

## Supporting Information

### Oxidative Addition of Disulfide/Diselenide to Group 10 Metal(0) and *in situ* Functionalization to Form Neutral Thiasalen/Selanasalen Group 10 Metal(II) Complexes

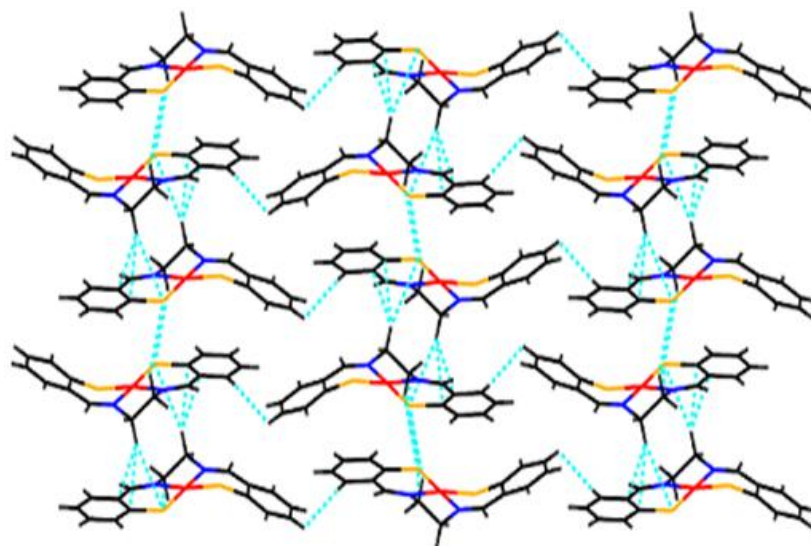
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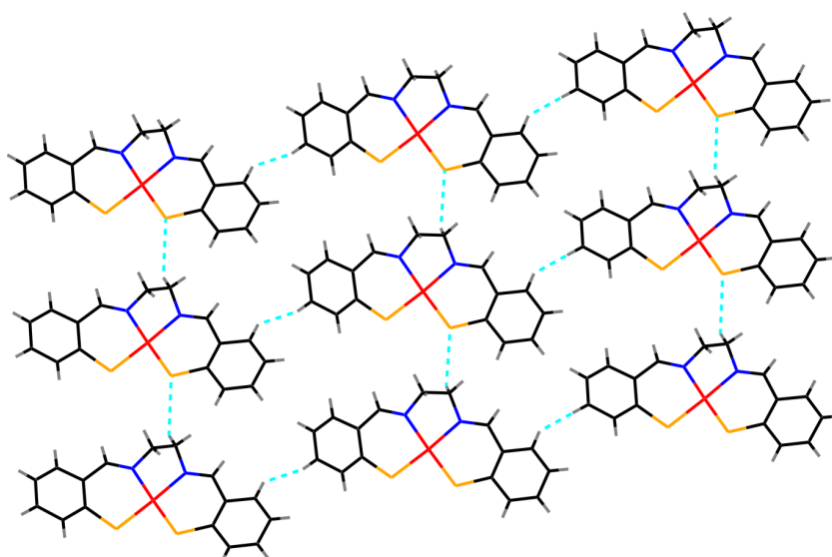
*Email: [snigdha@iiserkol.ac.in](mailto:snigdha@iiserkol.ac.in), [sanjiozade@iiserkol.ac.in](mailto:sanjiozade@iiserkol.ac.in)*

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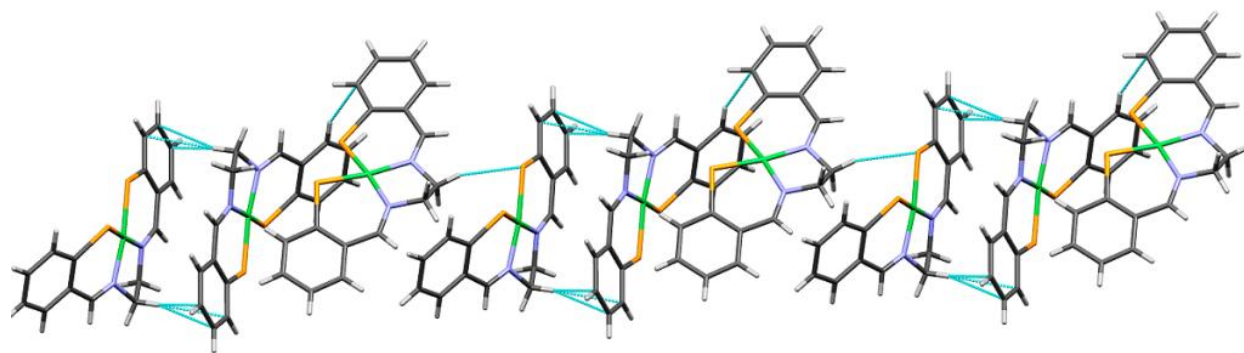
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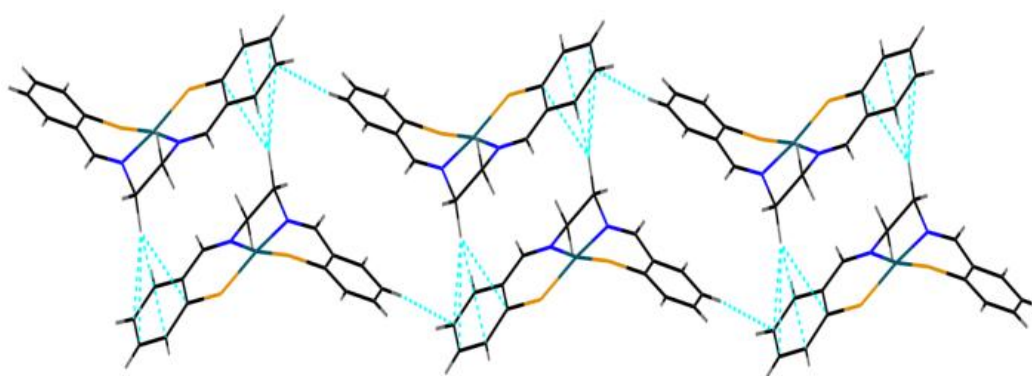
**Fig. S1** 2D sheets in complex **16** formed *via* C-H... $\pi$ , CH...H, CH...S interactions along *bc* plane.



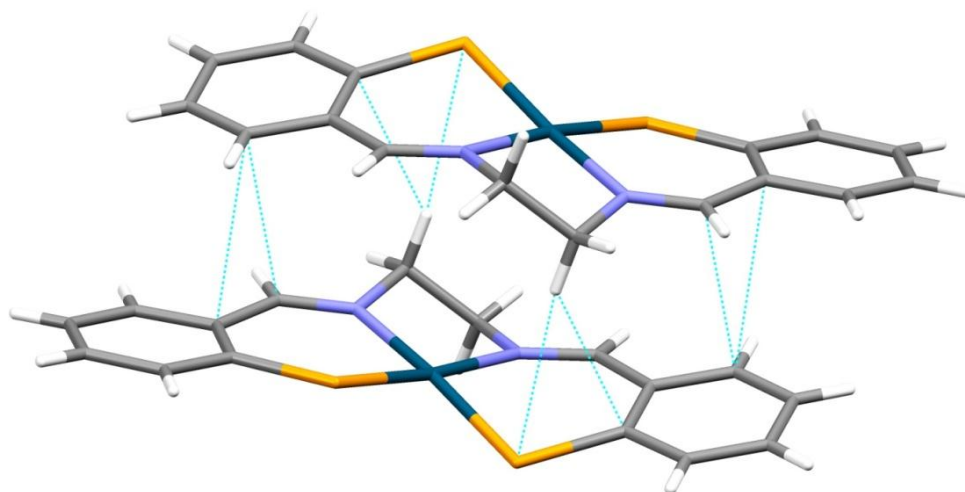
**Fig. S2.** 2D sheet 1n complex **16** formed along *ac* plane by intermolecular S1...H2B and H5...H14 interactions.



**Fig. S3** 1D chain growth in complex **17** along *b* axis through intermolecular C-H... $\pi$  and Se...H interactions.



(a)



(b)

**Fig. S4** Crystal packing diagram of **18** showing intermolecular (a) C-H... $\pi$  and (b)  $\pi$ ... $\pi$  and Se...H short contacts interactions.

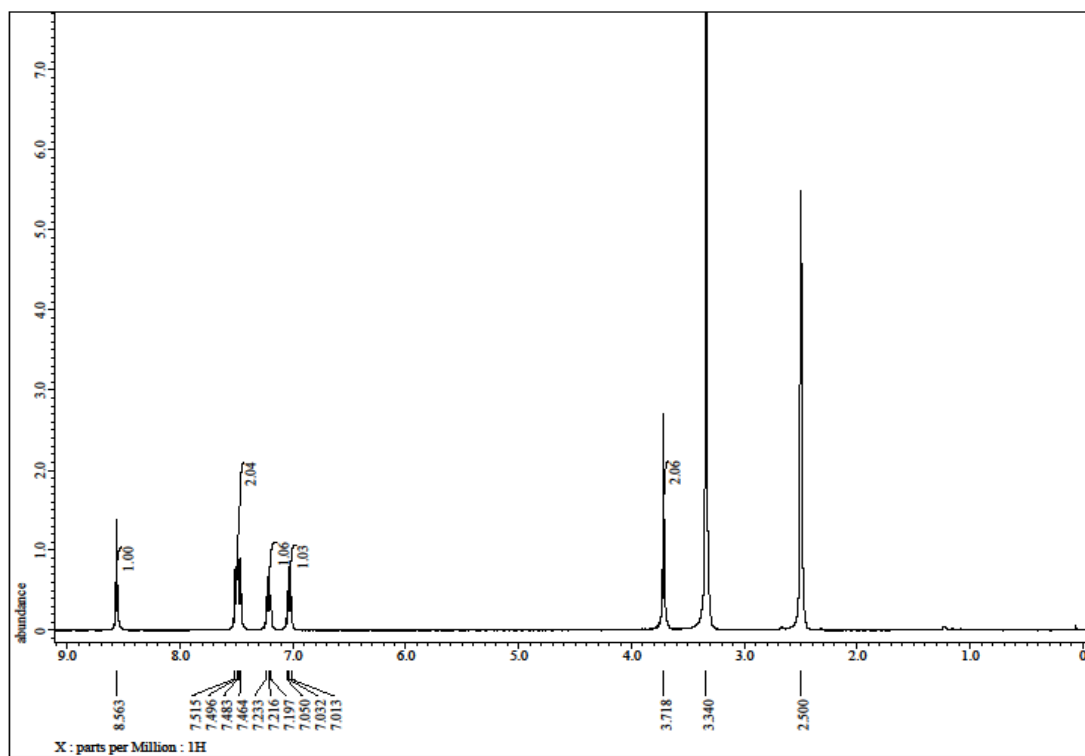


Fig. S5 <sup>1</sup>H NMR spectrum of complex 14.

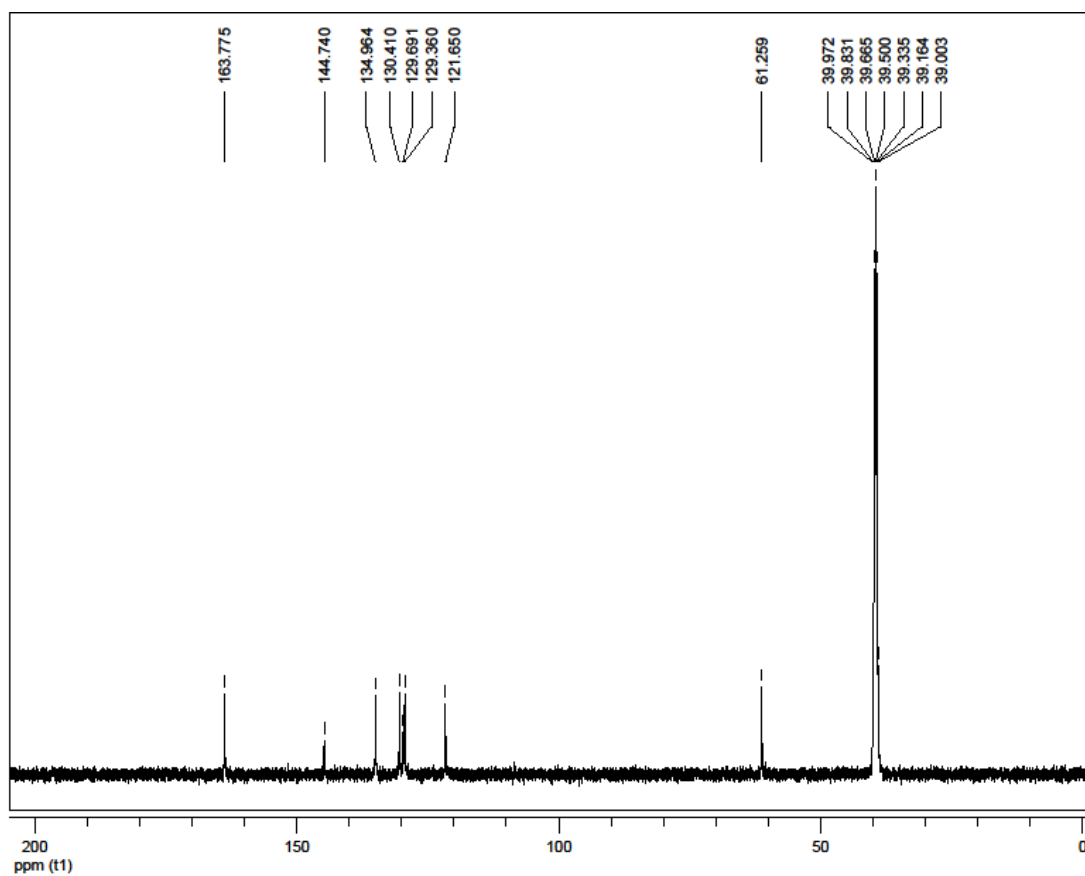


Fig. S6 <sup>13</sup>C NMR spectrum of complex 14.

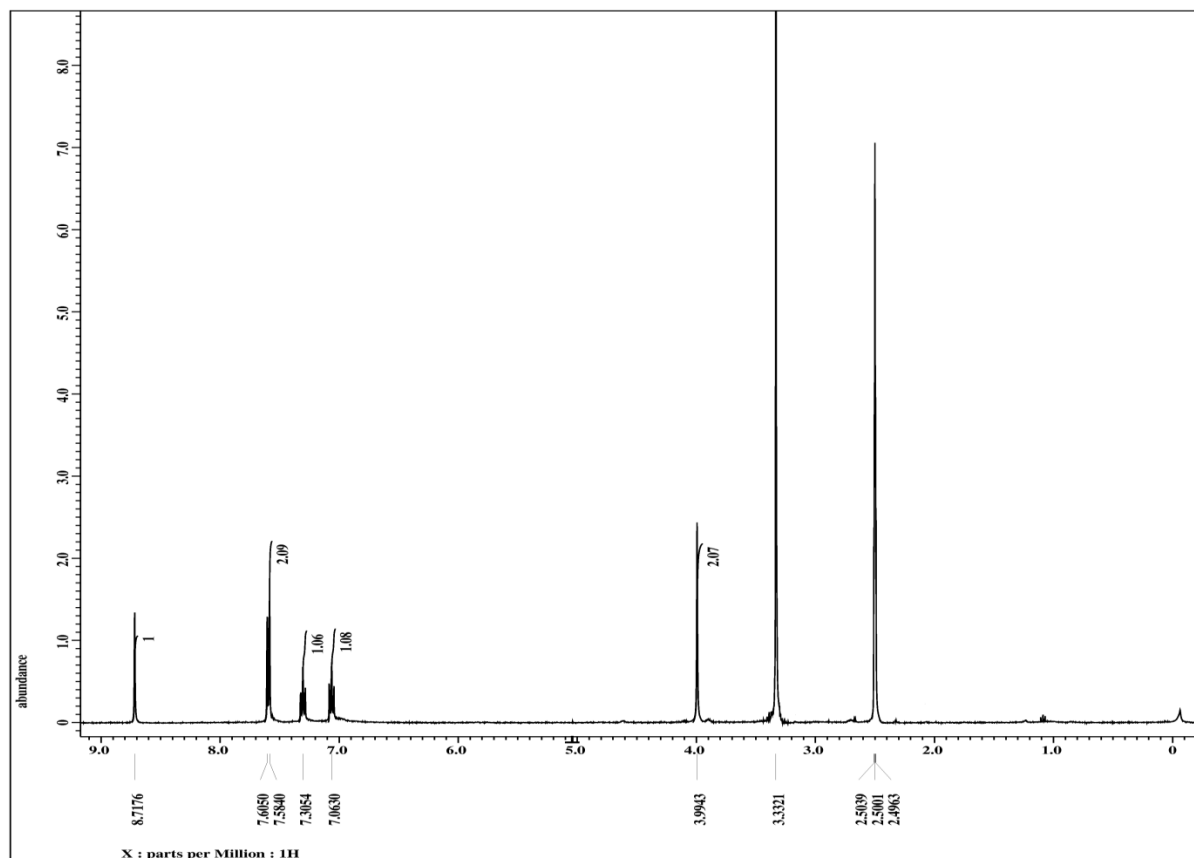


Fig. S7  $^1\text{H}$  NMR spectrum of complex 15.

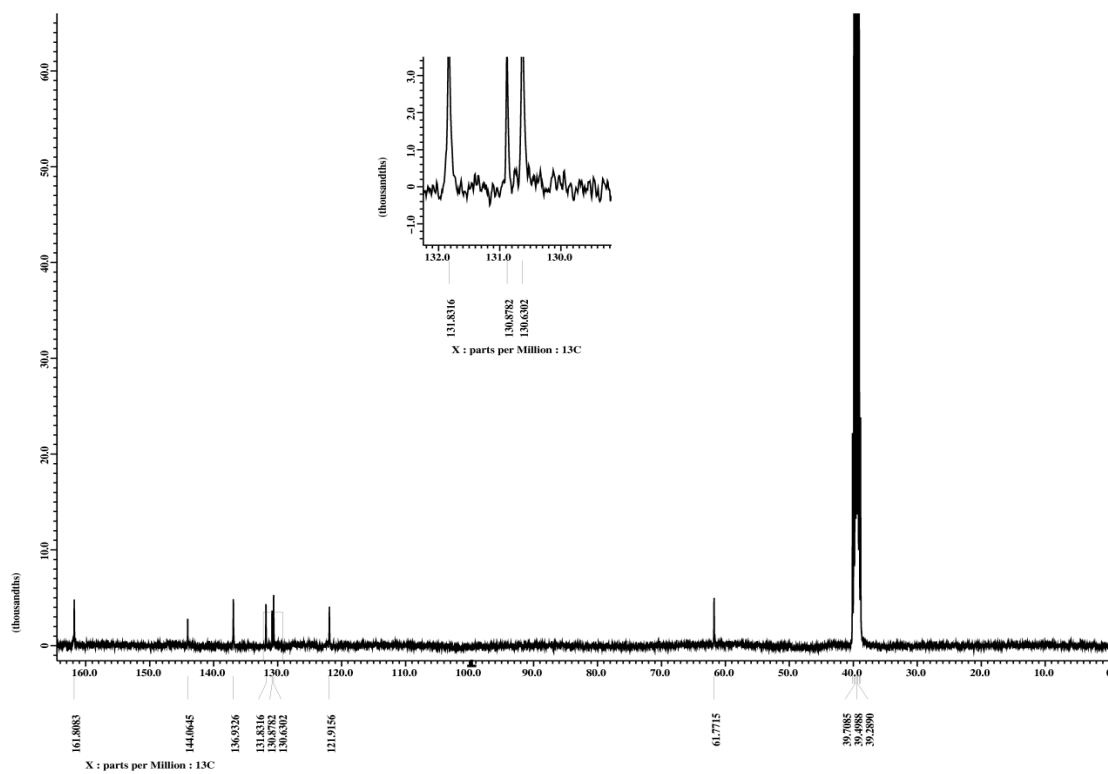


Fig. S8  $^{13}\text{C}$  NMR spectrum of complex 15

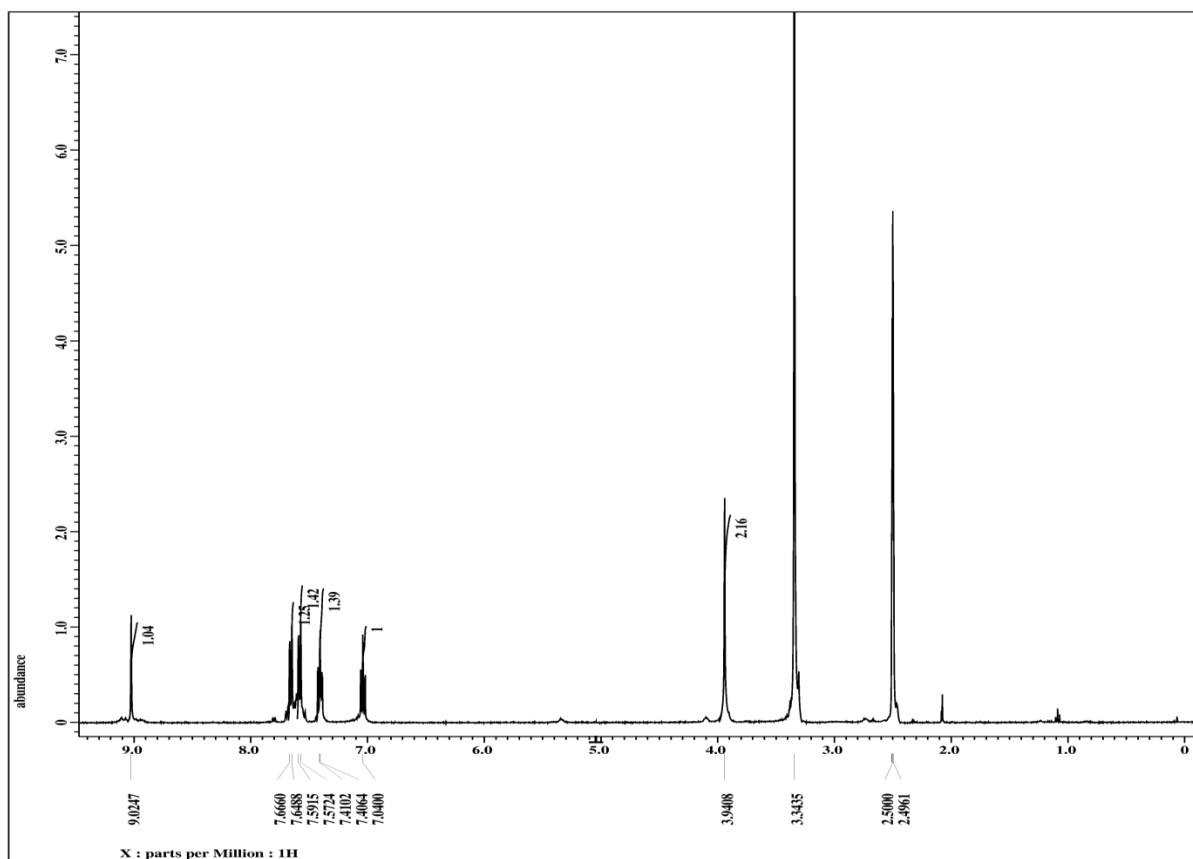


Fig. S9 <sup>1</sup>H NMR spectrum of complex 16.

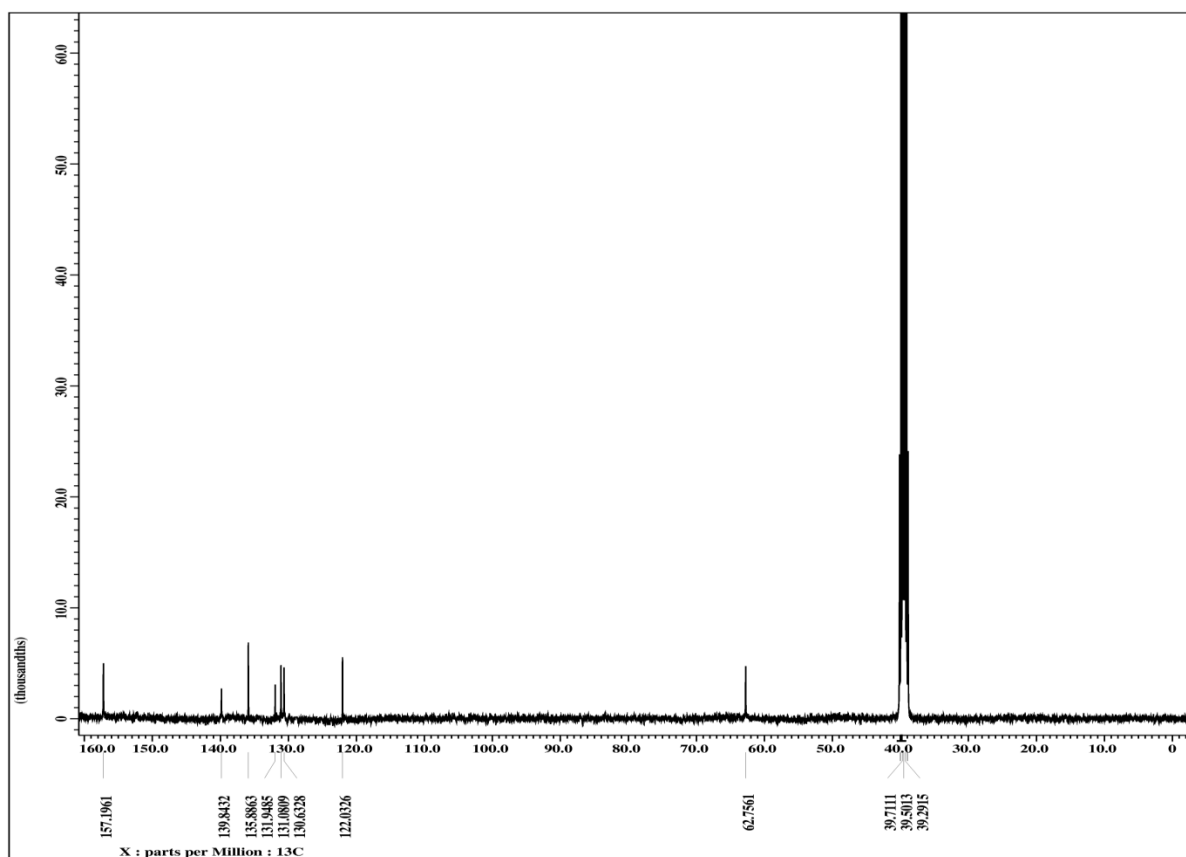


Fig. S10 <sup>13</sup>C NMR spectrum of complex 16.

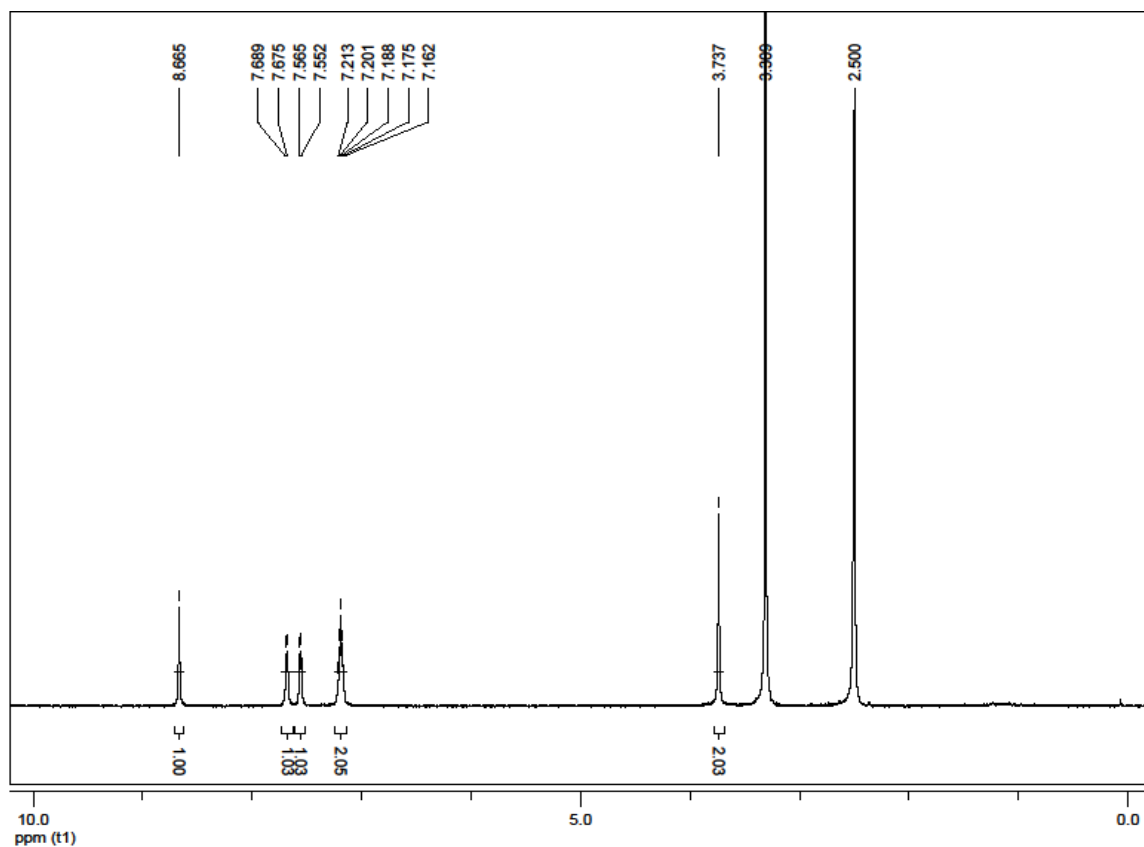


Fig. S11  $^1\text{H}$  NMR spectrum of complex 17.

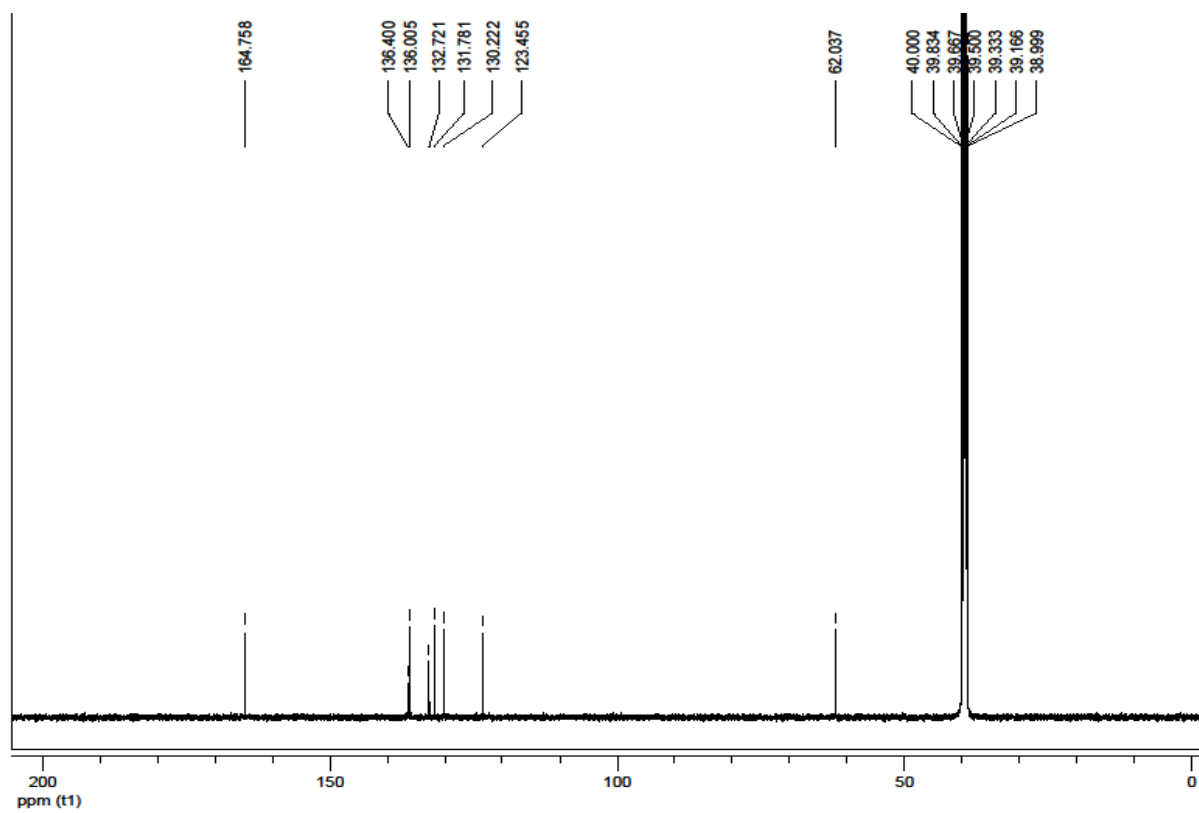


Fig. S12  $^{13}\text{C}$  NMR spectrum of complex 17.

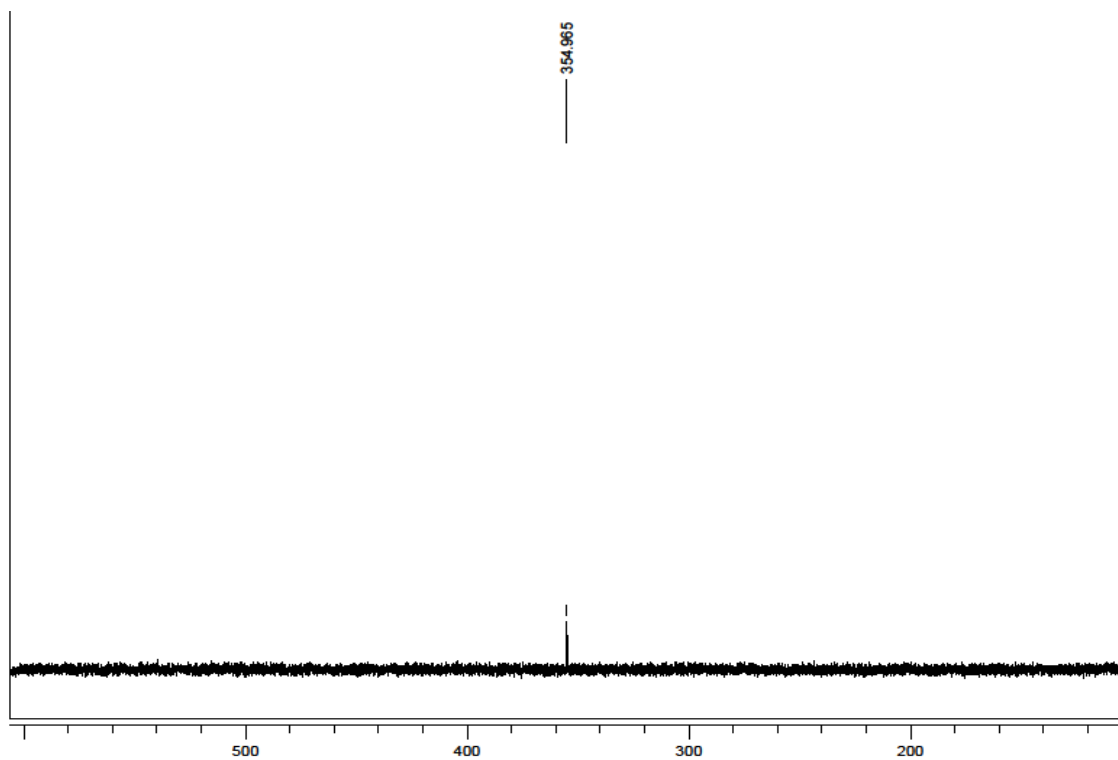


Fig. S13  $^{77}\text{Se}$  NMR spectrum of complex 17.

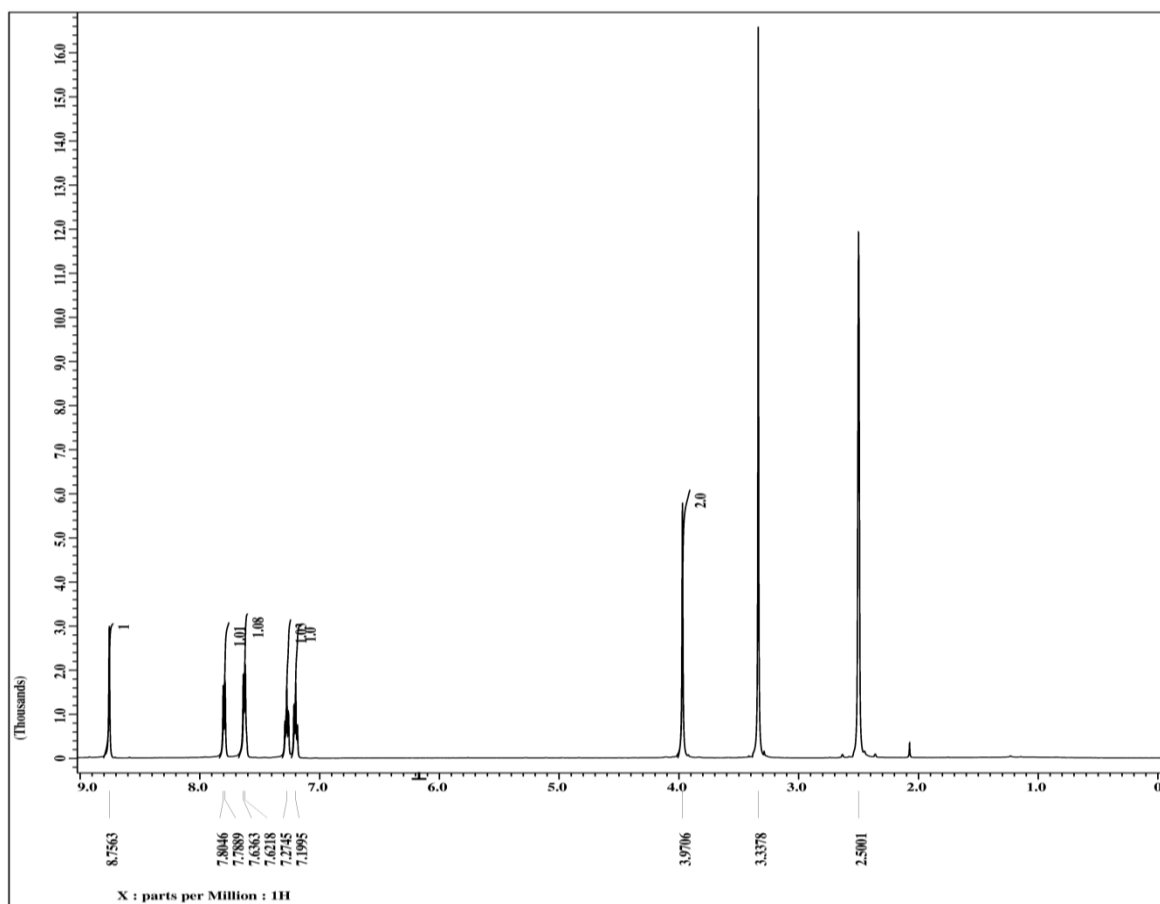


Fig. S14  $^1\text{H}$  NMR spectrum of complex 18.



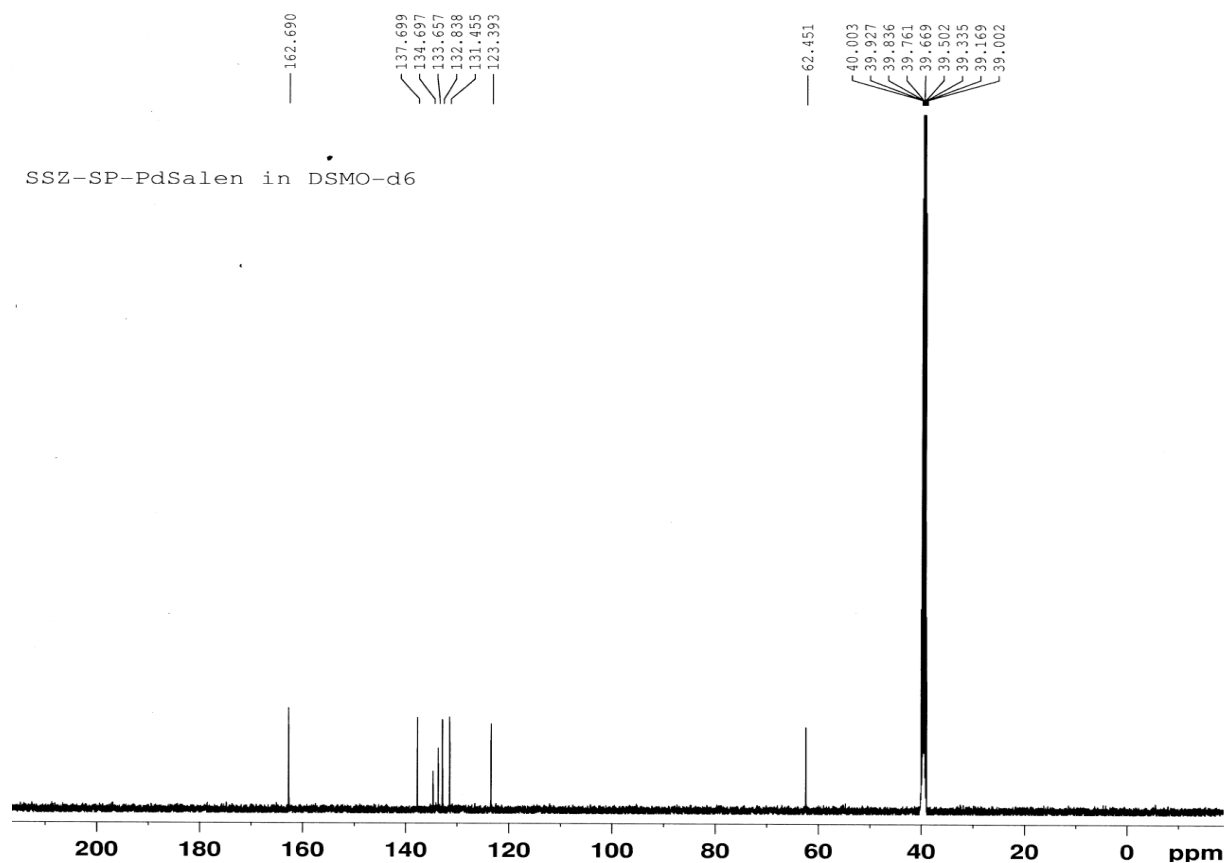


Fig. S15  $^{13}\text{C}$  NMR spectrum of complex 18.

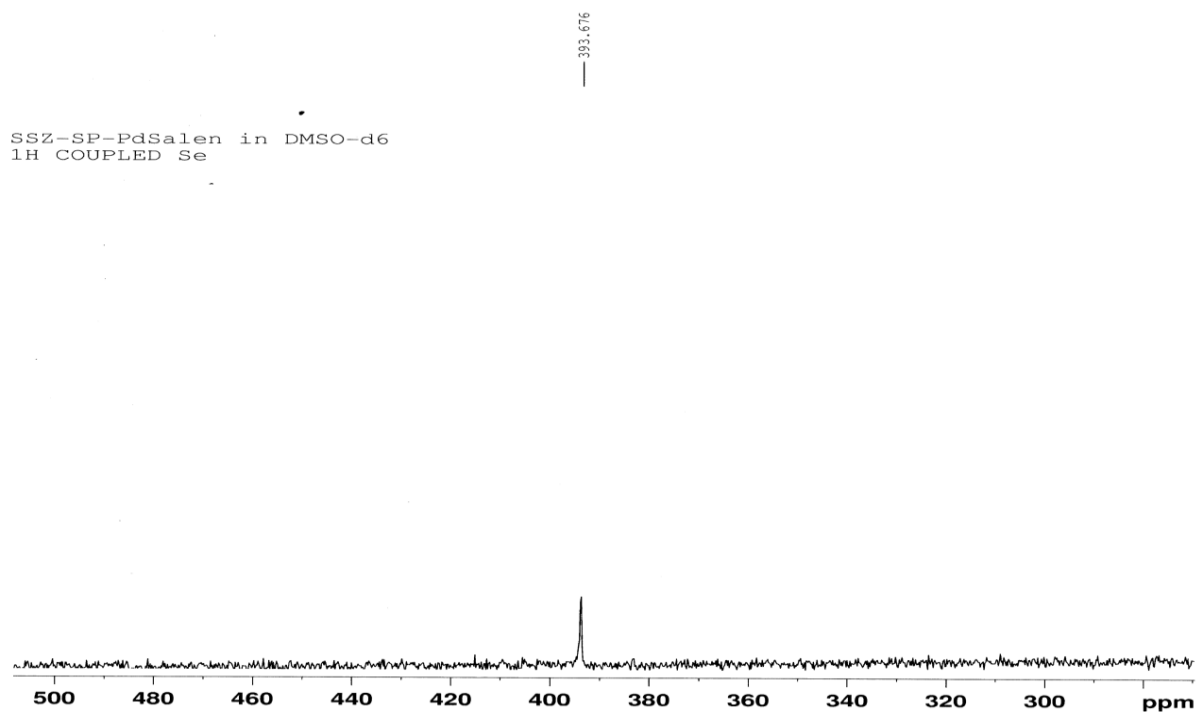


Fig. S16  $^{77}\text{Se}$  NMR spectrum of complex 18.

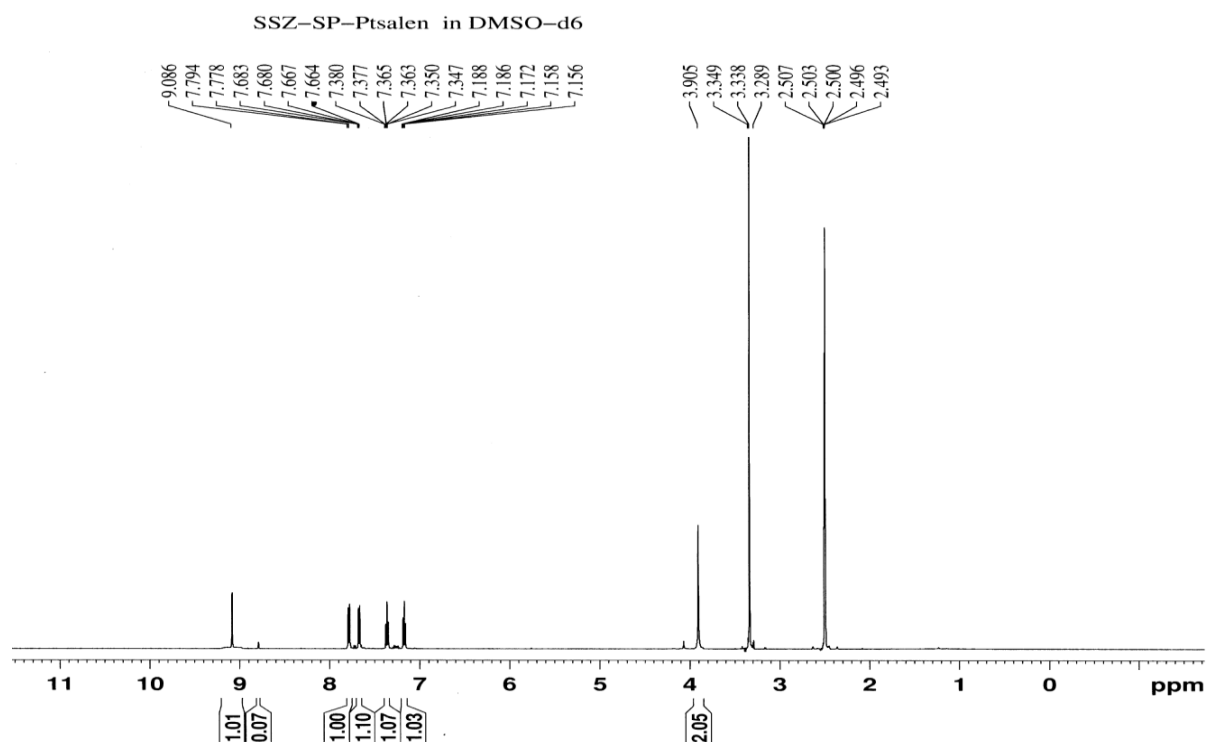


Fig. S17  $^1\text{H}$  NMR spectrum of complex **19**.

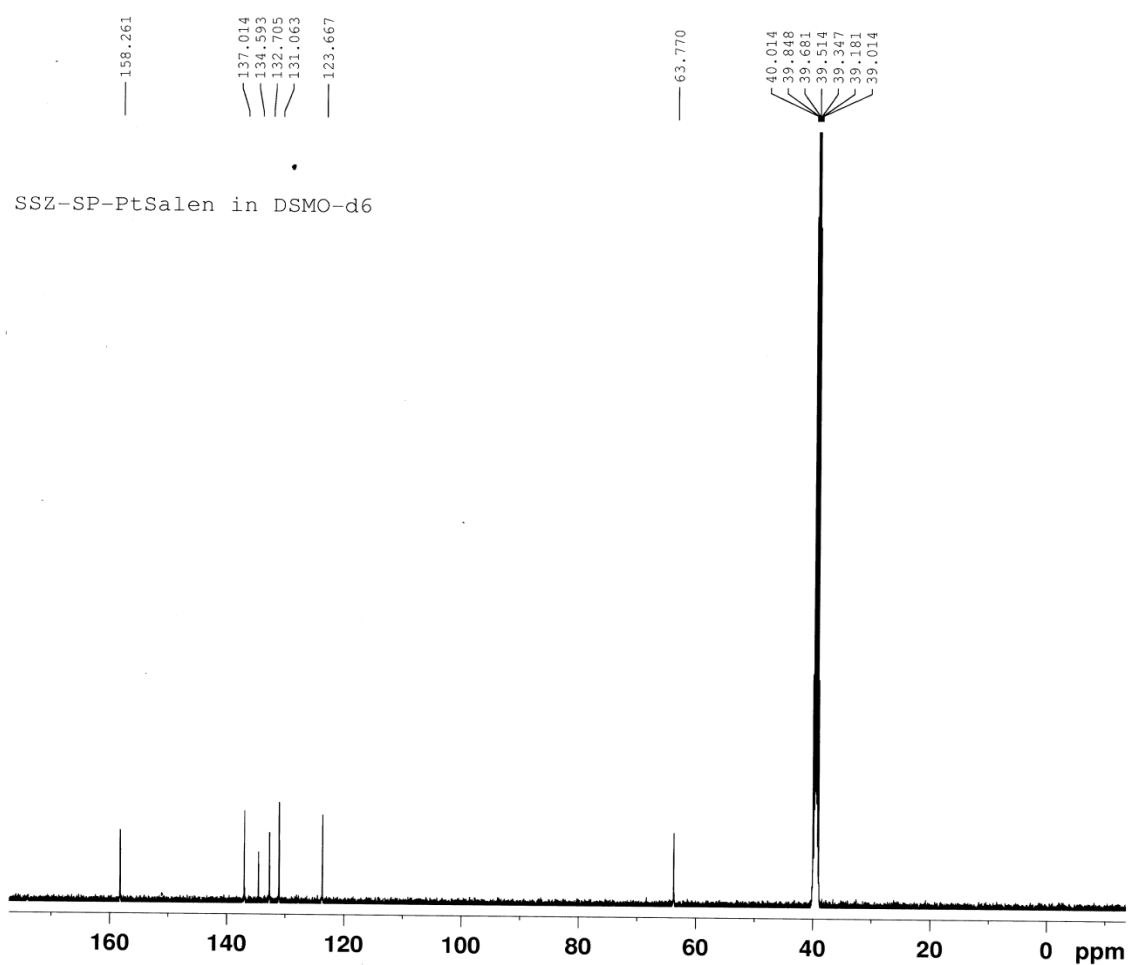
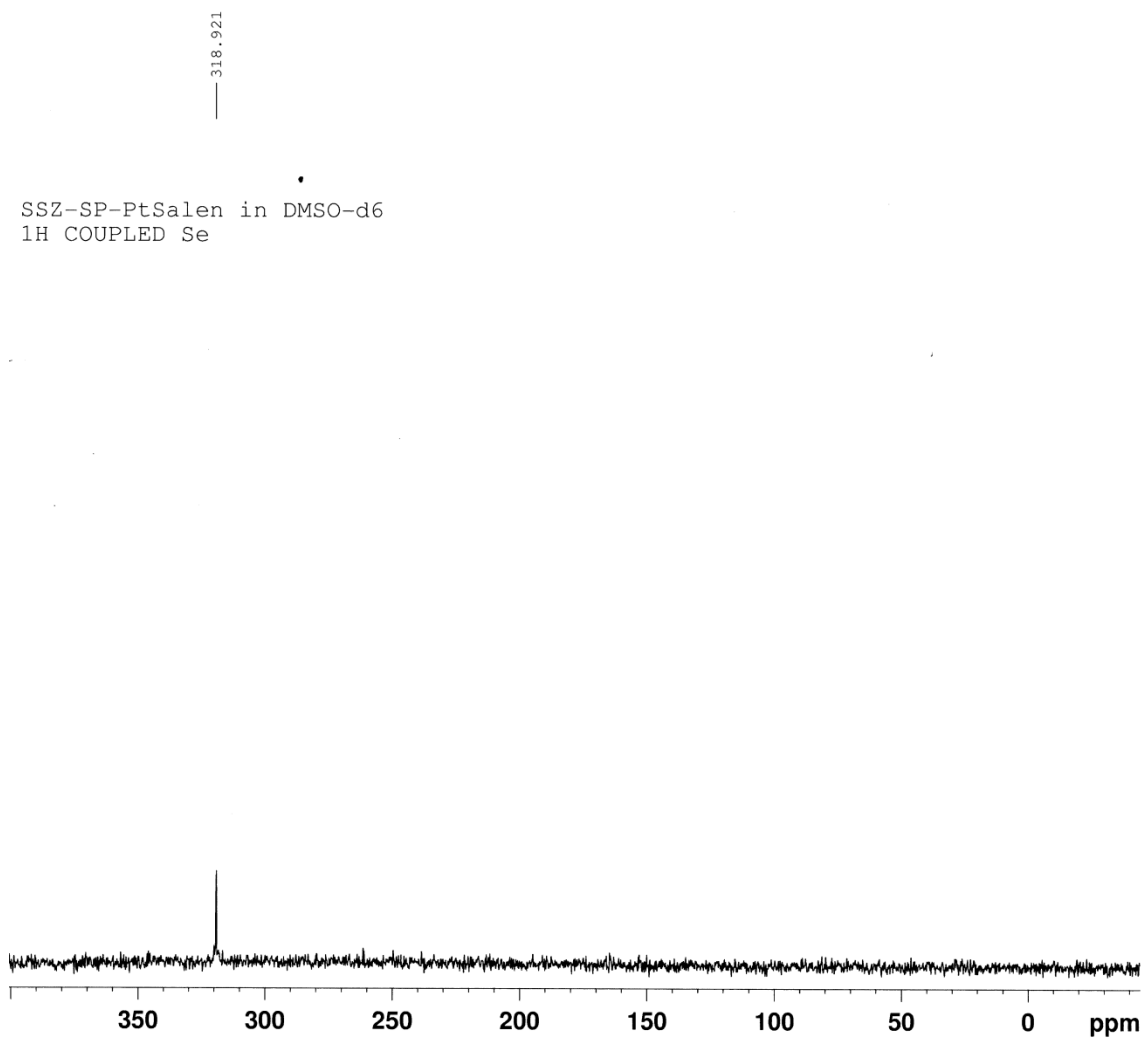


Fig. S18  $^{13}\text{C}$  NMR spectrum of complex **19**.



**Fig. S19**  $^{77}\text{Se}$  NMR spectrum of complex **19**.