

Supplementary Material

Gold-NHC-*N*-naphthamide complexes

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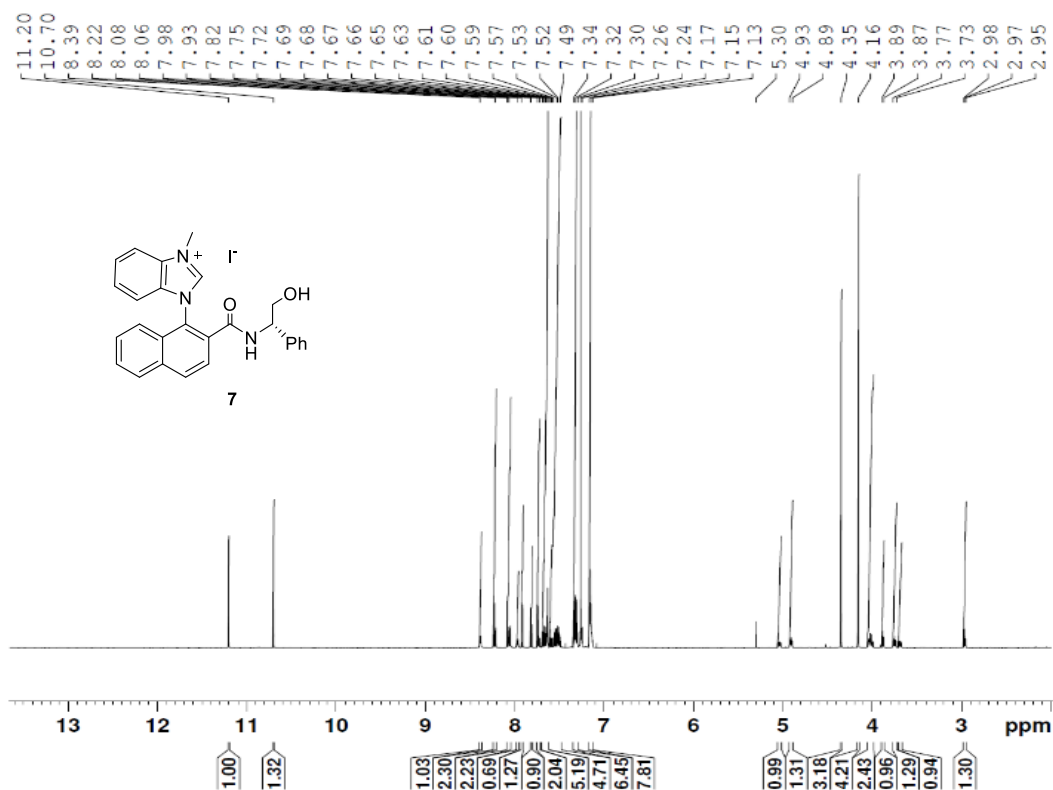
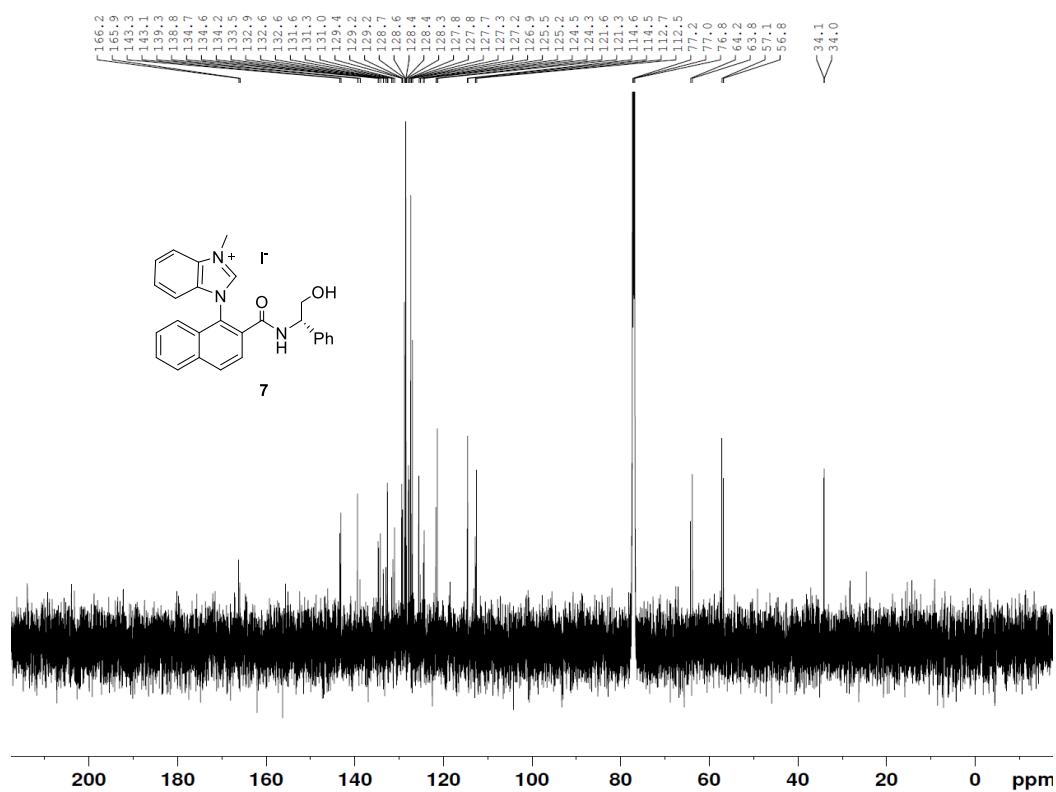
Email: anne.fiksdahl@ntnu.no

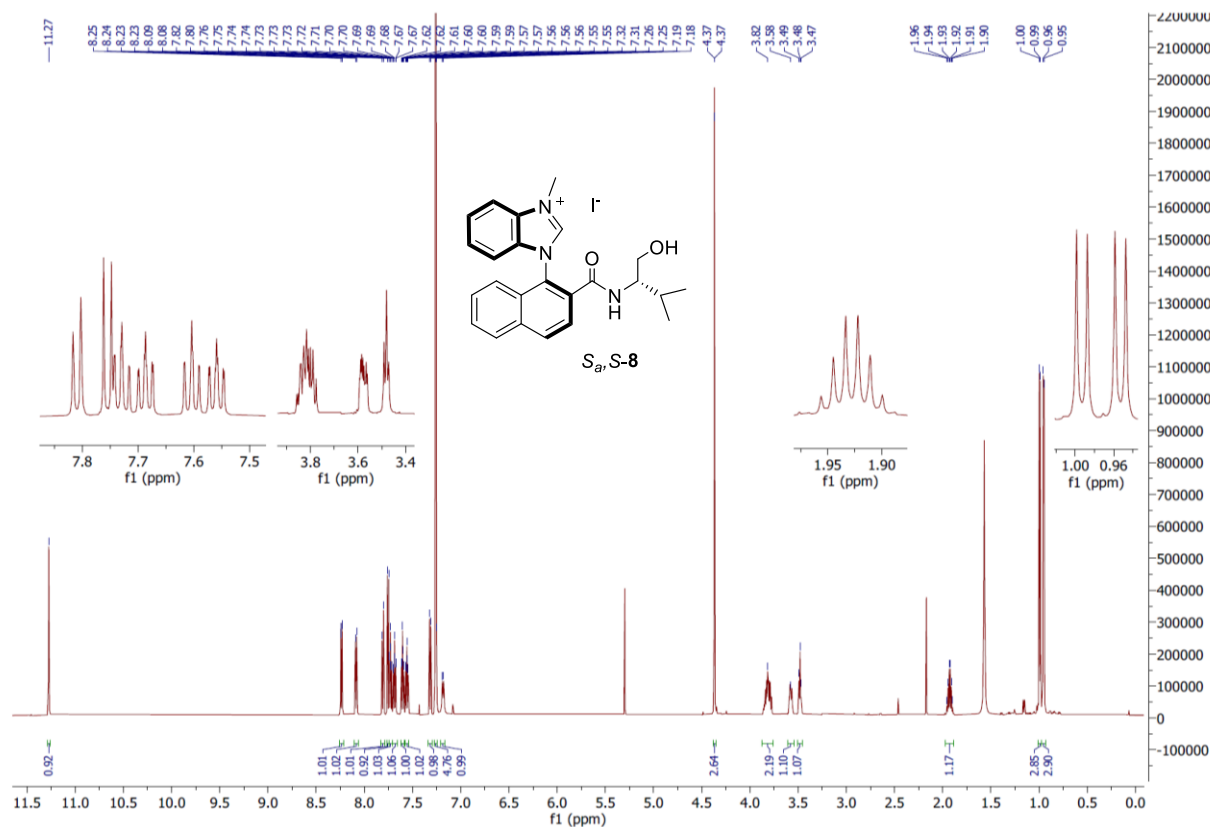
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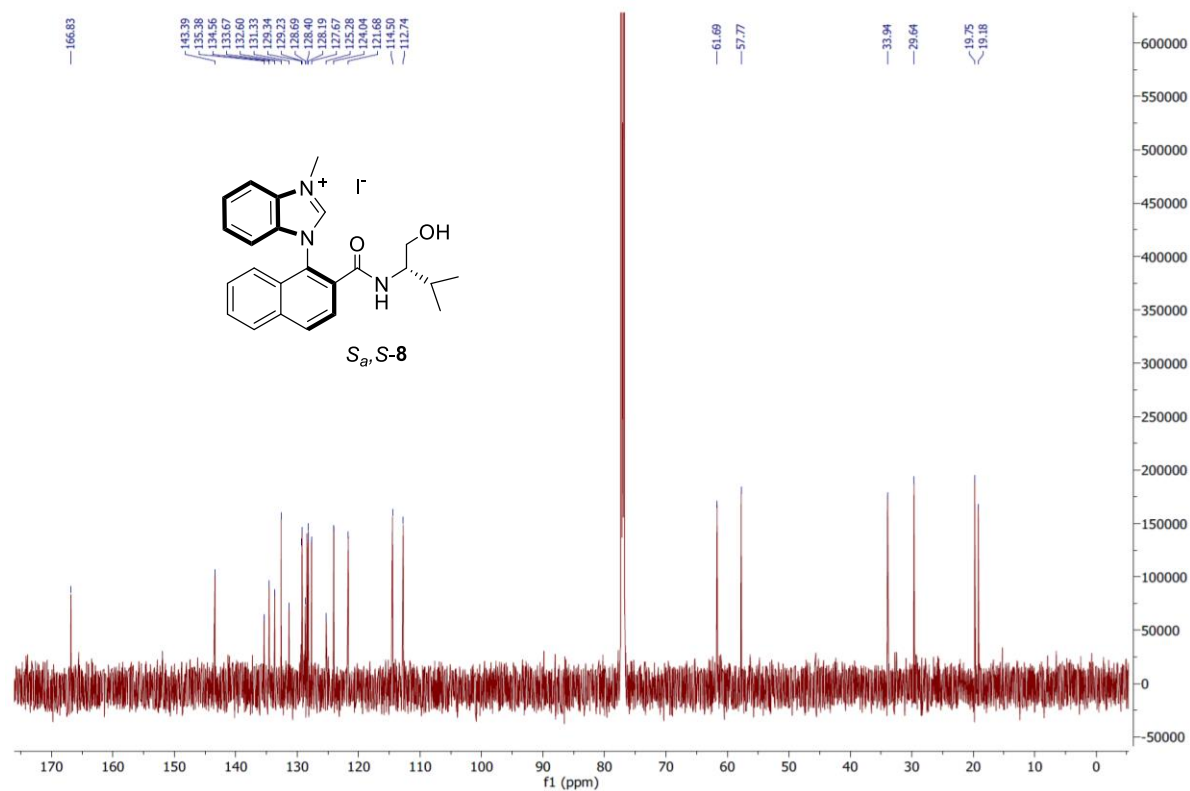
^1H and ^{13}C NMR spectra of compounds 7-12

Benzimidazolium salts (7,8)

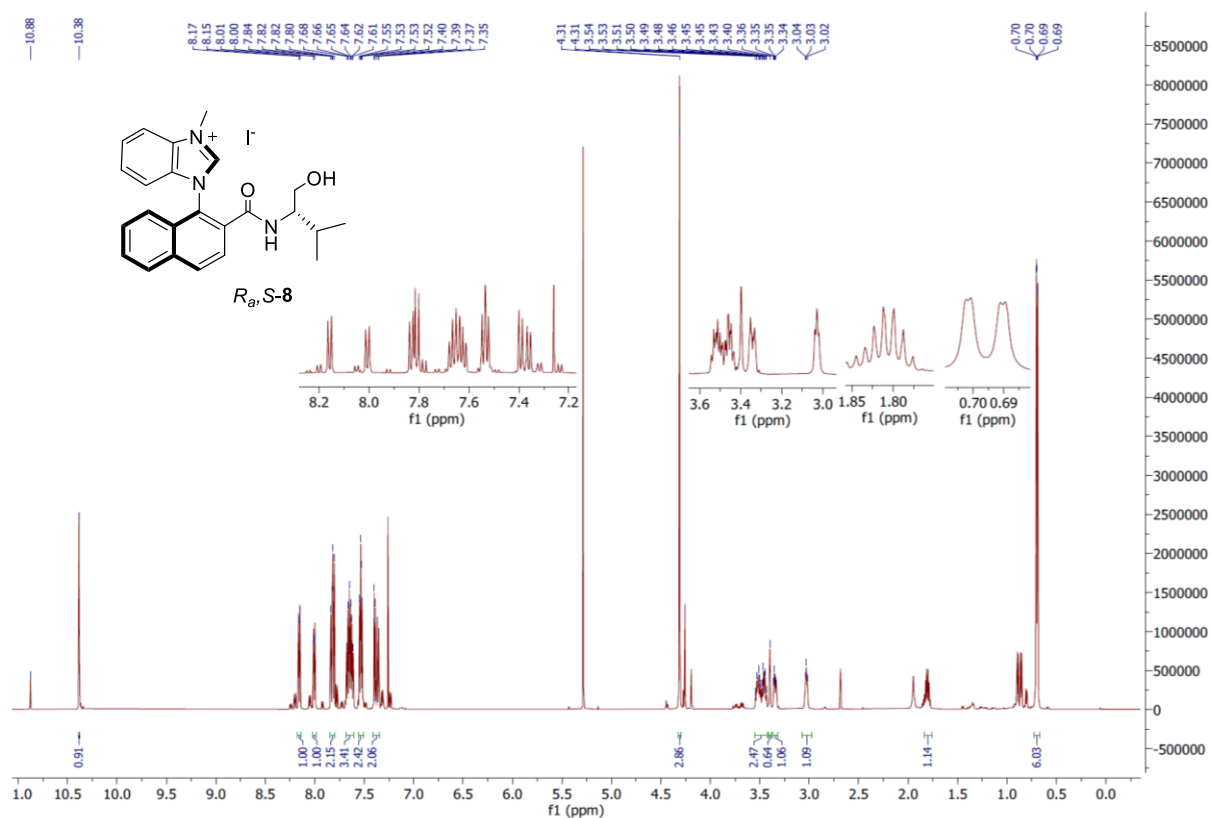
Benzimidazolium salt 7: ^1H NMR spectrum of 7 ^{13}C NMR spectrum of 7

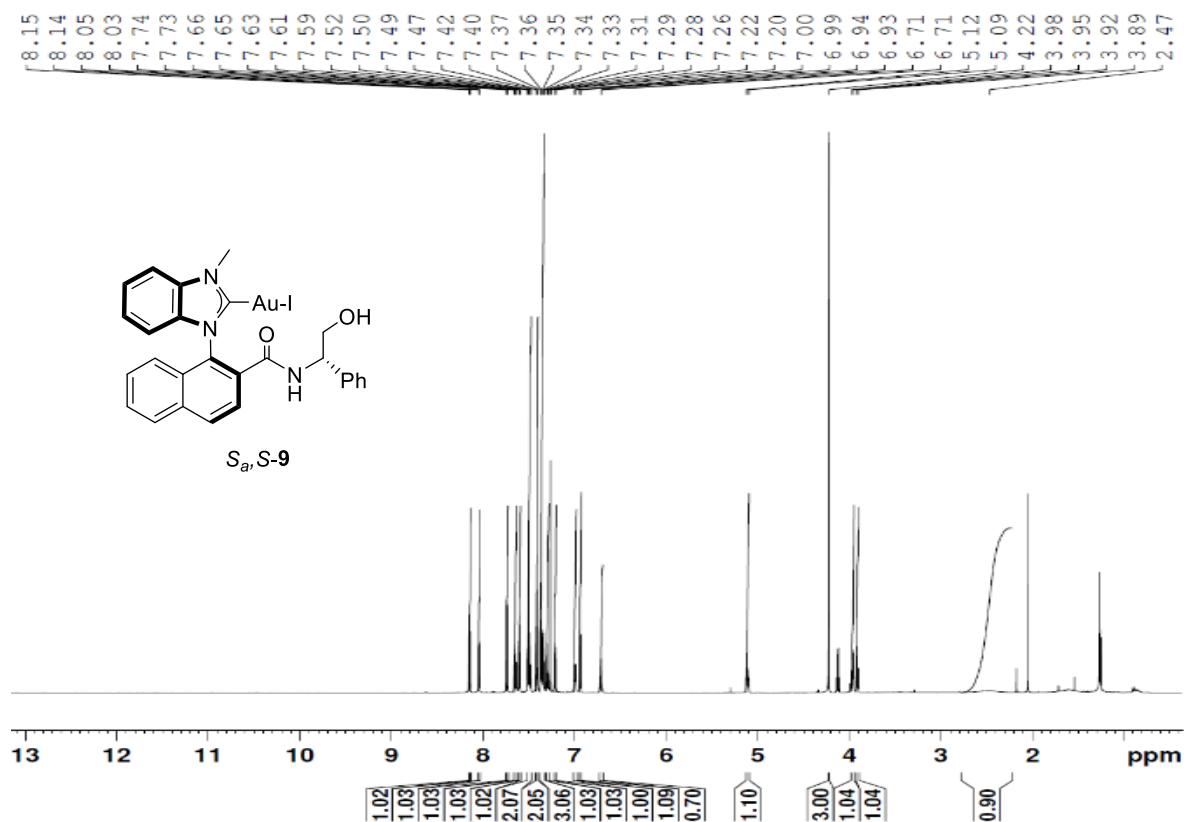
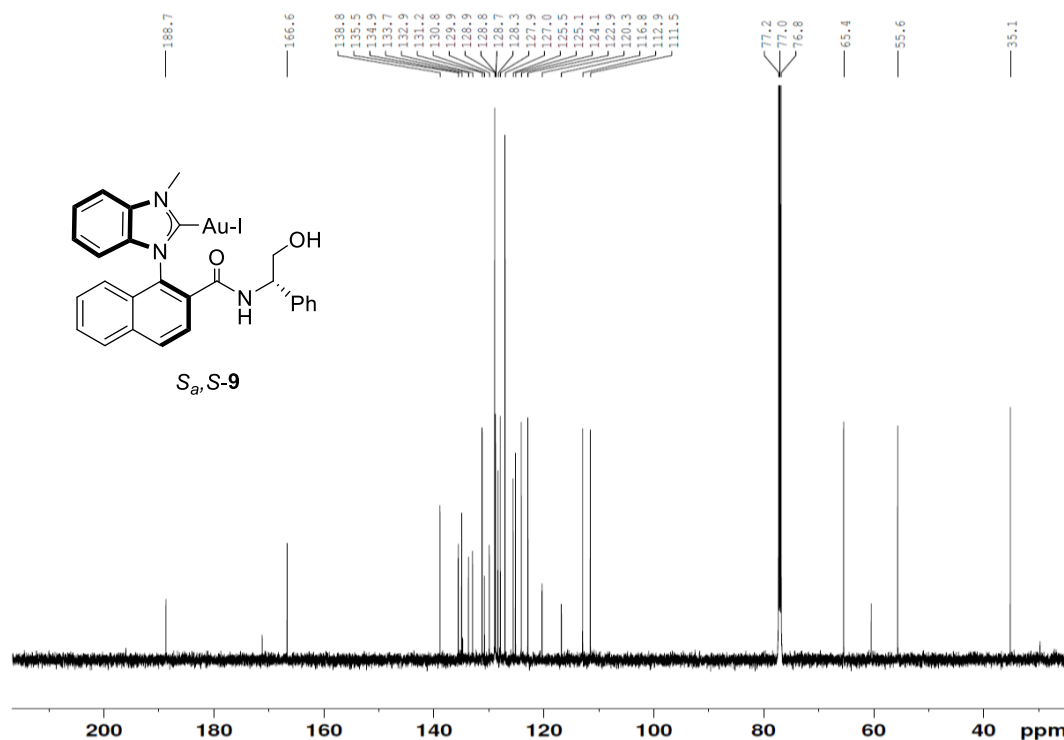
Benzimidazolium salt S_a , S-8:

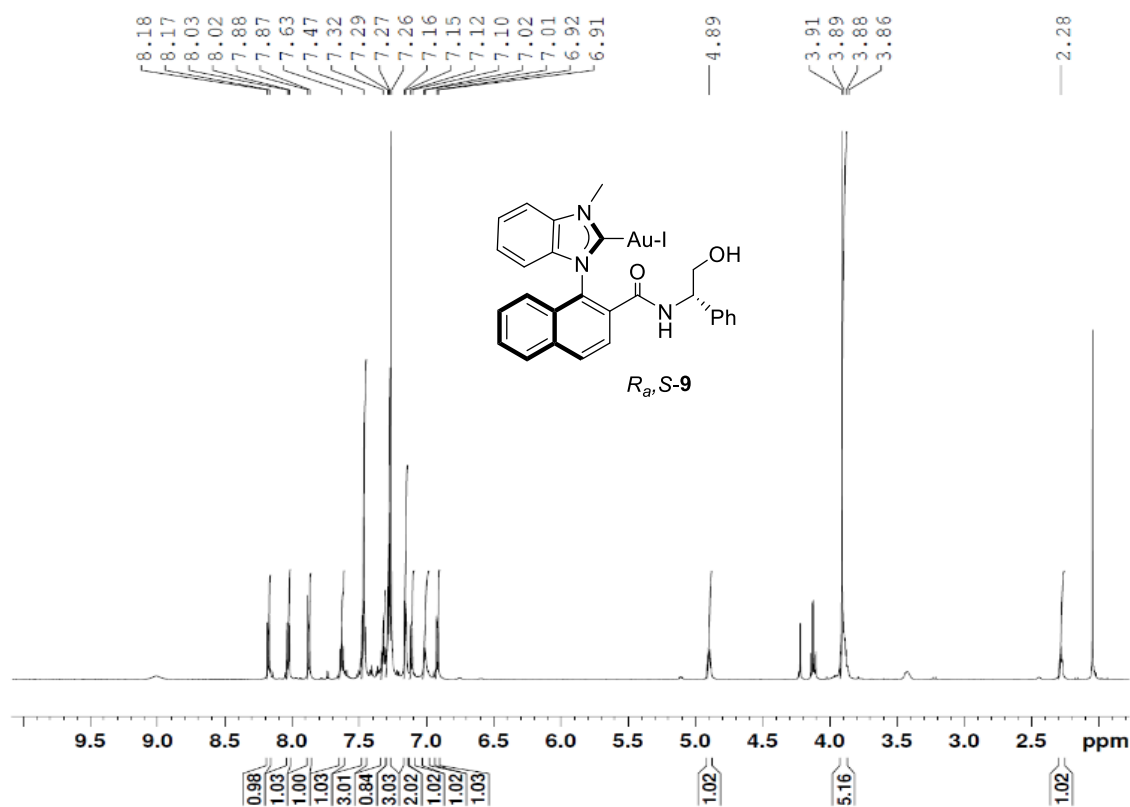
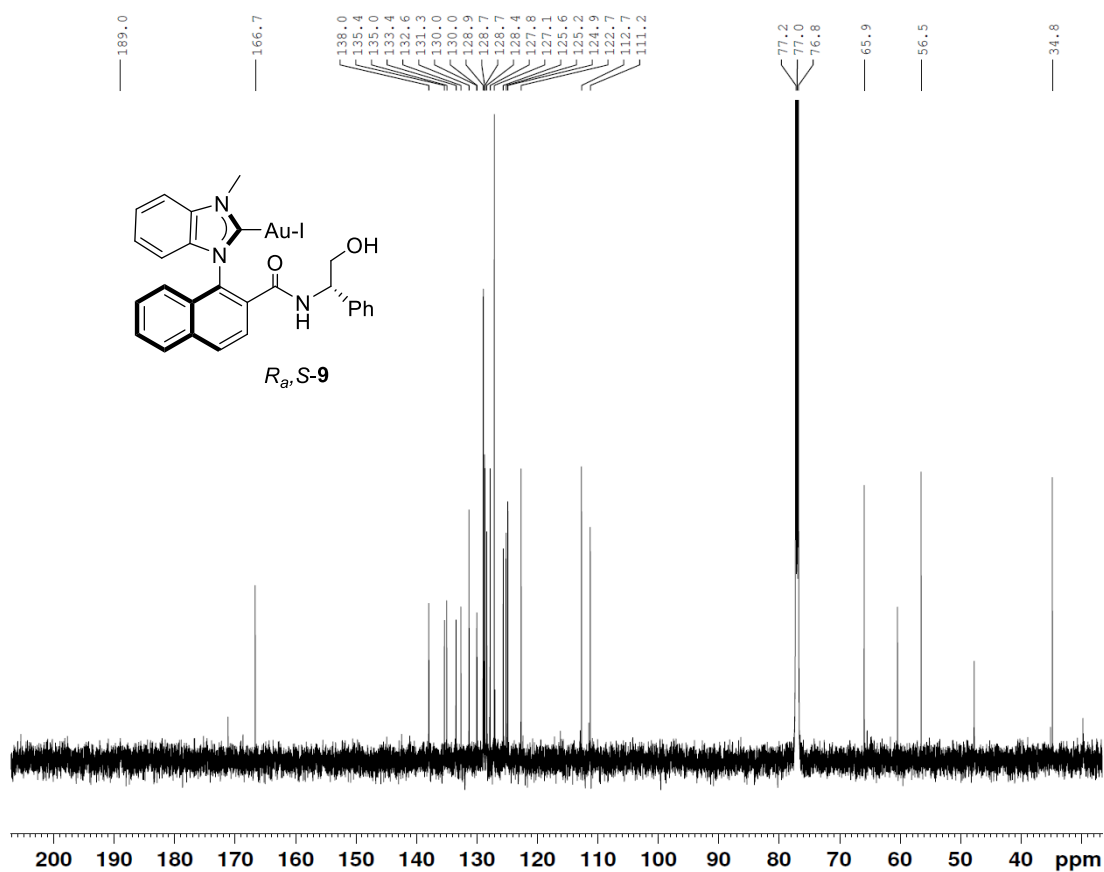
¹H NMR Spectrum of S_a , S-8

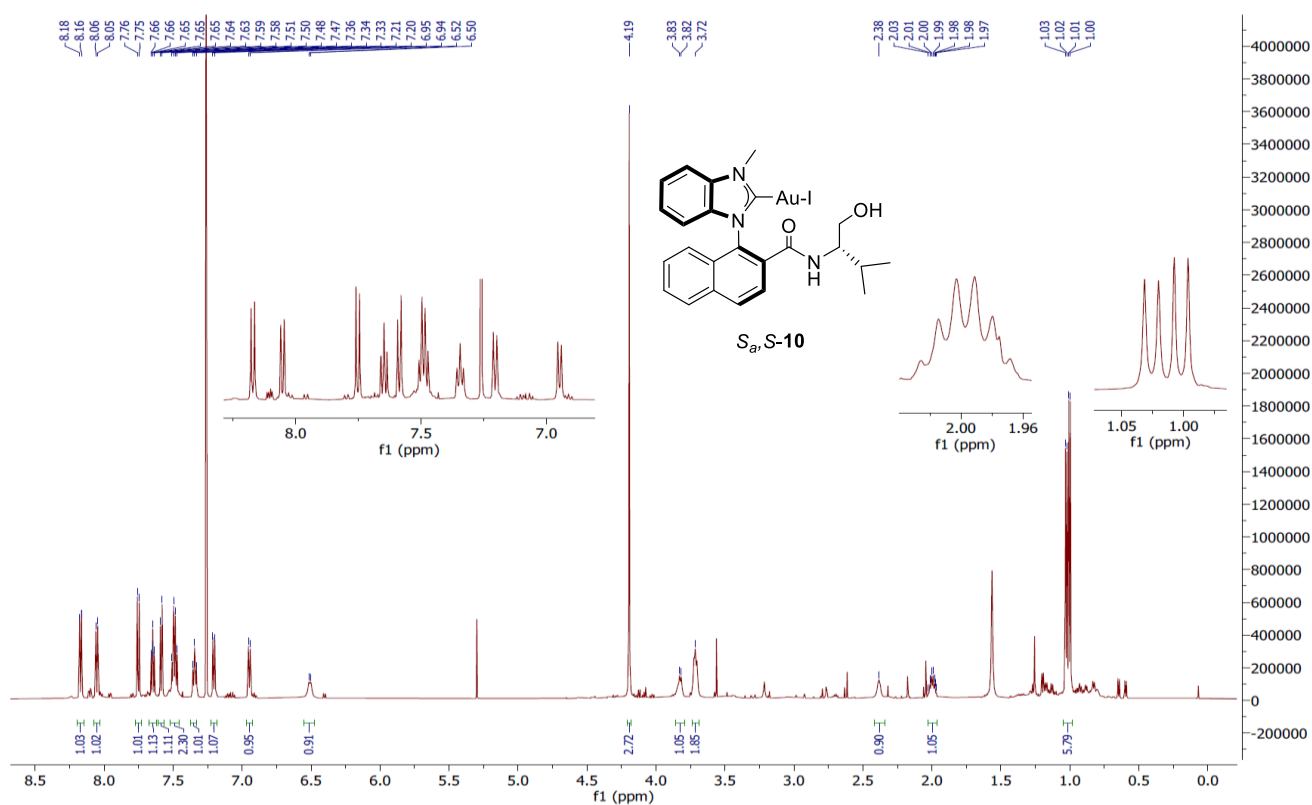


¹³C NMR Spectrum of S_a , S-8

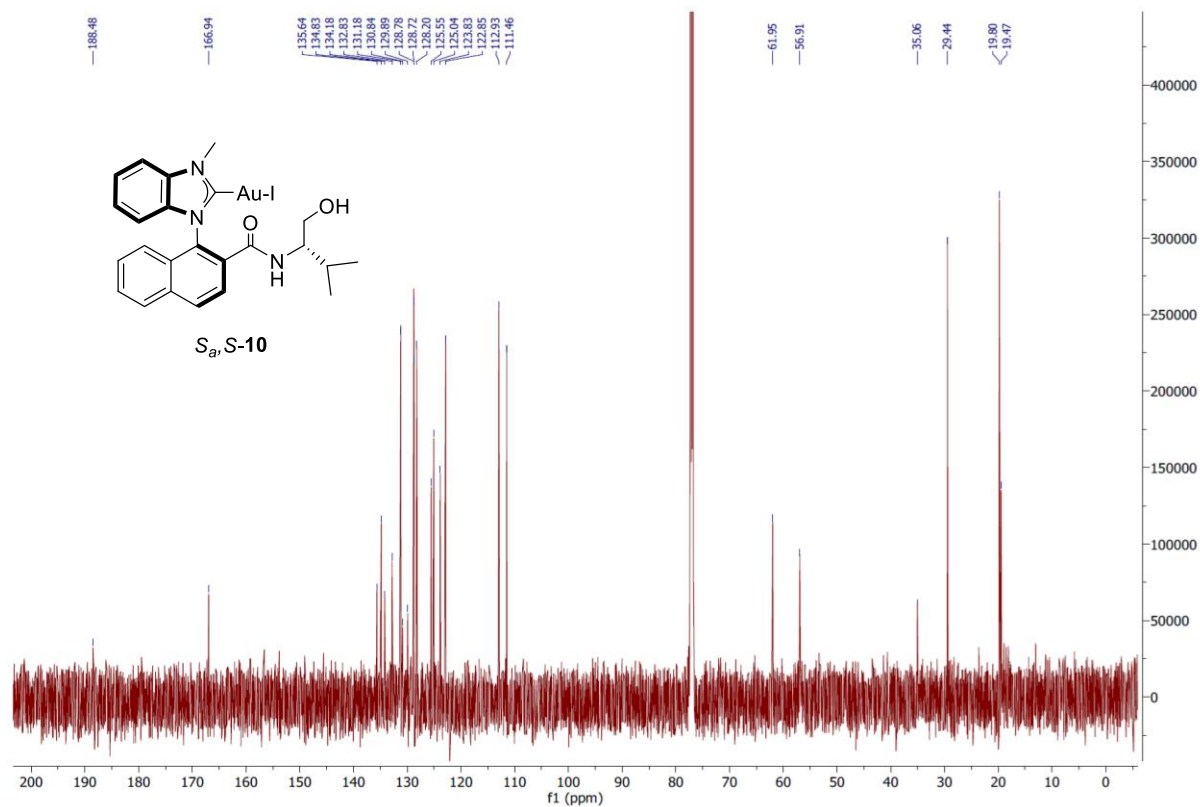
Benzimidazolium salt $R_a,S-8$: ^1H NMR Spectrum of $R_a,S-8$

Au(I)-NHC-*N*-naphthamide complexes (9,10)*Au(I)*-NHC complex *S_a*,*S*-9¹H NMR spectrum of *S_a*,*S*-9¹³C NMR spectrum of *S_a*,*S*-9

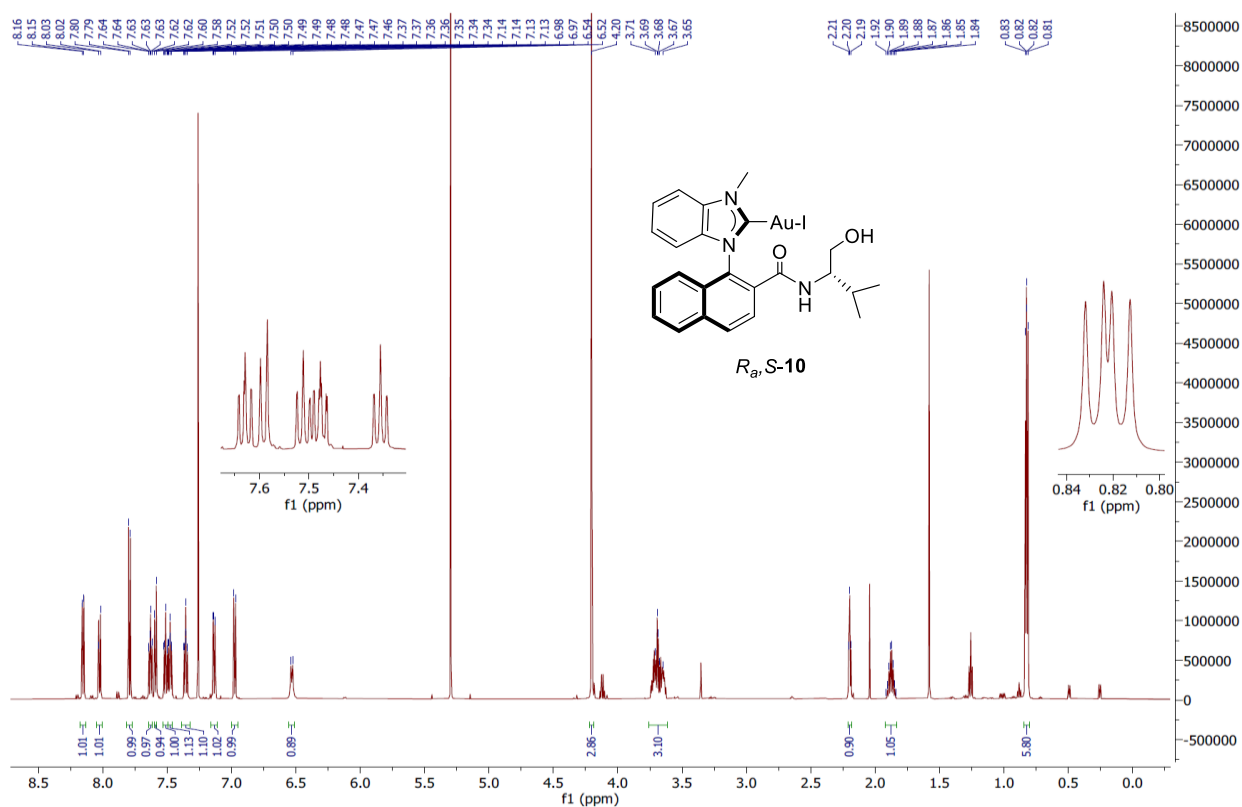
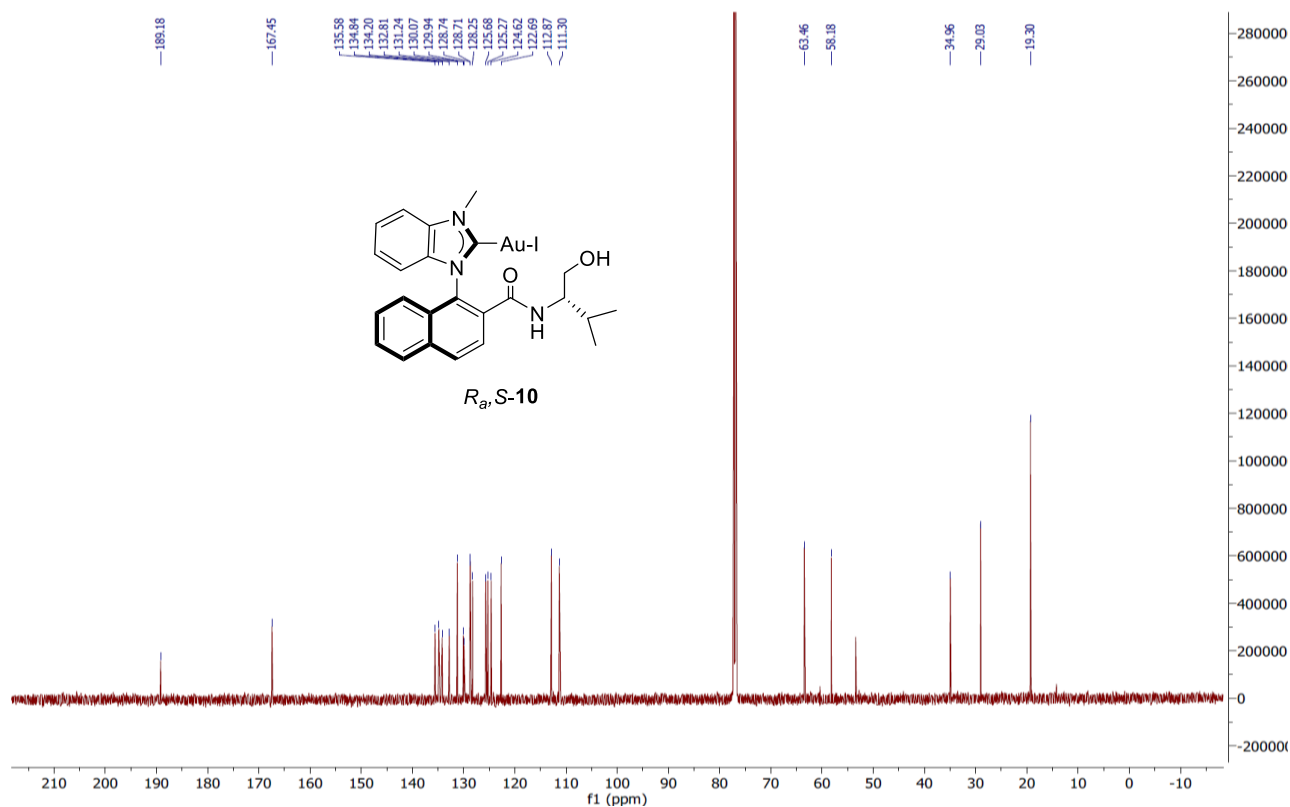
Au(I)-NHC complex R_a ,S-9 ^1H NMR spectrum of R_a ,S-9 ^{13}C NMR spectrum of R_a ,S-9

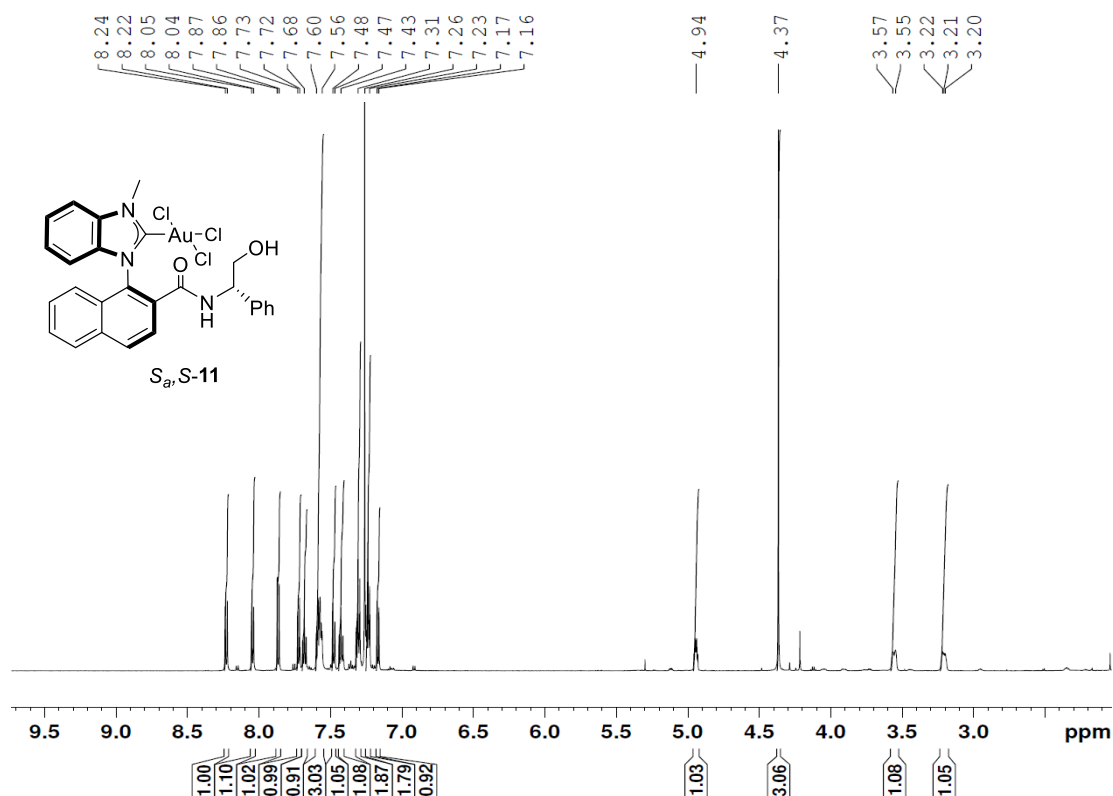
Au(I)-NHC complex $S_a, S-10$ 

^1H NMR spectrum of $S_a, S-10$

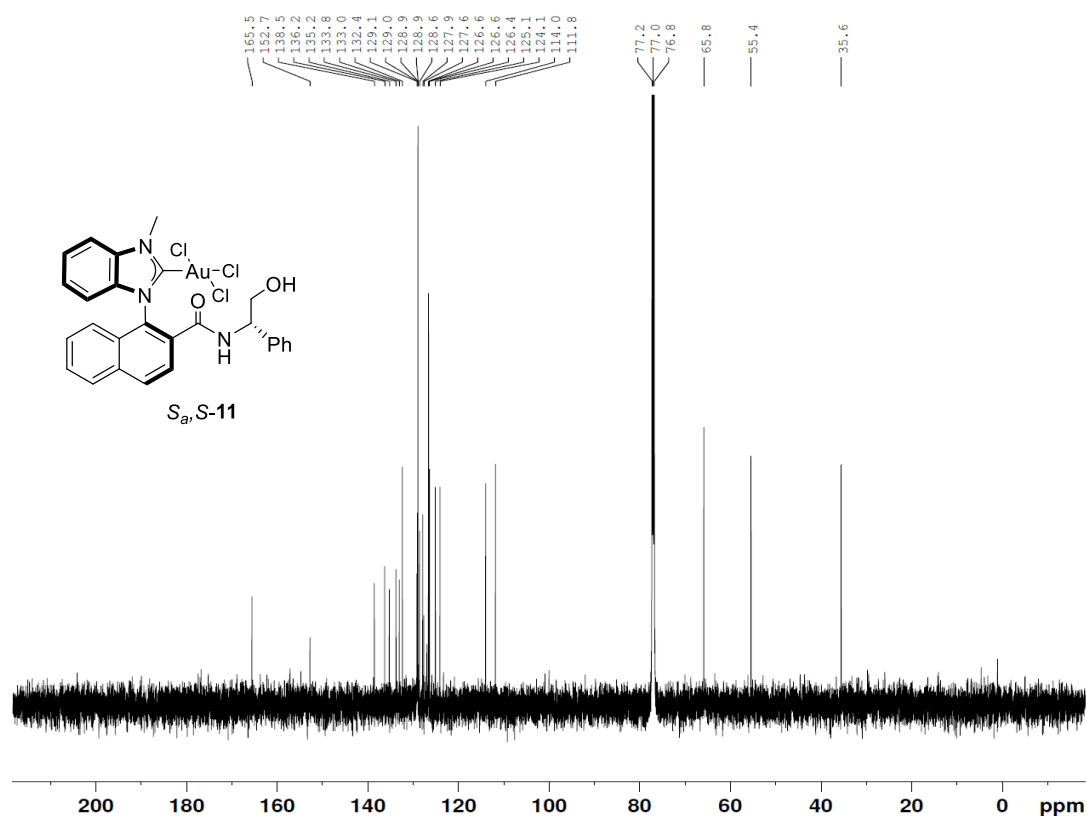


^{13}C NMR spectrum of $S_a, S-10$

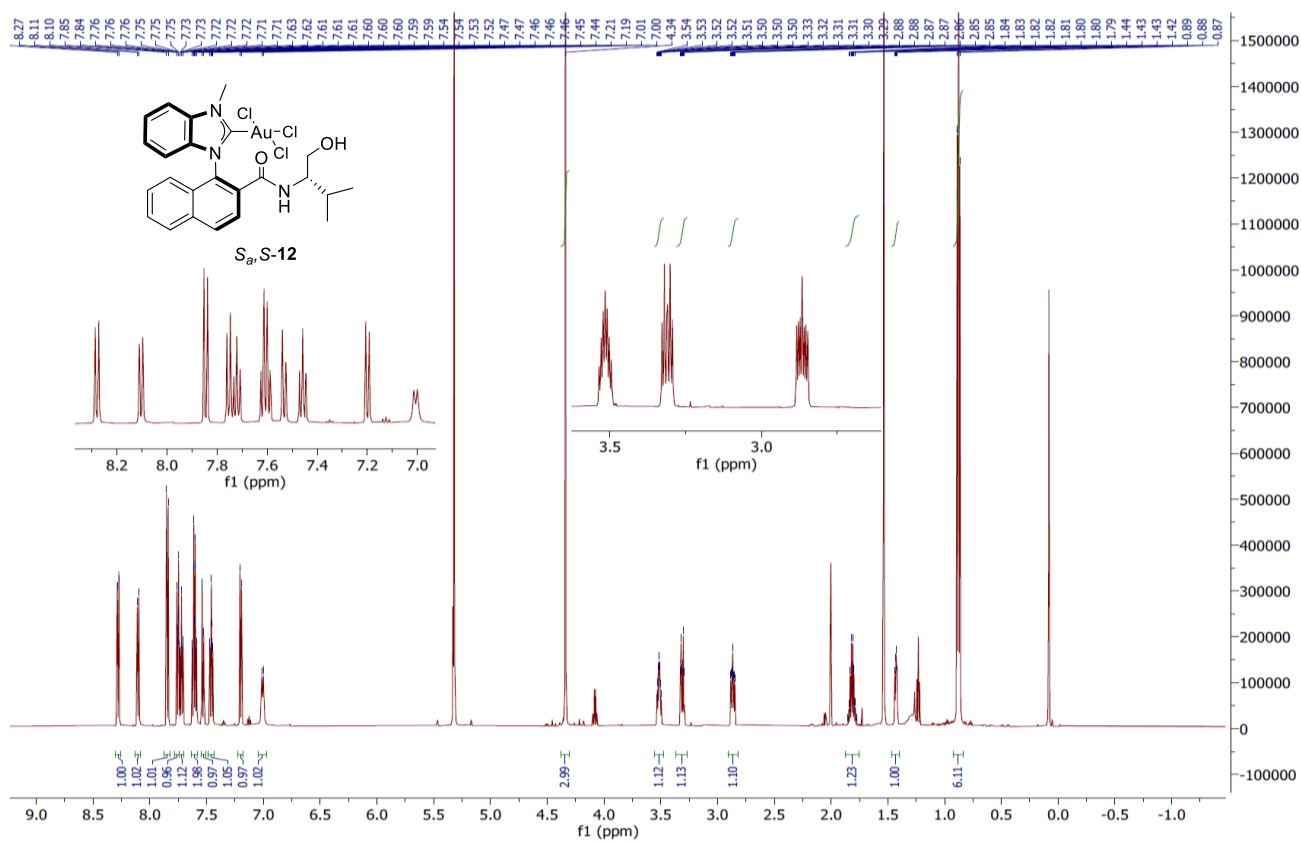
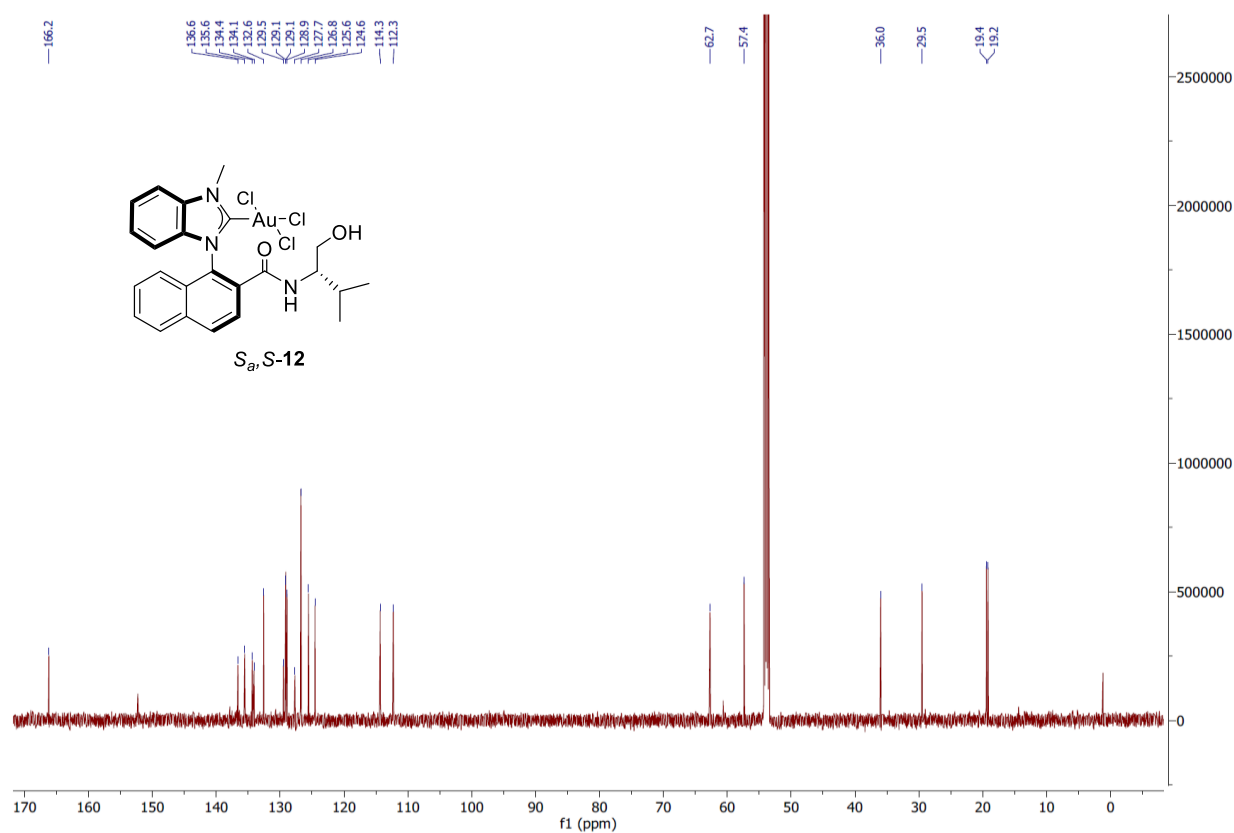
Au(I)-NHC complex R_a,S -10 ^1H NMR spectrum of R_a,S -10 ^{13}C NMR spectrum of R_a,S -10

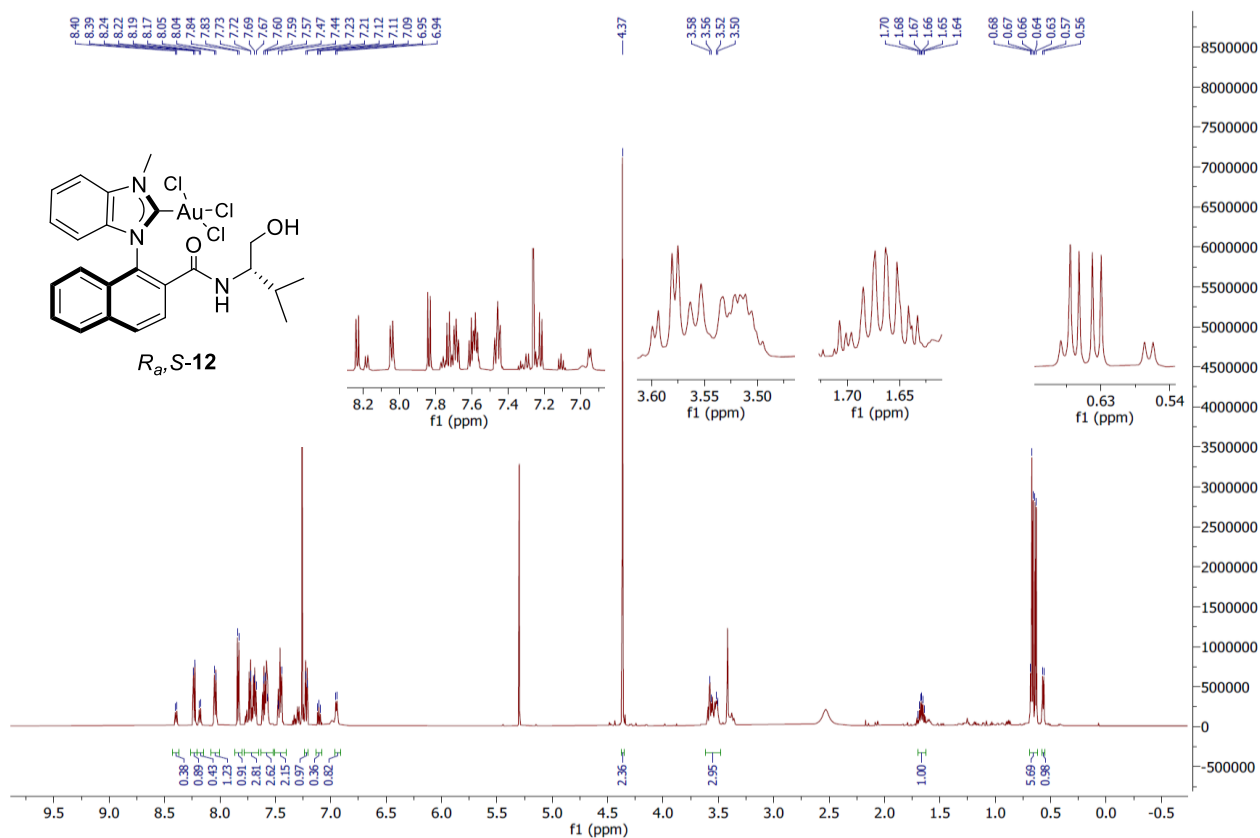
Au(III)Cl₃-NHC-*N*-naphthamide complexes (11,12)***Au*(III)-NHC complex *Sa,S-11***

¹H NMR spectrum of *Sa,S-11*

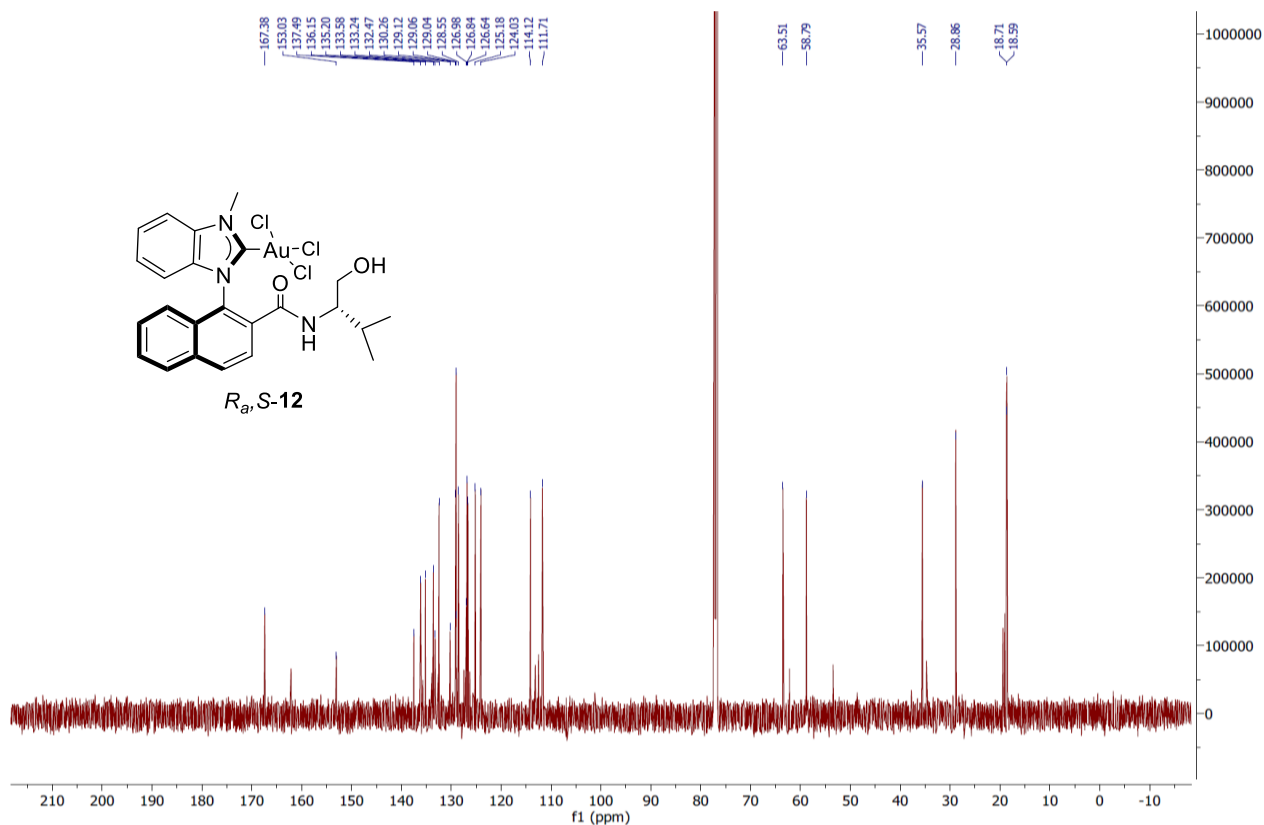


¹³C NMR spectrum of *Sa,S-11*

Au(III)-NHC complex *S_a*, S-12**¹H NMR spectrum of *S_a*, S-12****¹³C NMR spectrum of *S_a*, S-12**

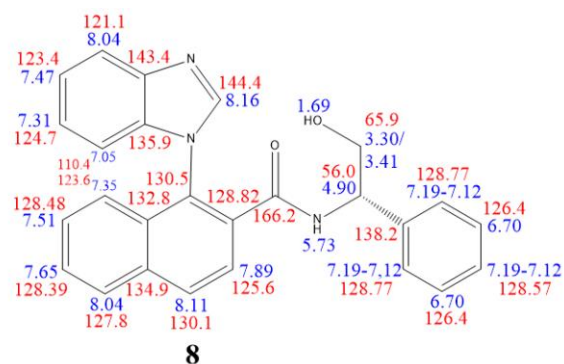
Au(III)-NHC complex R_a -S-12

¹H NMR spectrum of R_a -S-12

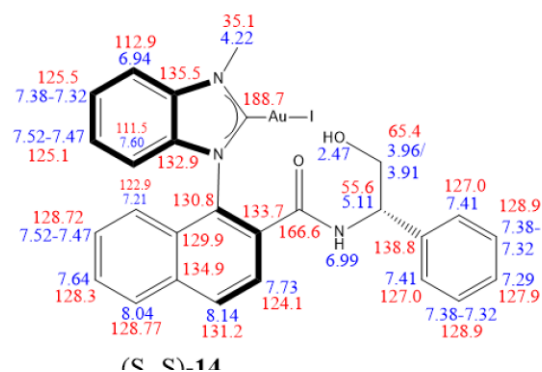


¹³C NMR spectrum of R_a -S-12

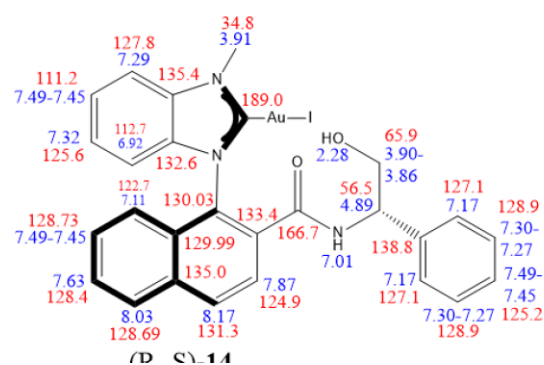
¹H and ¹³C NMR assignment based on 2D NMR studies (COSY, HSQC, HMBC):



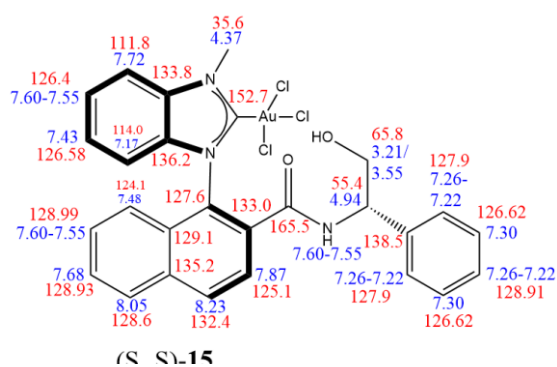
Amide **5** (R=Ph)



***S_o*,*S*-9 Au(I)-NHC complex (R=Ph)**



R_a,*S*-**9** Au(I)-NHC complex (R=Ph)



***S_a*,*S*-11** Au(III)-NHC complex (R=Ph)