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Supplementary information

Synthesis of N-heterocyclic carbene gold(I) complexes

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Synthesis of N-heterocyclic carbene gold(I) complexes

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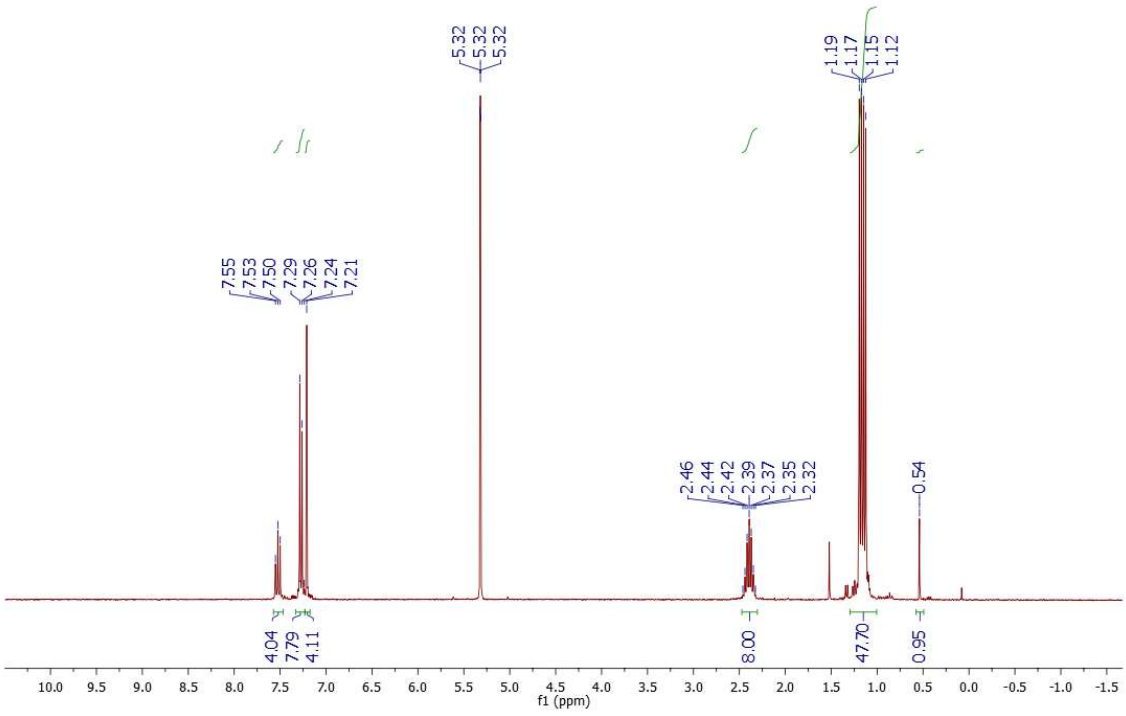
General considerations

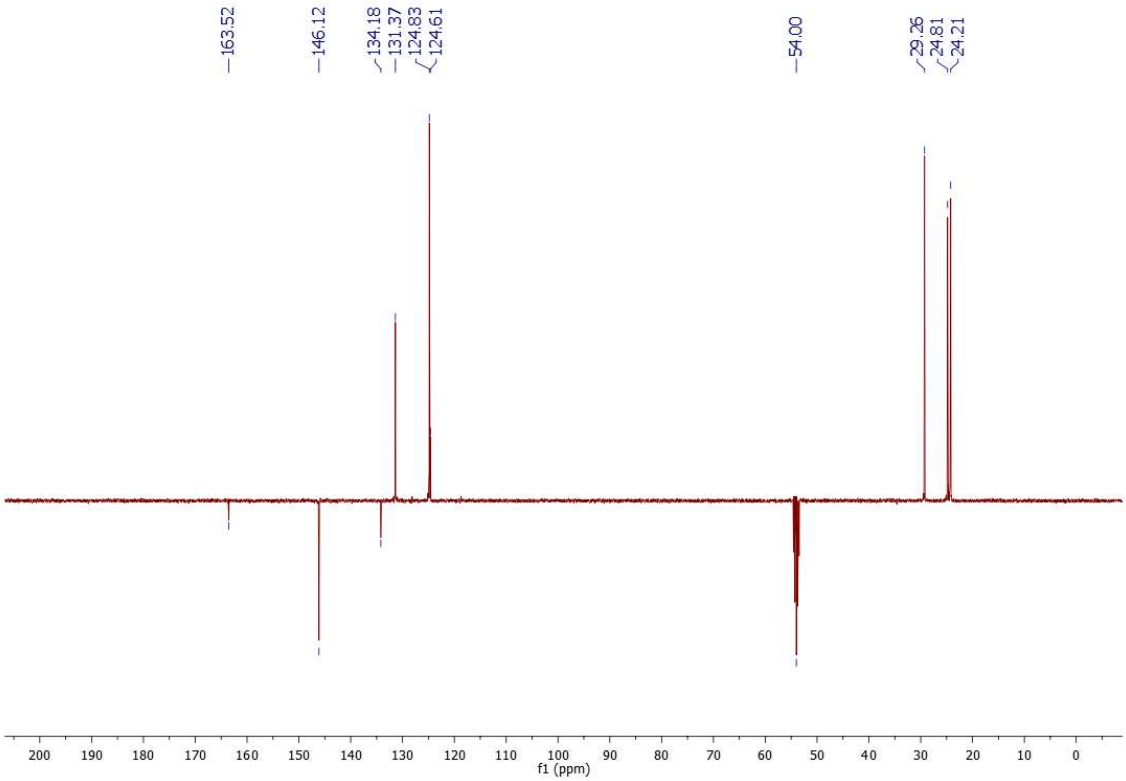
NMR spectra were acquired on a Bruker 300MHz Avance I Ultrashield, a Bruker 400MHz Avance II Ultrashield (both equipped with a BBFO-z-ATMA probe) or a Bruker Avance II 500MHz equipped with a 5mm triple channel probe head (TXO type). ^{1}H NMR spectra were referenced to residual solvent signals and ^{13}C NMR spectra to the deuterated solvent signal, while chemical shifts are reported in ppm. IR spectra were recorded on a Perkin Elmer FTIR spectrometer (spectrum 1000).

NMR spectra

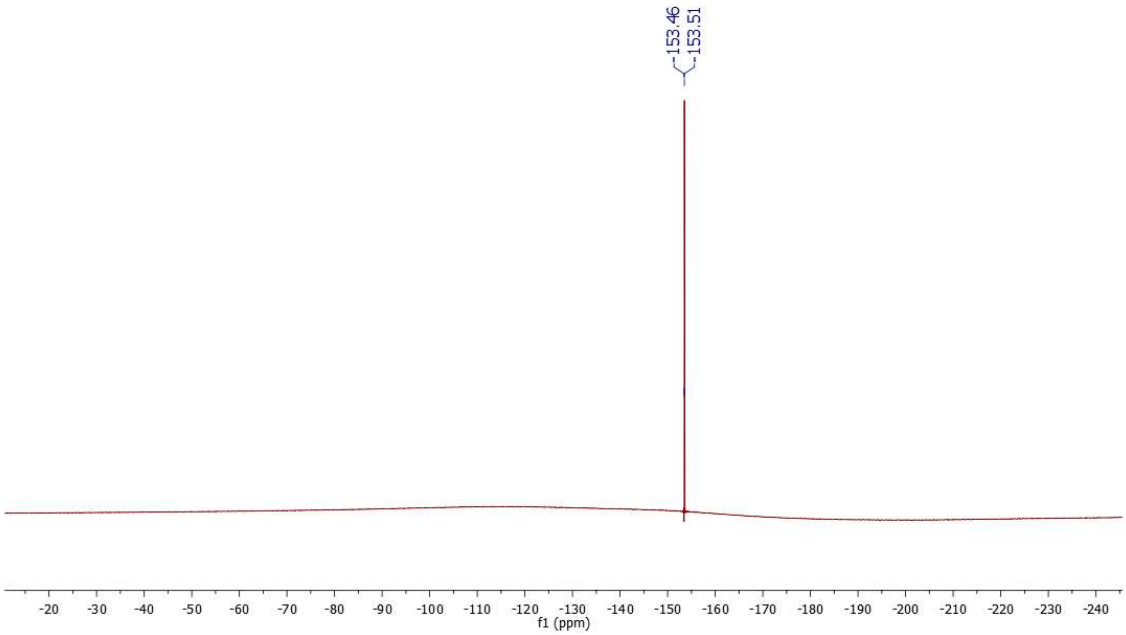
[{Au(IPr)}$_2$(μ-OH)][BF$_4$] (8)



Supplementary Figure 1. ^{1}H NMR of complex 8 in CD_2Cl_2 (300 MHz, 293K)



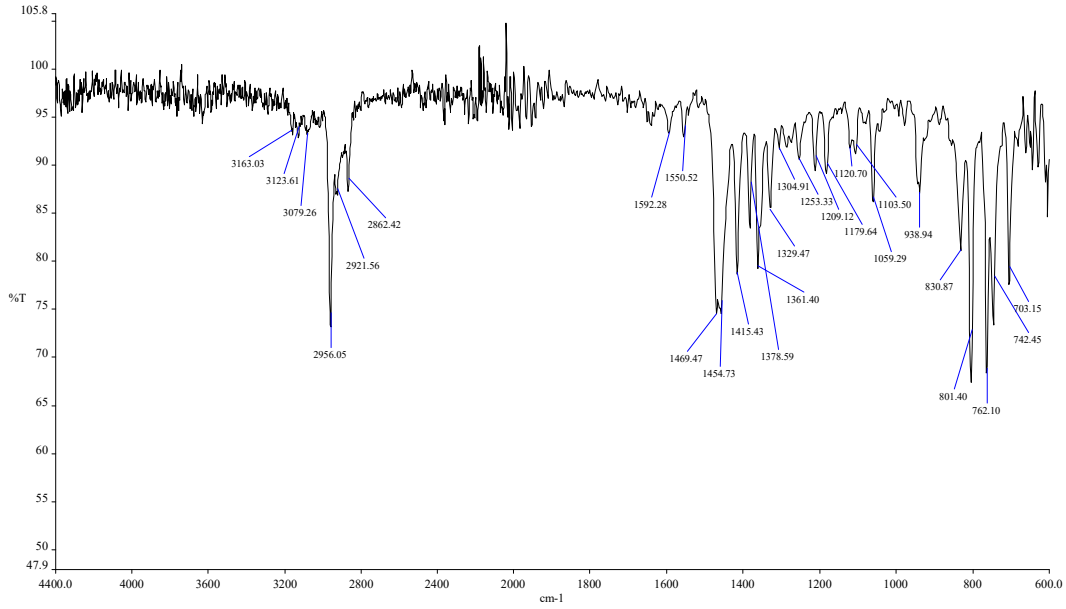
Supplementary Figure 2. ^{13}C {^{1}H} DEPT Q NMR of complex 8 in CD_2Cl_2 (100.6 MHz, 293K)



Supplementary Figure 3. ^{19}F NMR of complex 8 in CD_2Cl_2 (470.6 MHz, 293K)

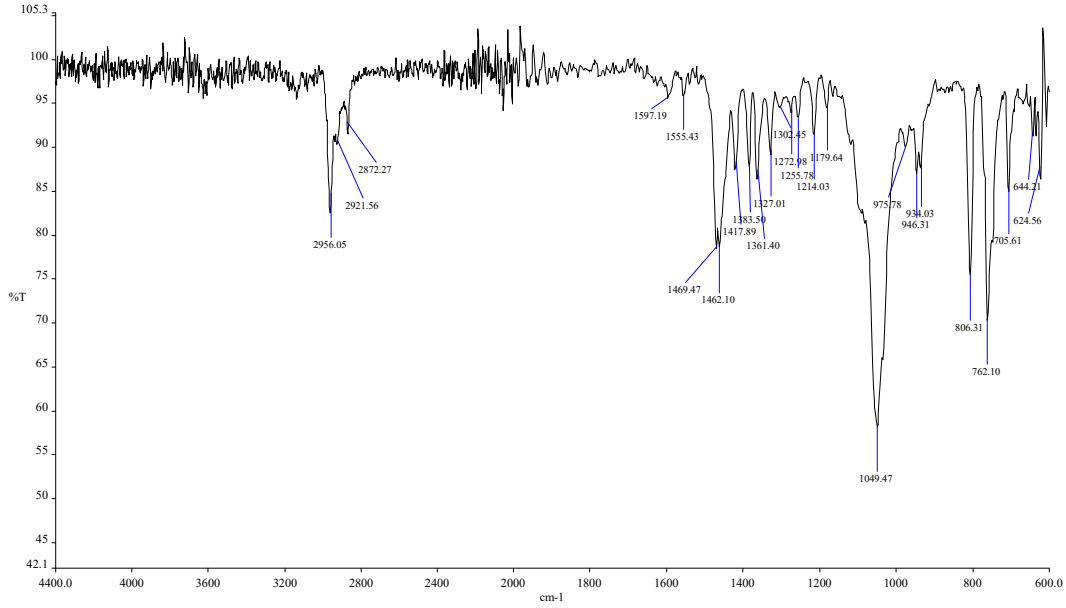
IR spectra

[Au(OH)(IPr)] (7)



Supplementary Figure 4. FTIR spectrum of complex 7

[{Au(IPr)}$_2$(μ-OH)][BF$_4$] (8)



Supplementary Figure 5. FTIR spectrum of complex 8