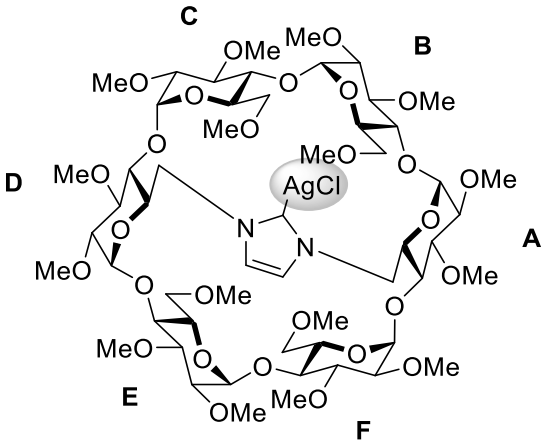
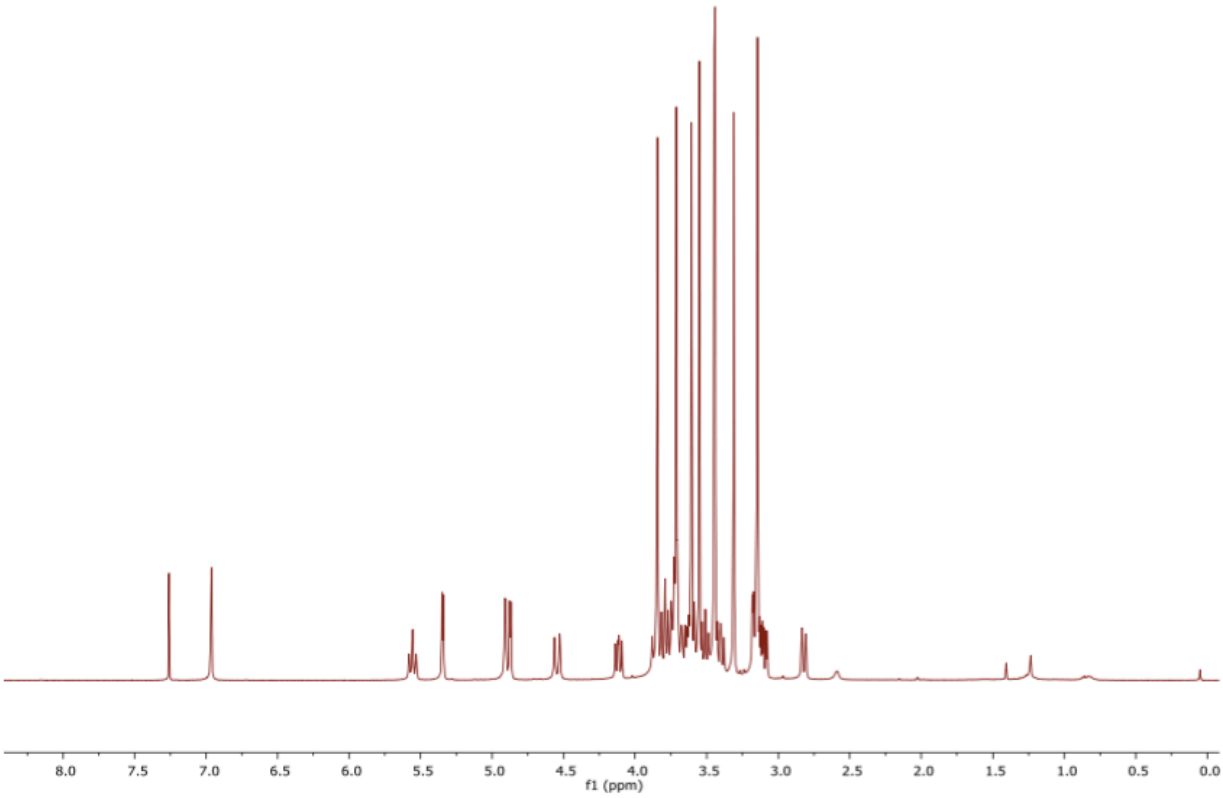
(α-ICyD^{Me})AgCl.

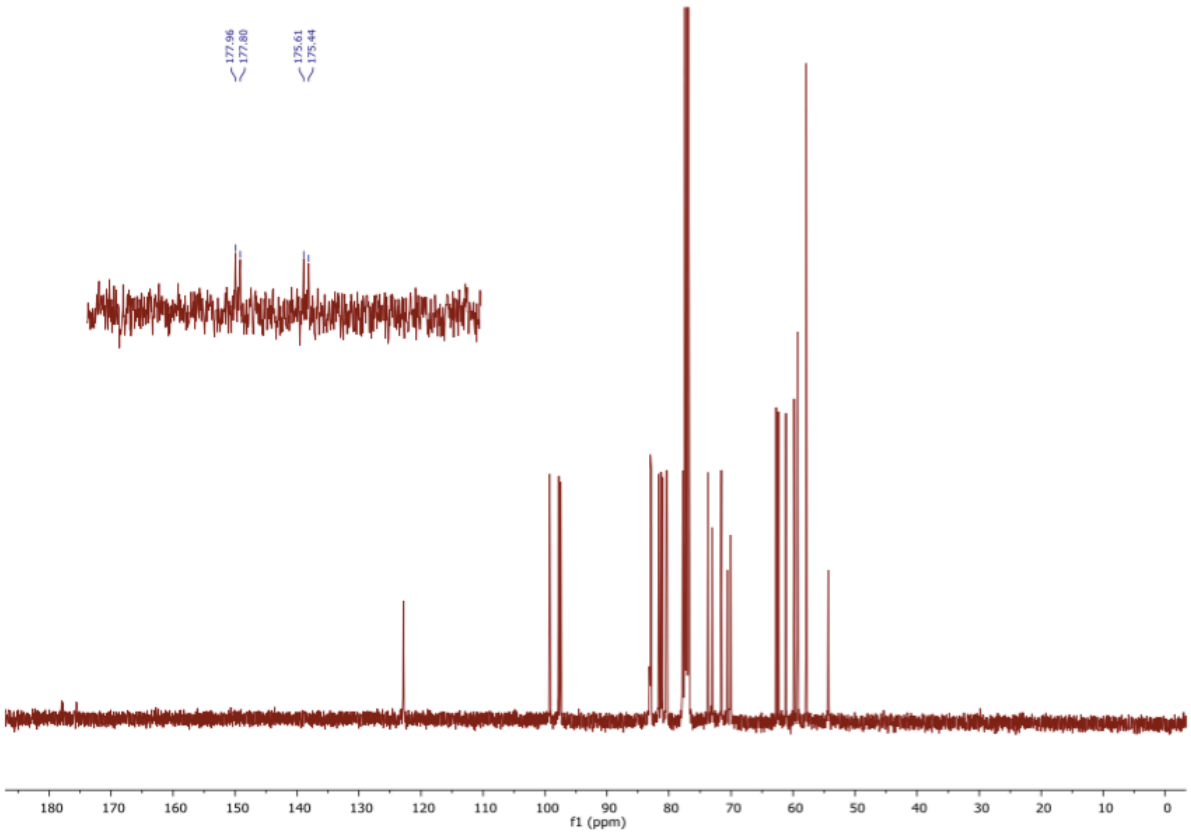


Chemical Formula: $C_{55}H_{92}AgClN_2O_{28}$
Molecular Weight: 1372.65

^{1}H NMR (400 MHz, $CDCl_3$, 300K): δ 2.81 (d, 2H, J = 10.6 Hz, 2 × $H_{6a}^{B,E}$), 3.10 (dd, J_1 = 3.6 Hz, J_2 = 10.5 Hz, 2 × $H_2^{C,F}$), 3.13 (m, 2H, 2 × $H_2^{B,E}$), 3.14 (s, 6H, 2 × $OCH_3(C_6^{B,E})$), 3.15 (m, 2H, 2 × $H_2^{A,D}$), 3.16 (m, 2H, 2 × $H_{6b}^{B,E}$), 3.31 (s, 6H, 2 × $OCH_3(C_6^{C,F})$), 3.41 (m, 2H, 2 × $H_4^{A,D}$), 3.44 (s, 6H, 2 × $OCH_3(C_2^{A,D})$), 3.45 (s, 6H, 2 × $OCH_3(C_2^{B,E})$), 3.51 (m, 2H, 2 × $H_4^{C,F}$), 3.55 (s, 6H, 2 × $OCH_3(C_2^{C,F})$), 3.58 (m, 2H, 2 × $H_4^{B,E}$), 3.60 (s, 6H, 2 × $OCH_3(C_3^{A,D})$), 3.62 (m, 2H, 2 × $H_{6a}^{C,F}$), 3.68 (m, 2H, 2 × $H_5^{B,E}$), 3.69 (m, 2H, 2 × $H_3^{B,E}$), 3.71 (s, 6H, 2 × $OCH_3(C_3^{B,E})$), 3.72 (m, 2H, 2 × $H_5^{C,F}$), 3.77 (m, 2H, 2 × $H_3^{A,D}$), 3.78 (m, 2H, 2 × $H_{6b}^{C,F}$), 3.84 (s, 6H, 2 × $OCH_3(C_3^{C,F})$), 3.85 (m, 2H, 2 × $H_{6a}^{A,D}$), 4.09 (dd, J_1 = 8.1 Hz, J_2 = 10.5 Hz, 2 × $H_3^{C,F}$), 4.54 (d, 2H, J = 14.2 Hz, 2 × $H_{6b}^{A,D}$), 4.86 (d, 2H, J = 3.6 Hz, 2 × $H_1^{B,E}$), 4.91 (d, 2H, J = 3.2 Hz, 2 × $H_1^{A,D}$), 5.35 (d, 2H, J = 3.6 Hz, 2 × $H_1^{C,F}$), 5.55 (t, 2H, J = 10.0 Hz, 2 × $H_5^{A,D}$), 6.96 (d, 2H, J = 1.8 Hz, 2 × -**CH**=CH-N) ppm; **^{13}C NMR** (100 MHz, $CDCl_3$, 300K): δ 54.3 (2C, 2 × $C_6^{A,D}$), 57.9 (4C, 2 × $OCH_3(C_2^{A,D})$, 2 × $OCH_3(C_2^{B,E})$), 59.25 (2C, 2 × $OCH_3(C_6^{C,F})$), 59.3 (2C, 2 × $OCH_3(C_6^{B,E})$), 59.8 (2C, 2 × $OCH_3(C_2^{C,F})$), 61.2 (2C, 2 × $OCH_3(C_3^{A,D})$), 62.3 (2C, 2 × $OCH_3(C_3^{C,F})$), 62.8 (2C, 2 × $OCH_3(C_3^{B,E})$), 70.1 (2C, 2 × $C_6^{B,E}$), 70.6 (2C, 2 × $C_5^{A,D}$), 71.6 (2C, 2 × $C_5^{B,E}$), 73.0 (2C, 2 × $C_6^{C,F}$), 73.7 (2C, 2 × $C_5^{C,F}$), 77.8 (2C, 2 × $C_4^{A,D}$), 80.25 (2C, 2 × $C_2^{C,F}$), 80.4 (2C, 2 × $C_3^{C,F}$), 81.1 (2C, 2 × $C_2^{B,E}$), 81.3 (2C, 2 × $C_4^{B,E}$), 81.6 (2C, 2 × $C_3^{B,E}$), 82.8 (2C, 2 × $C_2^{A,D}$), 82.95 (2C, 2 × $C_3^{A,D}$), 83.1 (2C, 2 × $C_4^{C,F}$), 97.4 (2C, 2 × $C_1^{B,E}$), 97.8 (2C, 2 × $C_1^{A,D}$), 99.2 (2C, 2 × $C_1^{C,F}$), 122.7, 122.8 (2C, J = 7.29 Hz, 2 × -**CH**=CH-N), 176.7 (1C, 1 × C-Ag, $J_{^{109}Ag\text{-}C}$ = 219.9 Hz, $J_{^{107}Ag\text{-}C}$ = 253.1 Hz) ppm.

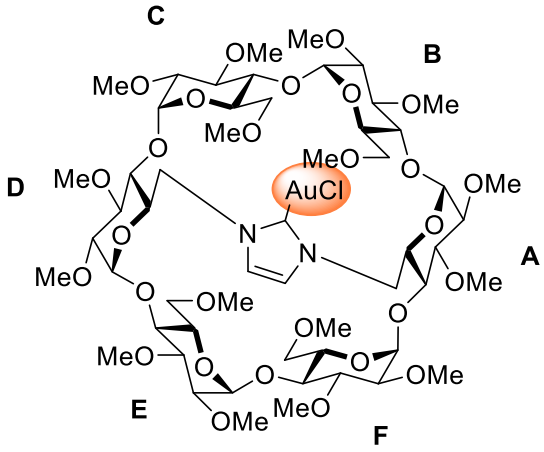


^{1}H NMR spectrum of **(α-ICyD^{Me})AgCl** in $CDCl_3$ (300K, 400 MHz)



^{13}C NMR spectrum of **(α-ICyD^{Me})AgCl** in $CDCl_3$ (300K, 100 MHz)

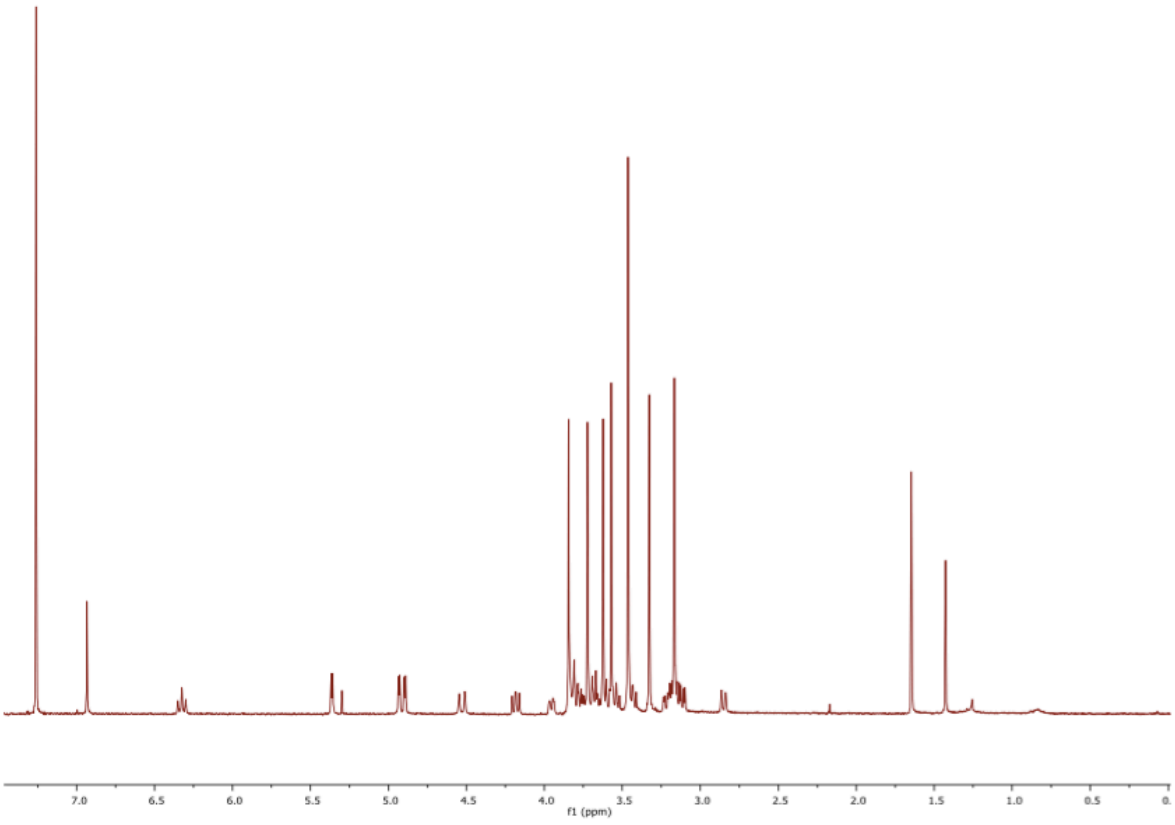
(α-ICyD^{Me})AuCl



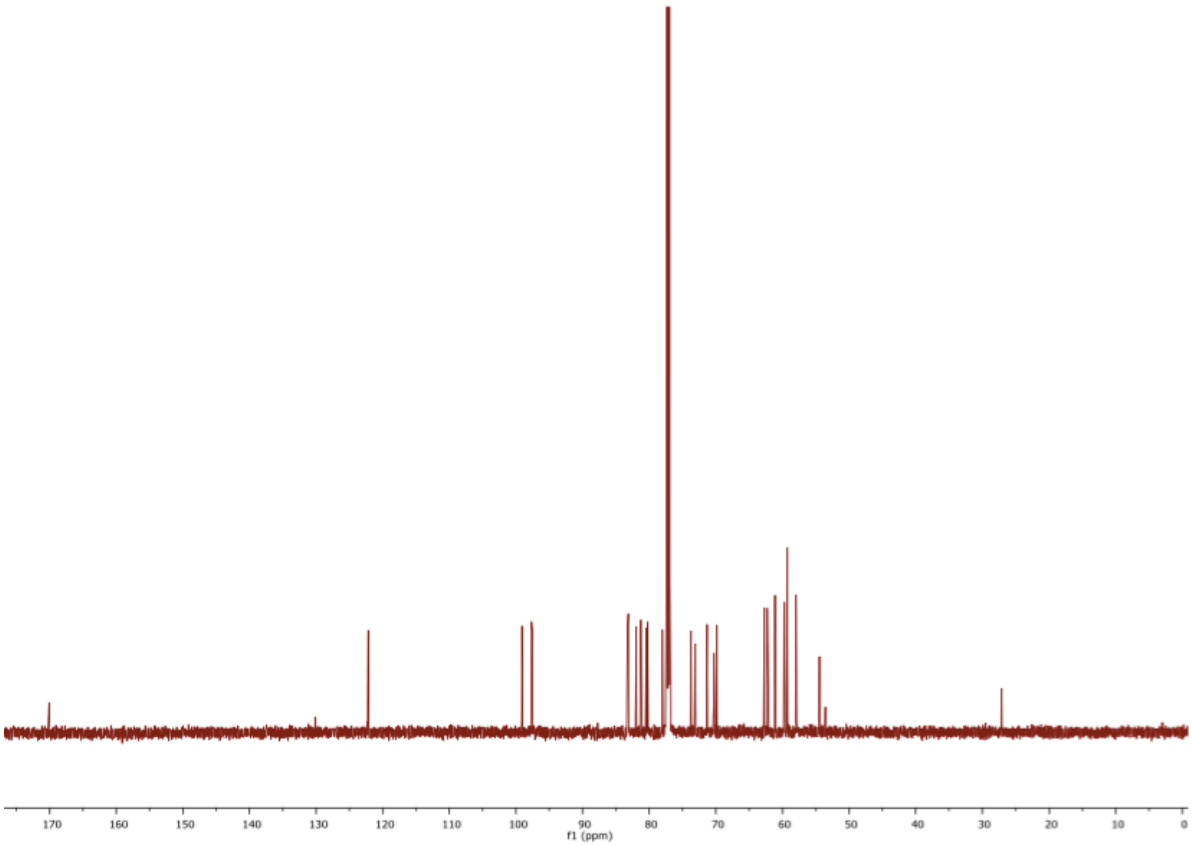
Chemical Formula: $C_{55}H_{92}AuClN_2O_{28}$
Molecular Weight: 1461.74

^{1}H NMR (400 MHz, $CDCl_3$, 300K): δ 2.86 (d, 2H, J = 10.5 Hz, 2 × $H_{6a}^{B,E}$), 3.10 (d, 2H, J = 3.4 Hz, 2 × $H_2^{C,F}$), 3.13 (d, 2H, J = 3.7 Hz, 2 × $H_2^{B,E}$), 3.15 (m, 2H, 2 × $H_2^{A,D}$), 3.17 (s, 6H, 2 × $OCH_3(C_6^{B,E})$), 3.22 (m, 2H, 2 × $H_{6b}^{B,E}$), 3.33 (s, 6H, 2 × $OCH_3(C_6^{C,F})$), 3.43 (m, 2H, 2 × $H_4^{A,D}$), 3.46 (s, 12H, 2 × $OCH_3(C_2^{A,D})$, 2 × $OCH_3(C_2^{B,E})$), 3.54 (m, 2H, 2 × $H_4^{C,F}$), 3.57 (s, 6H, 2 × $OCH_3(C_2^{C,F})$), 3.60 (m, 2H, 2 × $H_4^{B,E}$), 3.62 (s, 6H, 2 × $OCH_3(C_3^{A,D})$), 3.67 (m, 2H, 2 × $H_{6a}^{C,F}$), 3.70 (m, 2H, 2 × $H_3^{B,E}$), 3.72 (s, 6H, 2 × $OCH_3(C_3^{B,E})$), 3.75 (m, 2H, 2 × $H_{6a}^{A,D}$), 3.80 (m, 2H, 2 × $H_3^{A,D}$), 3.81 (m, 2H, 2 × $H_{6b}^{C,F}$), 3.83 (m, 2H, 2 × $H_5^{C,F}$), 3.84 (s, 6H, 2 × $OCH_3(C_3^{C,F})$), 3.96 (d, 2H, J = 14.5 Hz, 2 × $H_5^{B,E}$), 4.19 (dd, 2H, J = 8.0 Hz, J = 10.8 Hz, 2 × $H_3^{C,F}$), 4.53 (d, 2H, J = 14.1 Hz, 2 × $H_{6b}^{A,D}$), 4.89 (d, 2H, J = 3.7 Hz, 2 × $H_1^{B,E}$), 4.93 (d, 2H, J = 3.1 Hz, 2 × $H_1^{A,D}$), 5.36 (d, 2H, J = 3.4 Hz, 2 × $H_1^{C,F}$), 6.32 (t, 2H, J = 10.1 Hz, J = 11.1 Hz, 2 × $H_5^{A,D}$), 6.93 (s, 2H, 2 × -**CH**=CH-N) ppm;

^{13}C NMR (100 MHz, $CDCl_3$, 300K): δ 54.5 (2C, 2 × $C_6^{A,D}$), 57.9 (2C, 2 × $OCH_3(C_2^{B,E})$), 57.95 (2C, 2 × $OCH_3(C_2^{A,D})$), 59.3 (4C, 2 × $OCH_3(C_6^{B,E})$, 2 × $OCH_3(C_6^{C,F})$), 59.75 (2C, 2 × $OCH_3(C_2^{C,F})$), 61.1 (2C, 2 × $OCH_3(C_3^{A,D})$), 62.3 (2C, 2 × $OCH_3(C_3^{C,F})$), 62.7 (2C, 2 × $OCH_3(C_3^{B,E})$), 69.9 (2C, 2 × $C_5^{A,D}$), 70.3 (2C, 2 × $C_6^{B,E}$), 71.3 (2C, 2 × $C_5^{B,E}$), 73.1 (2C, 2 × $C_6^{C,F}$), 73.75 (2C, 2 × $C_5^{C,F}$), 78.0 (2C, 2 × $C_4^{A,D}$), 80.2 (2C, 2 × $C_3^{C,F}$), 80.4 (2C, 2 × $C_2^{C,F}$), 81.2 (2C, 2 × $C_2^{B,E}$), 81.25 (2C, 2 × $C_4^{B,E}$), 81.9 (2C, 2 × $C_3^{B,E}$), 83.1 (2C, 2 × $C_2^{A,D}$), 83.2 (2C, 2 × $C_3^{A,D}$), 83.25 (2C, 2 × $C_4^{C,F}$), 97.5 (2C, 2 × $C_1^{B,E}$), 97.7 (2C, 2 × $C_1^{A,D}$), 99.1 (2C, 2 × $C_1^{C,F}$), 122.2 (2C, 2 × -**CH**=CH-N), 170.0 (1C, 1 × C-Au) ppm.

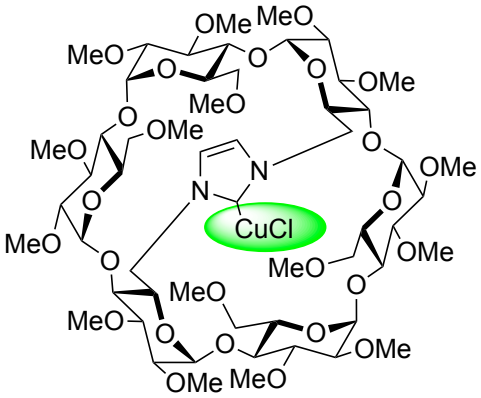


^{1}H NMR spectrum of **(α-ICyD^{Me})AuCl** in $CDCl_3$ (300 K, 400 MHz)



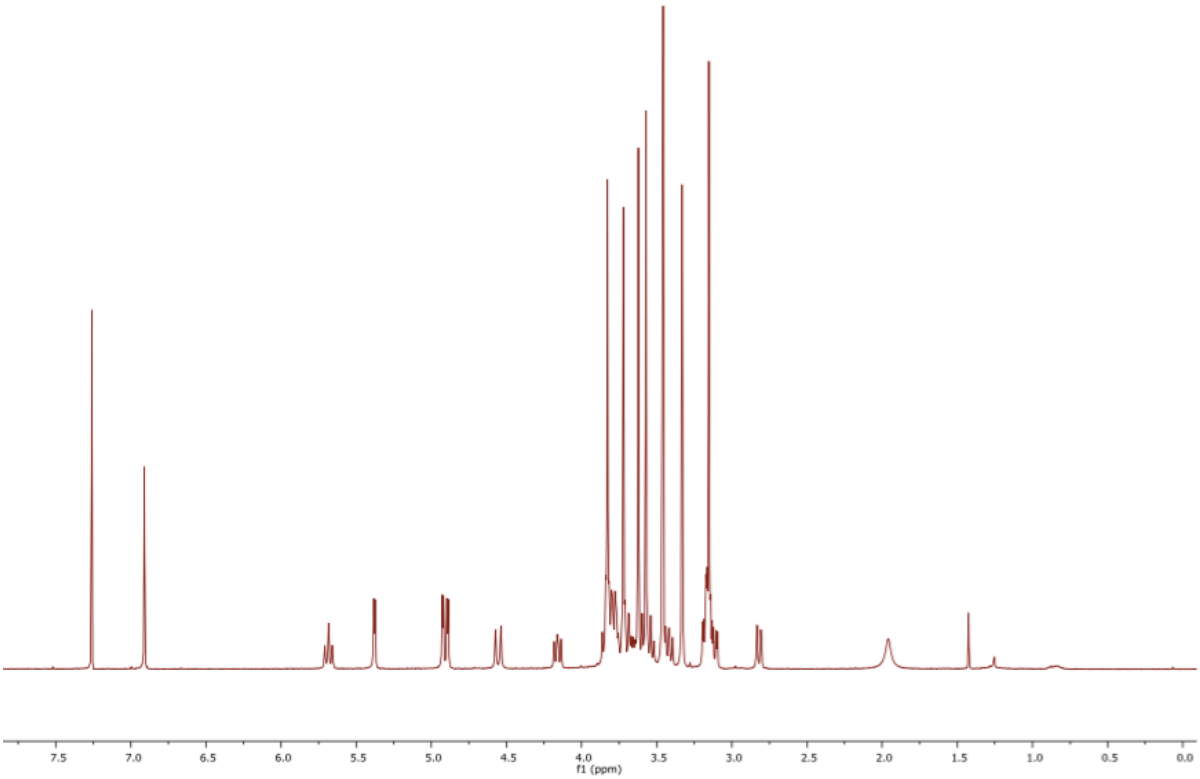
^{13}C NMR spectrum of **(α-ICyD^{Me})AuCl** in $CDCl_3$ (300 K, 100 MHz)

(α-ICyD^{Me})CuCl

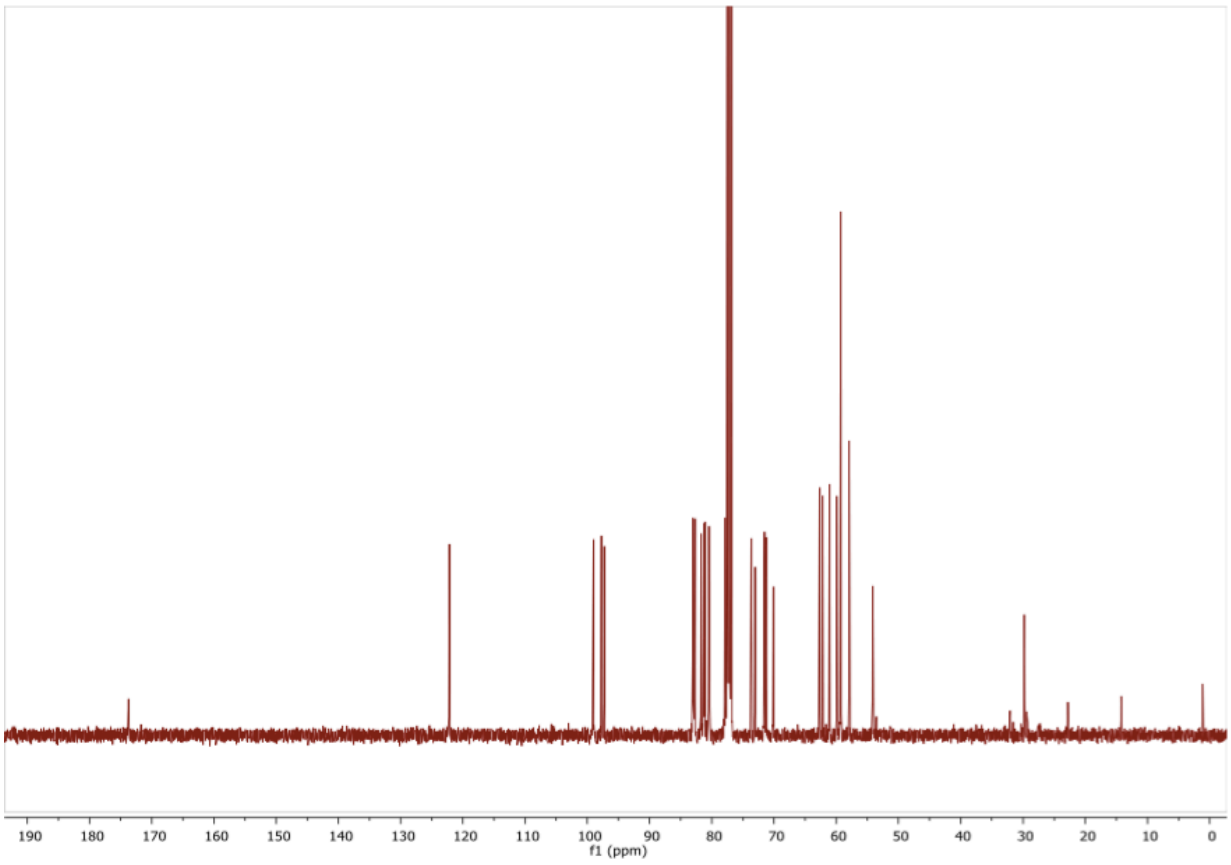


Chemical Formula: $C_{55}H_{93}ClCuN_2O_{28}$
Molecular Weight: 1329,3310

^{1}H NMR (400 MHz, $CDCl_3$, 300K): δ 2.81 (d, 2H, J = 10.7 Hz, 2 × $H_{6a}^{B,E}$), 3.09 (dd, 2H , J_1 = 3.3 Hz, J_2 = 10.3 Hz, 2 × $H_2^{C,F}$), 3.14 (m, 8H, 2 × $H_2^{B,E}$, 2 × $OCH_3(C_6^{B,E})$), 3.15 (m, 2H, 2 × $H_{6b}^{B,E}$), 3.16 (m, 2H, 2 × $H_2^{A,D}$), 3.32 (s, 6H, 2 × $OCH_3(C_6^{C,F})$), 3.40 (m, 2H, 2 × $H_4^{A,D}$), 3.44 (s, 6H, 2 × $OCH_3(C_2^{B,E})$), 3.45 (s, 6H, 2 × $OCH_3(C_2^{A,D})$), 3.52 (m, 2H, 2 × $H_4^{C,F}$), 3.55 (s, 6H, 2 × $OCH_3(C_2^{C,F})$), 3.57 (m, 2H, 2 × $H_4^{B,E}$), 3.61 (s, 6H, 2 × $OCH_3(C_3^{A,D})$), 3.65 (m, 2H, 2 × $H_{6a}^{C,F}$), 3.69 (m, 2H, 2 × $H_3^{B,E}$), 3.70 (s, 6H, 2 × $OCH_3(C_3^{B,E})$), 3.75 (m, 2H, 2 × $H_5^{C,F}$), 3.77 (m, 2H, 2 × $H_5^{B,E}$), 3.80 (m, 4H, 2 × $H_{6a}^{A,D}$, 2 × $H_{6b}^{C,F}$), 3.81 (s, 6H, 2 × $OCH_3(C_3^{C,F})$), 3.83 (m, 2H, 2 × $H_3^{A,D}$), 4.14 (dd, 2H , J_1 = 7.8 Hz, J_2 = 10.3 Hz, 2 × $H_3^{C,F}$), 4.55 (d, 2H, J = 14.2 Hz, 2 × $H_{6b}^{A,D}$), 4.88 (d, 2H, J = 3.5 Hz, 2 × $H_1^{B,E}$), 4.91 (d, 2H, J = 3.3 Hz, 2 × $H_1^{A,D}$), 5.36 (d, 2H, J = 3.3 Hz, 2 × $H_1^{C,F}$), 5.67 (t, 2H, J_1 = 9.7 Hz, J_2 = 11.3 Hz, 2 × $H_5^{A,D}$), 6.90 (s, 2H, 2 × -**CH**=CH-N) ppm; **^{13}C NMR** (100 MHz, $CDCl_3$, 300K): δ 53.95 (2C, 2 × $C_6^{A,D}$), 57.7 (2C, 2 × $OCH_3(C_2^{A,D})$), 57.8 (2C, 2 × $OCH_3(C_2^{B,E})$), 59.1 (4C, 2 × $OCH_3(C_6^{B,E})$, 2 × $OCH_3(C_6^{C,F})$), 59.8 (2C, 2 × $OCH_3(C_2^{C,F})$), 60.95 (2C, 2 × $OCH_3(C_3^{A,D})$), 62.0 (2C, 2 × $OCH_3(C_3^{C,F})$), 62.5 (2C, 2 × $OCH_3(C_3^{B,E})$), 69.95 (2C, 2 × $C_6^{B,E}$), 71.1 (2C, 2 × $C_5^{A,D}$), 71.4 (2C, 2 × $C_5^{B,E}$), 72.9 (2C, 2 × $C_6^{C,F}$), 73.5 (2C, 2 × $C_5^{C,F}$), 77.7 (2C, 2 × $C_4^{A,D}$), 80.2 (2C, 2 × $C_2^{C,F}$), 80.3 (2C, 2 × $C_3^{C,F}$), 80.95 (2C, 2 × $C_2^{B,E}$), 81.1 (2C, 2 × $C_4^{B,E}$), 81.6 (2C, 2 × $C_3^{B,E}$), 82.6 (2C, 2 × $C_3^{A,D}$), 82.8 (2C, 2 × $C_4^{C,F}$), 82.9 (2C, 2 × $C_2^{A,D}$), 97.1 (2C, 2 × $C_1^{B,E}$), 97.6 (2C, 2 × $C_1^{A,D}$), 98.85 (2C, 2 × $C_1^{C,F}$), 122.0 (2C, 2 × -**CH**=CH-N), 173.7 (1C, 1 × C-Cu)ppm



^{1}H NMR spectrum of **(α-ICyD^{Me})CuCl** in $CDCl_3$ (300 K, 400 MHz)



^{13}C NMR spectrum of **(α-ICyD^{Me})CuCl** in $CDCl_3$ (300 K, 100 MHz)