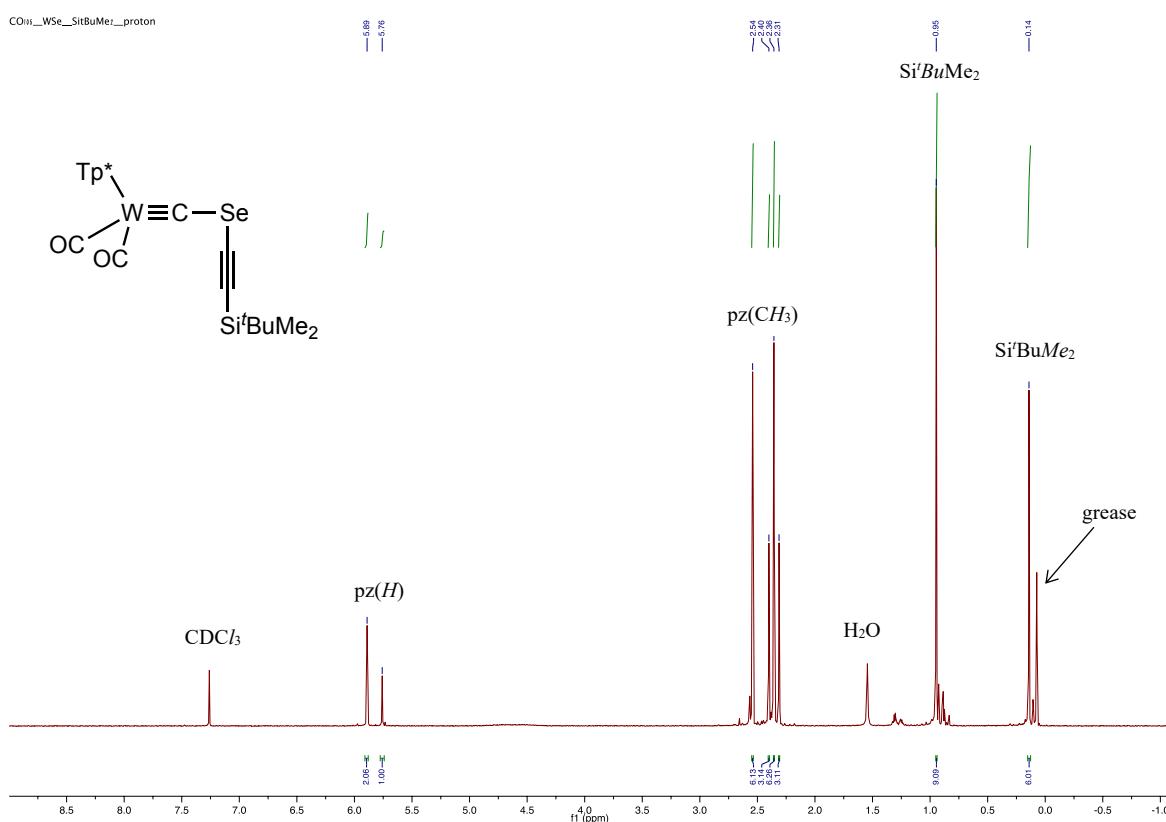
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 2.24.



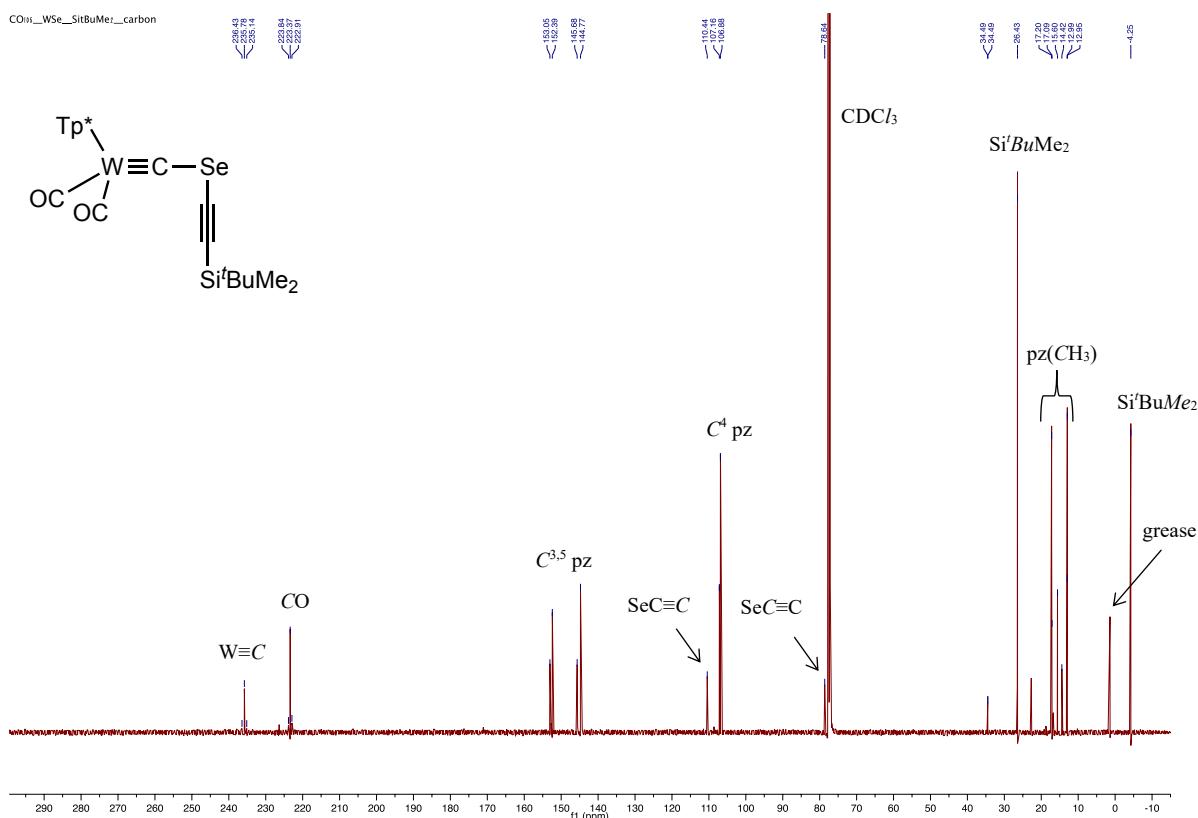
⁷⁷Se{¹H} NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound 2.24.



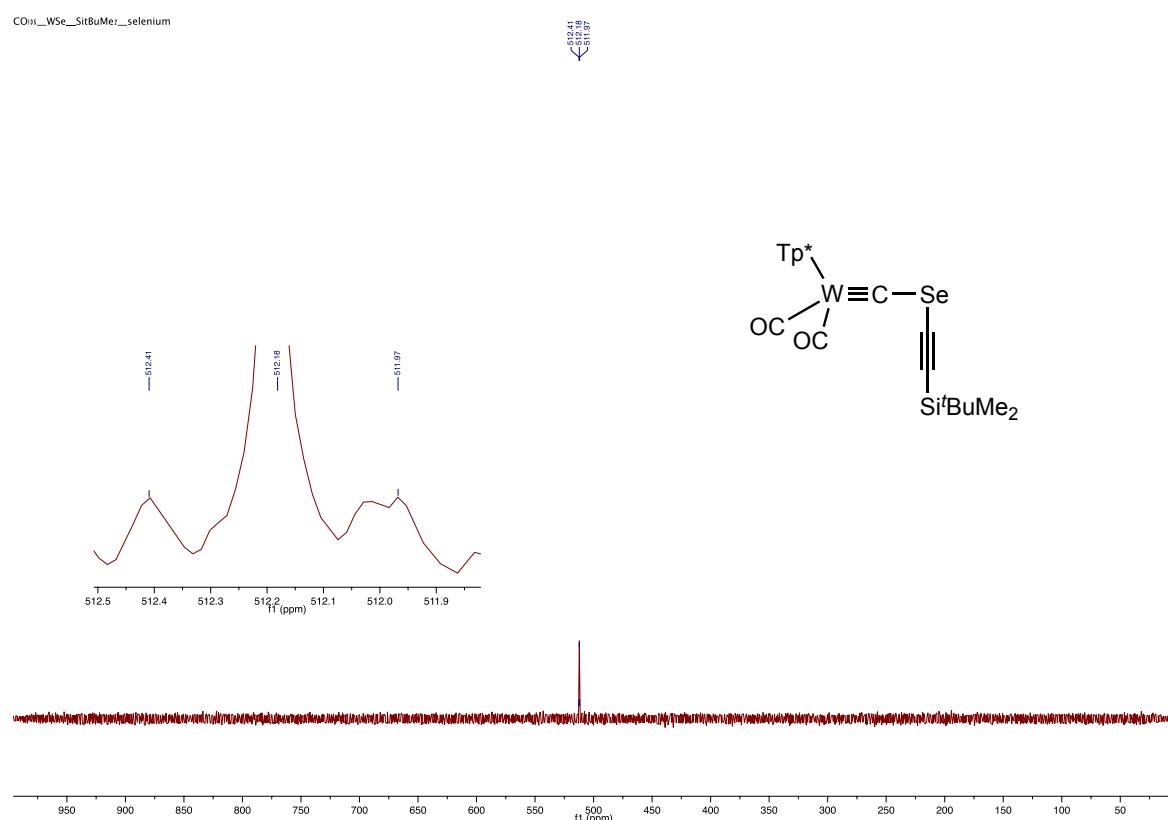
³¹P{¹H} NMR spectrum (283 MHz, CDCl₃, 25°C, δ) of compound 2.24.



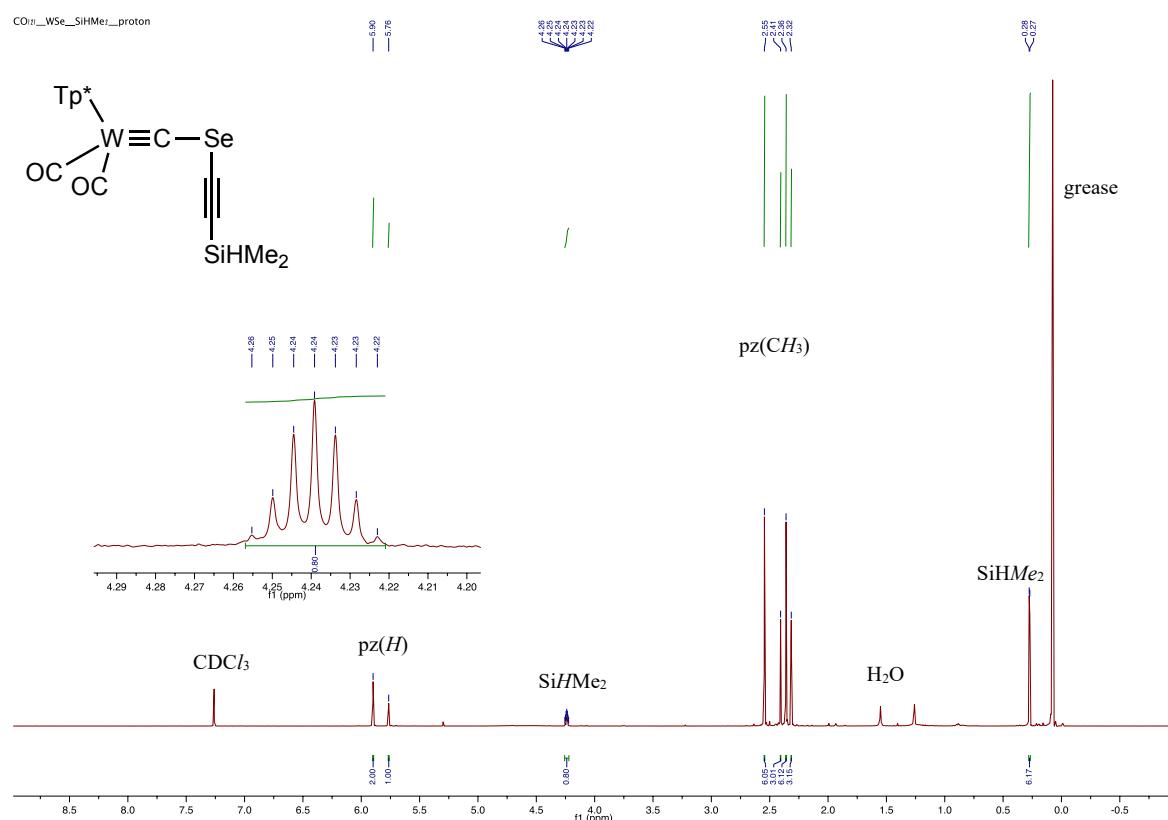
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.25.



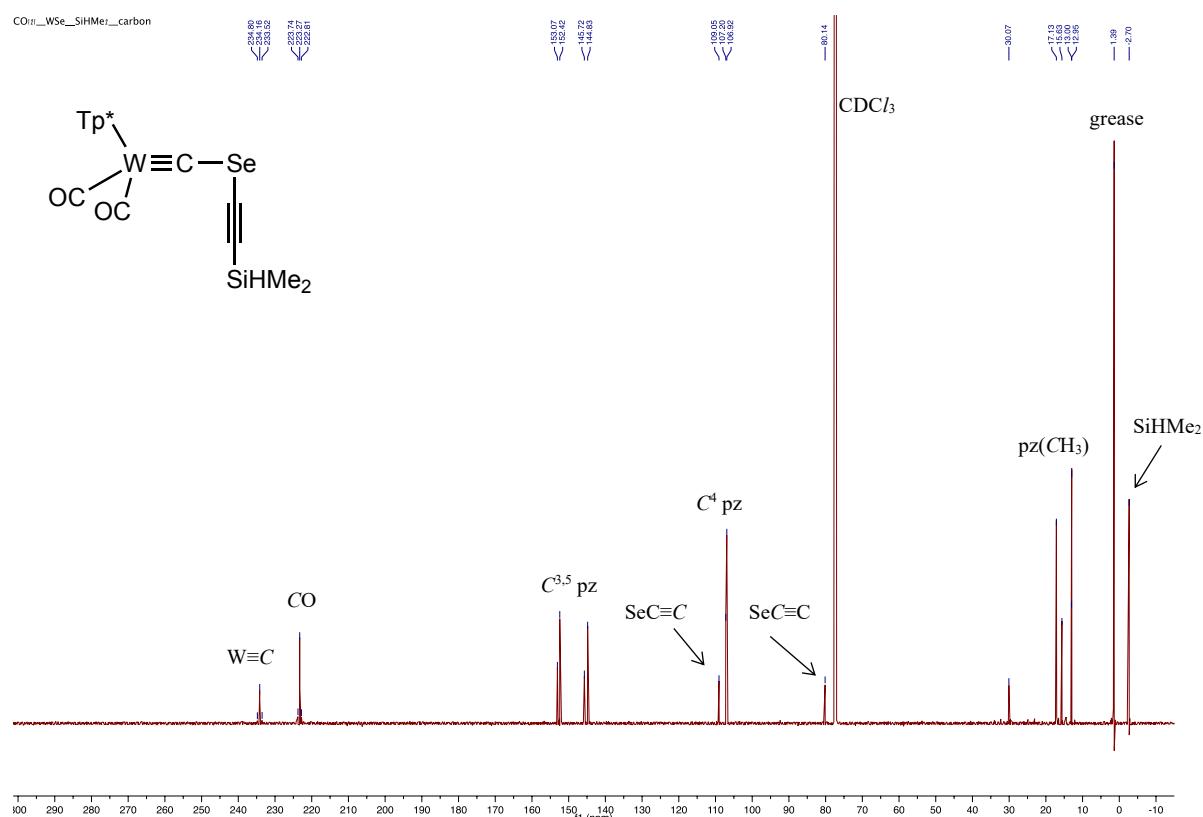
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.25.



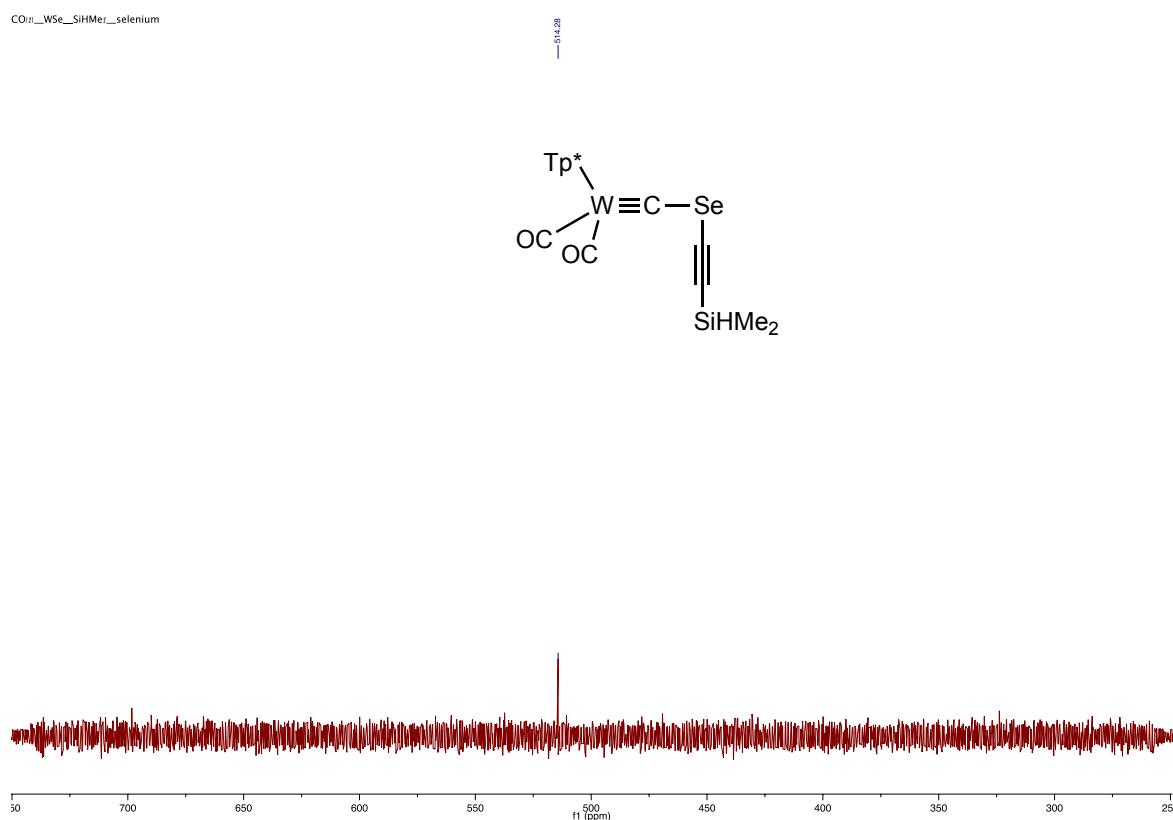
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound **2.25**.

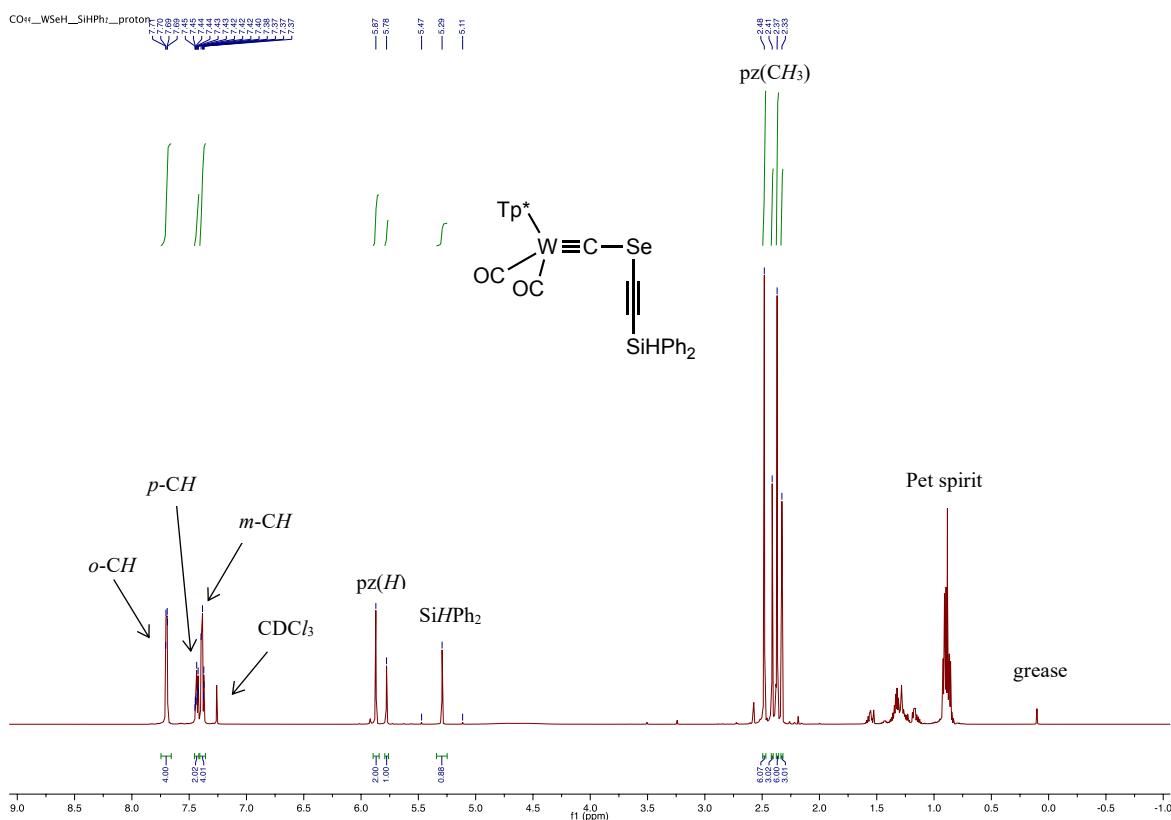


^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.26.

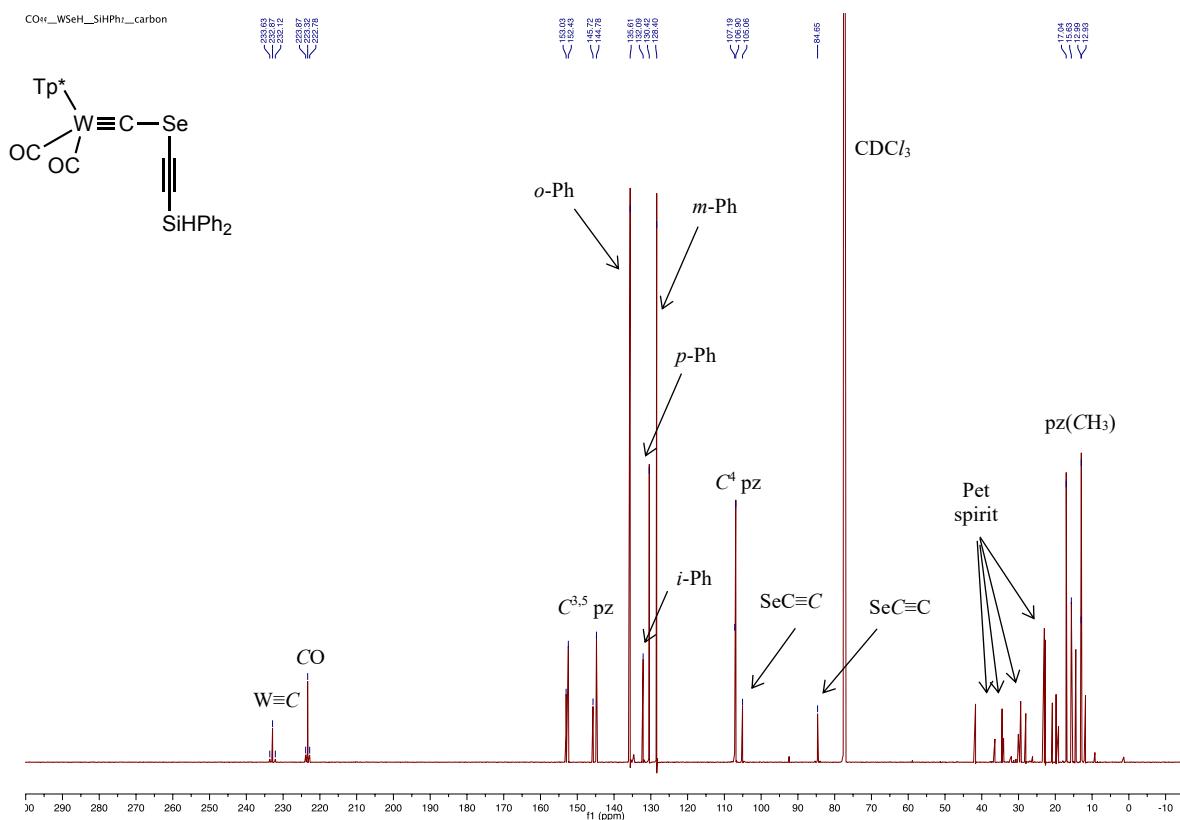


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.26.

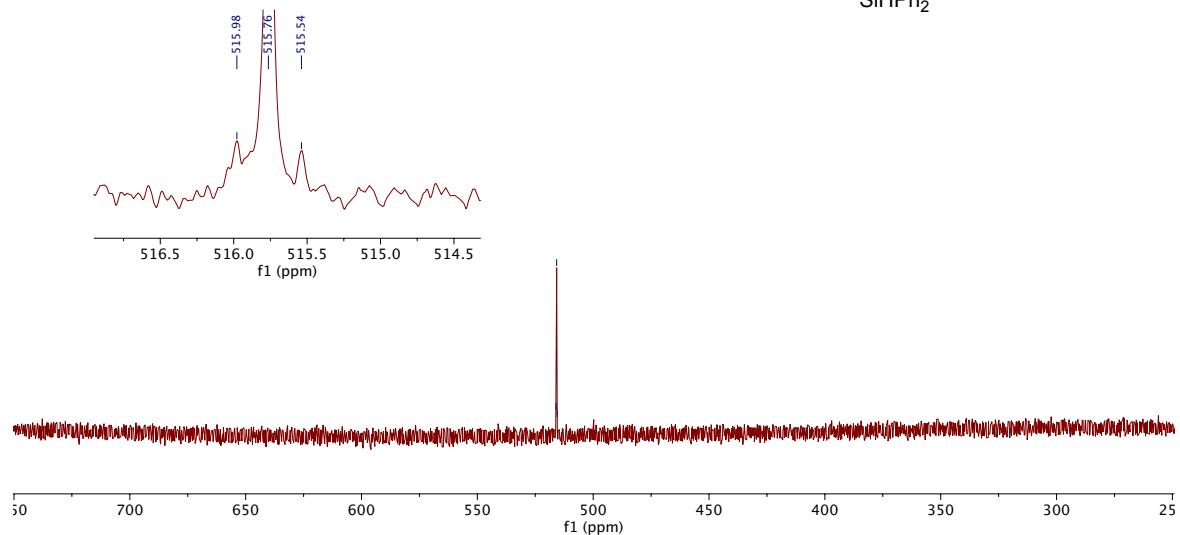
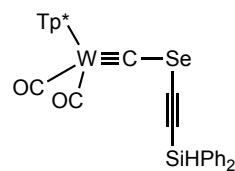




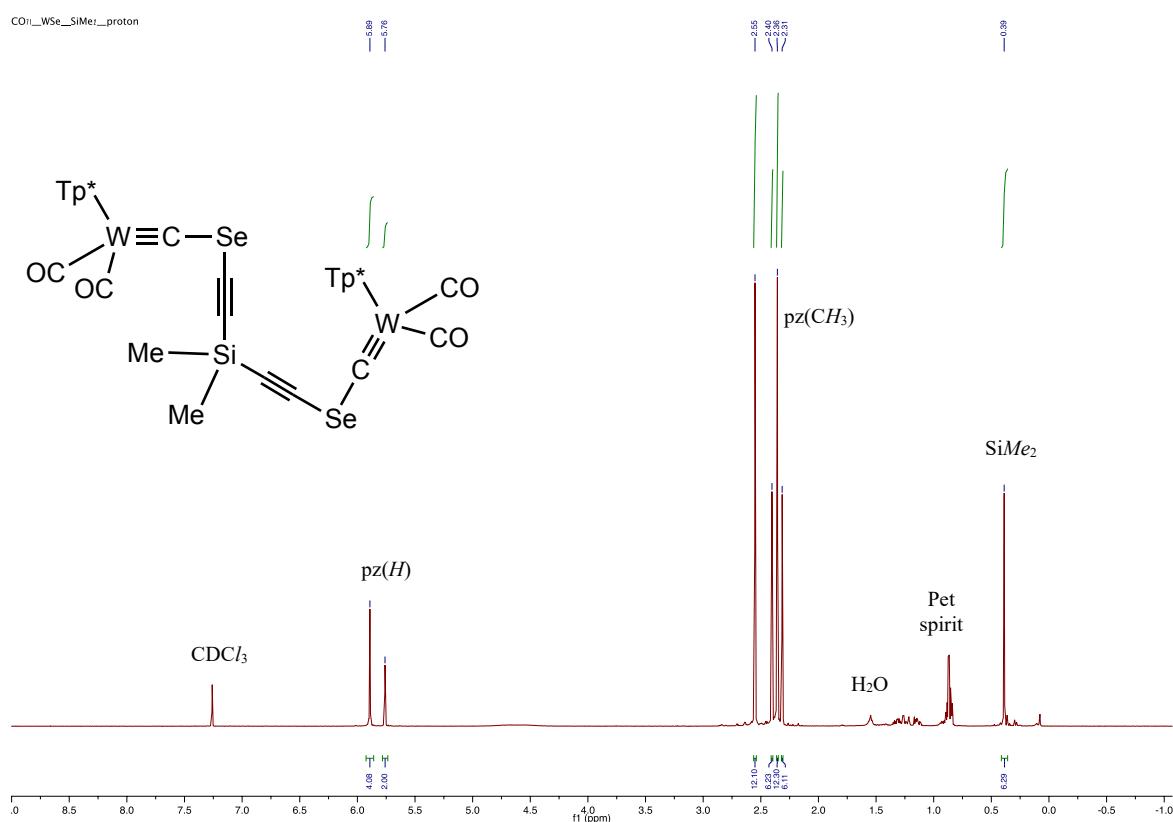
^1H NMR (600 MHz, CDCl_3 , 25°C, δ) of compound 2.27.



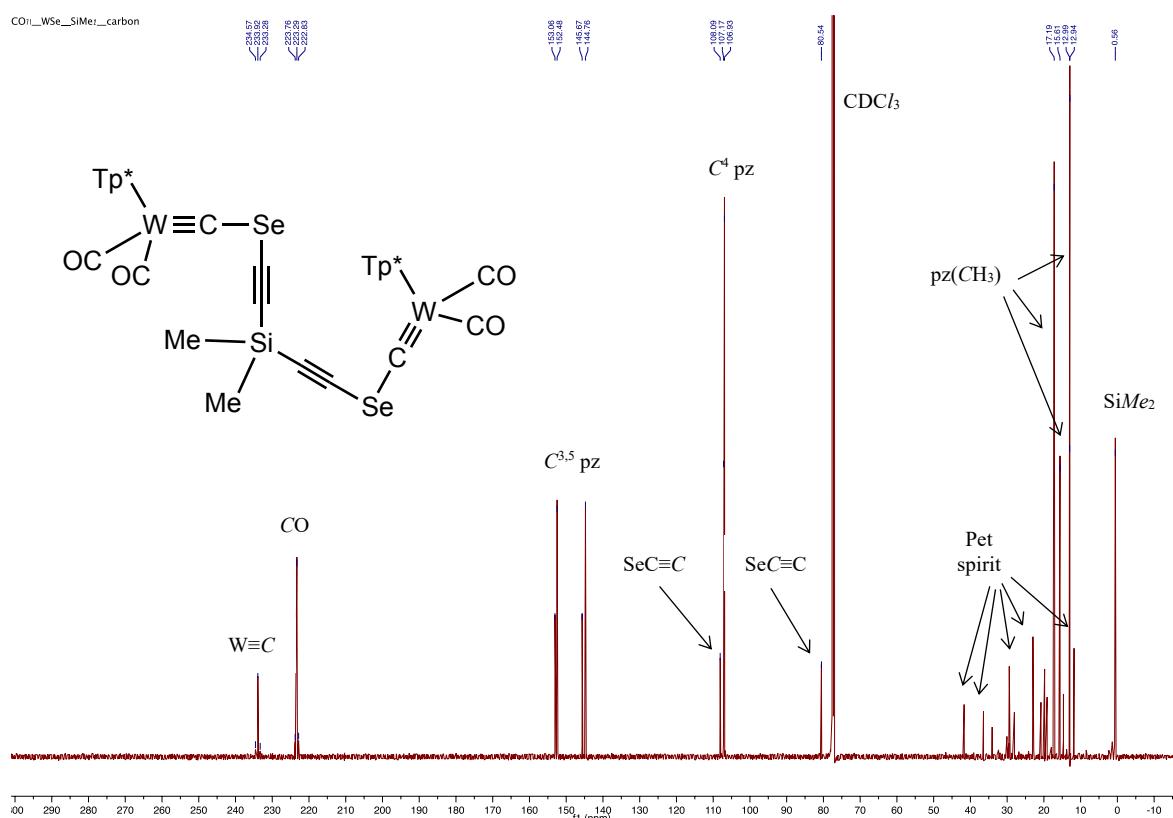
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 2.27.

CO_WSeH_SiPh₂_selenium515.98
515.76
515.54

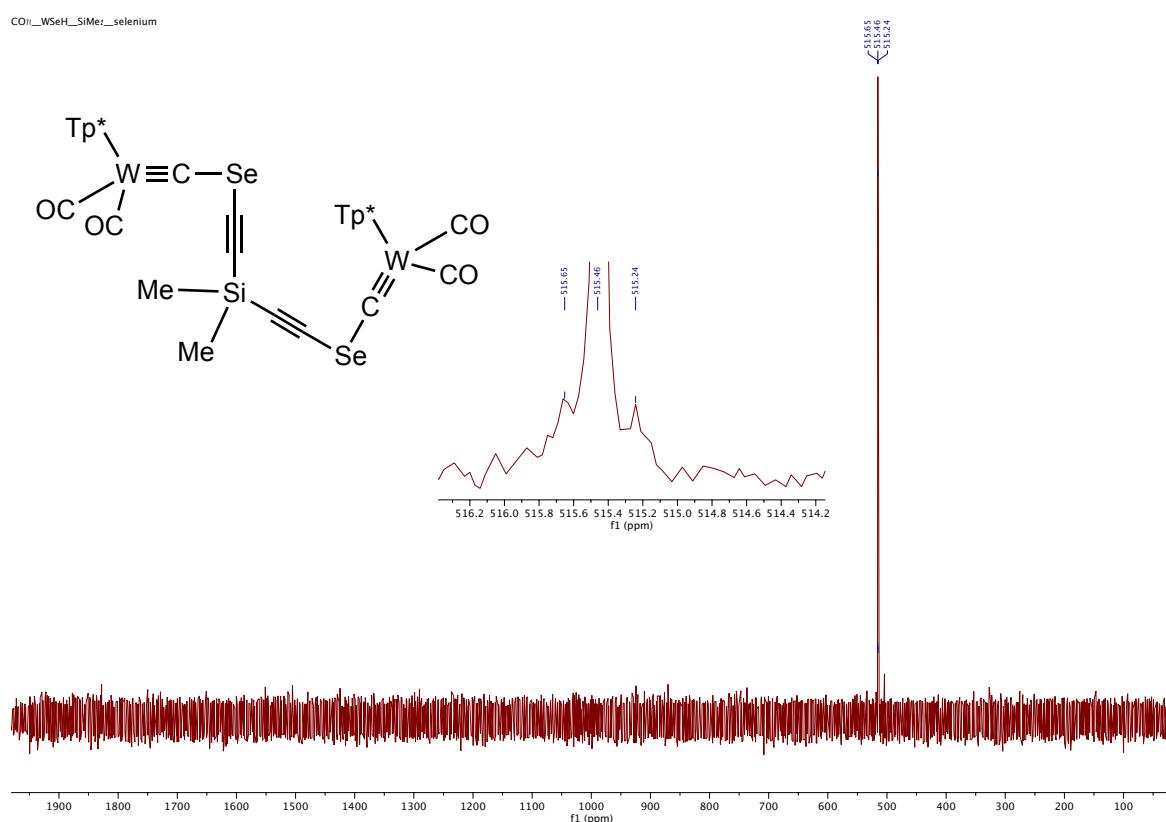
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.27**.



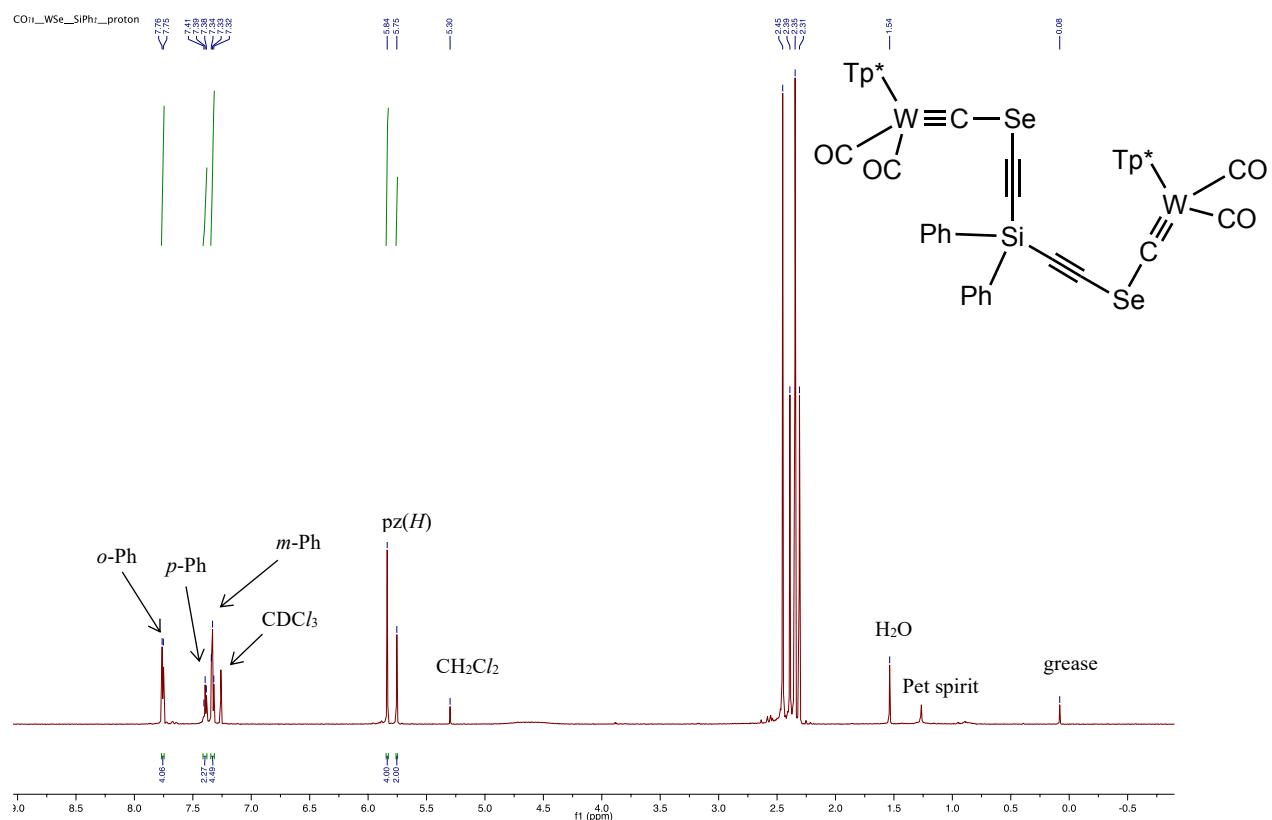
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.28.



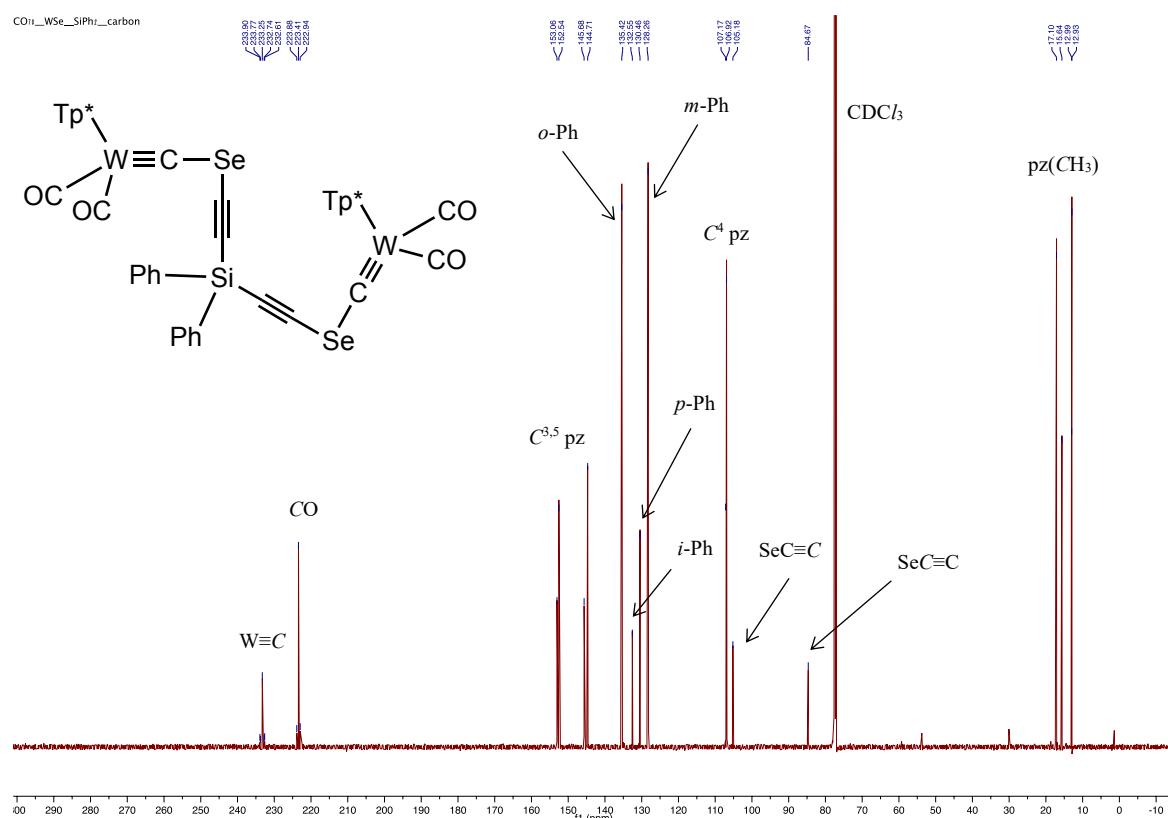
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.28.



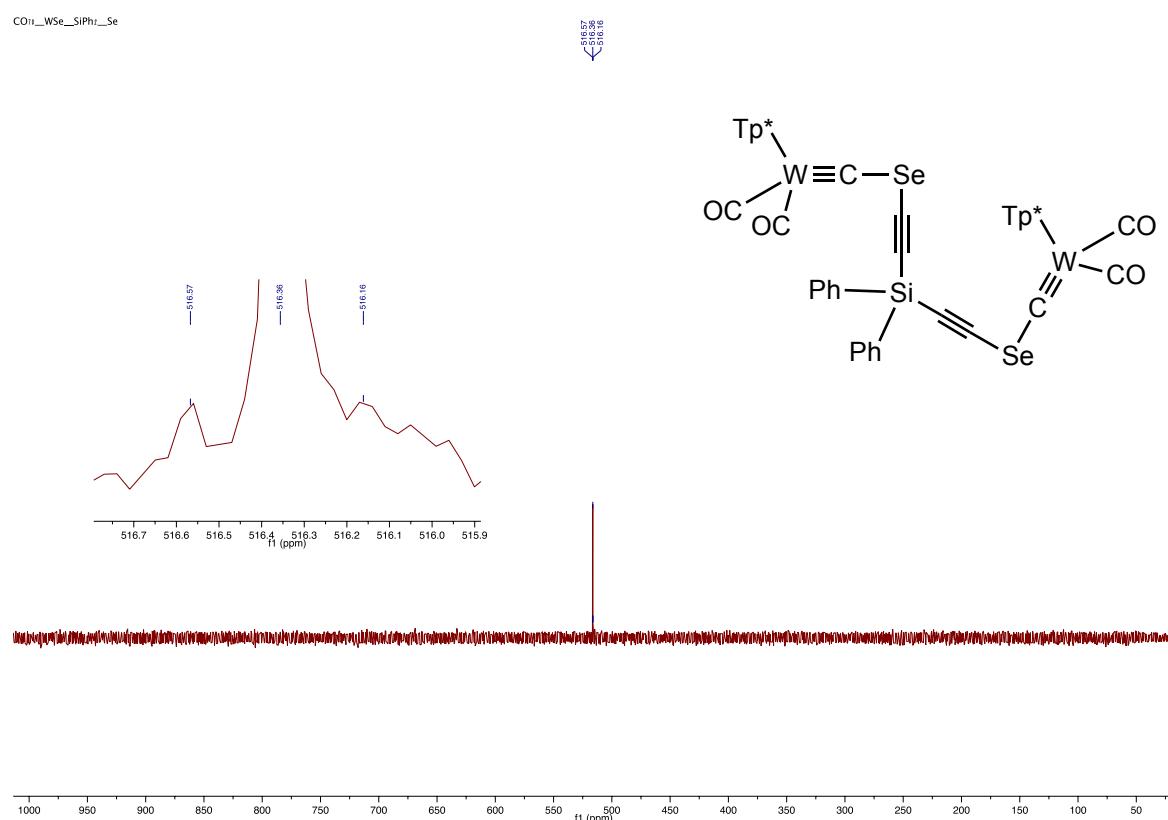
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 2.28.



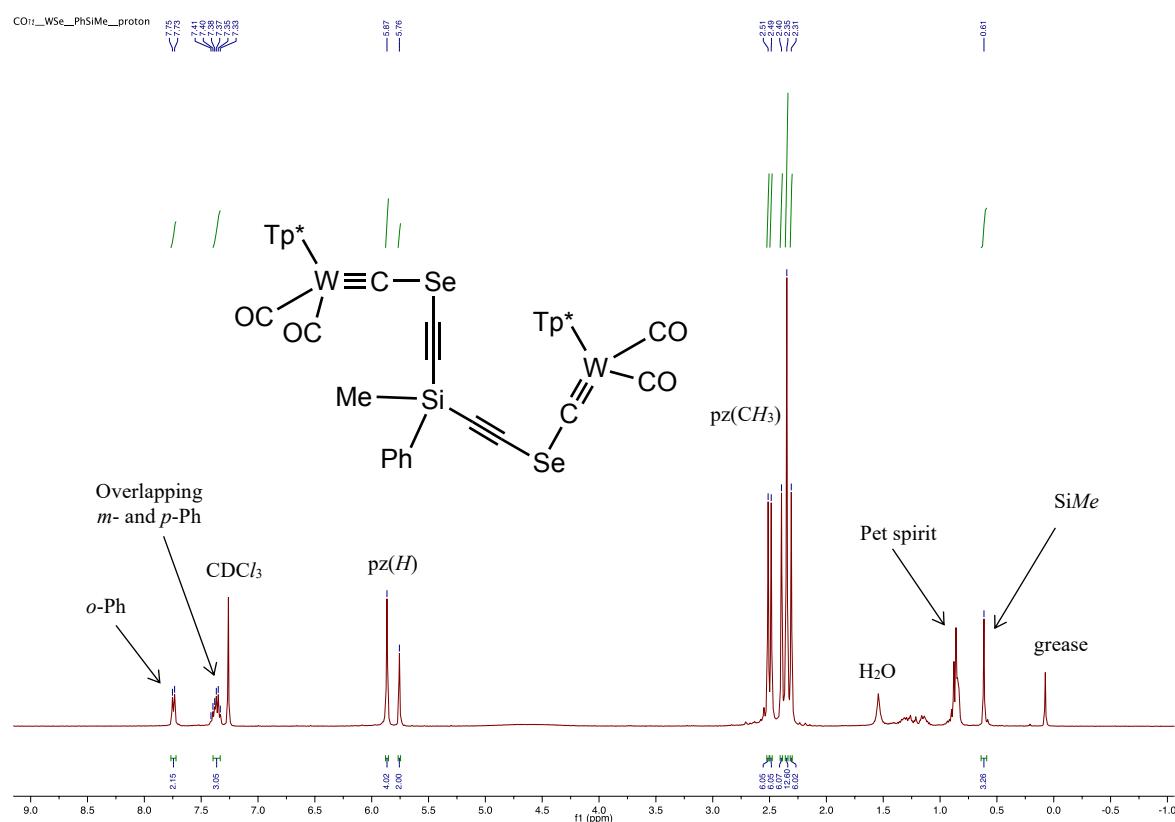
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.29.



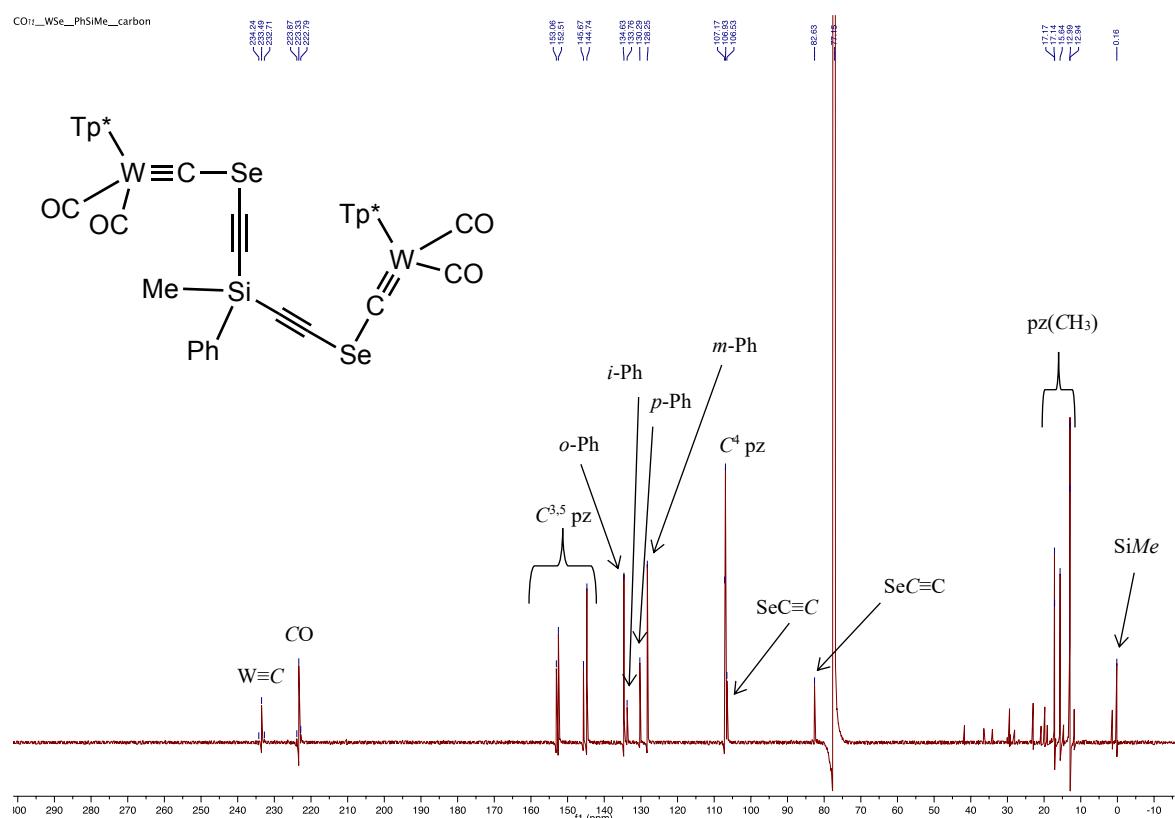
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.29.



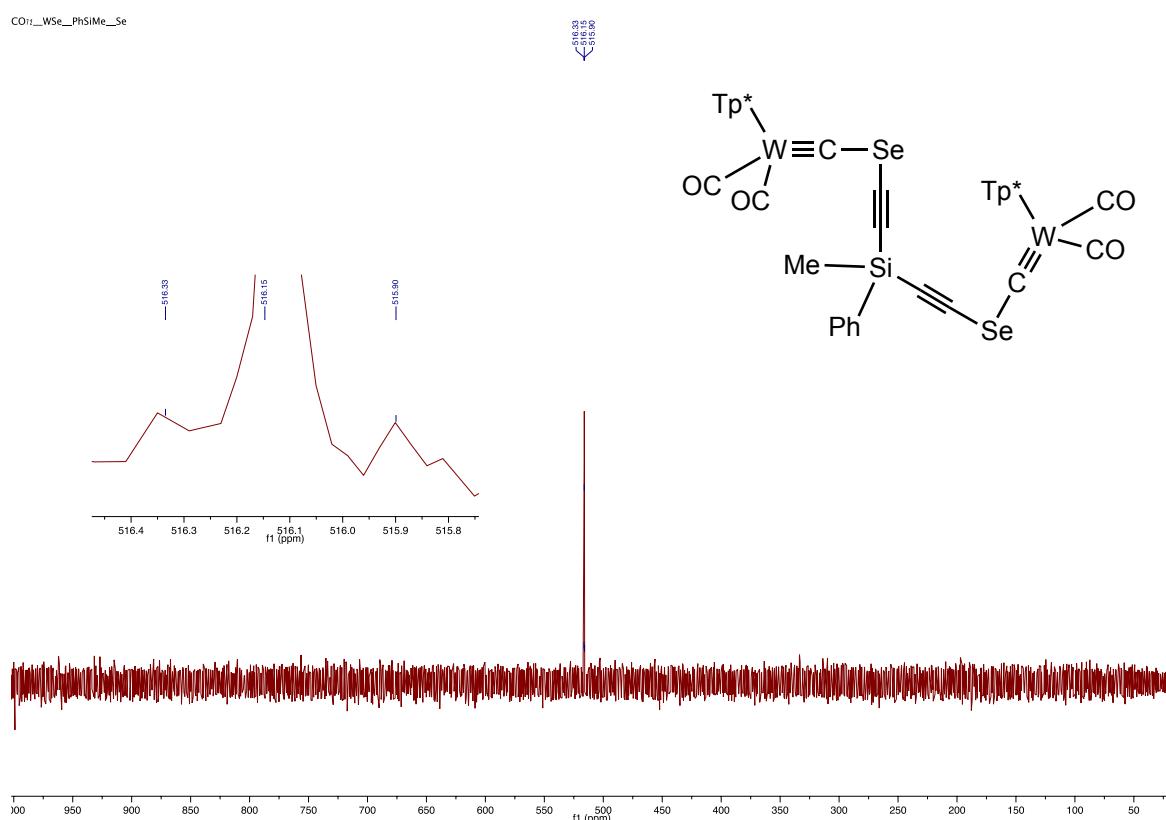
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound **2.29**.



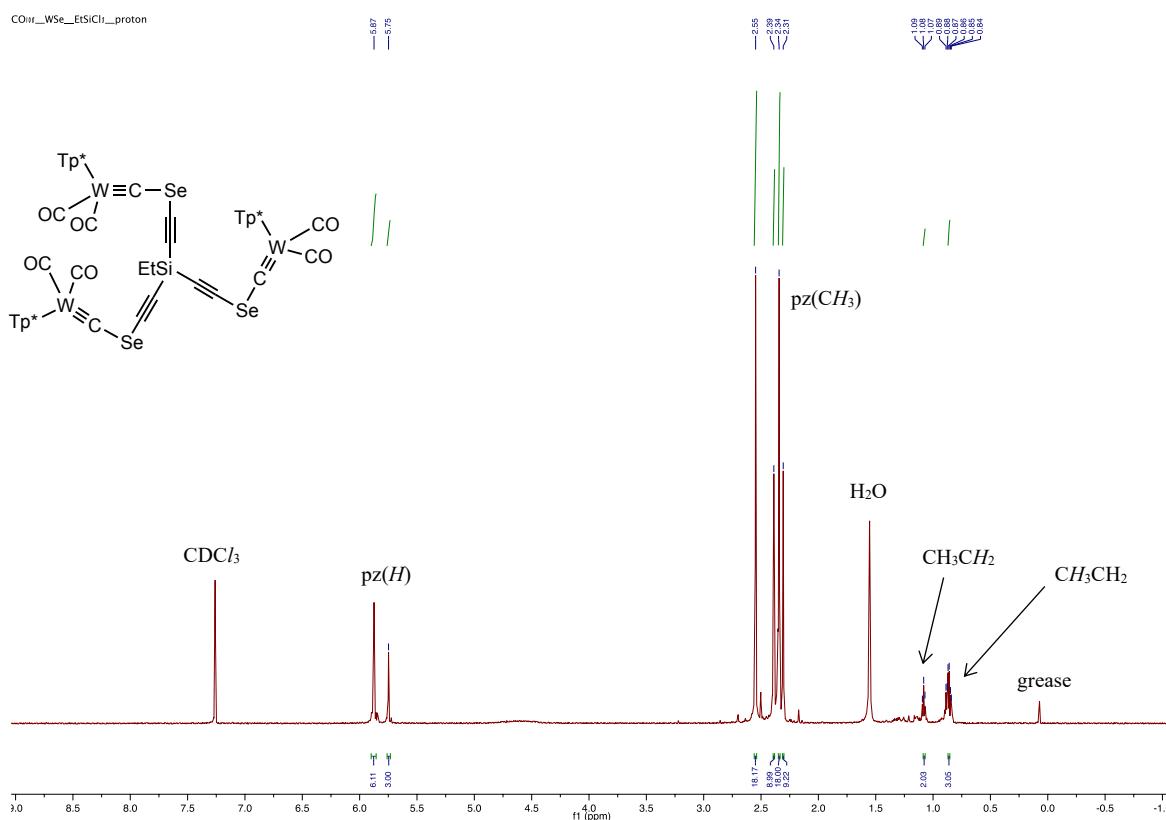
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 2.30.



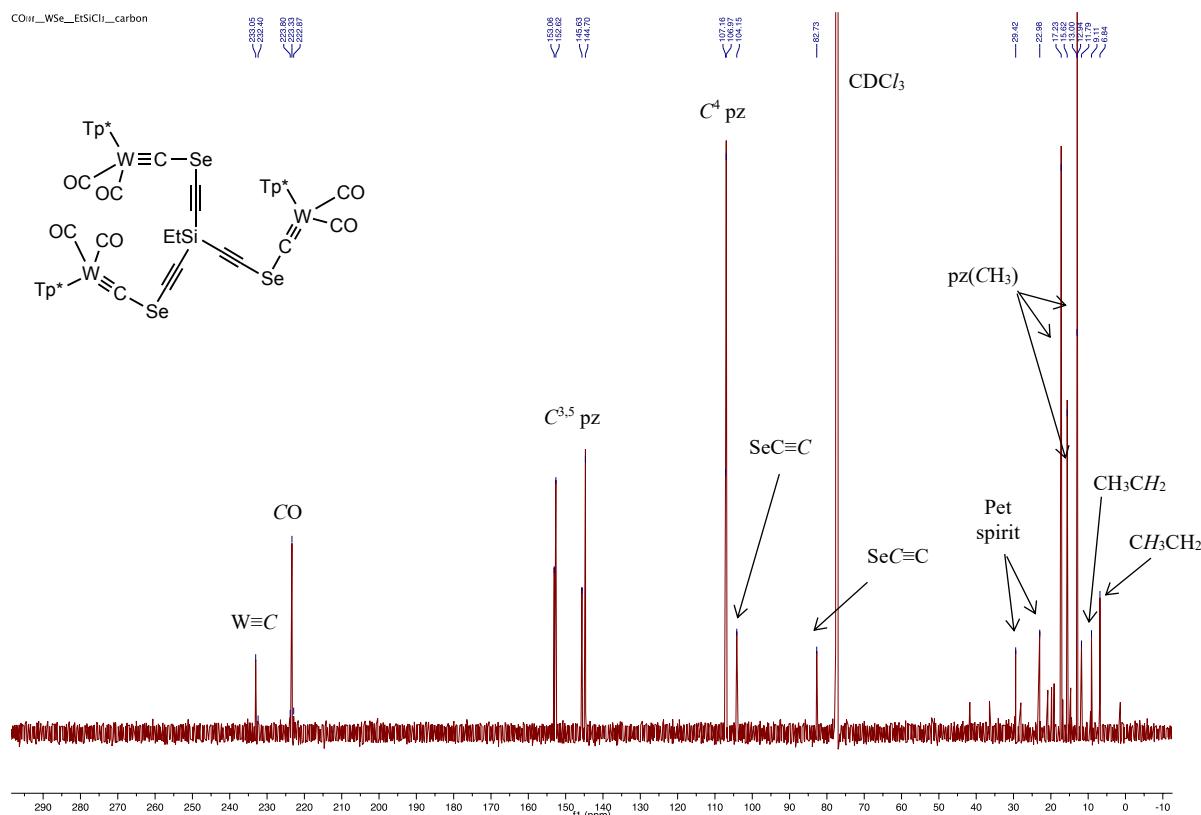
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 2.30.



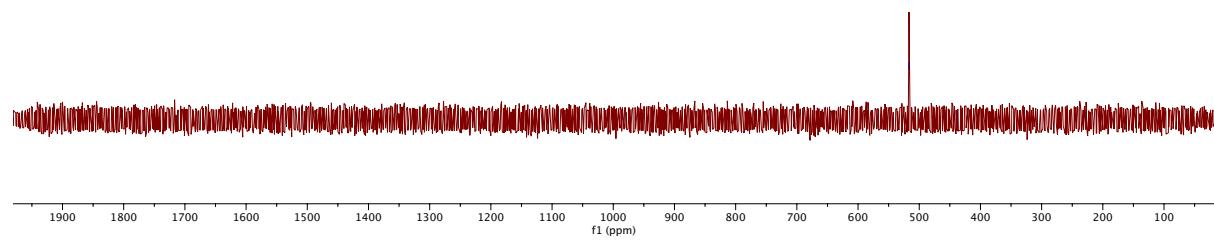
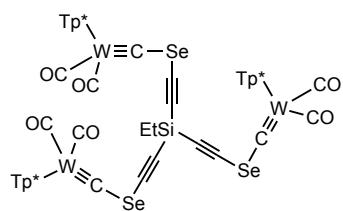
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **2.30**.



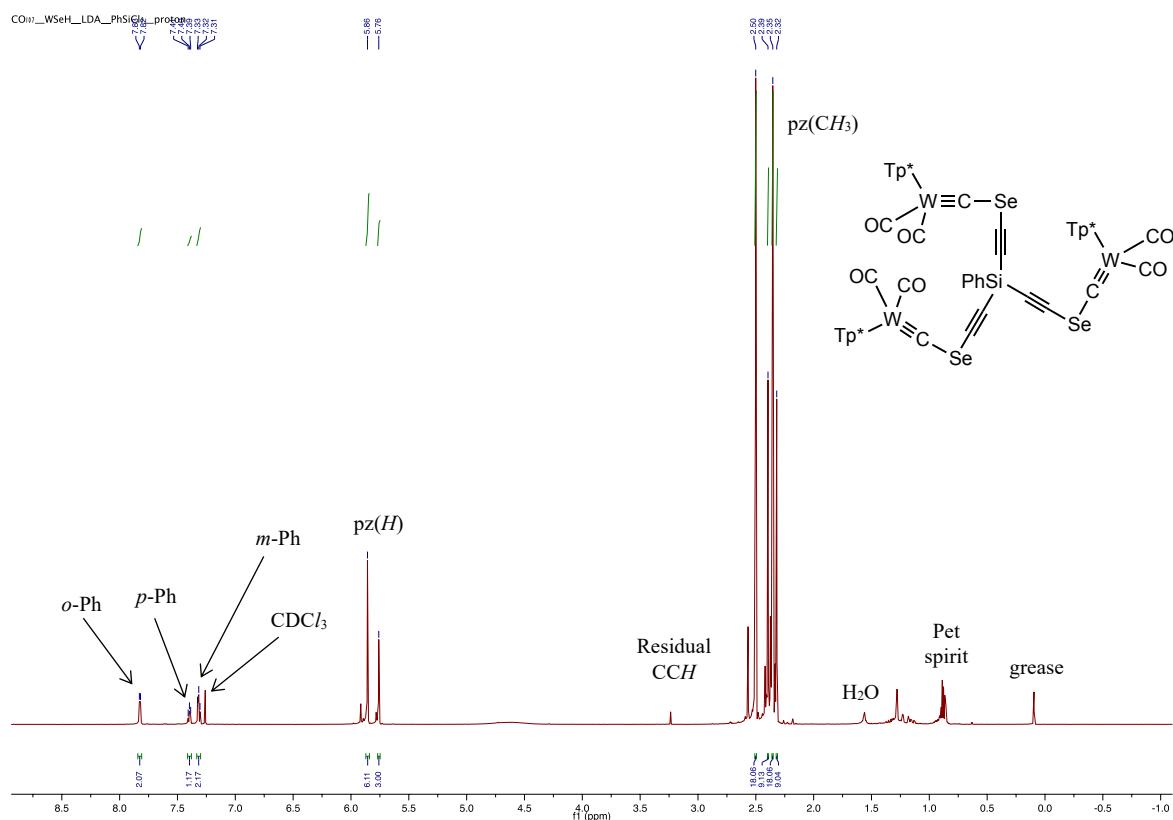
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.31.



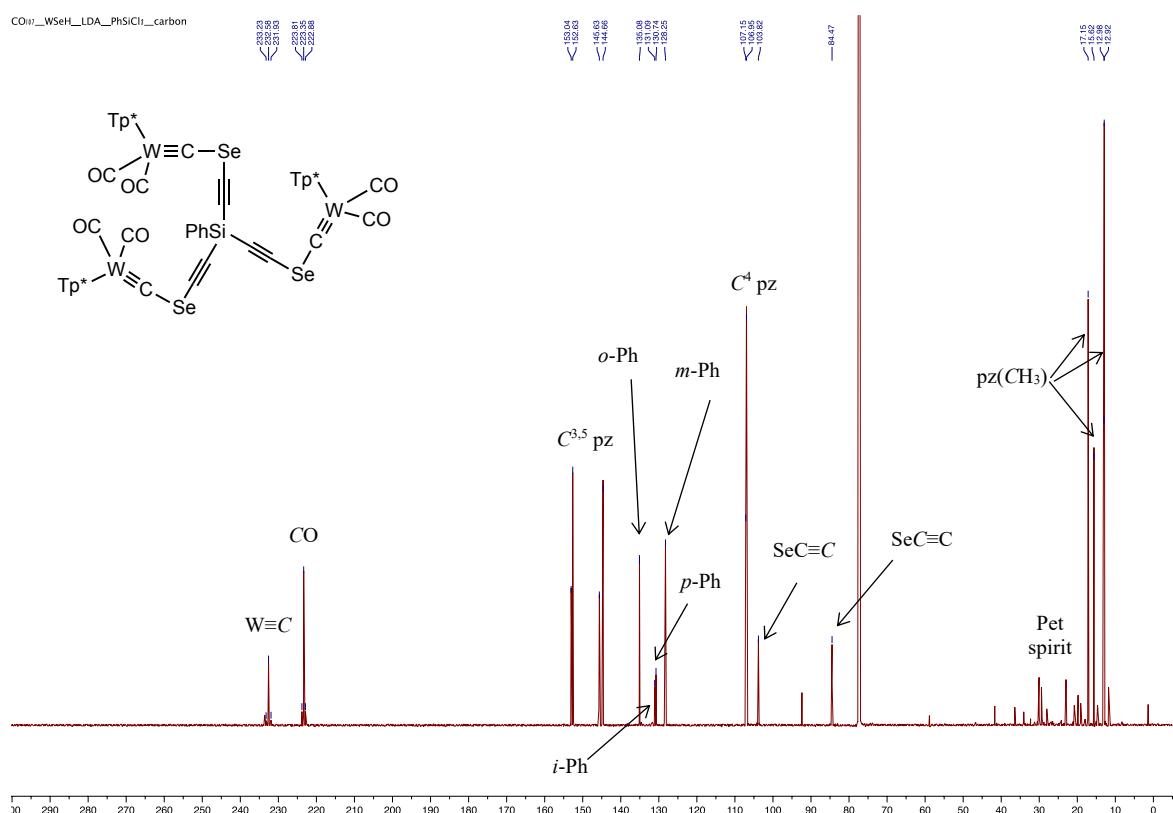
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.31.

CO₁₀_WSeH_EtSiCl₂_selenium—
515.70

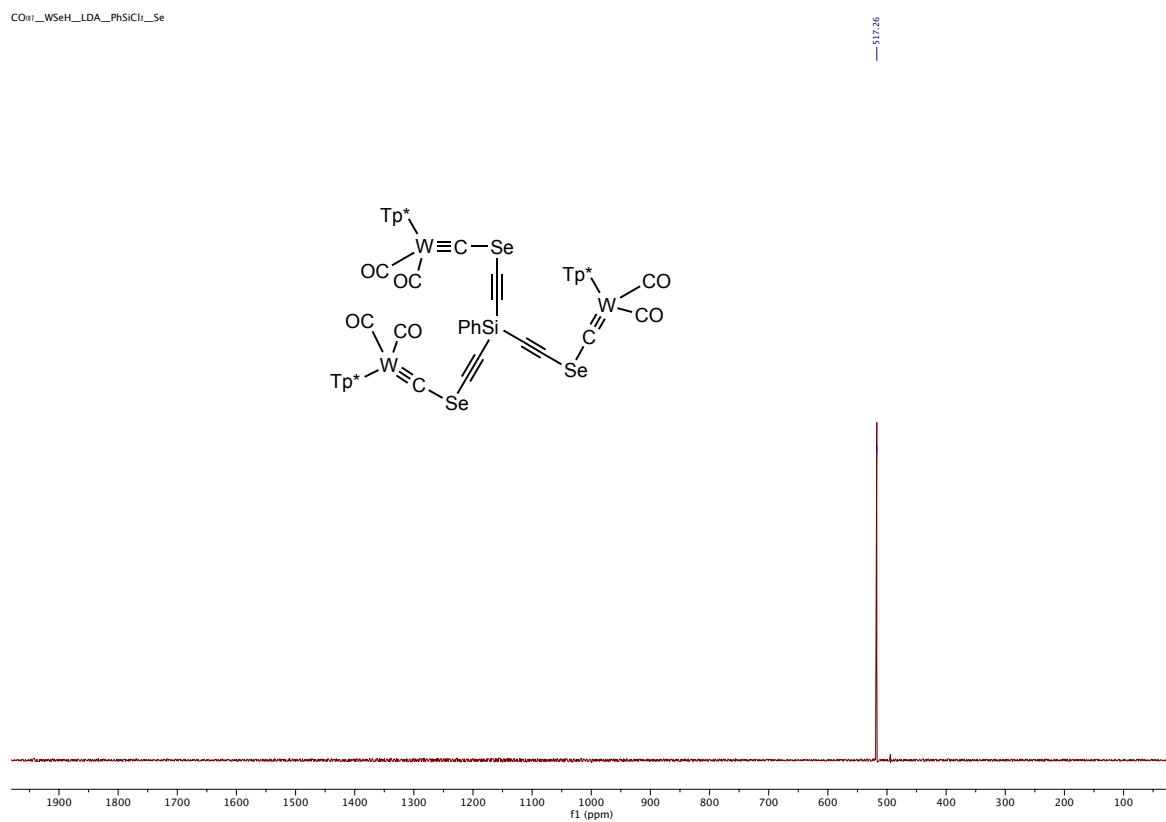
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 2.31.



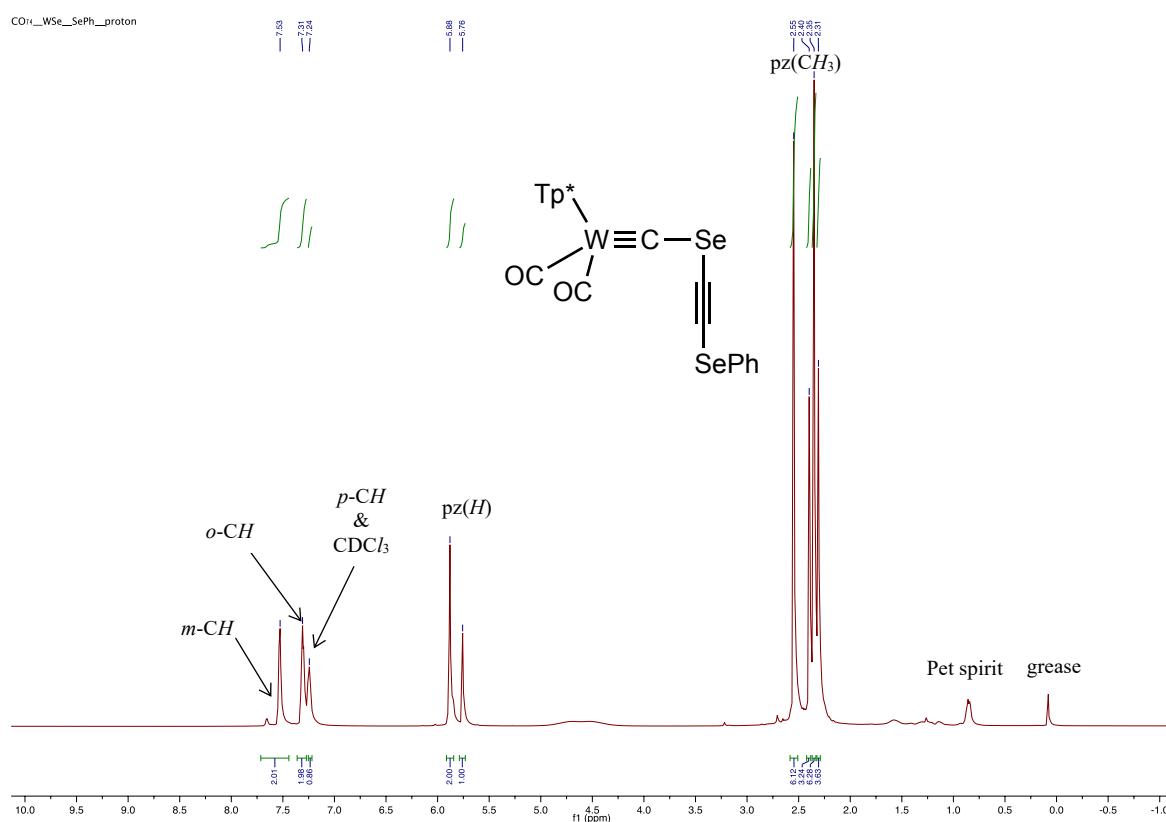
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 2.32.



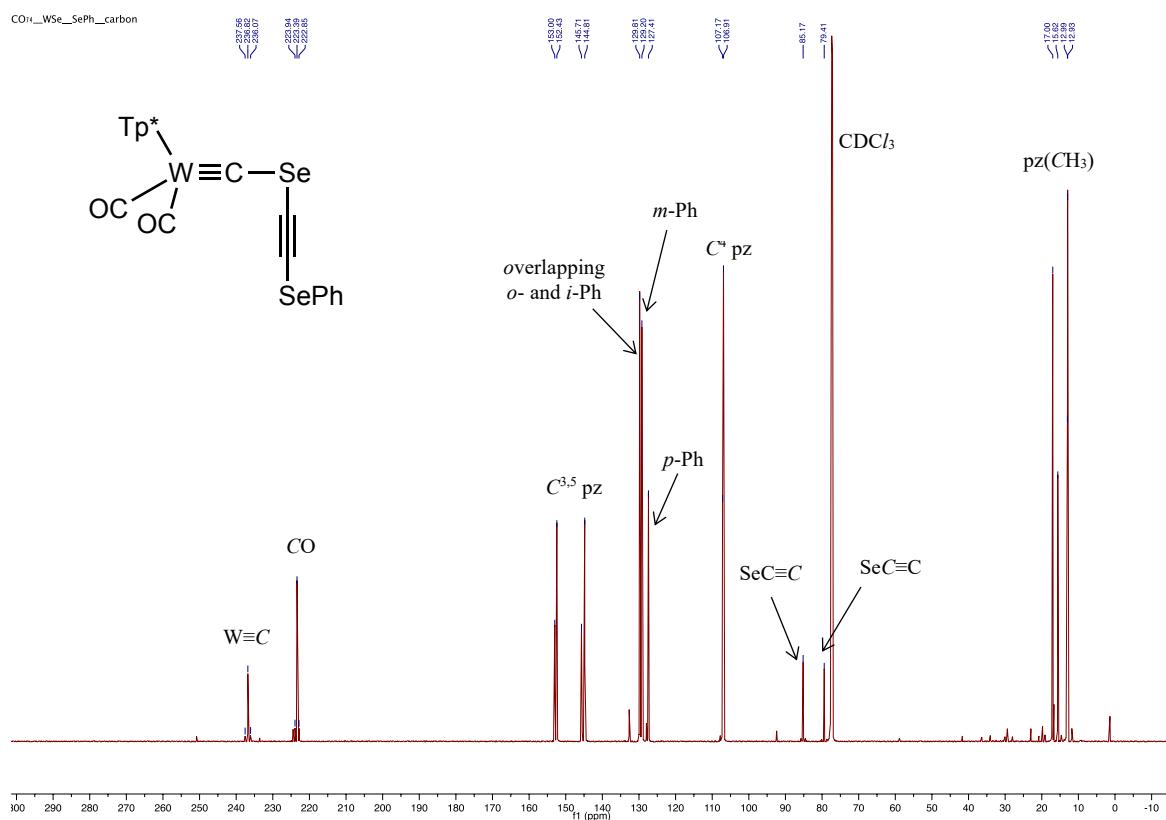
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound 2.32.



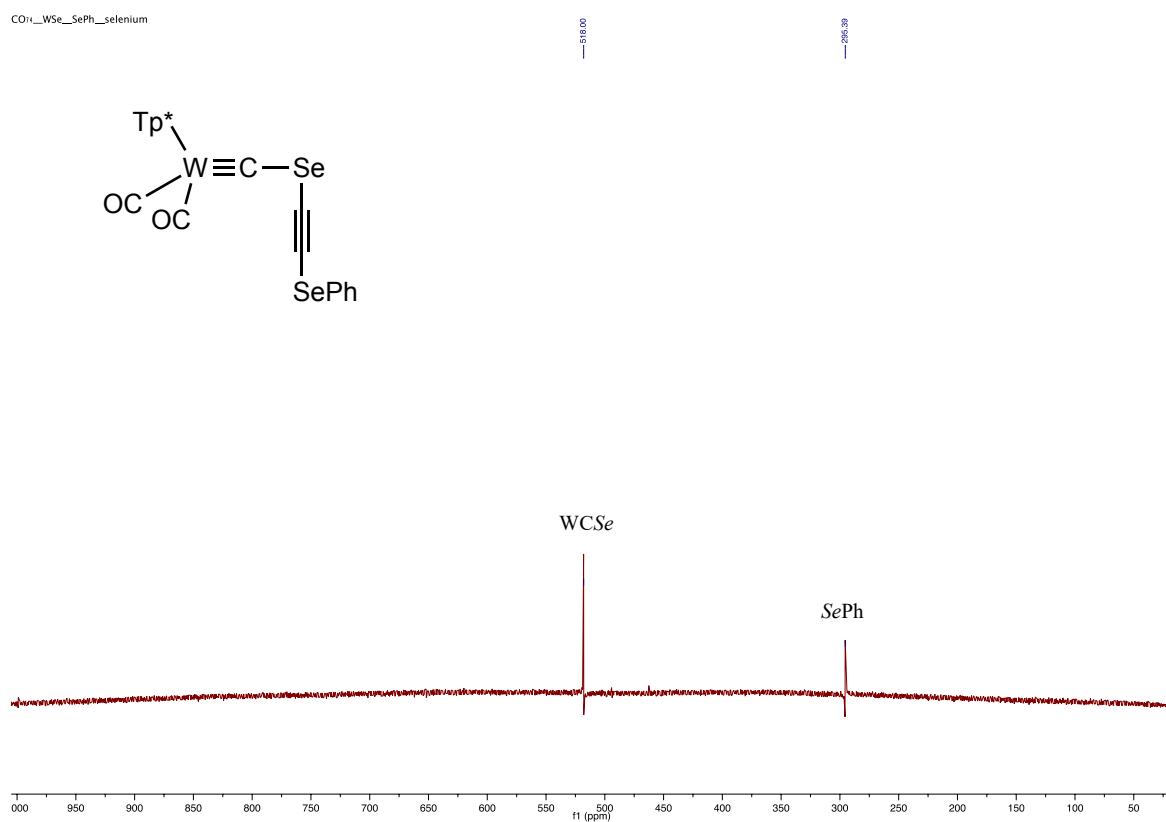
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 2.32.



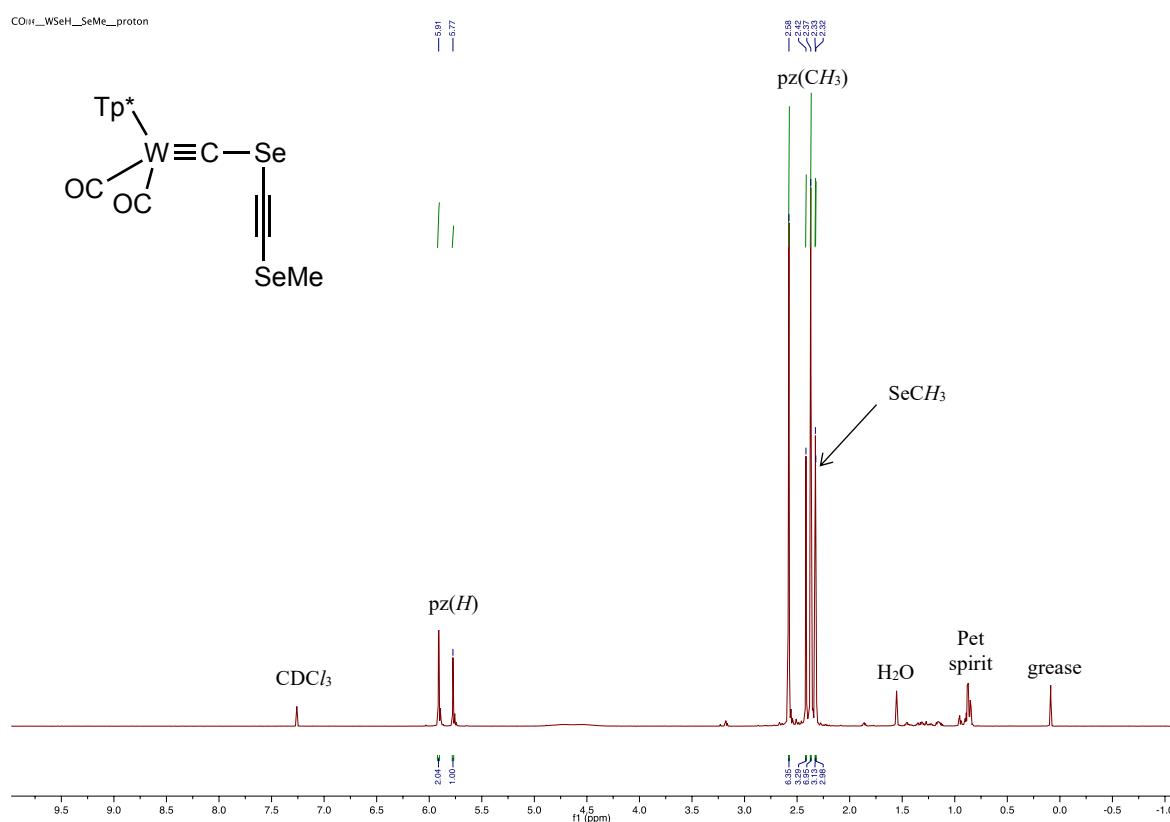
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 2.33.



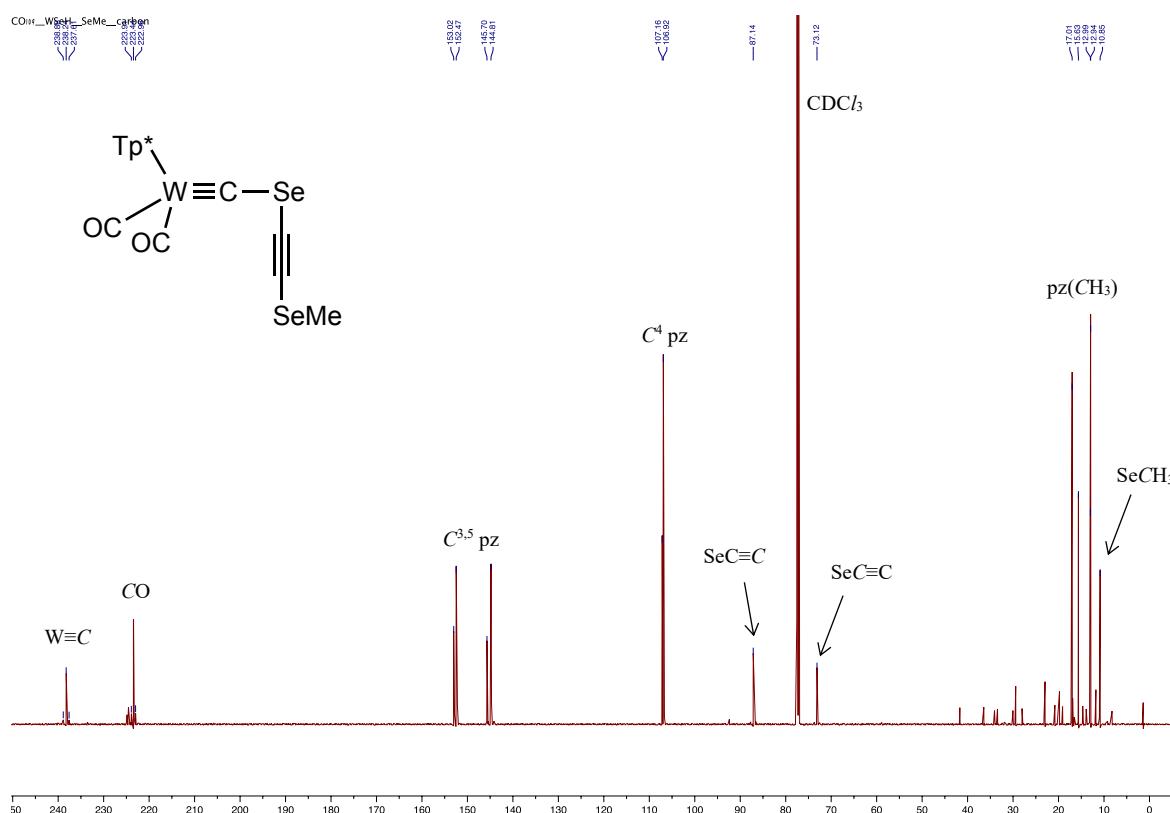
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 2.33.



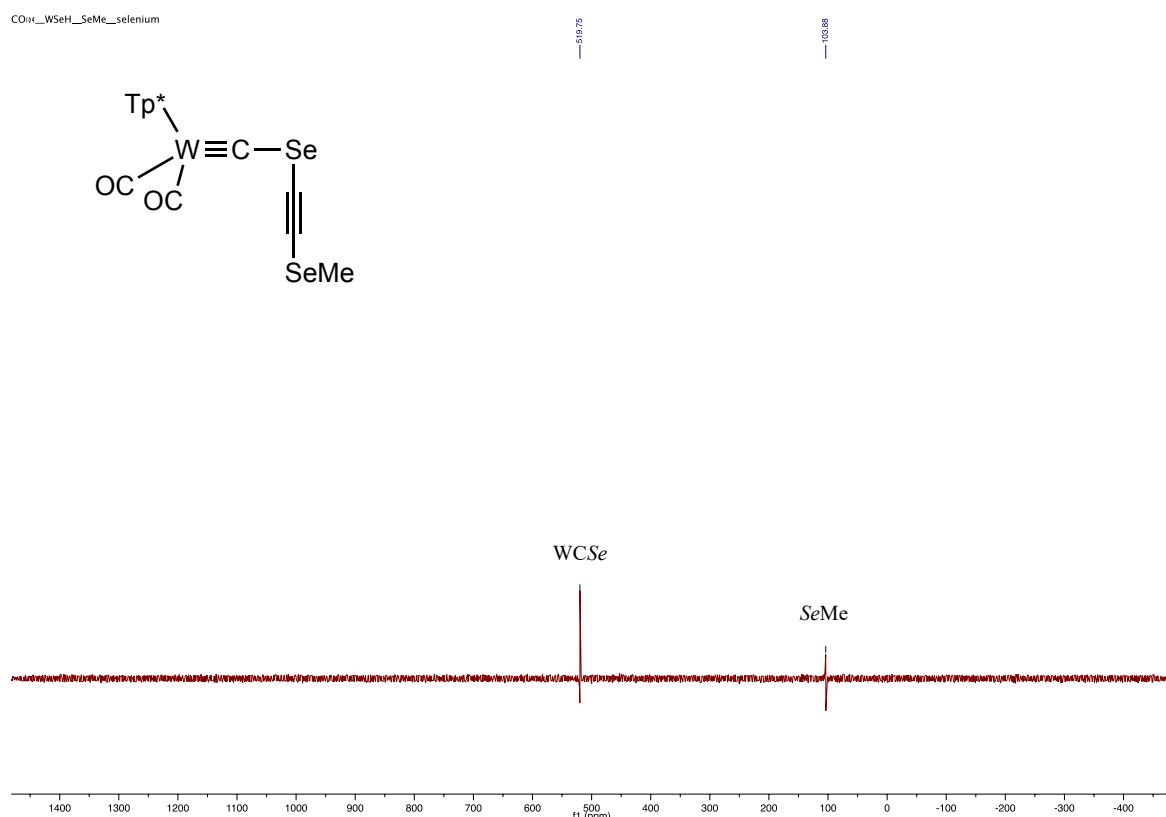
^{77}Se NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound **2.33**.



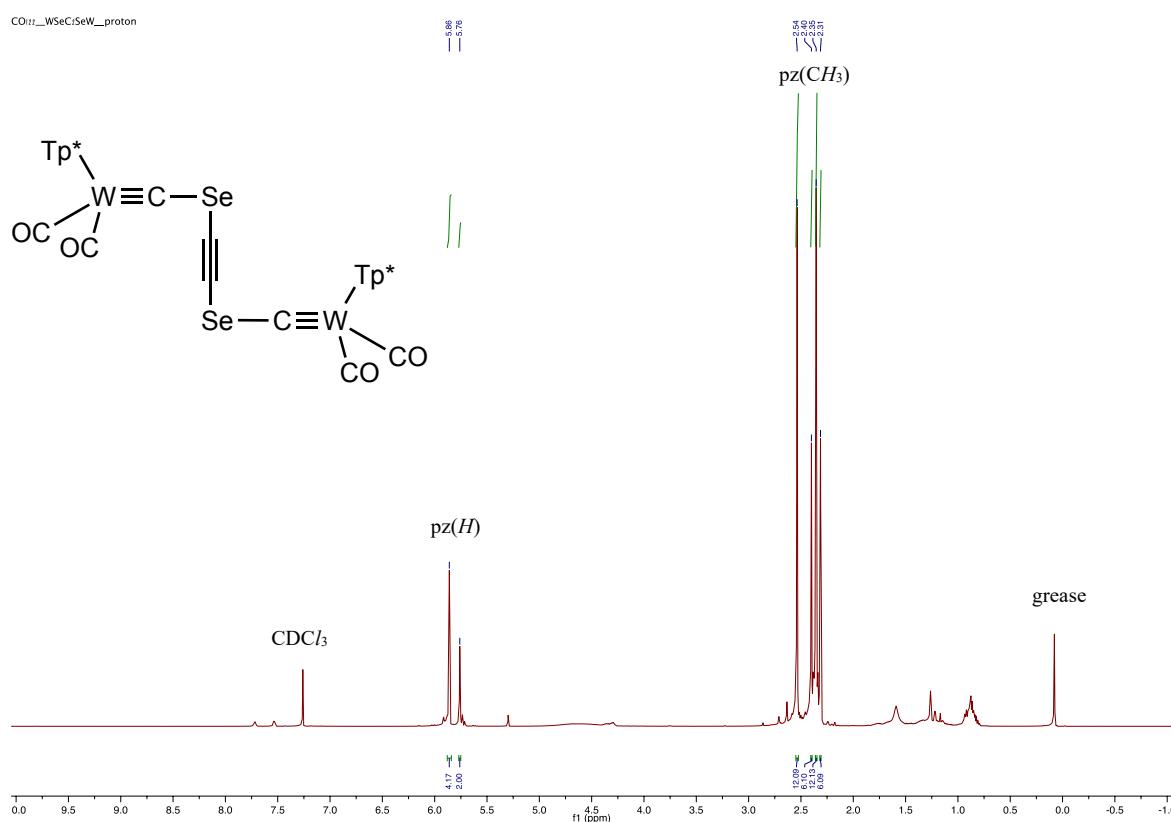
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 2.34.



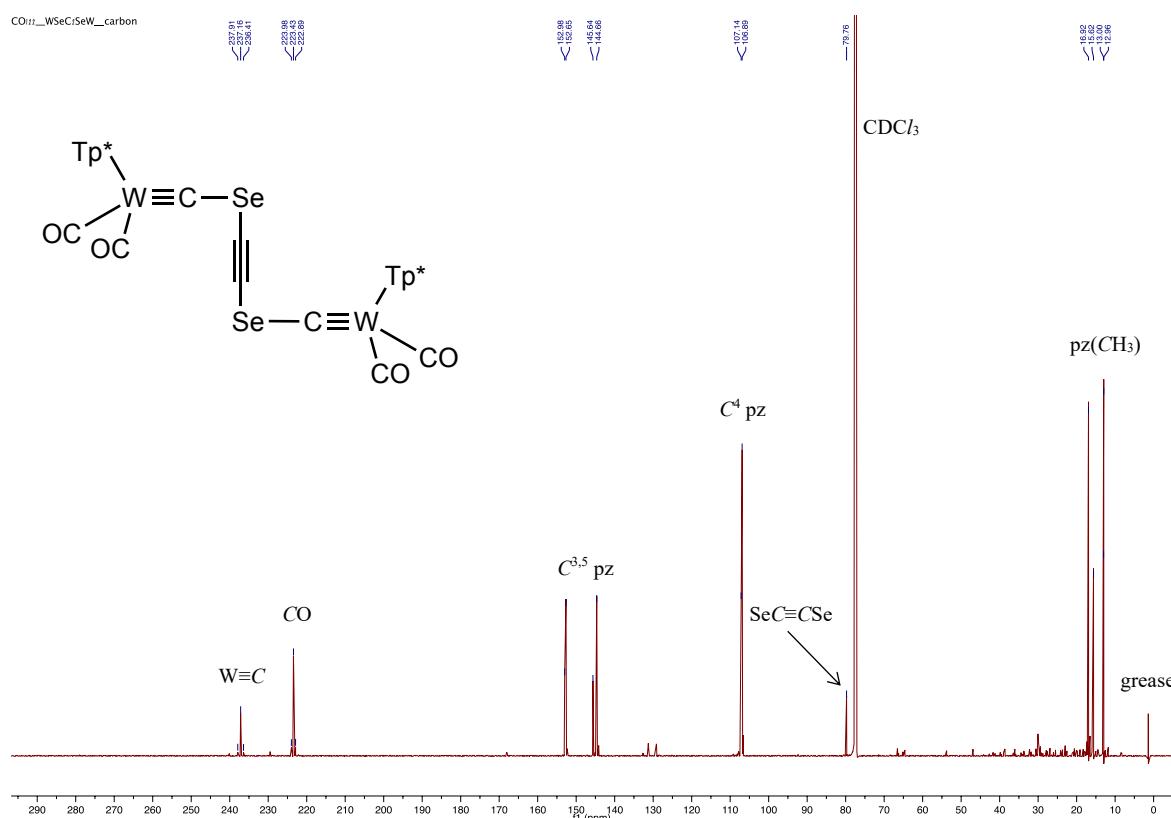
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 2.34.



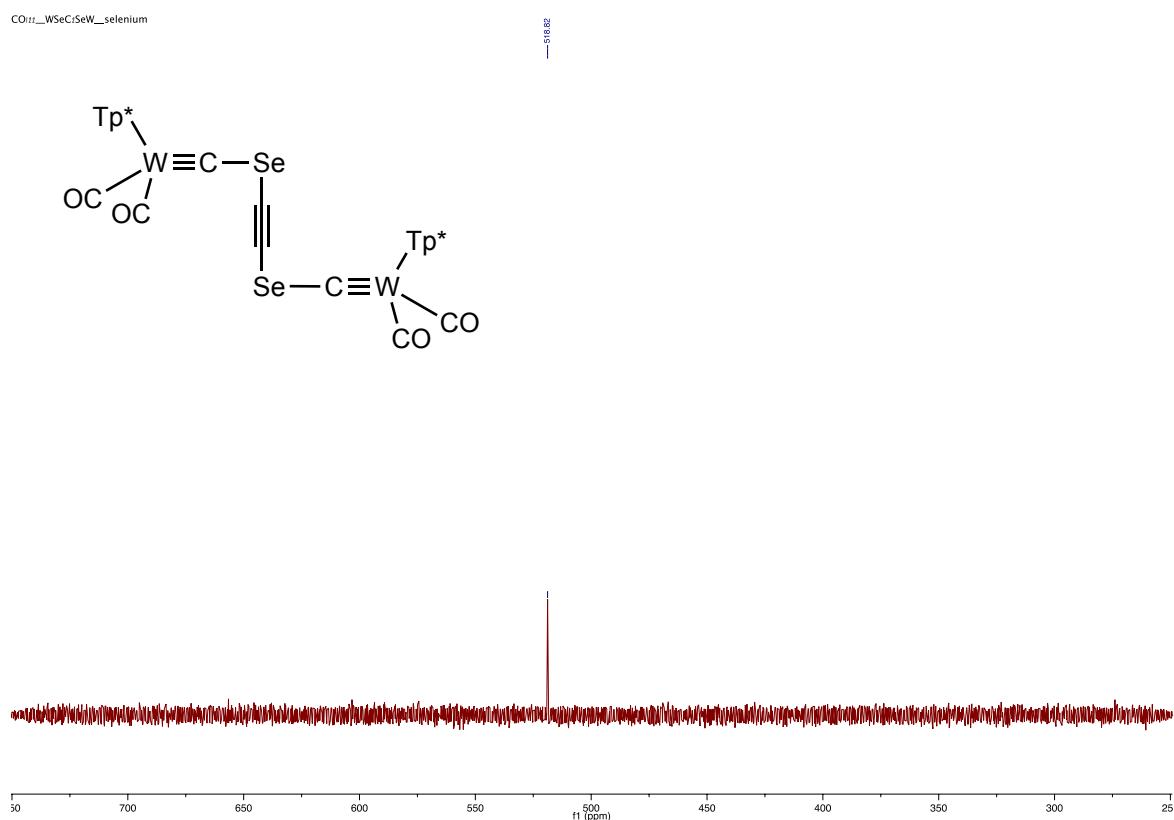
^{77}Se NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound **2.34**.



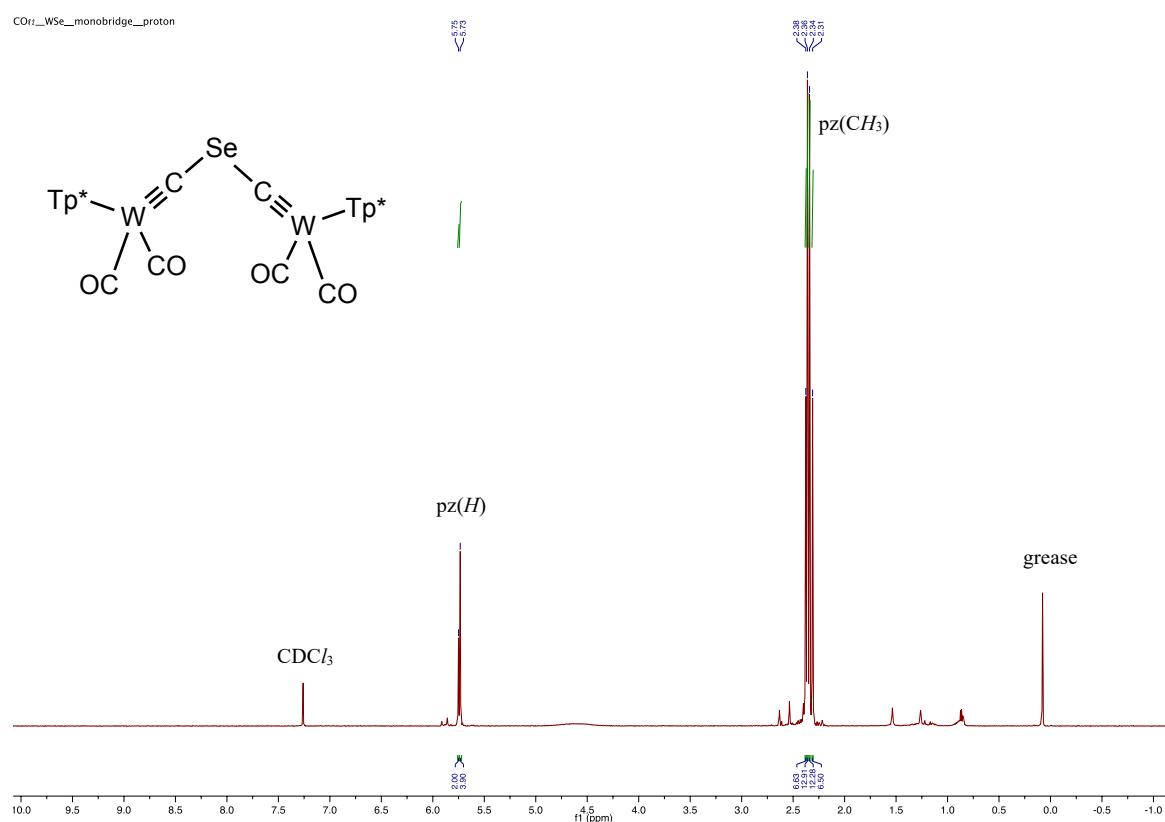
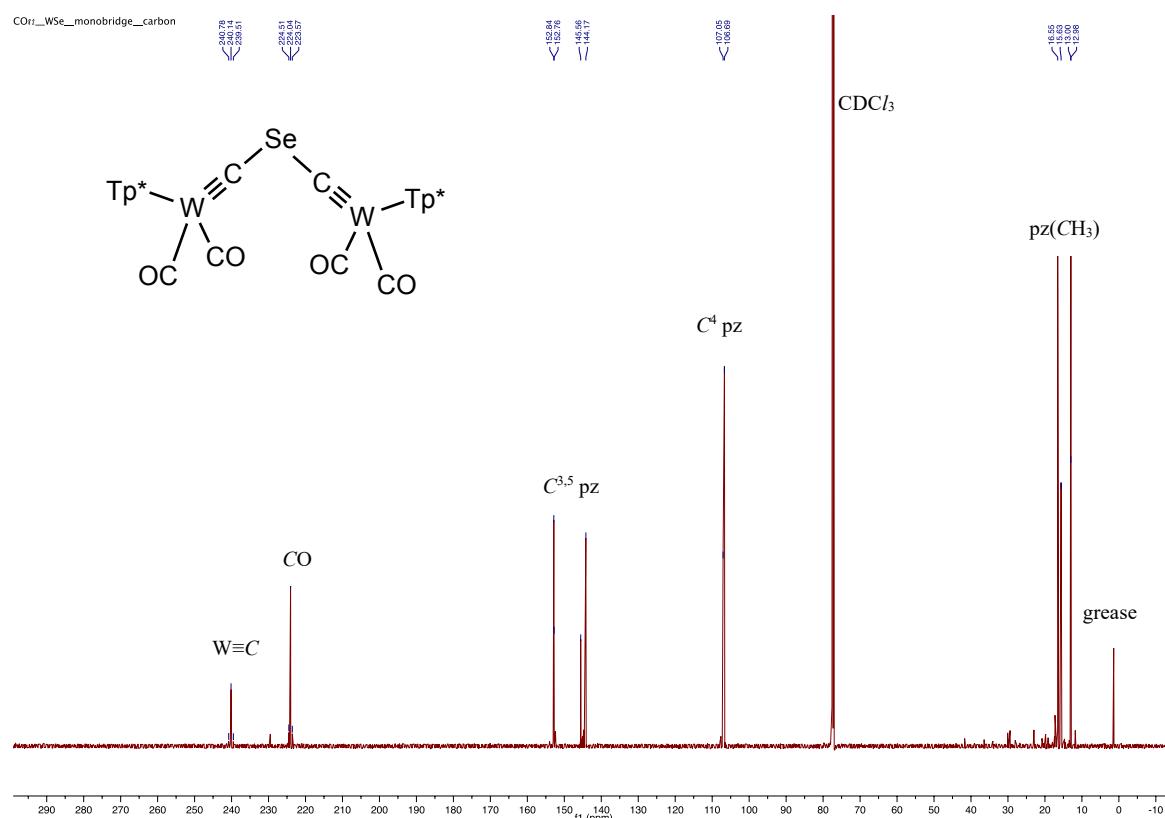
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 2.35.



¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 2.35.

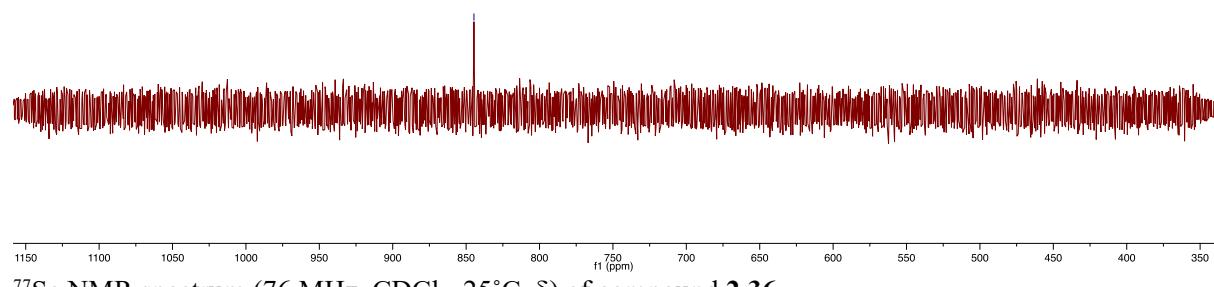
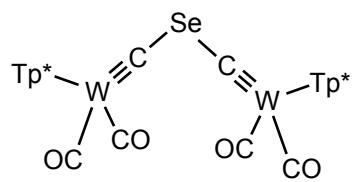


^{77}Se NMR spectrum (76 MHz, CDCl_3 , 25 °C, δ) of compound 2.35.

¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 2.36.¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 2.36.

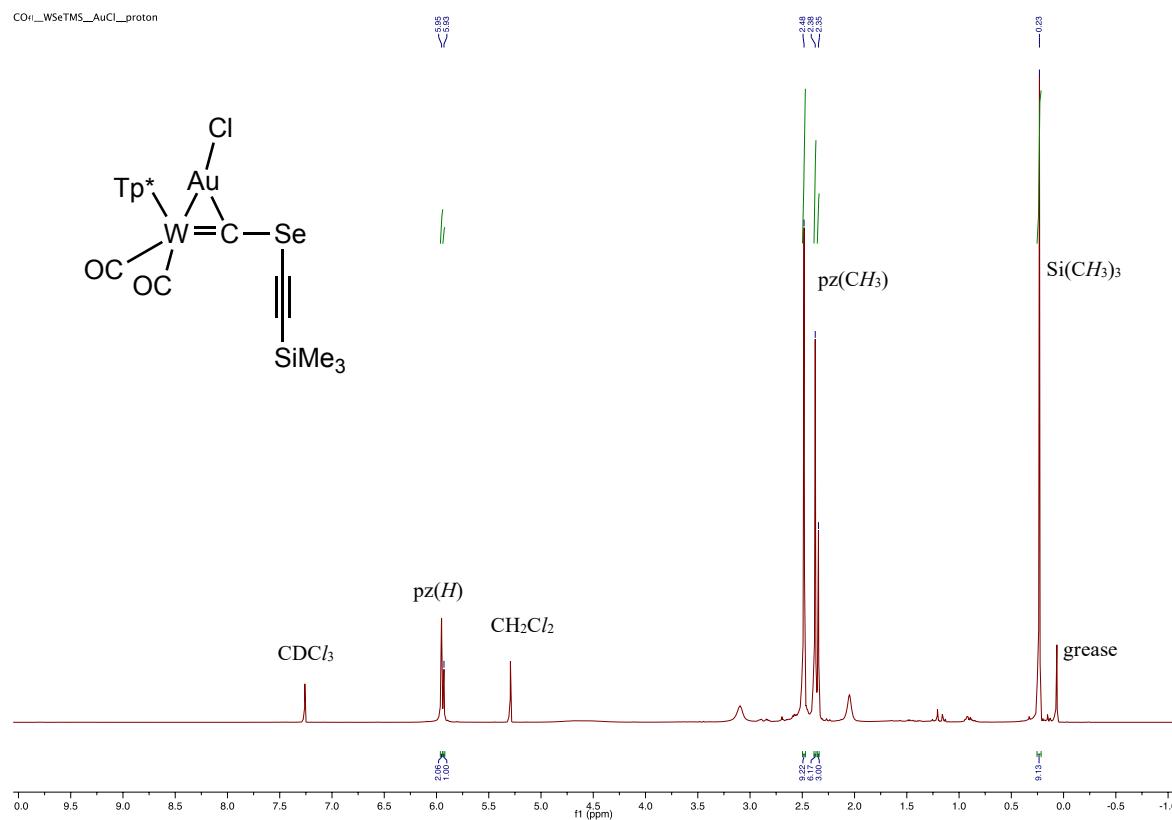
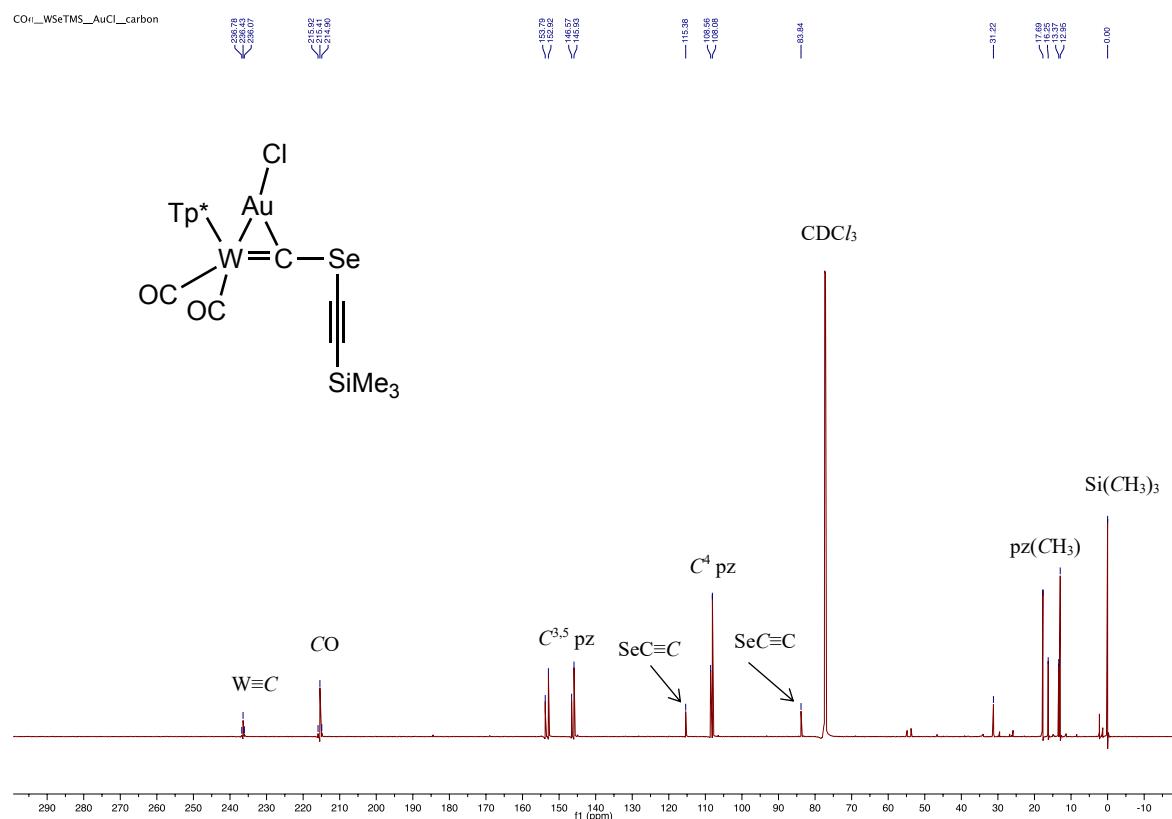
COI:__WSe__monobridge__selenium

844.67



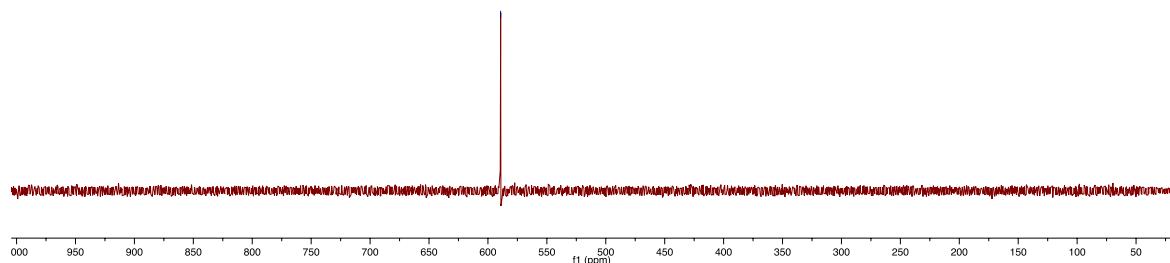
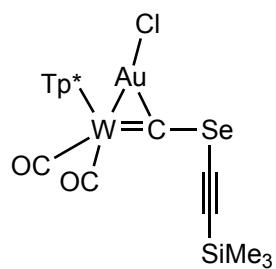
^{77}Se NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound **2.36**.

ESI – Chapter 3

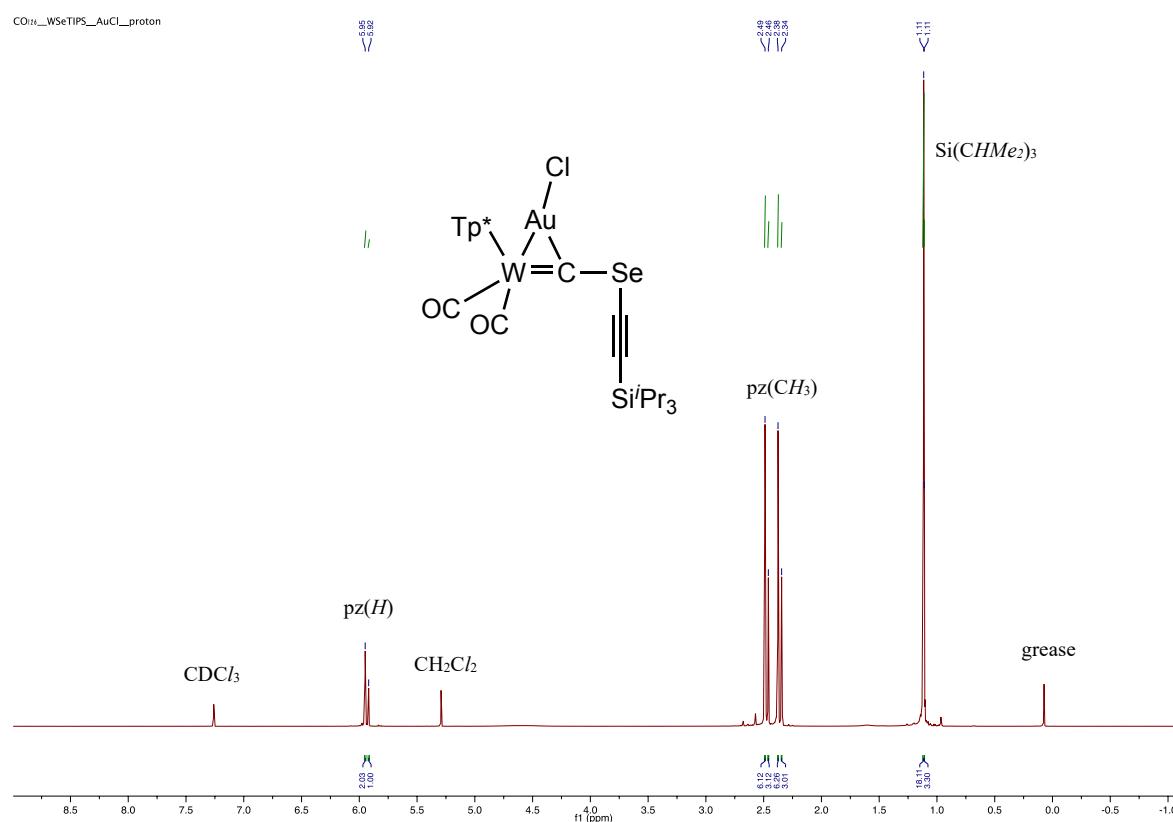
 ^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 3.1. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 3.1.

COII_WSeTMS_AuCl_selenium

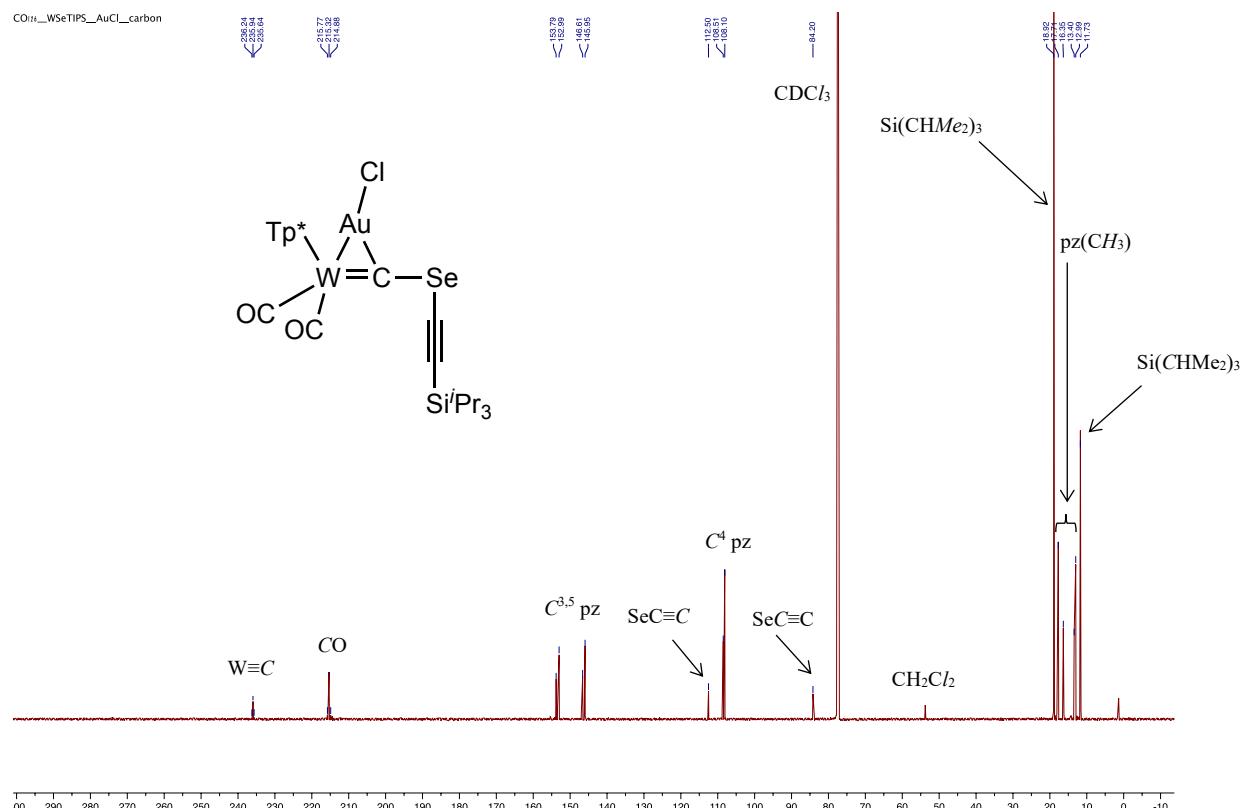
589.20



⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.1.



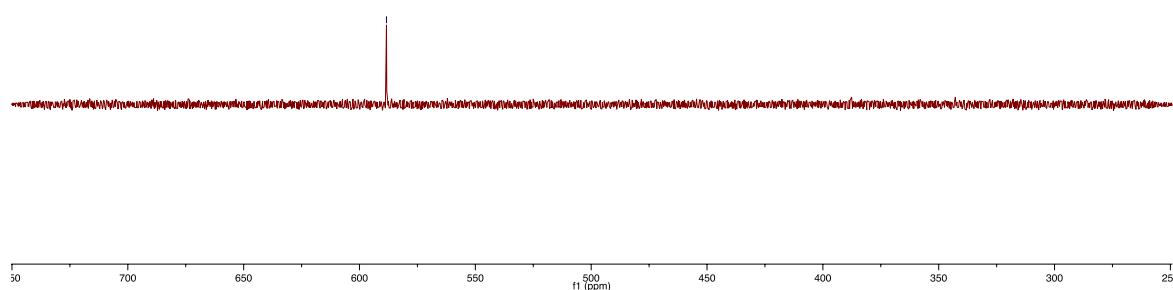
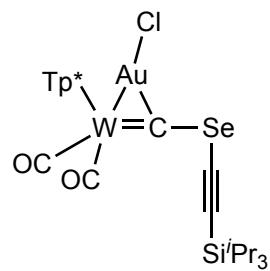
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 3.2.



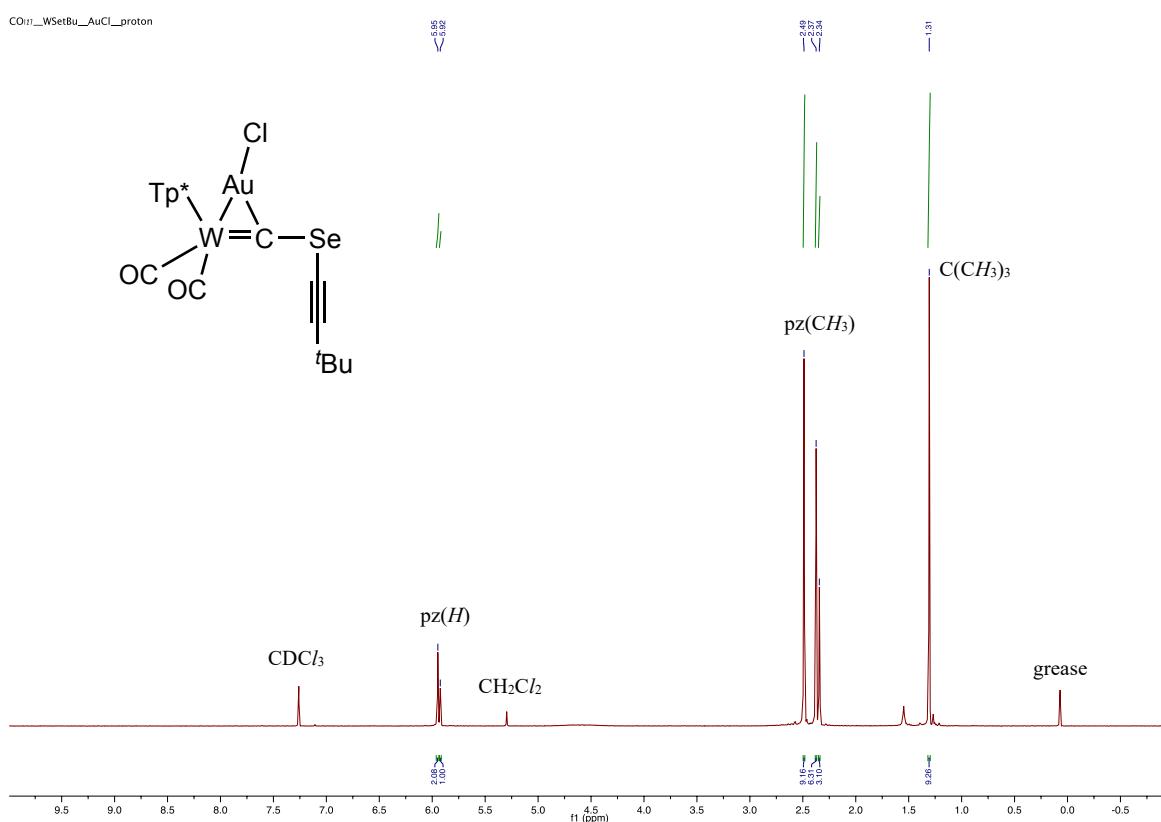
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 3.2.

CO_{2t}_WSeTIPS_AuCl_selenium

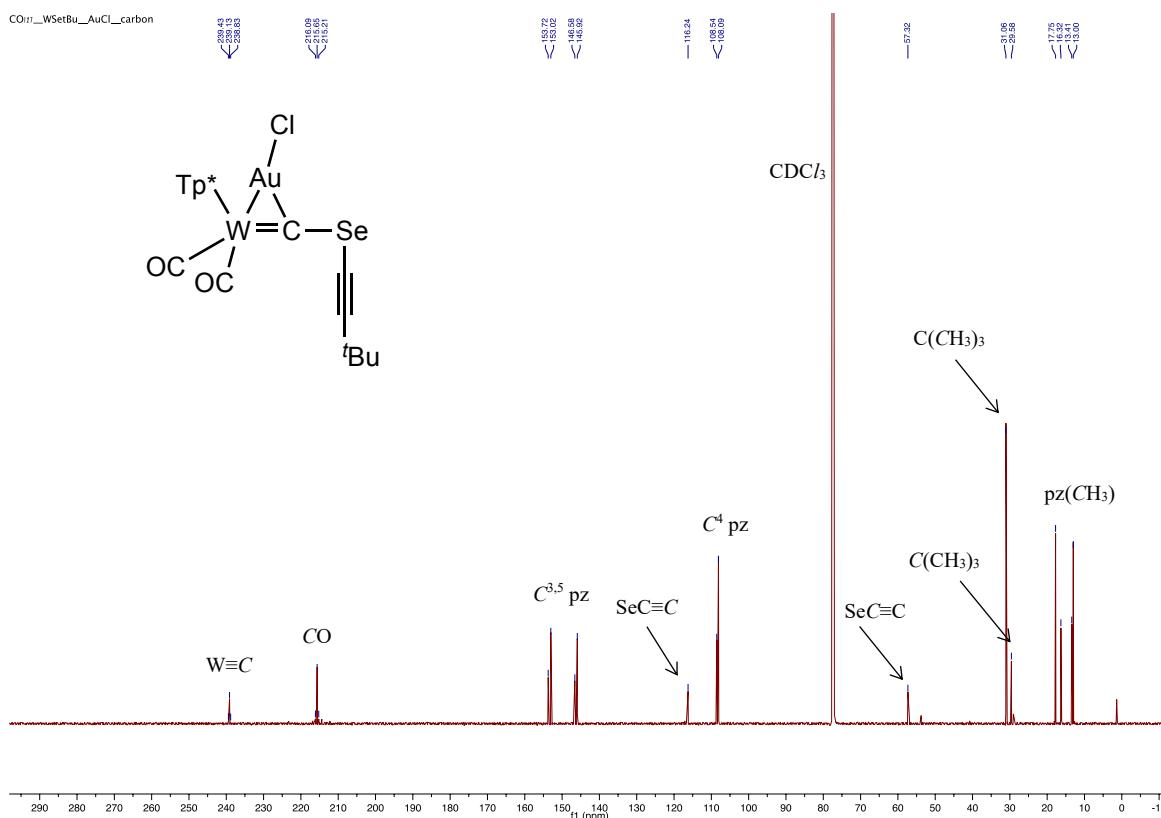
R



⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.2.



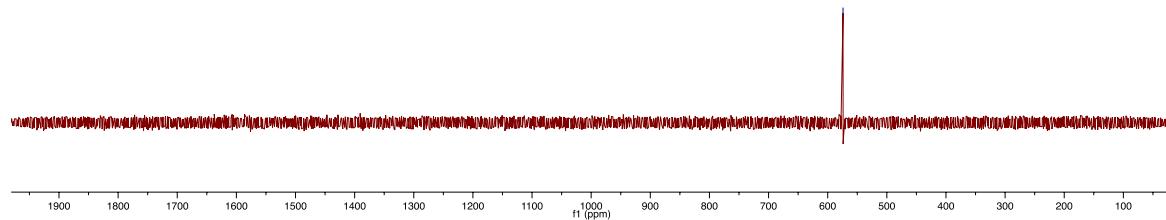
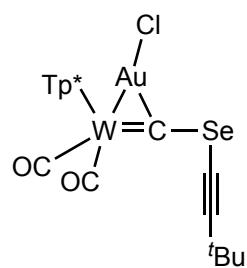
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 3.3.



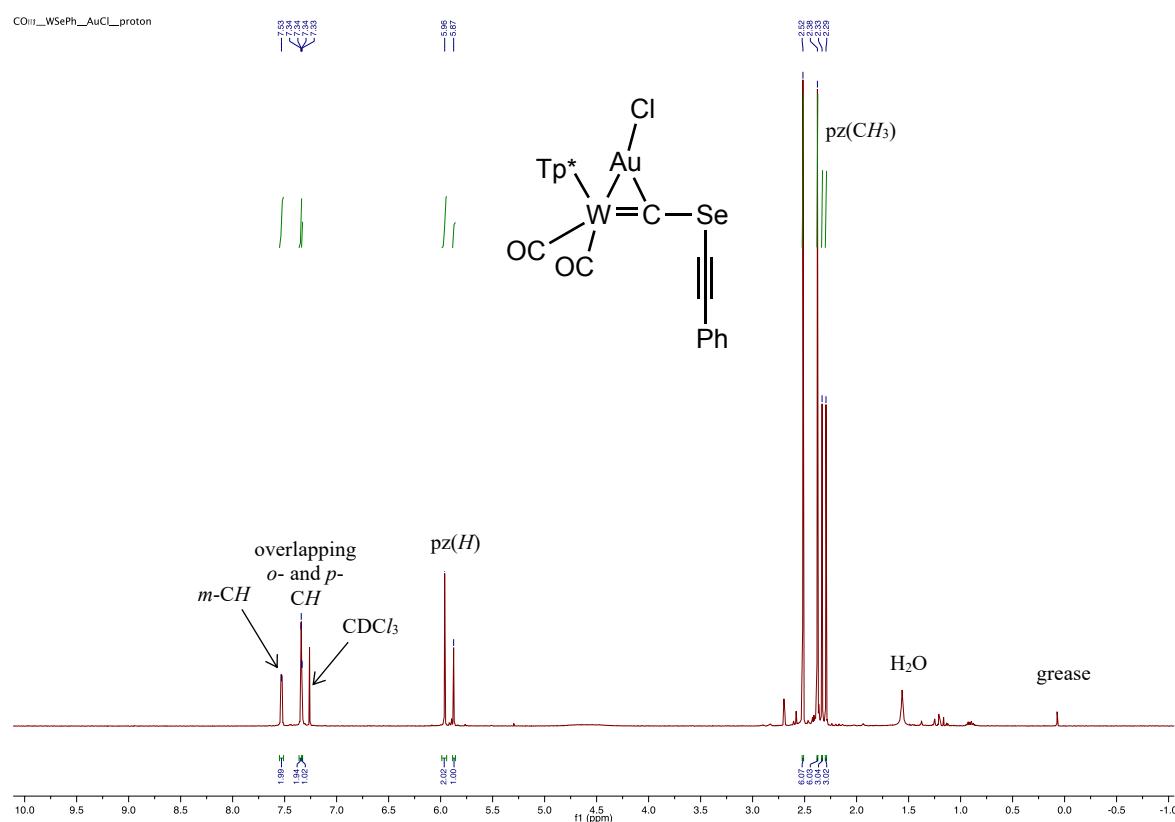
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 3.3.

CO(iPr)_2WS(SeBu)_2AuCl₂Se

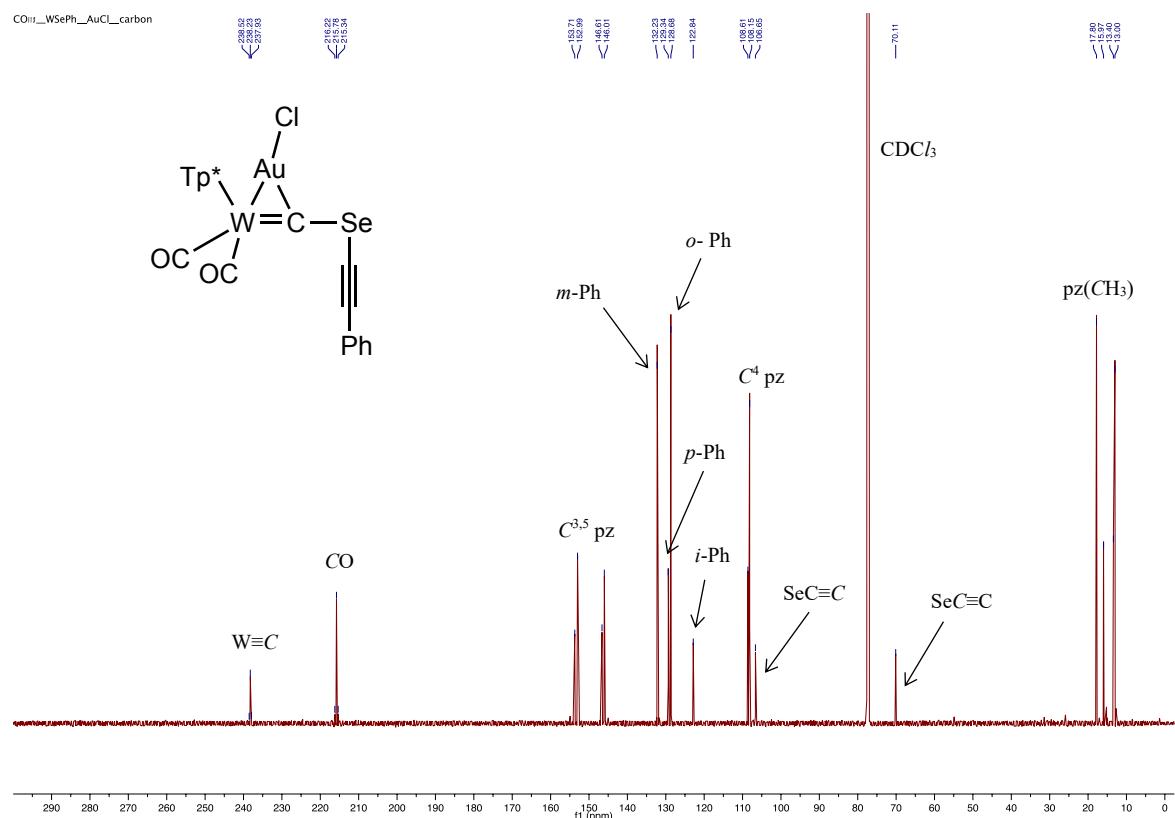
— 574.09 —



⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.3.

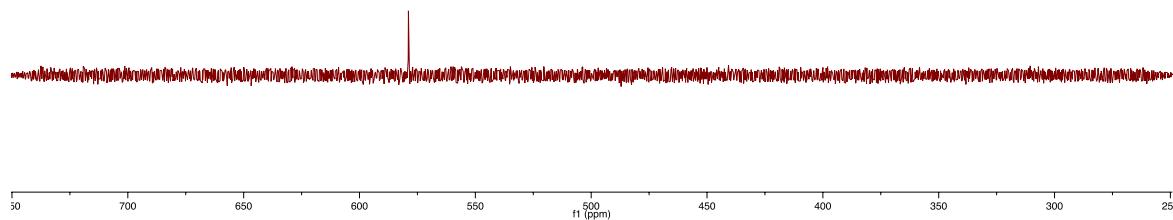
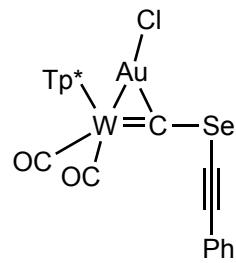


^1H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 3.4.

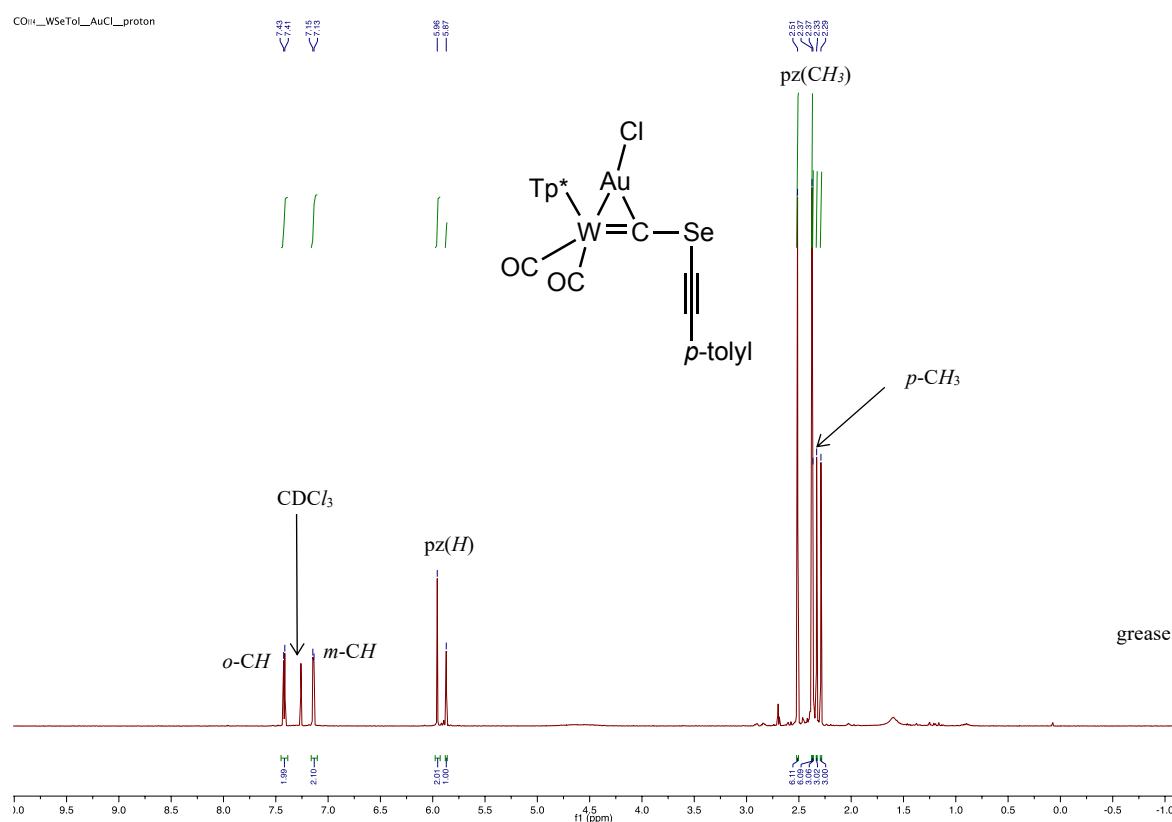


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 3.4.

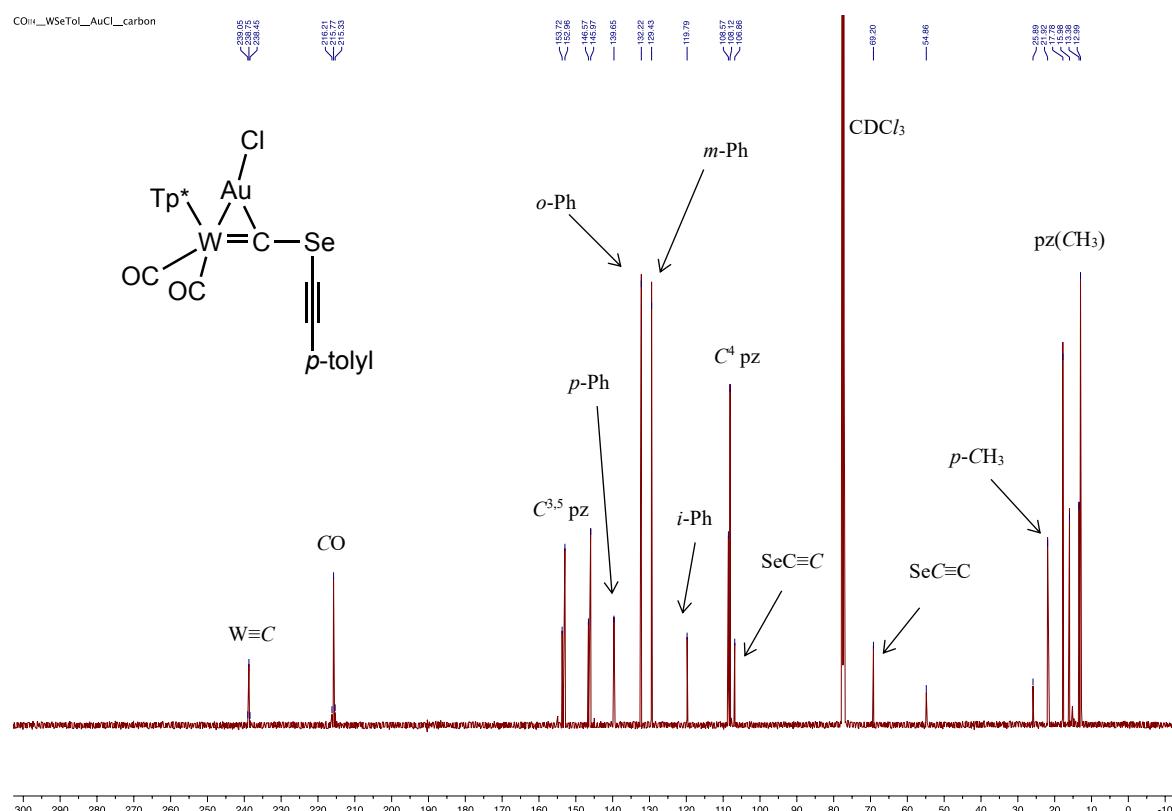
COII—WSePh—AuCl—selenium



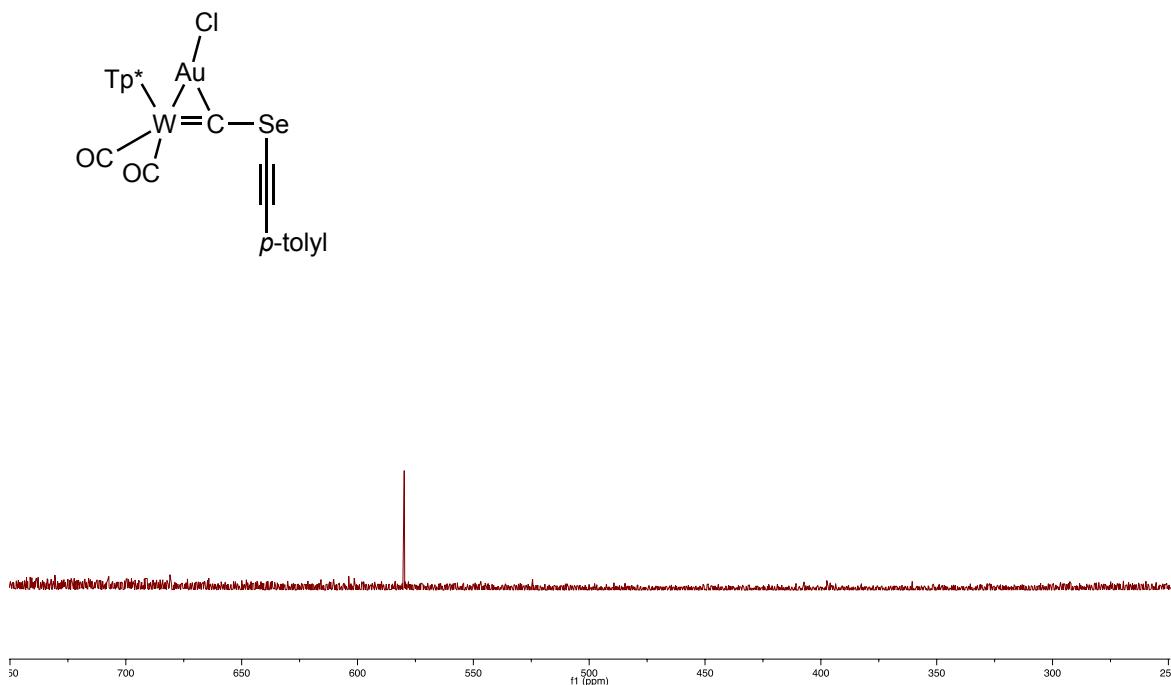
$^{77}\text{Se}\{{}^1\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 3.4.



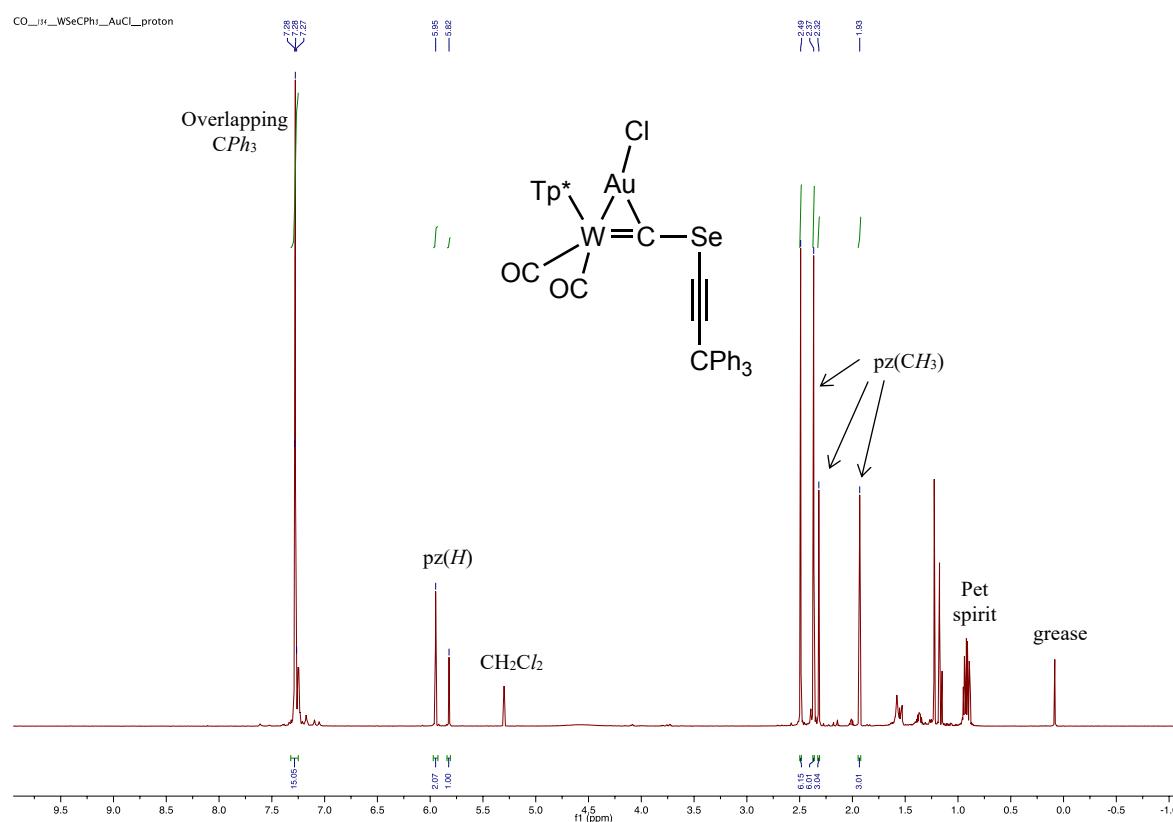
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 3.5.



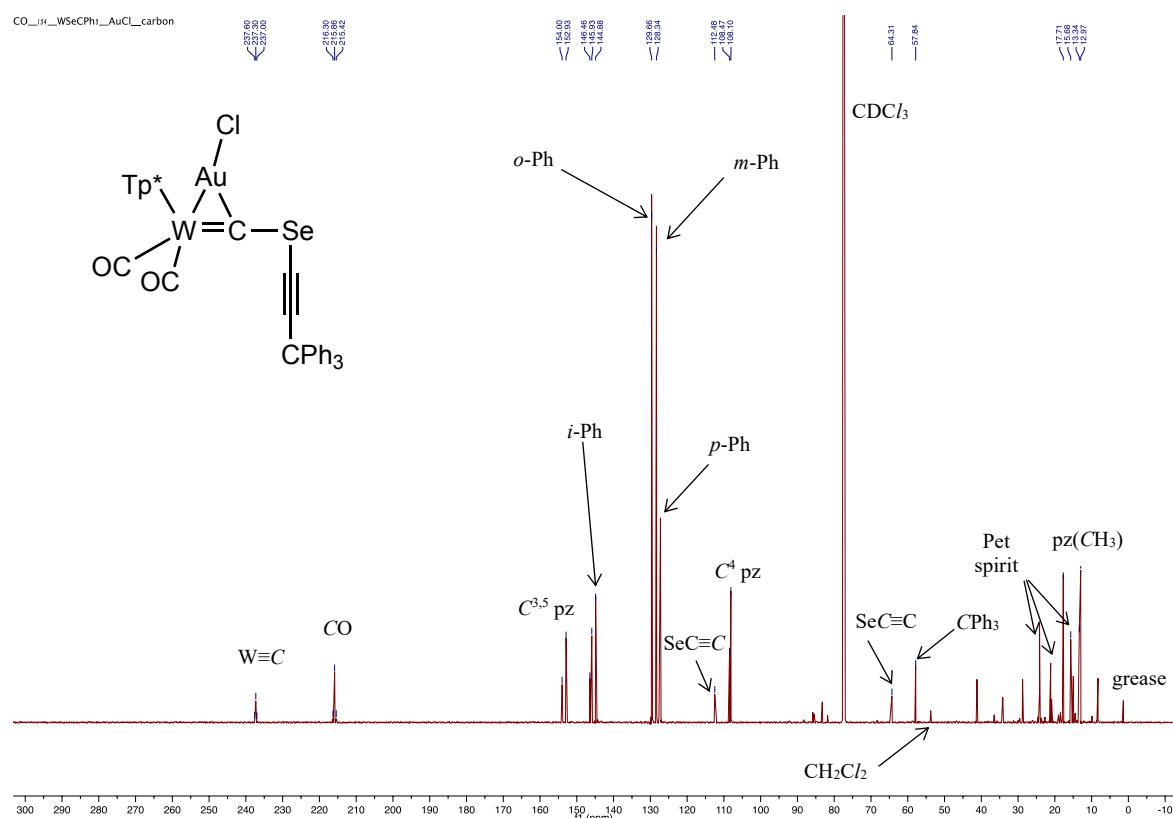
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 3.5.

COIr_x_WSeTol_AuCl_y_selenium

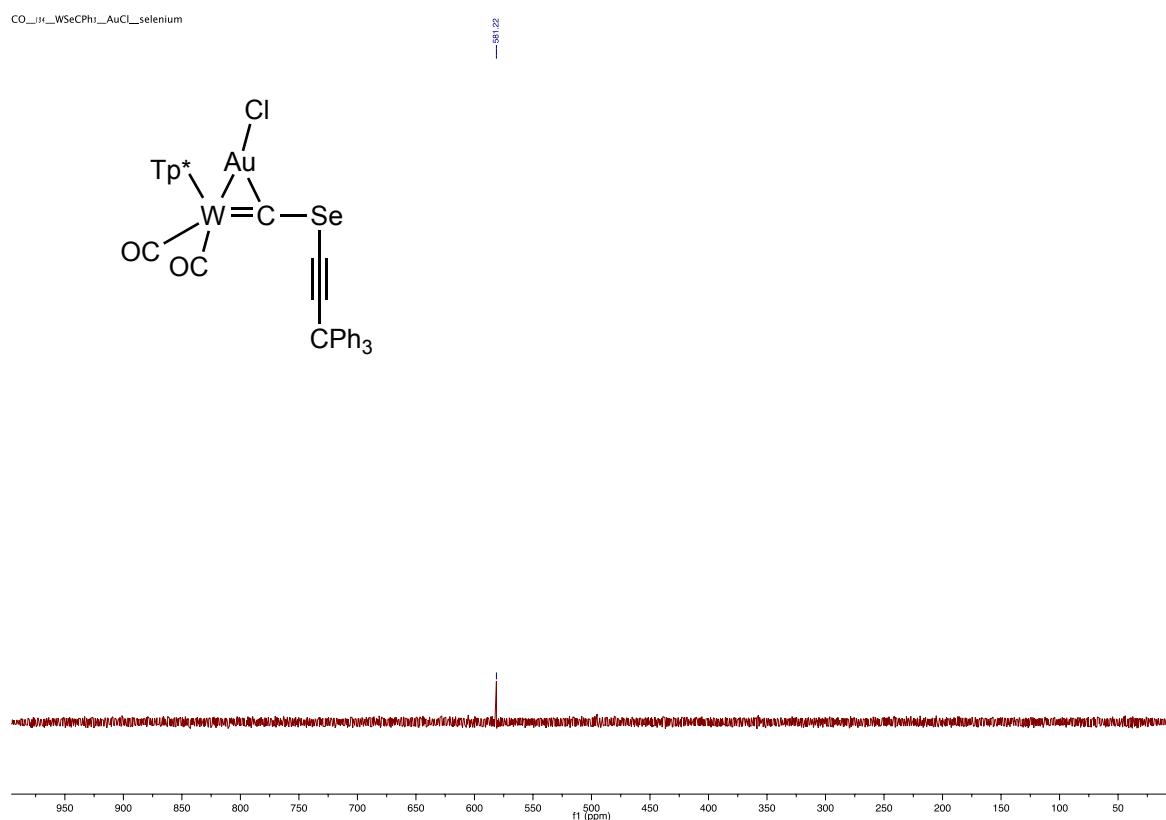
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 3.5.



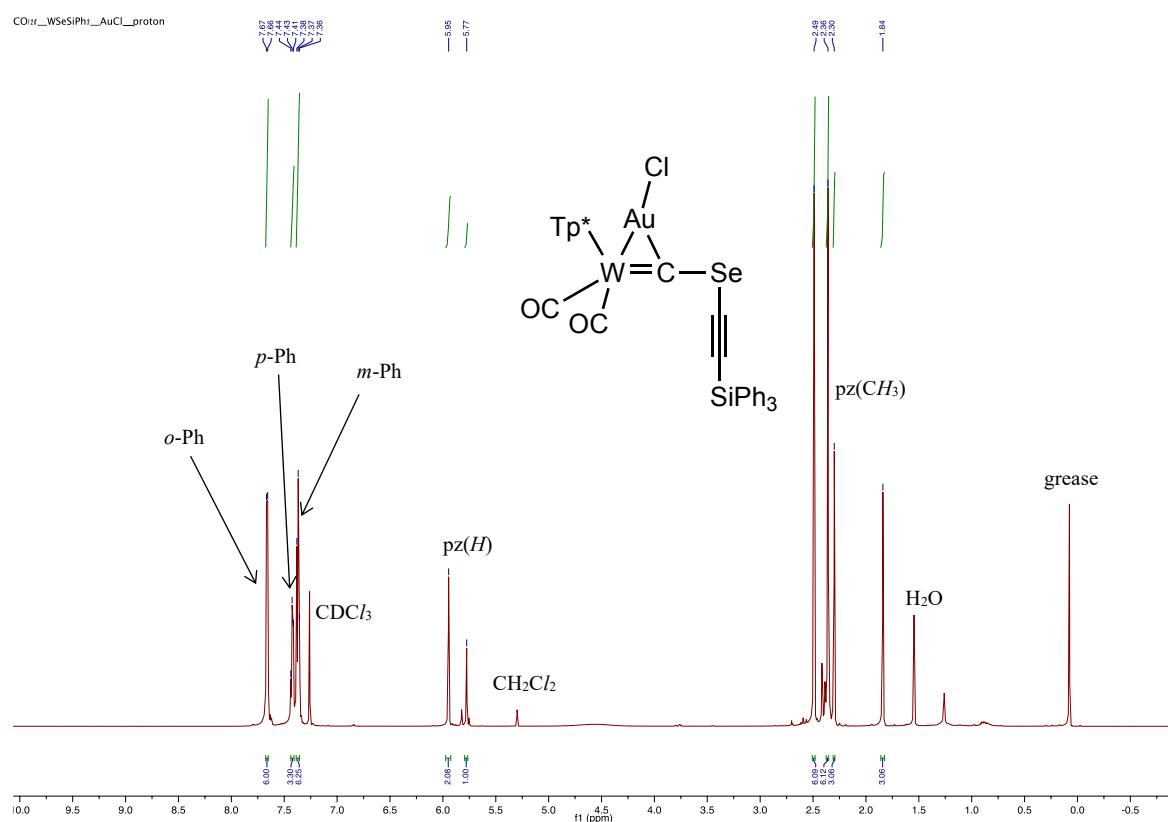
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 3.6.



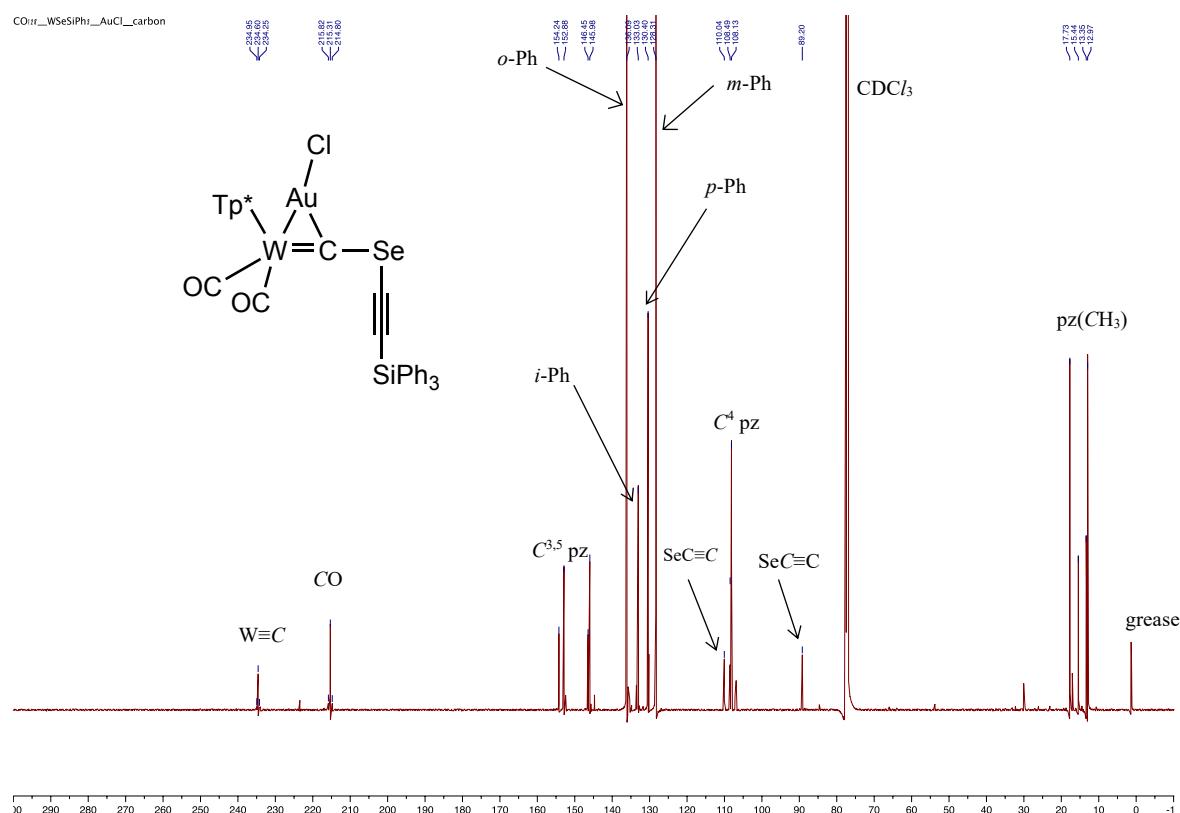
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 3.6.



⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.6.

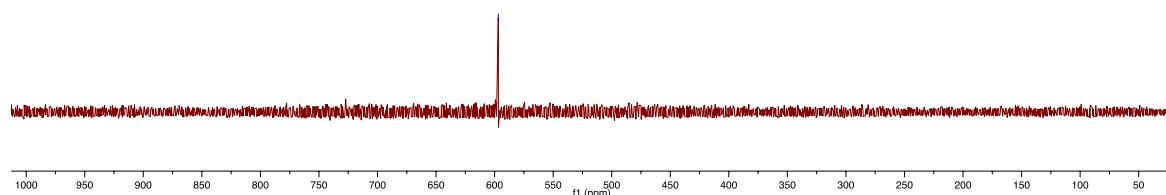
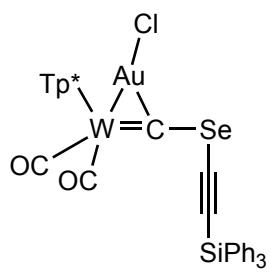


¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 3.7.

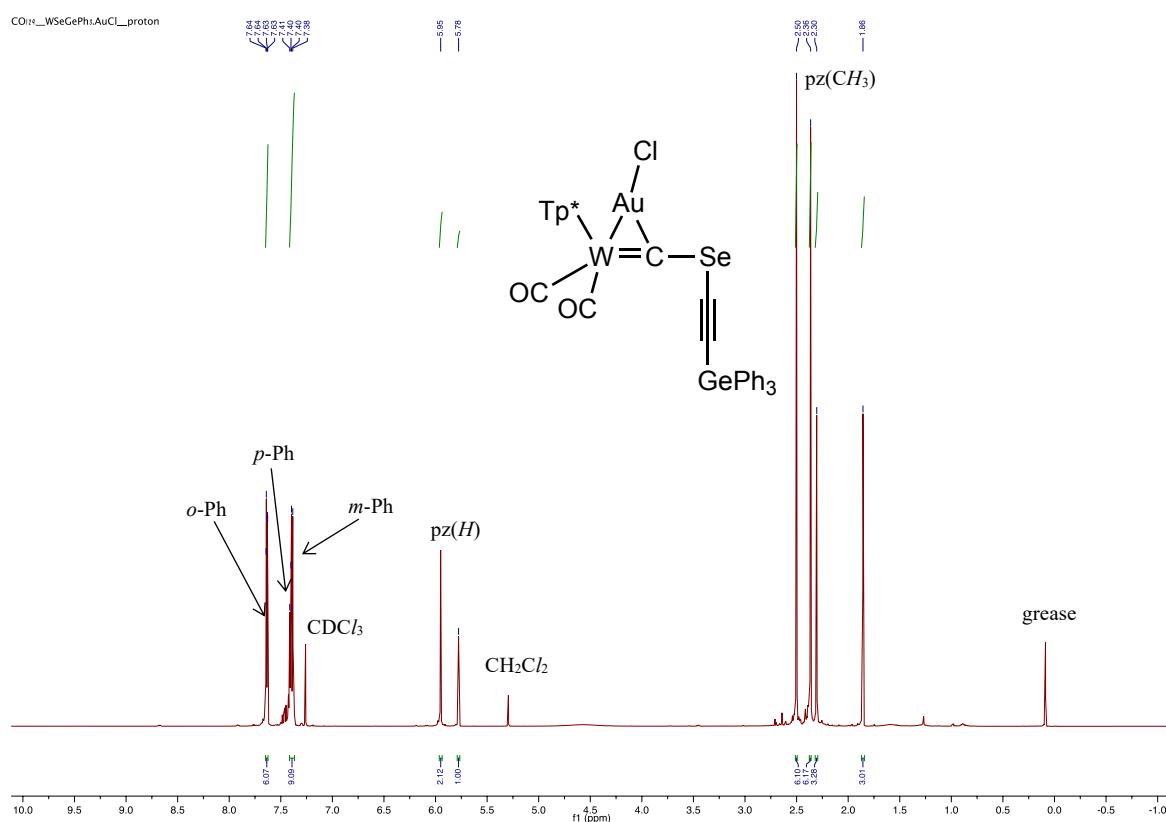


¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 3.7.

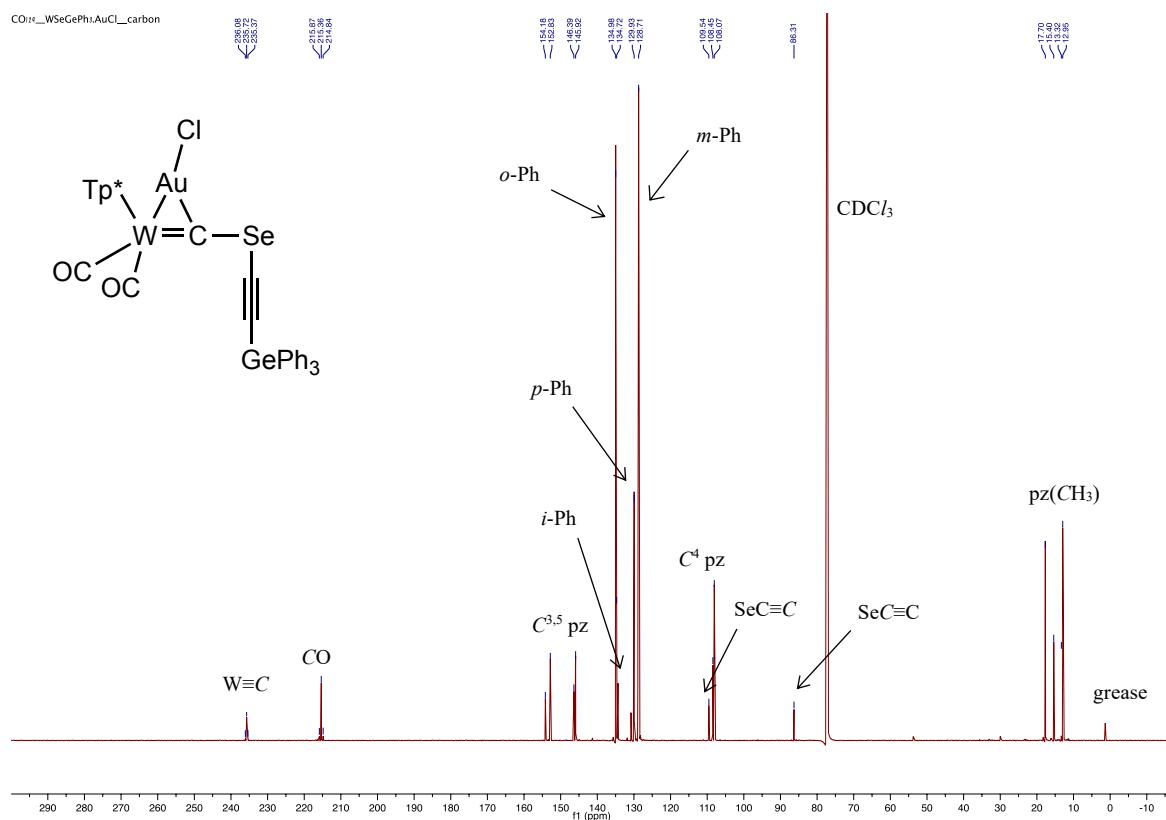
CO:rr_WSeSiPh3_AuCl_selenium

—
896.67

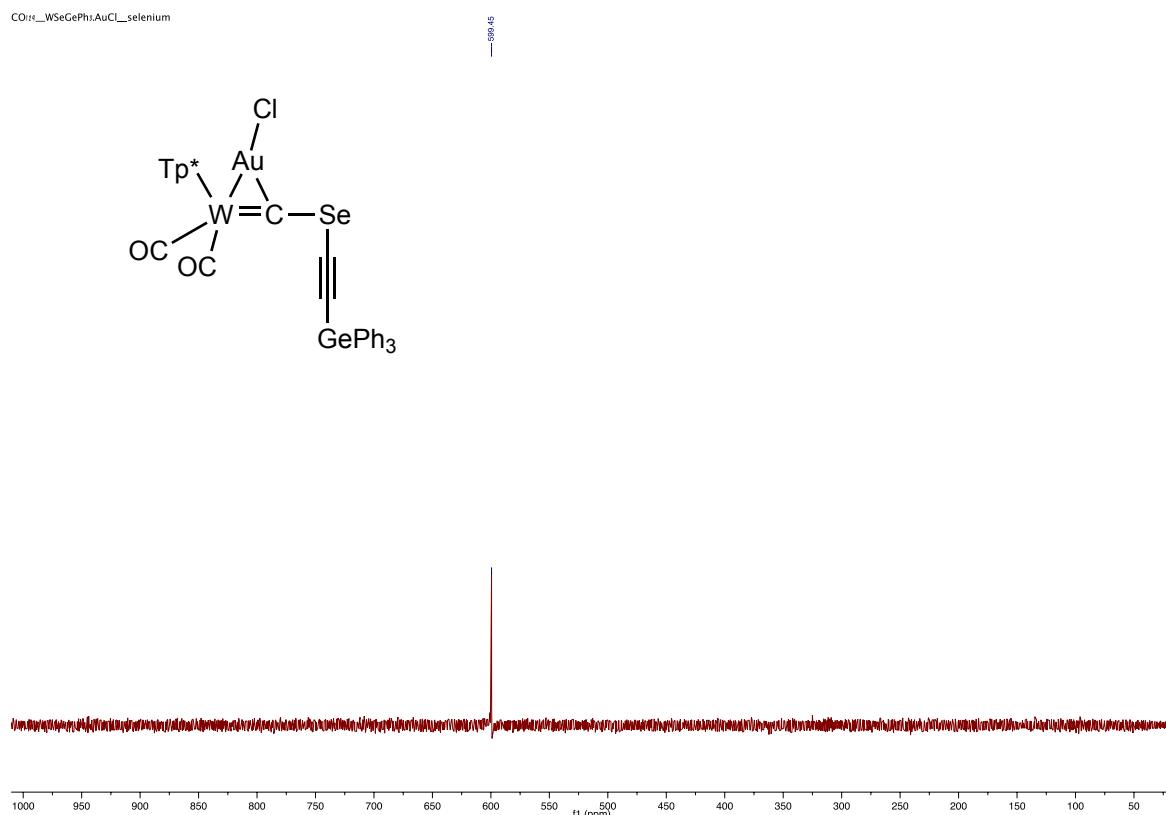
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.7.



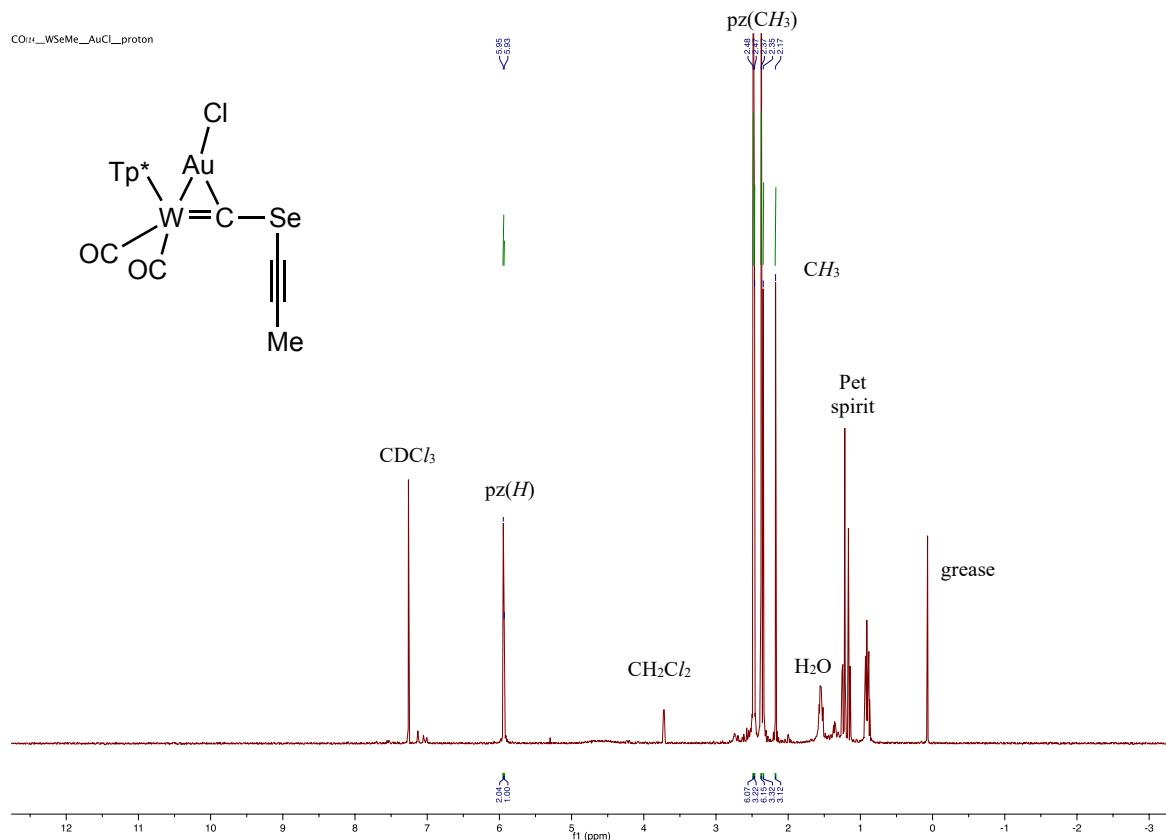
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 3.8.



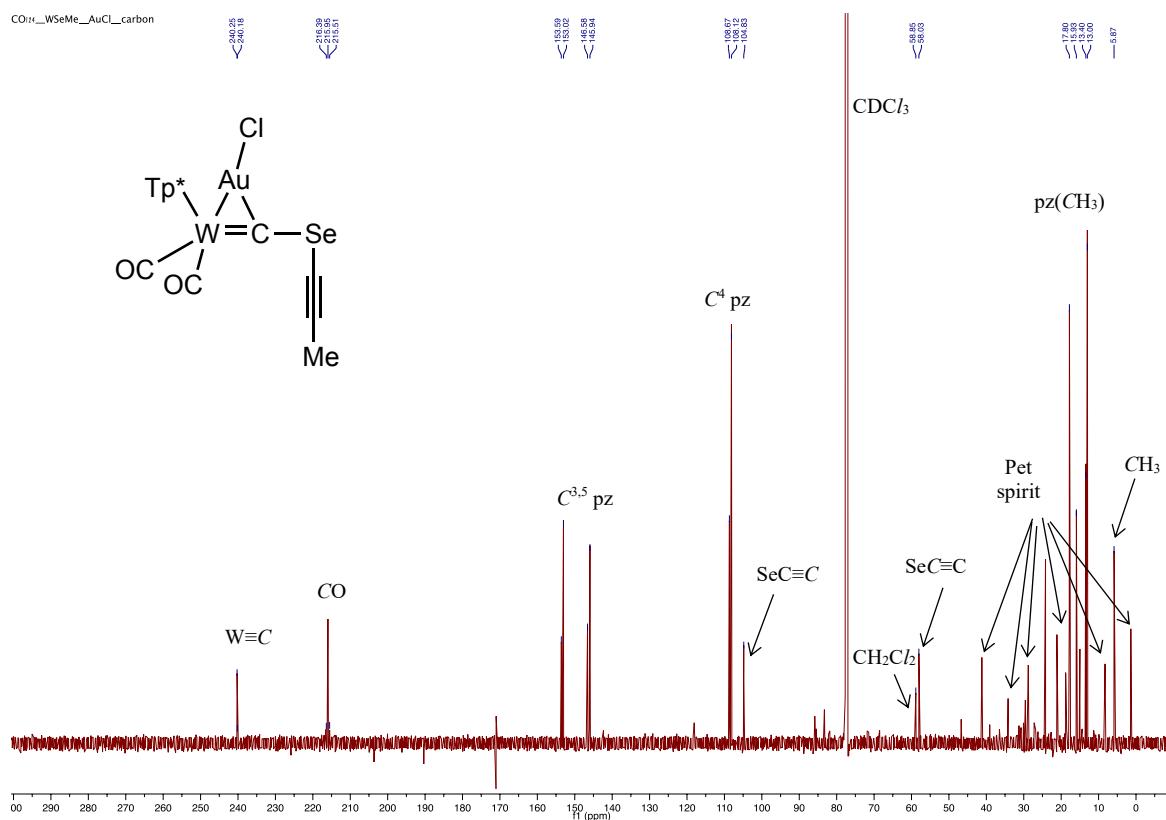
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 3.8.



$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **3.8**.



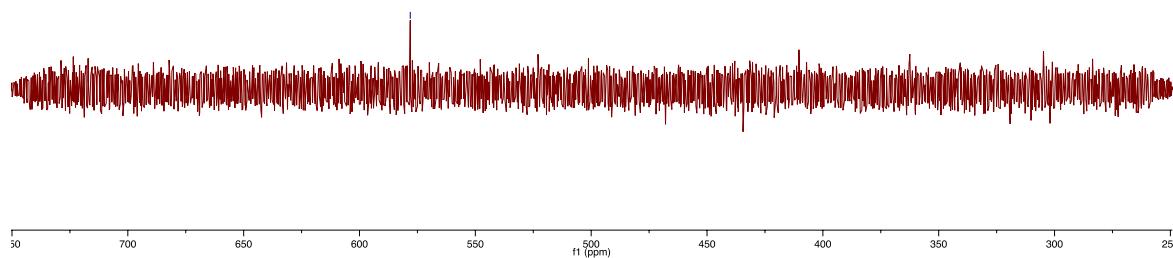
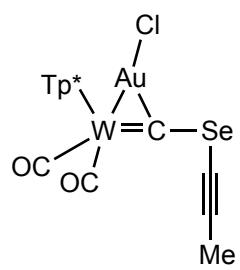
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 3.9.



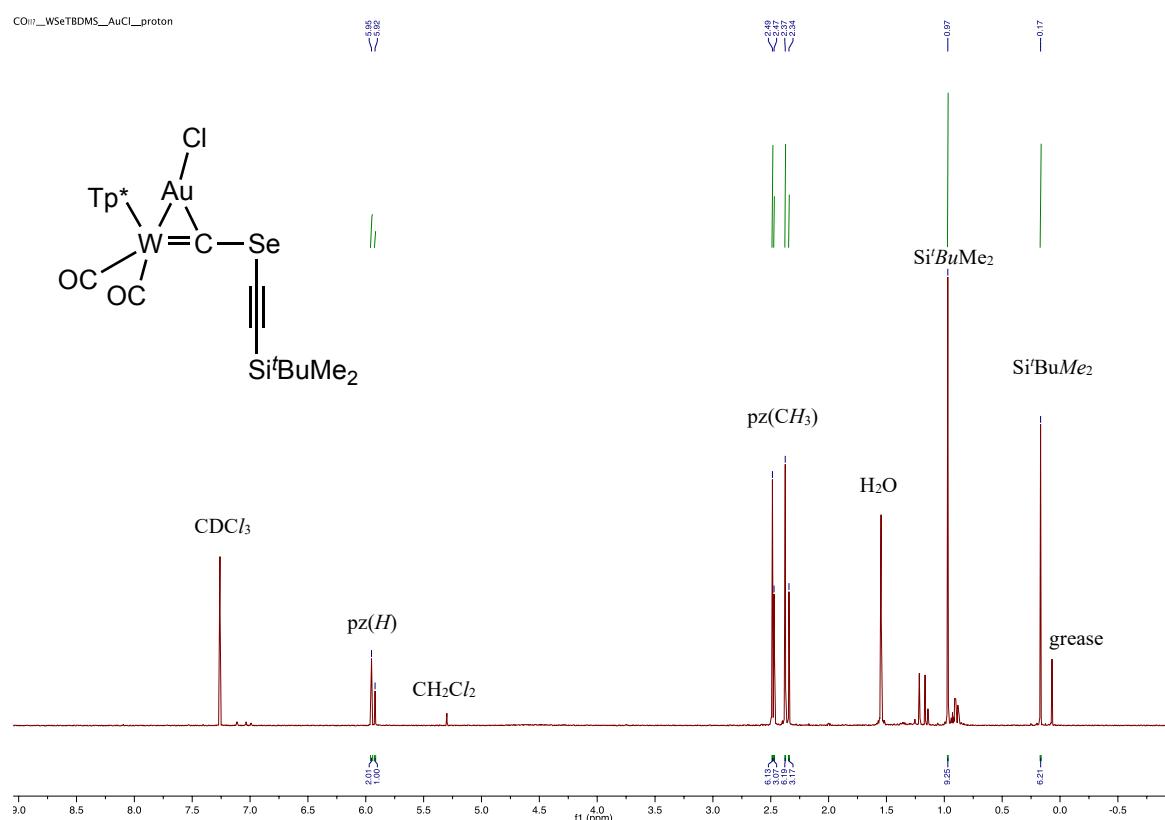
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 3.9.

CO₁₇—WSeMe—AuCl—selenium

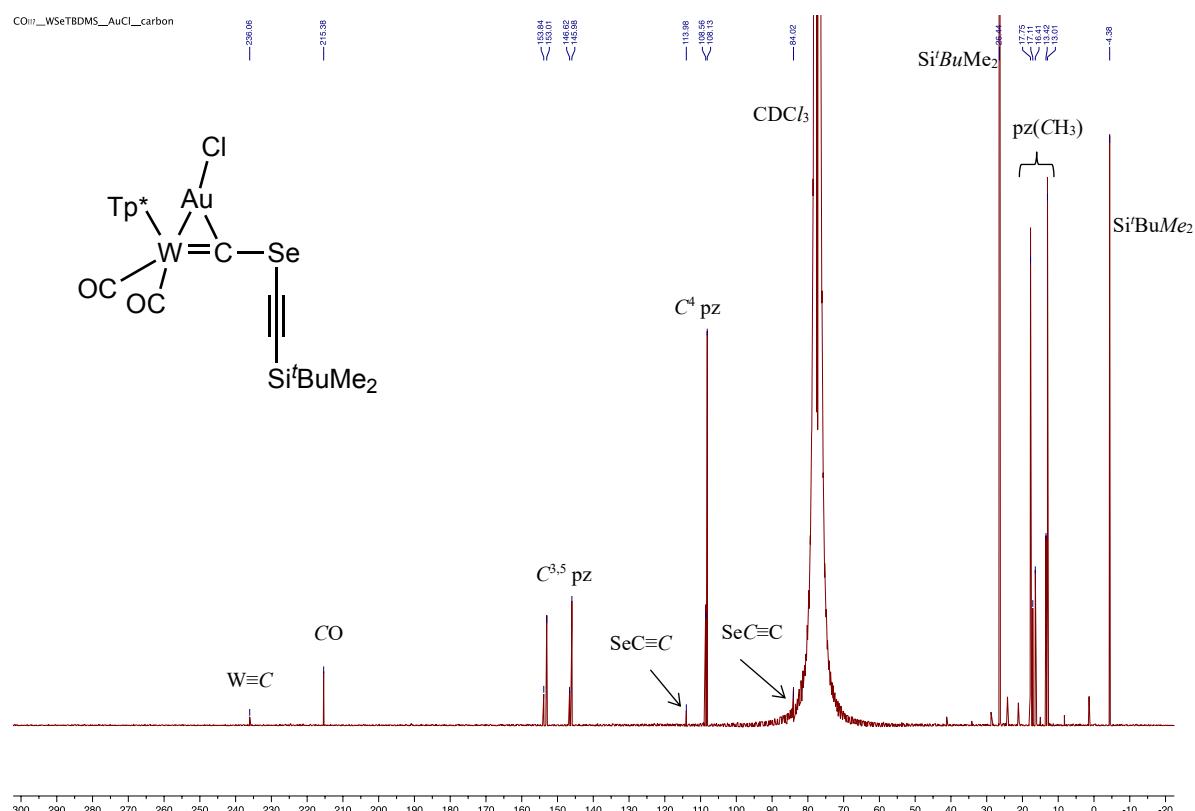
—578.10



⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.9.

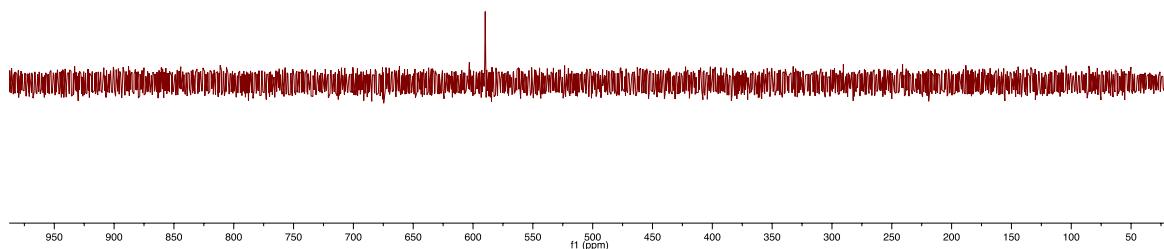
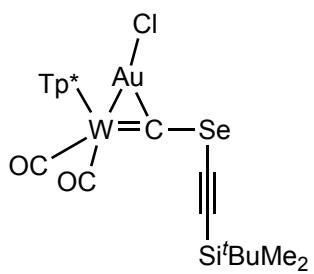


^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 3.10.

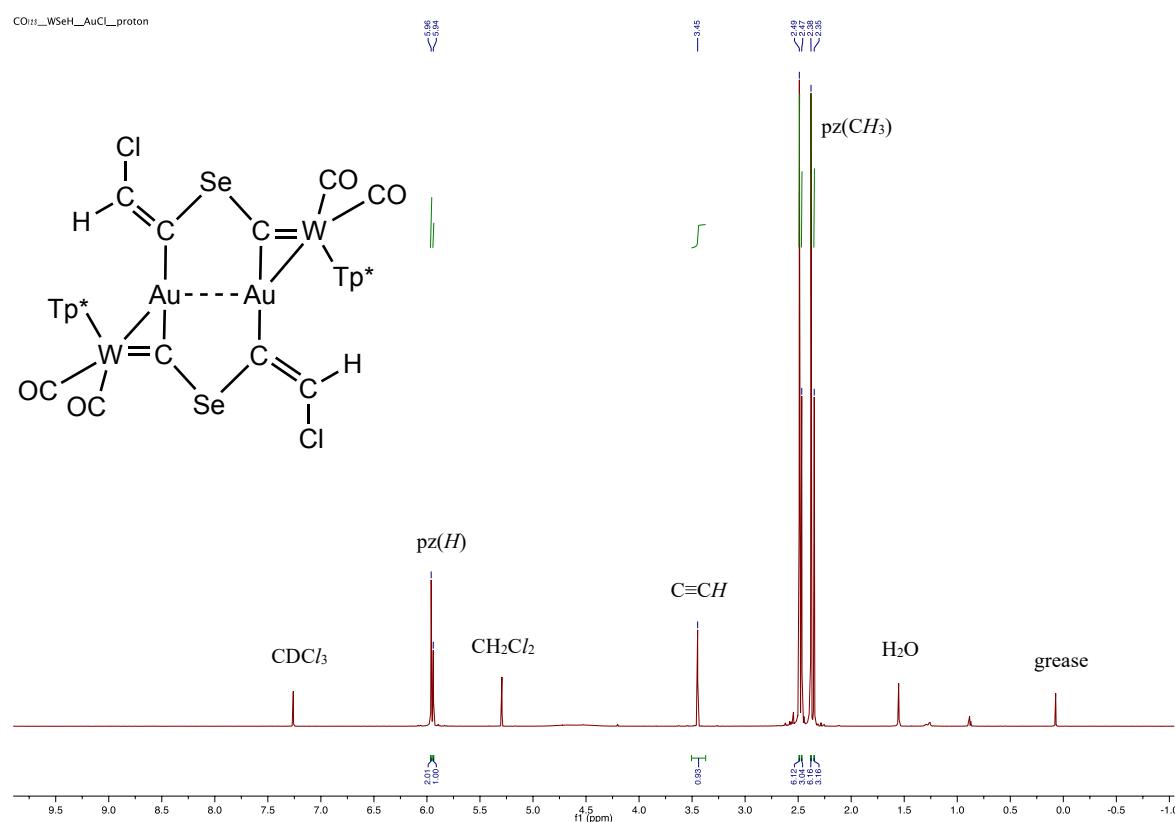


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 3.10.

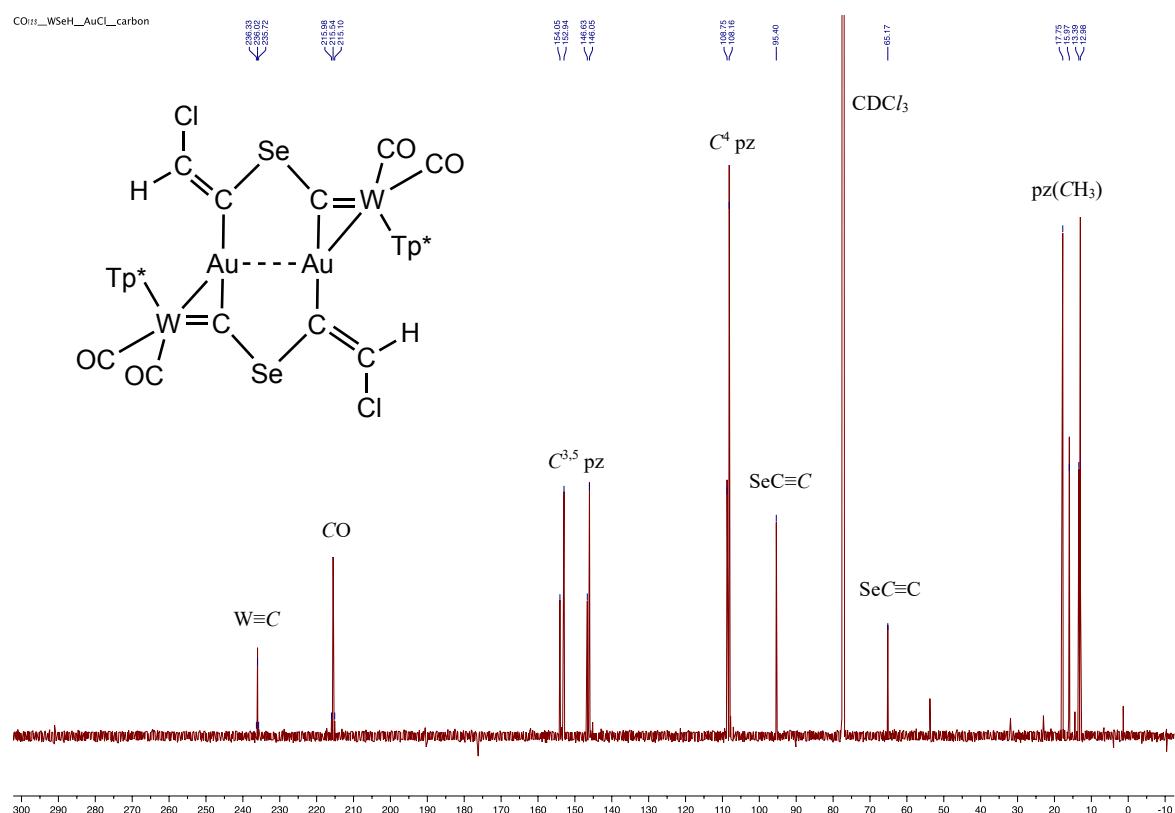
COrr_WSeTBDMSe_AuCl_selenium



⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.10.



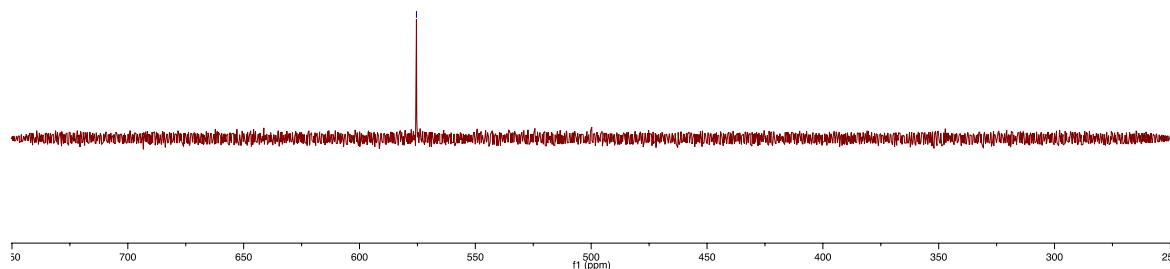
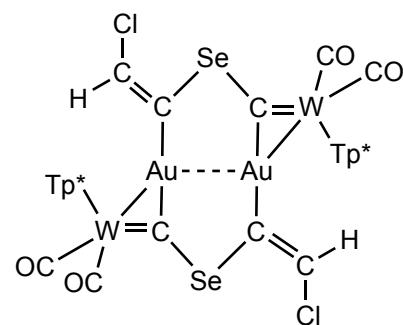
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 3.11.



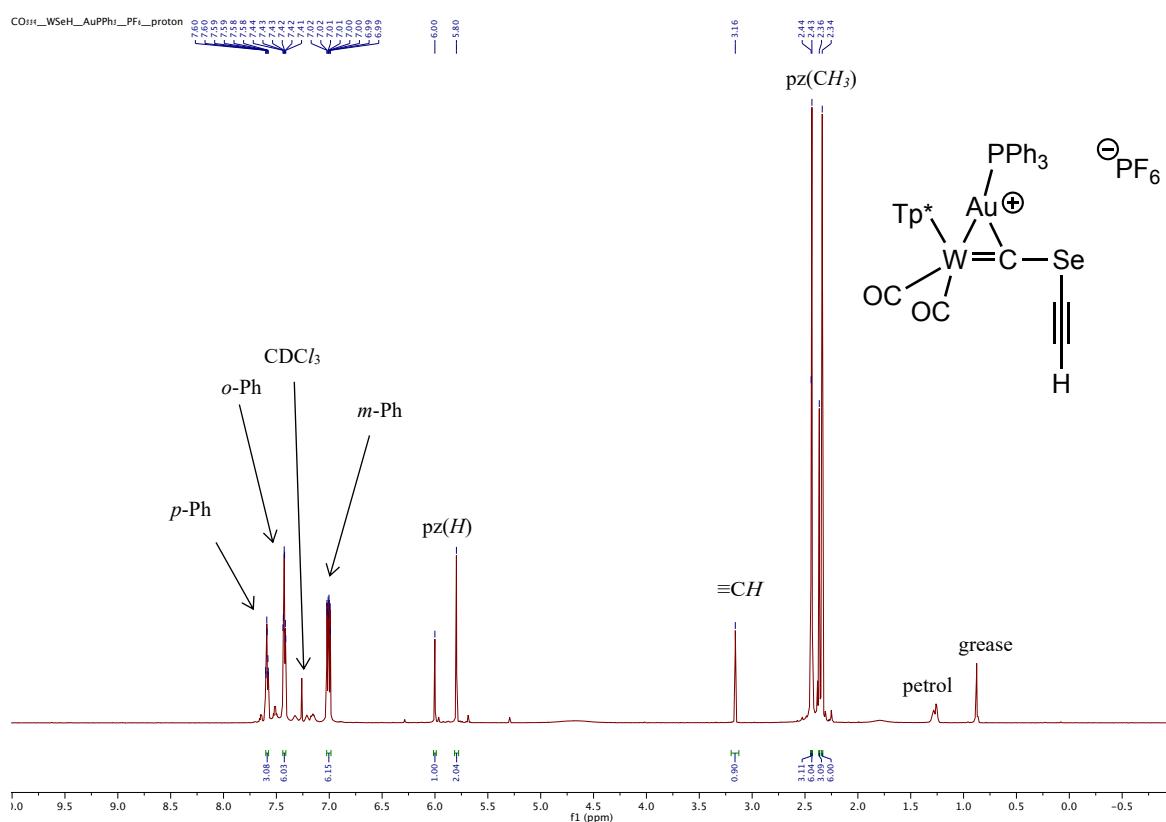
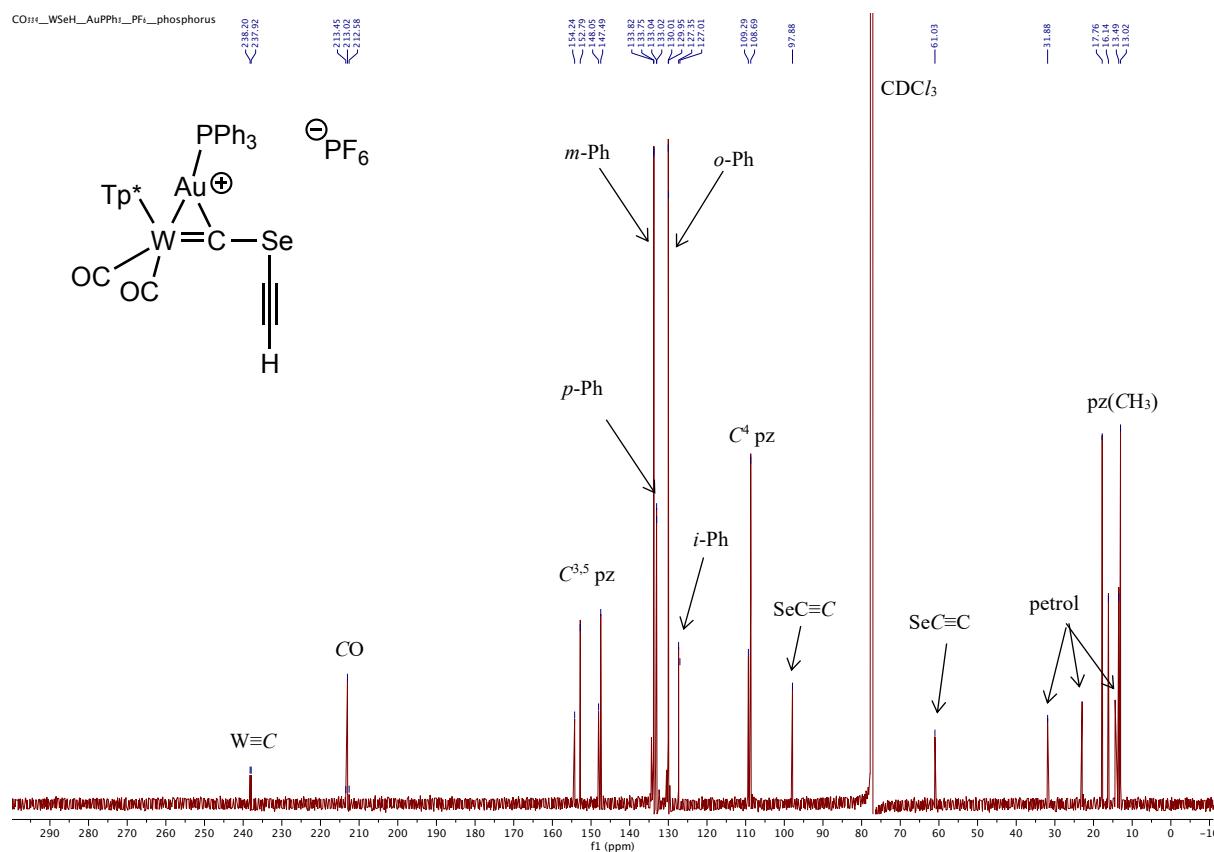
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 3.11.

CO:::__WSeH_AuCl_selenium

— 575.42

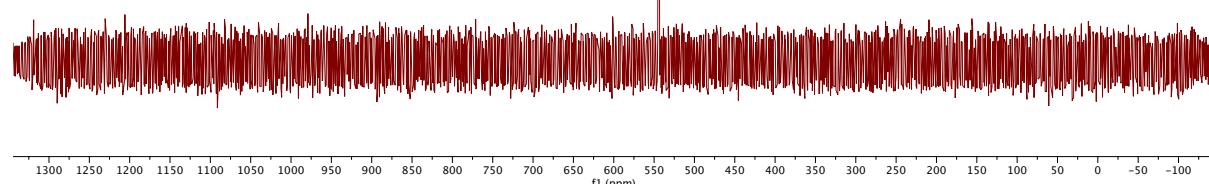
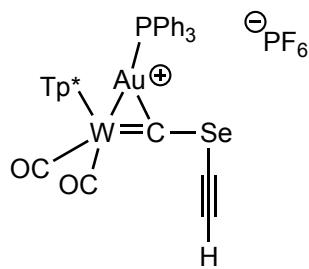


⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.11.

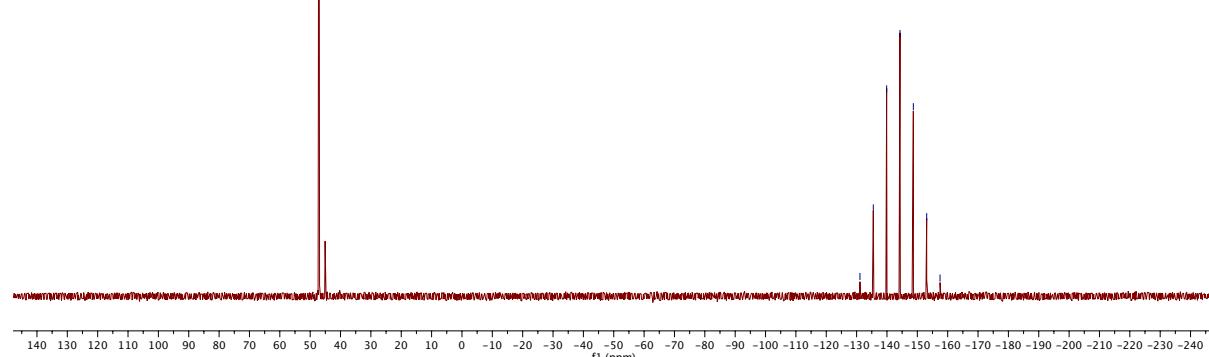
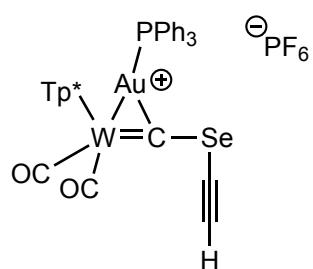
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 3.12.¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 3.12.

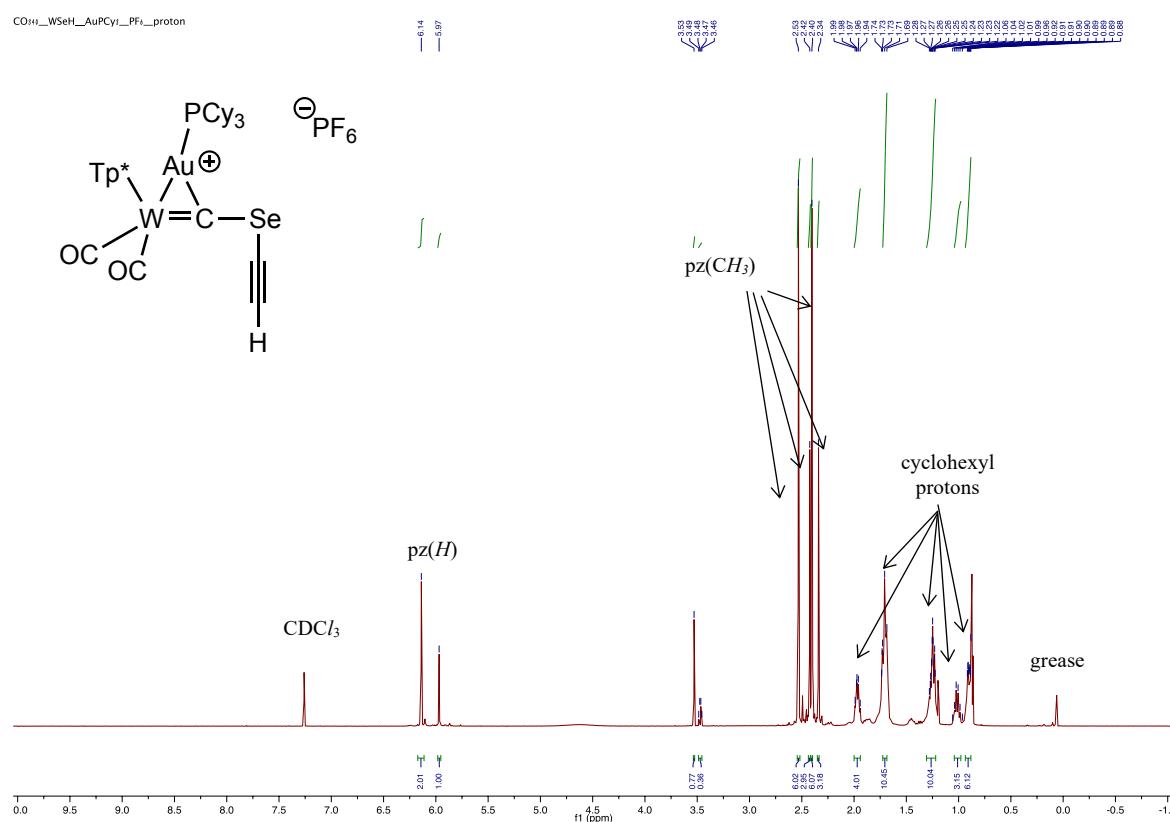
CO11t_WSeH_AuPPh3_PF6_selenium

5344.17

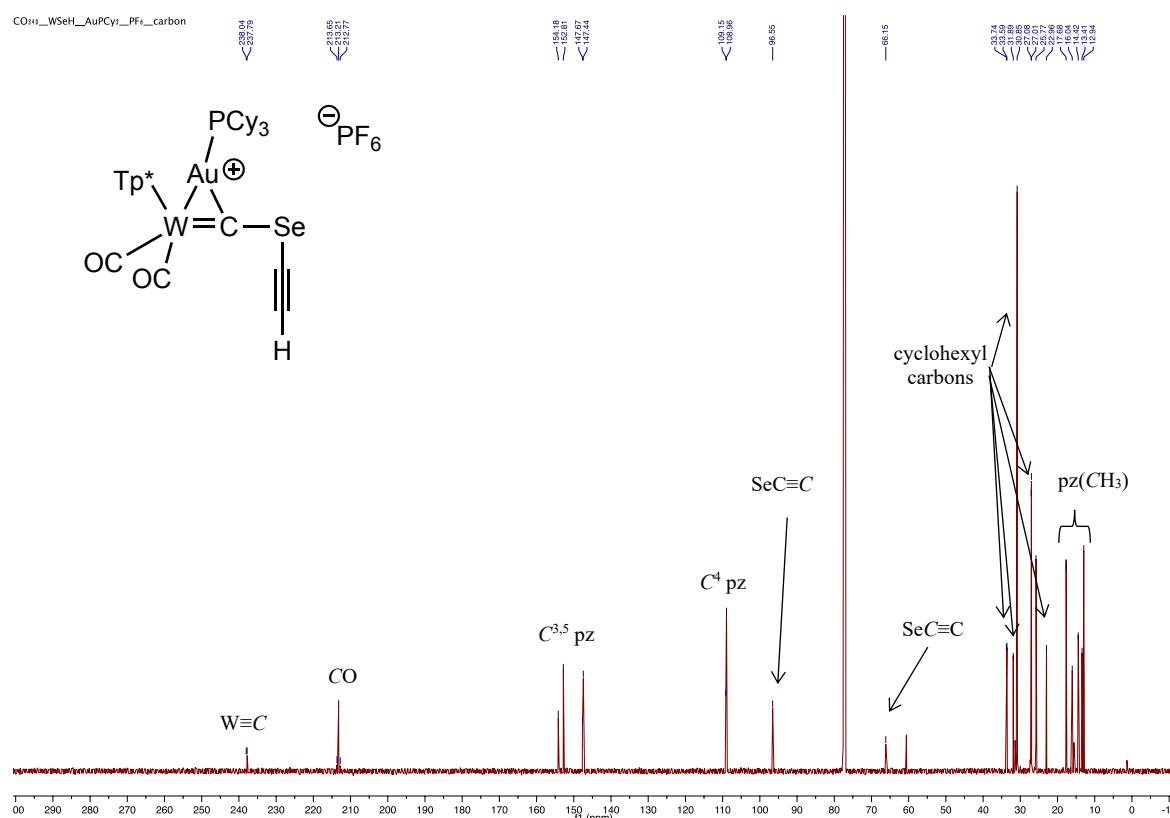
 $^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 3.12.

CO11t_WSeH_AuPPh3_PF6_phosphorus

147.10
141.10
139.89
139.89
134.29
134.29
138.69
138.69
125.49
125.49
127.48 $^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound 3.12.



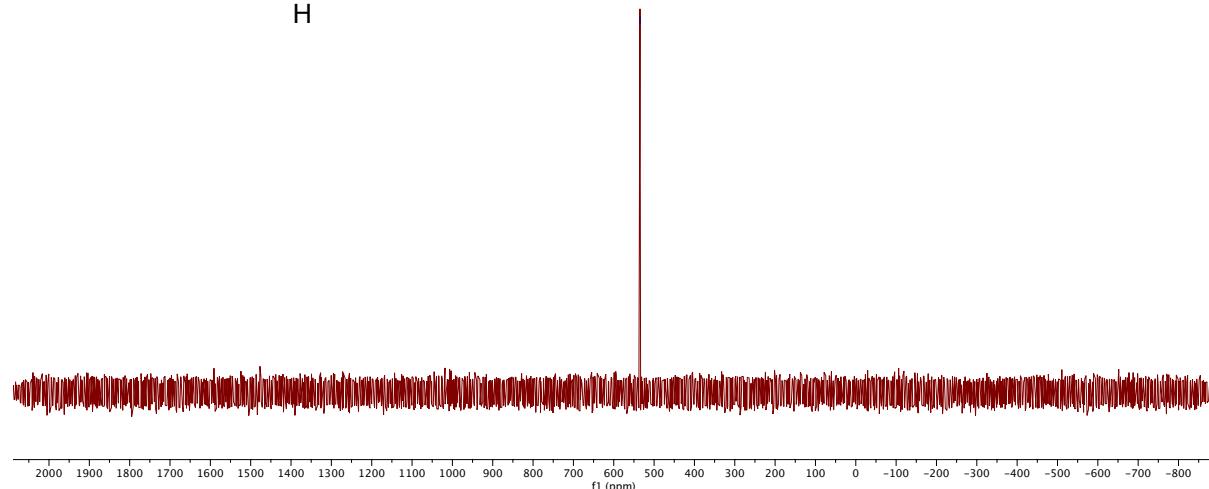
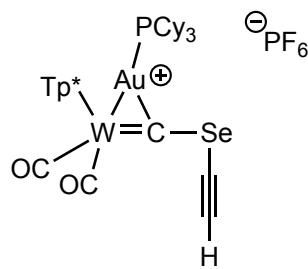
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 3.13.



¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 3.13.

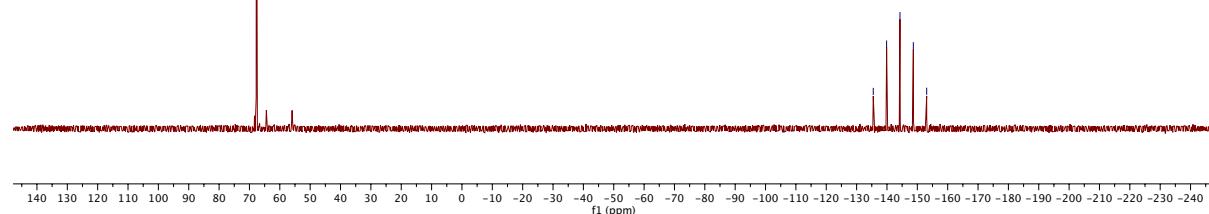
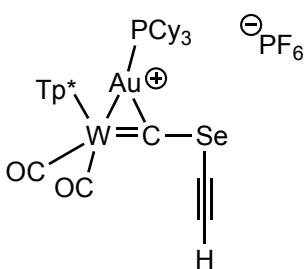
COHt_WSeH_AuPCy1_PFs_selenium

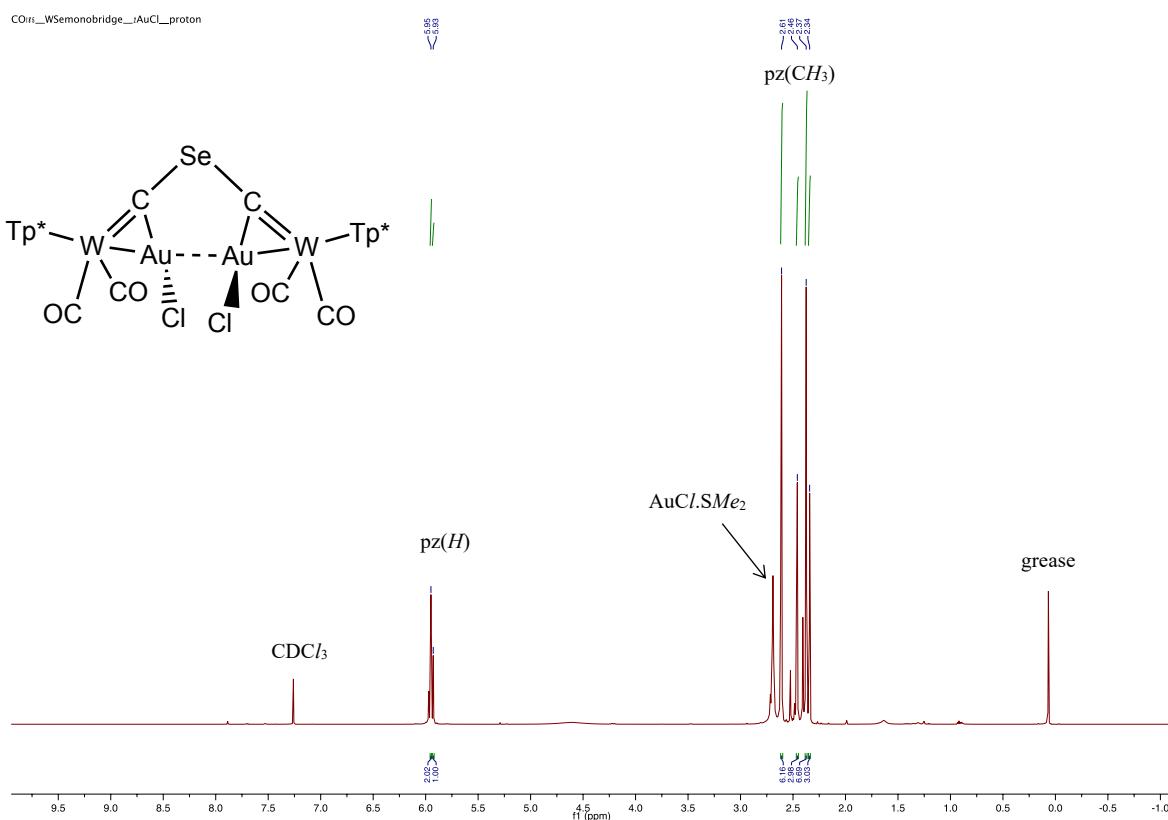
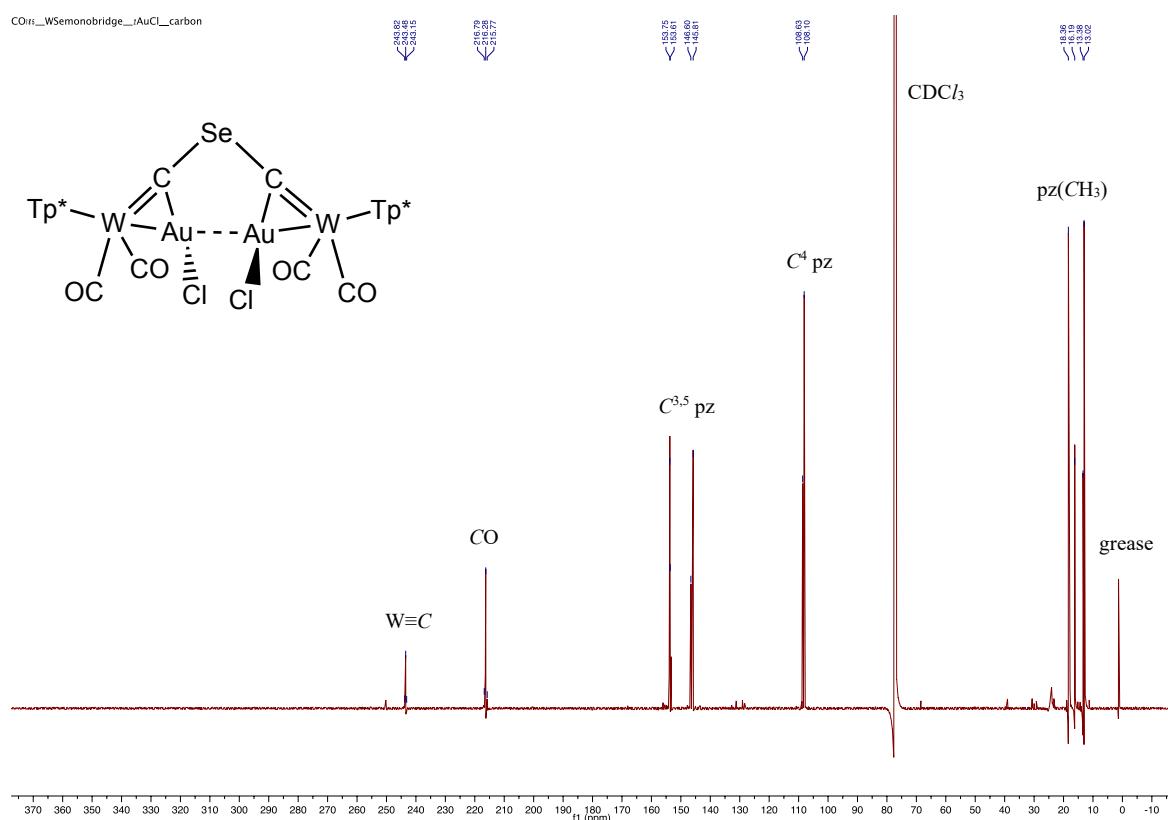
— 534.96

⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.13.

COHt_WSeH_AuPCy1_PFs_phosphorus

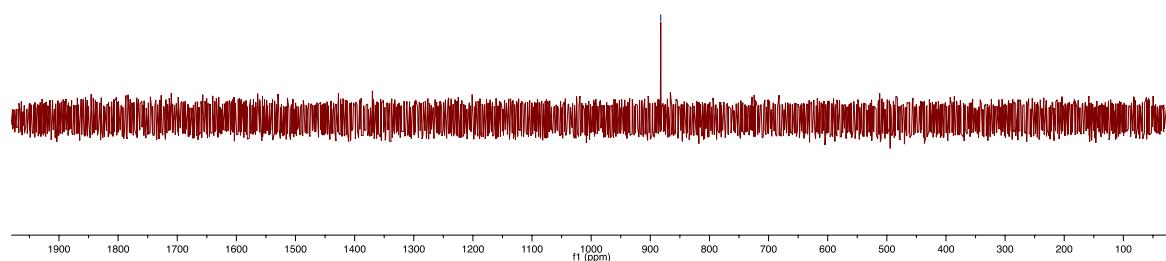
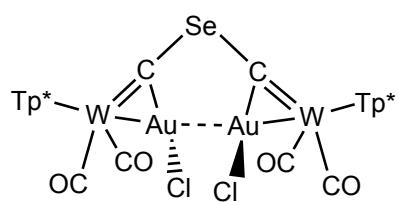
— 67.73

 ~ 135.99
 ~ 133.89
 ~ 134.28
 ~ 144.68
 ~ 155.68
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 3.13.

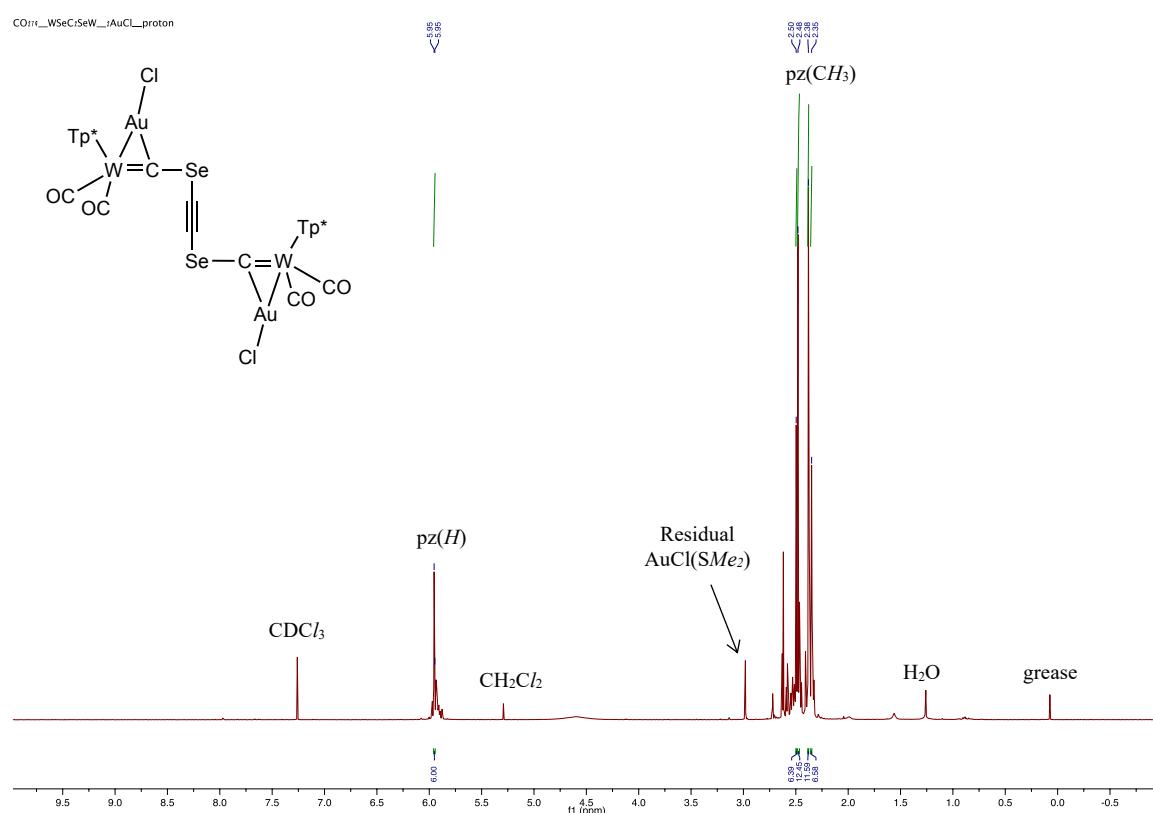
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 3.14.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 3.14.

CO(iR—WSemimonobridge—)AuCl—selenium

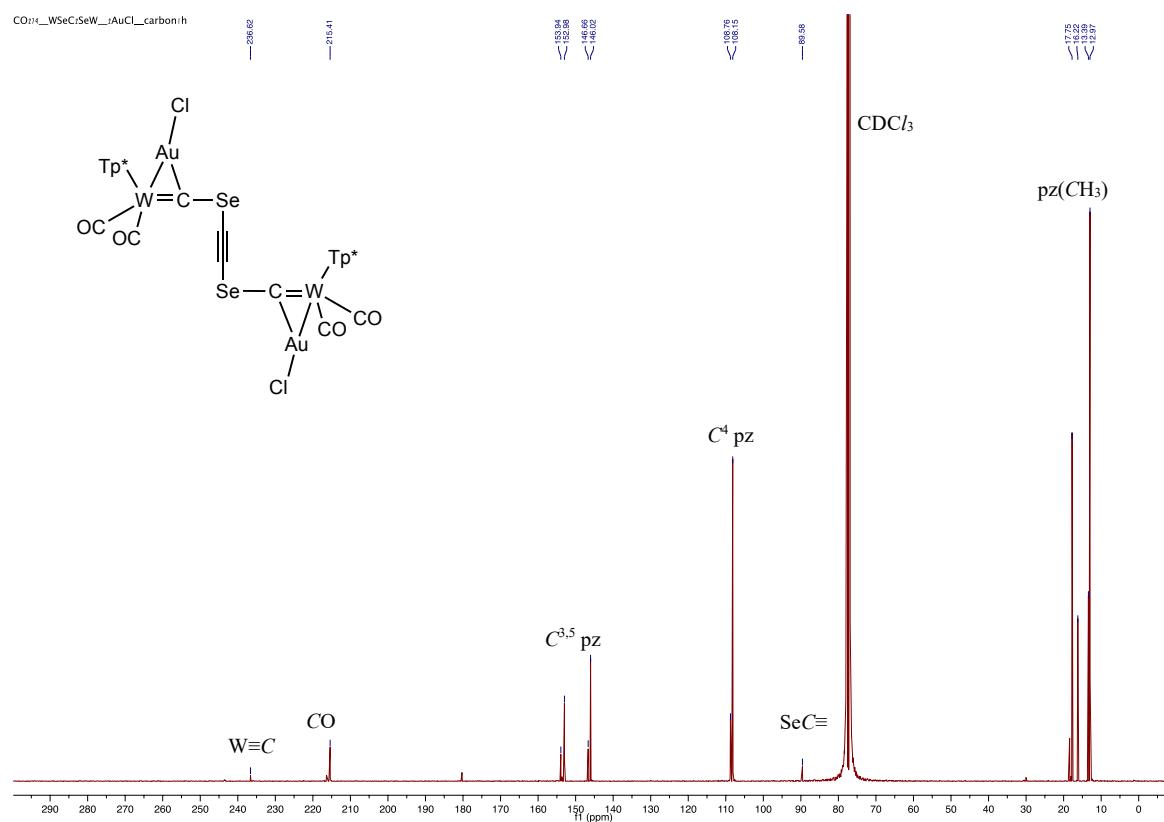
—892.32



$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 3.14.

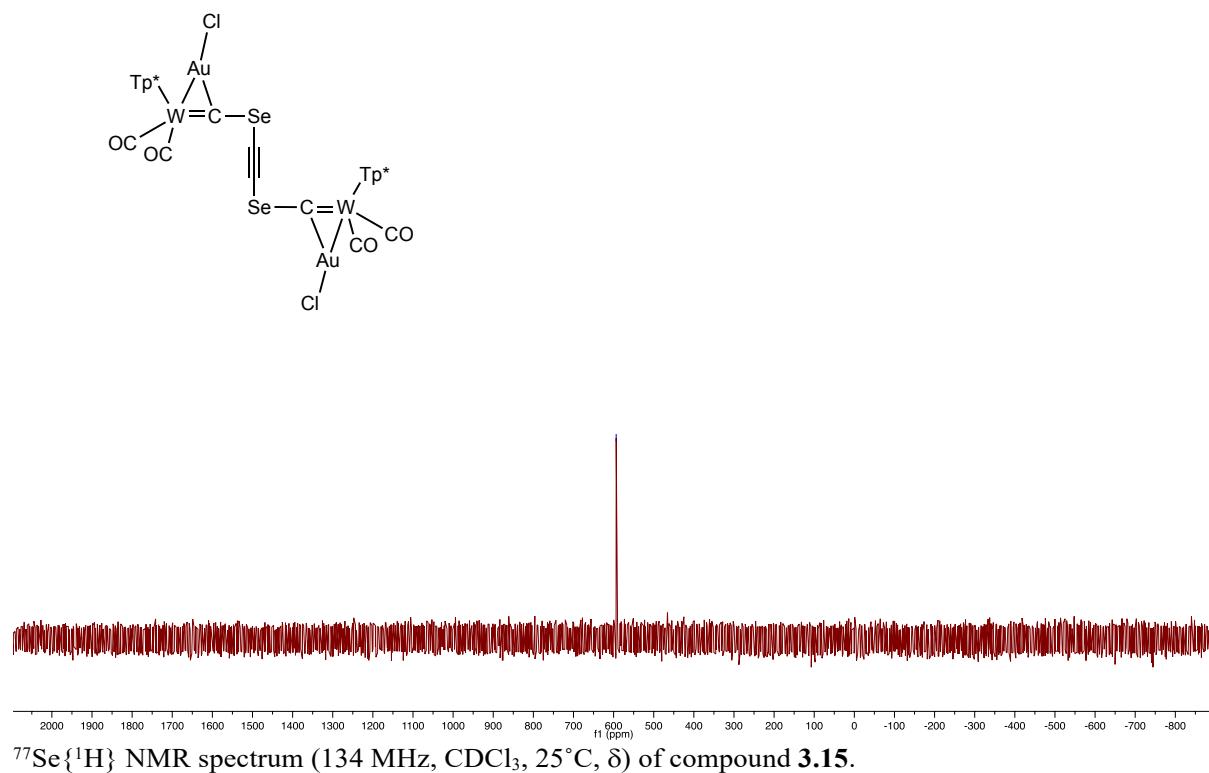


^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 3.15.

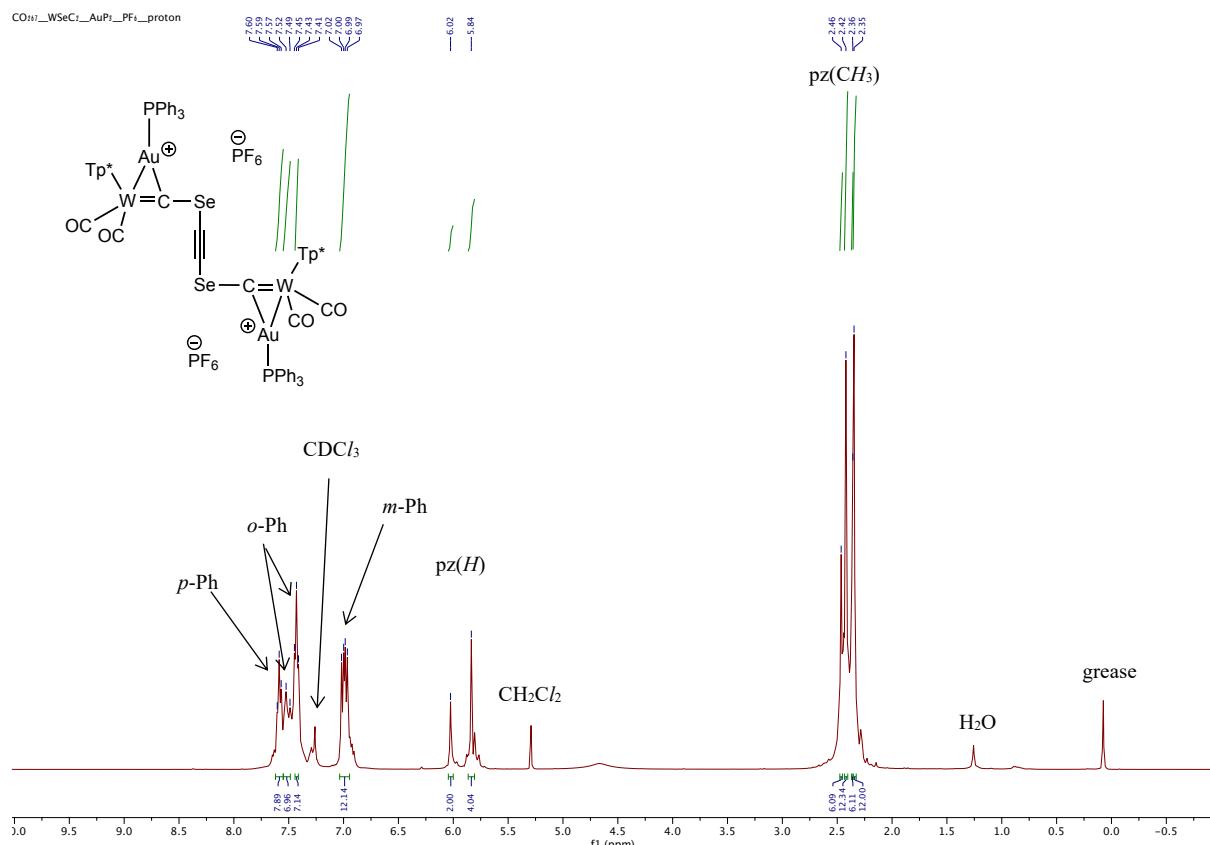


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 3.15.

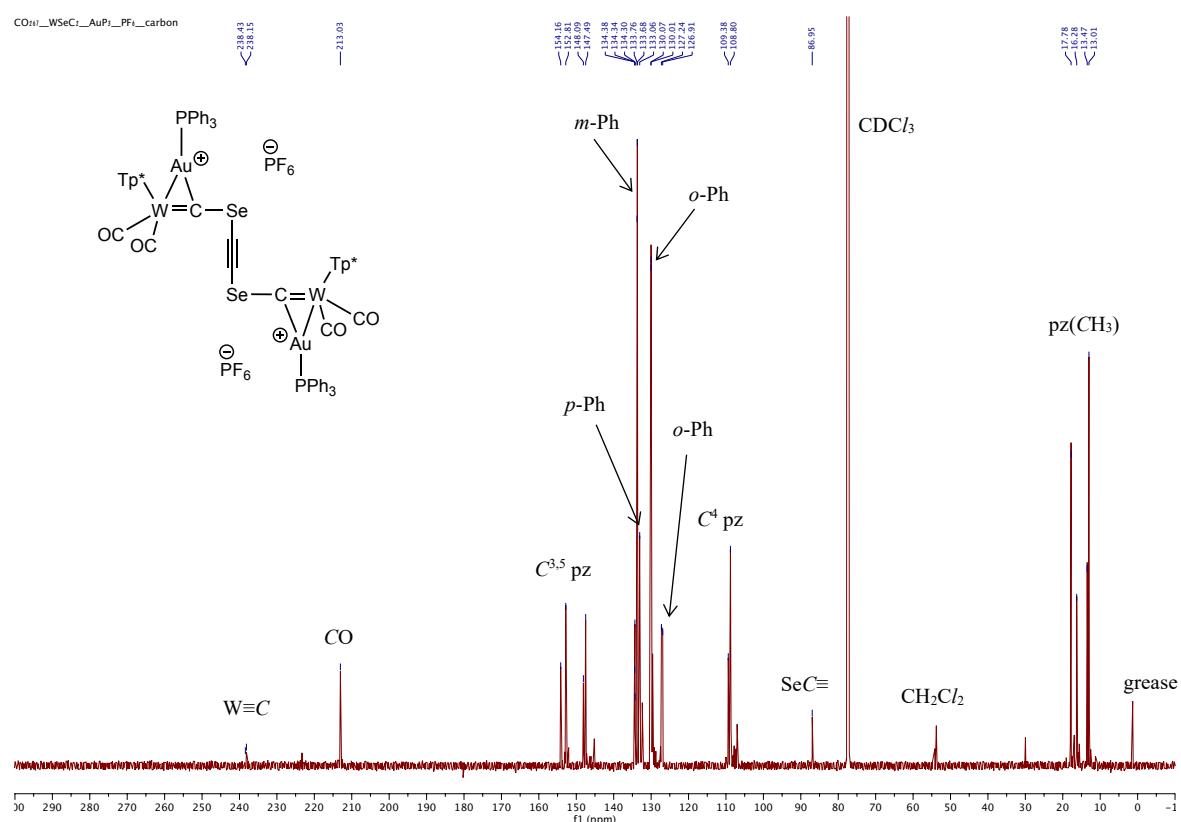
CO:N_WSeC:SeW_AuCl_selenium



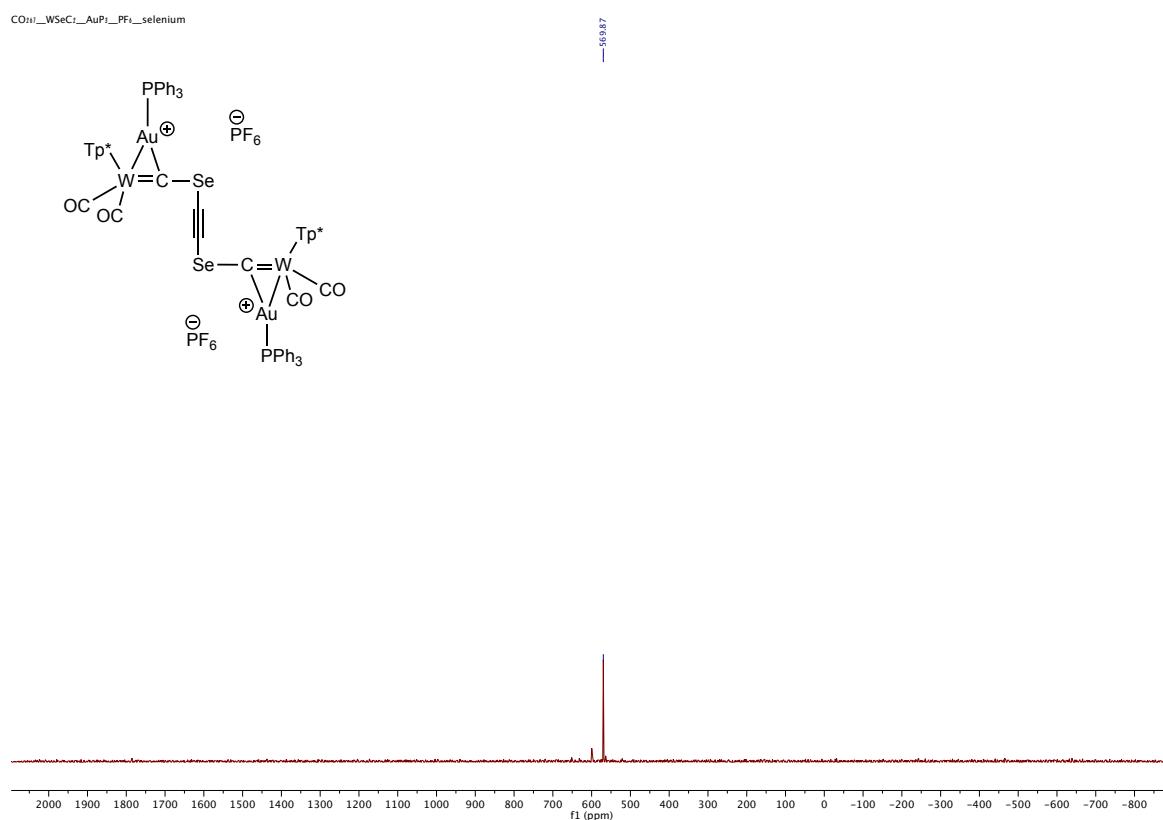
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (134 MHz, CDCl_3 , 25°C, δ) of compound **3.15**.



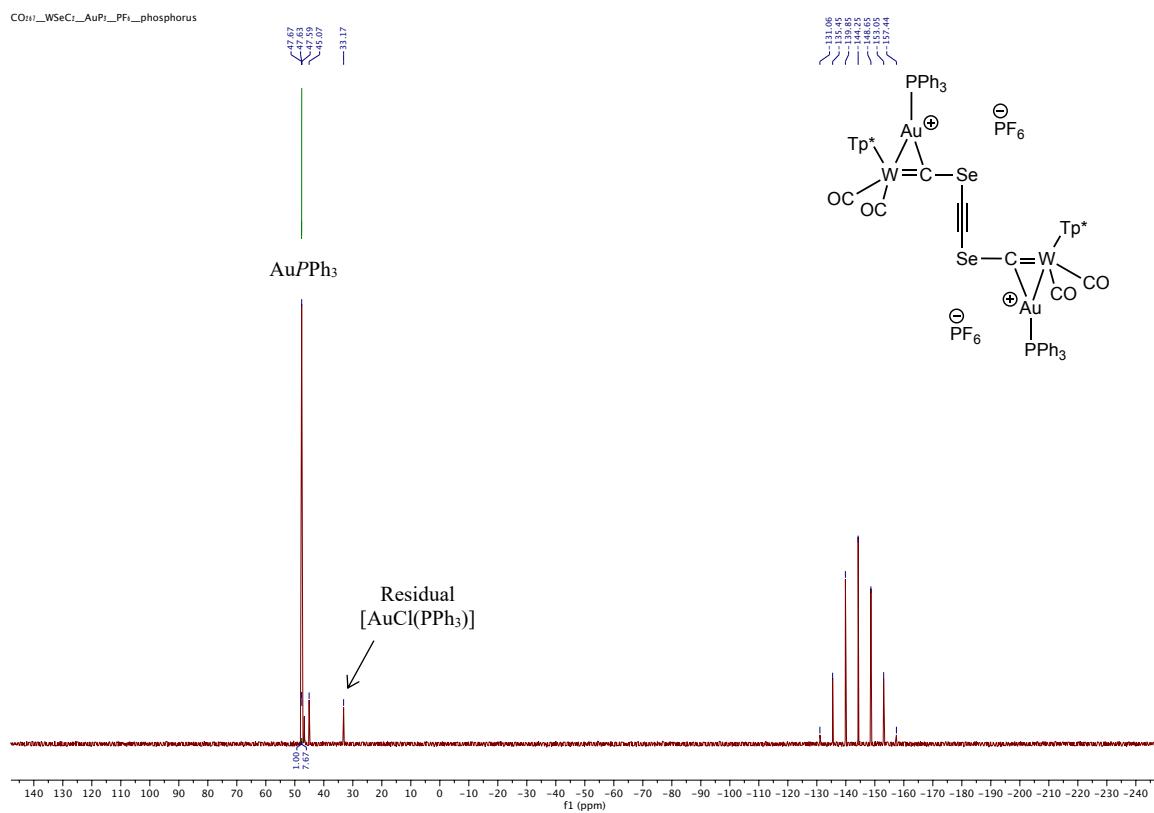
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 3.16.



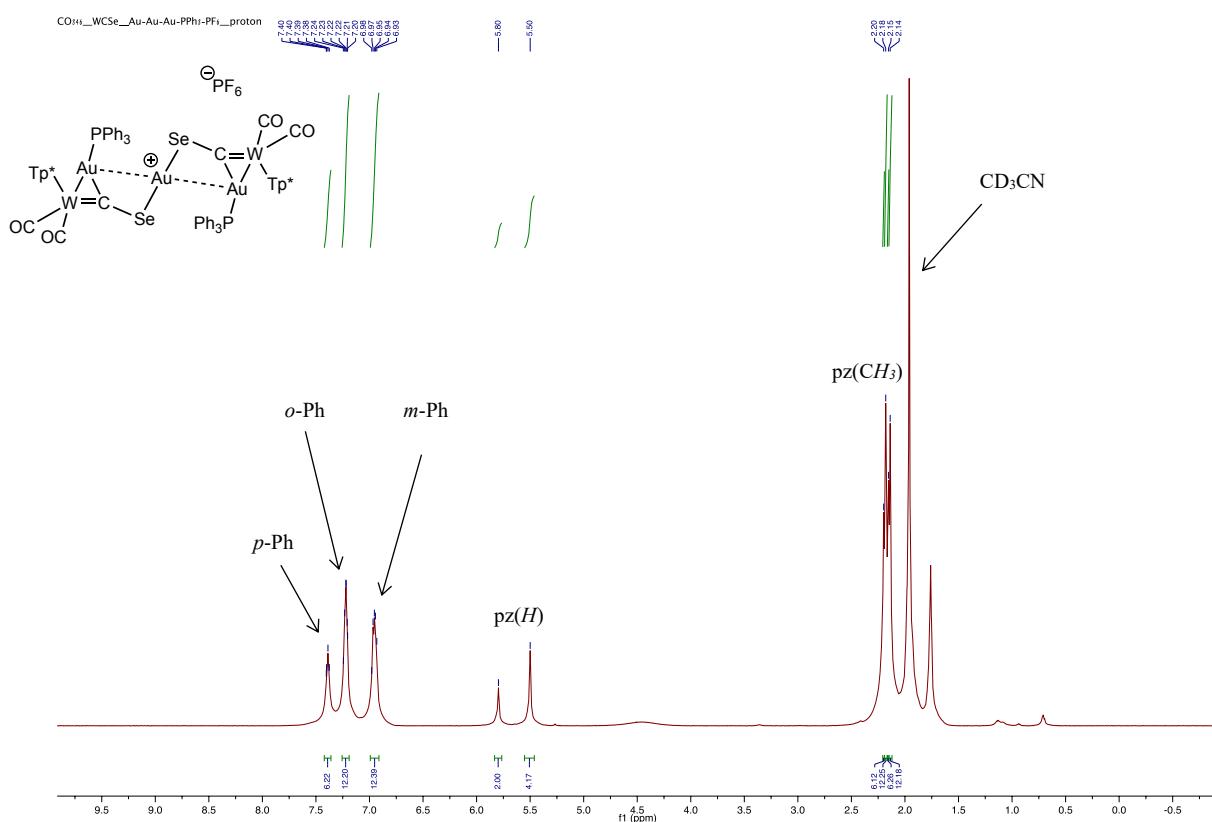
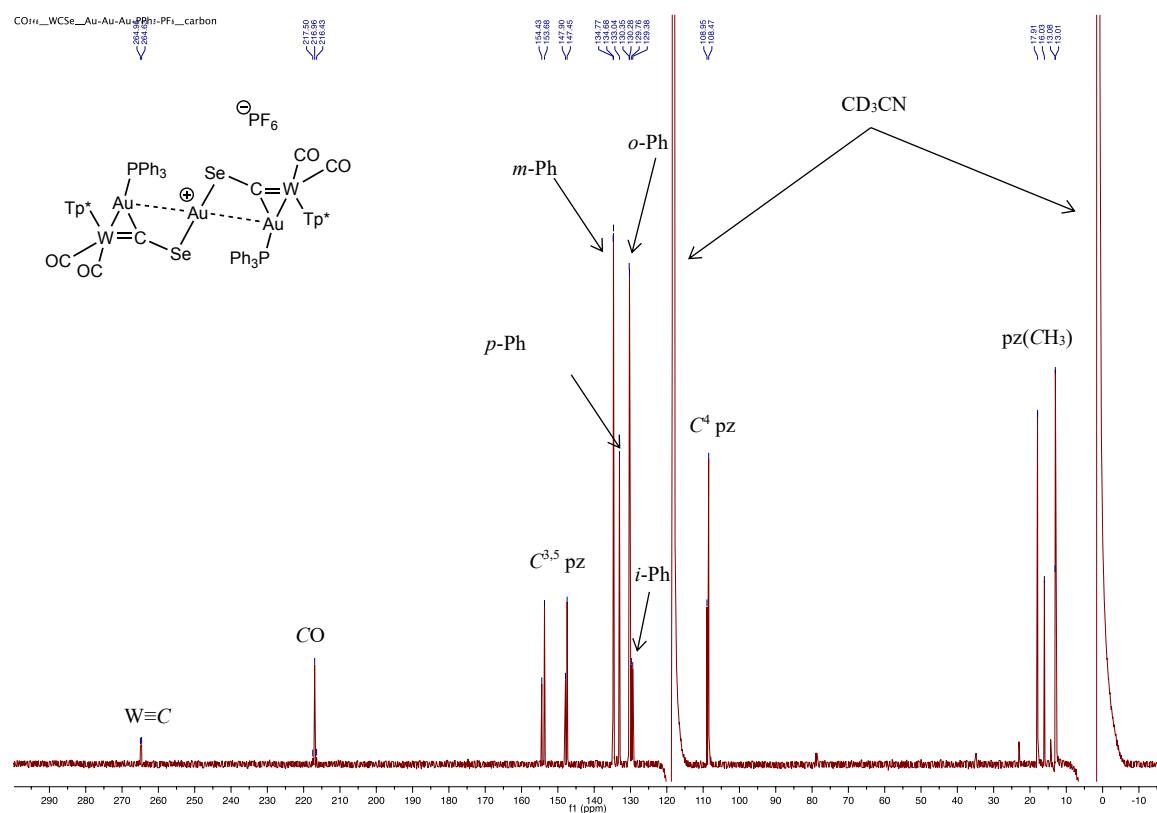
$^{13}\text{C}\{\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 3.16.

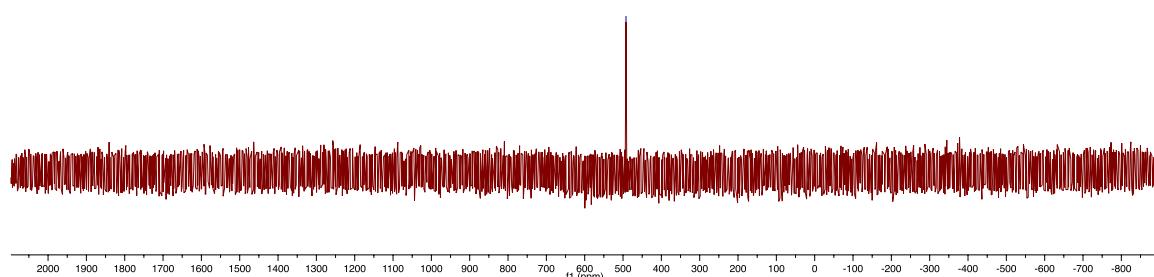
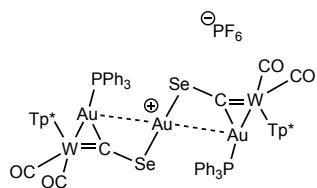
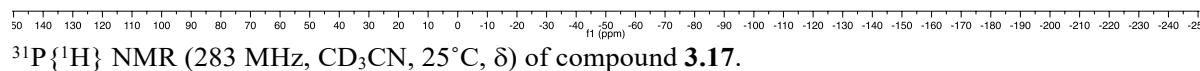
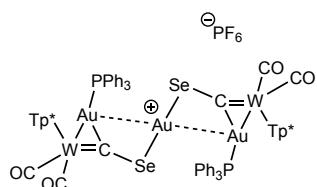


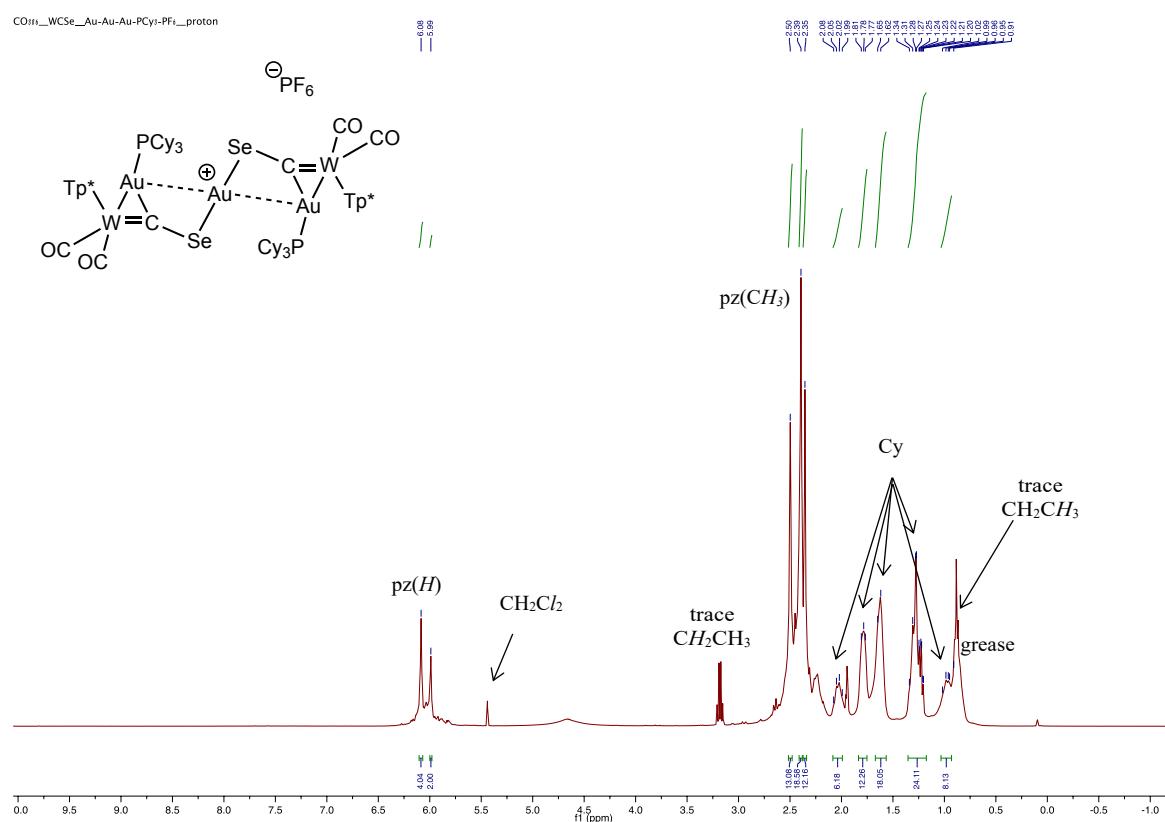
⁷⁷Se{¹H} NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound 3.16.



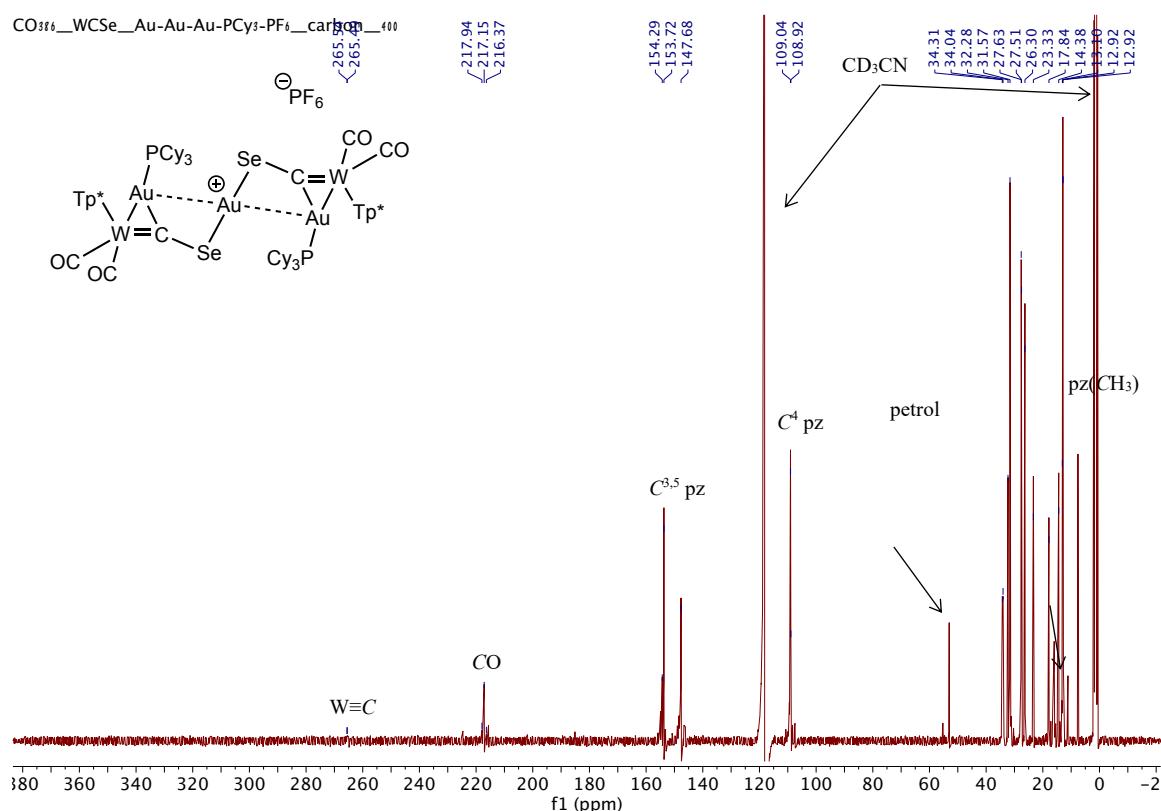
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 3.16.

 ^1H NMR spectrum (600 MHz, CD_3CN , 25°C, δ) of compound 3.17. $^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CD_3CN , 25°C, δ) spectrum of compound 3.17.

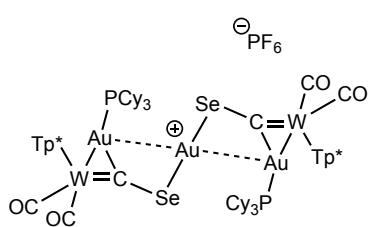
CO₁₁₄_WCSe_Au-Au-Au-PPh₃-PF₆_selenium⁷⁷Se{¹H} NMR (134 MHz, CD₃CN, 25°C, δ) of compound 3.17.CO₁₁₄_WCSe_Au-Au-Au-PPh₃-PF₆_phosphorus



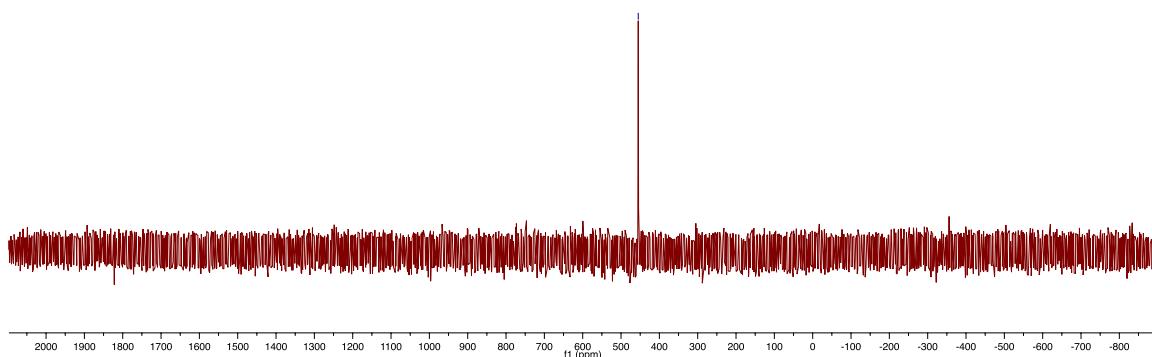
¹H NMR spectrum (400 MHz, CD₃CN, 25°C, δ) of compound 3.18.



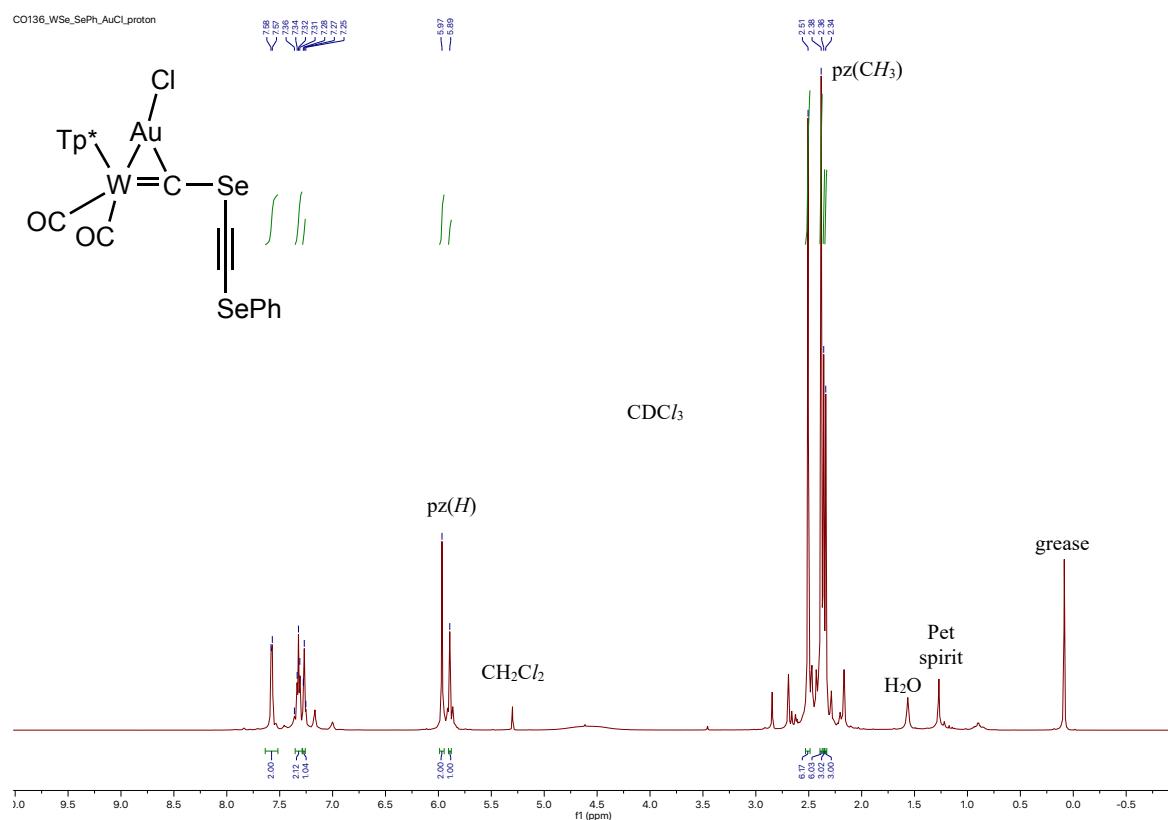
¹³C{¹H} NMR spectrum (101 MHz, CD₃CN, 25°C, δ) of compound 3.18.

CO₁₁₄_WCSe_Au-Au-Au-PCy₃-PF₆_selenium

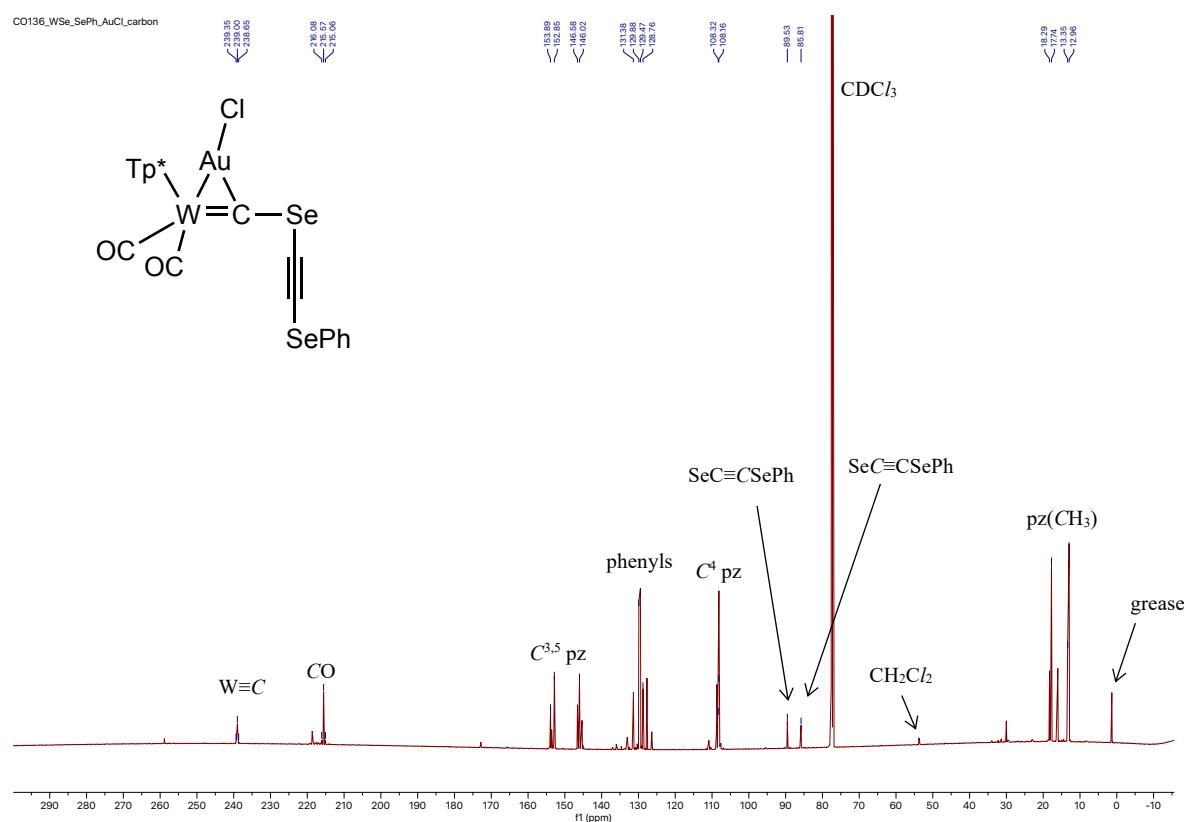
— 495.27

⁷⁷Se{¹H} NMR spectrum (134 MHz, CD₃CN, 25°C, δ) of compound 3.18.CO₁₁₄_WCSe_Au-Au-Au-PCy₃-PF₆_phosphorus

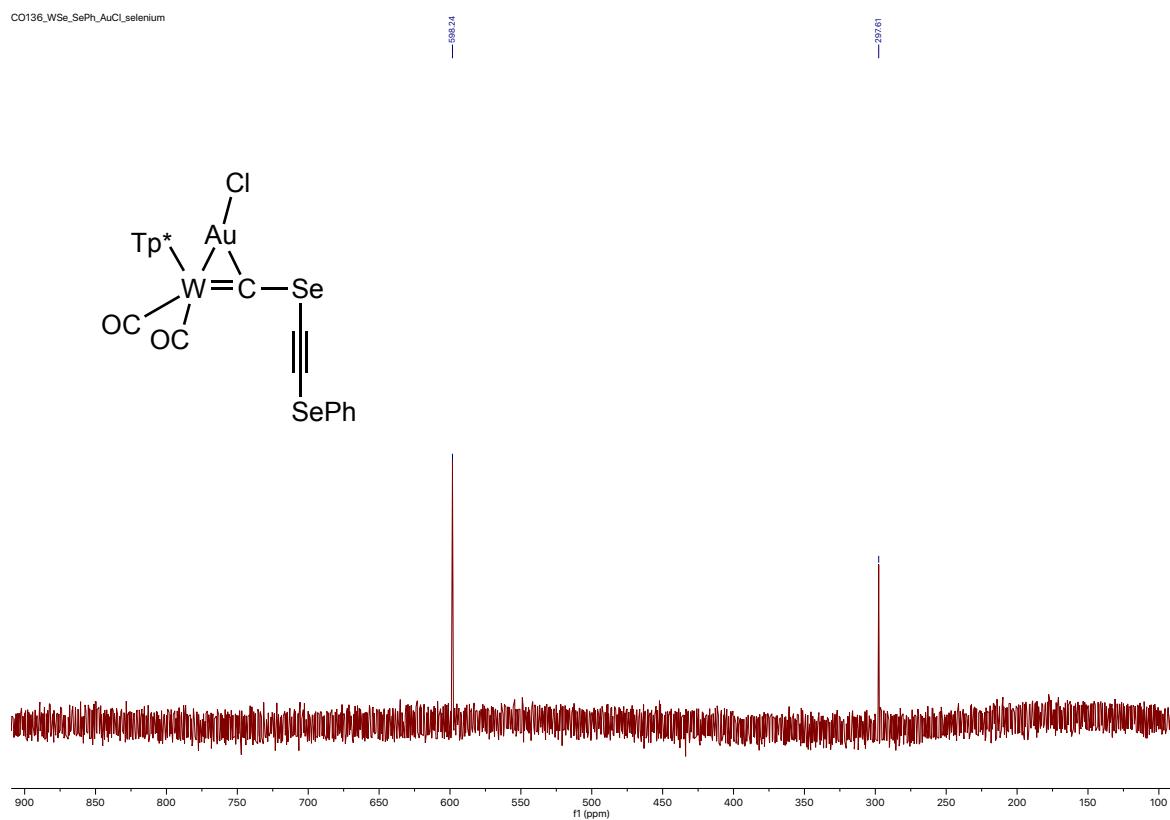
Chemical shift assignments (δ, ppm): 135.46, 135.38, 135.32, 135.25, 135.19, 135.15, 135.09, 135.05, 134.99, 134.95, 134.89, 134.85, 134.81, 134.77, 134.73, 134.69, 134.65, 134.61, 134.57, 134.53, 134.49, 134.45, 134.41, 134.37, 134.33, 134.29, 134.25, 134.21, 134.17, 134.13, 134.09, 134.05, 134.01, 133.97, 133.93, 133.89, 133.85, 133.81, 133.77, 133.73, 133.69, 133.65, 133.61, 133.57, 133.53, 133.49, 133.45, 133.41, 133.37, 133.33, 133.29, 133.25, 133.21, 133.17, 133.13, 133.09, 133.05, 133.01, 132.97, 132.93, 132.89, 132.85, 132.81, 132.77, 132.73, 132.69, 132.65, 132.61, 132.57, 132.53, 132.49, 132.45, 132.41, 132.37, 132.33, 132.29, 132.25, 132.21, 132.17, 132.13, 132.09, 132.05, 132.01, 131.97, 131.93, 131.89, 131.85, 131.81, 131.77, 131.73, 131.69, 131.65, 131.61, 131.57, 131.53, 131.49, 131.45, 131.41, 131.37, 131.33, 131.29, 131.25, 131.21, 131.17, 131.13, 131.09, 131.05, 131.01, 130.97, 130.93, 130.89, 130.85, 130.81, 130.77, 130.73, 130.69, 130.65, 130.61, 130.57, 130.53, 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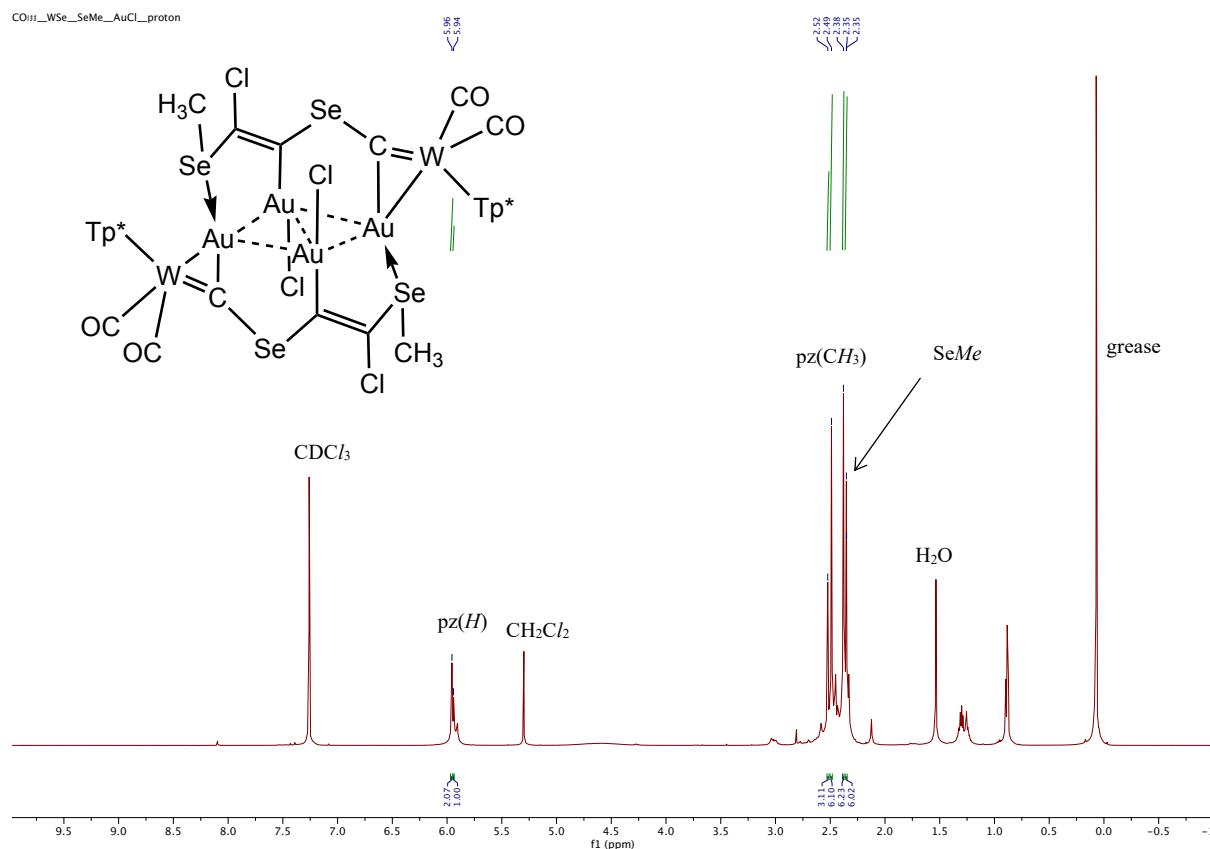
^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 3.19.



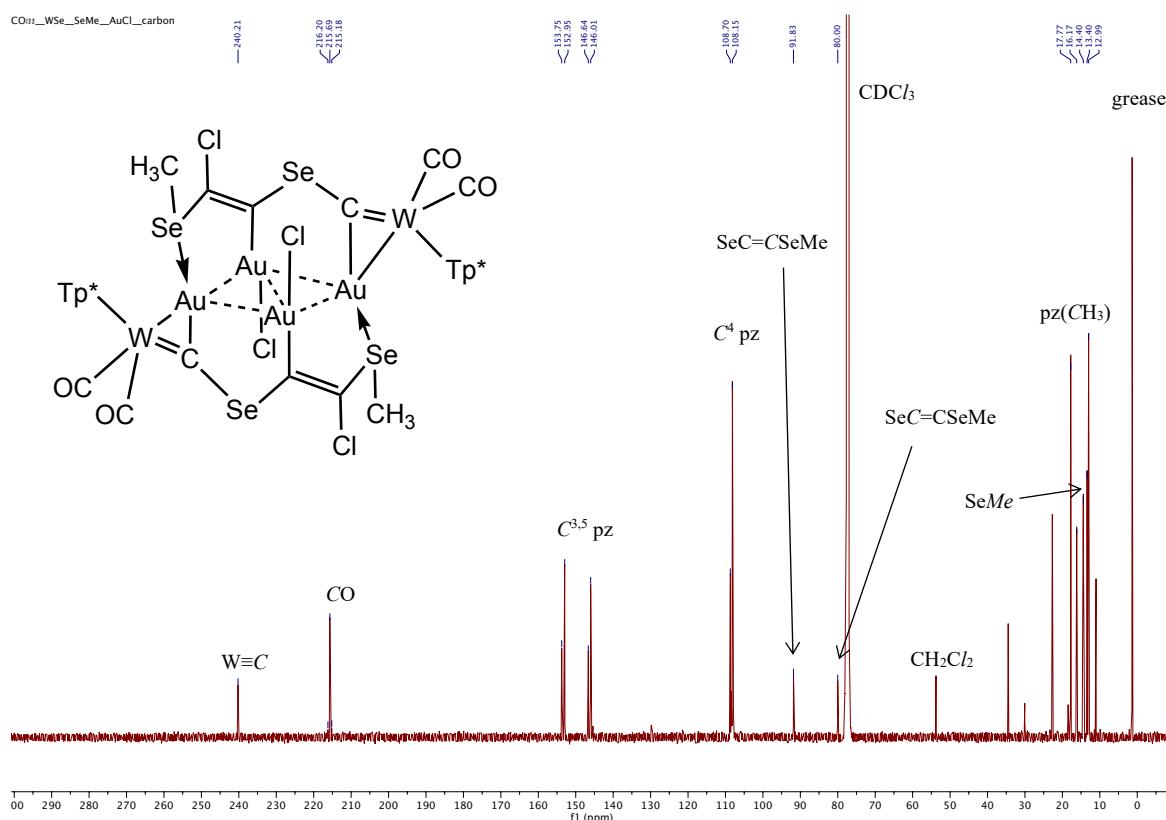
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 3.19.



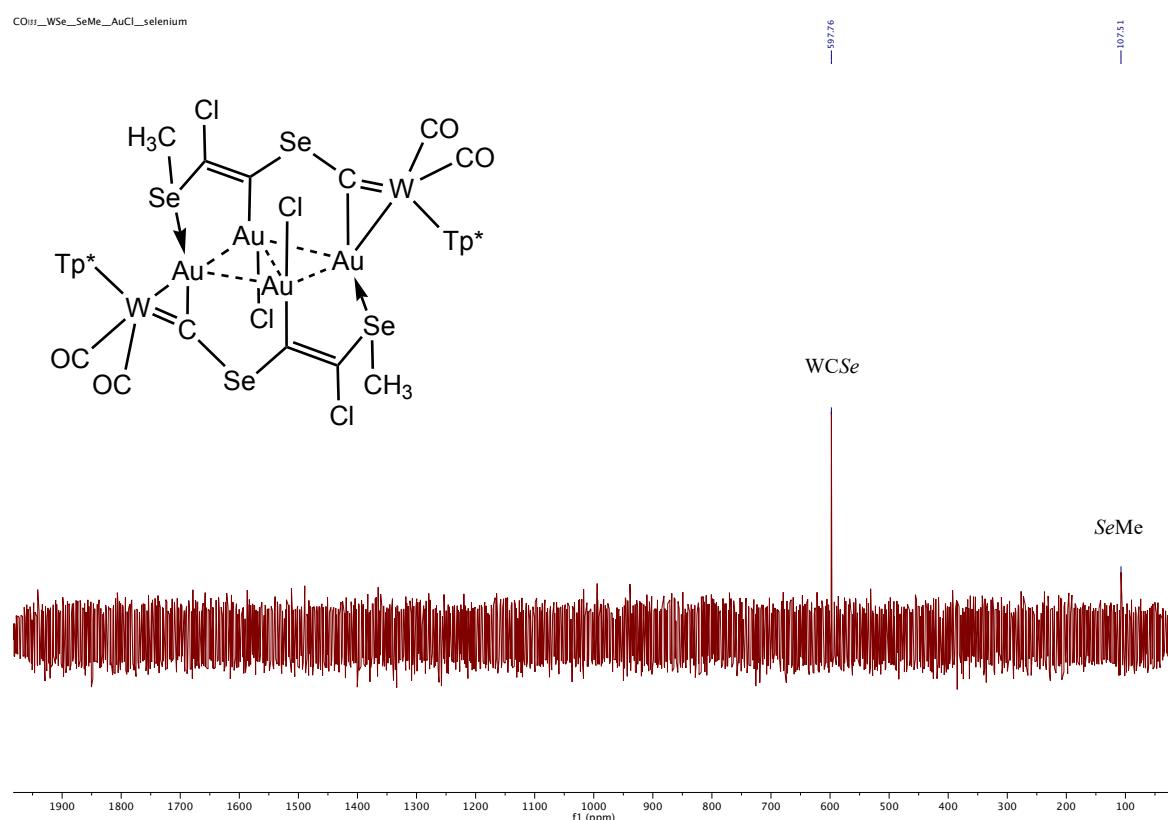
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **3.19**.



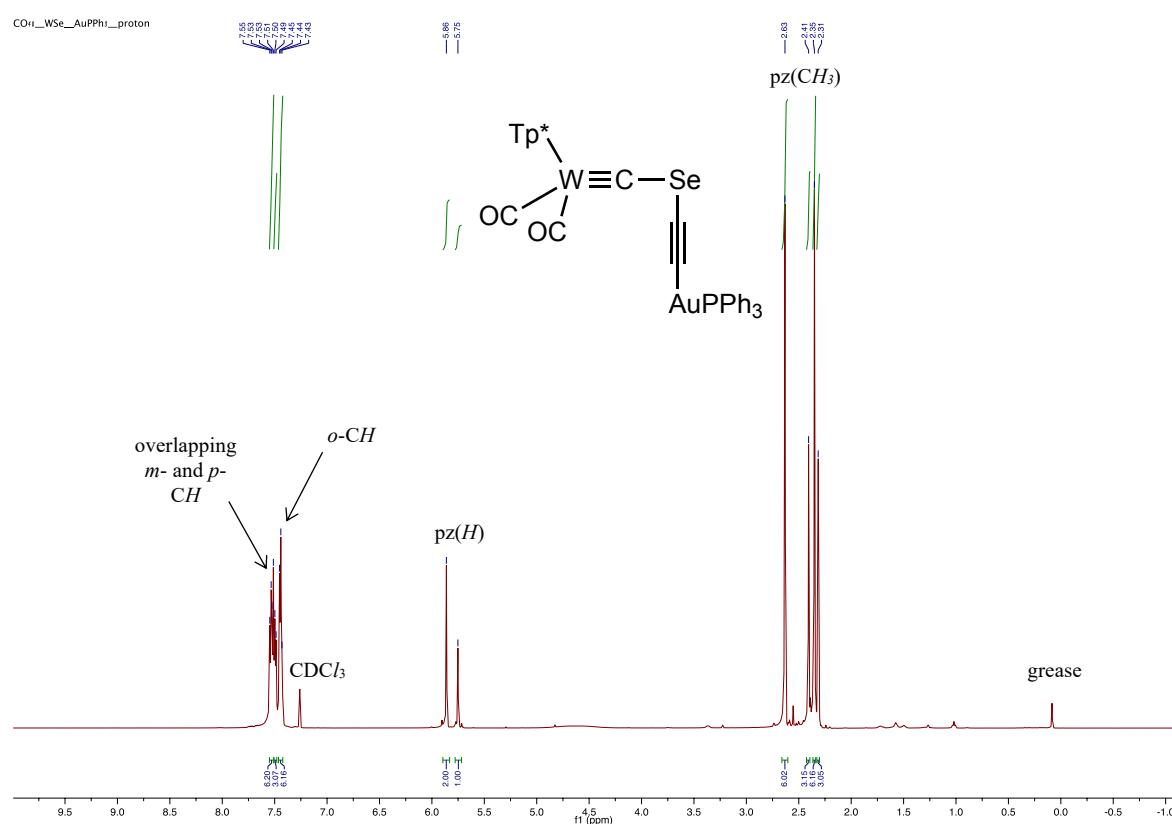
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 3.20.



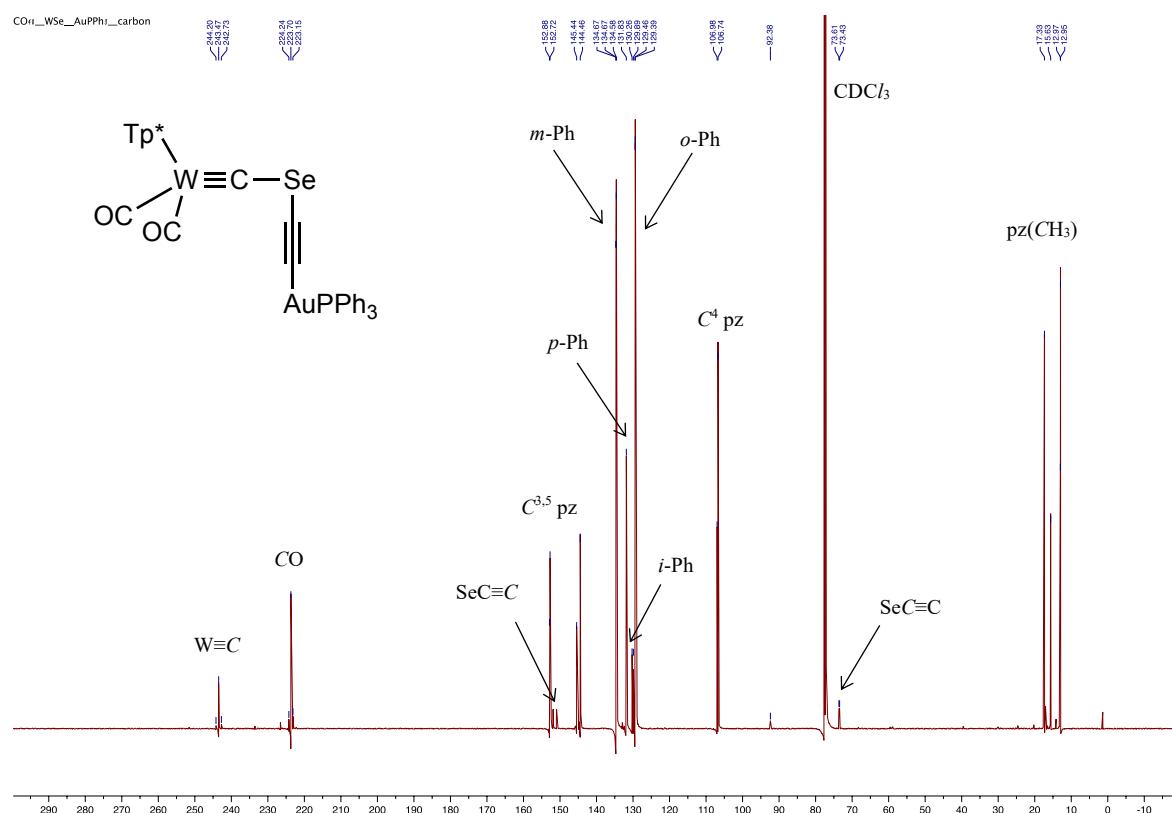
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) spectrum of compound 3.20.



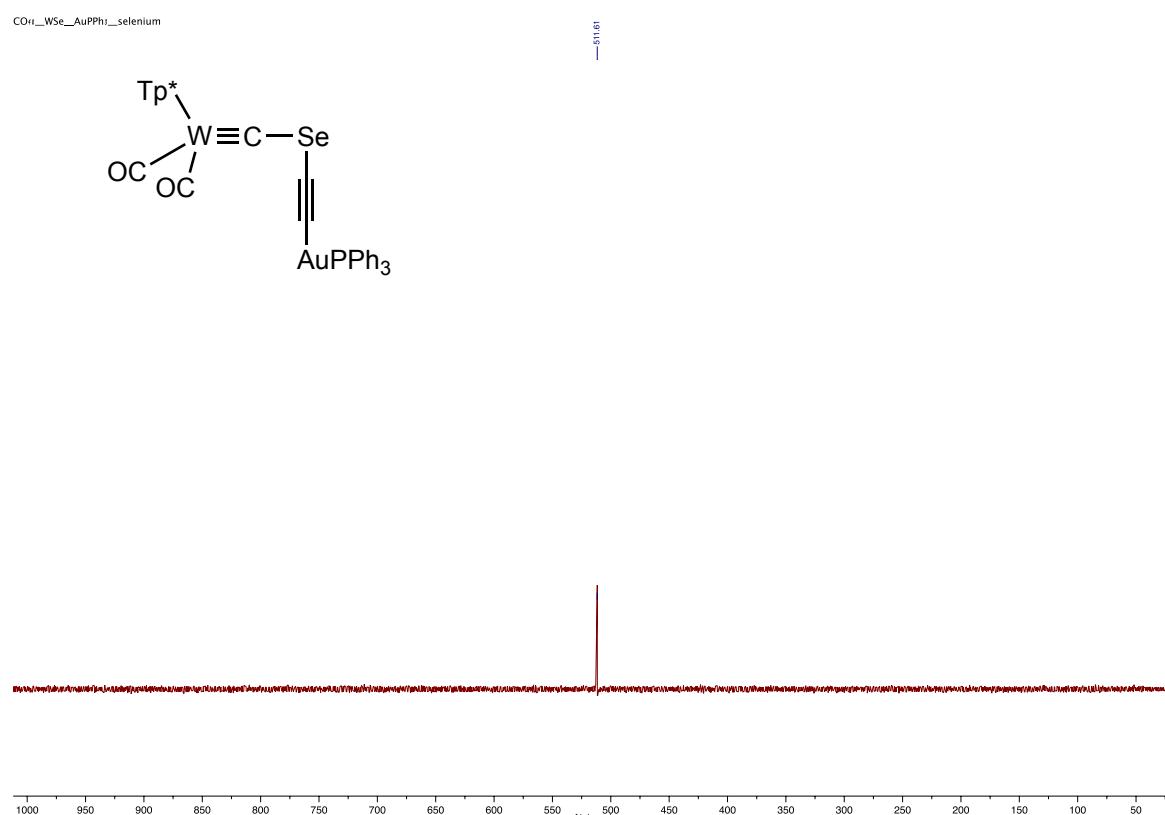
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.20.



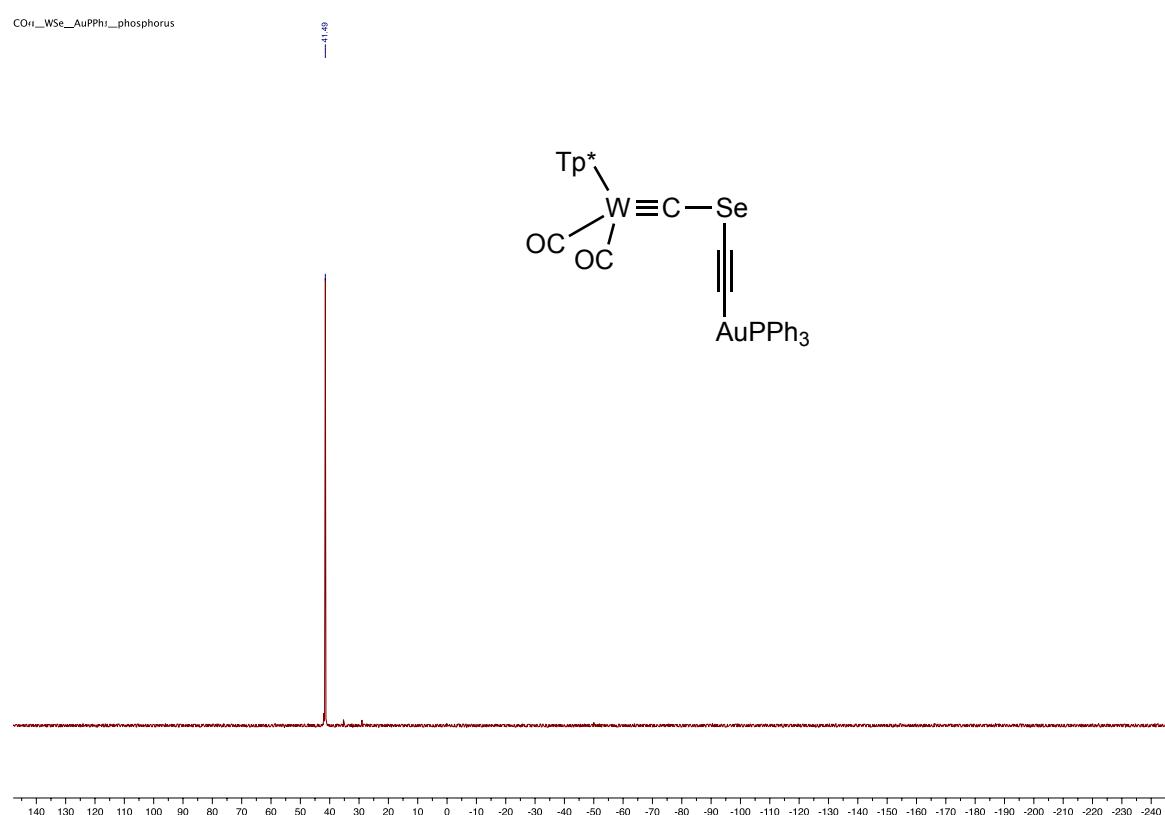
^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 3.21.



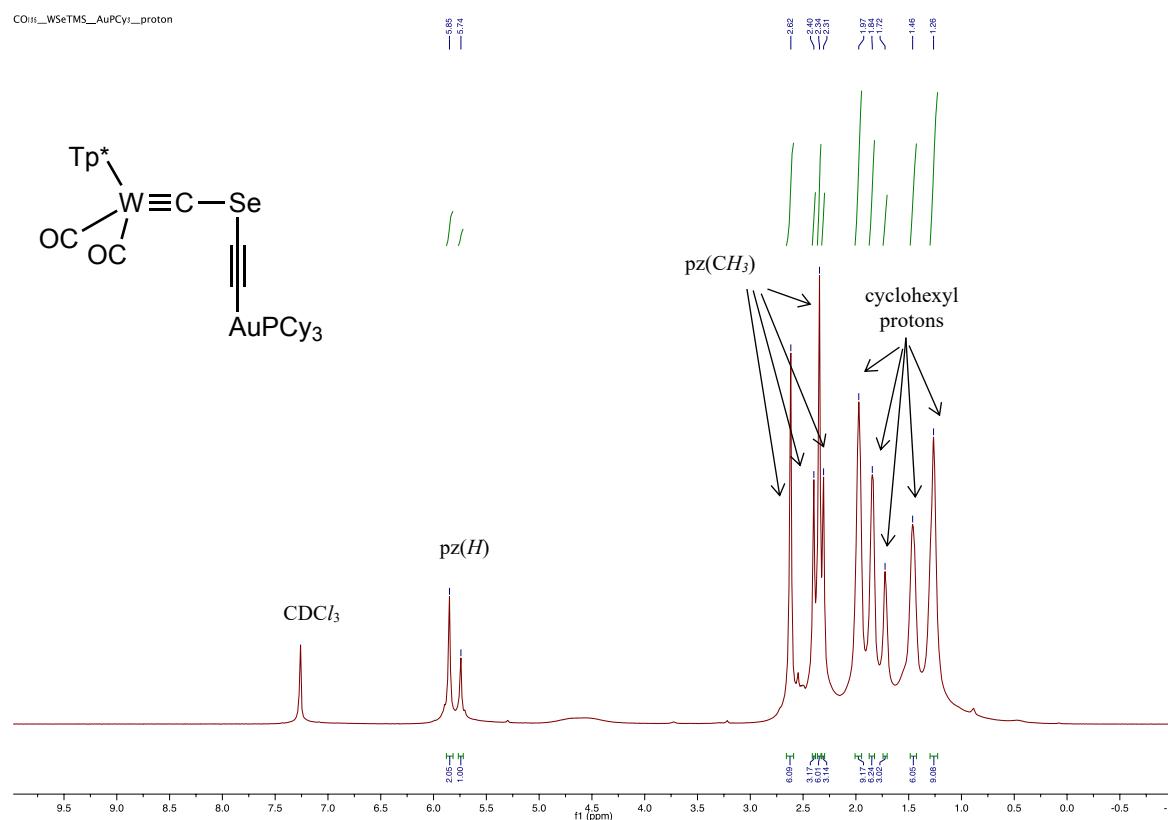
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 3.21.



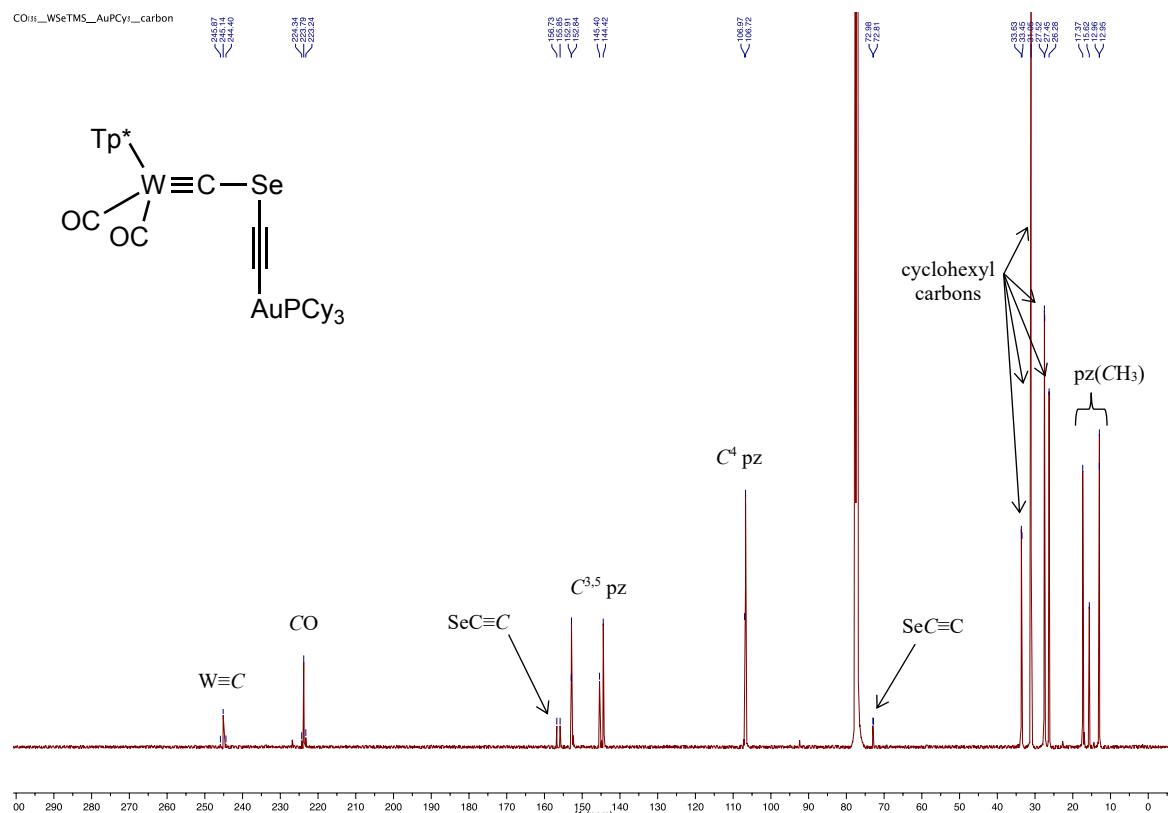
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.21.



³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 3.21.



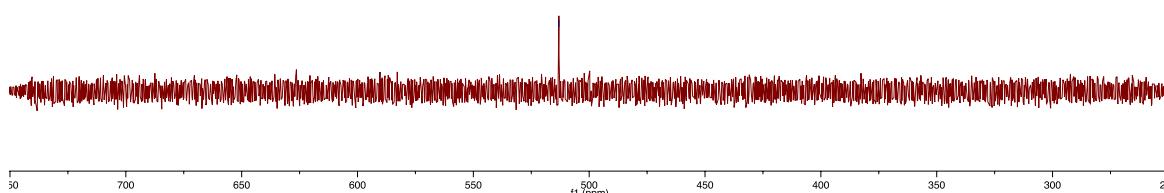
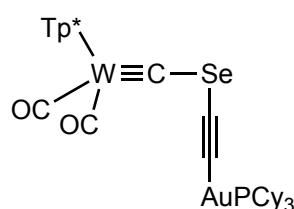
^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 3.22.



$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 3.22.

CO:H_WSeTMS_AuPCy₃_selenium

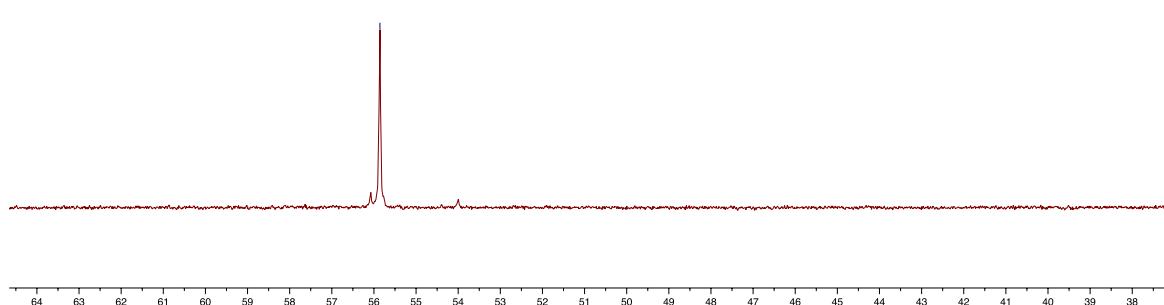
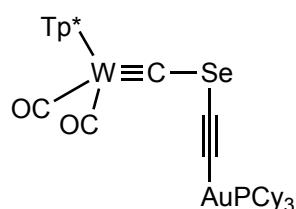
— 513.10



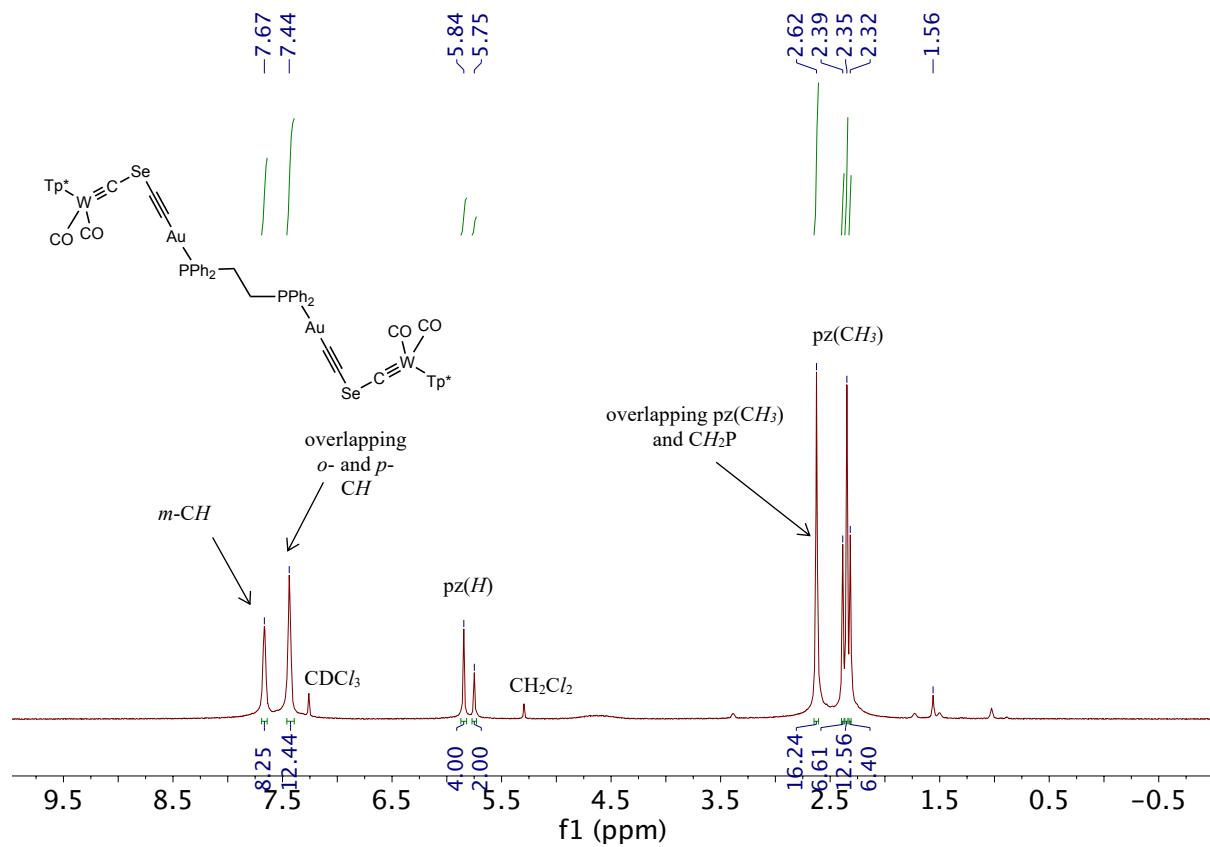
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 3.22.

CO:H_WSeTMS_AuPCy₃_phosphorus

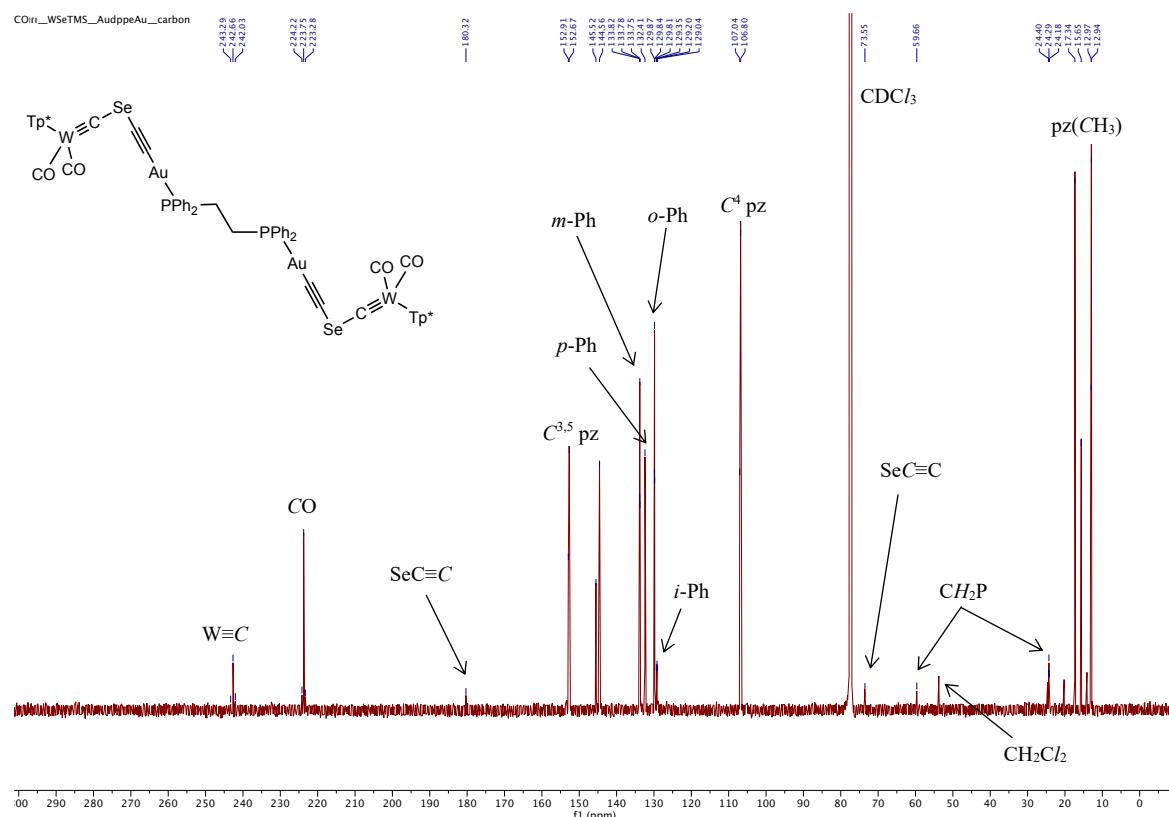
— 455.86



$^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound 3.22.



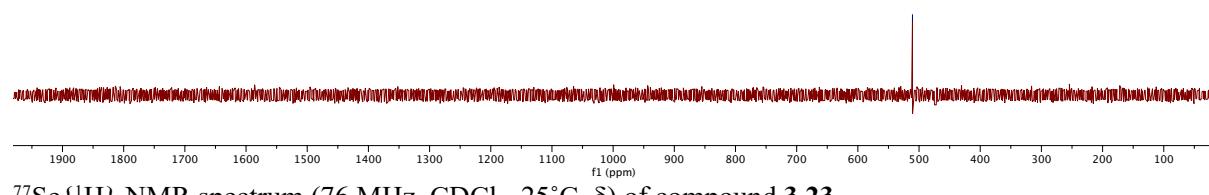
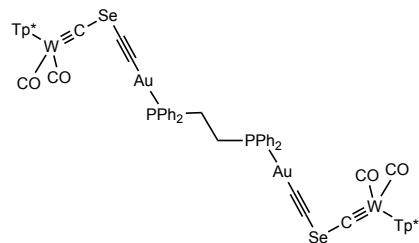
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 3.23.



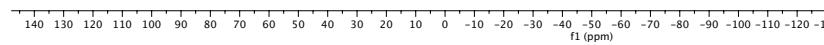
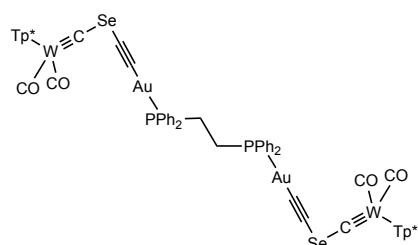
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 3.23.

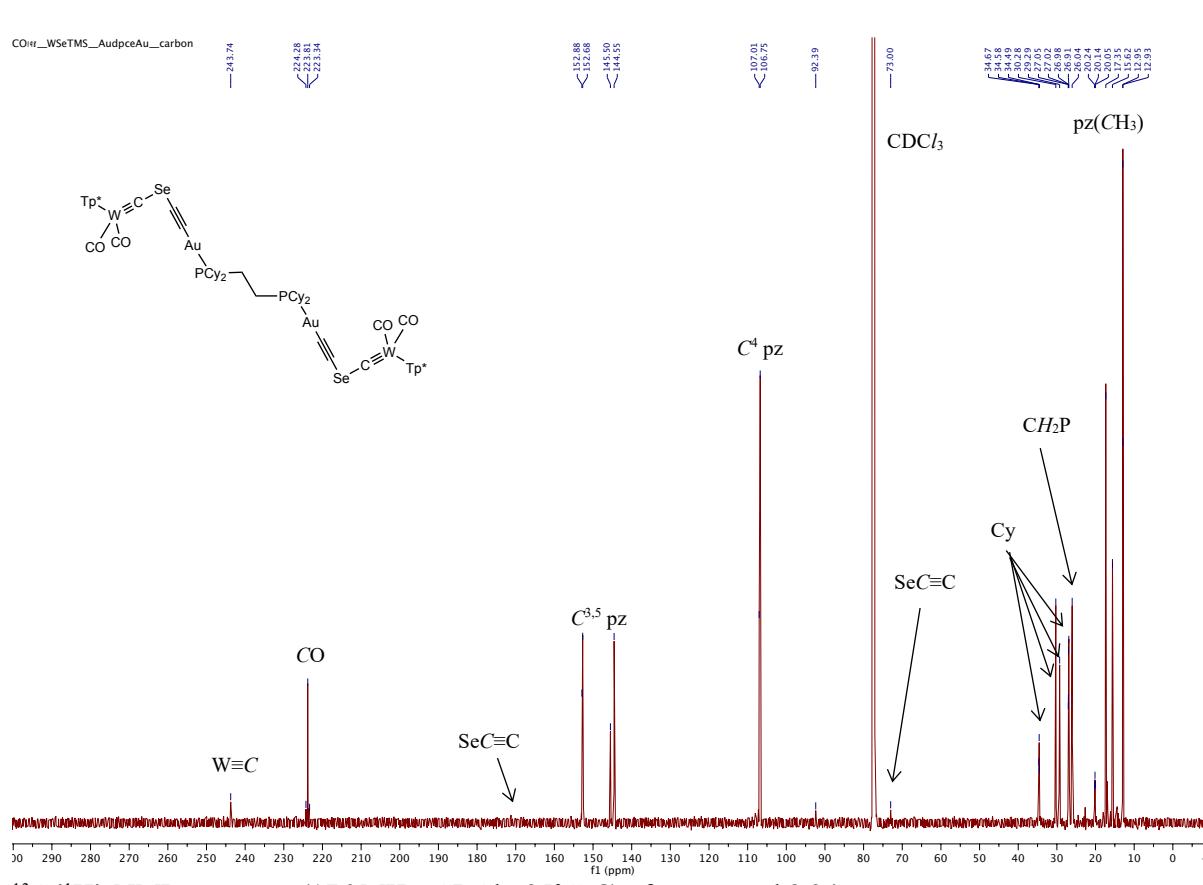
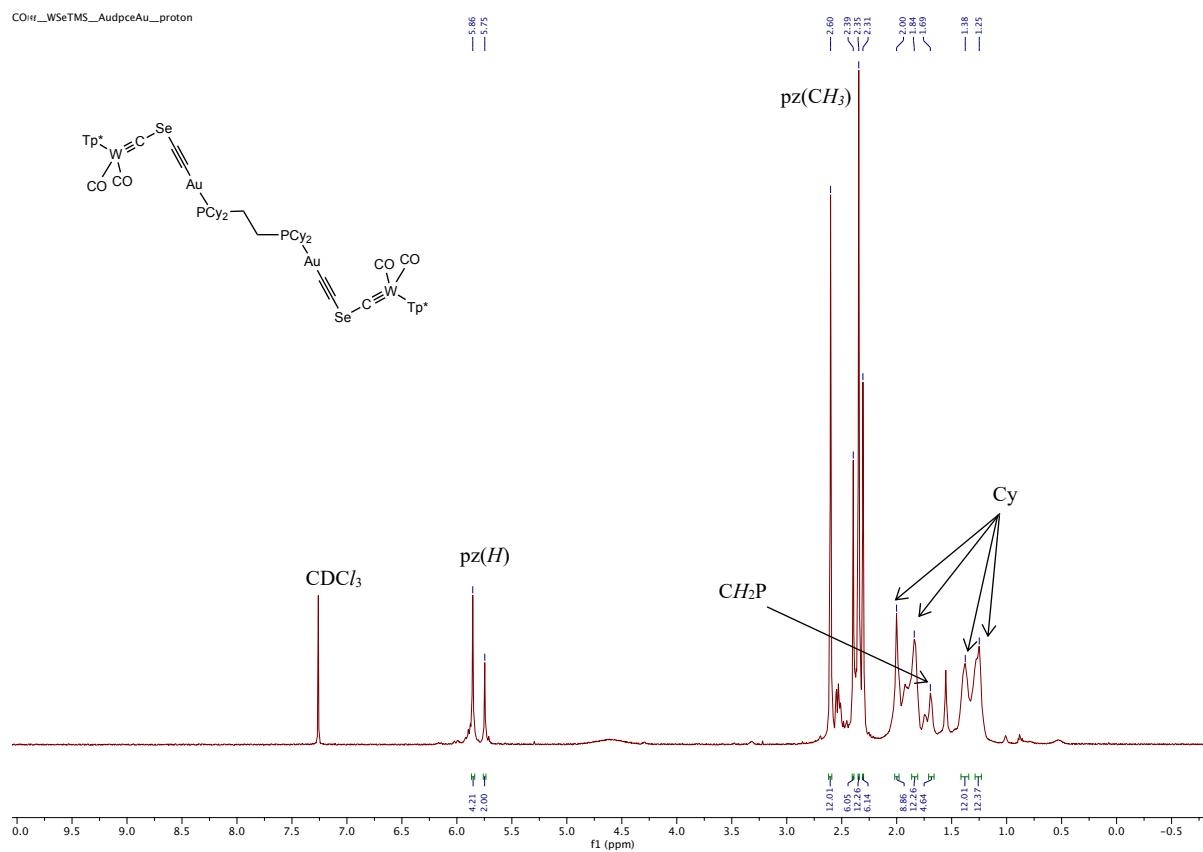
CO*rr*_WSeTMS_AudppeAu_selenium

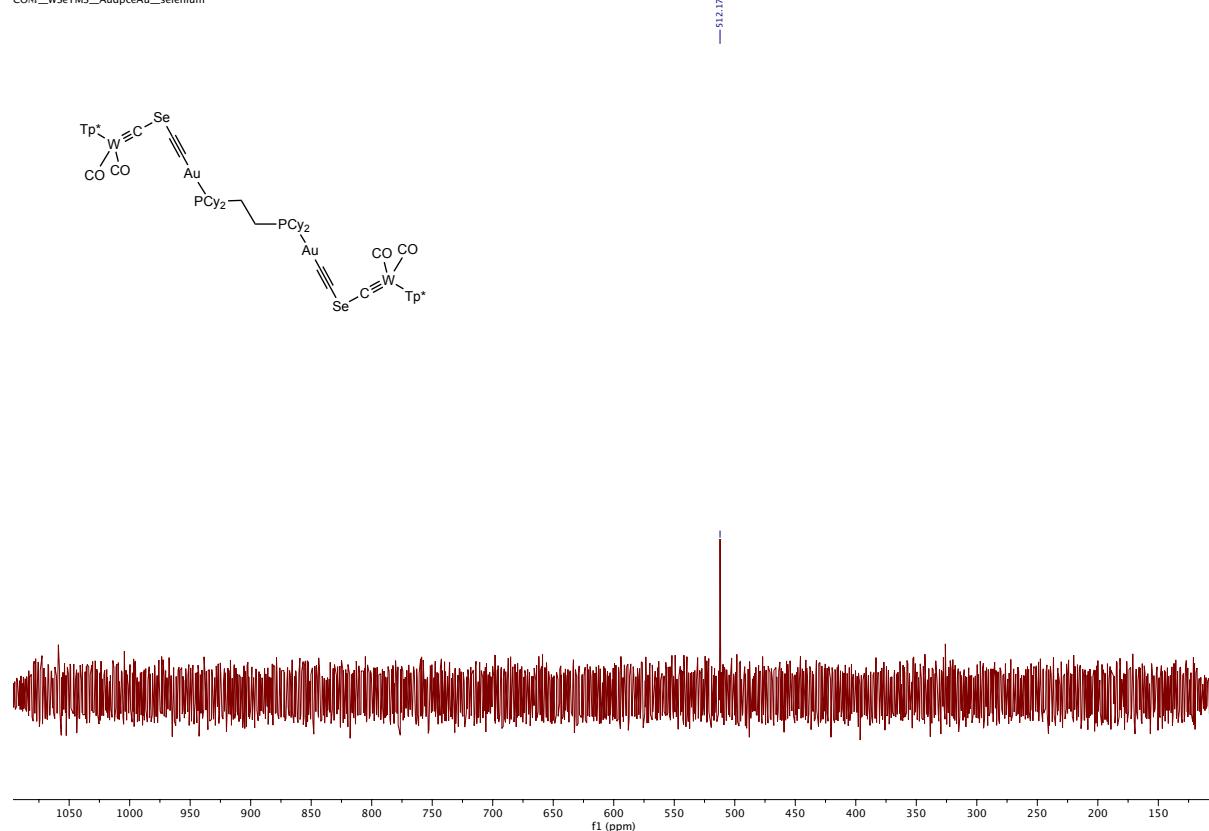
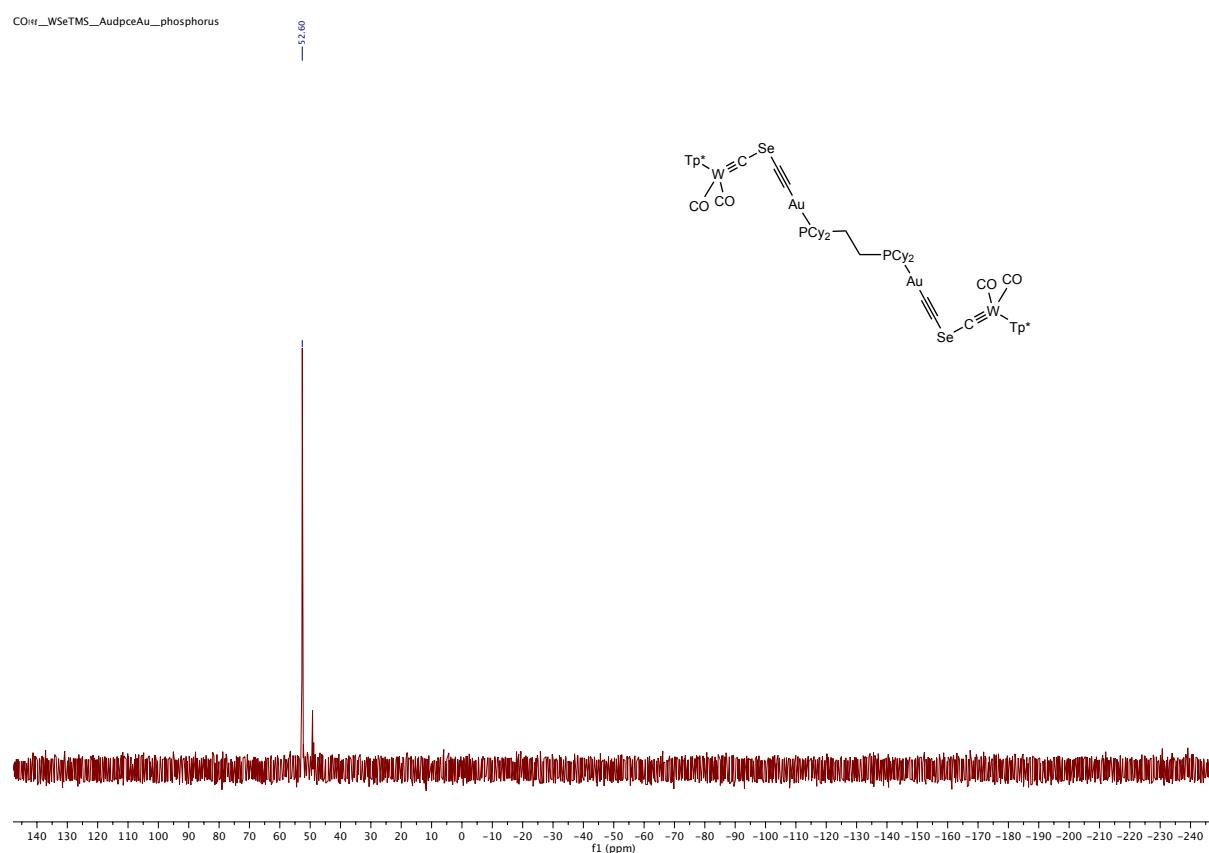
— 510.75 —

CO*rr*_WSeTMS_AudppeAu_phosphorus

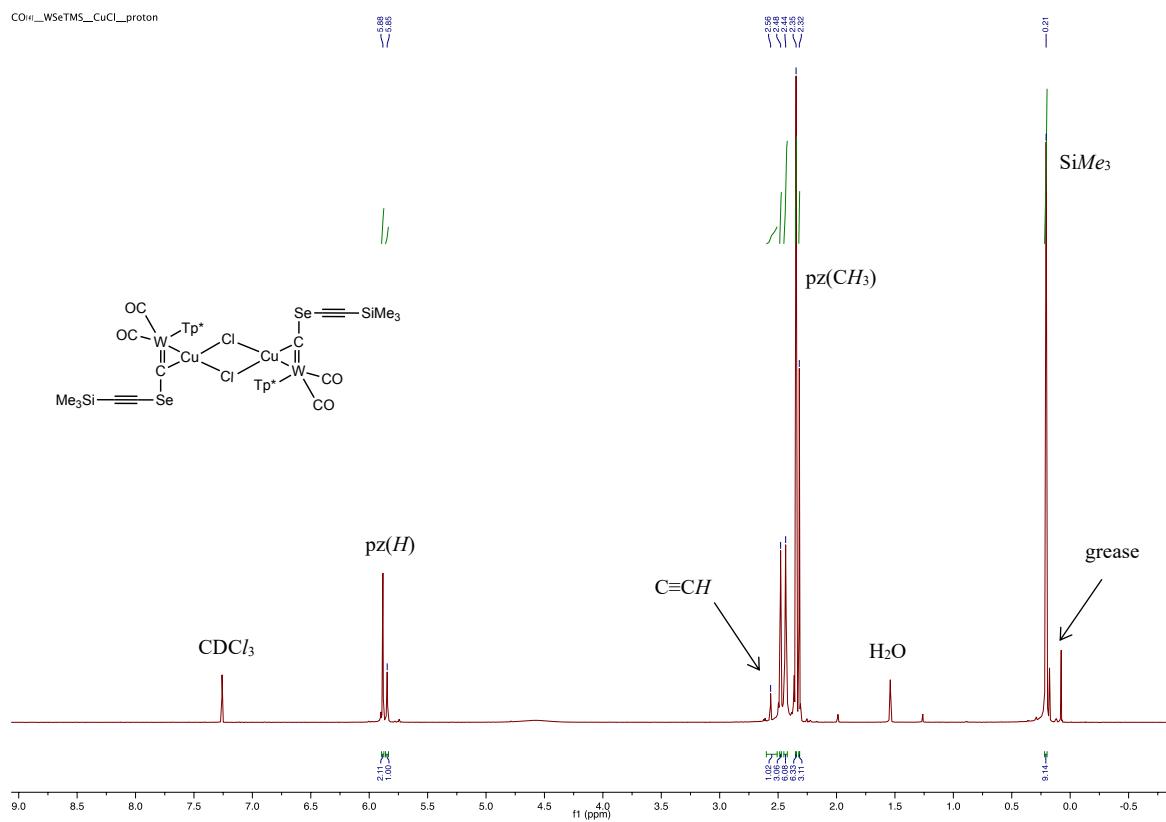
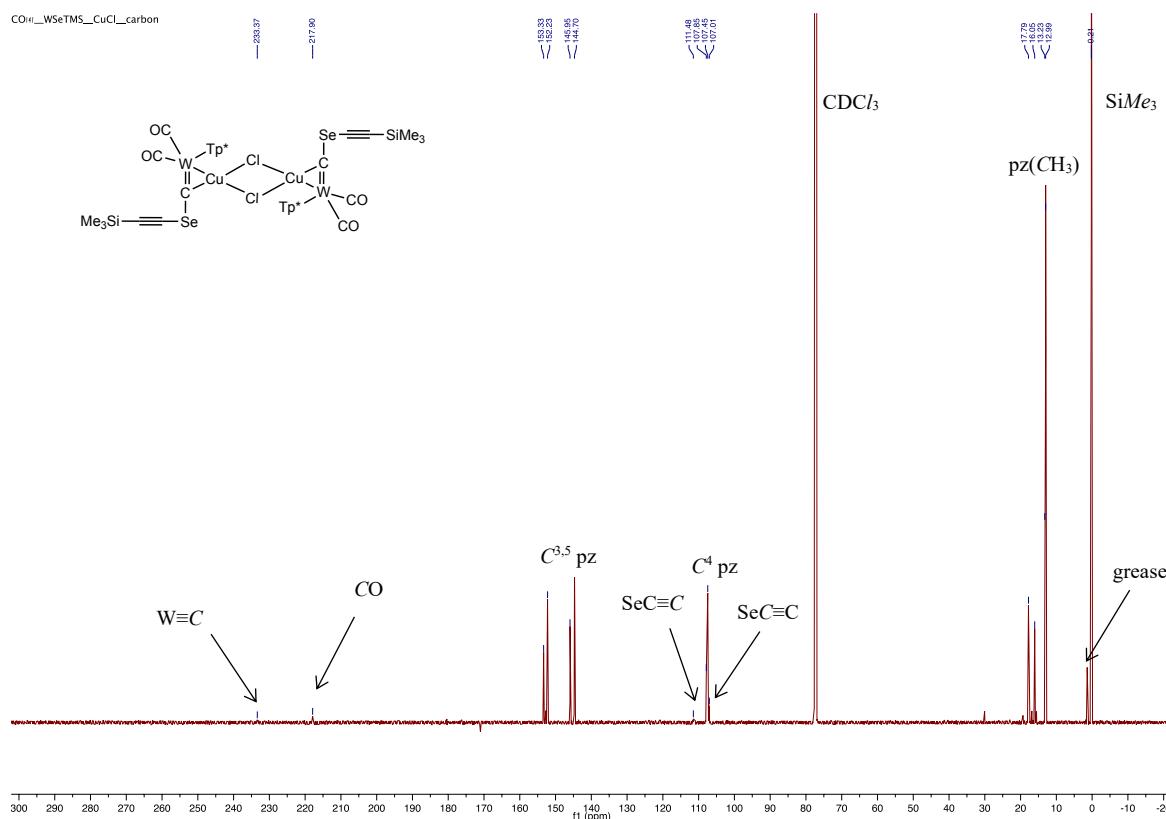
— 39.46 —

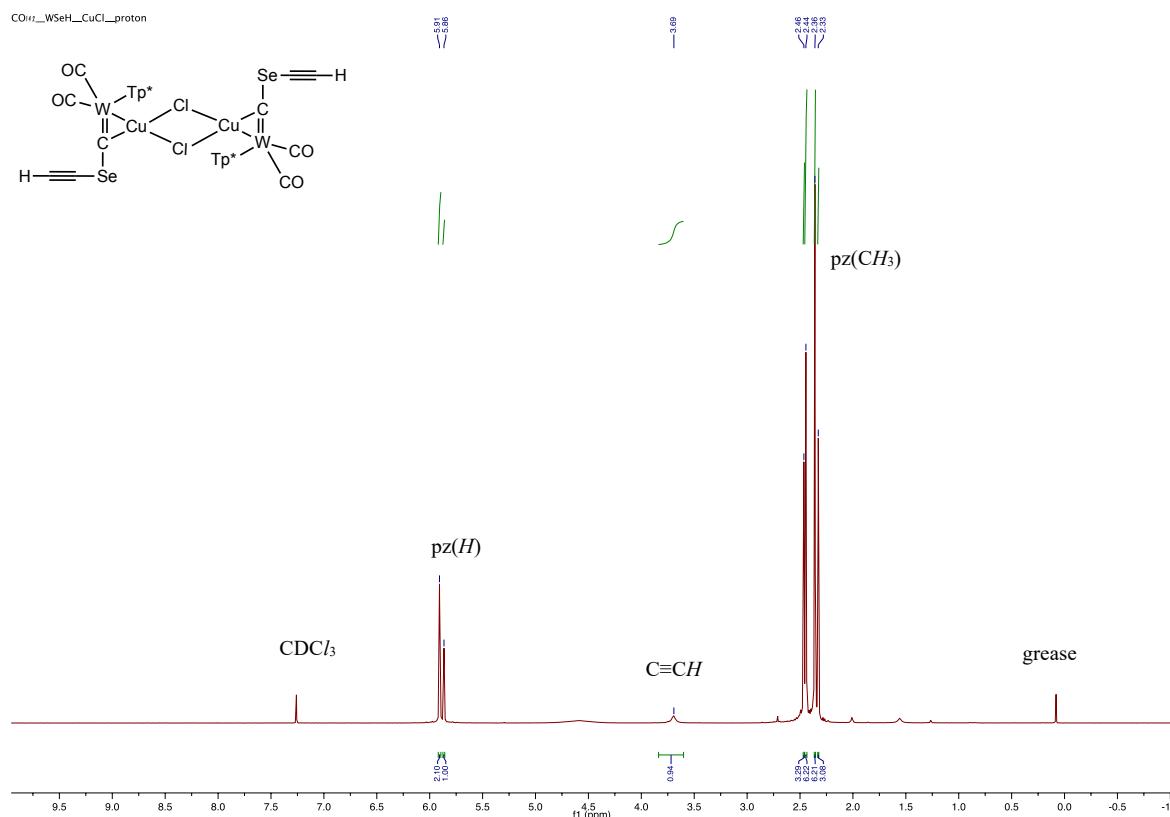




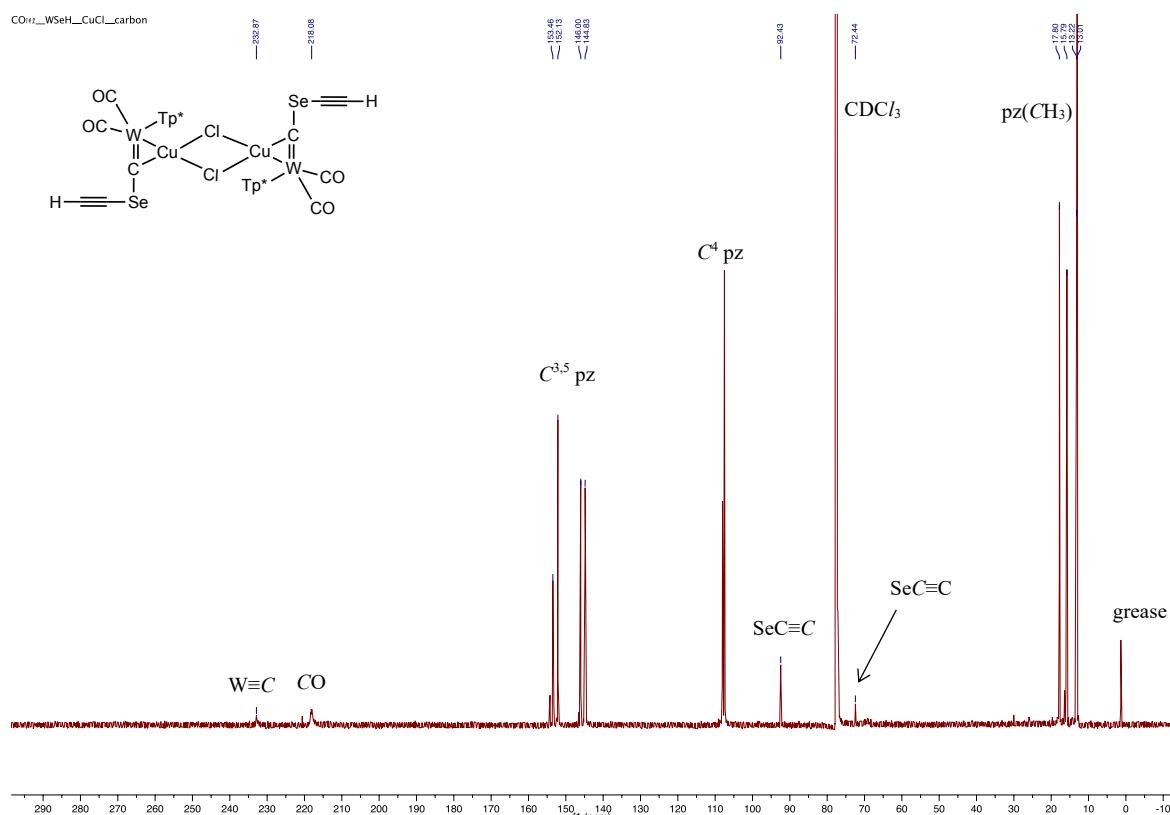
CO*t*f_WSeTMS_AudpcceAu_selenium⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 3.24.CO*t*f_WSeTMS_AudpcceAu_phosphorus³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 3.24.

ESI – Chapter 4

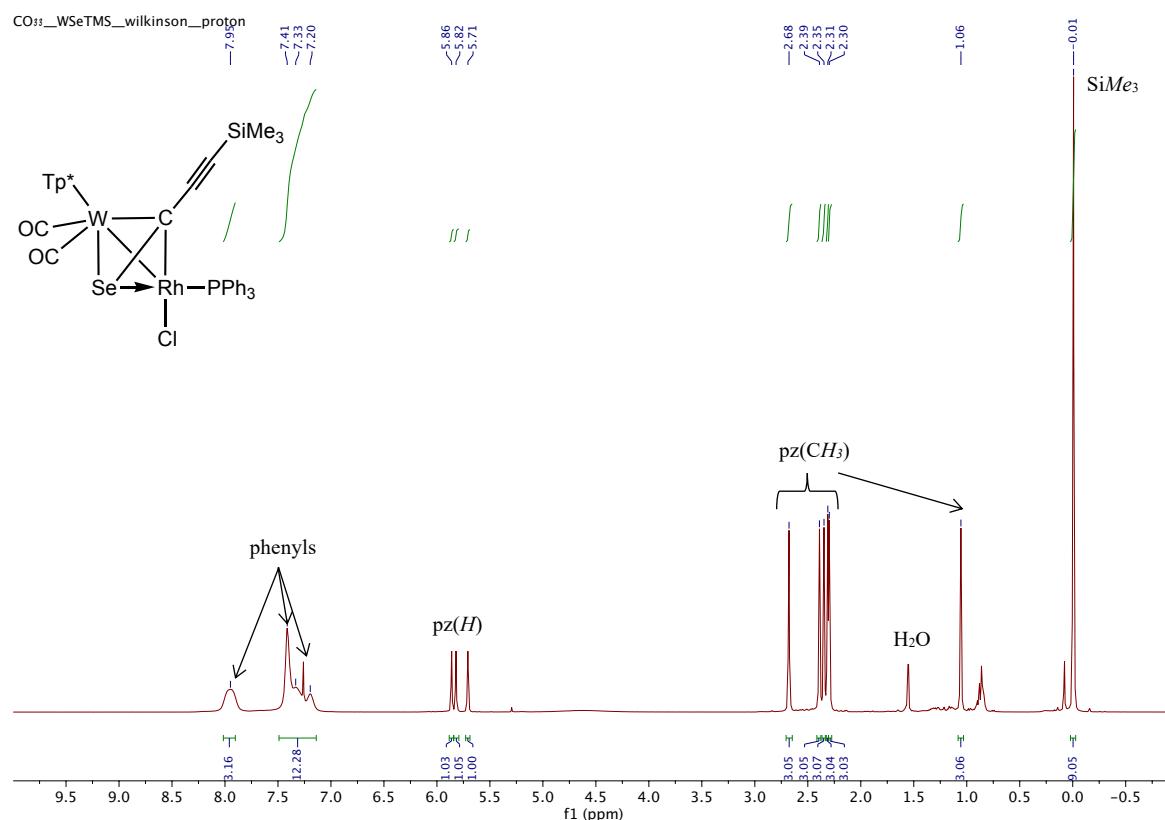
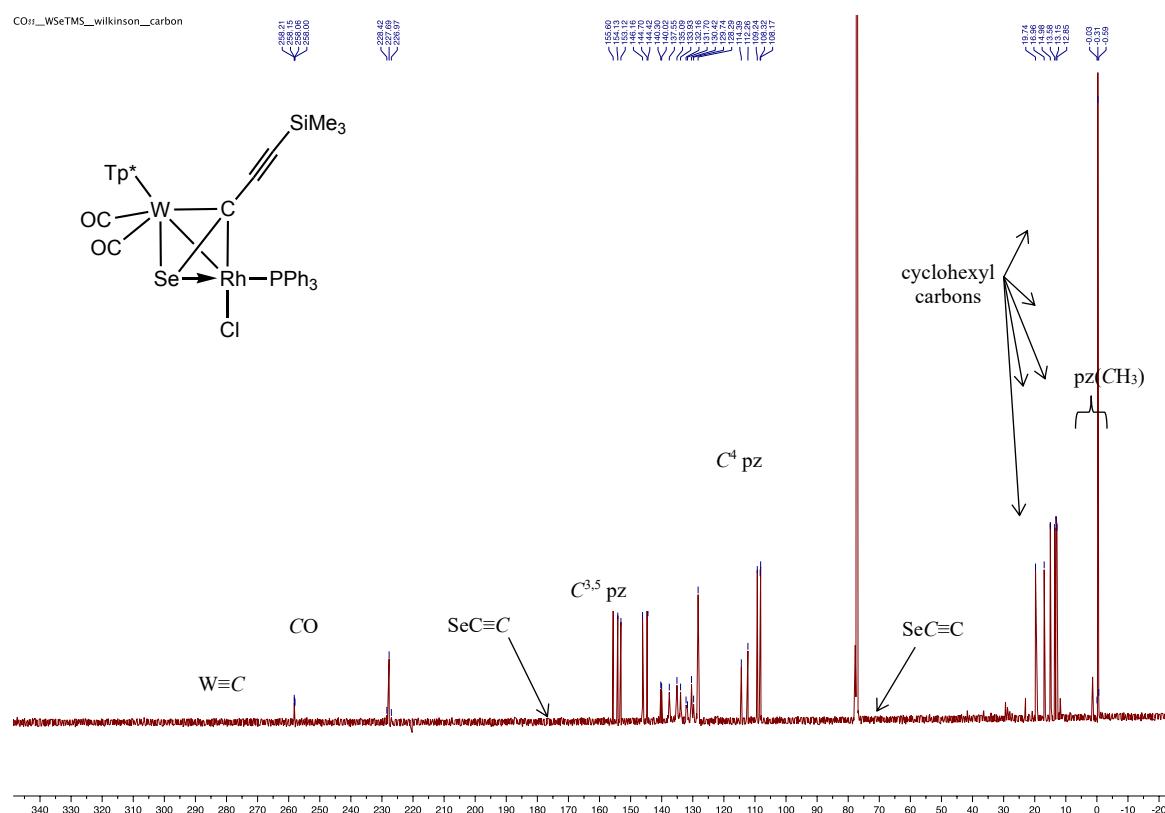
 ^1H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.1. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 4.1.



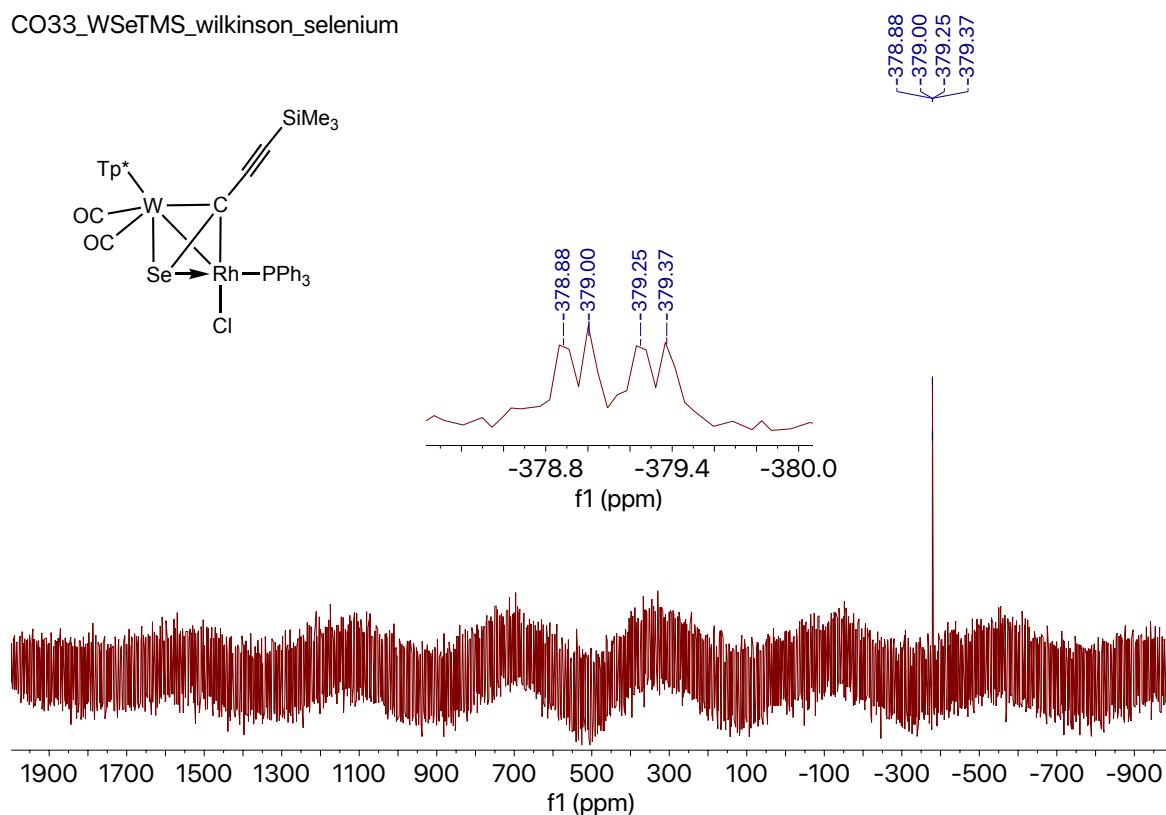
^1H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.2.



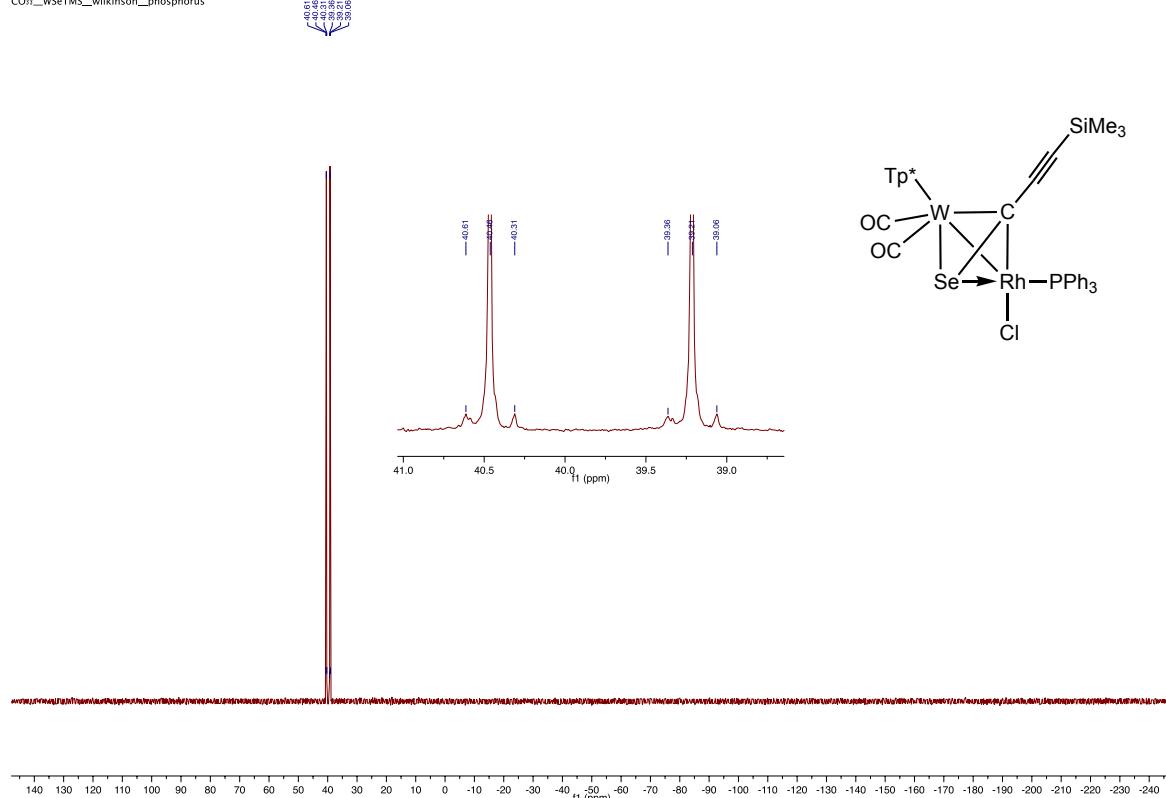
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 4.2.

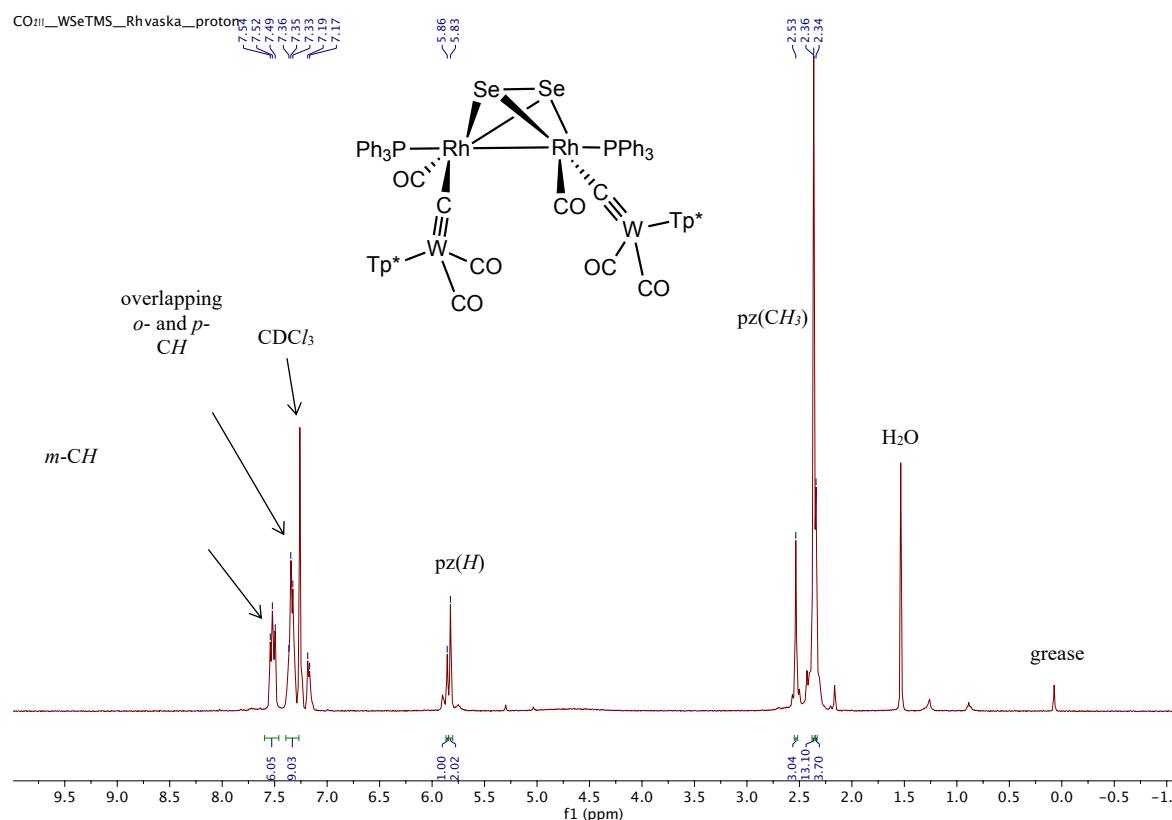
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 4.3.¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound 4.3.

CO33_WSeTMS_wilkinson_selenium

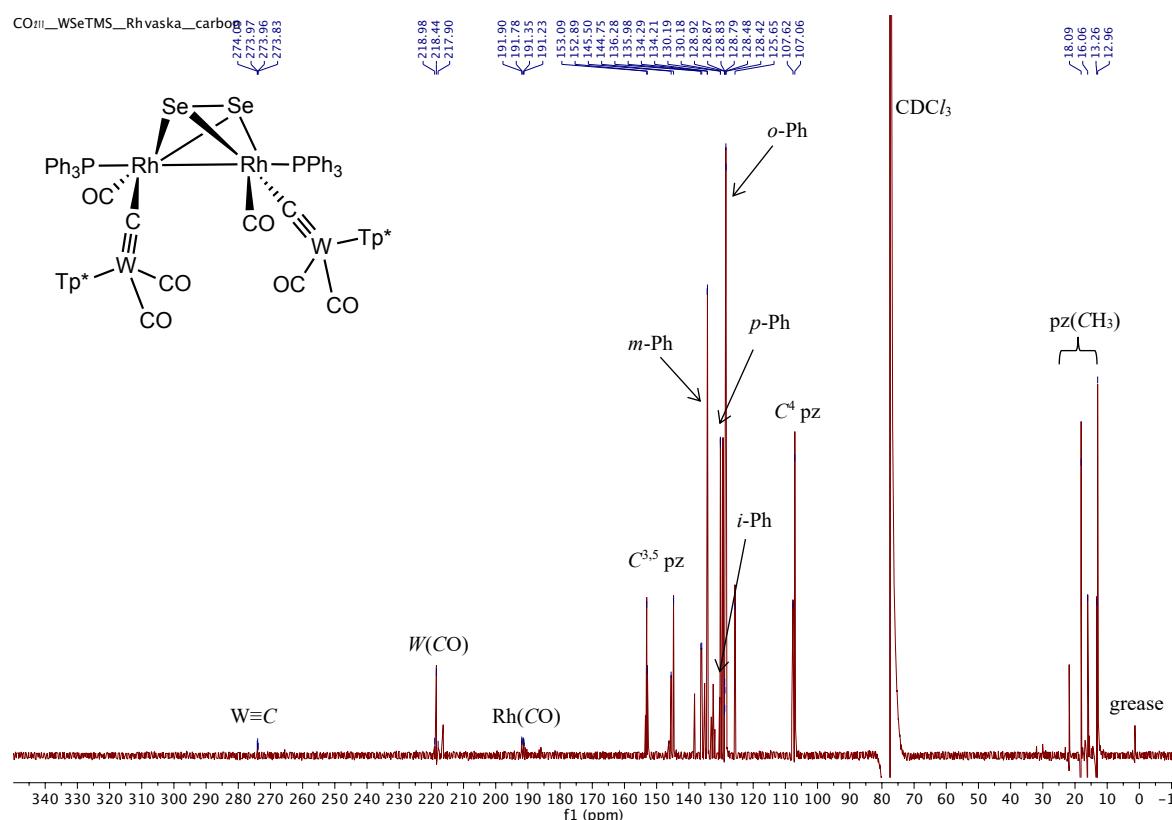
⁷⁷Se{¹H} NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound 4.3.

CO33_WSeTMS_wilkinson_phosphorus

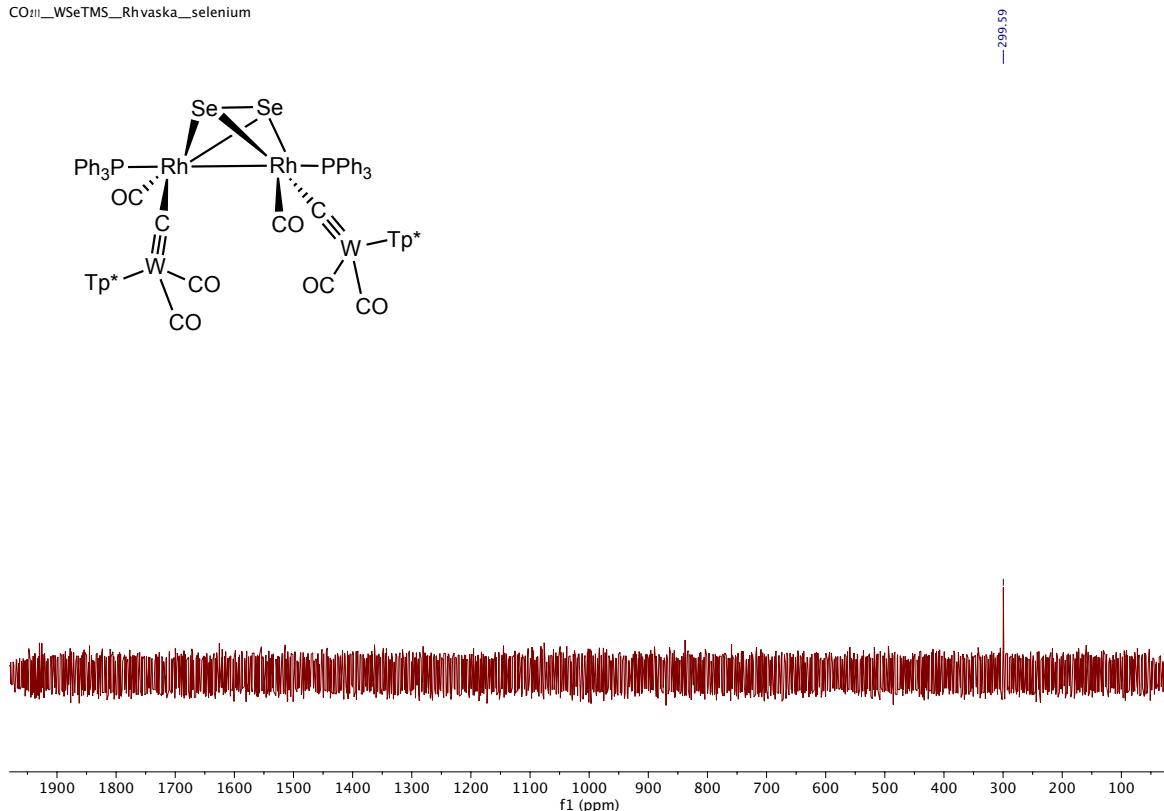
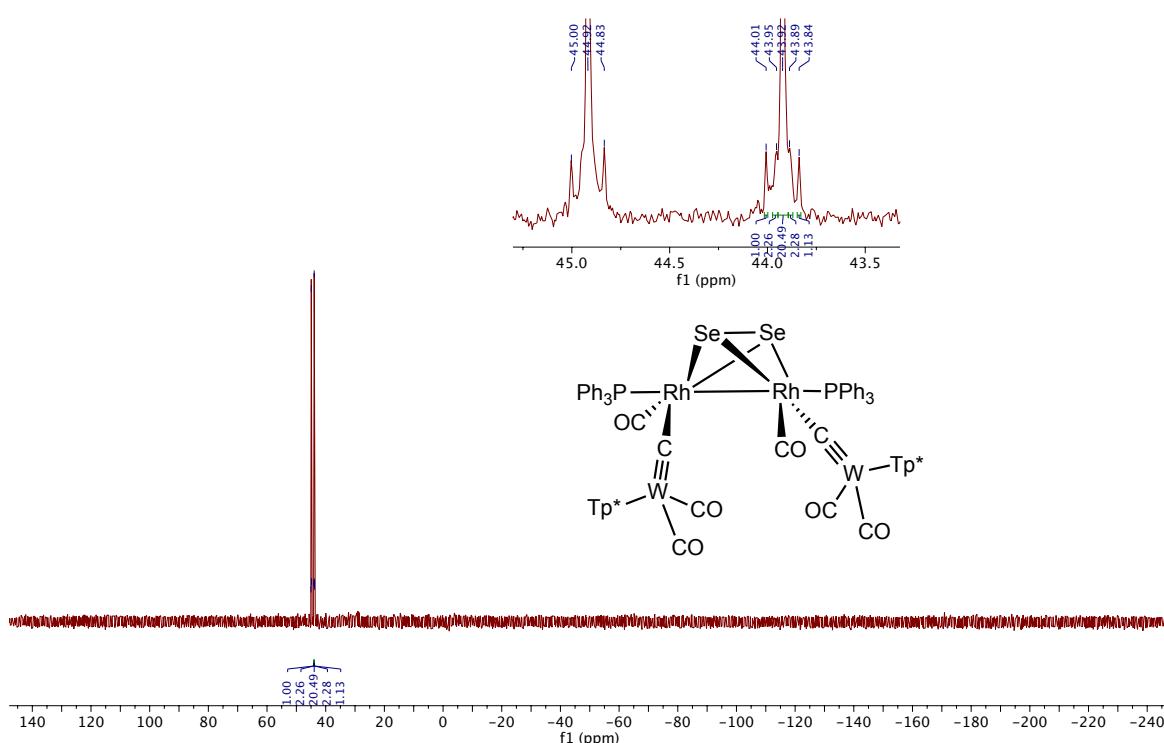
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.3.

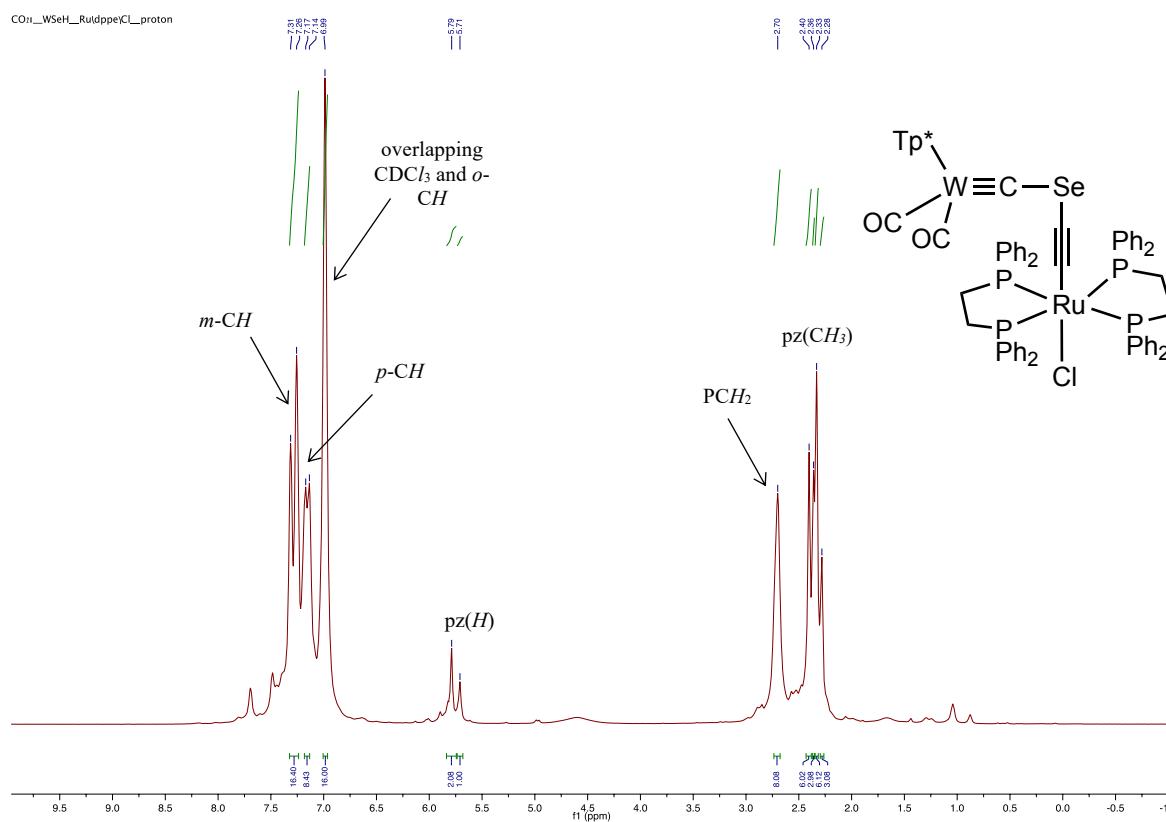
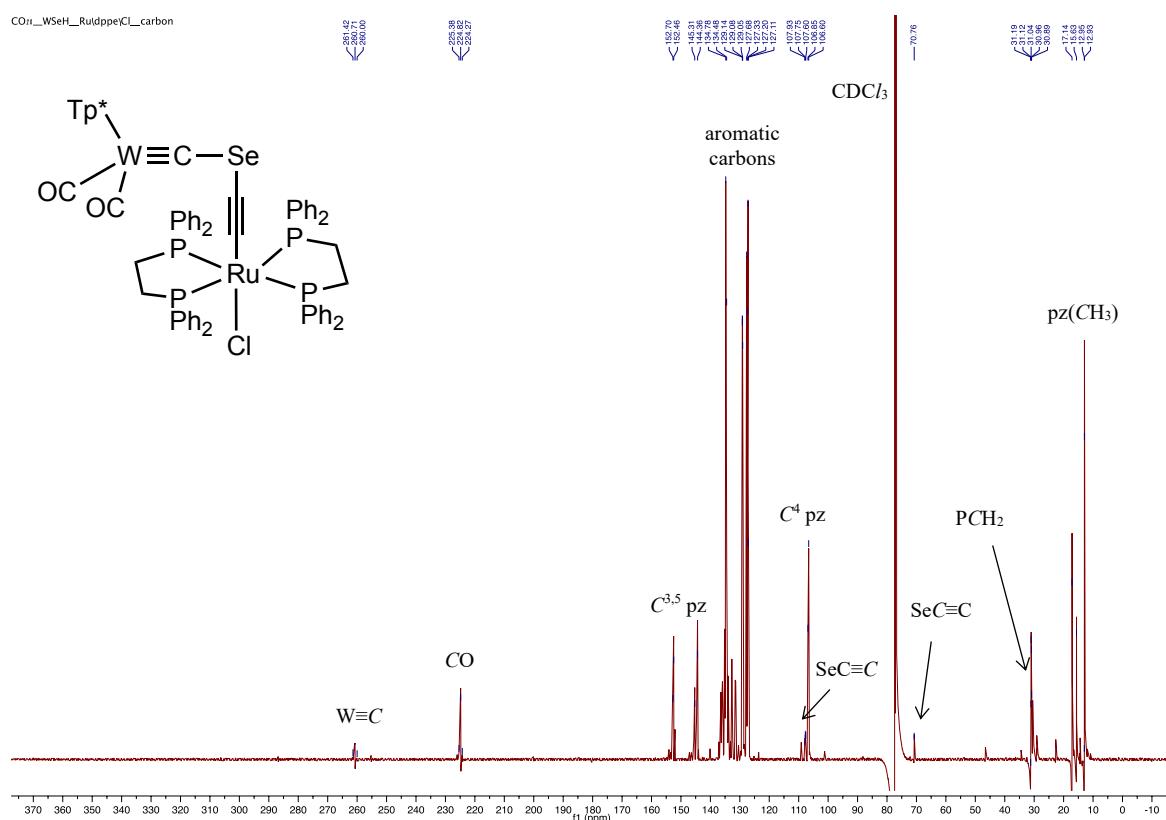


^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 4.4.



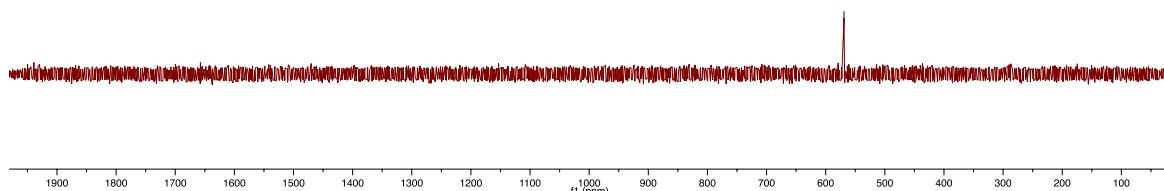
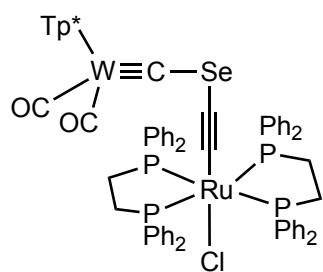
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 4.4.

CO₂II_WSeTMS_Rhvaska_selenium⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.4.CO₂II_WSeTMS_Rhvaska_phosphorus³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.4.

¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 4.5.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 4.5.

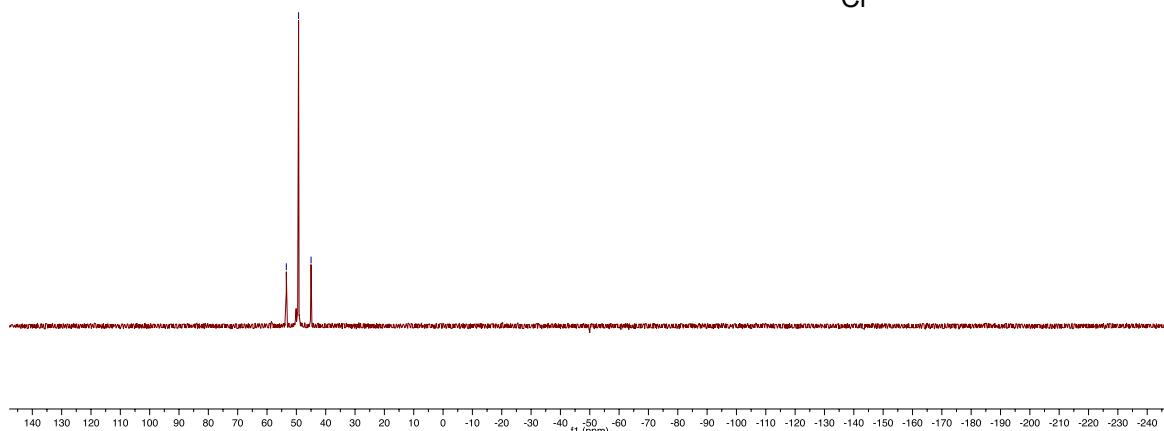
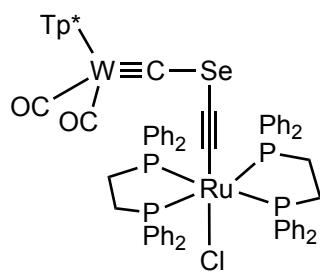
COH_WSeH_Ru(dpppe)Cl_selenium

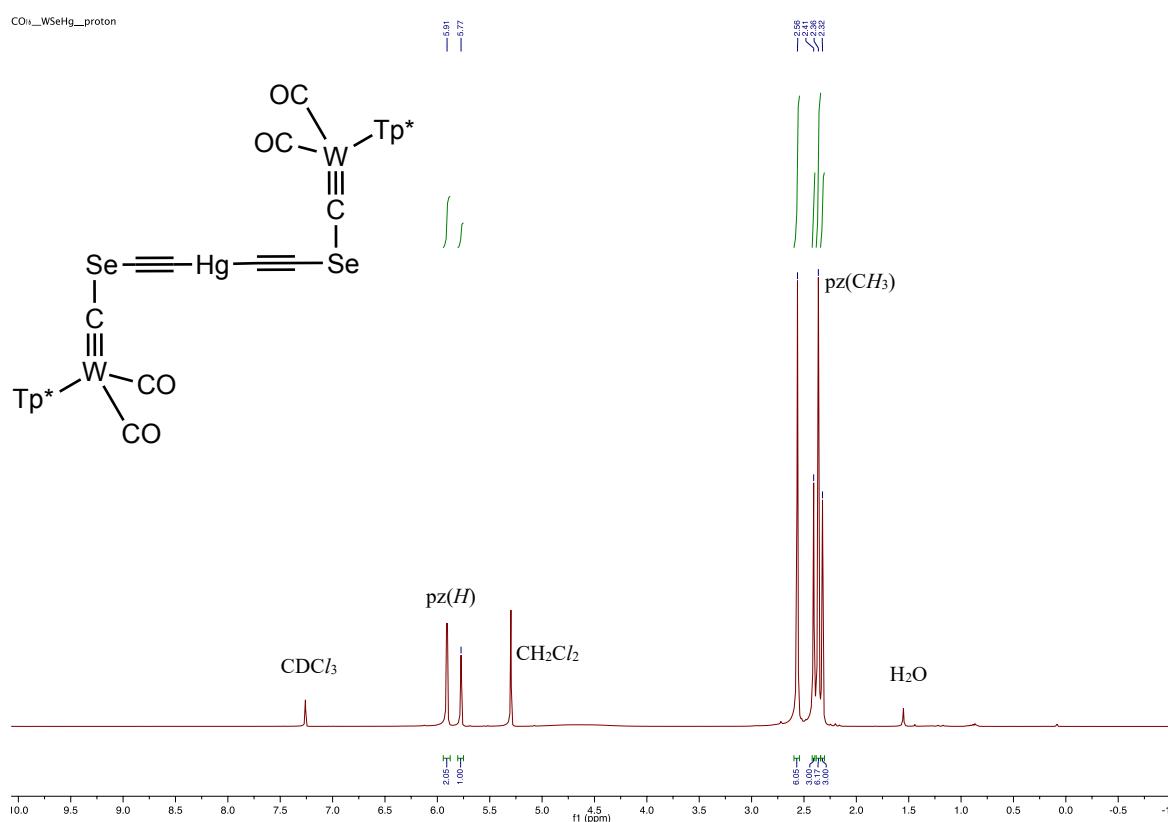
— 569.96 —

⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.5.

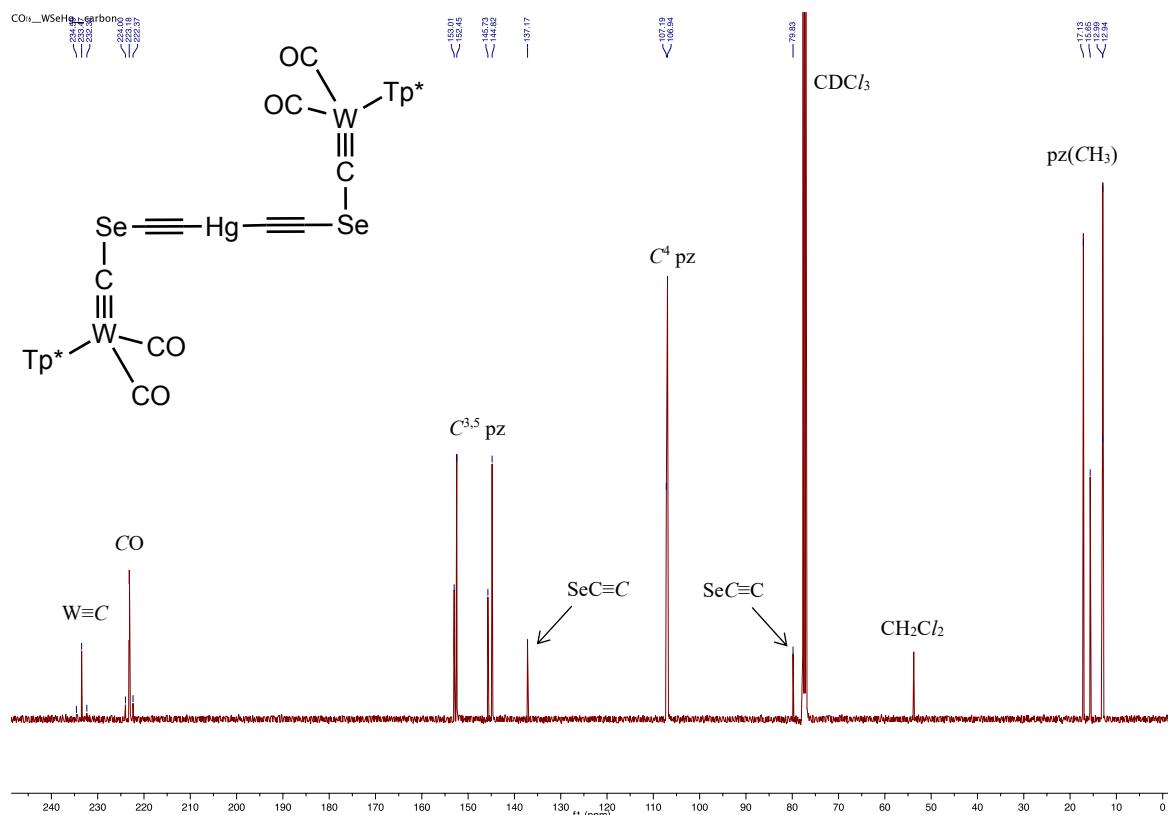
COH_WSeH_Ru(dpppe)Cl_phosphorus

— 569.96 —

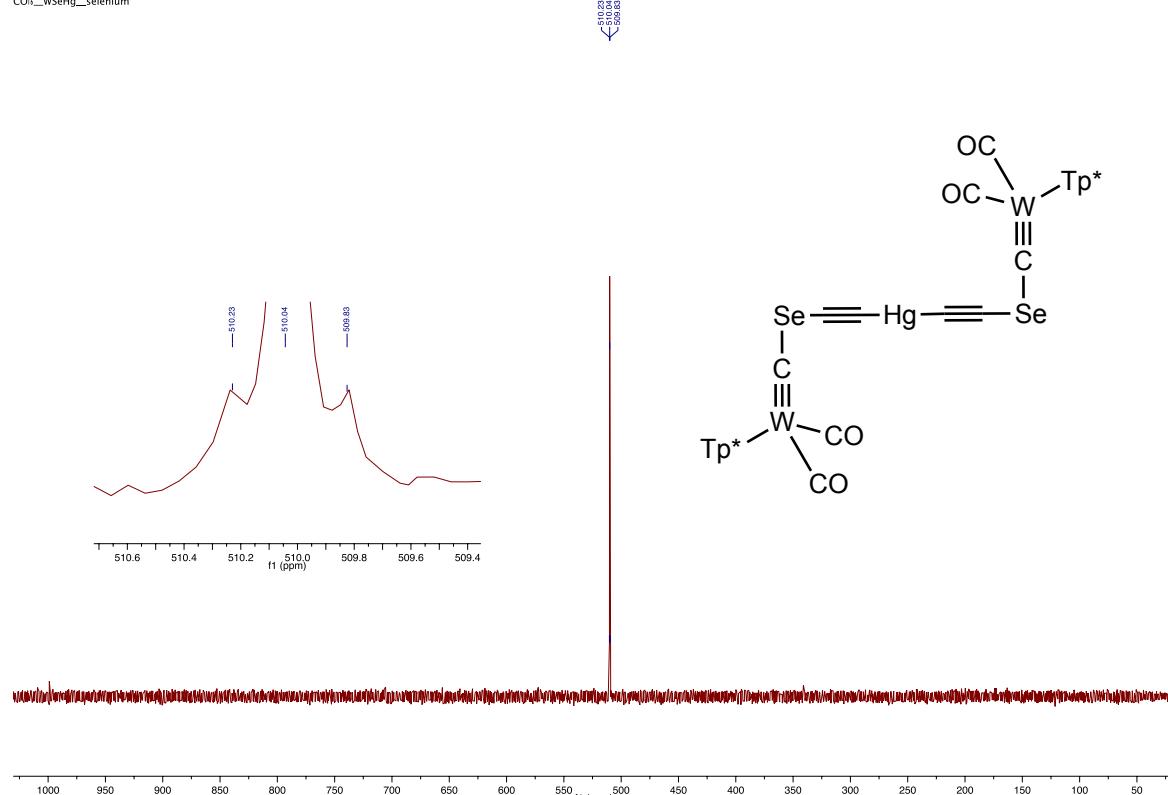
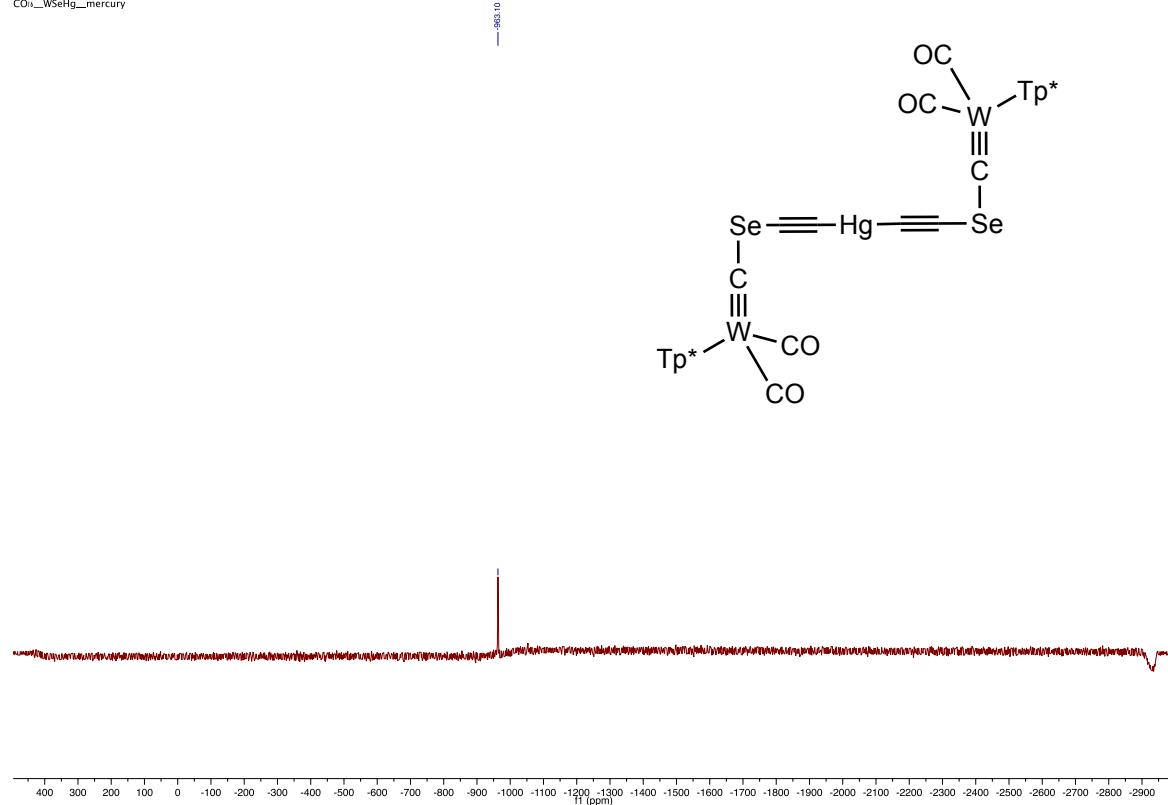
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.5.

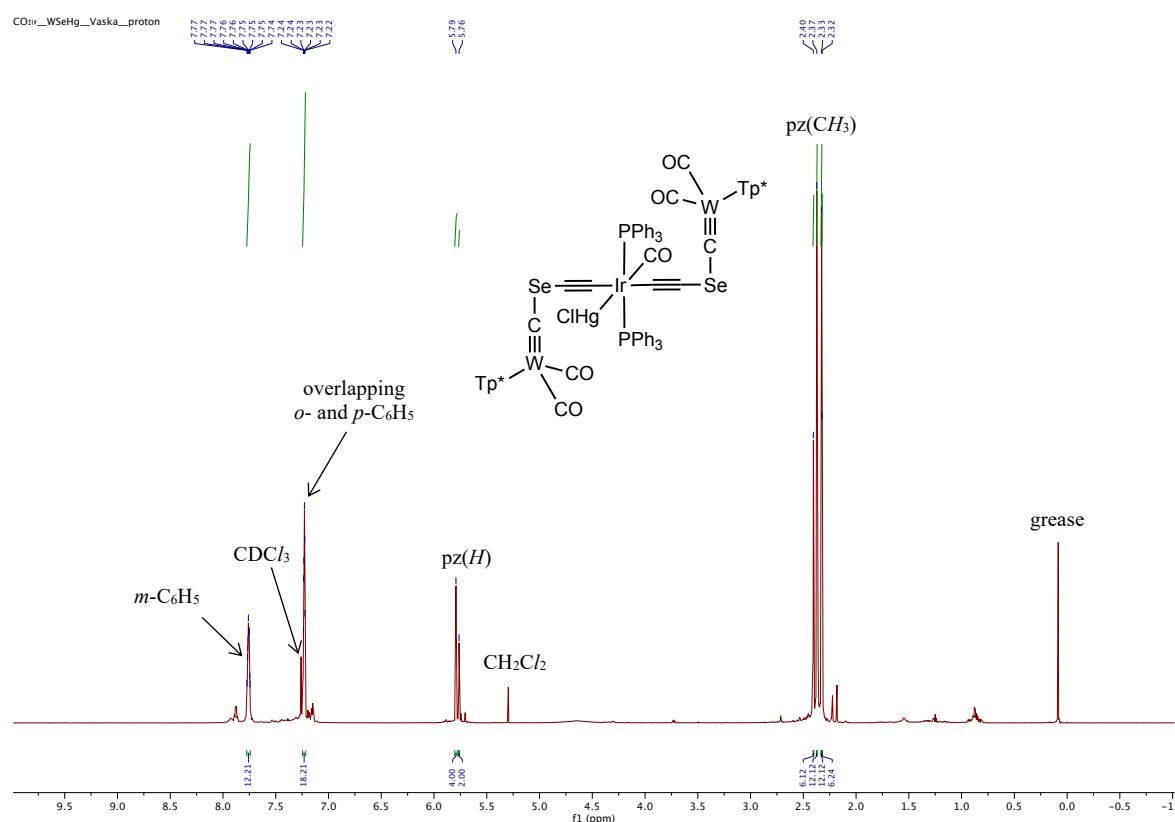


^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 4.6.

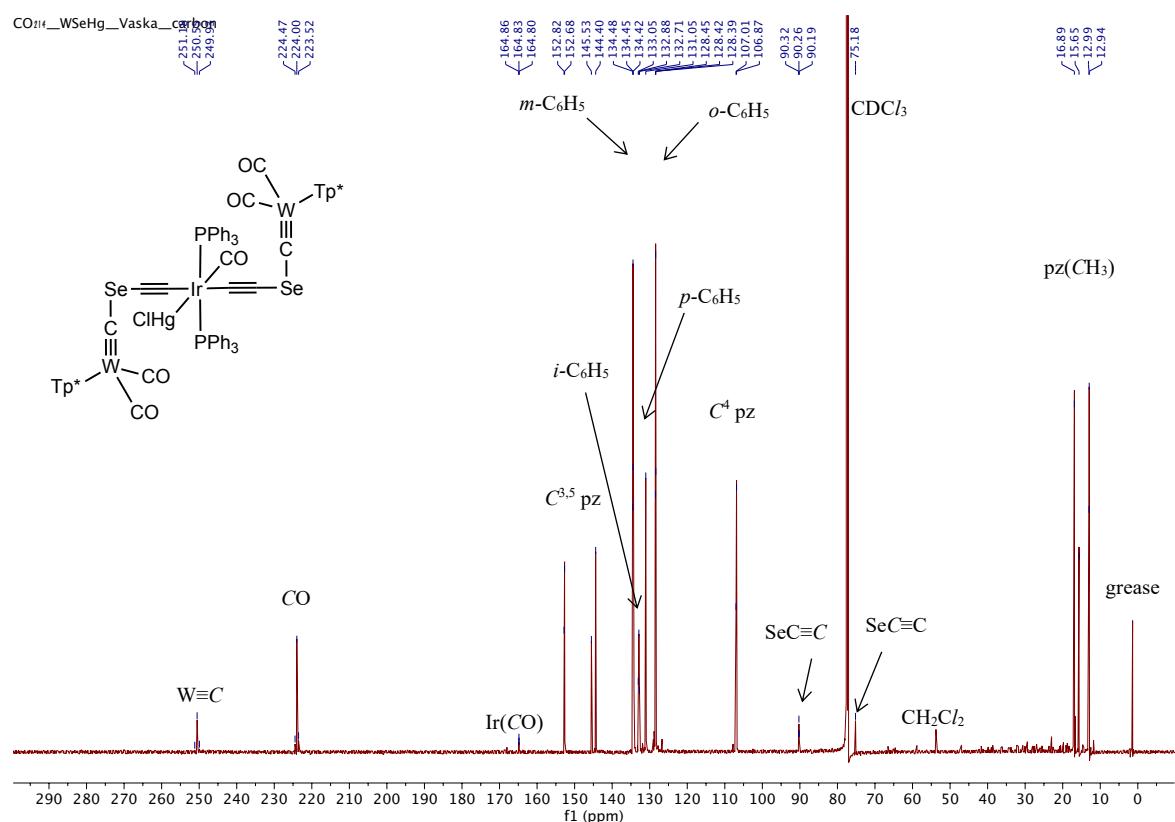


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound 4.6.

CO₃—WSeHg—selenium $^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C , δ) of compound 4.6.CO₃—WSeHg—mercury ^{199}Hg NMR spectrum (72 MHz, CDCl_3 , 25°C , δ) of compound 4.6.

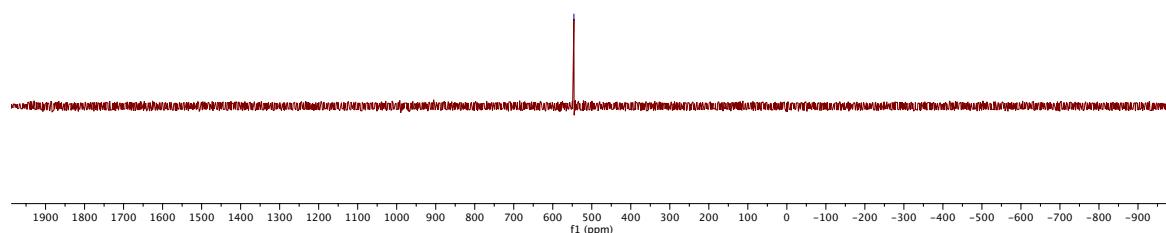
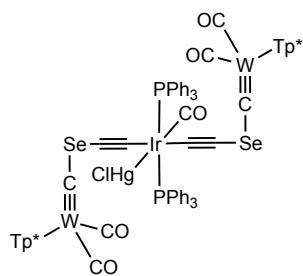


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.7.

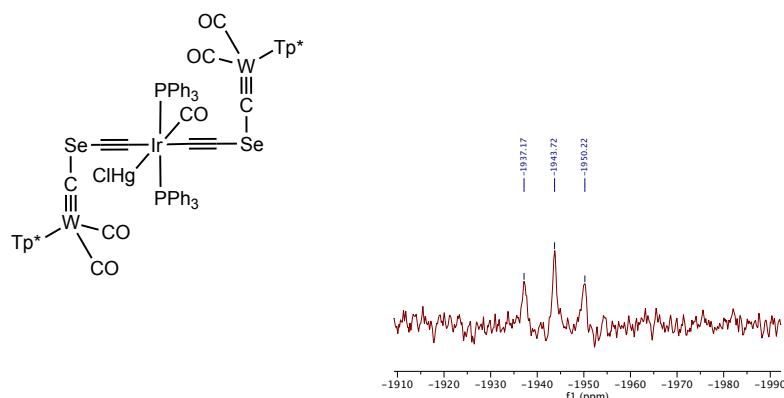


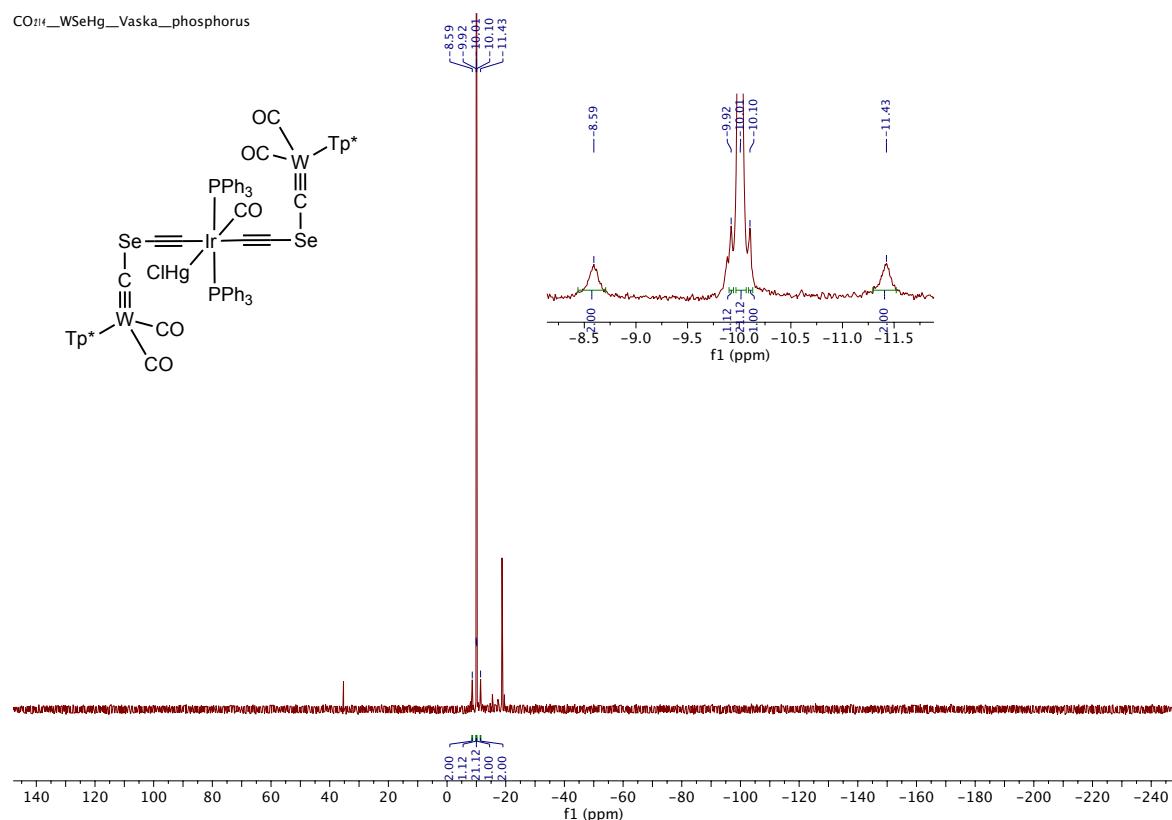
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 4.7.

COH_WSeHg_Vaska_selenium

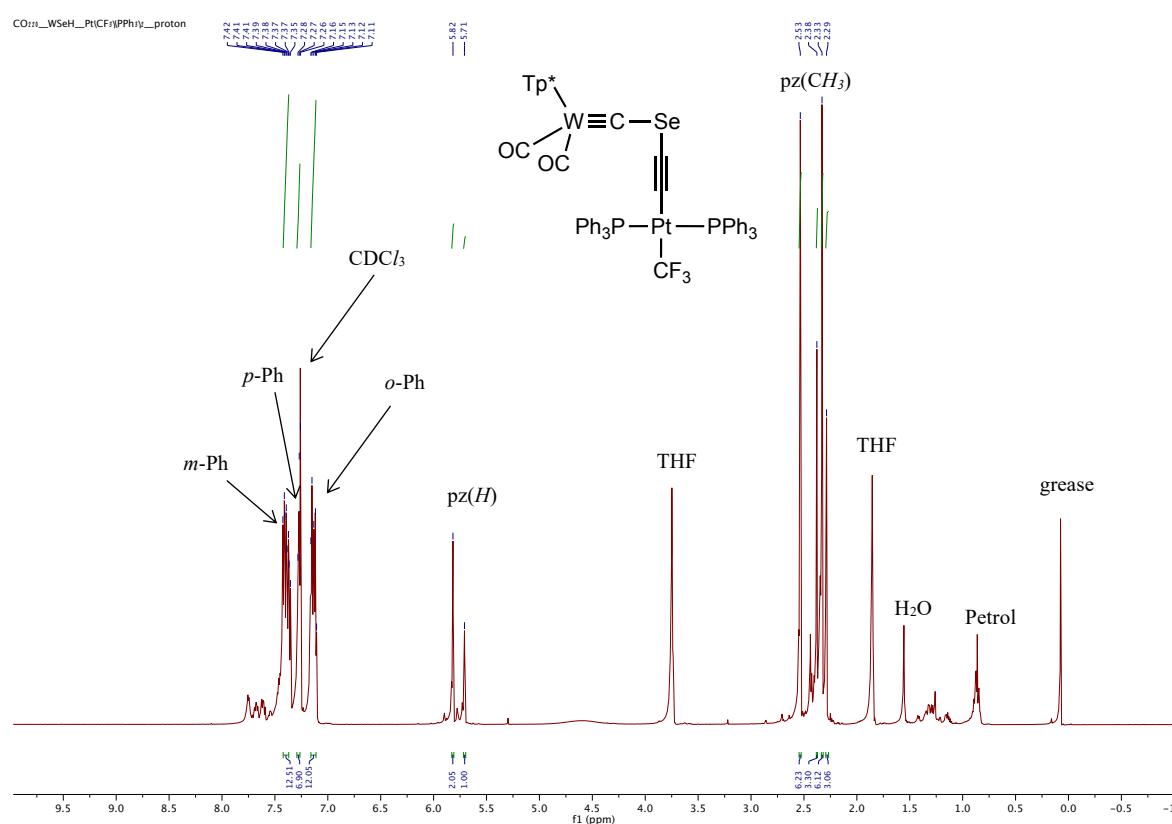
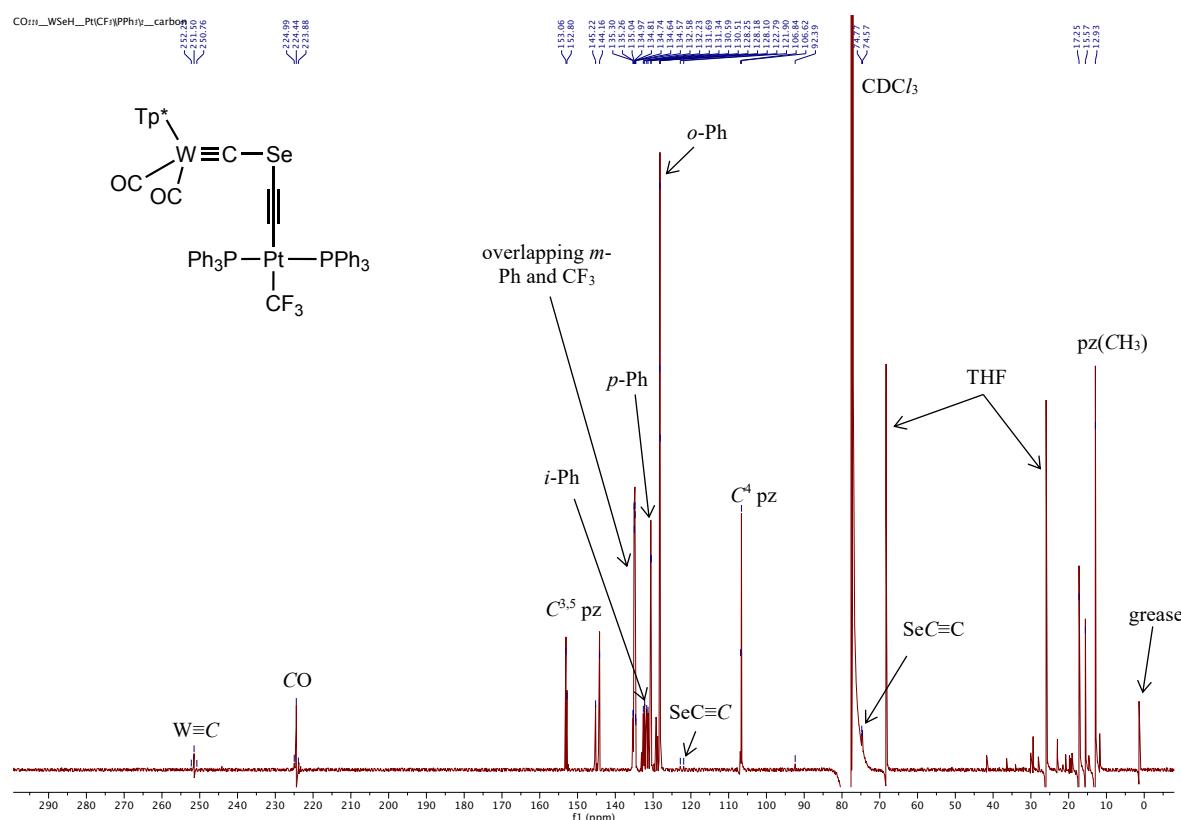
—
545.27⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.7.

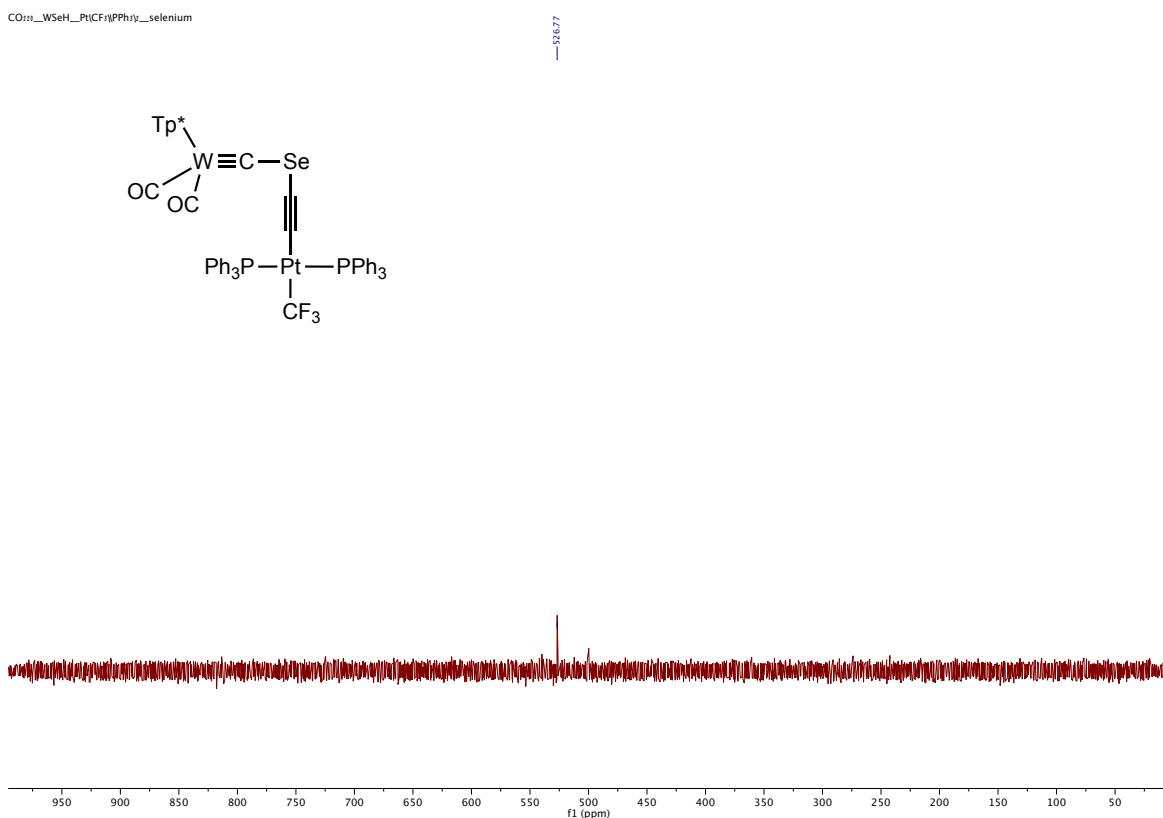
COH_WSeHg_Vaska_mercury

—
1997.17
1935.72
1950.22¹⁹⁹Hg NMR spectrum (72 MHz, CDCl₃, 25°C, δ) of compound 4.7.

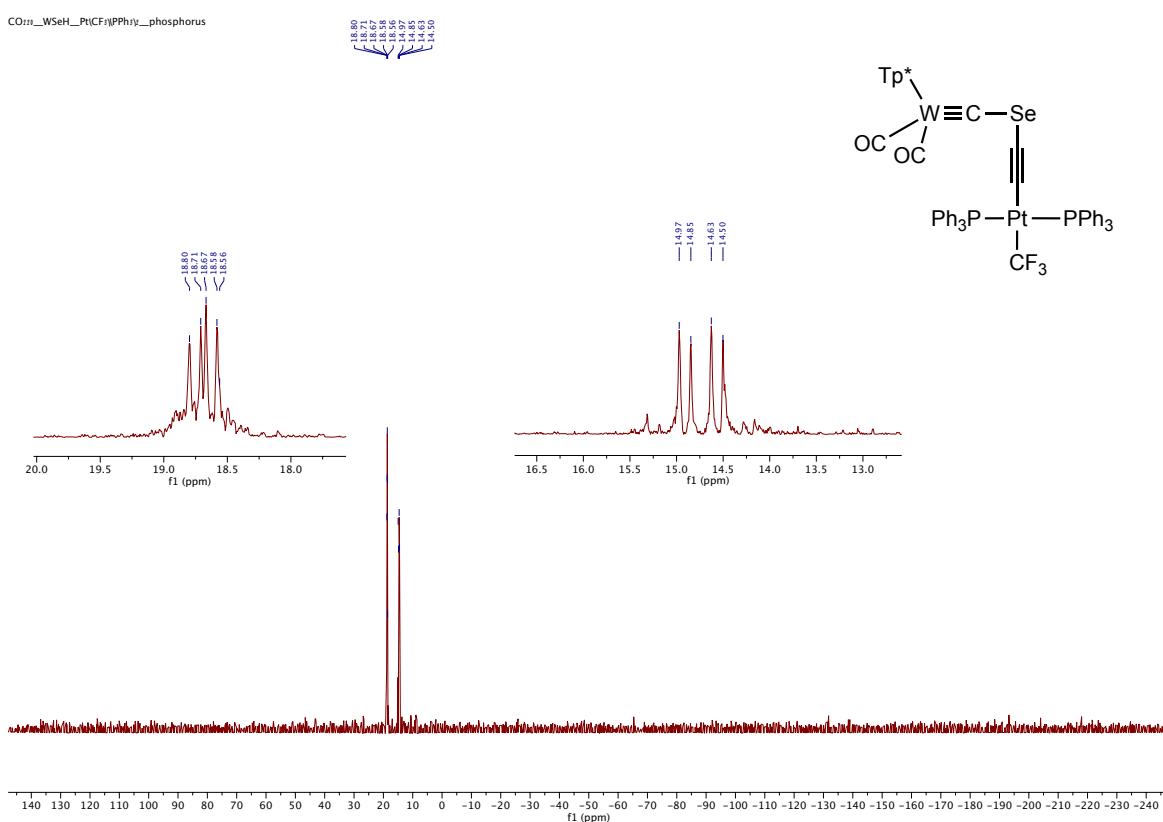


³¹P{¹H} NMR (162 MHz, CDCl₃, 25°C, δ) of compound 4.7.

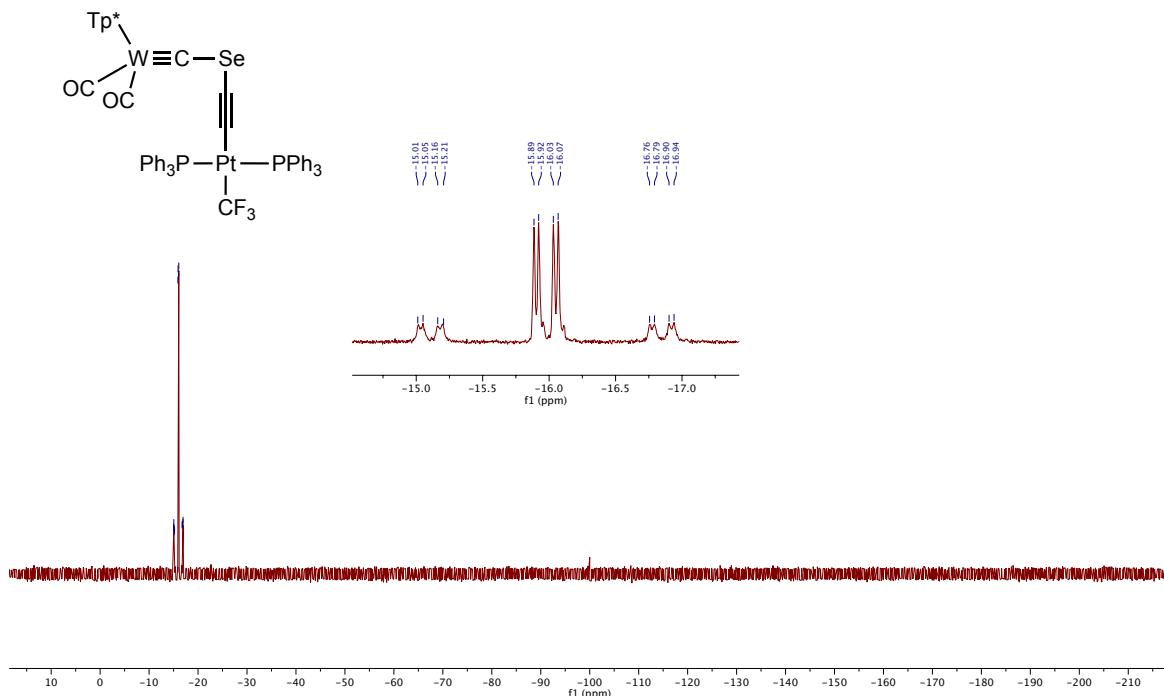
 ^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 4.8. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 4.8.



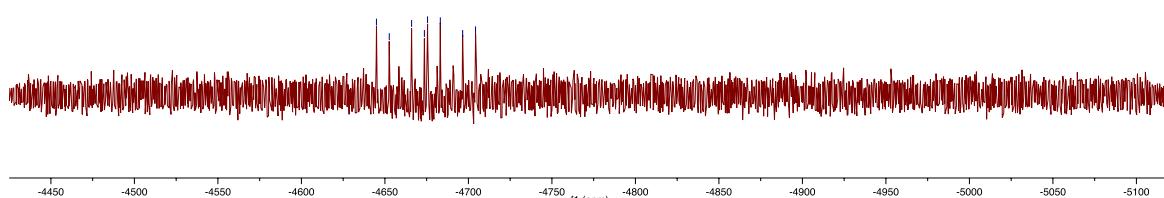
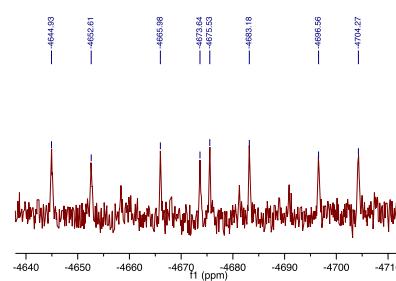
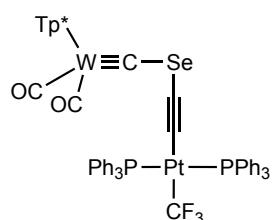
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.8.



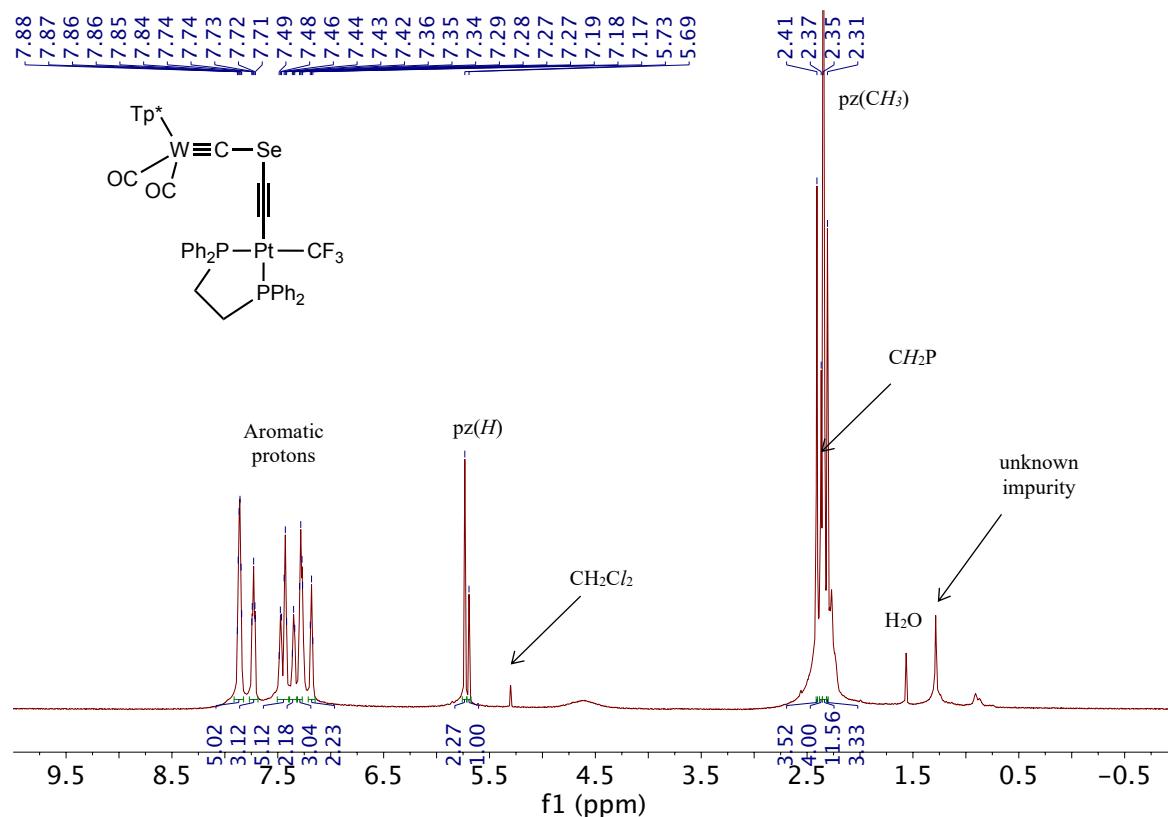
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.8.



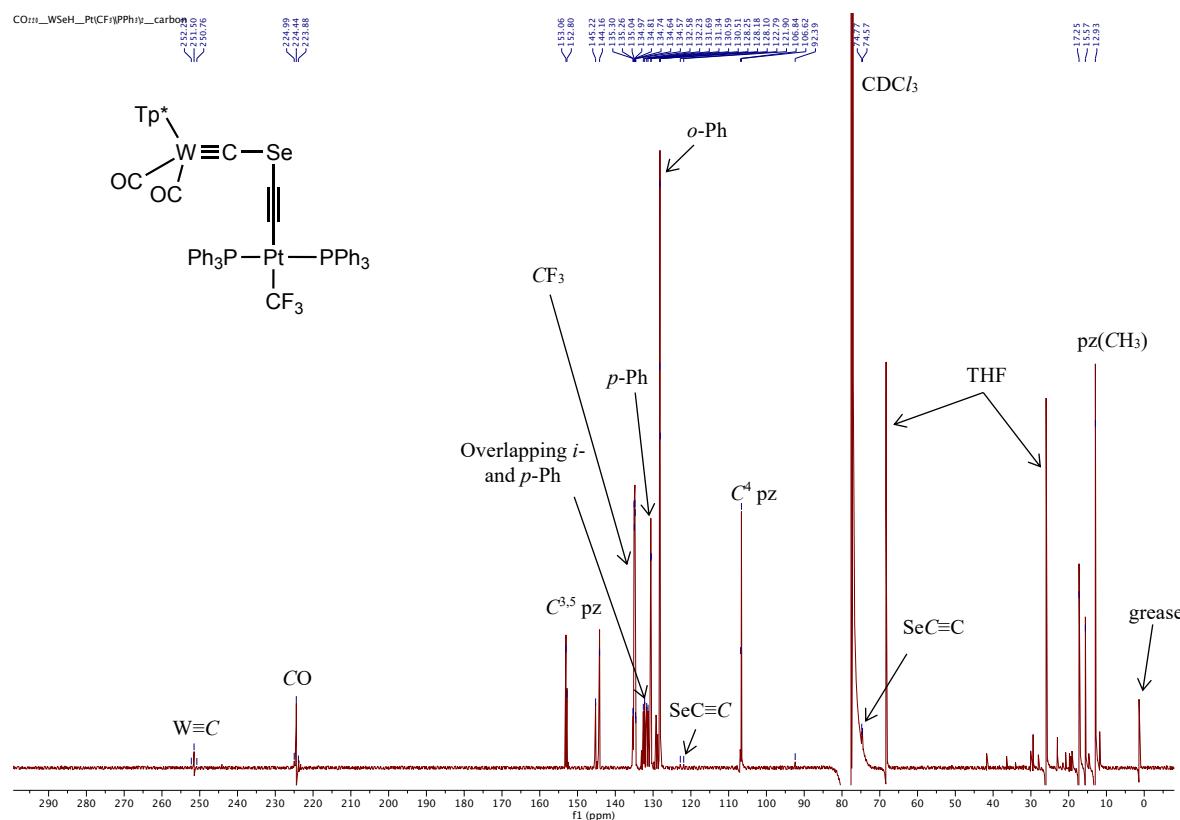
$^{19}\text{F}\left\{{}^1\text{H}\right\}$ NMR spectrum (376 MHz, CDCl_3 , 25°C, δ) of compound **4.8**.



¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 4.8.



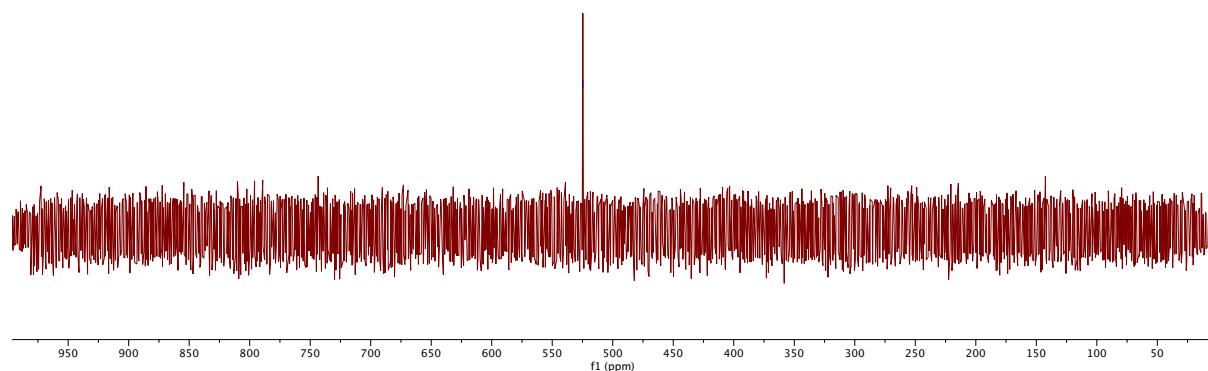
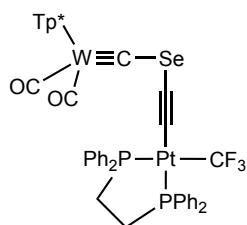
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.9.



¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 4.9.

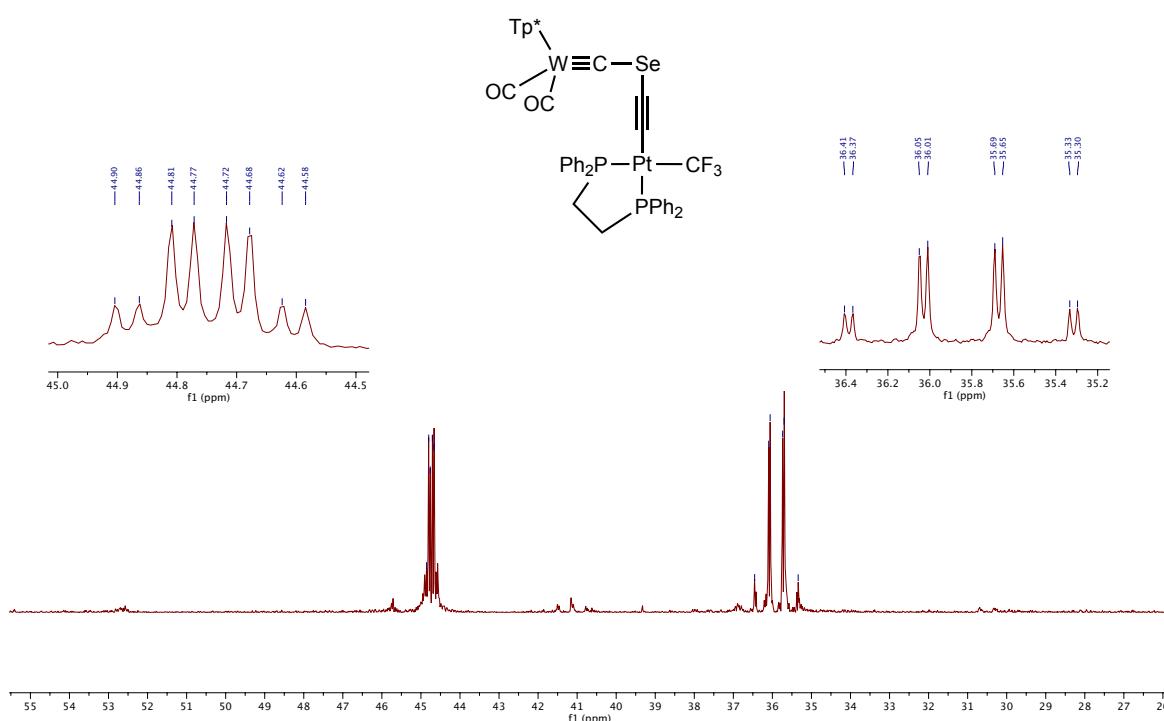
CO₂H—WSeH—Pt(CF₃)₂(dppe)—selenium

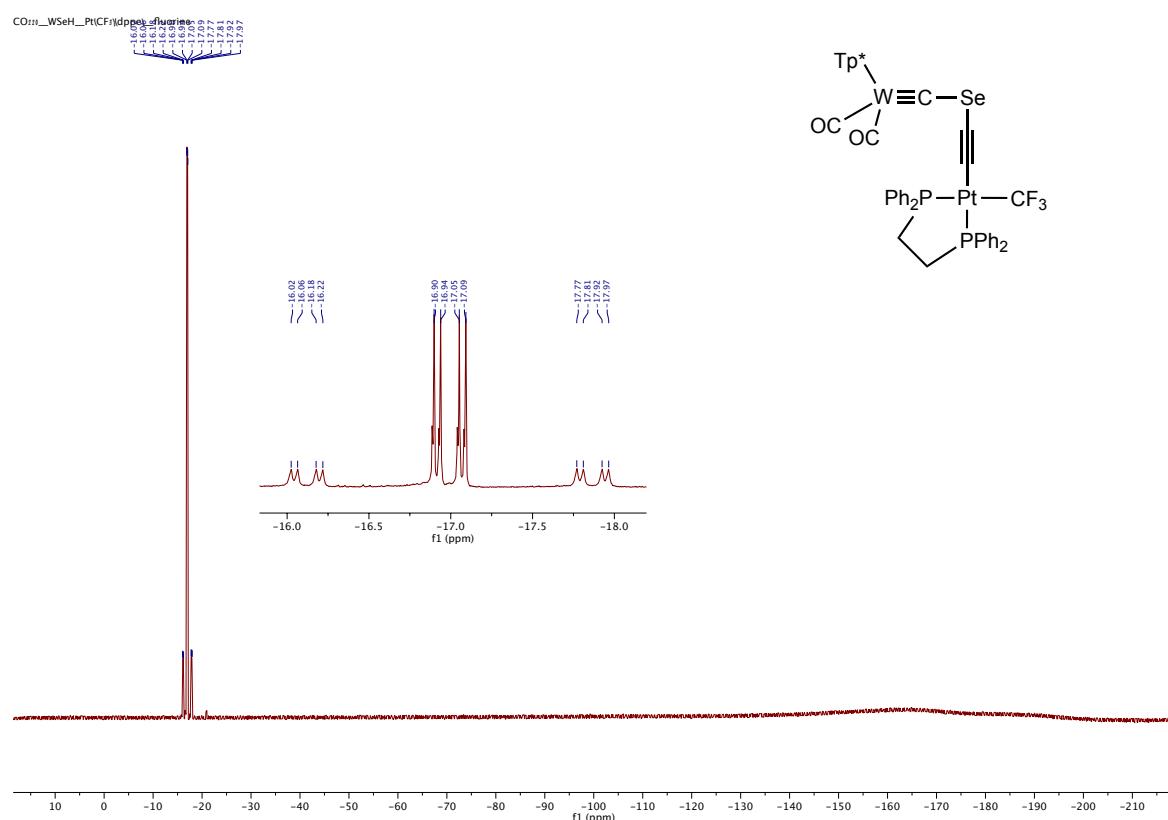
— 524.76

CO₂H—WSeH—Pt(CF₃)₂(dppe)—phosphorus

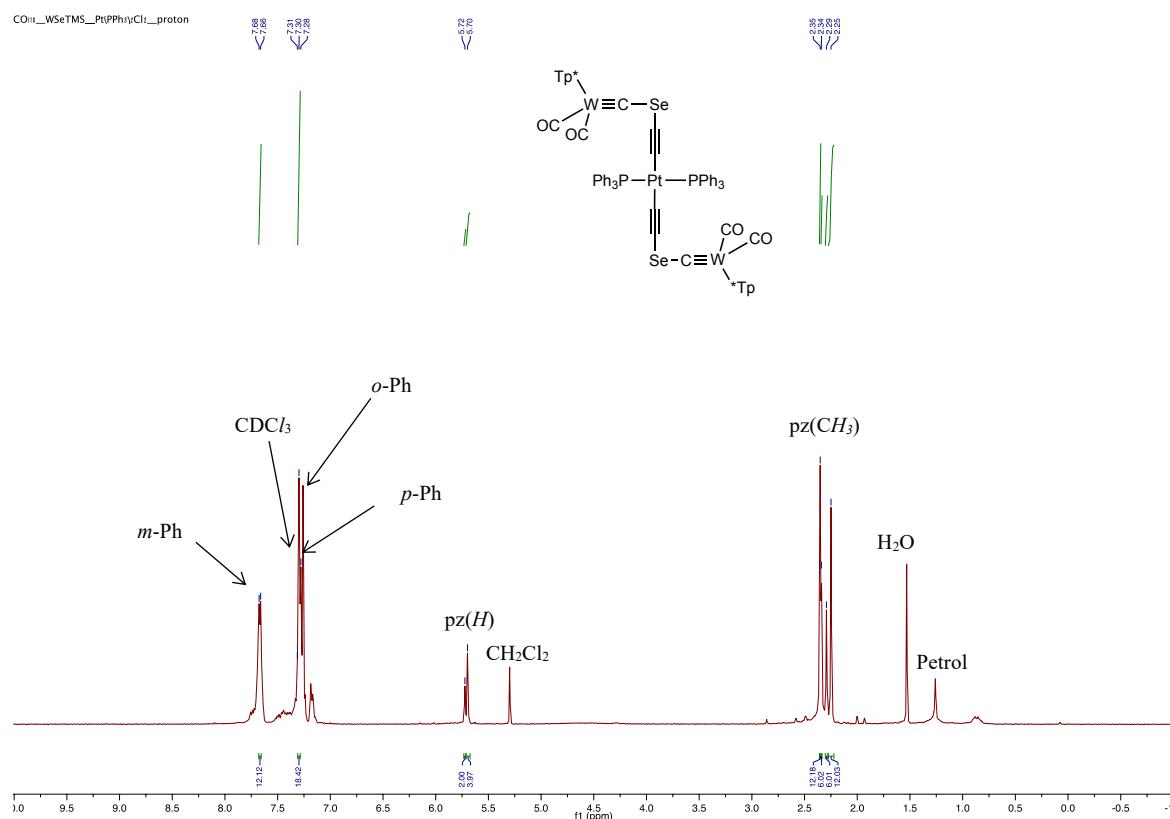
Chemical shift assignments for the ⁷⁷Se{¹H} NMR spectrum:

- 44.36, 44.30, 44.26, 44.21, 44.17, 44.07
- 36.45, 36.09, 35.74, 35.70, 35.34

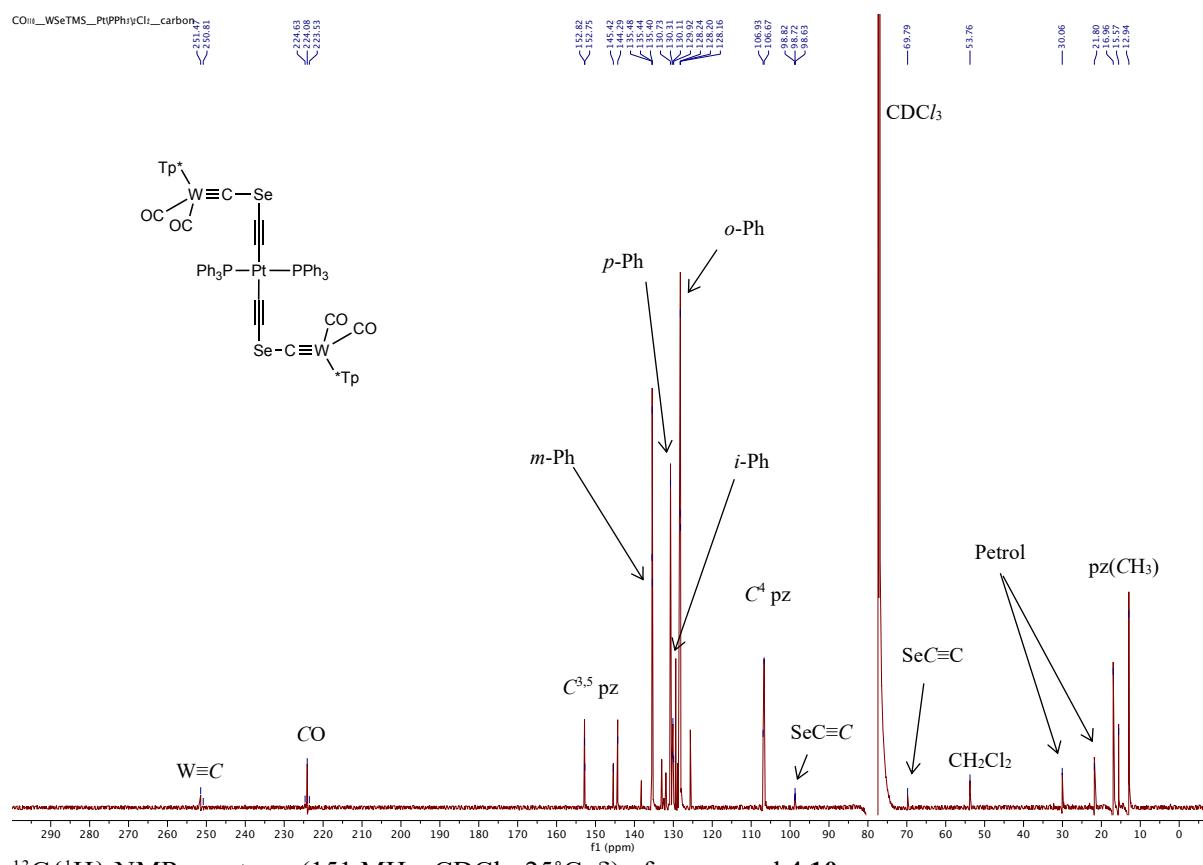




¹⁹F{¹H} NMR spectrum (376 MHz, CDCl₃, 25°C, δ) of compound **4.9**.



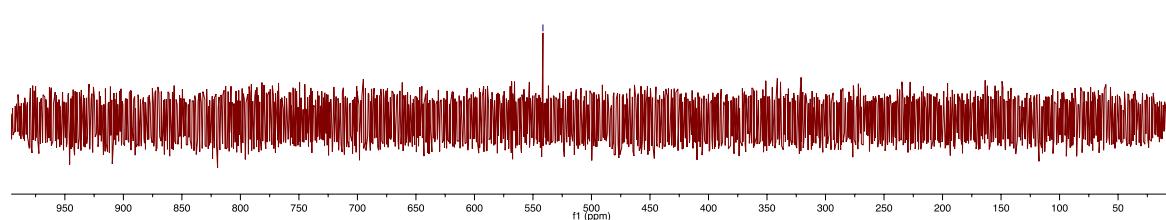
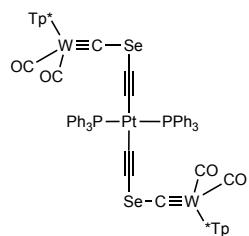
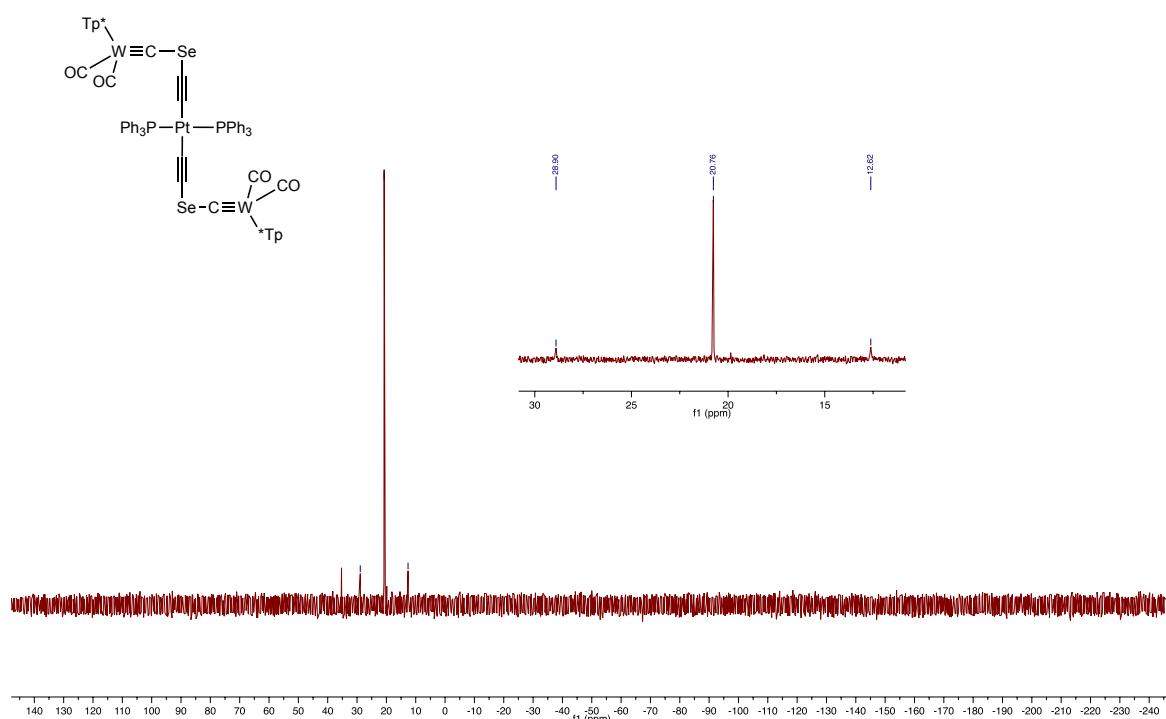
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 4.10.



¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 4.10.

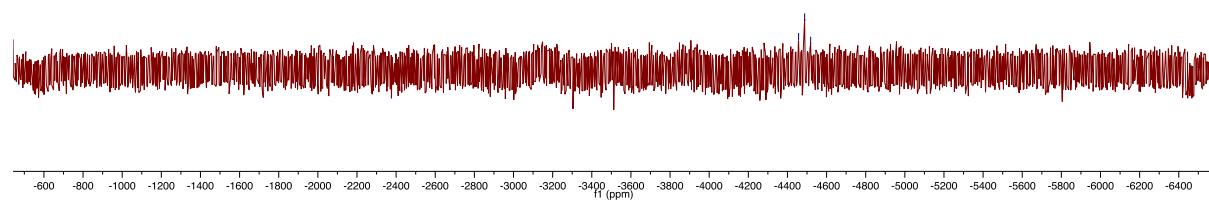
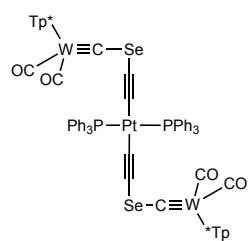
CO(||)_2WSeTMS-Pt(PPh₃)₂Cl₂-selenium

— 541.48

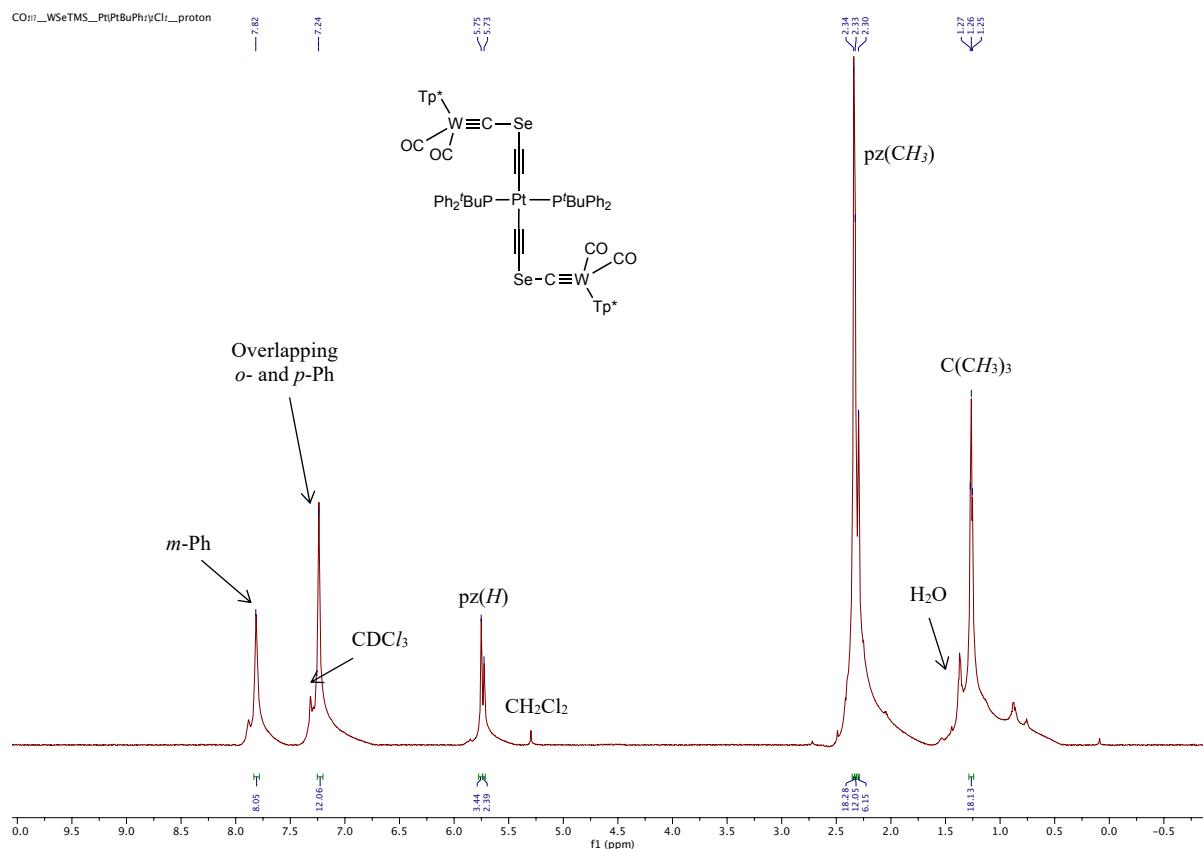
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.10.CO(||)_2WSeTMS-Pt(PPh₃)₂Cl₂-phosphorus— 28.90
— 20.76
— 12.62³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.10.

CO1s_WSeTMS_Pt(PPh3)Cl2_platinum

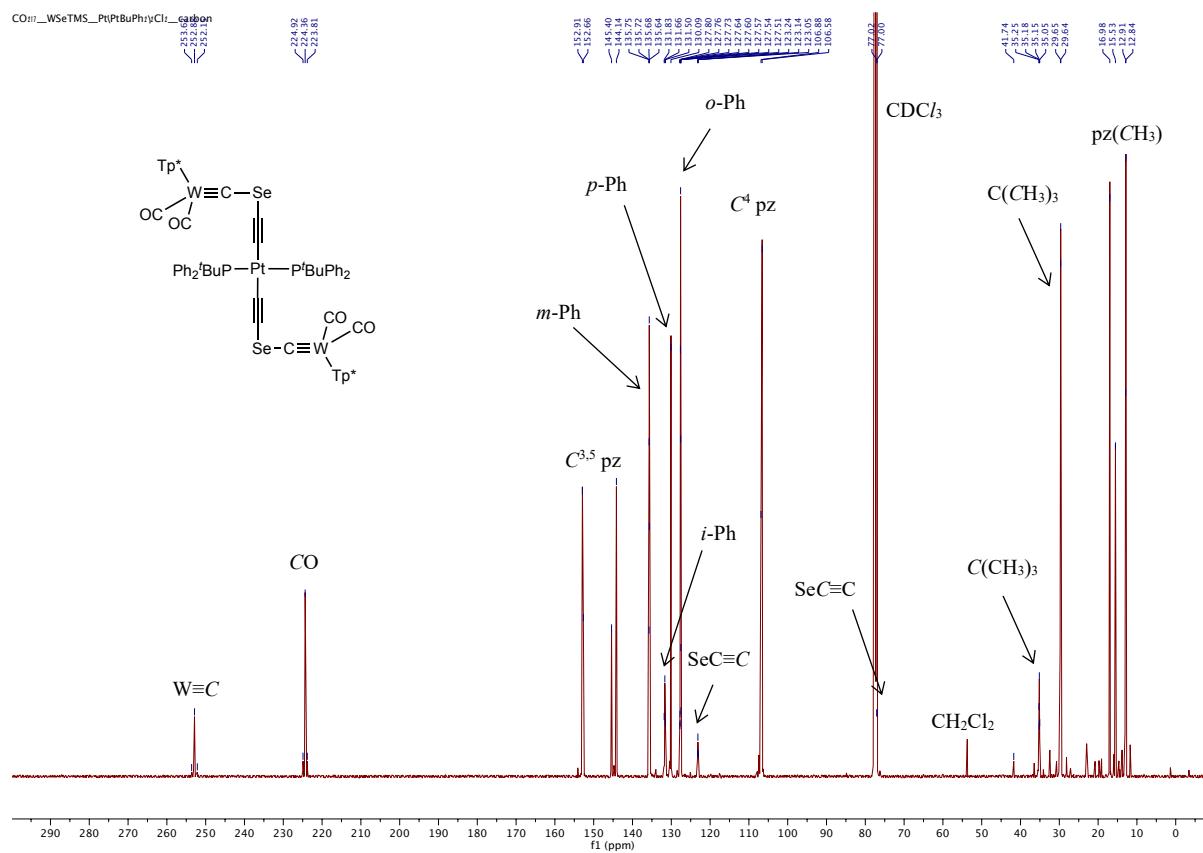
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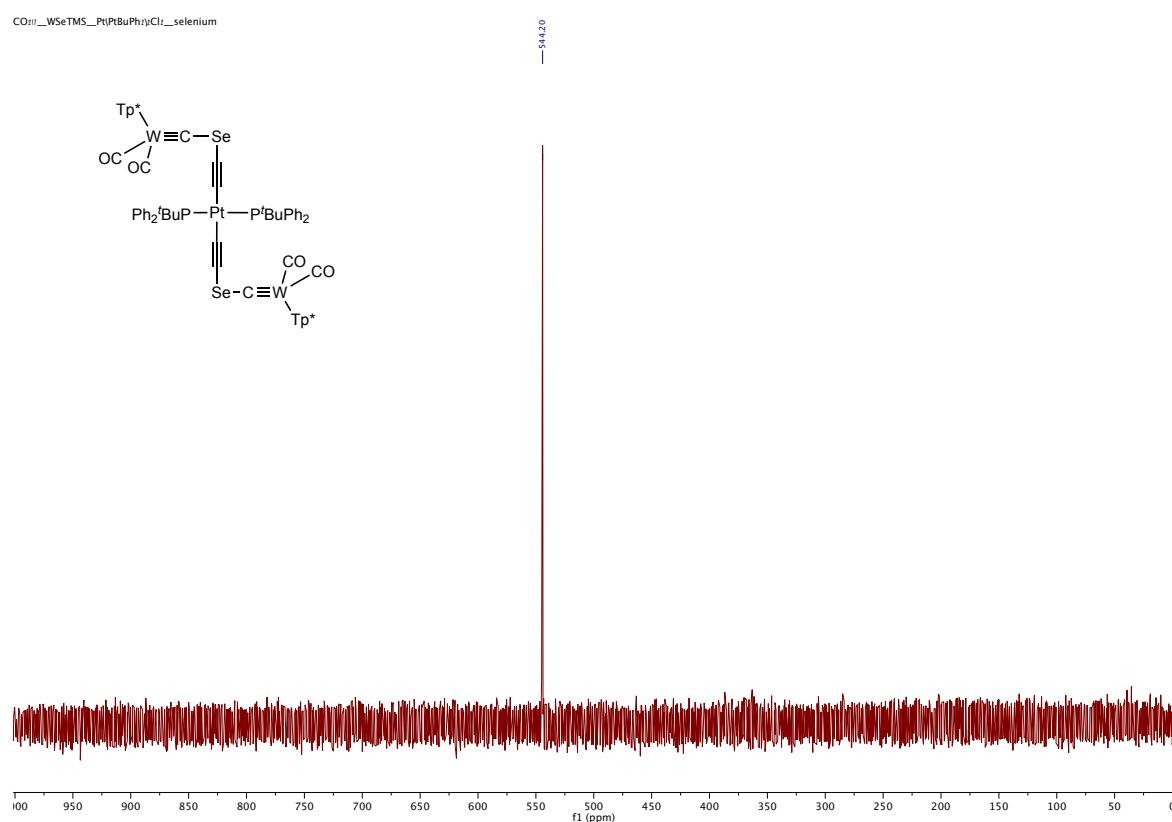
¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 4.10.



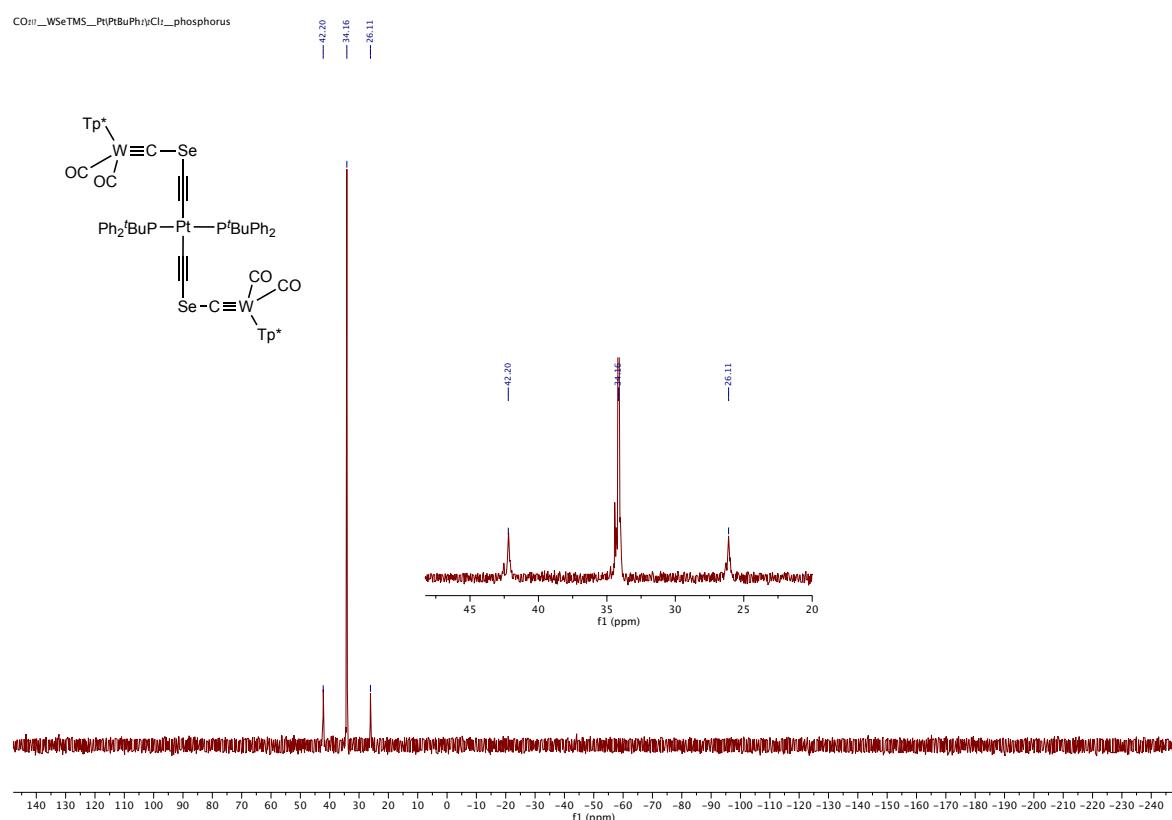
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.11.



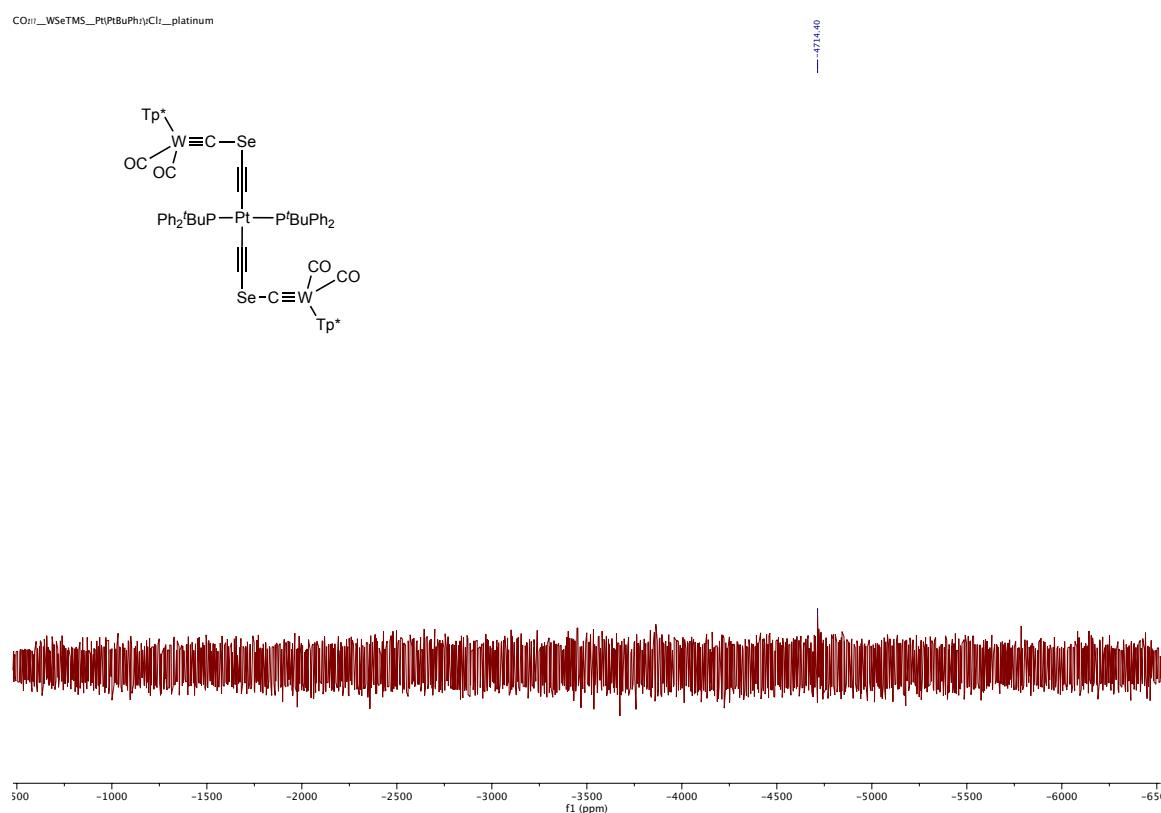
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 4.11.



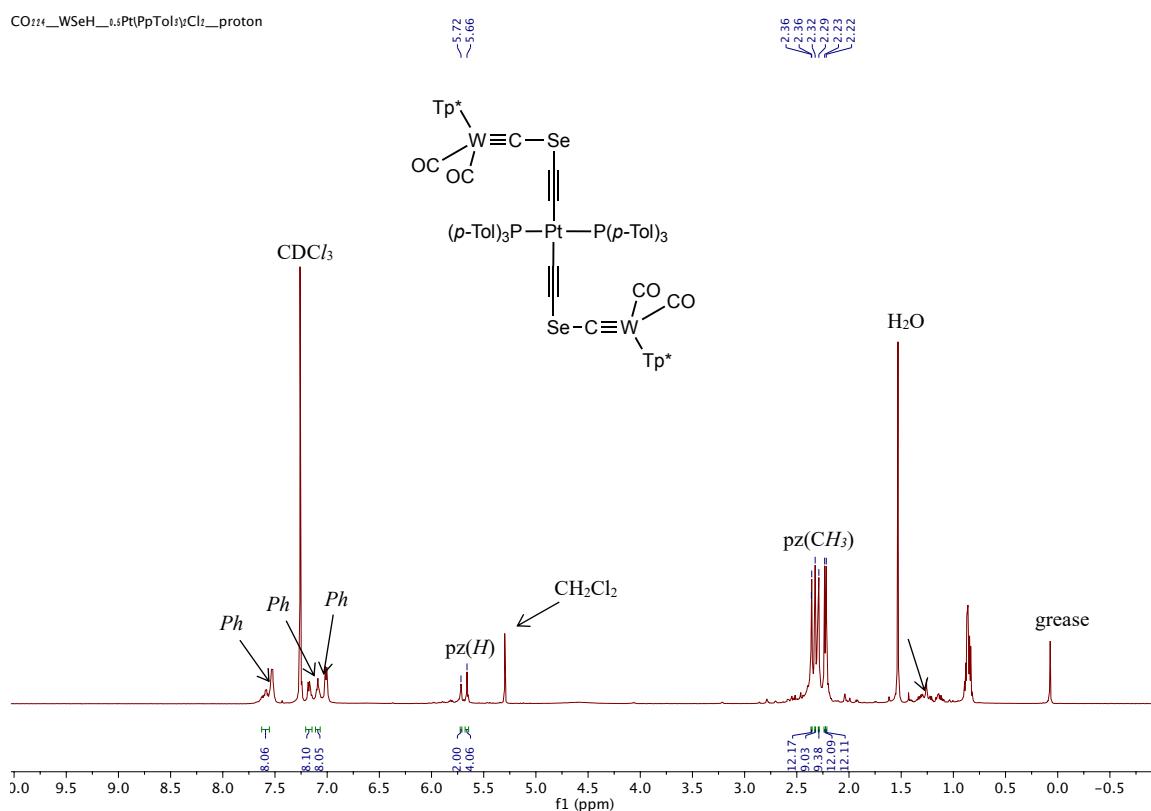
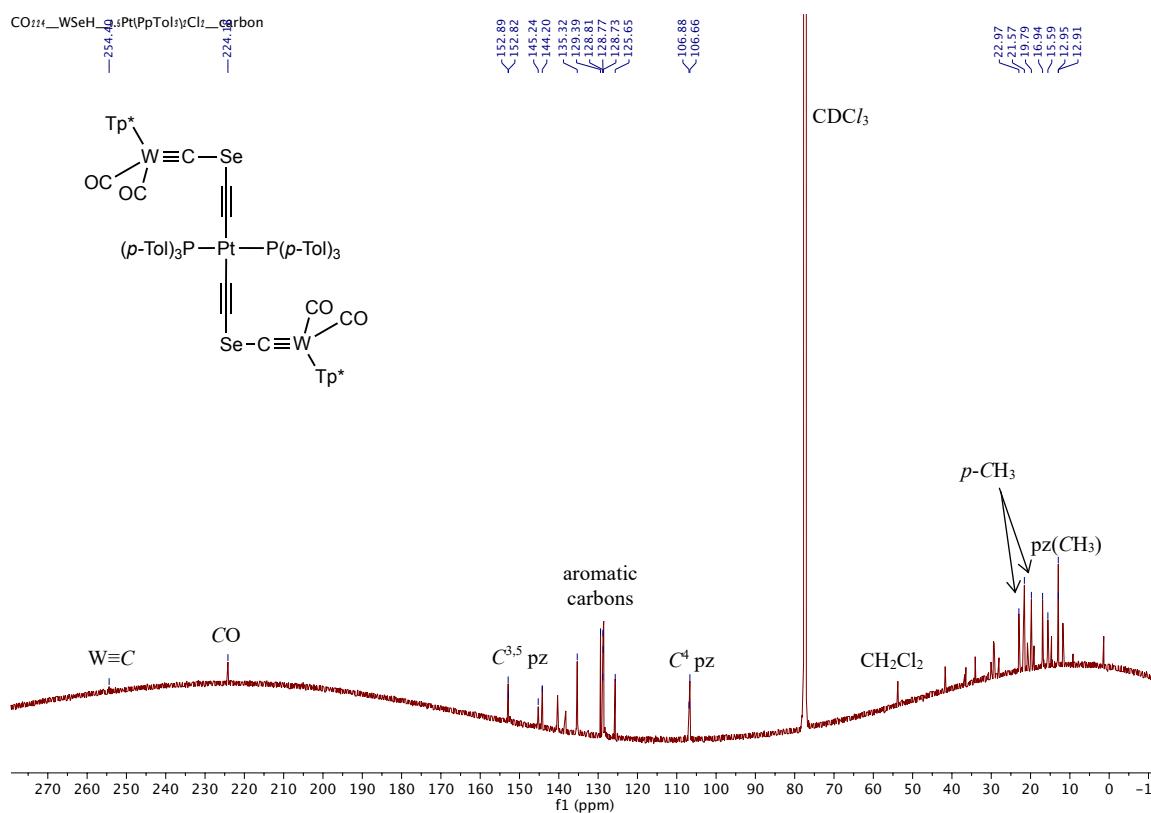
$^{77}\text{Se}\{^1\text{H}\}$ NMR spectrum (134 MHz, CDCl_3 , 25°C, δ) of compound 4.11.

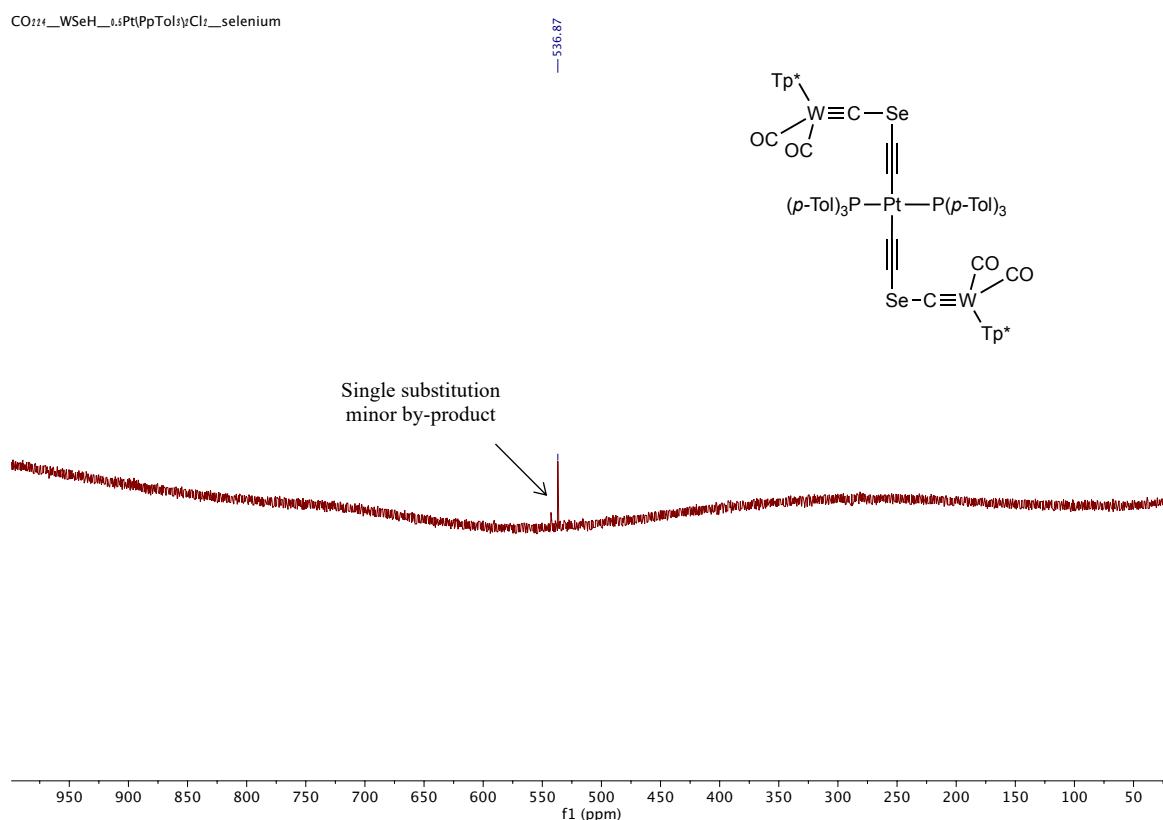


$^{31}\text{P}\{^1\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound 4.11.

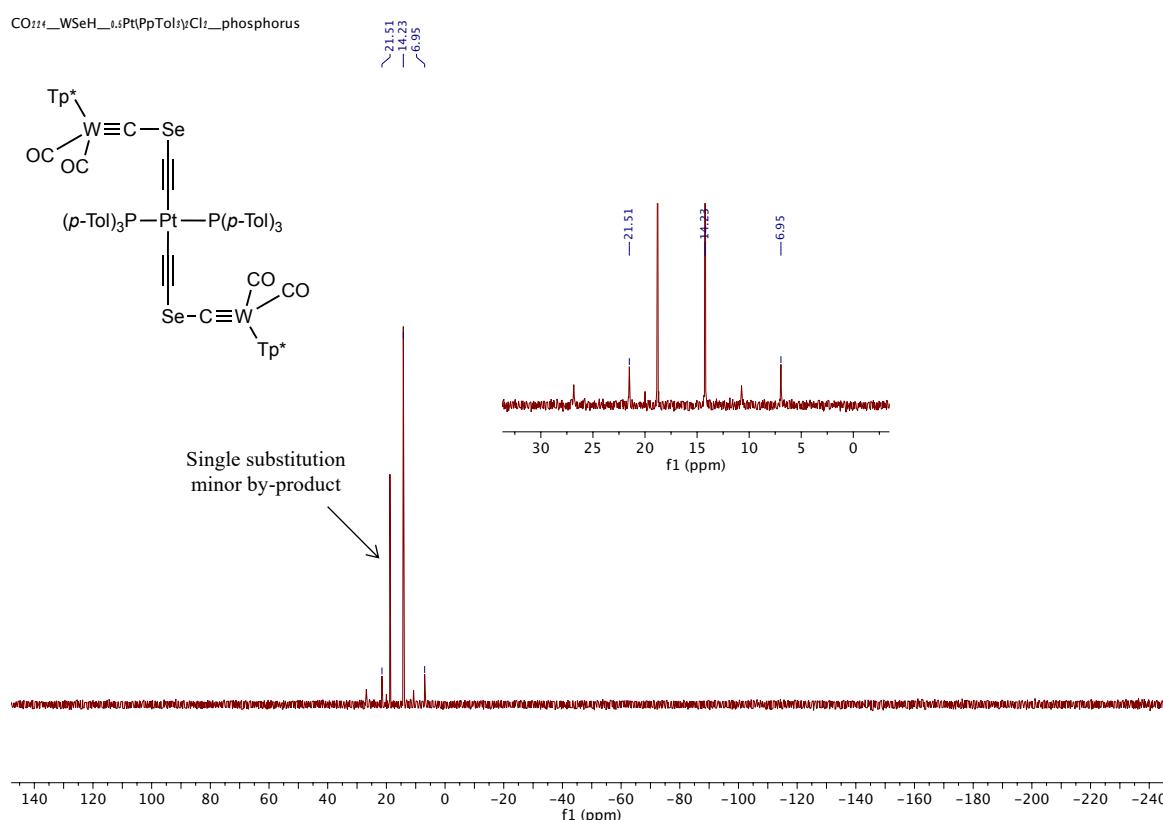


¹⁹⁵Pt NMR spectrum (150 MHz, CDCl₃, 25 °C, δ) of compound 4.11.

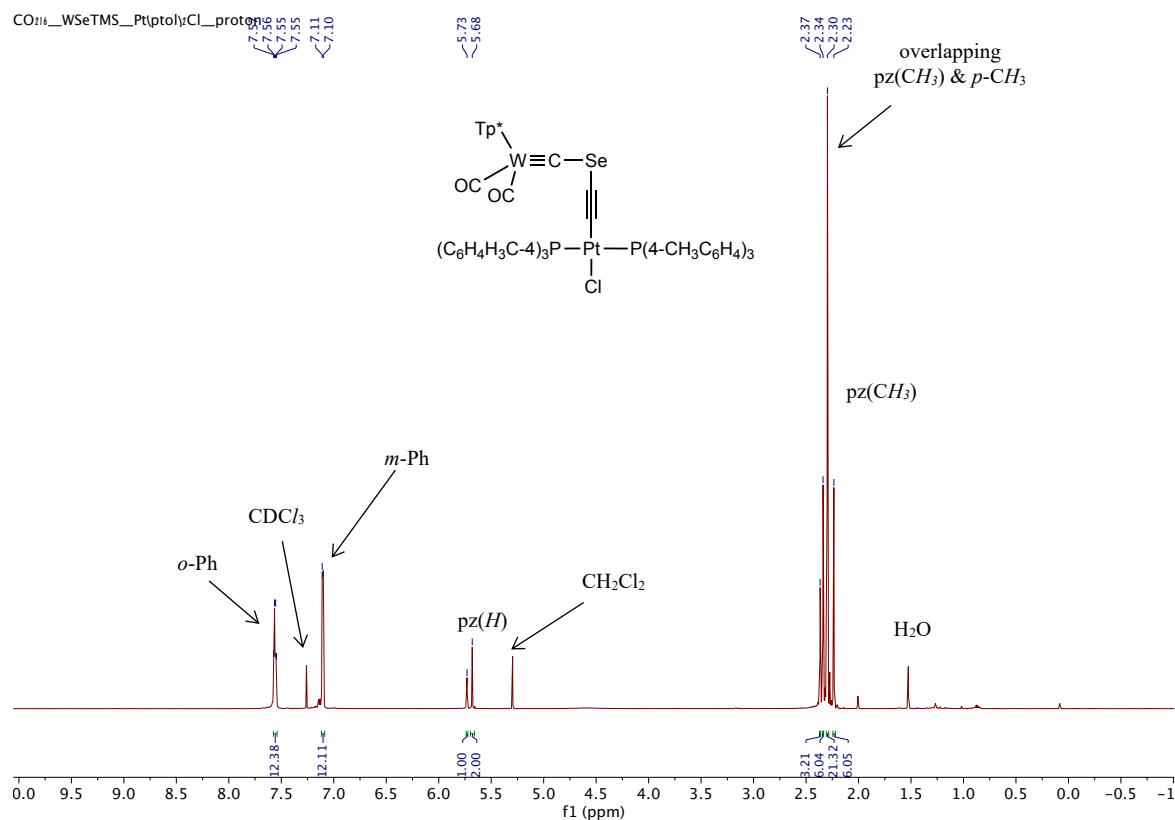
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 4.12.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) spectrum of compound 4.12.



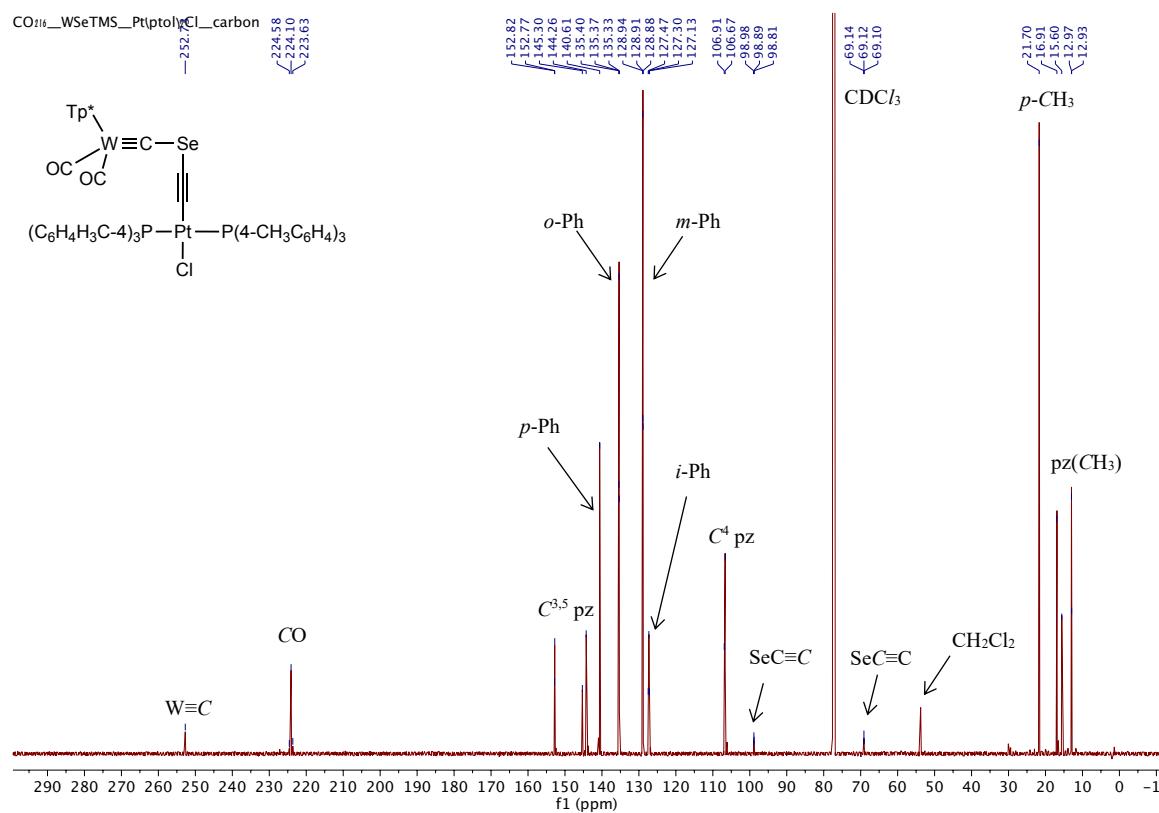
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.12.



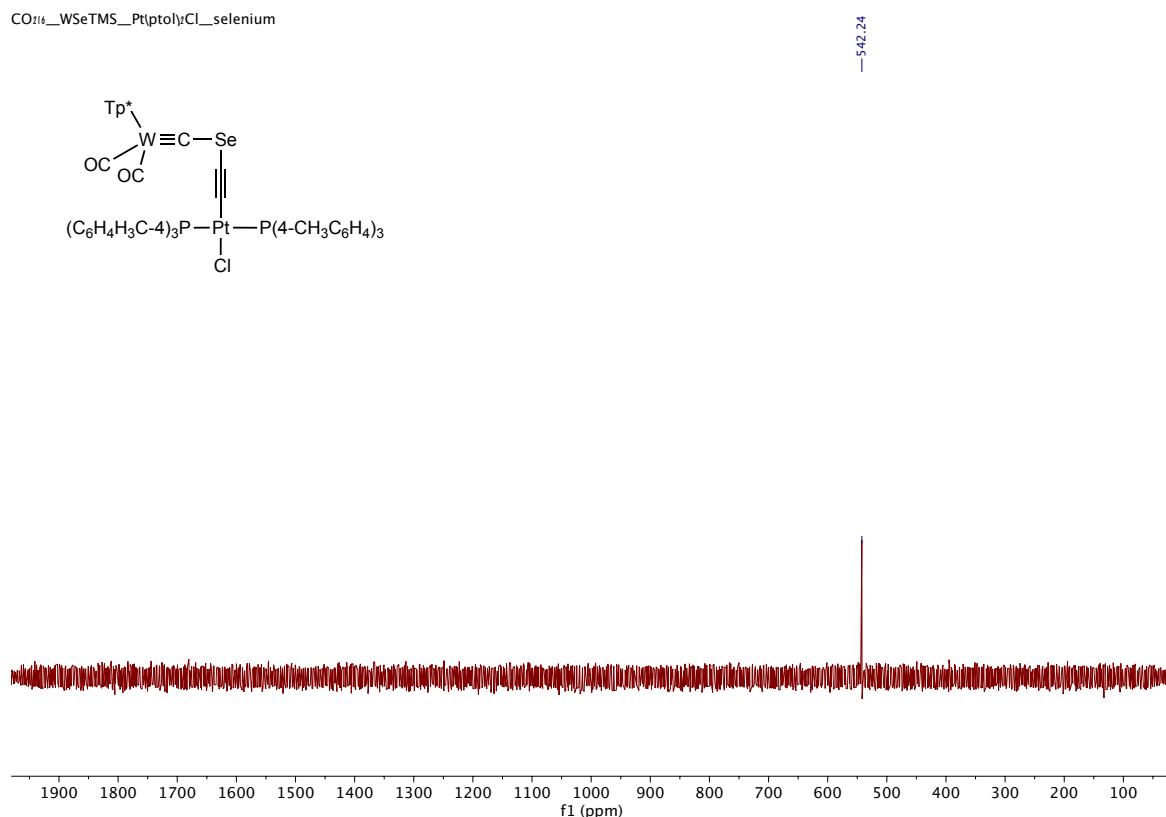
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.12.



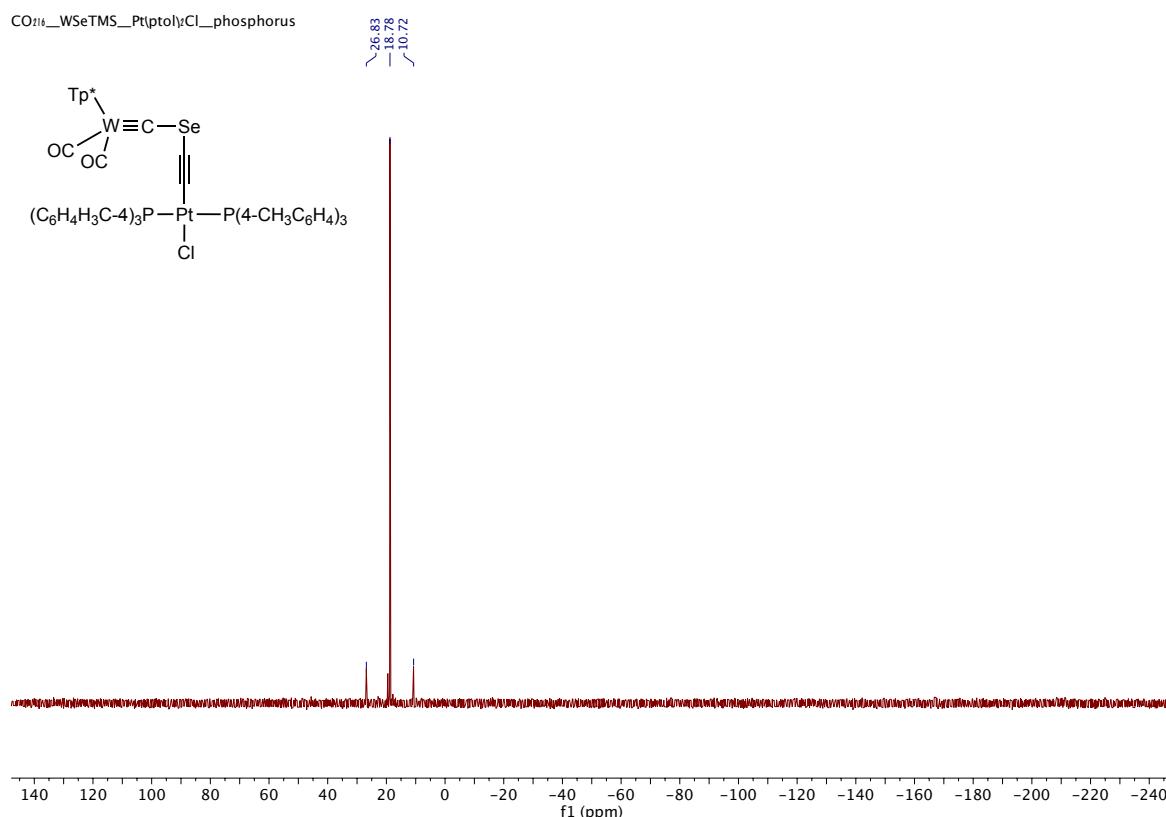
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.13.



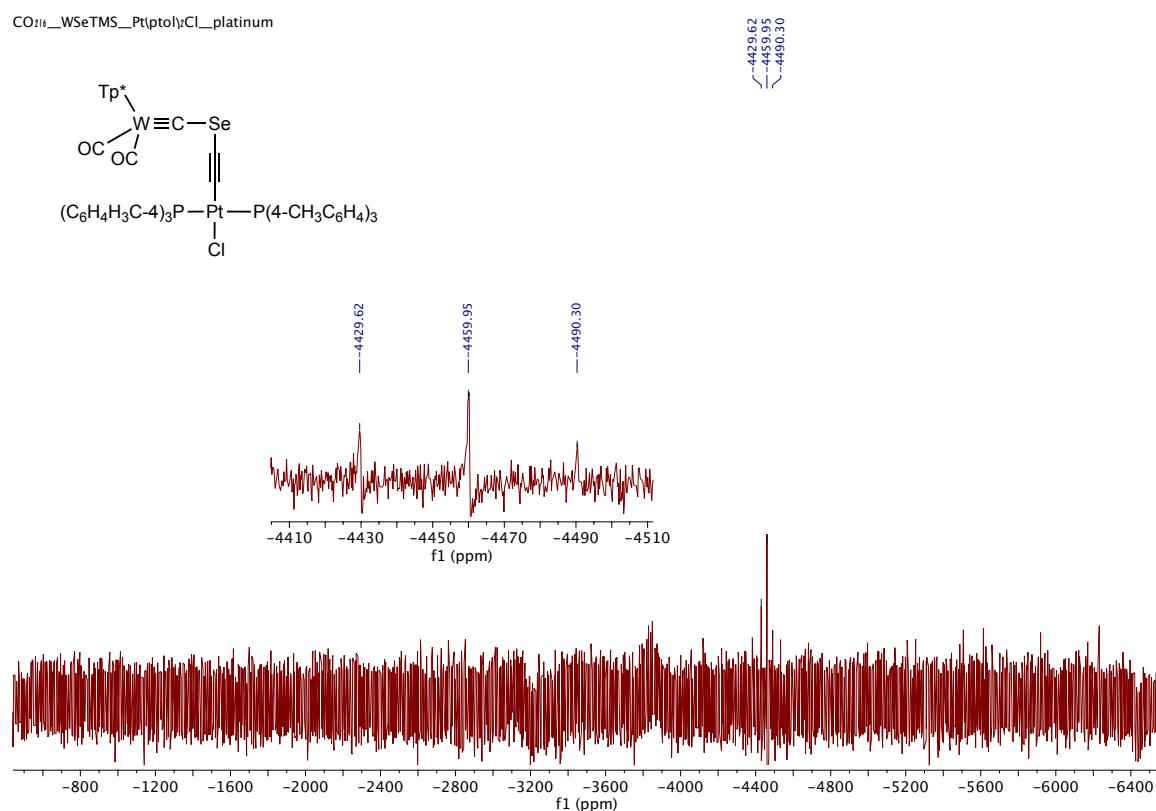
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 4.13.



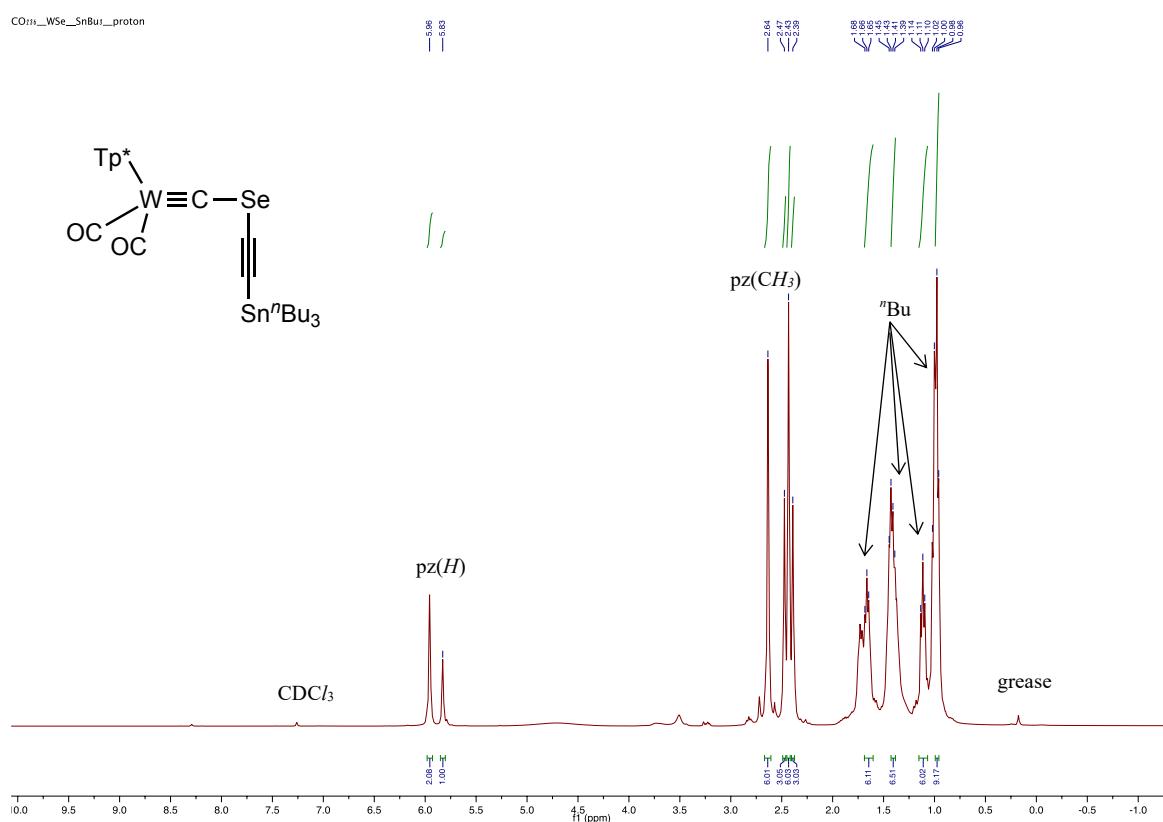
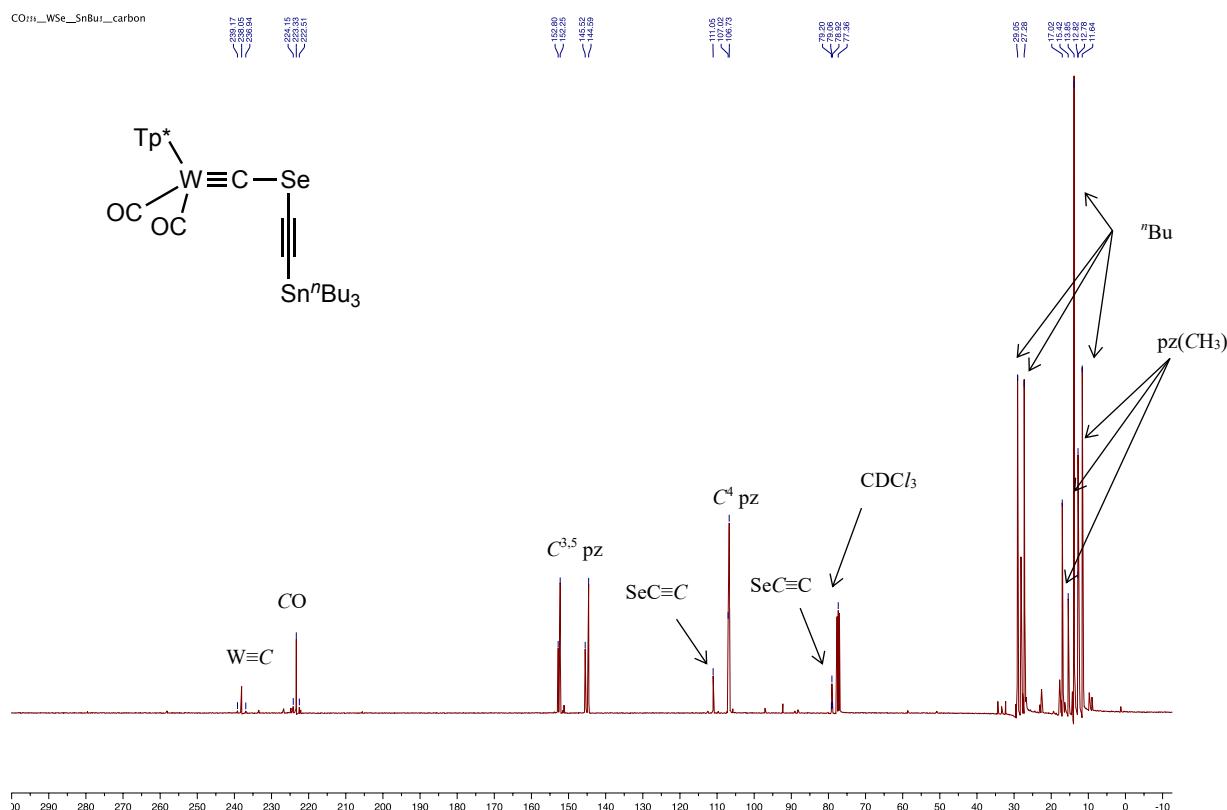
⁷⁷Se{¹H} NMR (76 MHz, CDCl₃, 25°C, δ) of compound **4.13**.

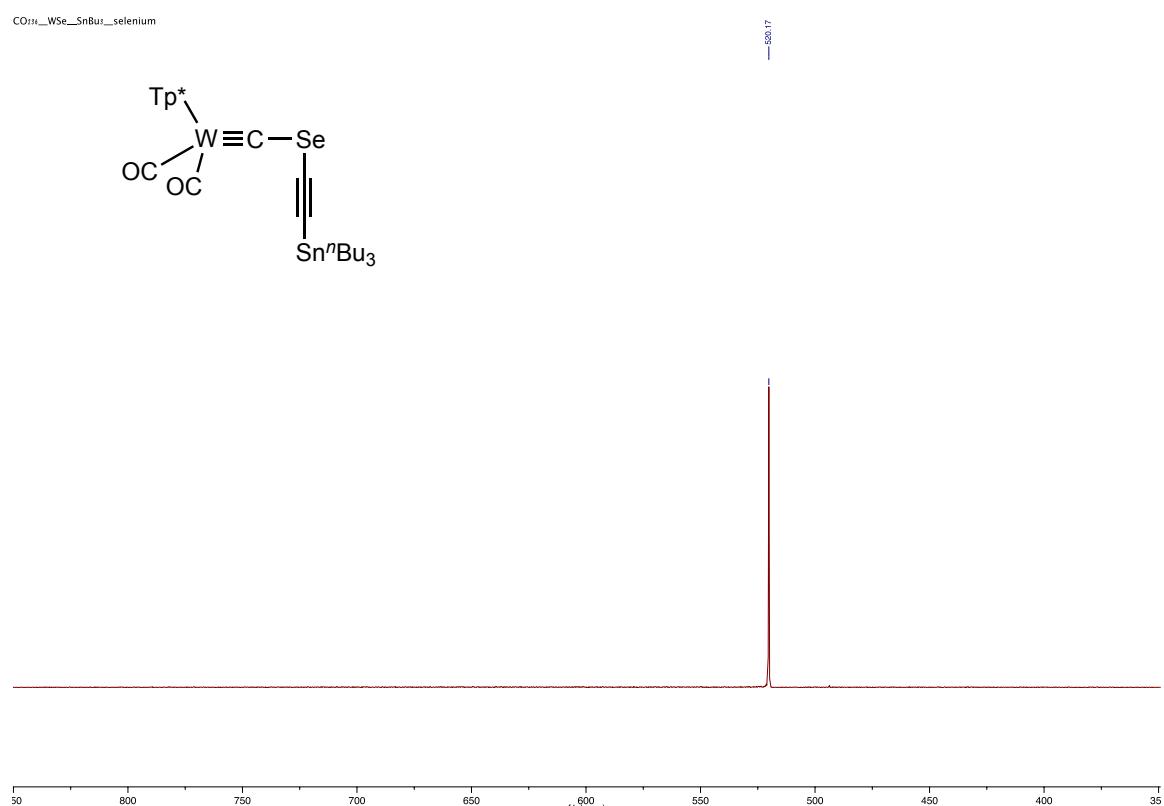


³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound **4.13**.

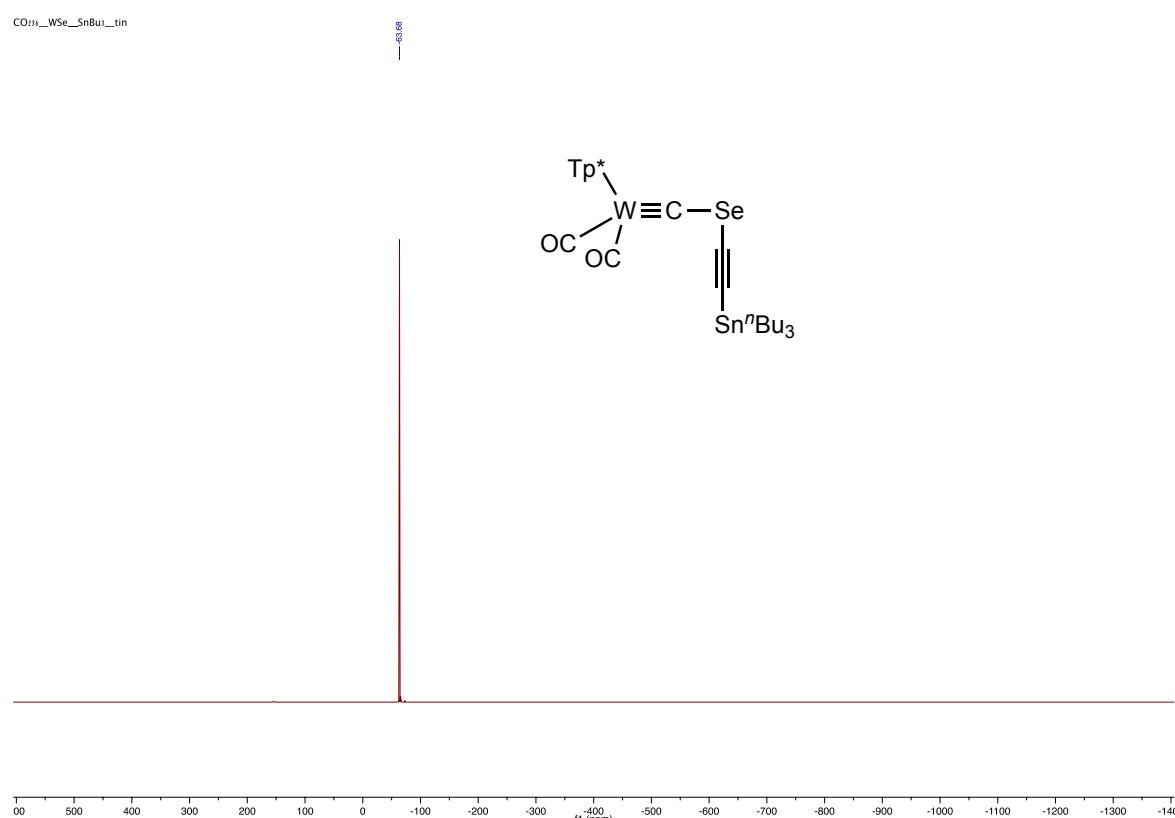


^{195}Pt NMR spectrum (86 MHz, $CDCl_3$, 25°C, δ) of compound 4.13.

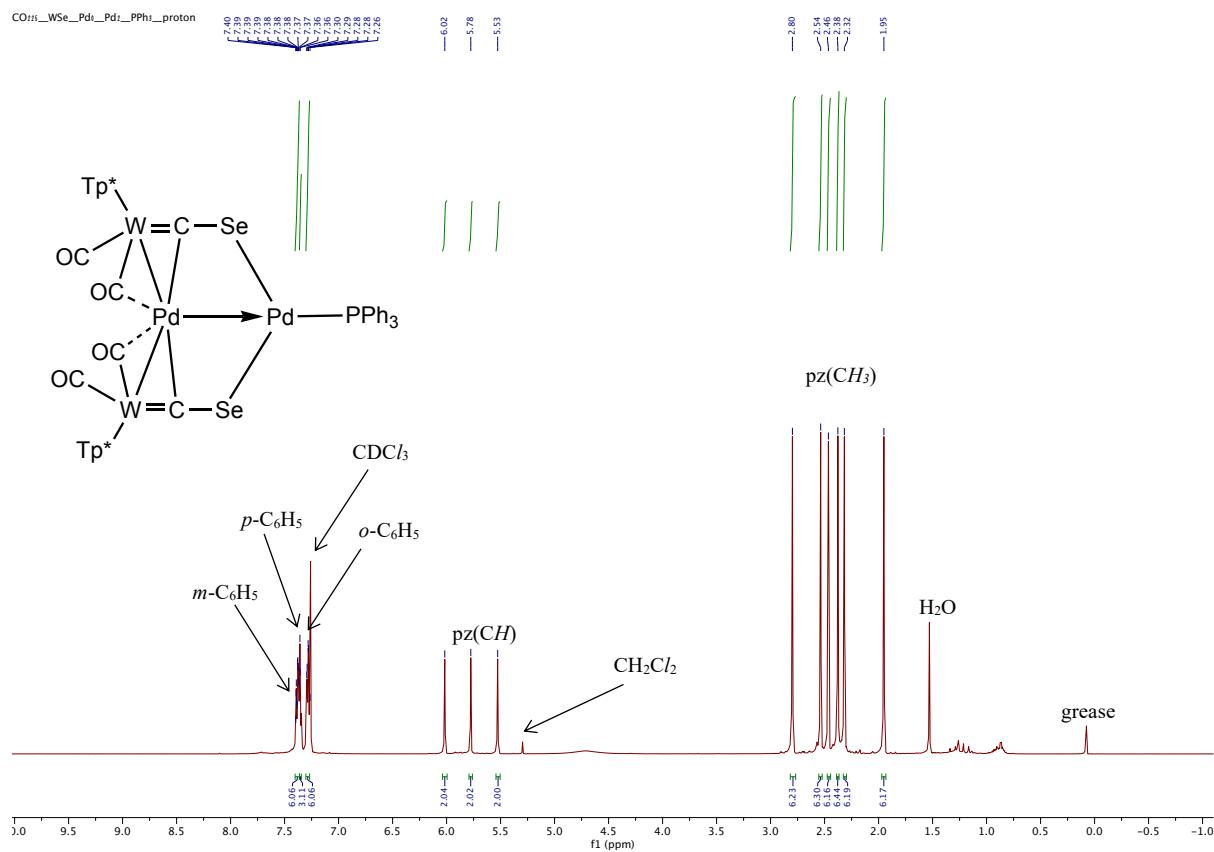
 ^1H NMR spectrum (400 MHz, CDCl_3 , 25°C , δ) of compound 4.14. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C , δ) of compound 4.14.



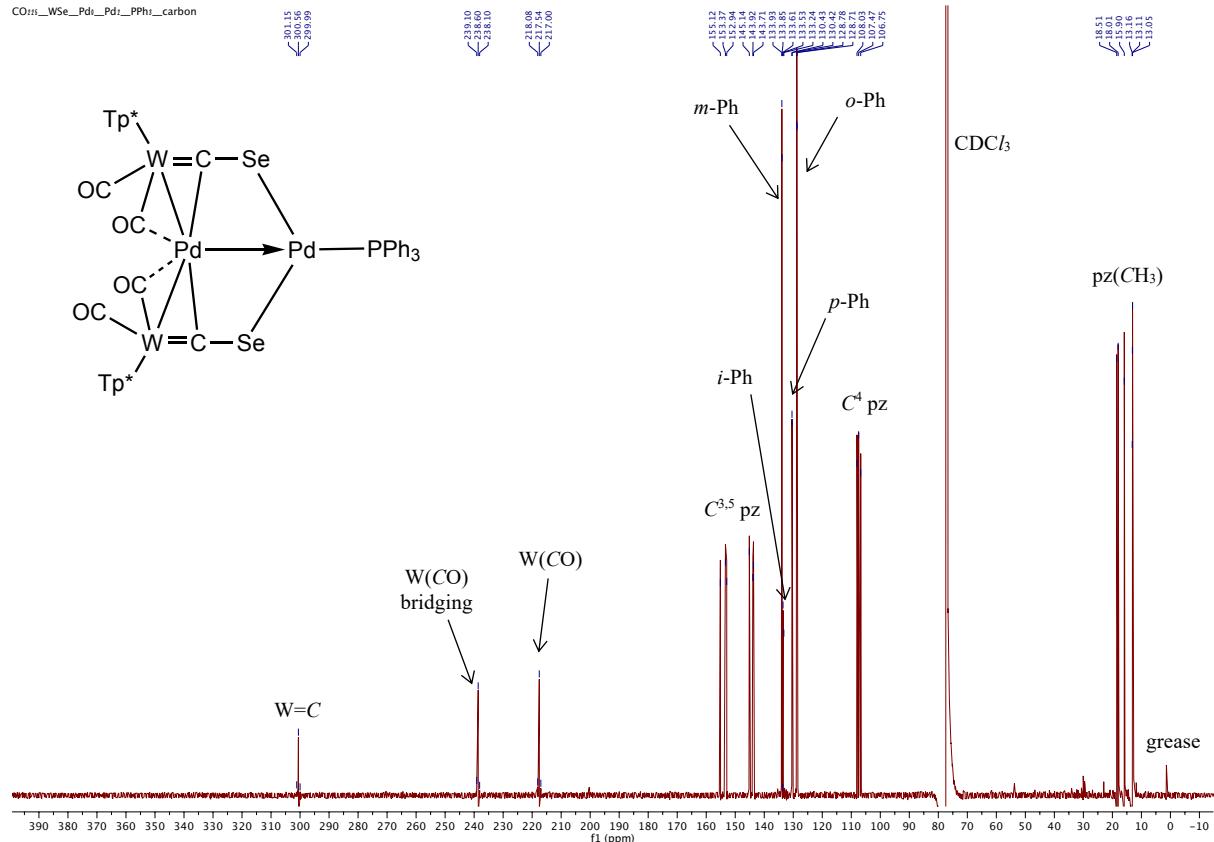
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **4.14**.



¹¹⁹Sn NMR spectrum (149 MHz, CDCl₃, 25°C) of compound **4.14**.



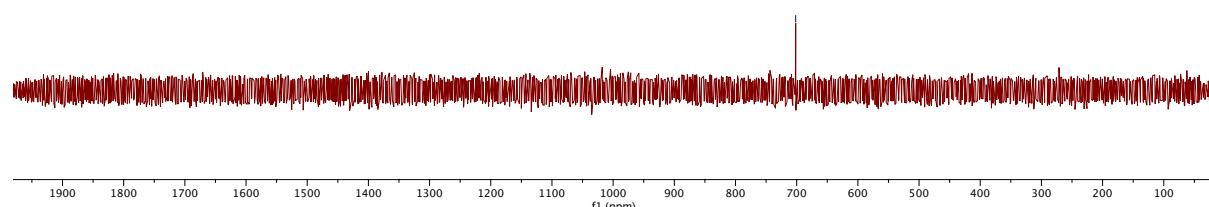
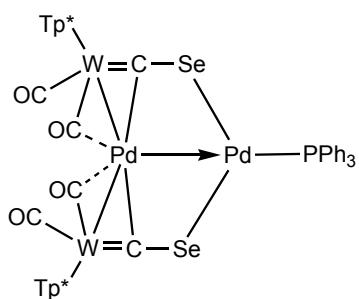
^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 4.15.



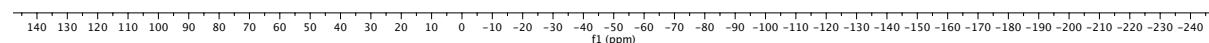
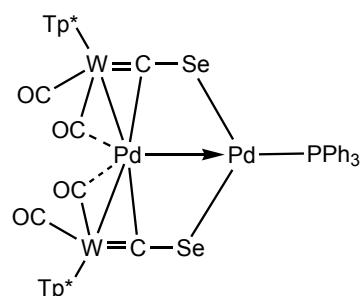
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 4.15.

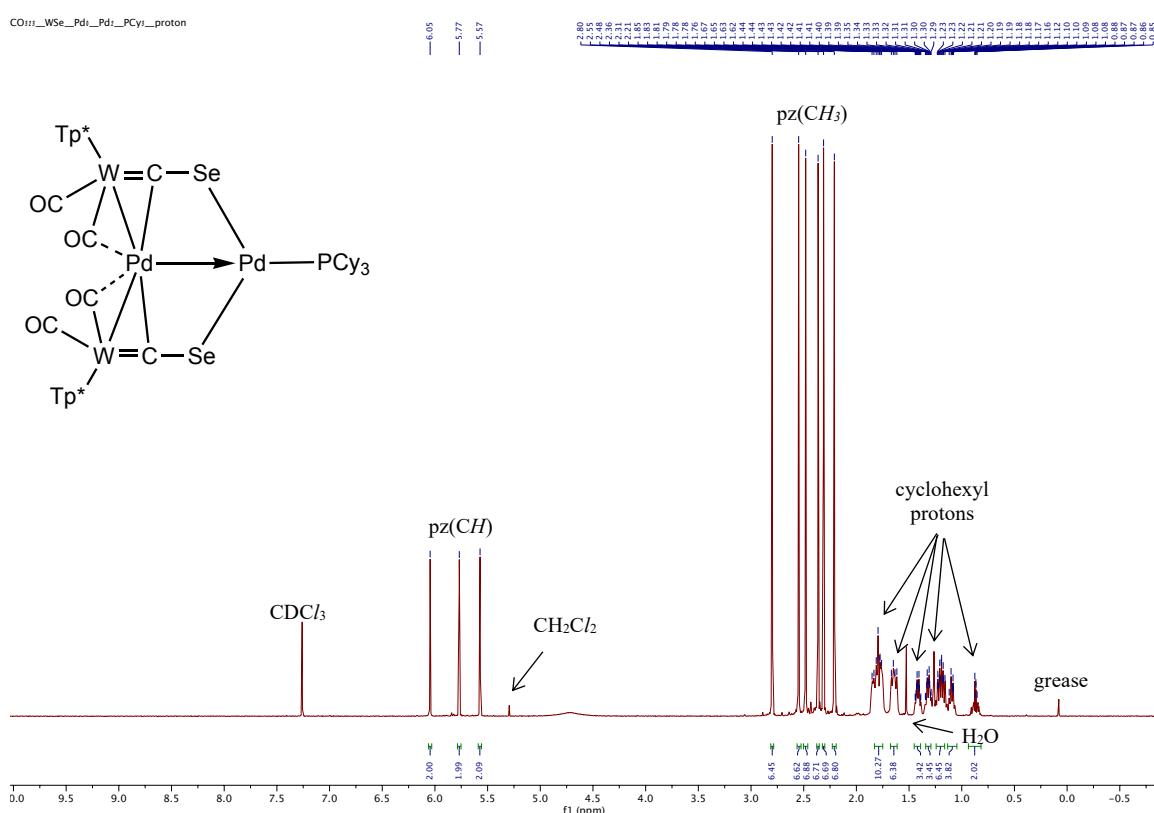
CO₂₁₅_WSe_Pd₁_Pd₂_PPh₃_selenium

701.69

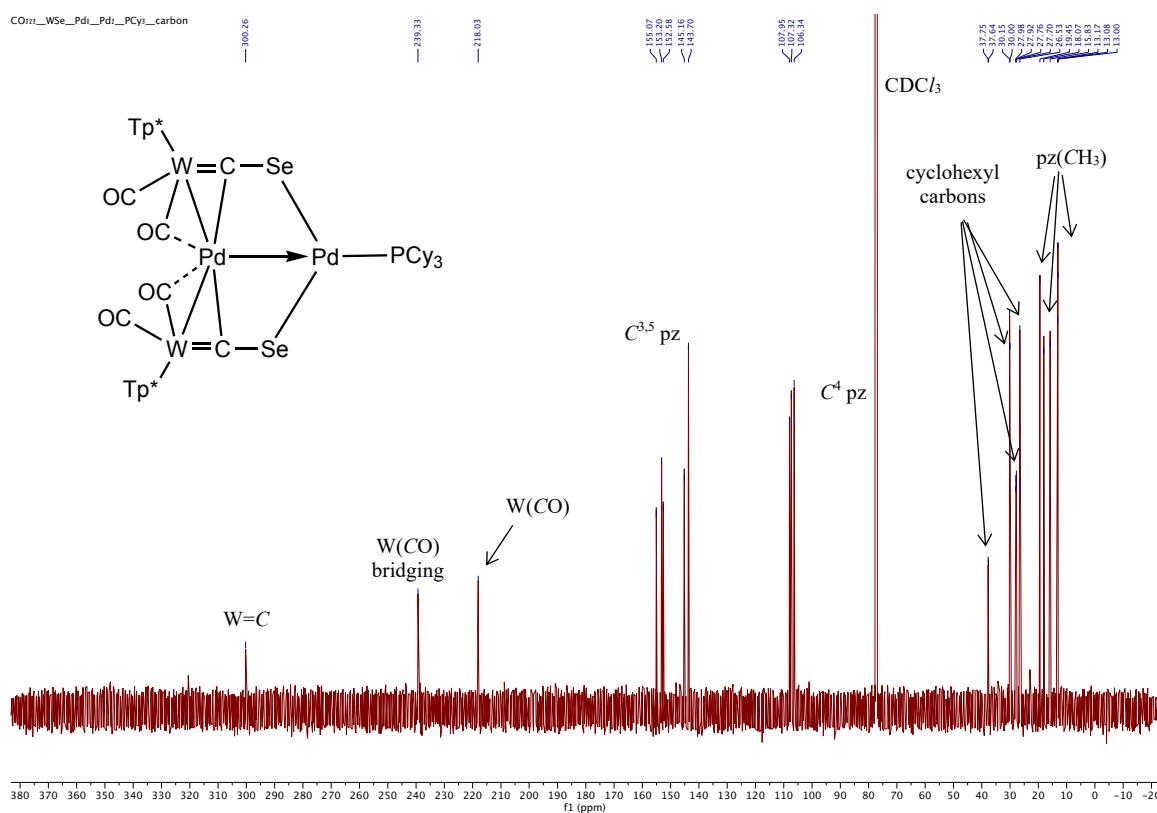
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.15.CO₂₁₅_WSe_Pd₁_Pd₂_PPh₃_phosphorus

— 19.44

³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.15.



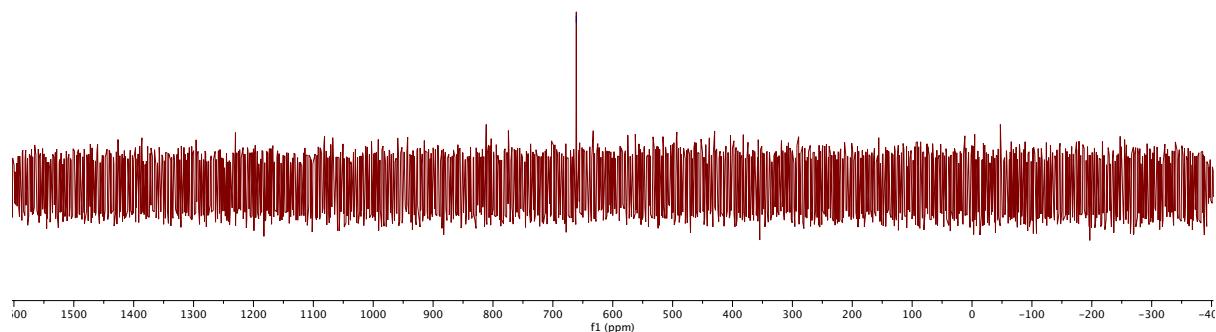
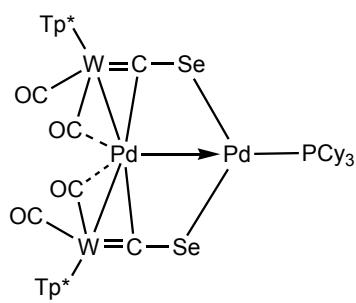
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.16.



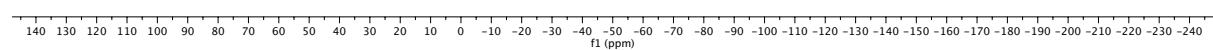
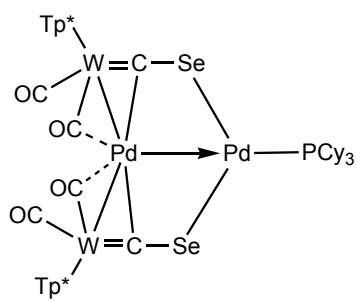
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 4.16.

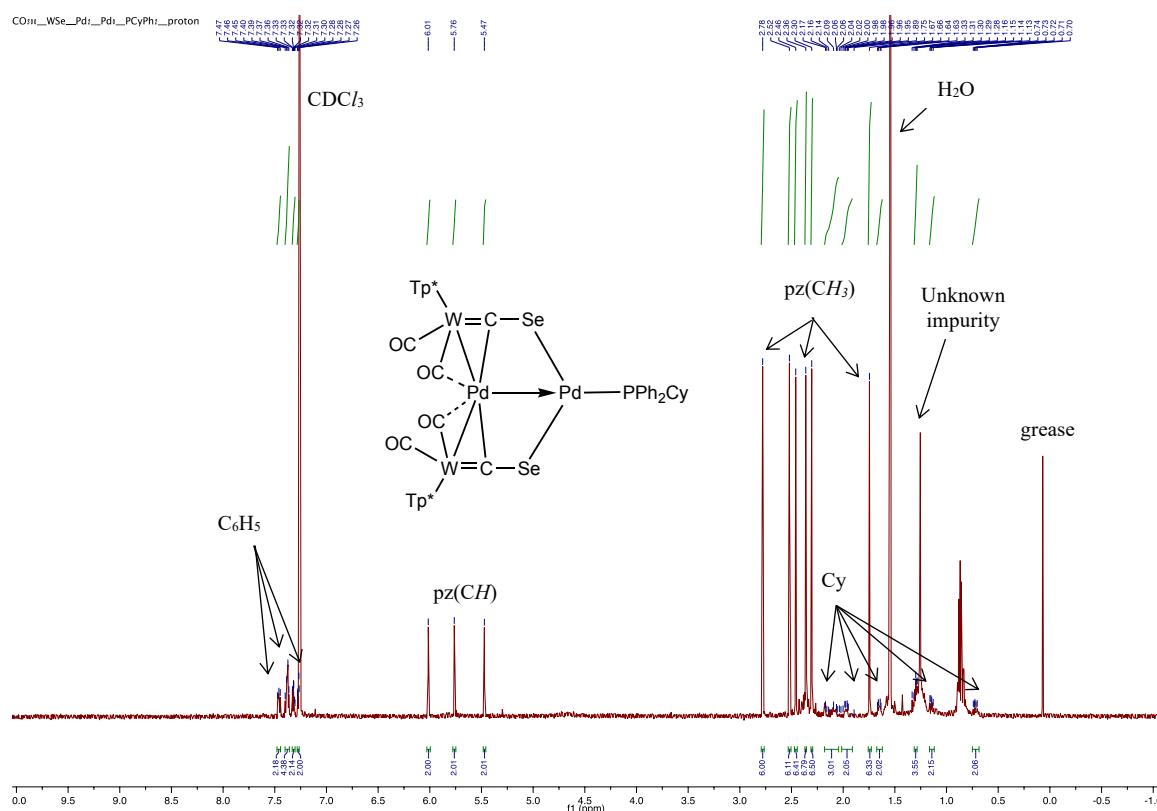
CO₂1_WSe_Pd1_Pd1_PCy1_selenium

— 656.89 —

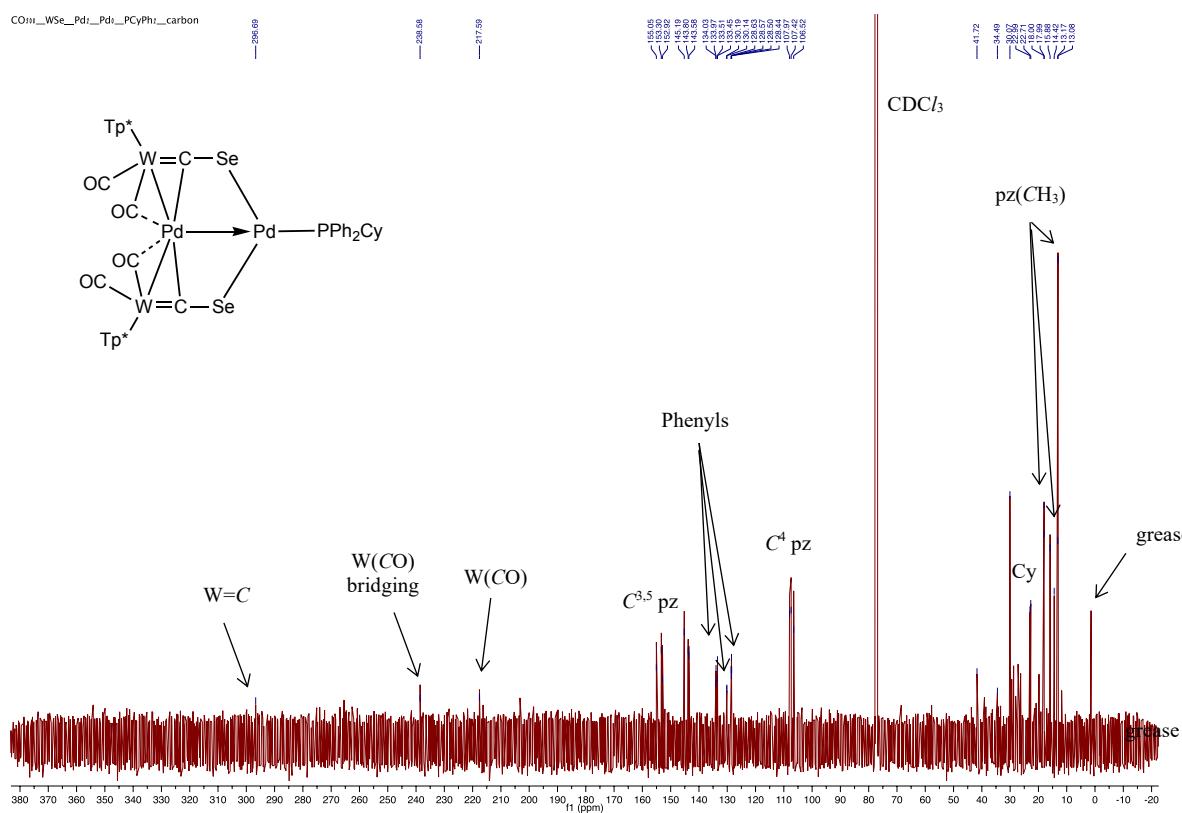
 $^{77}\text{Se}\{\text{H}\}$ NMR spectrum (134 MHz, CDCl_3 , 25°C, δ) of compound 4.16.CO₂1_WSe_Pd1_Pd1_PCy1_phosphorus

— 42.65 —

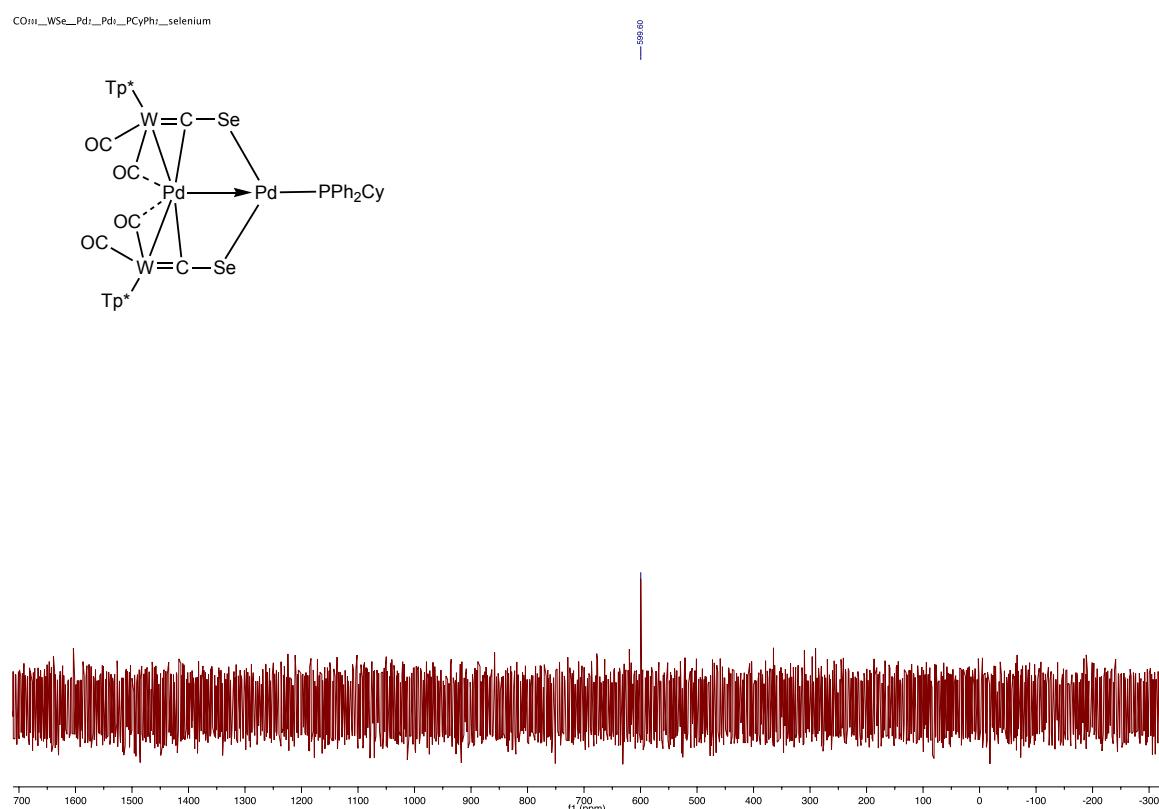
 $^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound 4.16.



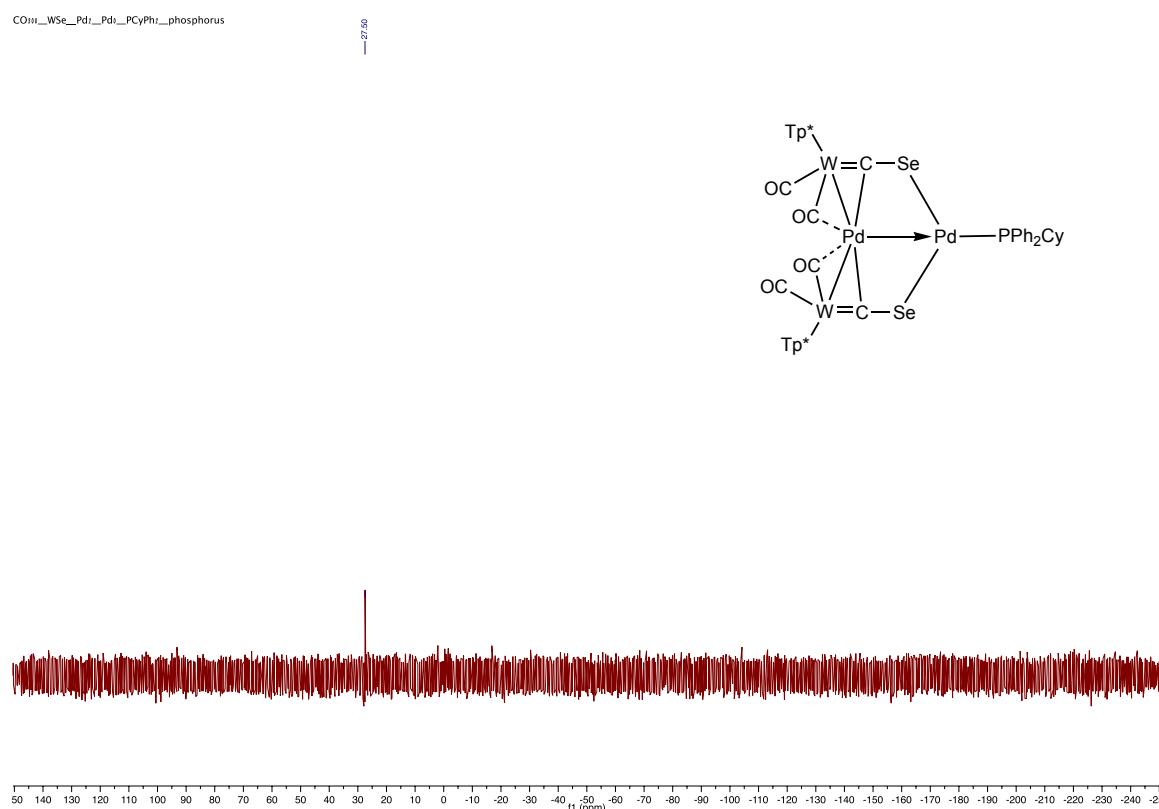
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 4.17.



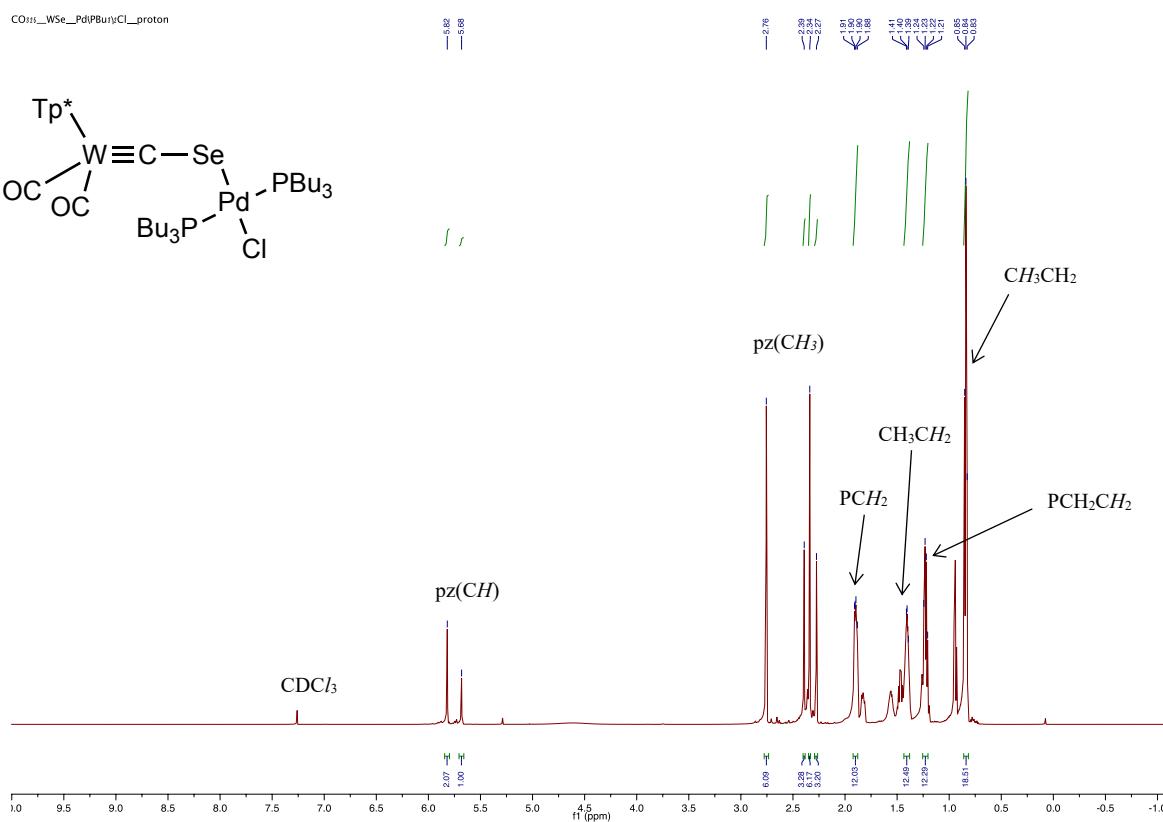
$^{13}\text{C}\{\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 4.17.



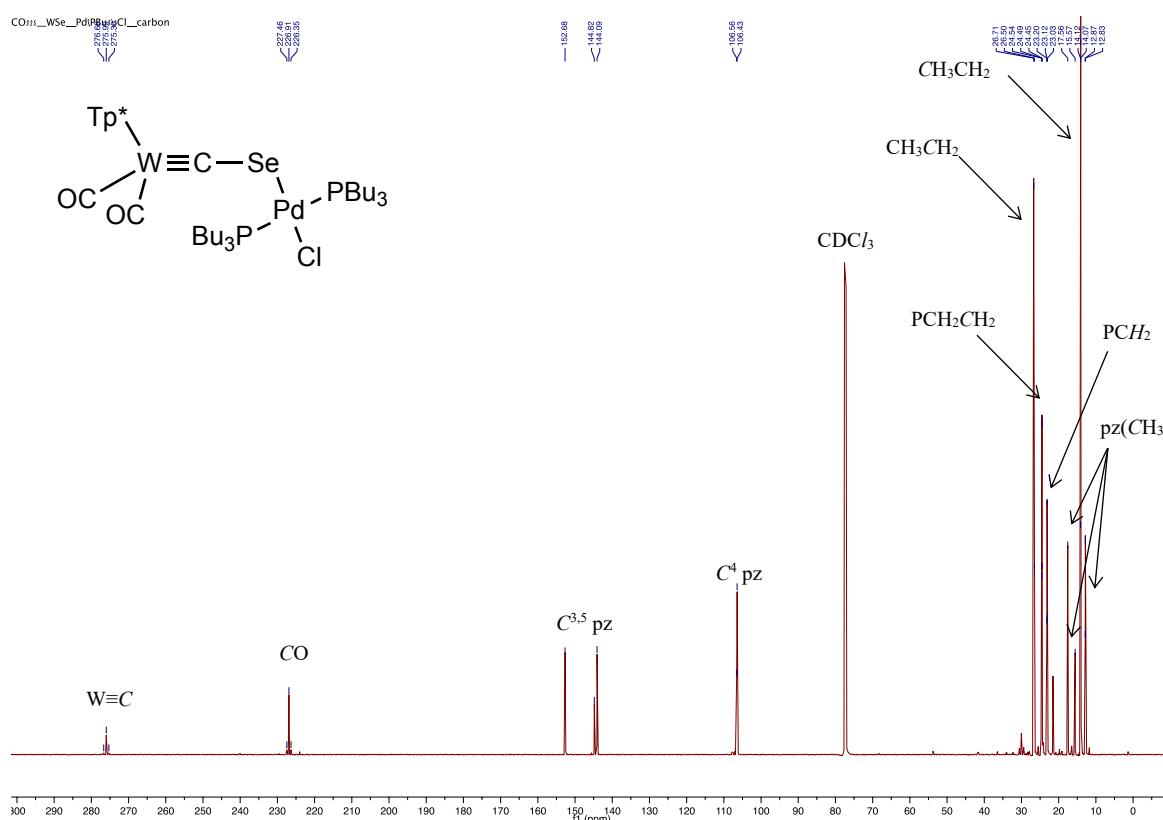
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound 4.17.



$^{31}\text{P}\{\text{H}\}$ NMR spectrum (283 MHz, CDCl_3 , 25°C, δ) of compound 4.17.



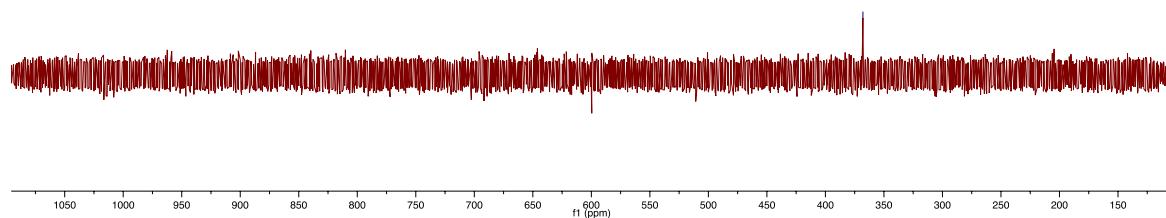
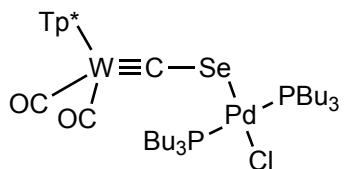
^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 4.18.



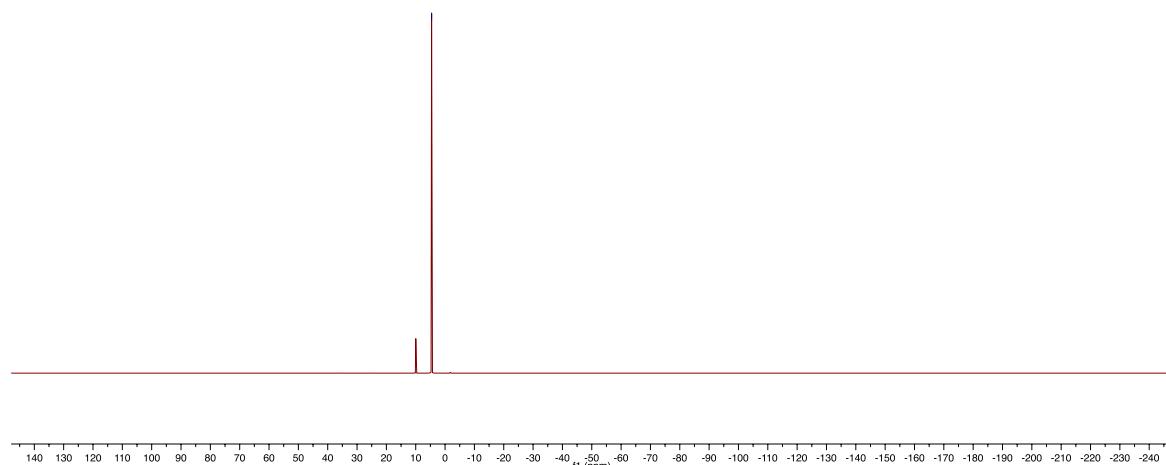
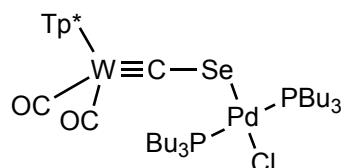
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 4.18.

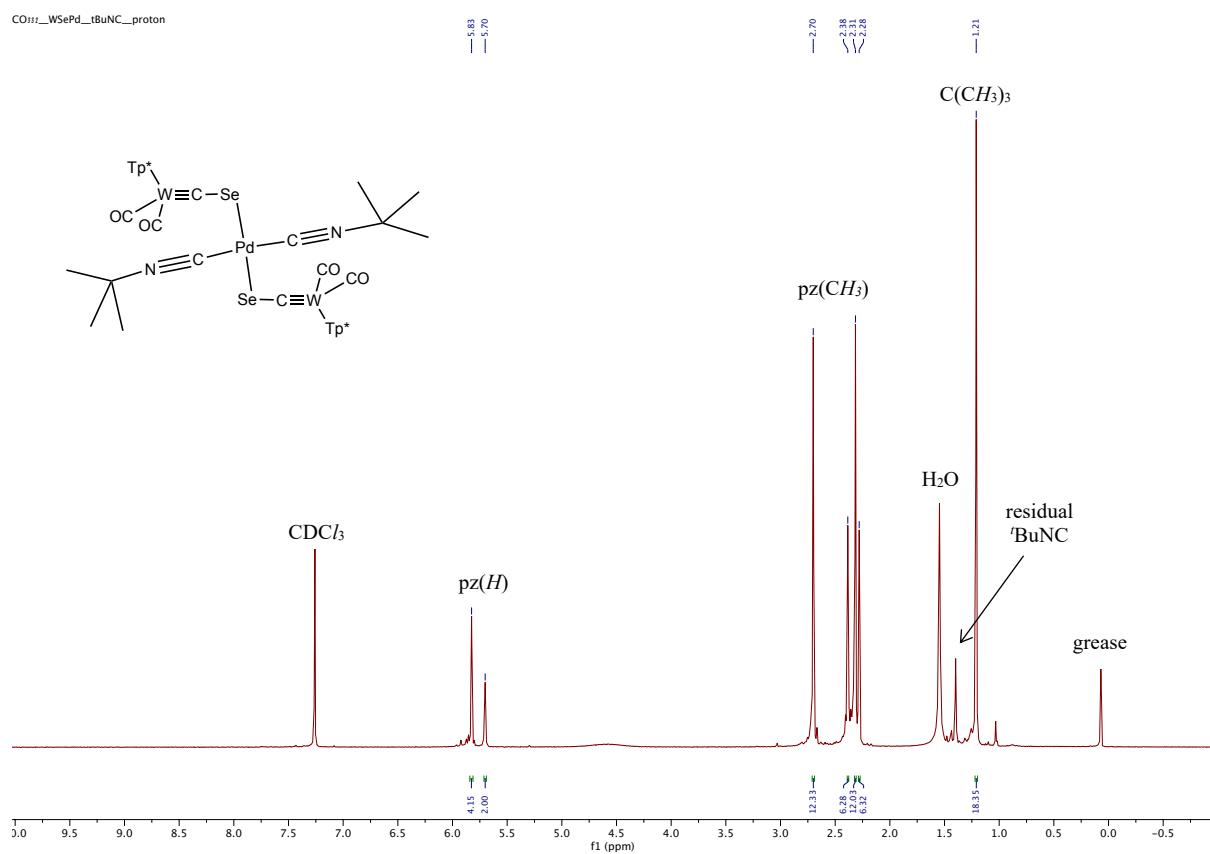
CO₂..._WSe...Pd(PBu₃)Cl...selenium

— 387.95

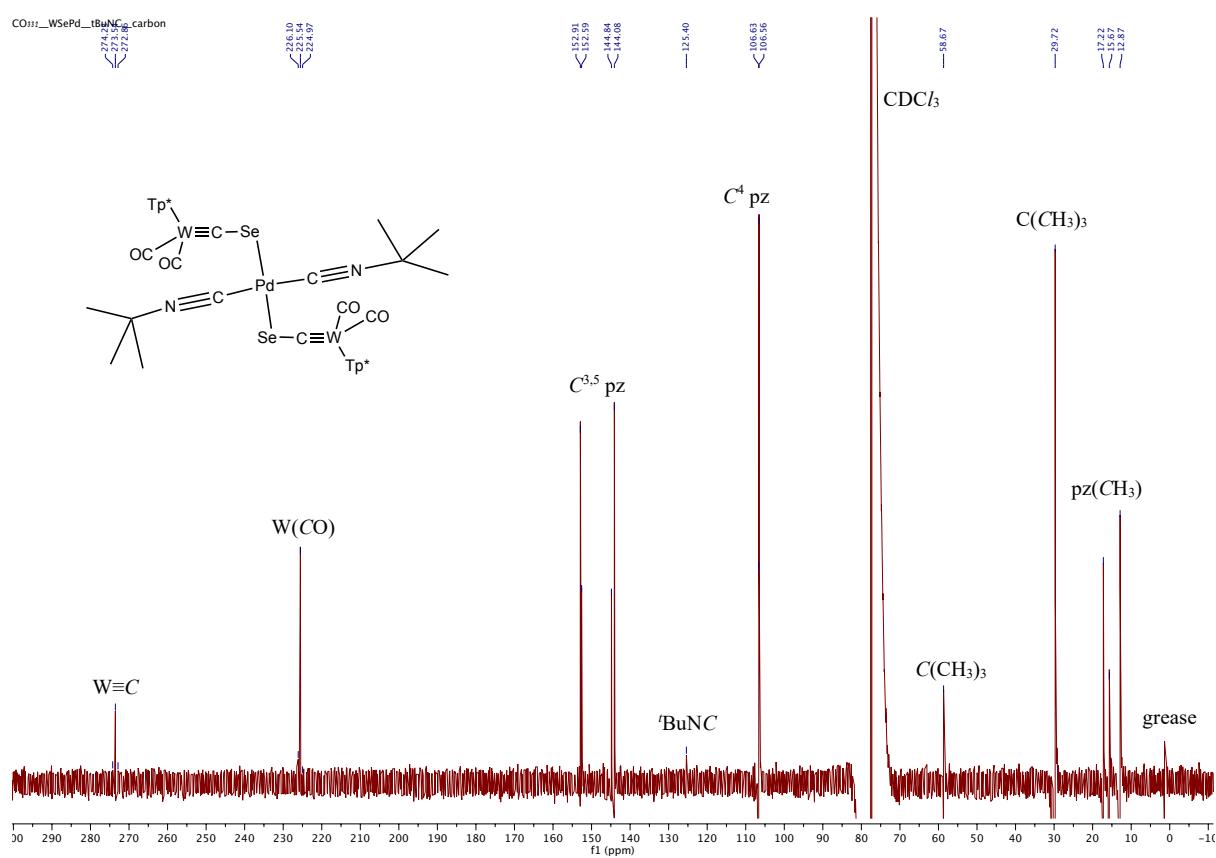
CO₂..._WSe...Pd(PBu₃)Cl...phosphorus

— 4.59





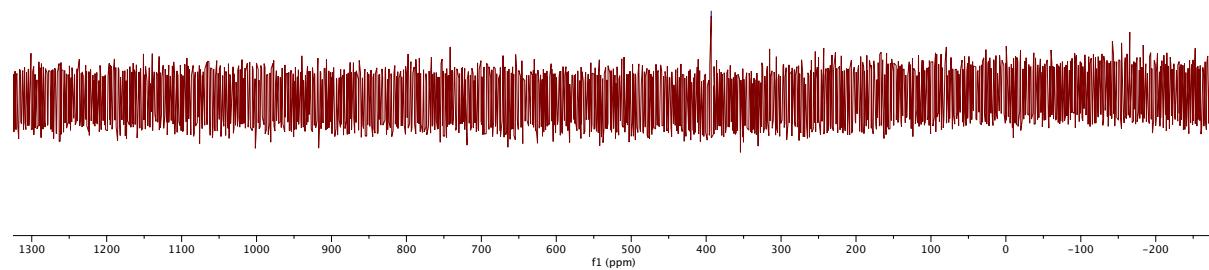
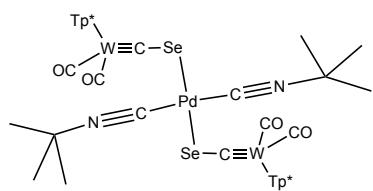
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 4.19.



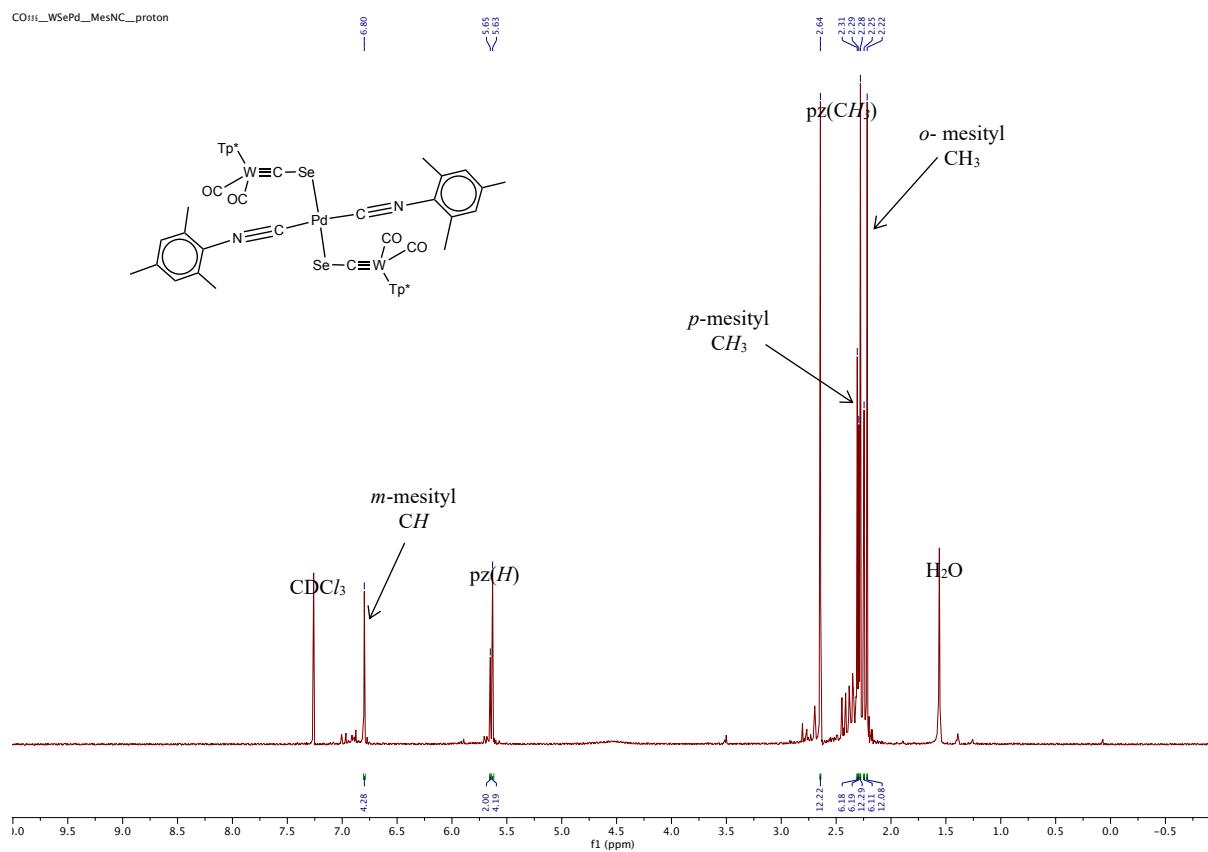
$^{13}\text{C}\{\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 4.19.

CO111_WSePd_tBuNC_selenium

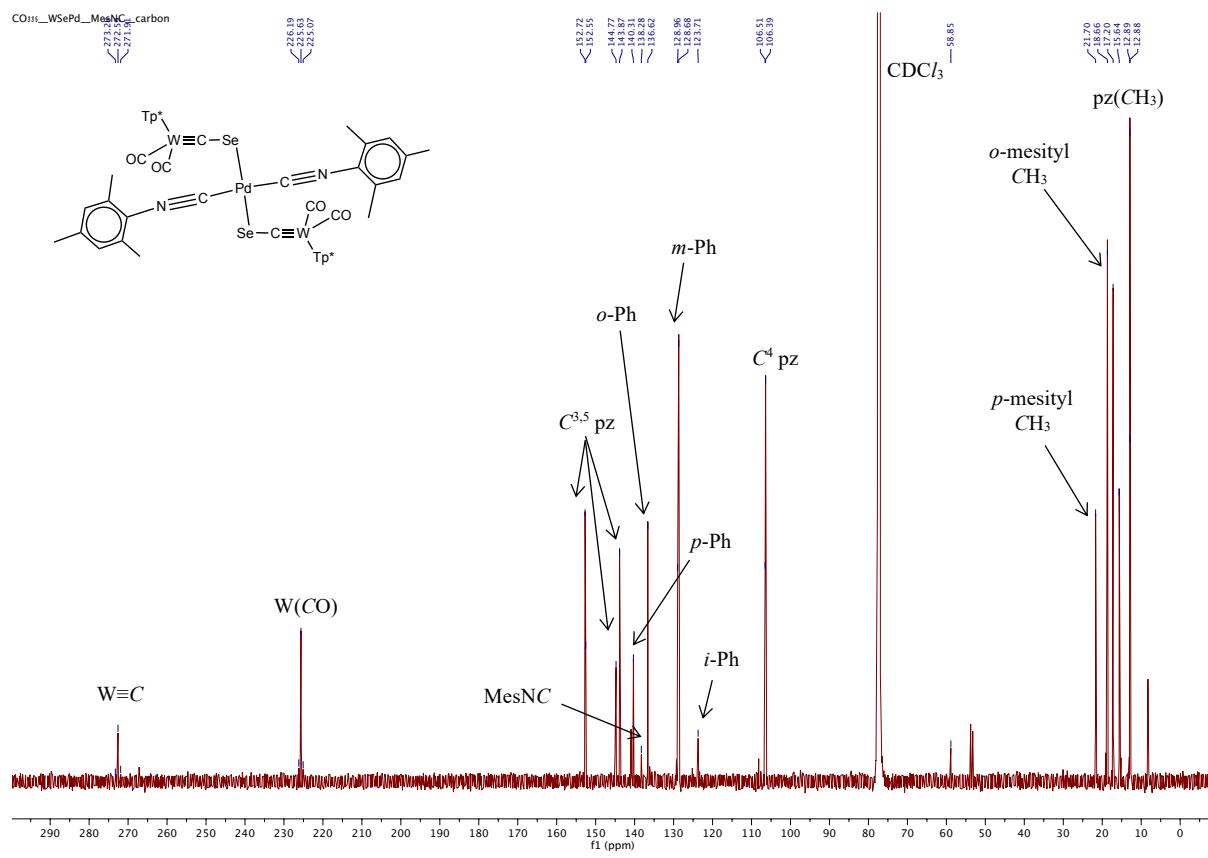
393.27



⁷⁷Se{¹H} NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound **4.19**.

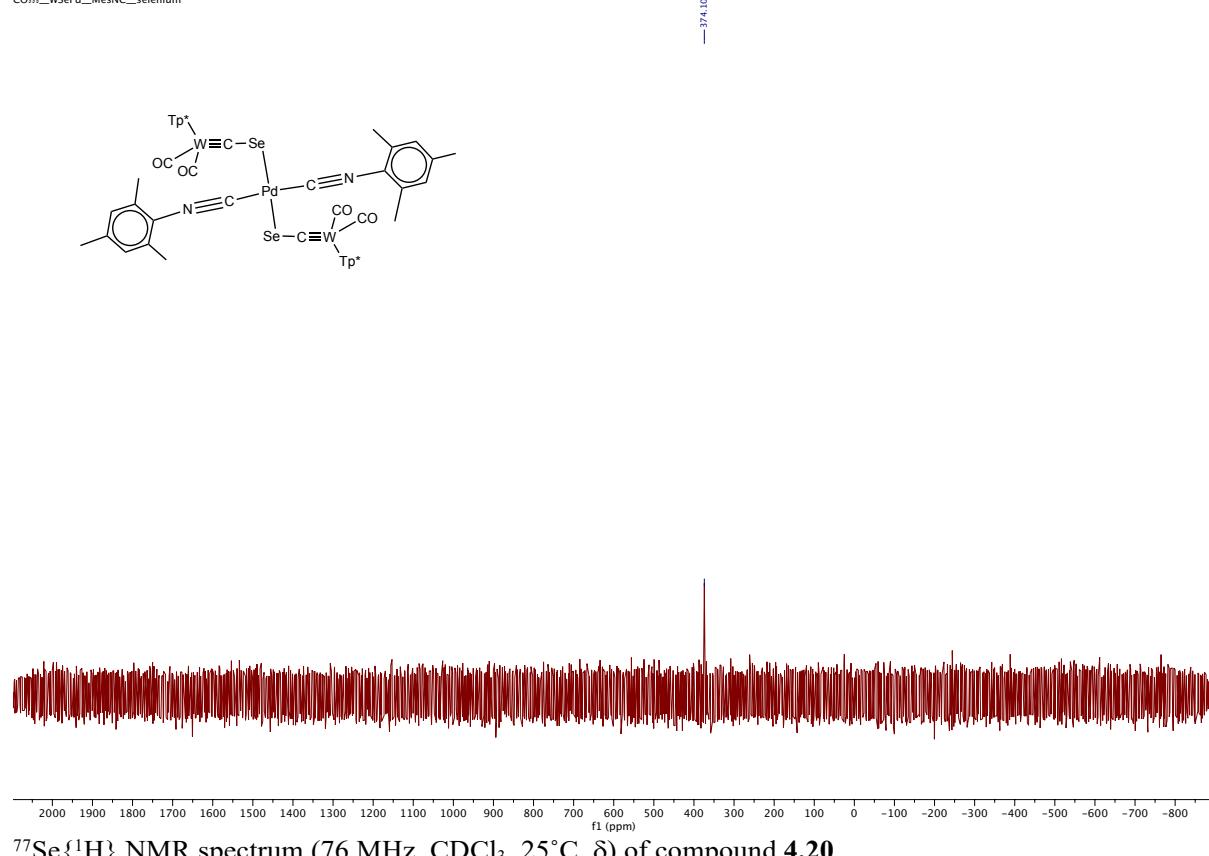


^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 4.20.

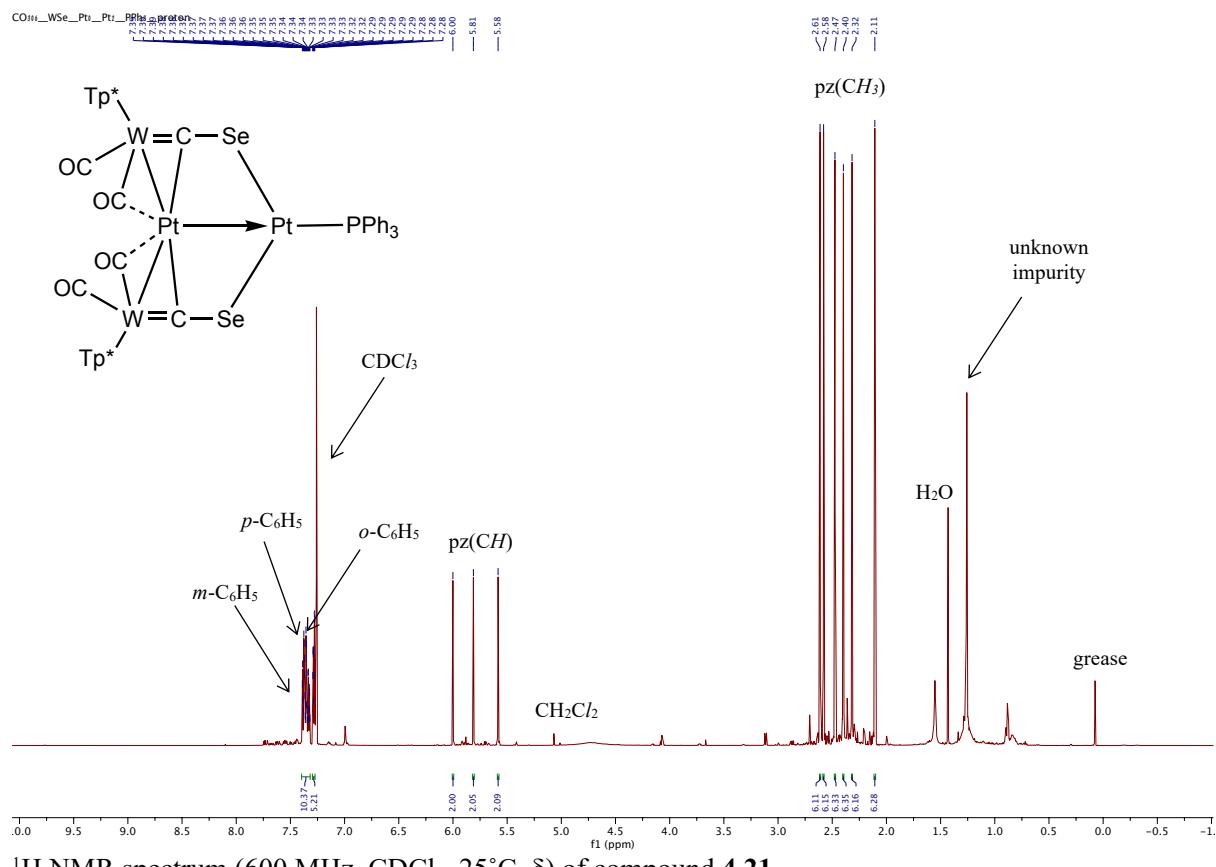
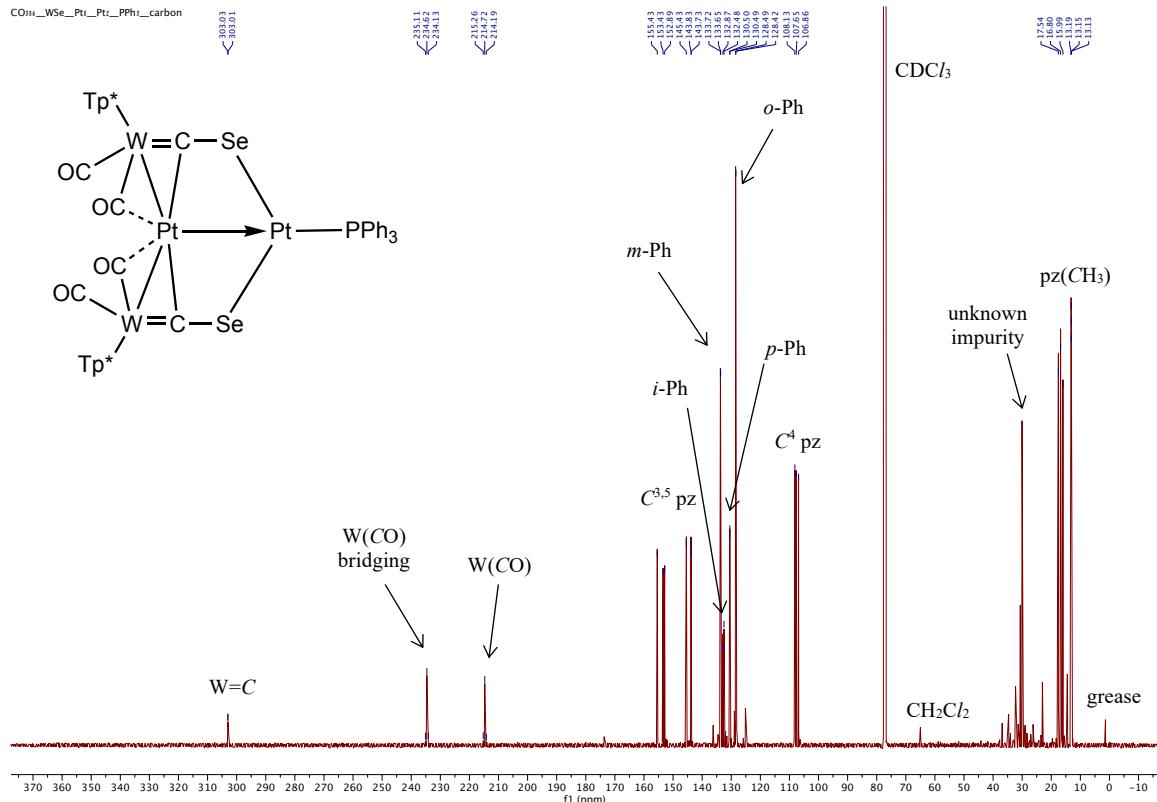


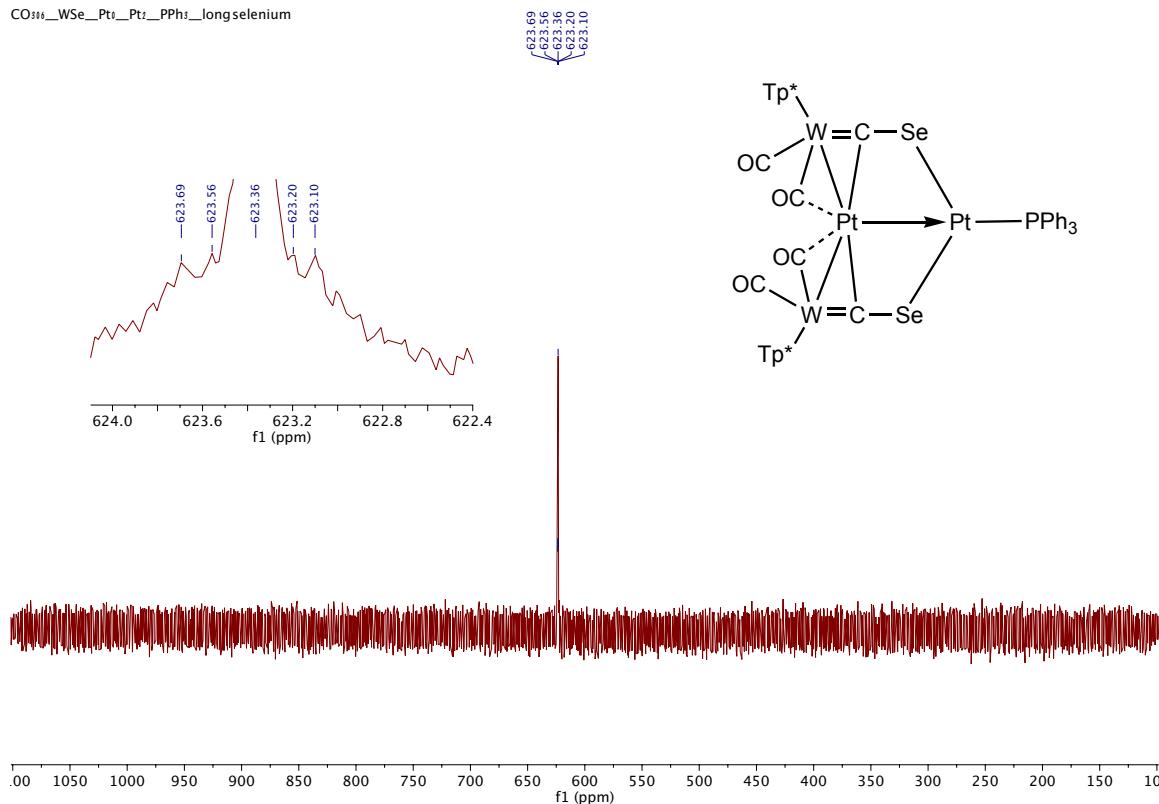
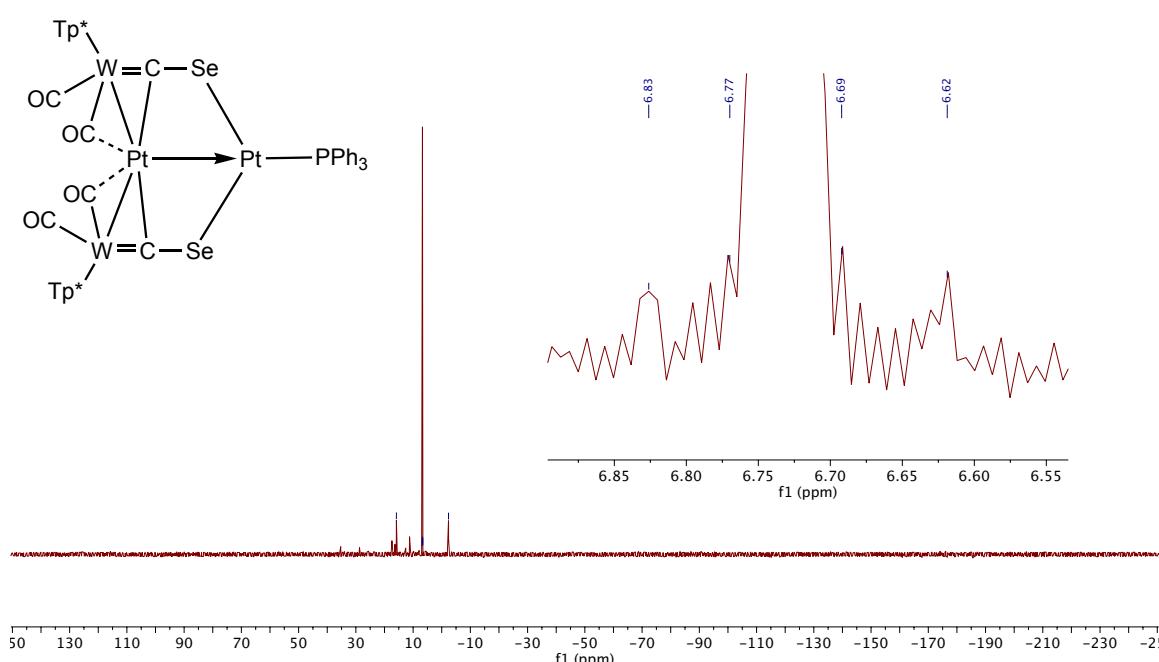
$^{13}\text{C}\{\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 4.20.

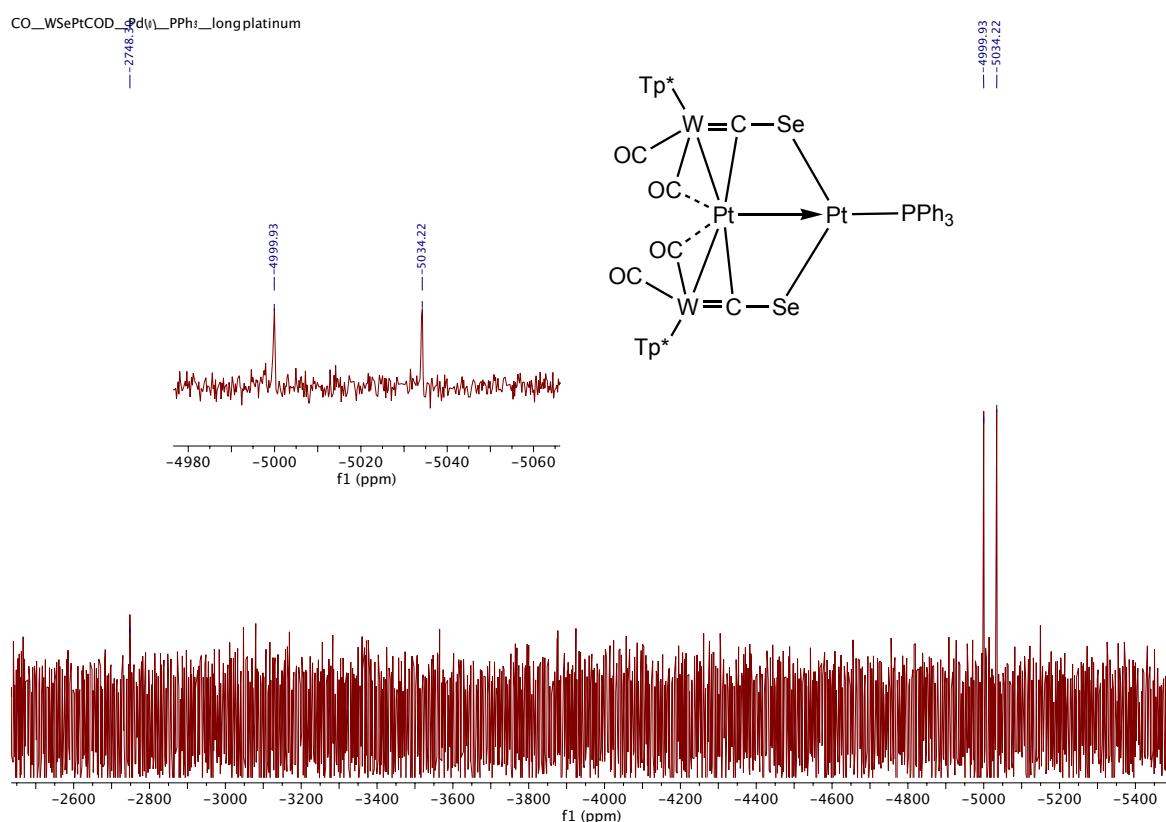
CO111_WSePd_MesNC_selenium



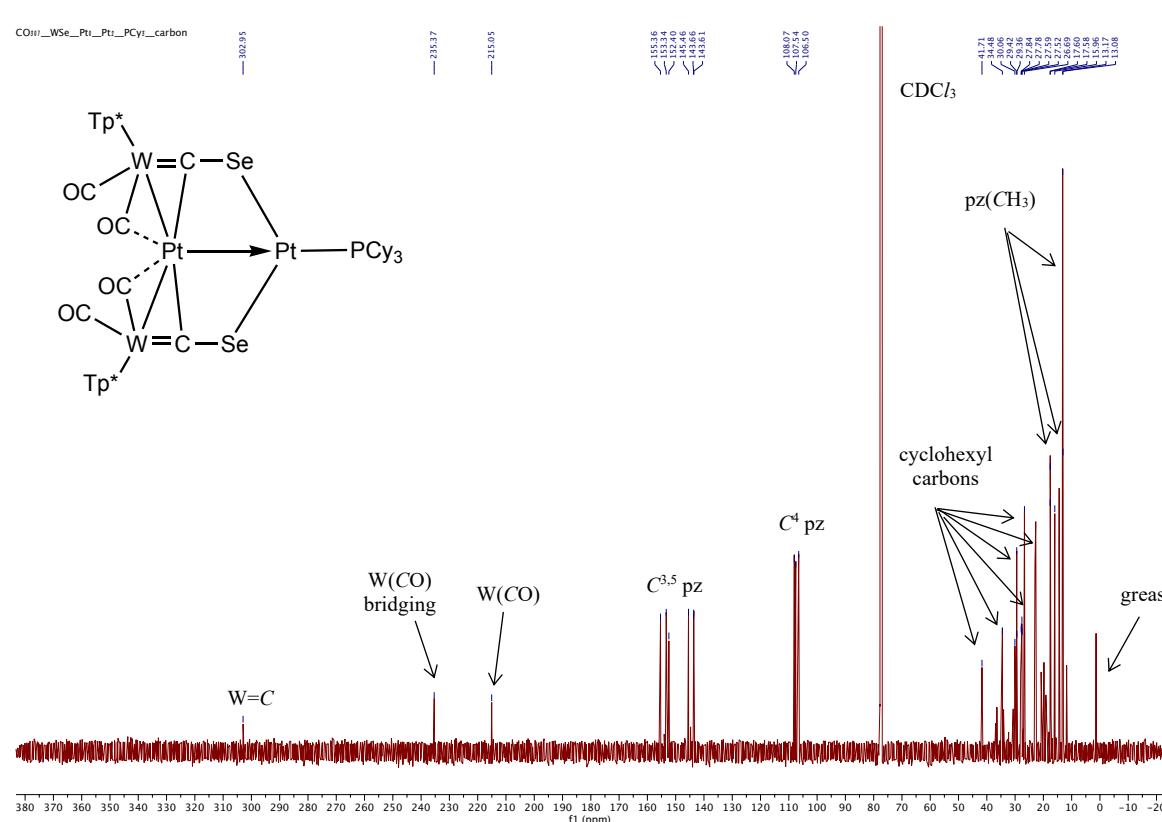
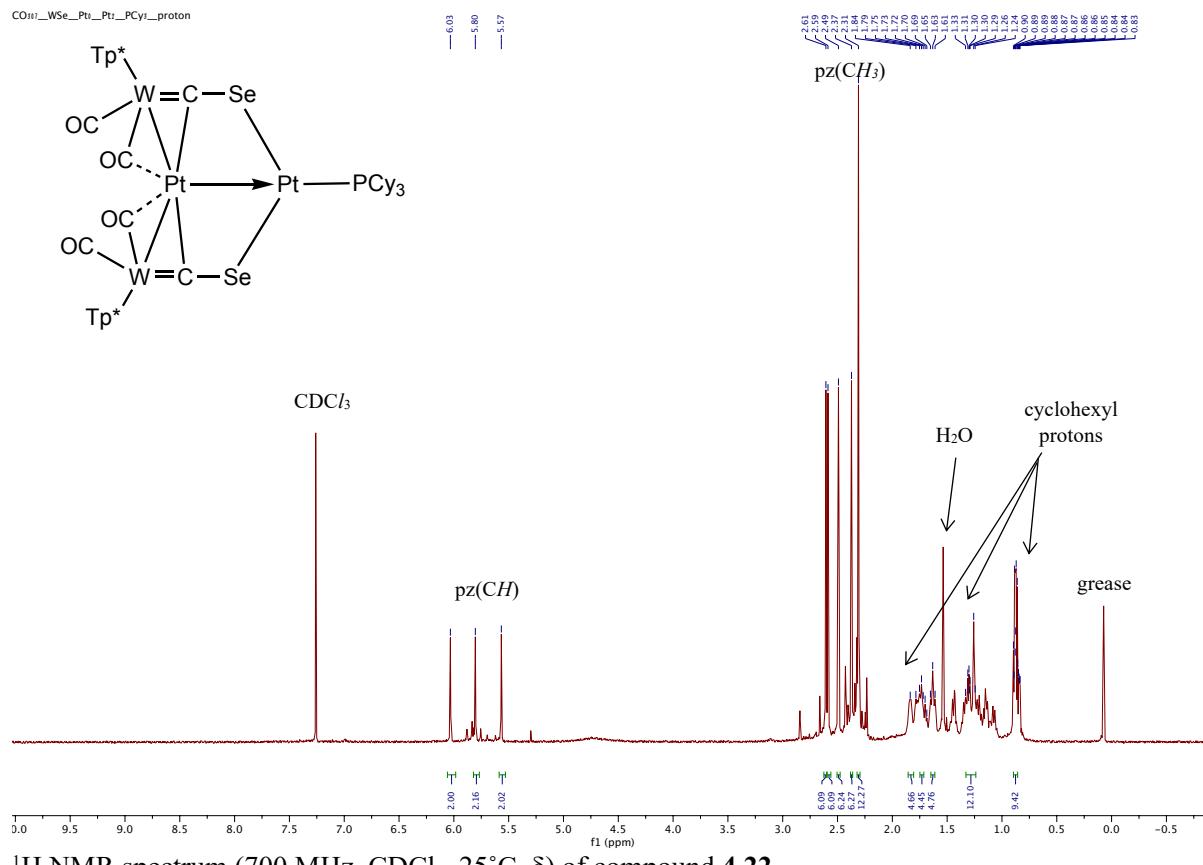
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound **4.20**.

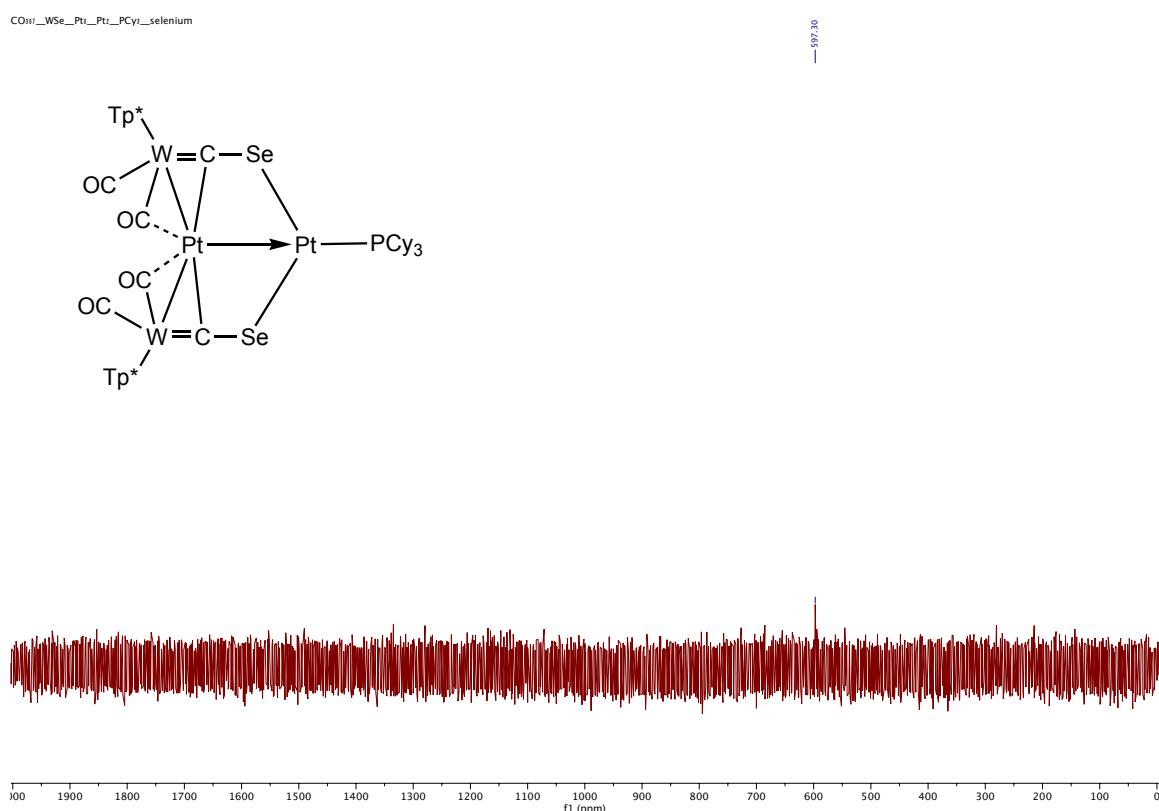
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 4.21.¹³C{¹H} NMR (151 MHz, CDCl₃, 25°C, δ) spectrum of compound 4.21.

CO₂—WSe—Pt—Pt—PPh₃ long selenium $^{77}\text{Se}\{\text{H}\}$ NMR (134 MHz, CDCl_3 , 25°C, δ) of compound 4.21.CO₂—WSe—Pt—Pt—PPh₃ long phosphorus $^{31}\text{P}\{\text{H}\}$ NMR (283 MHz, CDCl_3 , 25°C, δ) of compound 4.21.

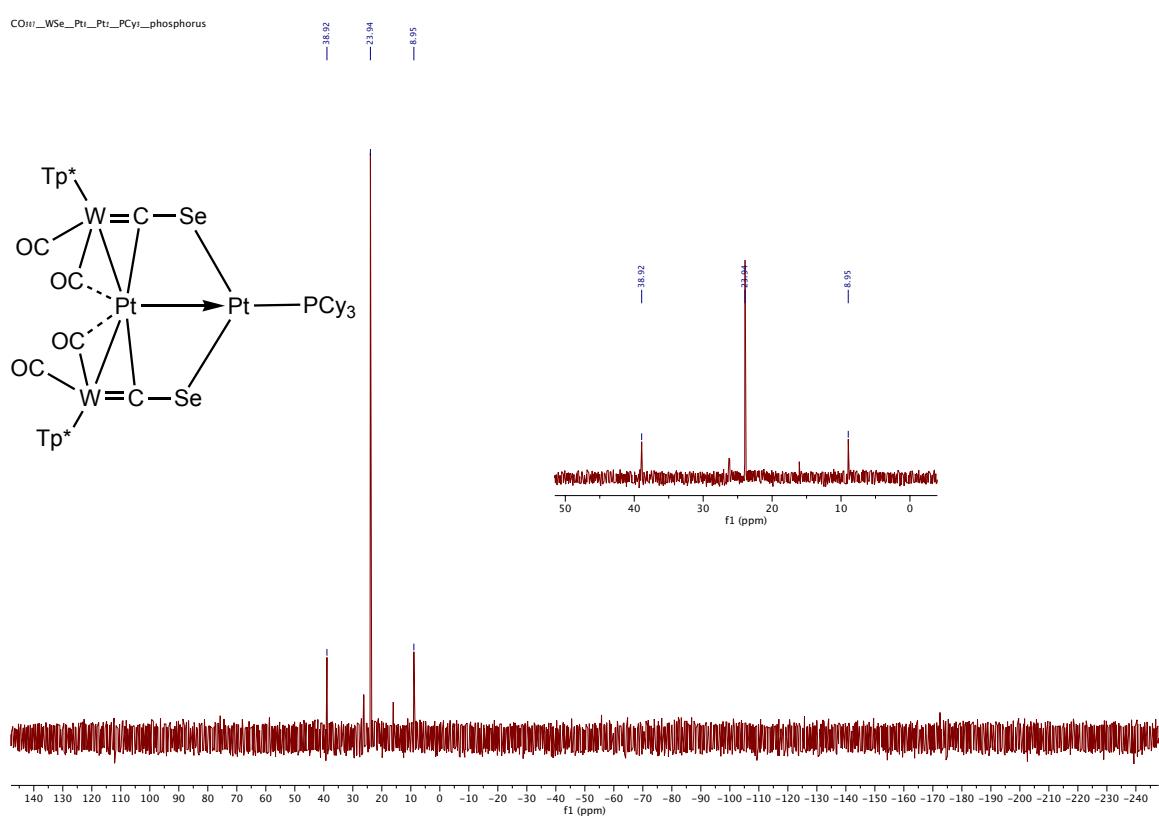


¹⁹⁵Pt NMR (150 MHz, CDCl₃, 25°C, δ) of compound 4.21.

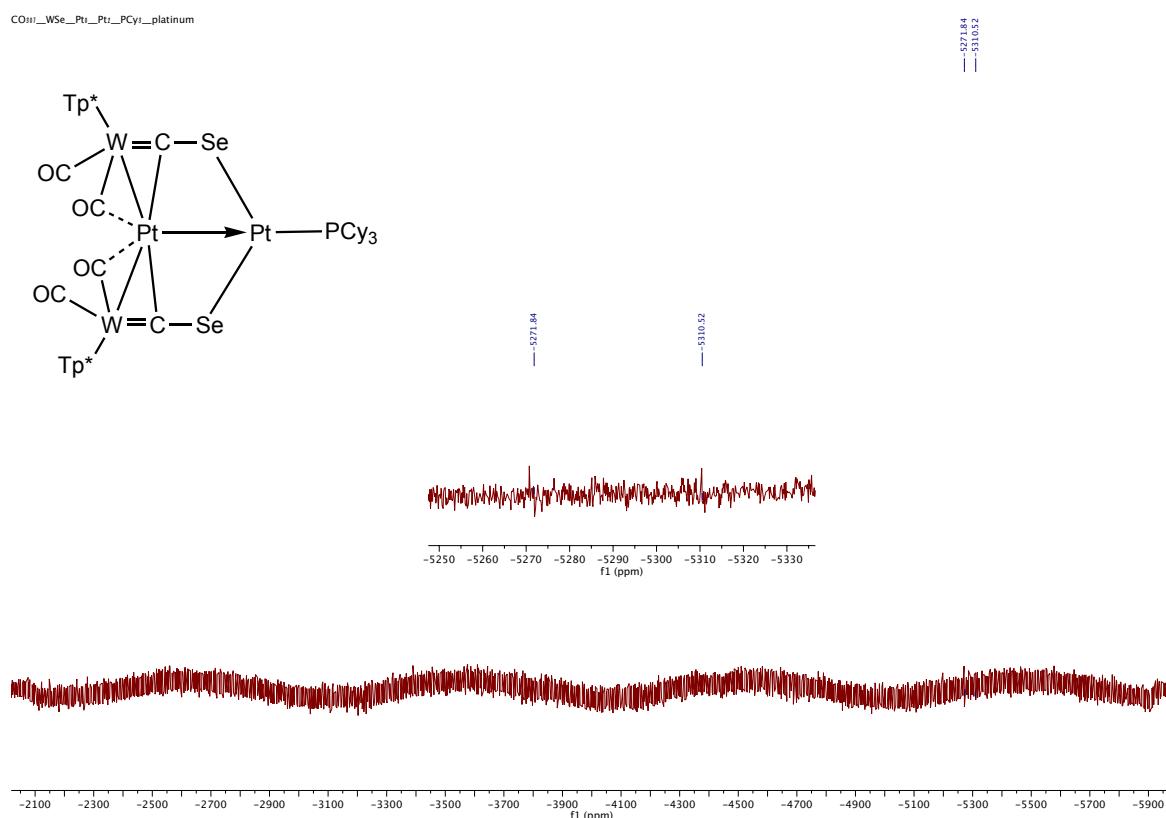
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 4.22.



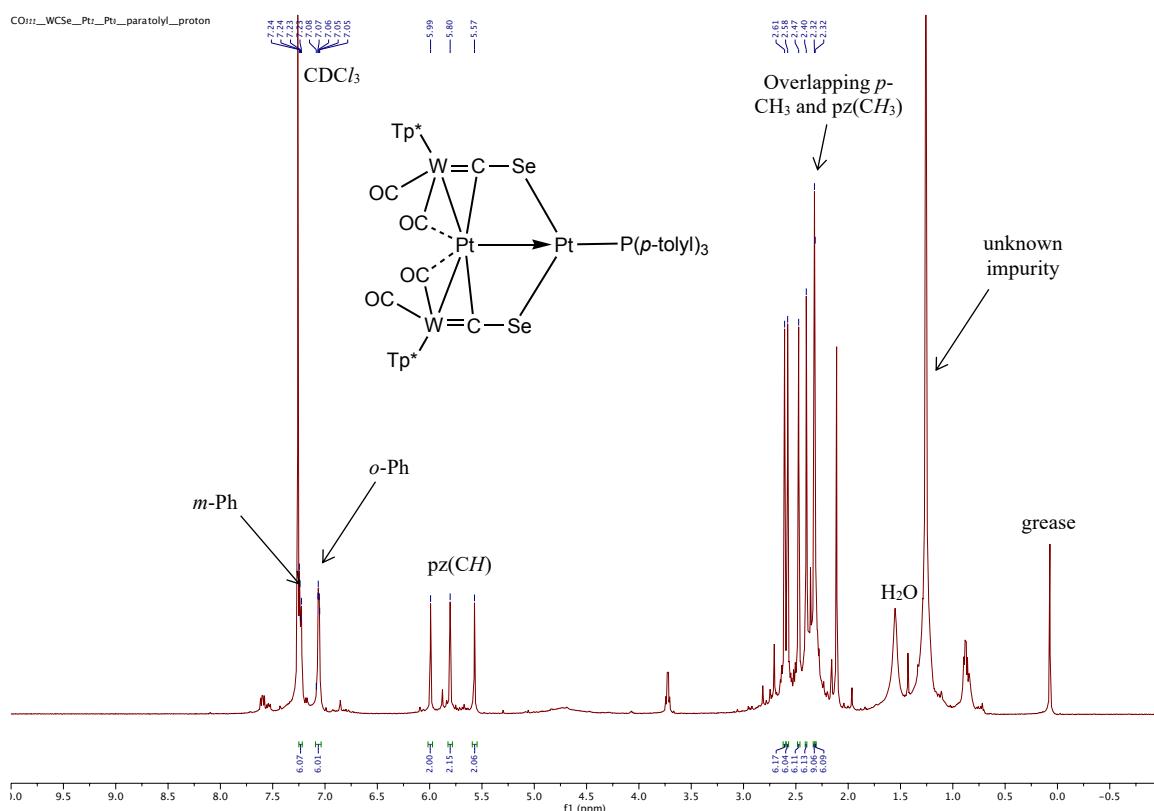
⁷⁷Se{¹H} NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound 4.22.



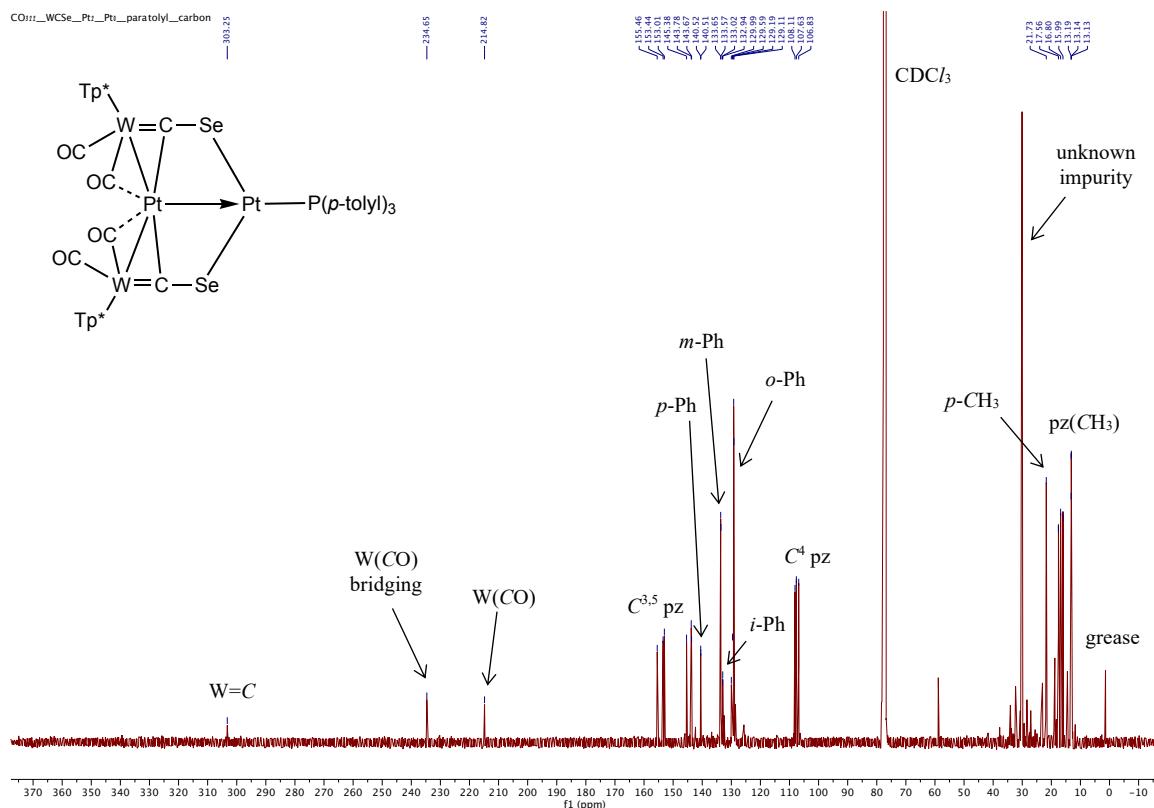
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.22.



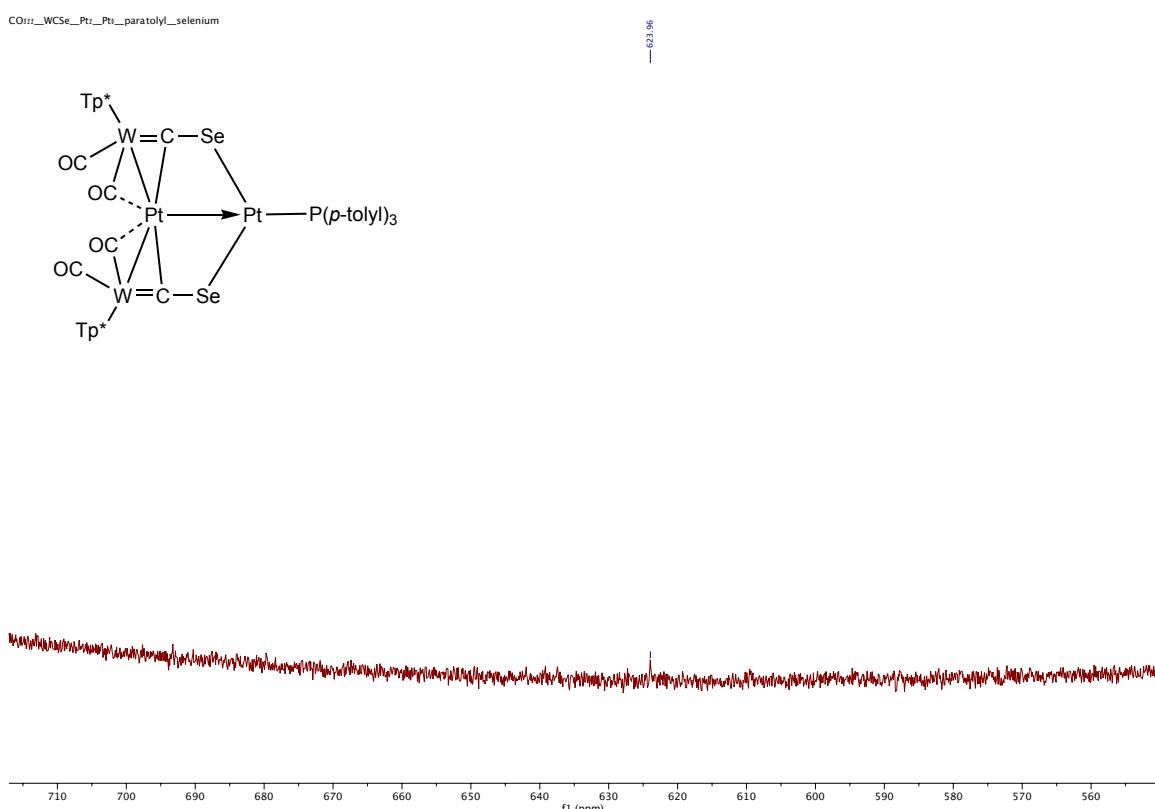
¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 4.22.



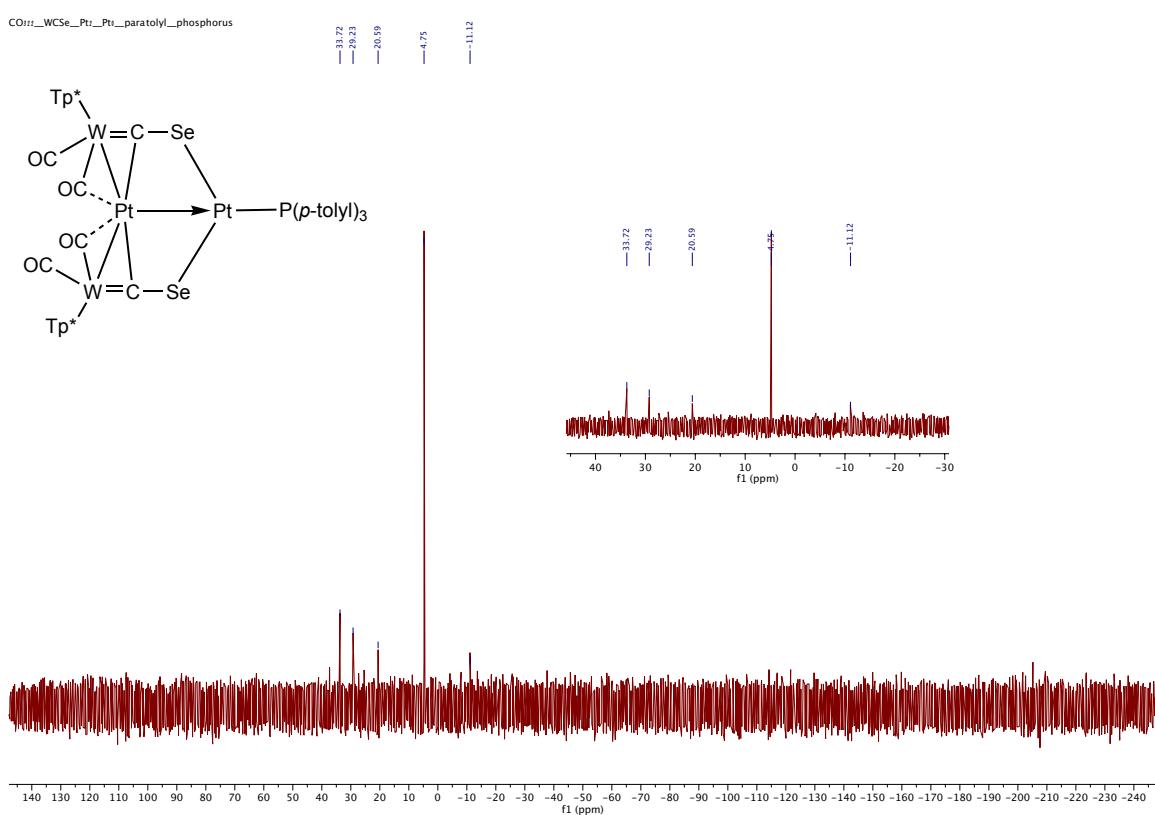
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 4.23.



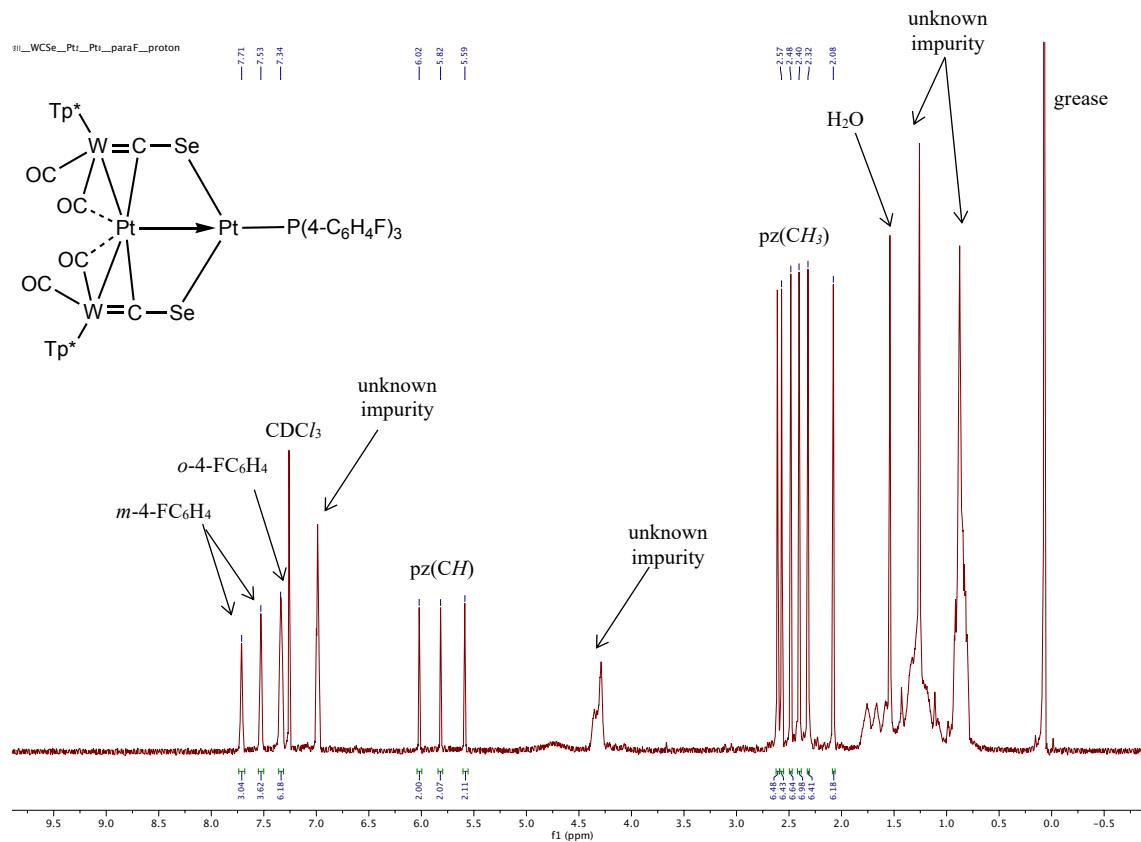
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 4.23.



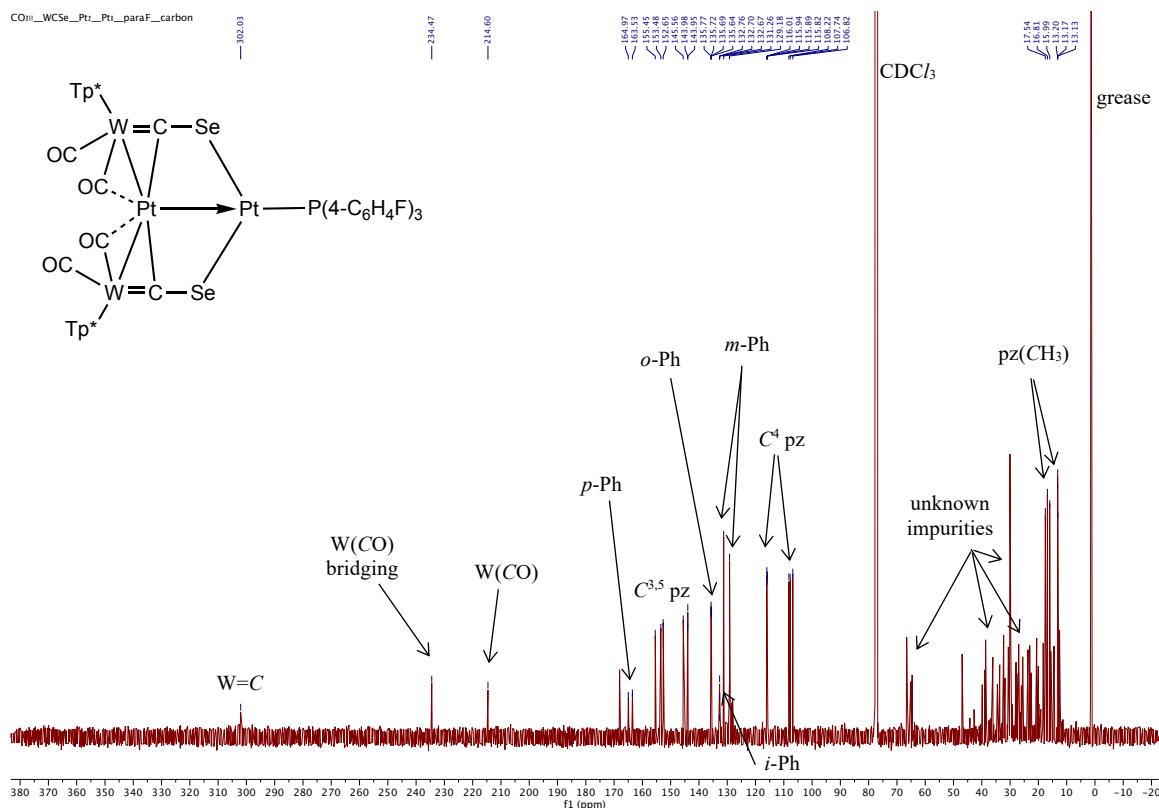
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.23.



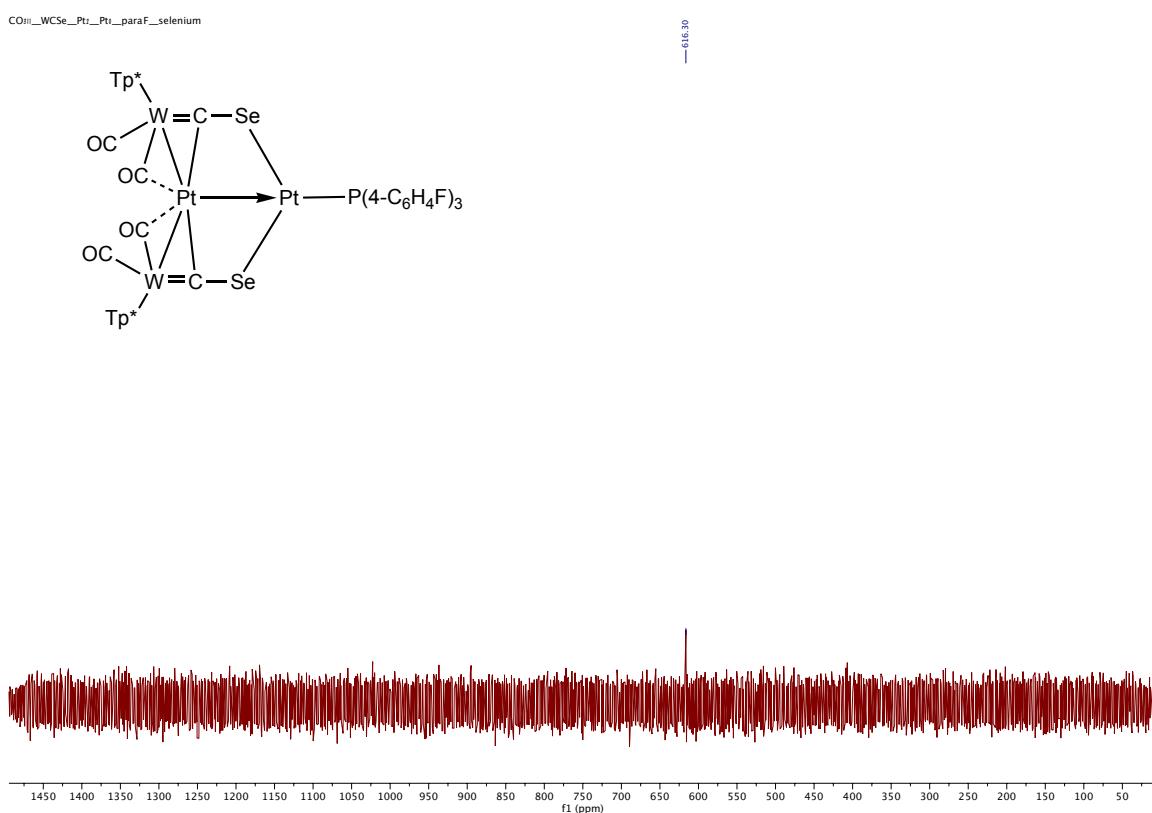
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.23.



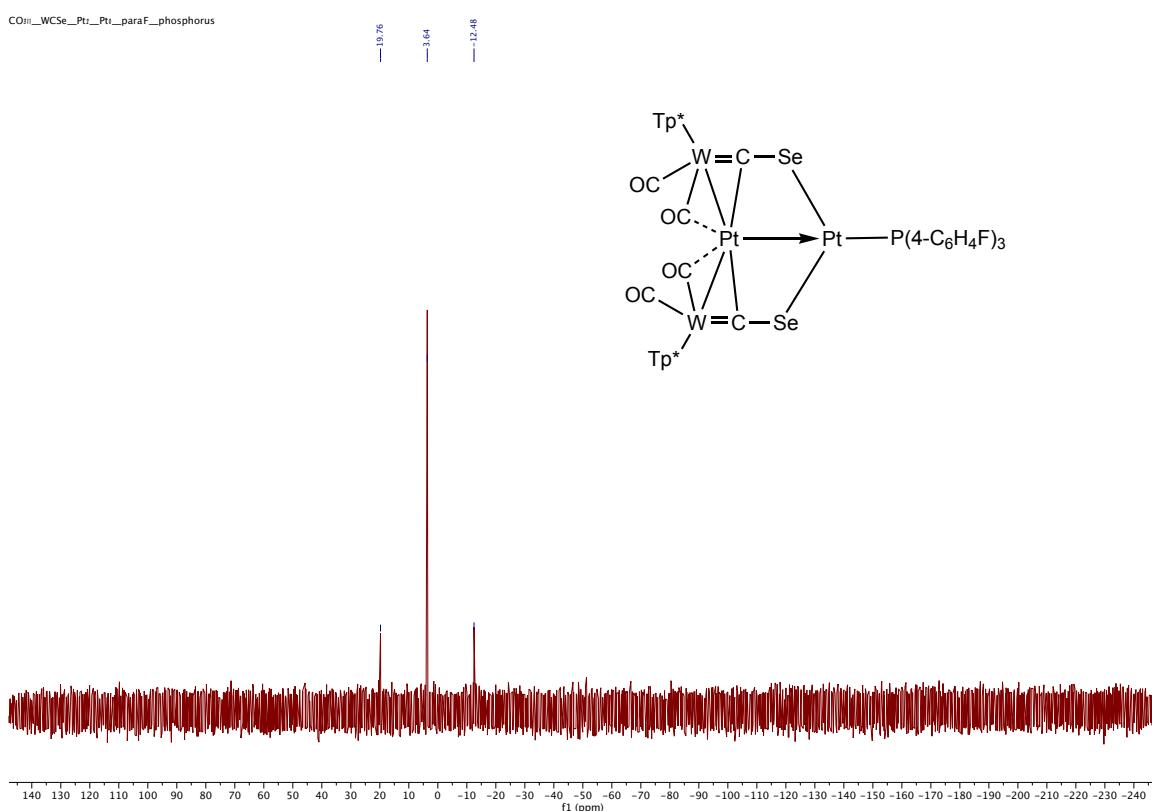
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.24.



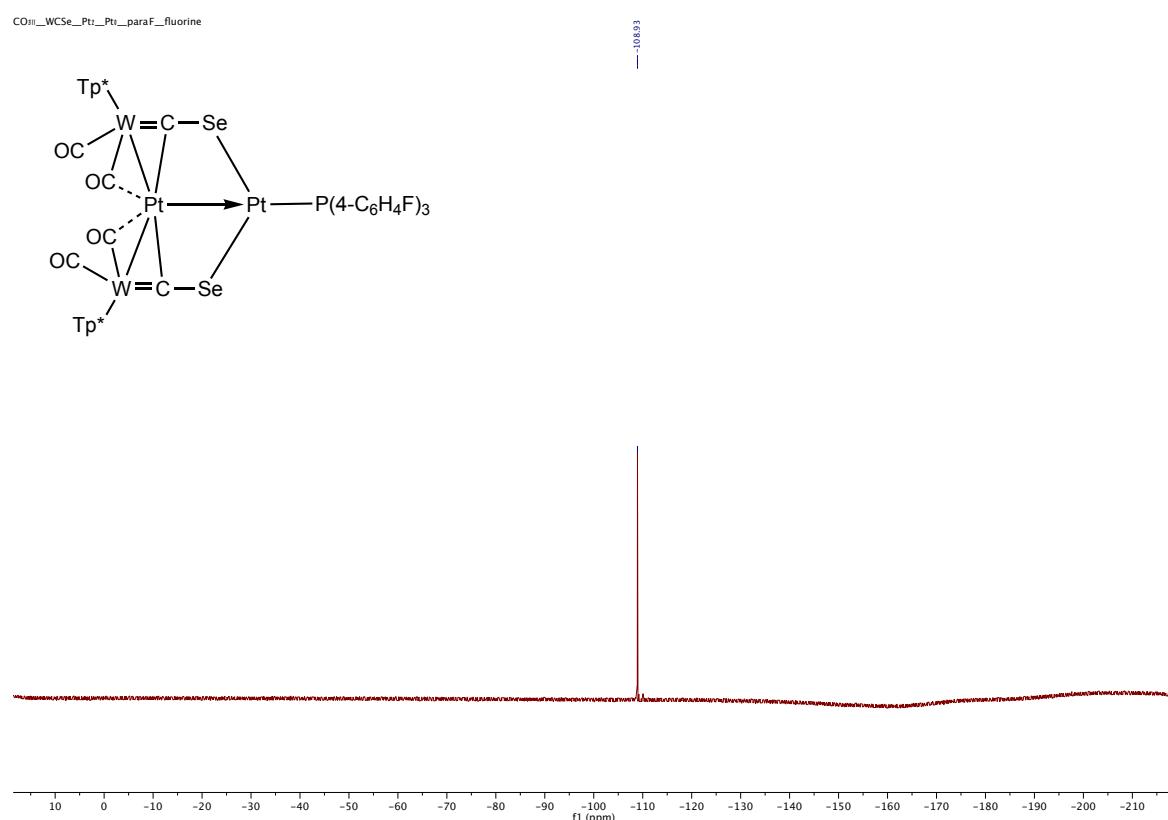
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 4.24.



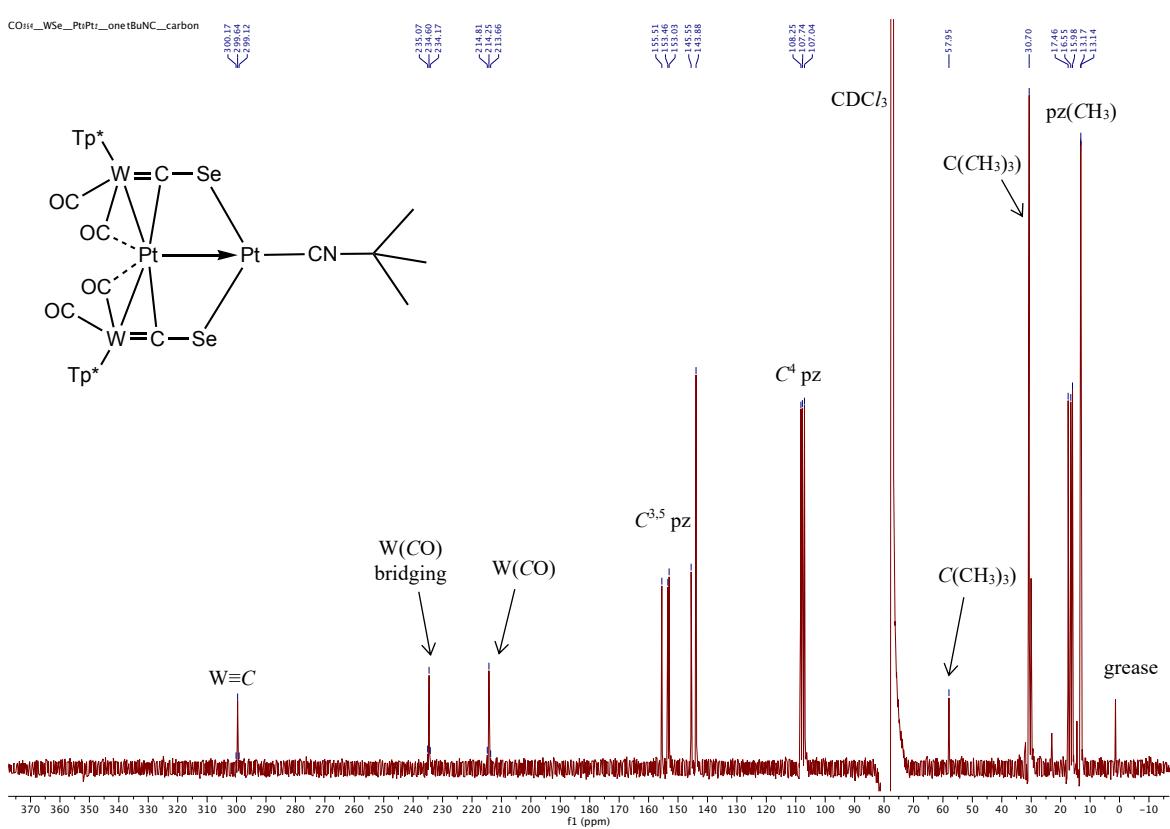
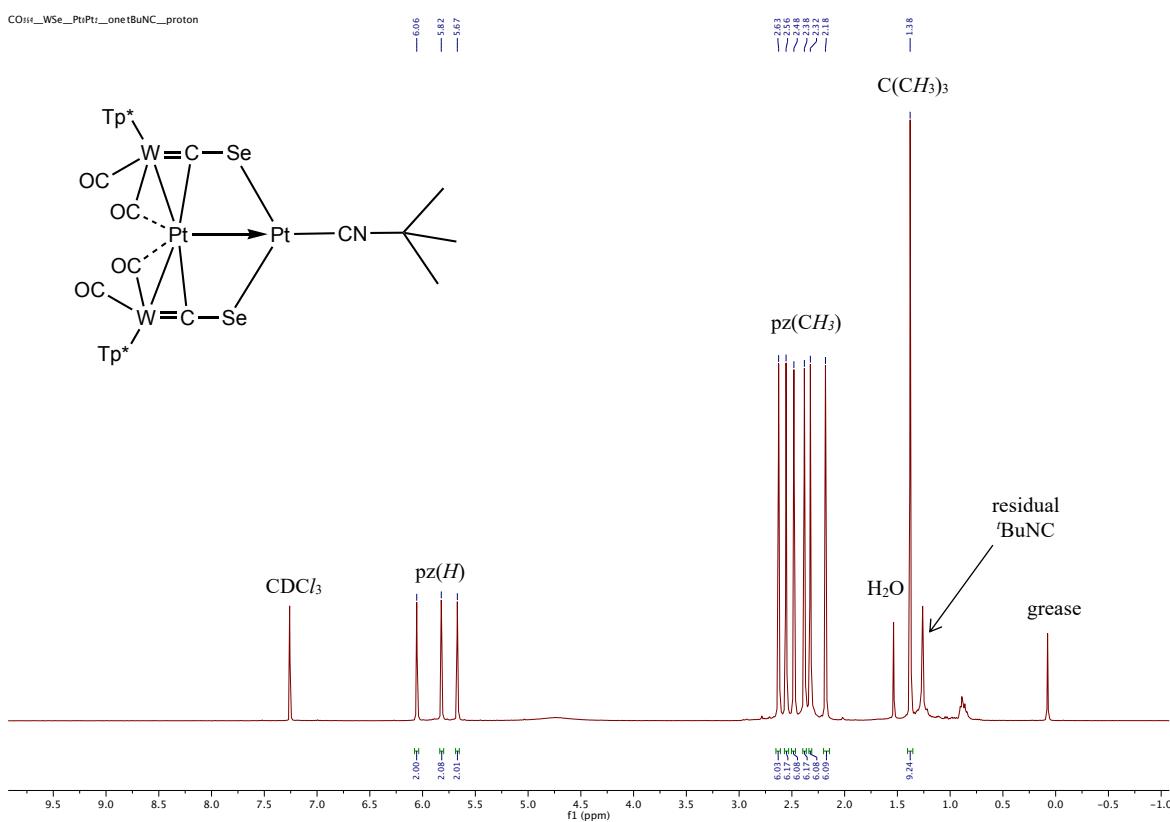
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.24.

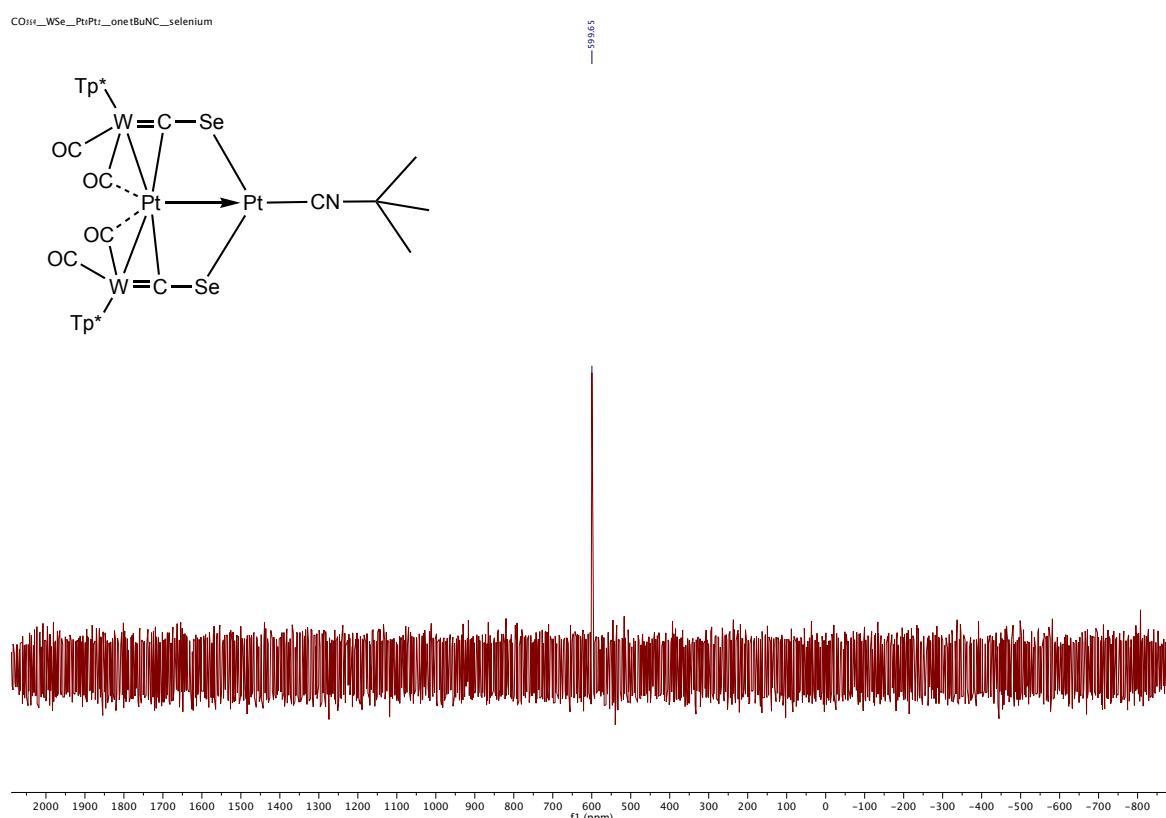


³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.24.

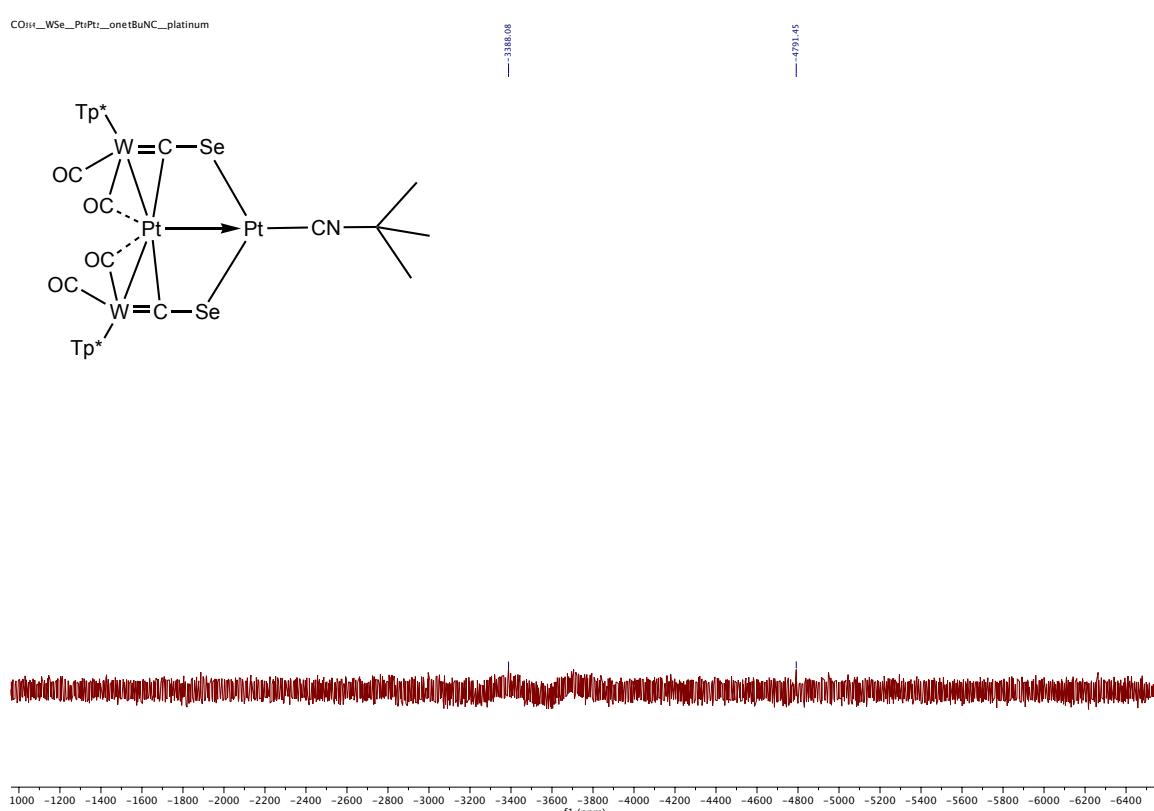


¹⁹F{¹H} NMR spectrum (376 MHz, CDCl₃, 25°C, δ) of compound 4.24.

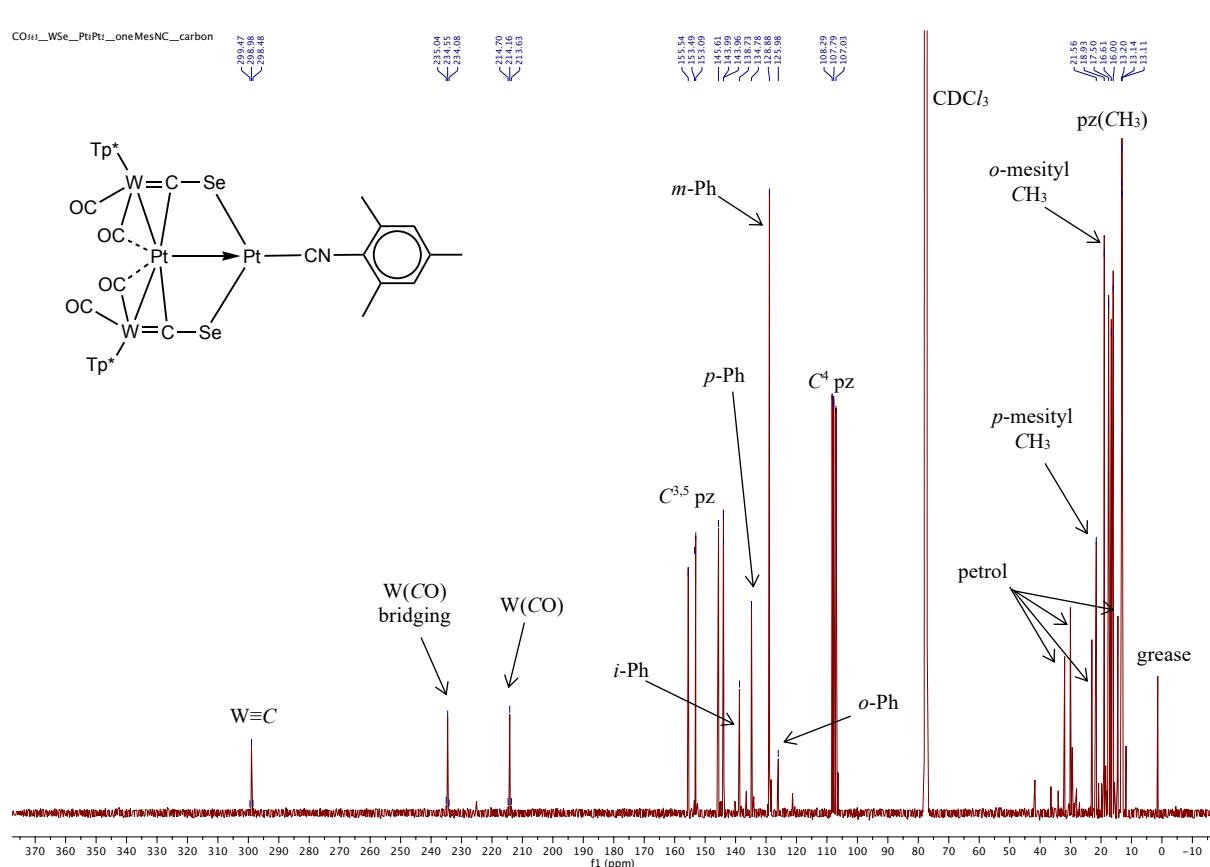
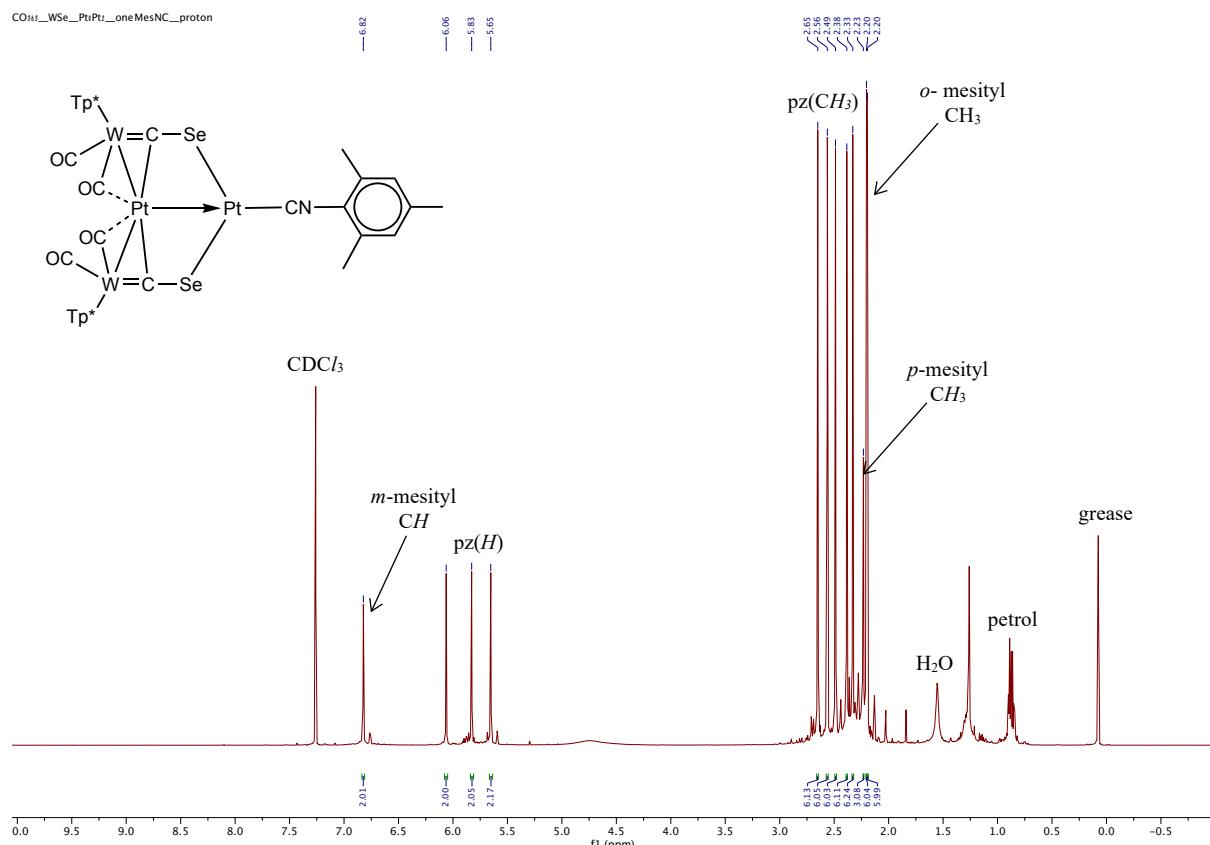




⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.25.

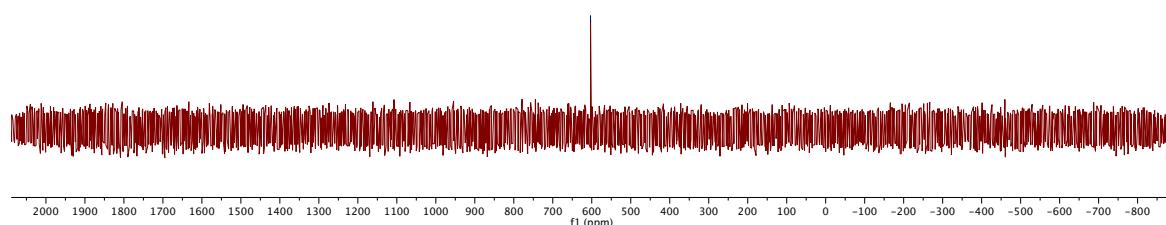
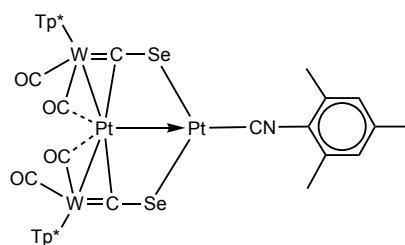


¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 4.25.



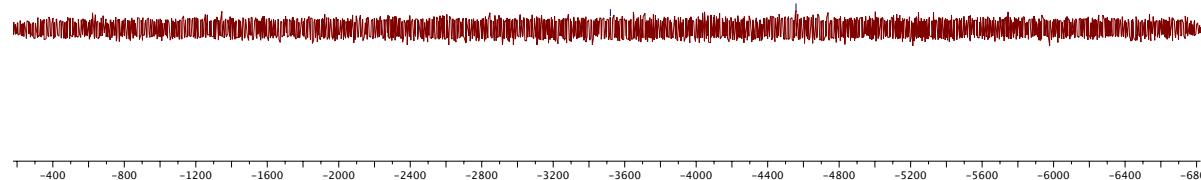
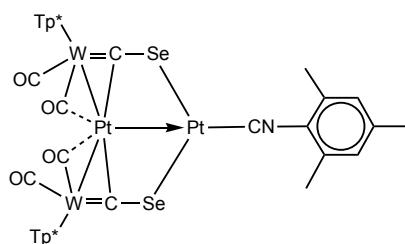
CO₁₀—WSe—Pt₂Pt₂—one MesNC—selenium

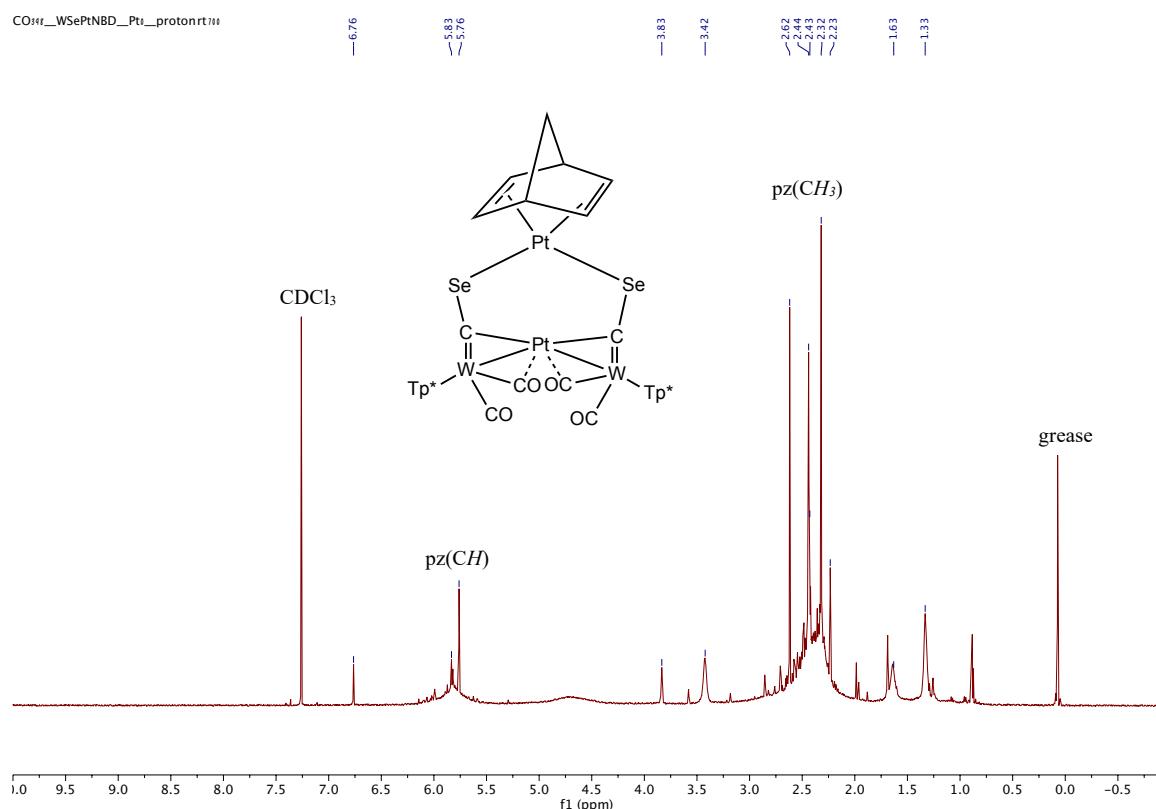
—693.3

⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound 4.26.CO₁₀—WSe—Pt₂Pt₂—one MesNC—platinum

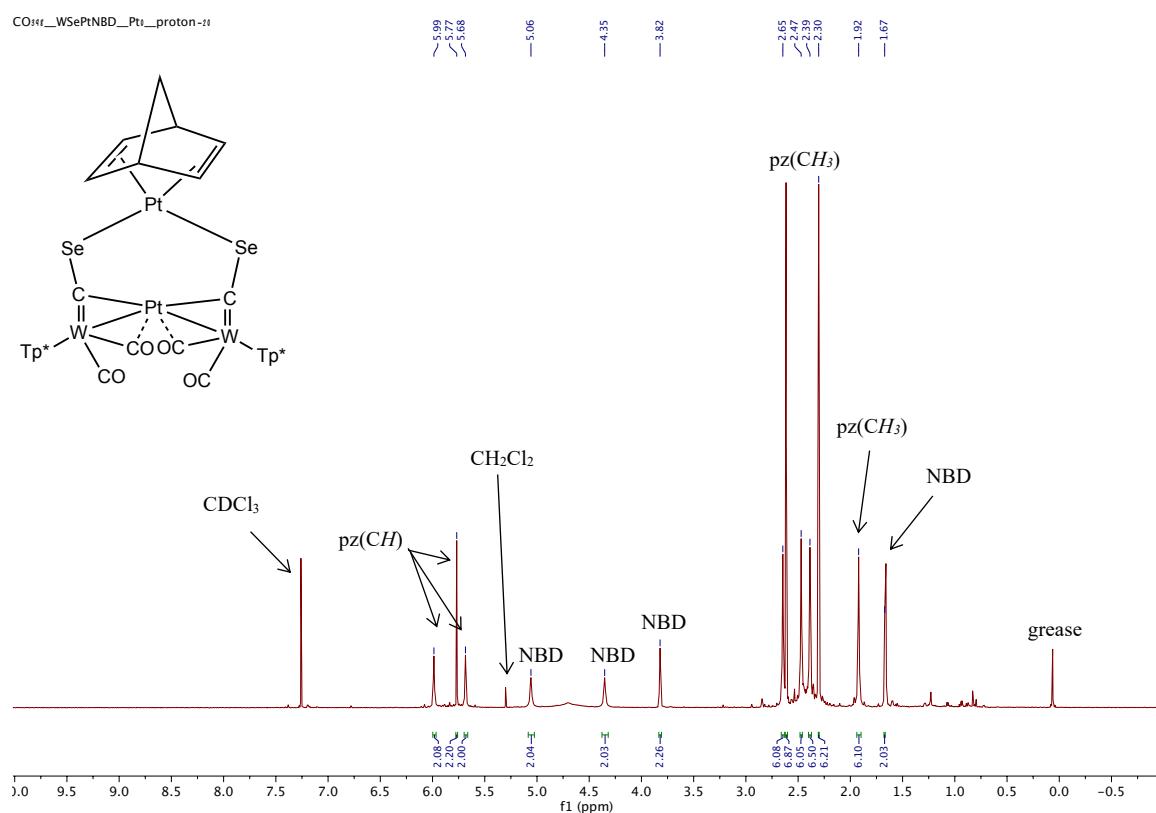
—3519.84

—4558.57

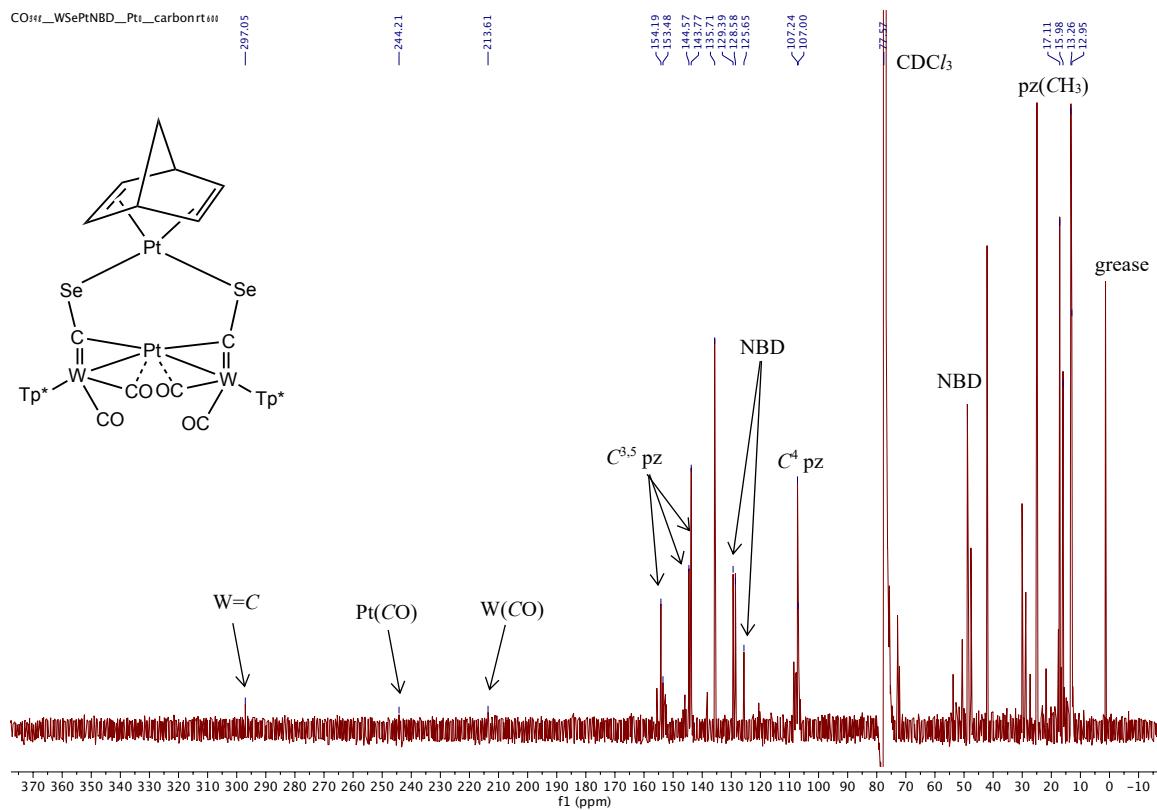
¹⁹⁵Pt NMR spectrum (150 MHz, CDCl₃, 25°C, δ) of compound 4.26.



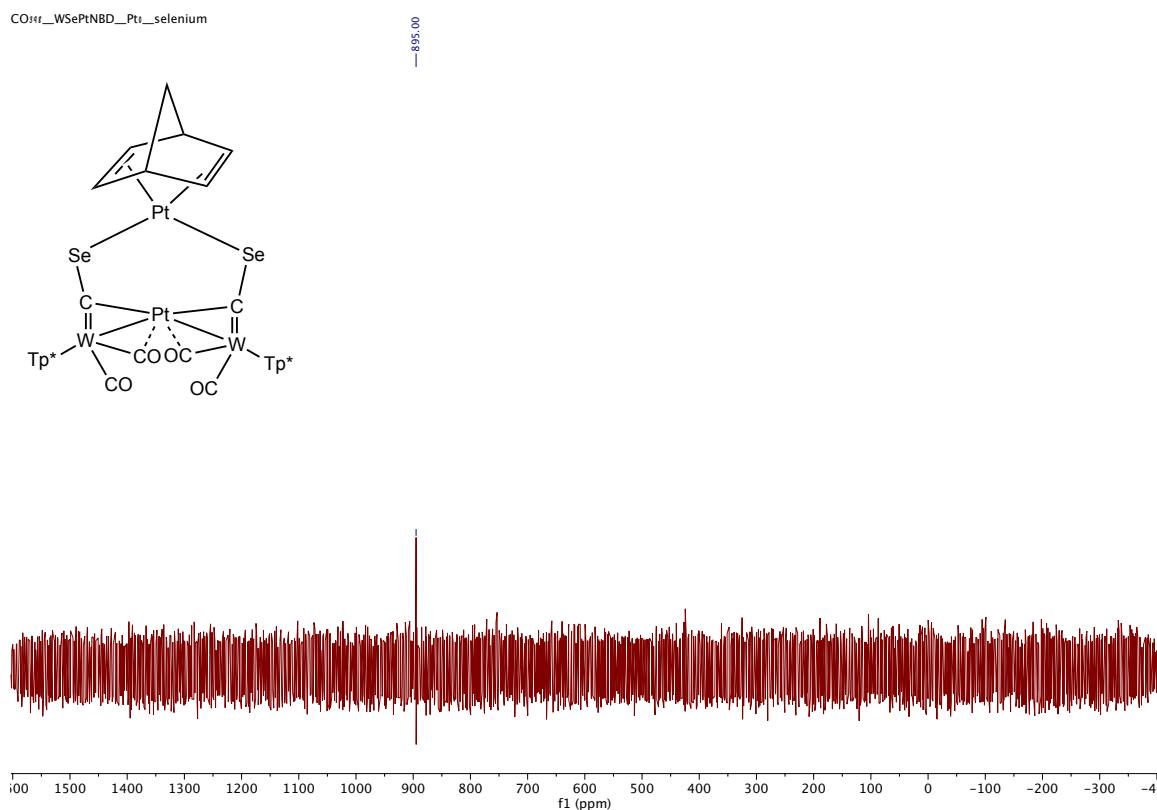
¹H NMR spectrum (700 MHz, CDCl₃, 25 °C, δ) of compound 4.27.



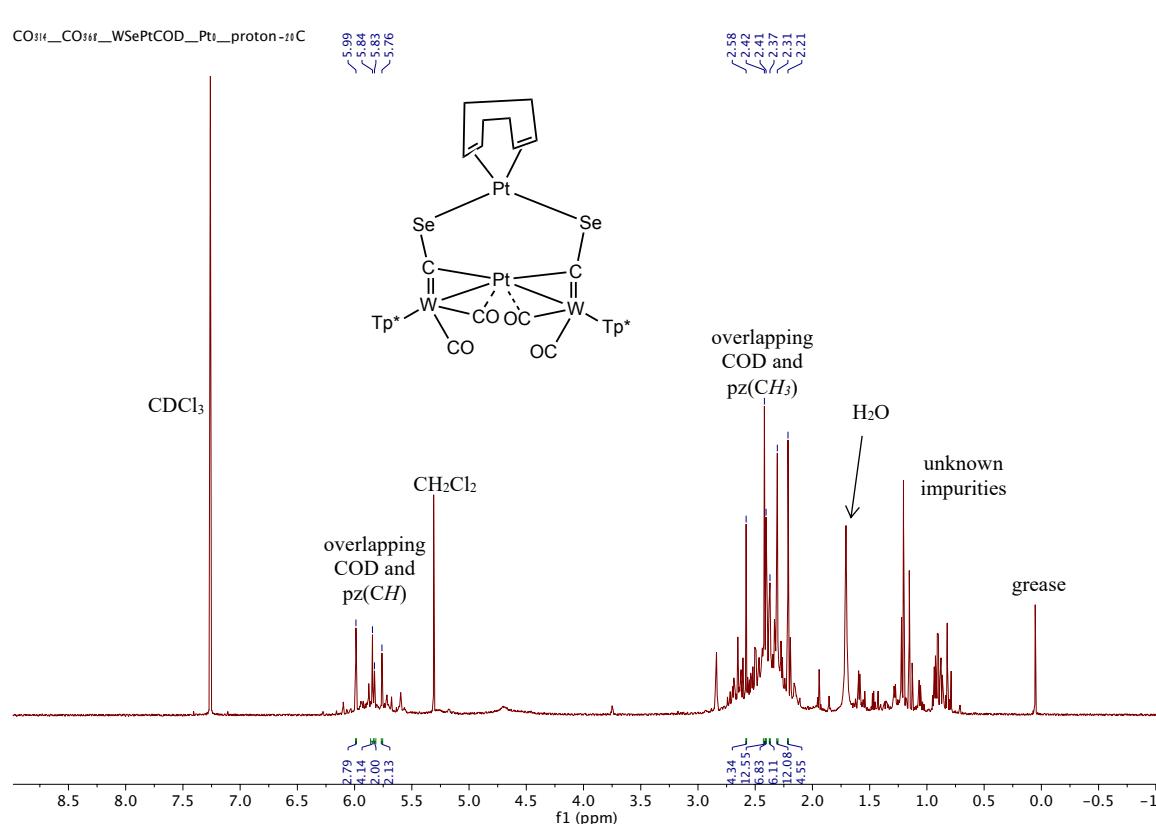
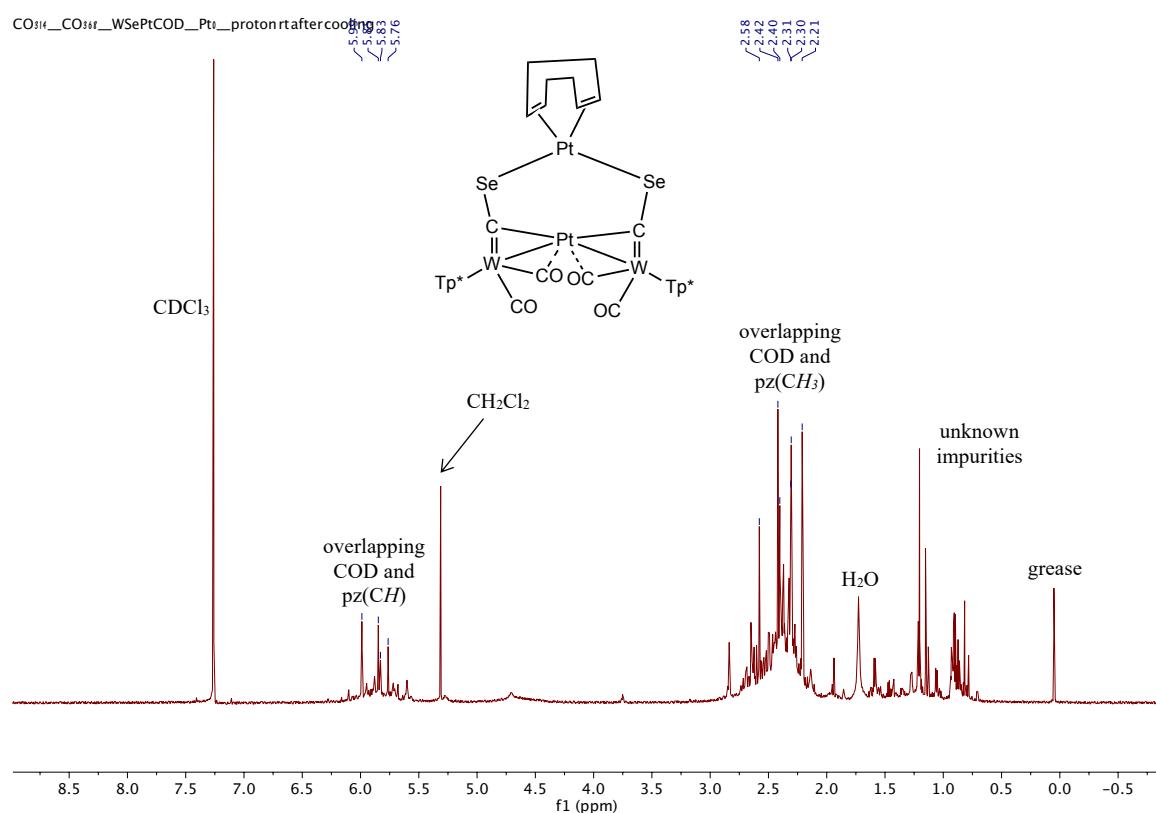
¹H NMR spectrum (700 MHz, CDCl₃, -20 °C, δ) of compound 4.27.

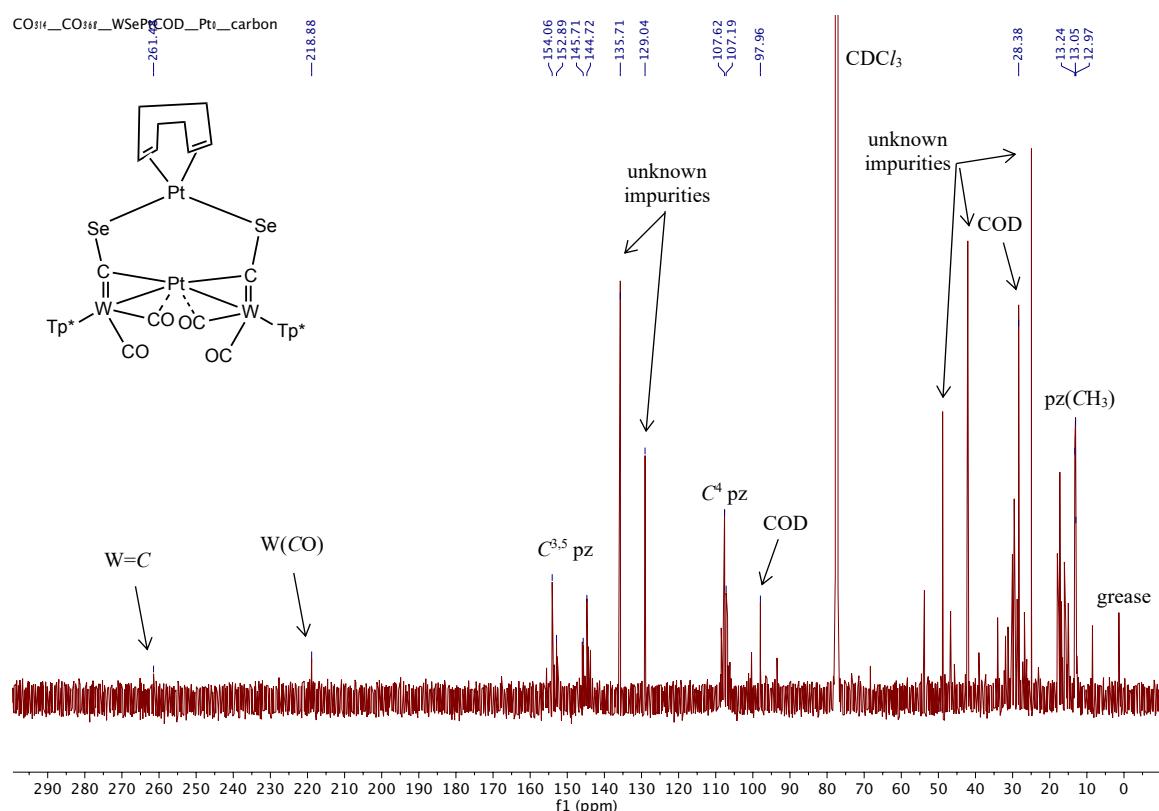


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 4.27.

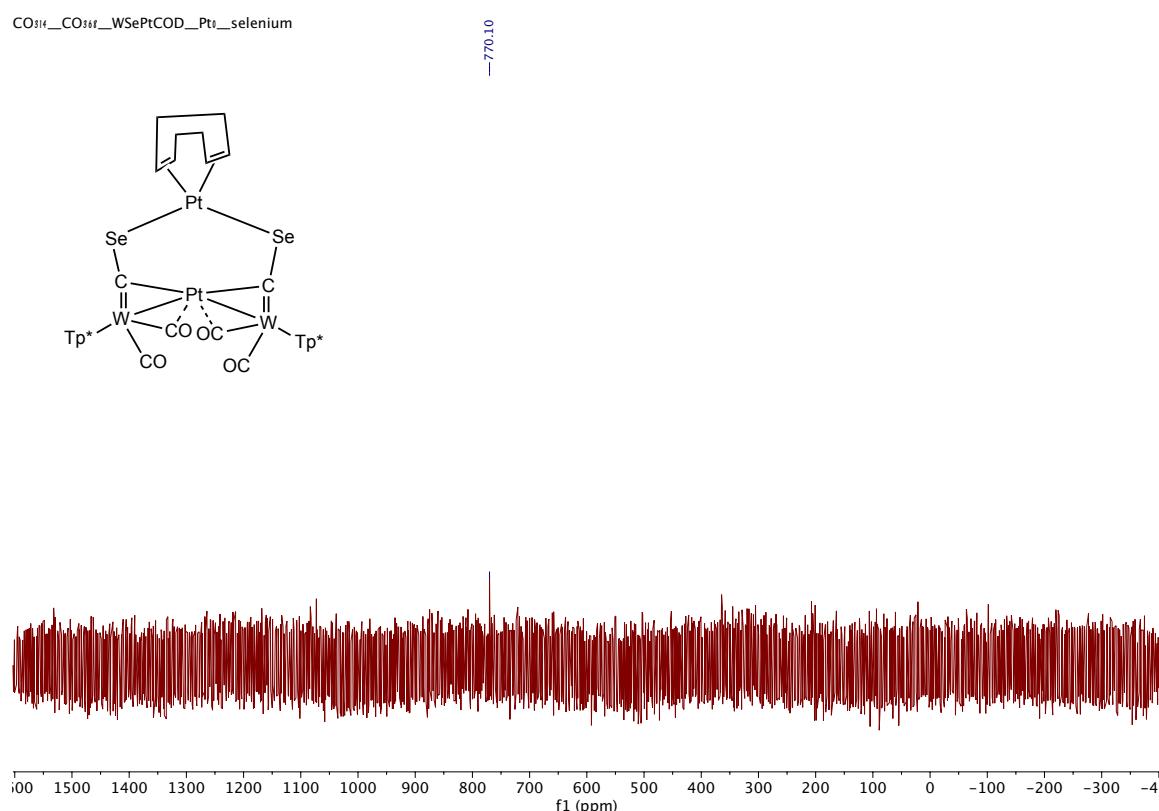


$^{77}\text{Se}\{^1\text{H}\}$ NMR spectrum (134 MHz, CDCl_3 , 25°C, δ) of compound 4.27.

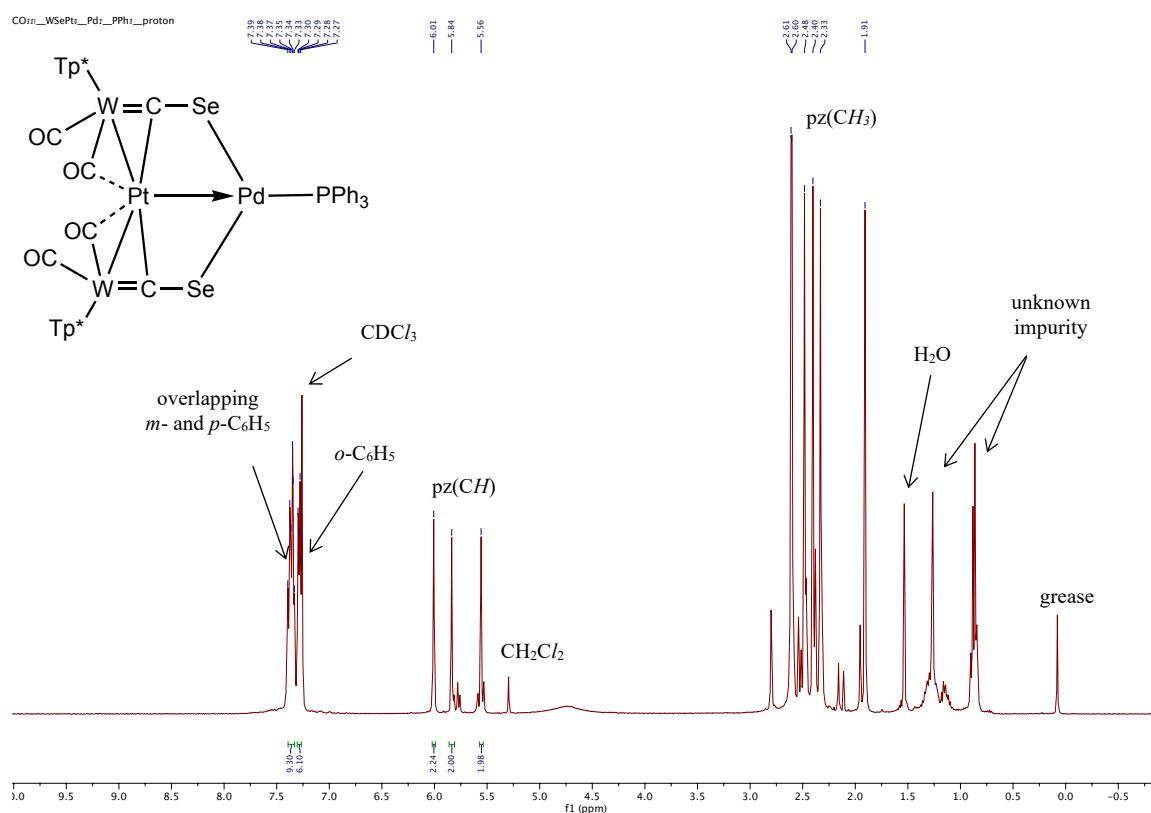




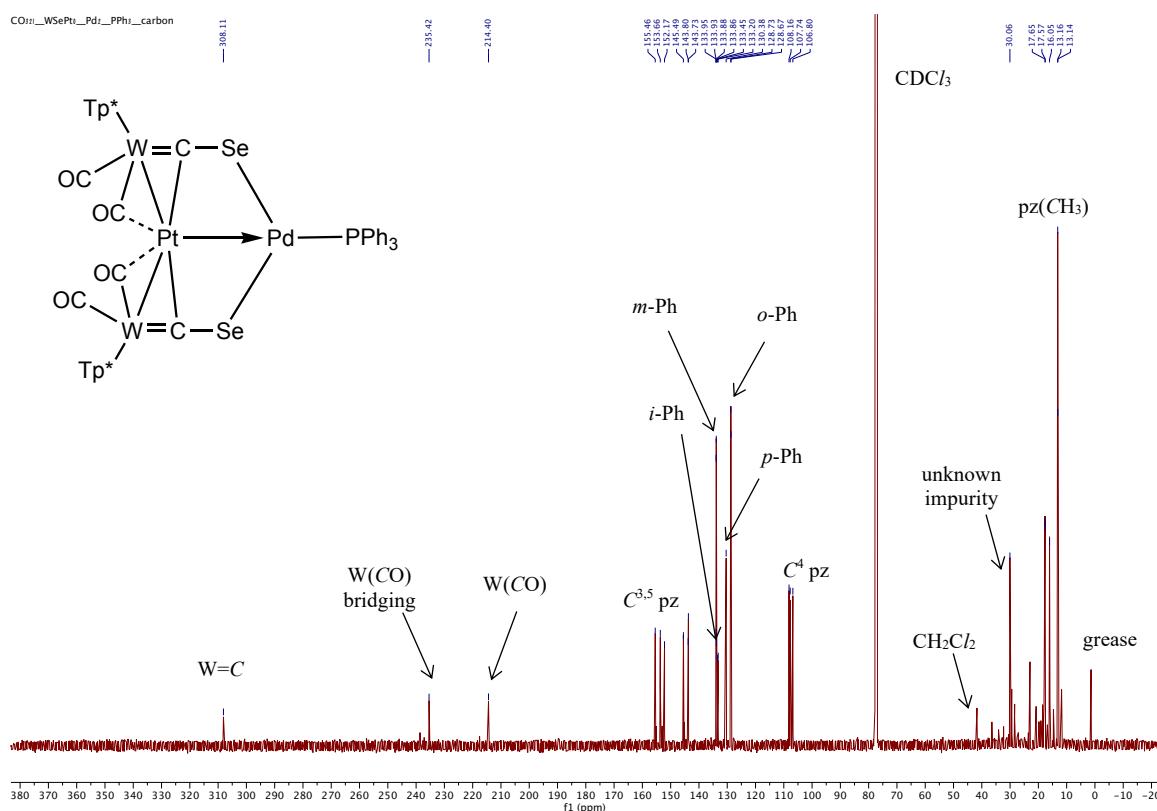
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 4.28.



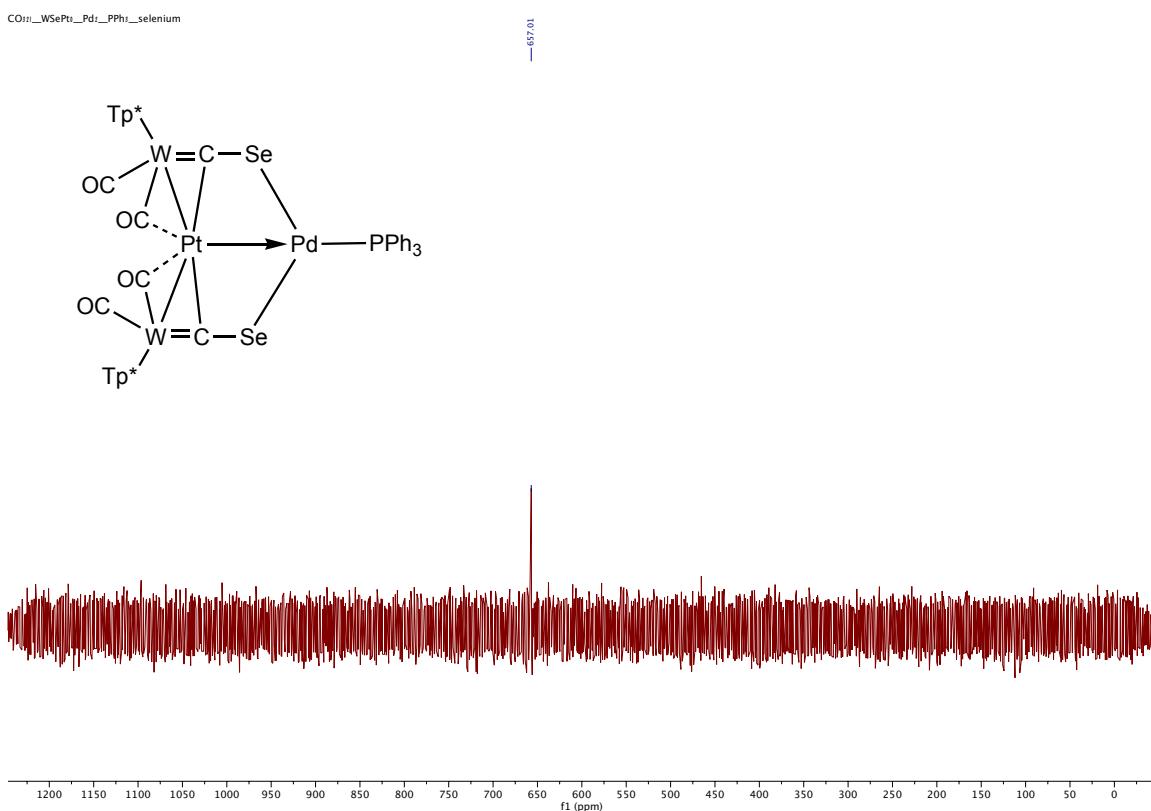
$^{77}\text{Se}\{^1\text{H}\}$ NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound 4.28.



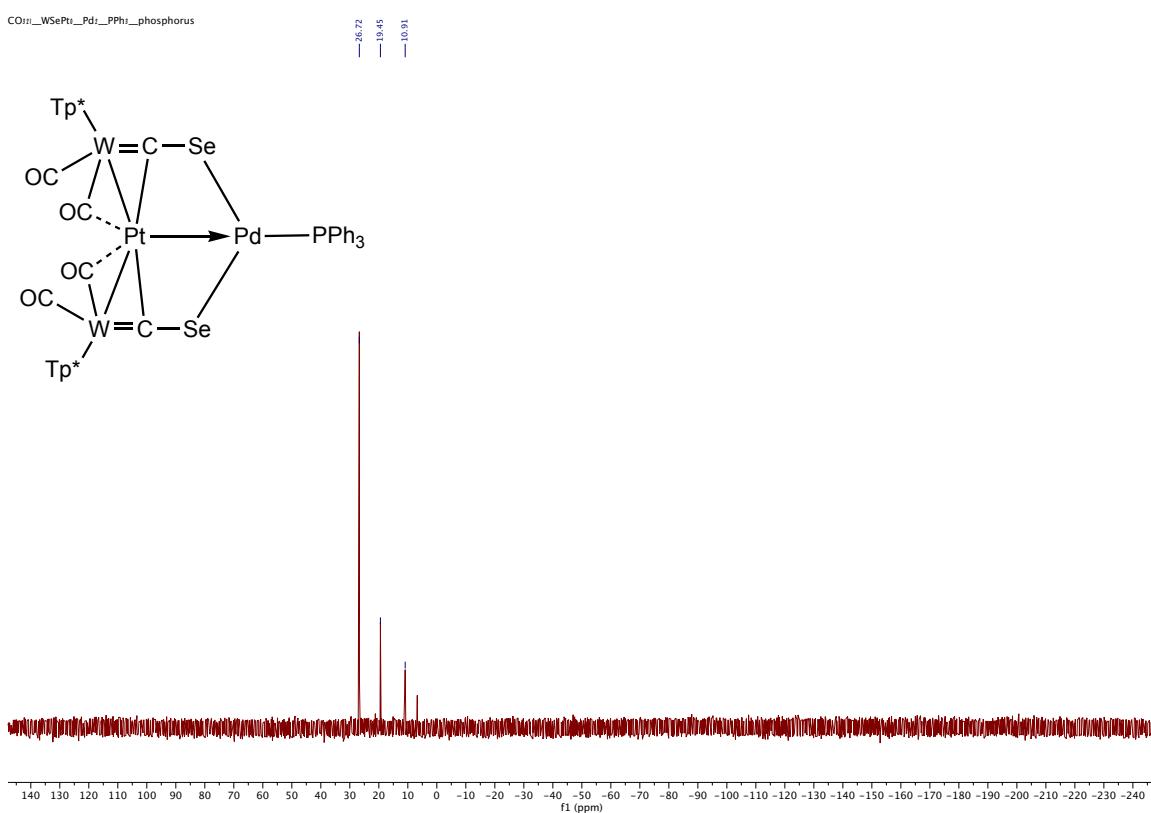
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 4.29.



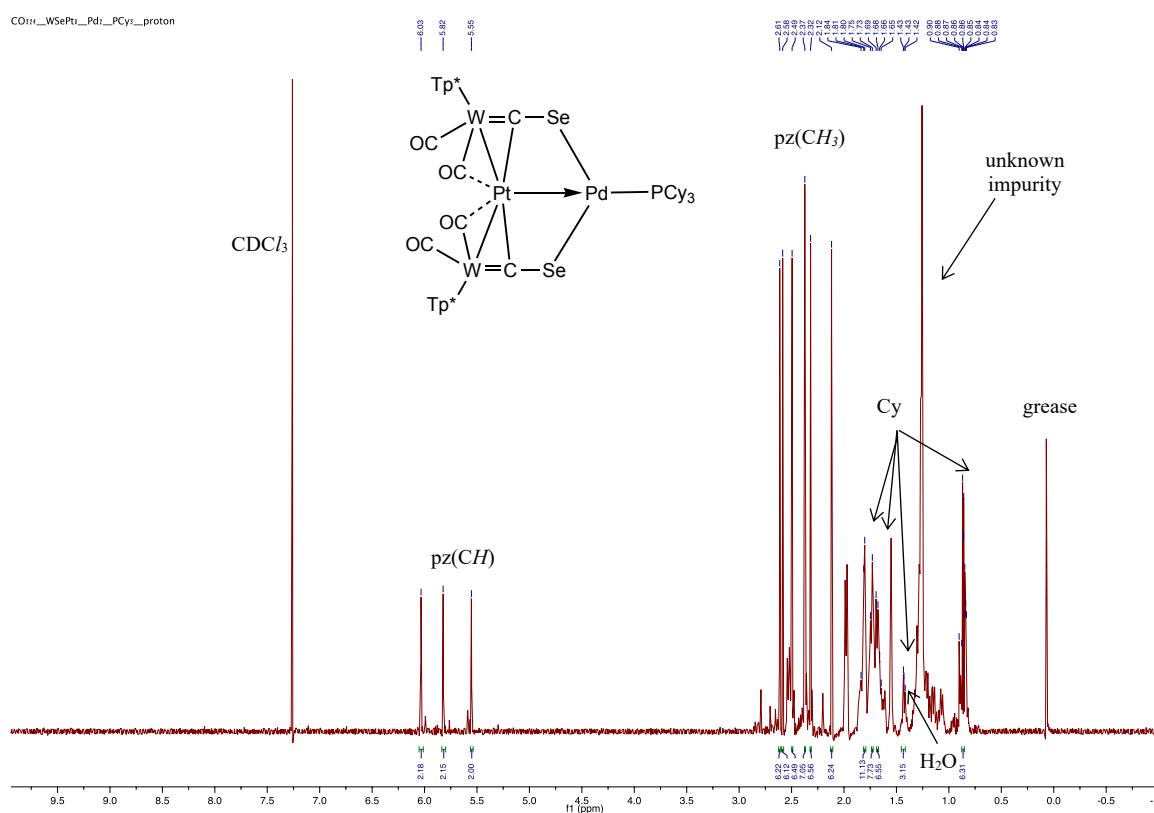
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 4.29.



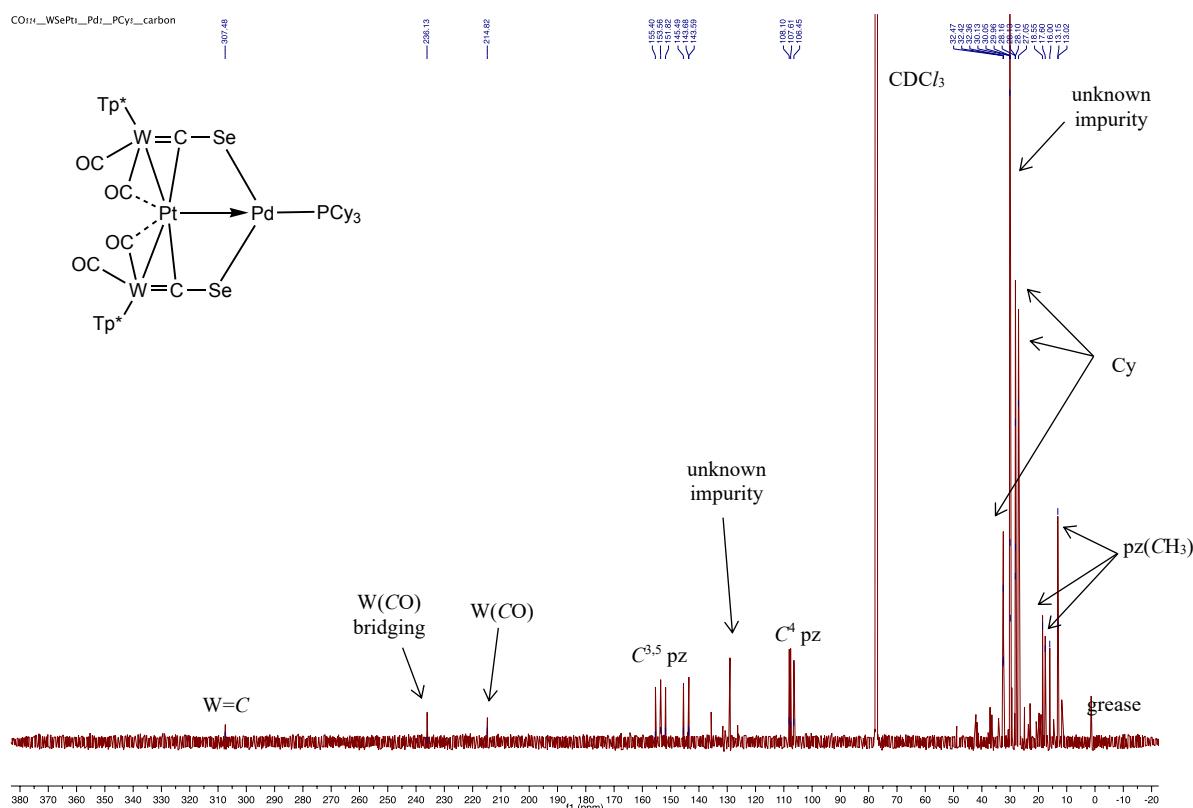
⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound **4.29**.

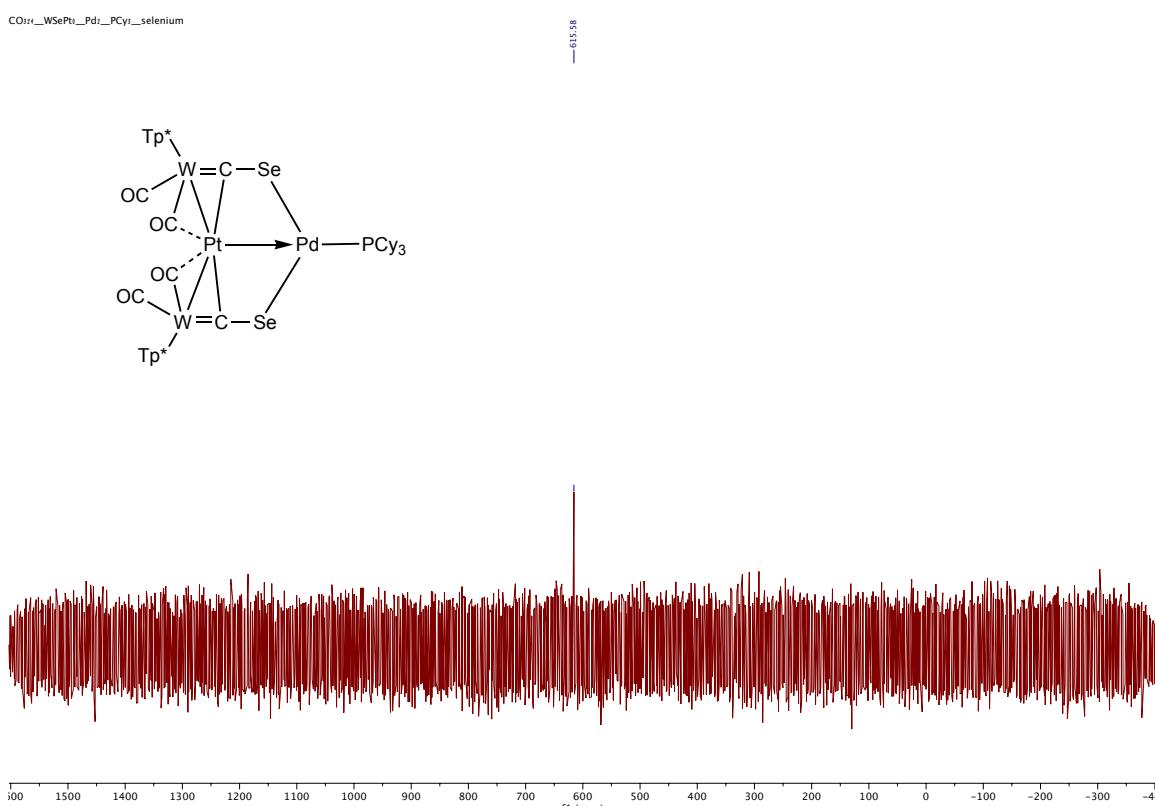


³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound **4.29**.

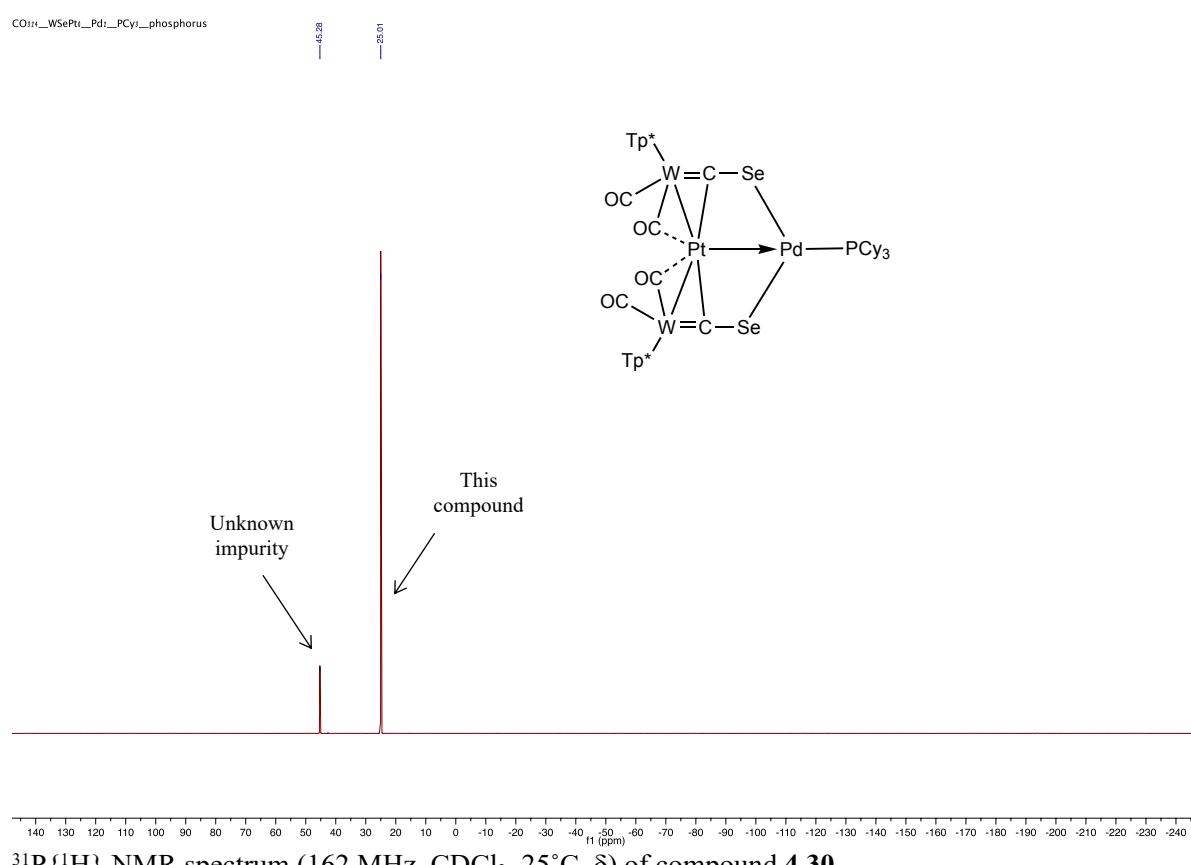


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 4.30.





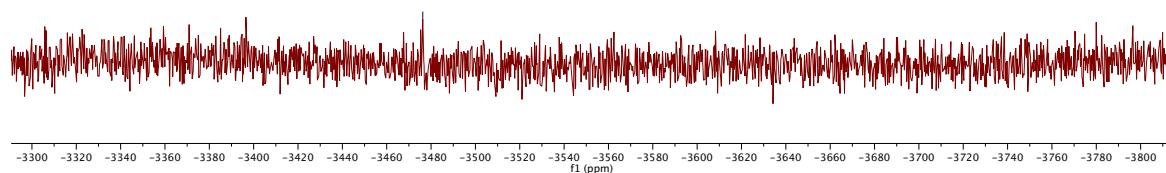
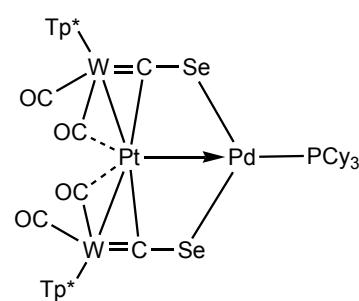
$^{77}\text{Se}\{\text{H}\}$ NMR spectrum (134 MHz, CDCl_3 , 25°C, δ) compound **4.30**.



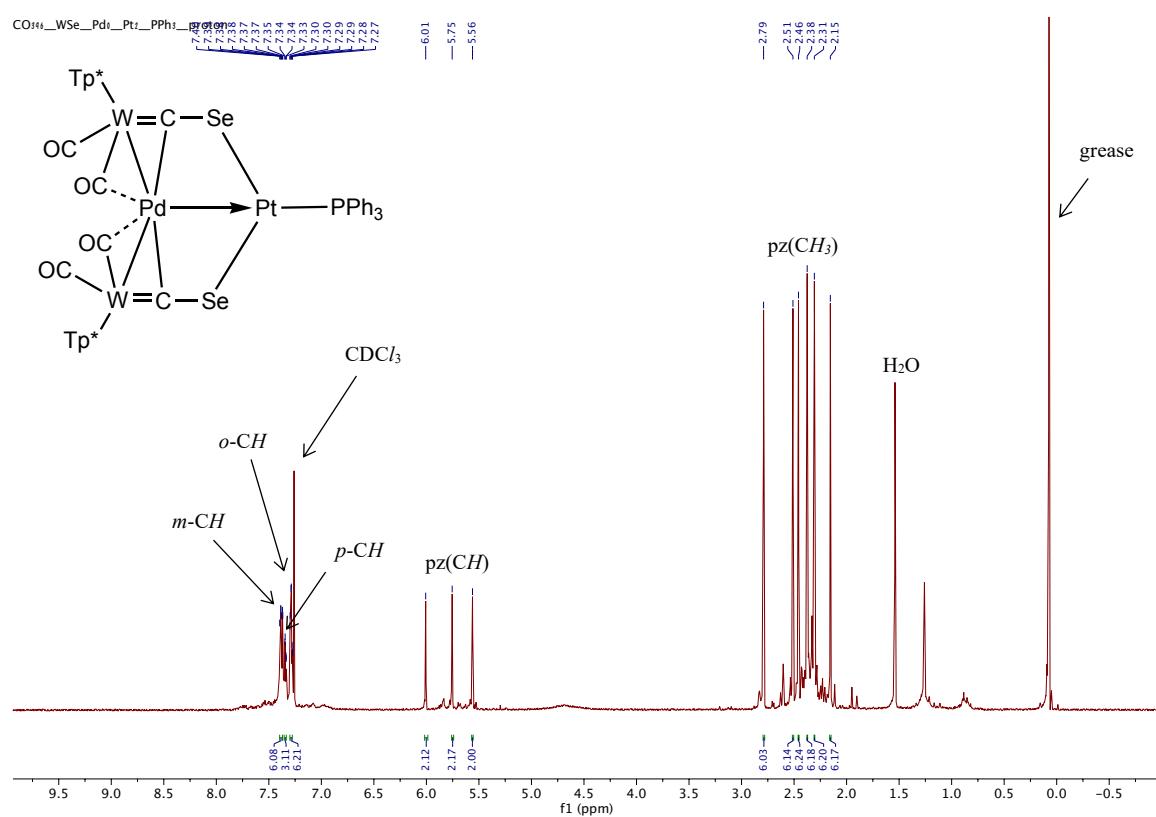
$^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound **4.30**.

CO:!!r_WSePtz_Pdz_PCy3_platinum

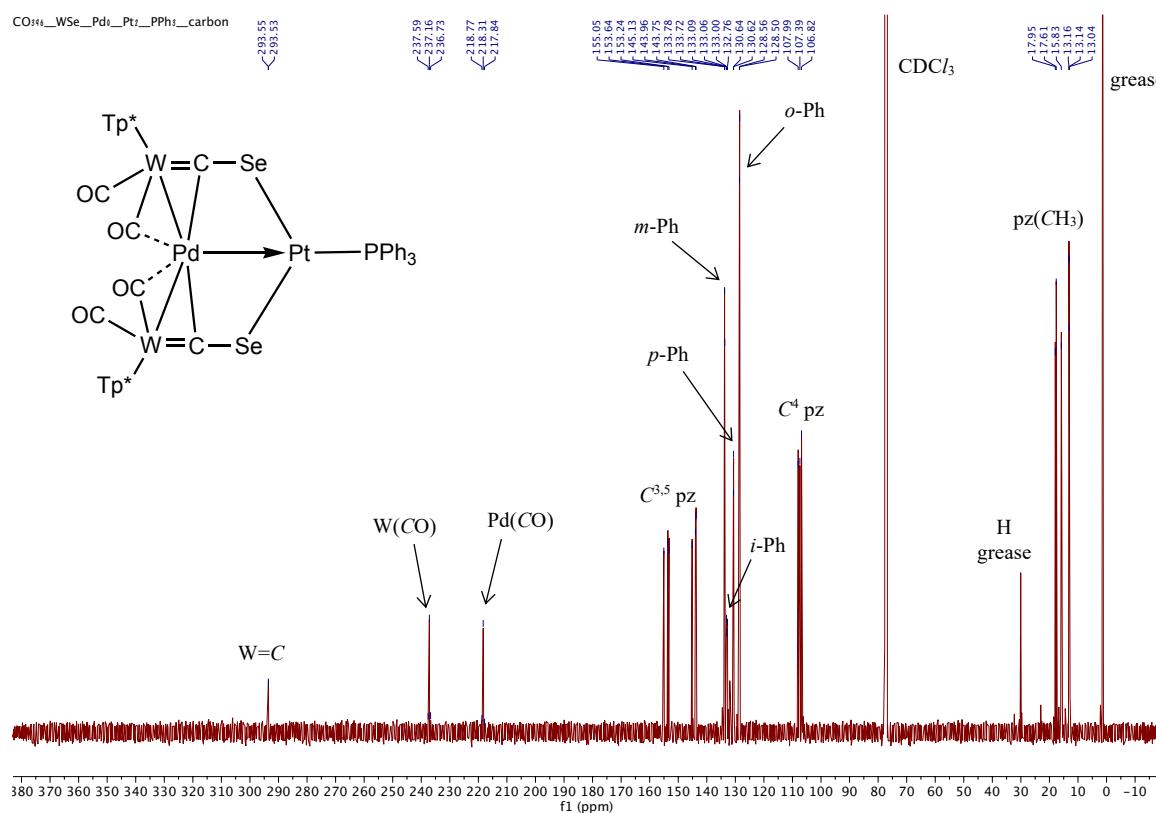
—13476.26



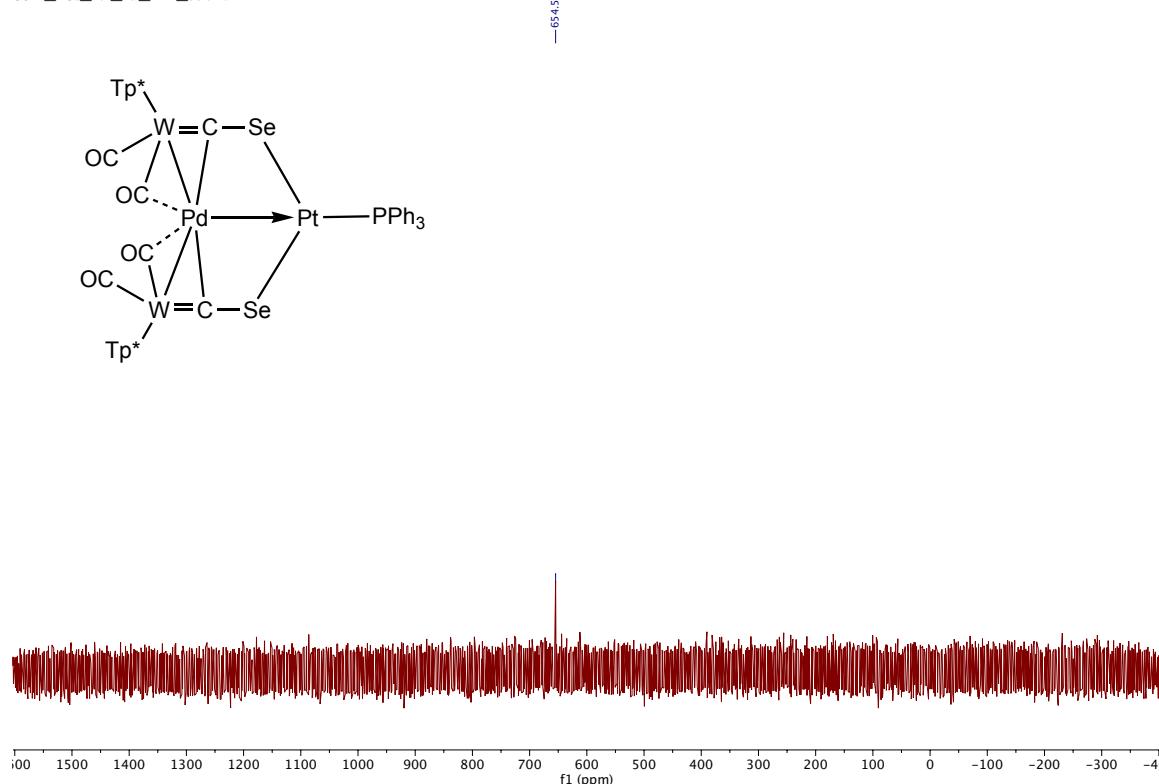
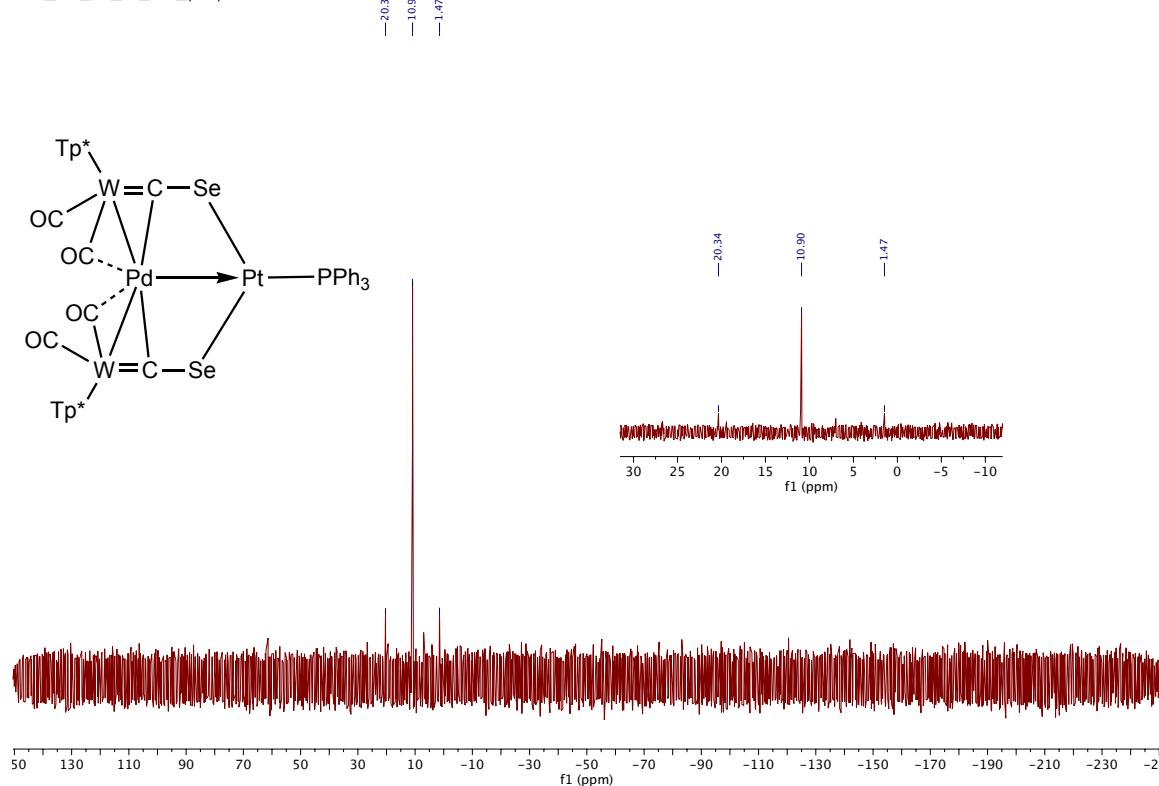
¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 4.30.

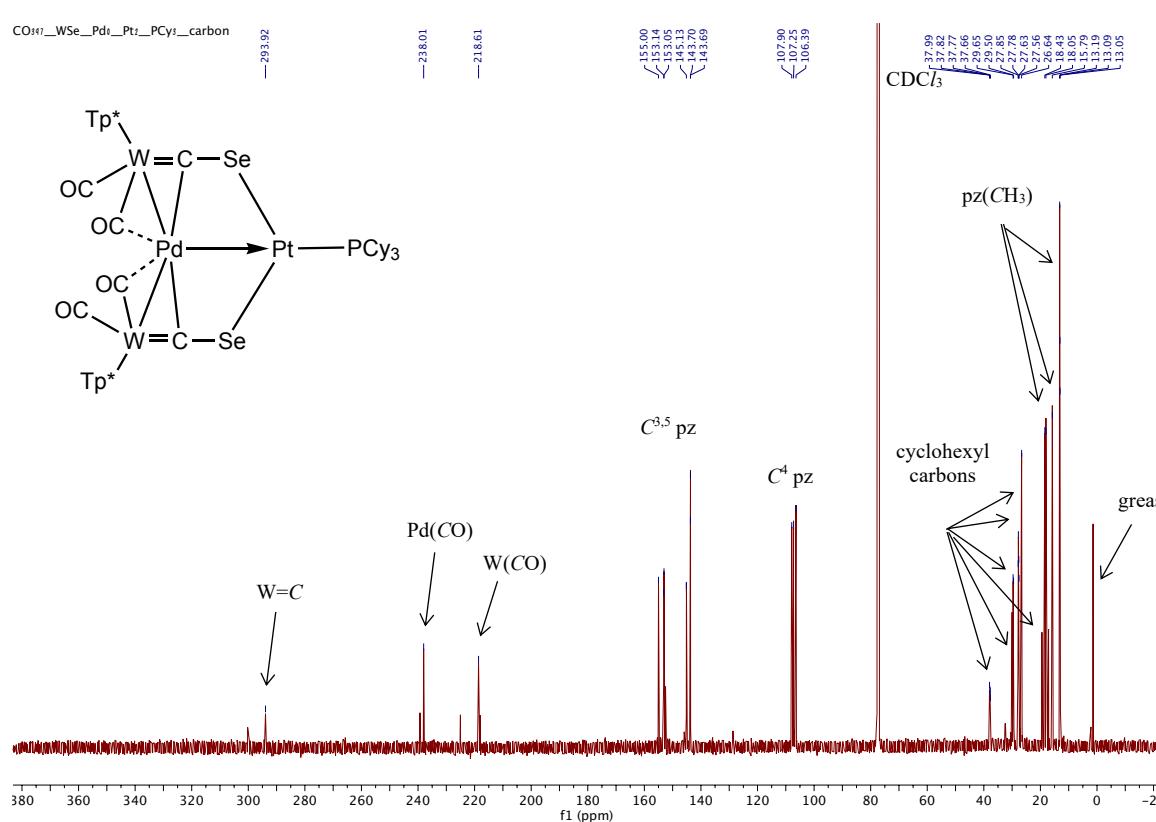
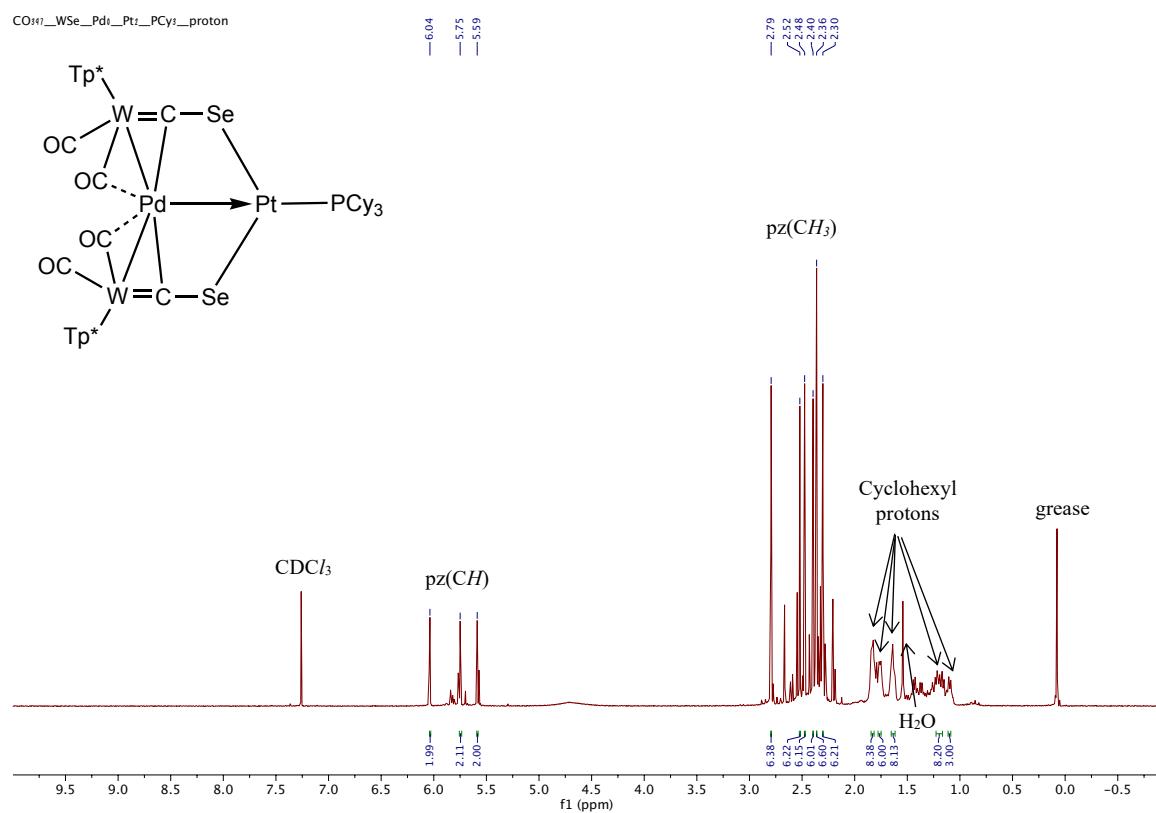


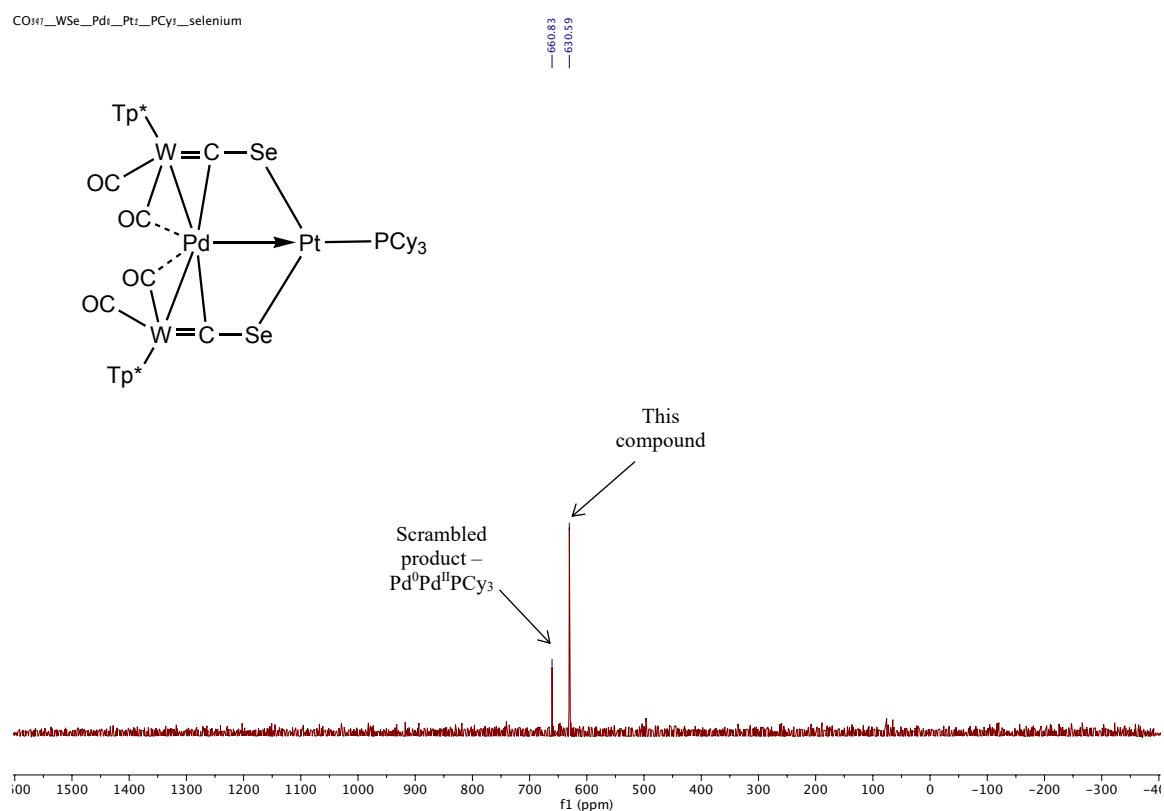
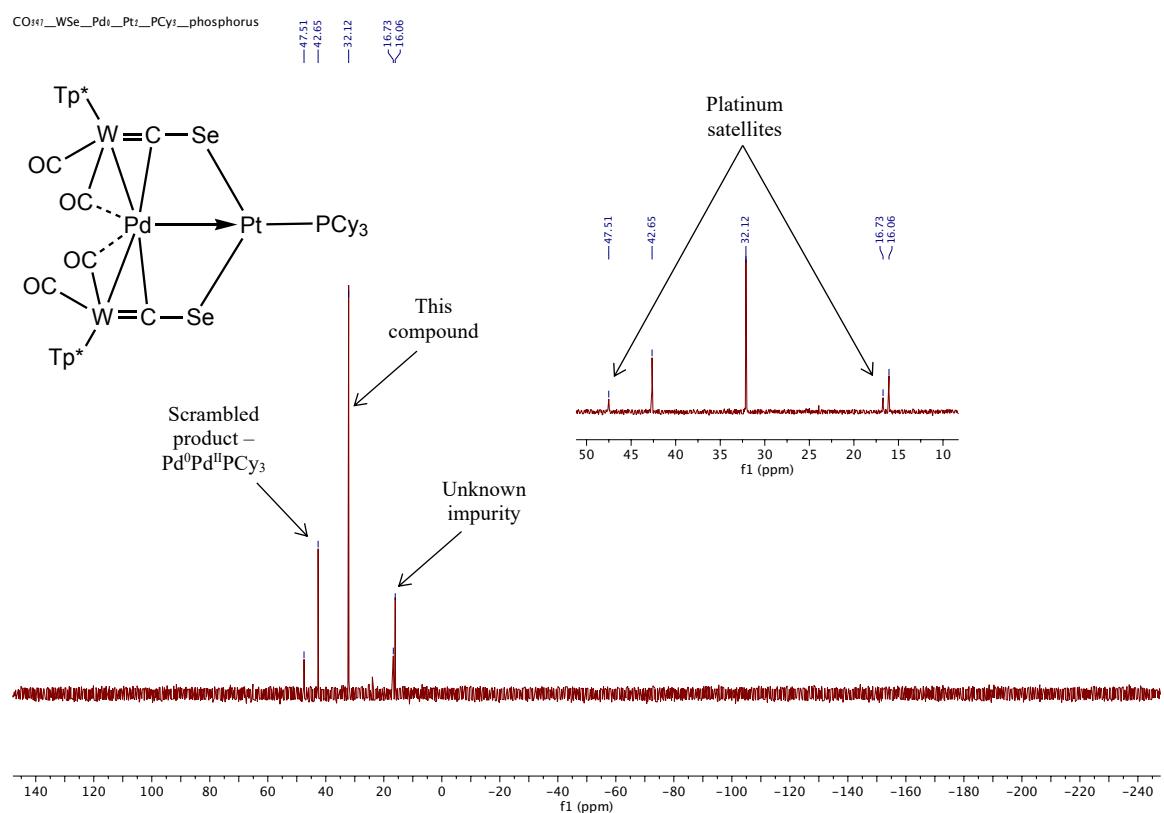
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 4.31.



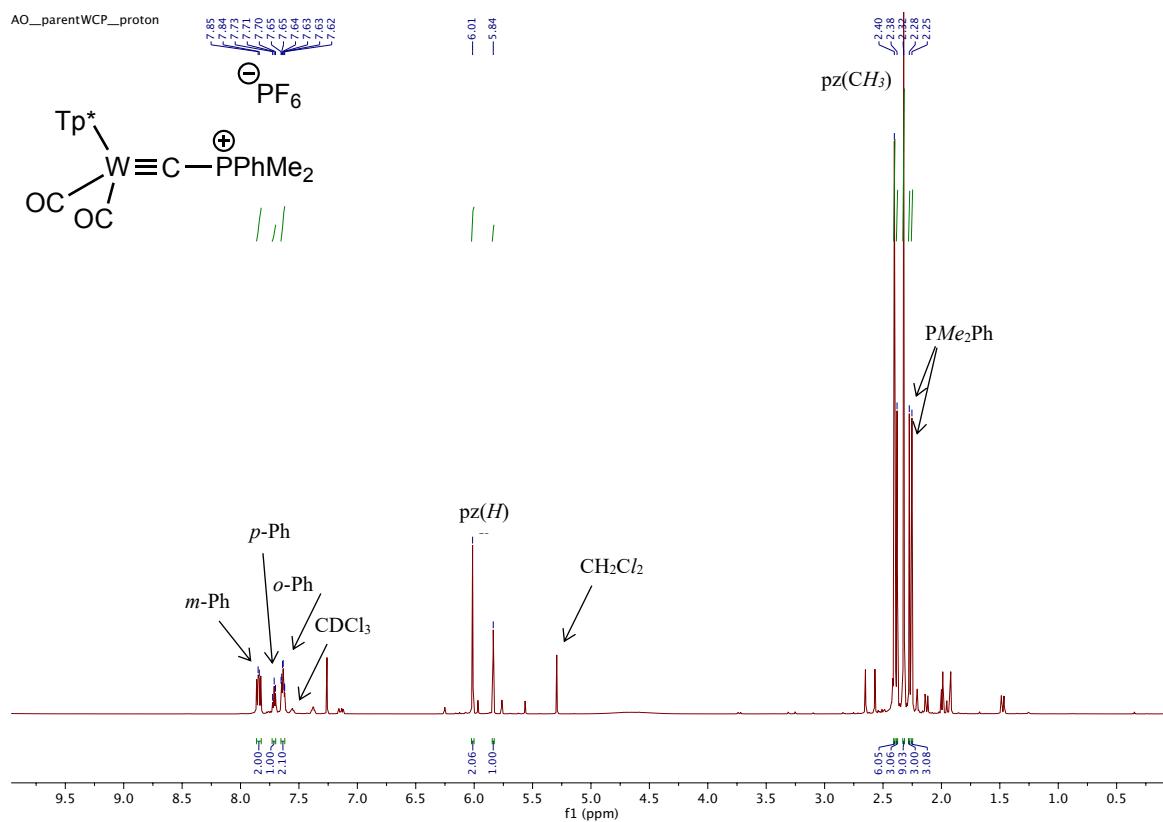
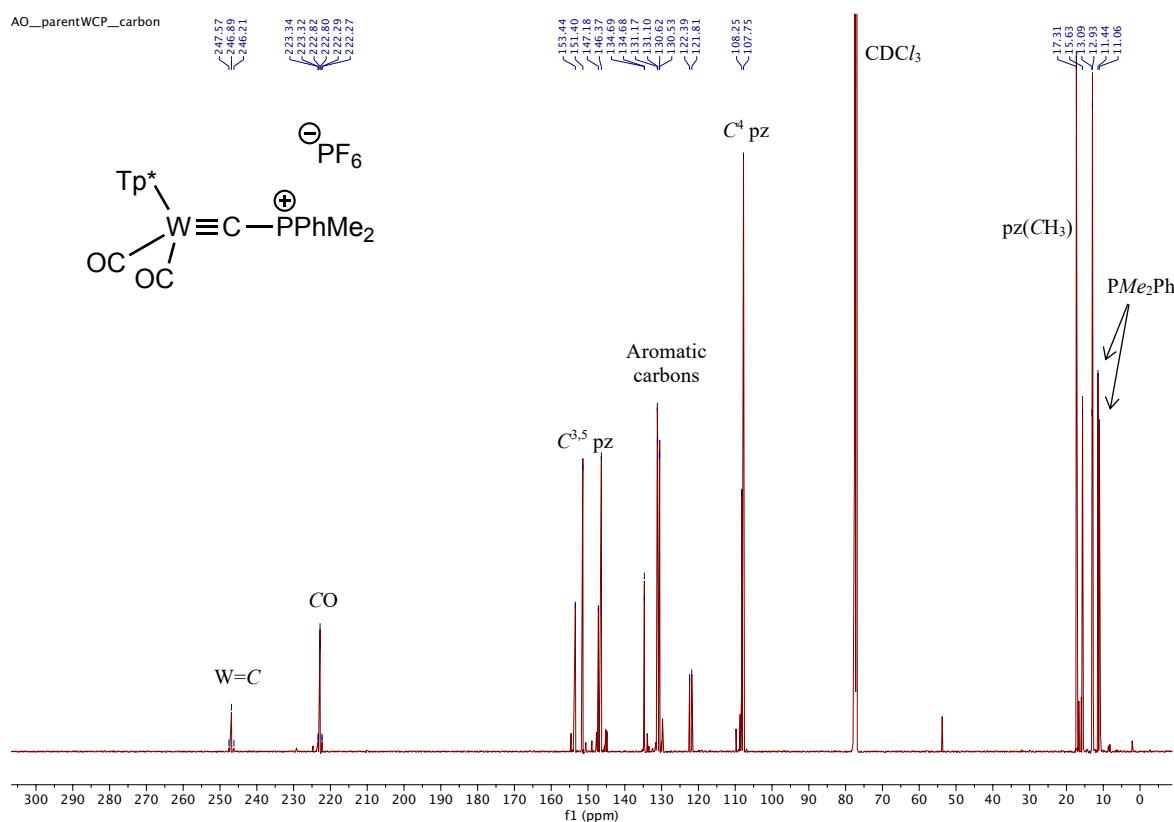
$^{13}\text{C}\{\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 4.31.

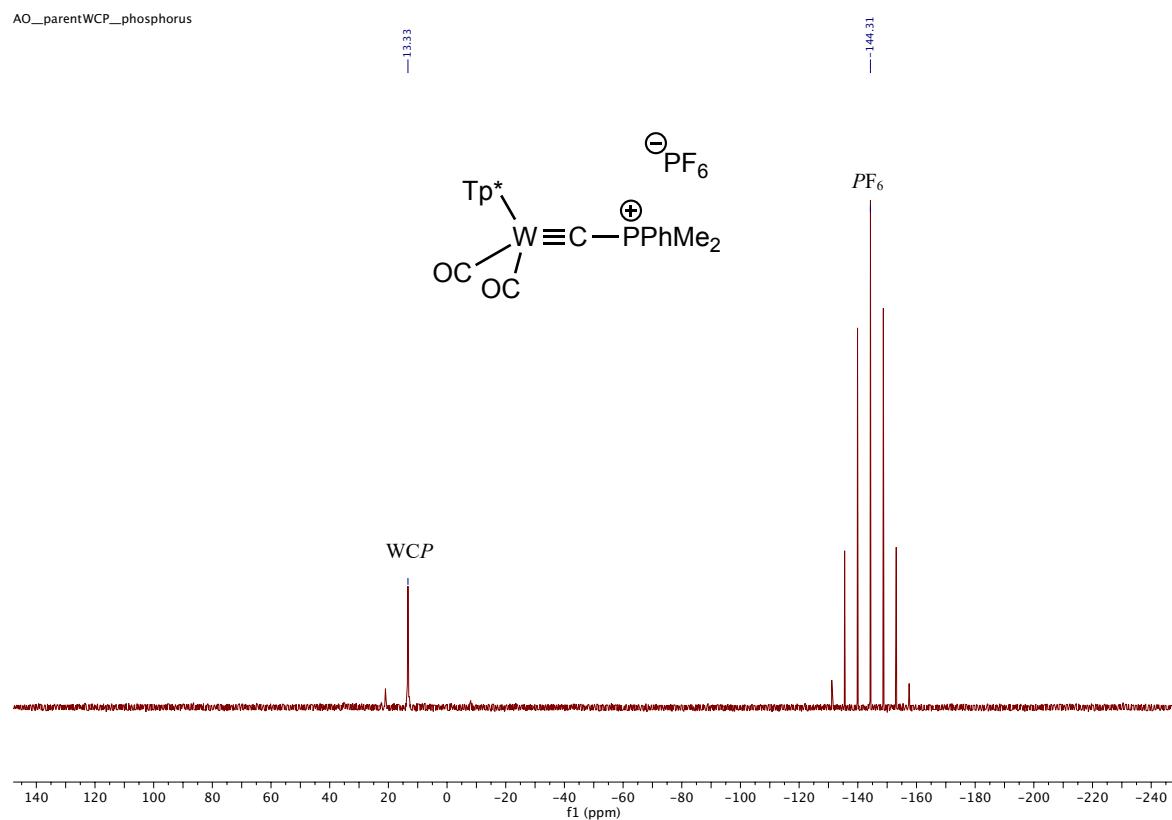
CO₂—WSe—Pd₂—Pt—PPh₃—selenium $^{77}\text{Se}\{\text{H}\}$ NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound 4.31.CO₂—WSe—Pd₂—Pt—PPh₃—phosphorus $^{31}\text{P}\{\text{H}\}$ NMR spectrum (283 MHz, CDCl₃, 25°C, δ) of compound 4.31.



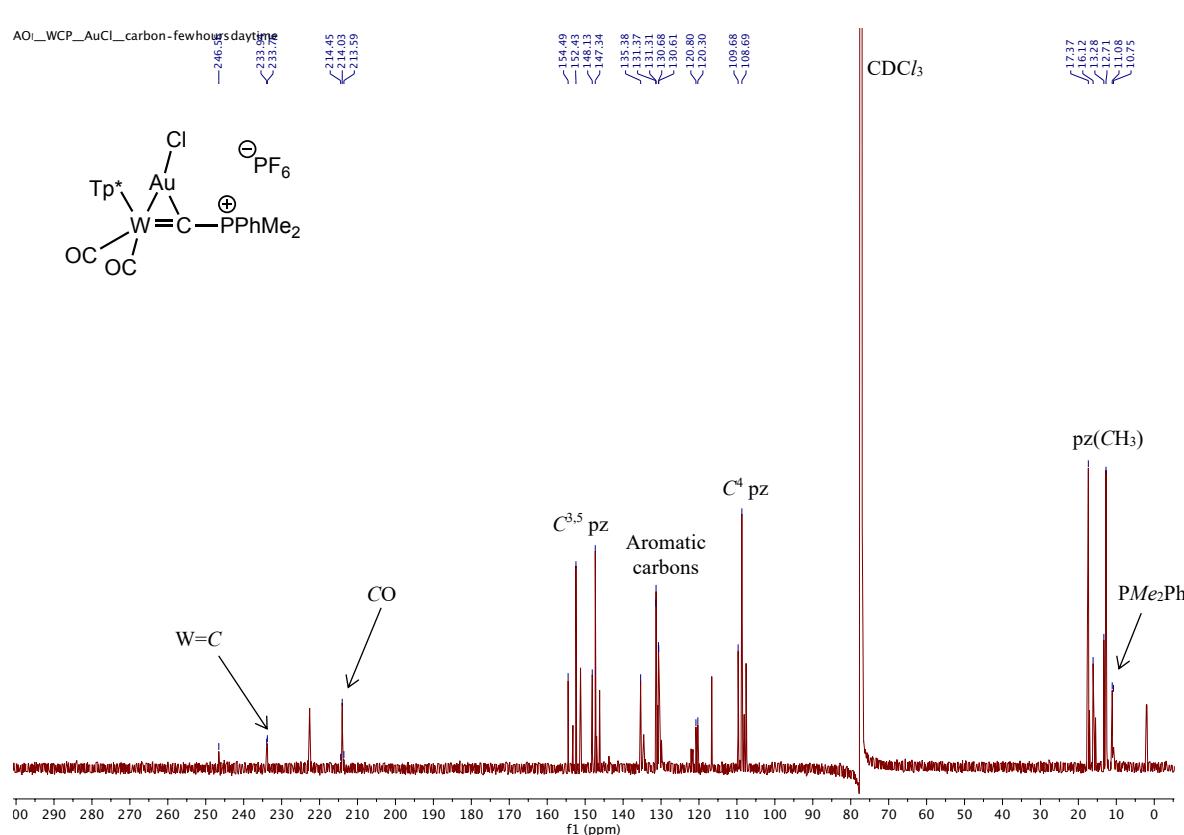
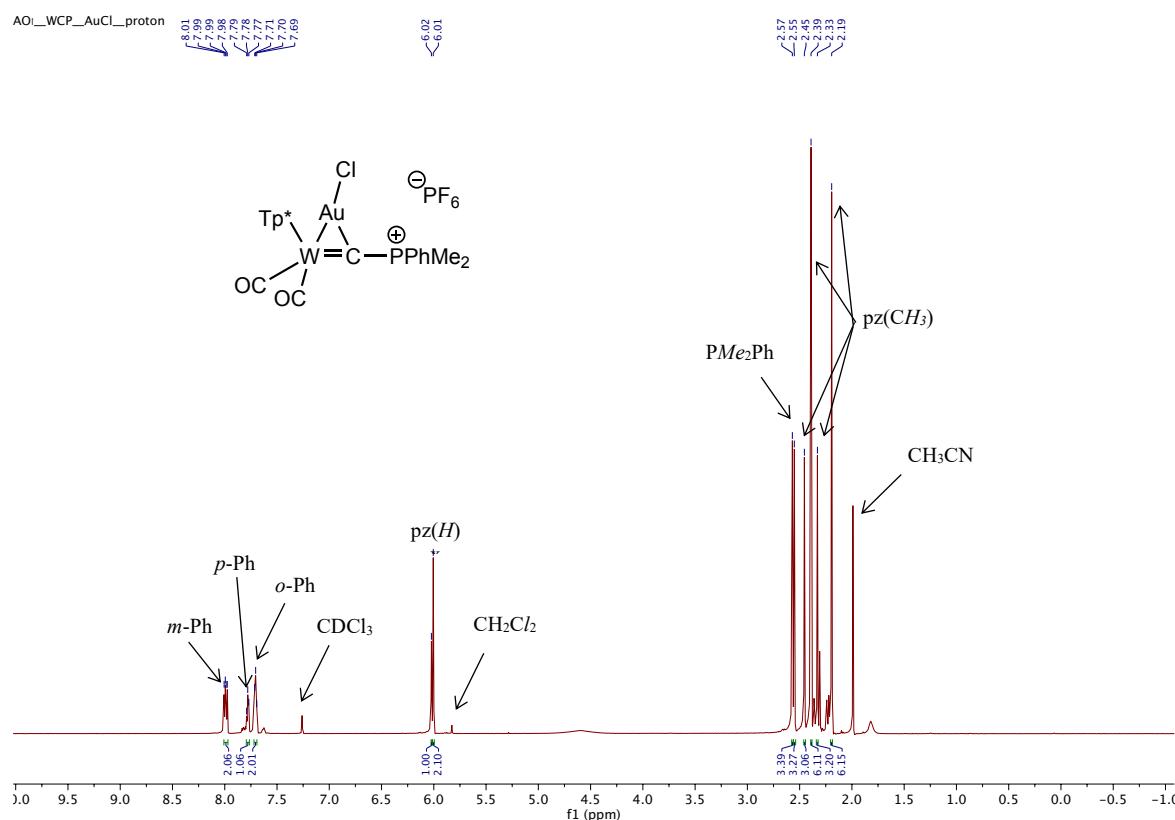
⁷⁷Se{¹H} NMR spectrum (134 MHz, CDCl₃, 25°C, δ) of compound 4.32.³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 4.32.

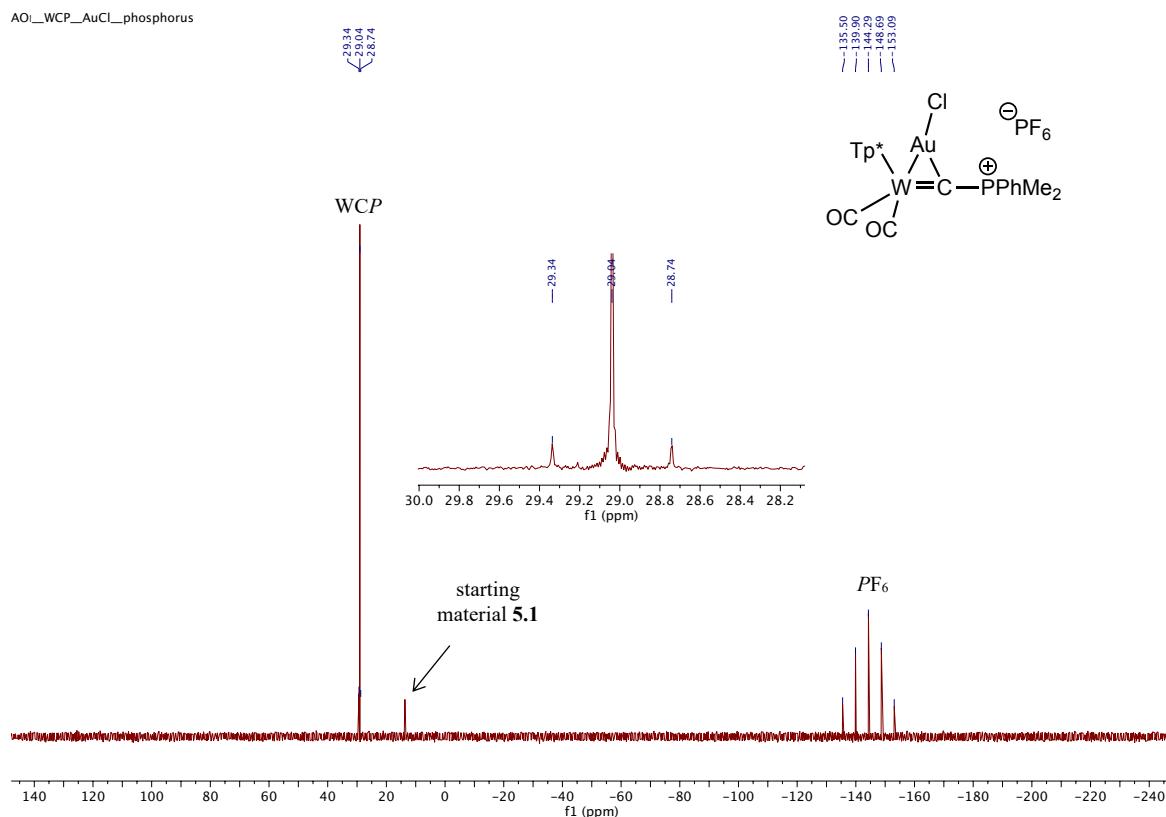
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 ^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 5.1. $^{13}\text{C}\{\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 5.1.

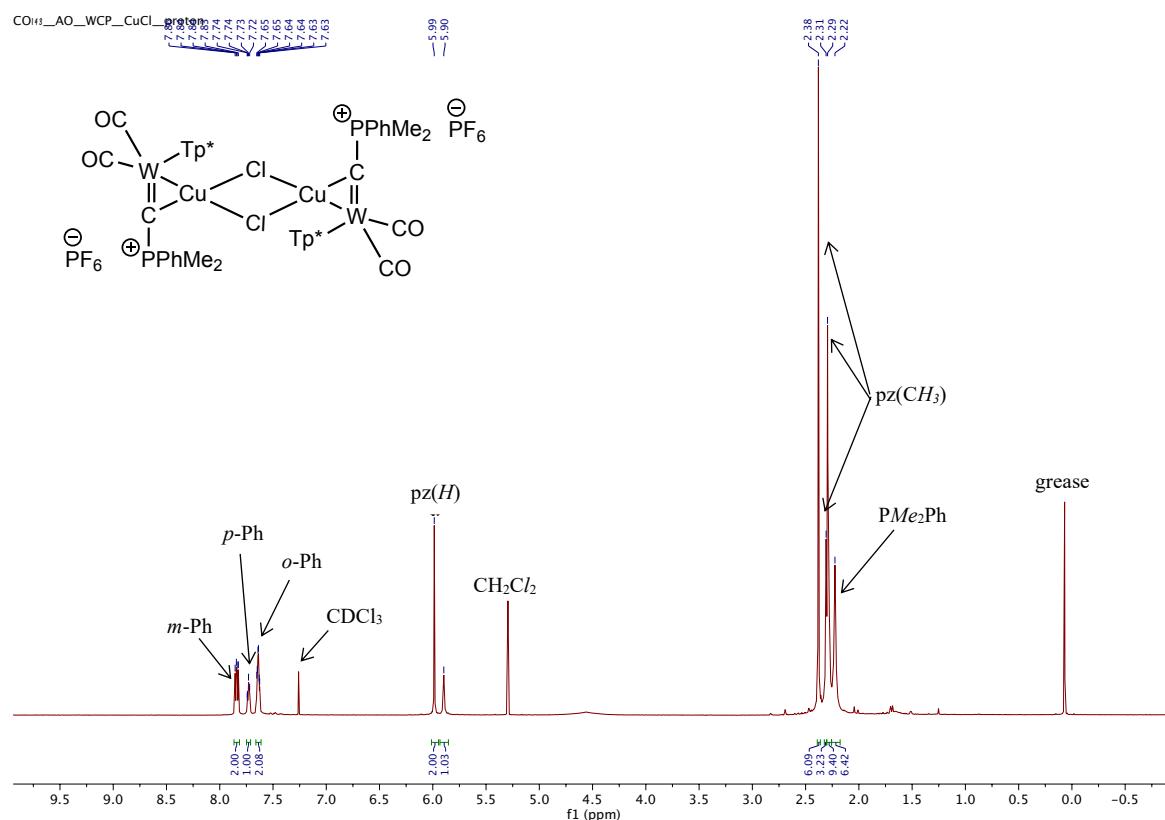
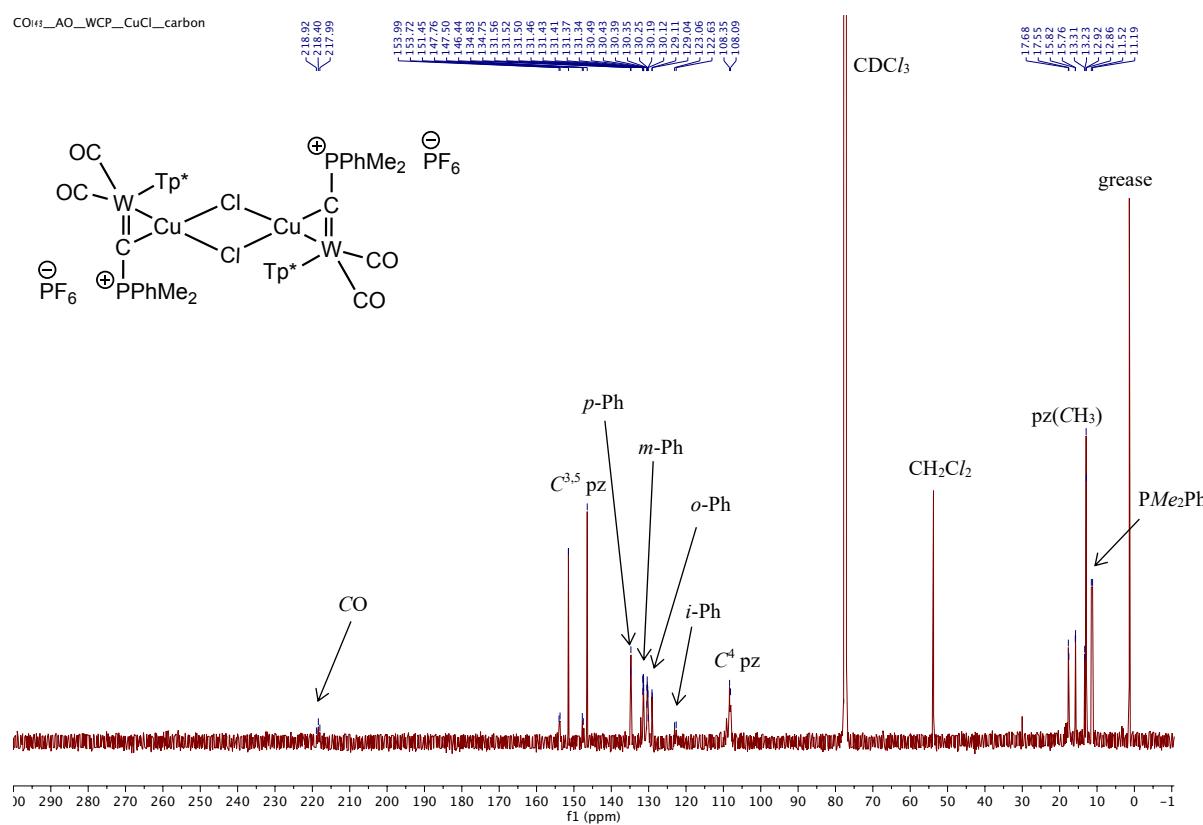


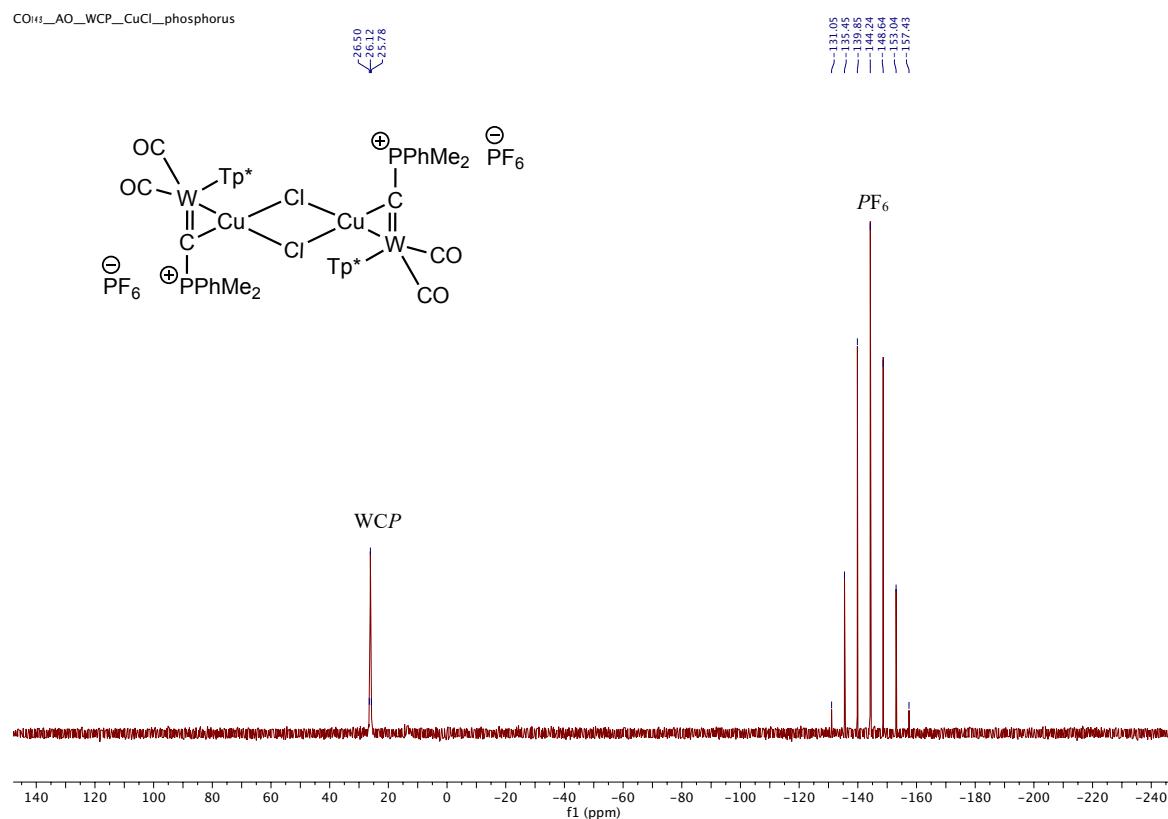
$^{31}\text{P}\{^1\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound **5.1**.



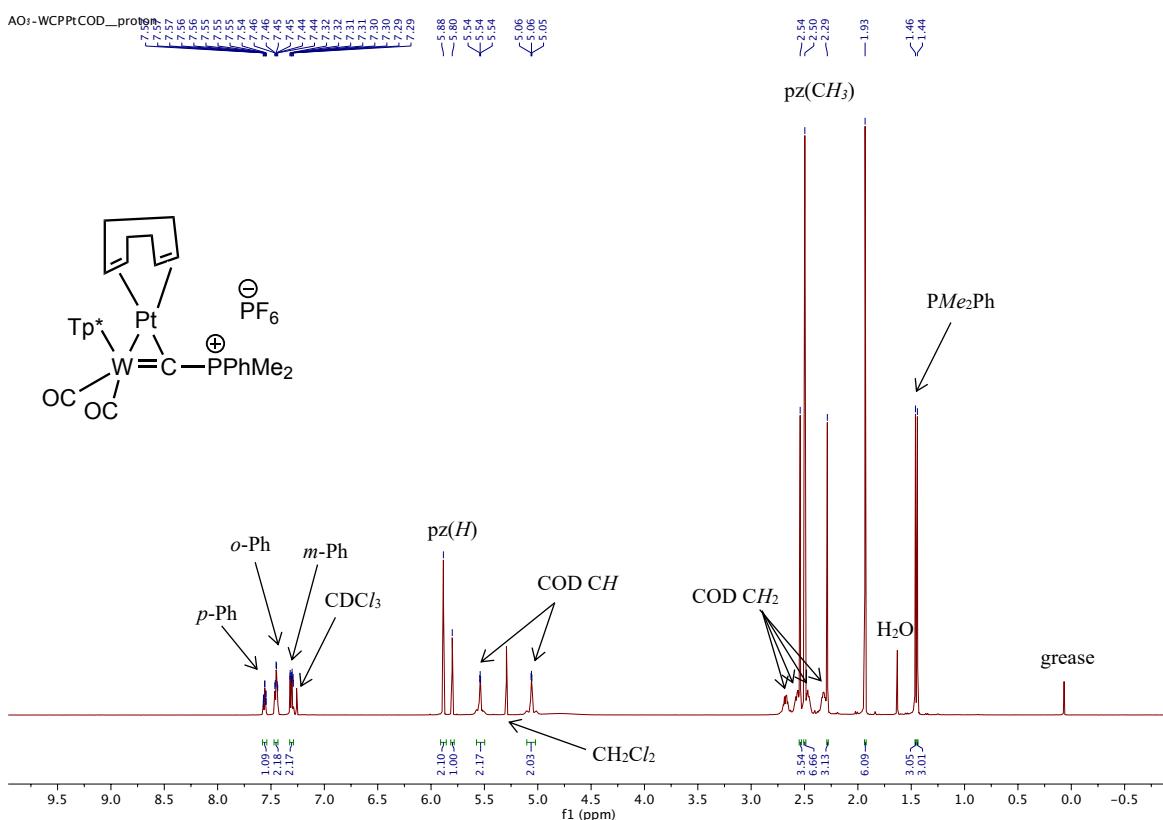


³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound **5.2**.

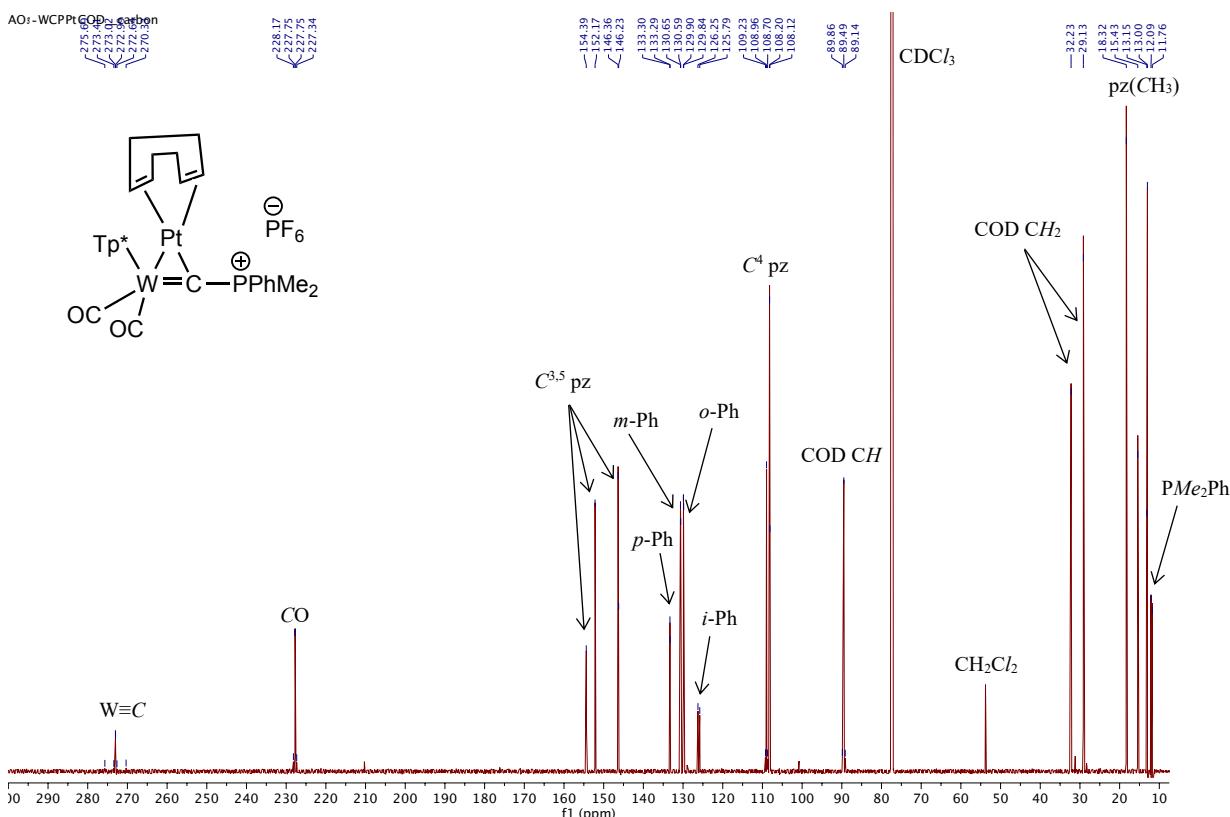
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.3.¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 5.3.



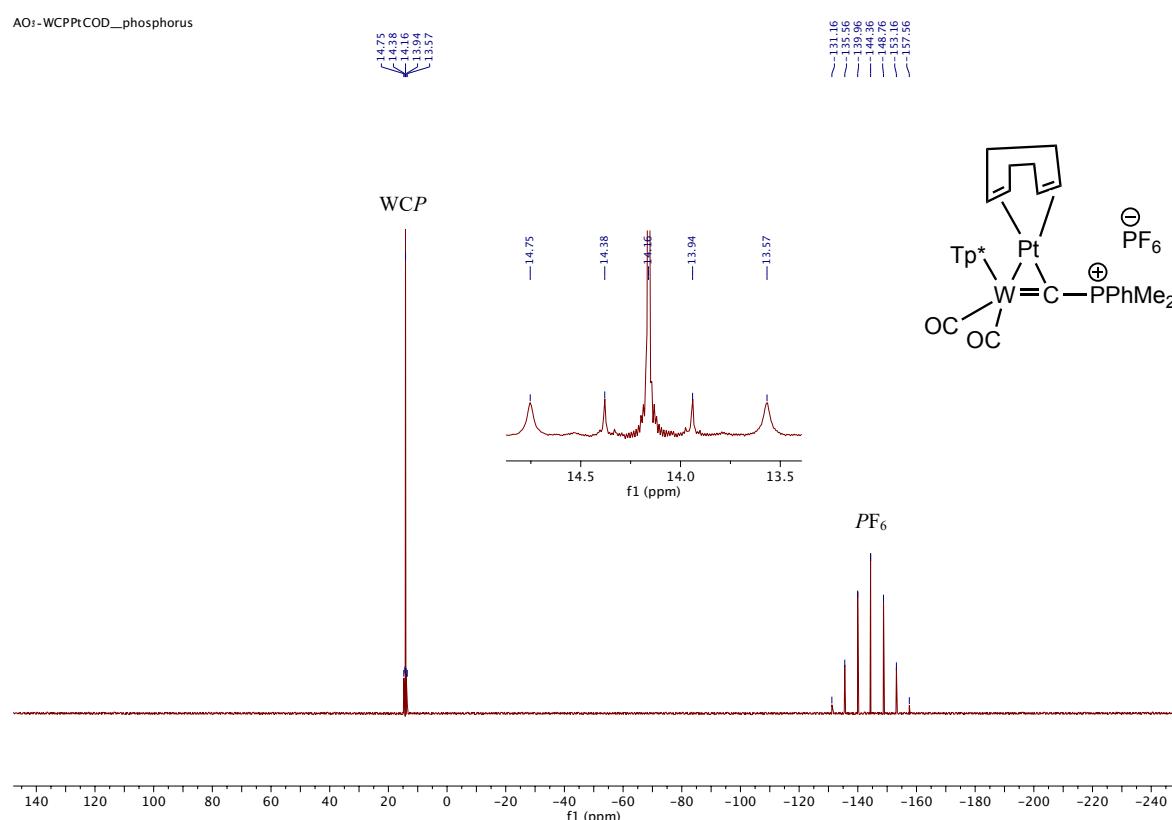
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25 °C, δ) of compound 5.3.



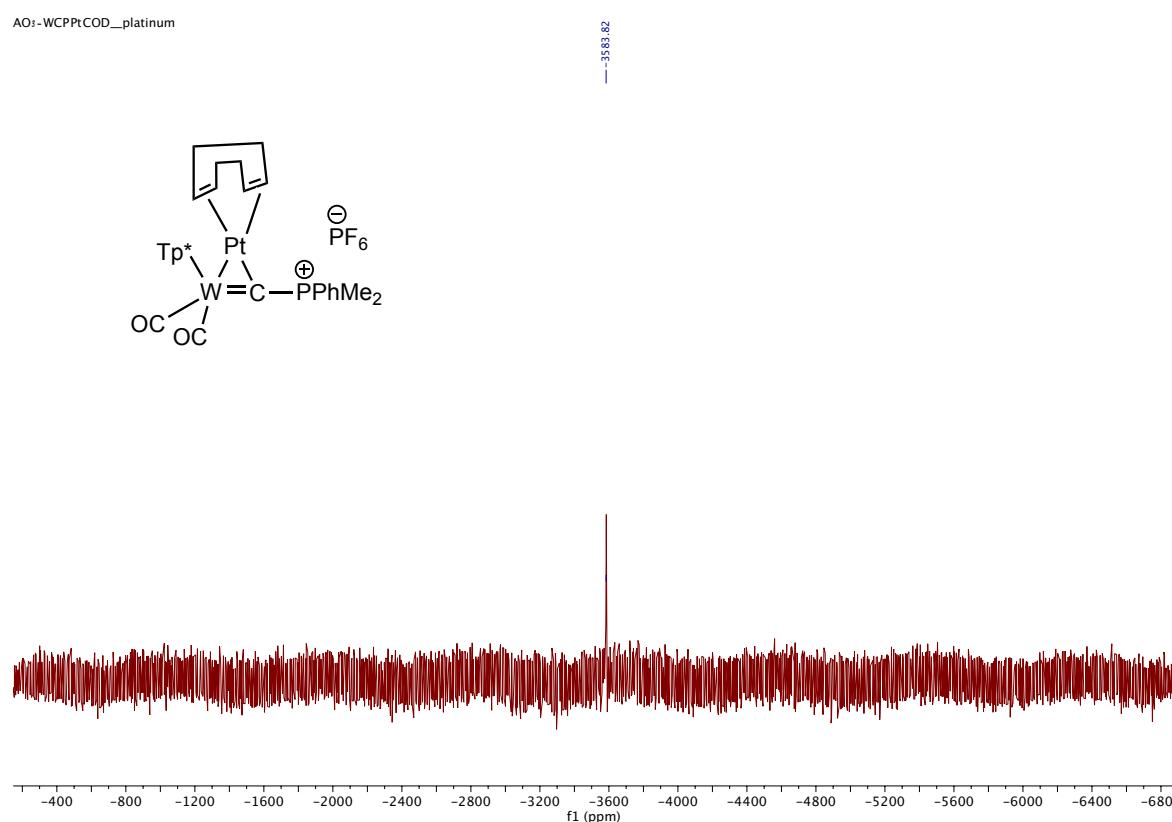
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.4.



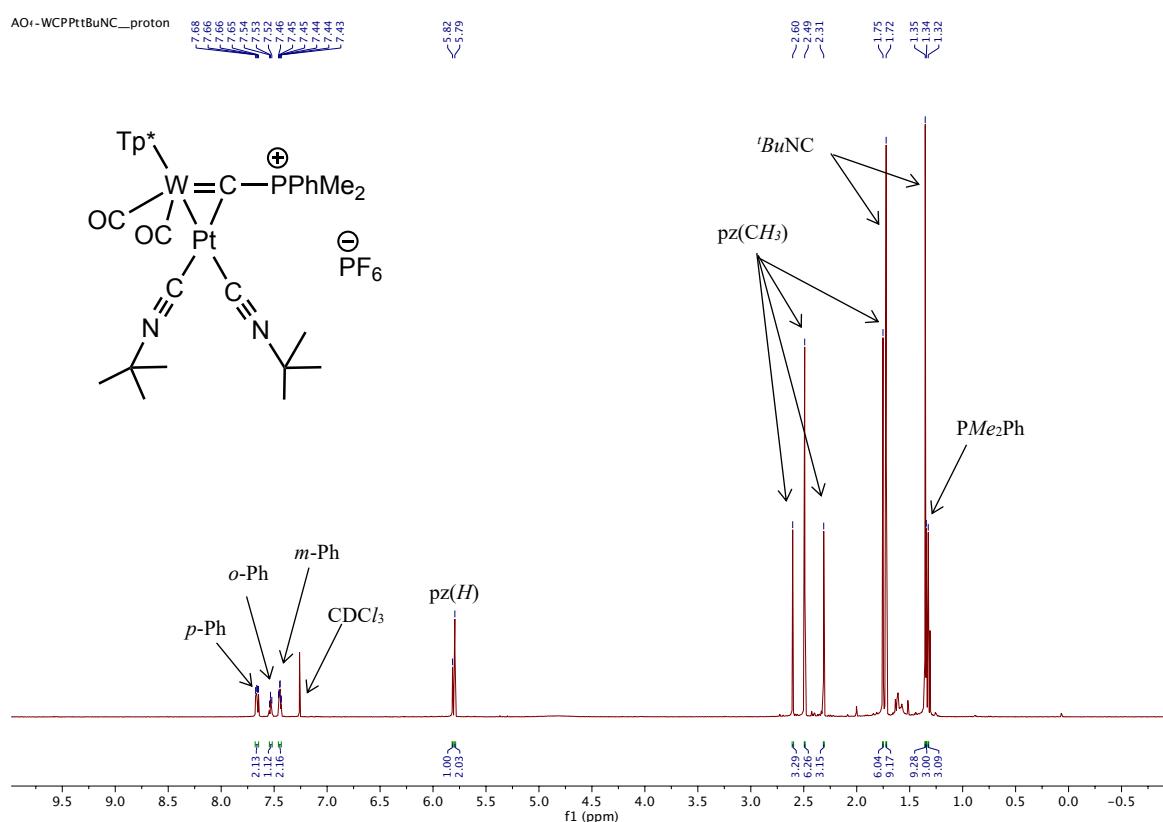
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 5.4.



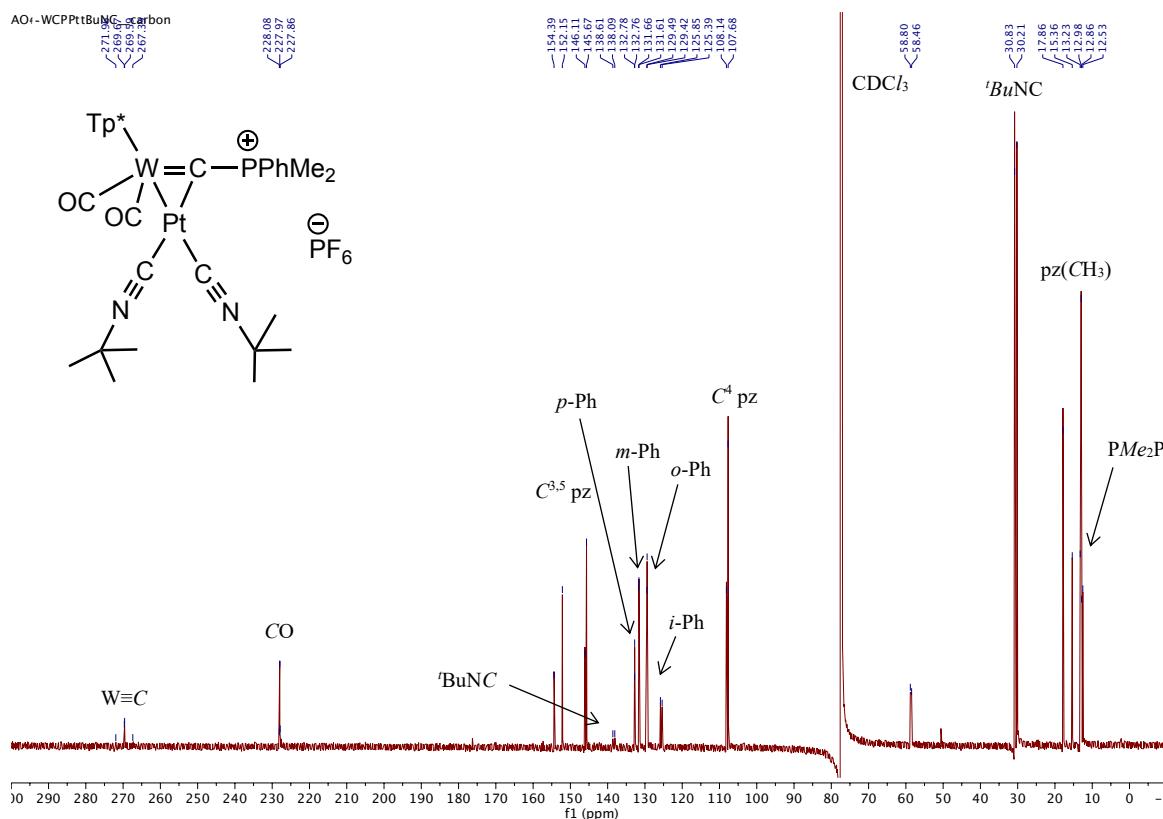
$^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound 5.4.



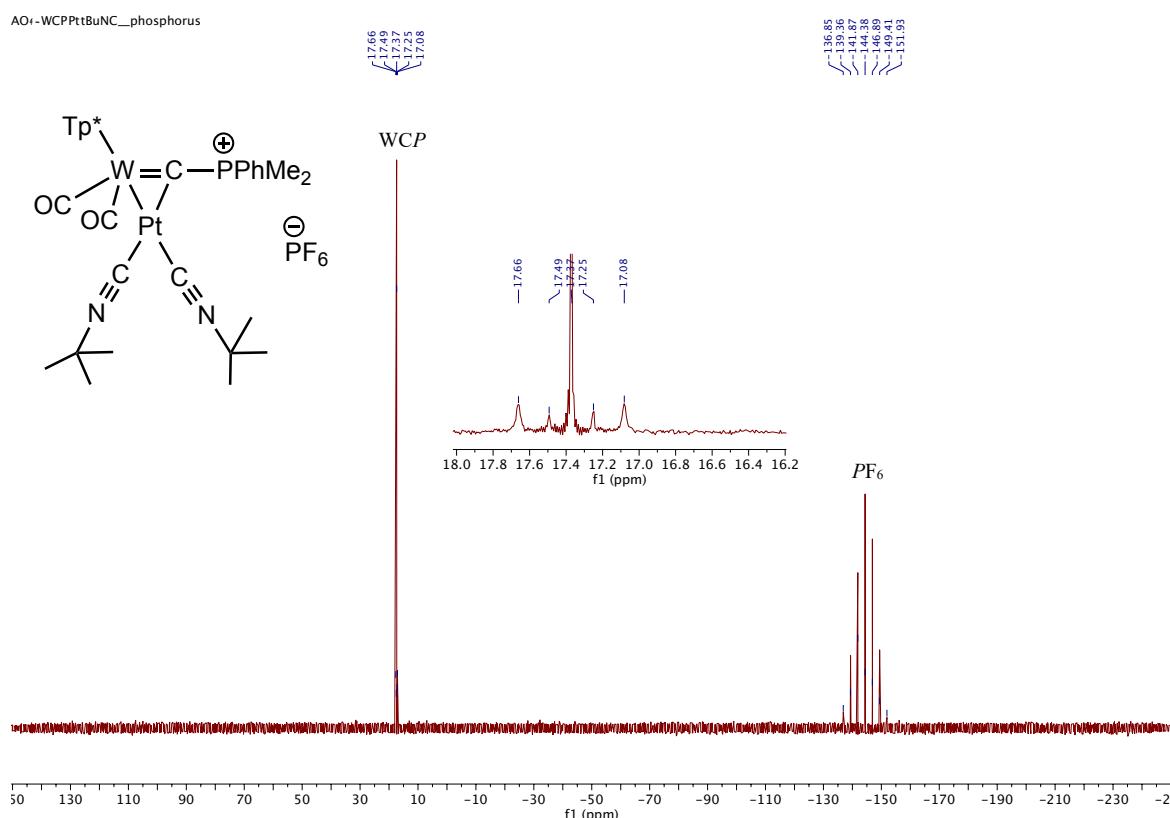
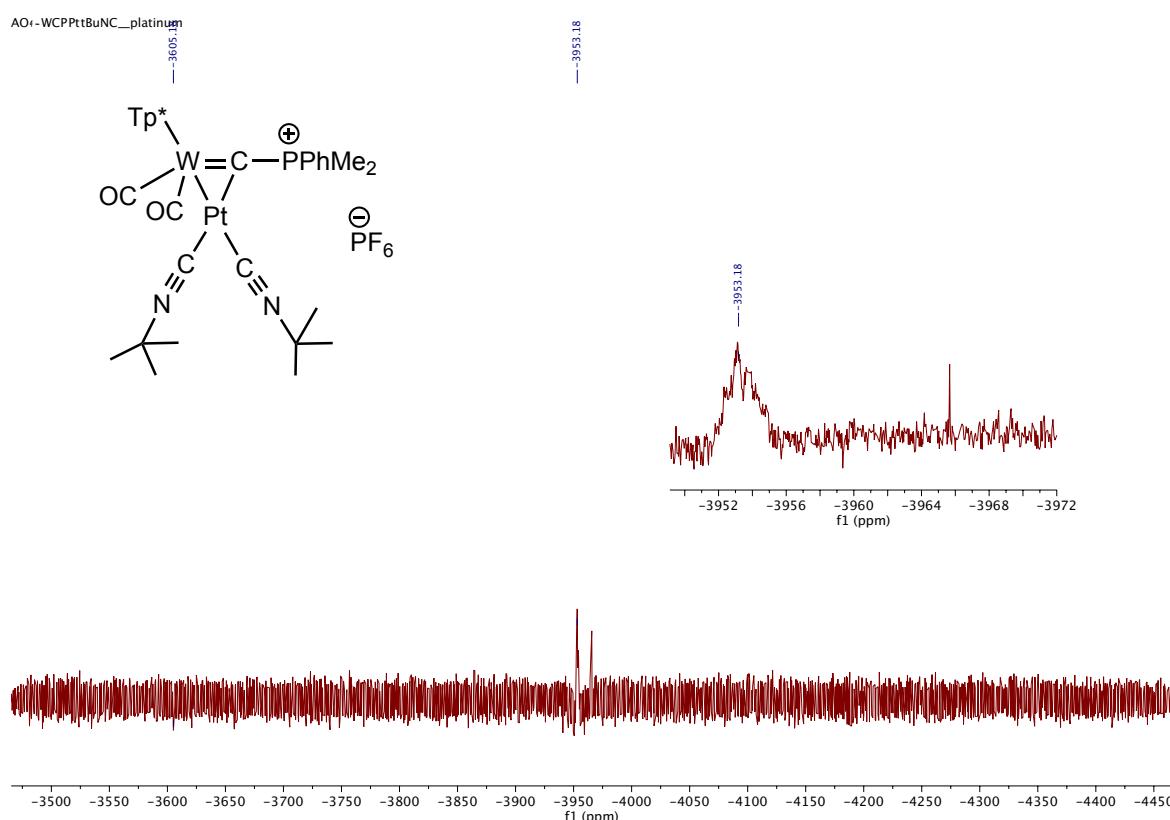
¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 5.4.

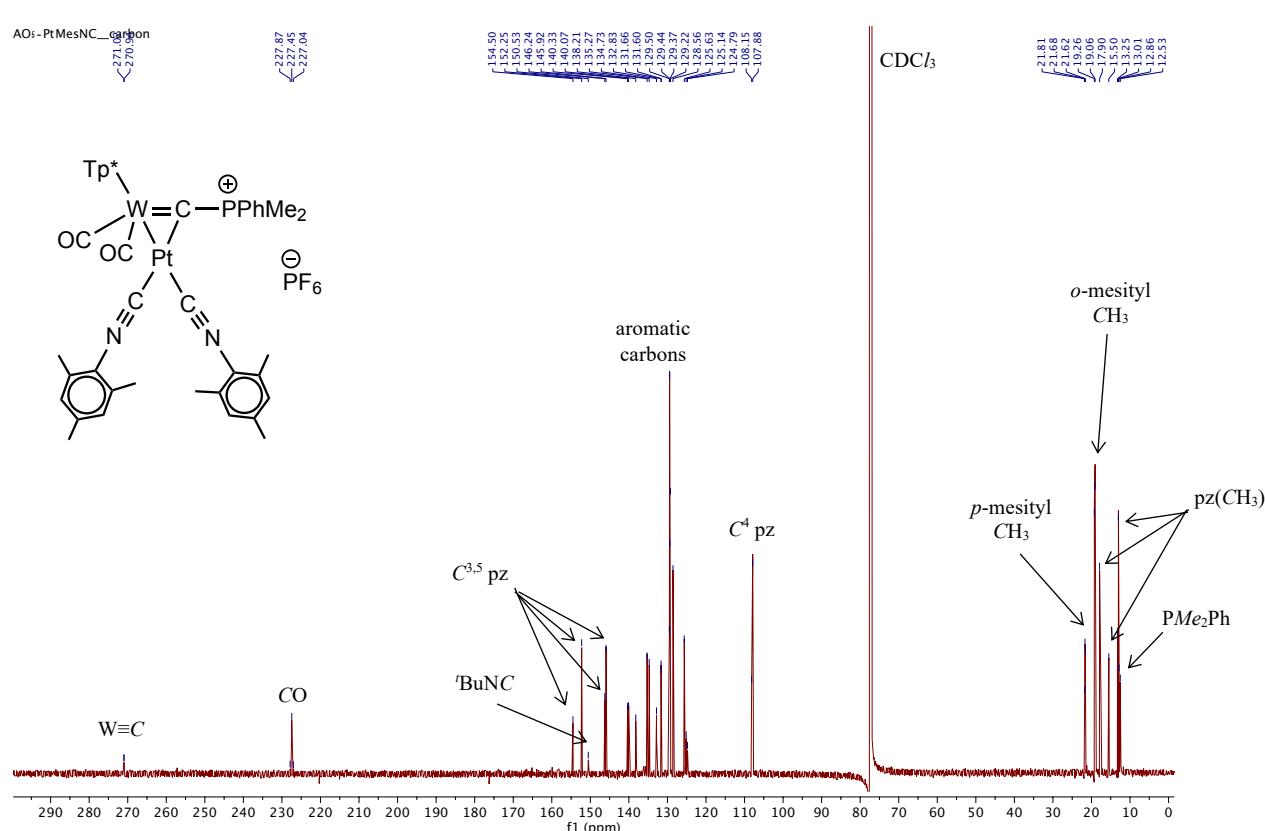
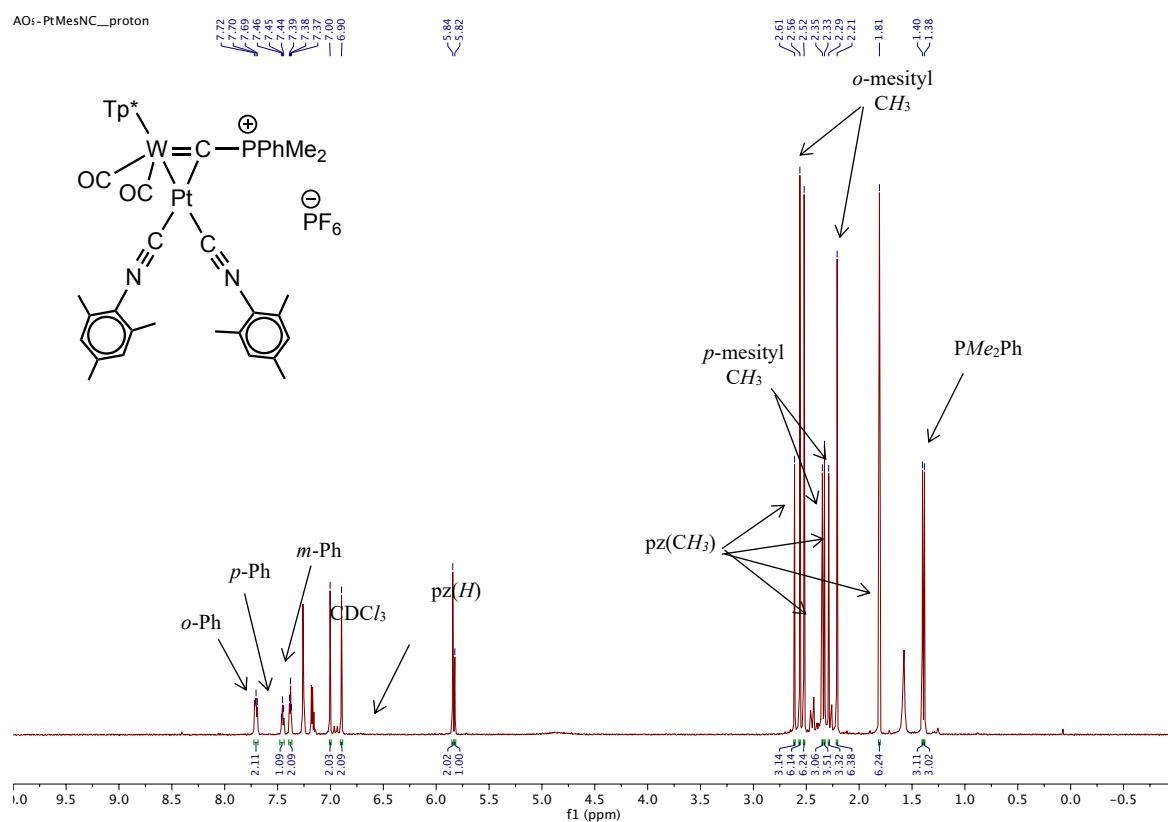


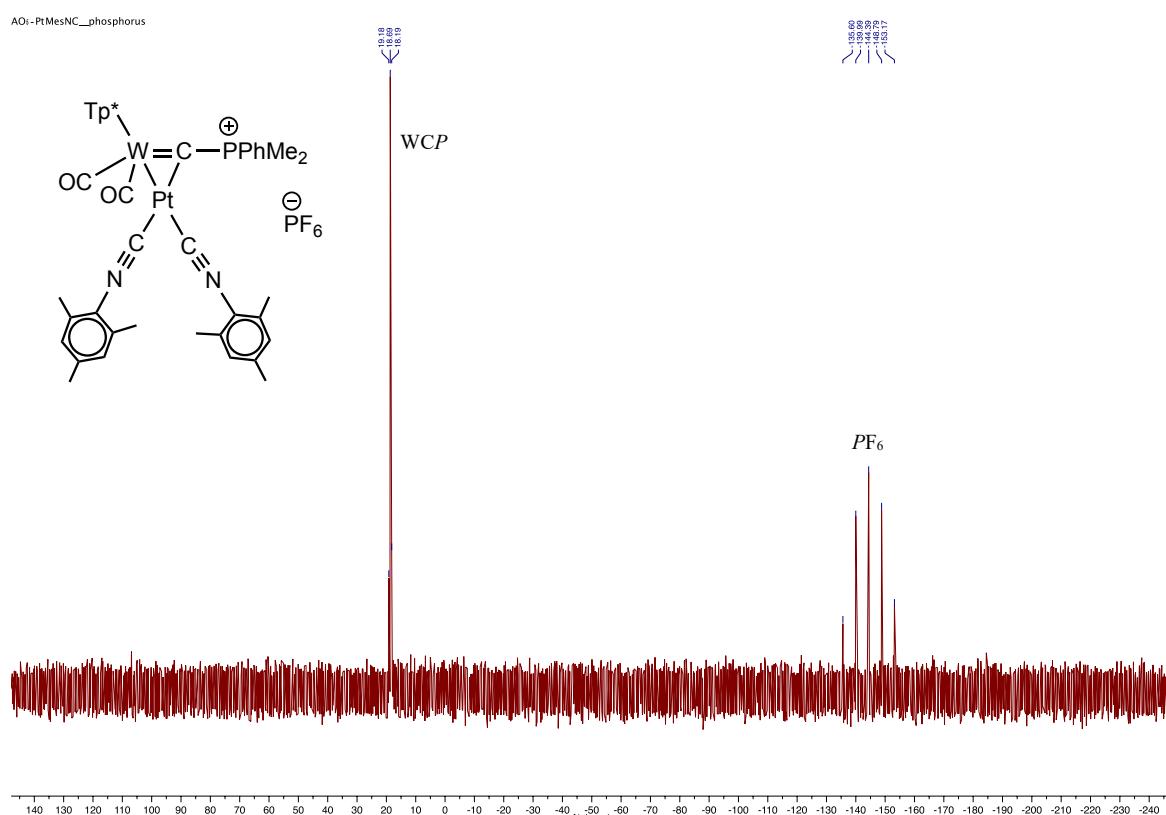
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.5.



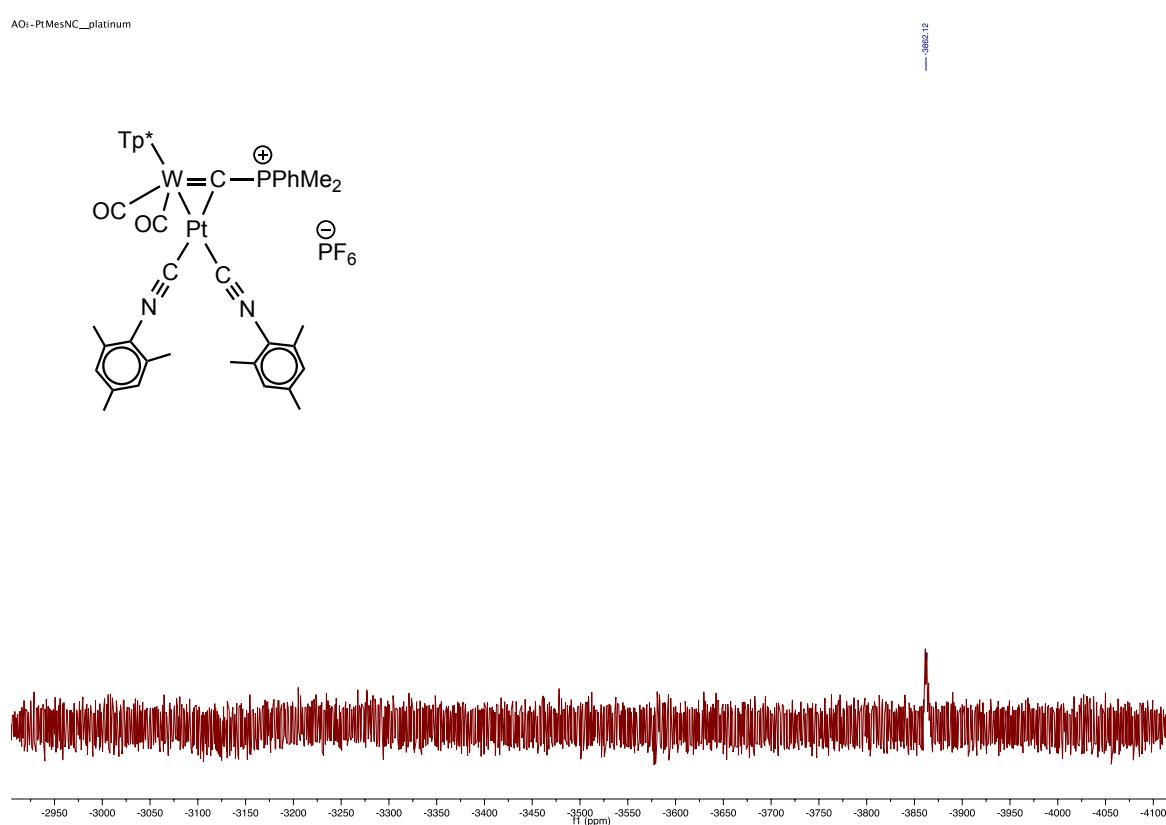
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 5.5.

³¹P{¹H} NMR spectrum (283 MHz, CDCl₃, 25°C, δ) of compound 5.5.¹⁹⁵Pt NMR spectrum (150 MHz, CDCl₃, 25°C, δ) of compound 5.5.

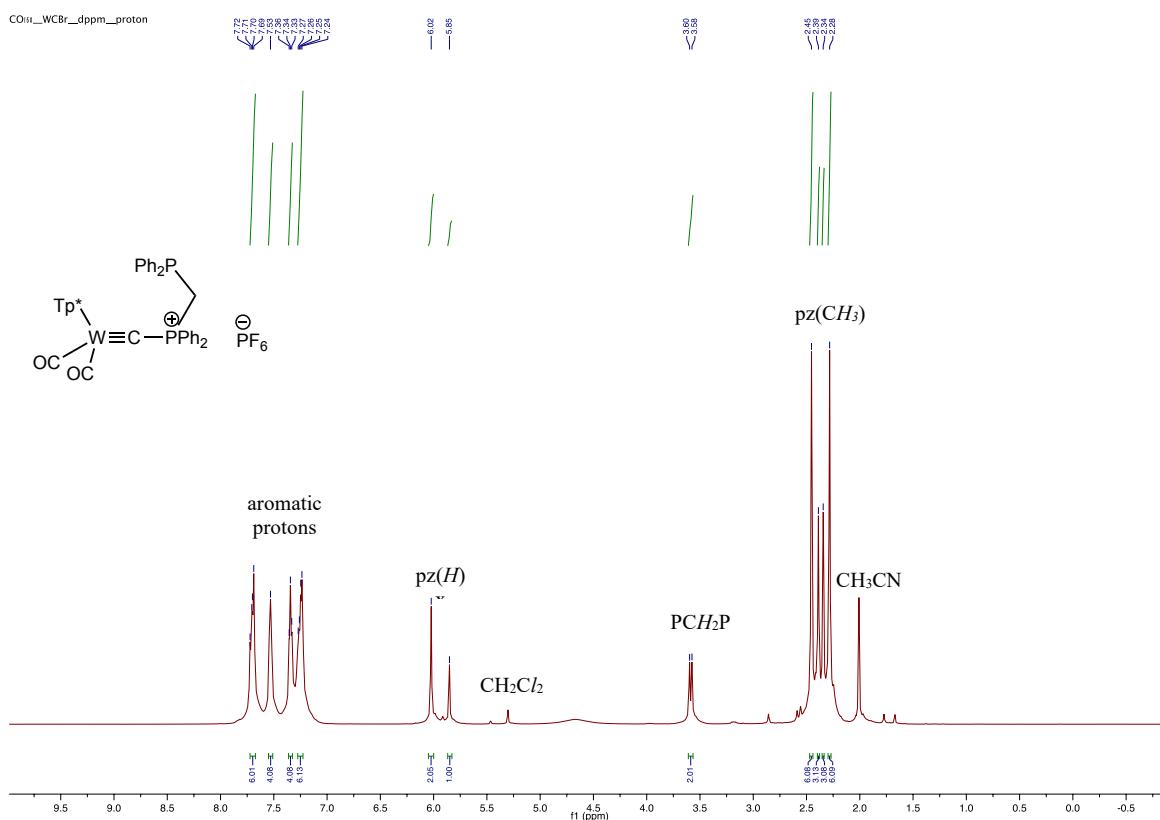
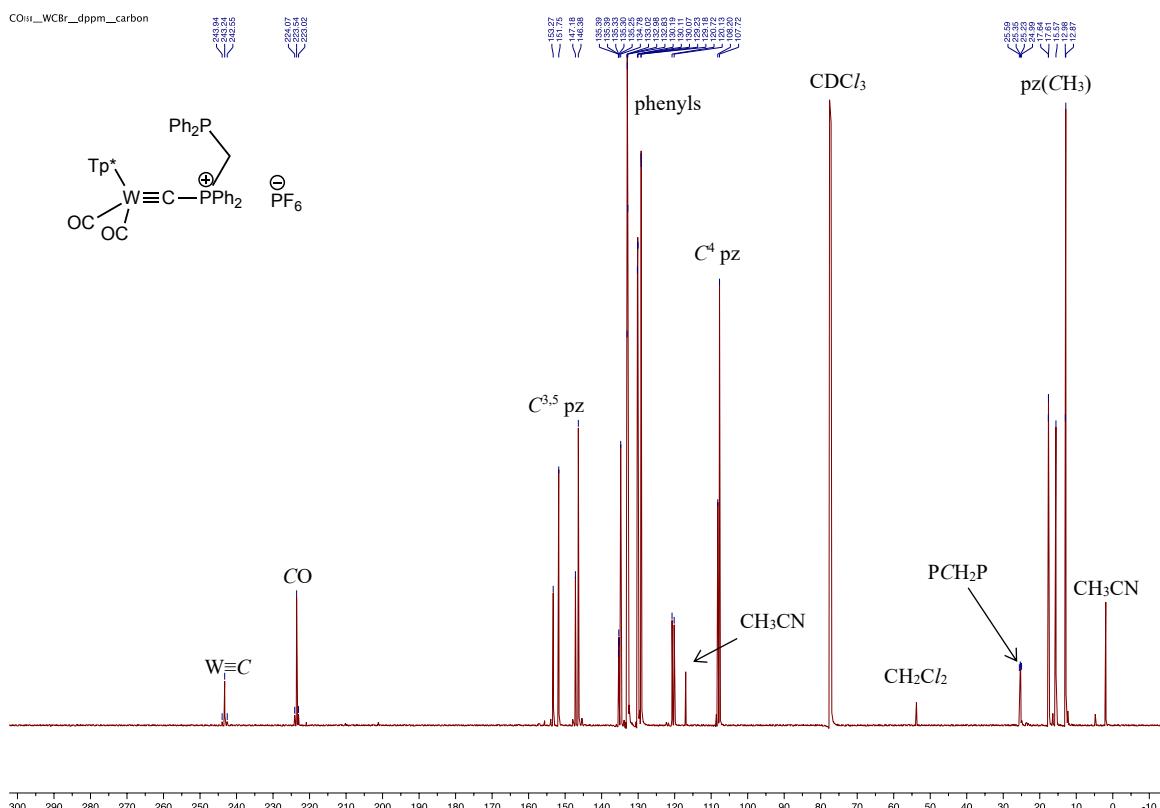


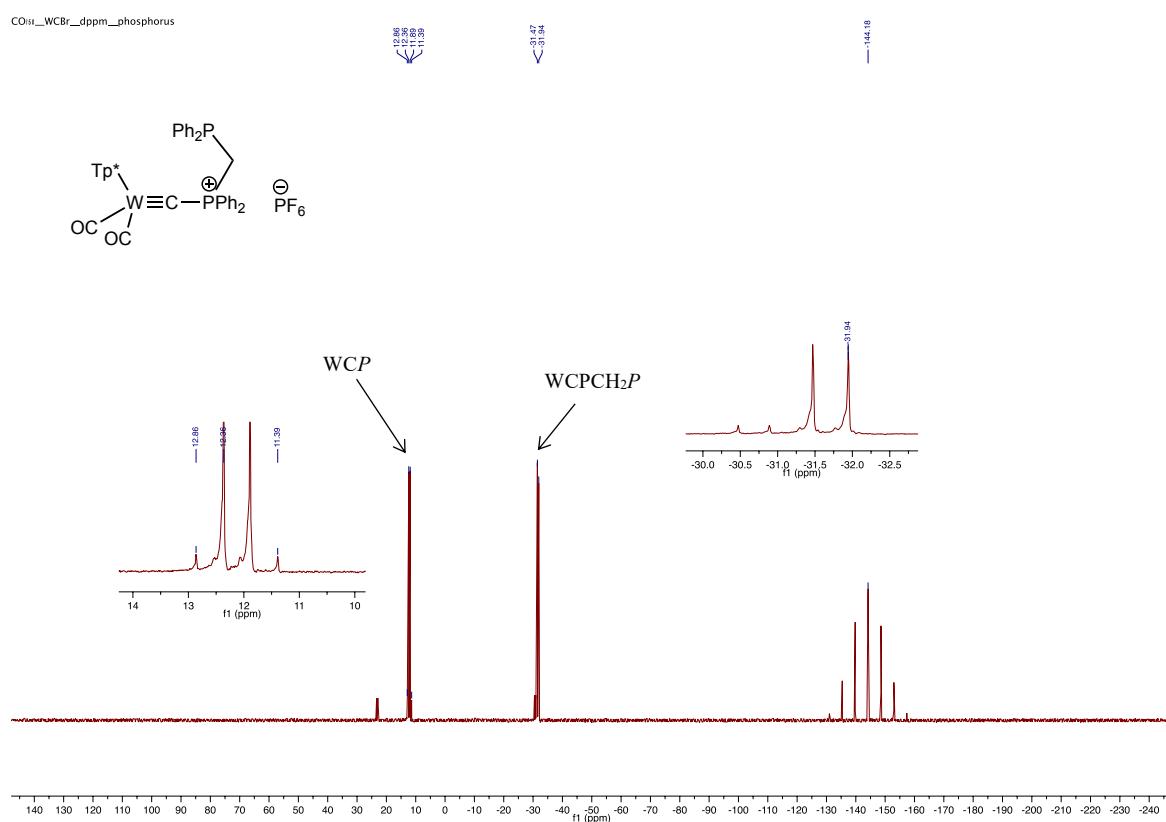


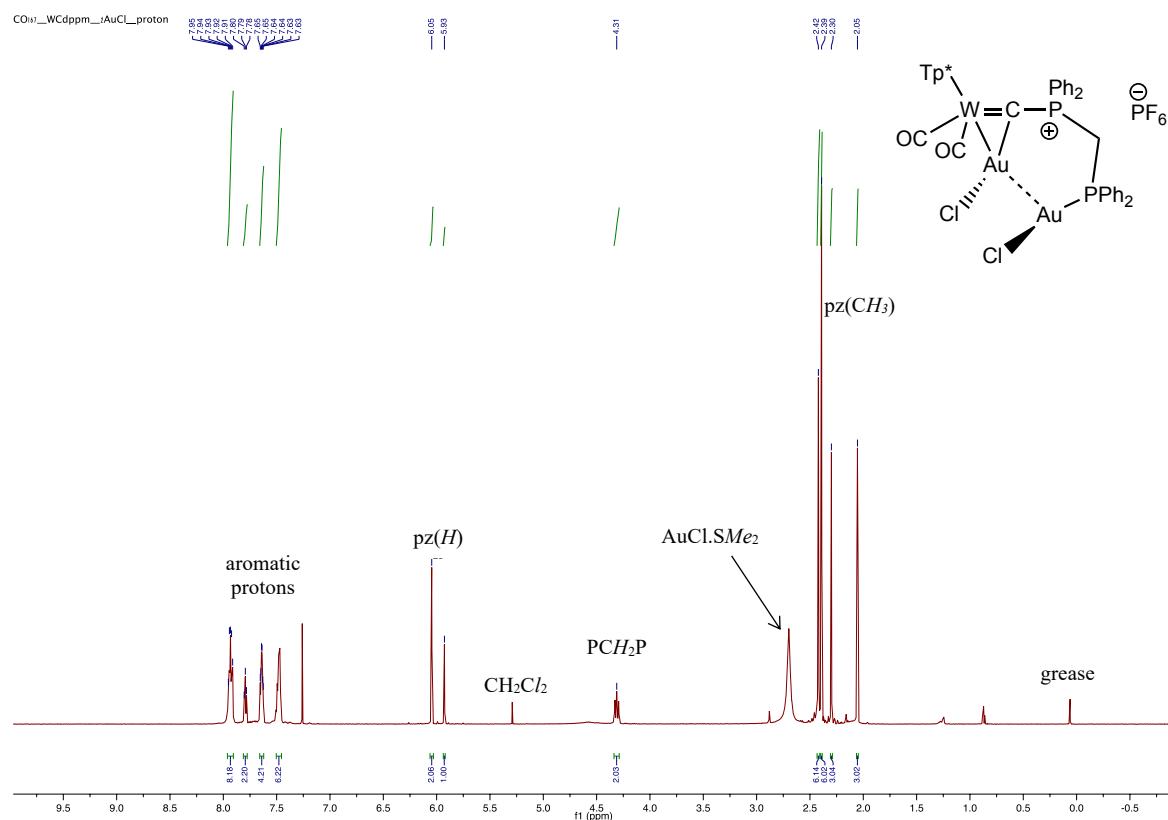
$^{31}\text{P}\{^1\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound **5.6**.



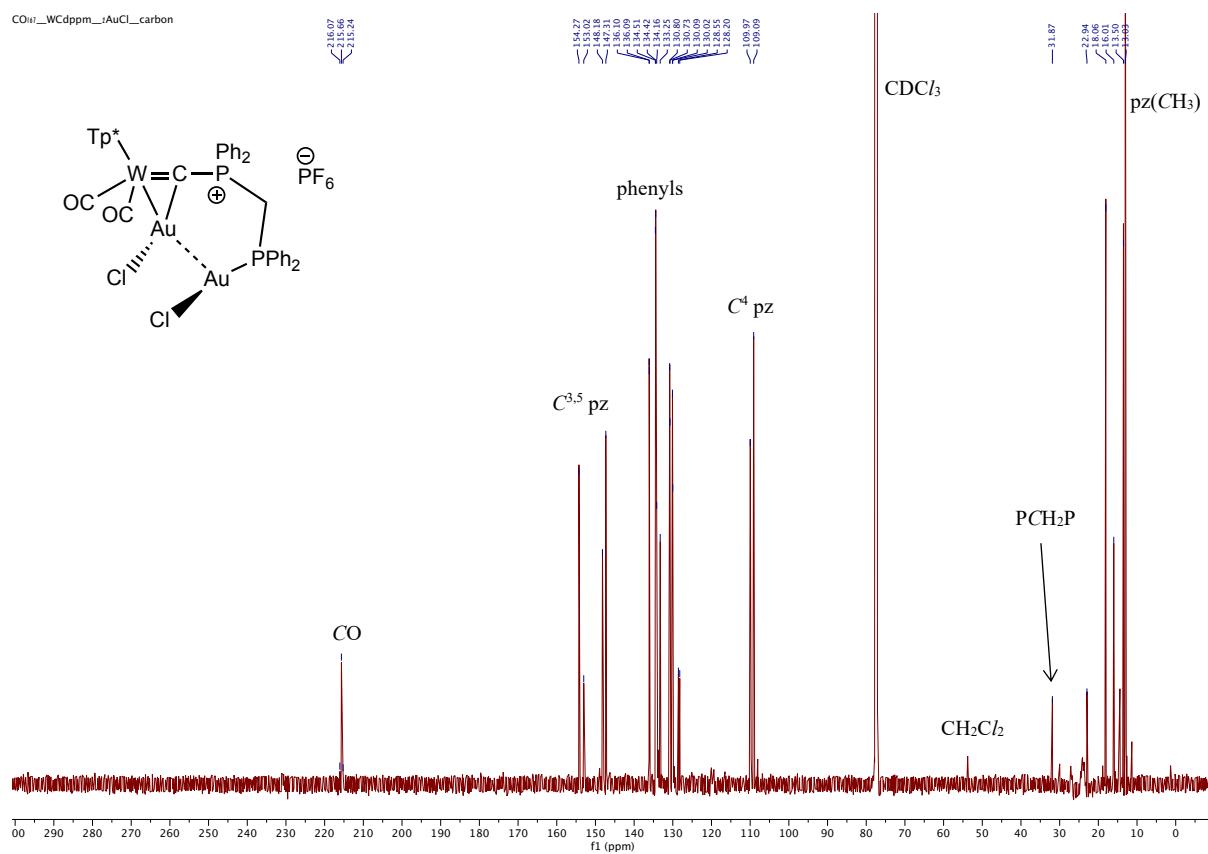
^{195}Pt NMR spectrum (86 MHz, CDCl_3 , 25°C, δ) of compound **5.6**.

 ^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 5.7. $^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3 , 25°C, δ) spectrum of compound 5.7.

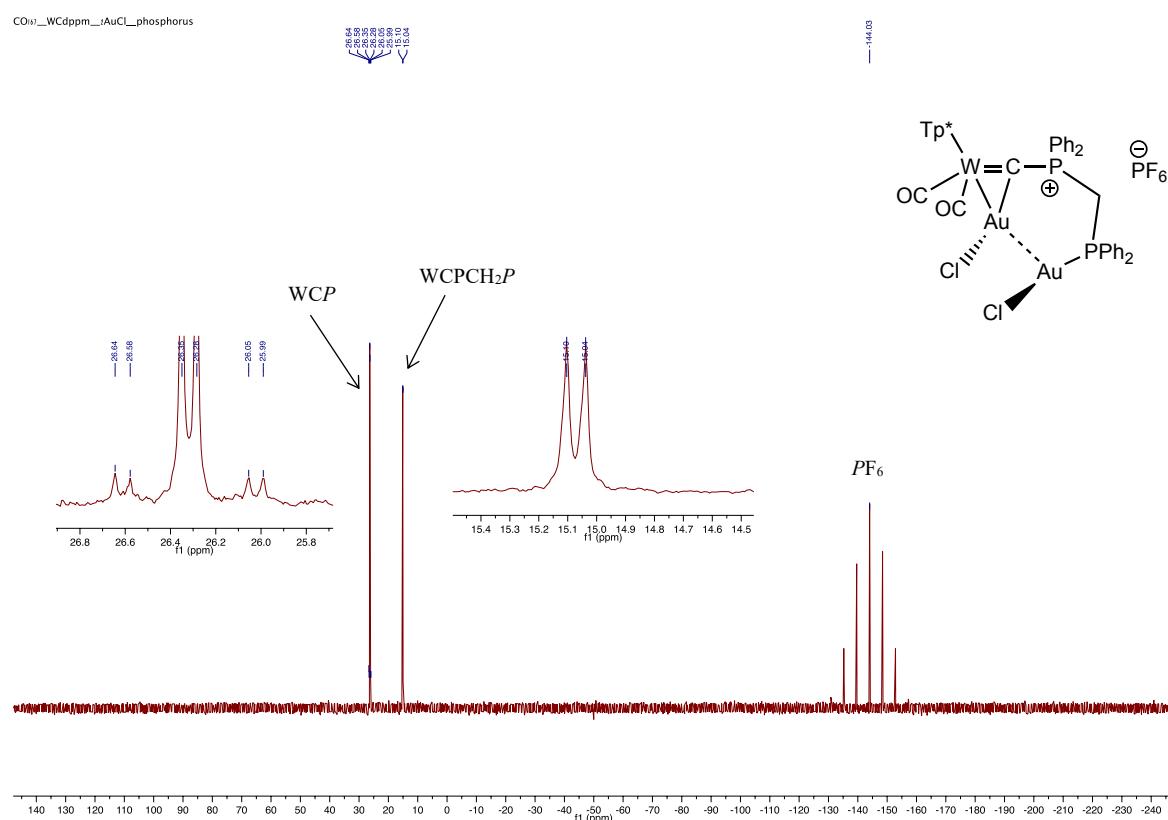




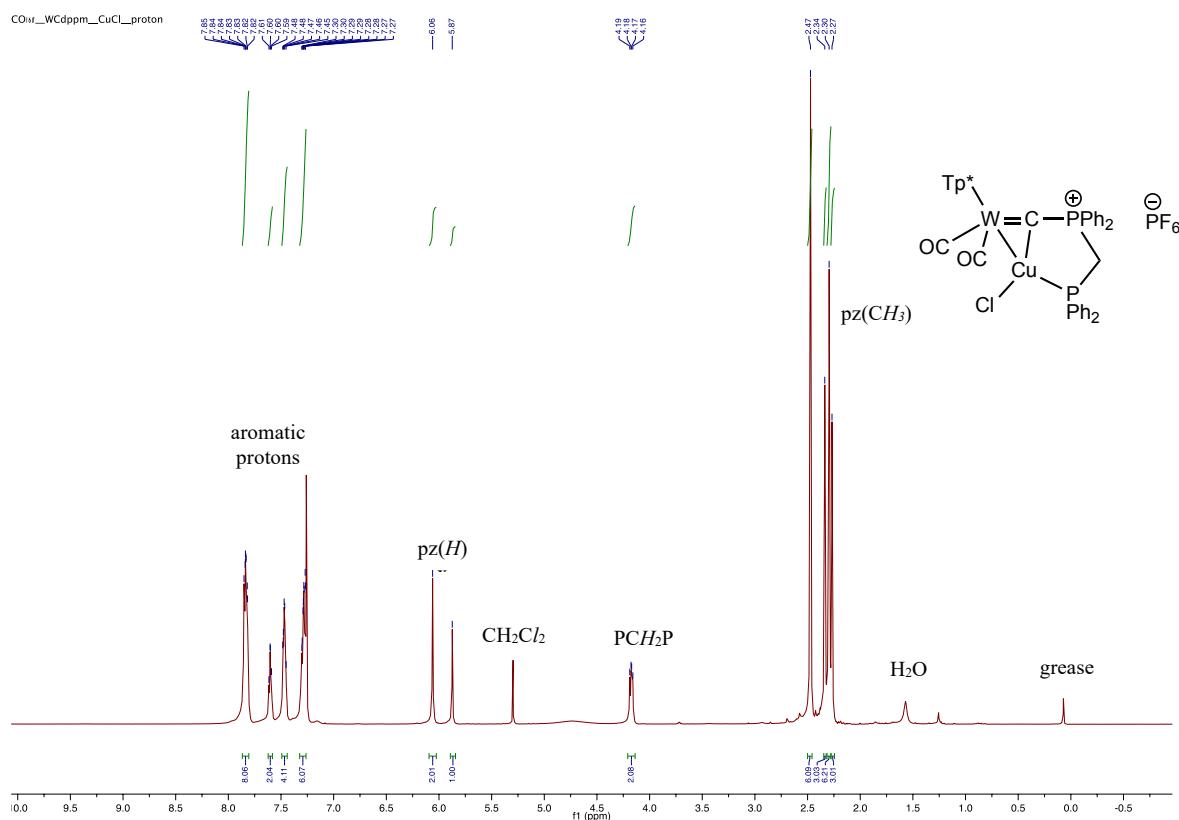
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.8.



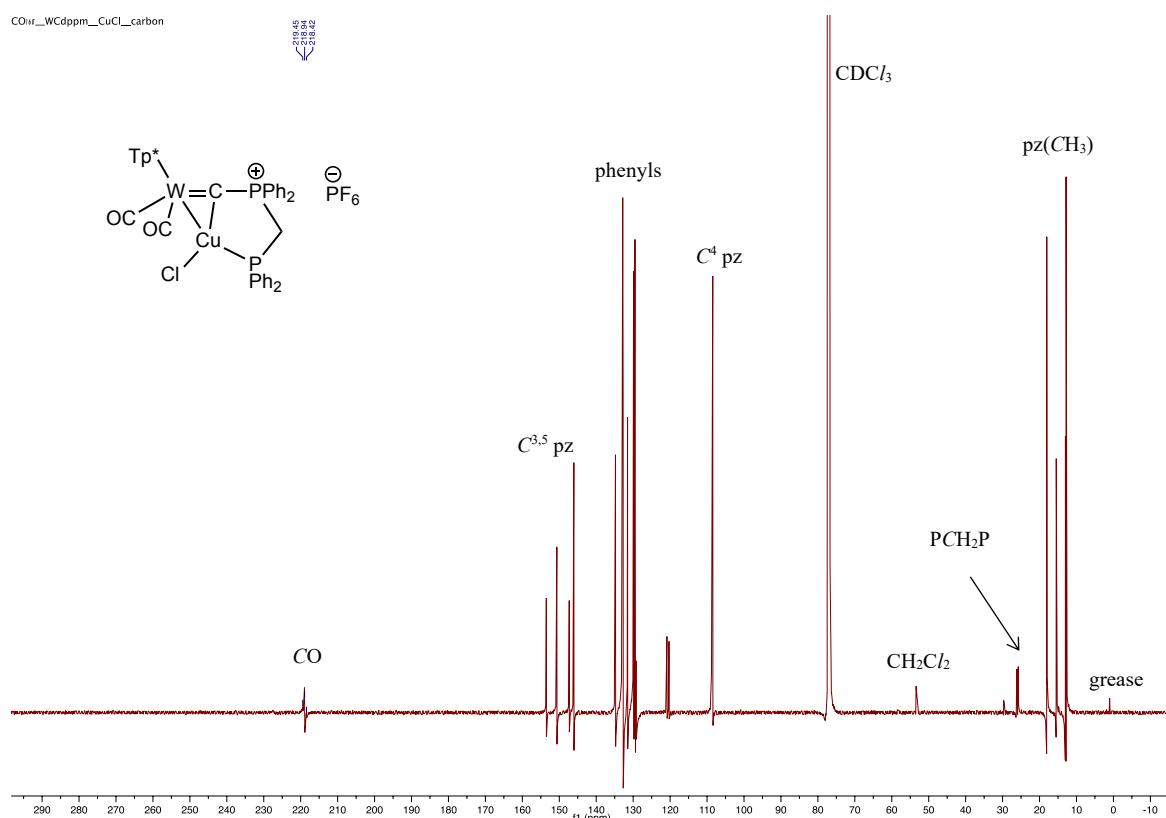
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 5.8.



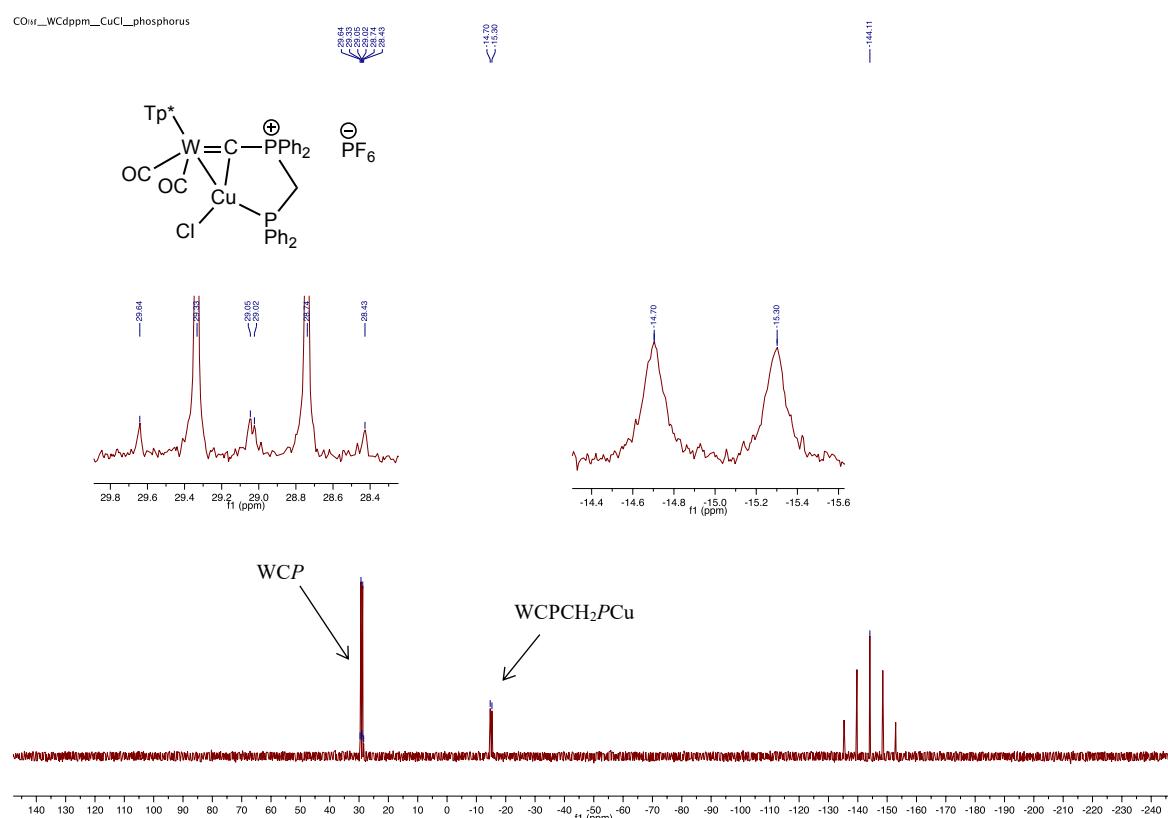
$^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound **5.8**.



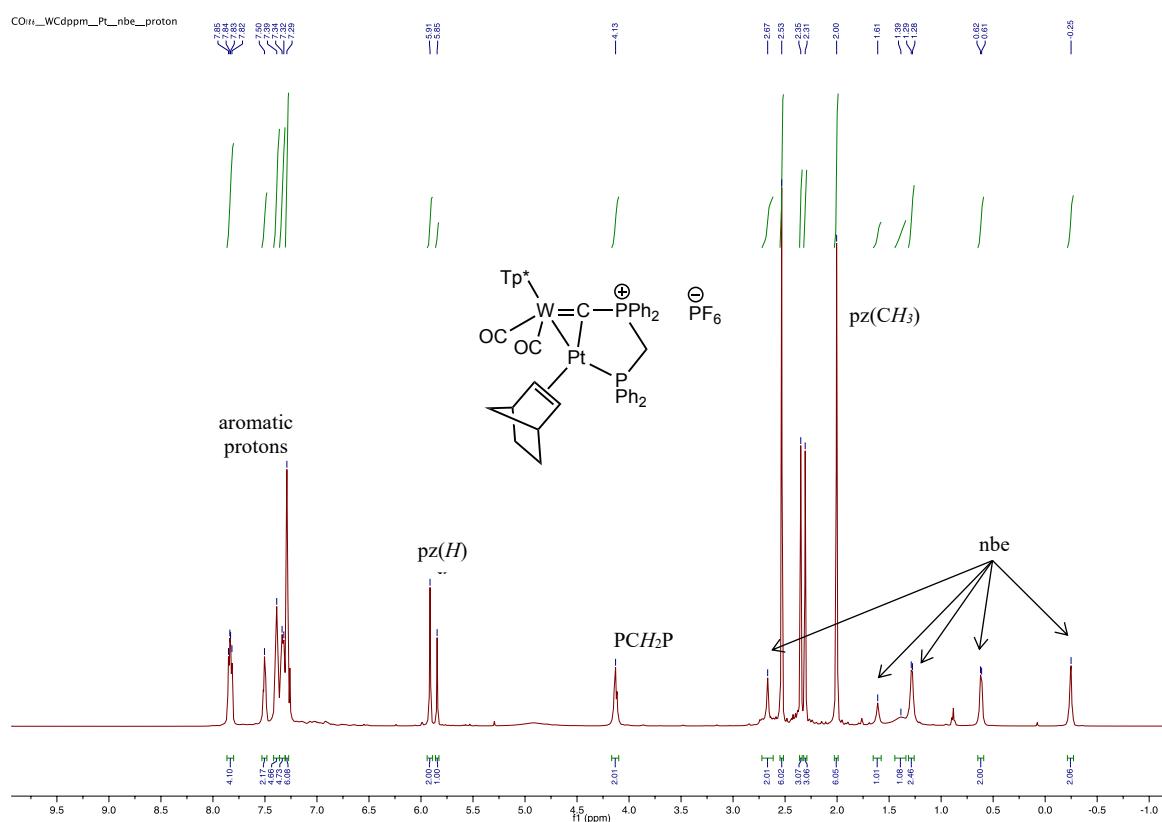
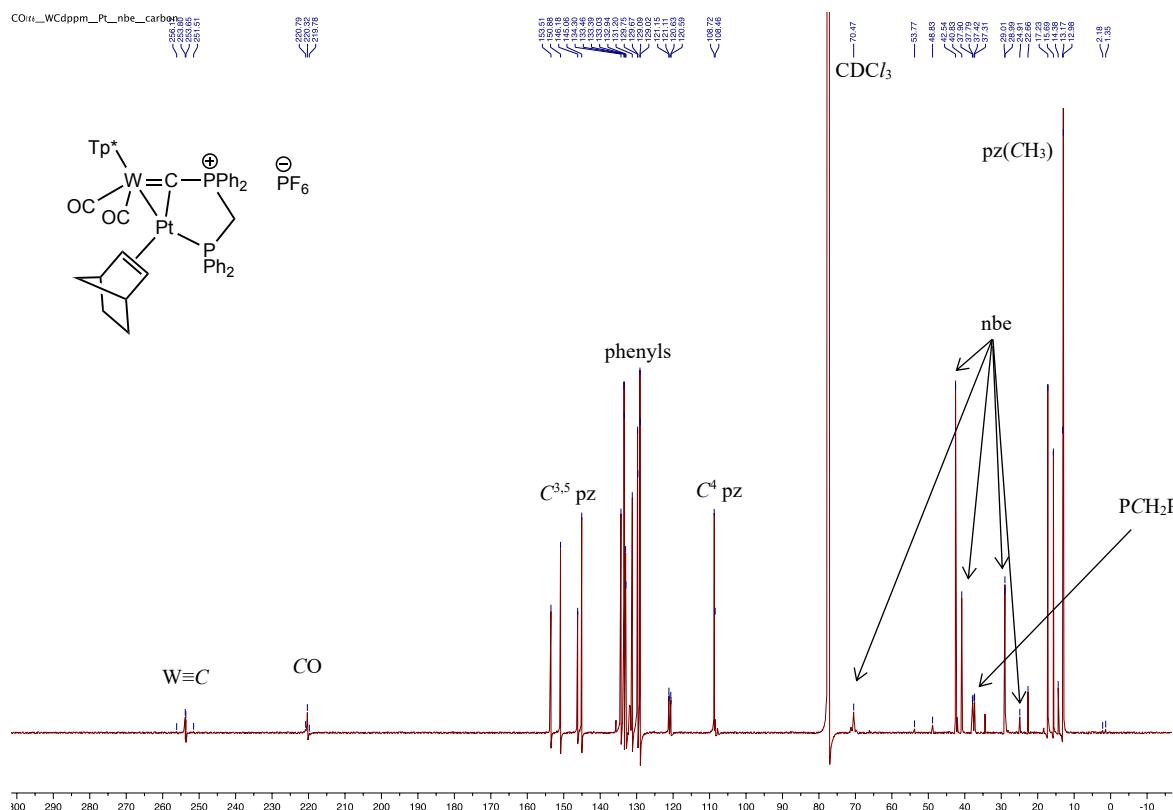
^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 5.9.

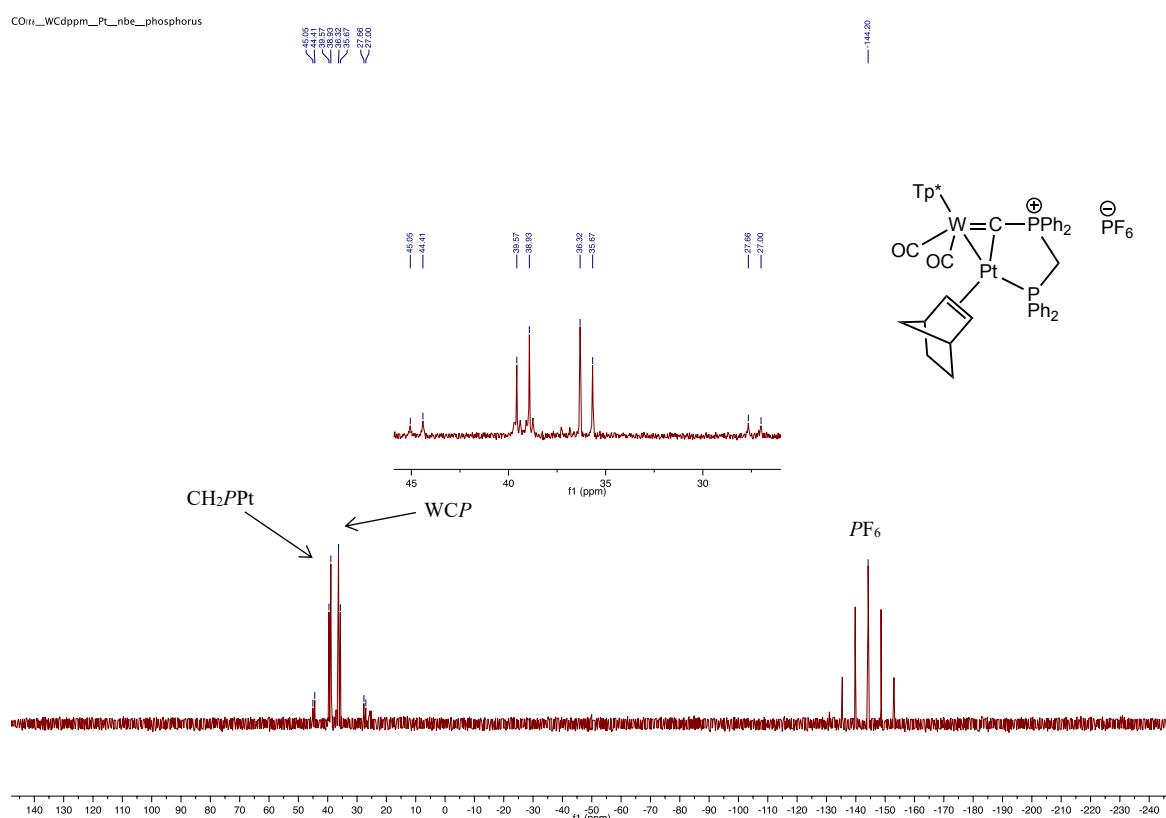
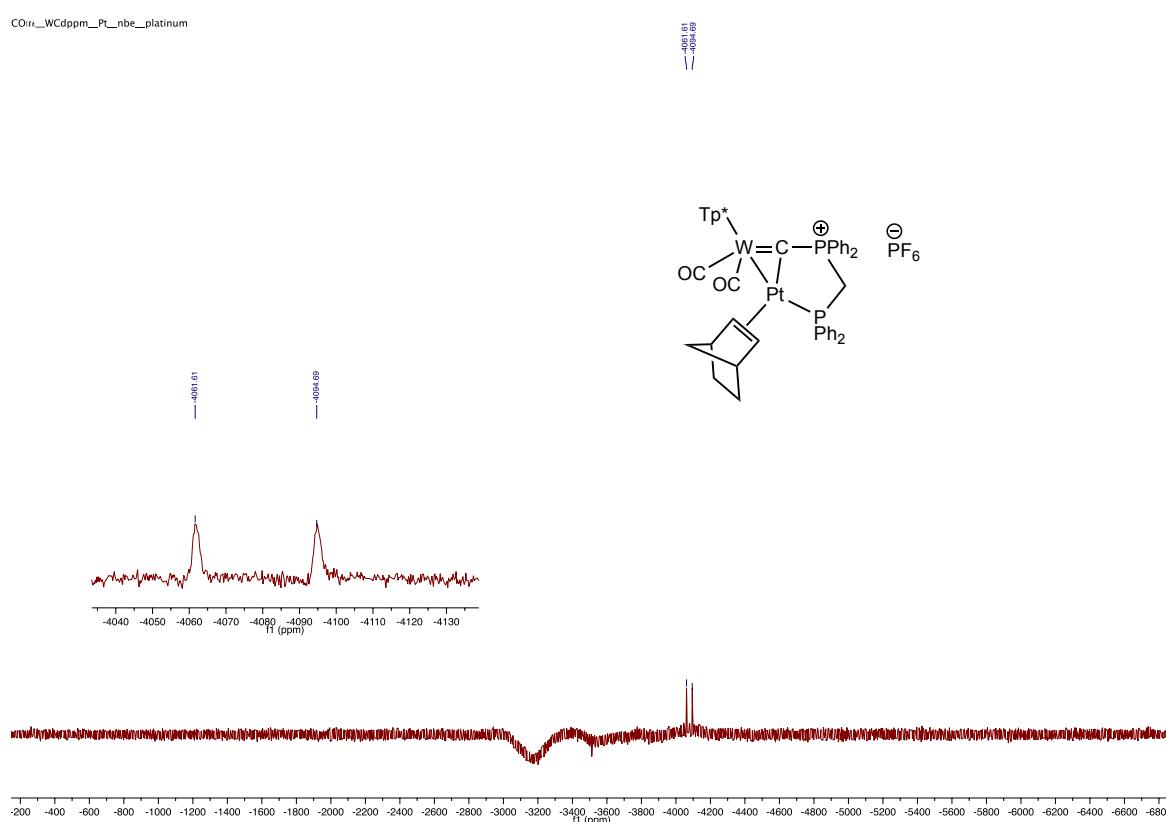


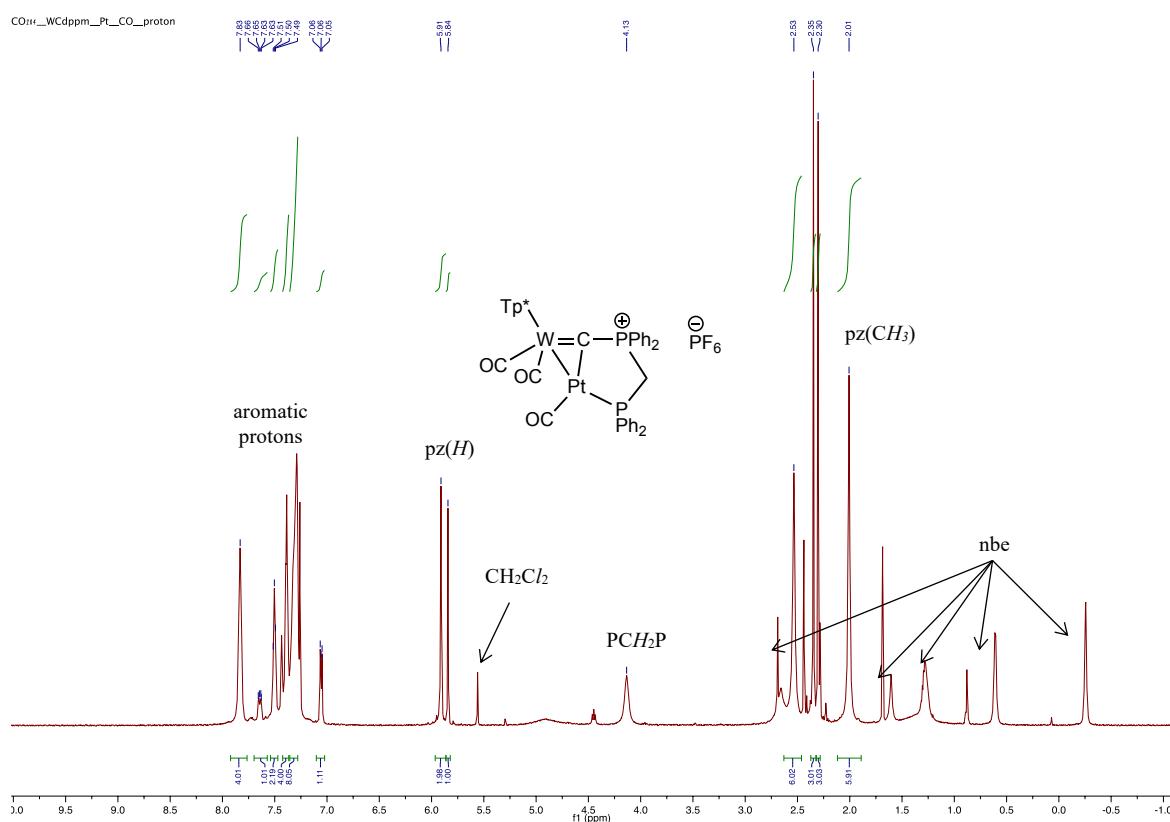
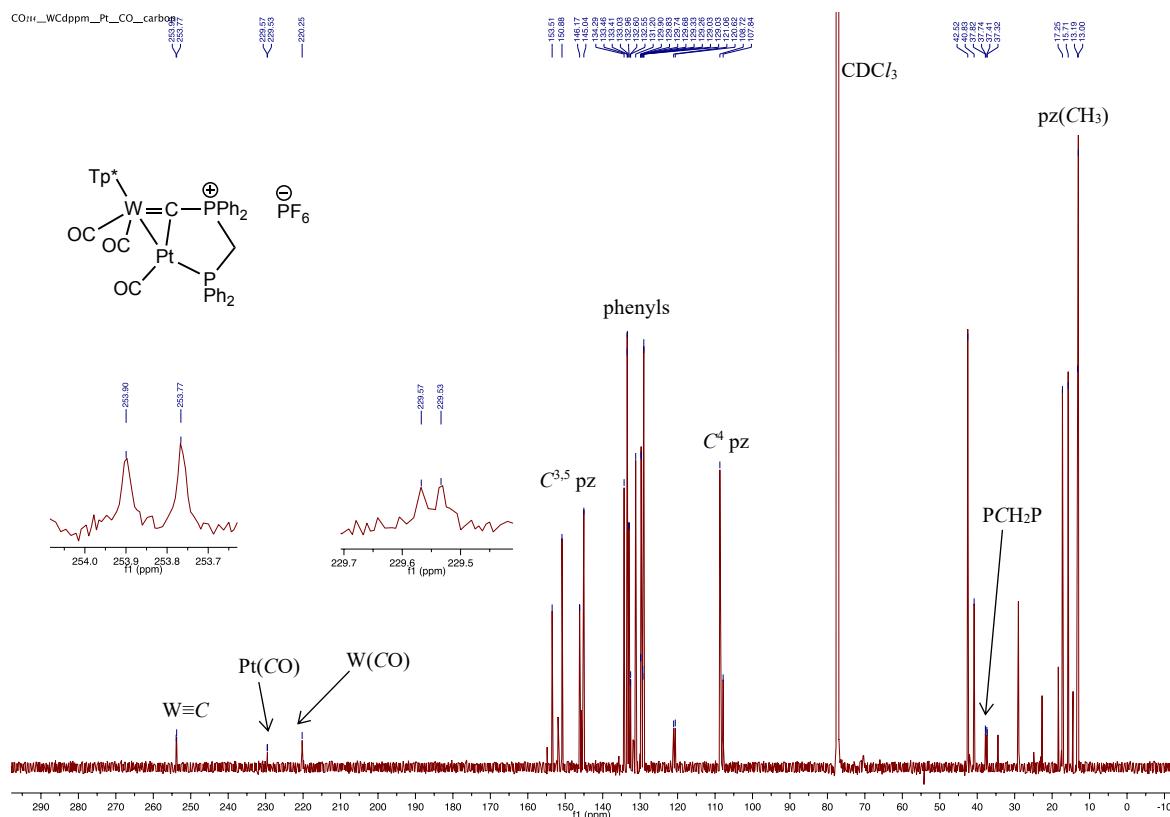
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 5.9.

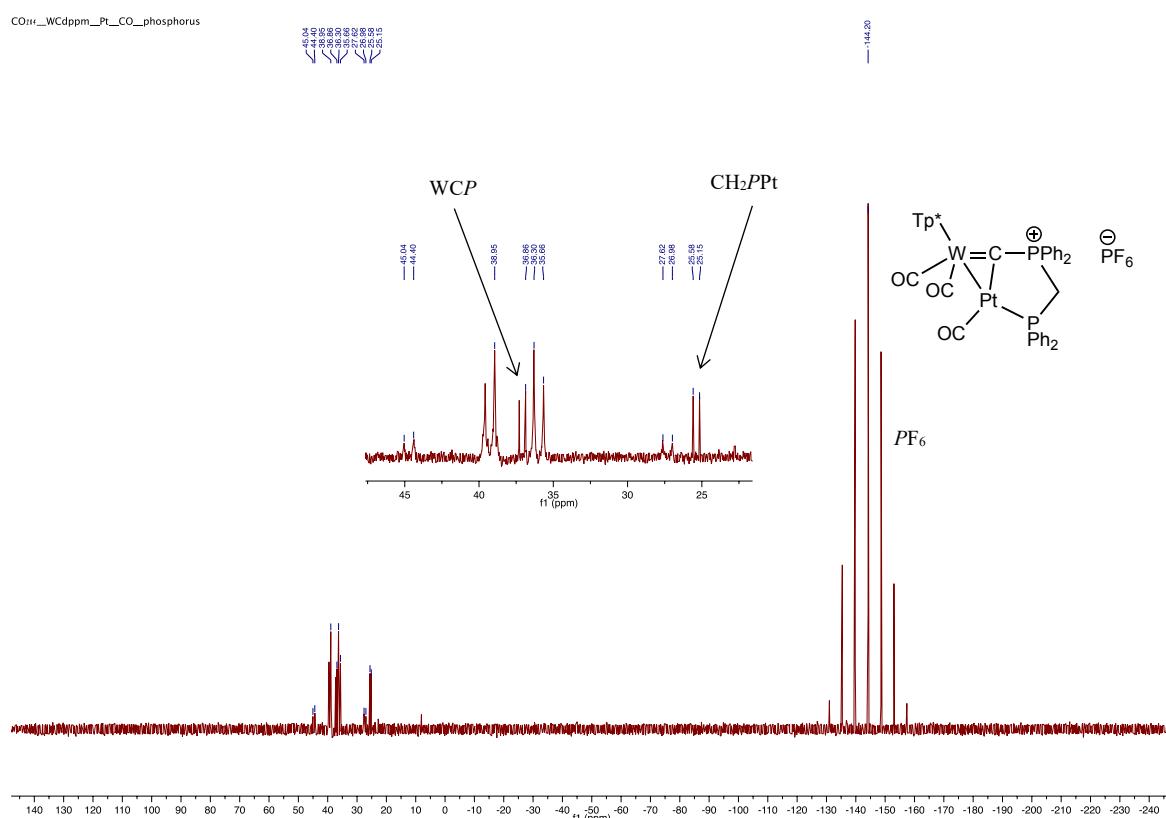
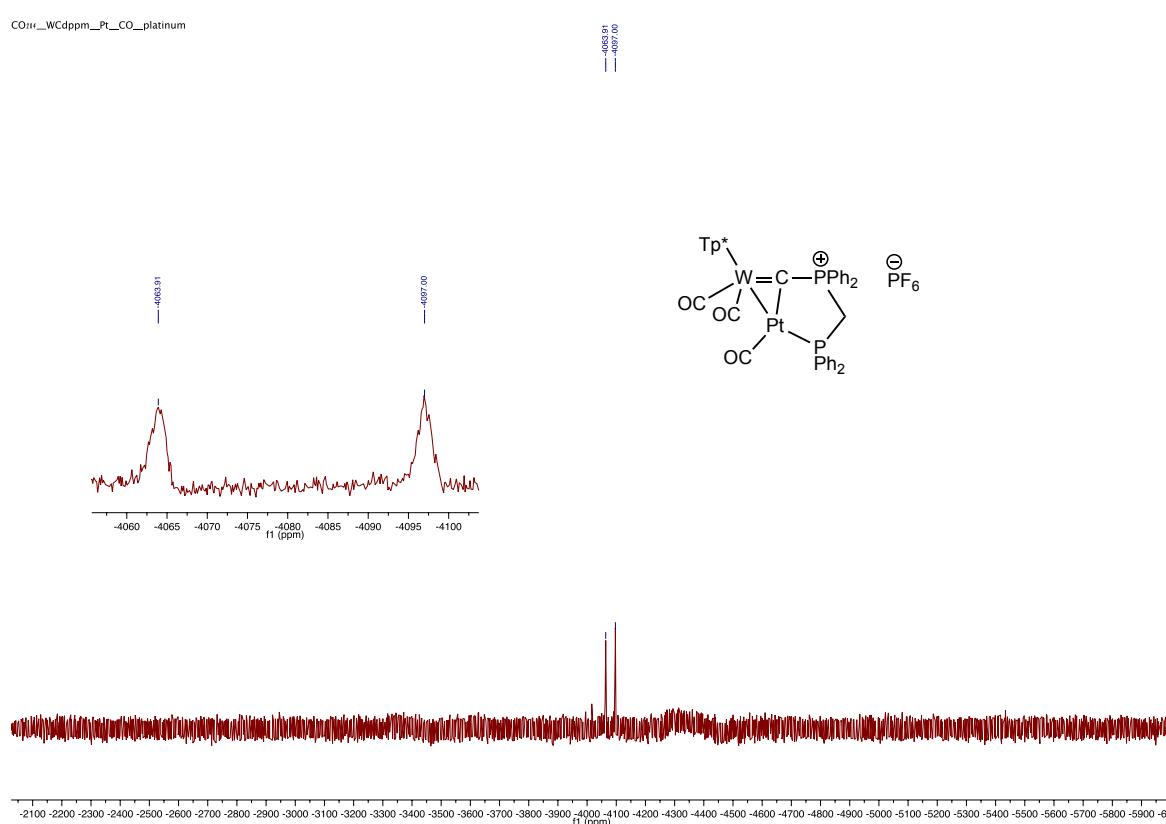


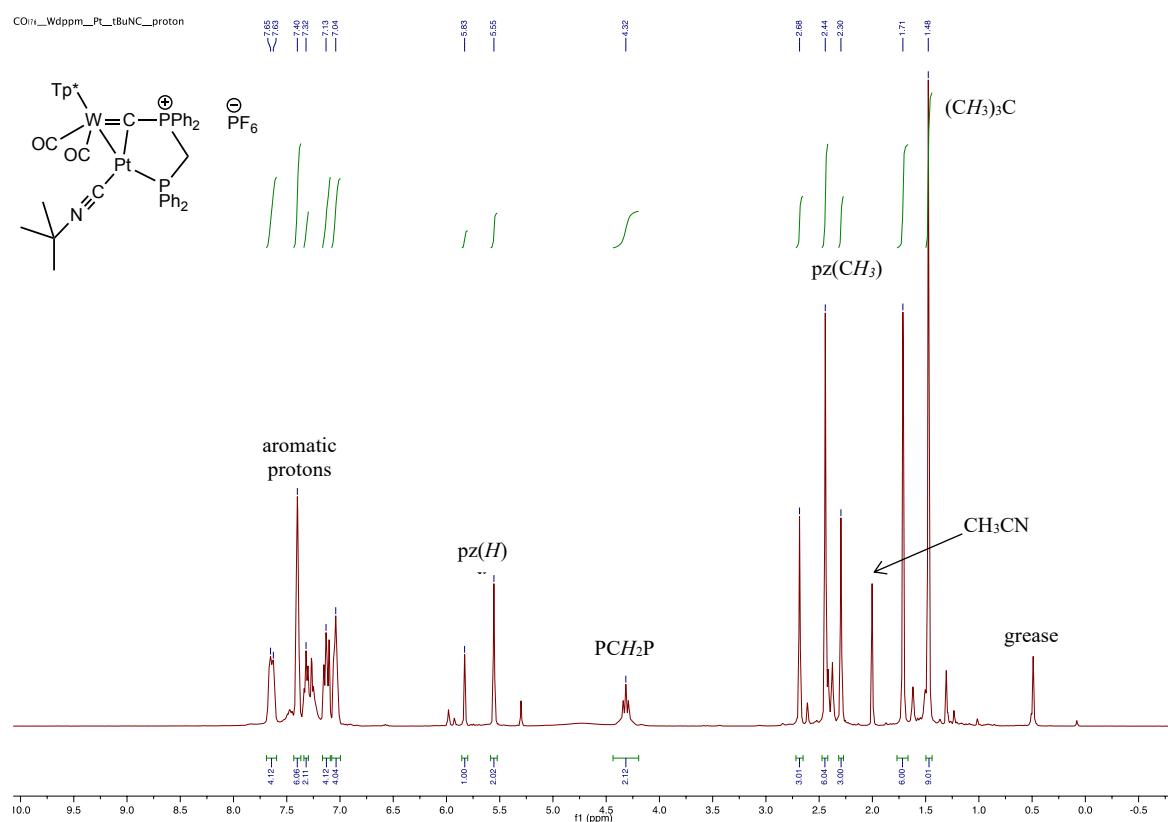
$^{31}\text{P}\{^1\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound **5.9**.

 ^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 5.10. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 5.10.

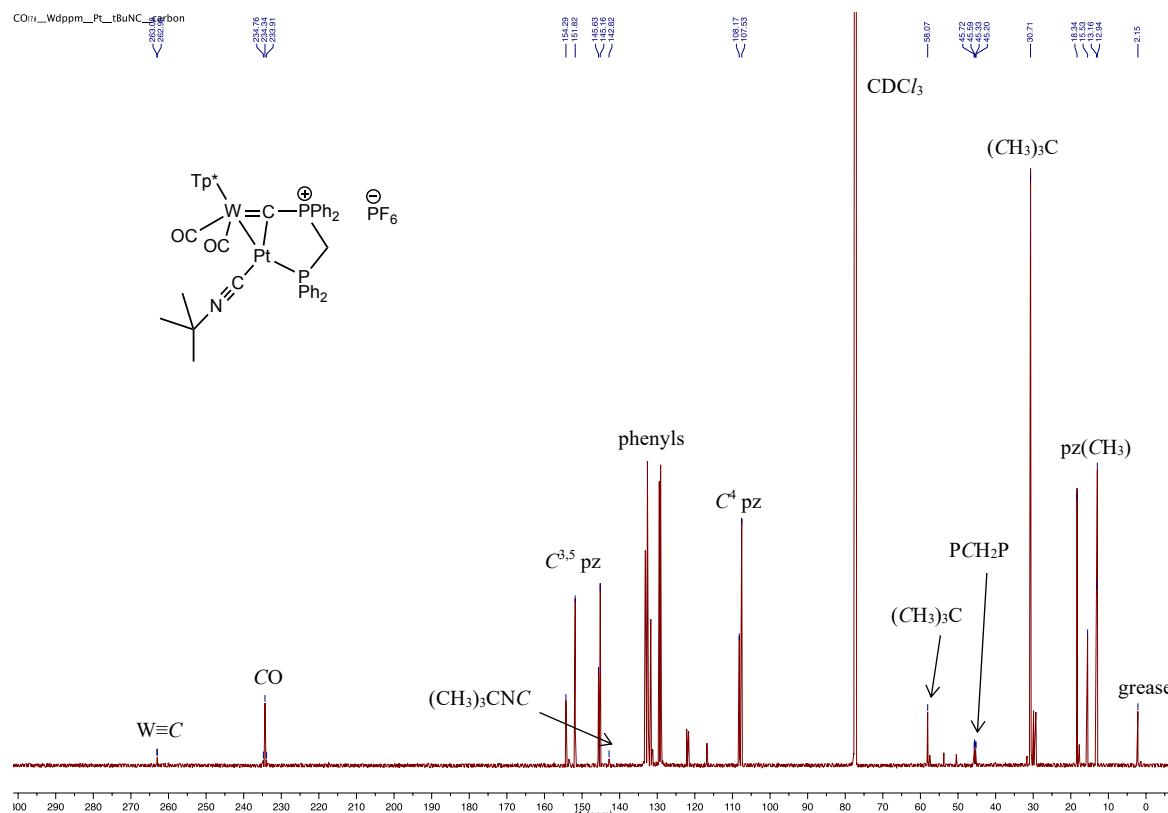
 $^{31}\text{P}\{^1\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound **5.10**. ^{195}Pt NMR spectrum (86 MHz, CDCl_3 , 25°C, δ) of compound **5.10**.

 ^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 5.11. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 5.11.

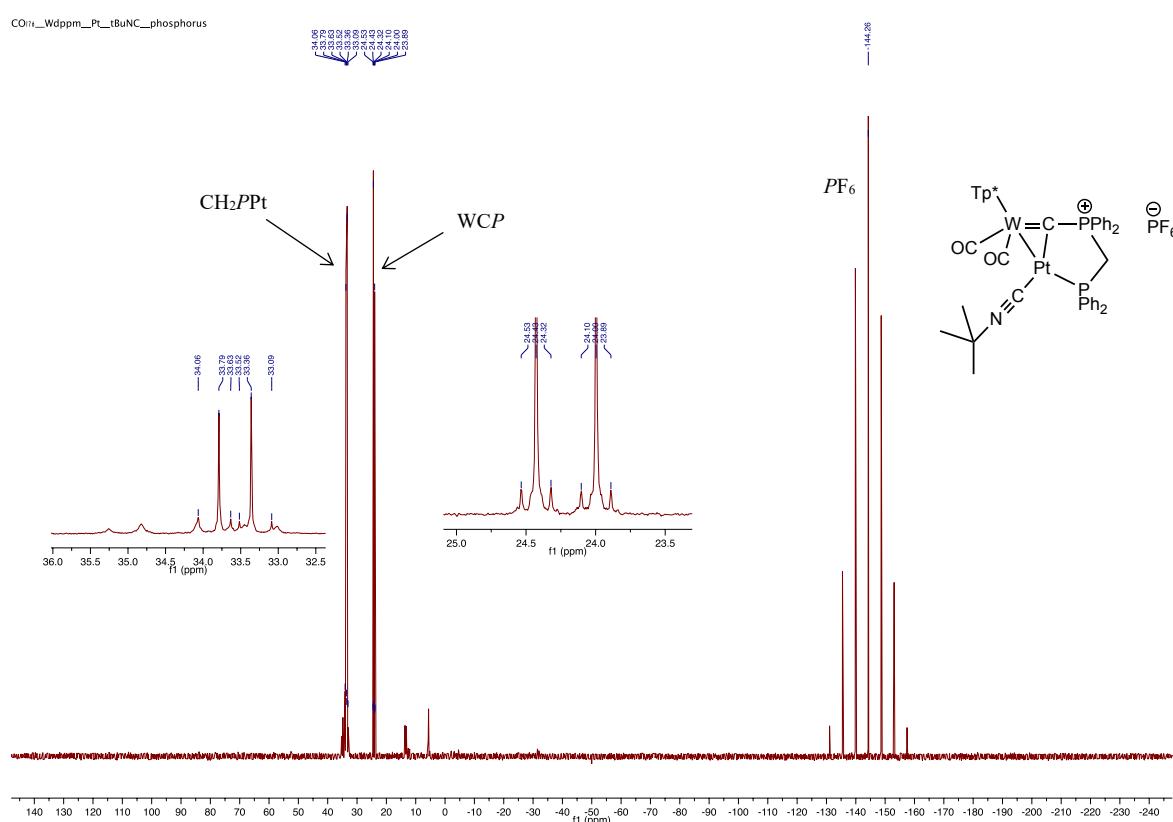
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 5.11.¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 5.11.



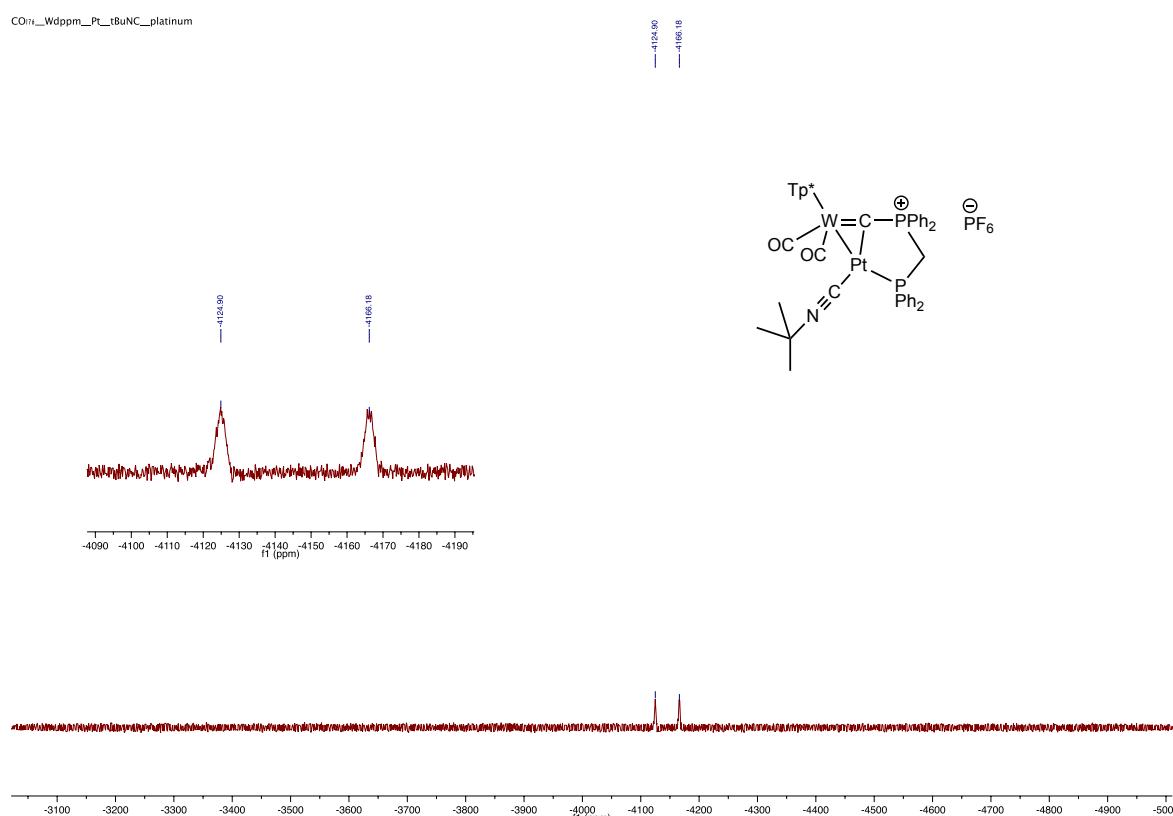
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 5.12.



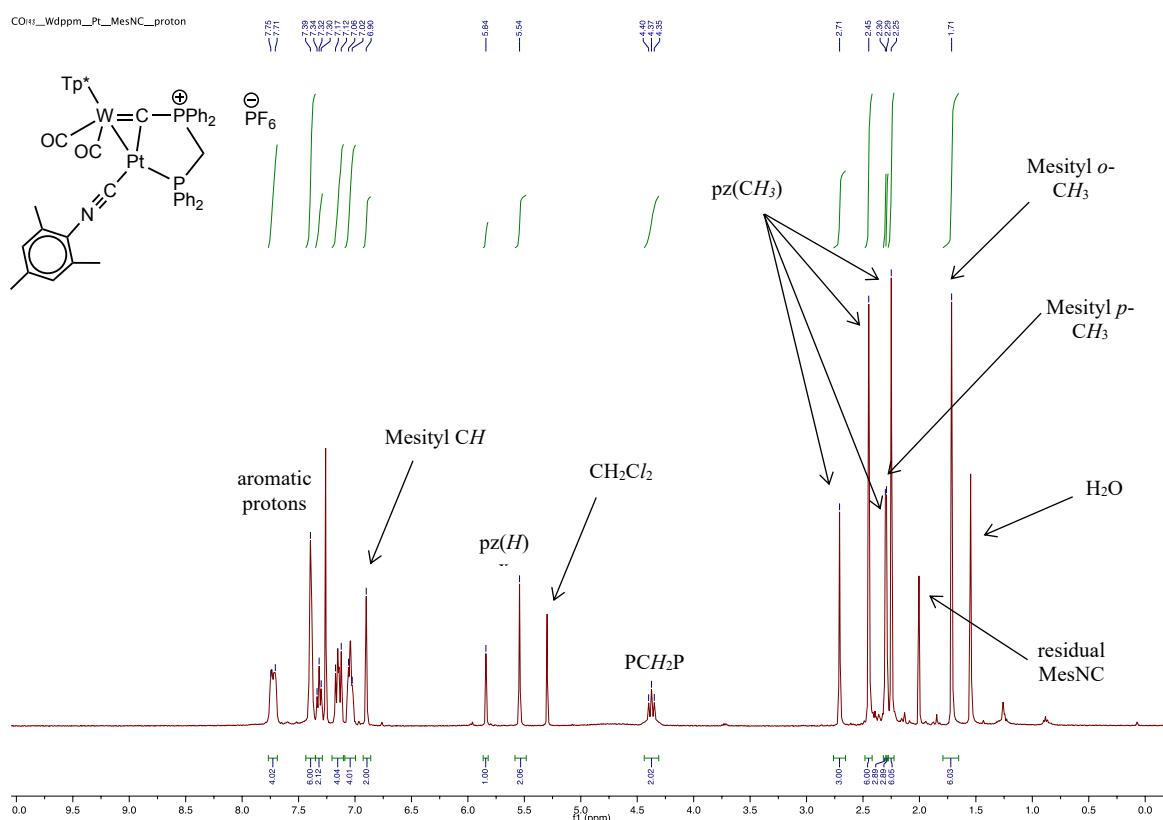
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 5.12.



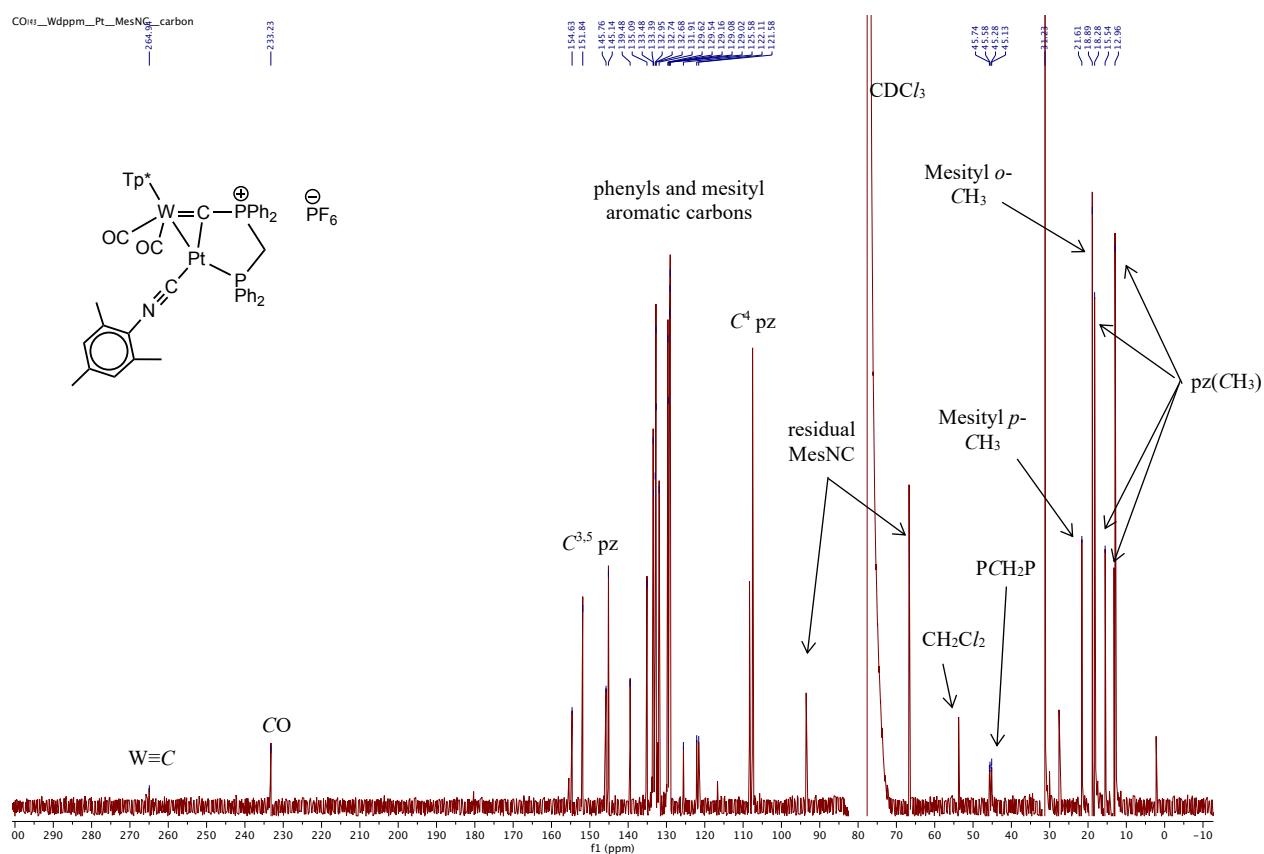
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 5.12.



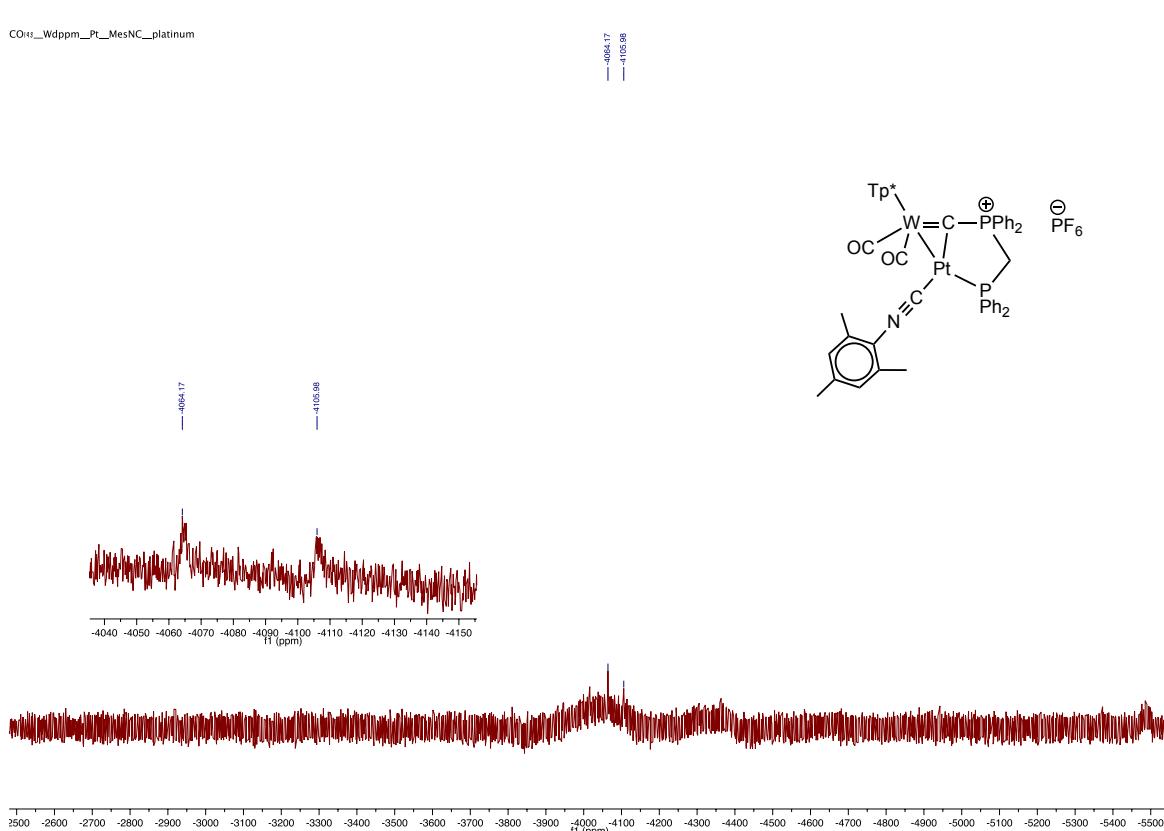
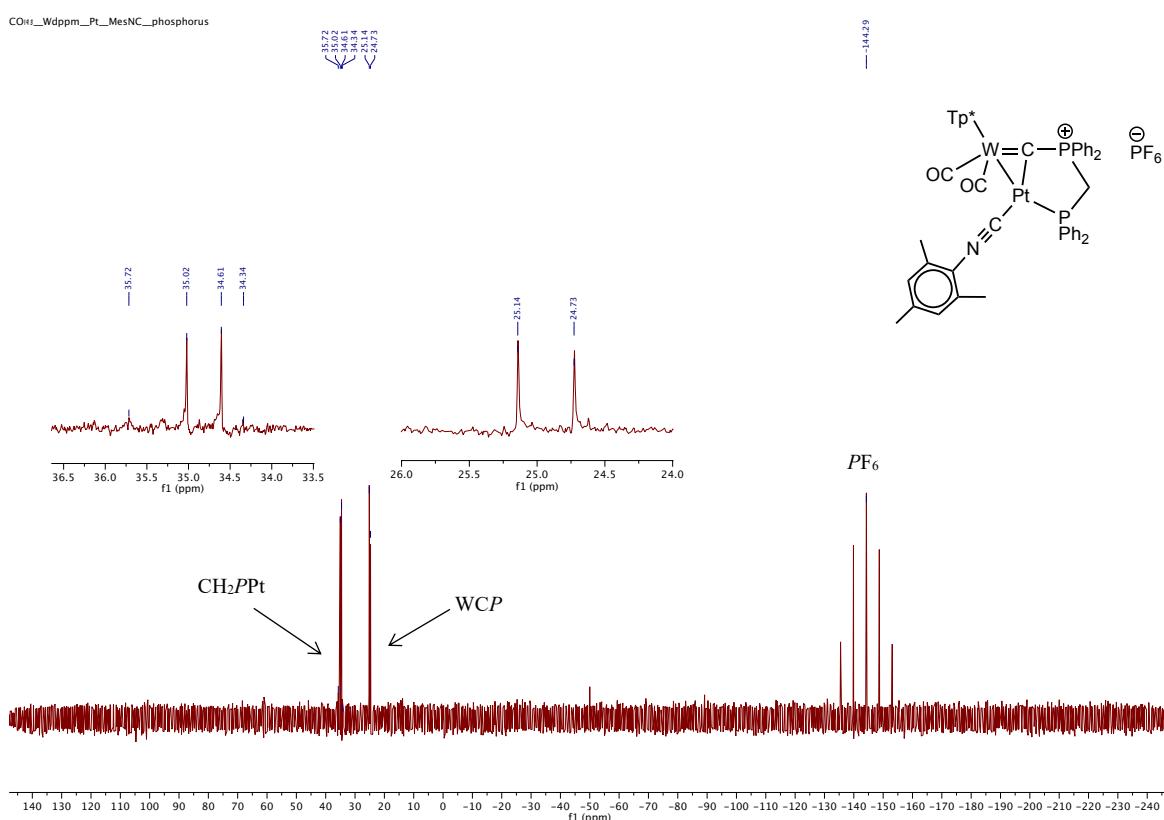
¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 5.12.

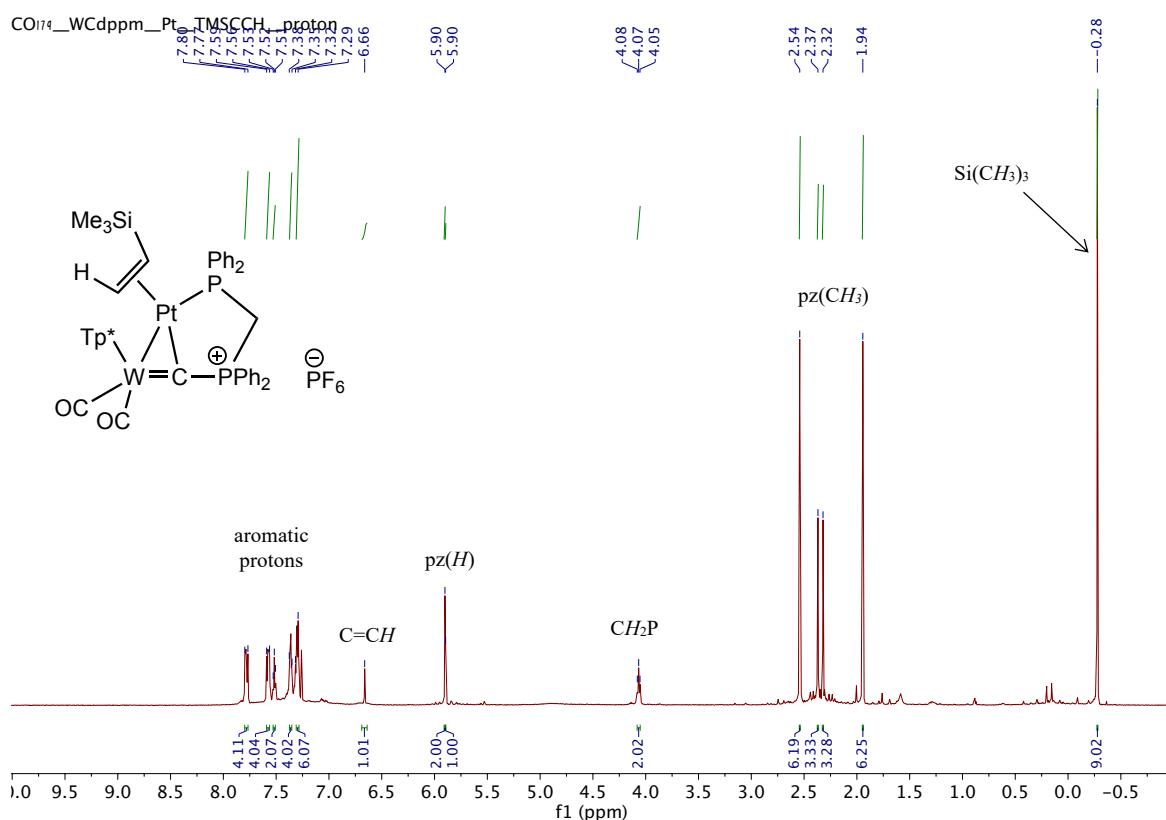


^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 5.13.

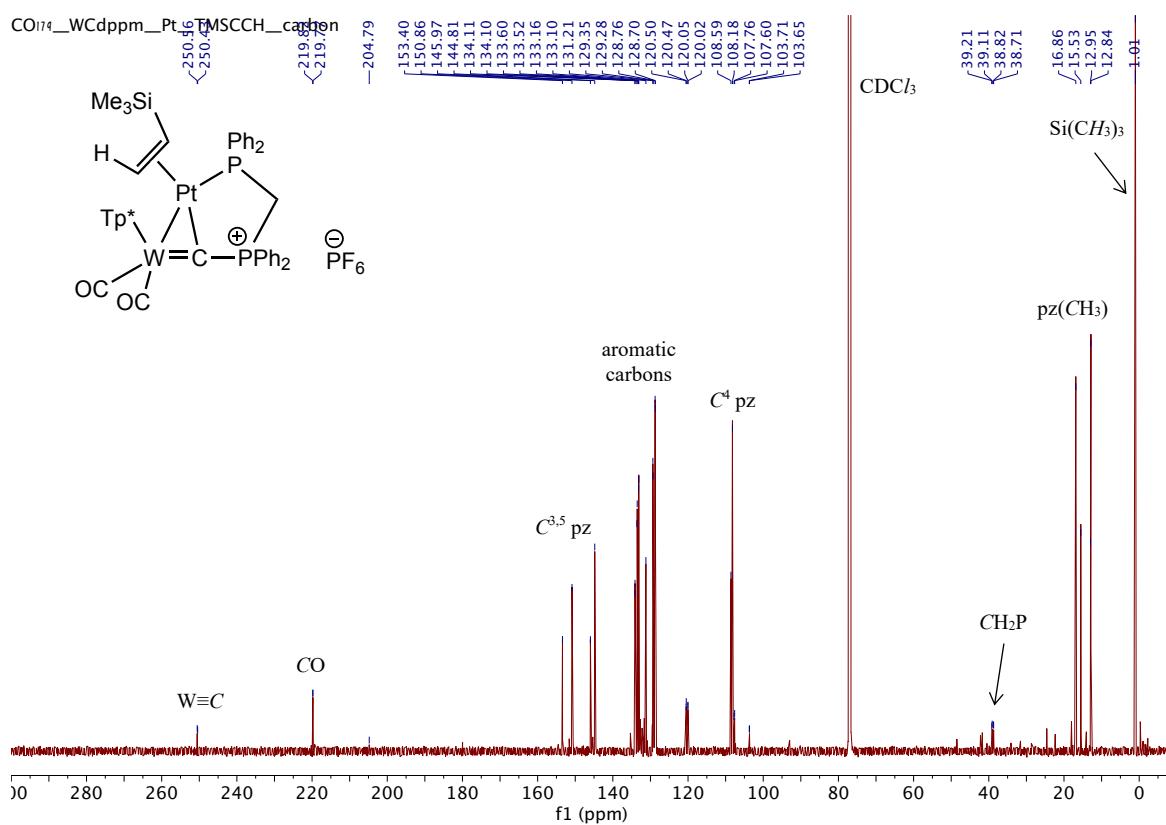


$^{13}\text{C}\{\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 5.13.

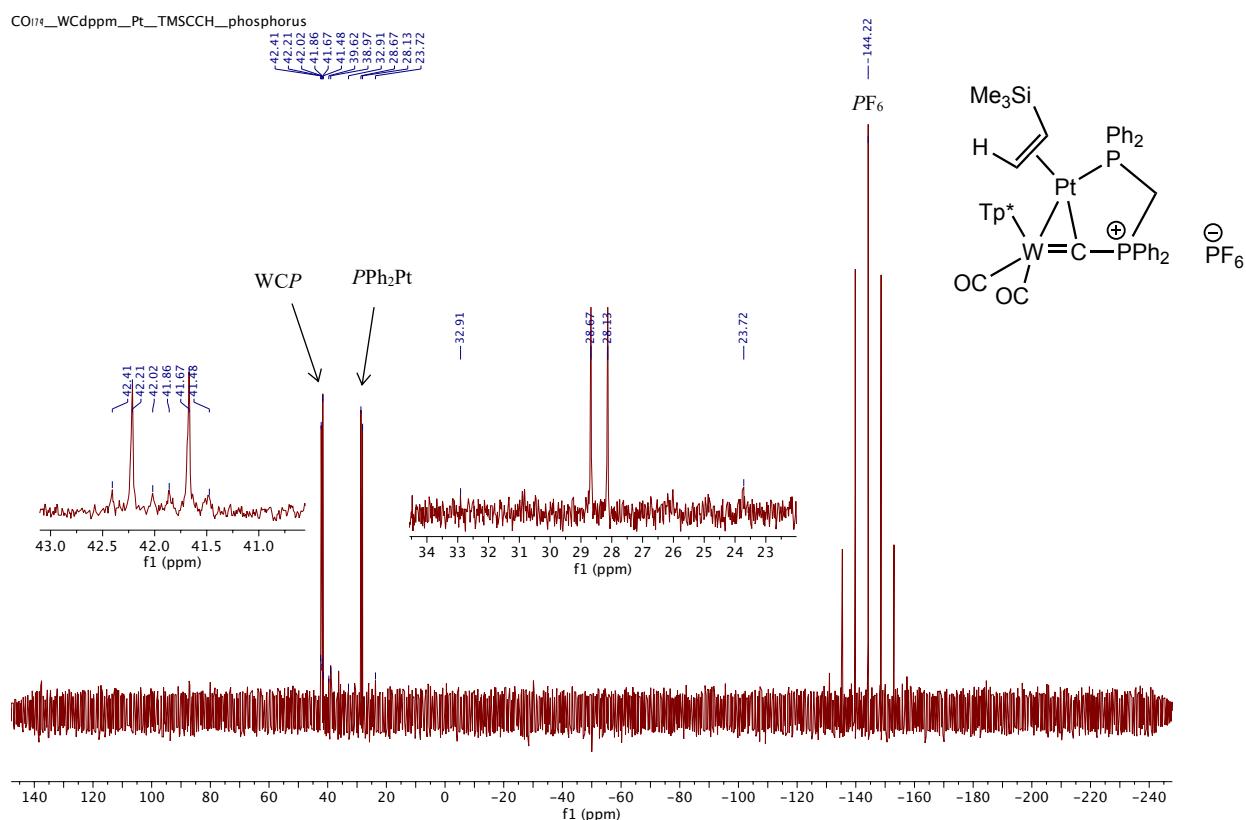




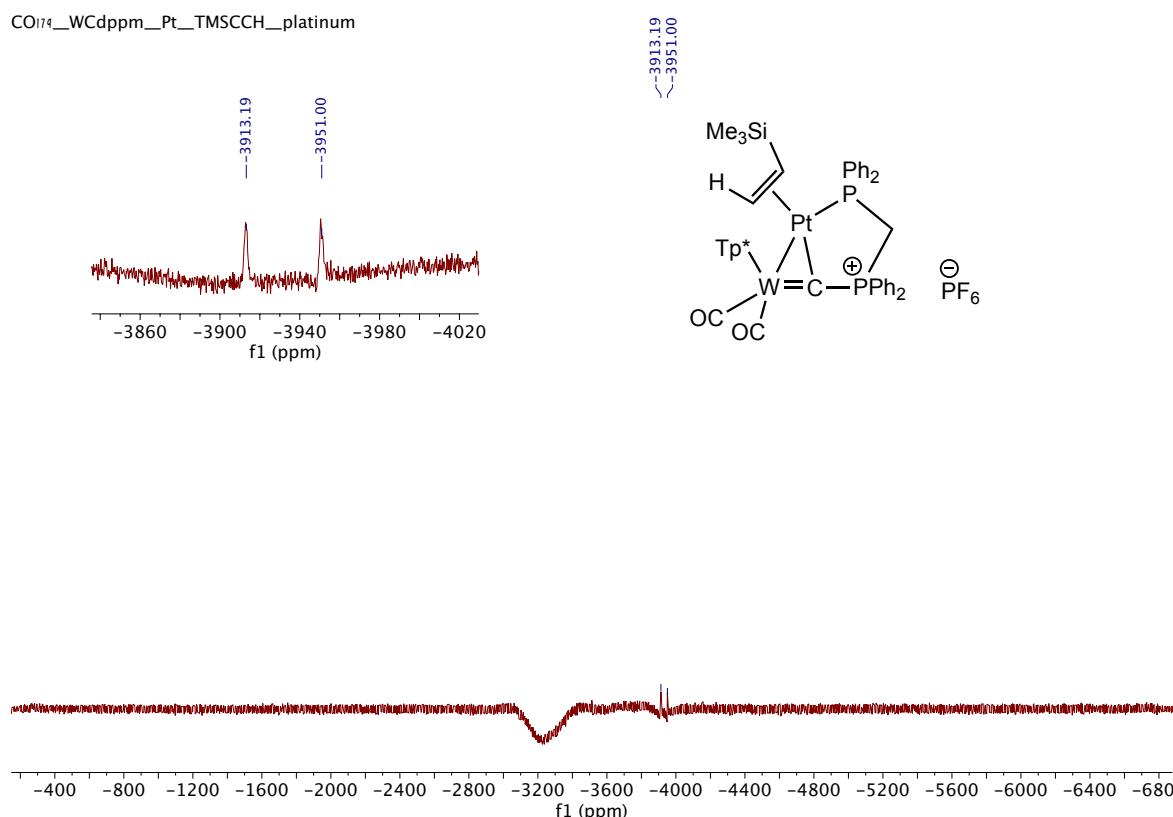
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.14.



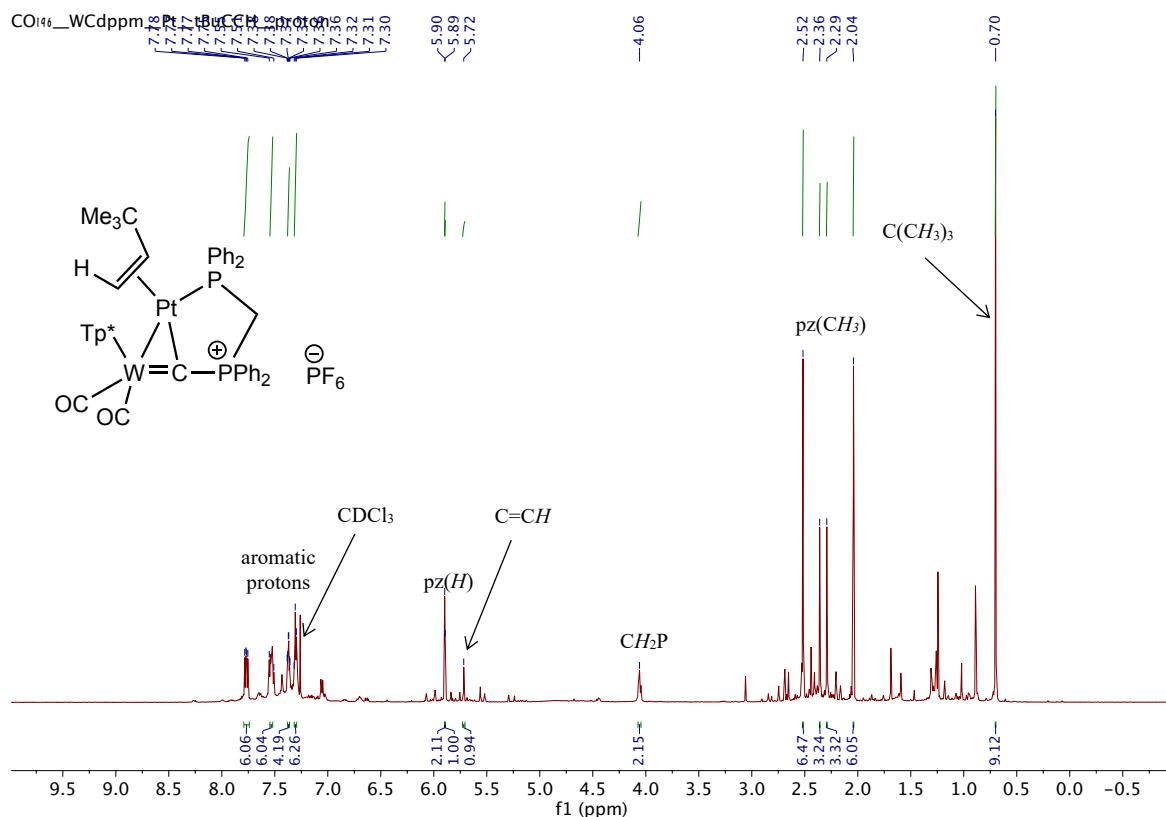
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 5.14.



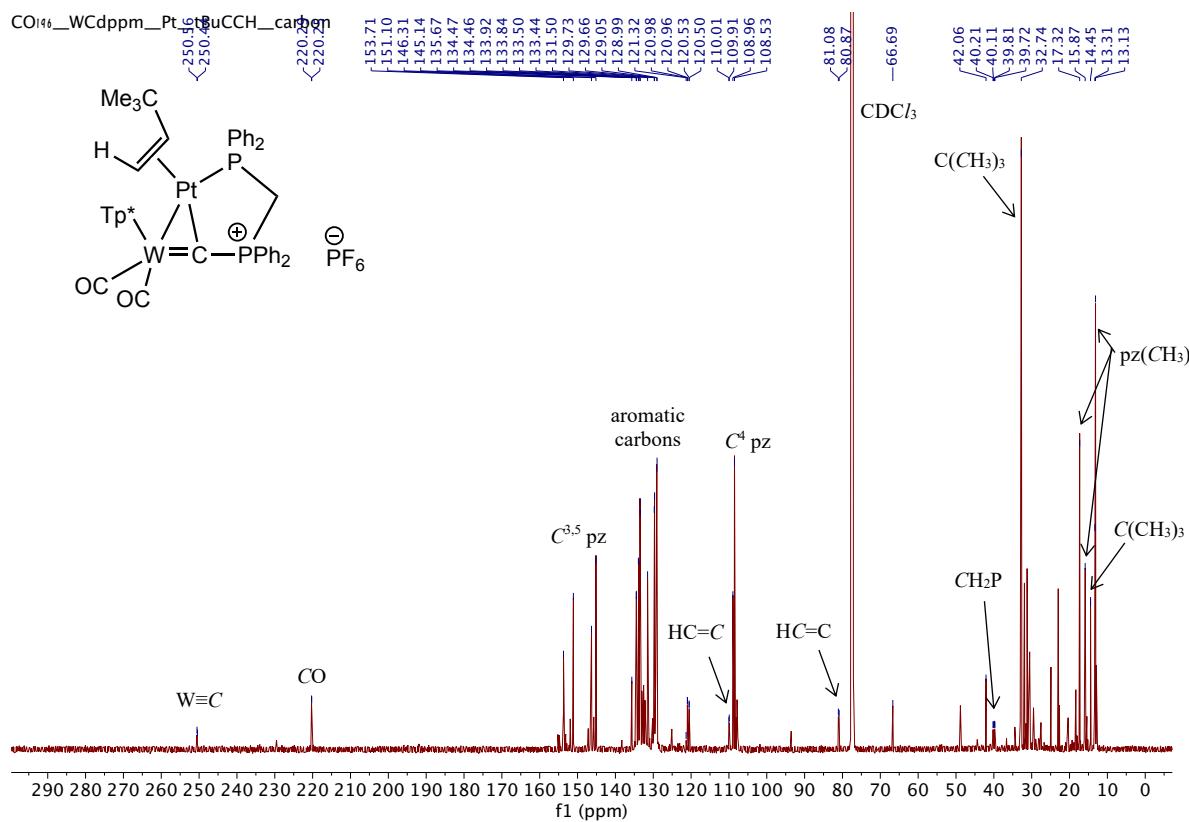
$^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound **5.14**.



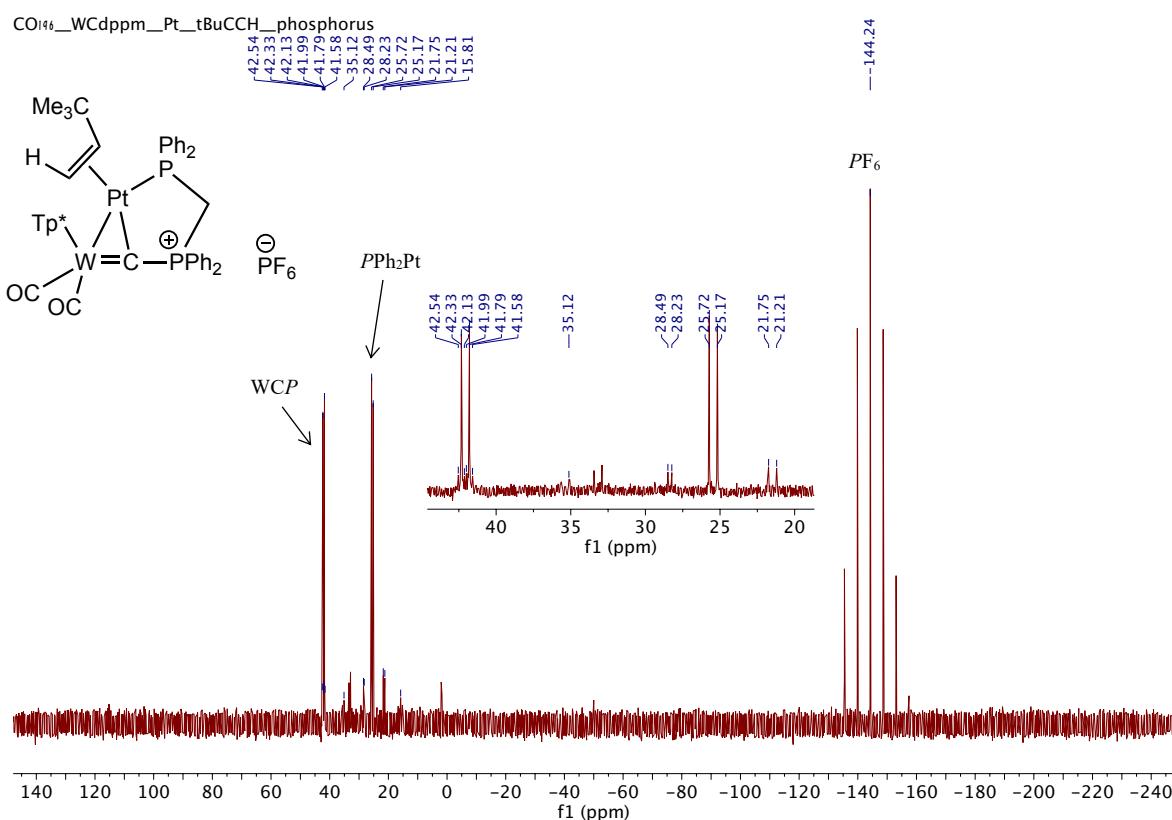
^{195}Pt NMR spectrum (86 MHz, CDCl_3 , 25°C, δ) of compound **5.14**.



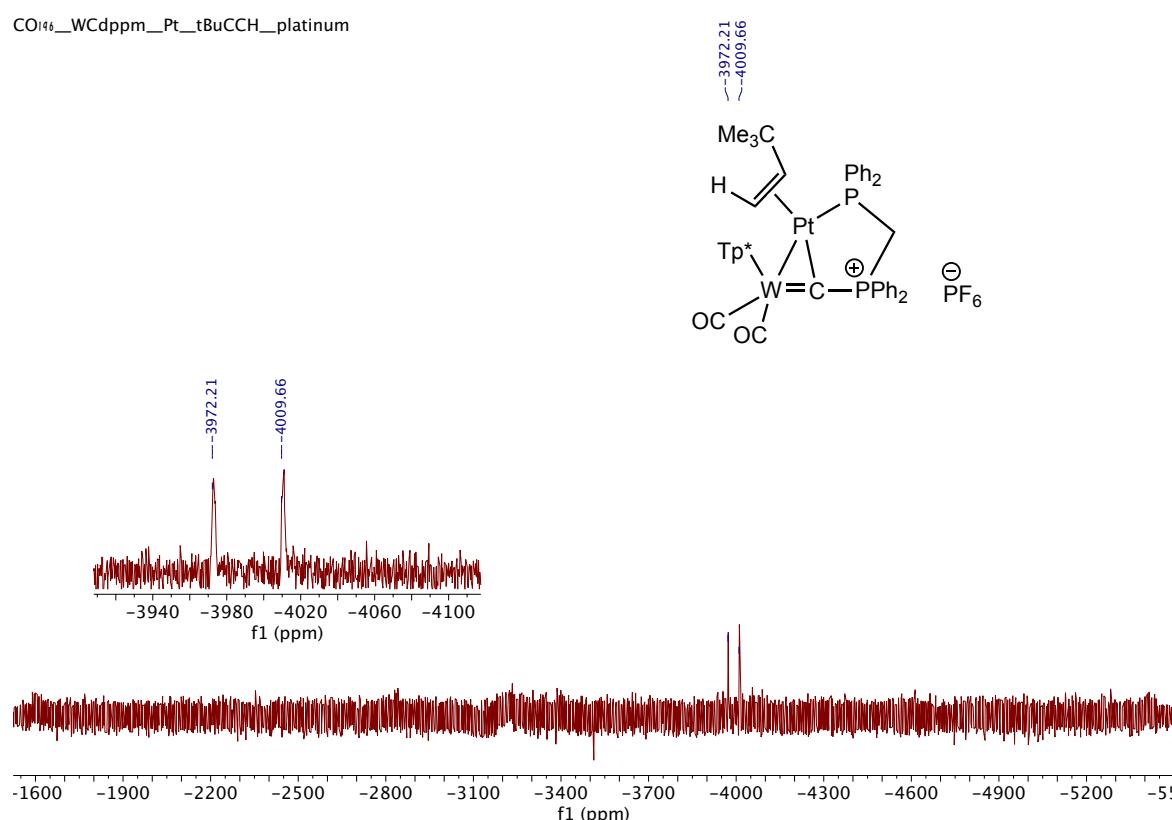
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.15.



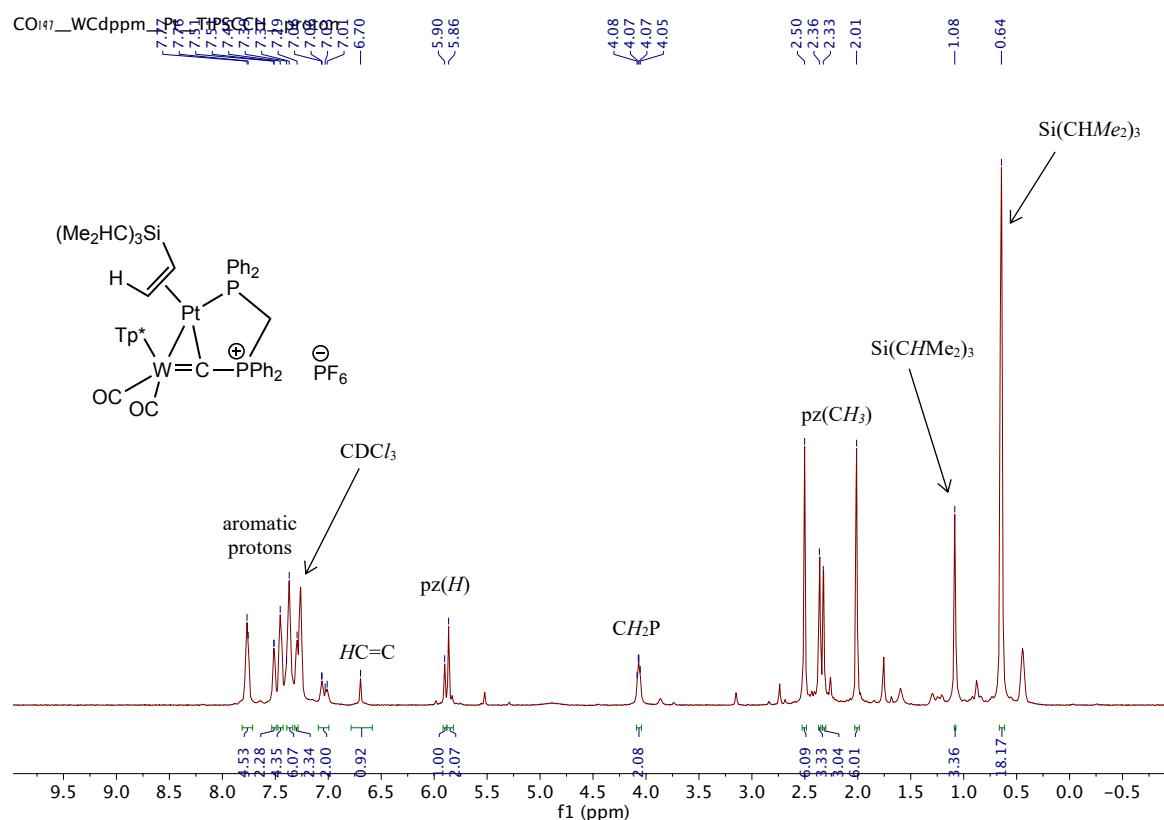
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 5.15.



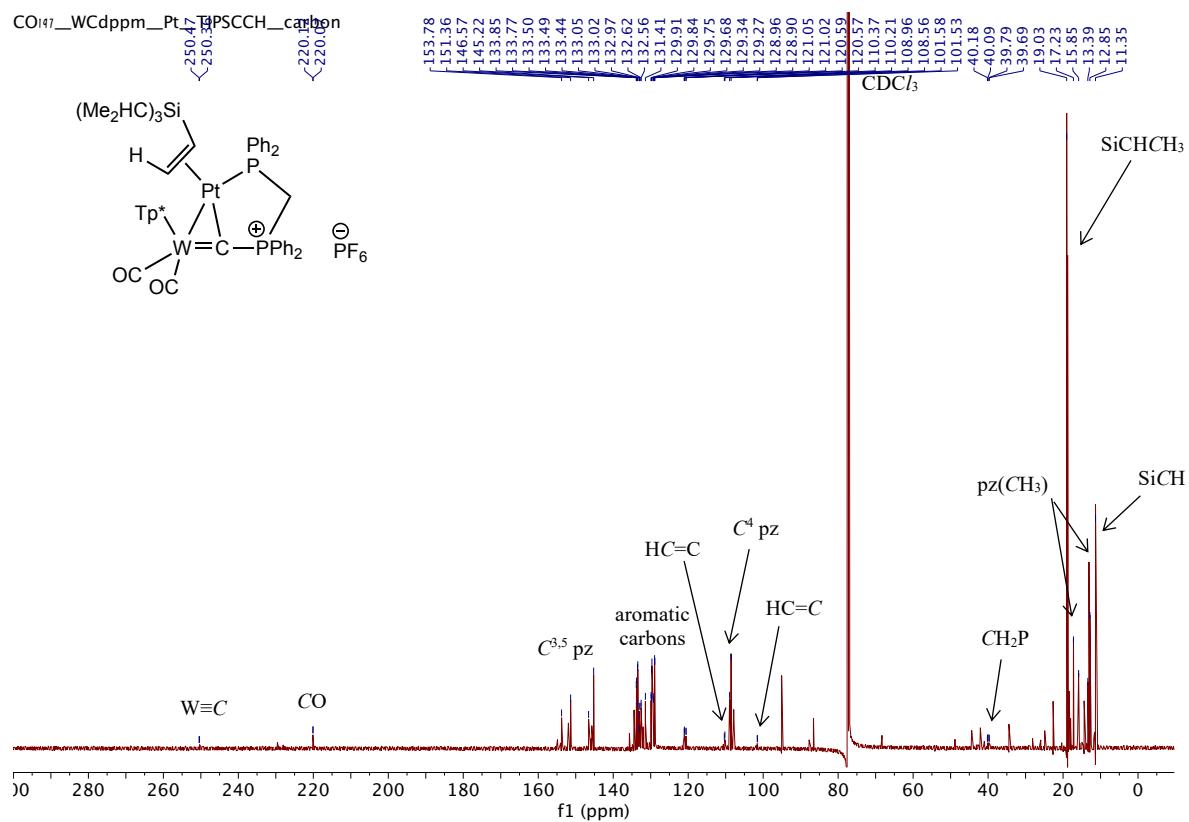
$^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound 5.15.



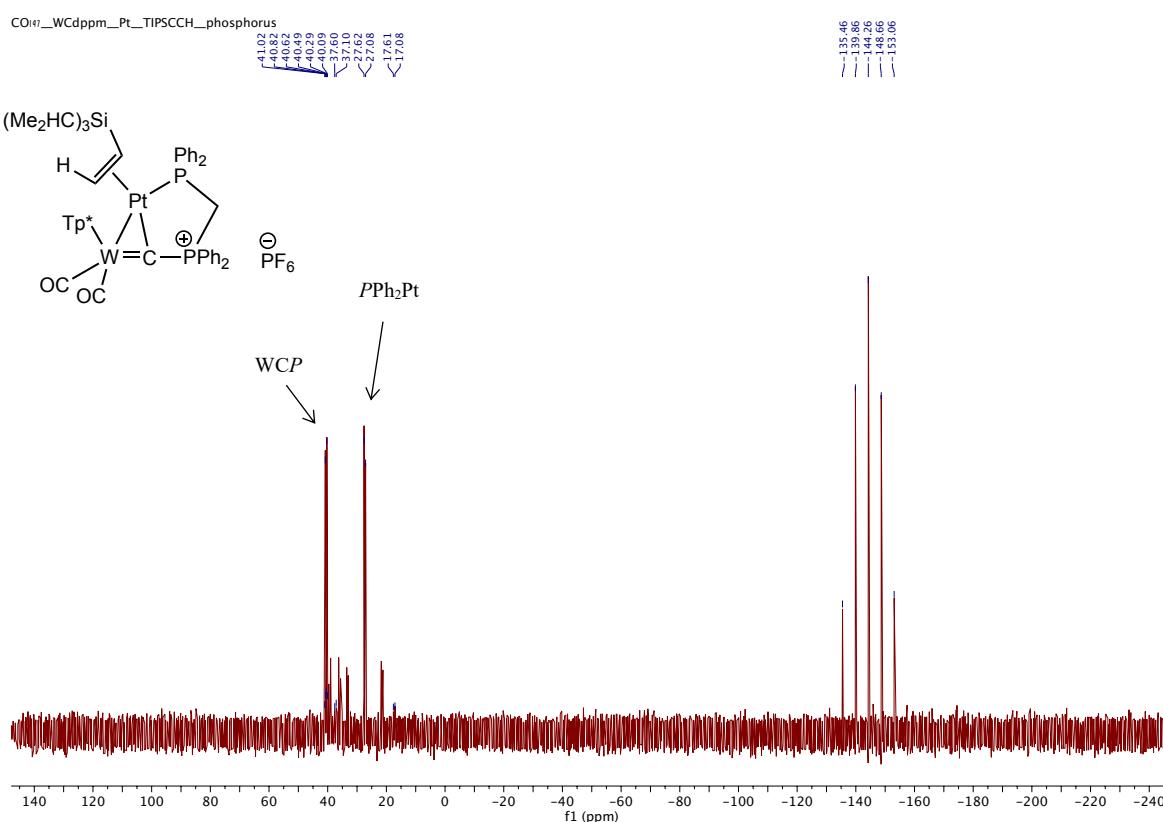
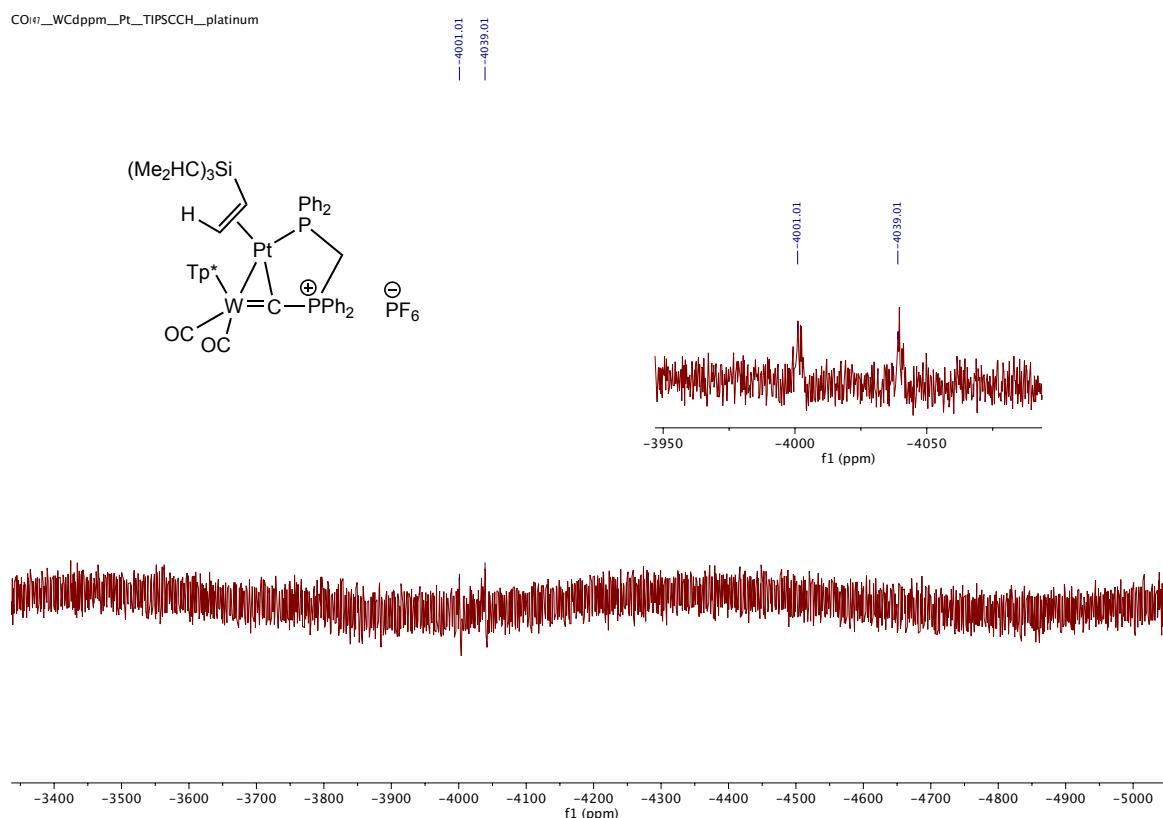
^{195}Pt NMR spectrum (86 MHz, CDCl_3 , 25°C, δ) of compound 5.15.

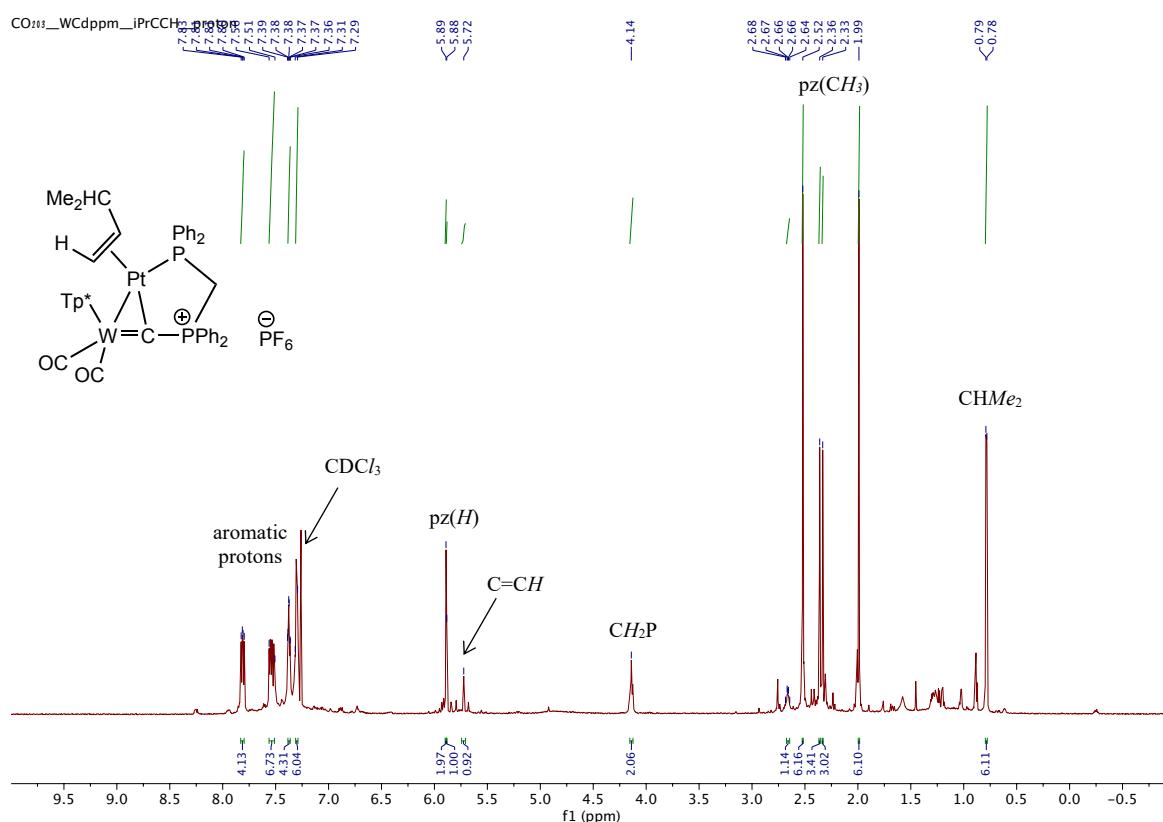


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.16.

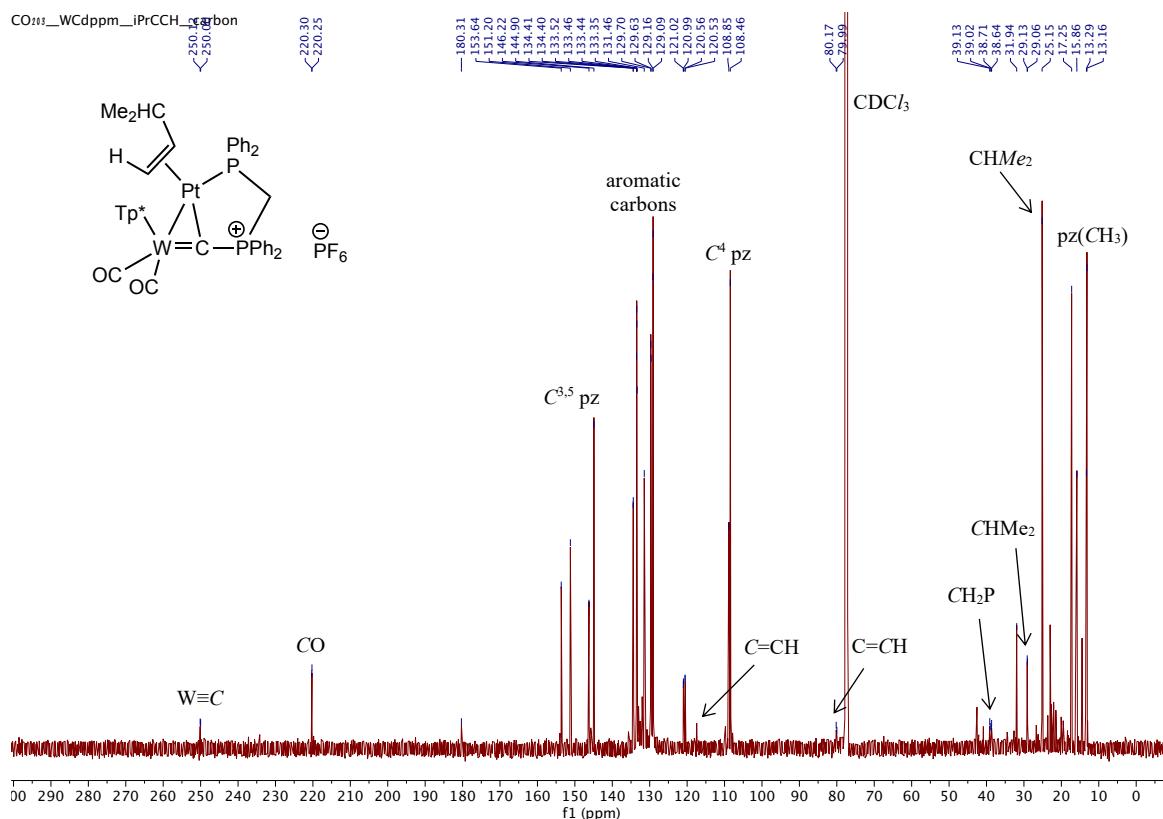


¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 5.16.

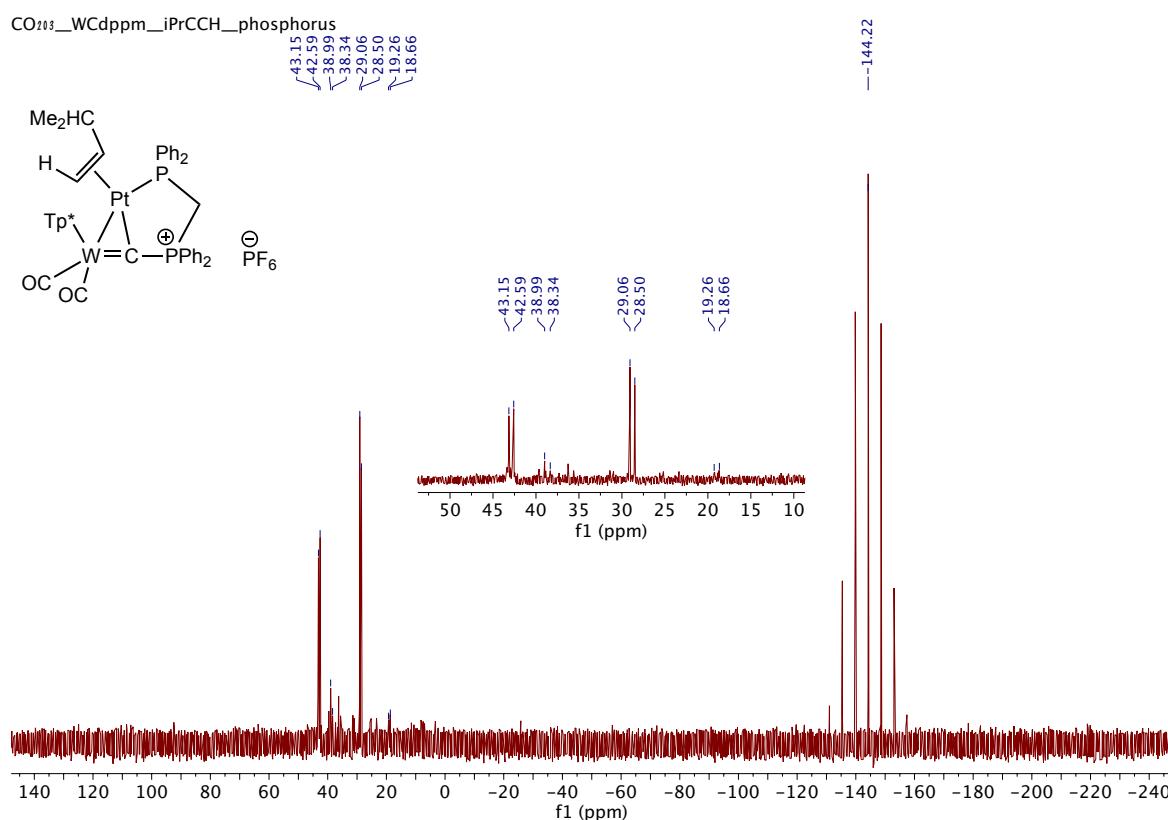
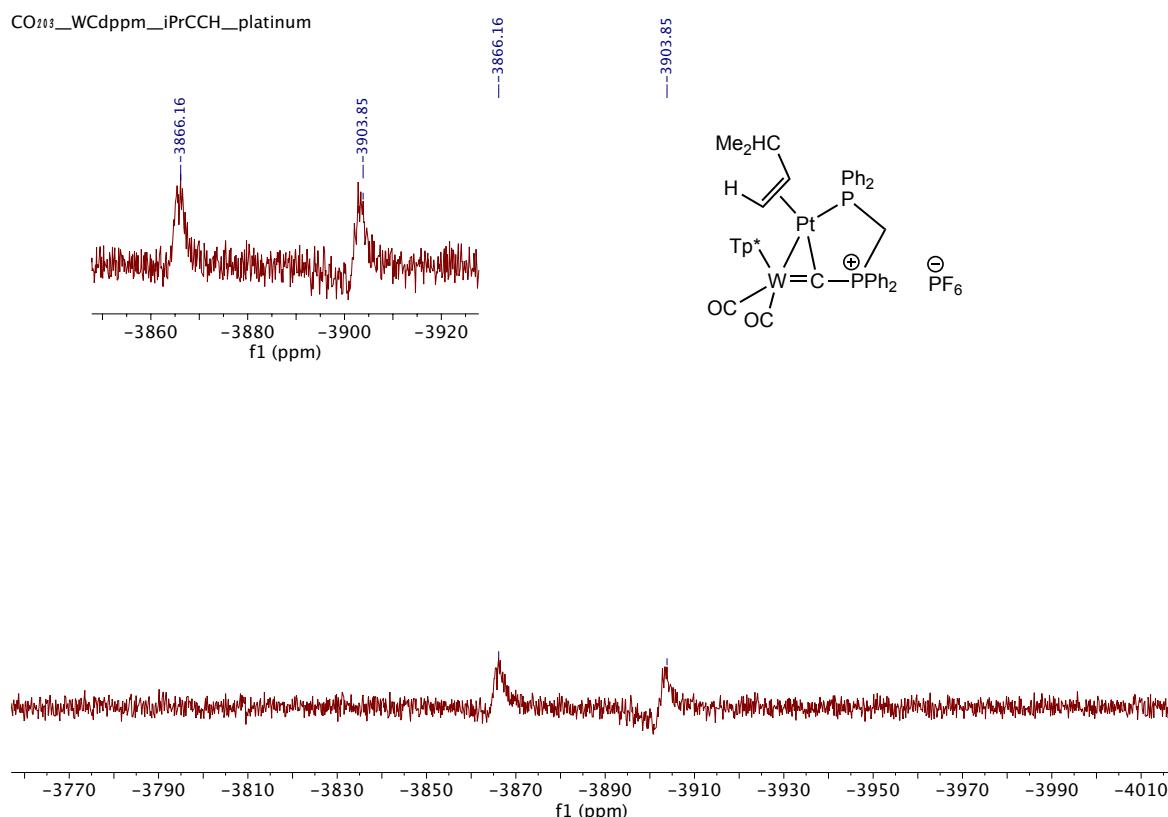
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 5.16.¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 5.16.

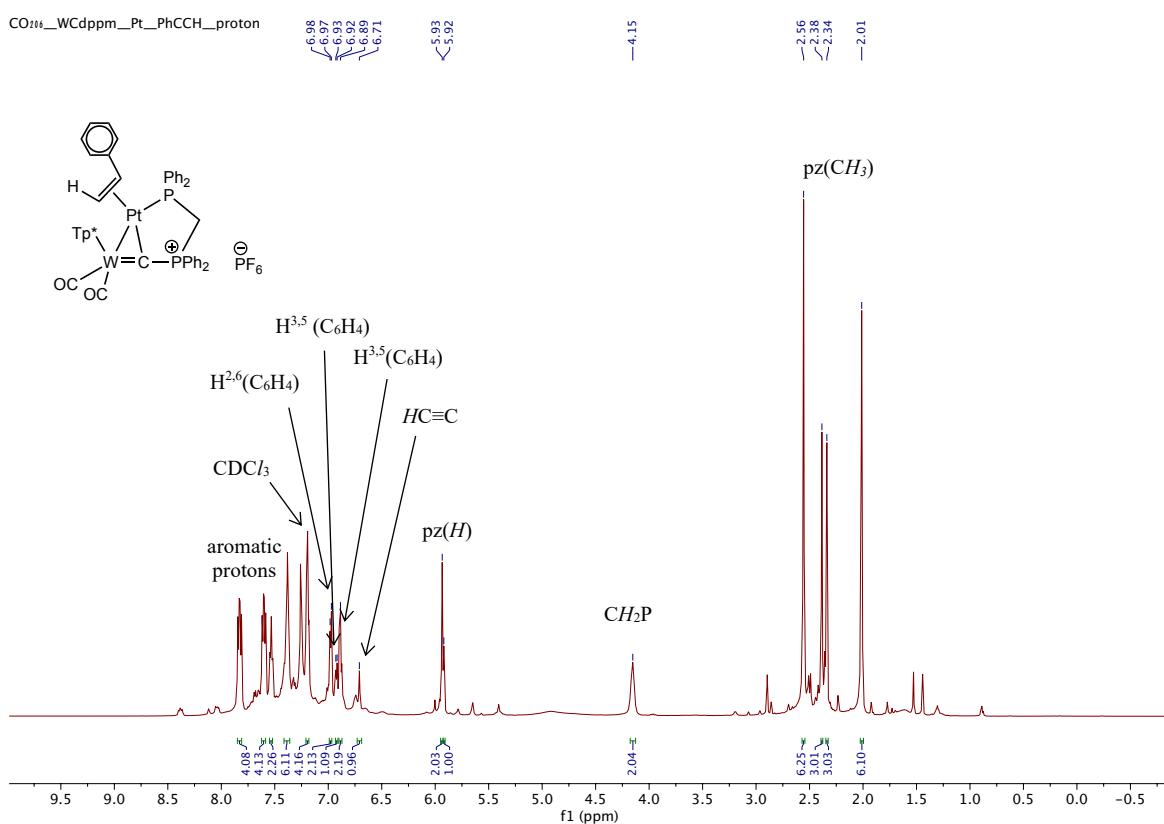


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.17.

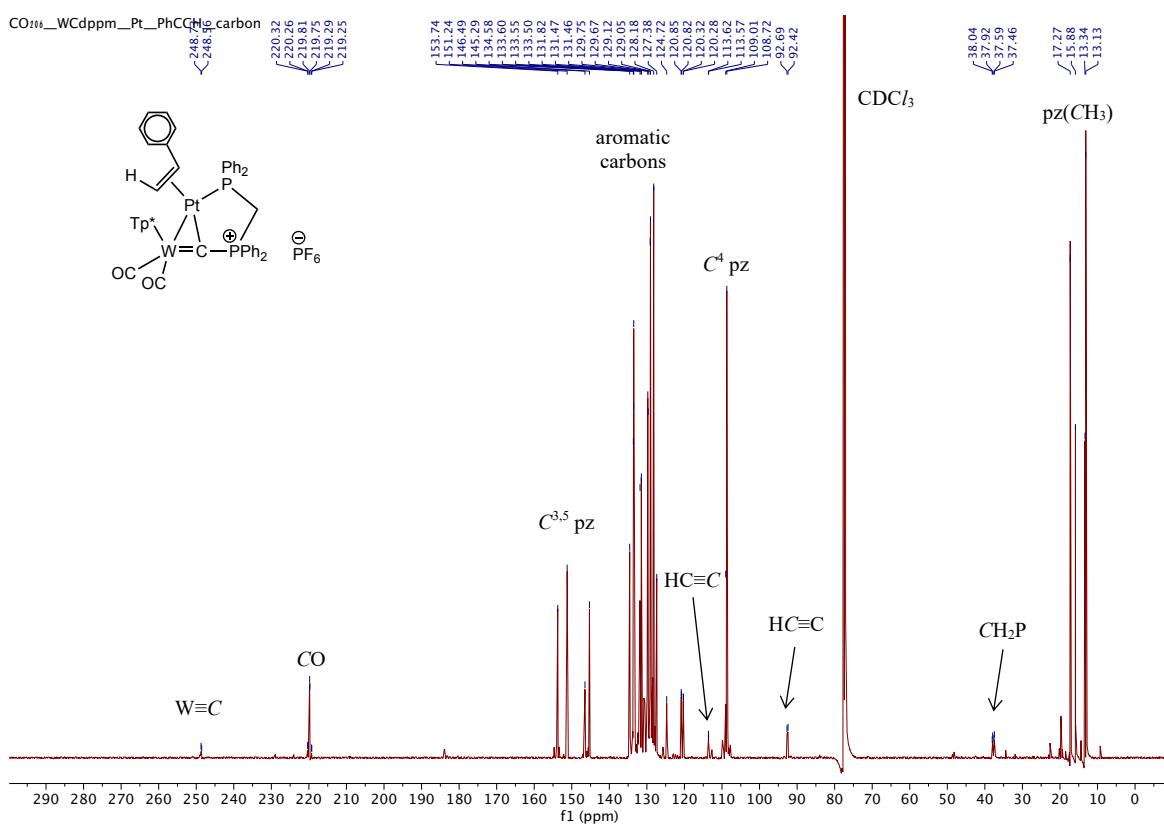


¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 5.17.

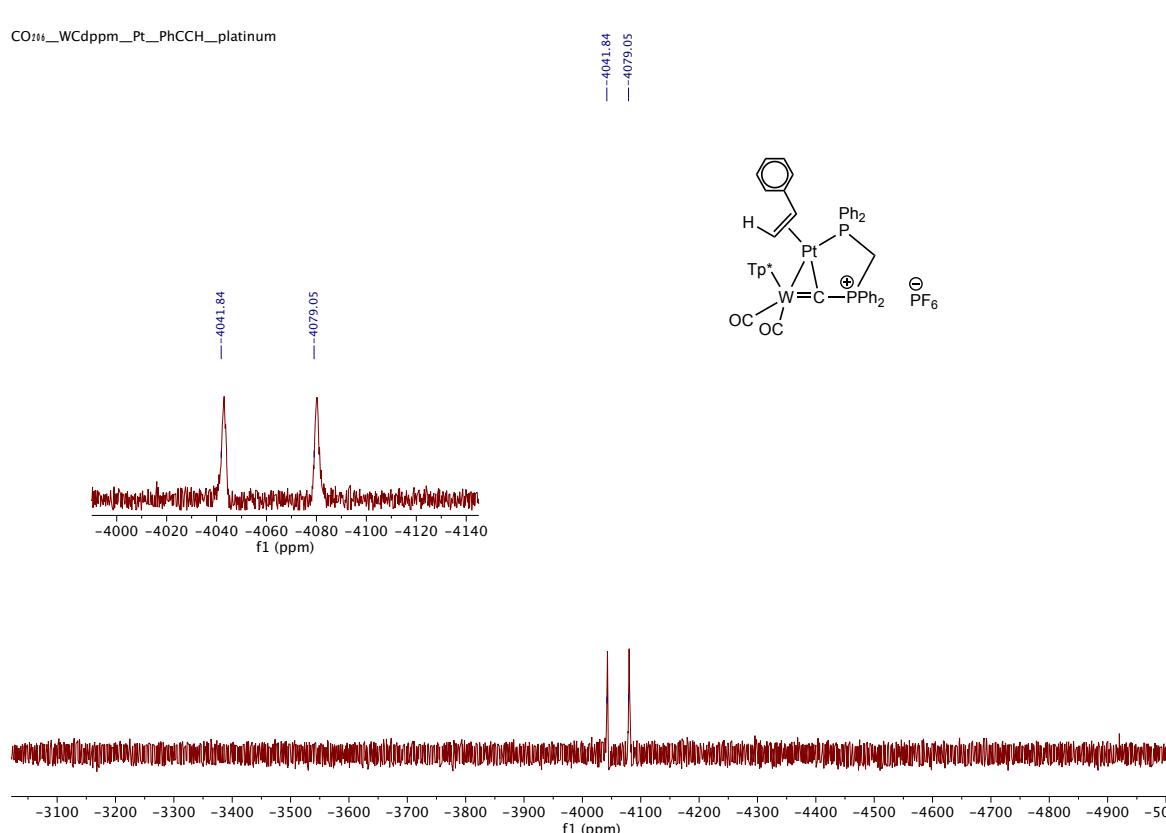
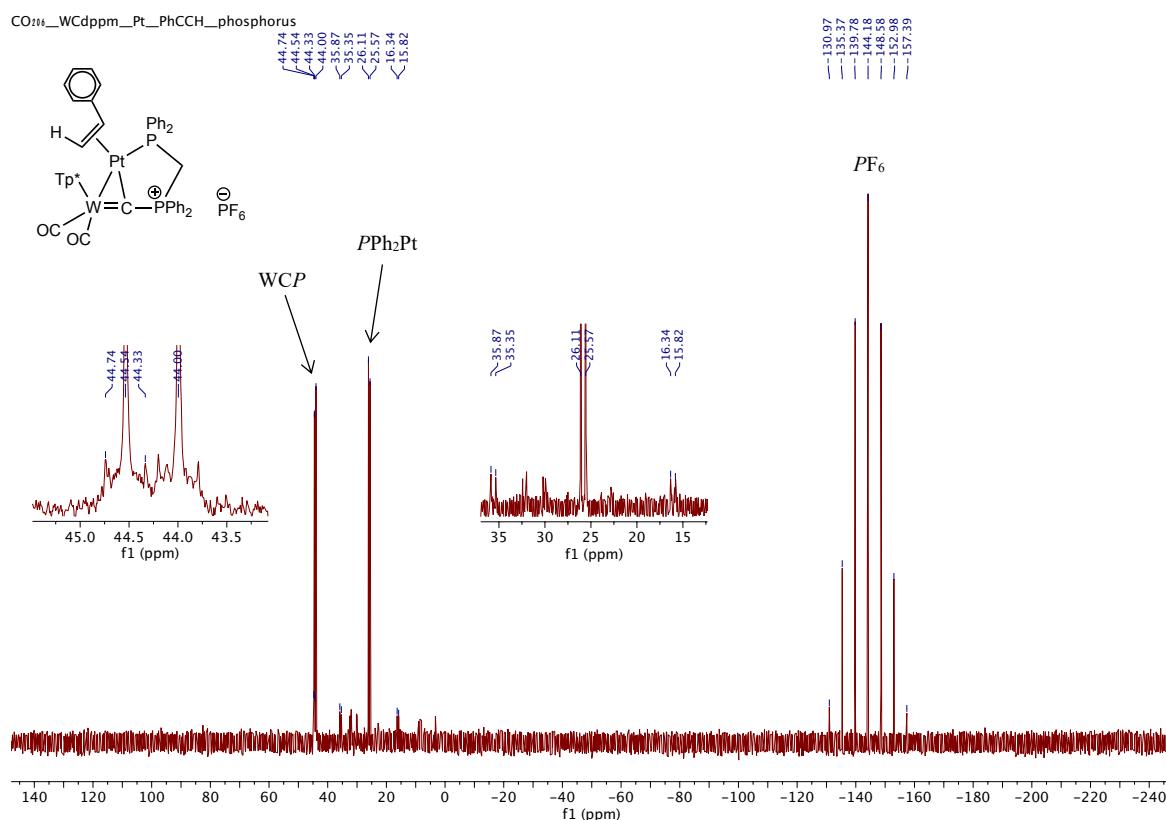
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound **5.17**.¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound **5.17**.

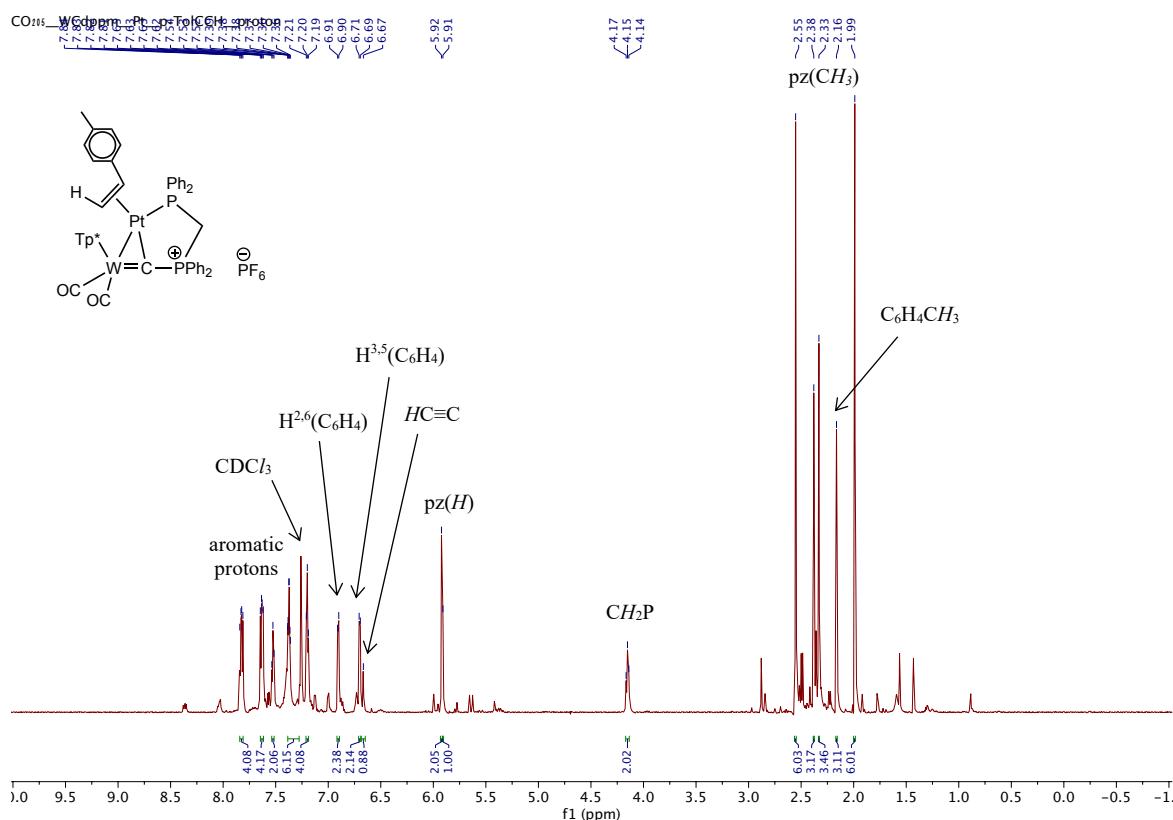
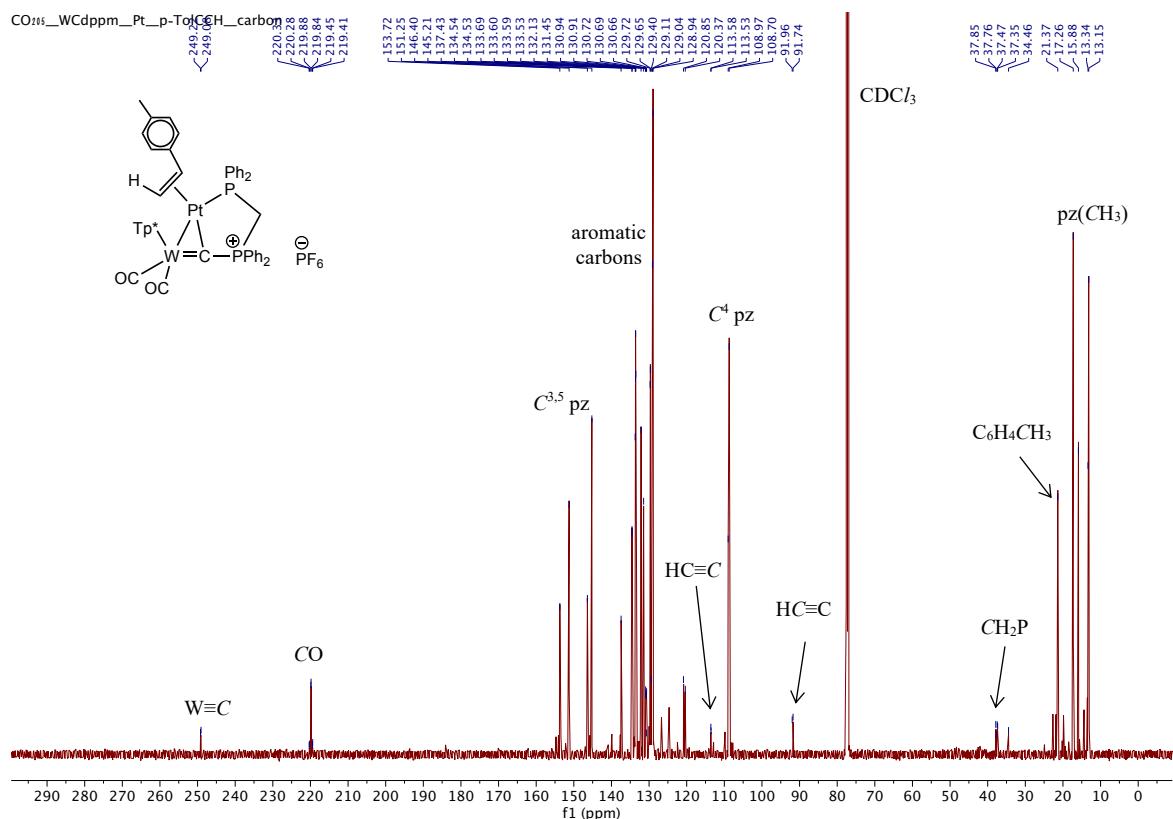


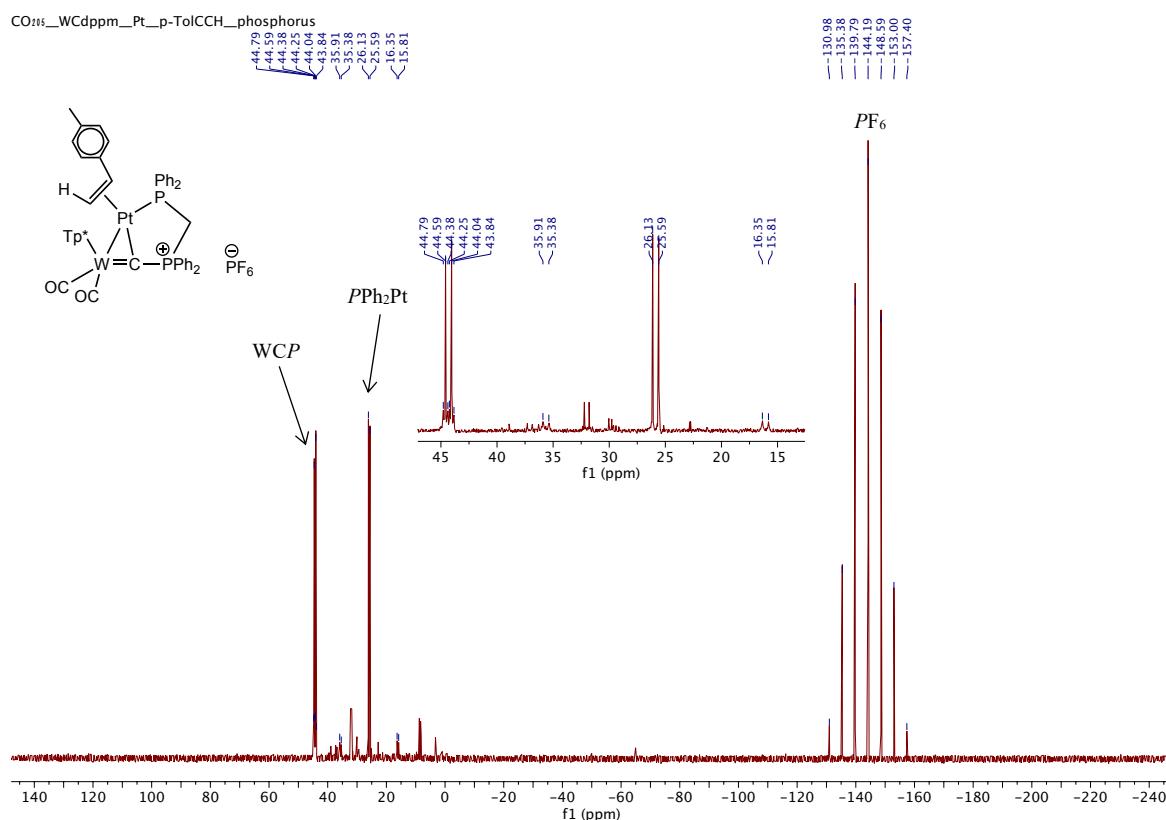
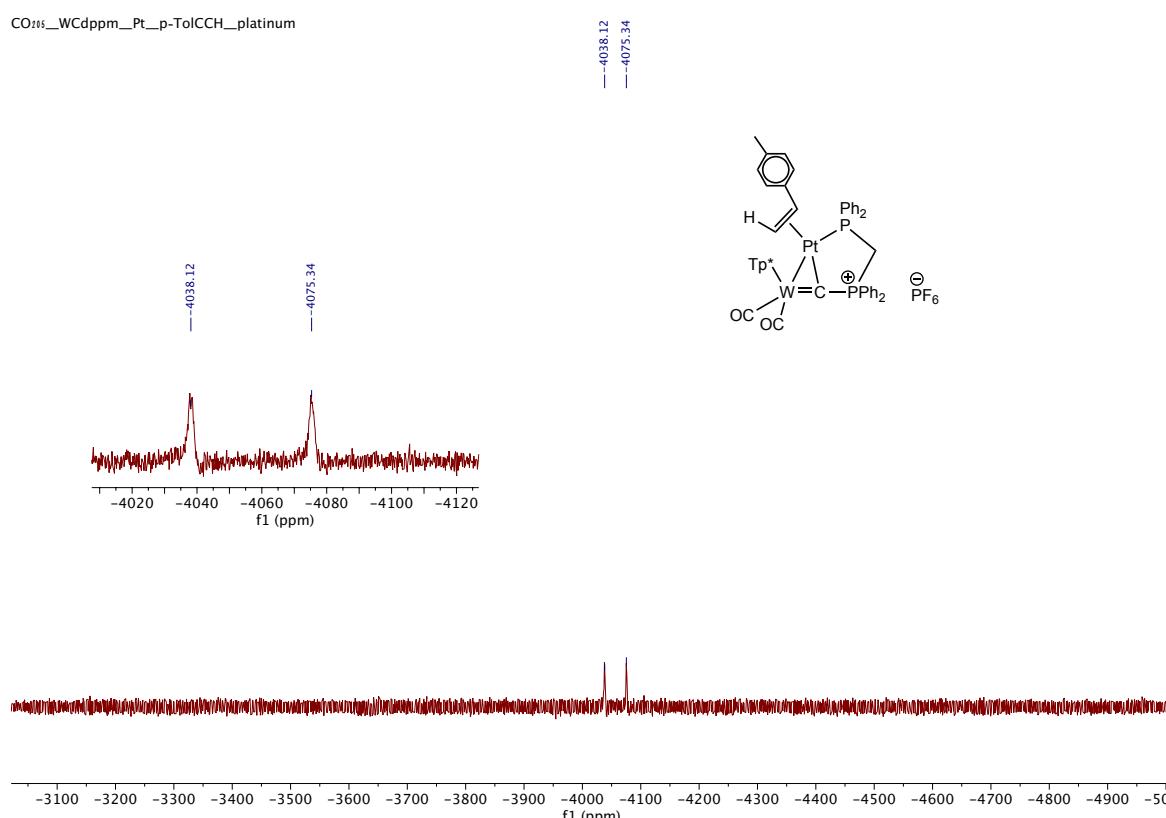
¹H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 5.18.

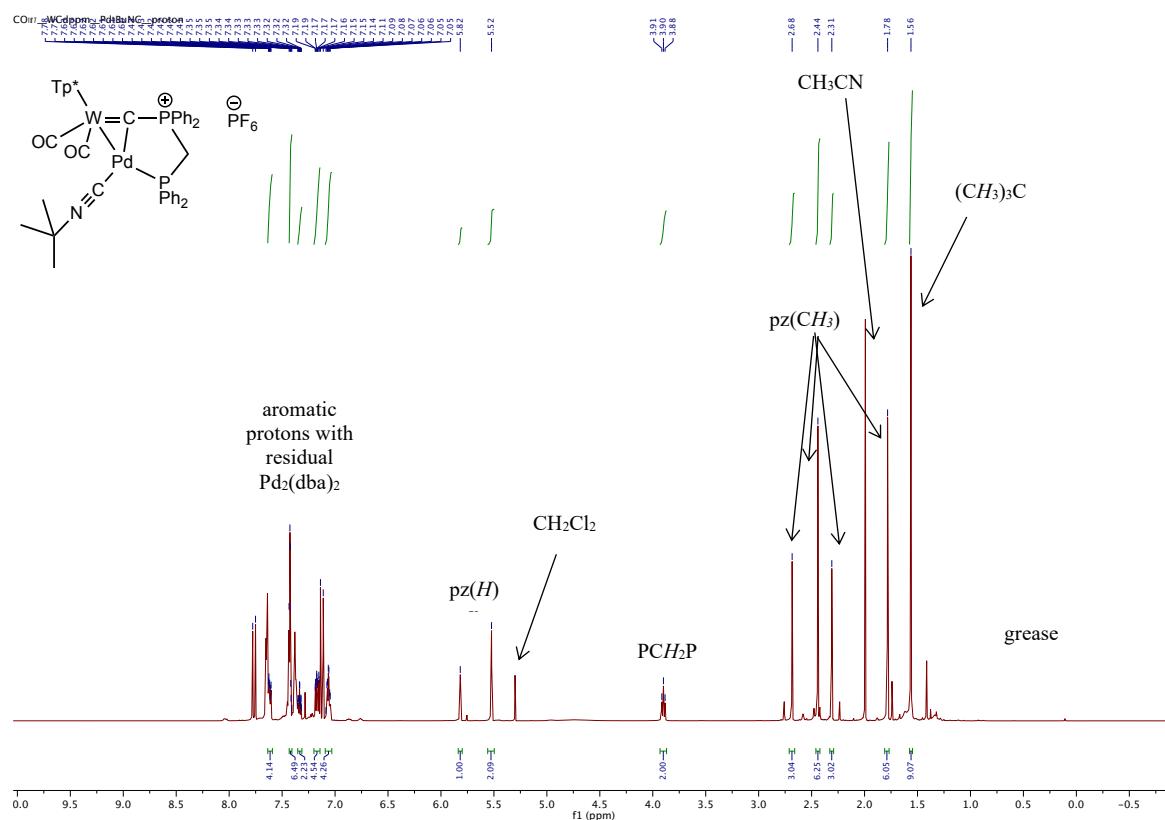
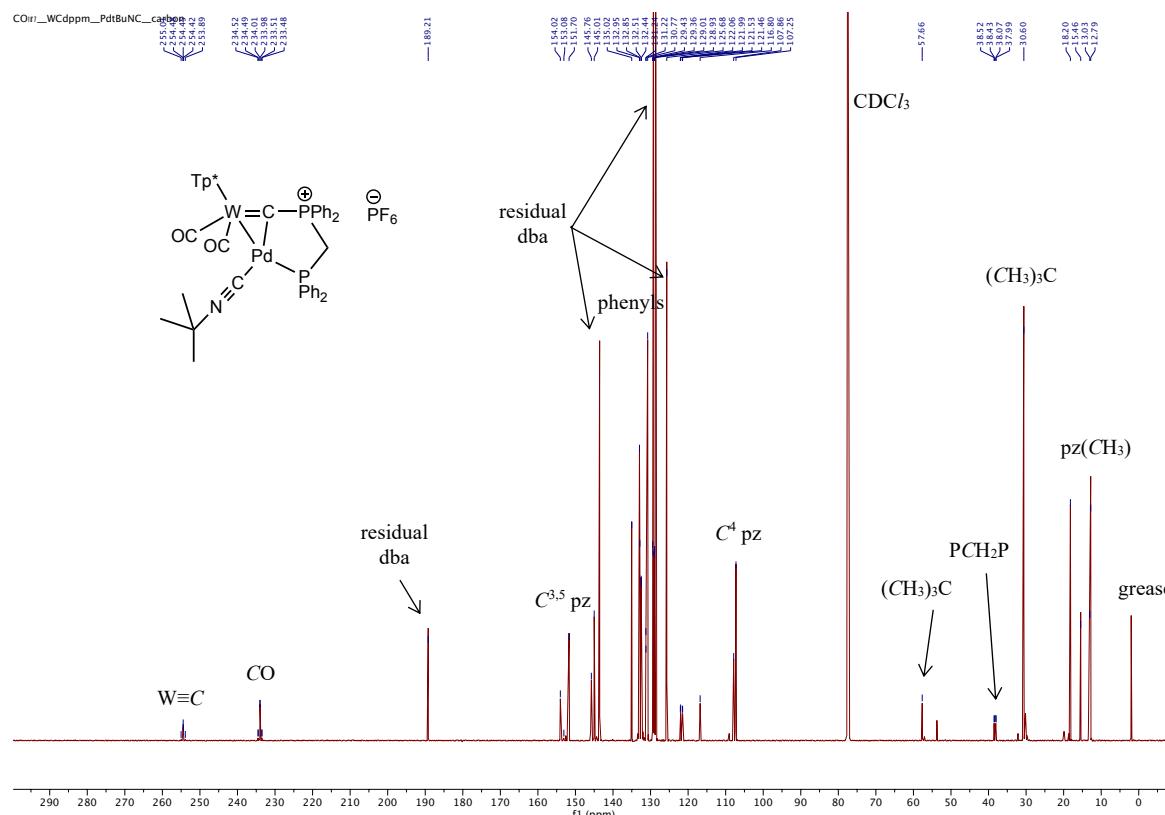


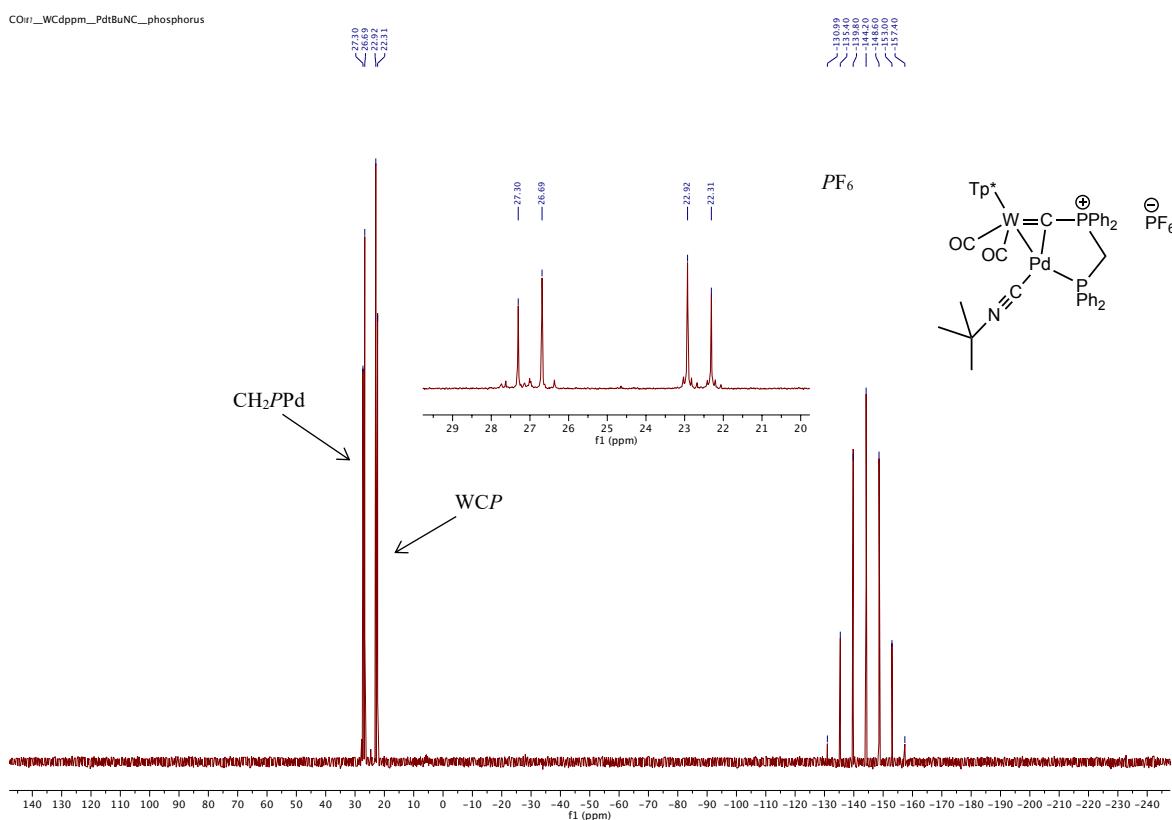
¹³C{¹H} NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 5.18.

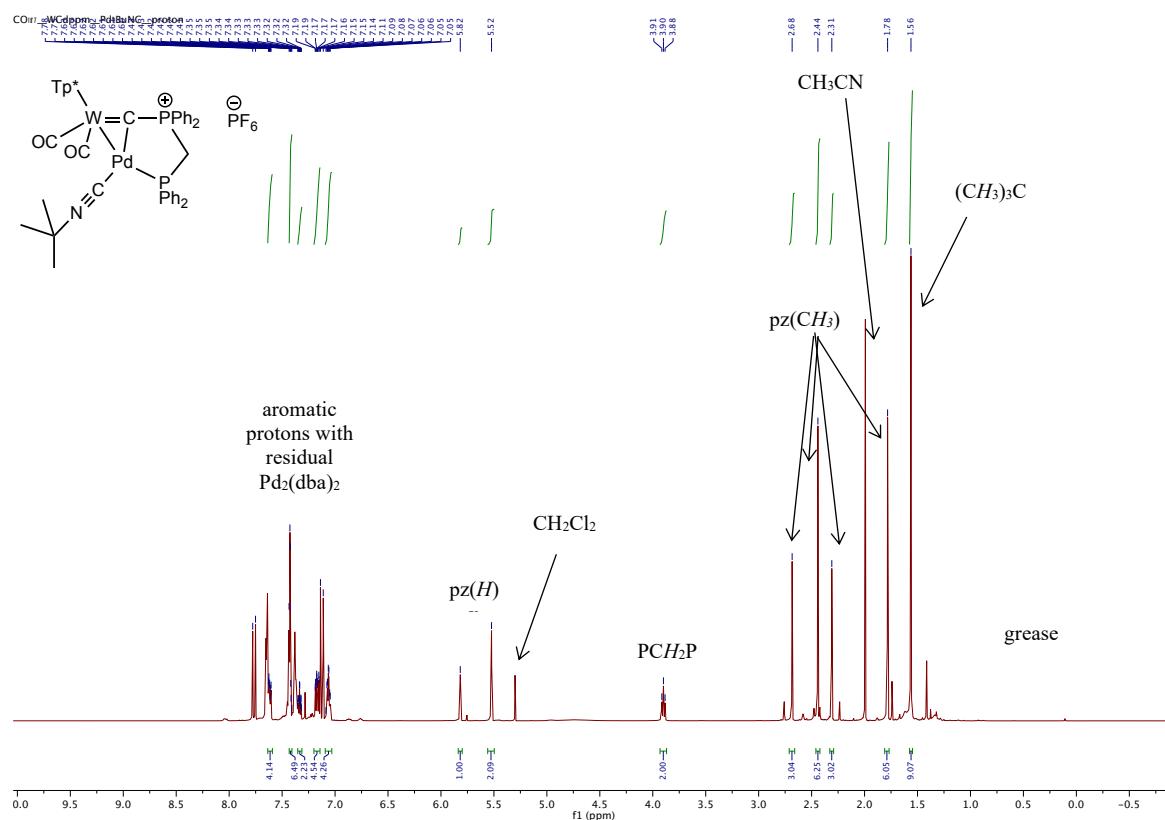


 ^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 5.19. $^{13}\text{C}\{\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 5.19.

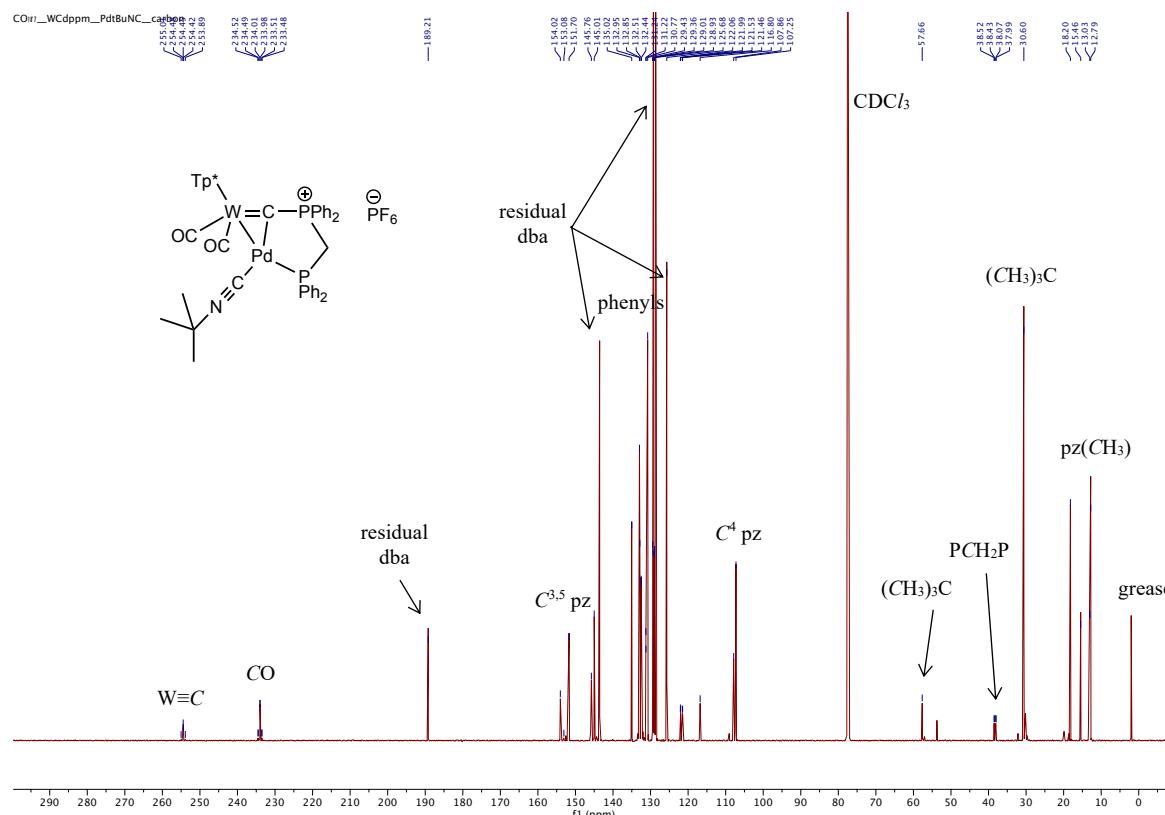
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 5.19.¹⁹⁵Pt NMR spectrum (86 MHz, CDCl₃, 25°C, δ) of compound 5.19.

¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 5.20.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 5.20.

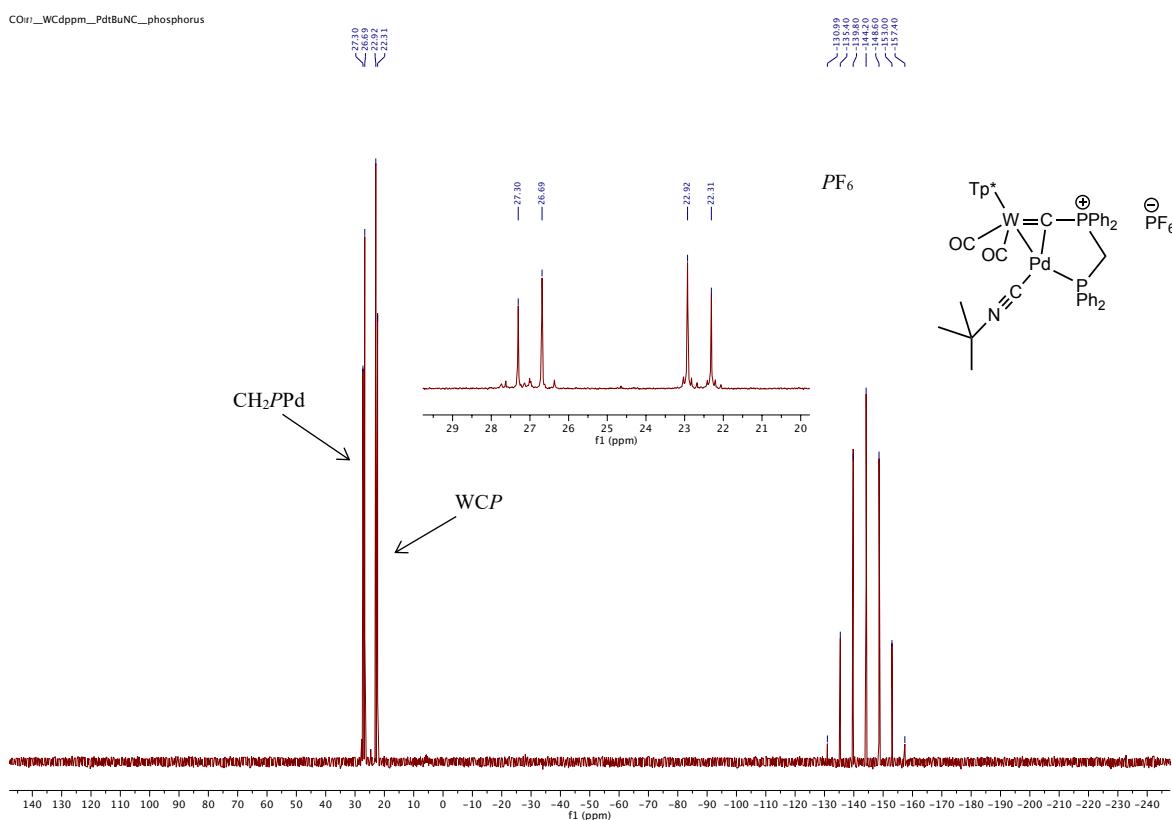


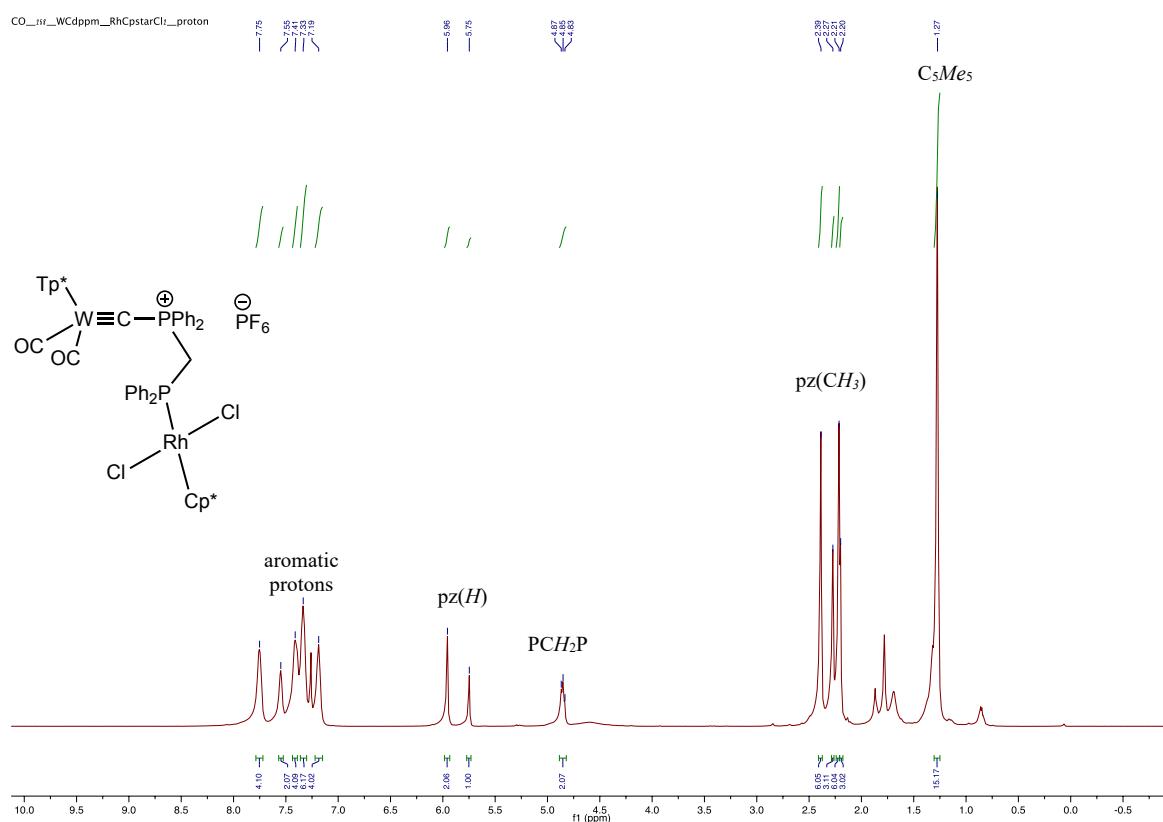


¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 5.21.

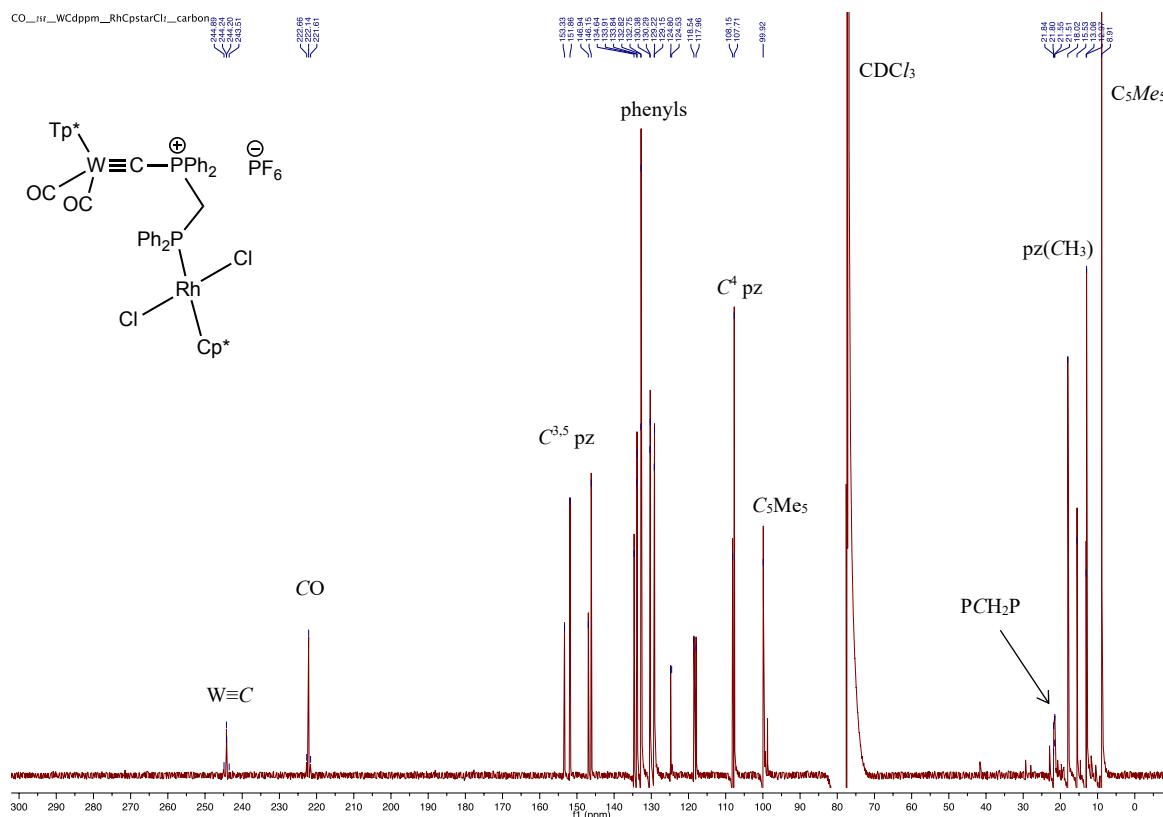


¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 5.21.

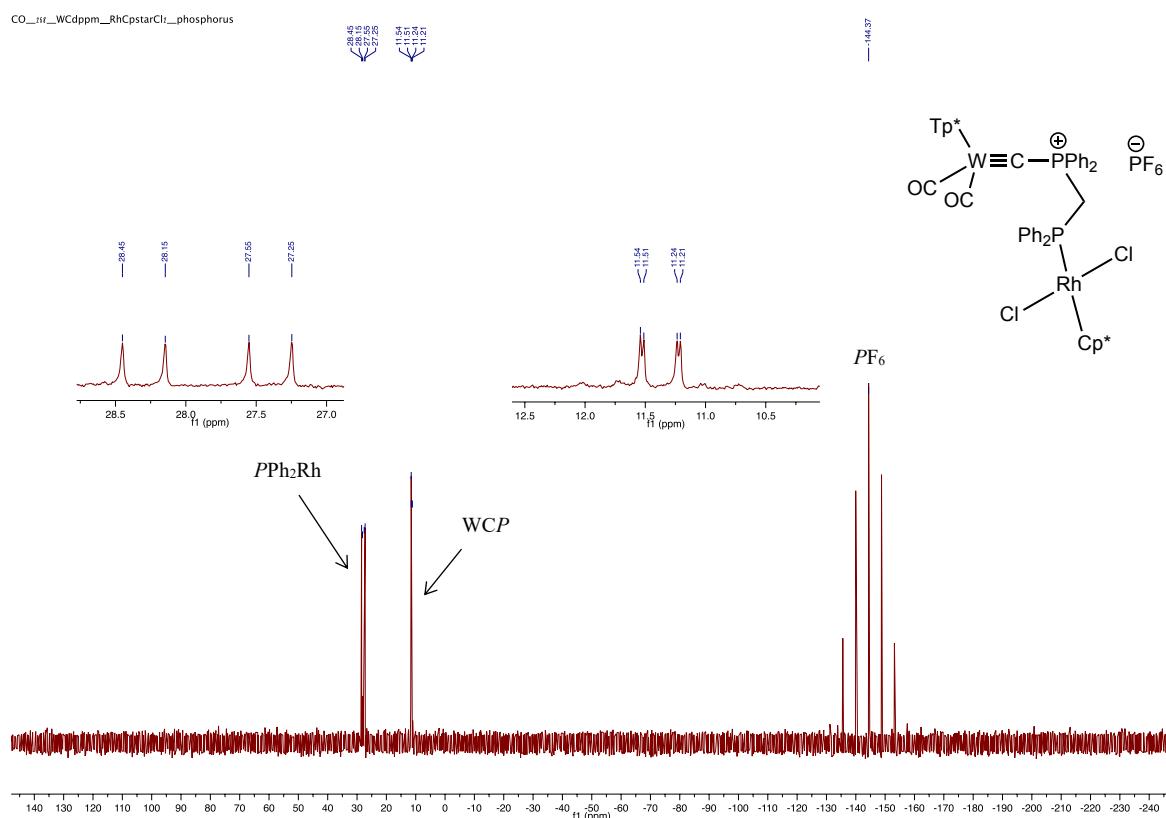




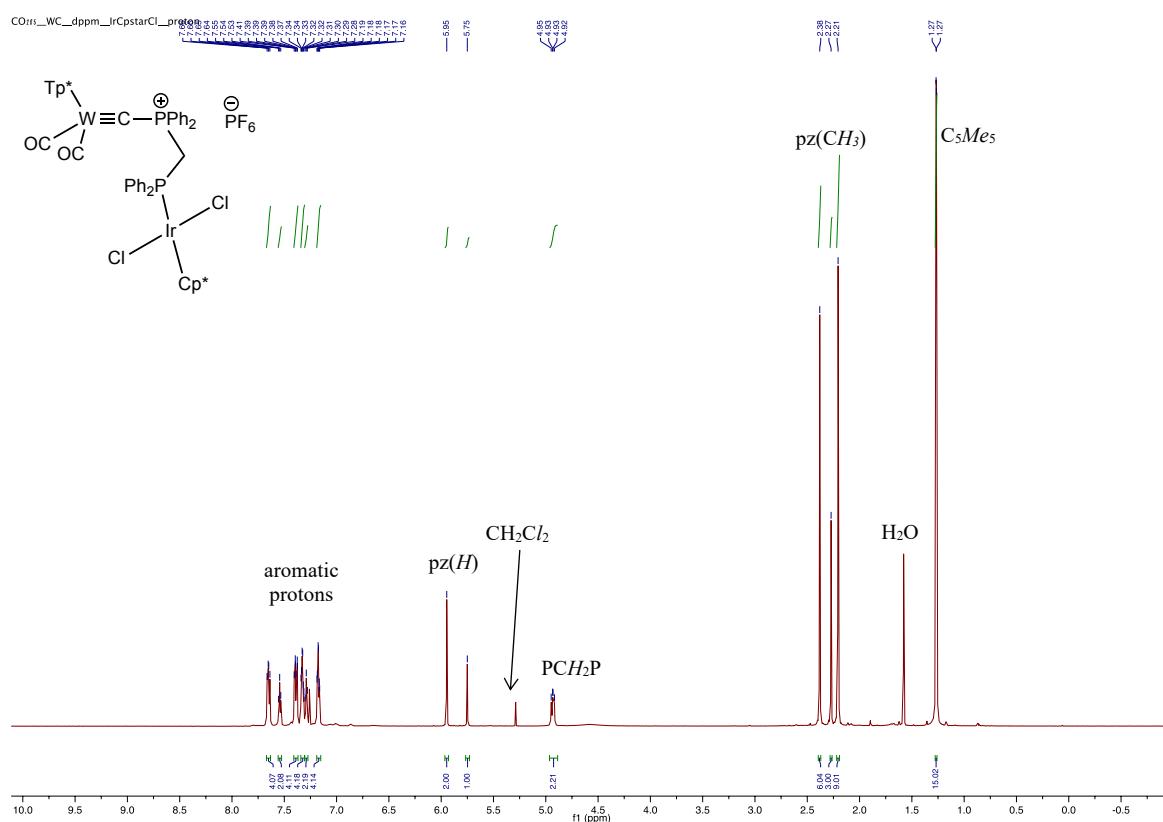
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 5.22.



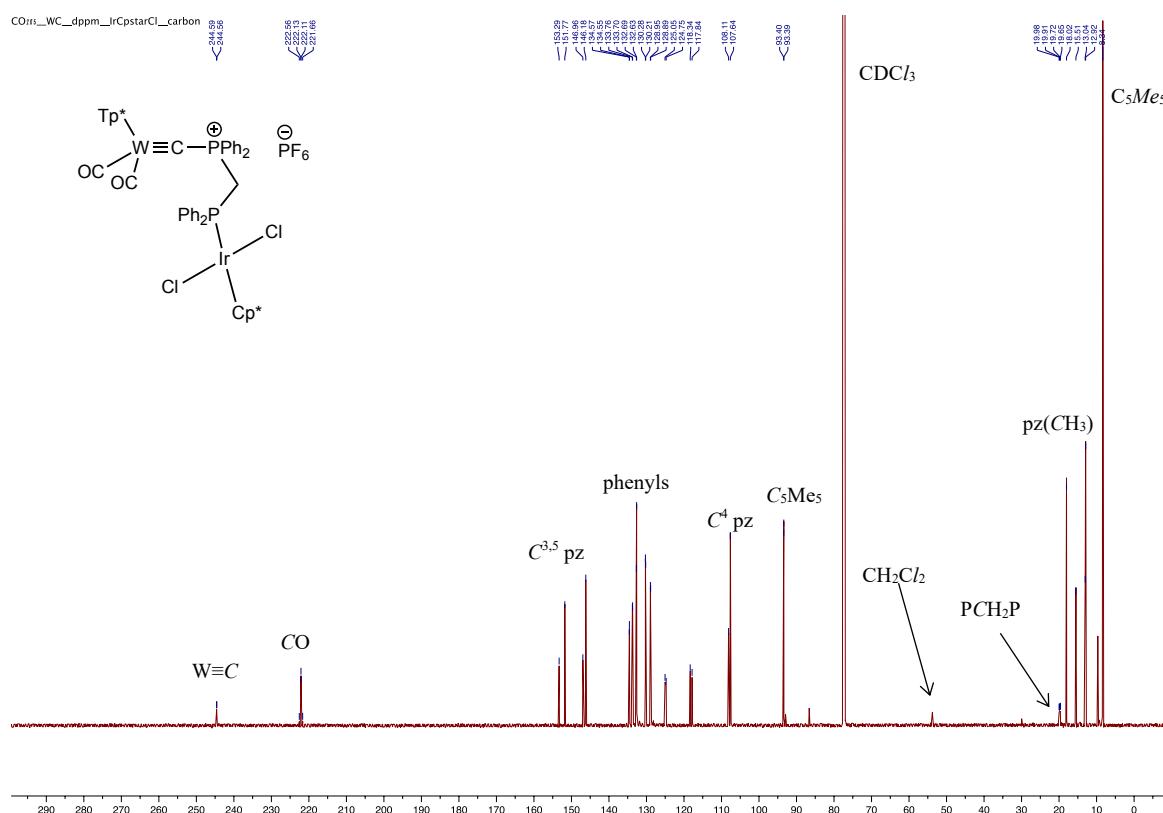
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 5.22.



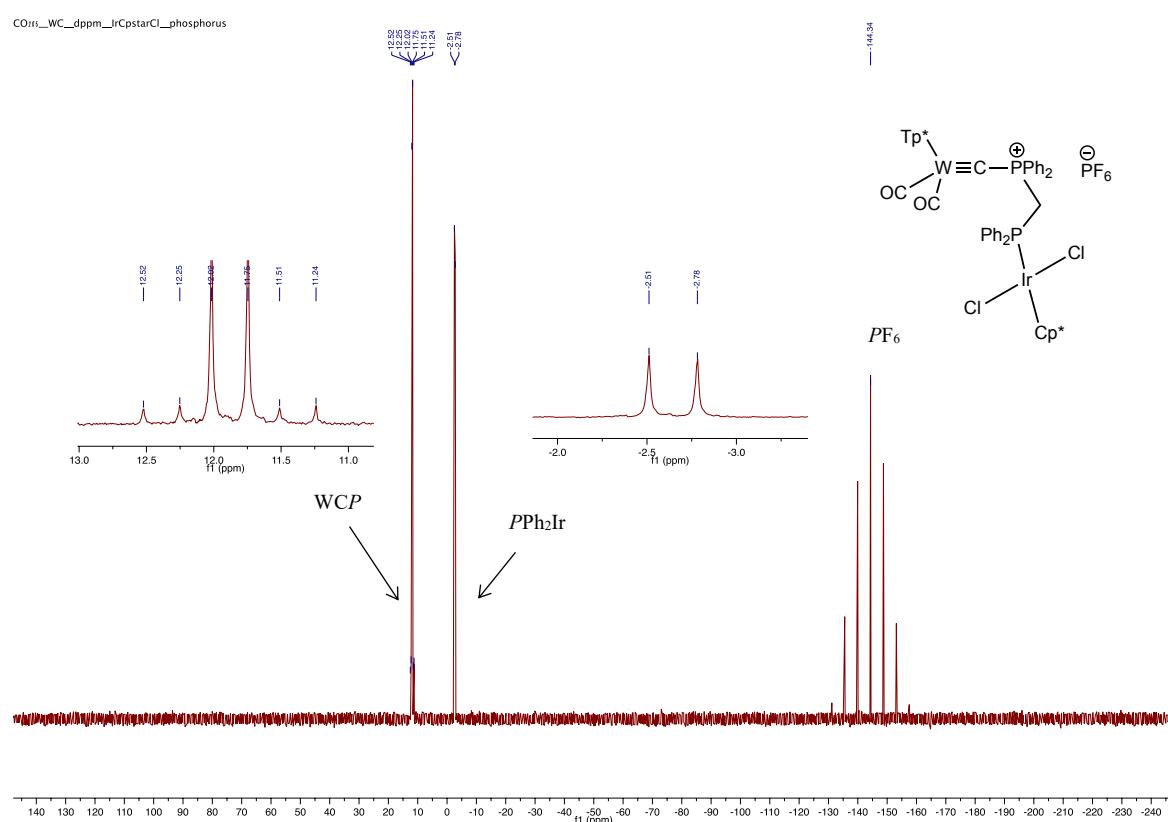
³¹P{¹H} NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 5.22.

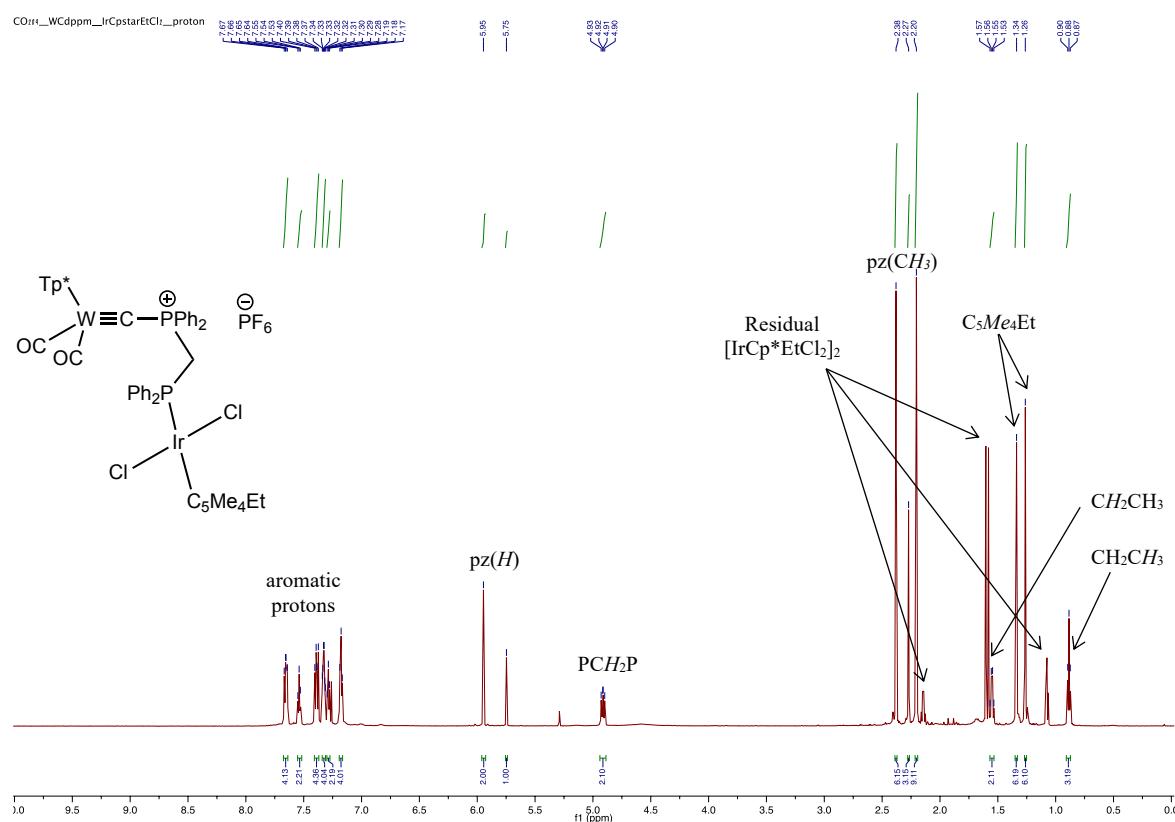


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.23.

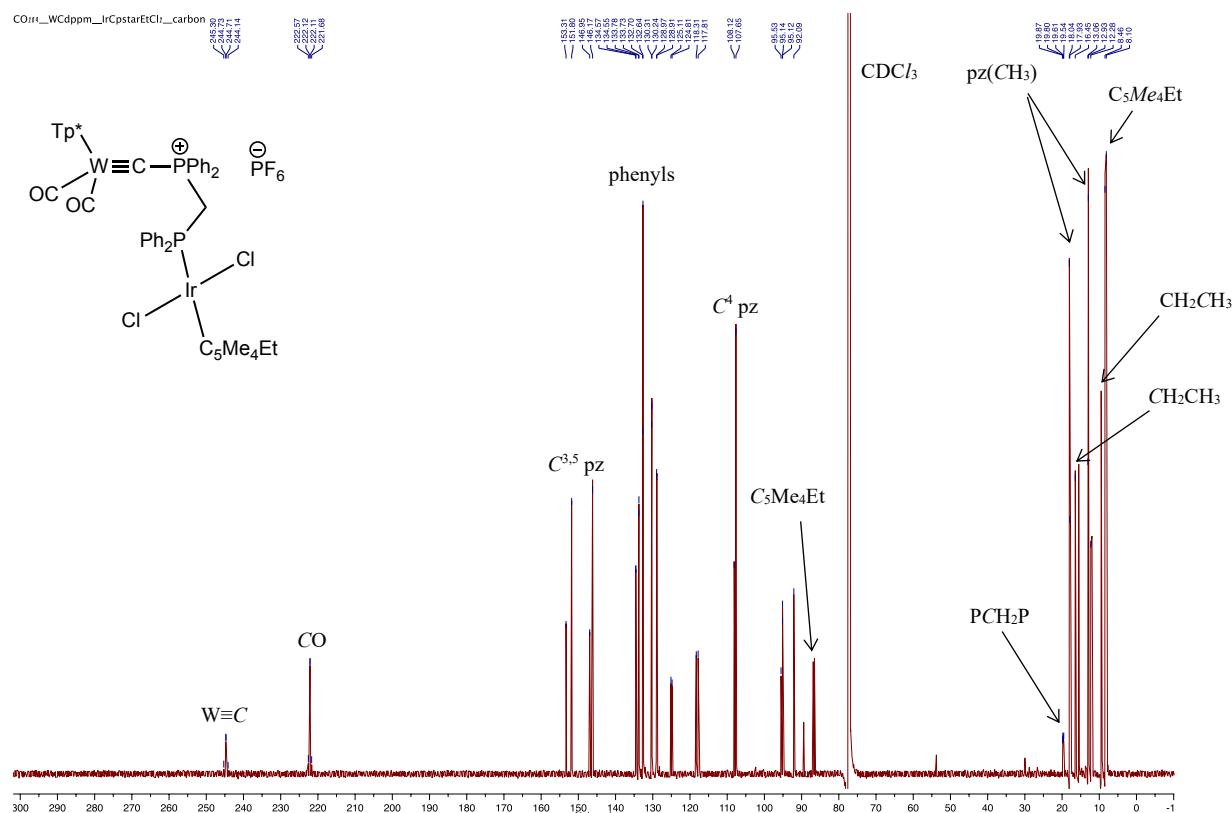


¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 5.23.

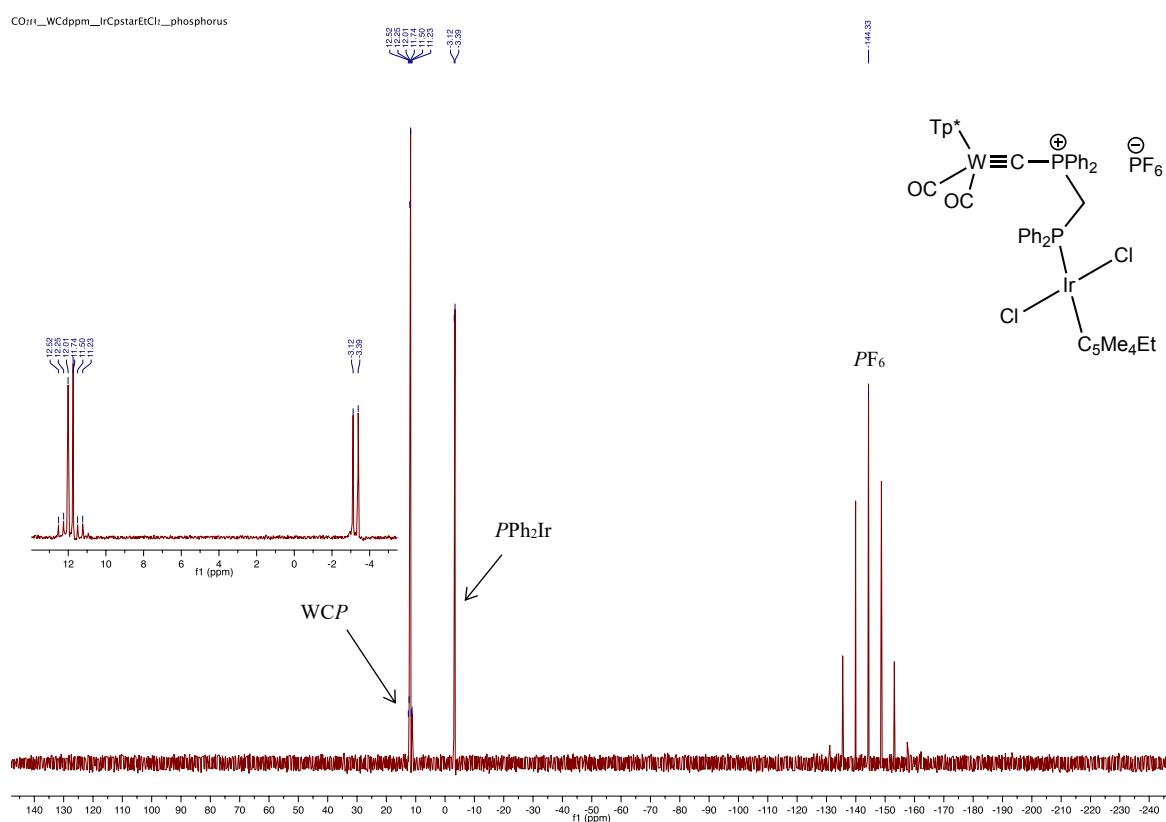




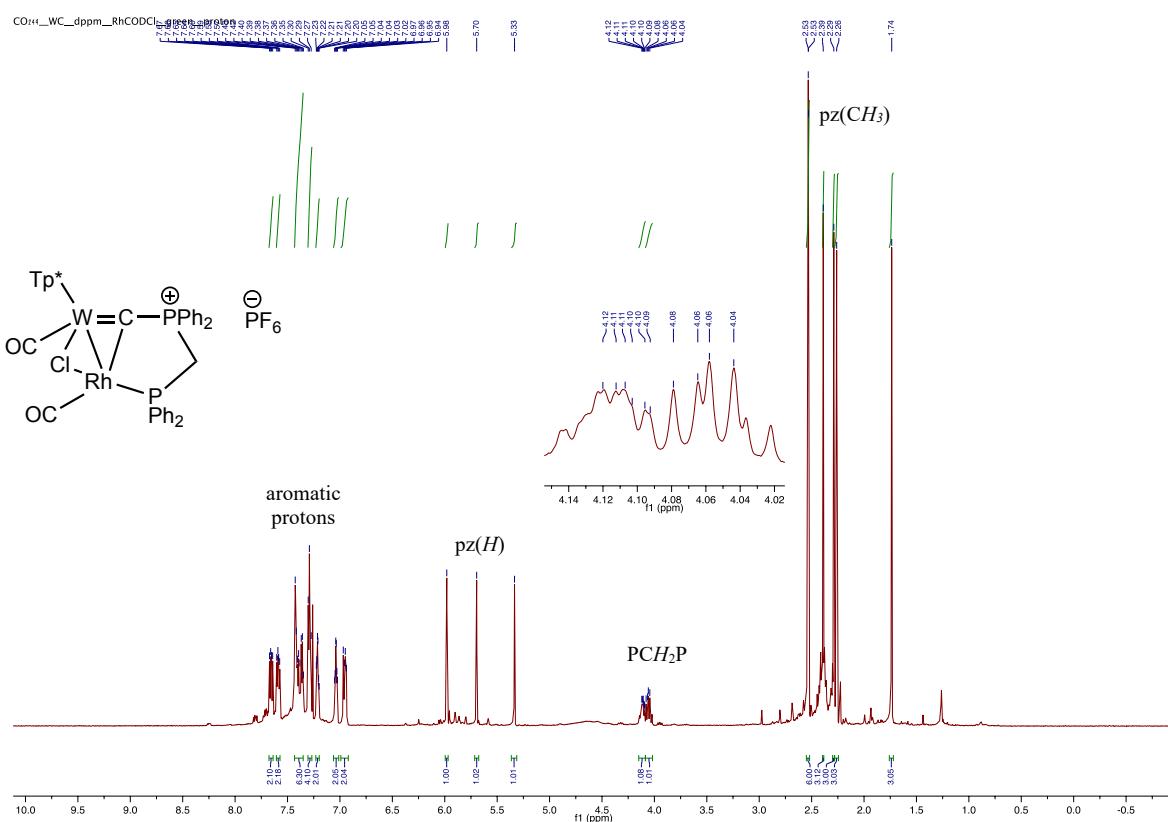
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 5.24.



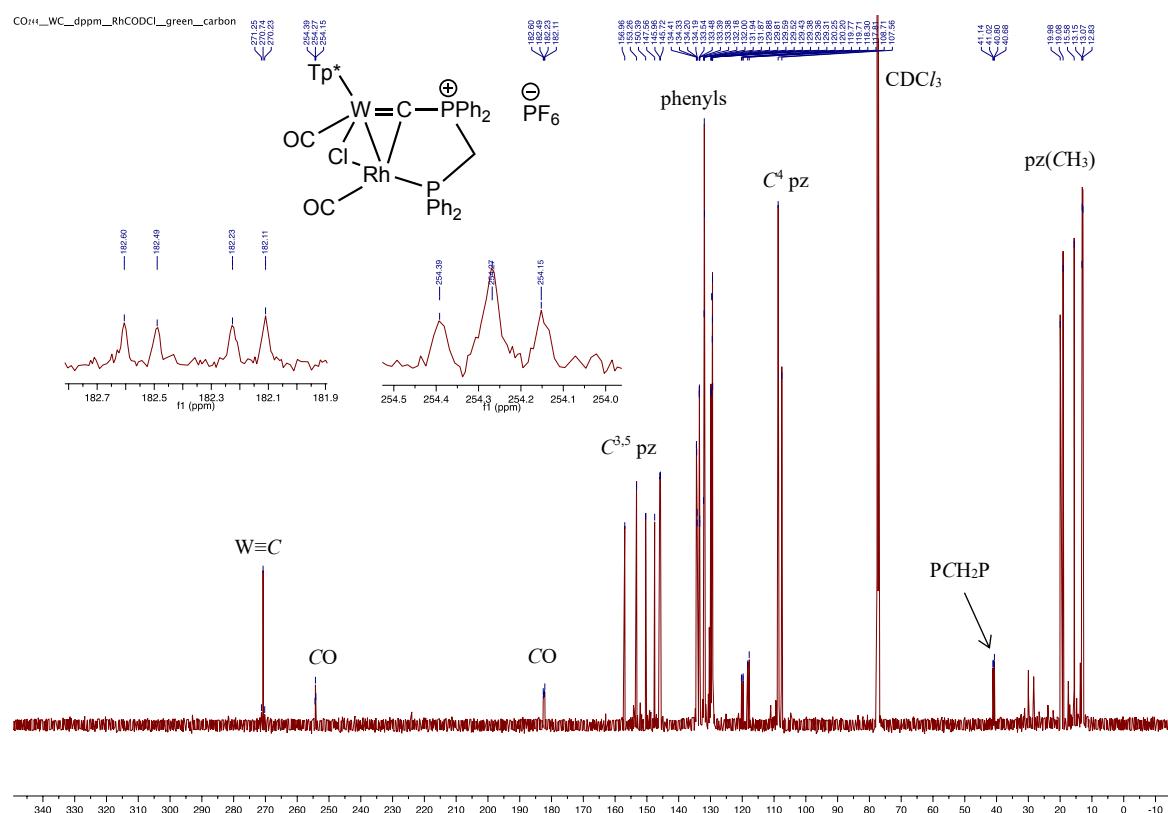
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 5.24.



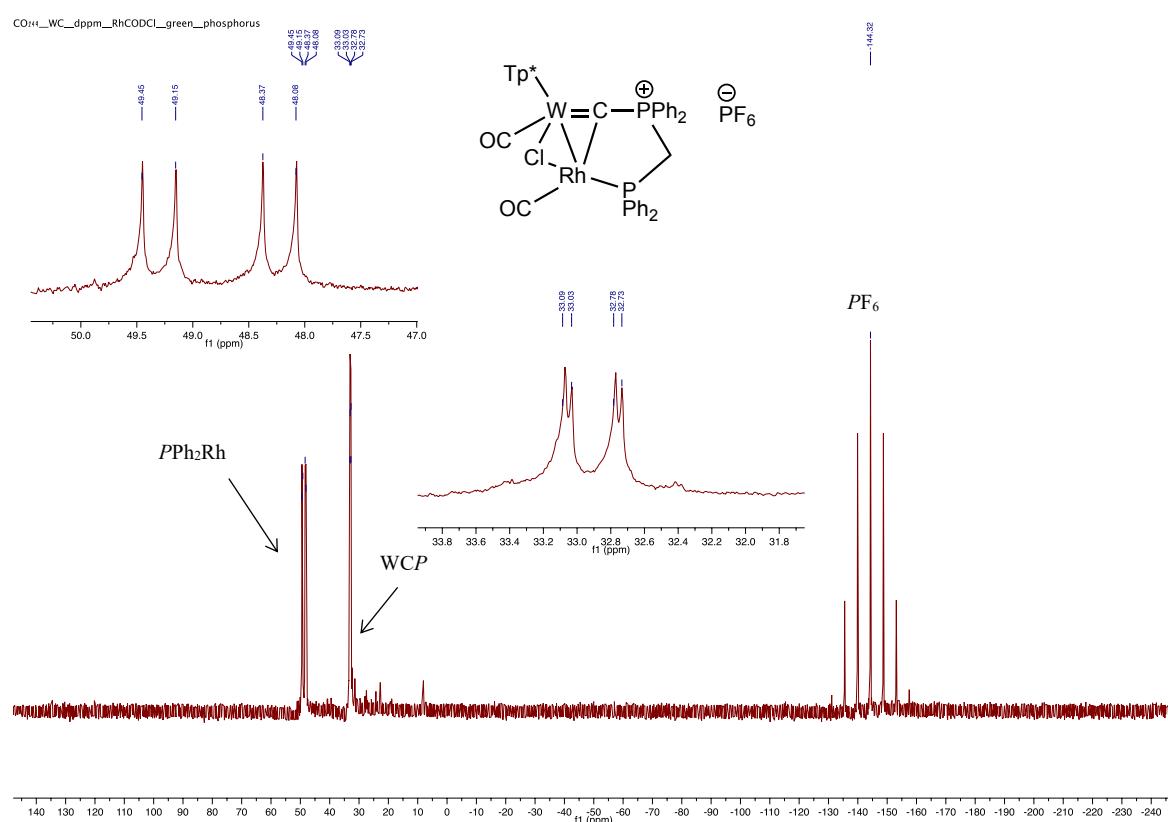
$^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl₃, 25°C, δ) of compound 5.24.



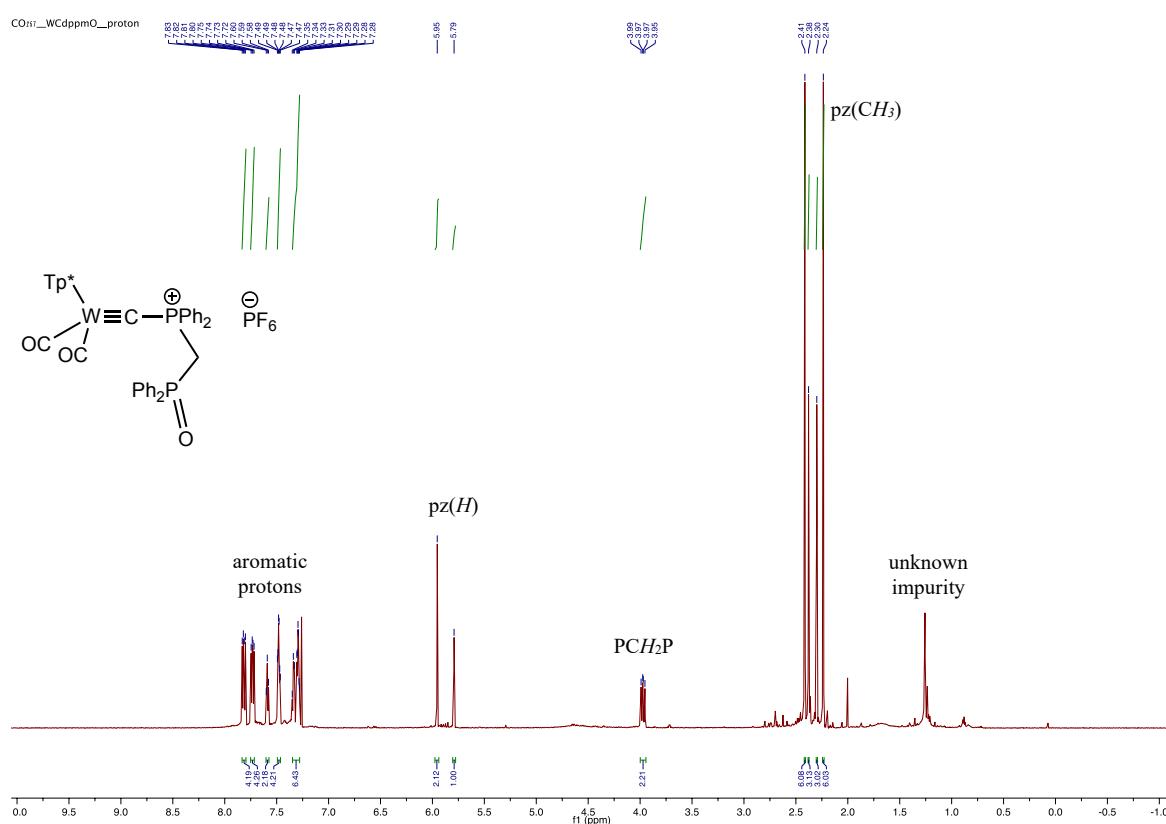
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 5.25.



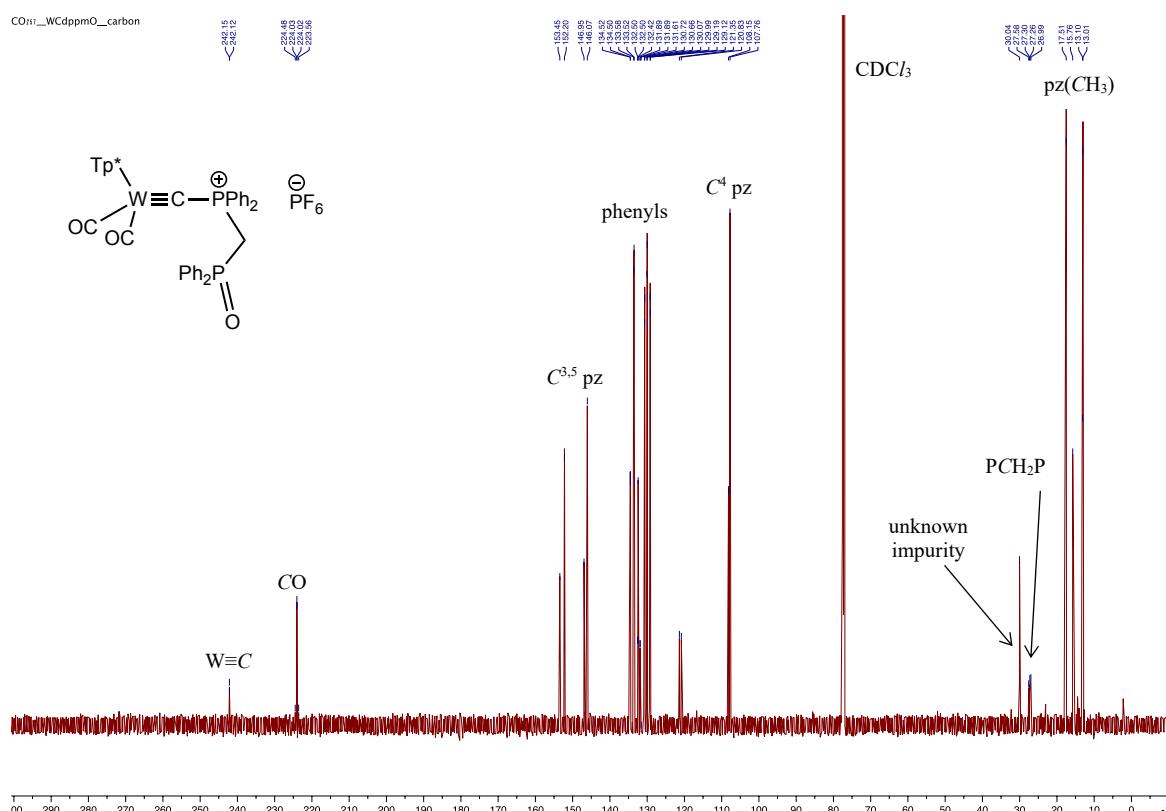
¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 5.25.



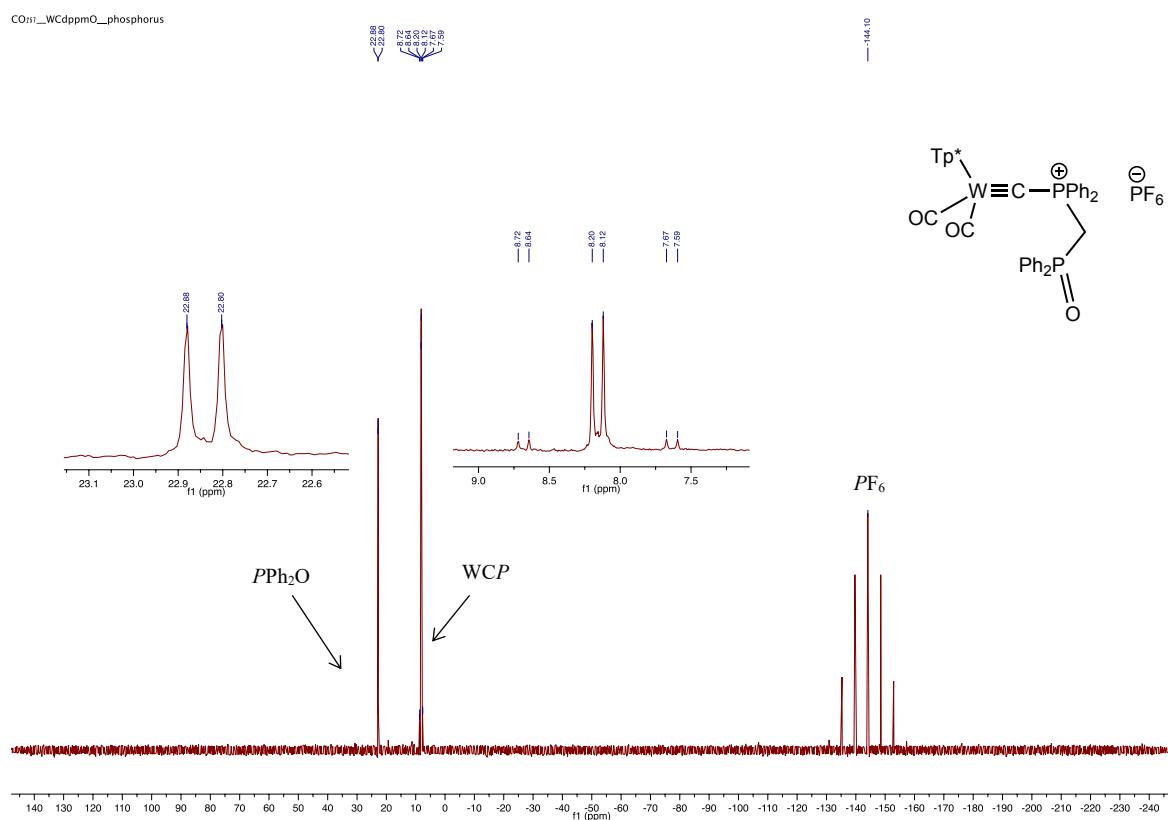
$^{31}\text{P}\{\text{H}\}$ NMR spectrum (162 MHz, CDCl_3 , 25°C, δ) of compound **5.25**.

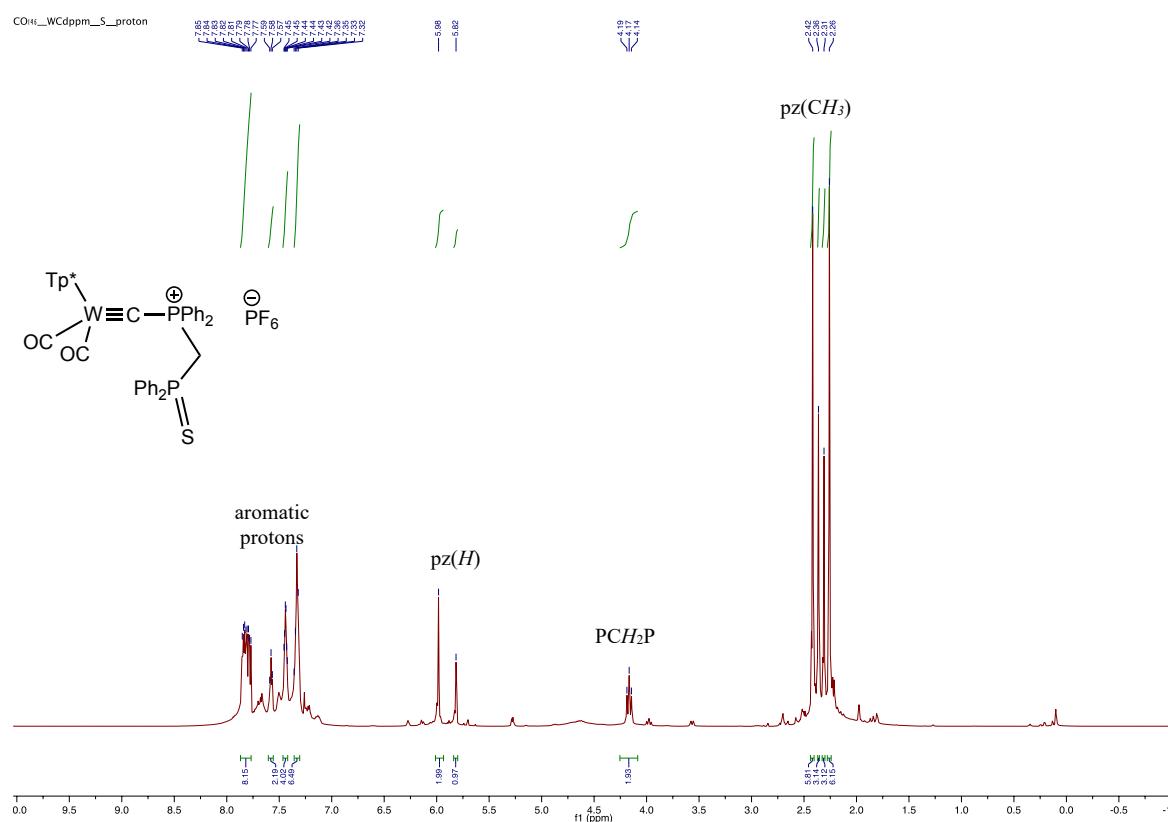


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.26.

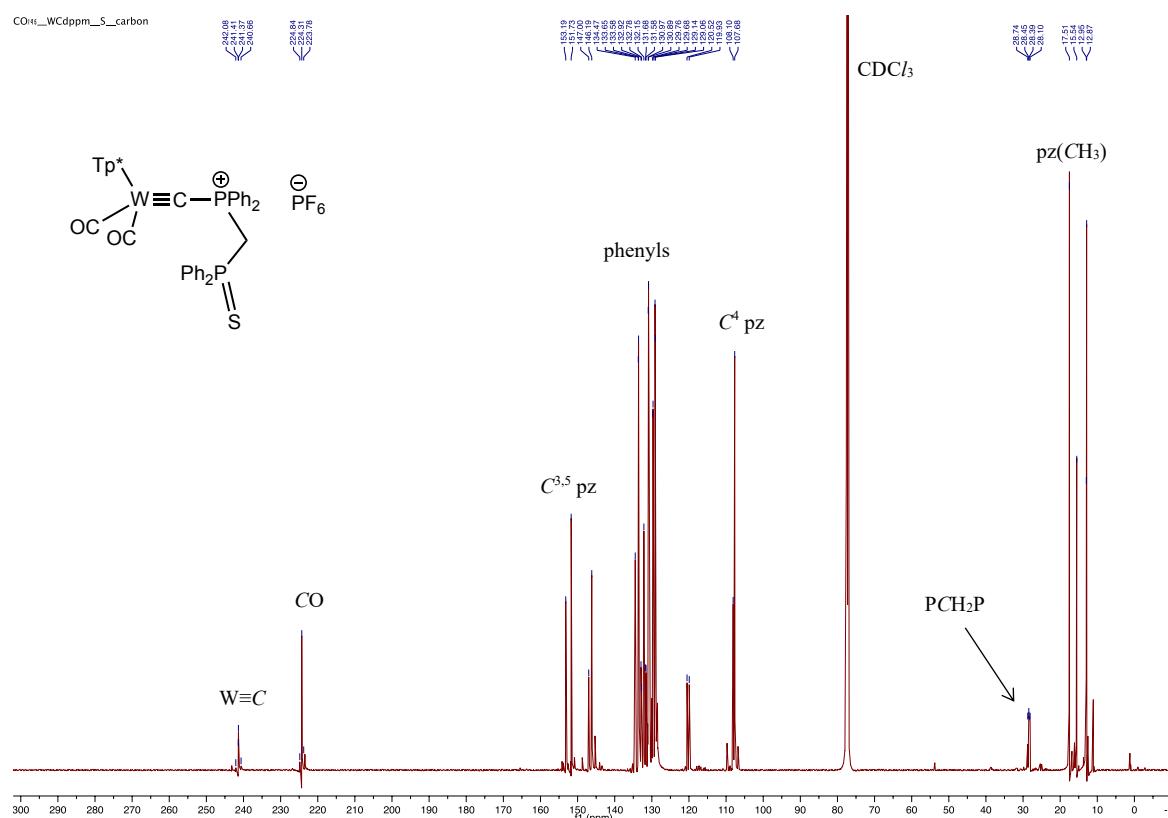


¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 5.26.

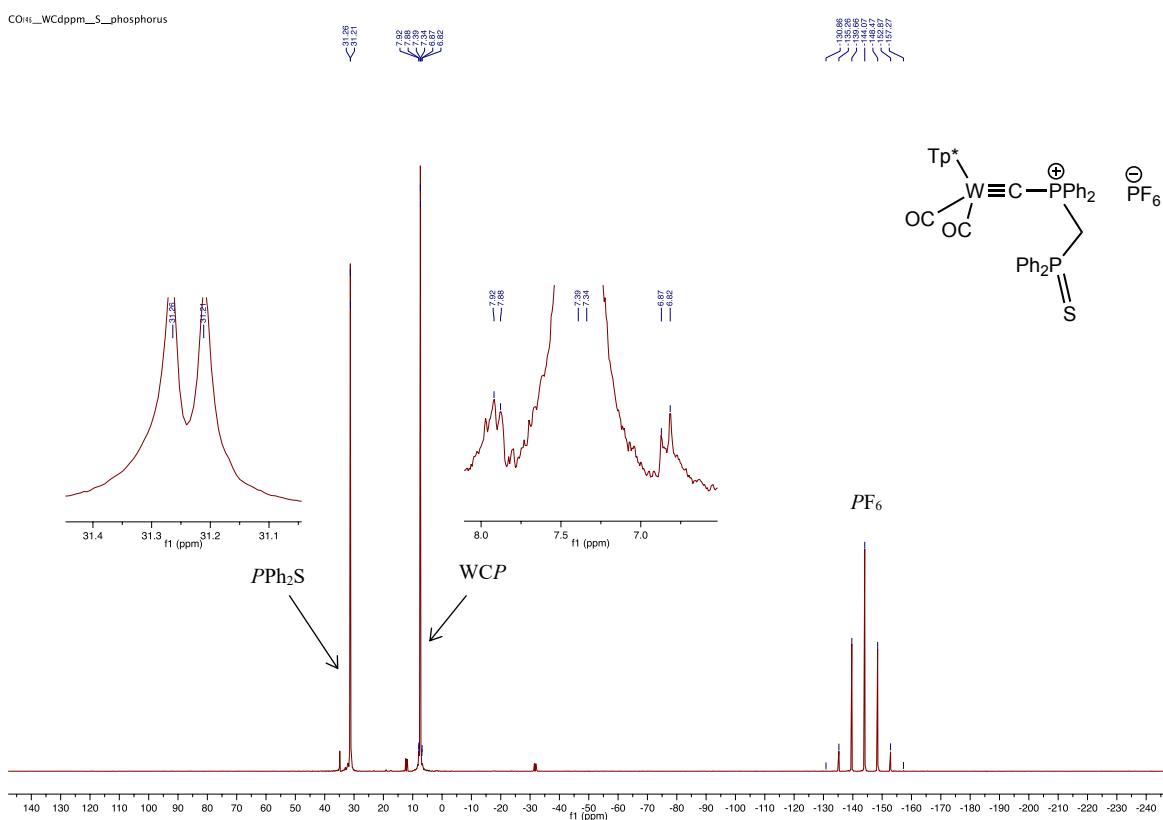


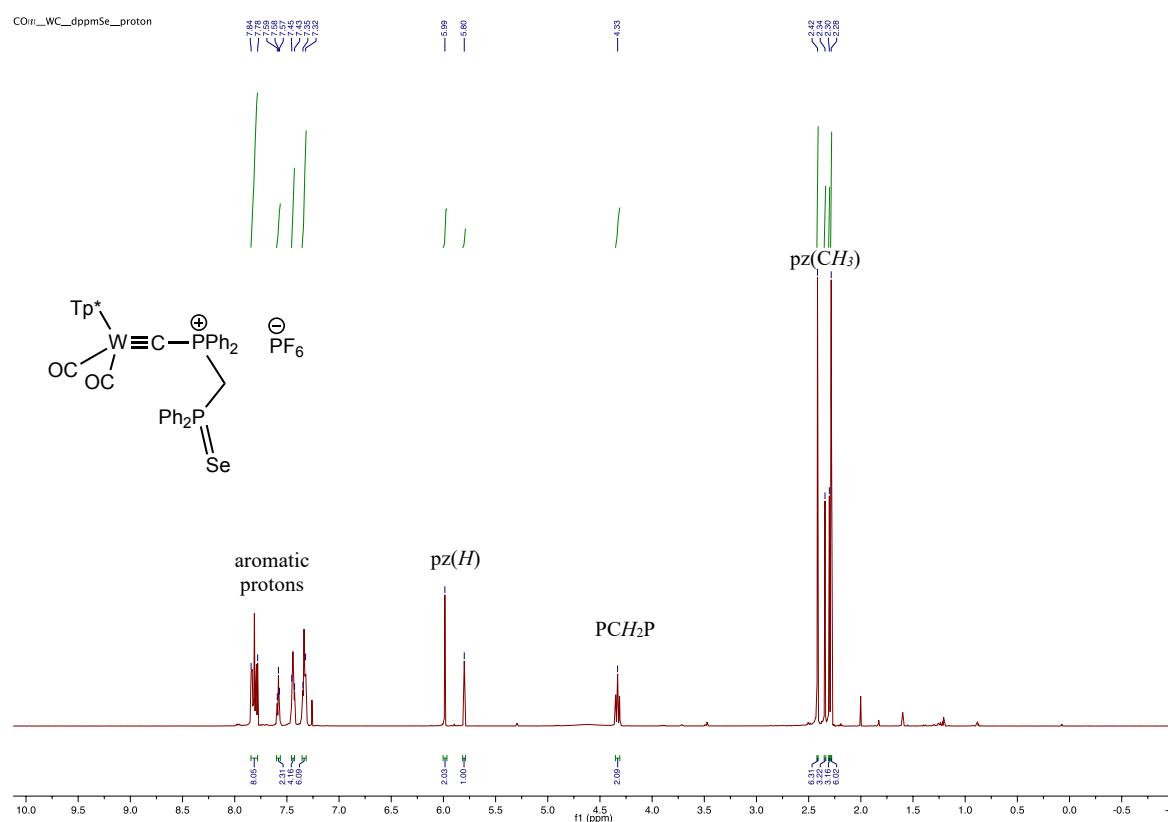


¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 5.27.

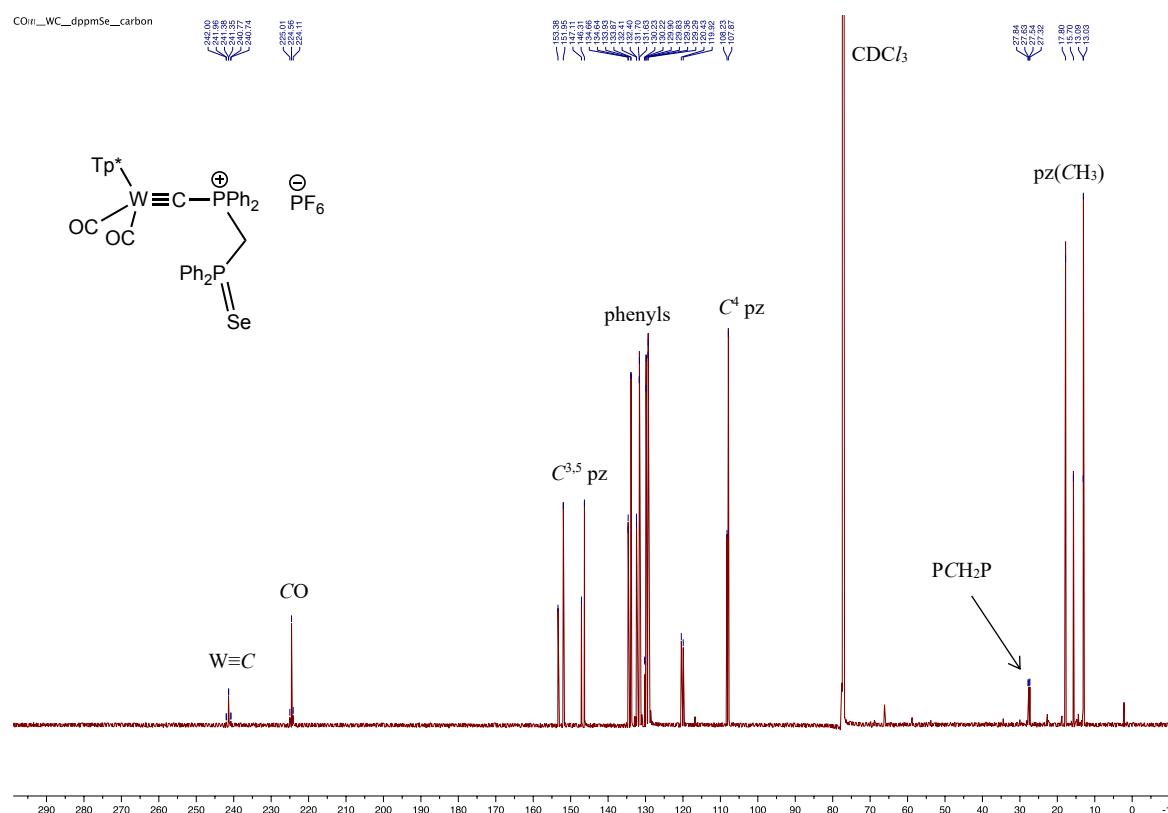


¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 5.27.

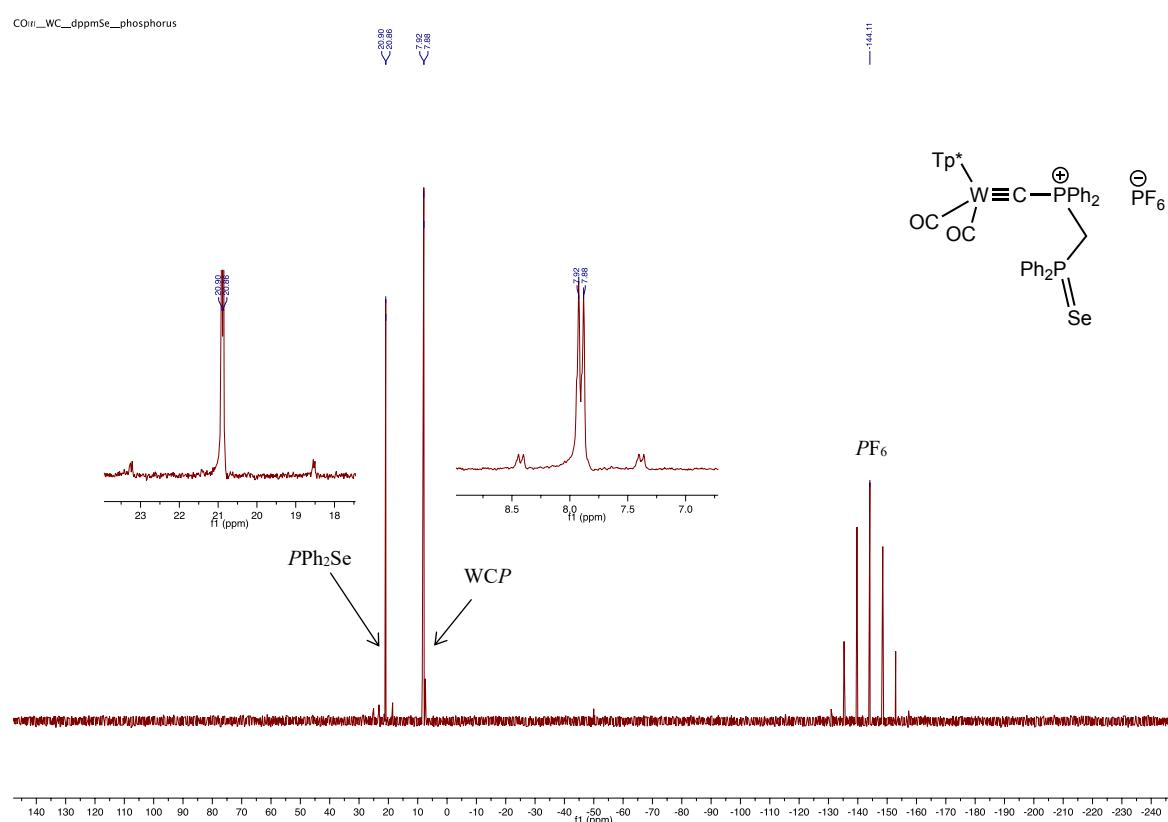
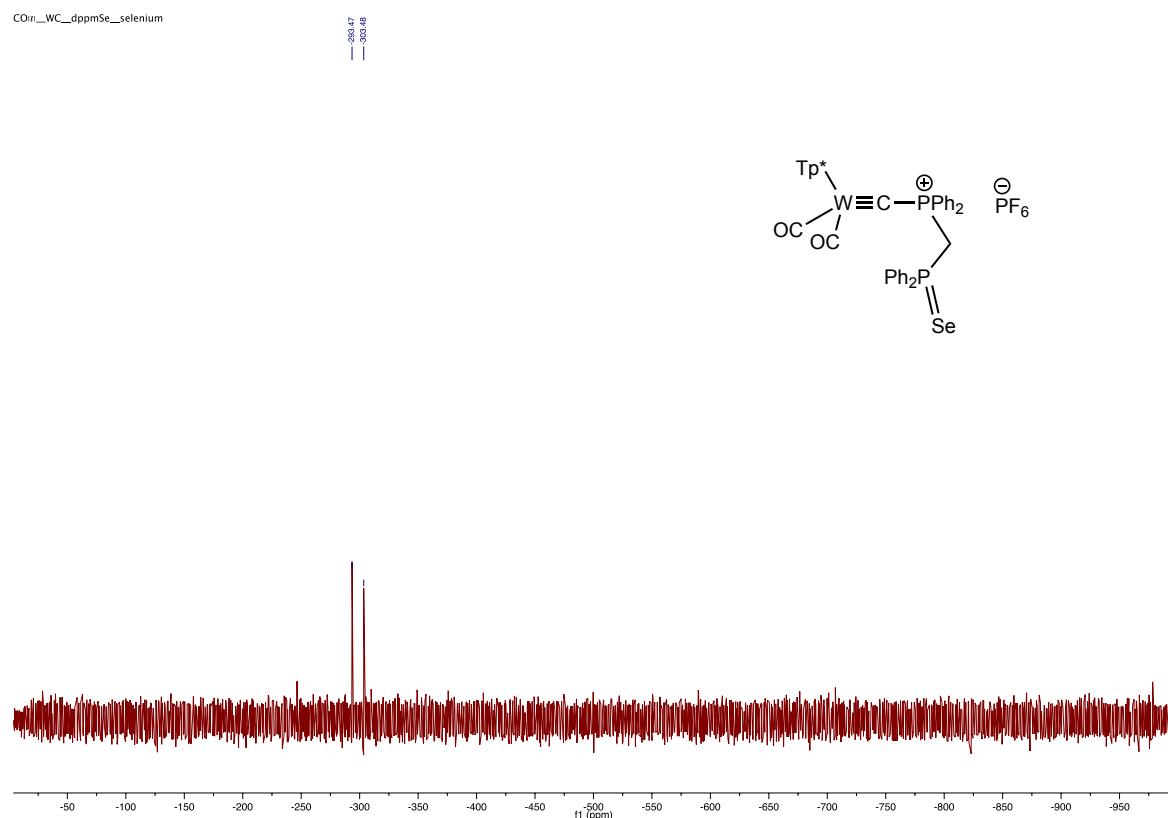


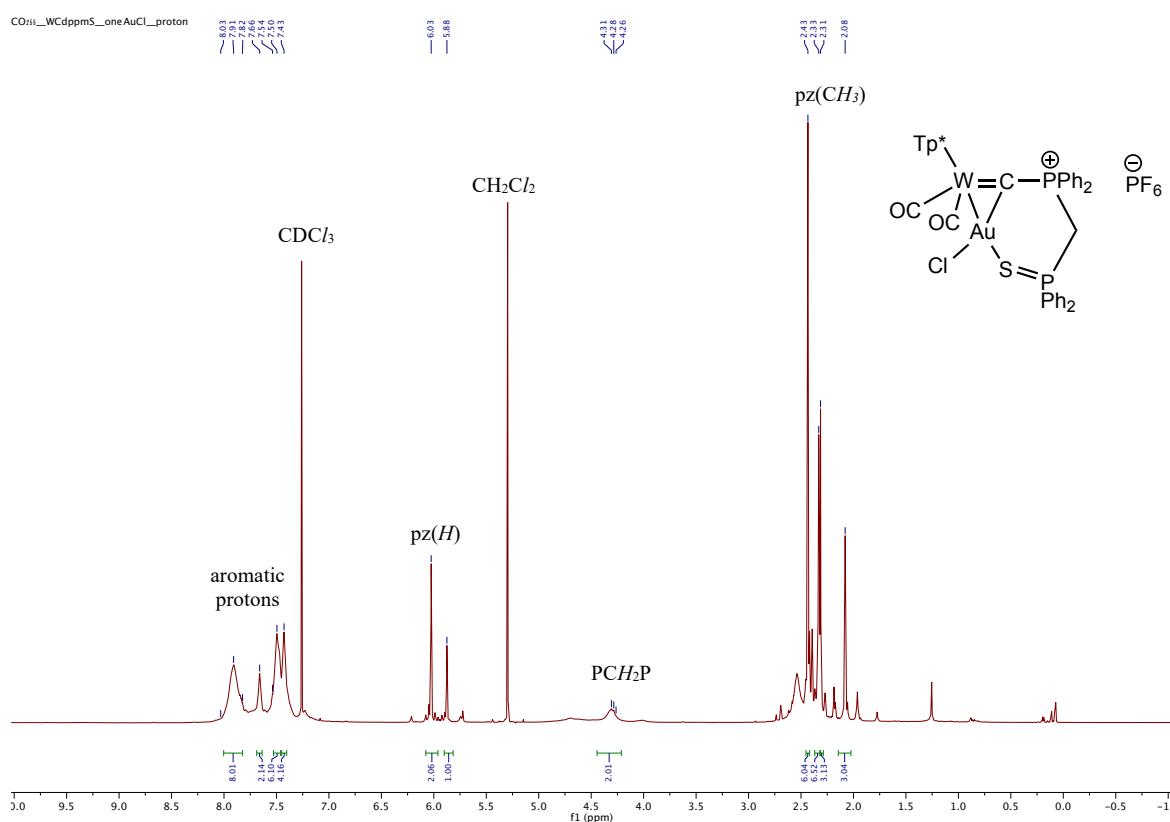
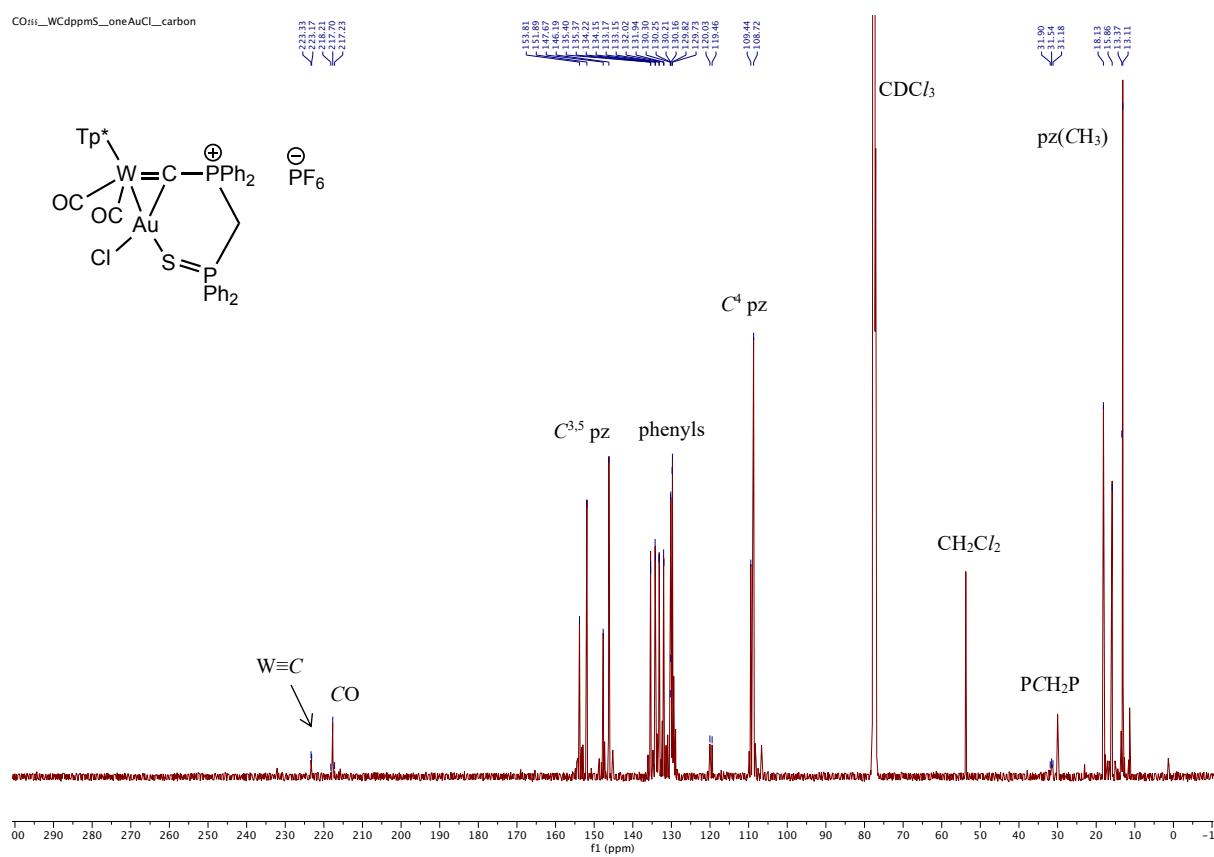


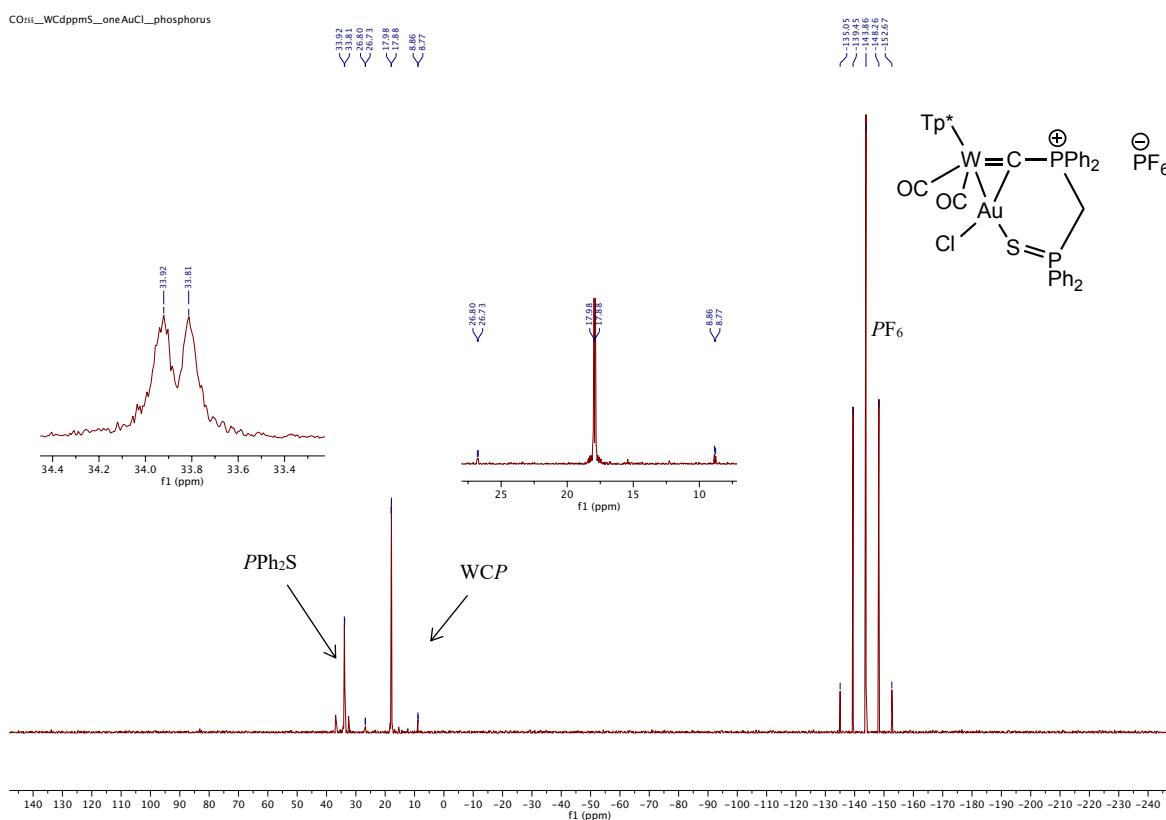
¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 5.28.

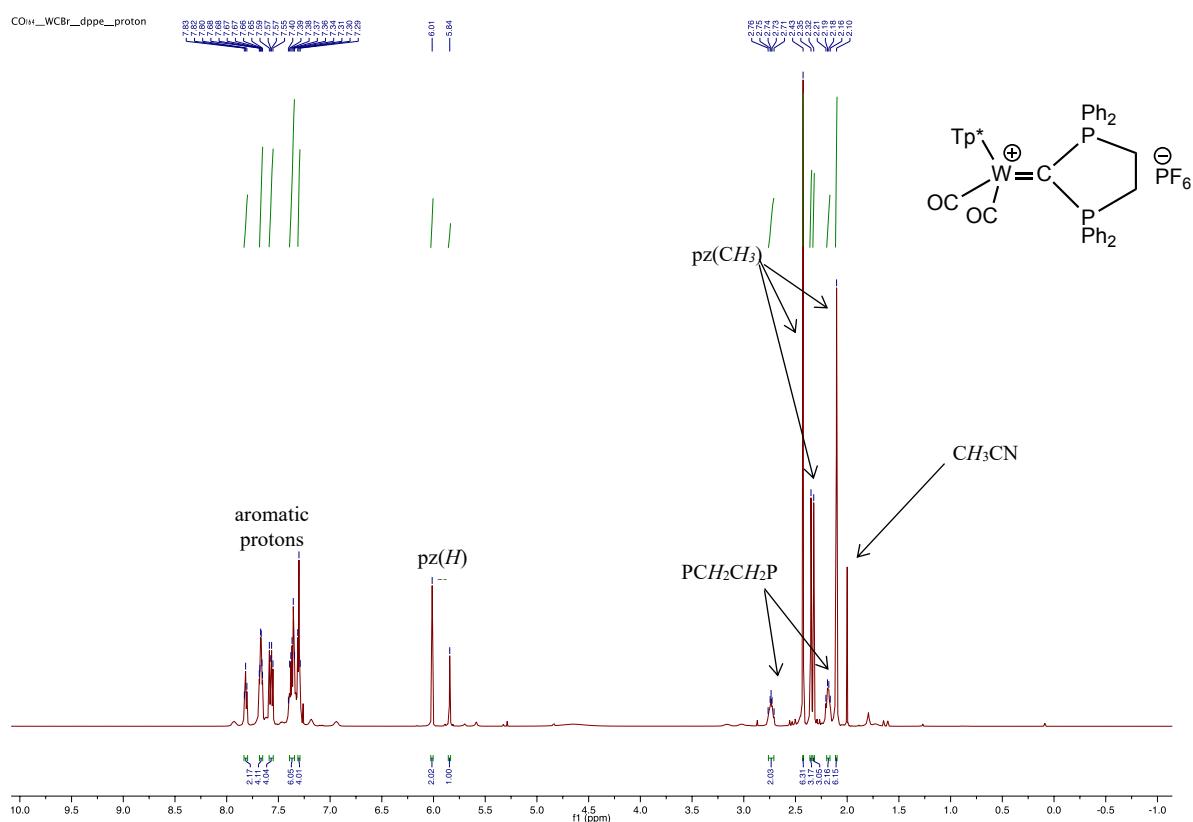
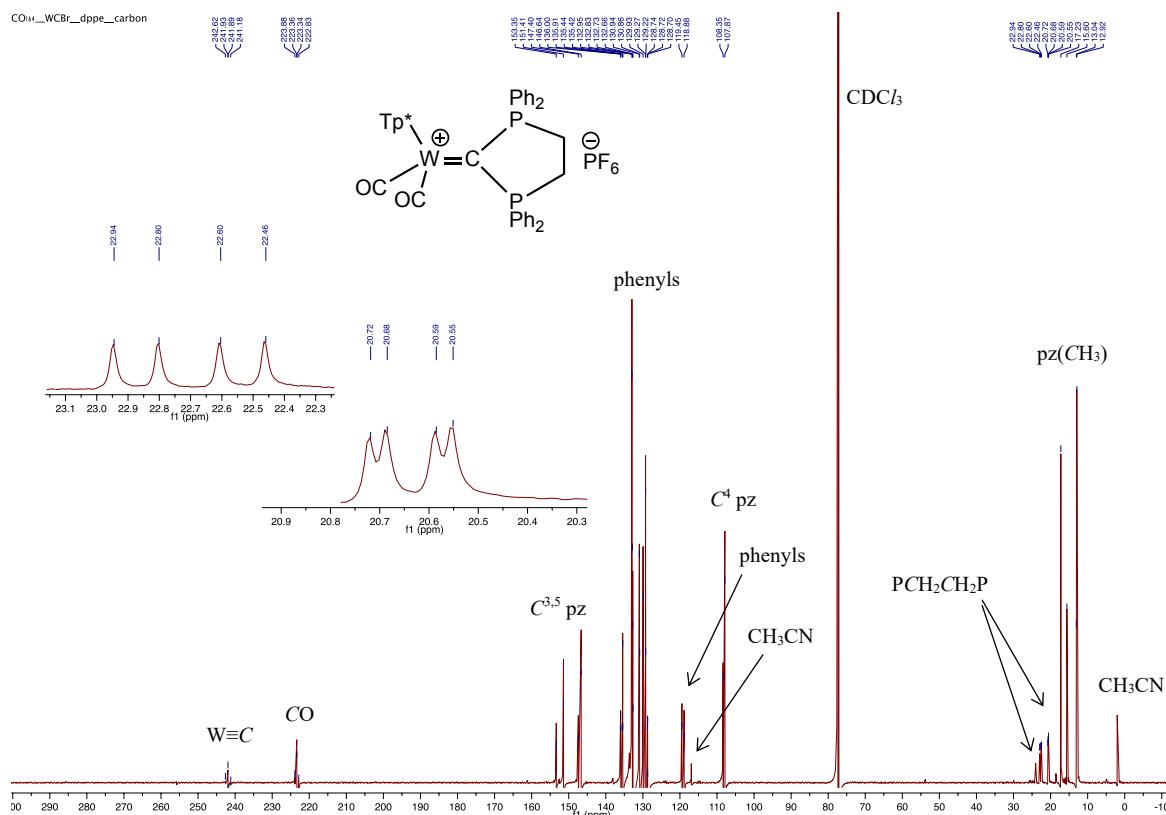


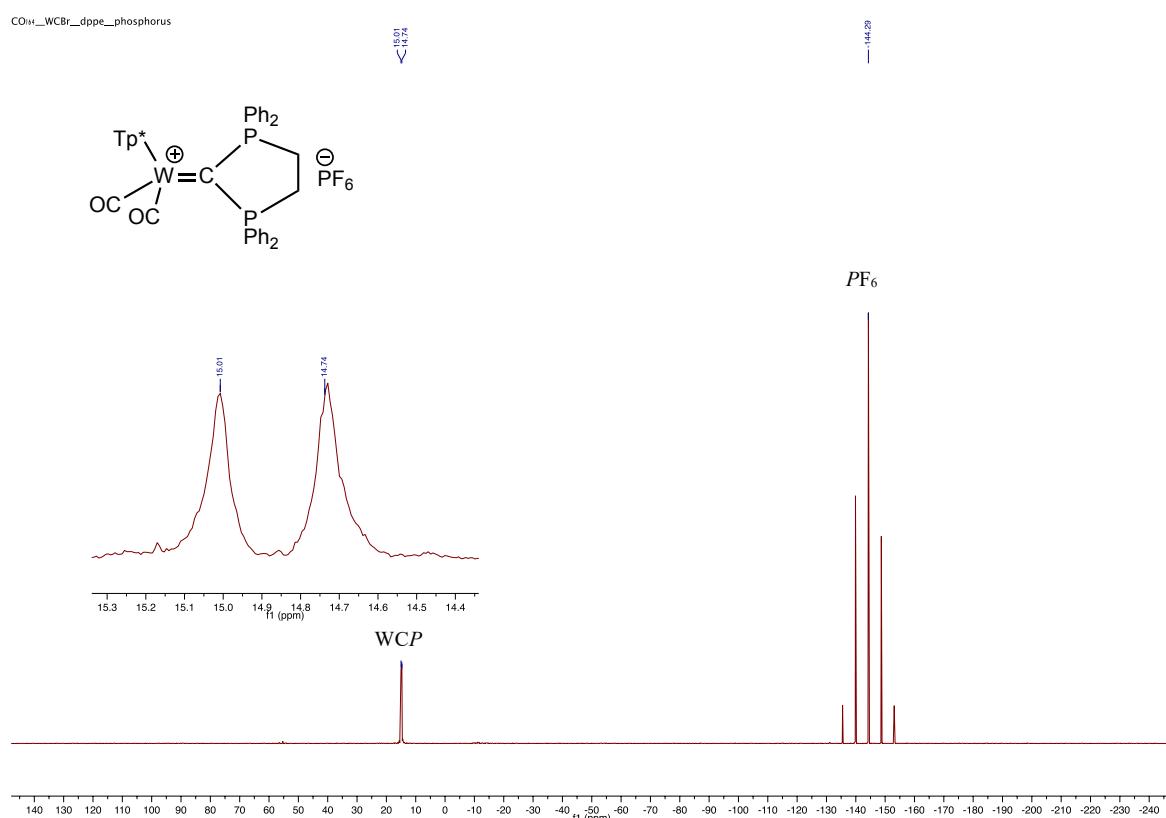
¹³C{¹H} NMR (176 MHz, CDCl₃, 25°C, δ) spectrum of compound 5.28.

³¹P{¹H} NMR (162 MHz, CDCl₃, 25°C, δ) of compound 5.28.⁷⁷Se{¹H} NMR (76 MHz, CDCl₃, 25°C, δ) of compound 5.28.

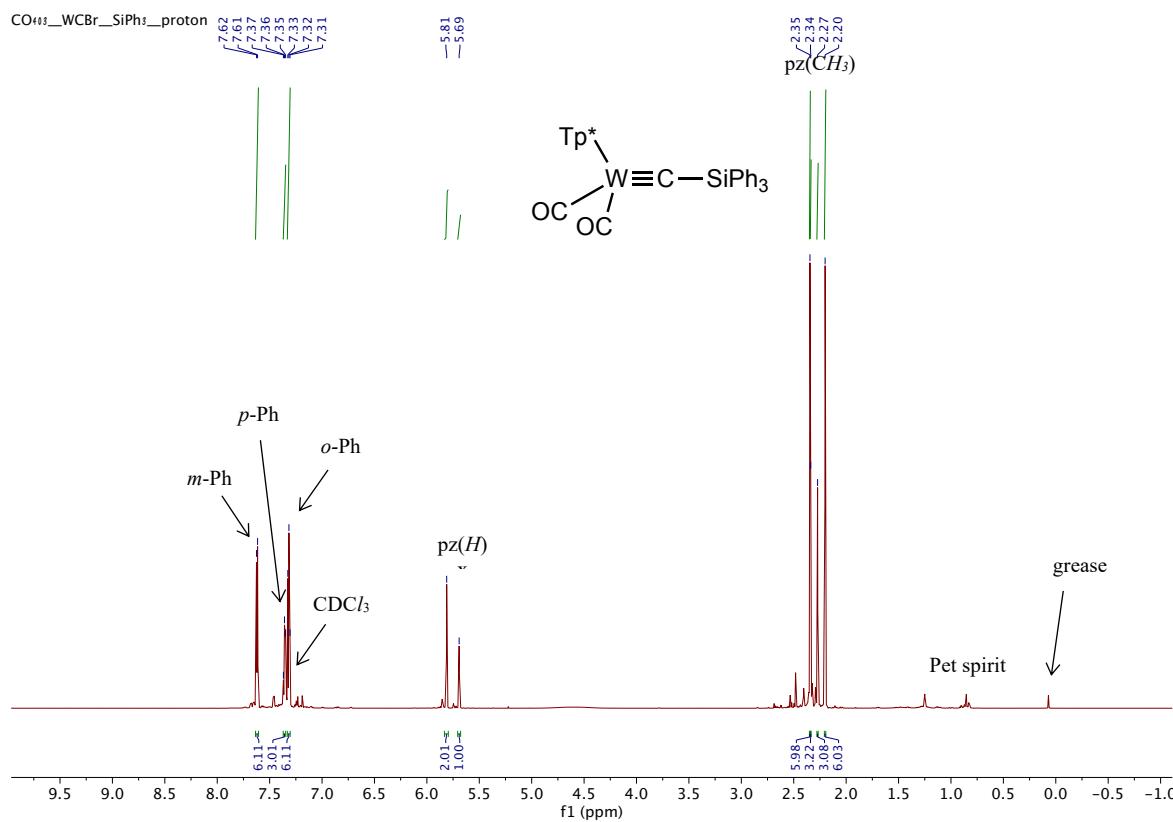
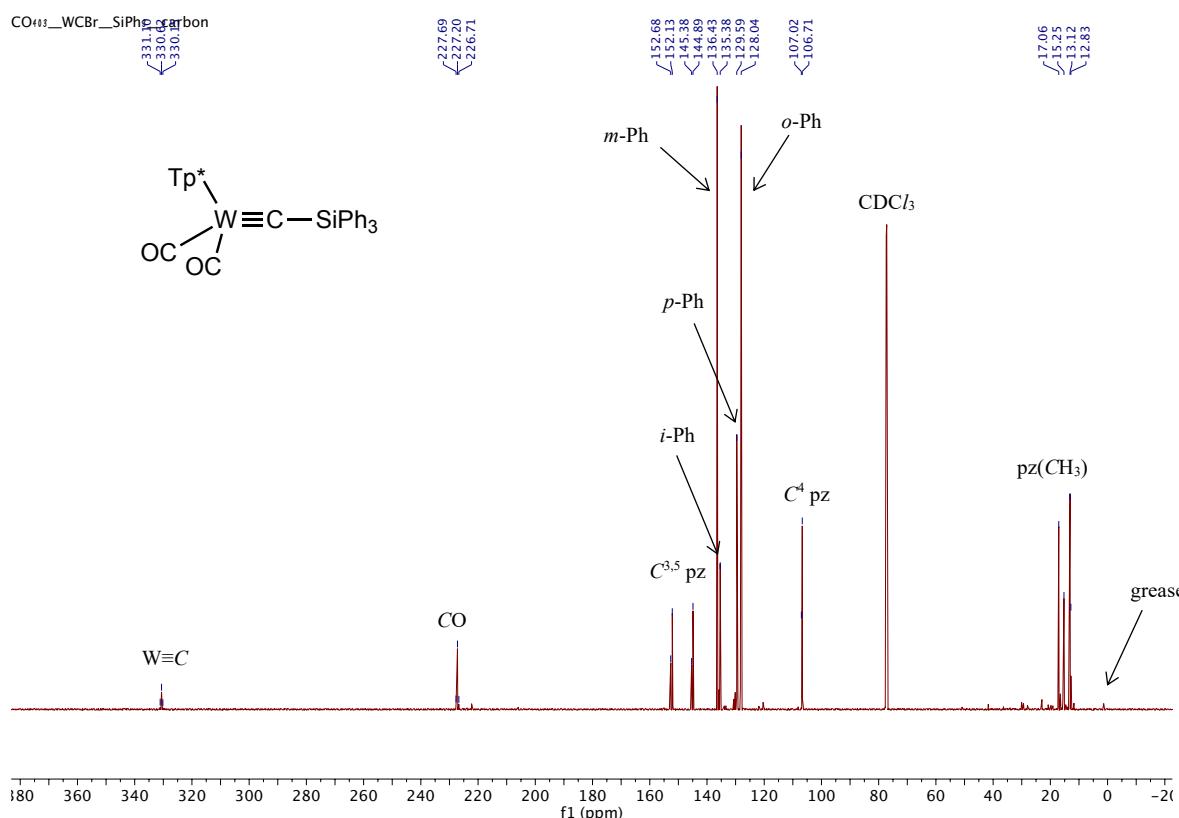
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 5.29.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 5.29.

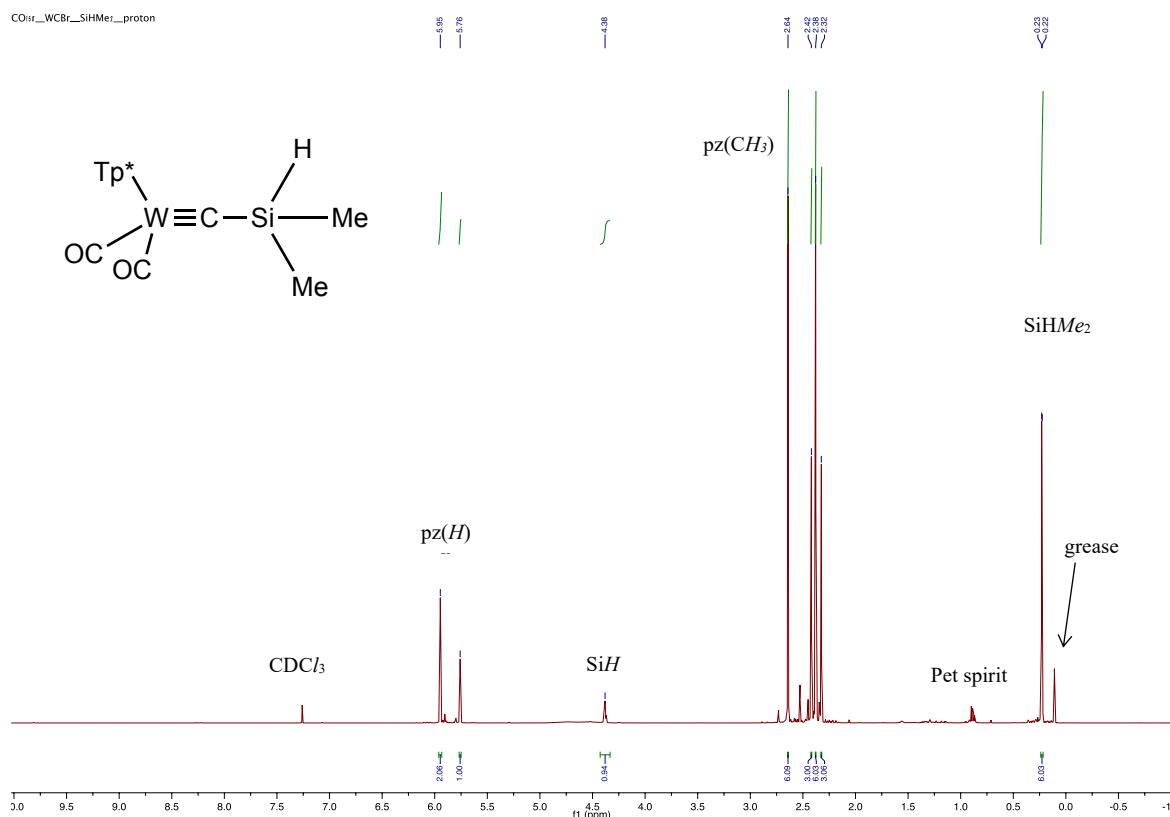


 ^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound 5.30. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 5.30.

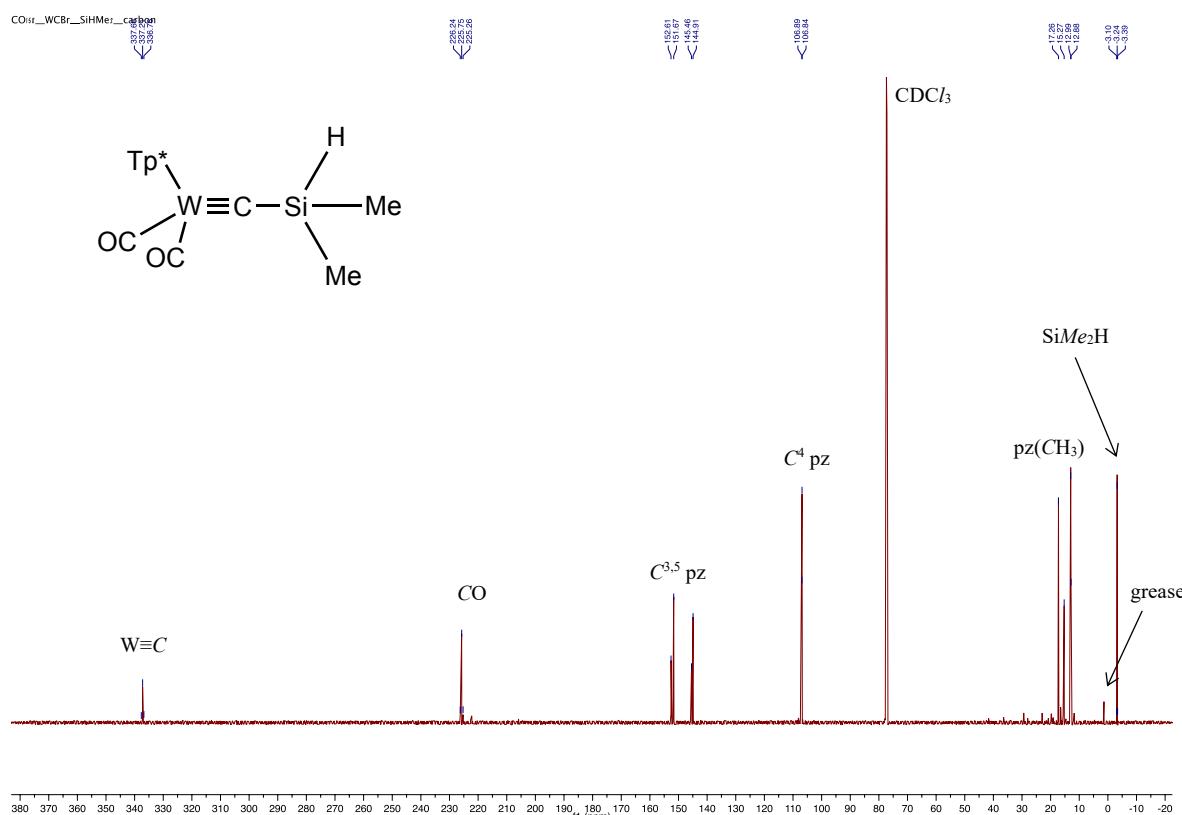


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 ^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 6.2. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 6.2.



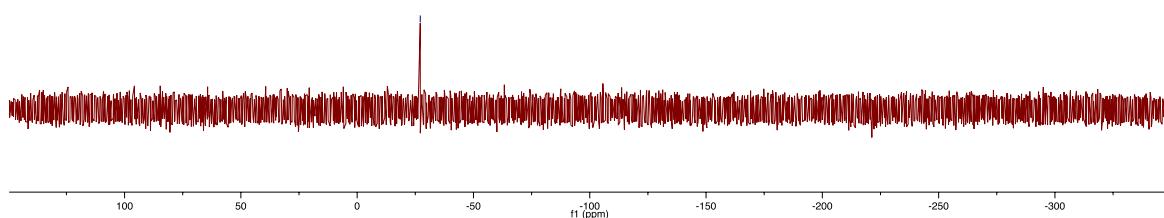
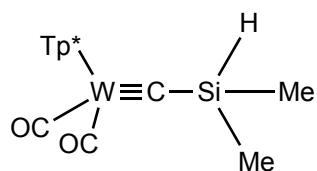
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 6.3.



$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 6.3.

CO_{1f}_WCBr_SiHMe₂_silicon

—27.13



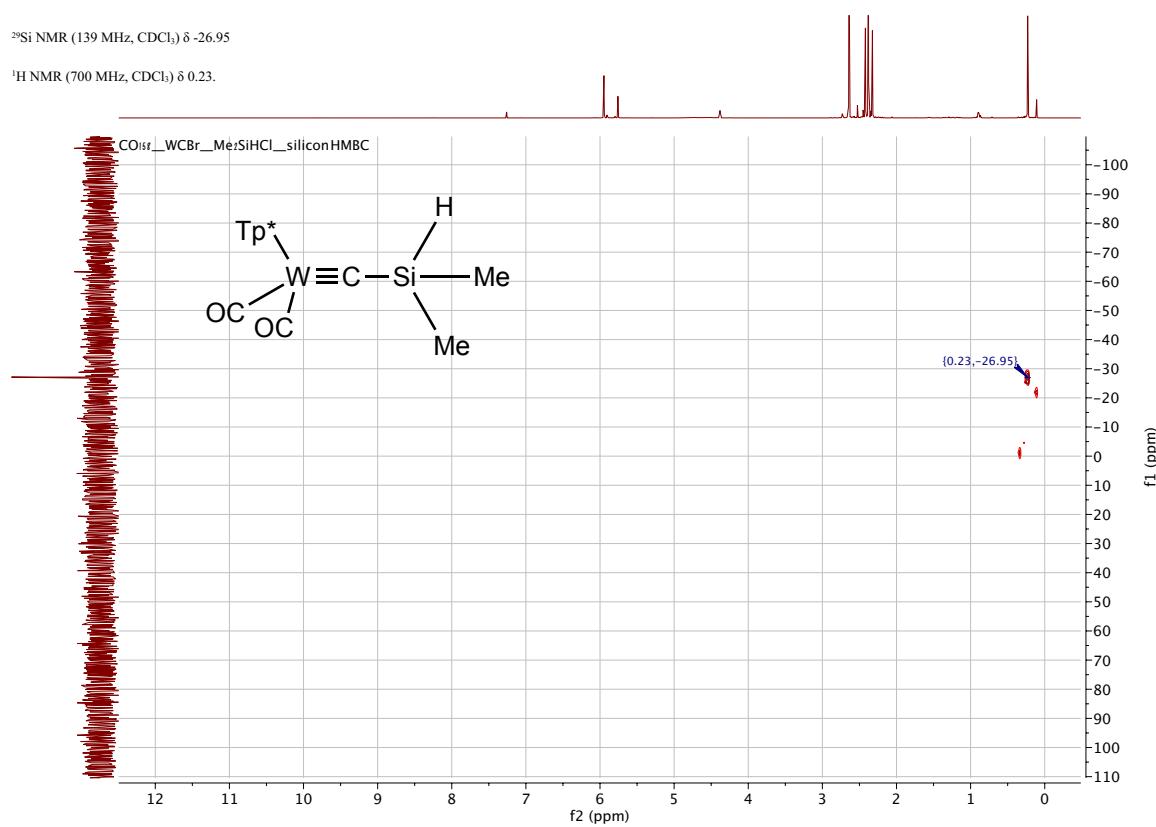
²⁹Si{¹H} NMR spectrum (79 MHz, CDCl₃, 25°C, δ) of compound **6.3**.

²⁹Si NMR (139 MHz, CDCl₃) δ -26.88¹H NMR (700 MHz, CDCl₃) δ 4.38.

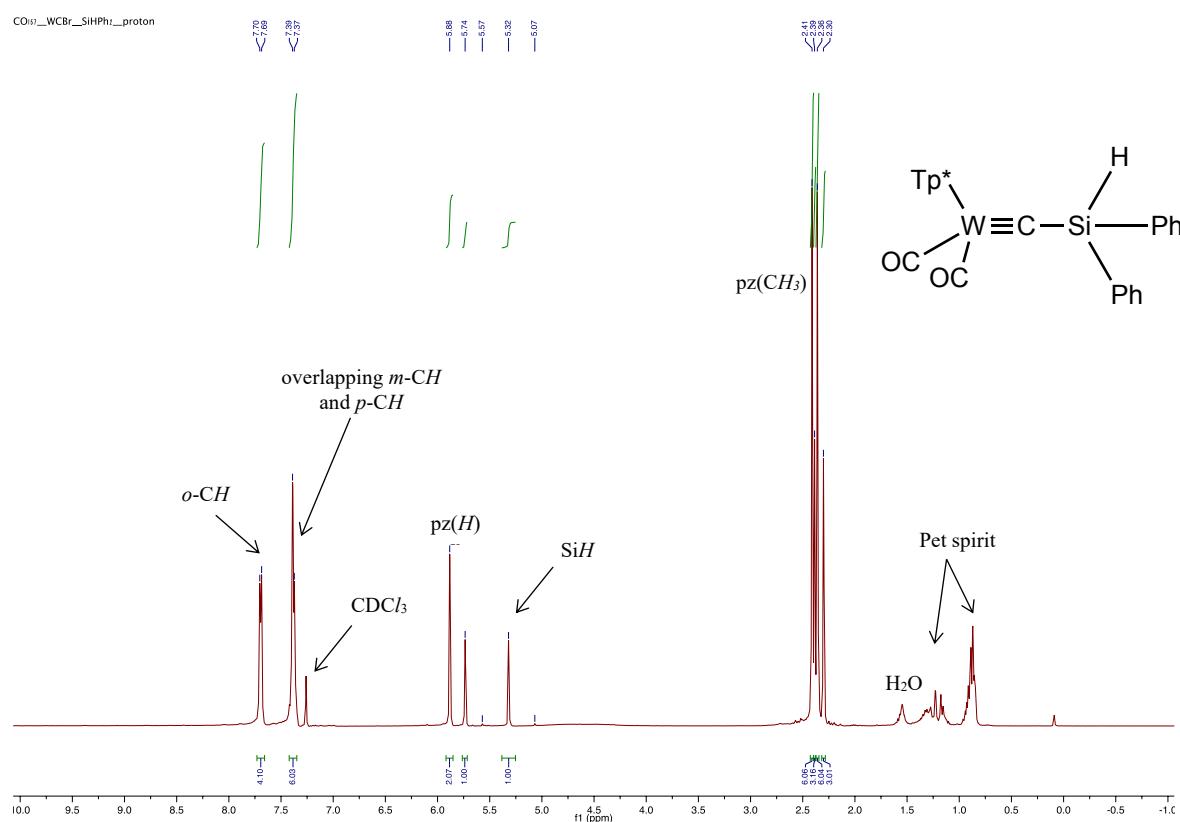
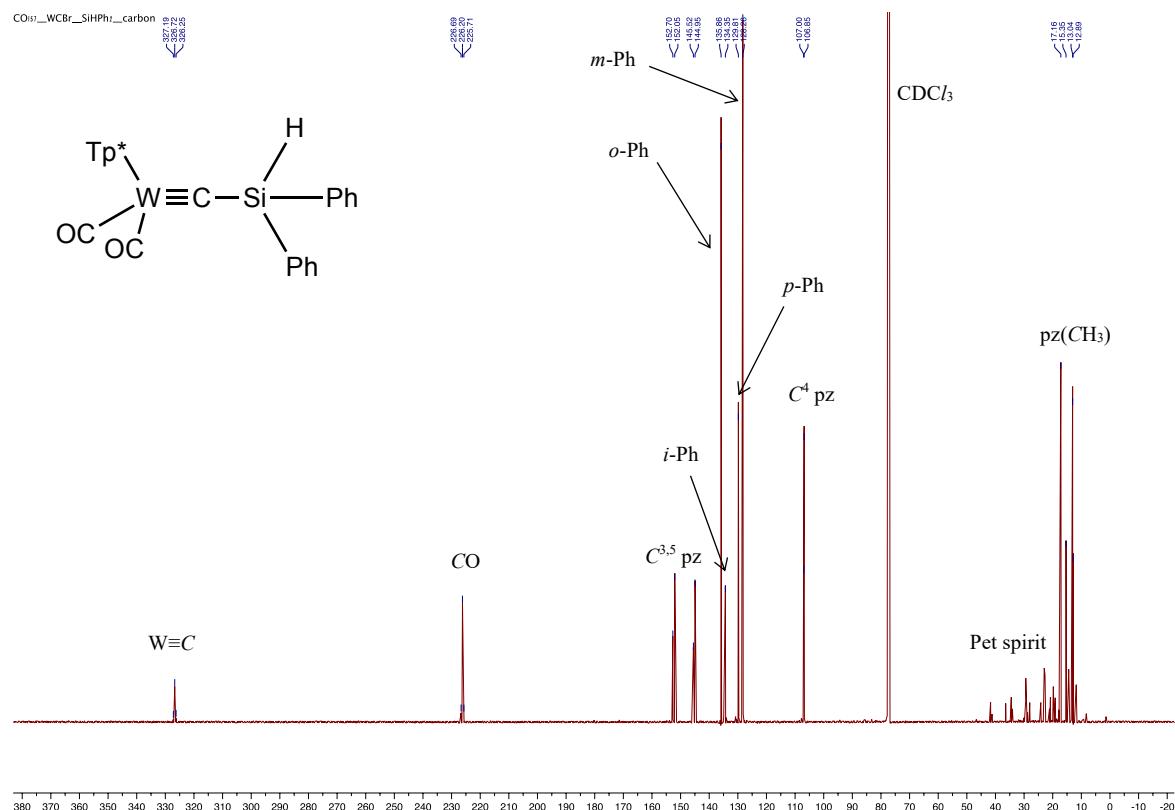
²⁹Si-¹H HSQC NMR spectrum of compound **6.3**.

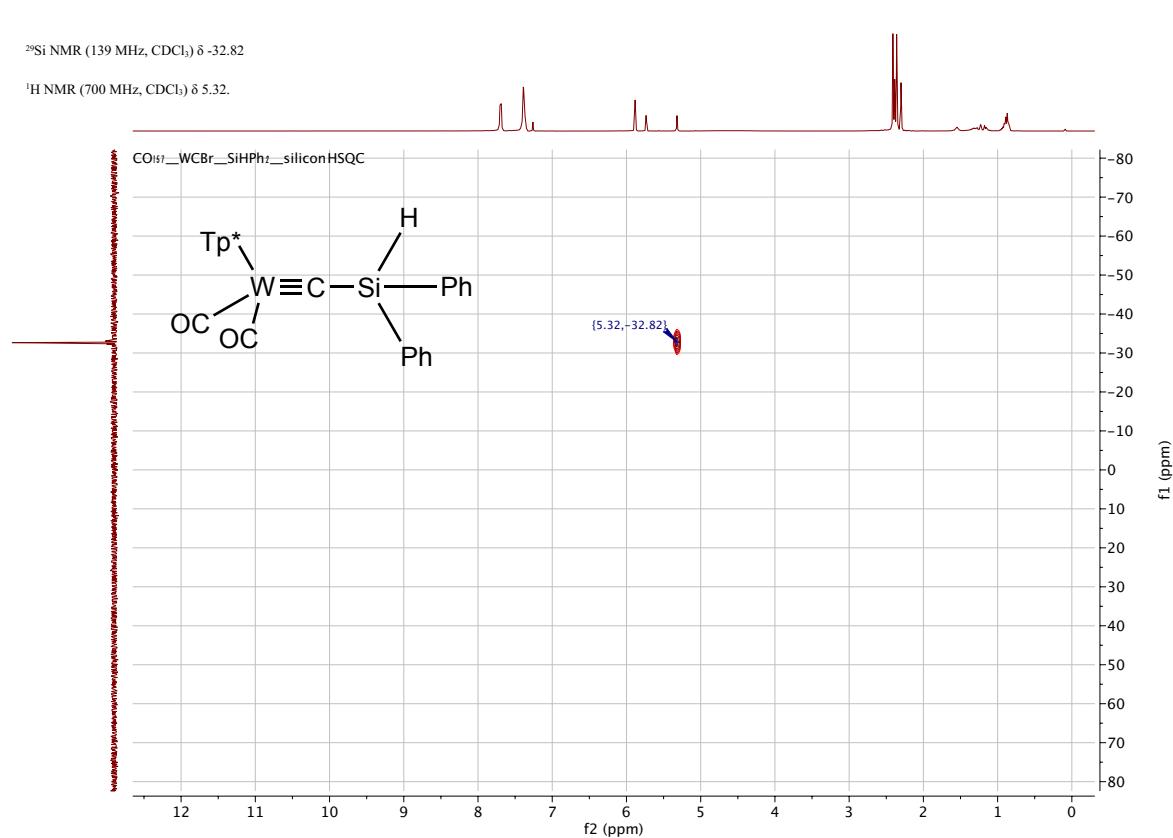
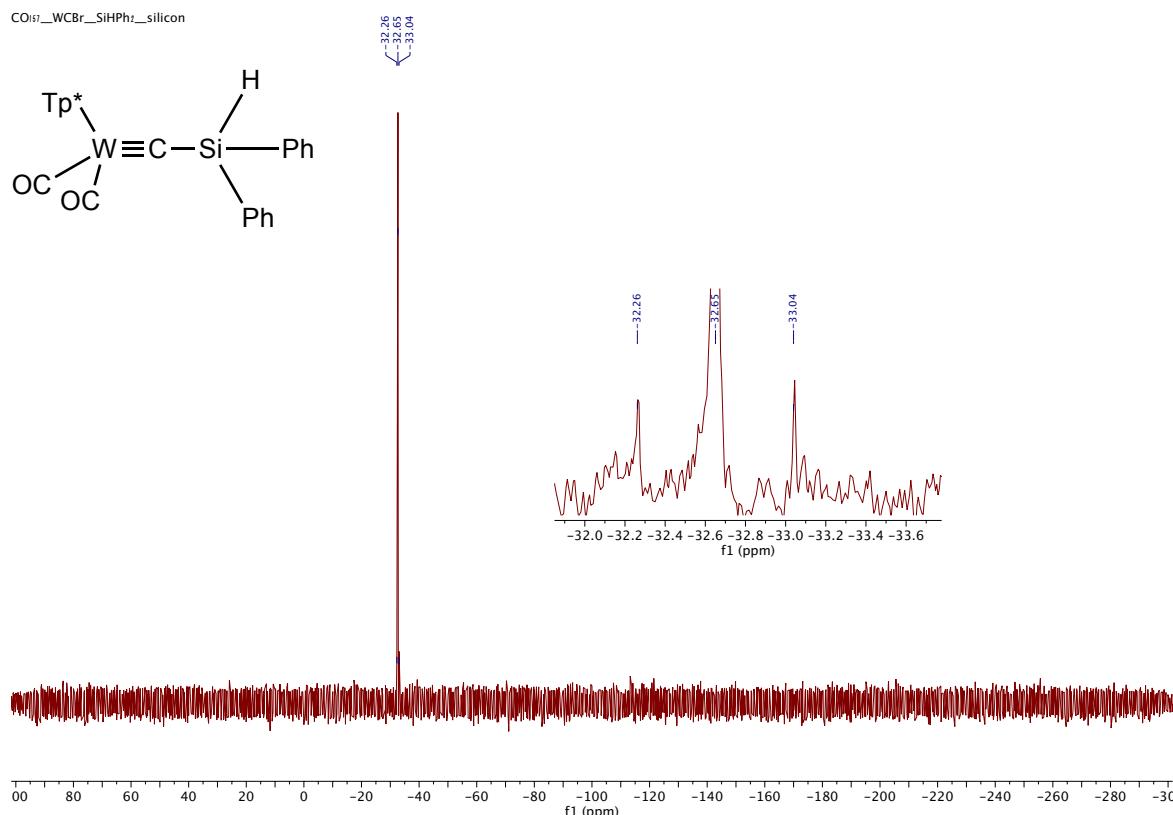
^{29}Si NMR (139 MHz, CDCl_3) δ -26.95

^1H NMR (700 MHz, CDCl_3) δ 0.23.



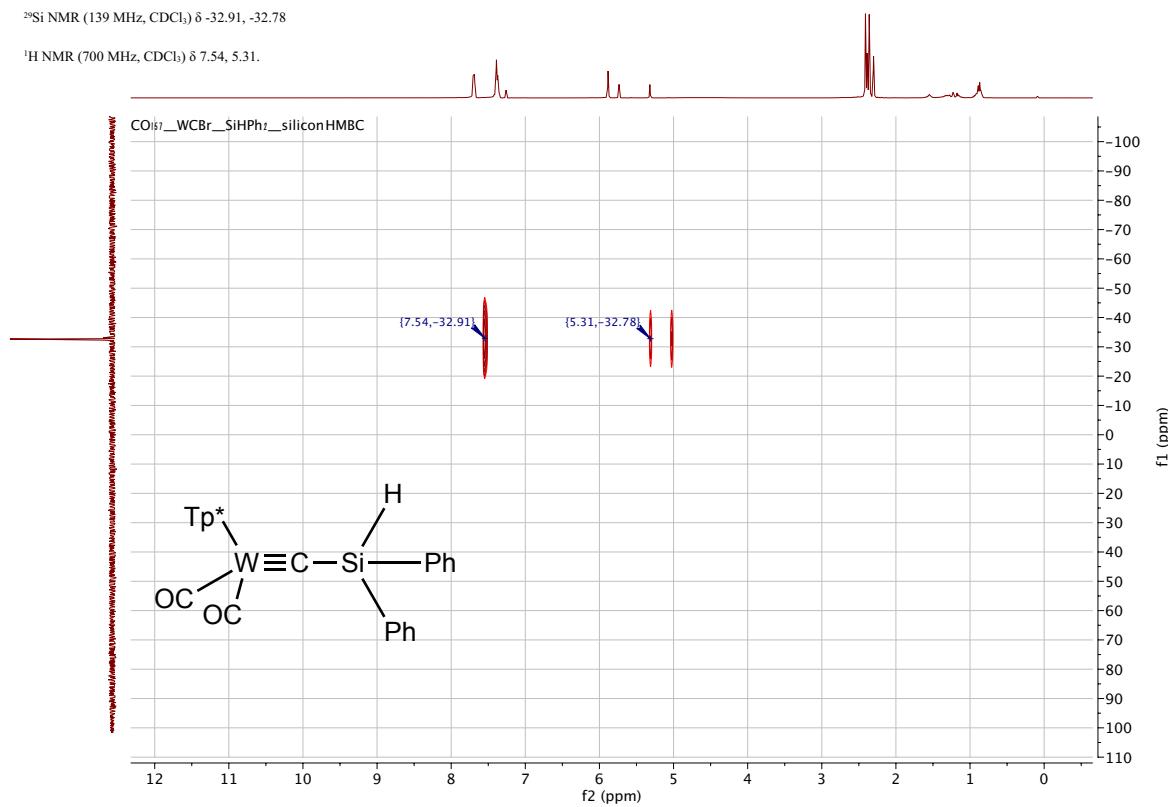
^{29}Si - ^1H HMBC NMR spectrum of compound **6.3**.

¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound 6.4.¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 6.4.

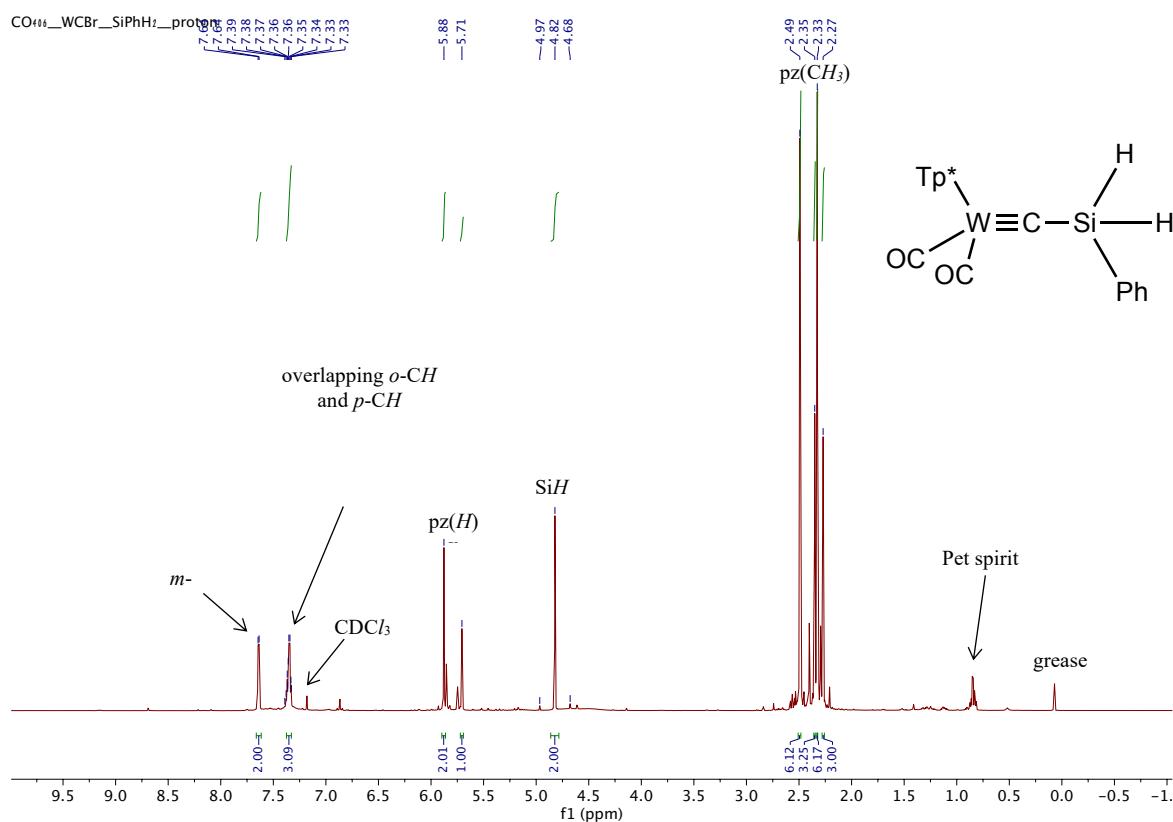
²⁹Si—¹H HSQC NMR spectrum of compound **6.4**.

^{29}Si NMR (139 MHz, CDCl_3) δ -32.91, -32.78

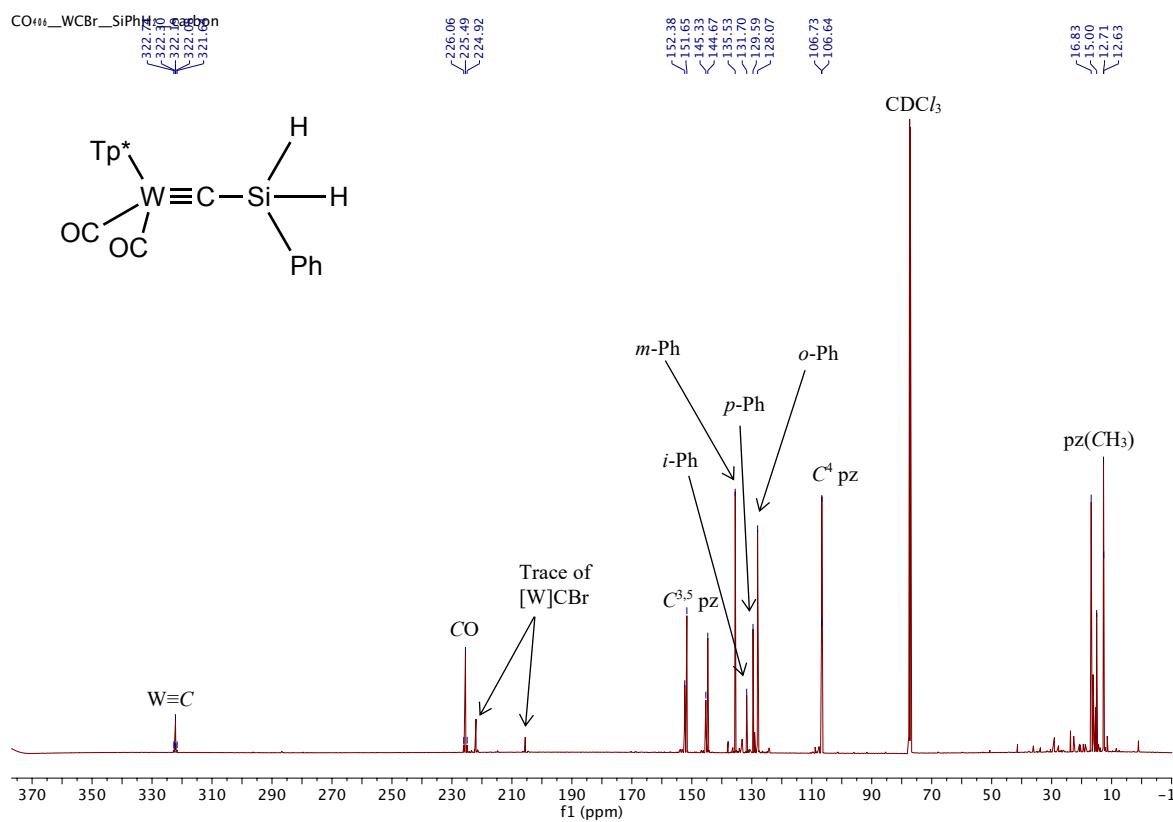
^1H NMR (700 MHz, CDCl_3) δ 7.54, 5.31.



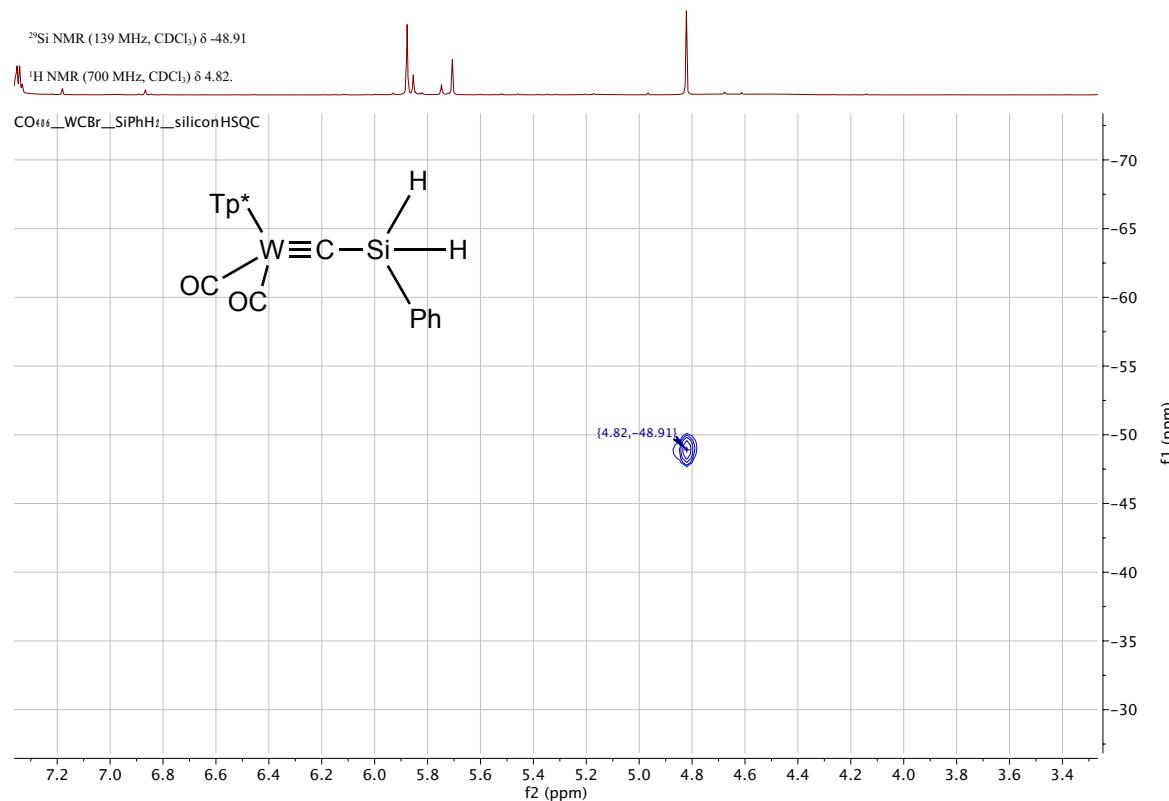
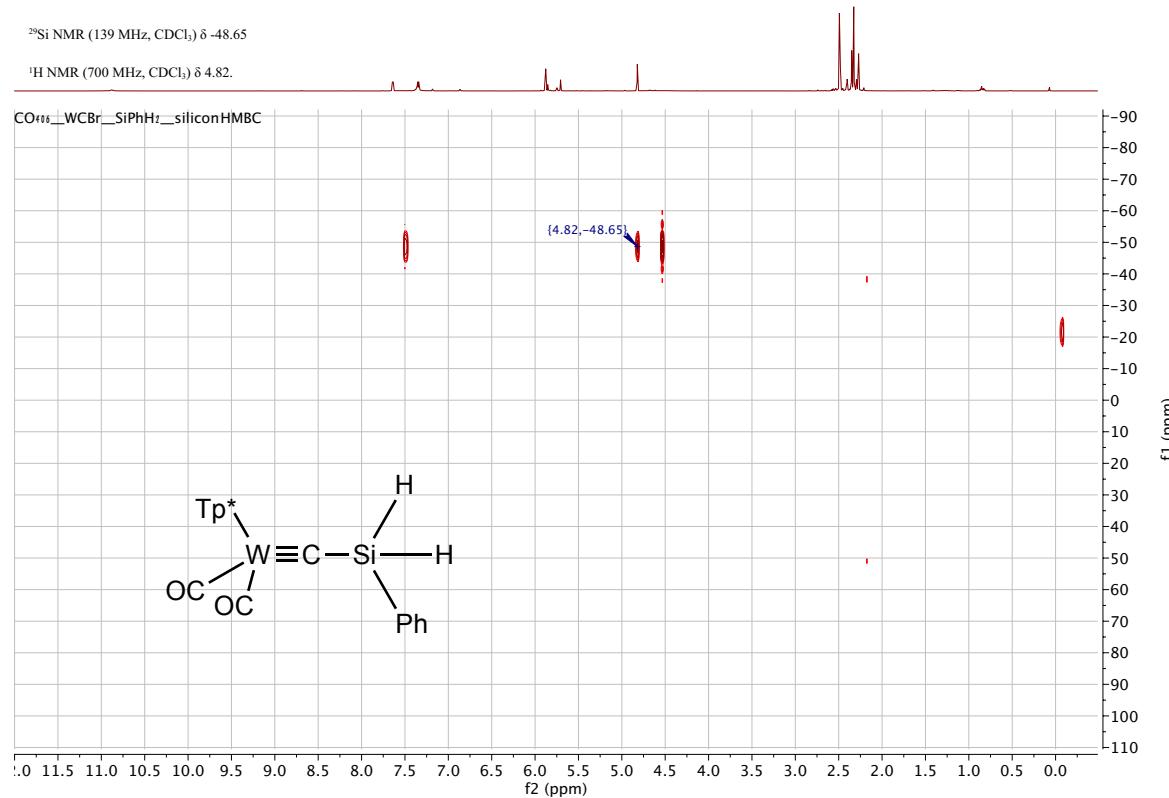
$^{29}\text{Si}-^1\text{H}$ HMBC NMR spectrum of compound 6.4.

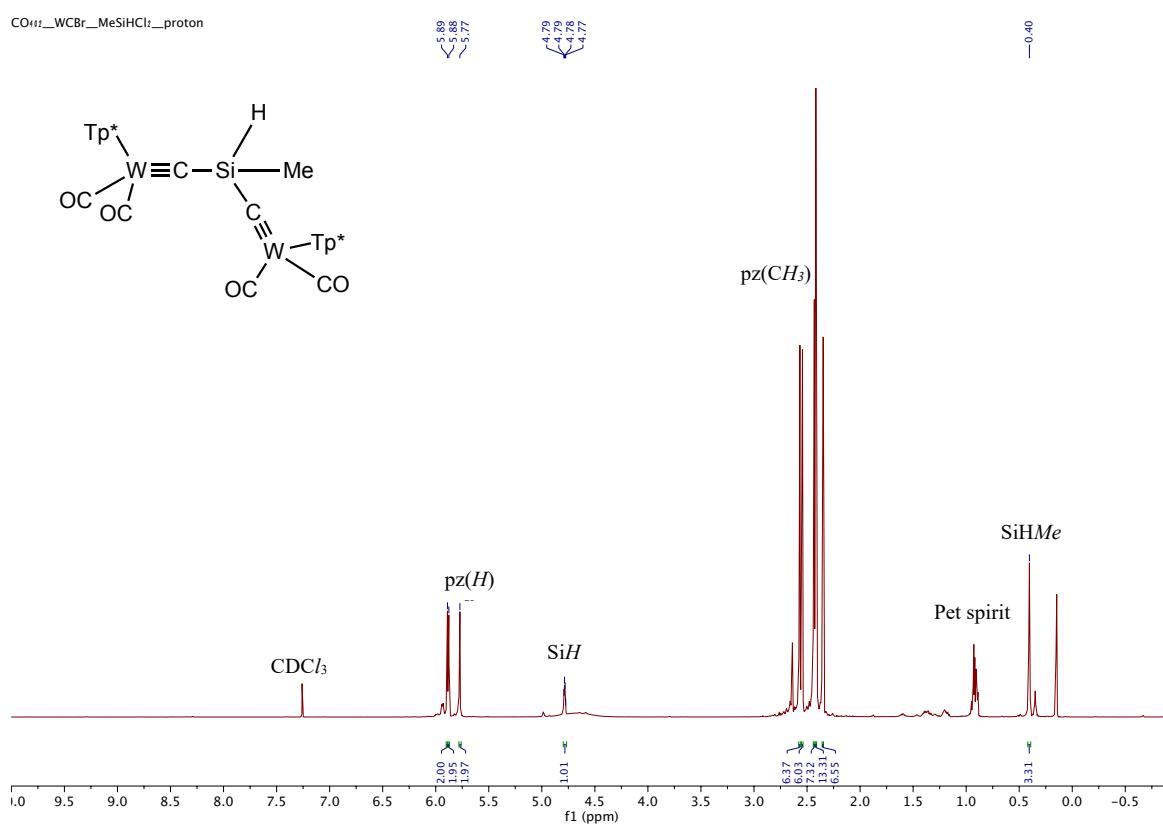
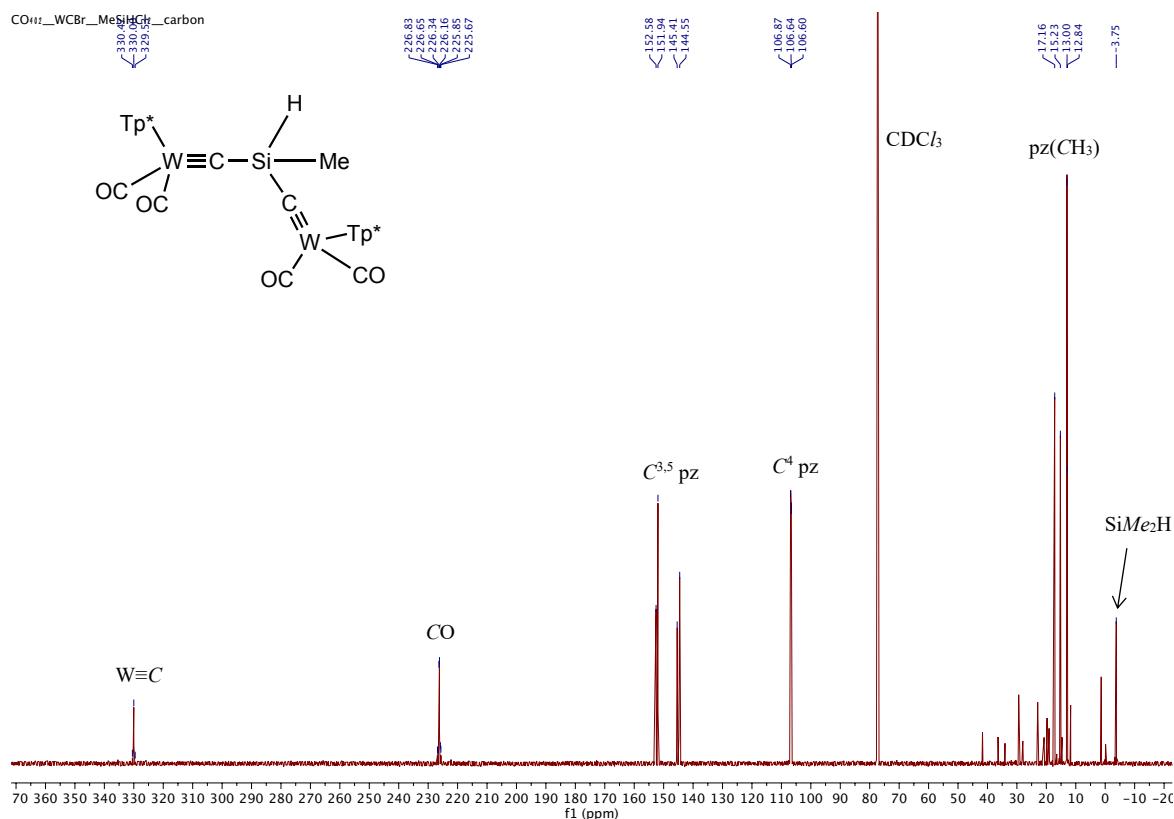


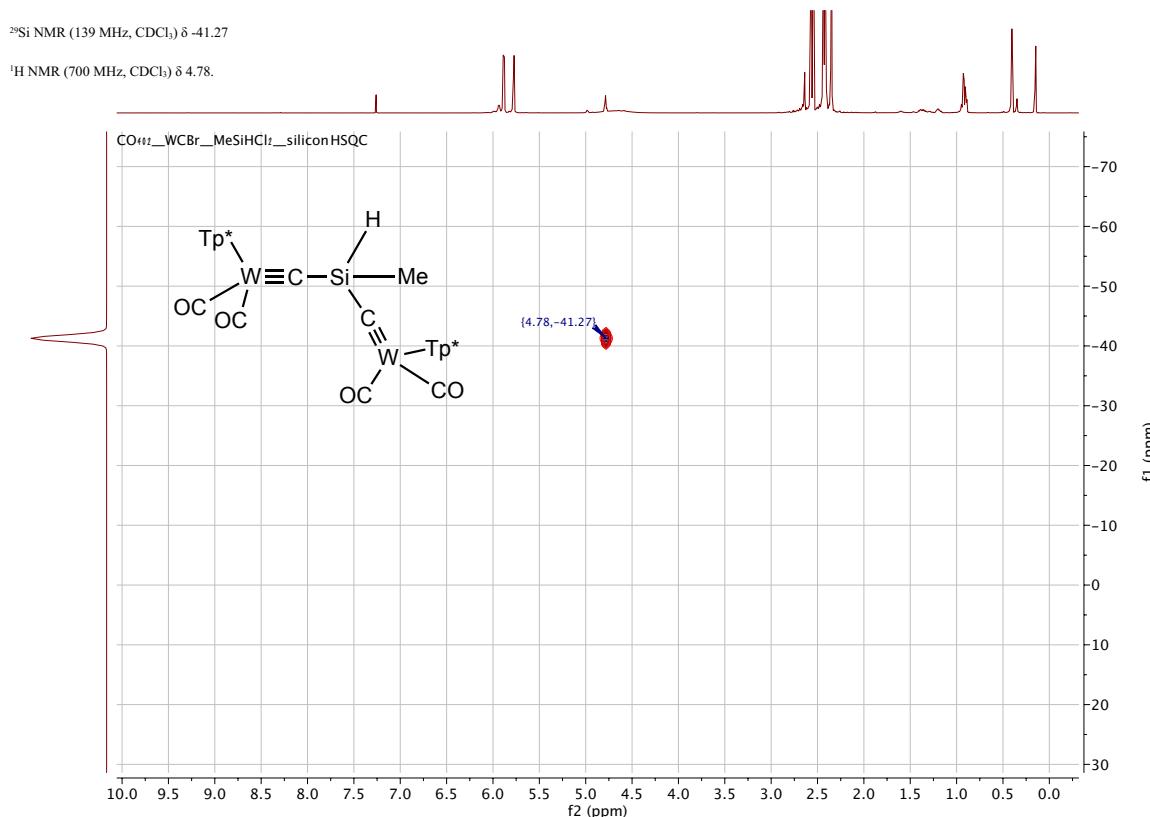
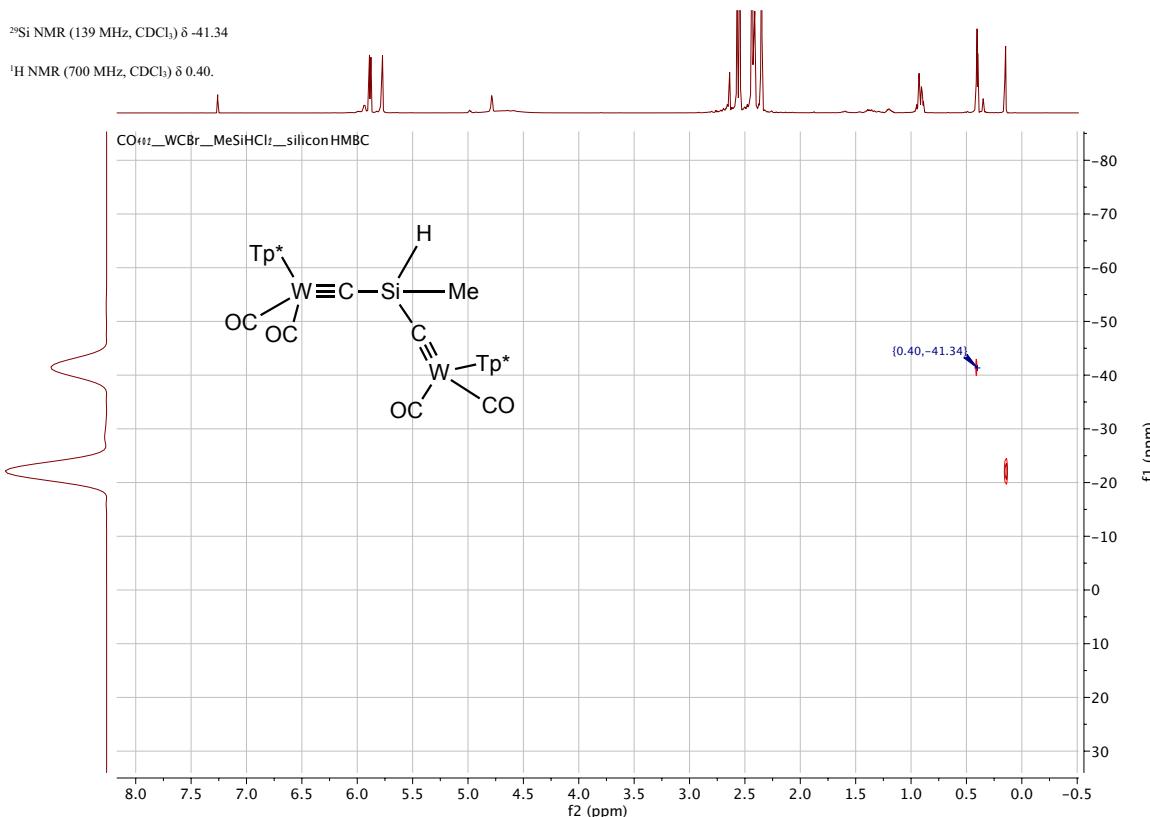
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound 6.5.

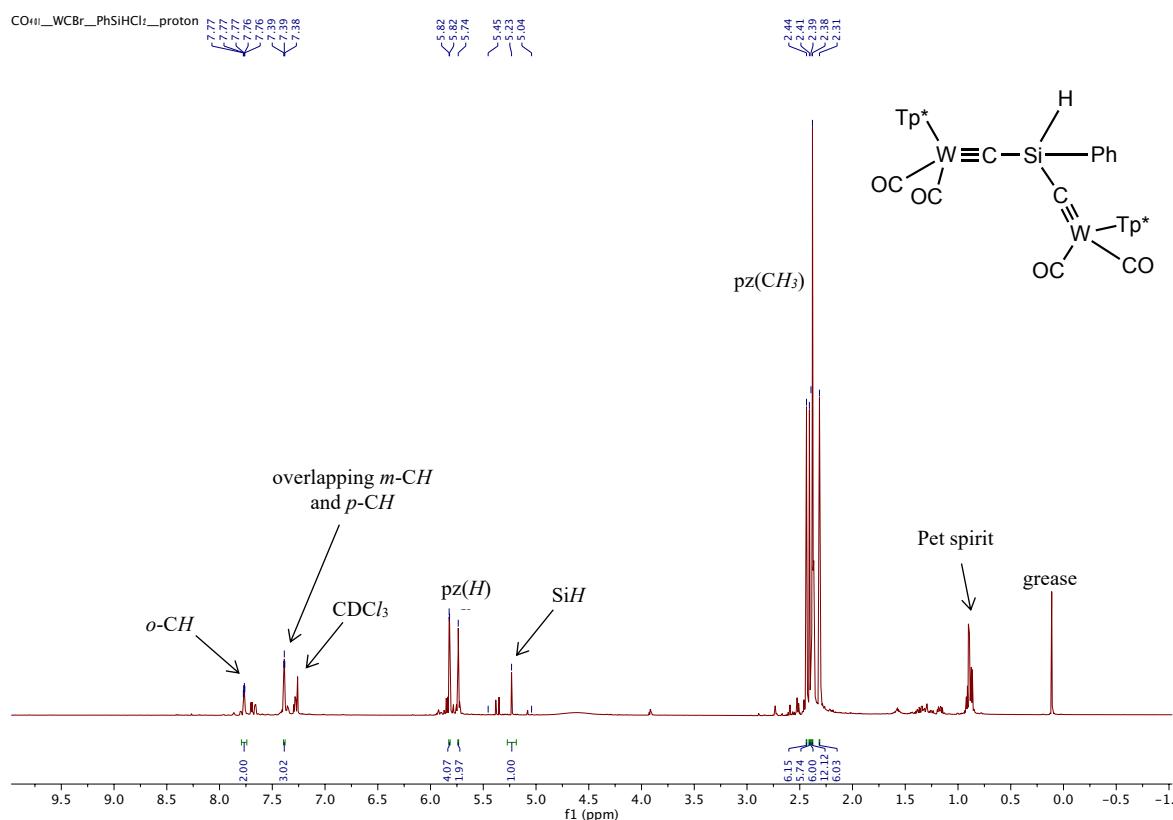


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 6.5.

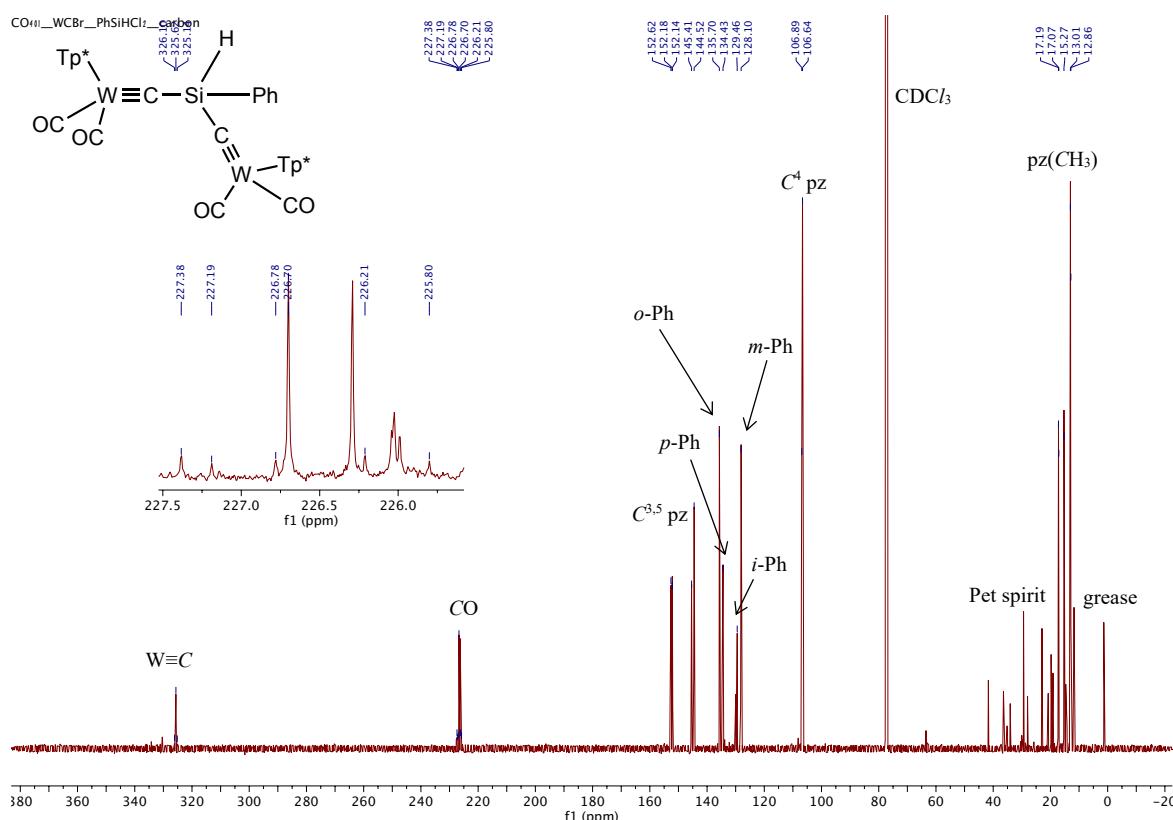
²⁹Si—¹H HSQC NMR spectrum of compound 6.5.²⁹Si—¹H HMBC NMR spectrum of compound 6.5.

¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 6.6.¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 6.6.

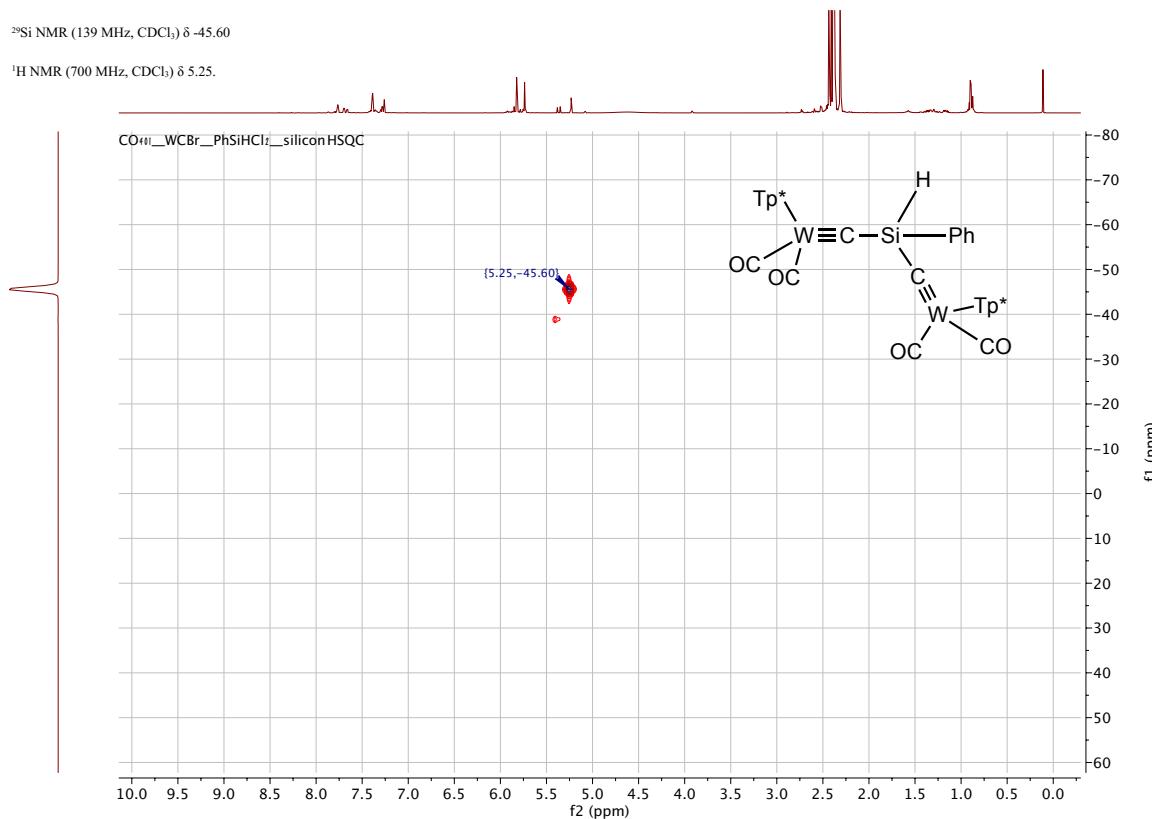
²⁹Si-¹H HSQC NMR spectrum of compound 6.6.²⁹Si-¹H HMBC NMR spectrum of compound 6.6.

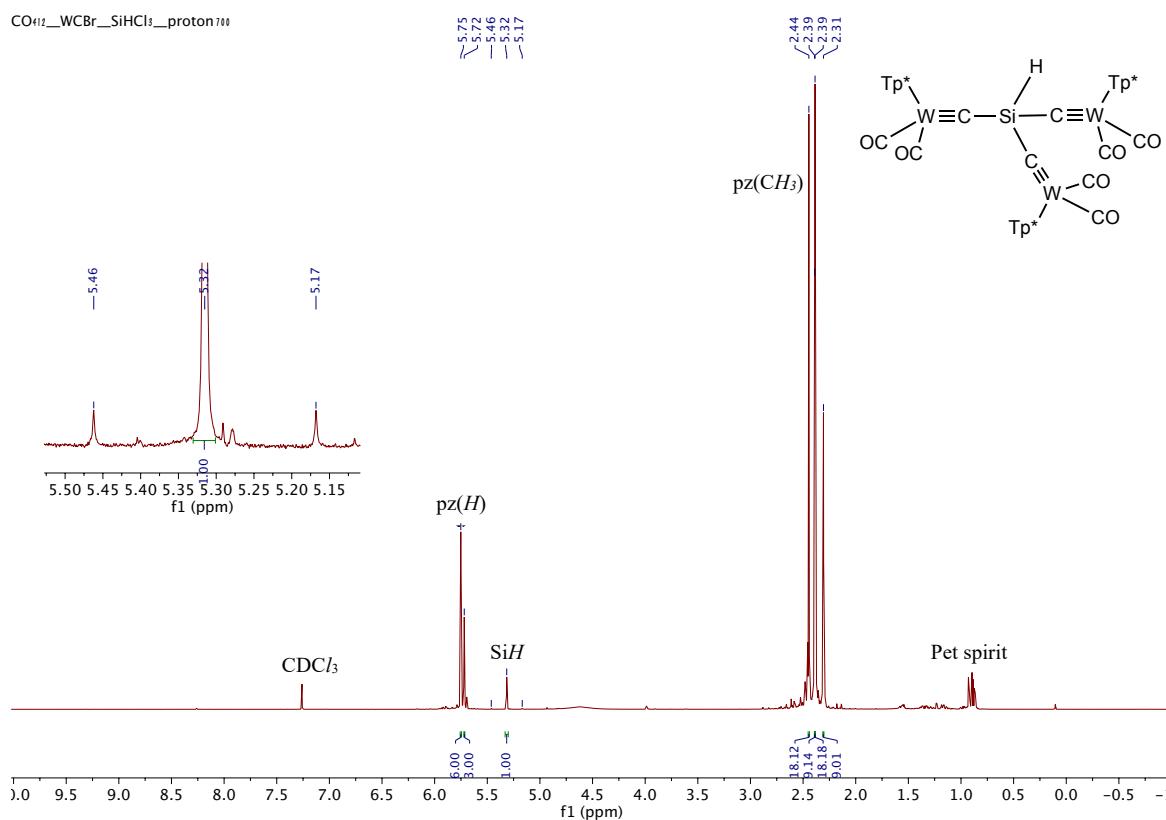


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 6.7.

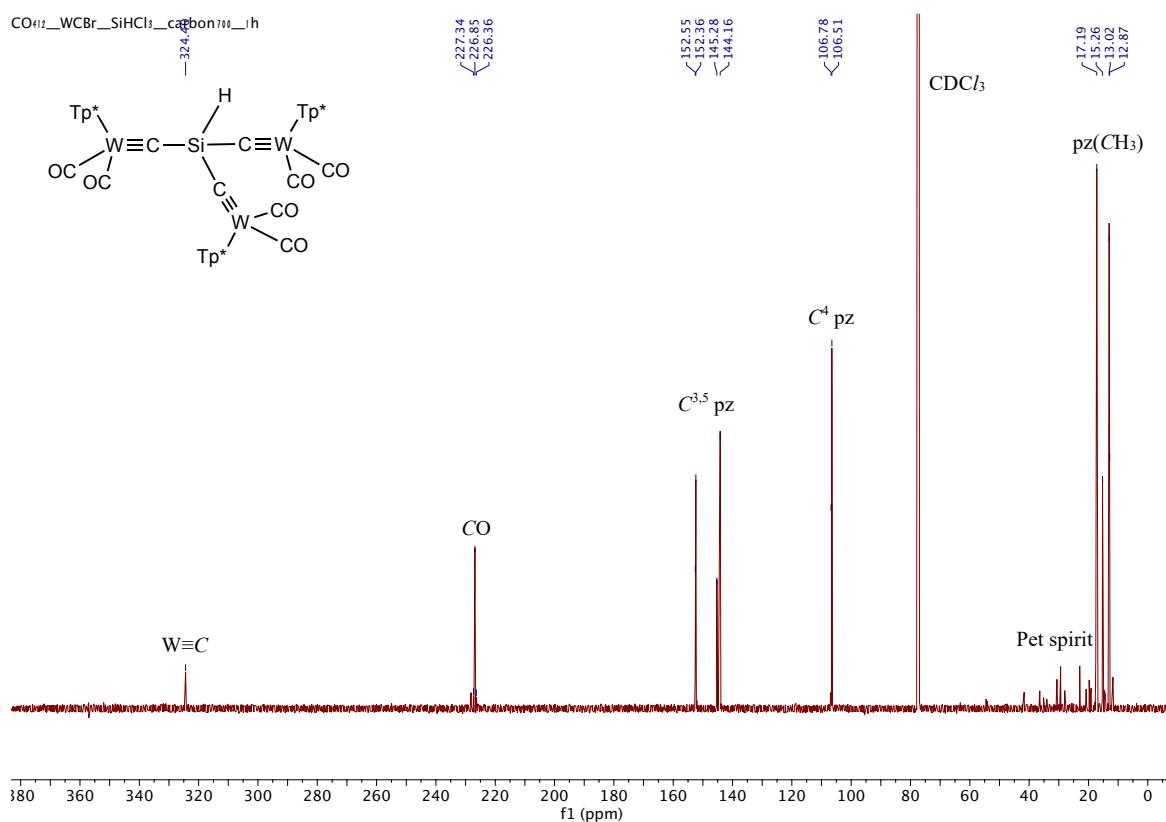


¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 6.7.

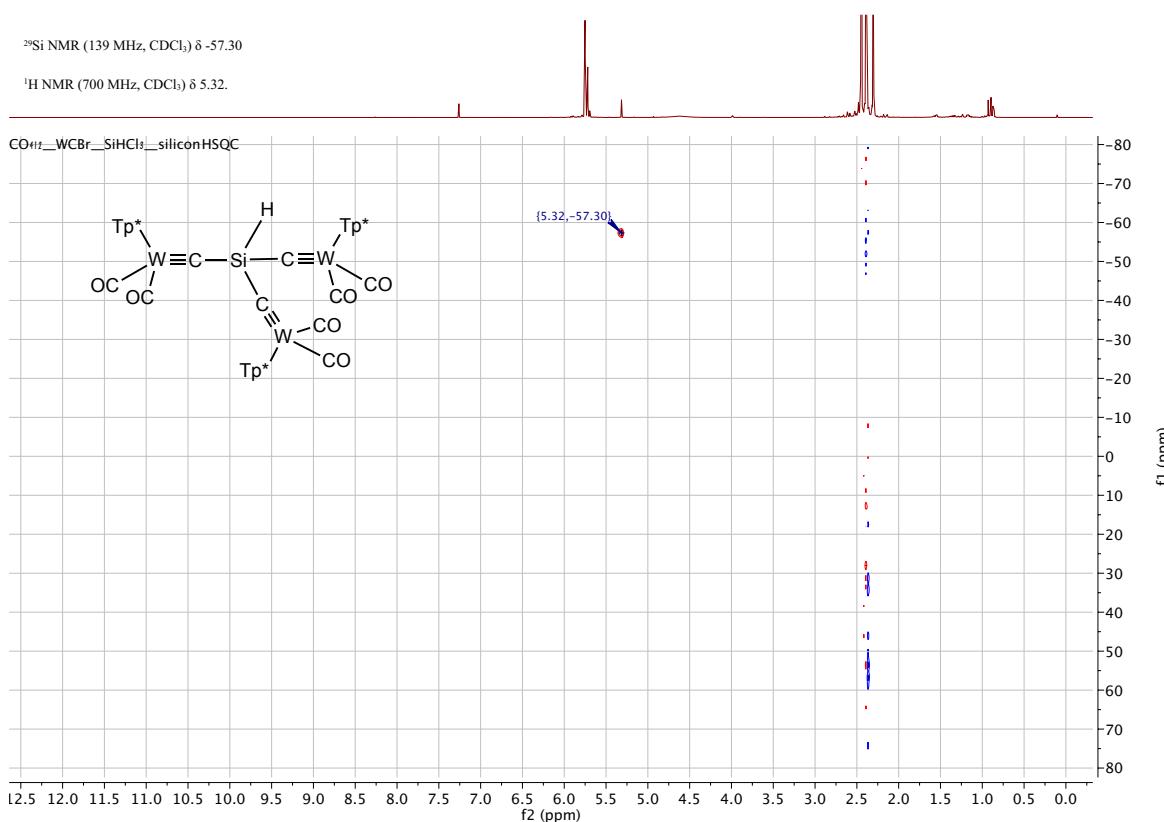
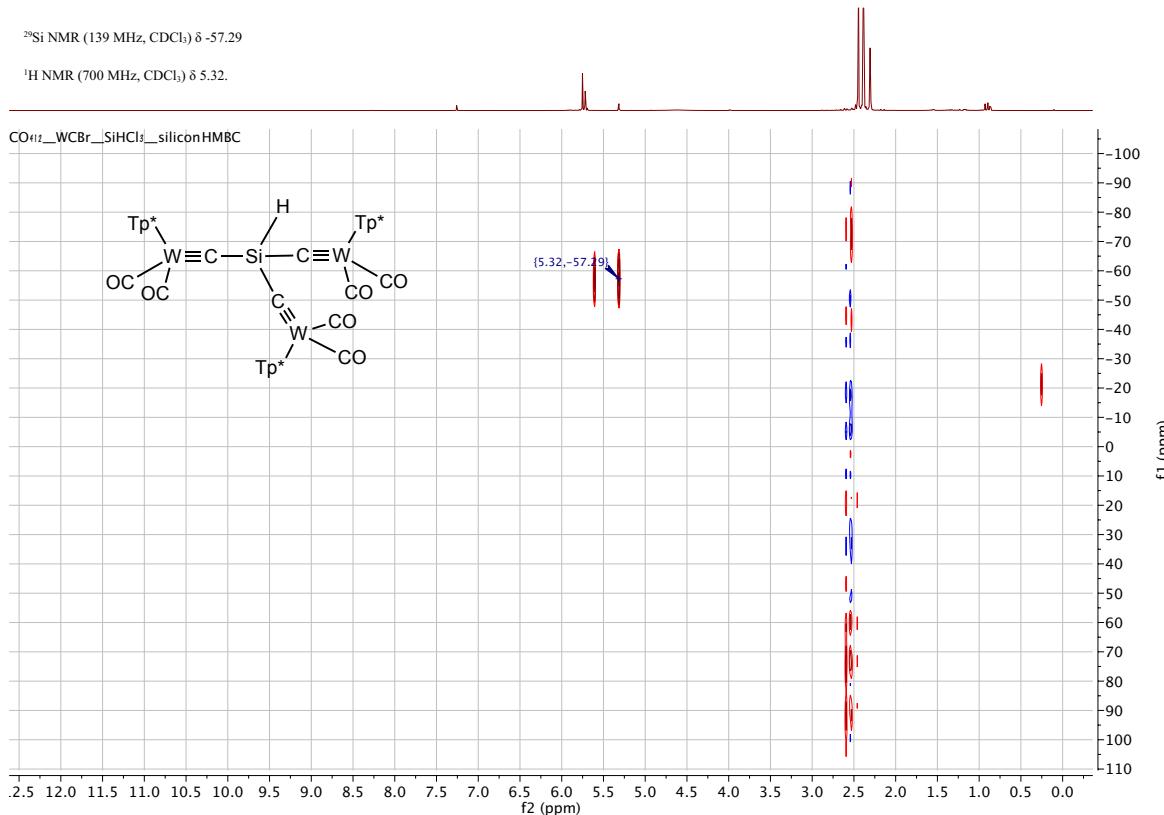
²⁹Si-¹H HSQC NMR spectrum of compound 6.7.²⁹Si-¹H HMBC NMR spectrum of compound 6.7.

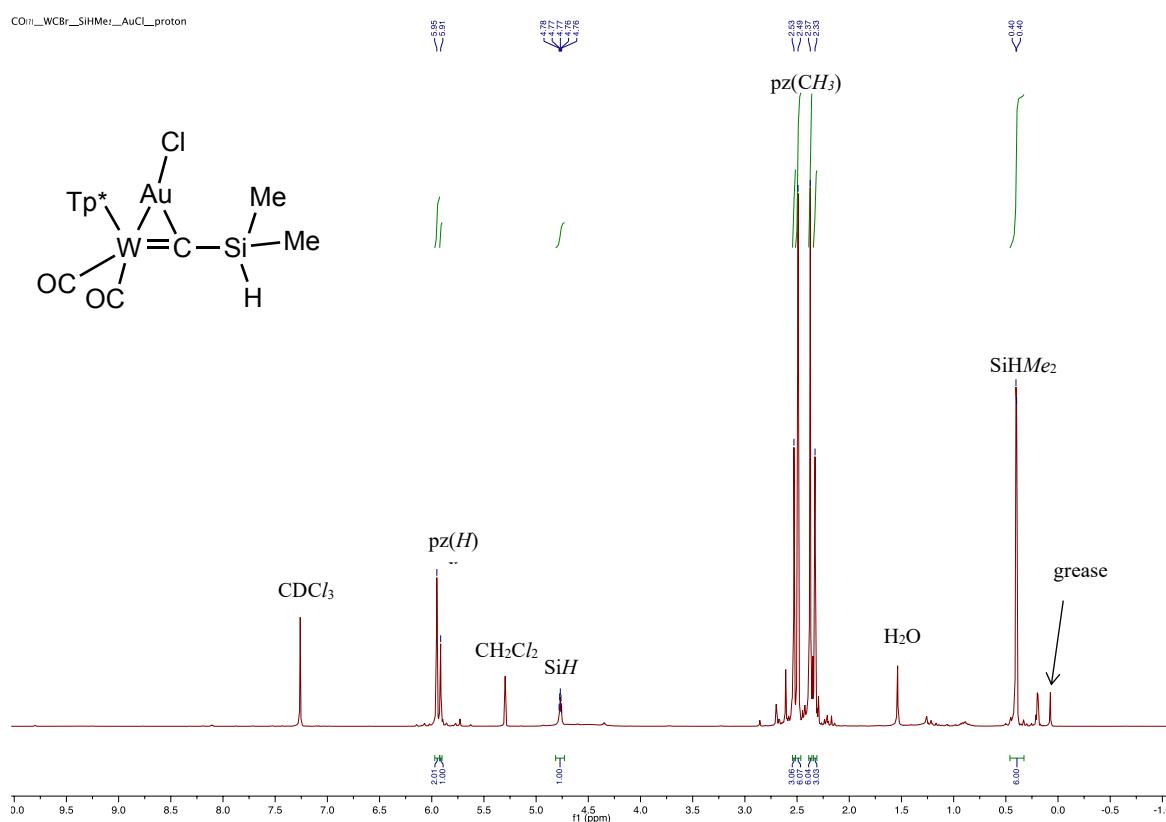


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 6.8.

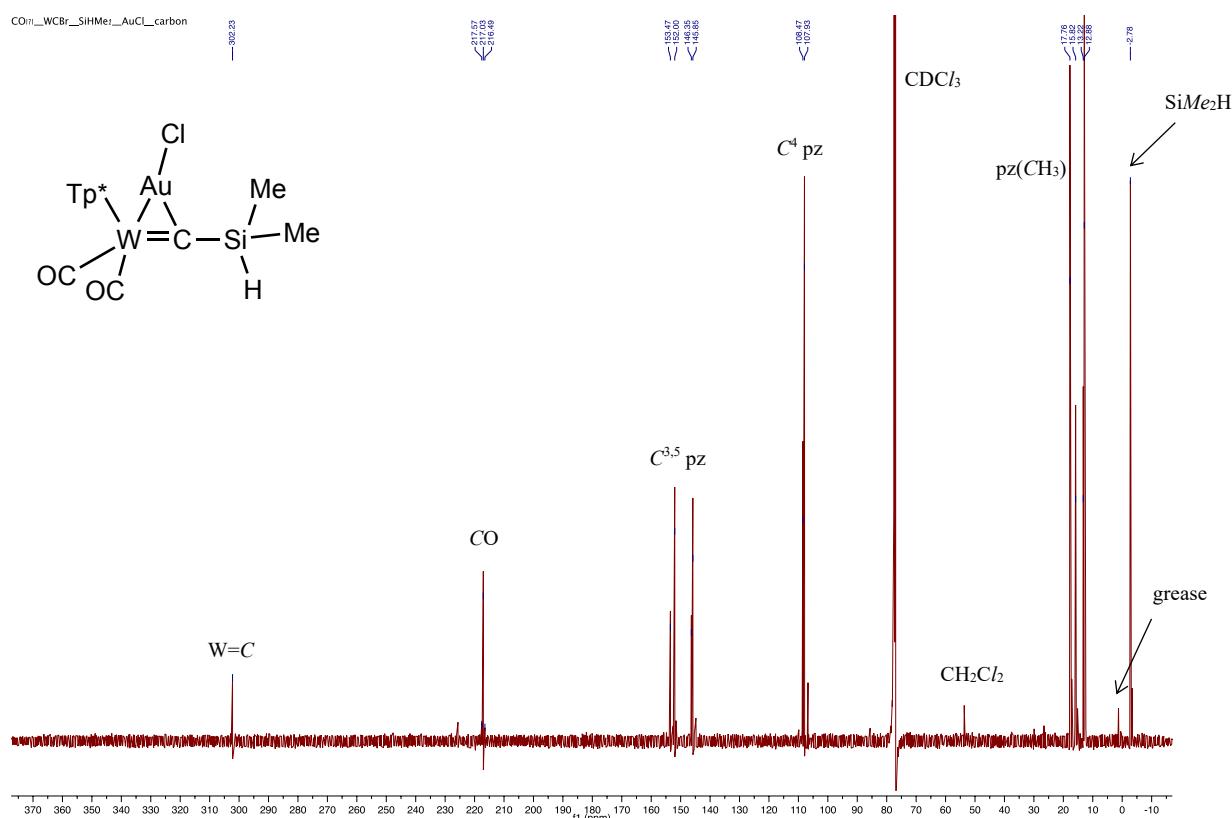


¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 6.8.

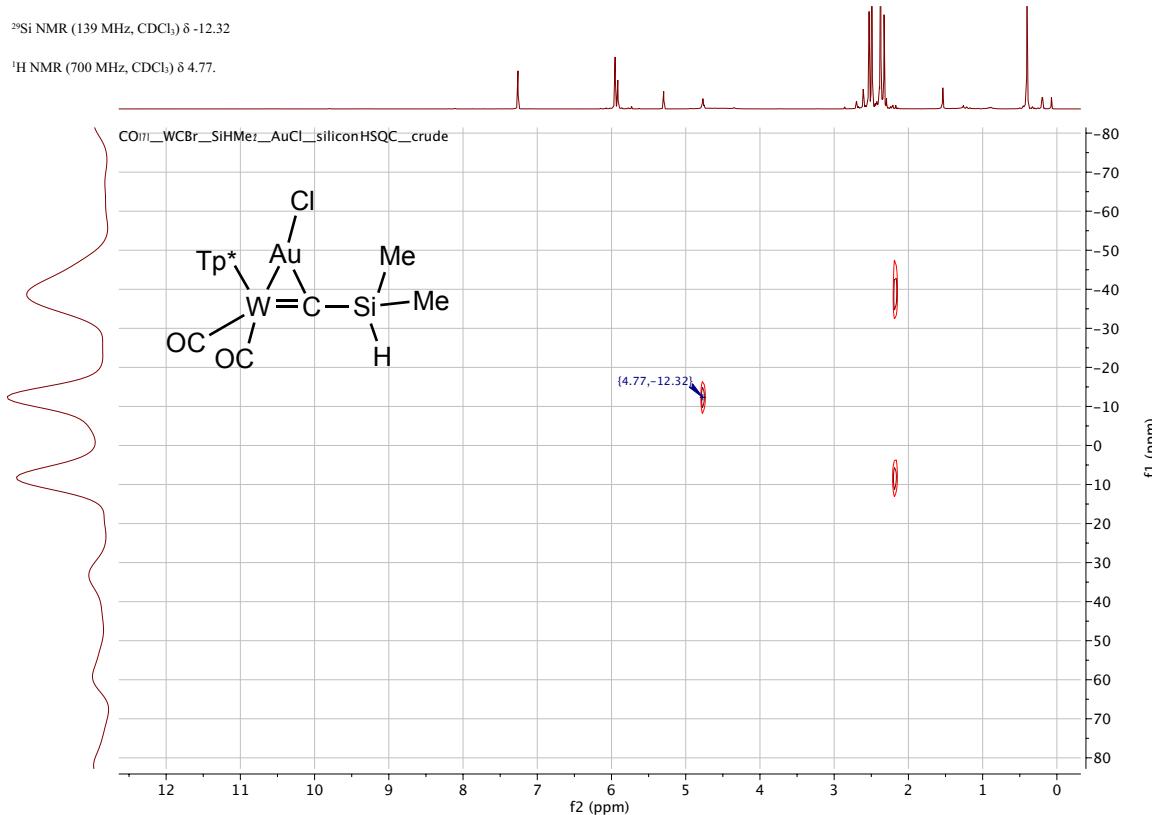
²⁹Si-¹H HSQC NMR spectrum of compound 6.8.²⁹Si-¹H HMBC NMR spectrum of compound 6.8.



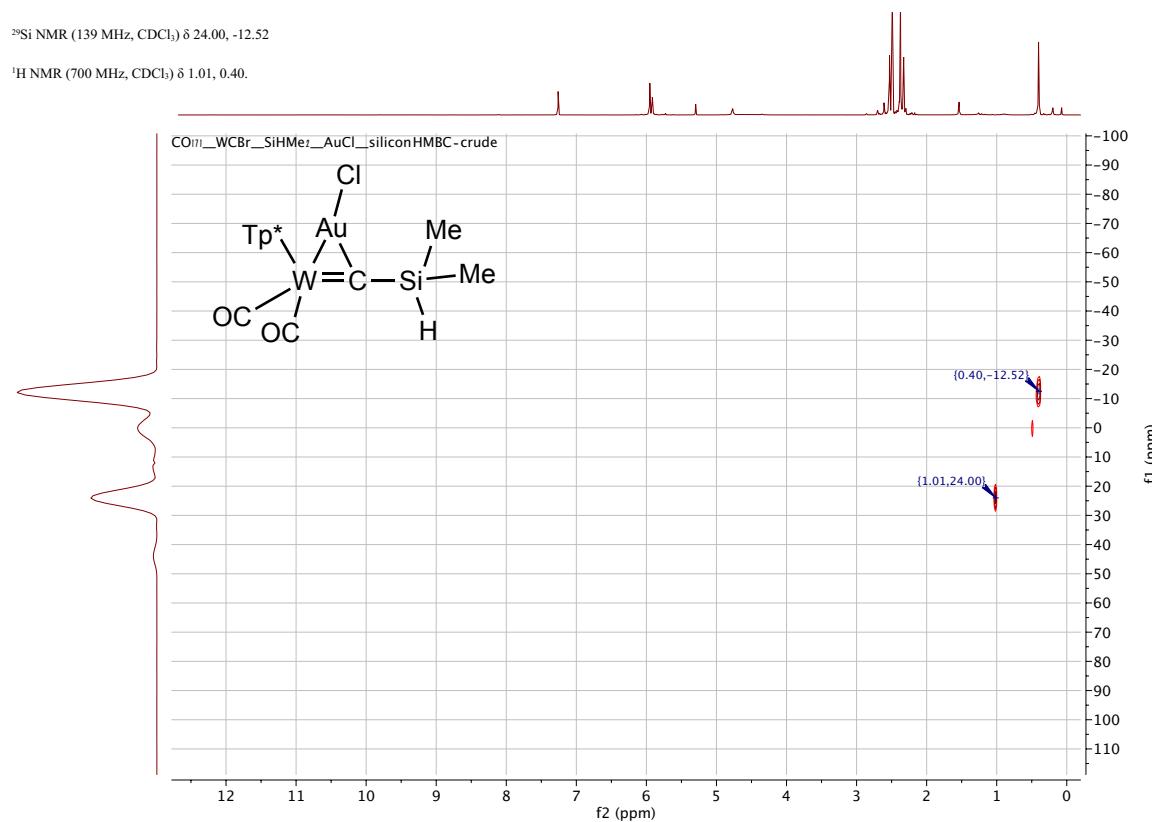
^1H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 6.9.



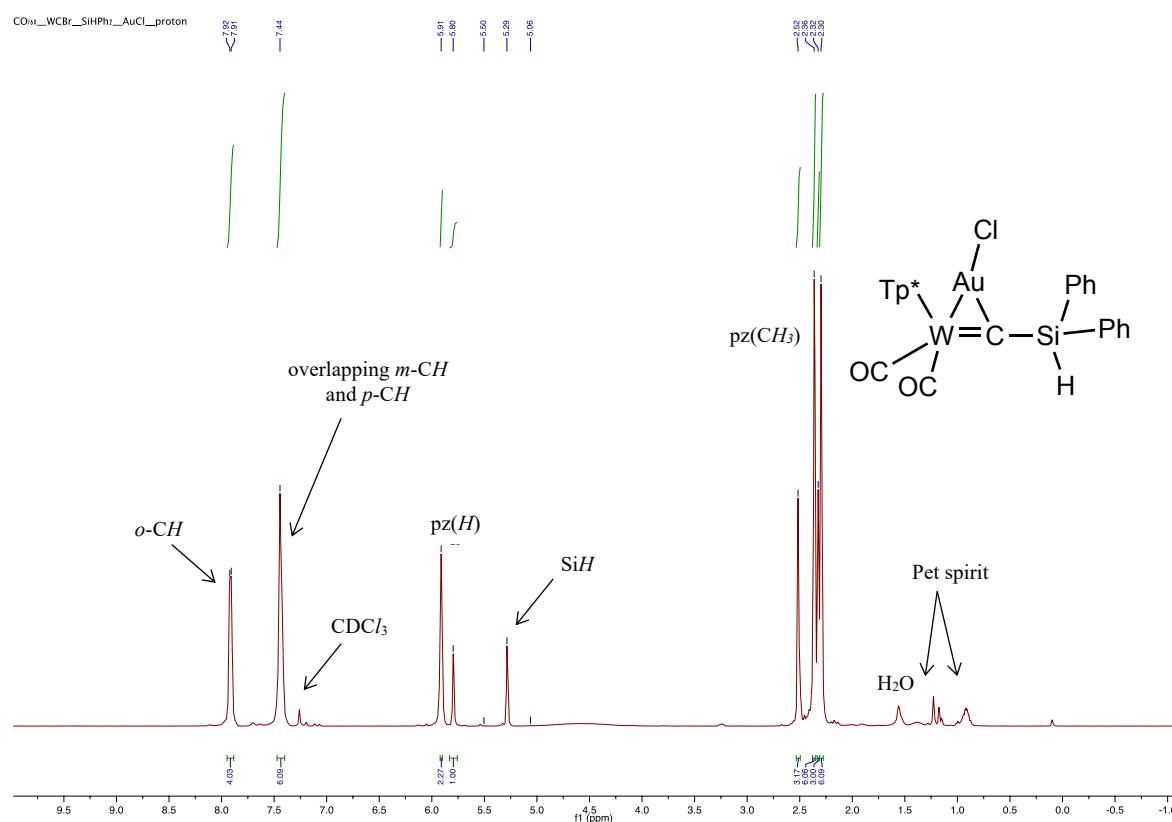
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 6.9.



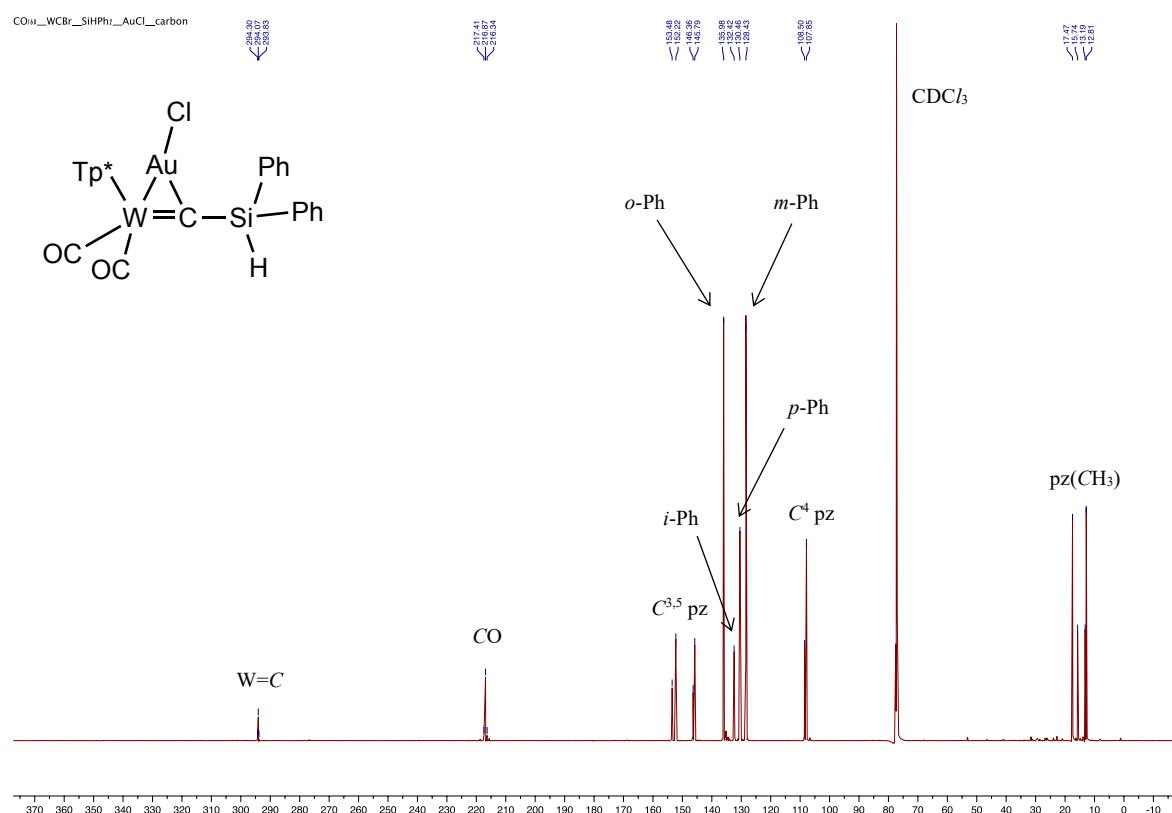
²⁹Si—¹H HSQC NMR spectrum of [WAuCl(μ-CSiHMe₂)(CO)₂(Tp^{*})] (**6.9**) – crude mixture.



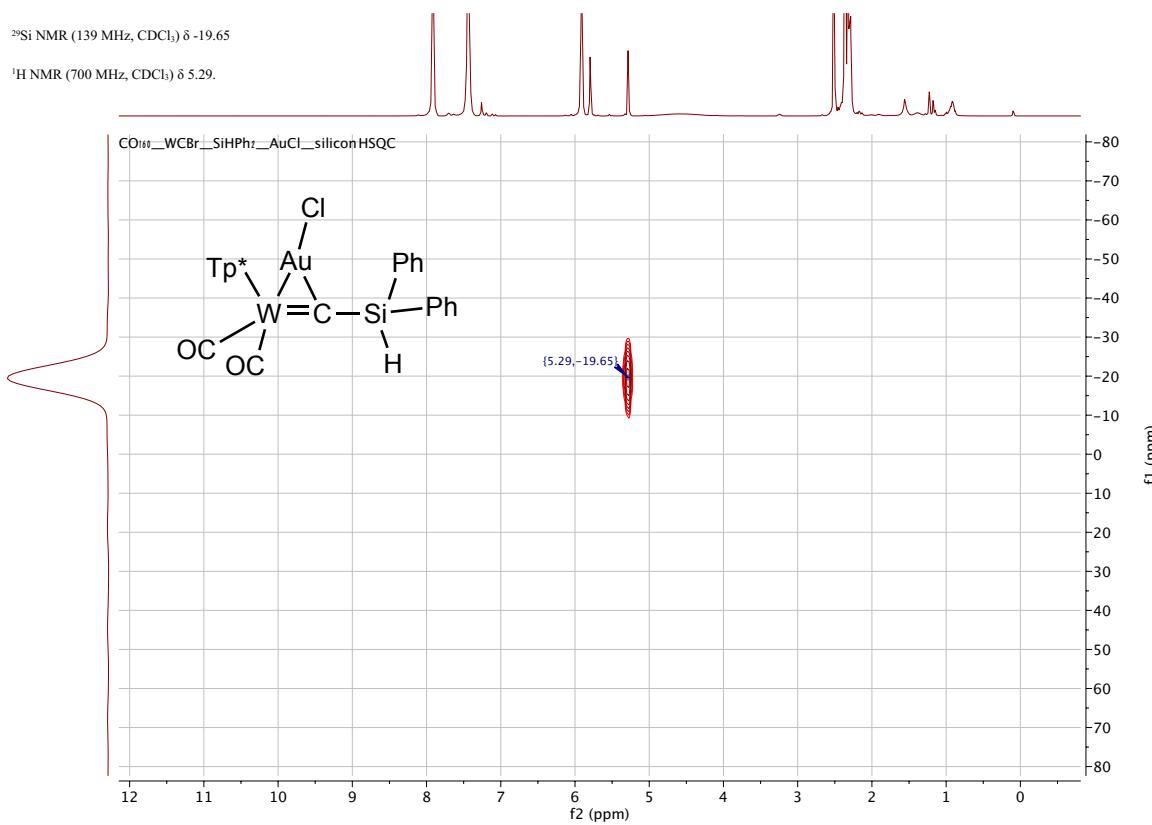
²⁹Si—¹H HMBC NMR spectrum of [WAuCl(μ-CSiHMe₂)(CO)₂(Tp^{*})] (**6.9**) – crude mixture.

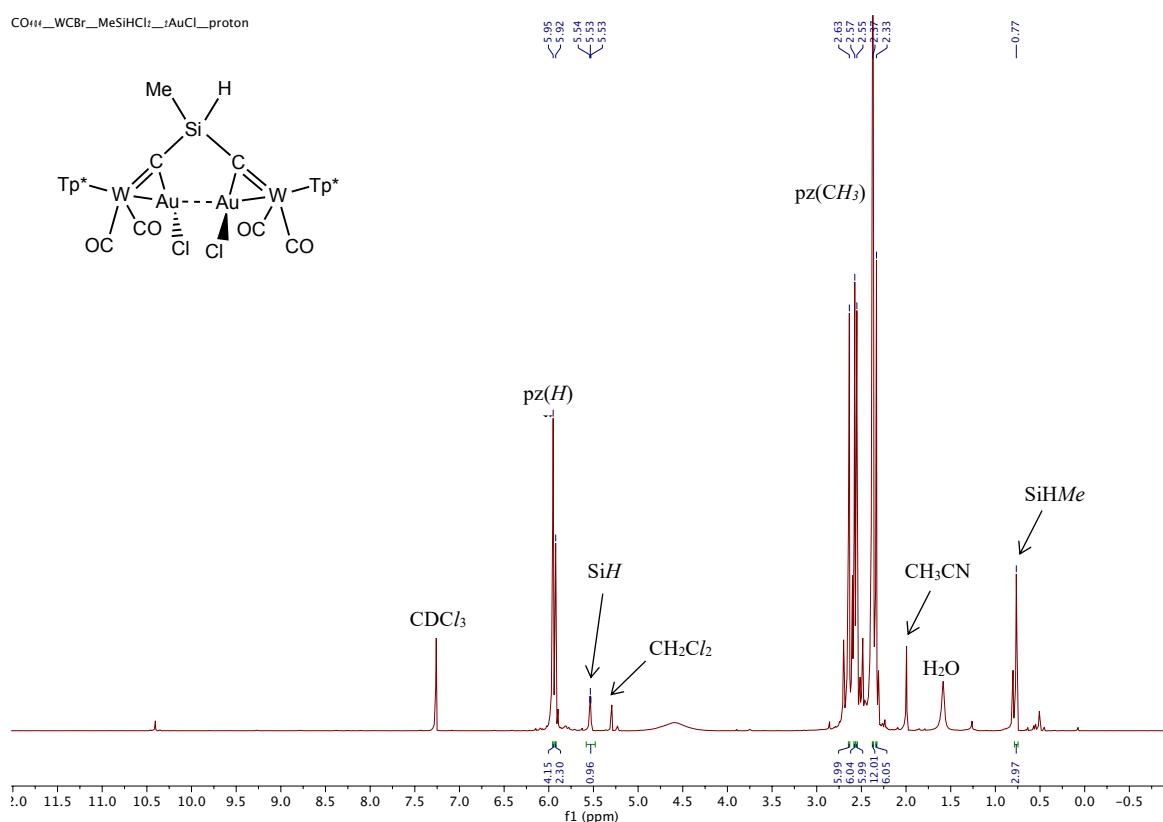
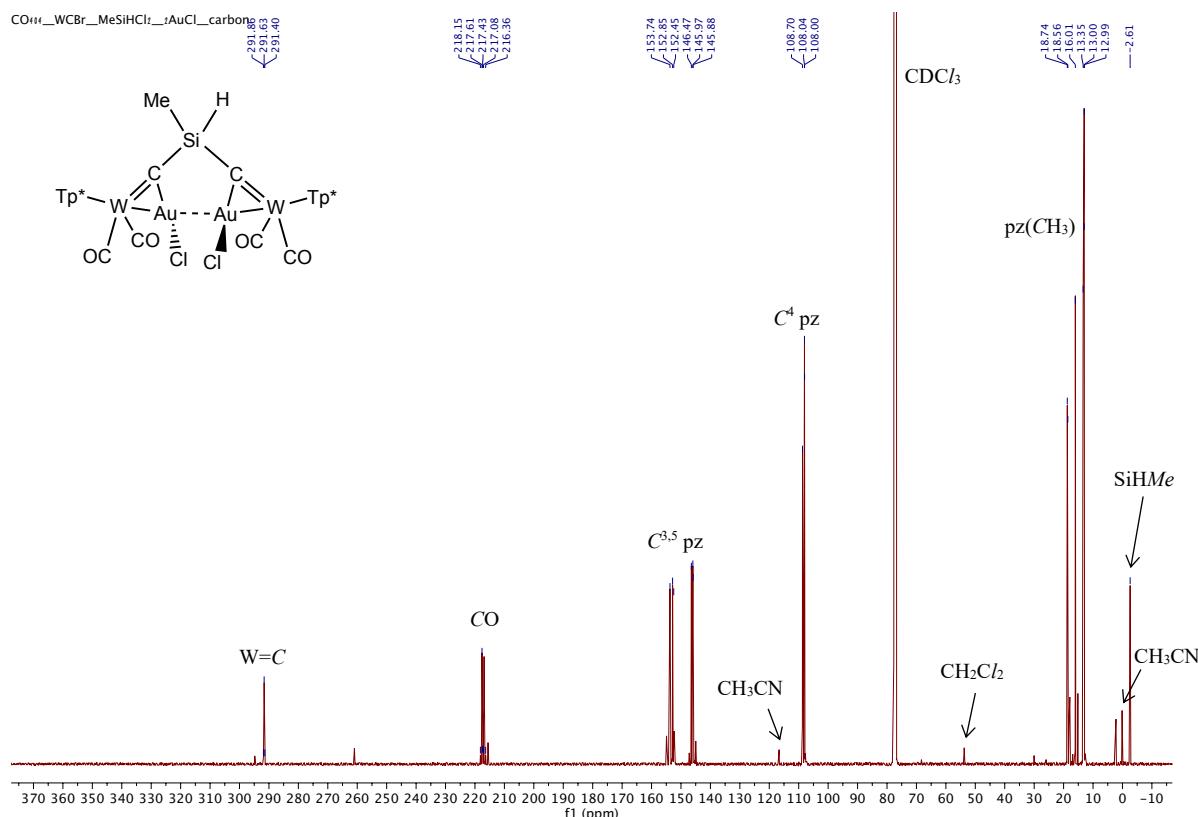


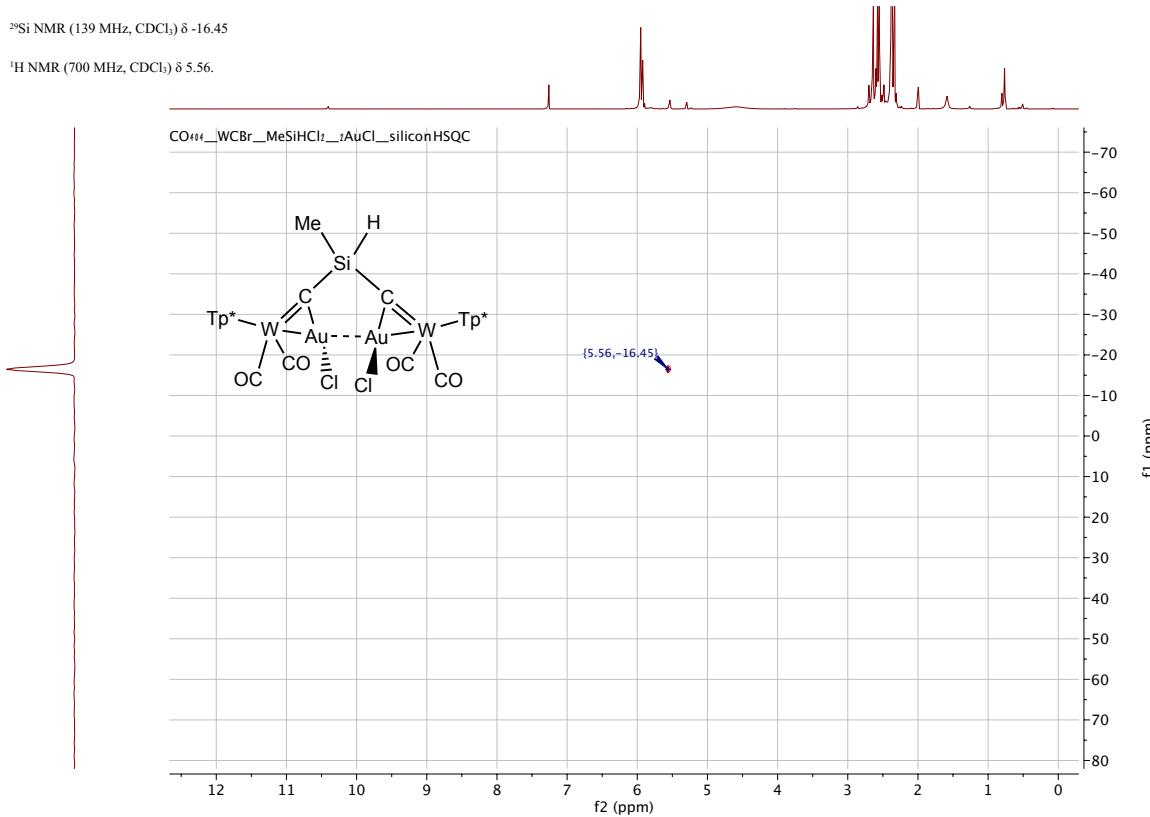
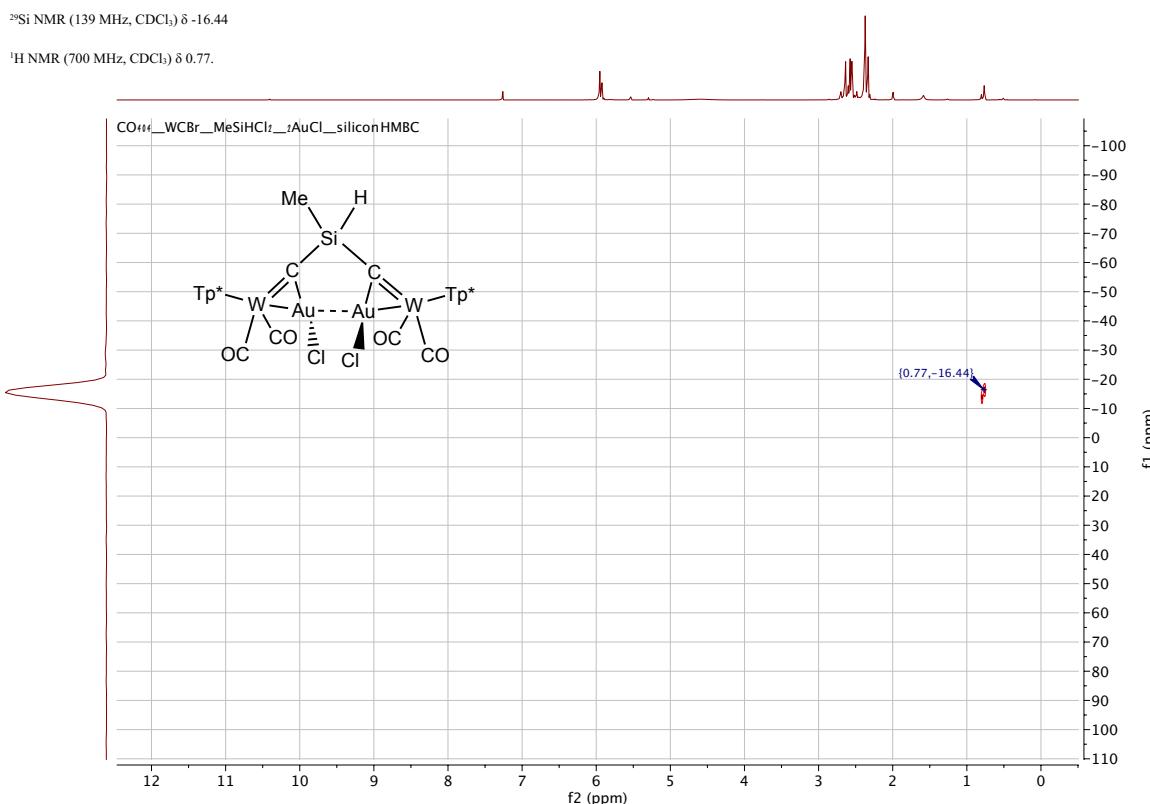
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound 6.10.

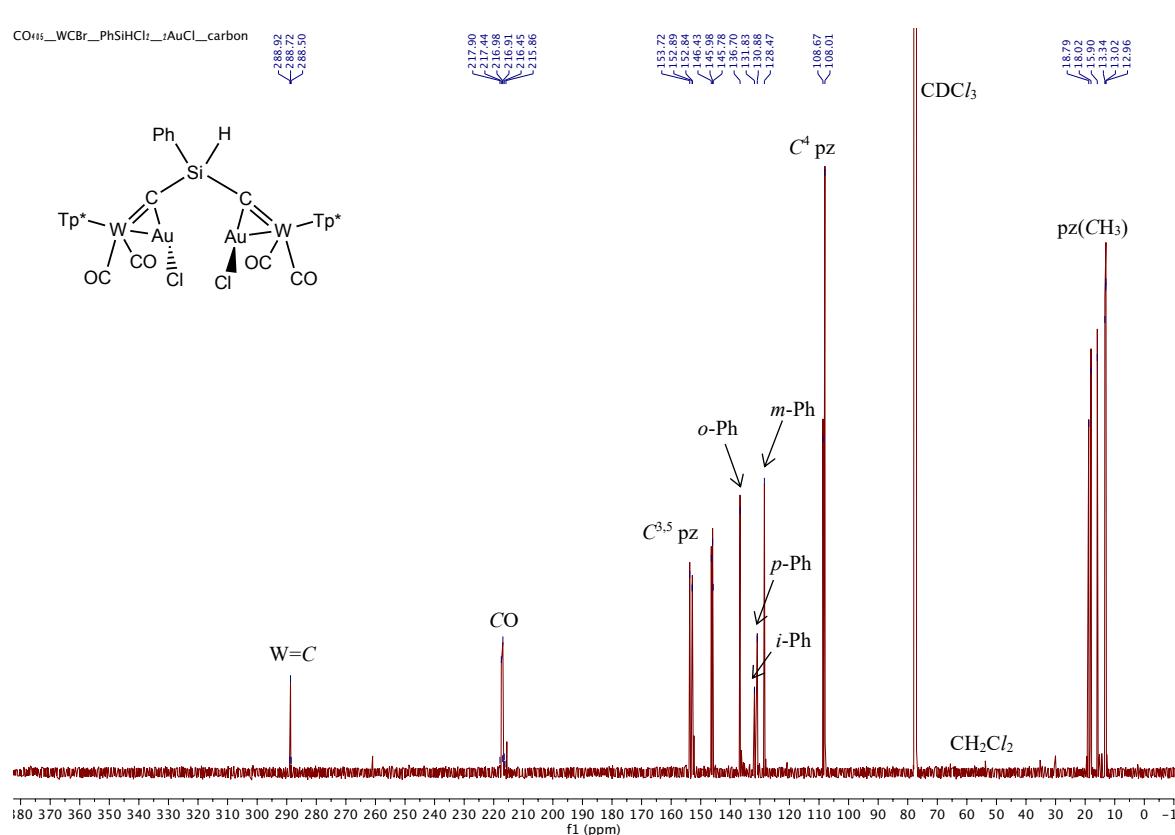
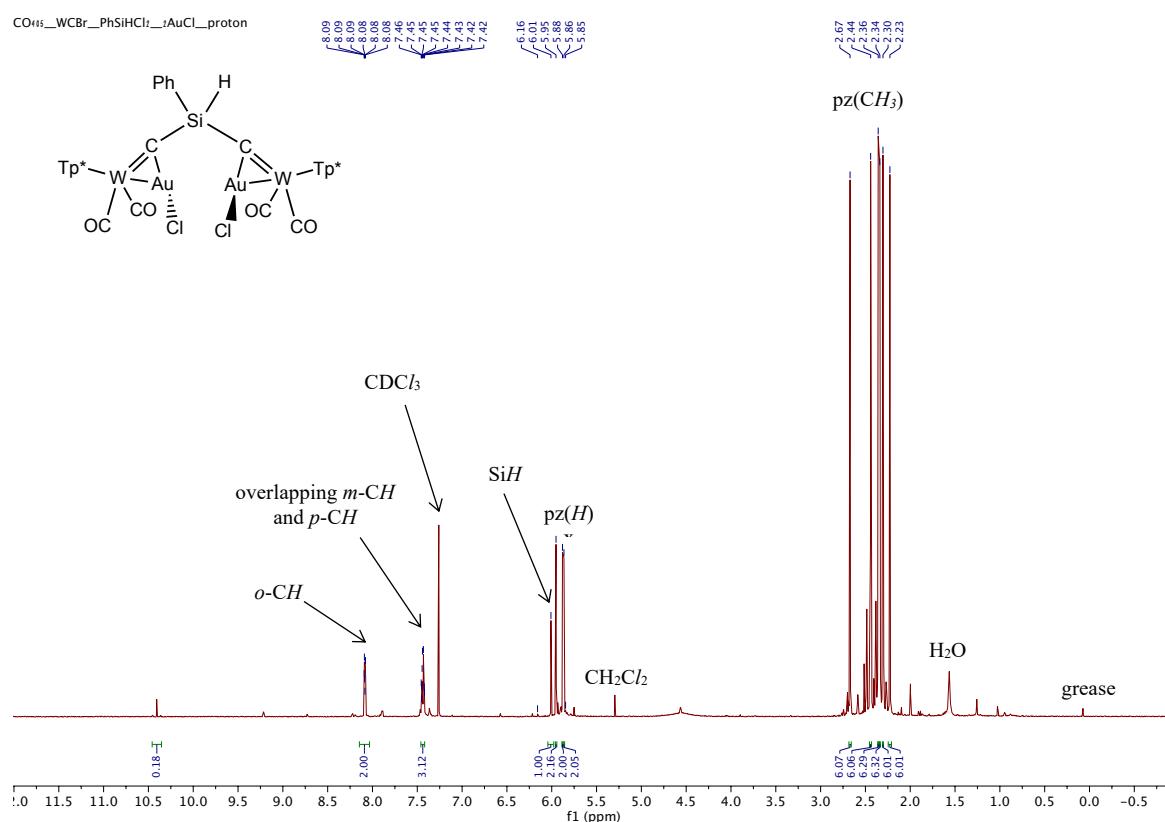


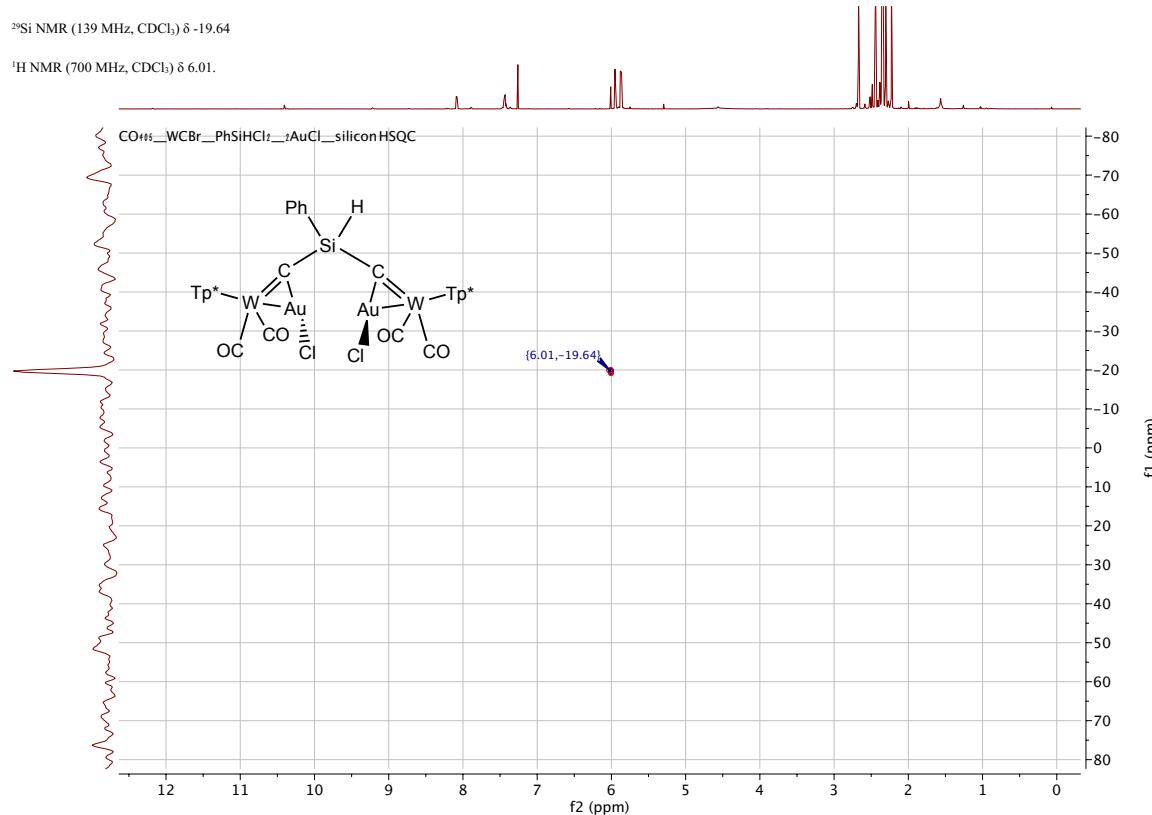
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound 6.10.

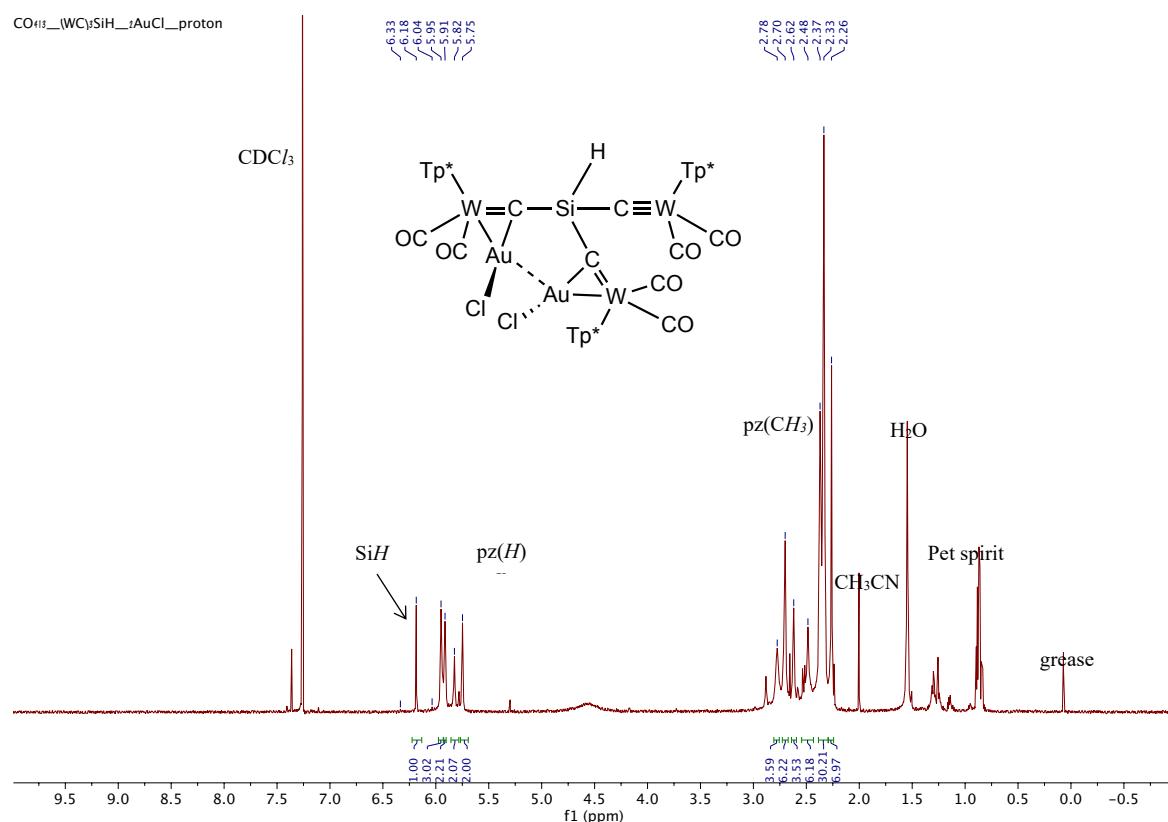
²⁹Si-¹H HSQC NMR spectrum of compound **6.10** – crude mixture.²⁹Si-¹H HMBC NMR spectrum of compound **6.10** – crude mixture.

¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 6.11.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound 6.11.

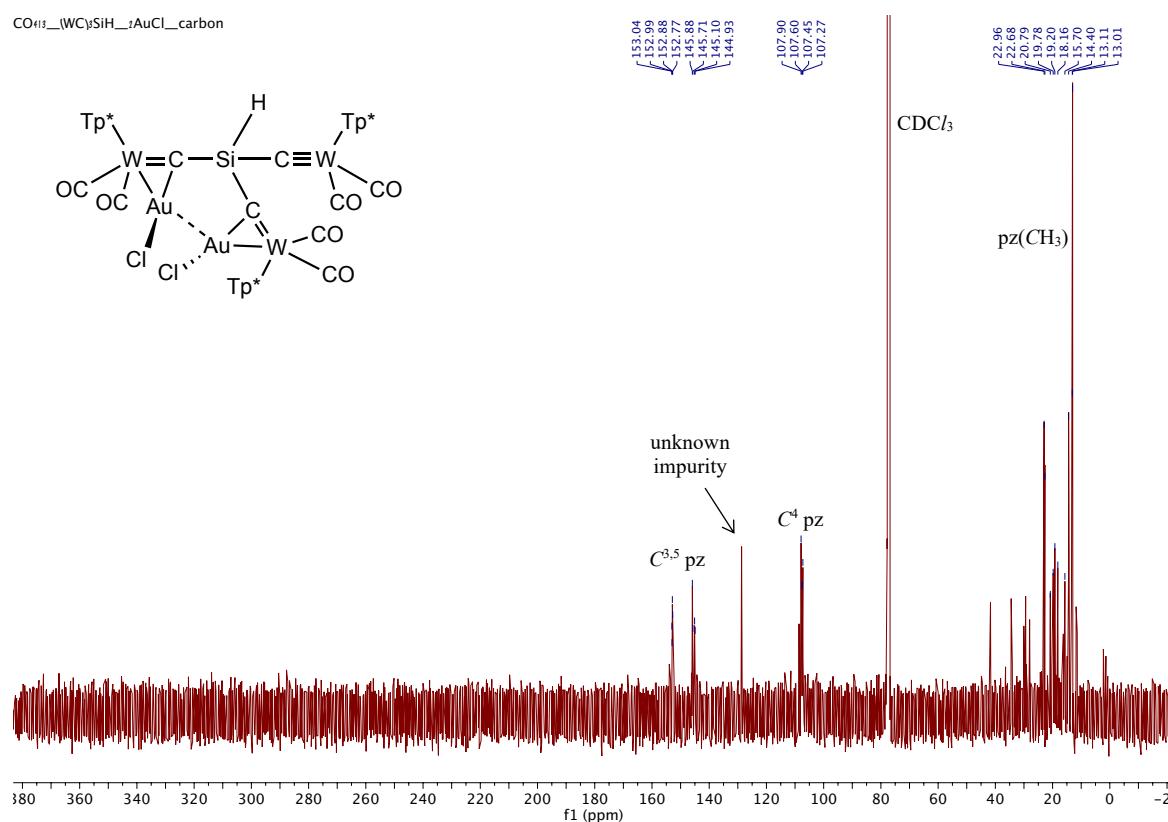
²⁹Si-¹H HSQC NMR spectrum of compound 6.11.²⁹Si-¹H HMBC NMR spectrum of compound 6.11.



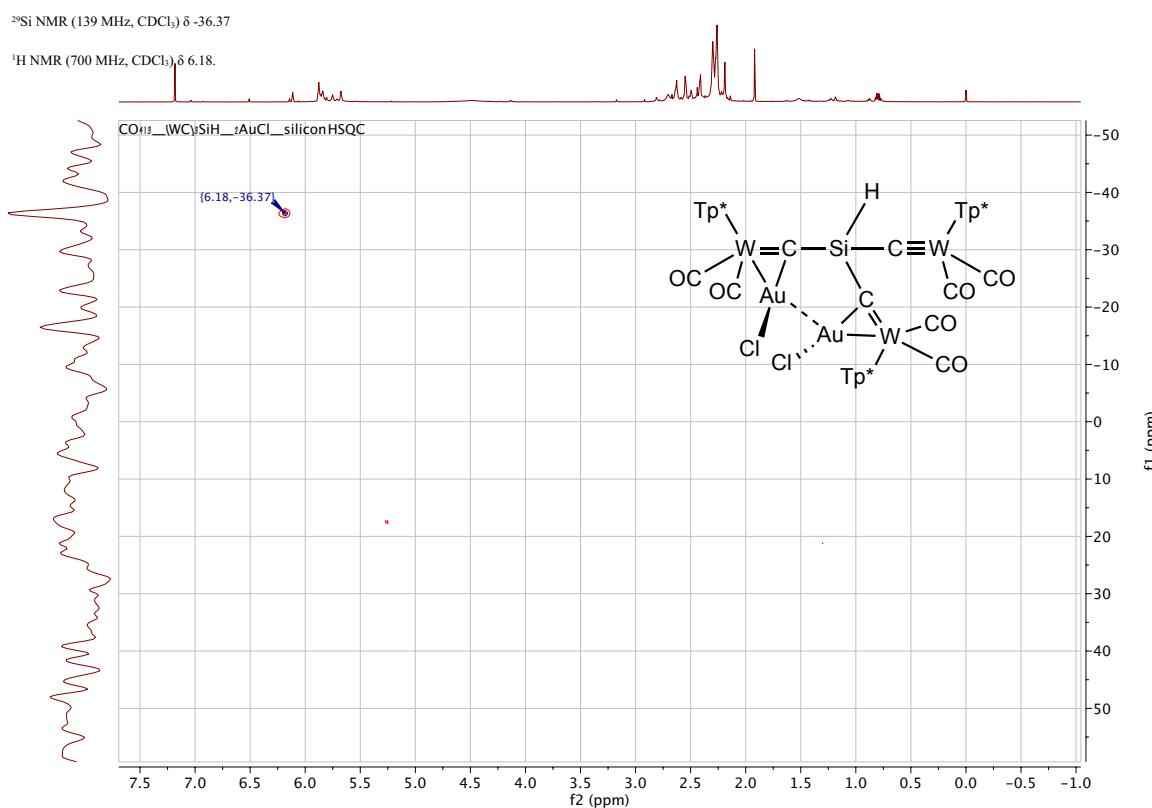
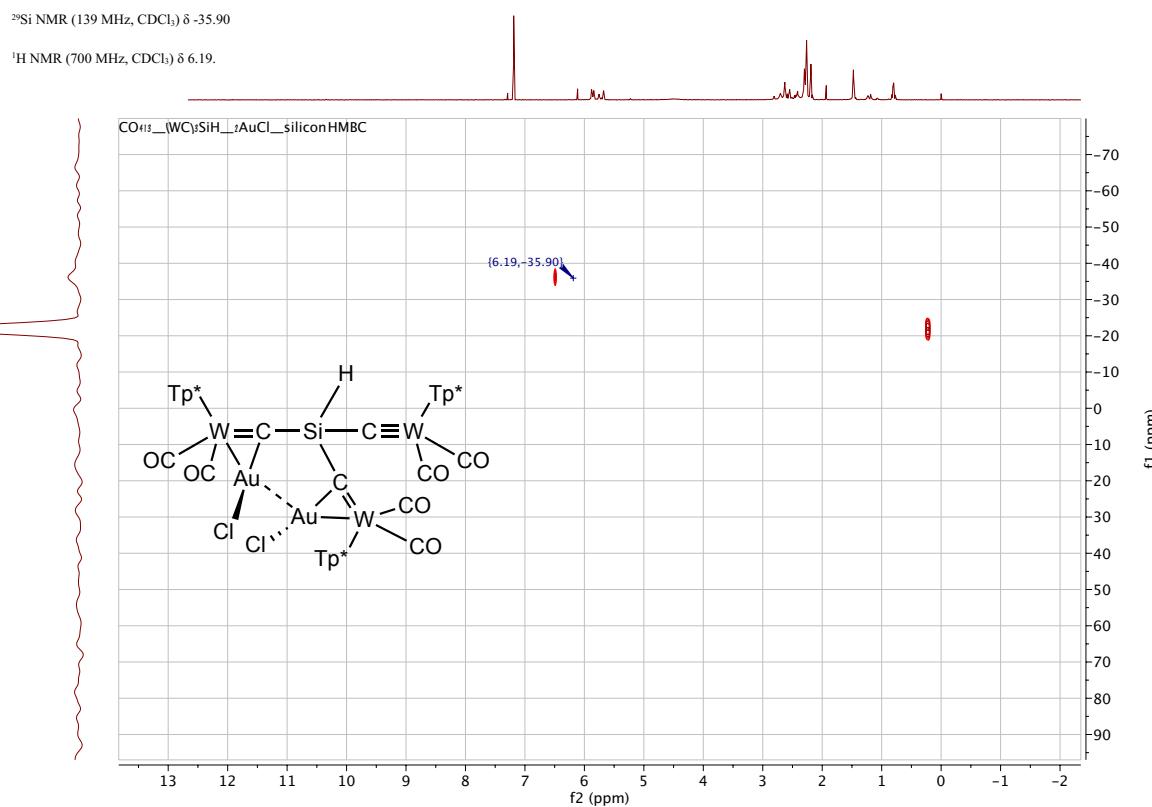
²⁹Si—¹H HSQC NMR spectrum of compound 6.12.²⁹Si—¹H HMBC NMR spectrum of compound 6.12.

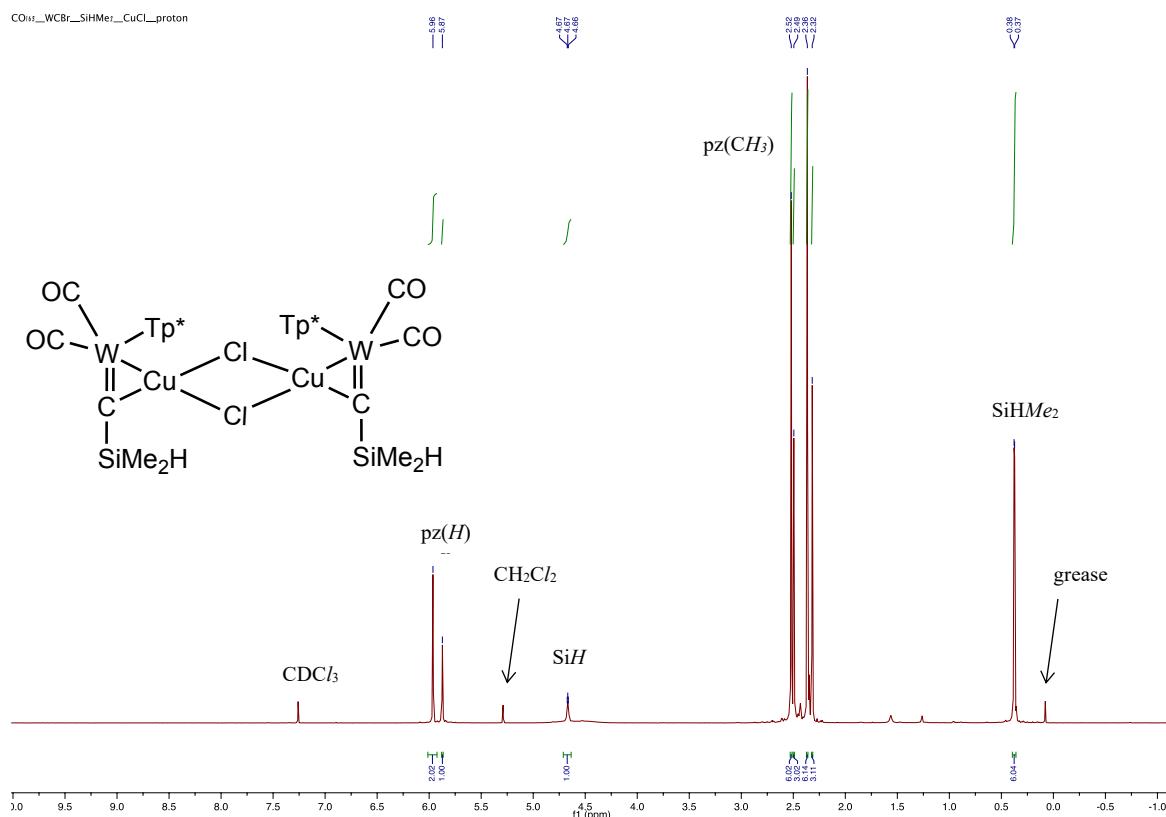


¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 6.13.

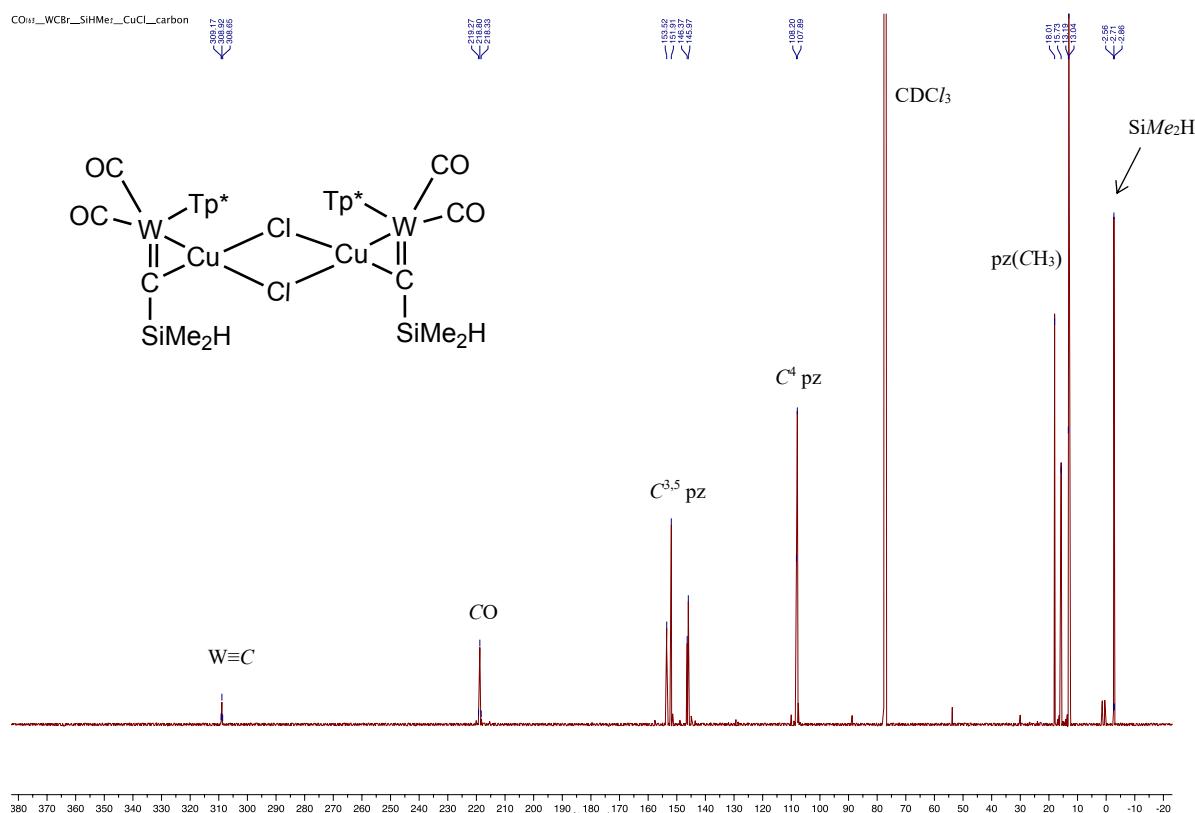


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound 6.13.

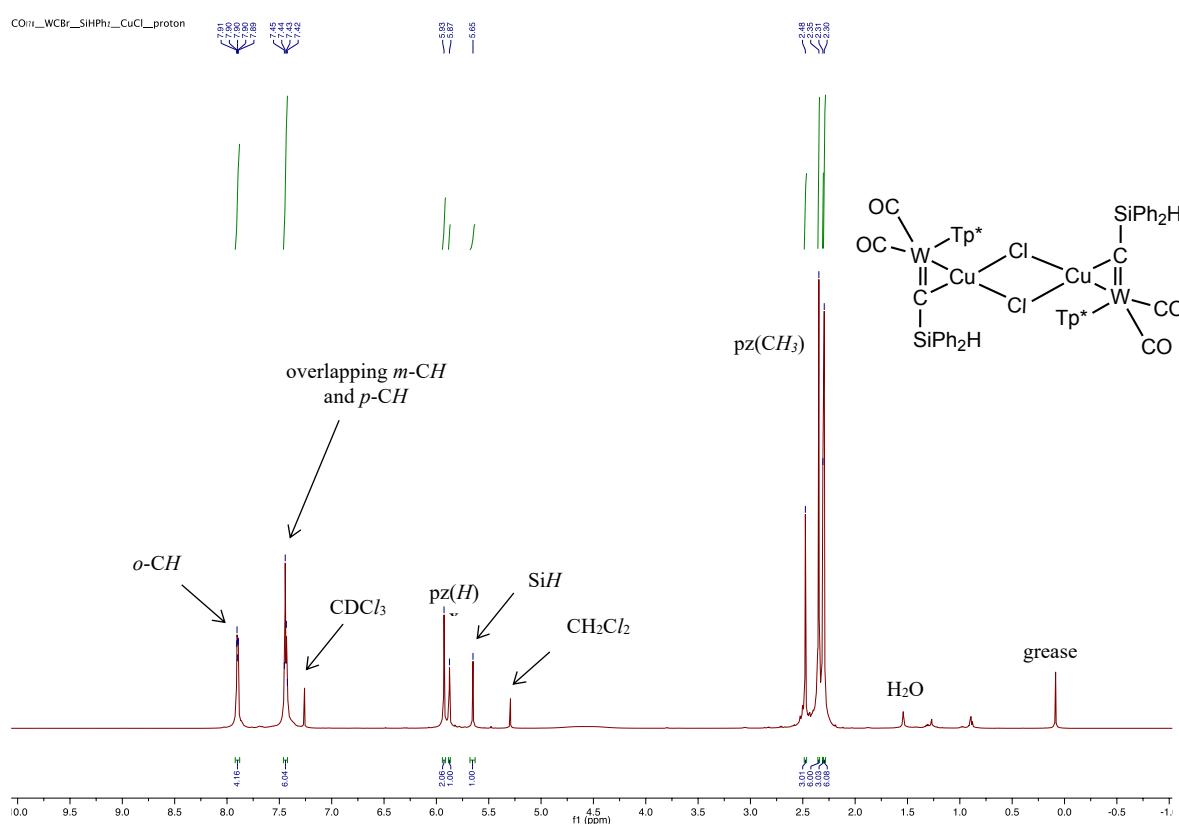
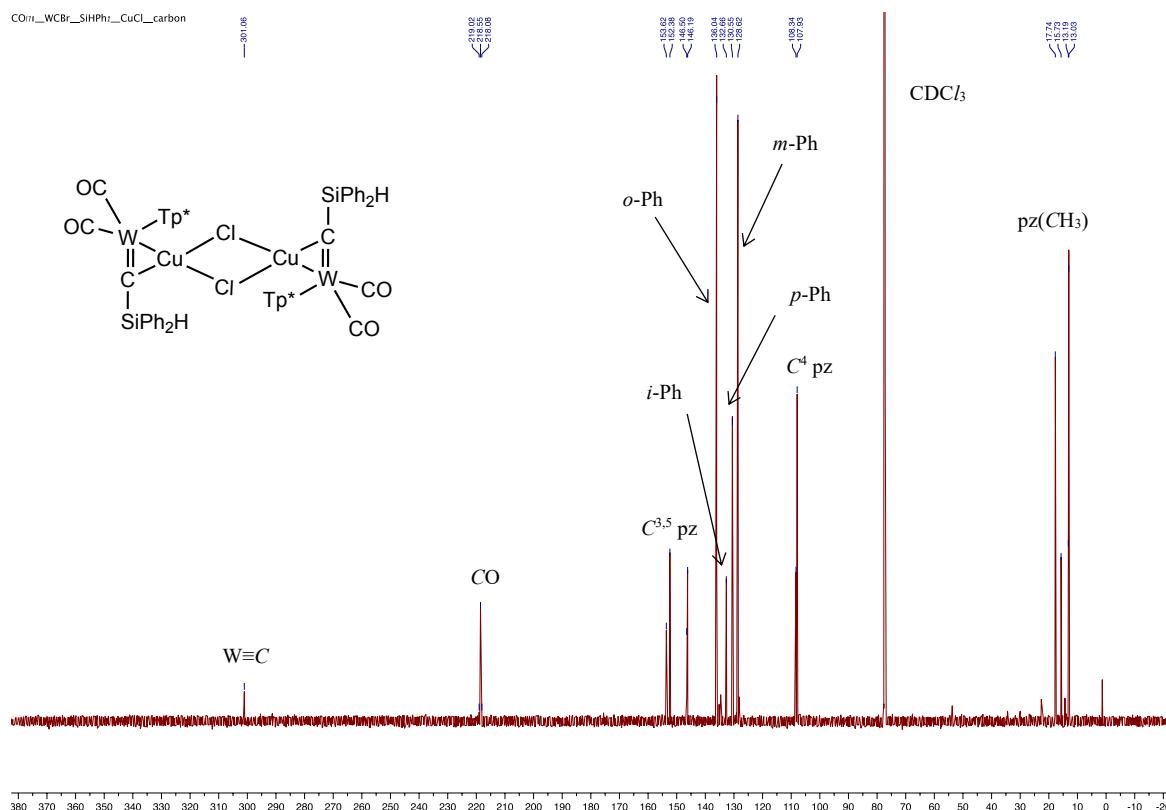
²⁹Si-¹H HSQC NMR spectrum of compound **6.13**.²⁹Si-¹H HMBC NMR spectrum of compound **6.13**.



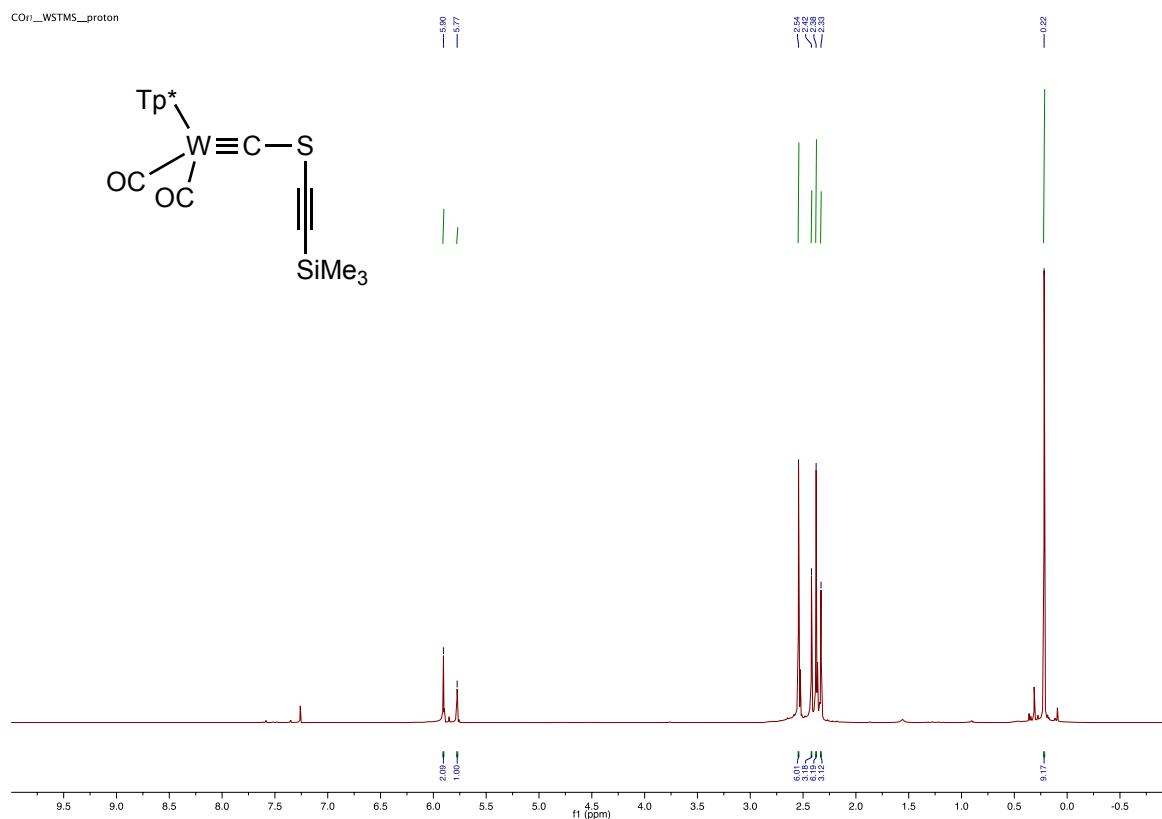
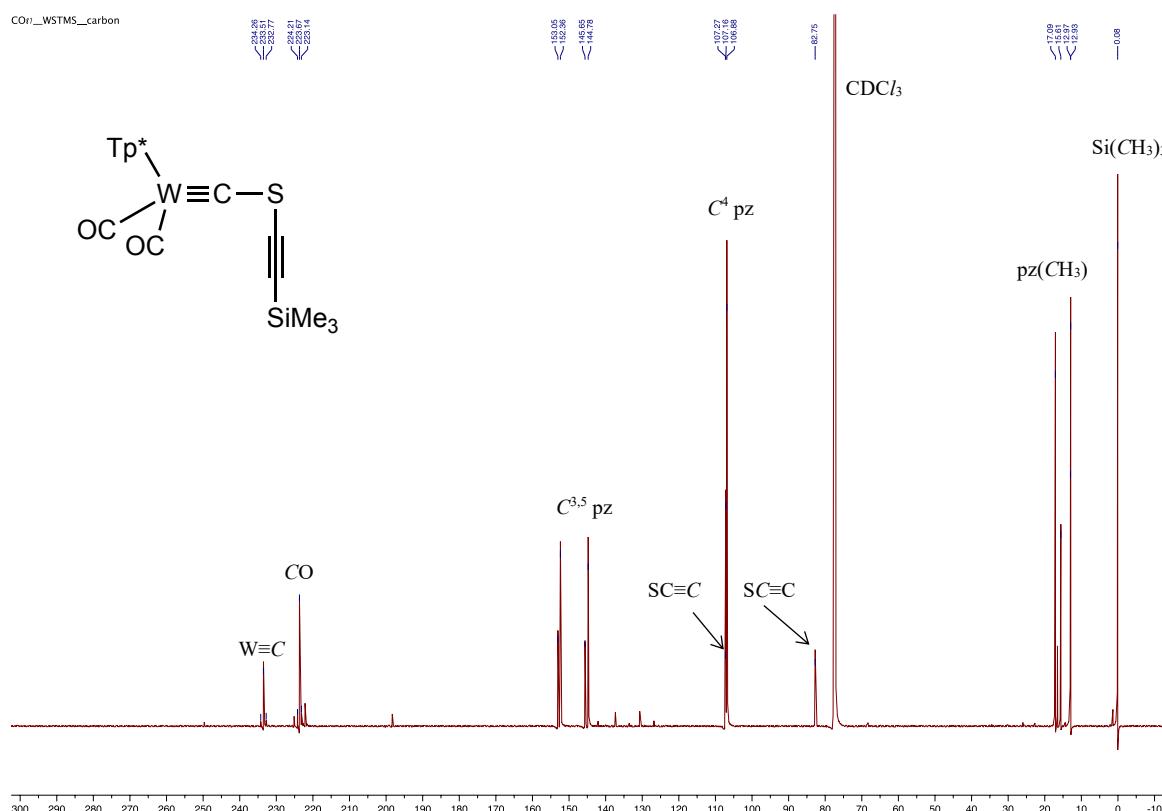
^1H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound 6.14.

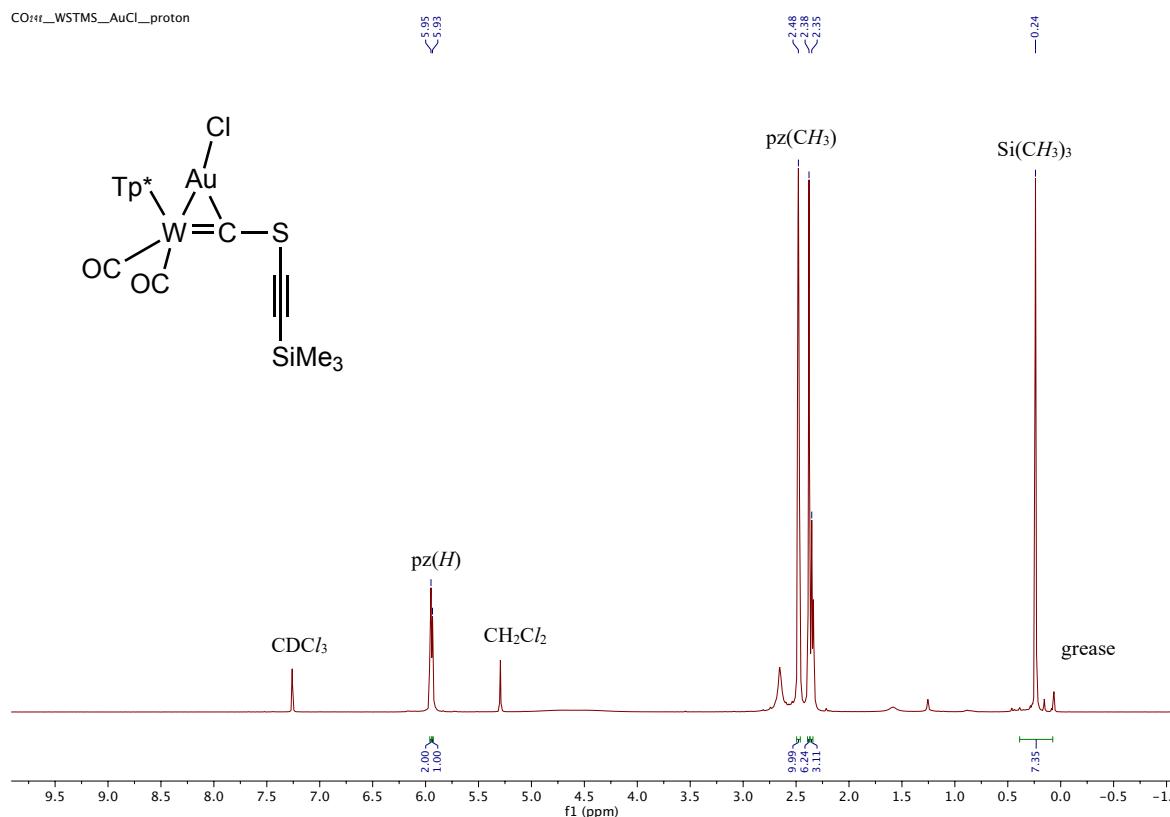
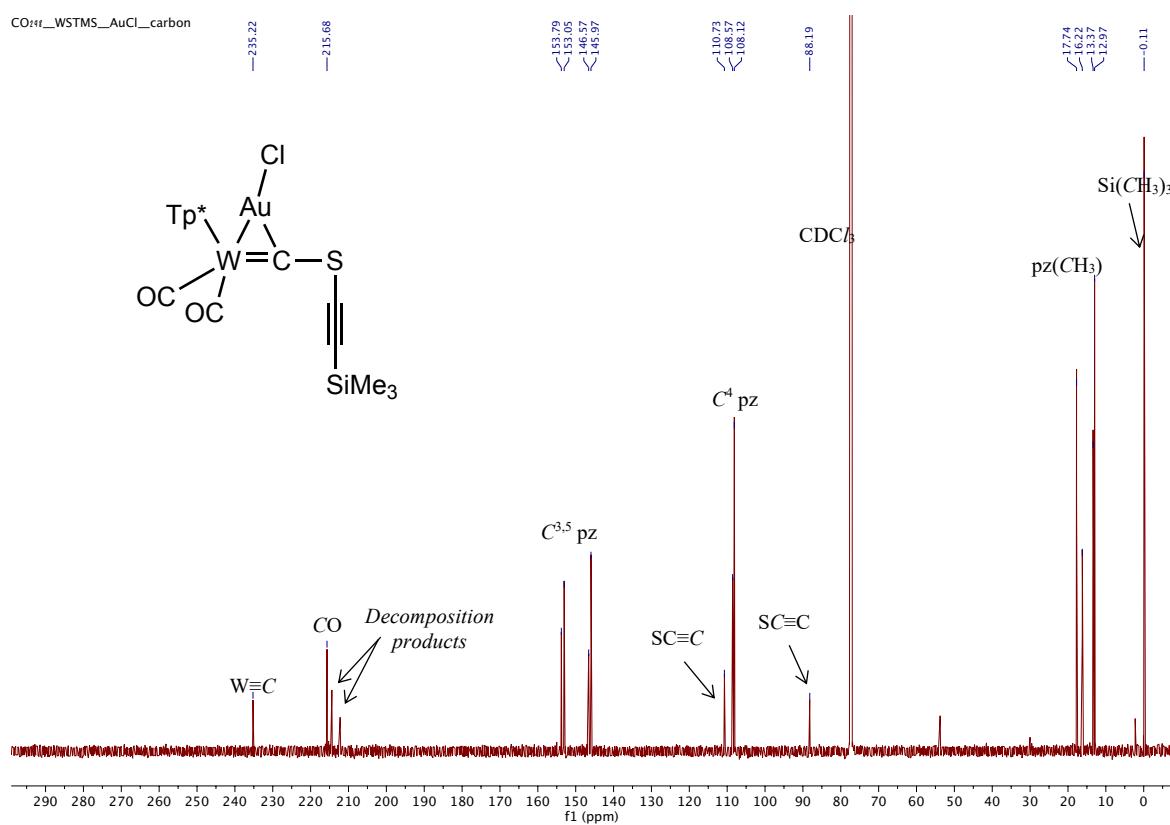


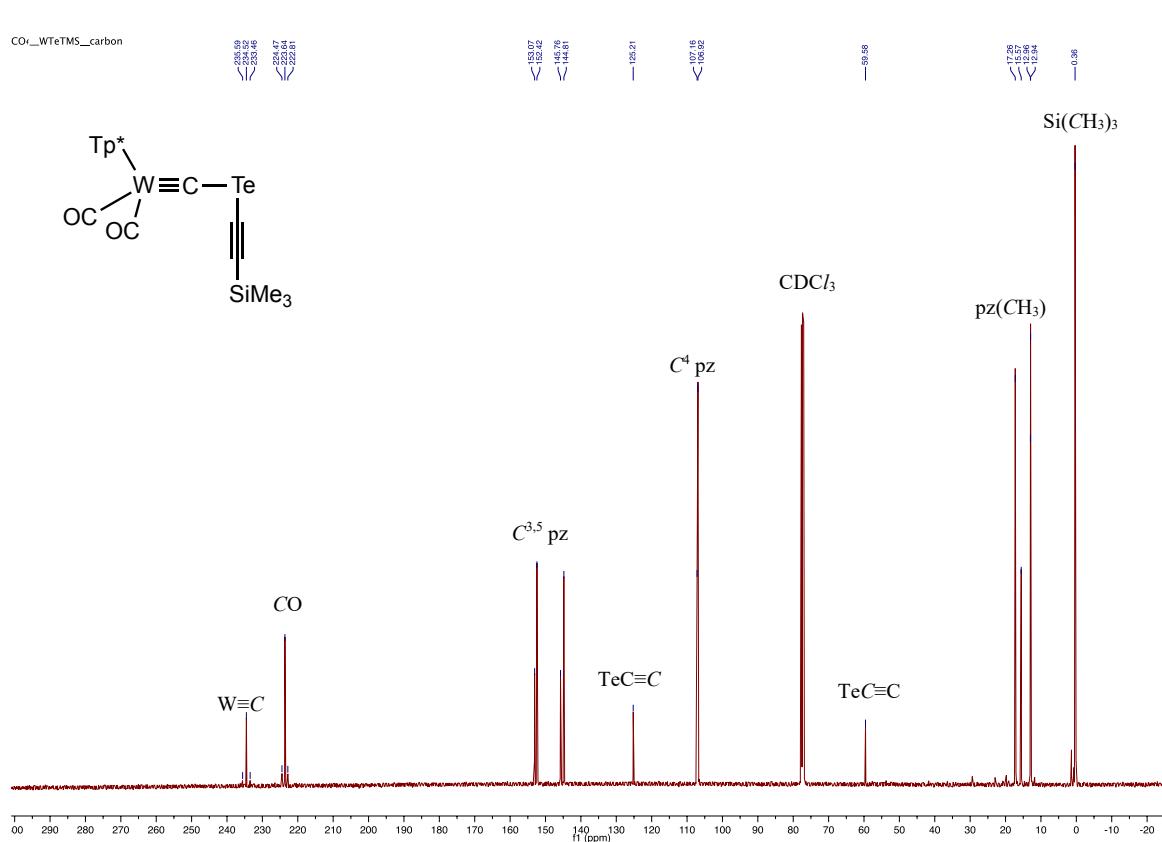
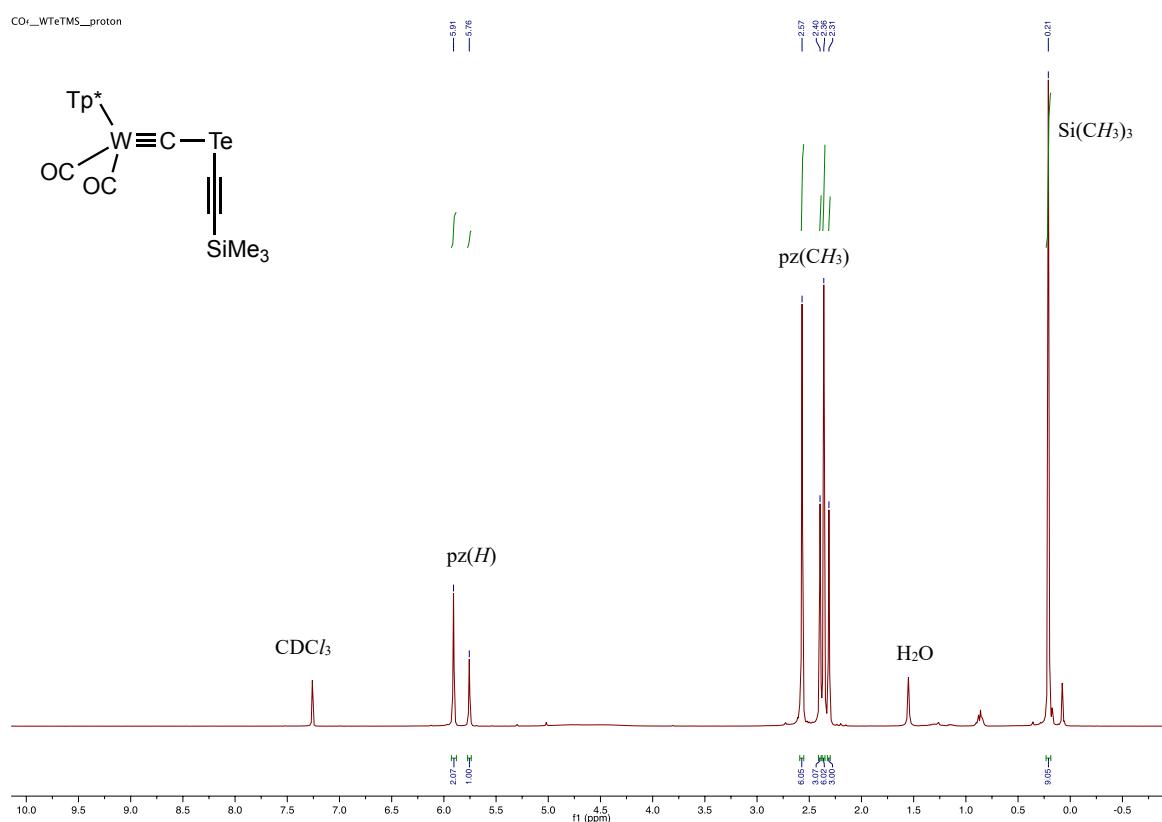
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 6.14.

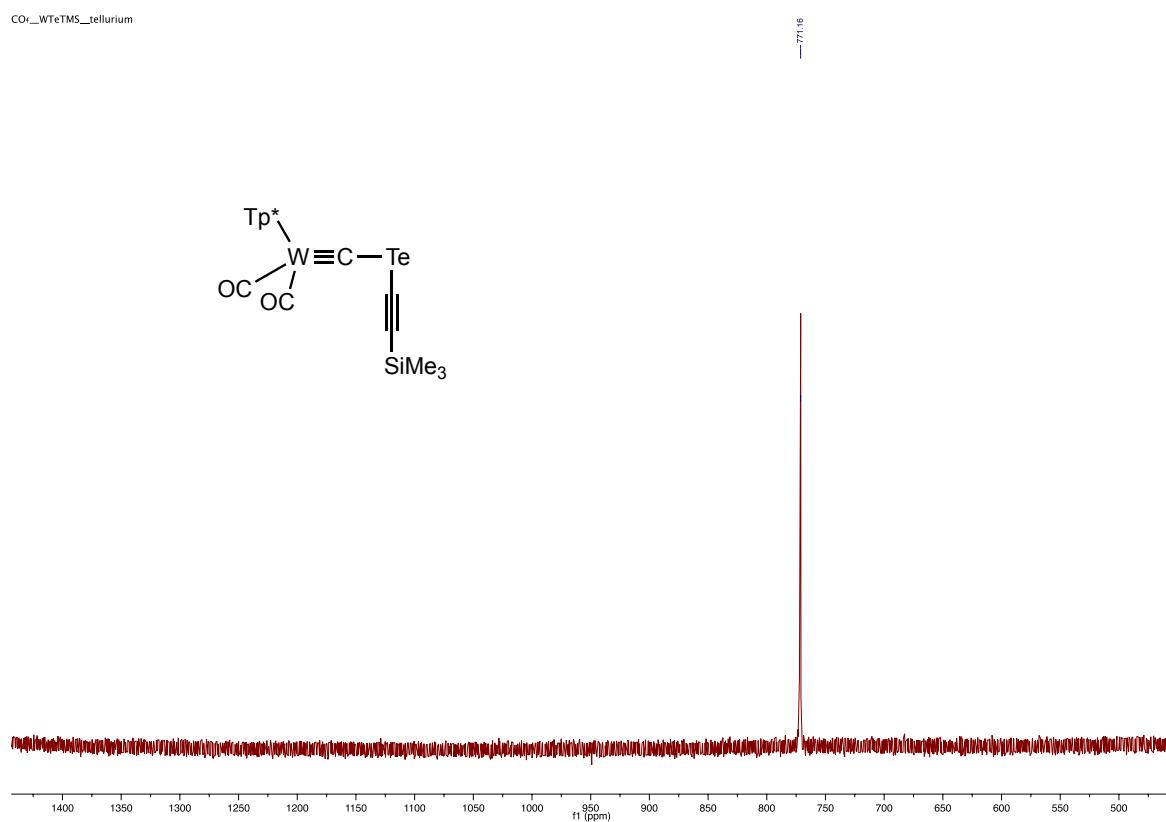
 ^1H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound 6.15. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound 6.15.

ESI – Appendix

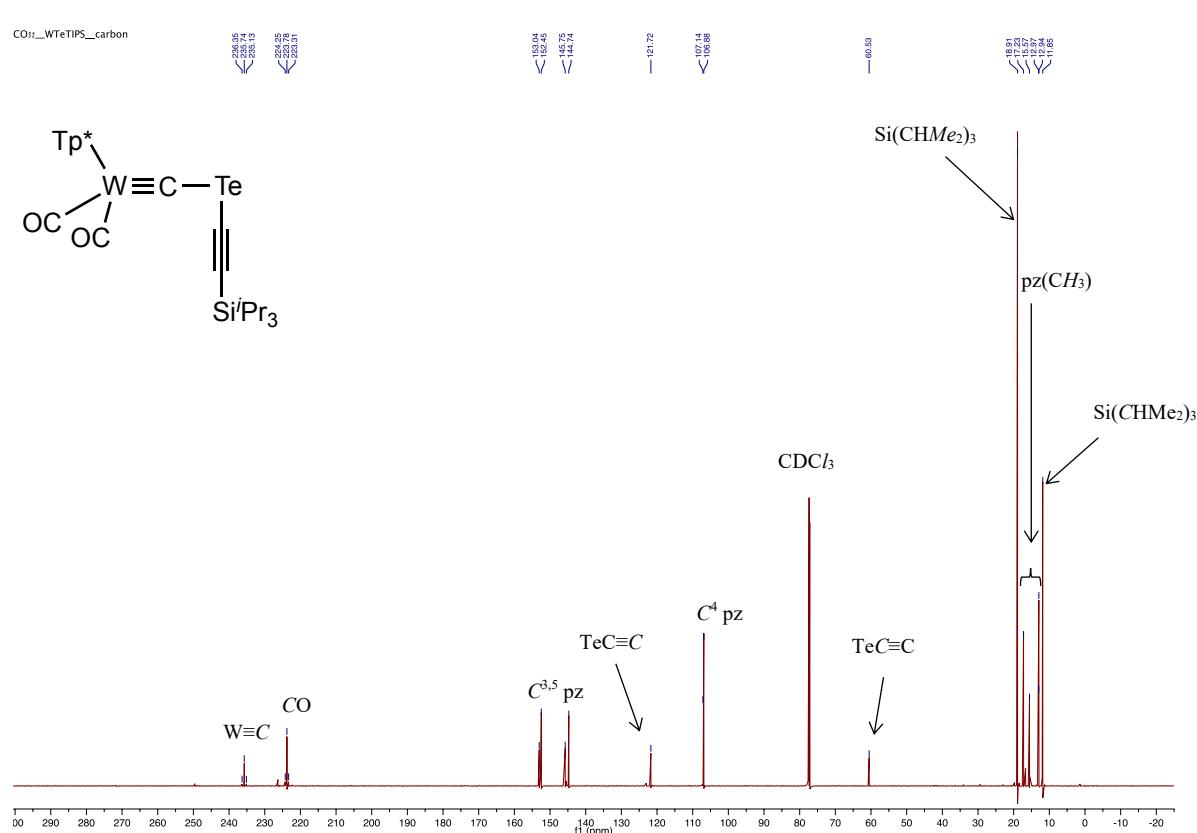
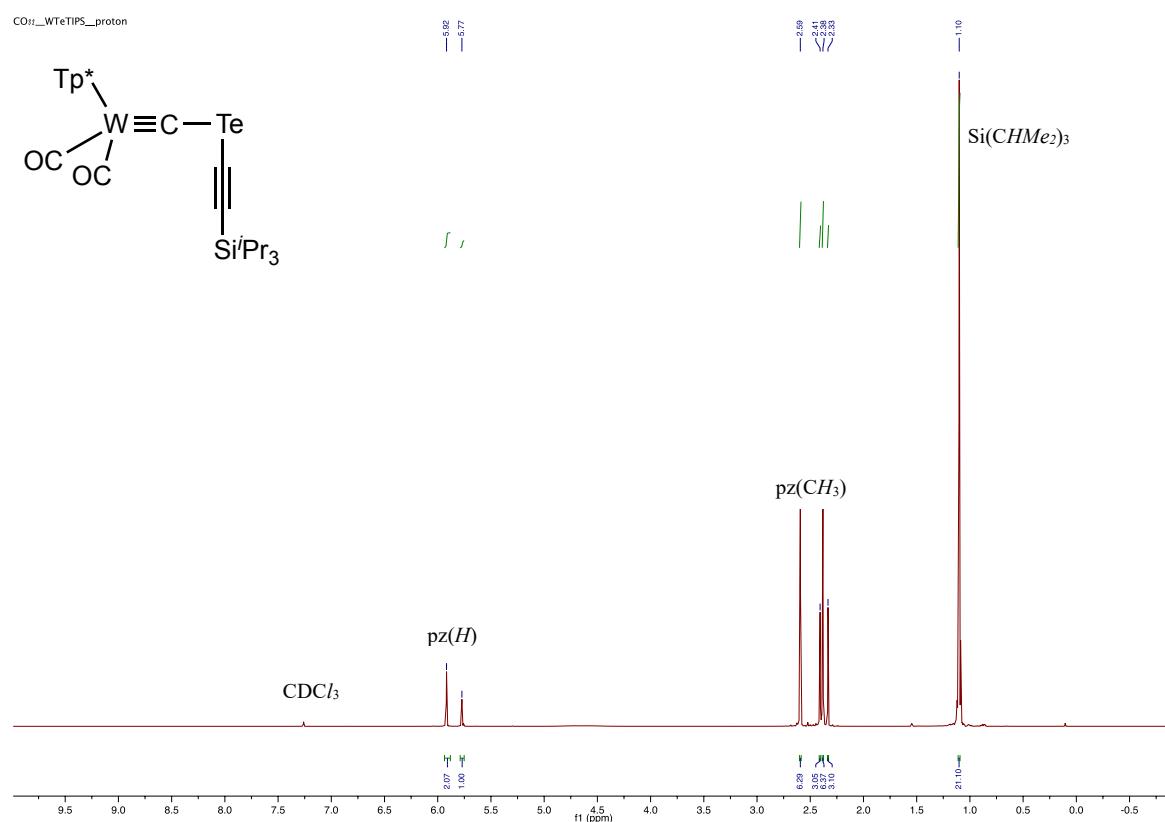
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound A.1.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound A.1.

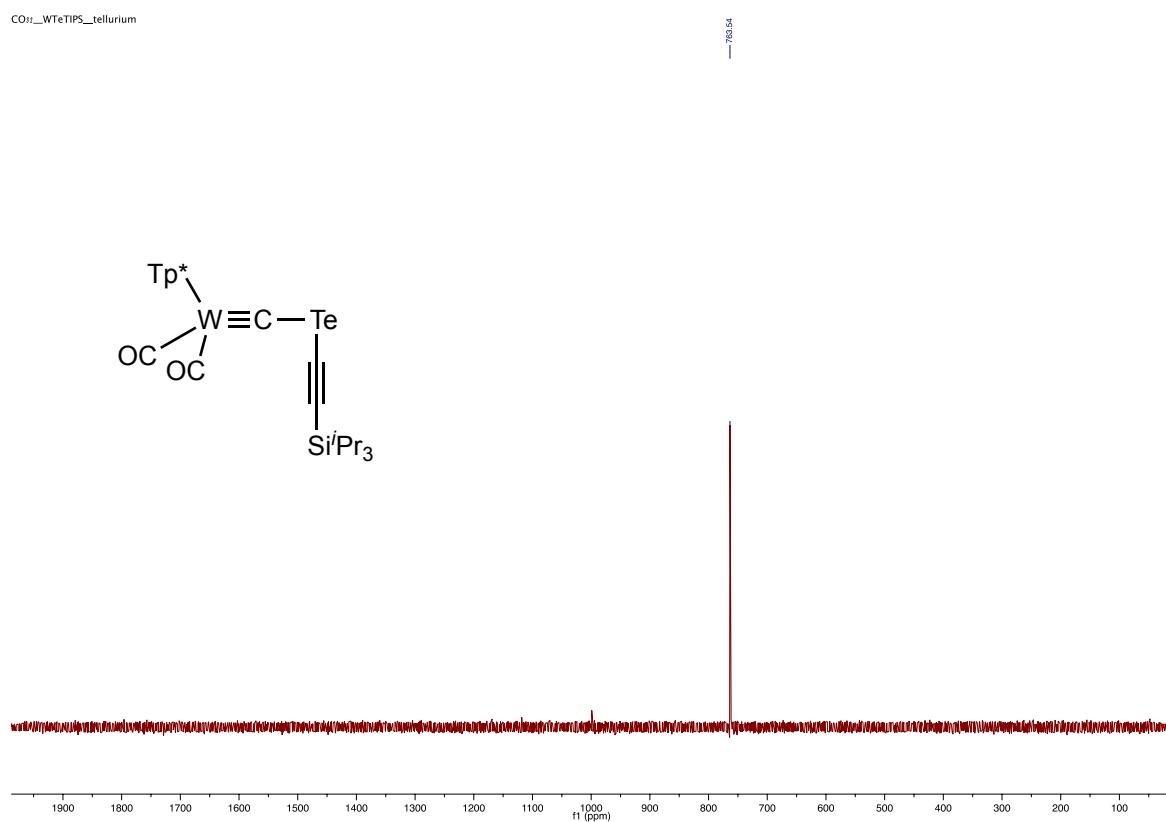
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.2.¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound A.2.



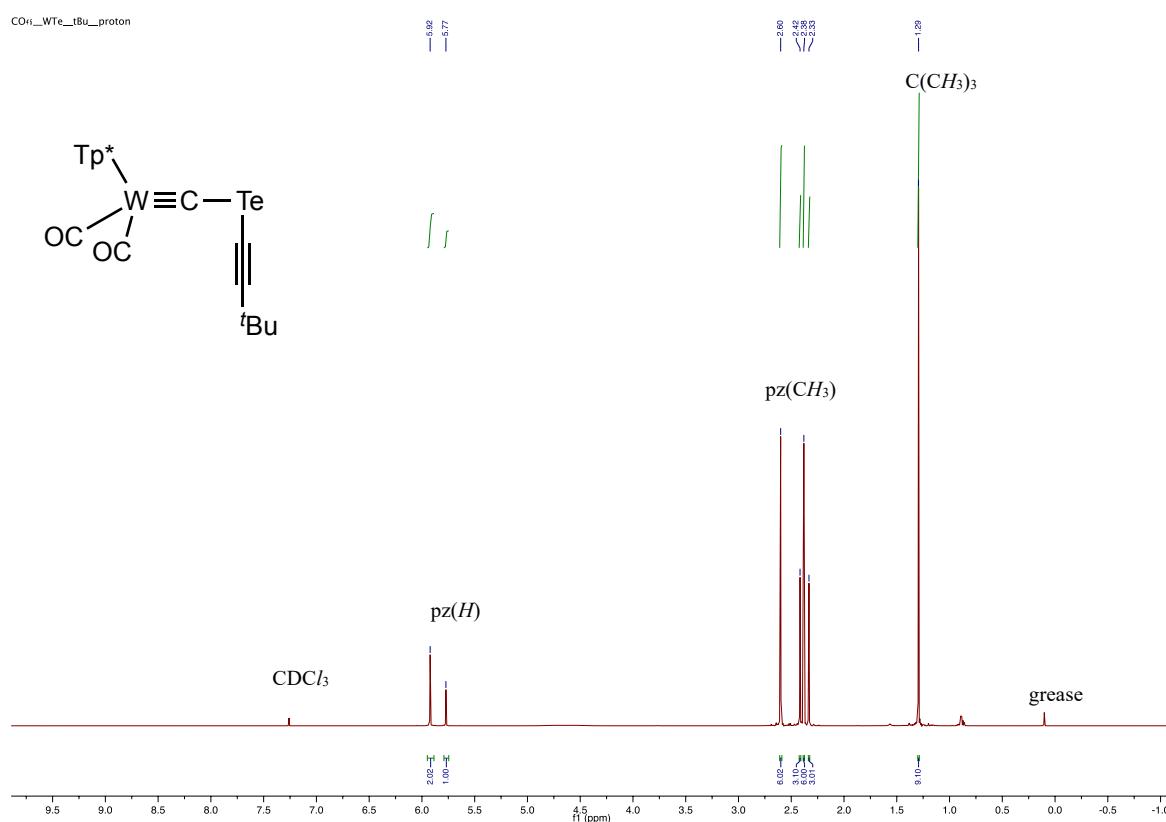
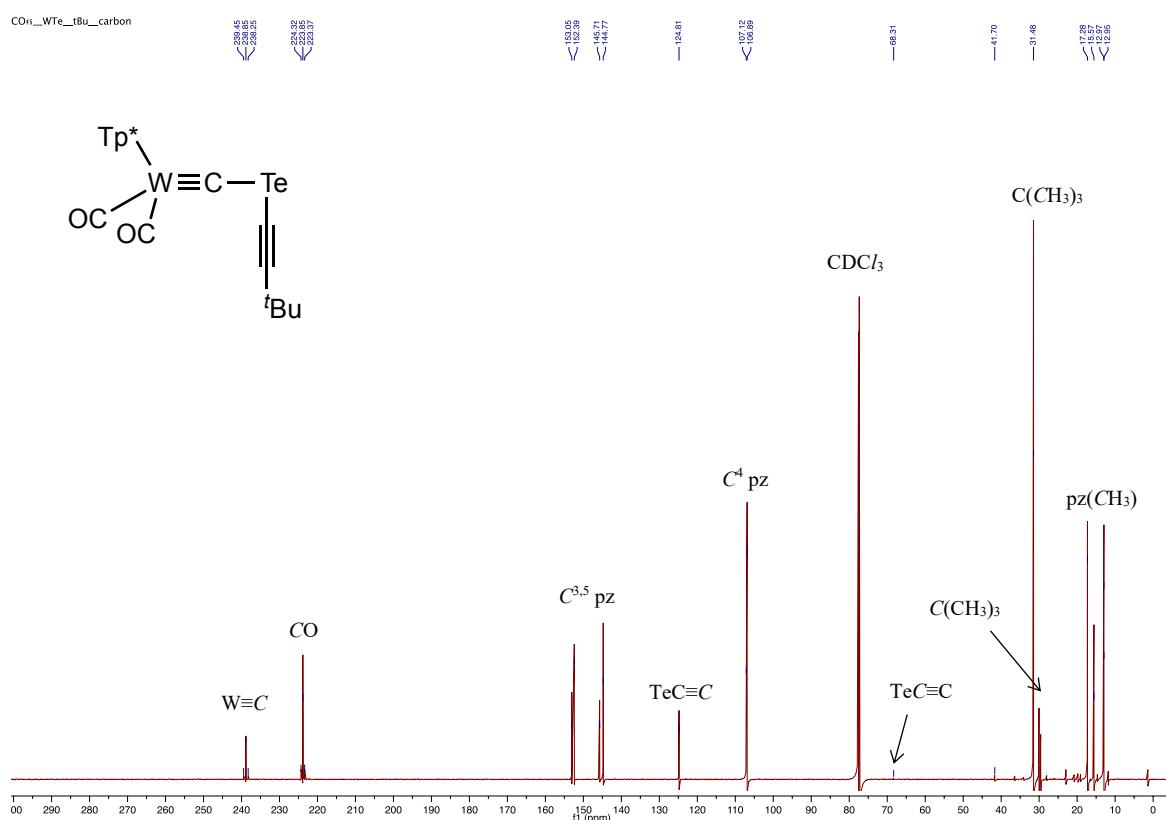


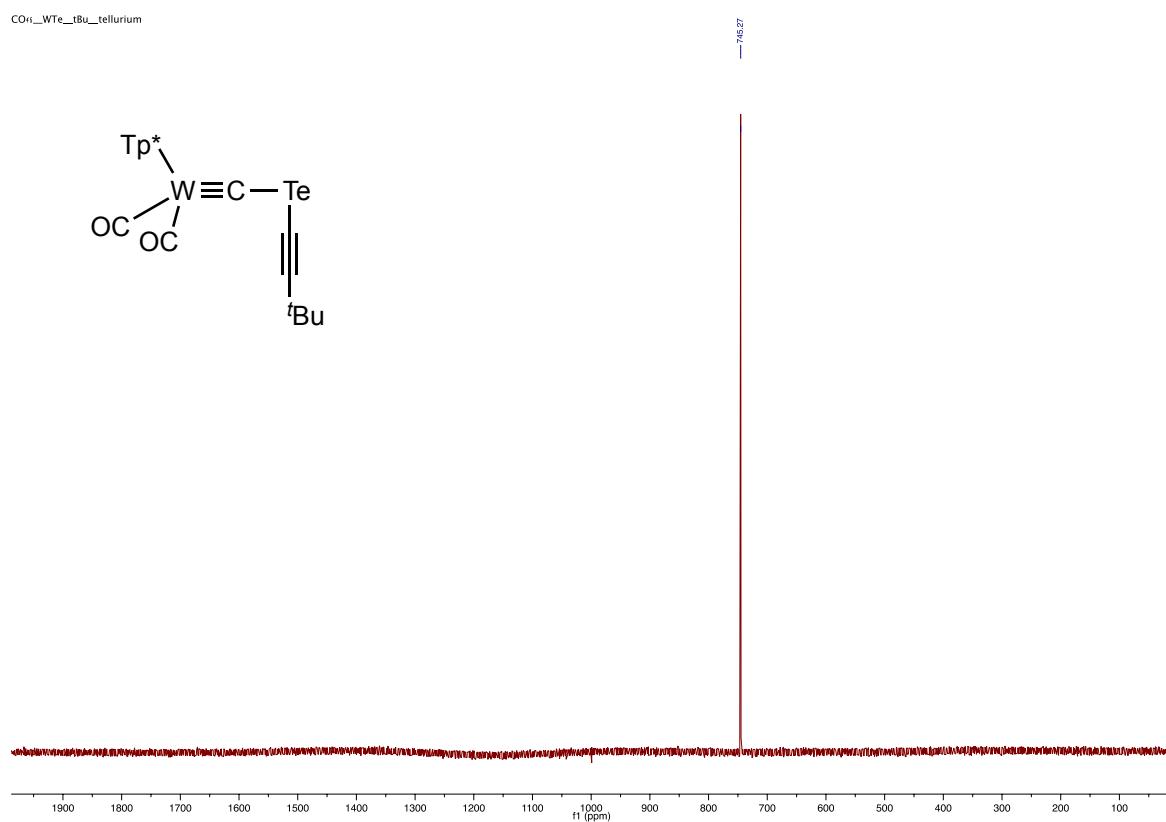
¹²⁵Te{¹H} NMR spectrum (126 MHz, CDCl₃, 25°C, δ) of compound A.3.



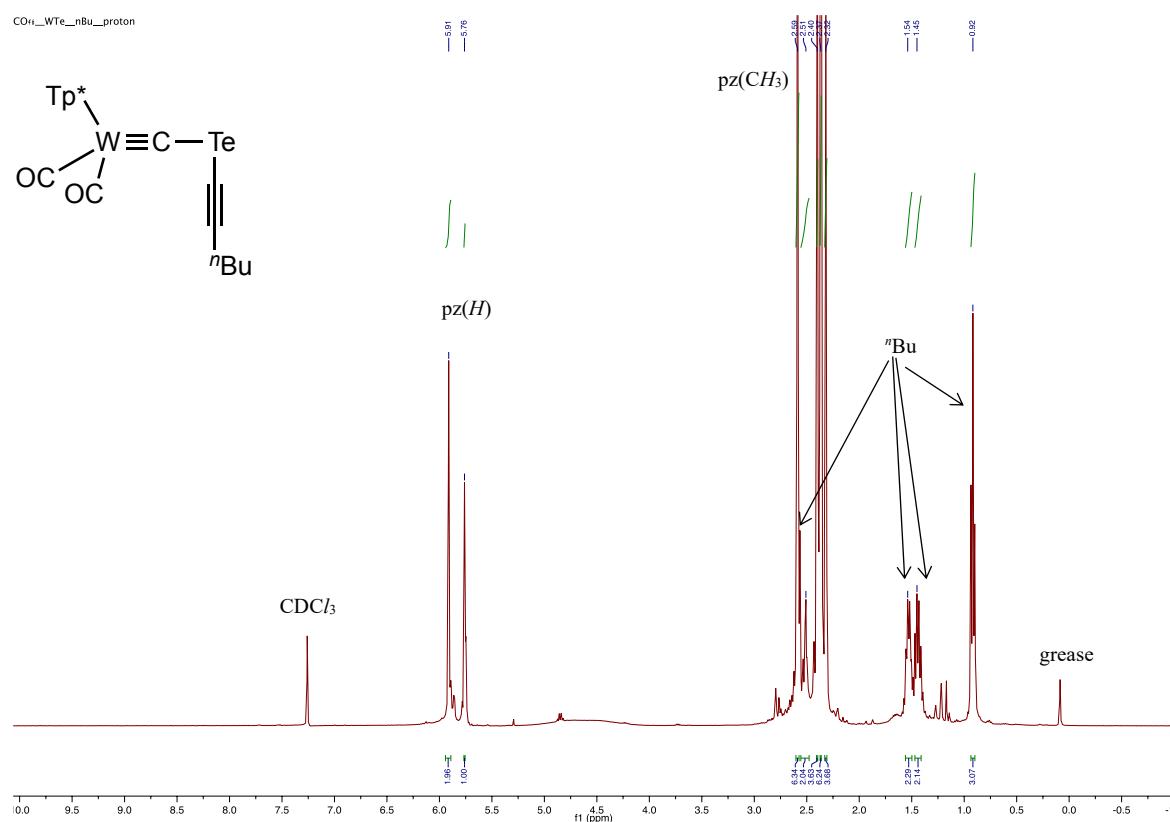


$^{71}\text{Te}\{\text{H}\}$ NMR spectrum (126 MHz, CDCl₃, 25°C, δ) of compound A.4.

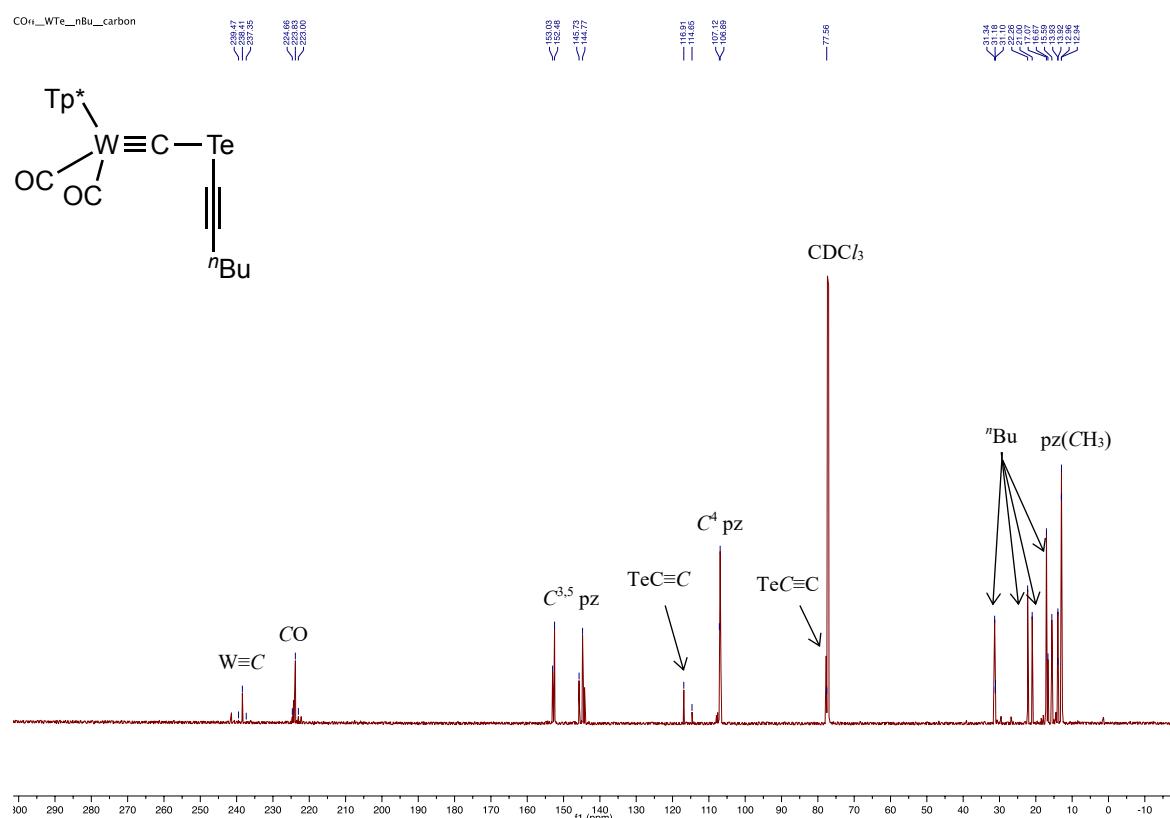
 ^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound A.5. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound A.5.



$^{125}\text{Te}\{^1\text{H}\}$ NMR spectrum (126 MHz, CDCl_3 , 25°C, δ) of compound A.5.

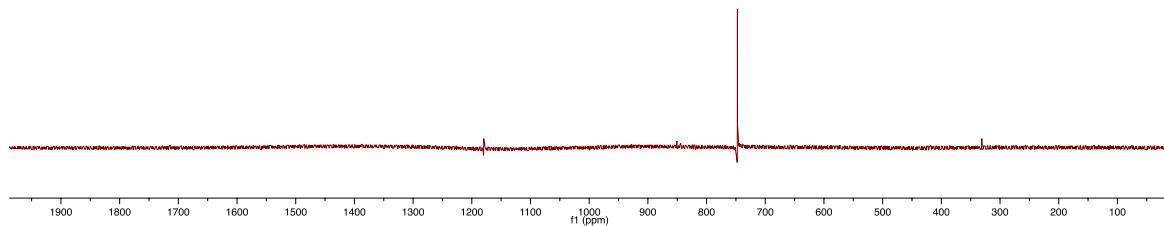
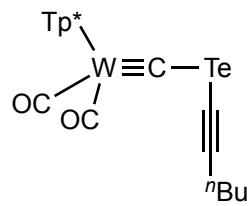


¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.6.

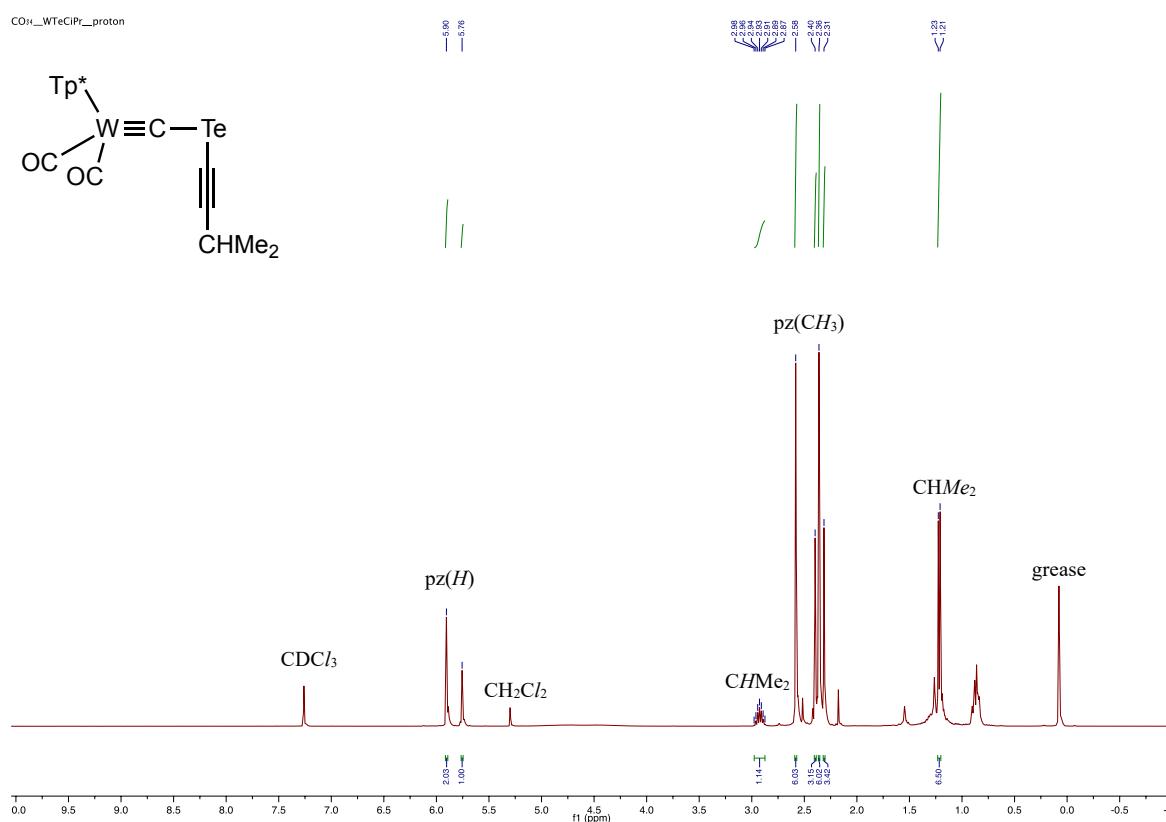


¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound A.6.

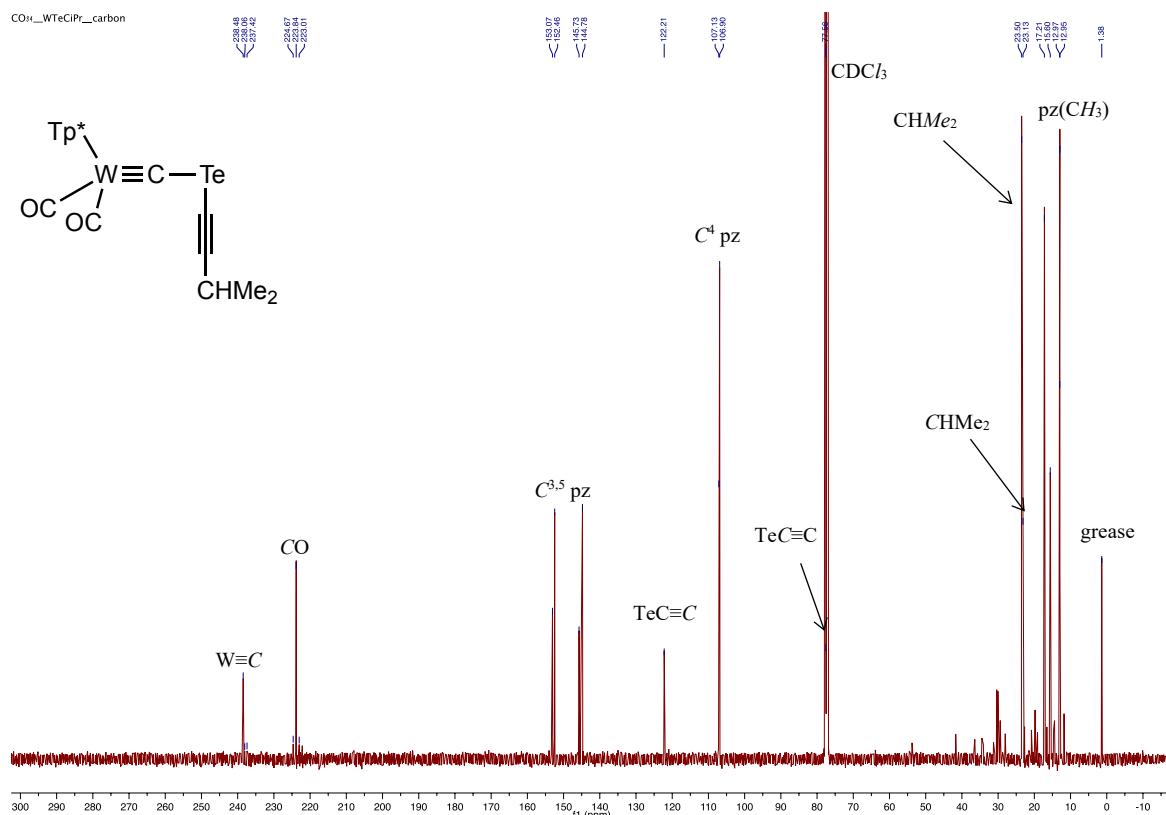
COH—WTe—nBu—tellurium



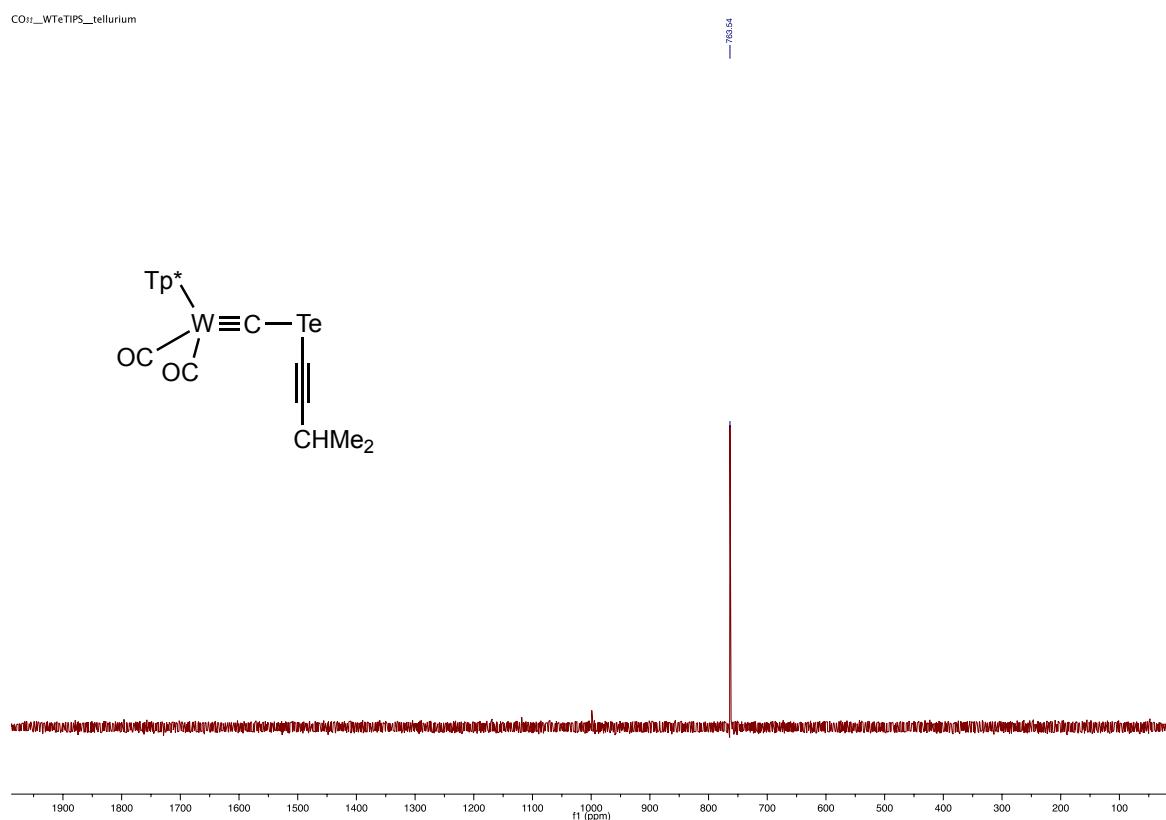
¹²⁵Te{¹H} NMR spectrum (126 MHz, CDCl₃, 25°C, δ) of compound A.6.



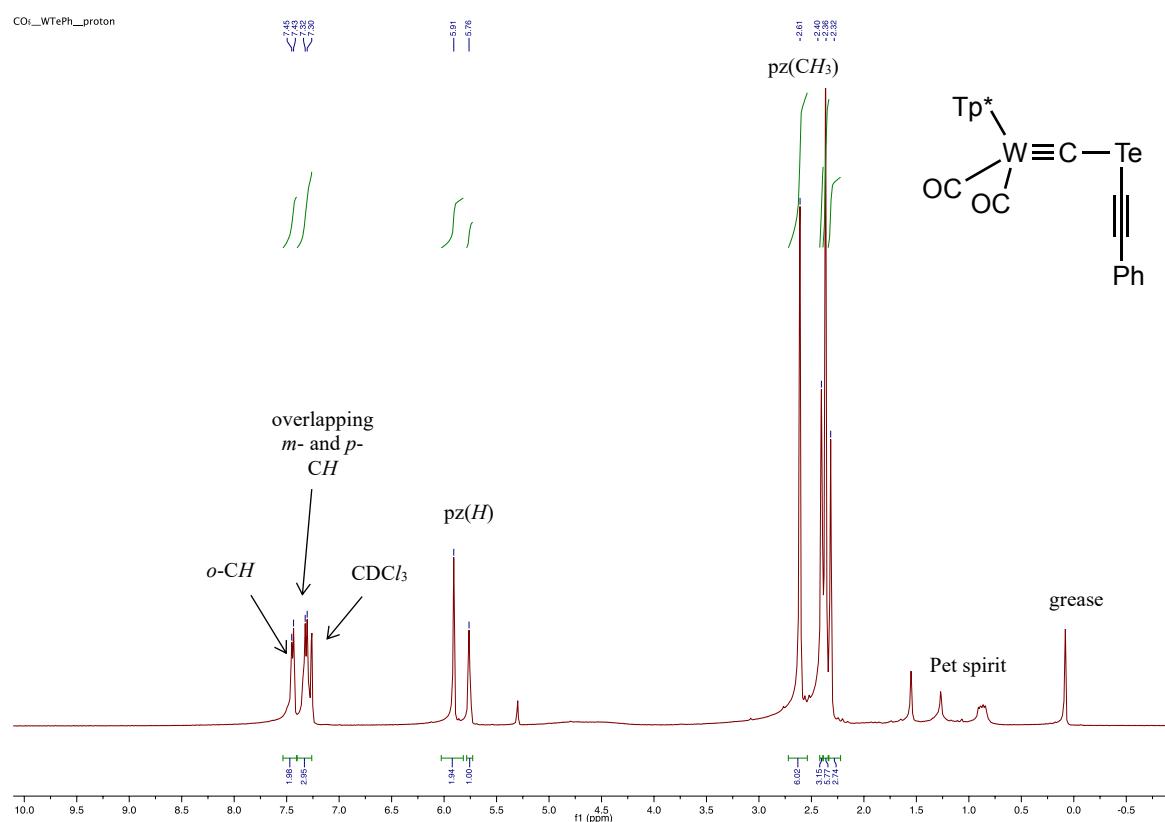
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound A.7.



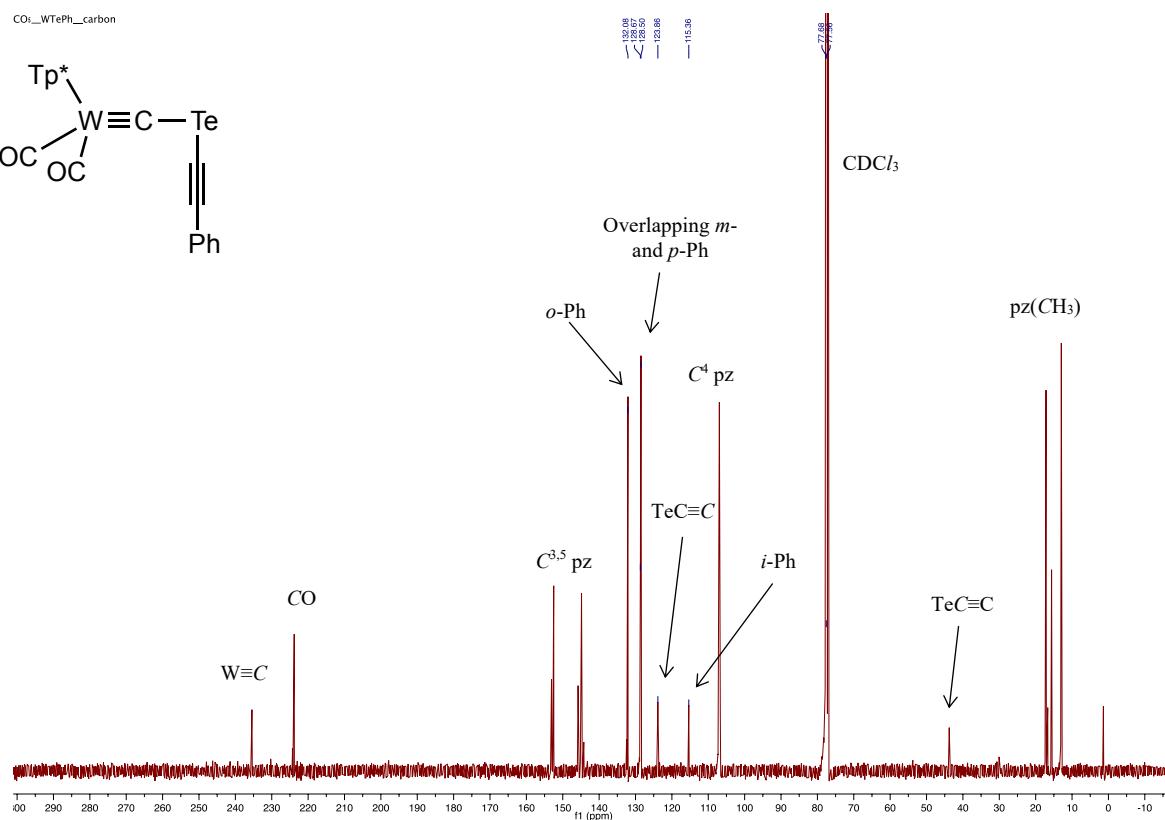
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound A.7.



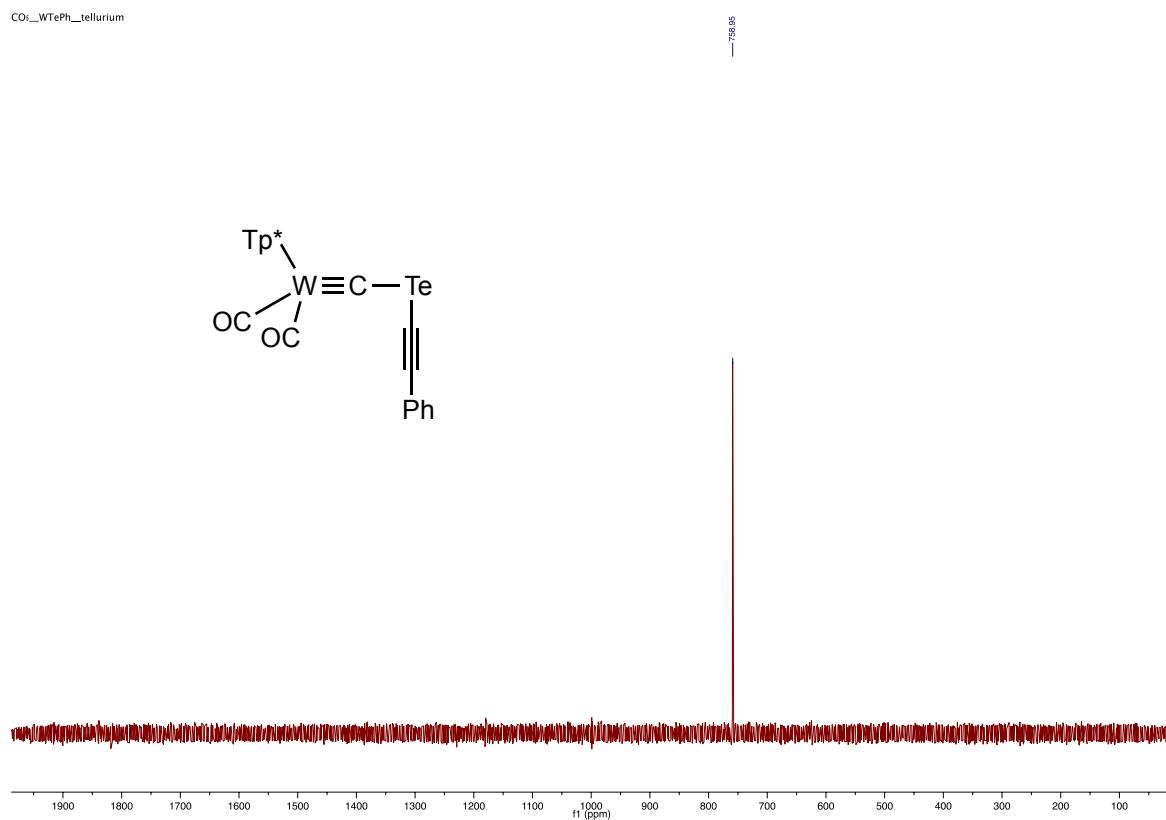
¹²⁵Te{¹H} NMR spectrum (126 MHz, CDCl₃, 25°C, δ) of compound A.7.



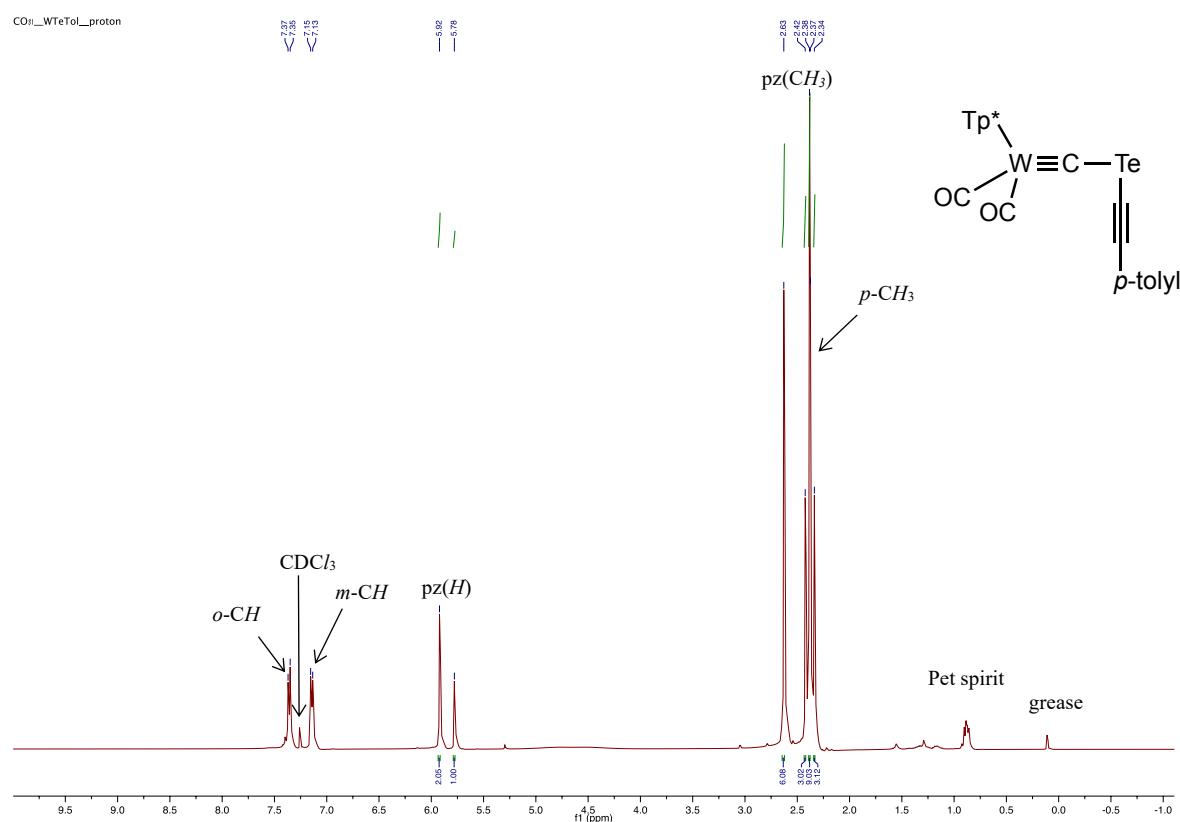
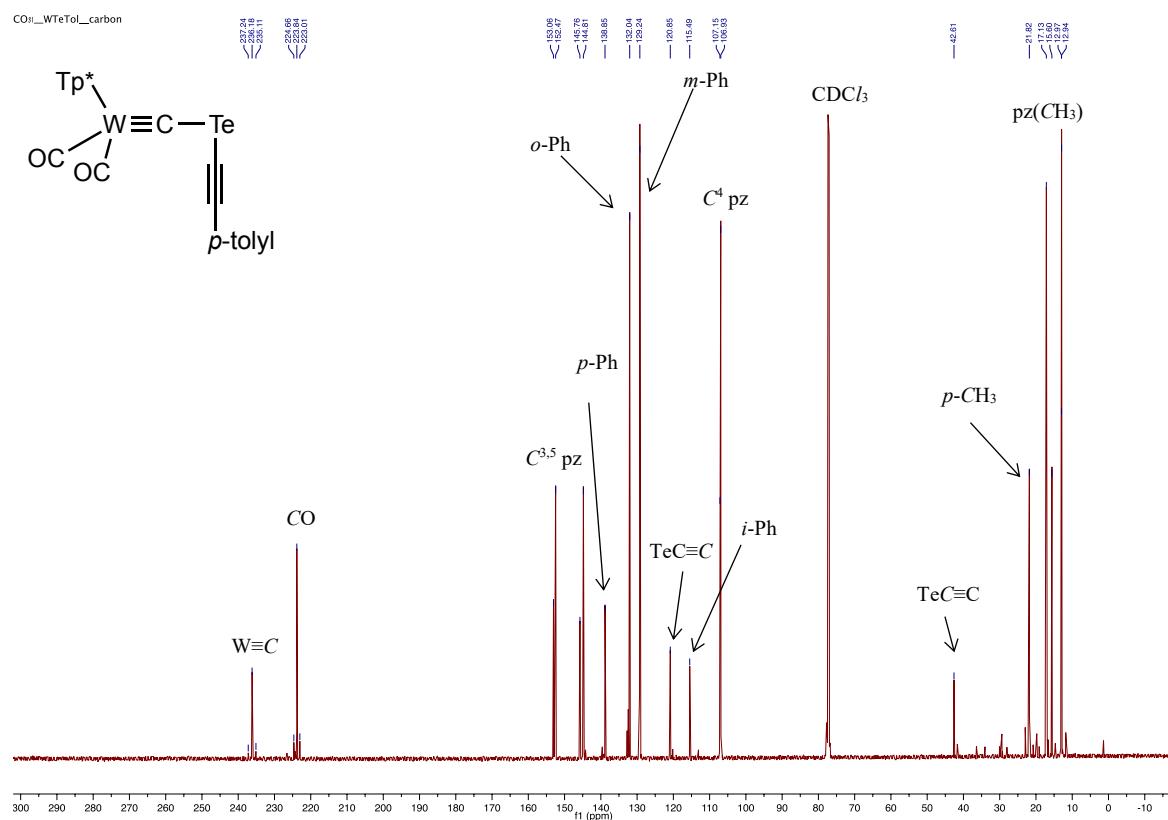
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound A.8.



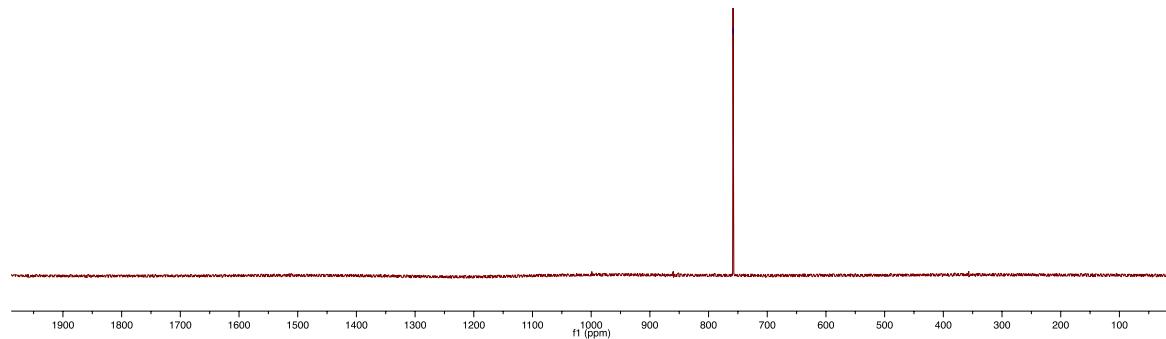
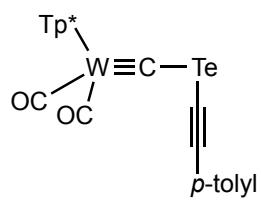
$^{13}\text{C}\{\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound A.8.



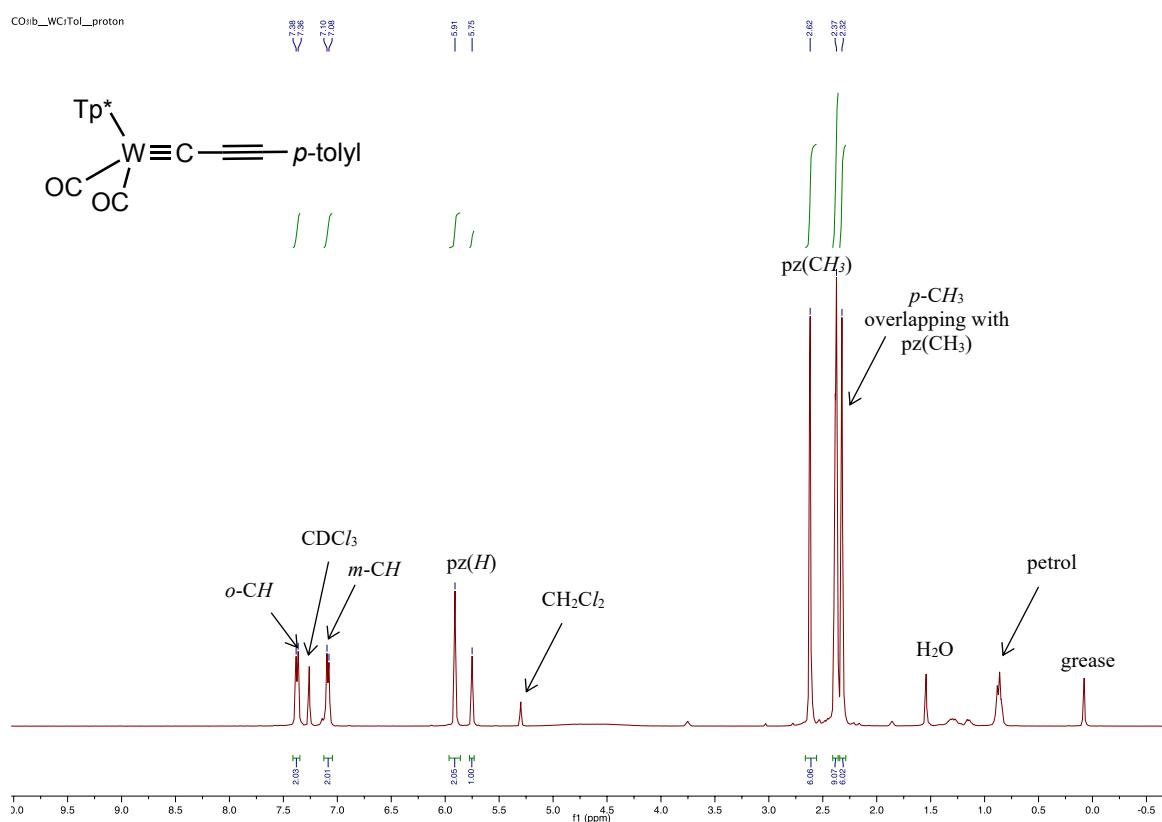
$^{125}\text{Te}\{\text{H}\}$ NMR spectrum (126 MHz, CDCl_3 , 25°C, δ) of compound **A.8**.

¹H NMR spectrum (400 MHz, *CDCl*₃, 25°C, δ) of compound A.9.¹³C{¹H} NMR spectrum (101 MHz, *CDCl*₃, 25°C, δ) of compound A.9.

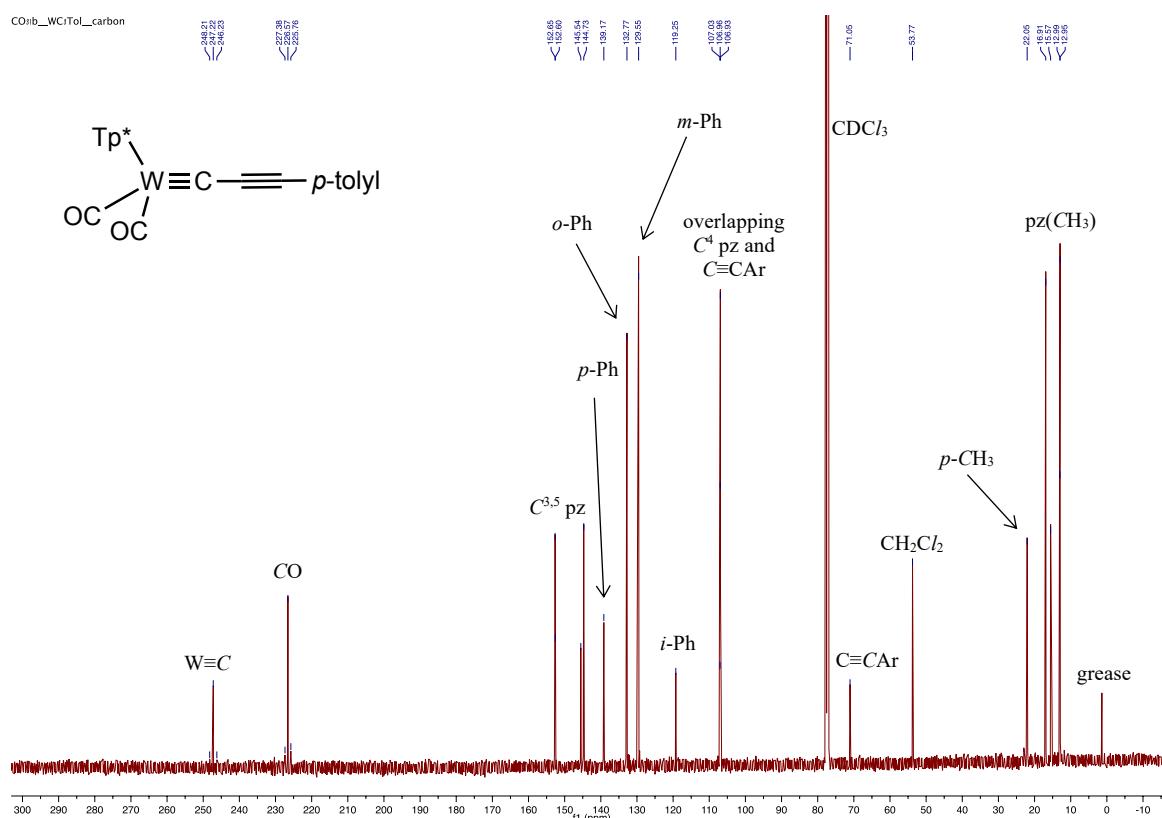
CO!!_WTeTol_tellurium

—
758.27

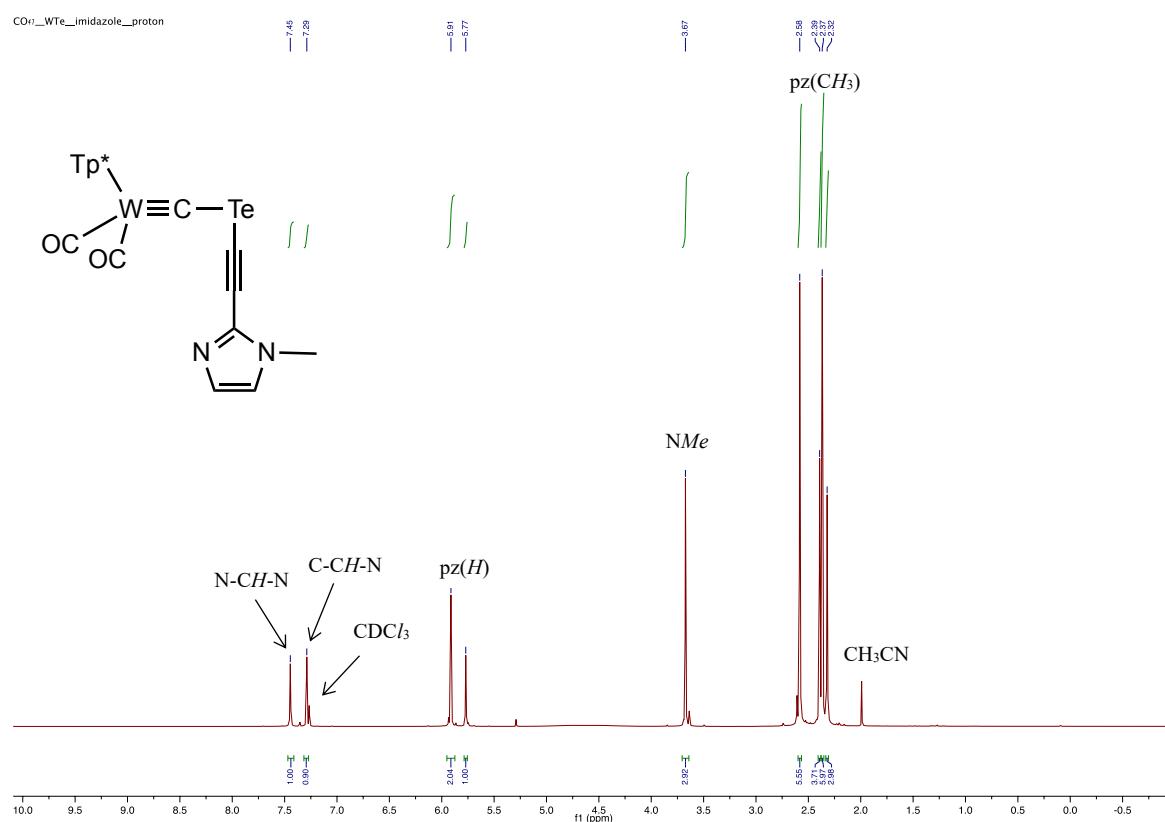
$^{125}\text{Te}\{^1\text{H}\}$ NMR spectrum (126 MHz, CDCl_3 , 25°C, δ) of compound **A.9**.



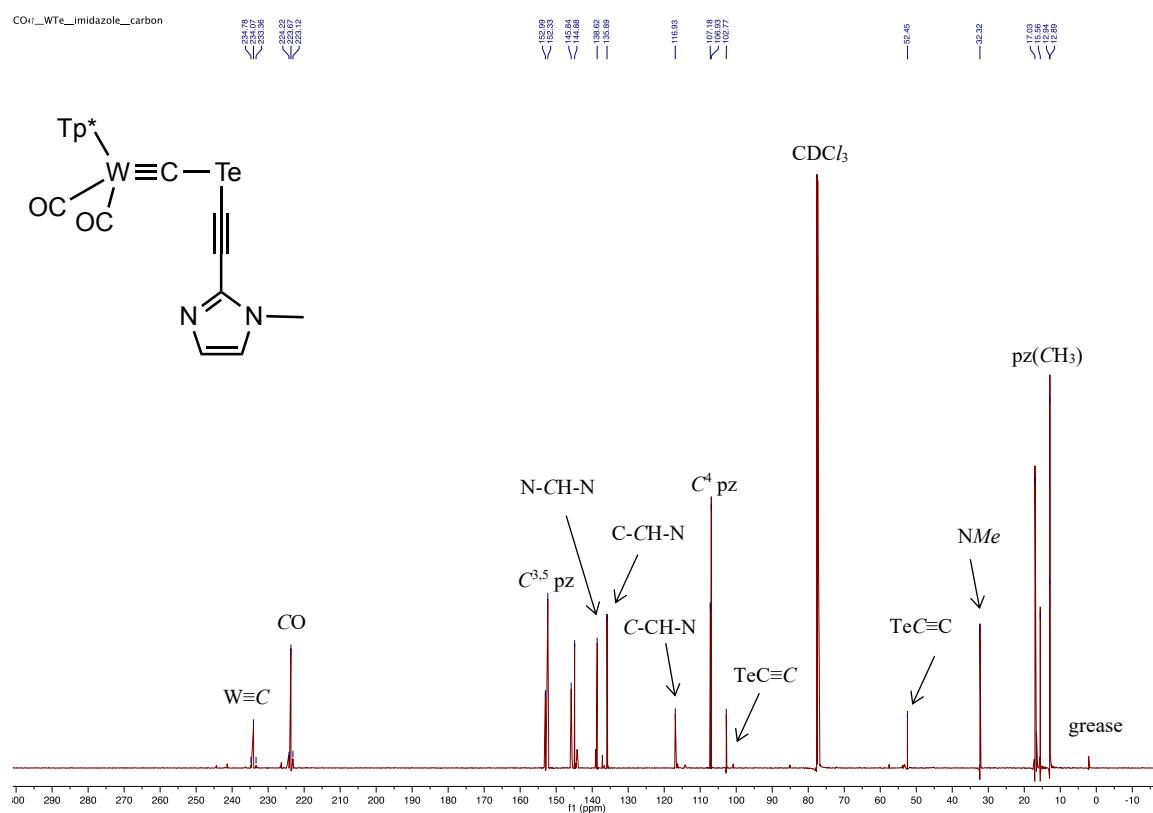
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound A.9a.



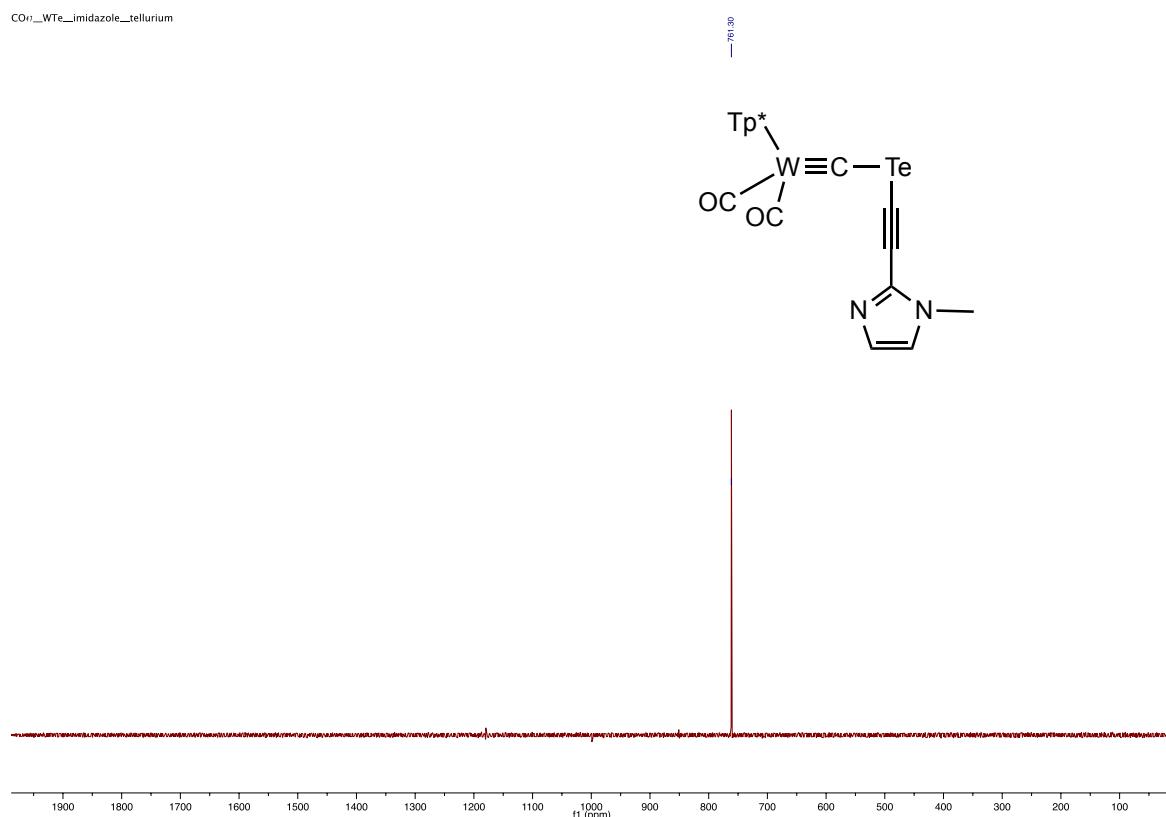
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound A.9a.



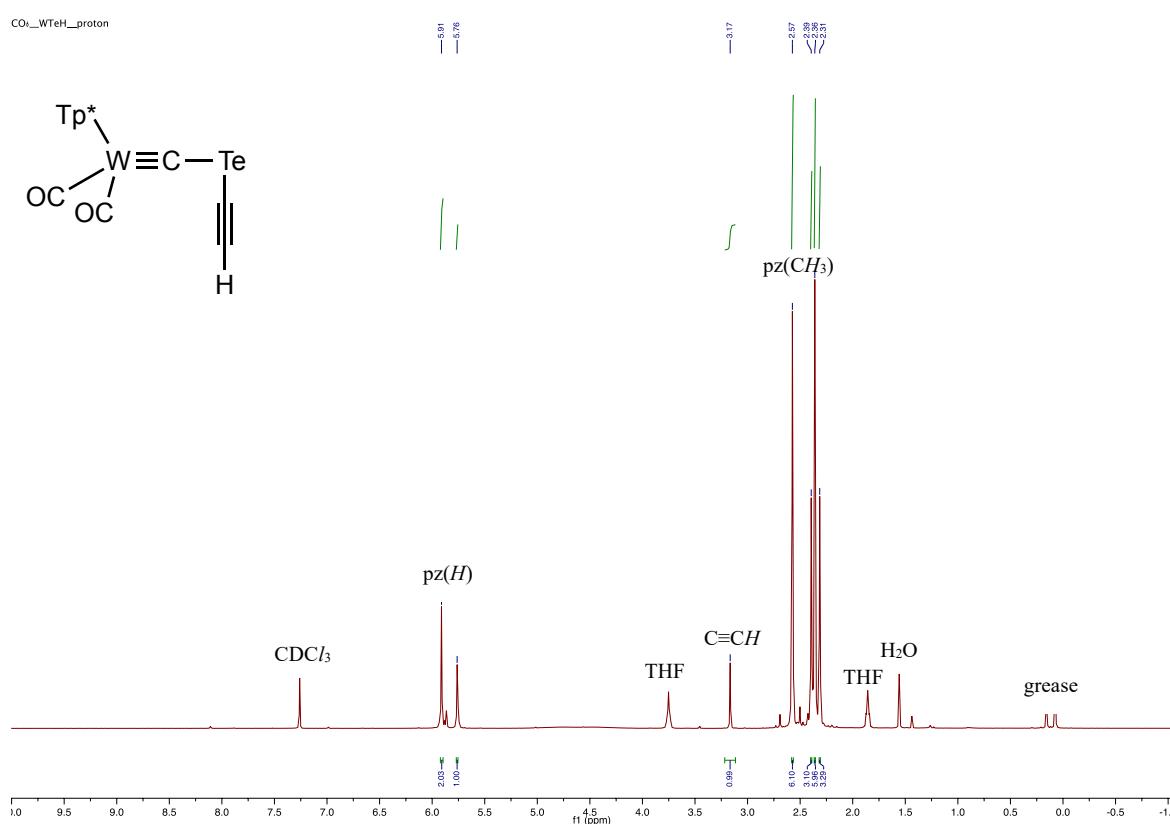
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound A.10.



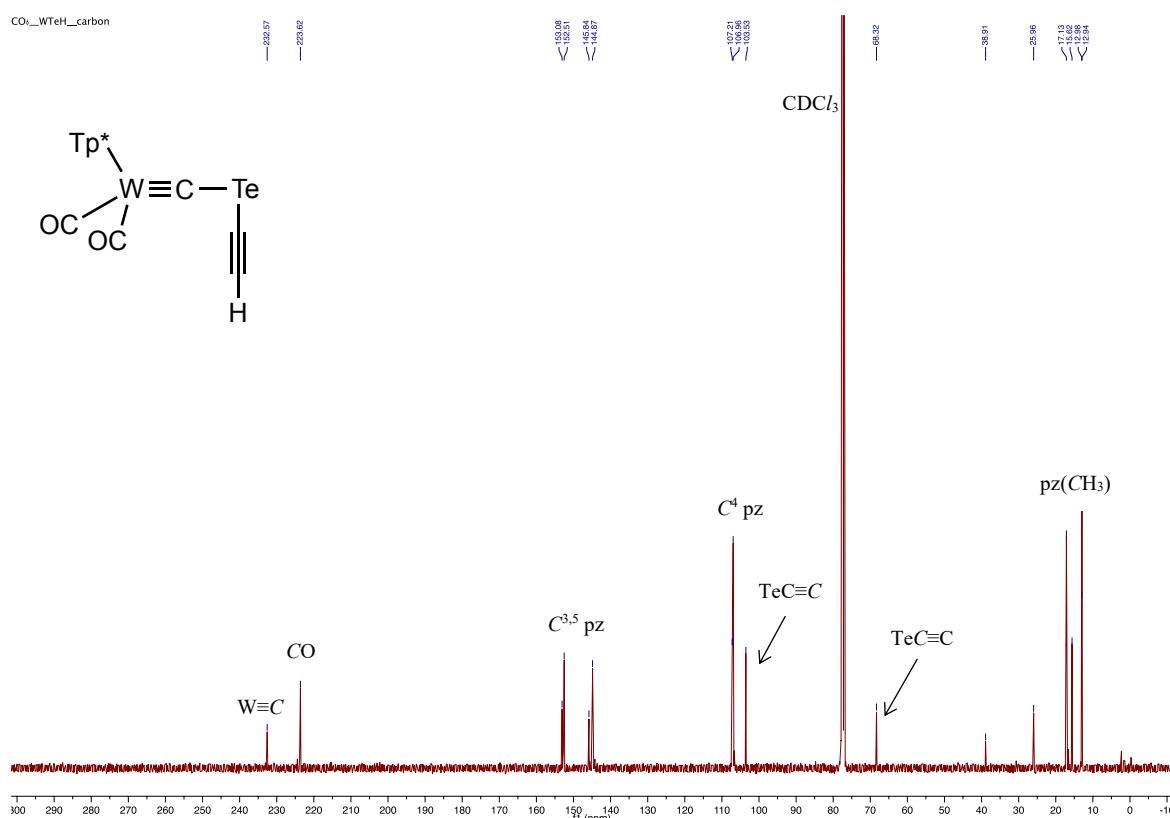
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound A.10.



$^{125}\text{Te}\{\text{H}\}$ NMR spectrum (126 MHz, CDCl_3 , 25°C, δ) of compound A.10.



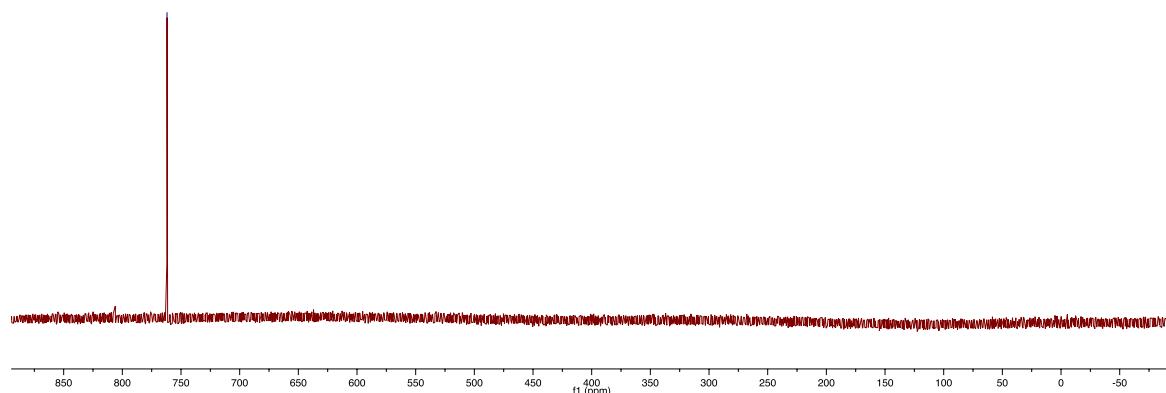
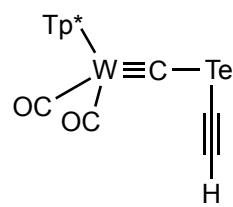
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.11.



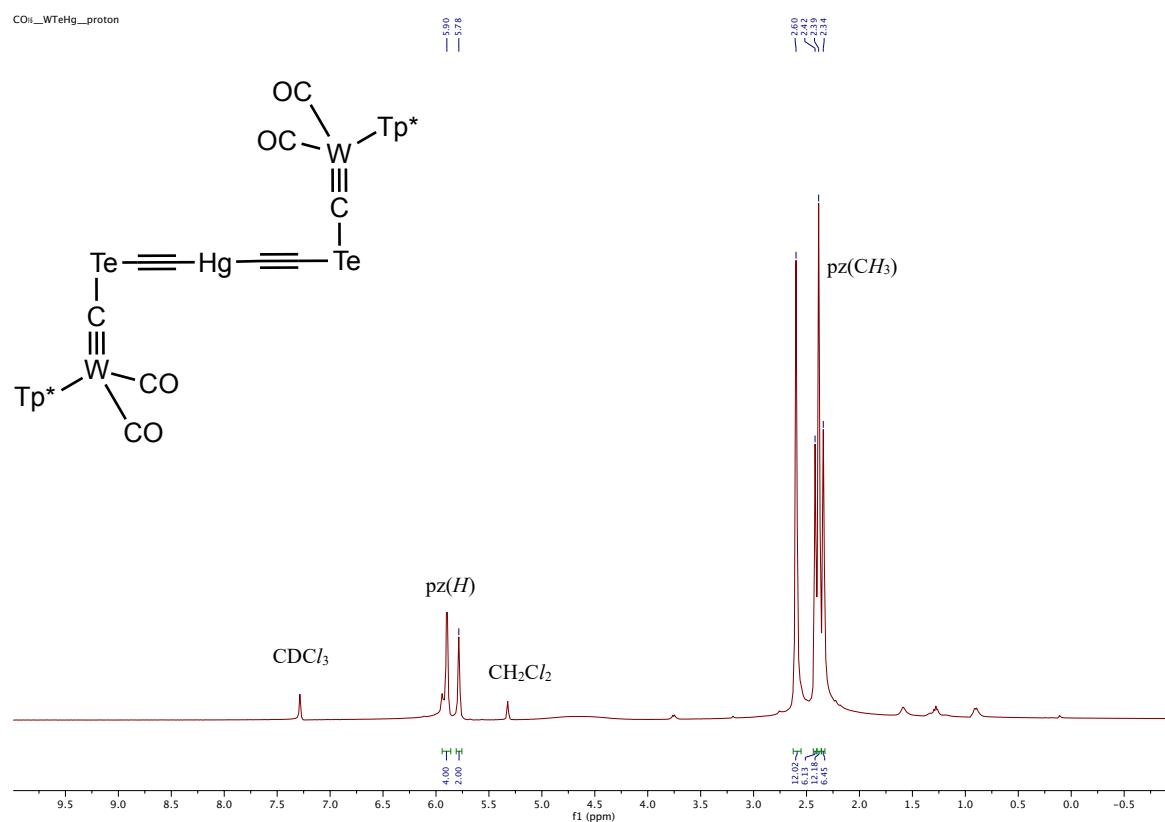
¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound A.11.

CO₂_WTeH_tellurium

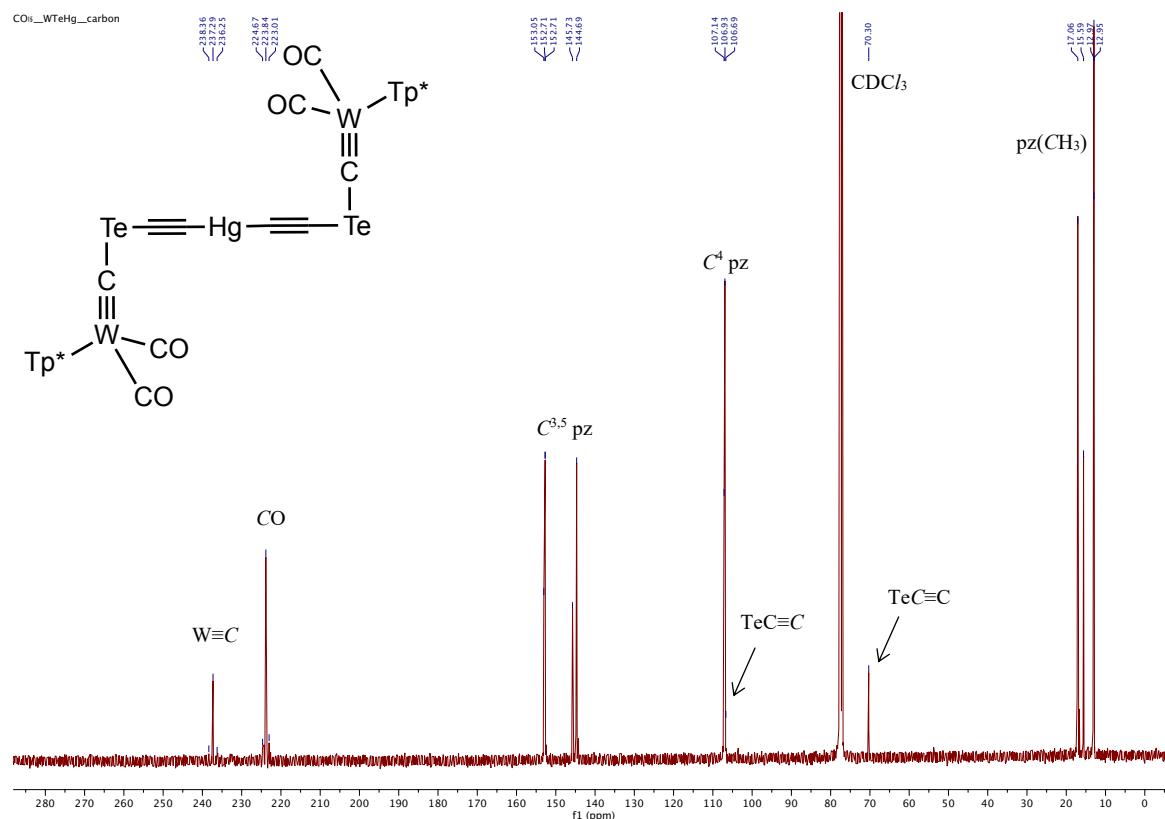
— 781.92



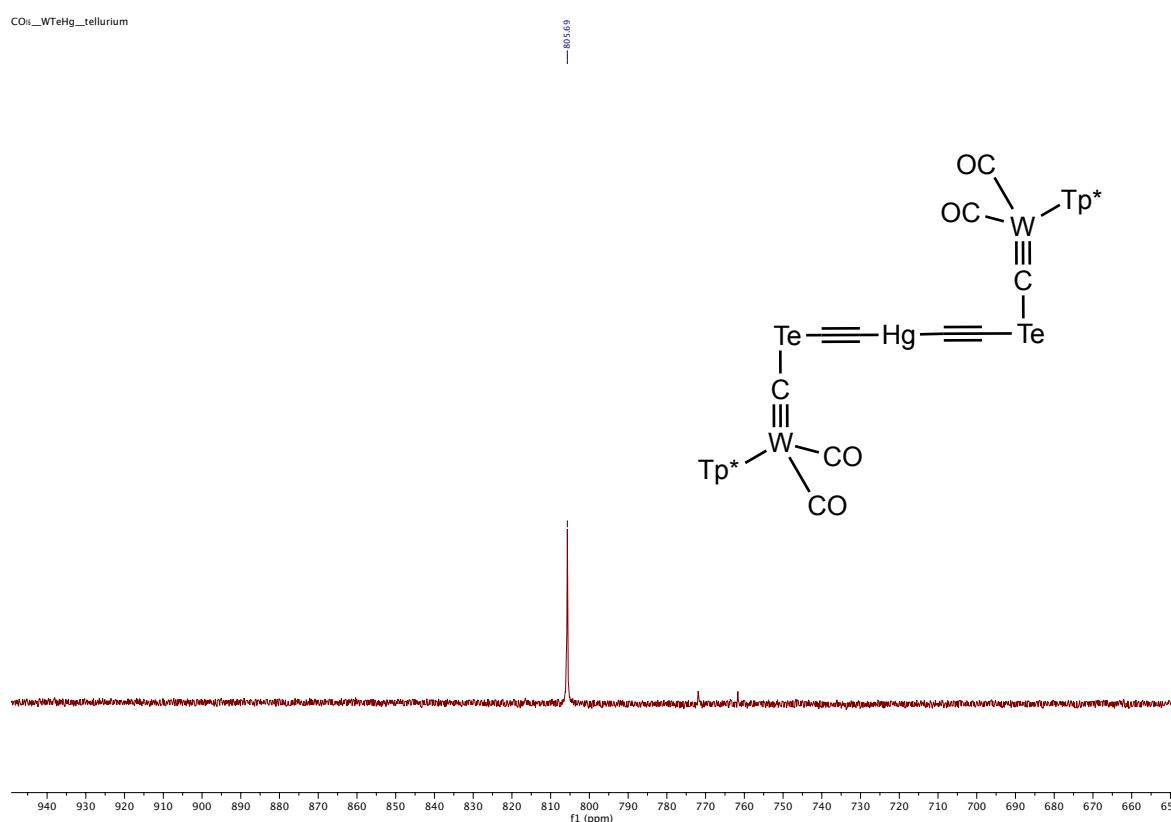
¹²⁵Te{¹H} NMR spectrum (126 MHz, CDCl₃, 25°C, δ) of compound A.11.



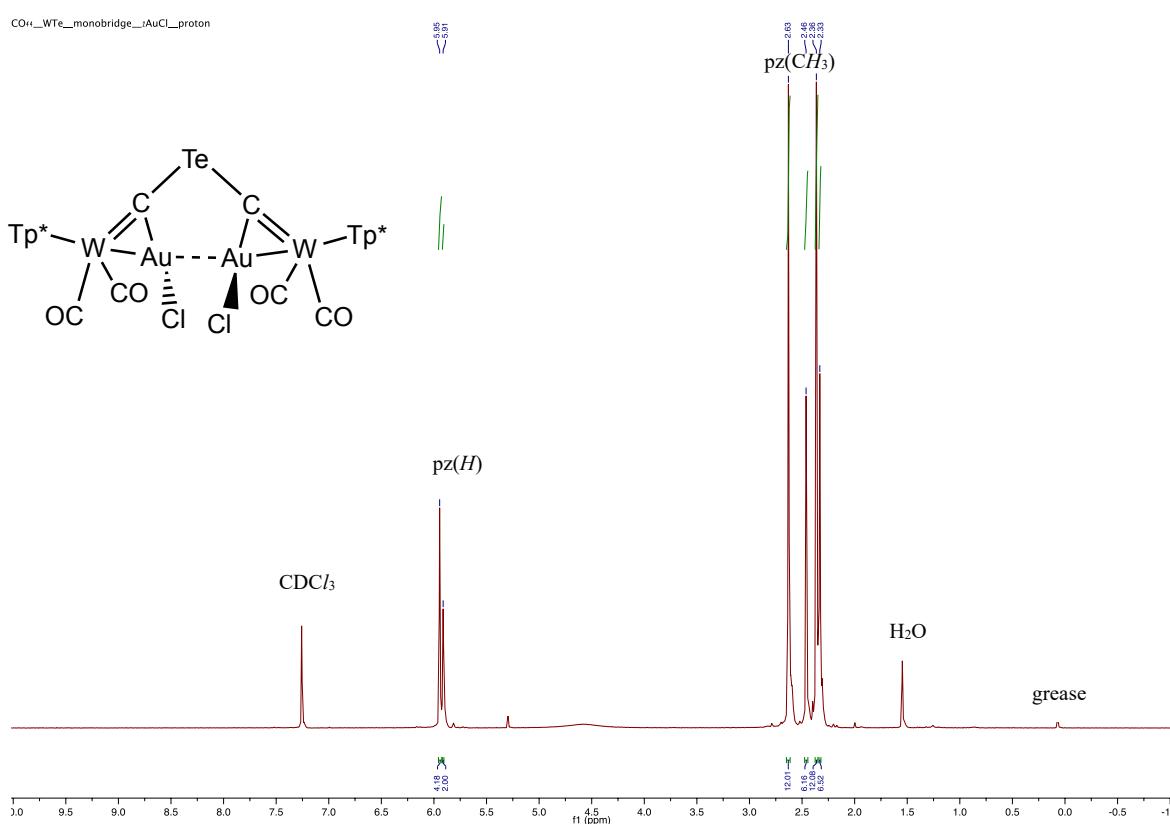
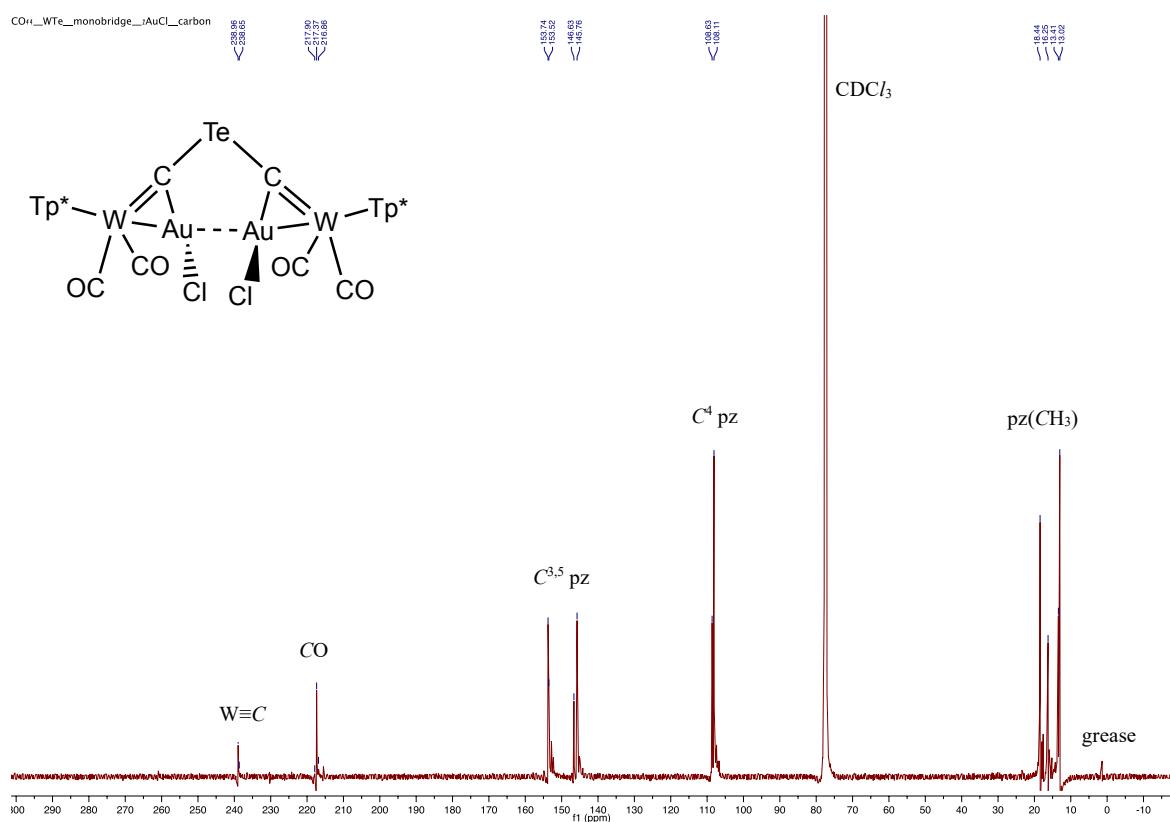
^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound A.12.

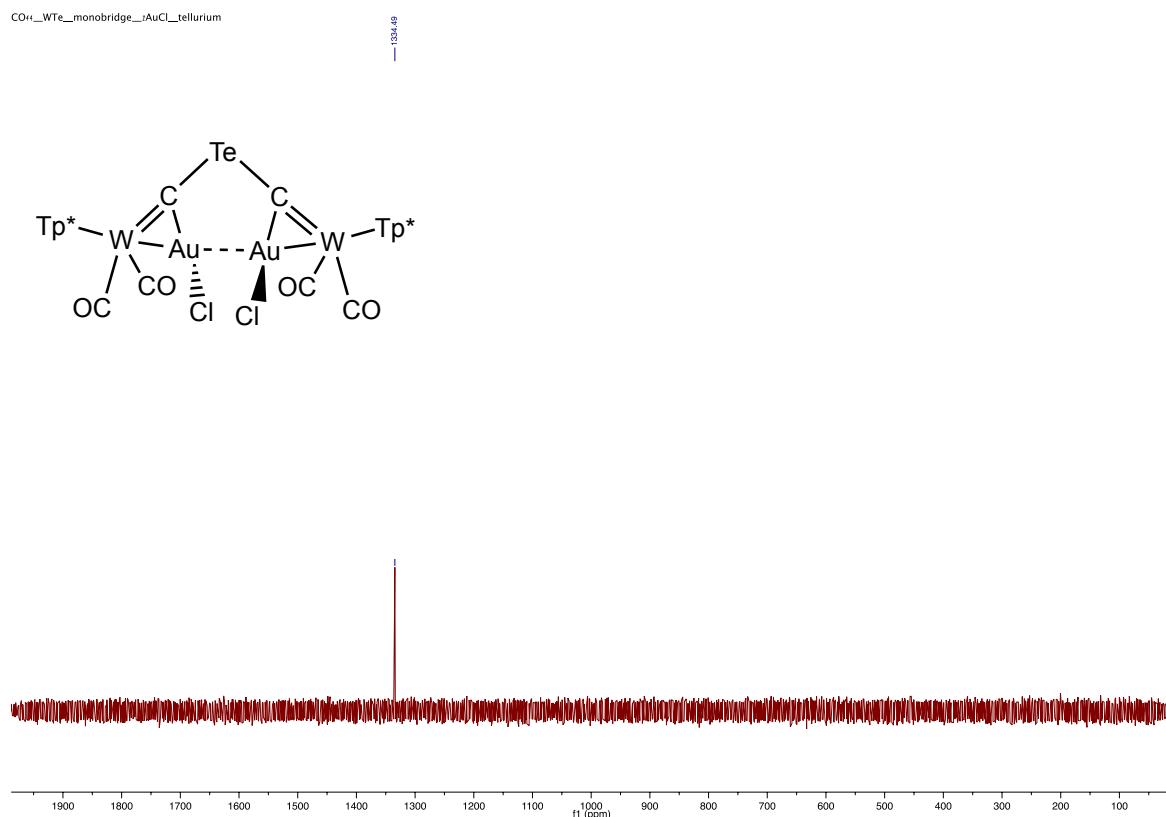


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl_3 , 25°C, δ) of compound A.12.

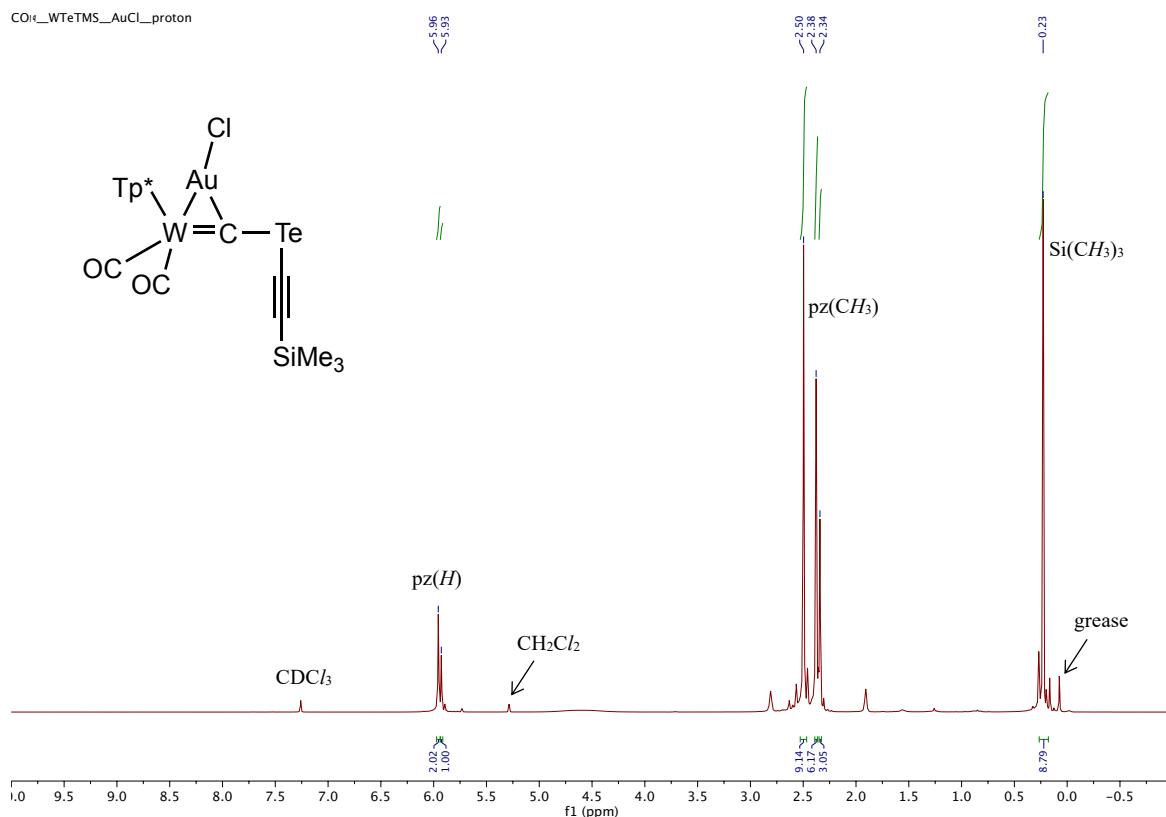
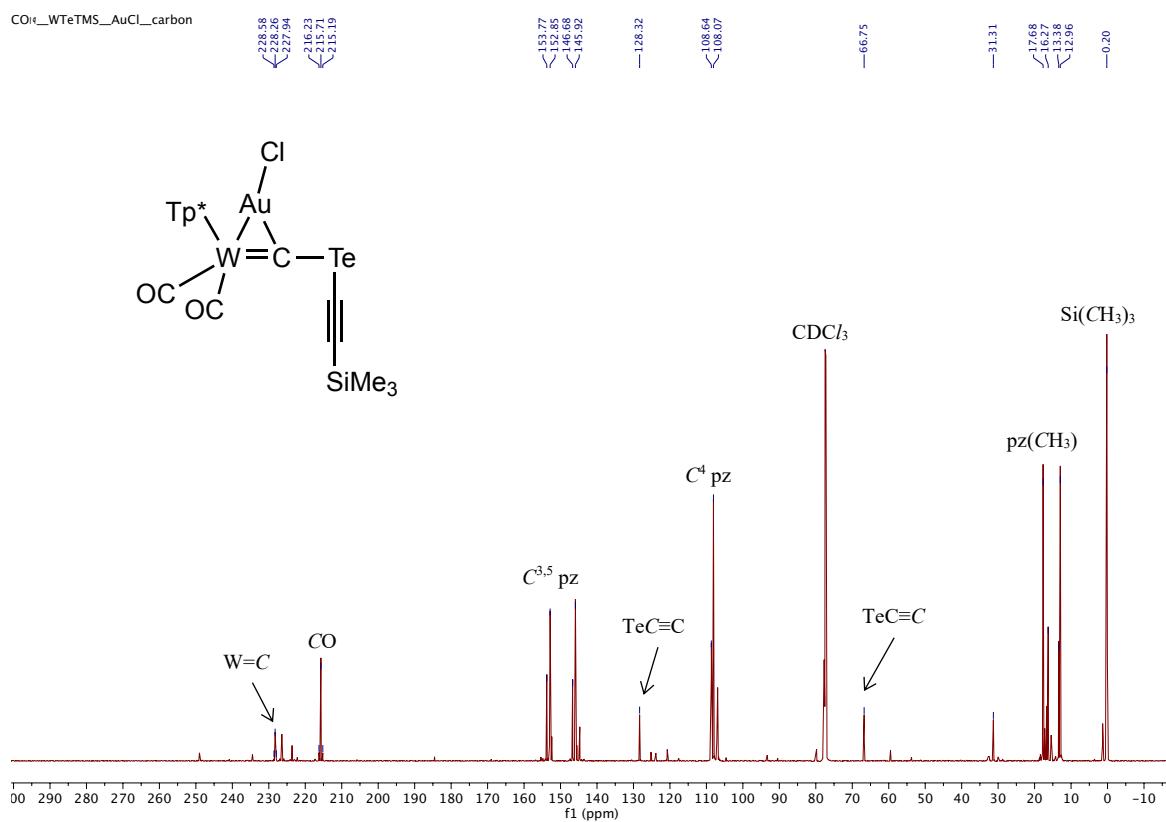


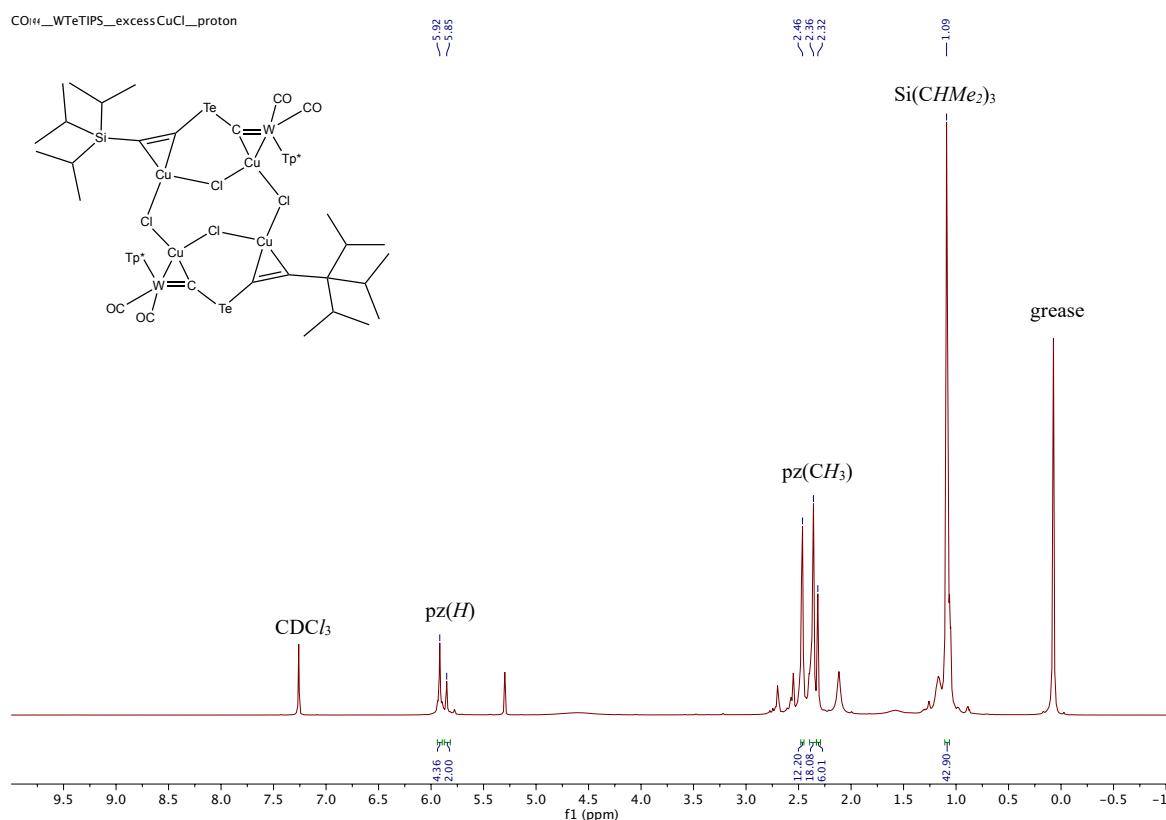
$^{125}\text{Te}\{\text{H}\}$ NMR spectrum (126 MHz, CDCl_3 , 25°C, δ) of compound **A.12**.

 ^1H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound A.13. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound A.13.

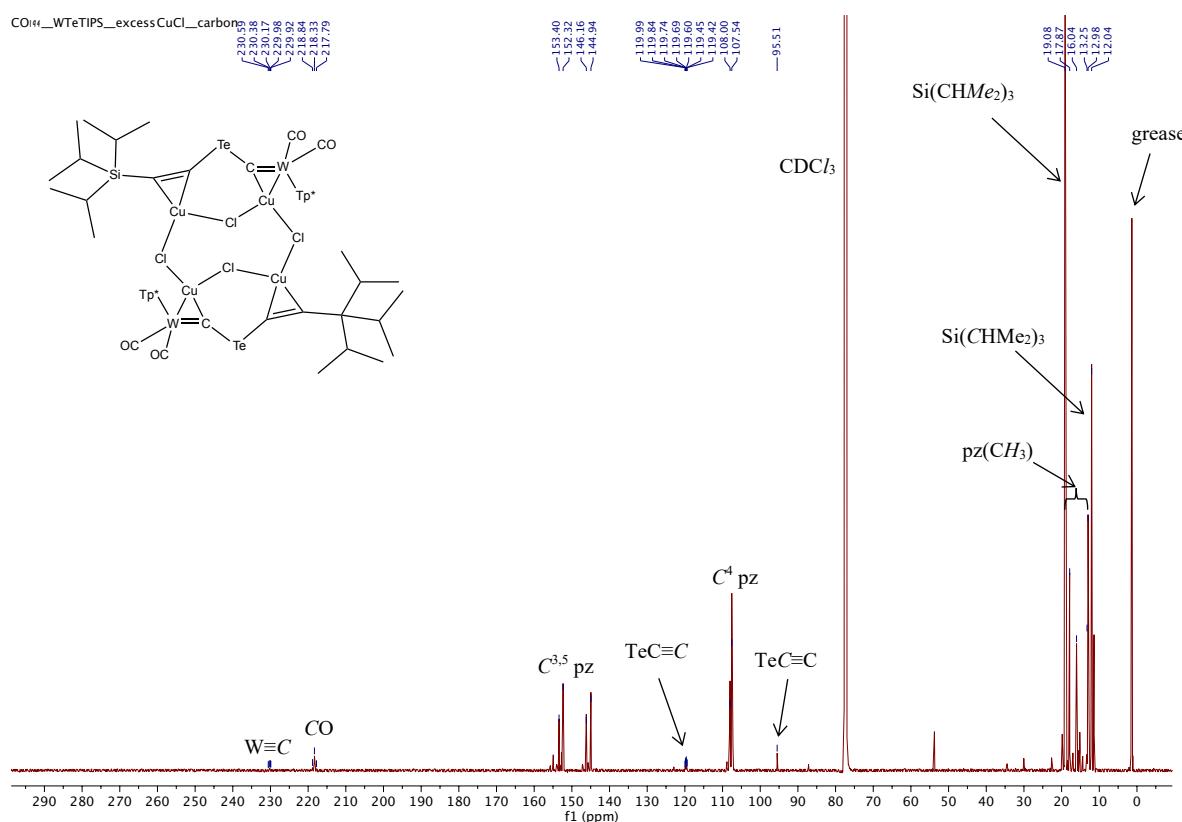


$^{125}\text{Te}\{^1\text{H}\}$ NMR spectrum (126 MHz, CDCl_3 , 25°C, δ) of compound **A.13**.

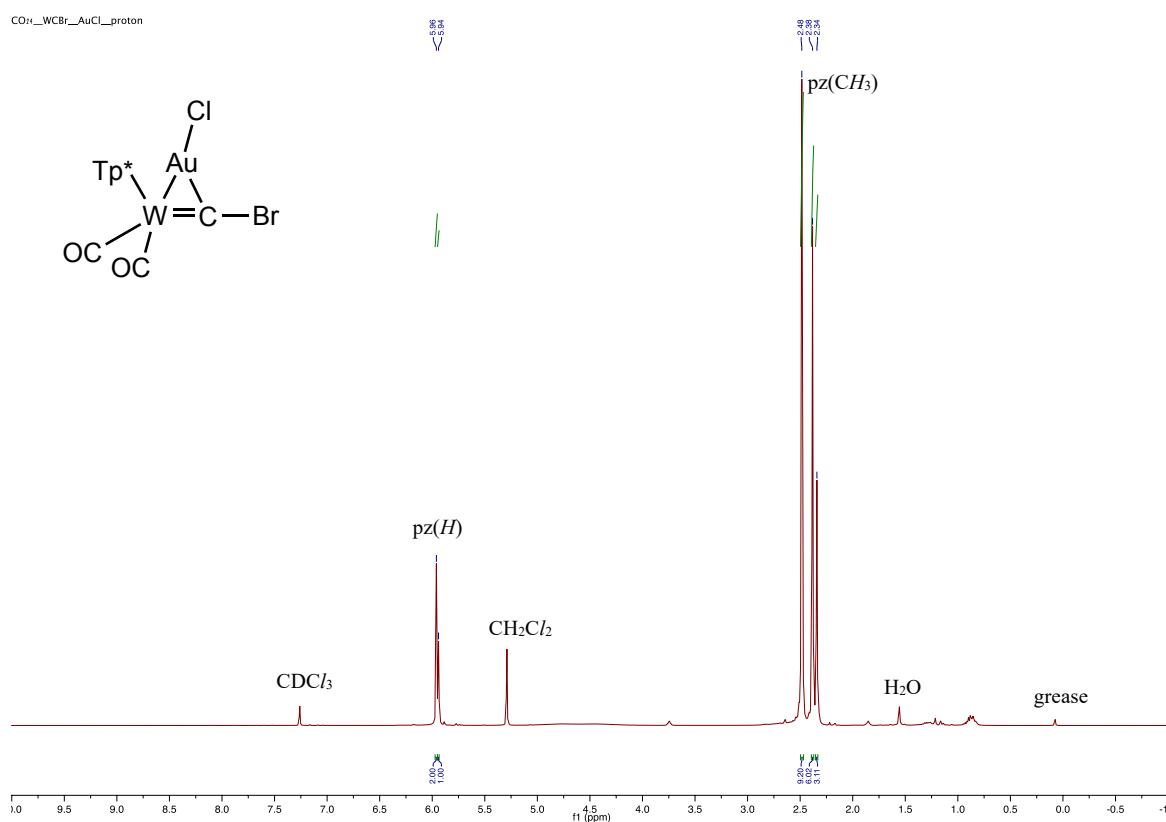
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound A.14.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound A.14.



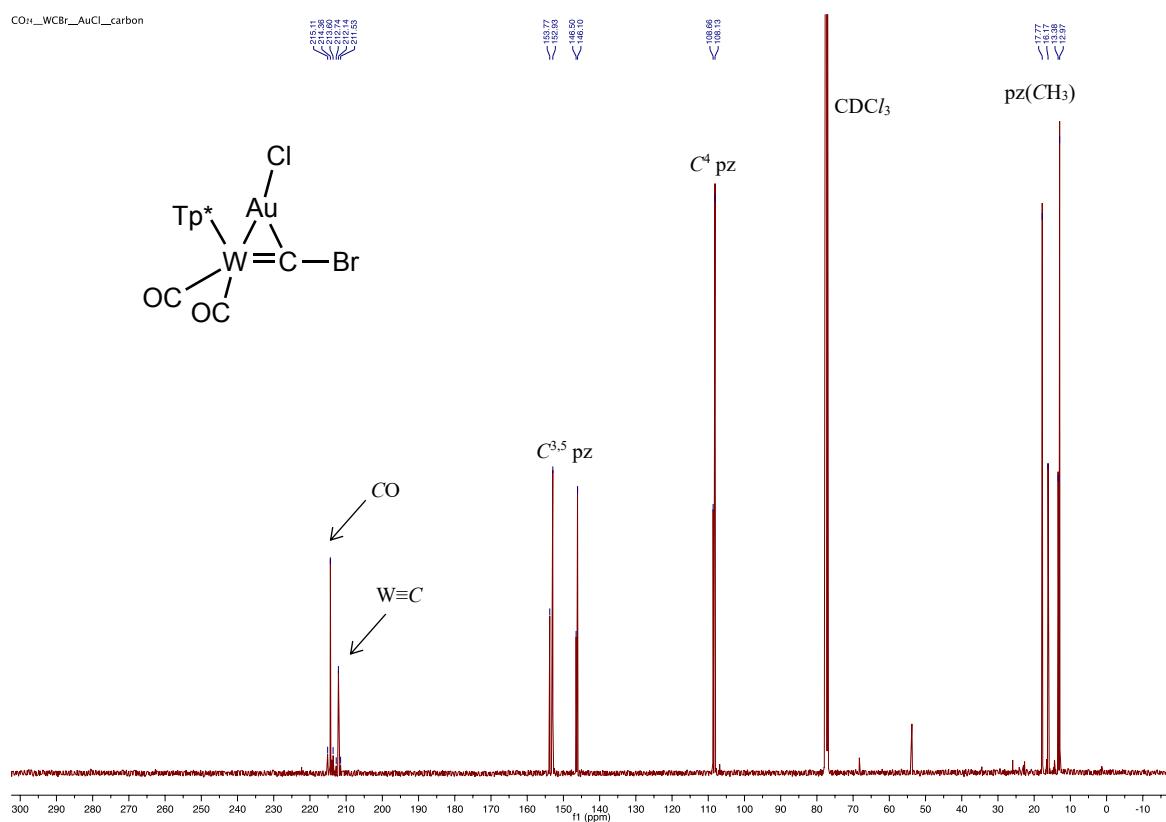
^1H NMR spectrum (600 MHz, CDCl_3 , 25°C, δ) of compound A.15.



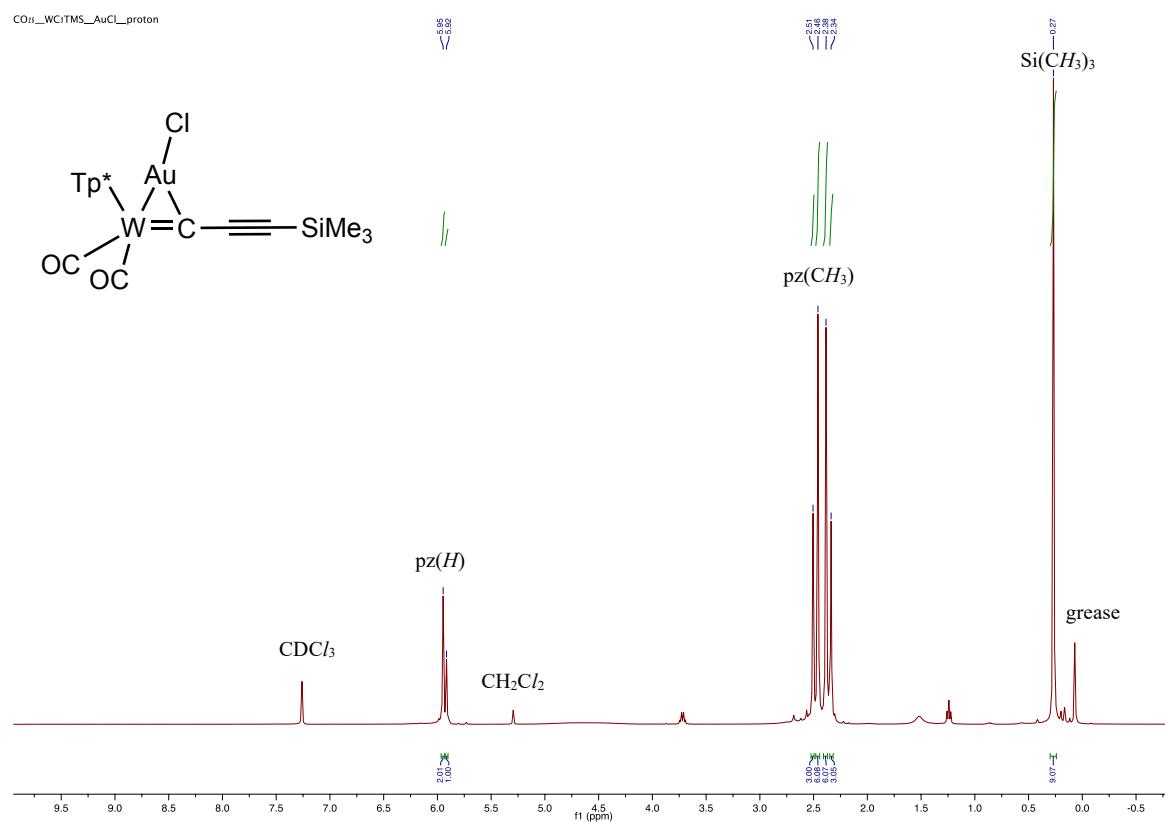
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound A.15.



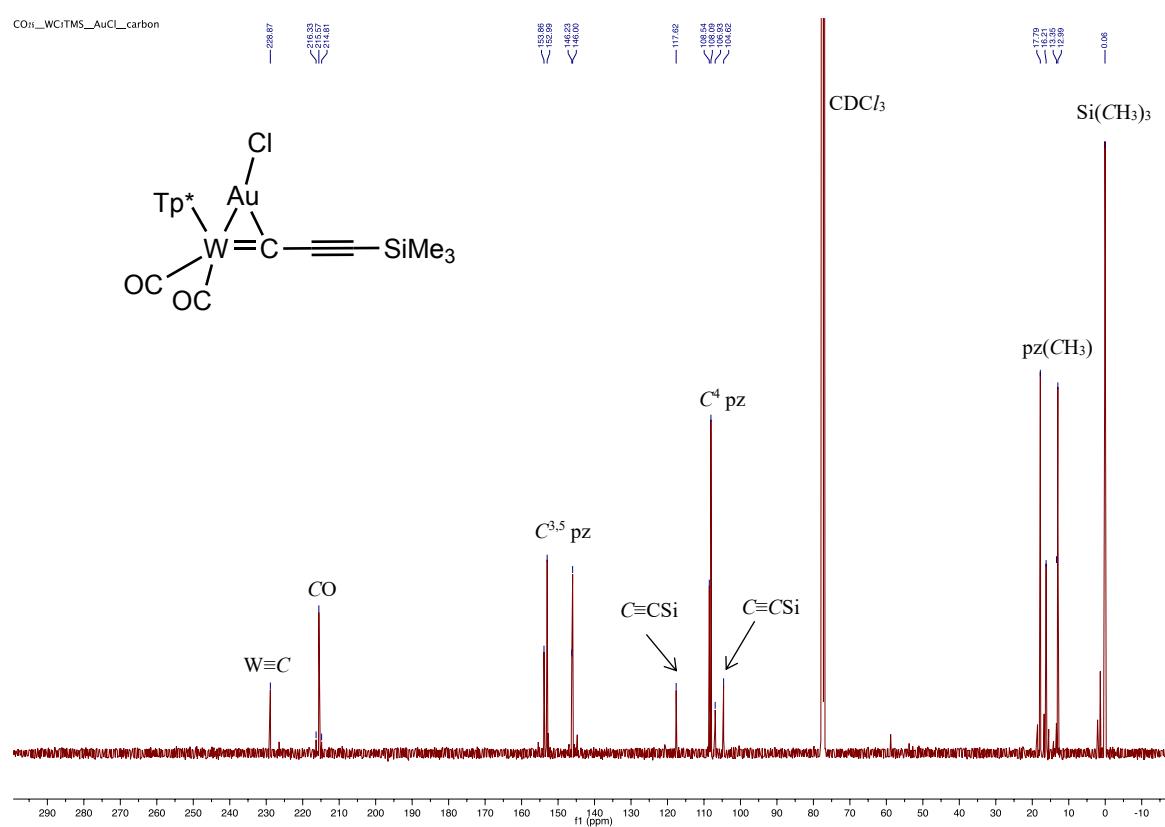
^1H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.16.



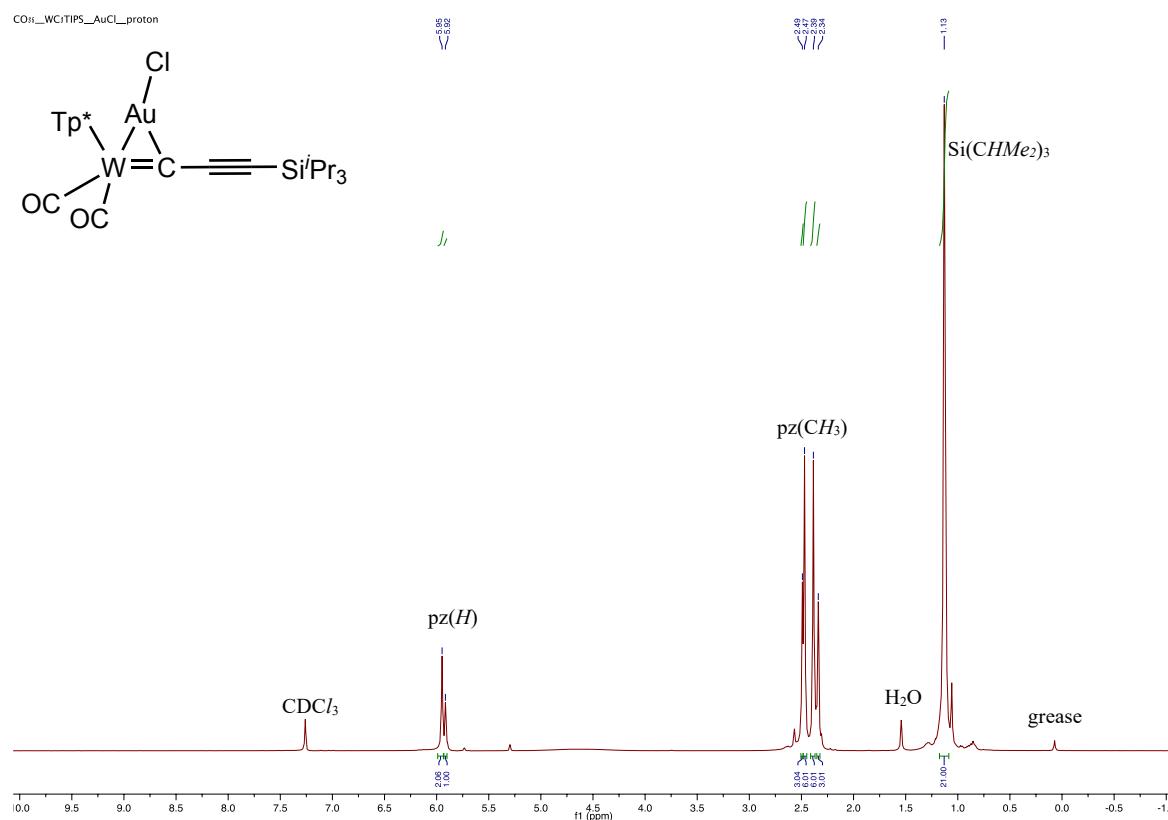
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound A.16.



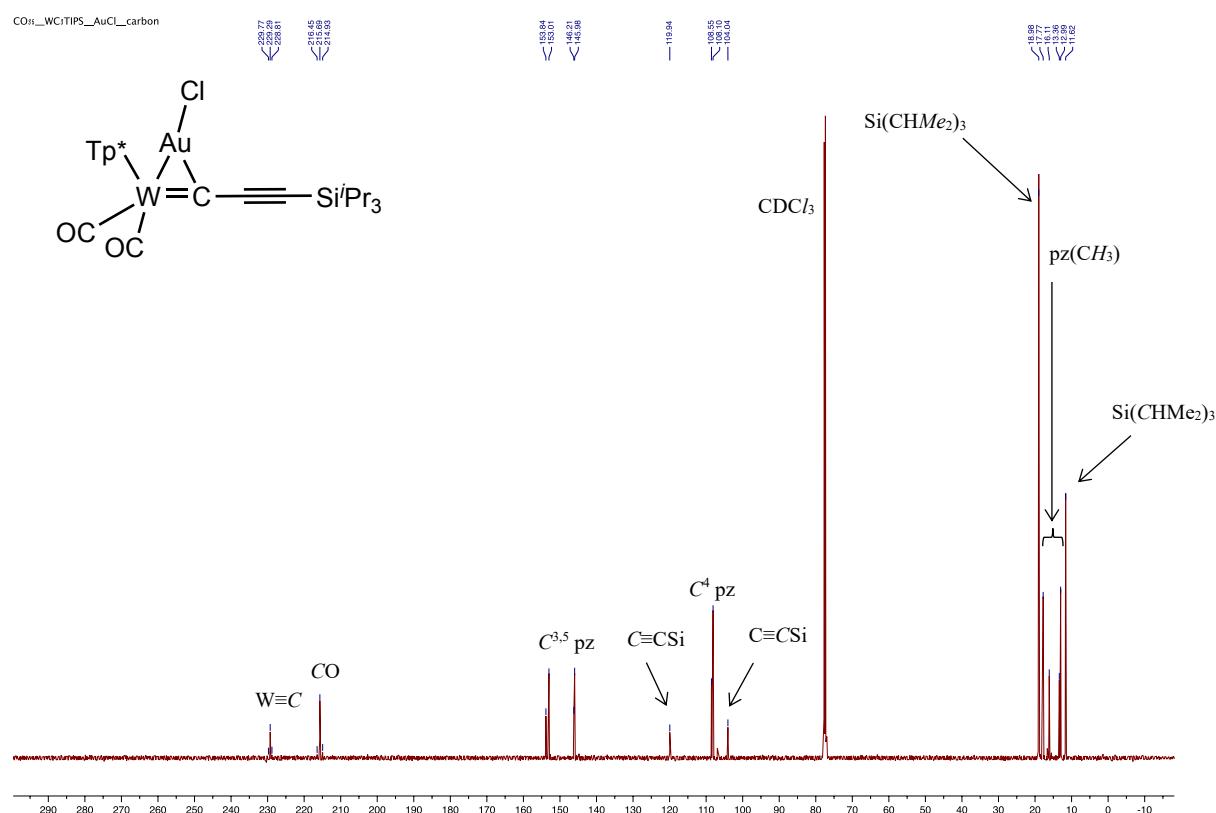
^1H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.17.



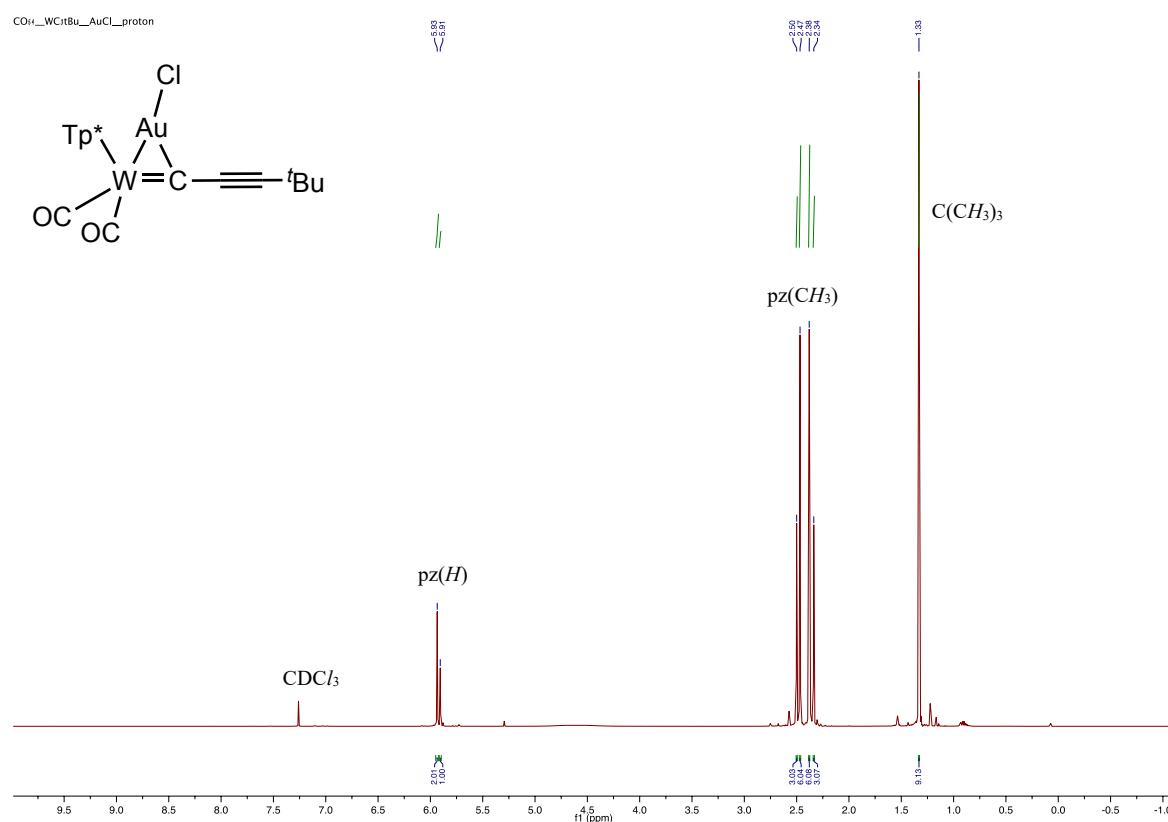
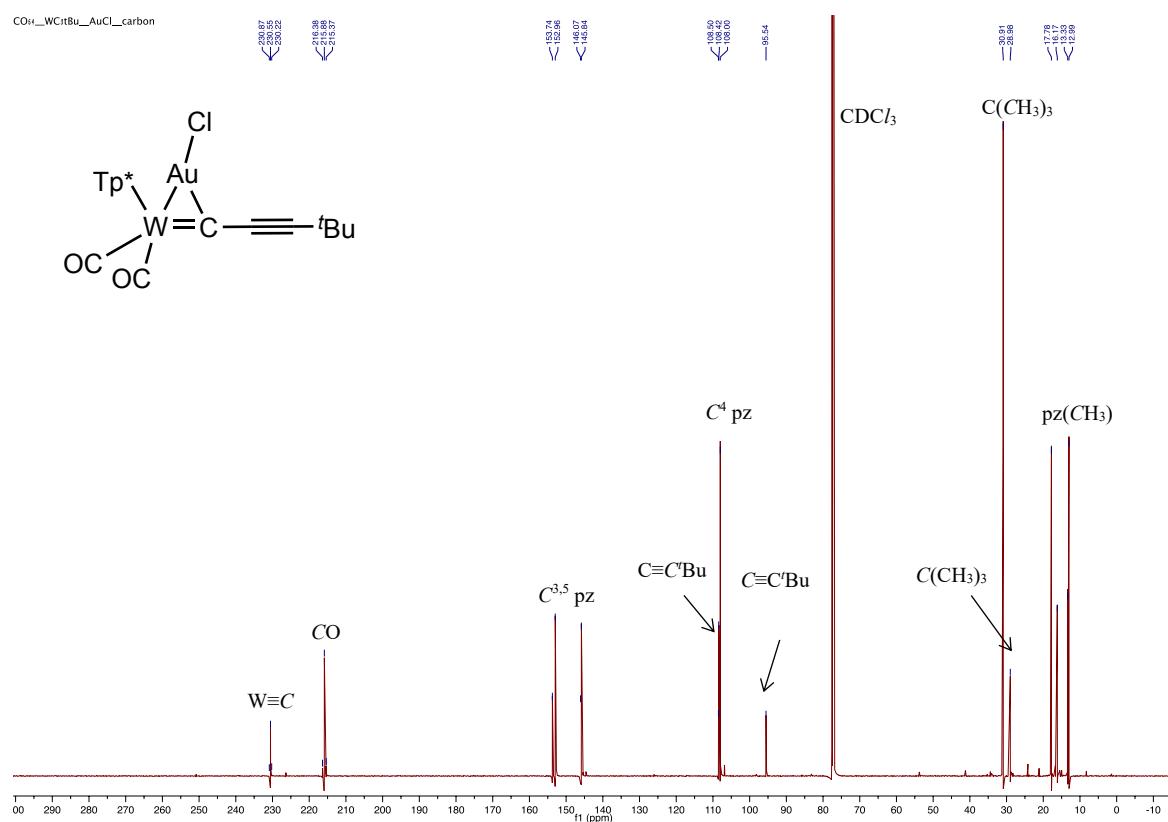
$^{13}\text{C}\{\text{H}\}$ NMR (101 MHz, CDCl₃, 25°C, δ) spectrum of compound A.17.

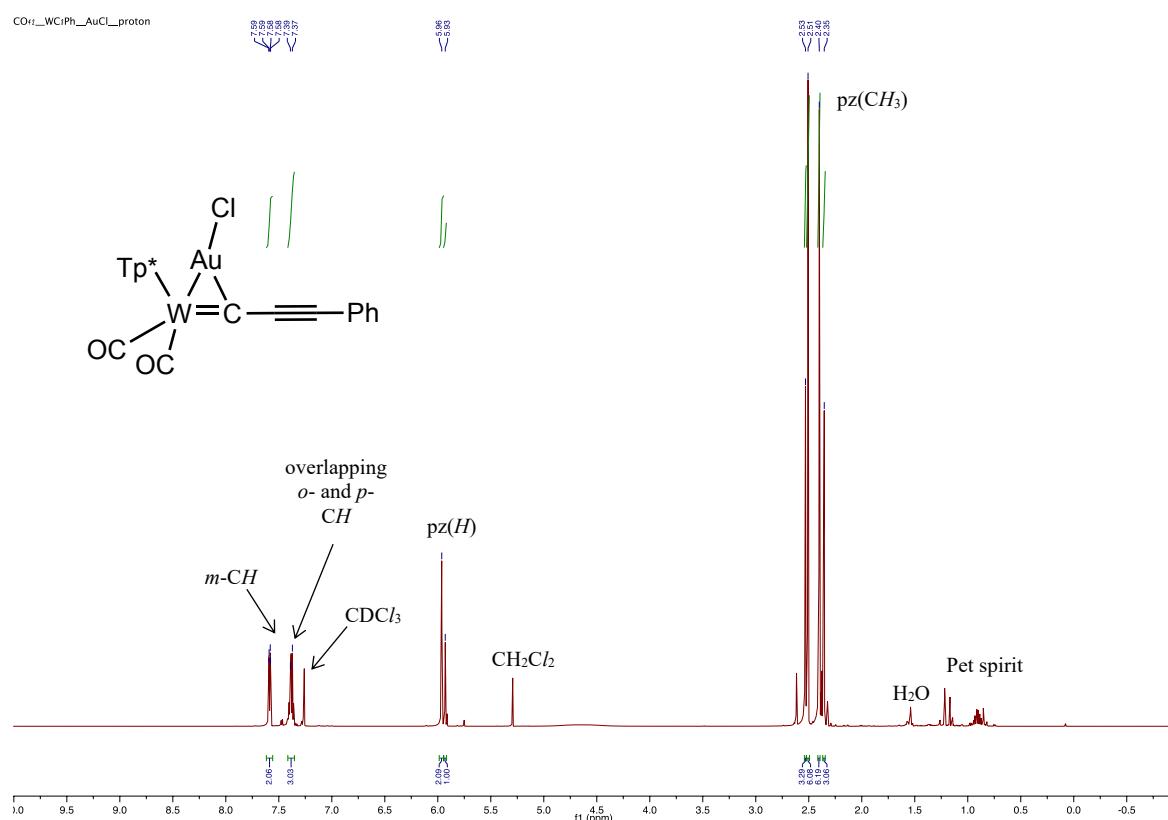


¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.18.

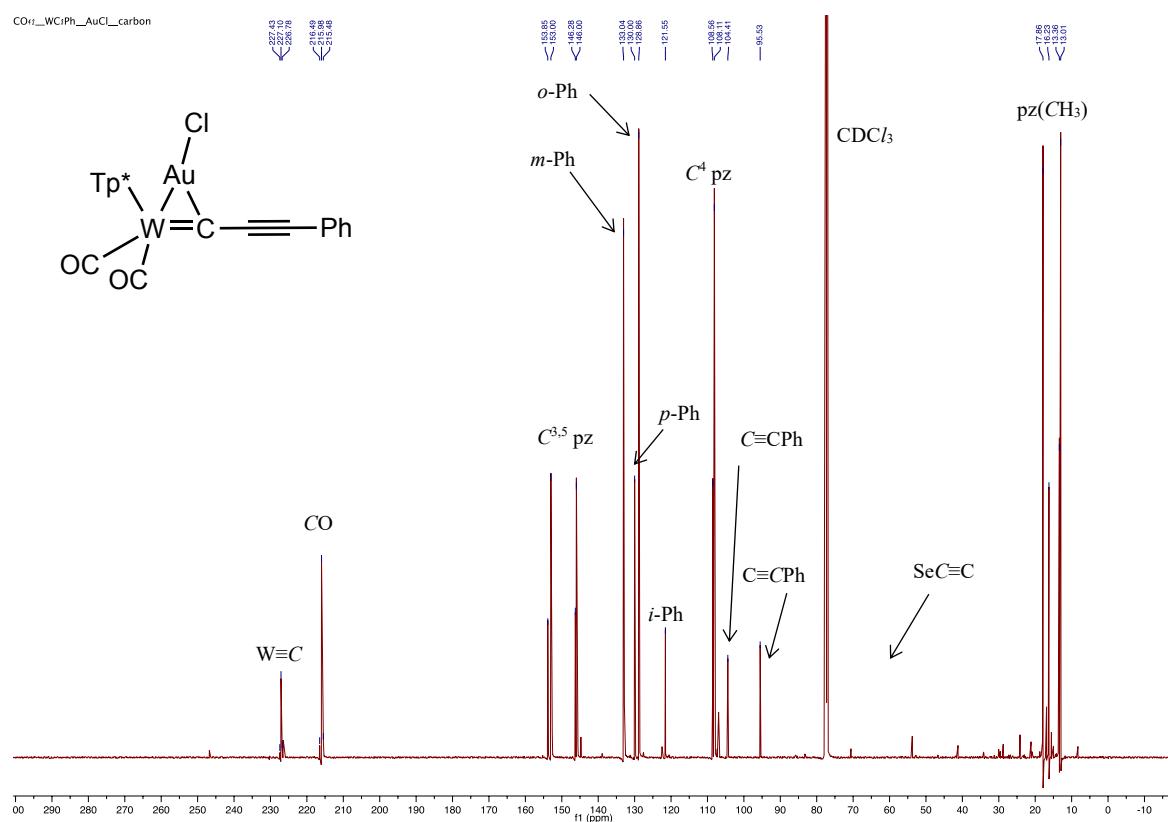


¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound A.18.

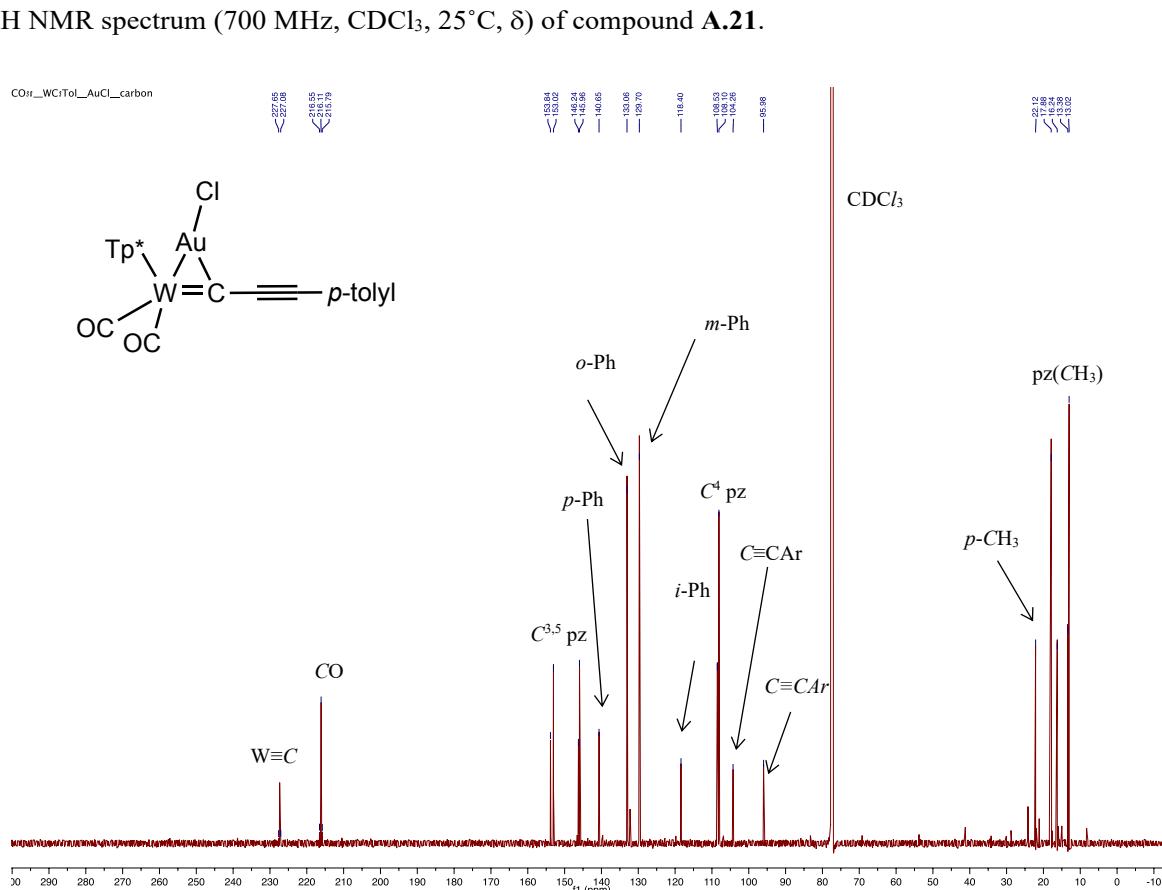
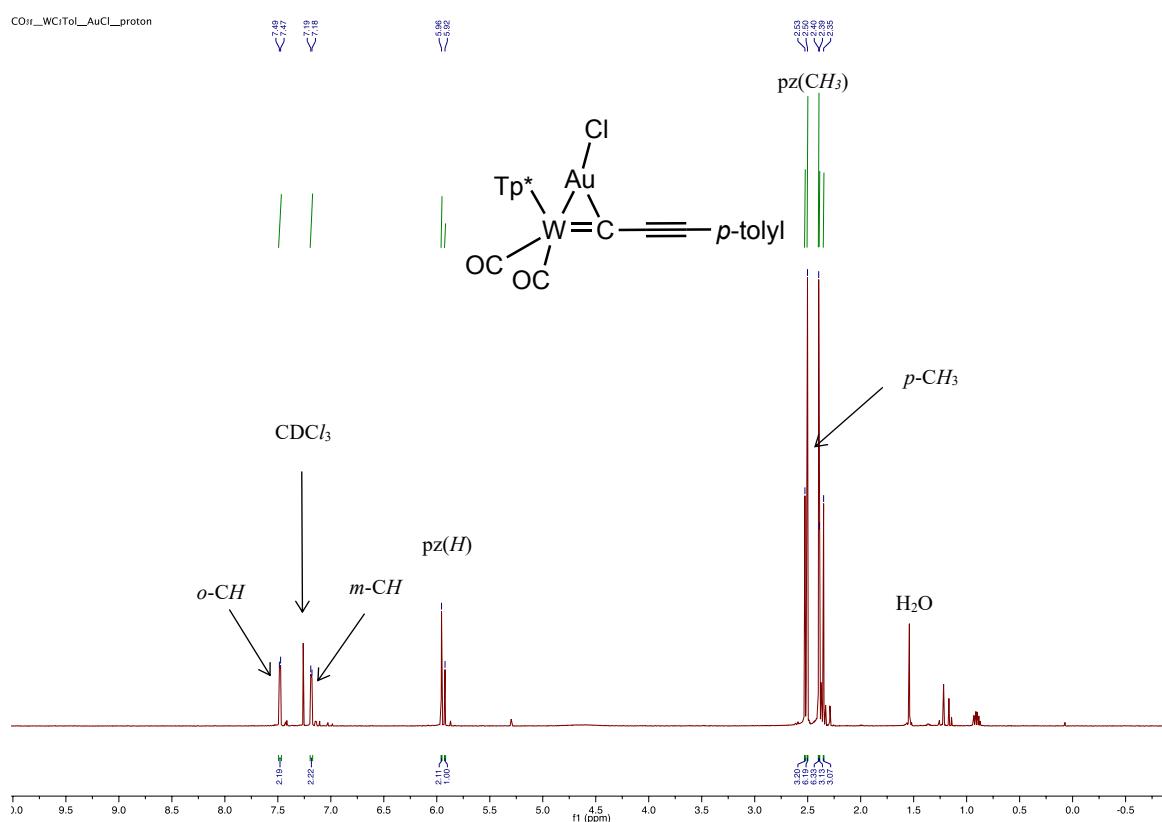
 ^1H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound A.19. $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound A.19.

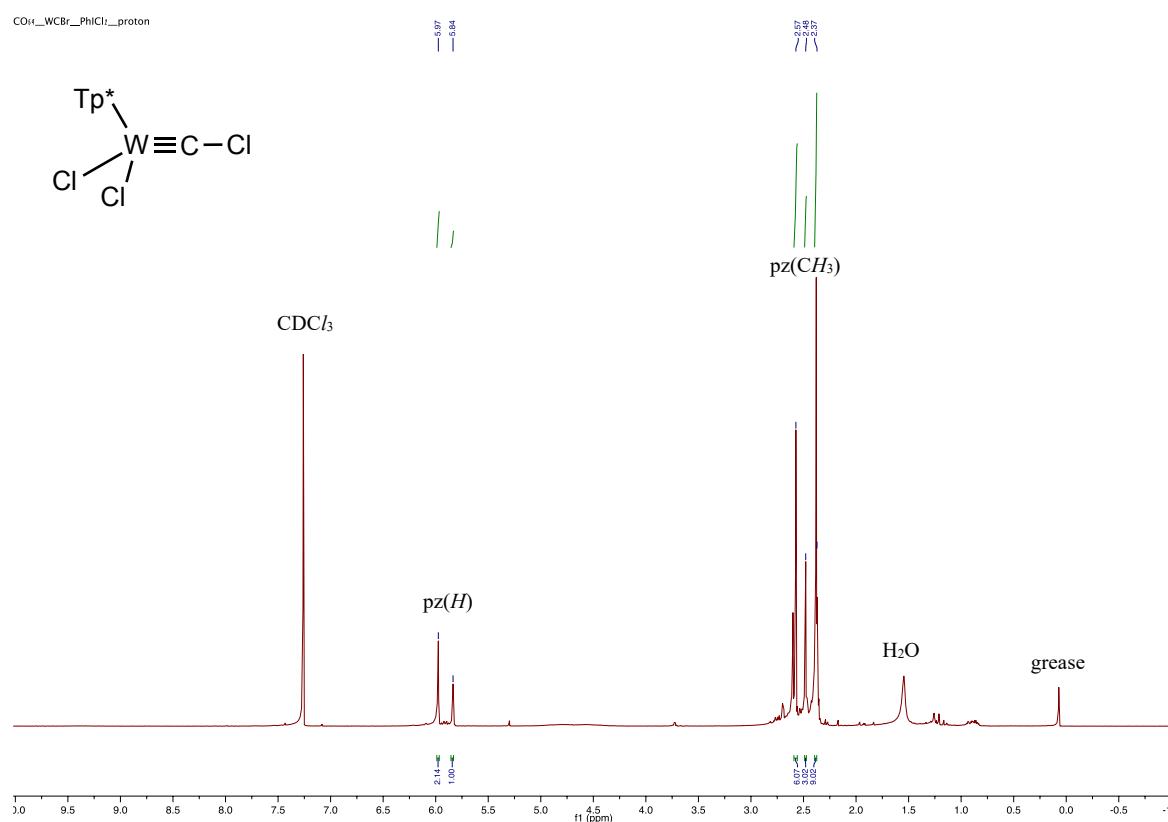


^1H NMR (600 MHz, CDCl_3 , 25°C, δ) of compound A.20.

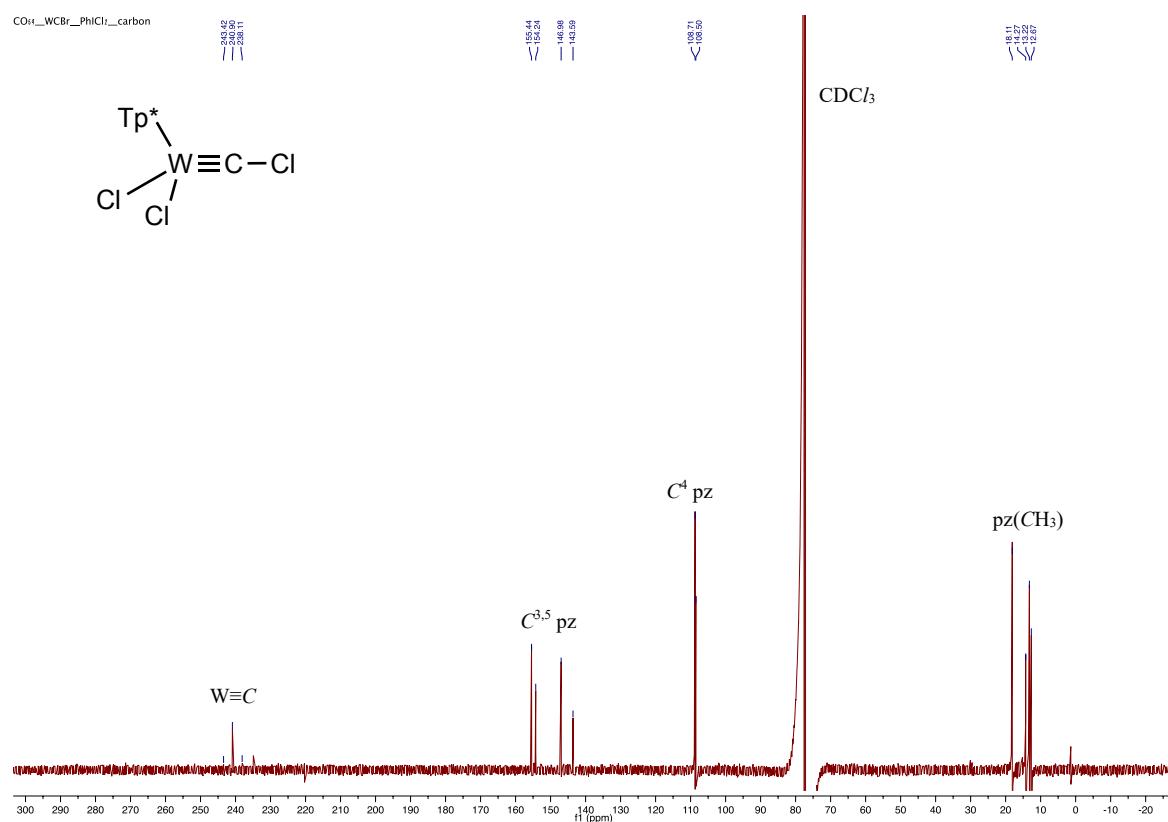


$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3 , 25°C, δ) of compound A.20.

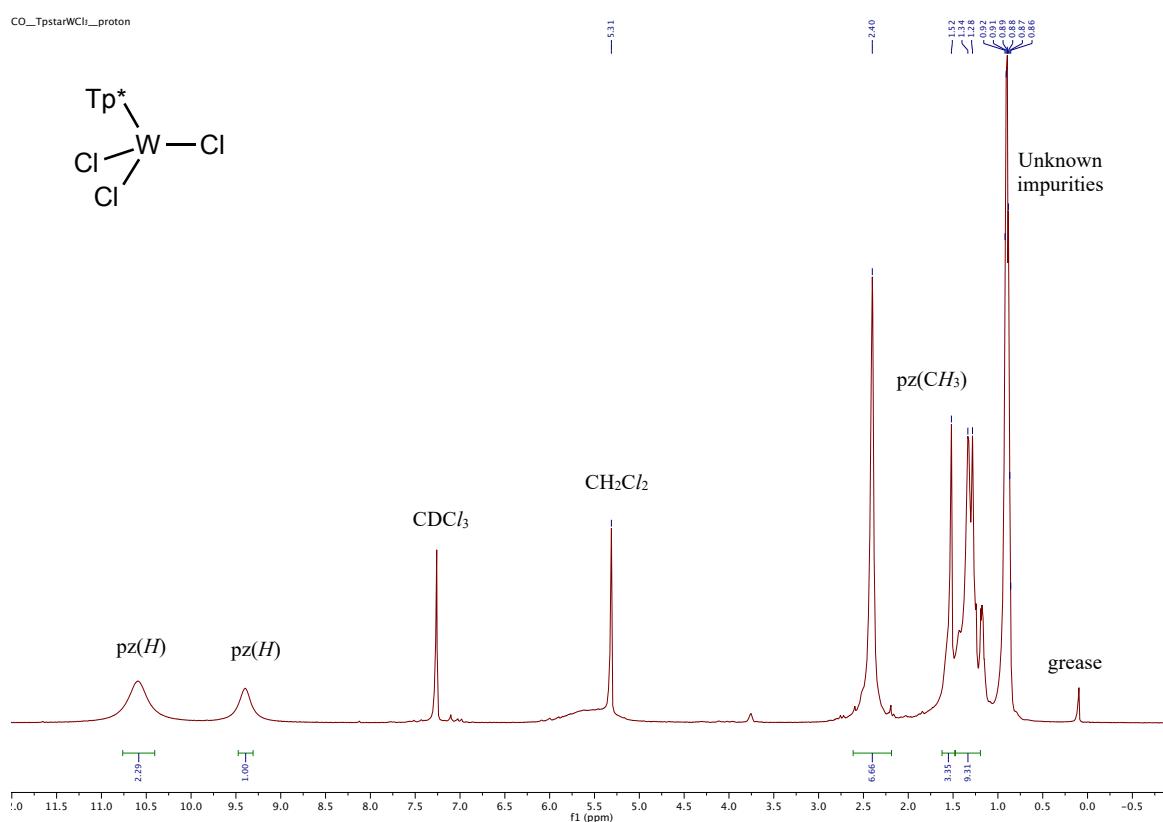
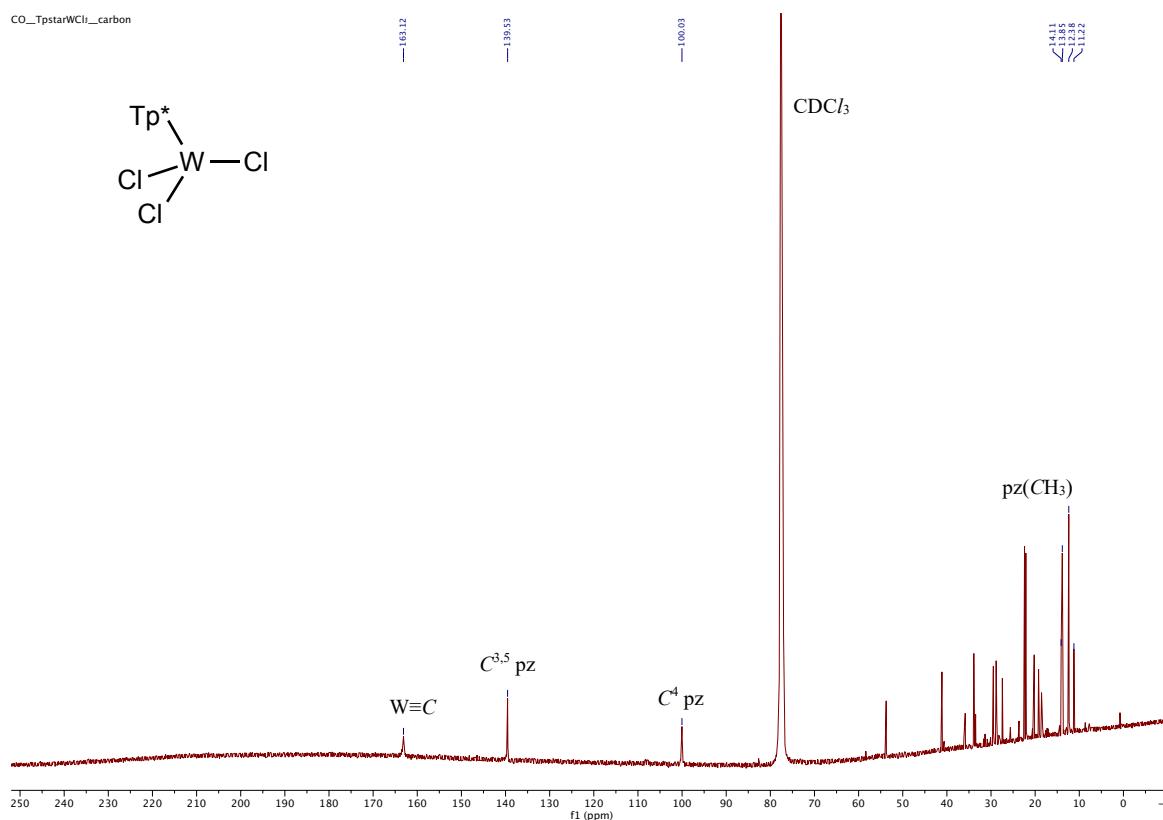


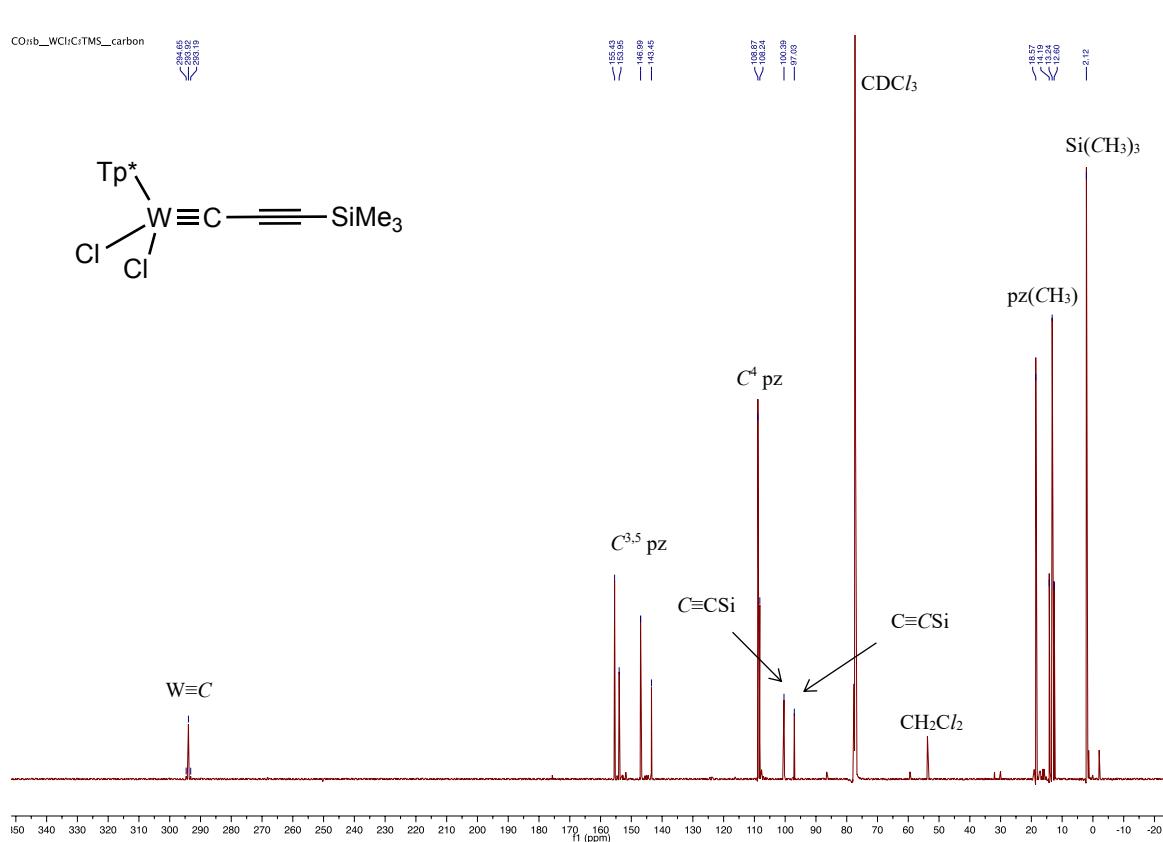
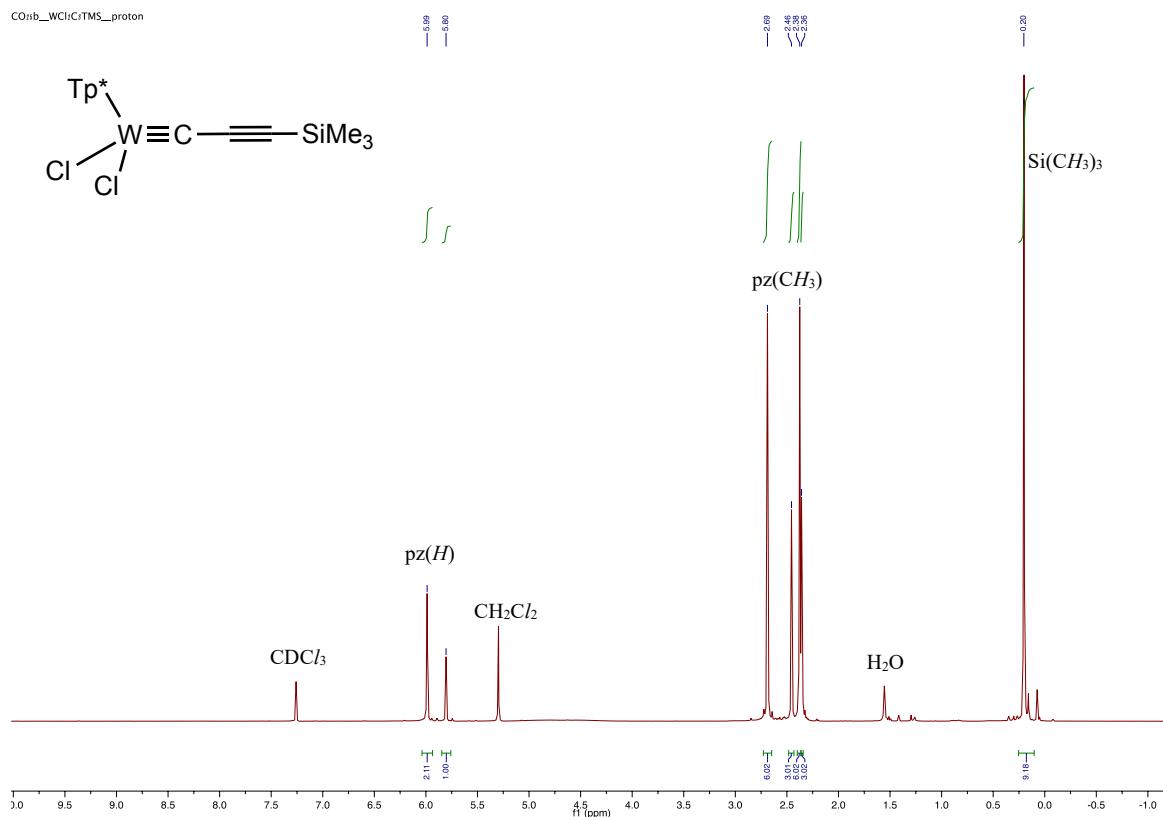


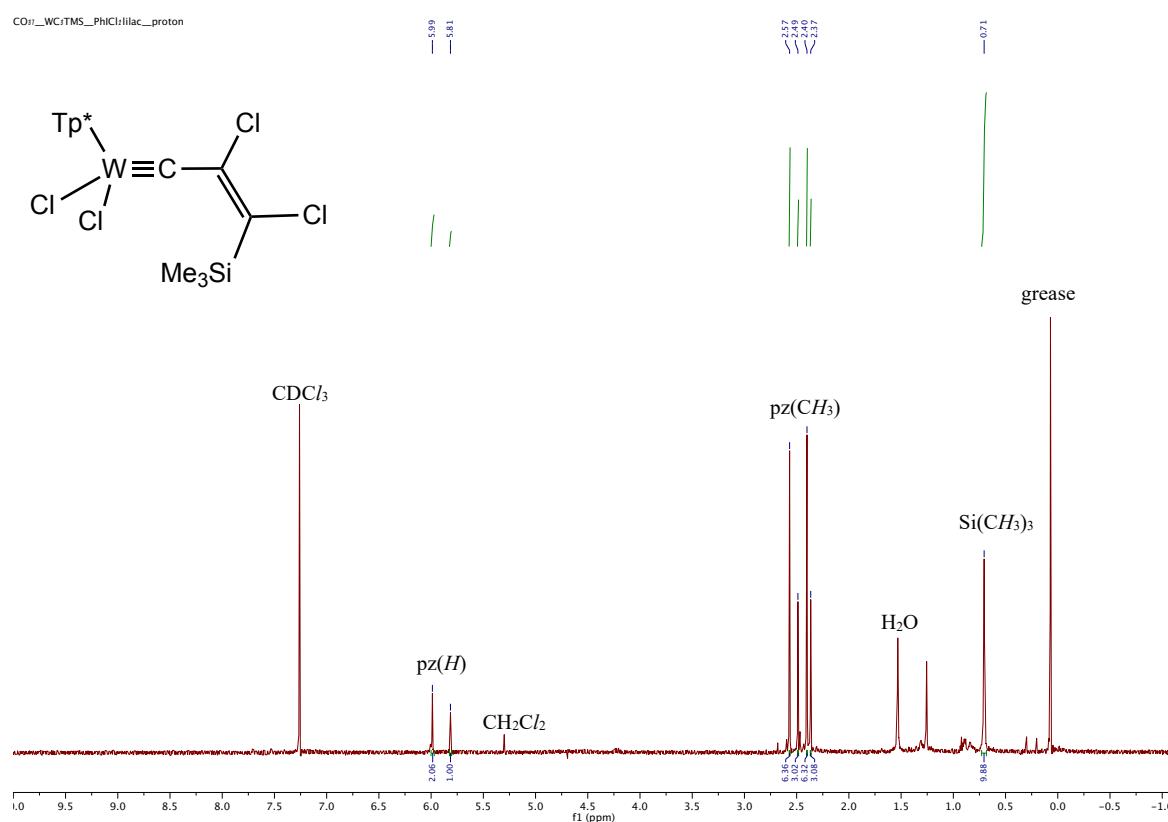
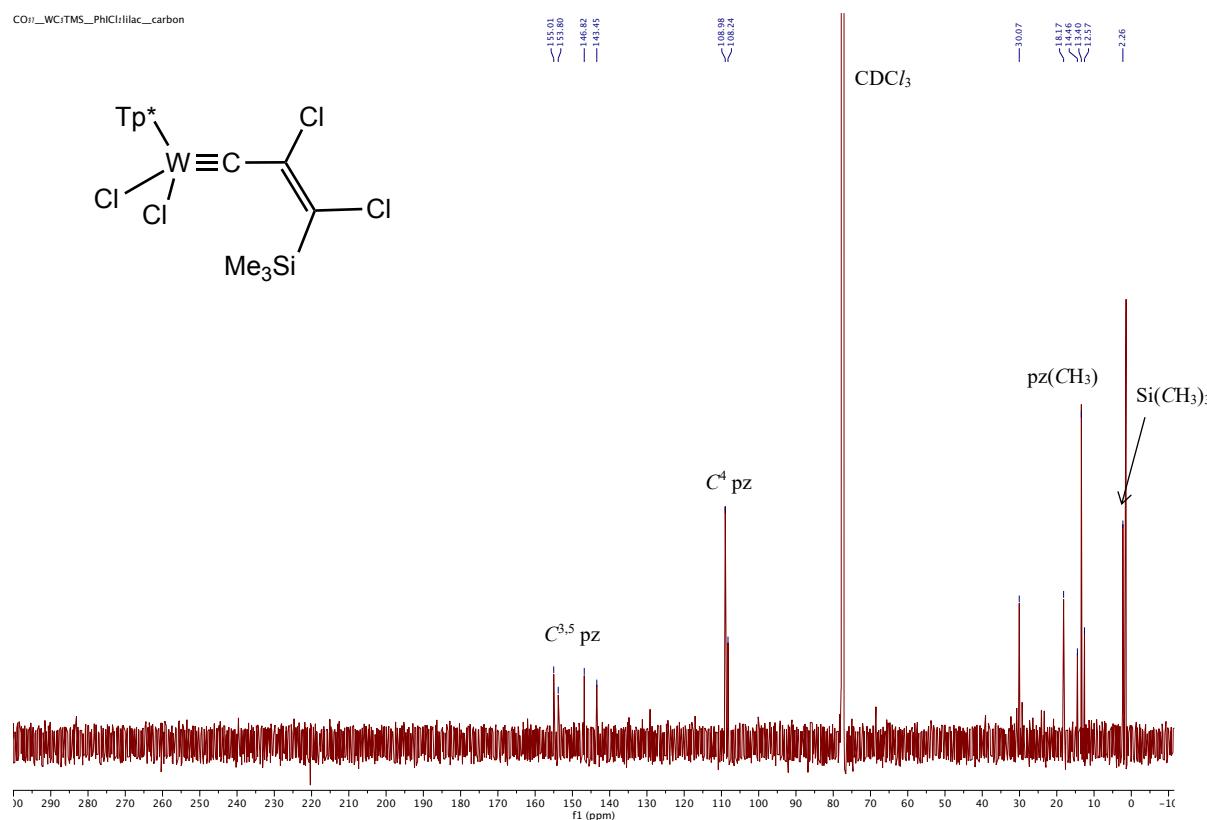
^1H NMR spectrum (600 MHz, CDCl_3 , 25°C , δ) of compound A.22.

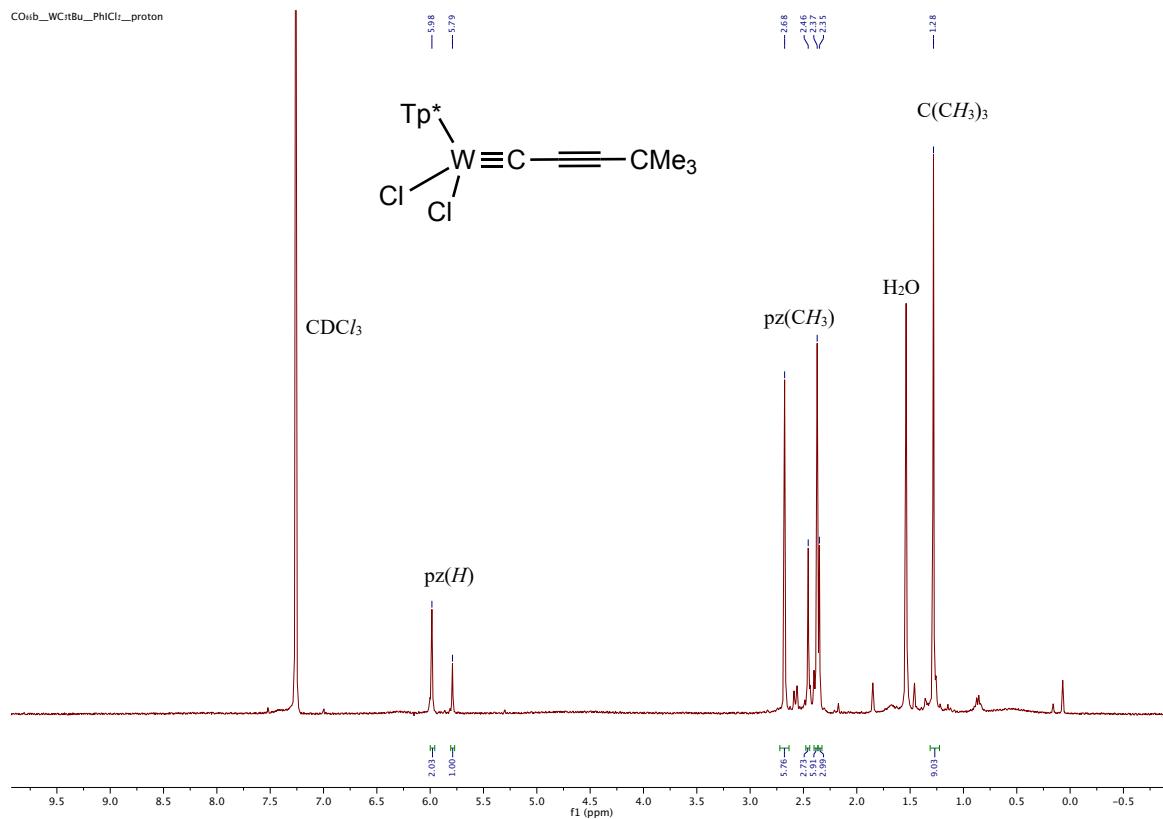


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C , δ) of compound A.22.

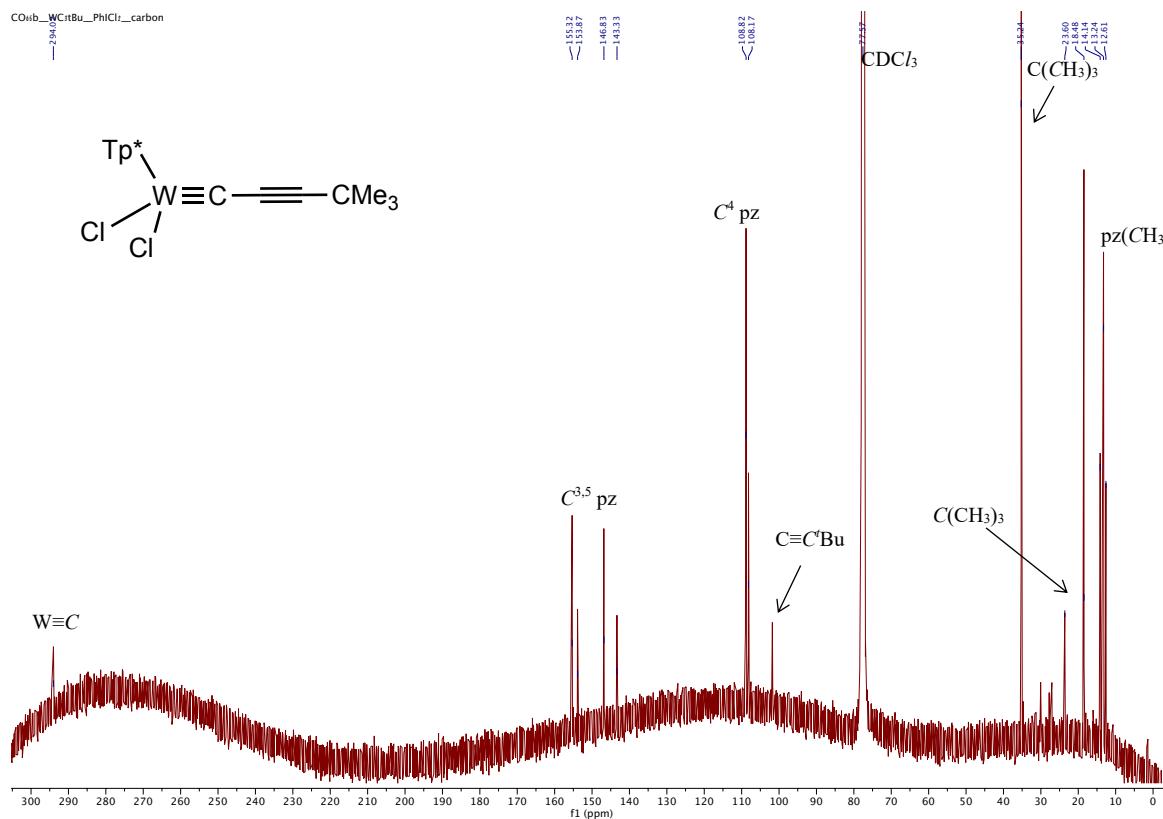
¹H NMR spectrum (600 MHz, CDCl₃, 25°C, δ) of compound A.23.¹³C{¹H} NMR spectrum (151 MHz, CDCl₃, 25°C, δ) of compound A.23.



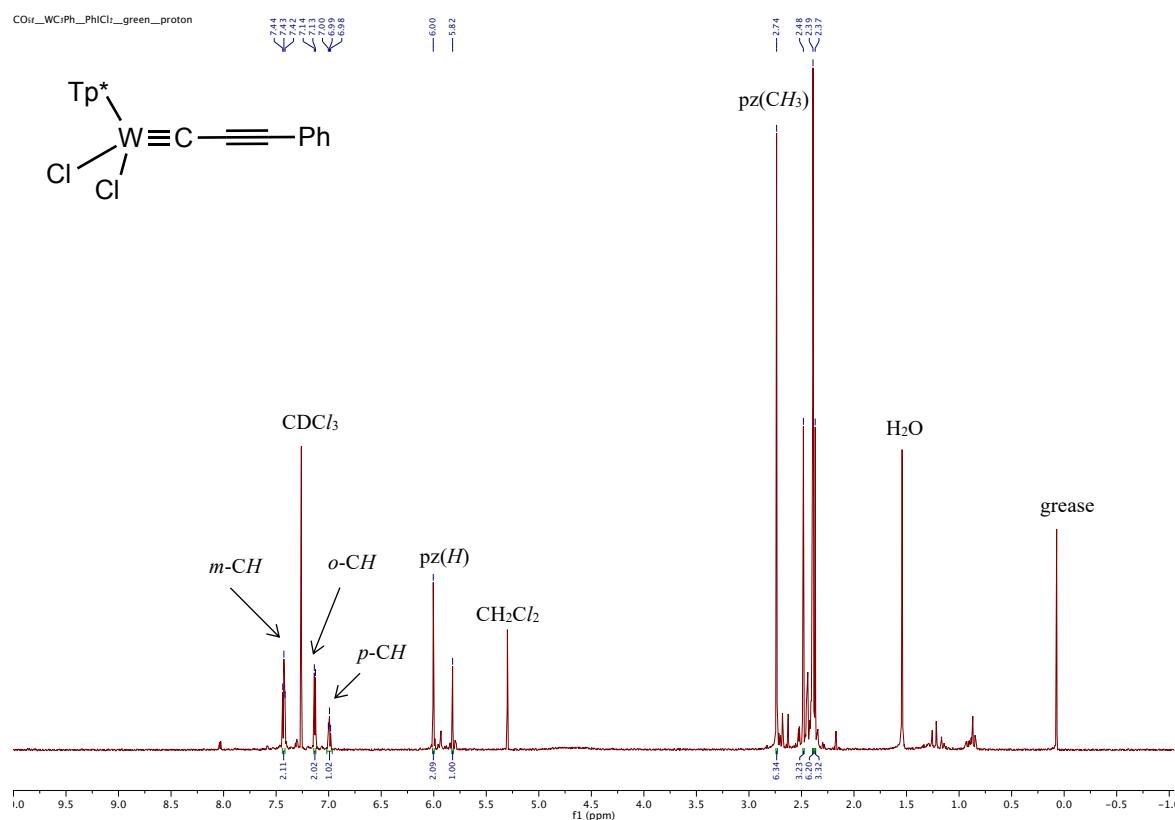
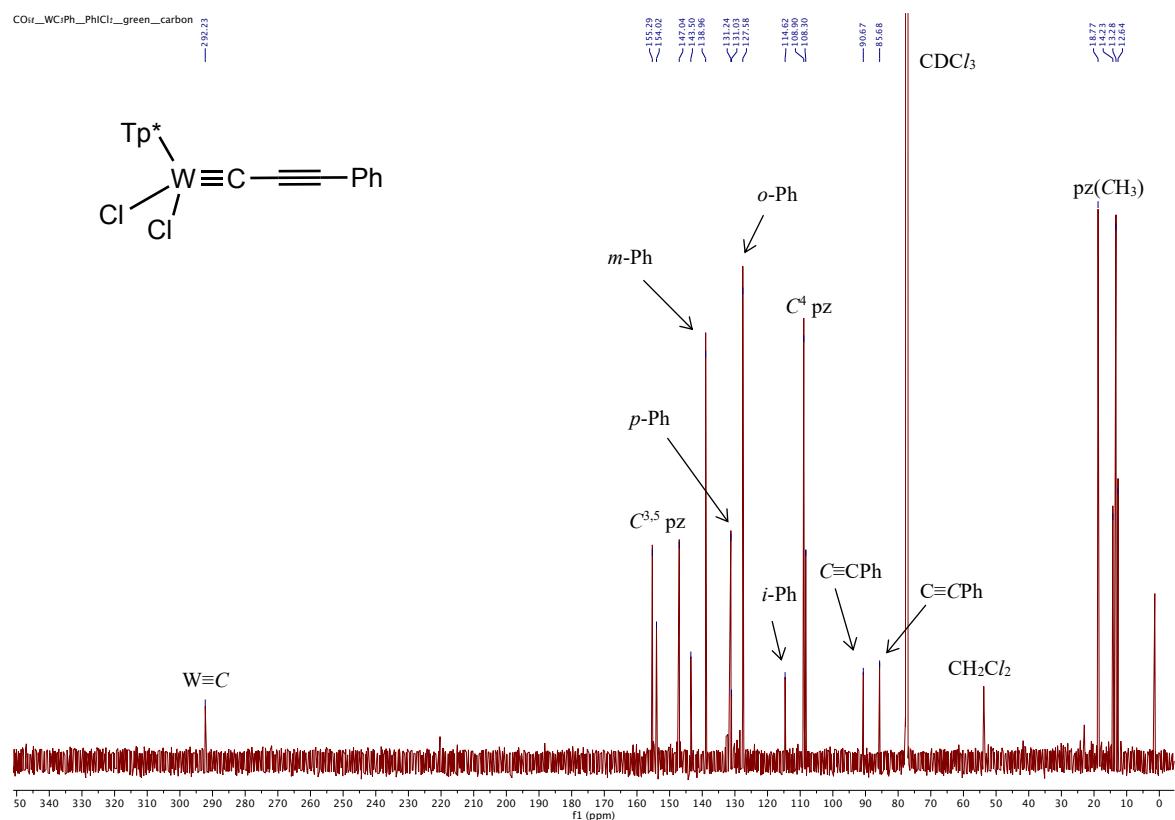
¹H NMR spectrum (400 MHz, CDCl_3 , 25°C, δ) of compound A.25.¹³C{¹H} NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound A.25.

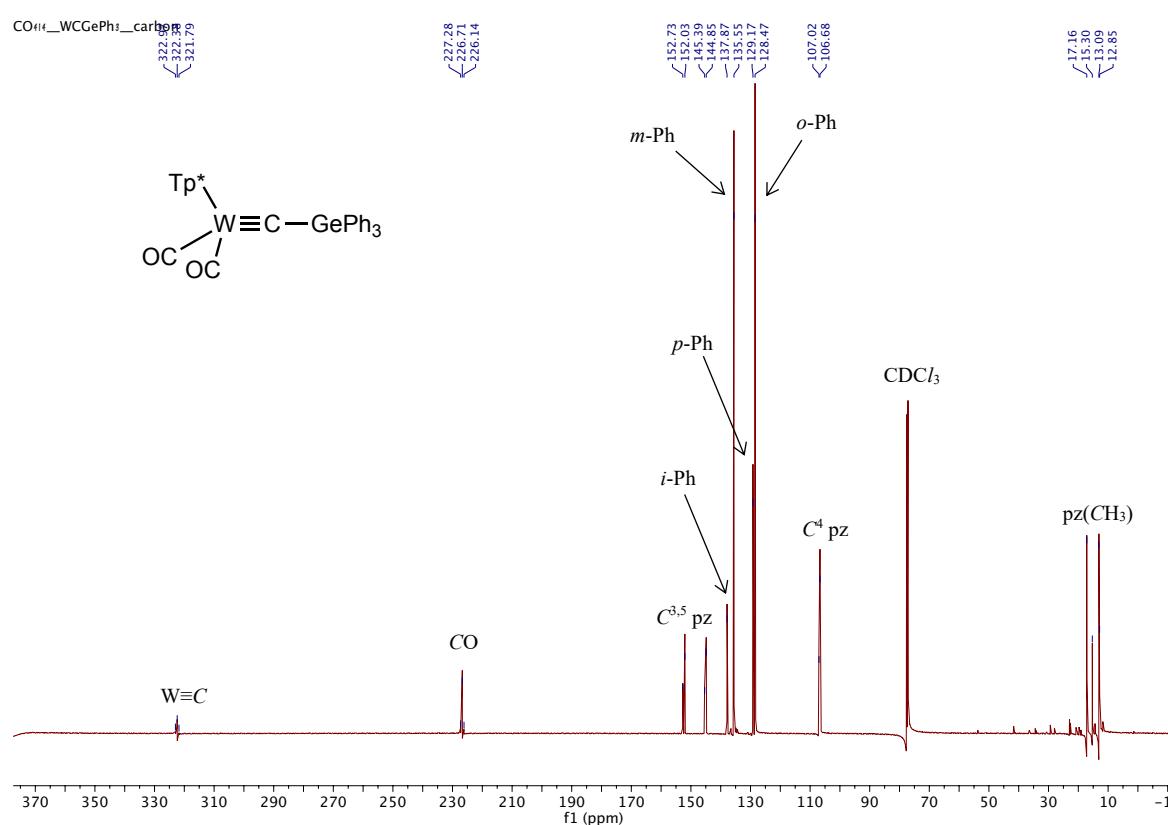
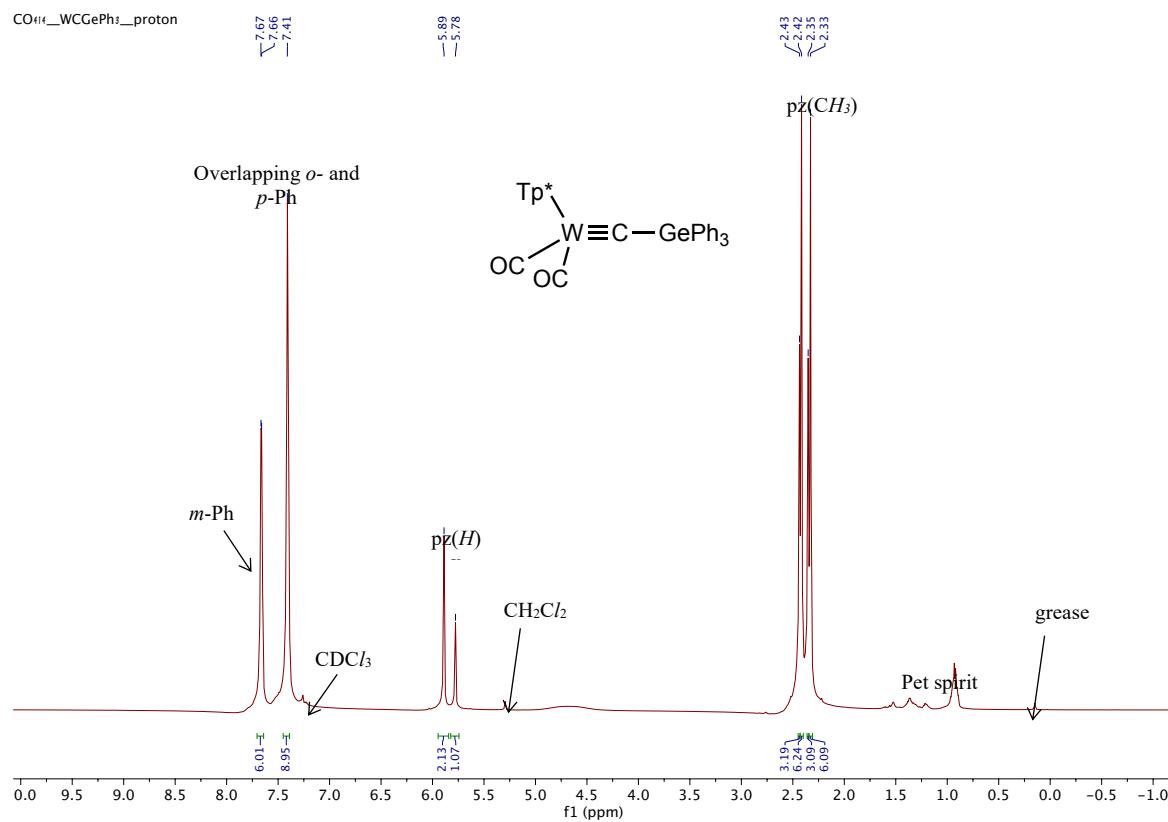


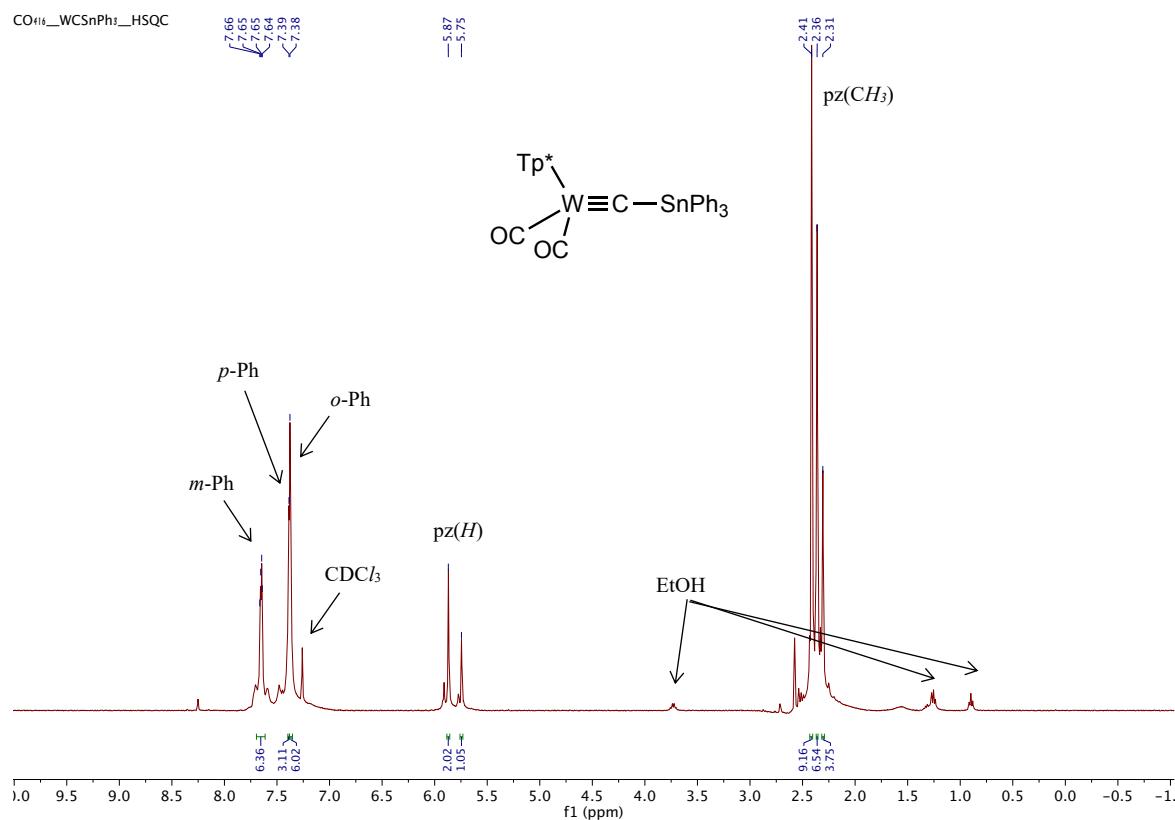
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.26.



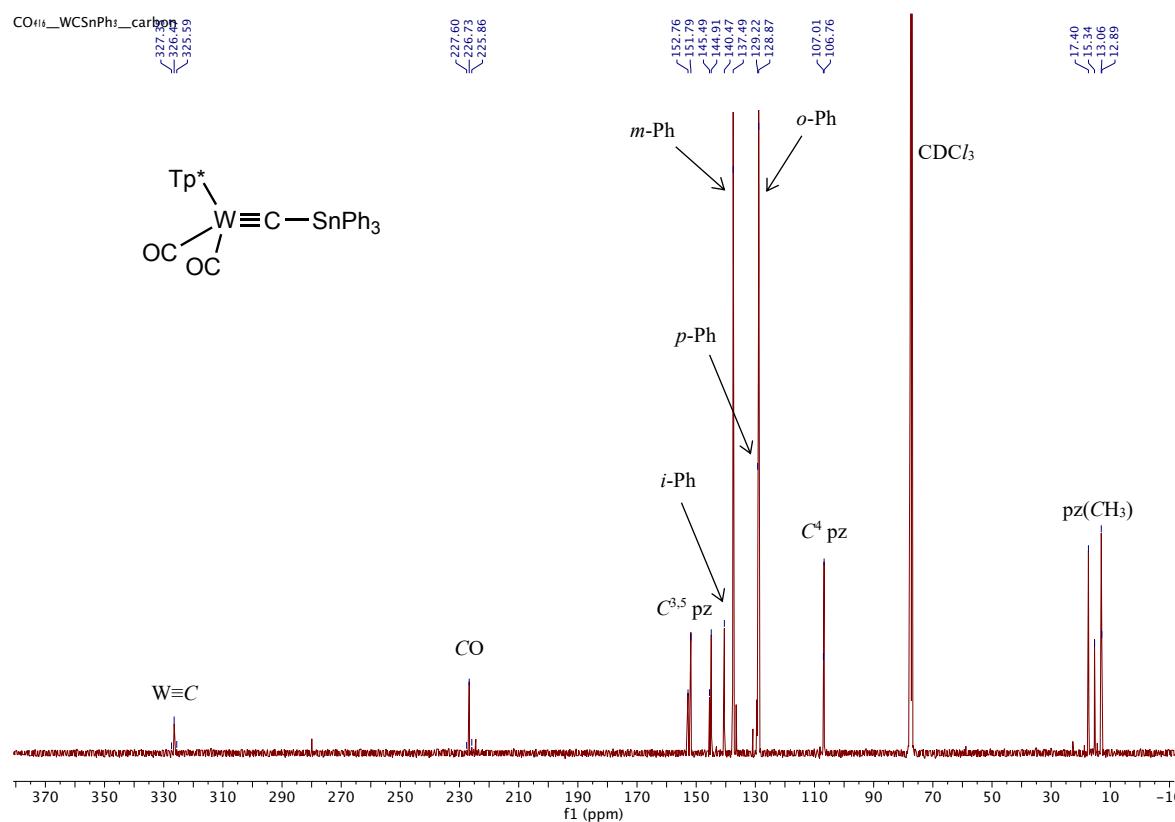
¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound A.26.

¹H NMR spectrum (700 MHz, CDCl₃, 25°C, δ) of compound A.28.¹³C{¹H} NMR spectrum (176 MHz, CDCl₃, 25°C, δ) of compound A.28.

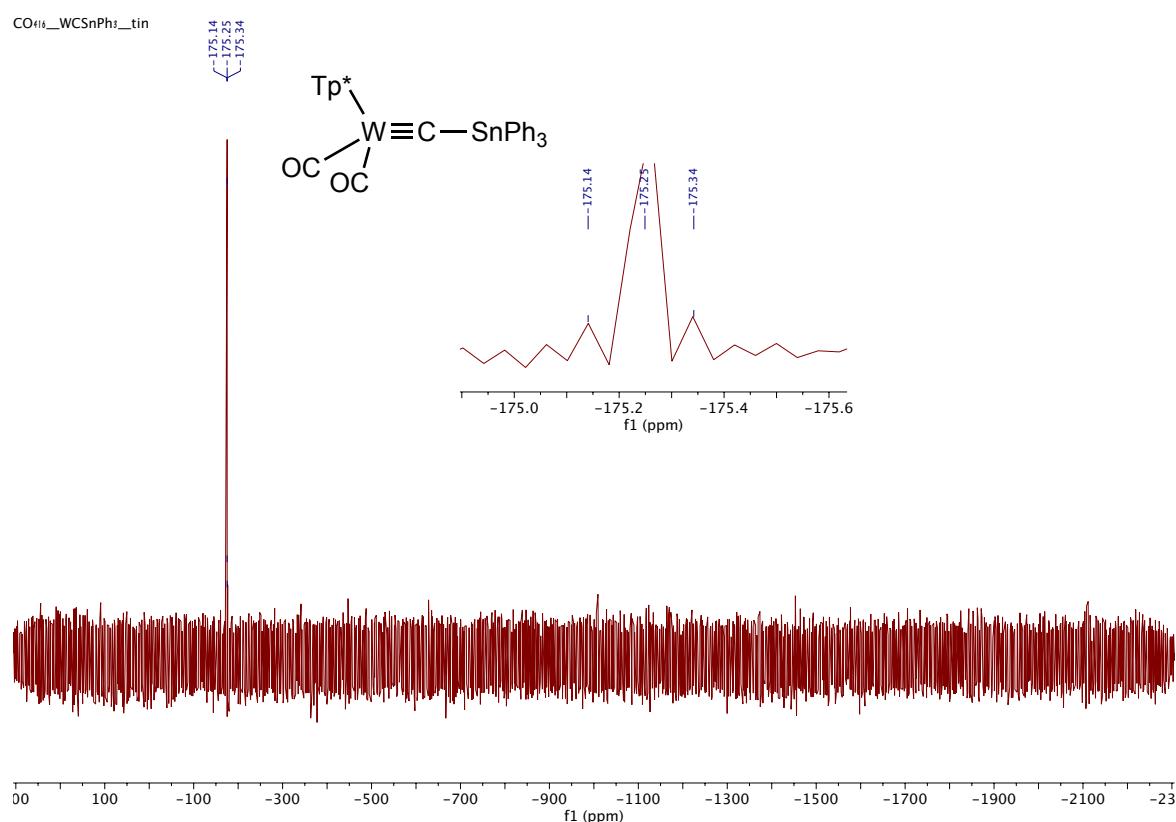




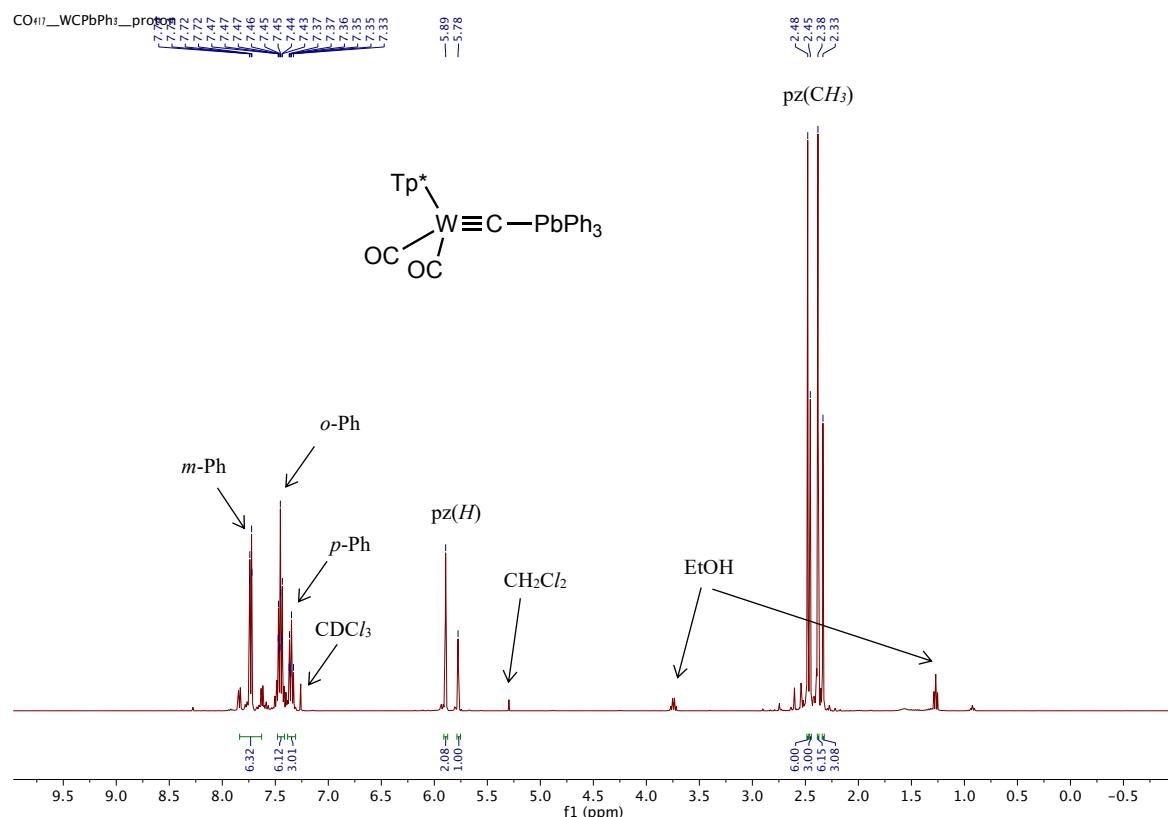
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.30.



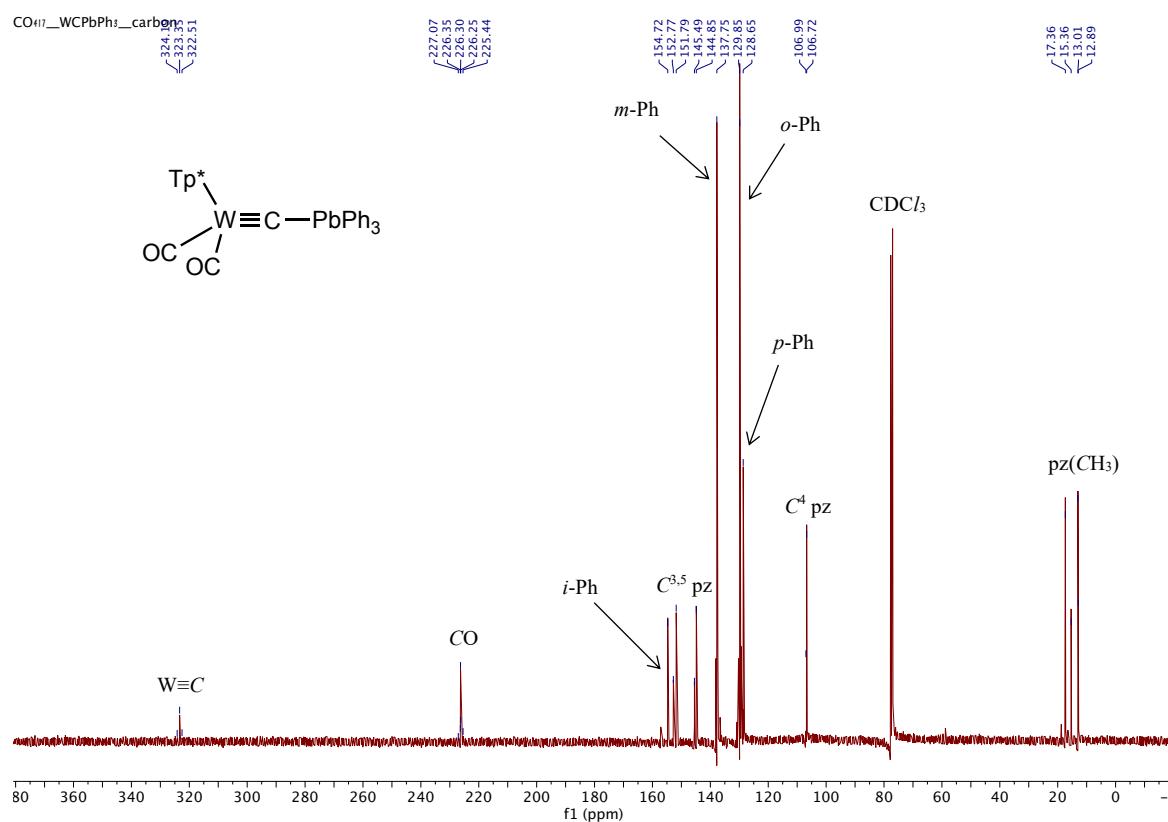
¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound A.30.



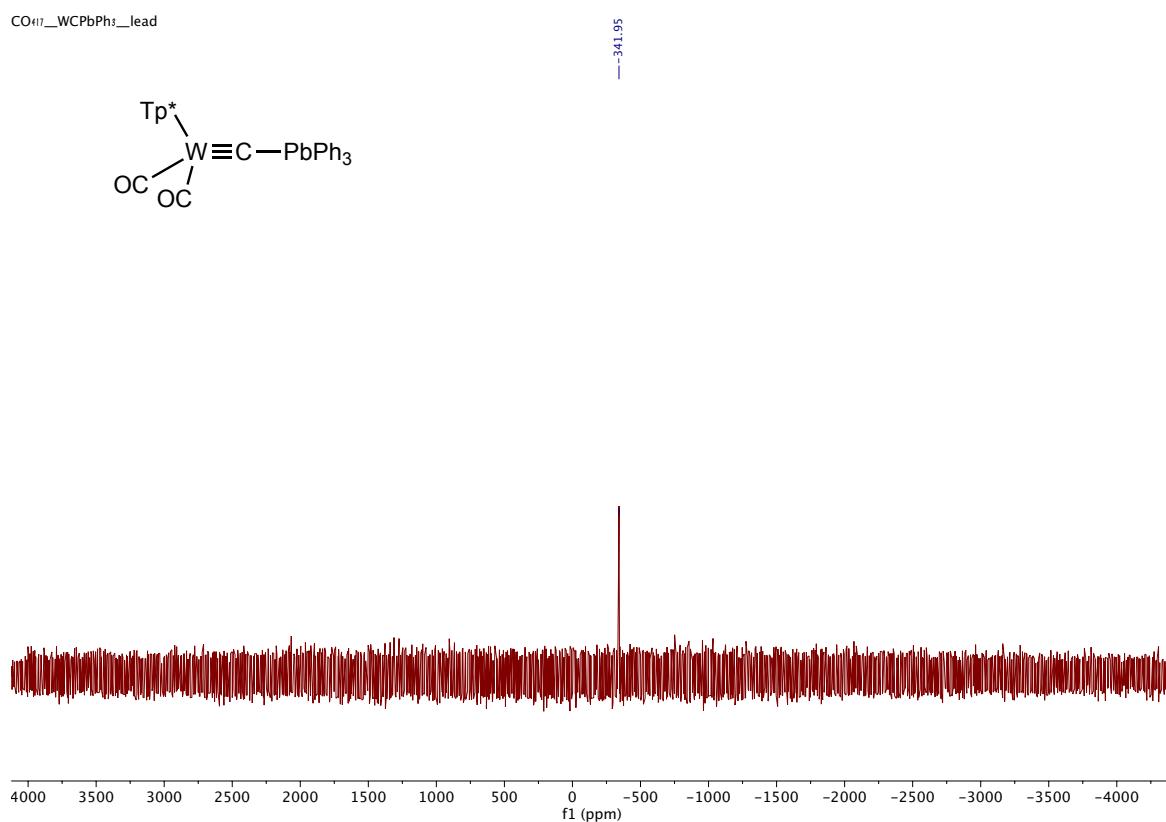
¹¹⁹Sn NMR spectrum (261 MHz, CDCl₃, 25°C, δ) of compound **A.30**.



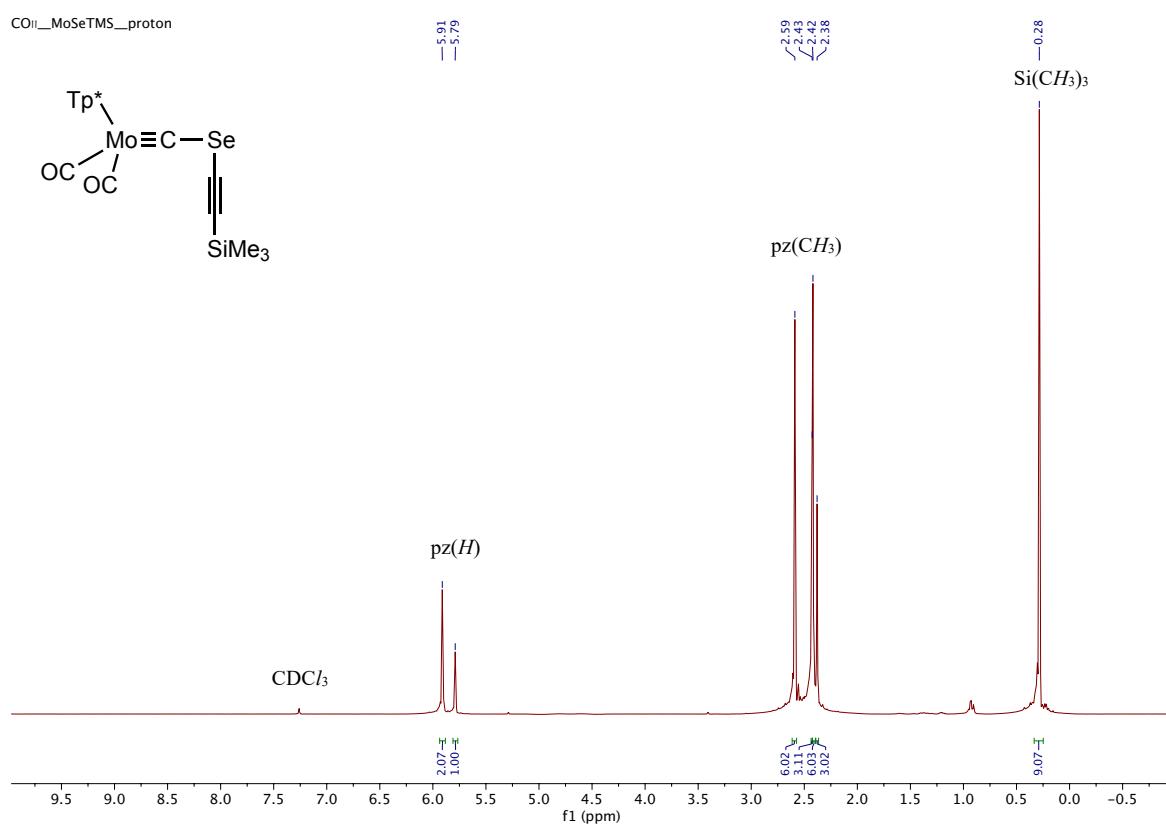
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.31.



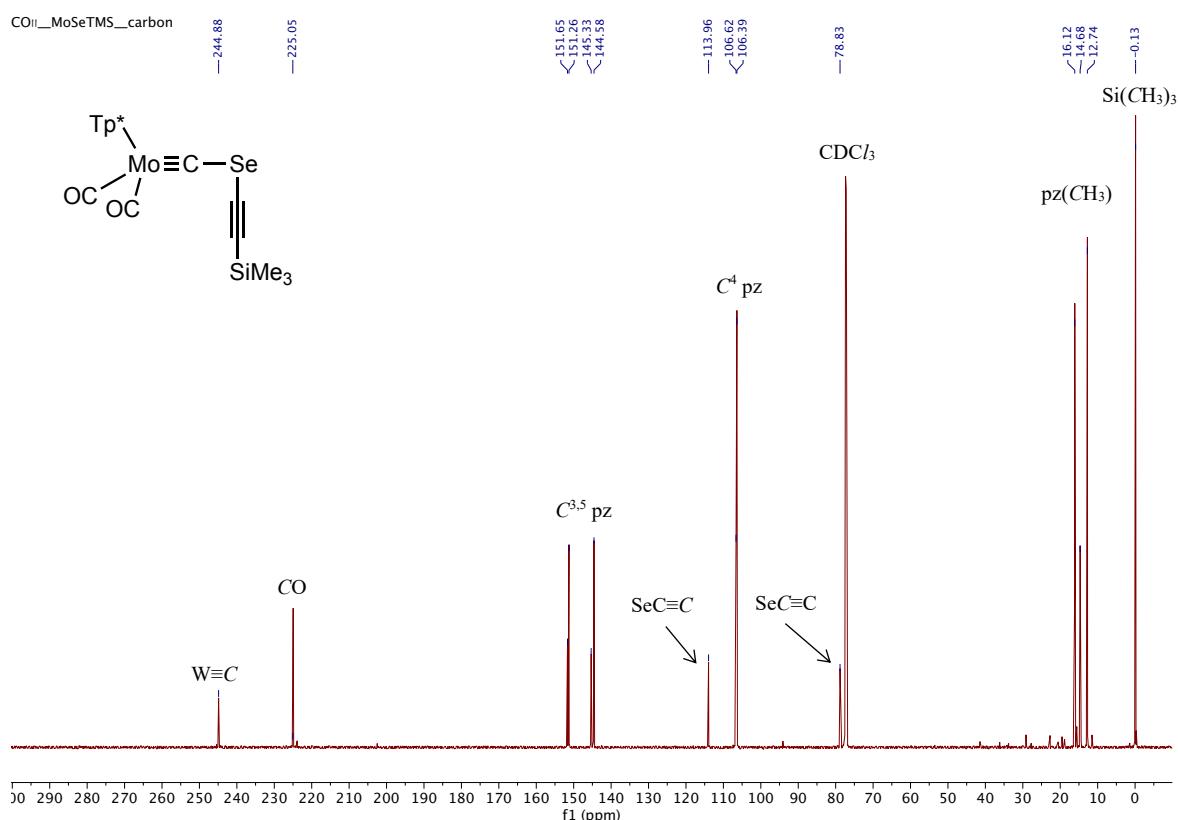
¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound A.32.



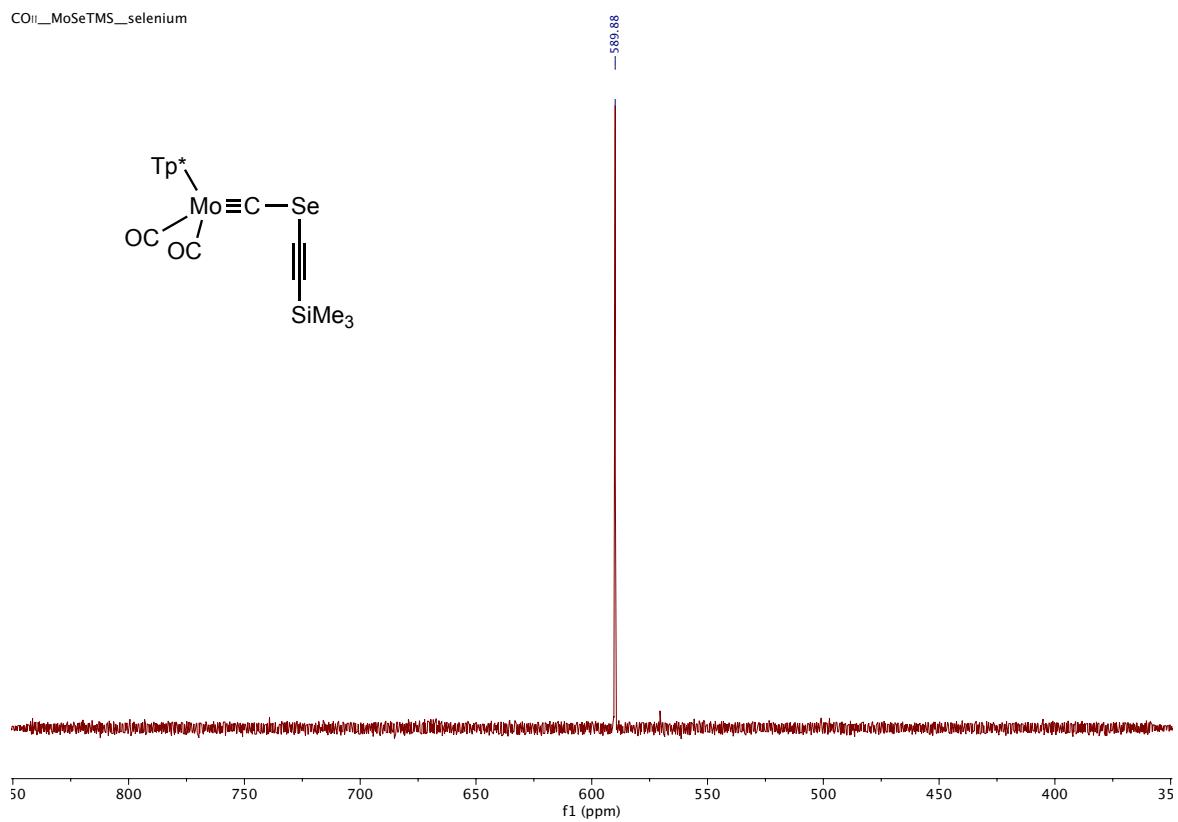
²⁰⁷Pb NMR spectrum (146 MHz, CDCl₃, 25°C, δ) of compound **A.32**.



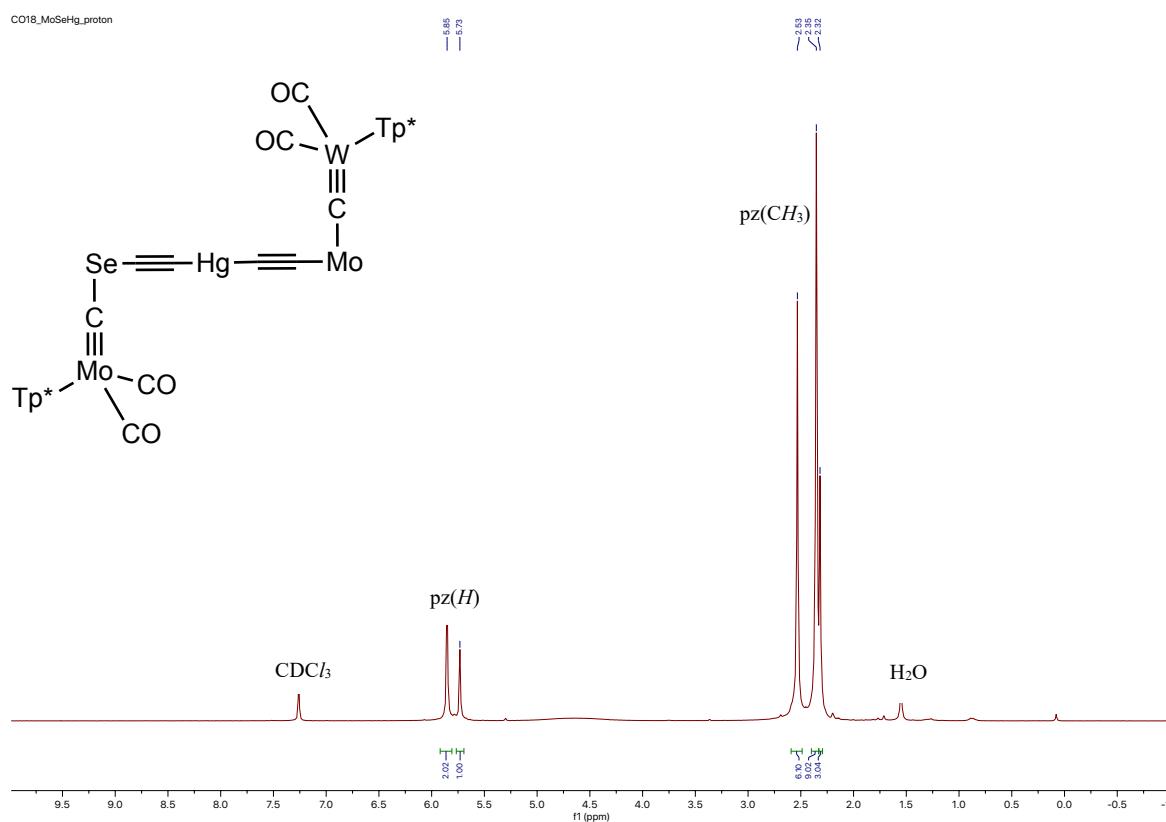
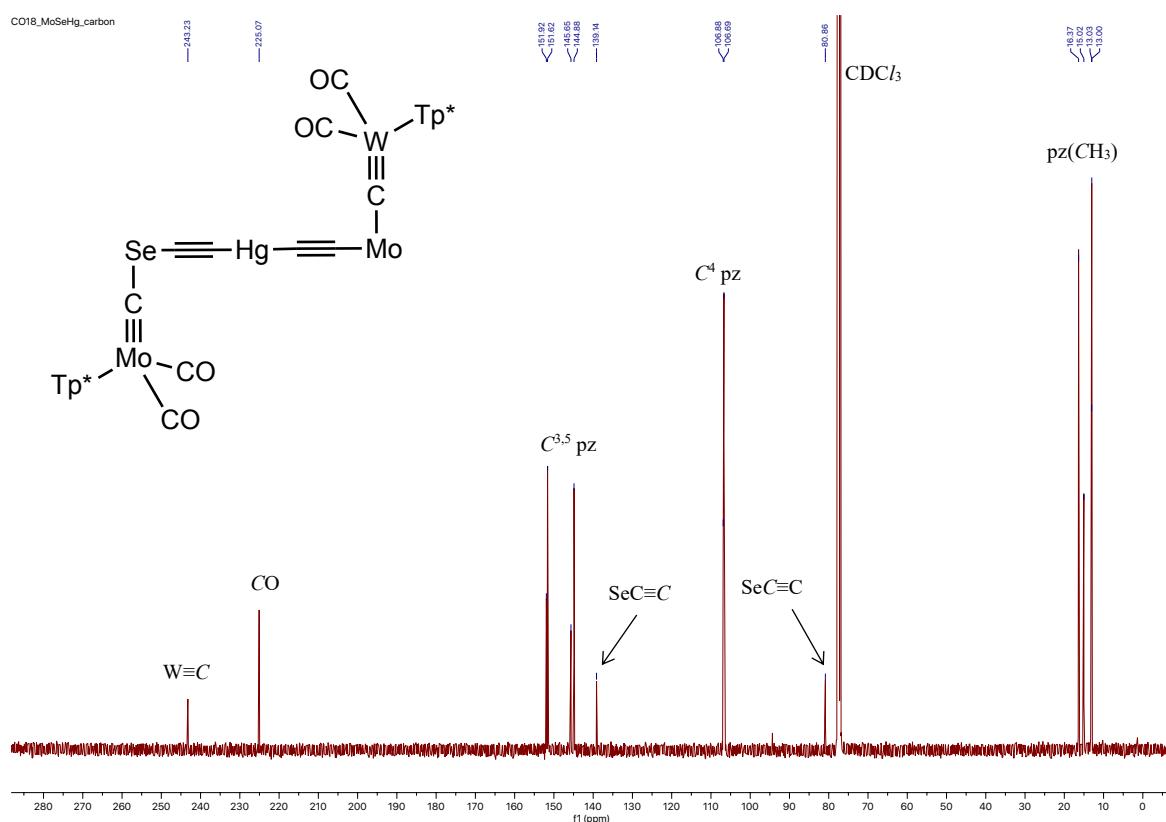
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound A.33.

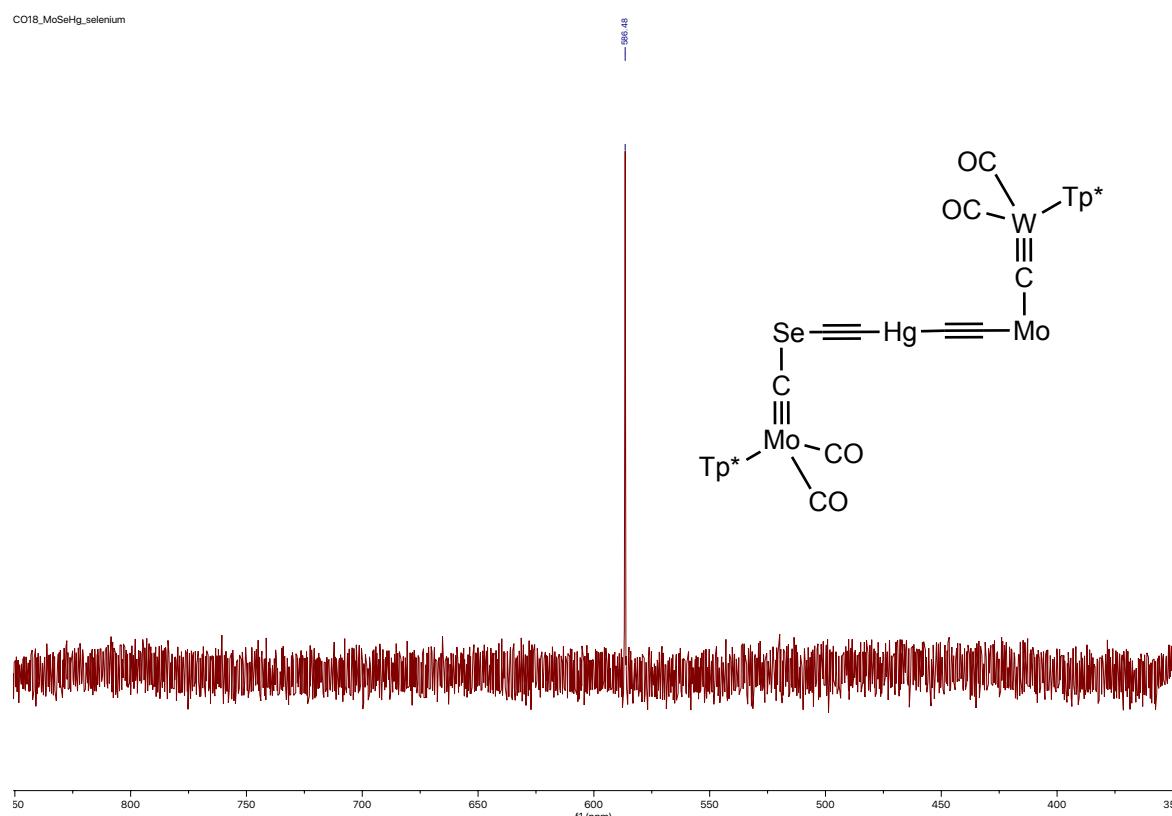


$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum (176 MHz, CDCl_3 , 25°C, δ) of compound A.33.

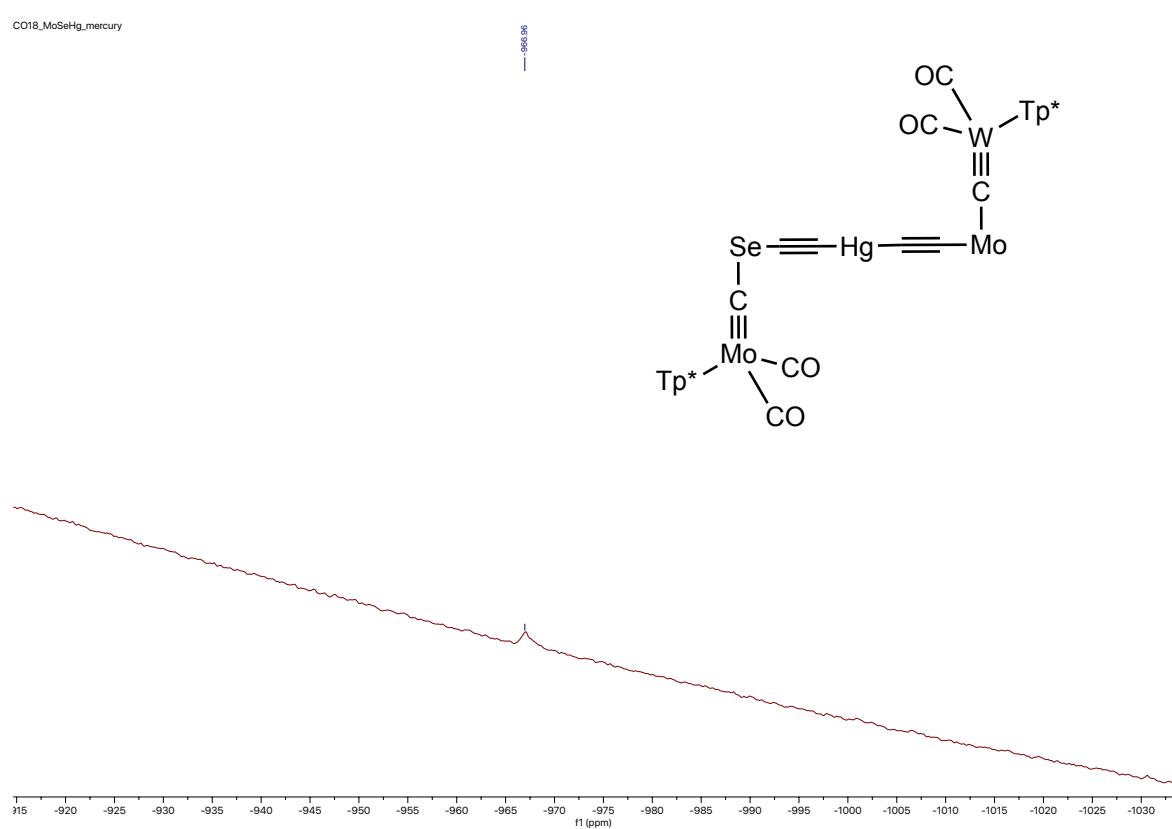


⁷⁷Se{¹H} NMR spectrum (76 MHz, CDCl₃, 25°C, δ) of compound A.33.

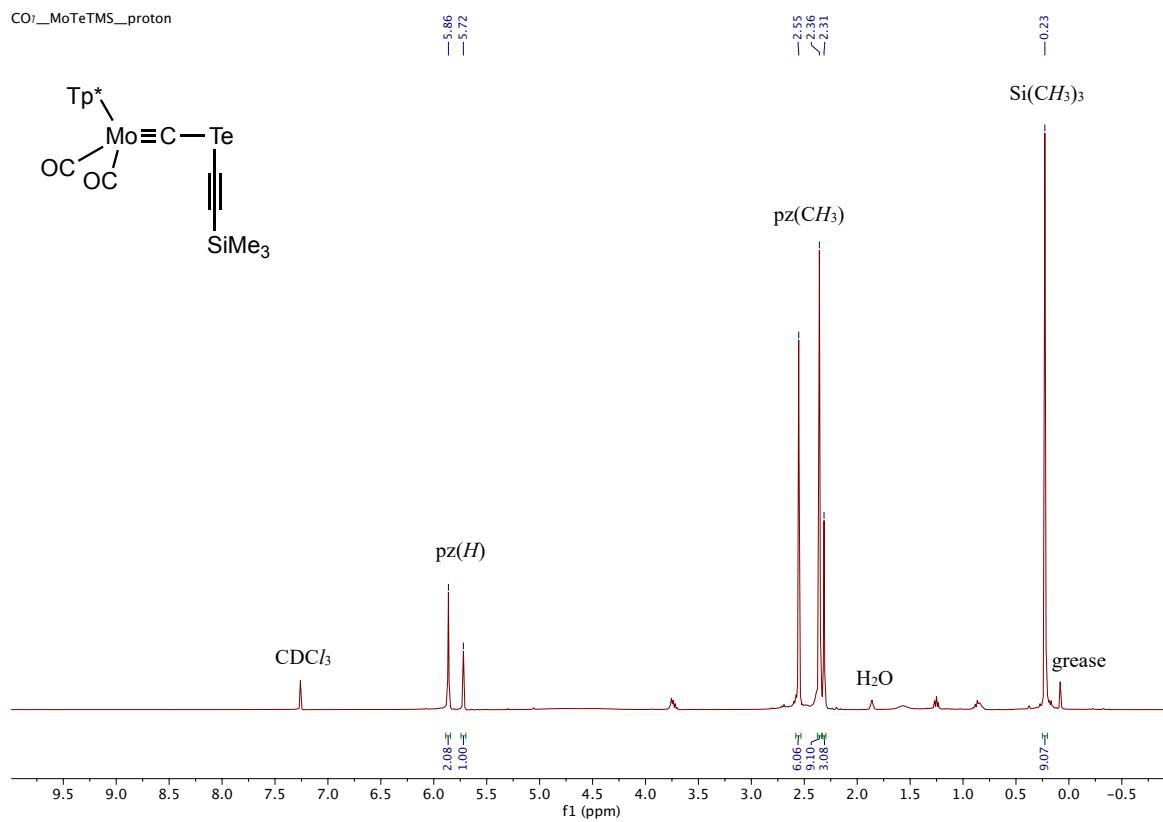
¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.34.¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound A.34.



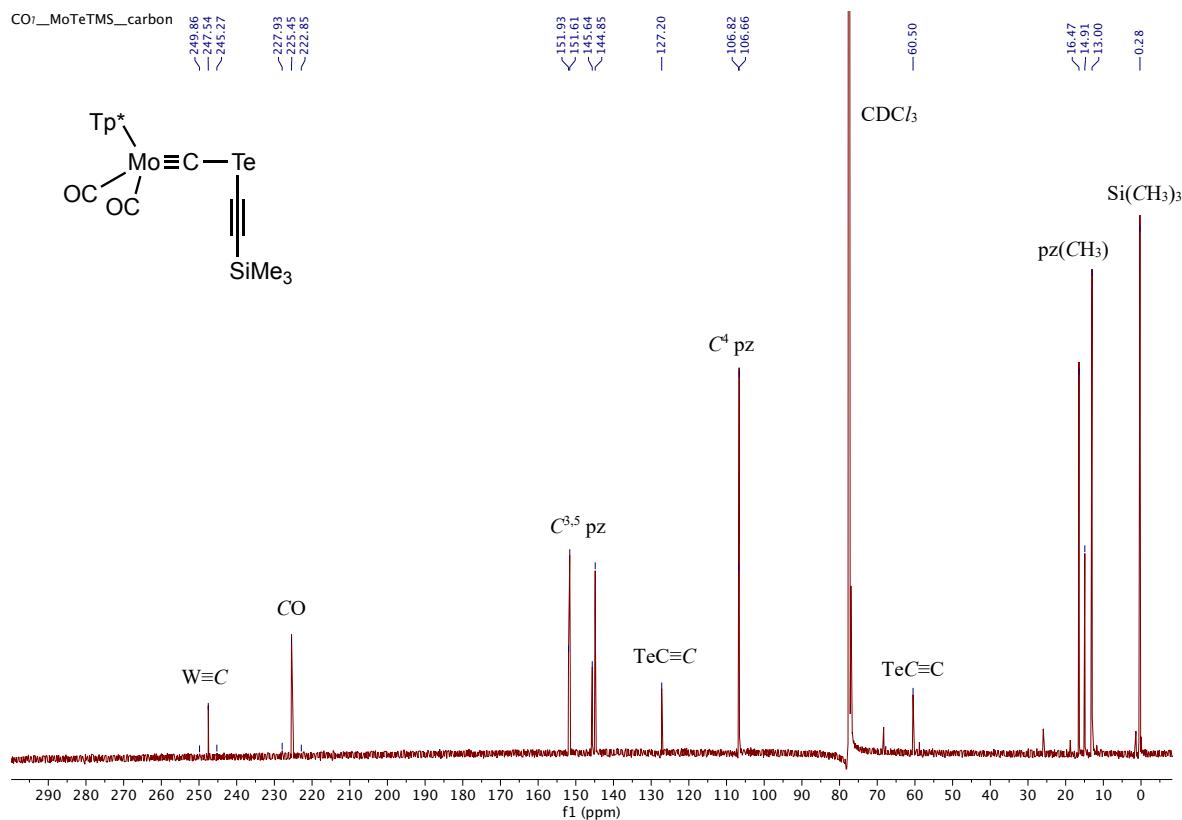
$^{77}\text{Se}\{^1\text{H}\}$ NMR spectrum (76 MHz, CDCl_3 , 25°C, δ) of compound **A.34**.



^{199}Hg NMR spectrum (72 MHz, CDCl_3 , 25°C, δ) of compound **A.34**.

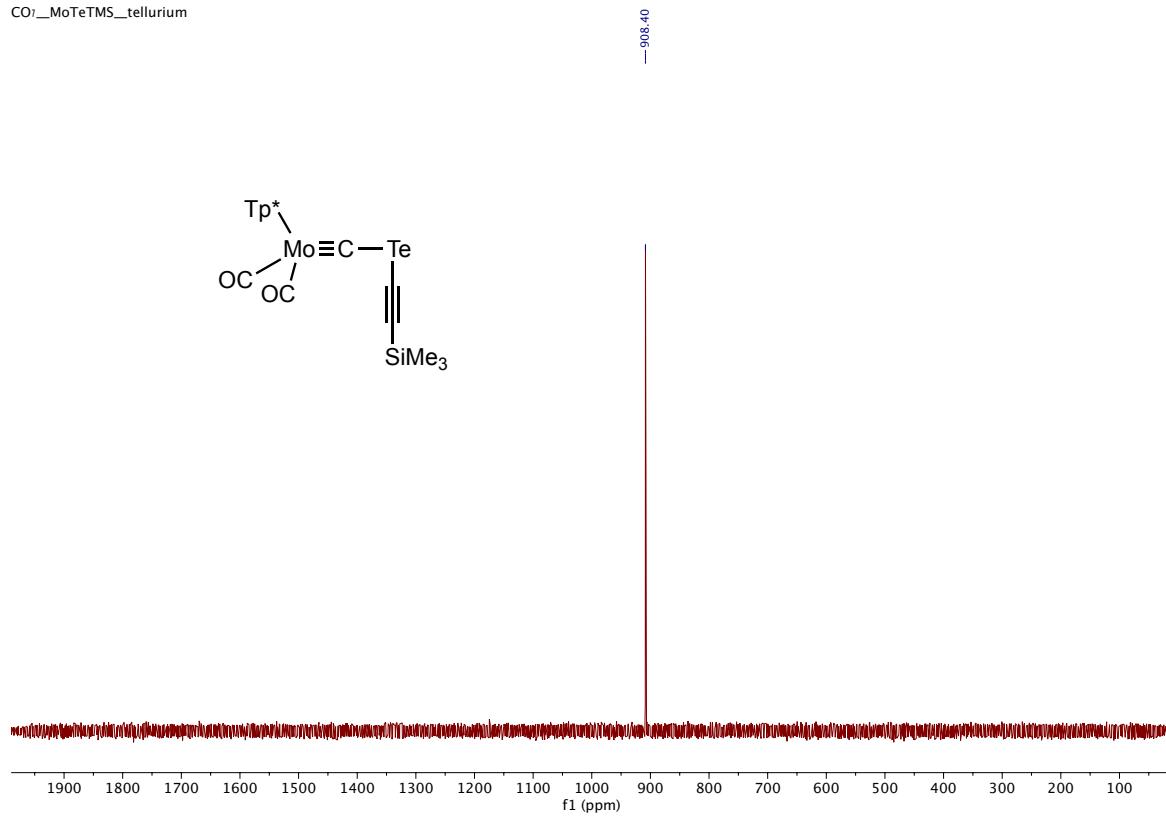


¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.35.

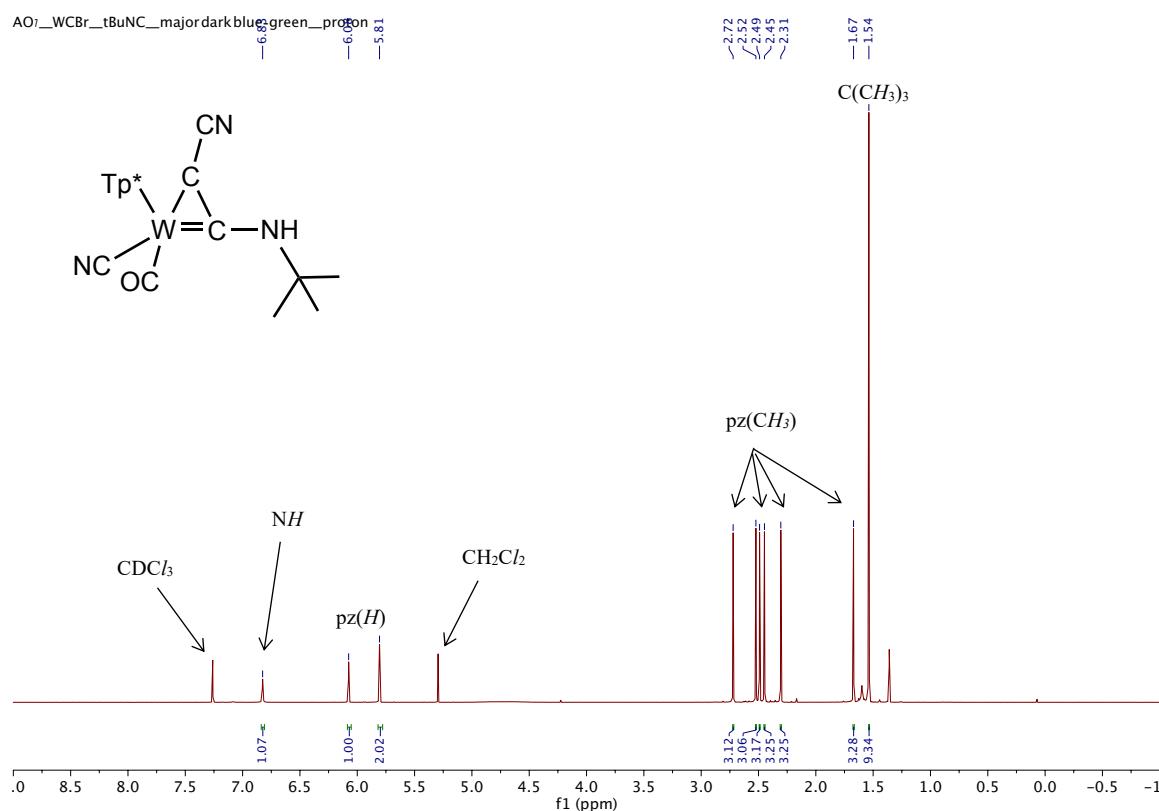


¹³C{¹H} NMR spectrum (101 MHz, CDCl₃, 25°C, δ) of compound A.35.

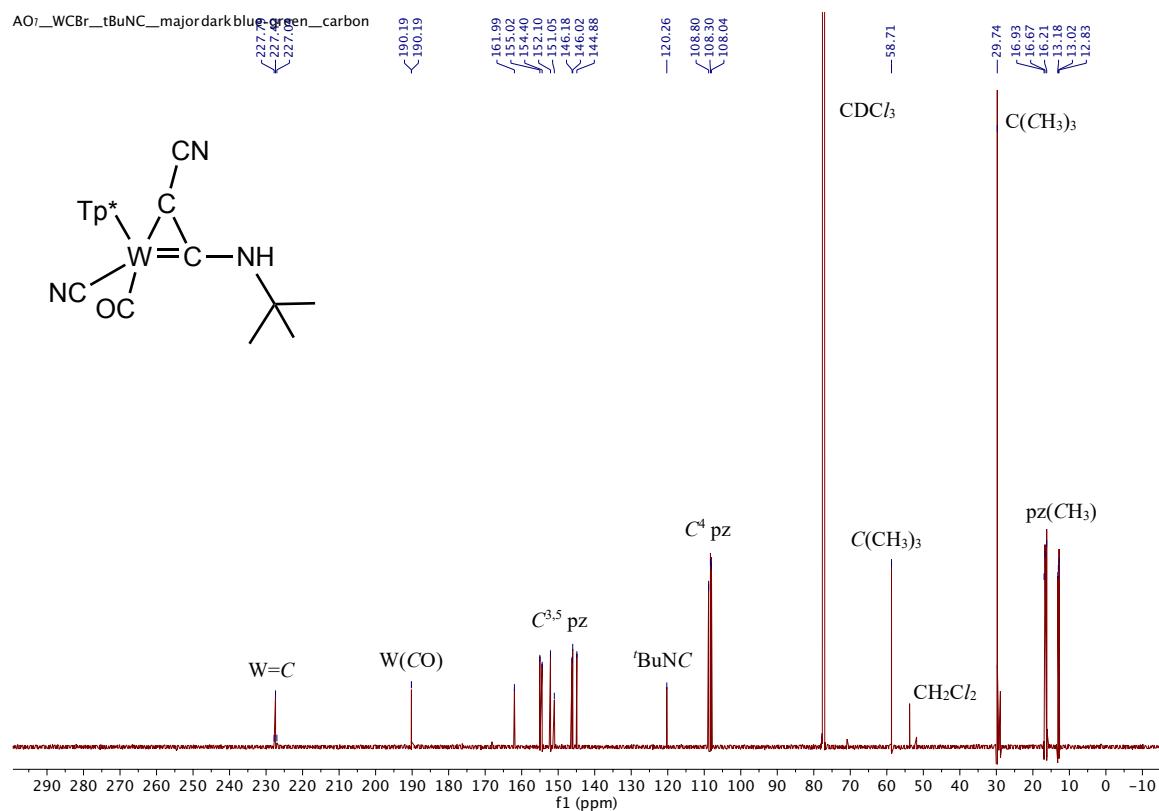
COJ_MoTeTMS_tellurium



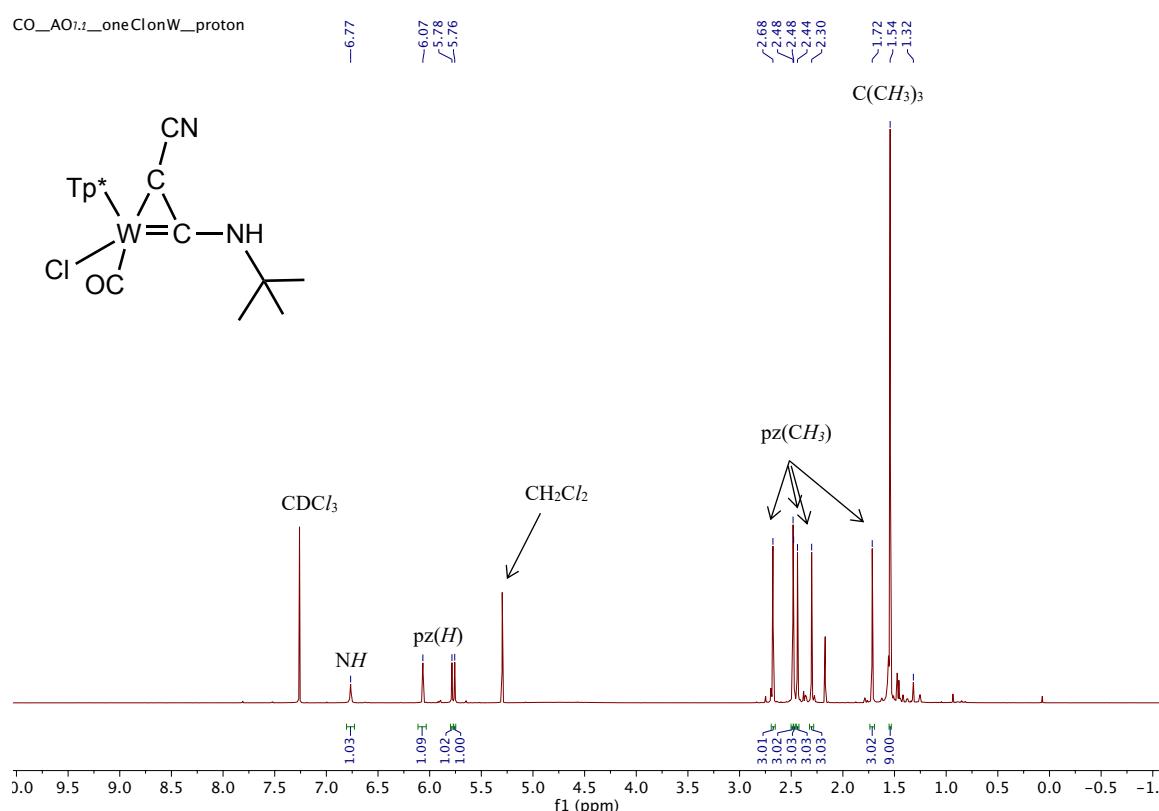
$^{125}\text{Te}\{\text{H}\}$ NMR spectrum (126 MHz, CDCl₃, 25°C, δ) of compound **A.35**.



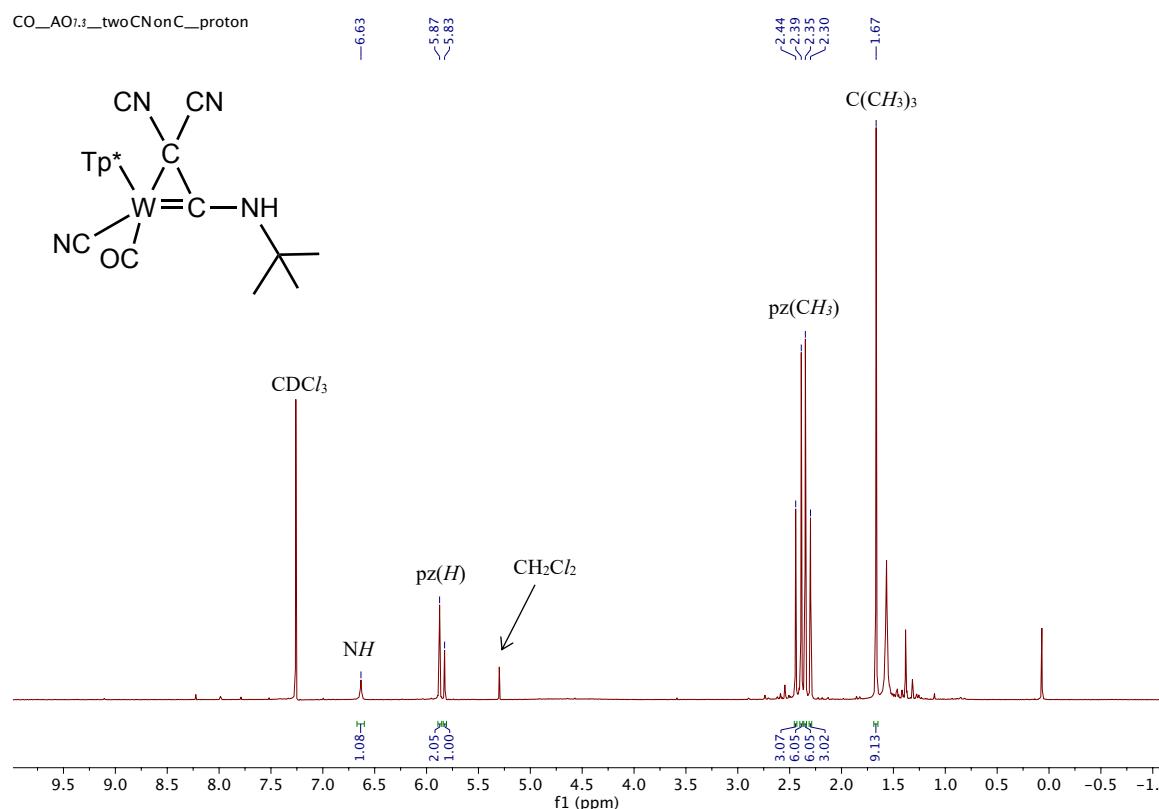
^1H NMR spectrum (700 MHz, CDCl_3 , 25°C, δ) of compound A.36a.



$^{13}\text{C}\{\text{H}\}$ NMR spectrum (151 MHz, CDCl_3 , 25°C, δ) of compound A.36a.



¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.36b.



¹H NMR spectrum (400 MHz, CDCl₃, 25°C, δ) of compound A.36c.