Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Changing Stereo- And Regioselectivity In Copper (I)-Catalyzed 5-Exo Cyclization By Chelation And Rigidity In Aminoalkyl Radicals: Synthesis Towards Diverse Bioactive N-heterocycles

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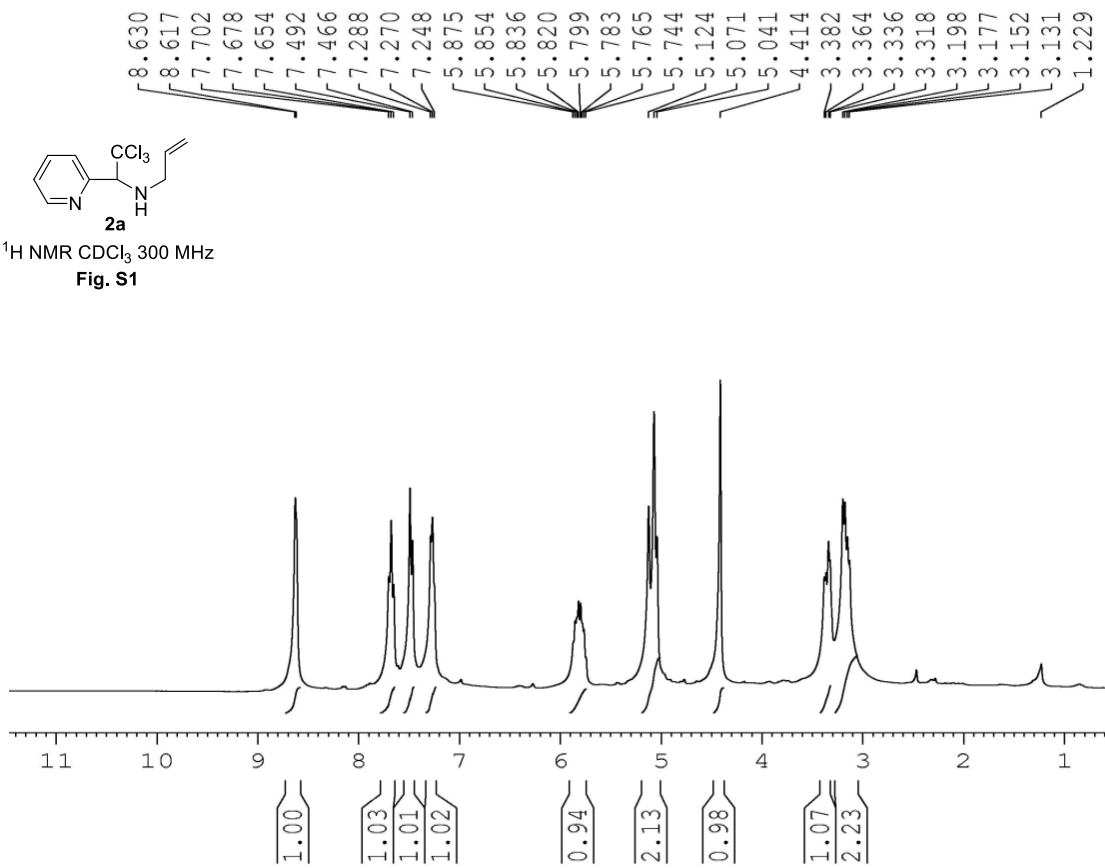
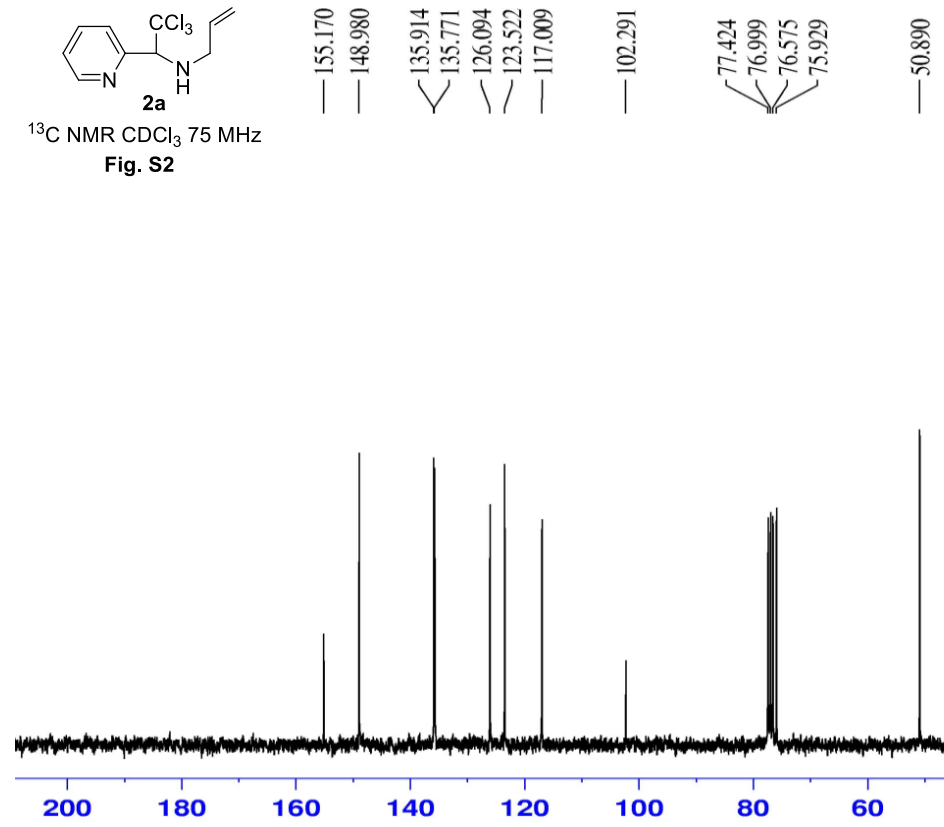


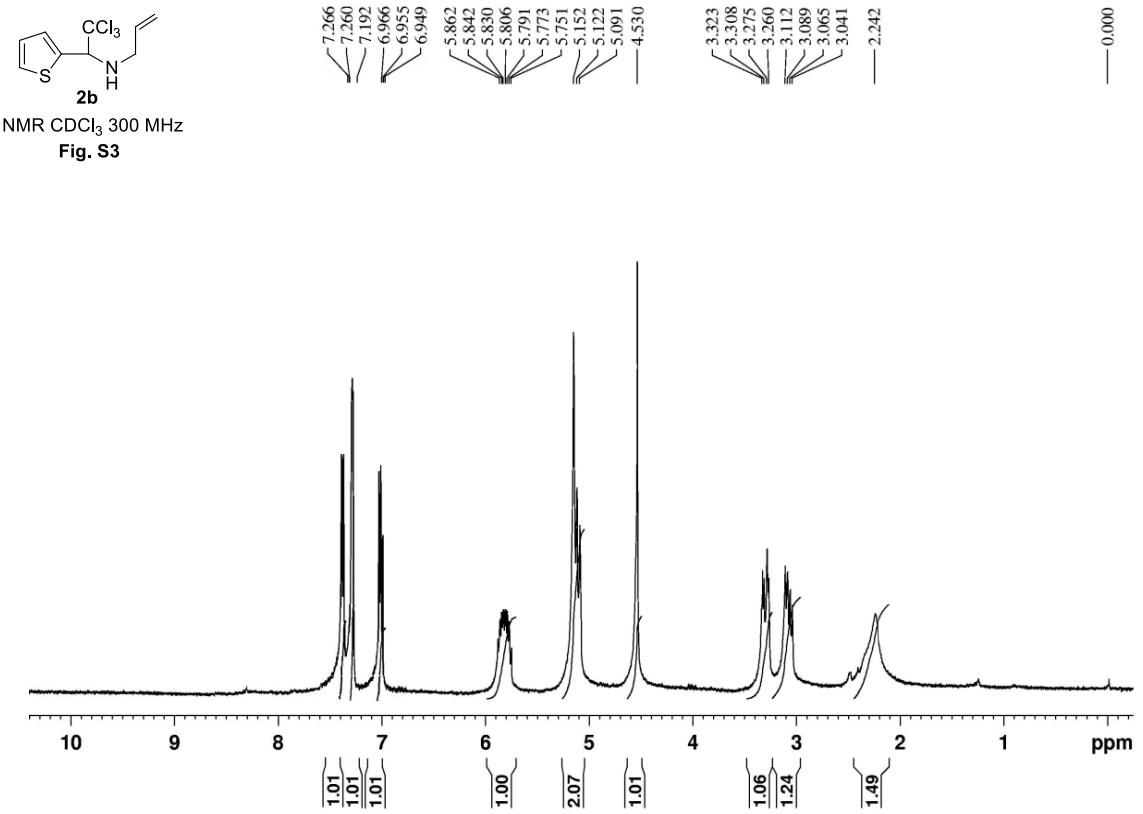
^{1}H NMR $CDCl_3$ 300 MHz

Fig. S1



^{13}C NMR $CDCl_3$ 75 MHz

Fig. S2



^{1}H NMR $CDCl_3$ 300 MHz

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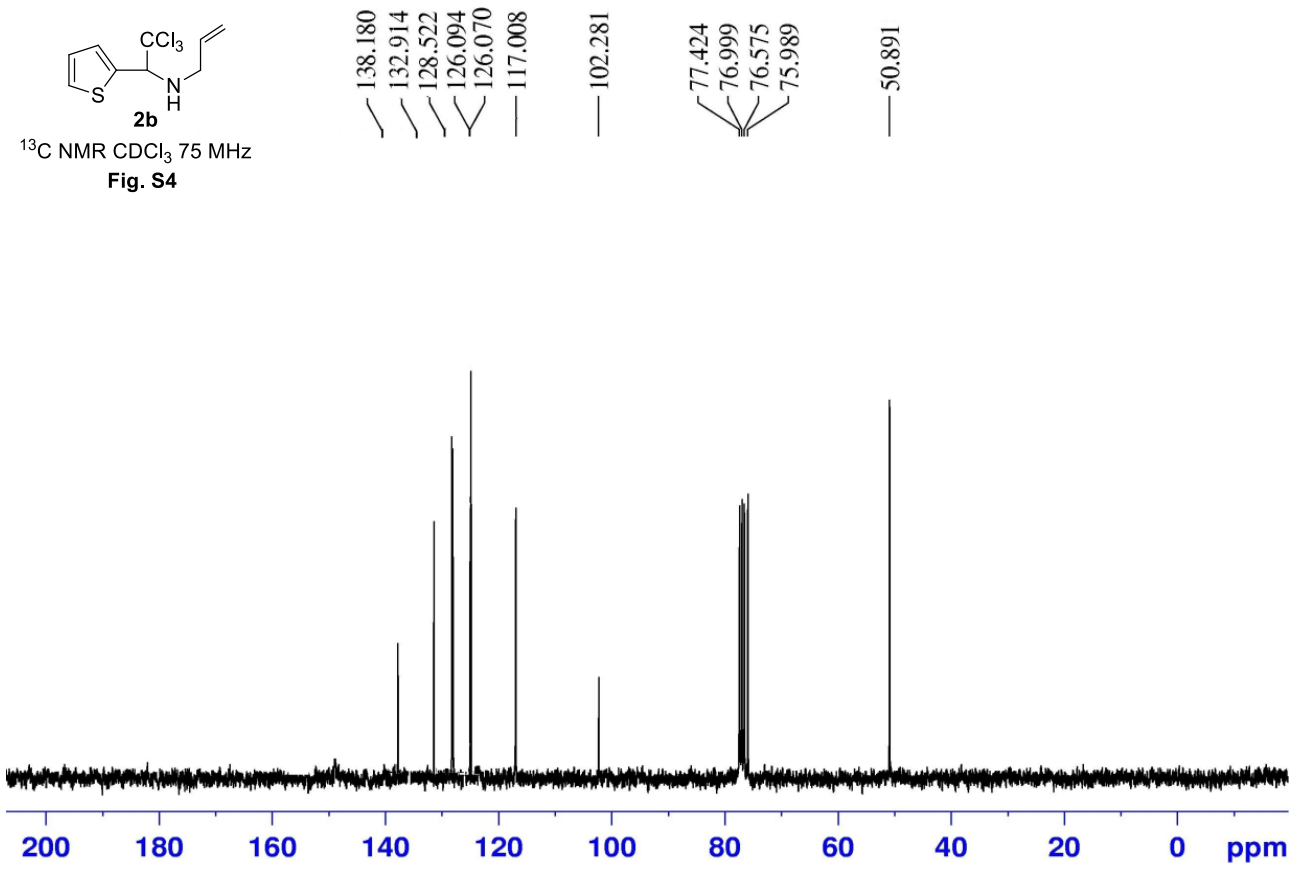
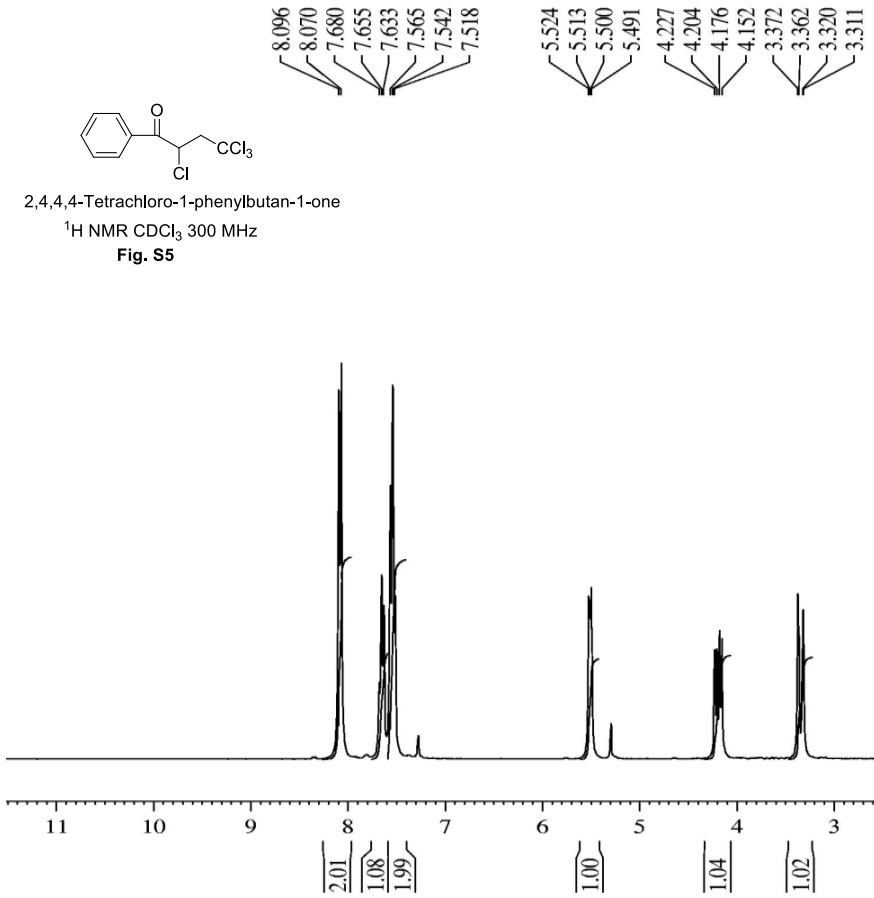


^{13}C NMR $CDCl_3$ 75 MHz

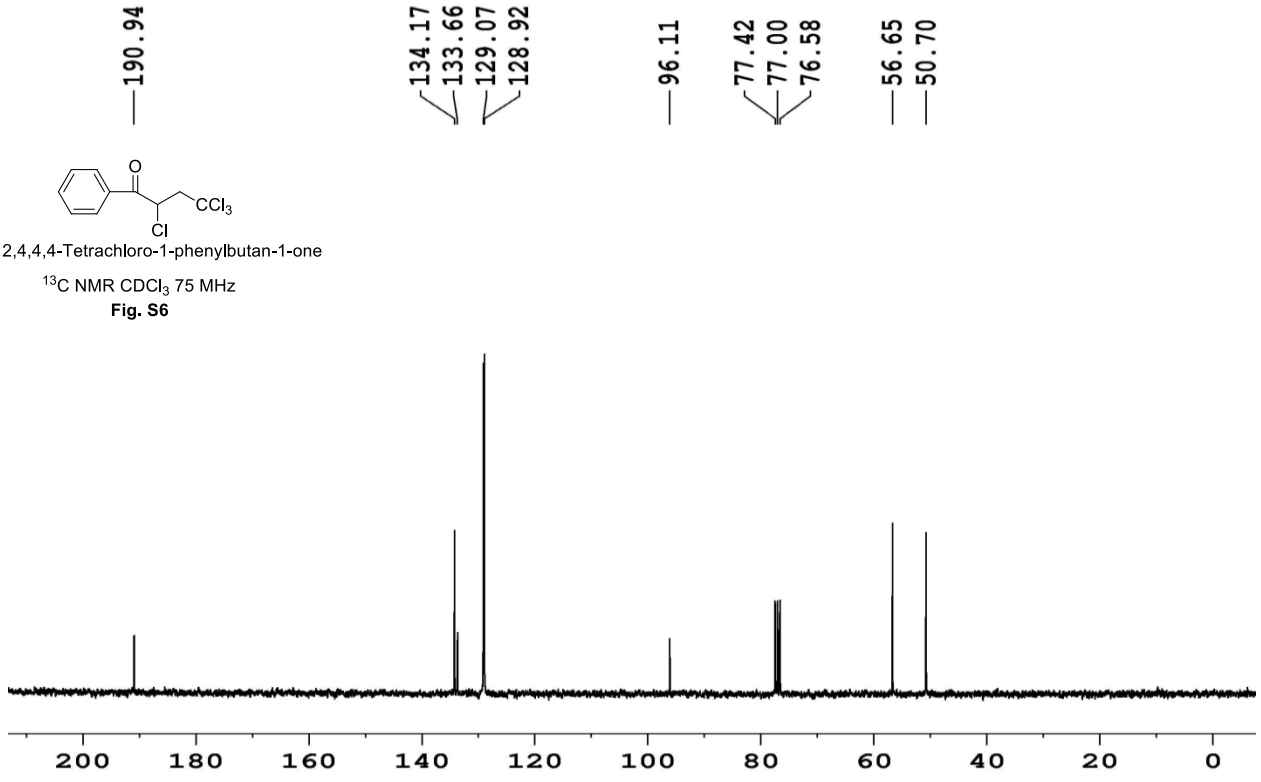
Fig. S4



2,4,4,4-Tetrachloro-1-phenylbutan-1-one

^{1}H NMR $CDCl_3$ 300 MHz

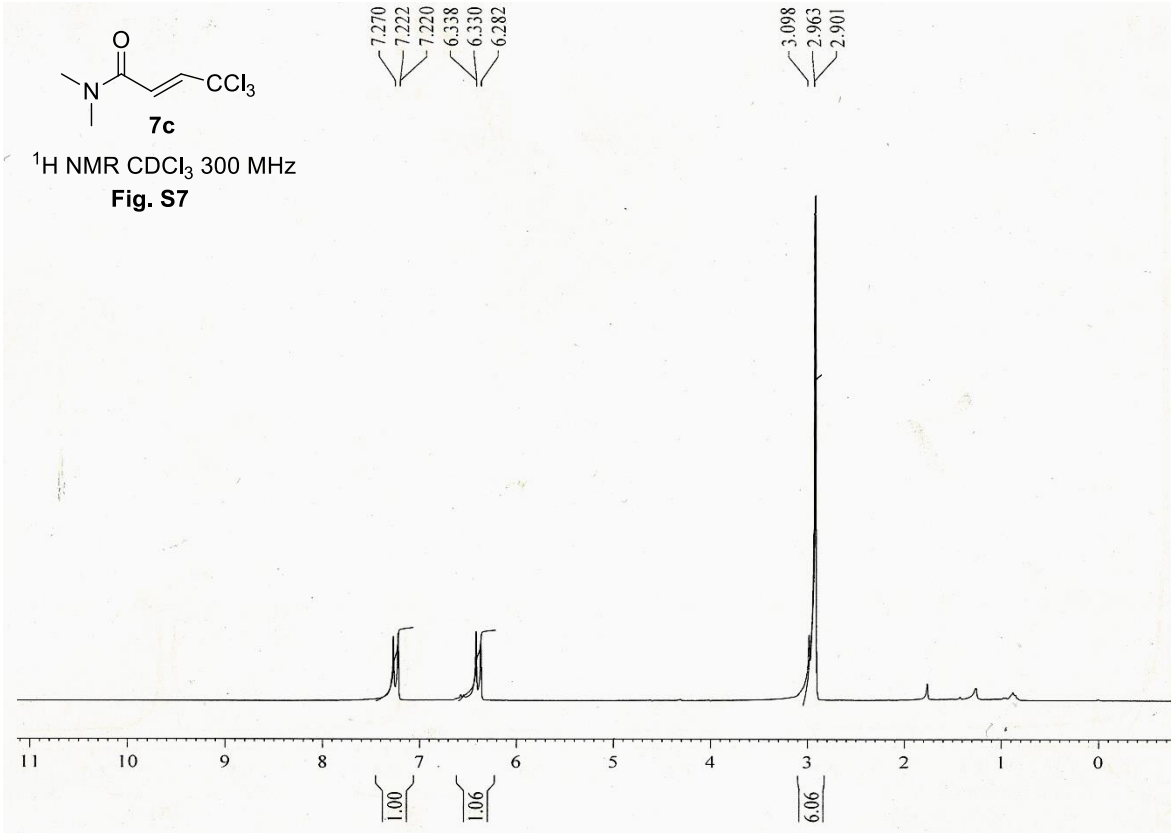
Fig. S5



2,4,4,4-Tetrachloro-1-phenylbutan-1-one

^{13}C NMR $CDCl_3$ 75 MHz

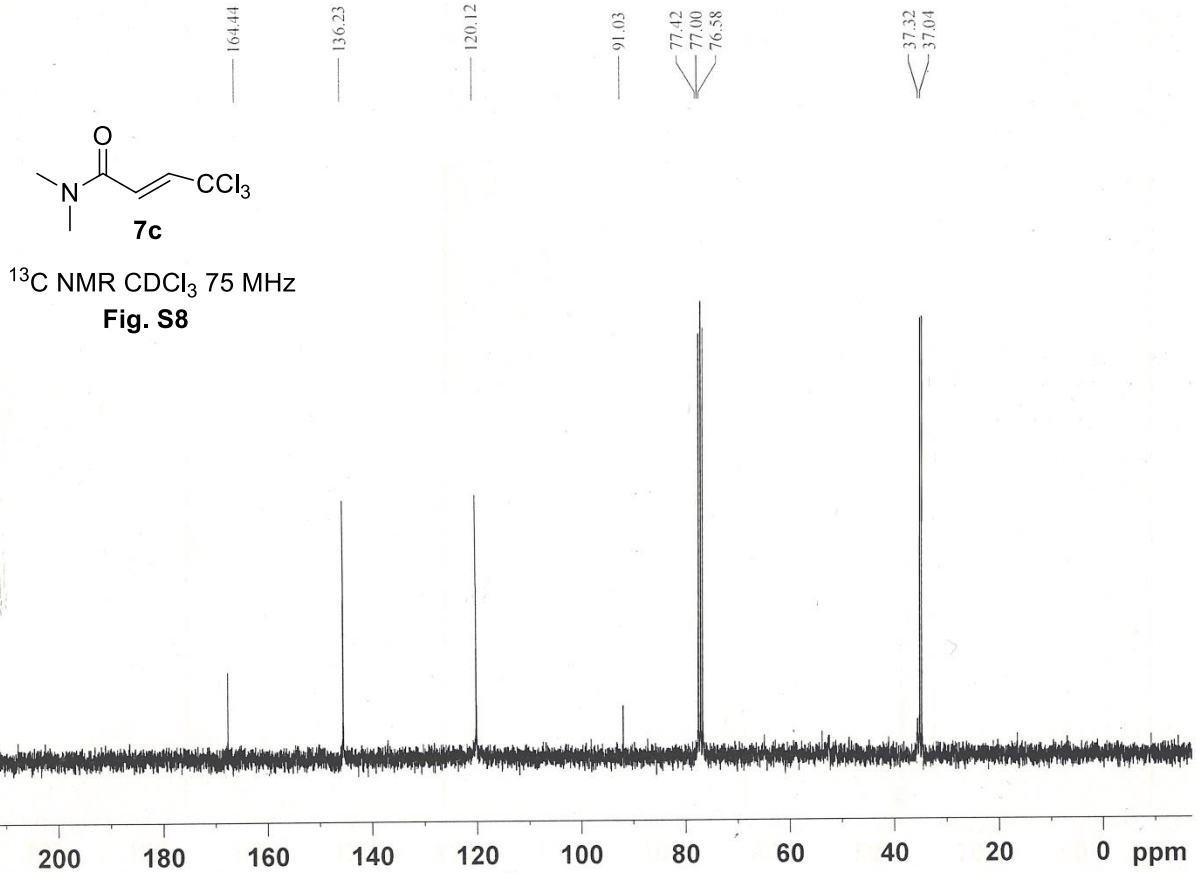
Fig. S6



7c

^{1}H NMR $CDCl_3$ 300 MHz

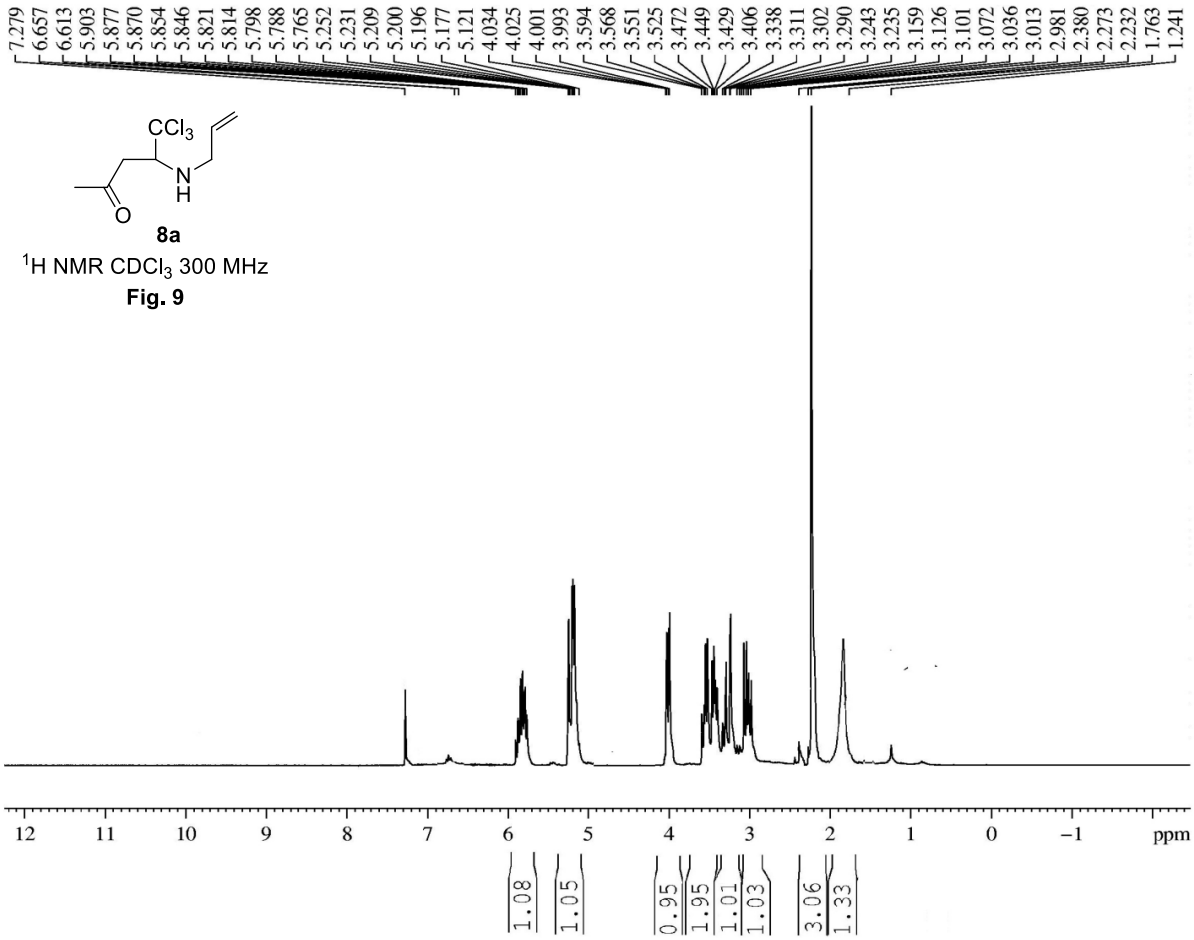
Fig. S7



7c

^{13}C NMR $CDCl_3$ 75 MHz

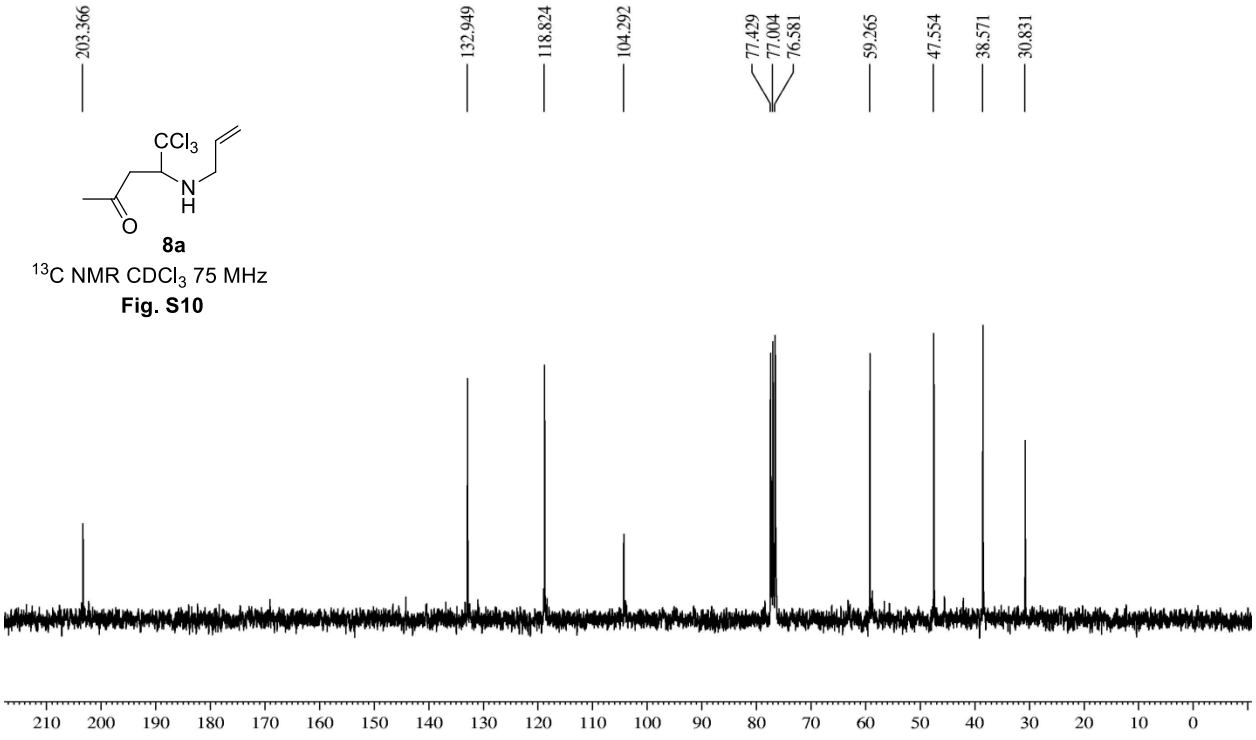
Fig. S8



8a

^{1}H NMR $CDCl_3$ 300 MHz

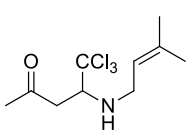
Fig. 9



8a

^{13}C NMR $CDCl_3$ 75 MHz

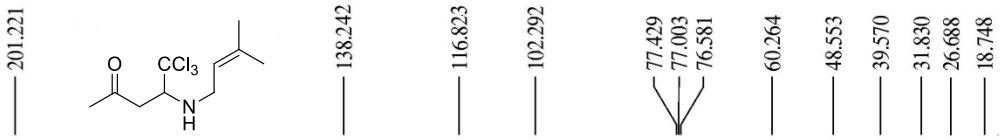
Fig. S10



8b

^{1}H NMR $CDCl_3$ 300 MHz

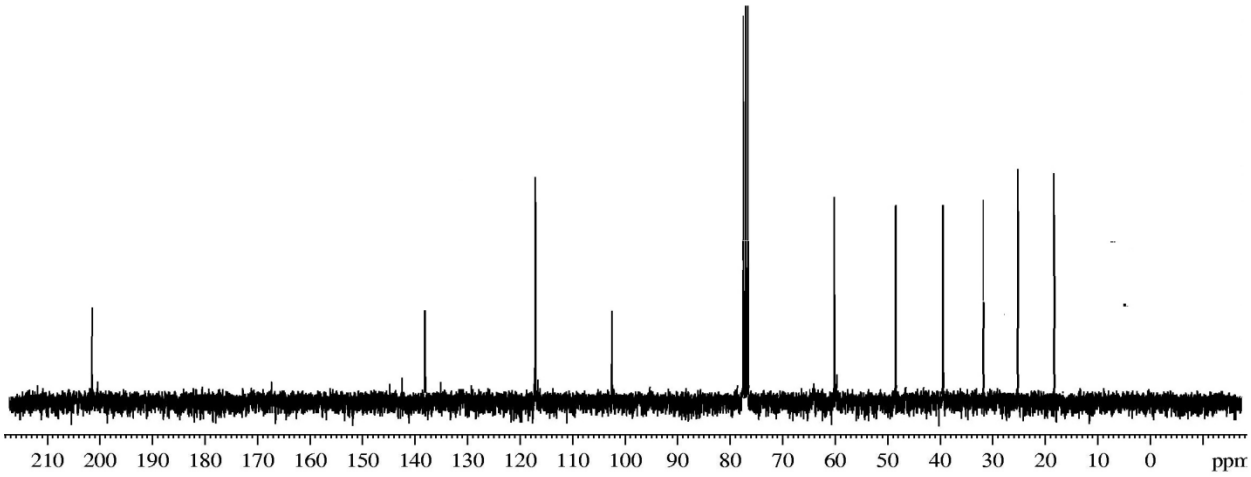
Fig.S11

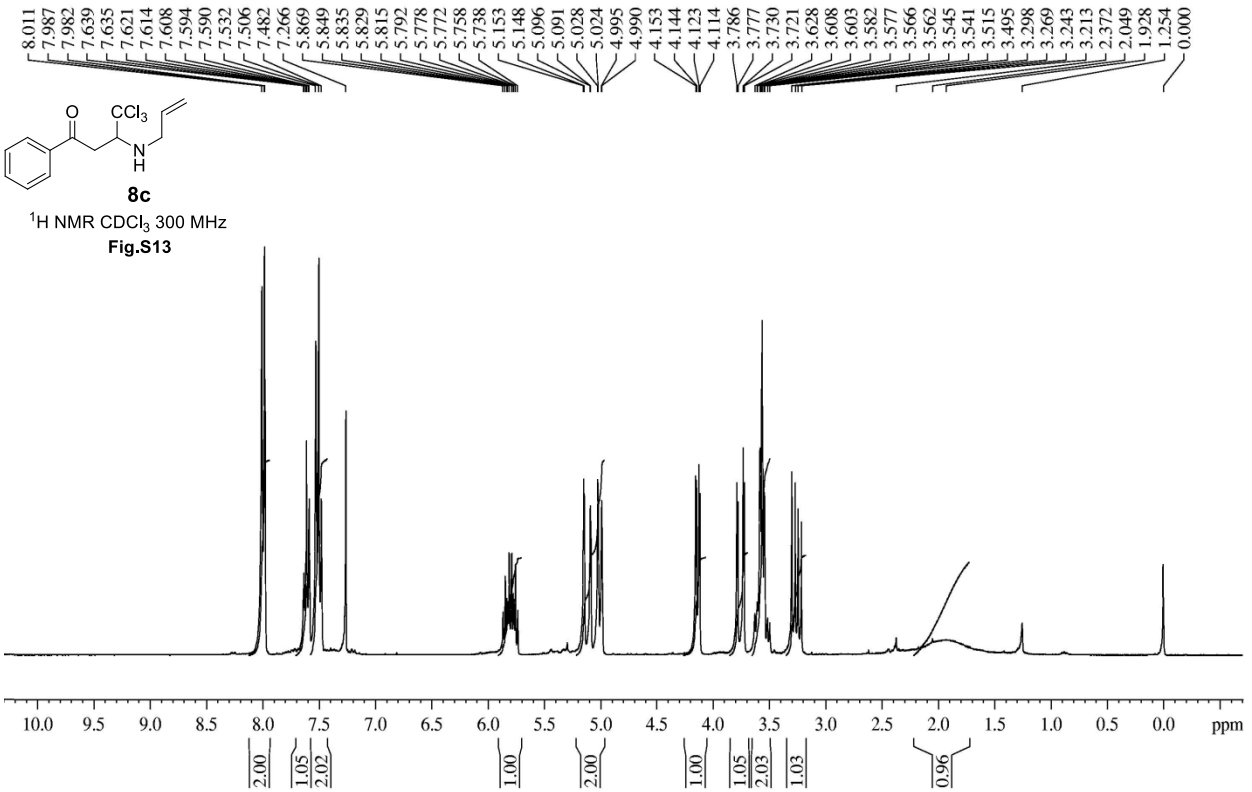


8b

^{13}C NMR $CDCl_3$ 75 MHz

Fig. S12

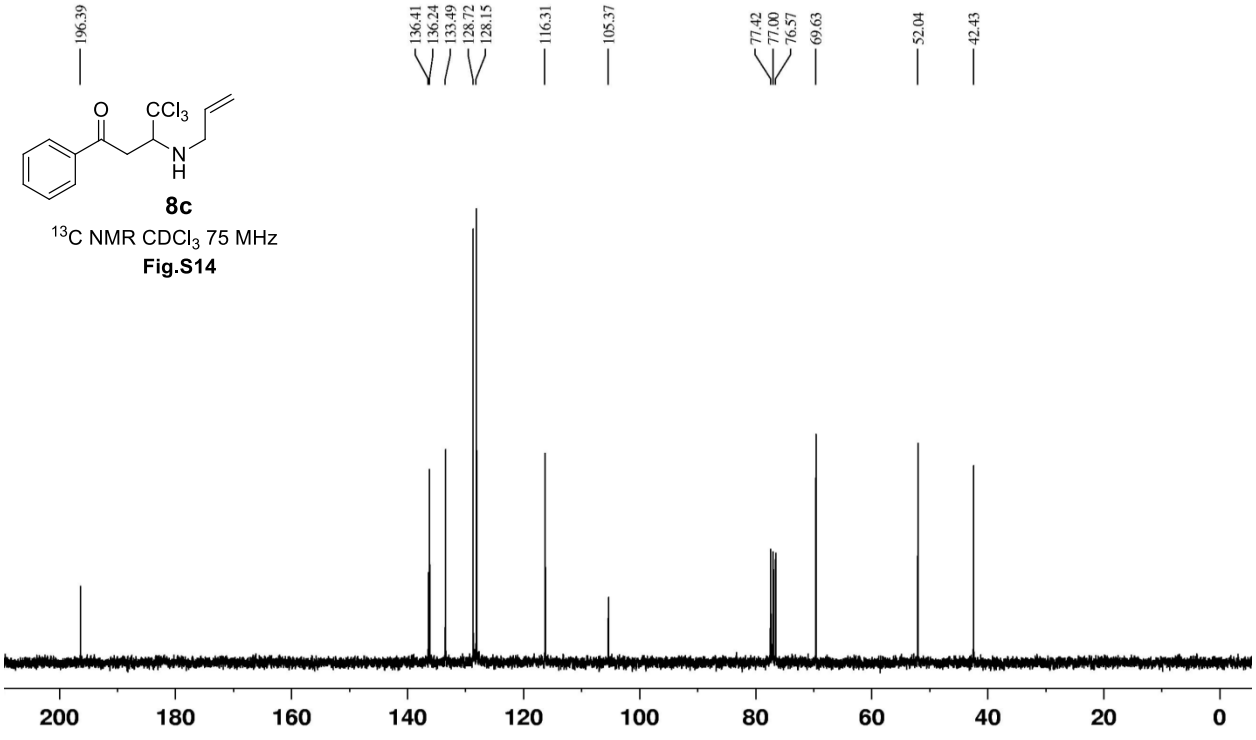




8c

^{1}H NMR $CDCl_3$ 300 MHz

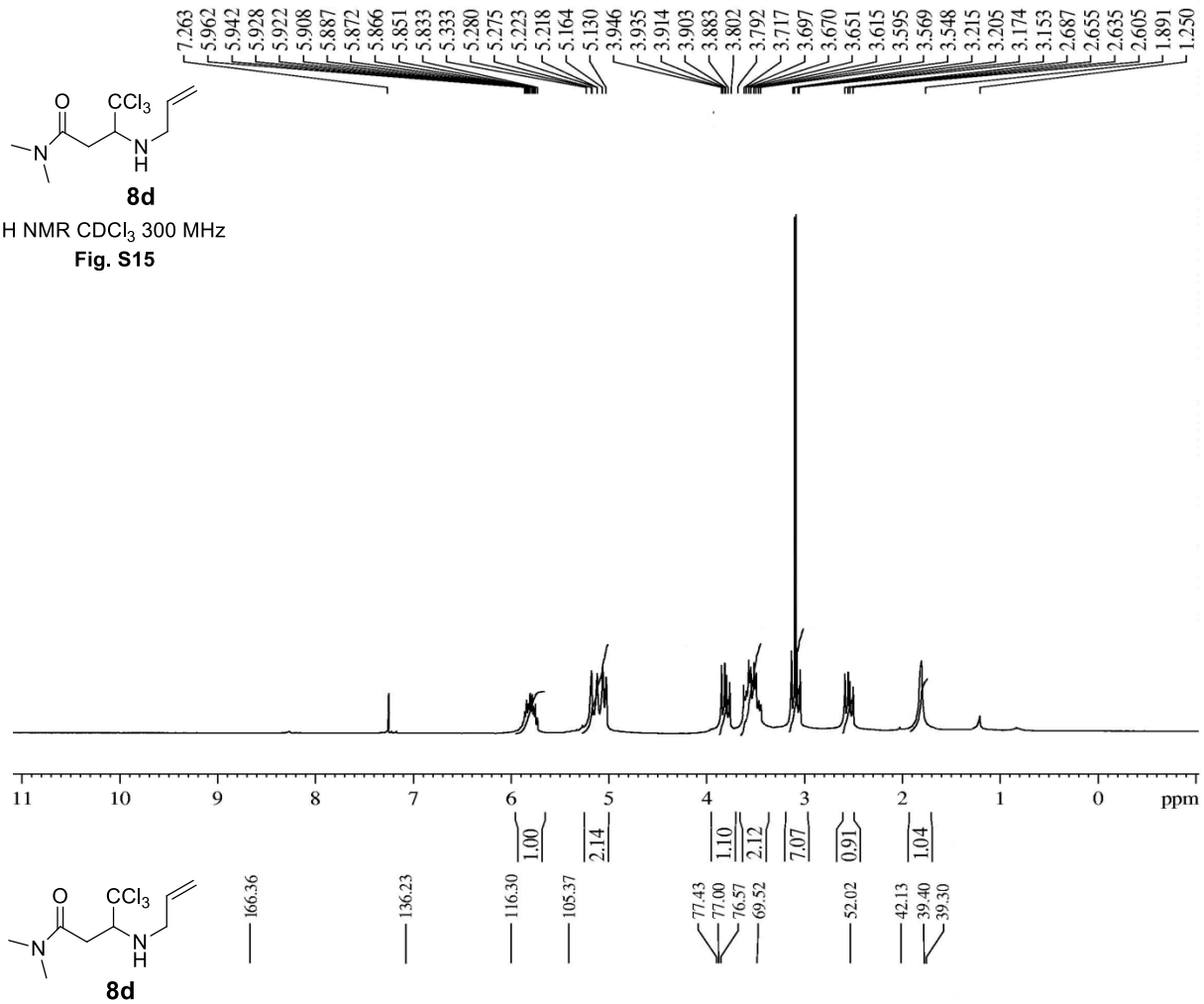
Fig.S13



8c

^{13}C NMR $CDCl_3$ 75 MHz

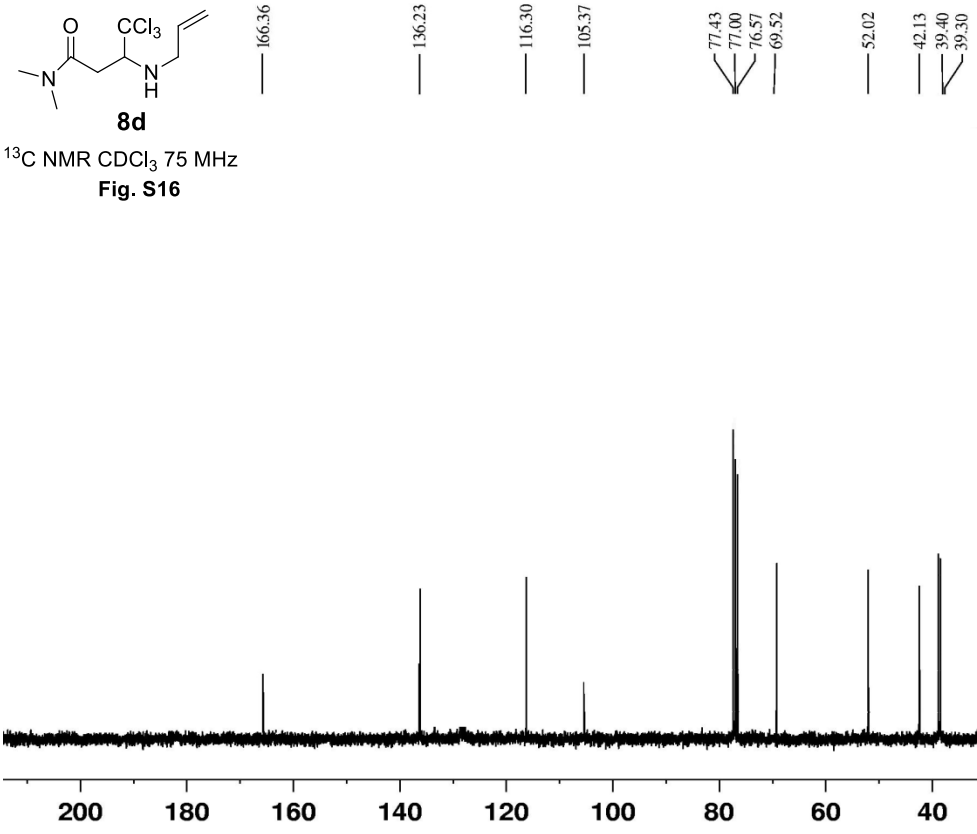
Fig.S14



8d

^{1}H NMR $CDCl_3$ 300 MHz

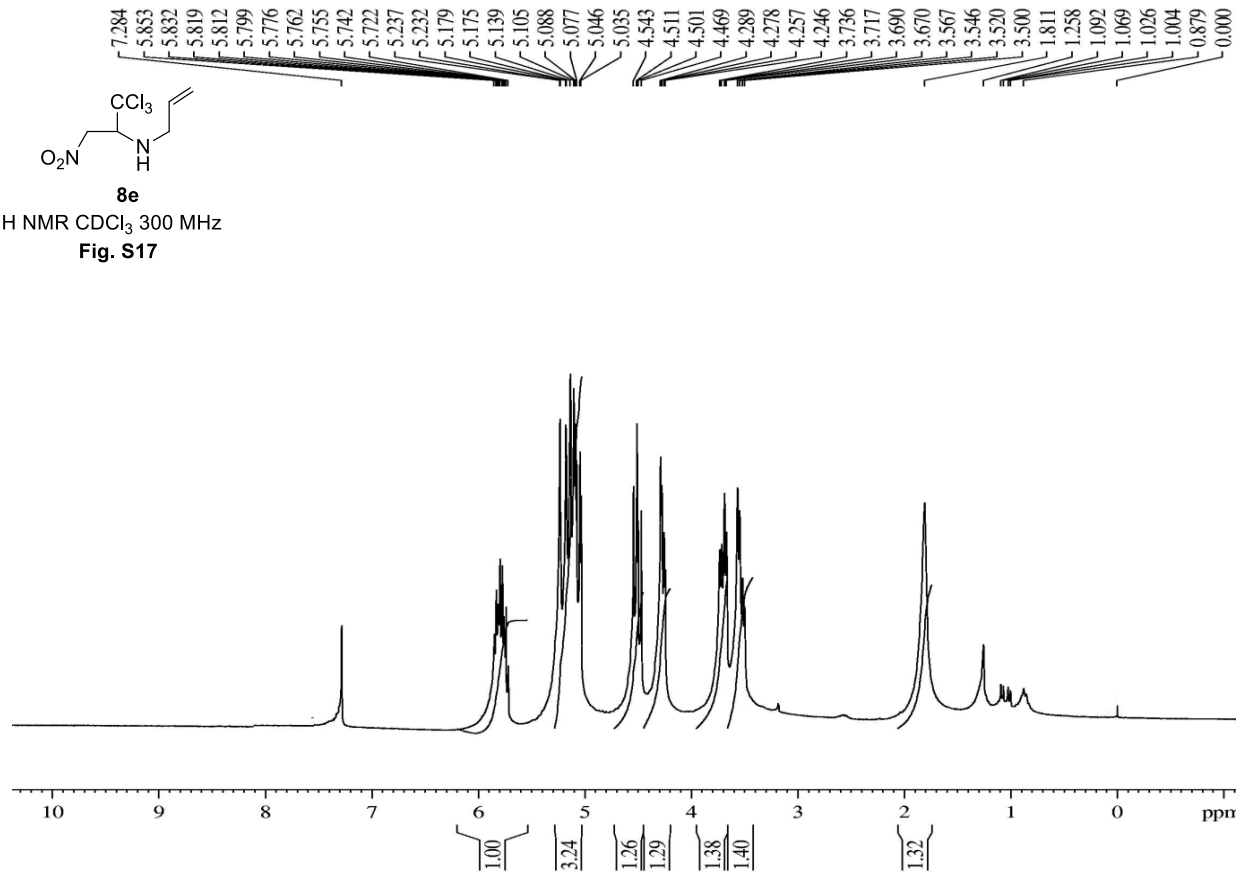
Fig. S15



8d

^{13}C NMR $CDCl_3$ 75 MHz

Fig. S16



8e

^{1}H NMR $CDCl_3$ 300 MHz

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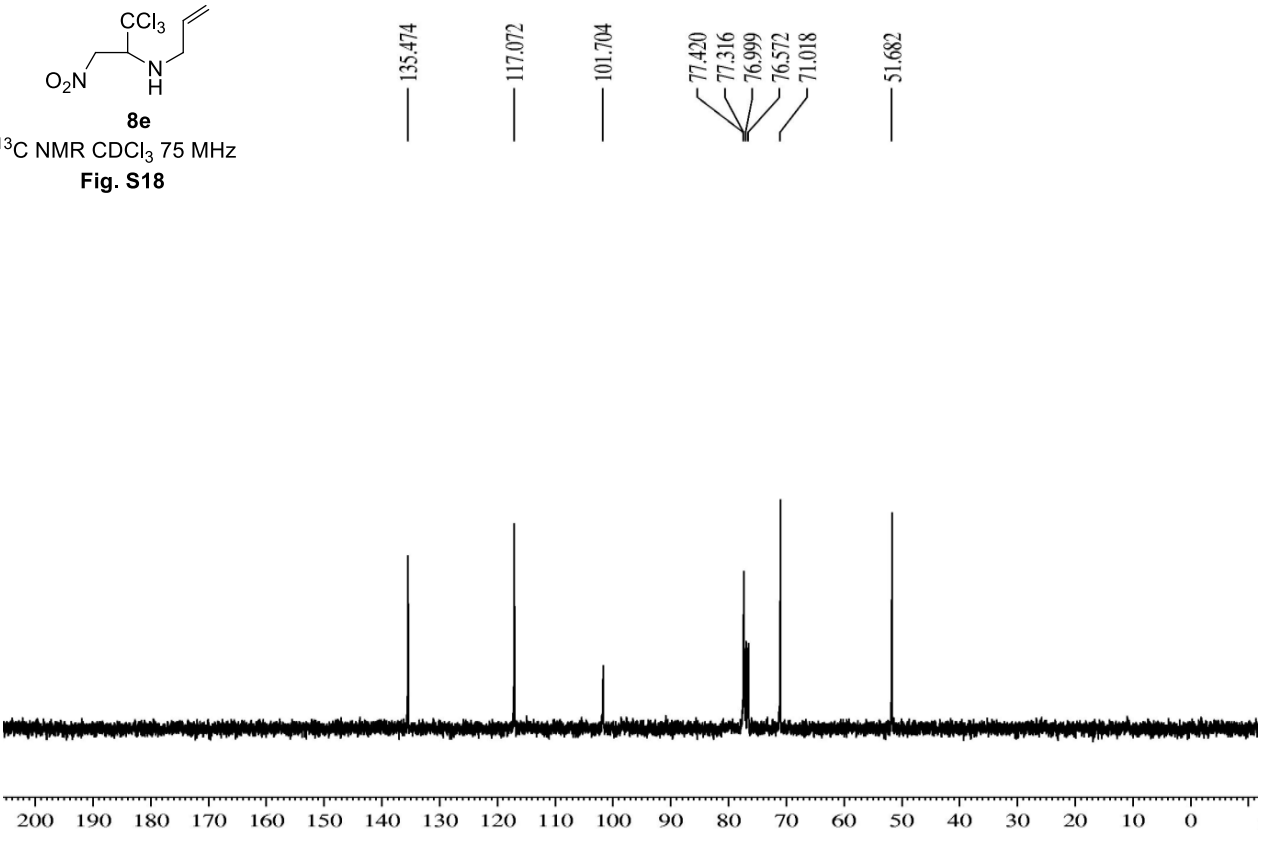
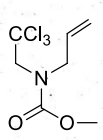


8e

^{13}C NMR $CDCl_3$ 75 MHz

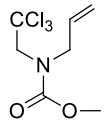
Fig. S18



10a

^{1}H NMR $CDCl_3$ 300 MHz

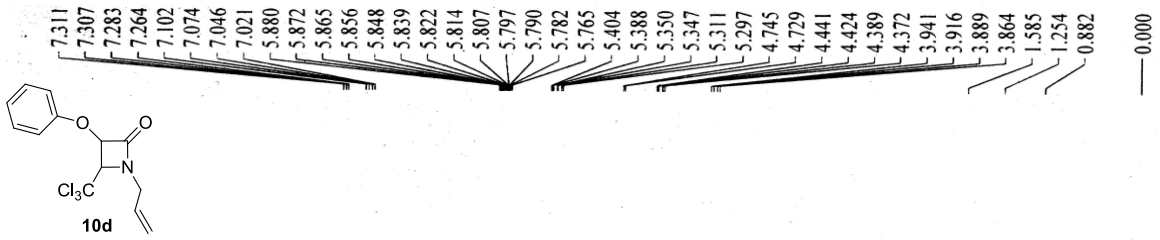
Fig. S19



10a

^{13}C NMR $CDCl_3$ 75 MHz

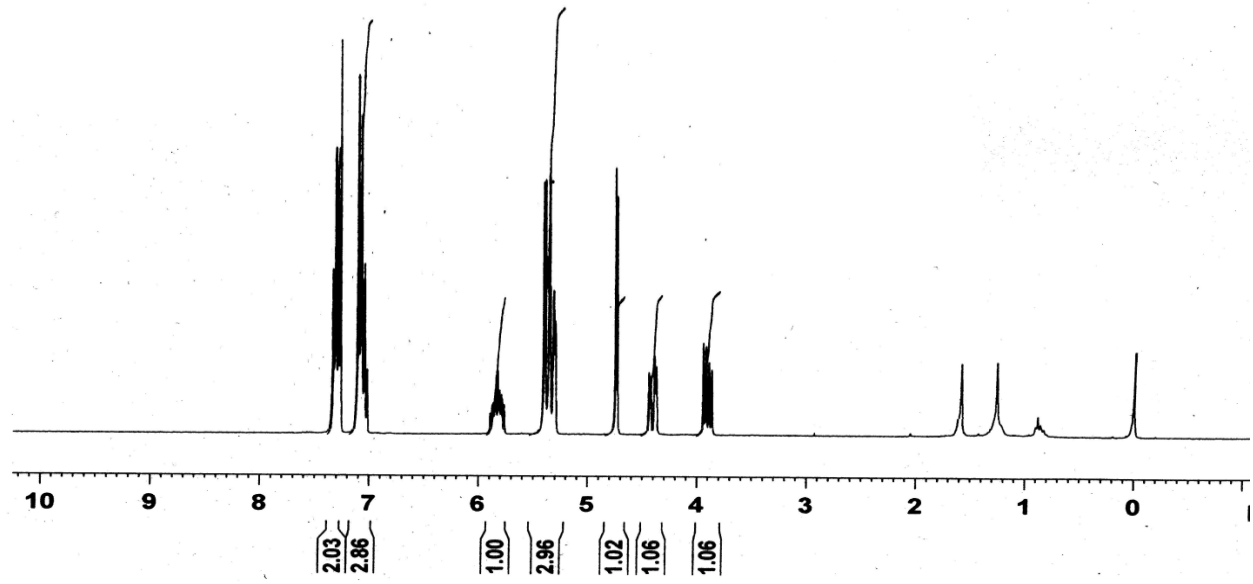
Fig. S20

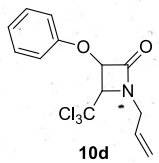


10d

^{1}H NMR $CDCl_3$ 300 MHz

Fig. S21





10d

^{13}C NMR $CDCl_3$ 75 MHz

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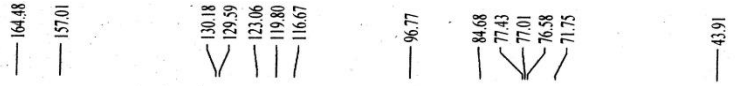
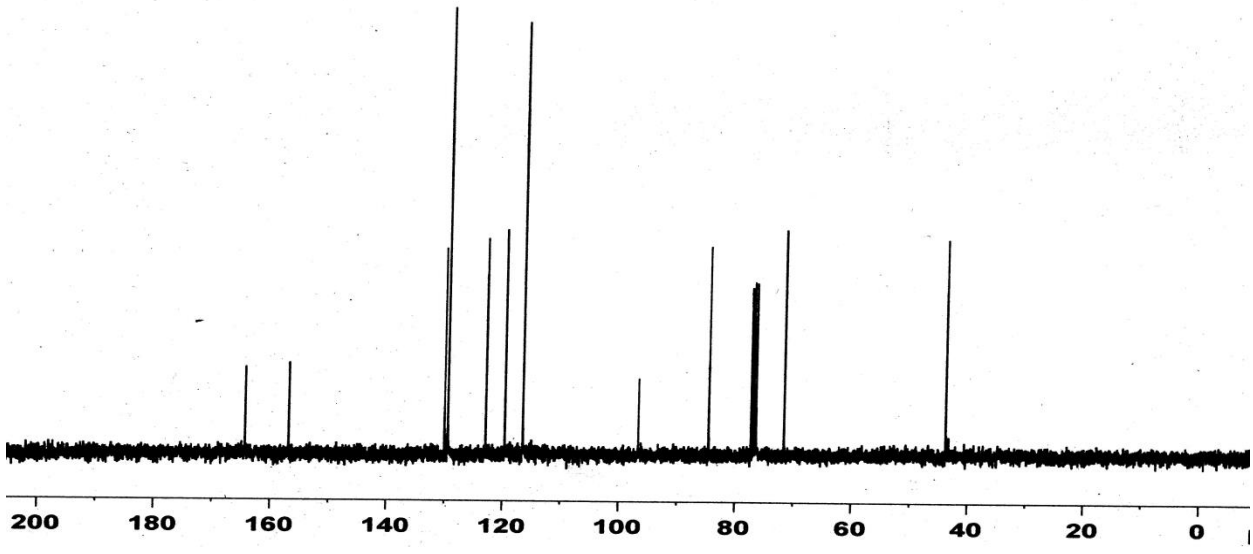
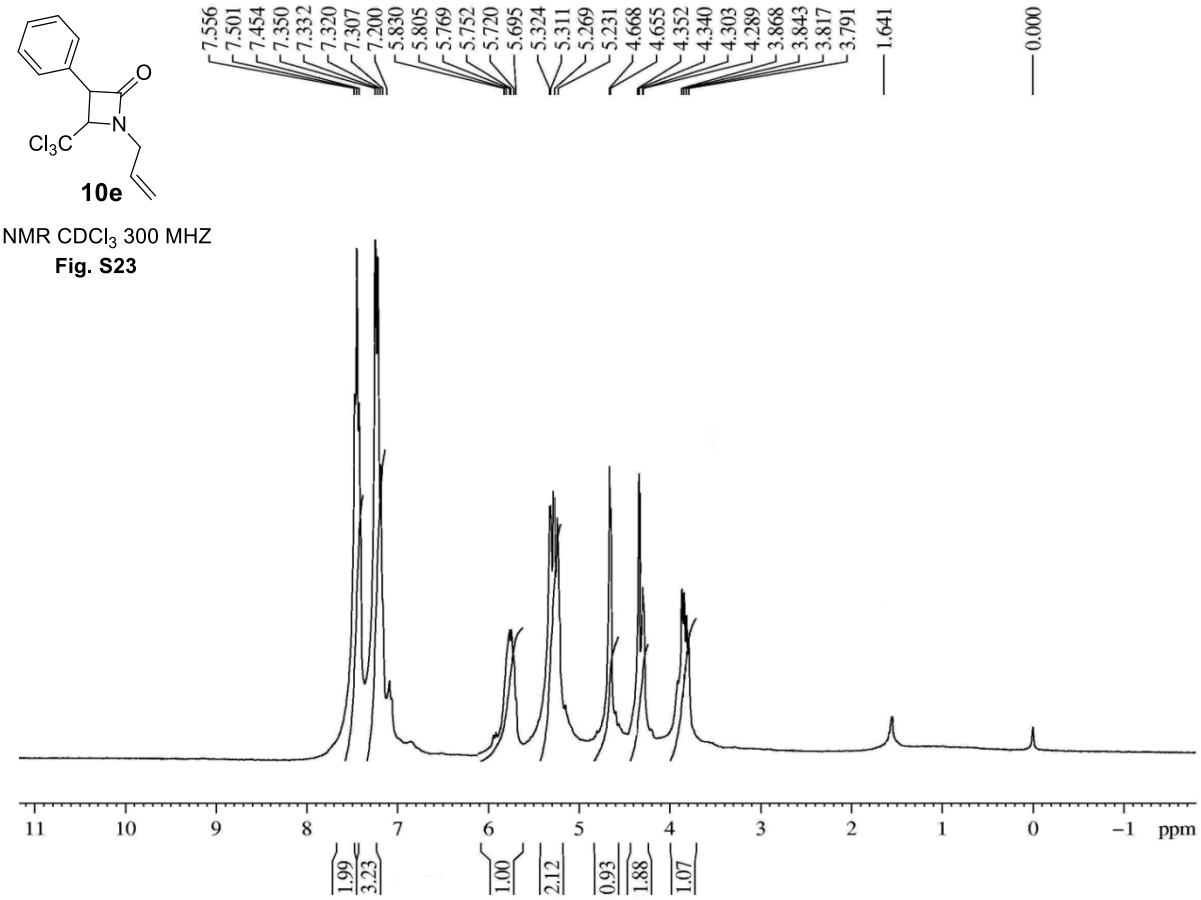
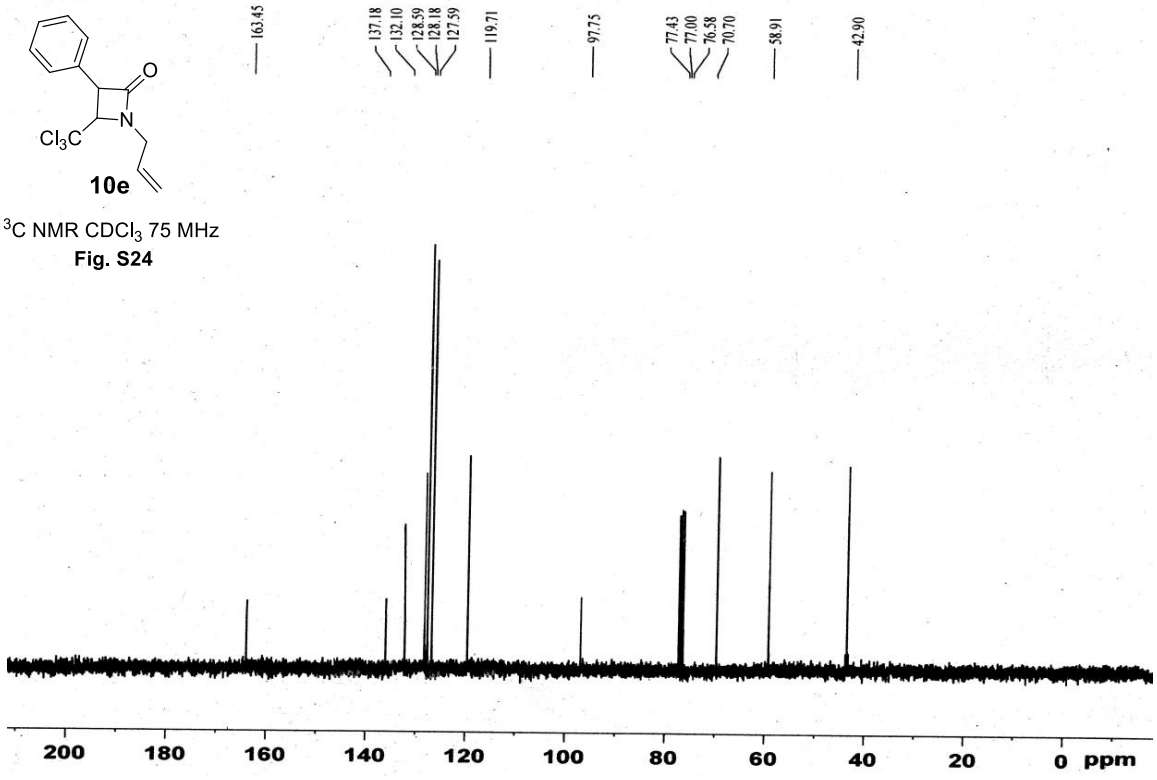






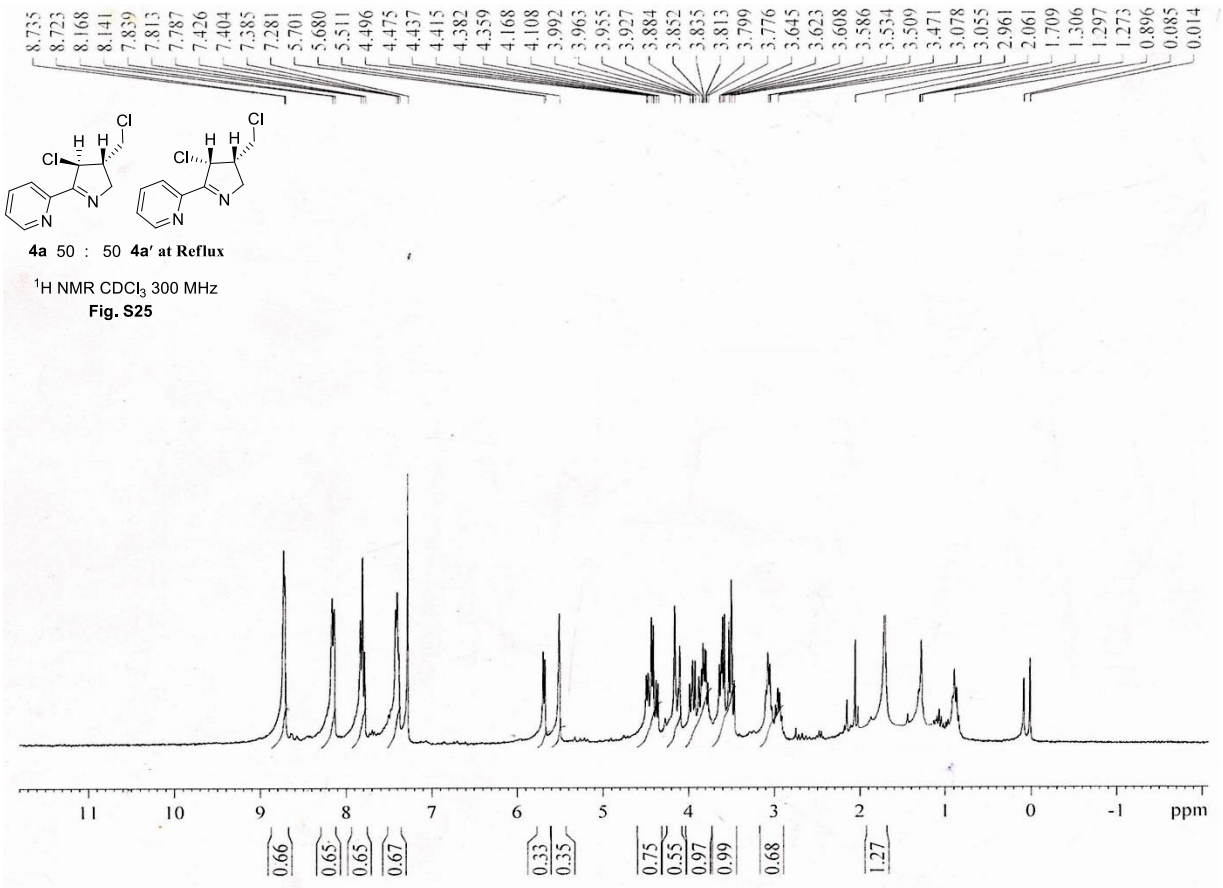
^{1}H NMR $CDCl_3$ 300 MHZ

Fig. S23



^{13}C NMR $CDCl_3$ 75 MHz

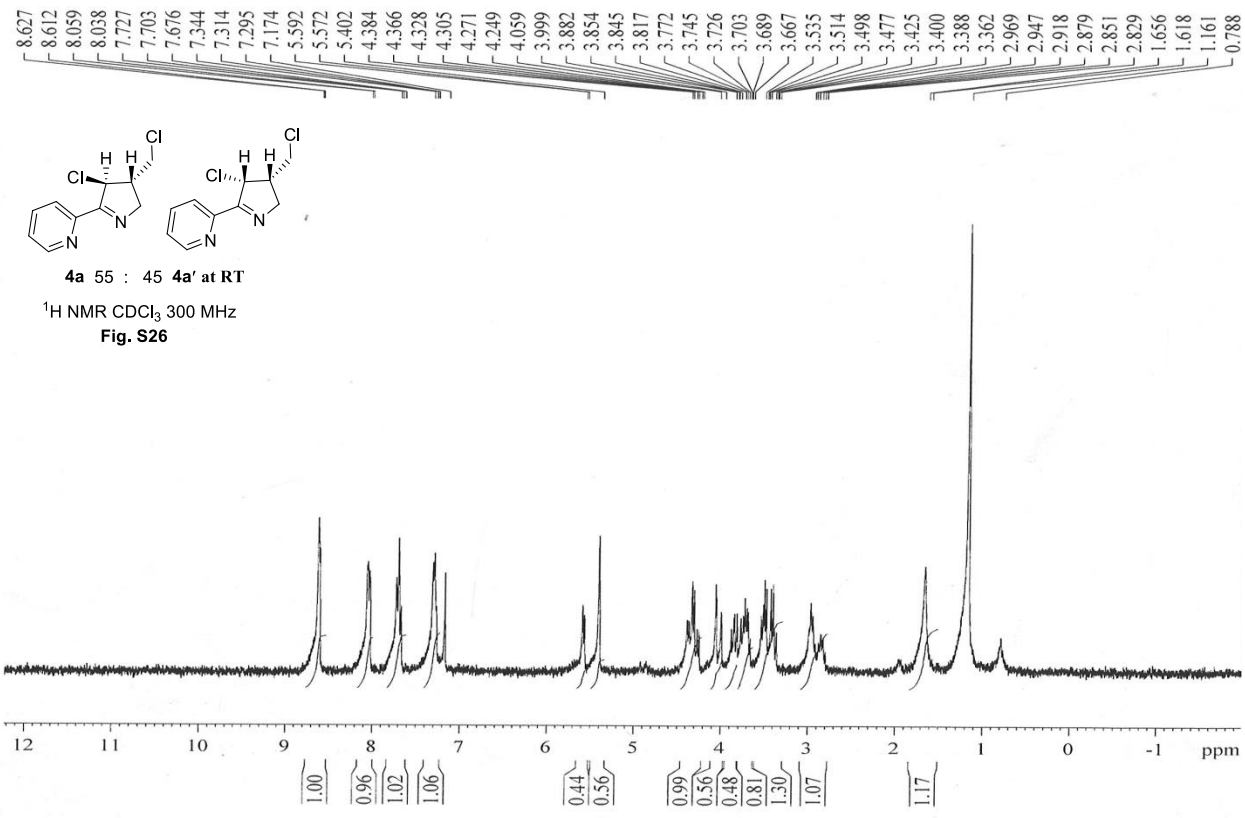
Fig. S24



4a 50 : 50 **4a′ at Reflux**

^{1}H NMR $CDCl_3$ 300 MHz

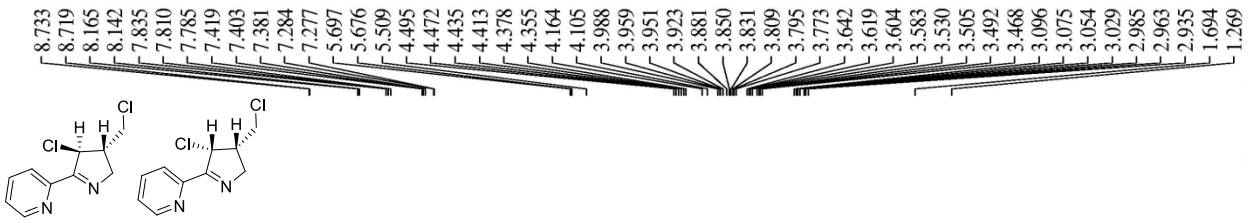
Fig. S25



4a 55 : 45 **4a′ at RT**

^{1}H NMR $CDCl_3$ 300 MHz

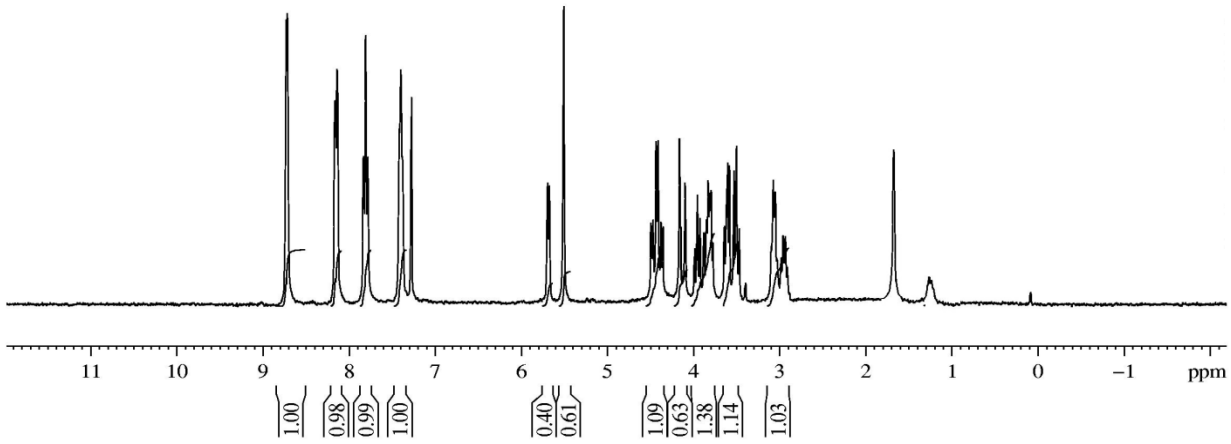
Fig. S26



4a 60 : 40 **4a′ at 0°C**

^{1}H NMR $CDCl_3$ 300 MHz

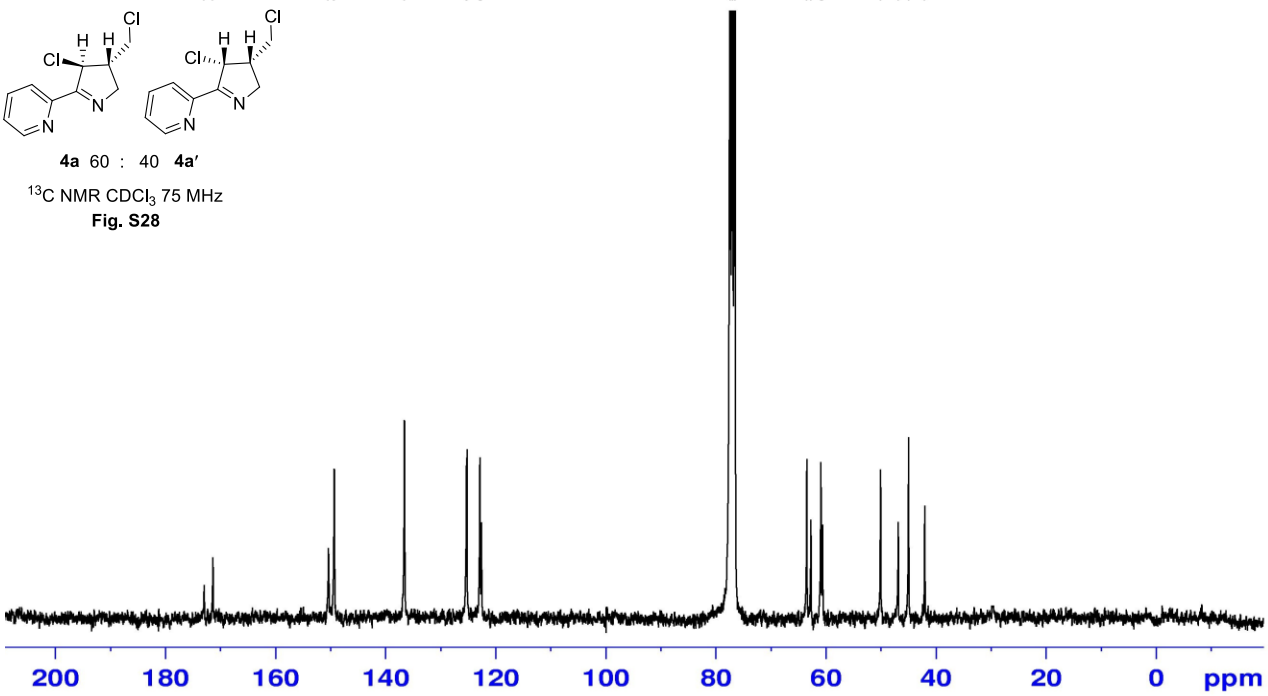
Fig. S27

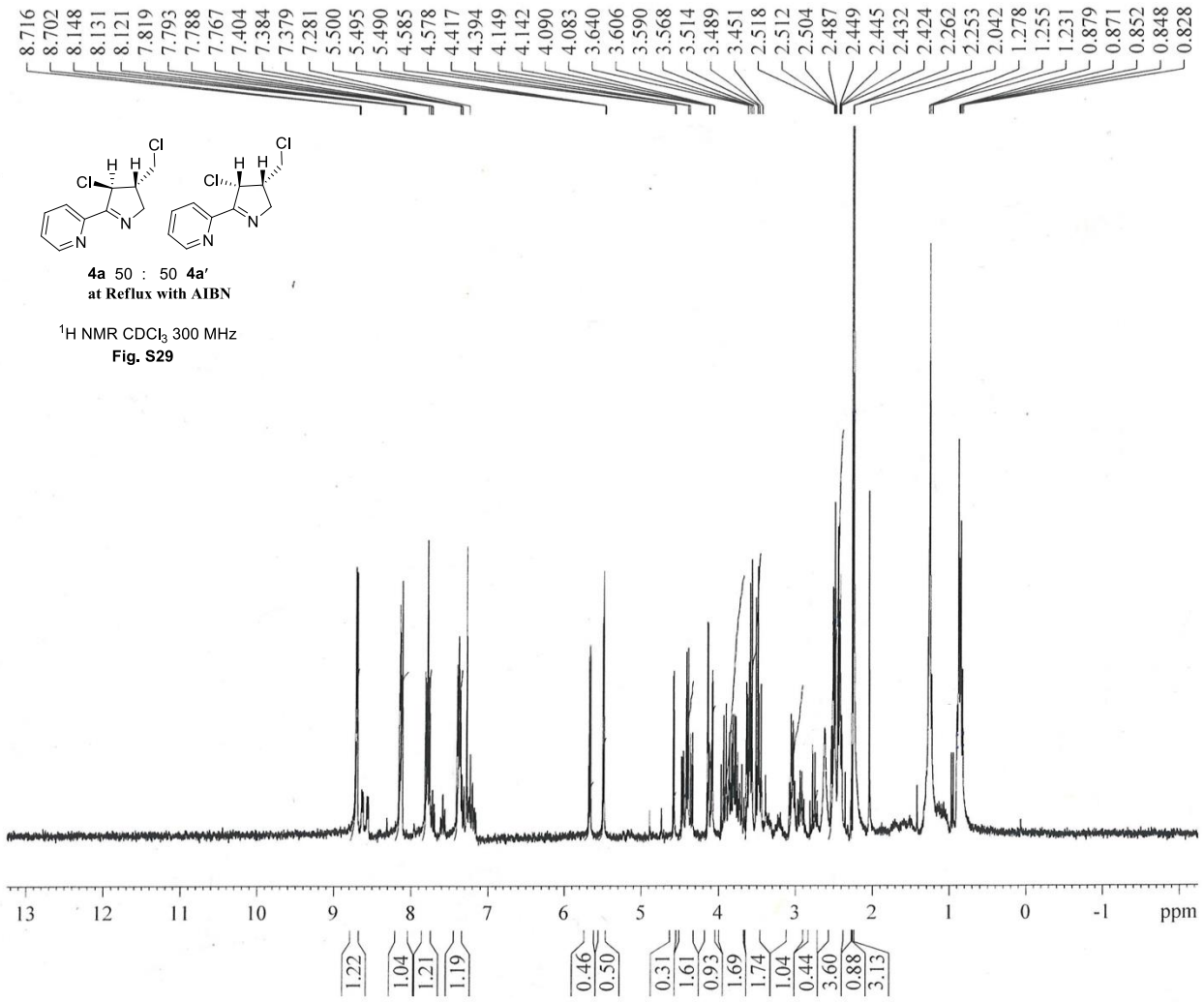


4a 60 : 40 **4a′**

^{13}C NMR $CDCl_3$ 75 MHz

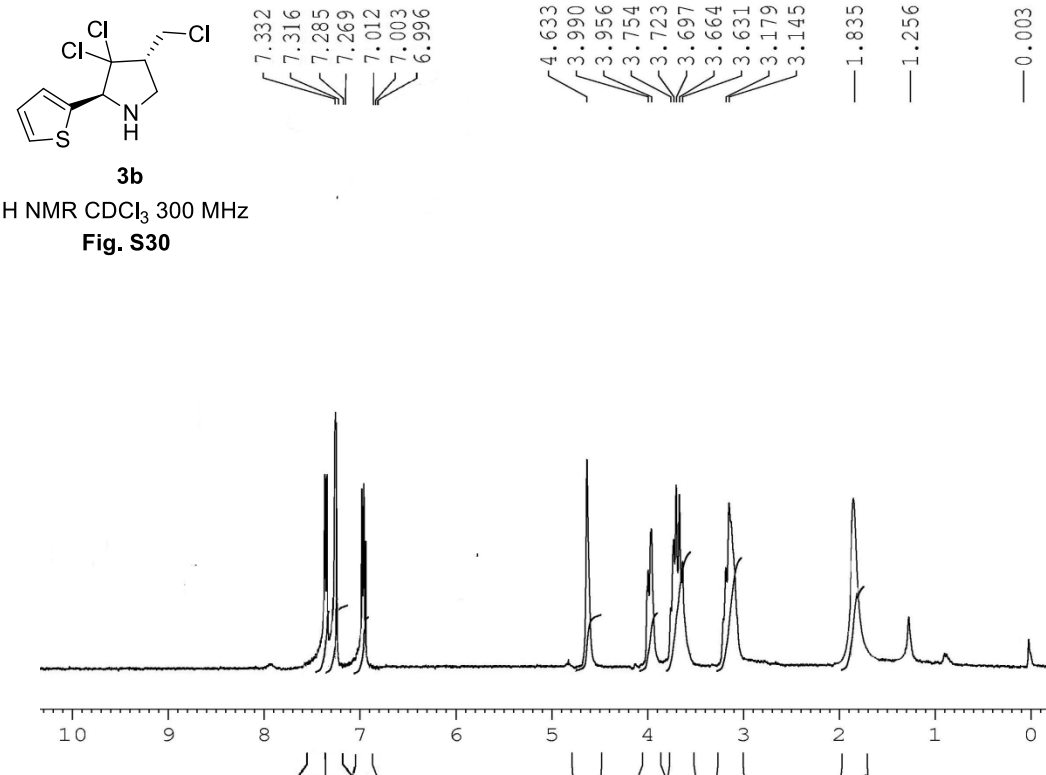
Fig. S28





4a 50 : 50 **4a′**
at Reflux with AIBN

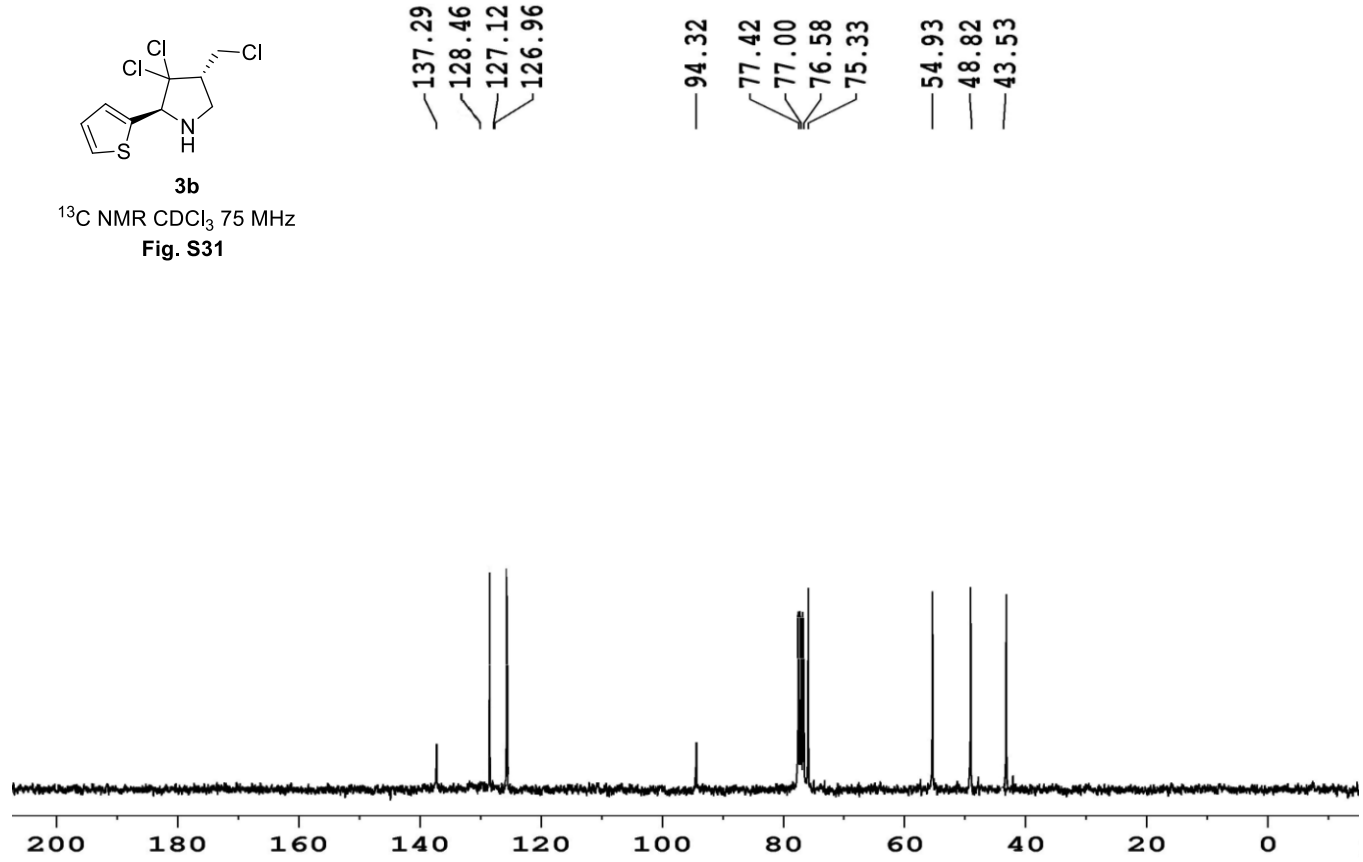
^{1}H NMR $CDCl_3$ 300 MHz
Fig. S29



3b

^{1}H NMR $CDCl_3$ 300 MHz

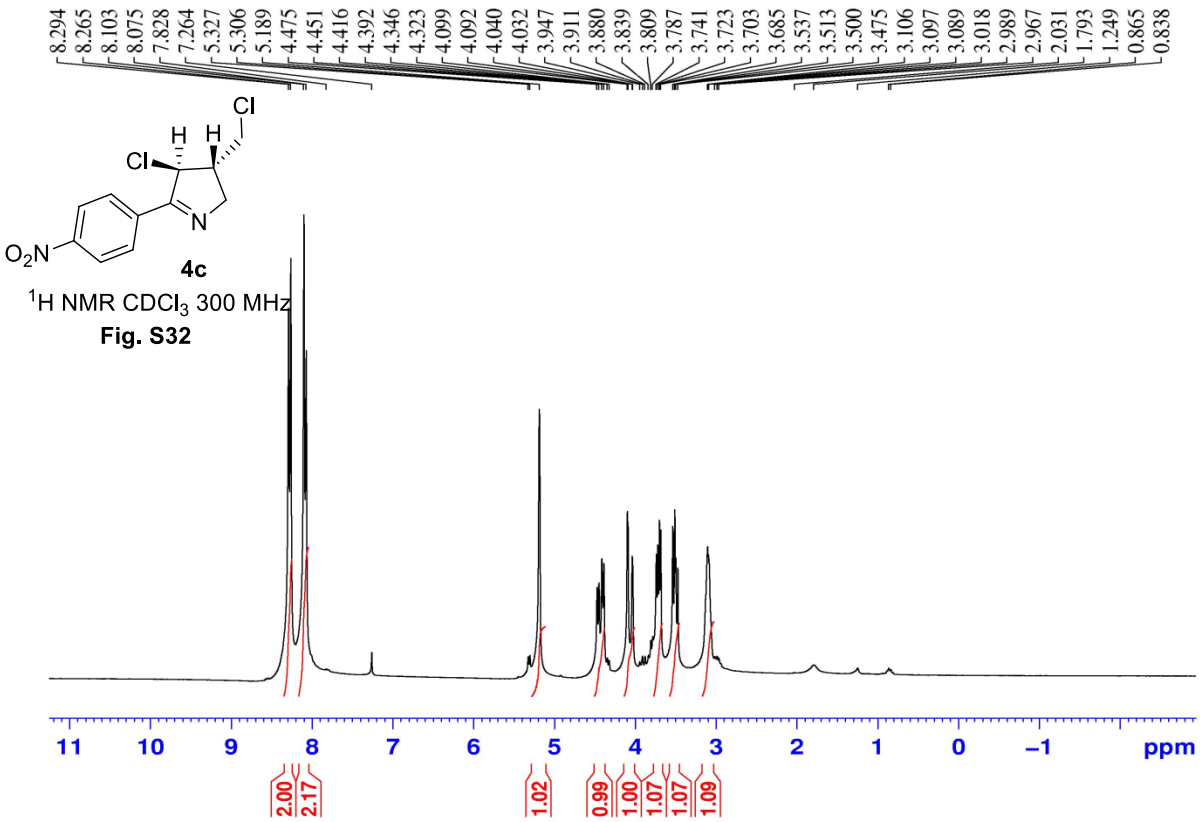
Fig. S30



3b

^{13}C NMR $CDCl_3$ 75 MHz

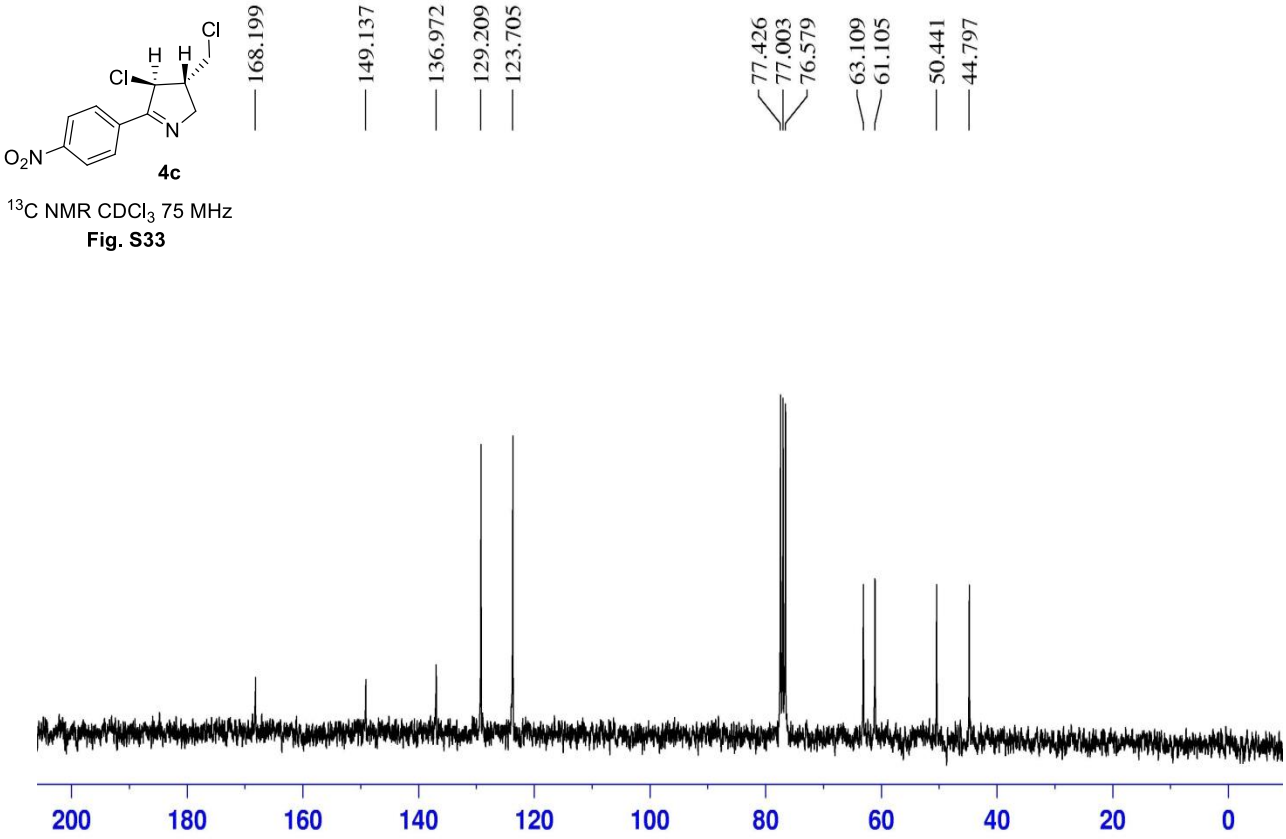
Fig. S31



4c

^{1}H NMR $CDCl_3$ 300 MHz

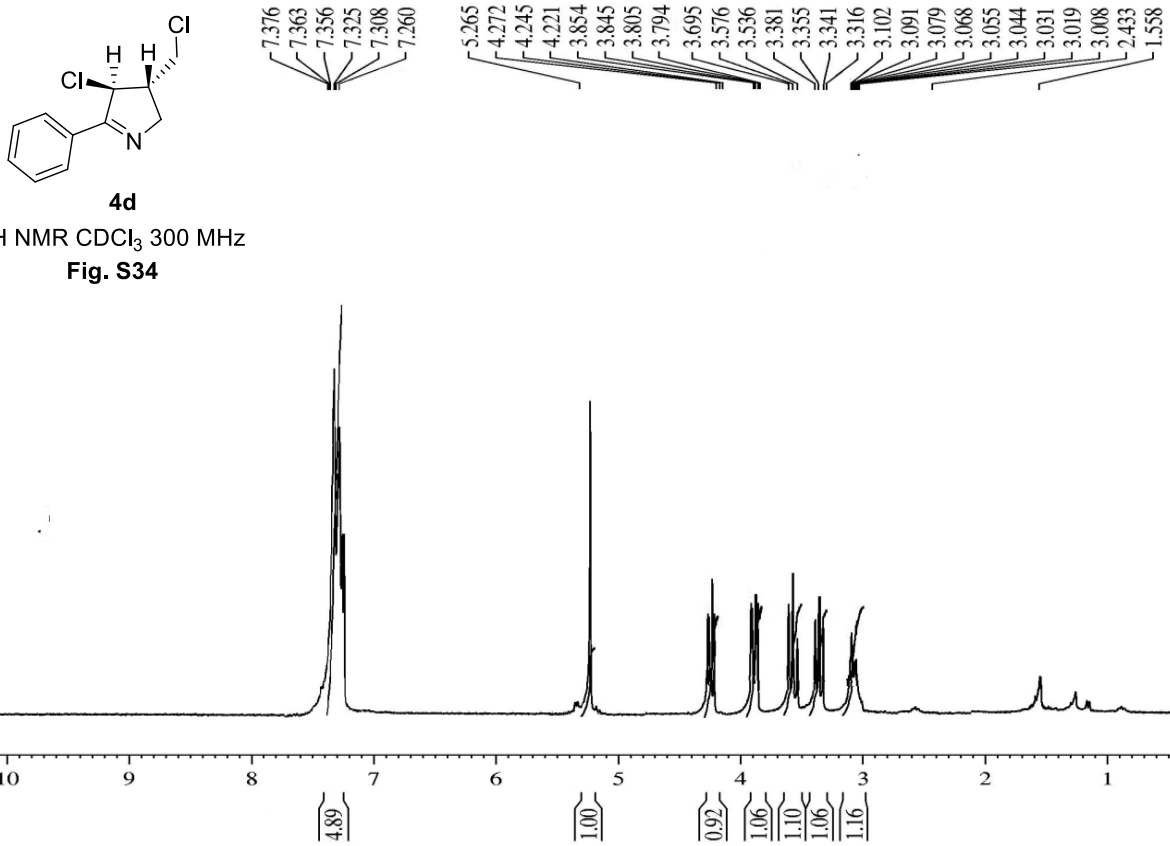
Fig. S32



4c

^{13}C NMR $CDCl_3$ 75 MHz

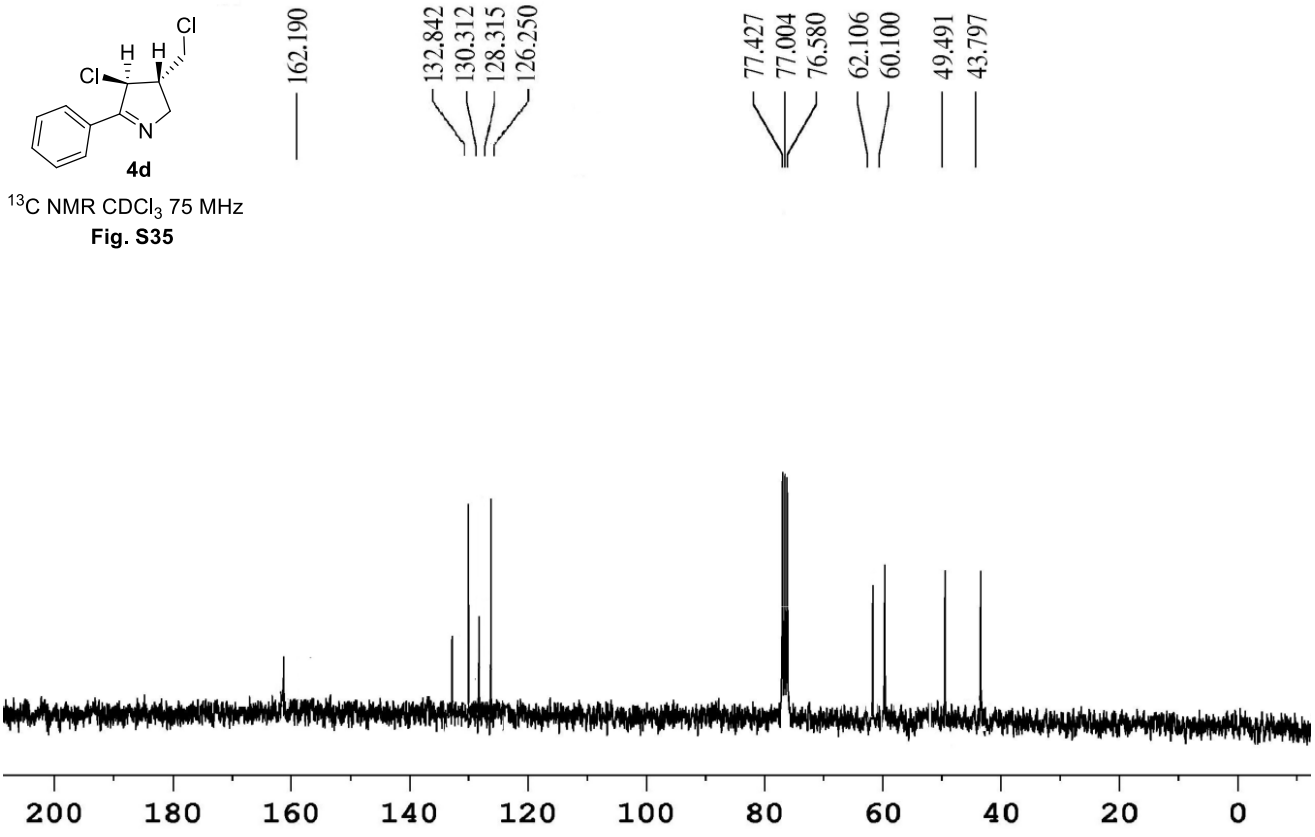
Fig. S33



4d

^{1}H NMR $CDCl_3$ 300 MHz

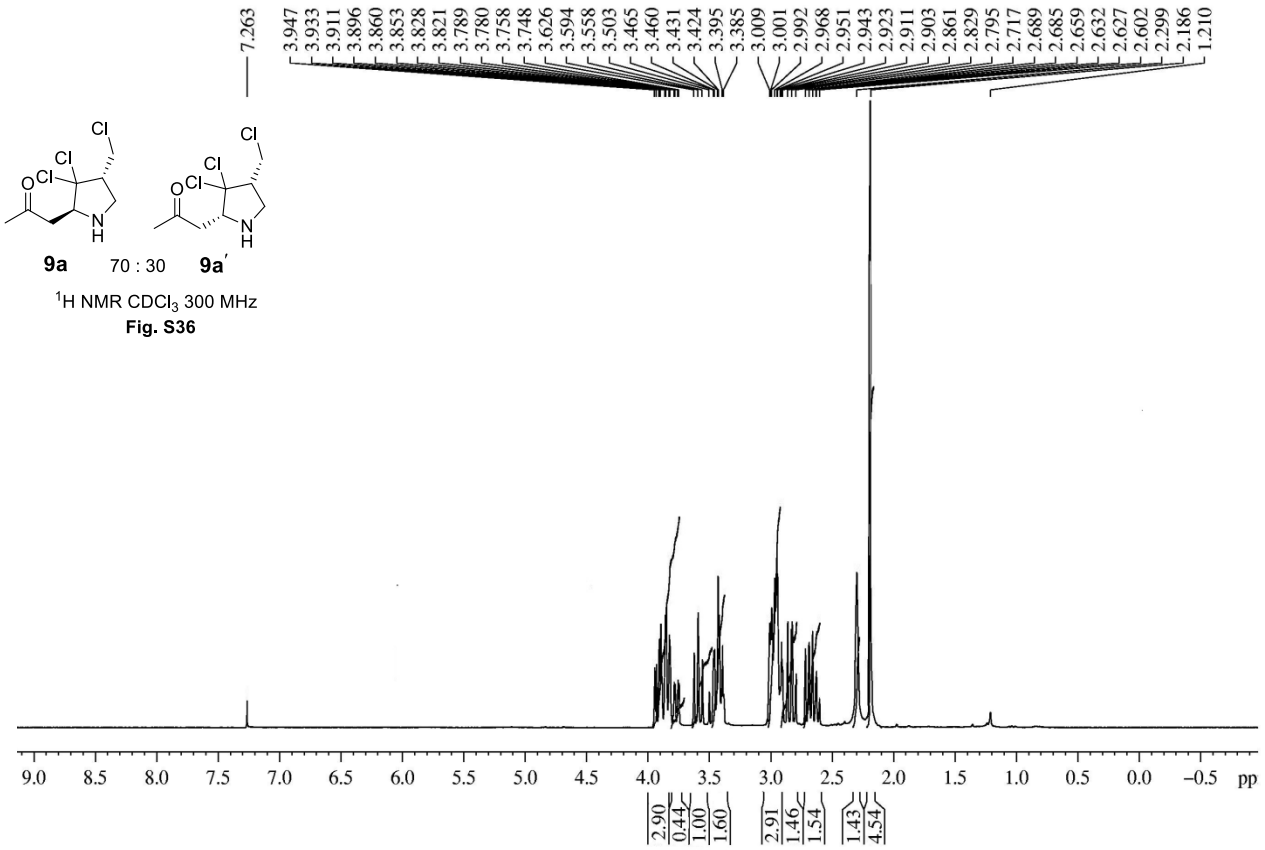
Fig. S34



4d

^{13}C NMR $CDCl_3$ 75 MHz

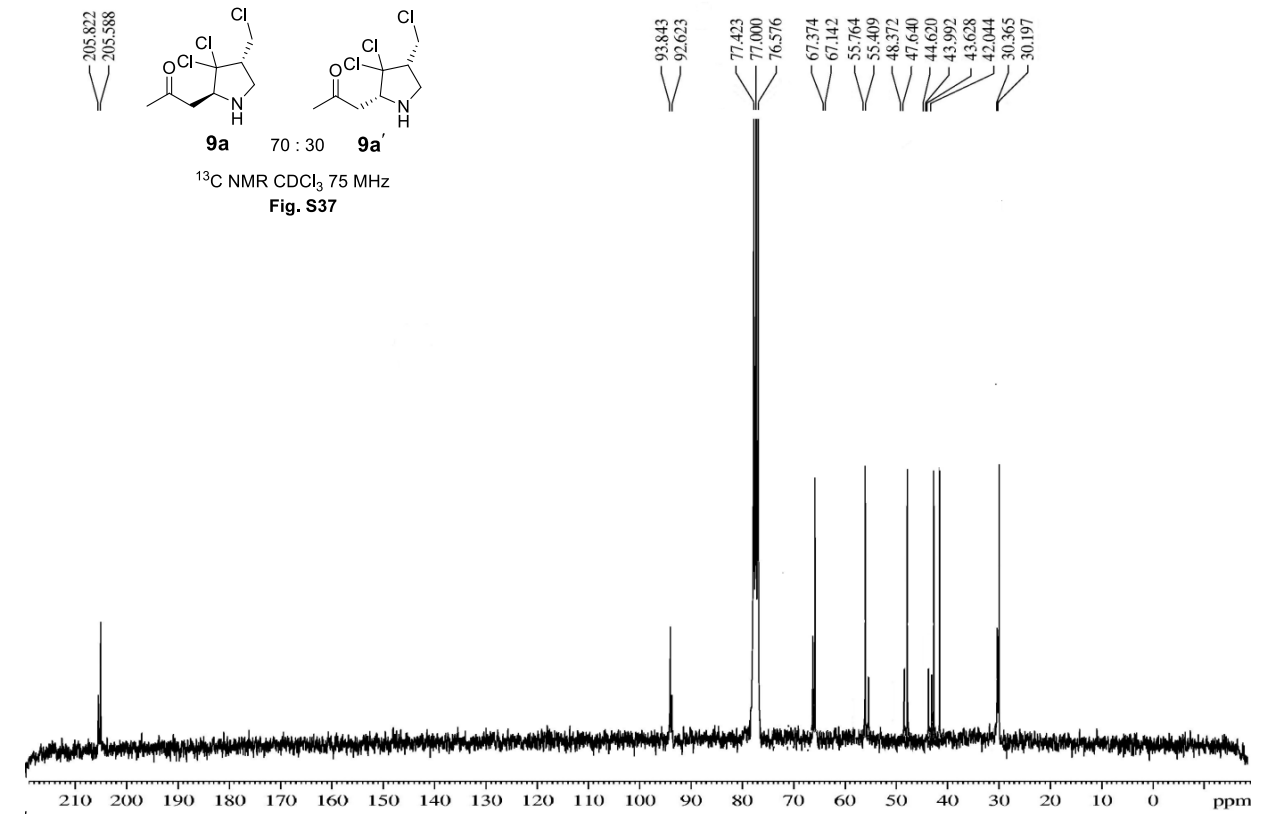
Fig. S35



9a 70 : 30 **9a′**

^{1}H NMR $CDCl_3$ 300 MHz

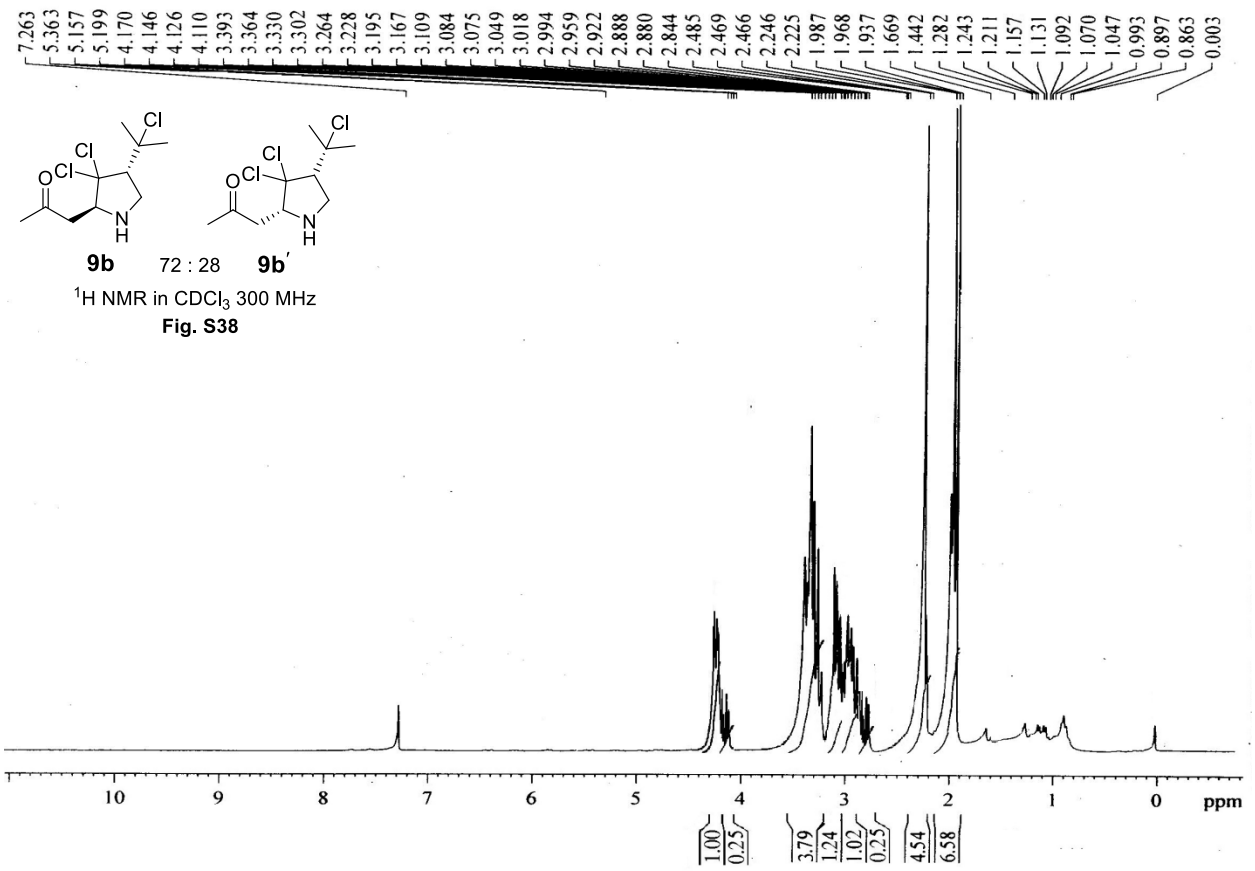
Fig. S36



9a 70 : 30 **9a′**

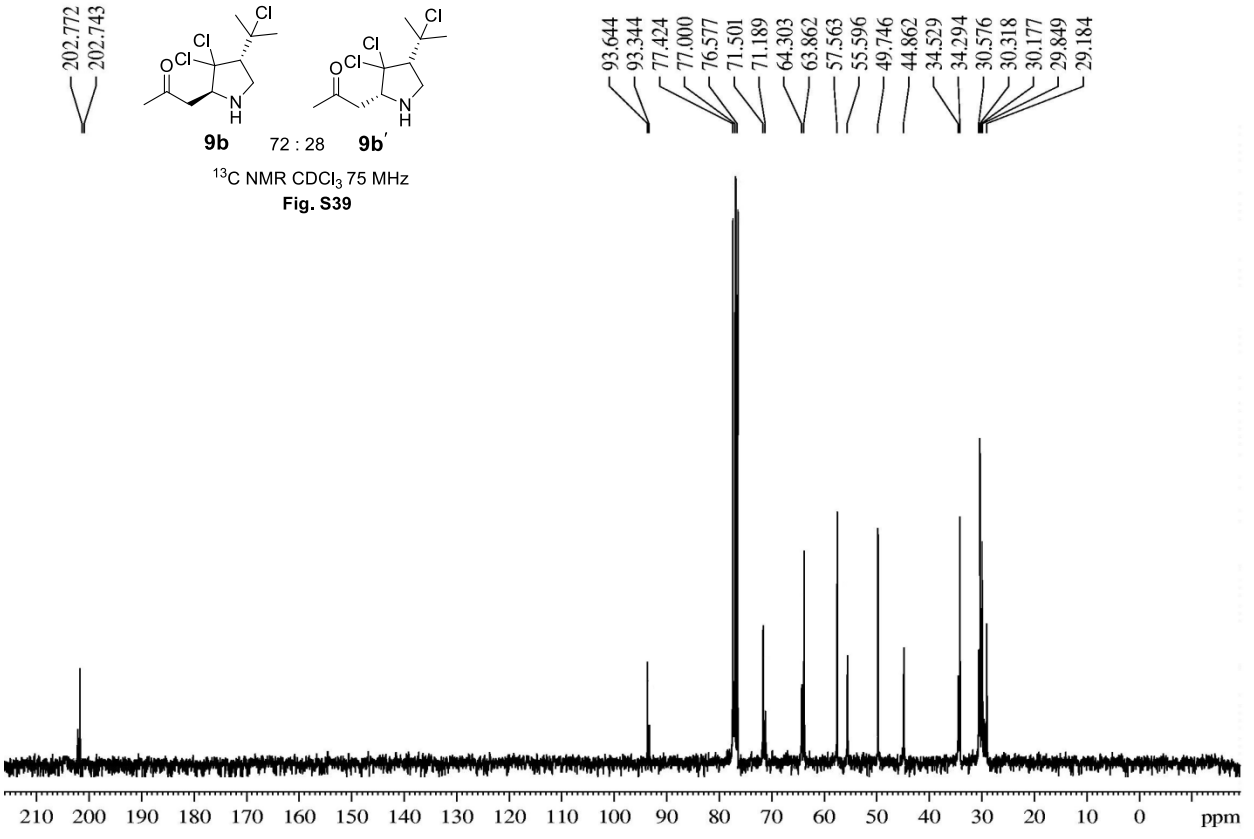
^{13}C NMR $CDCl_3$ 75 MHz

Fig. S37



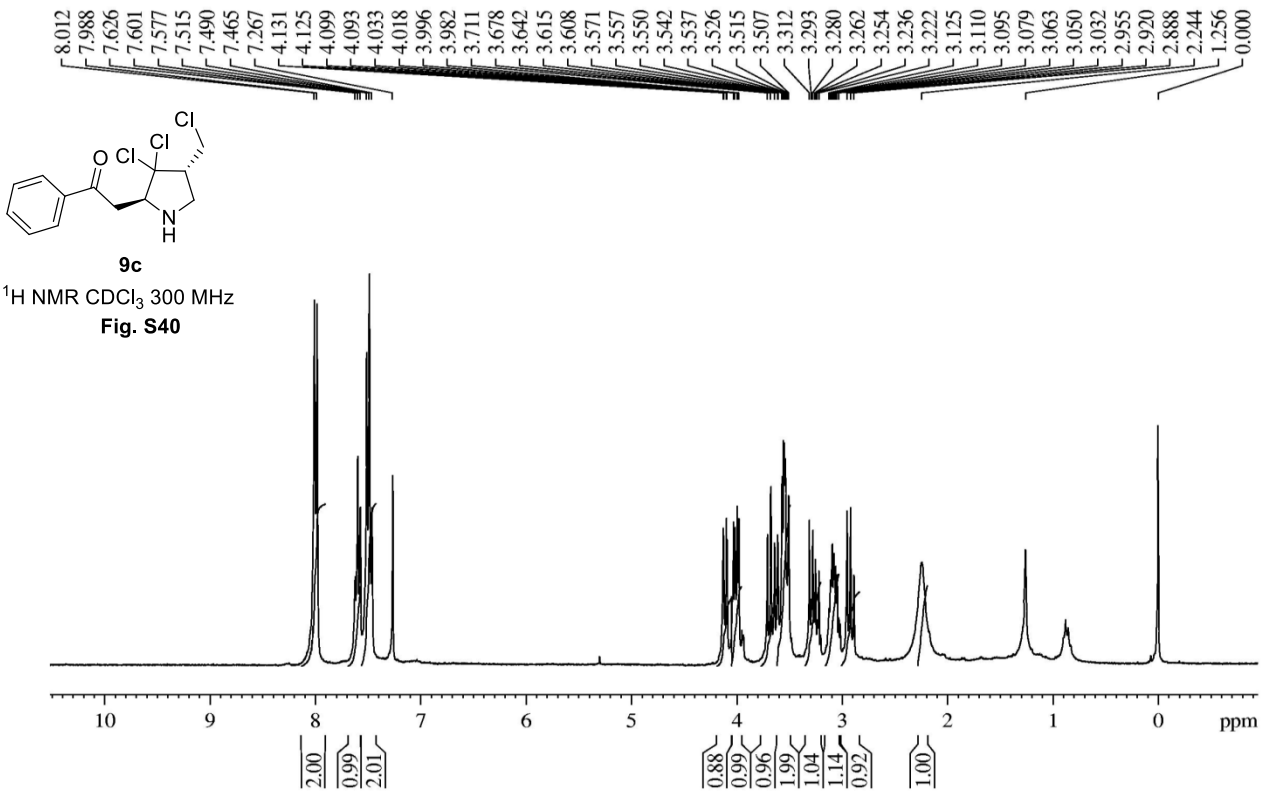
^{1}H NMR in $CDCl_3$ 300 MHz

Fig. S38



^{13}C NMR $CDCl_3$ 75 MHz

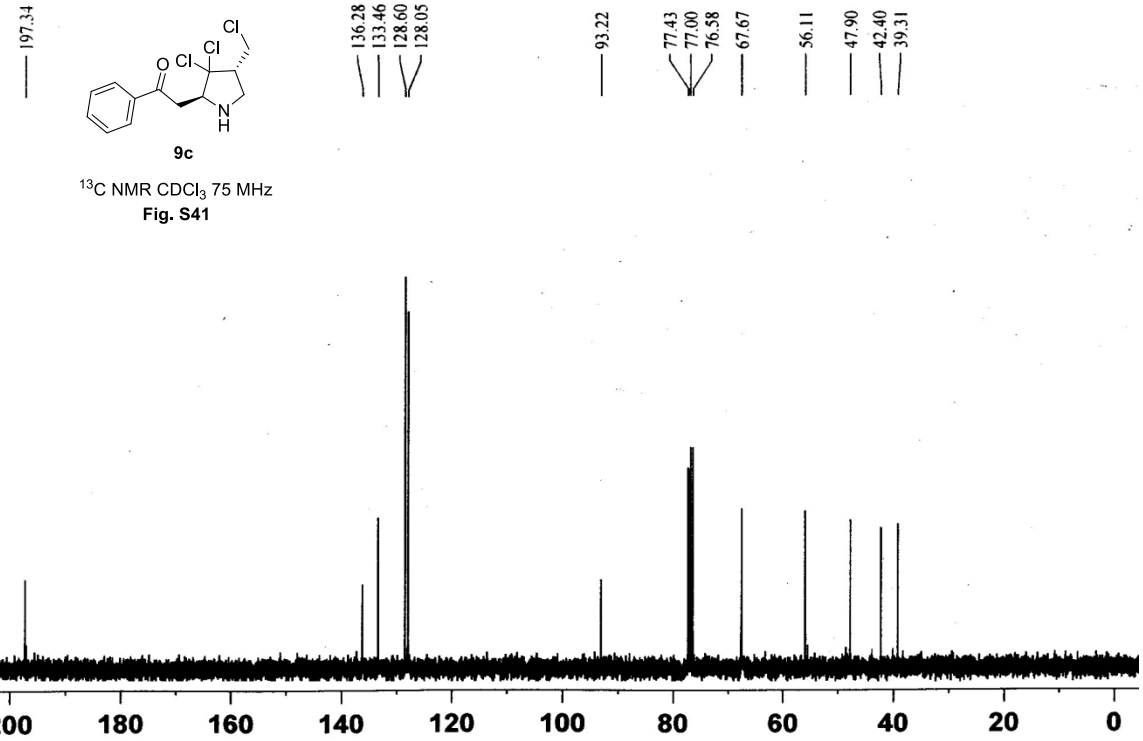
Fig. S39



9c

^{1}H NMR $CDCl_3$ 300 MHz

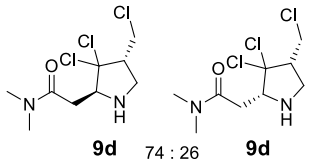
Fig. S40



9c

^{13}C NMR $CDCl_3$ 75 MHz

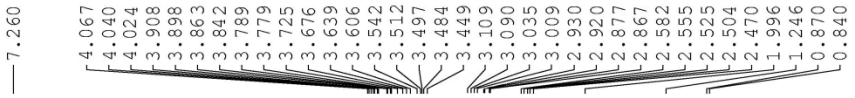
Fig. S41

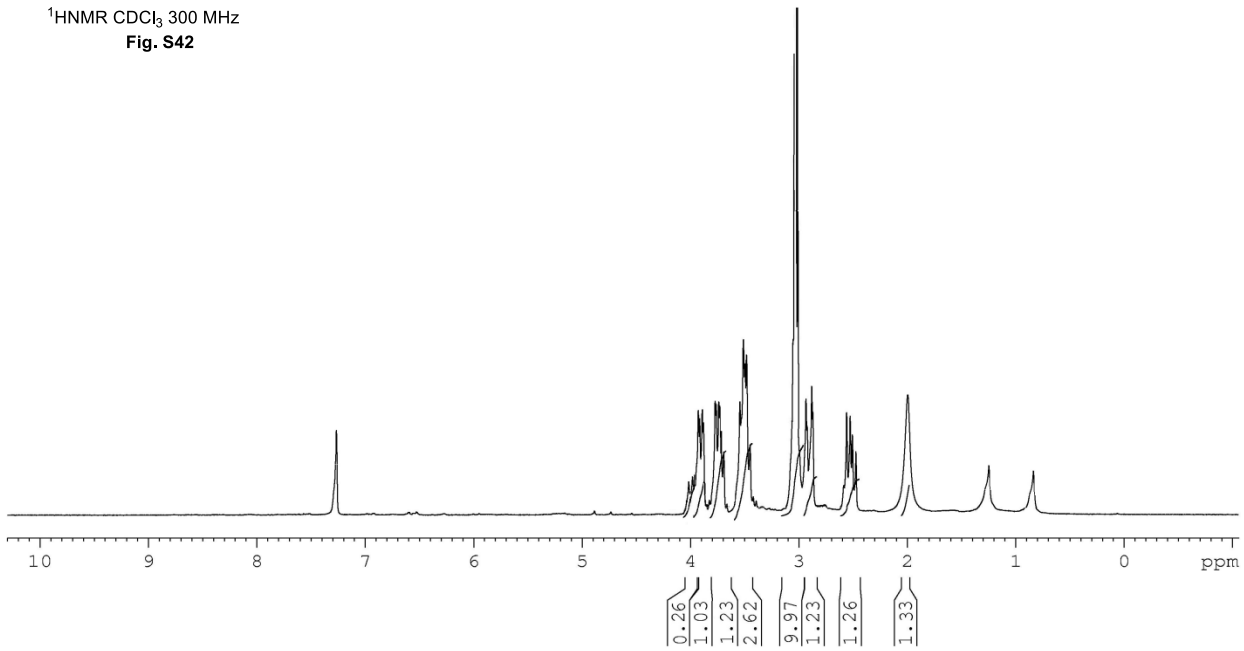


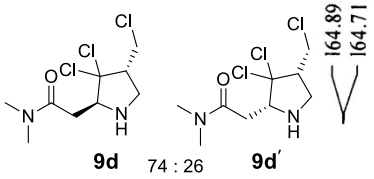
9d 74 : 26 **9d**

^{1}HNMR $CDCl_3$ 300 MHz

Fig. S42



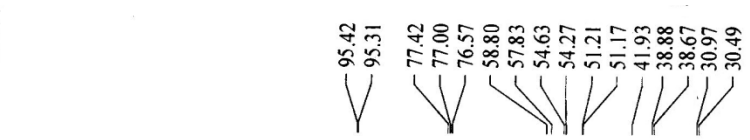


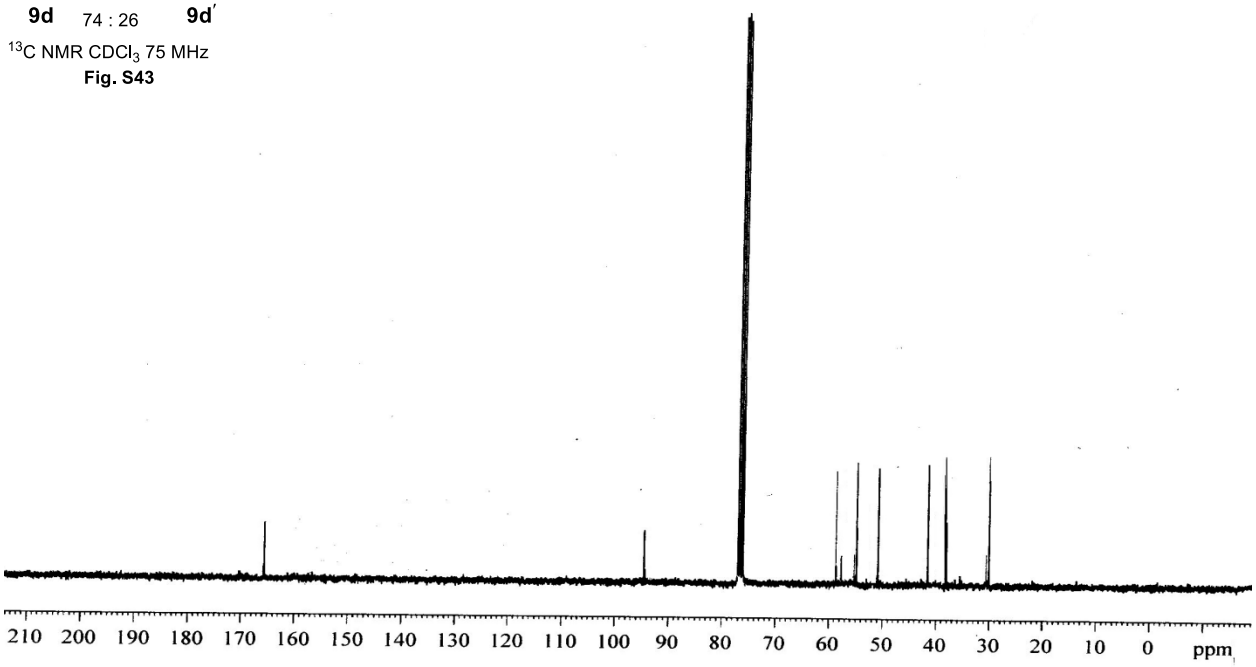


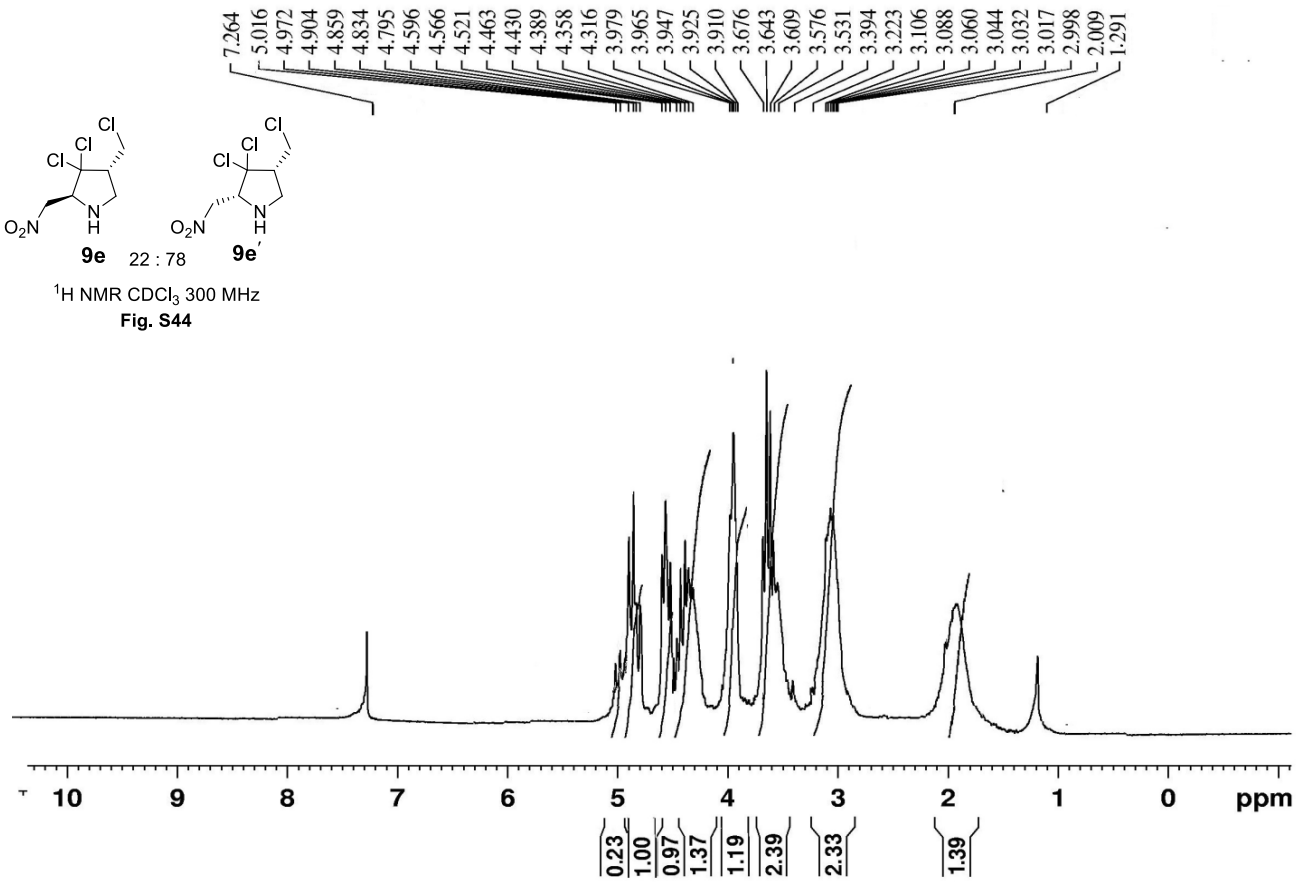
9d 74 : 26 **9d′**

^{13}C NMR $CDCl_3$ 75 MHz

Fig. S43

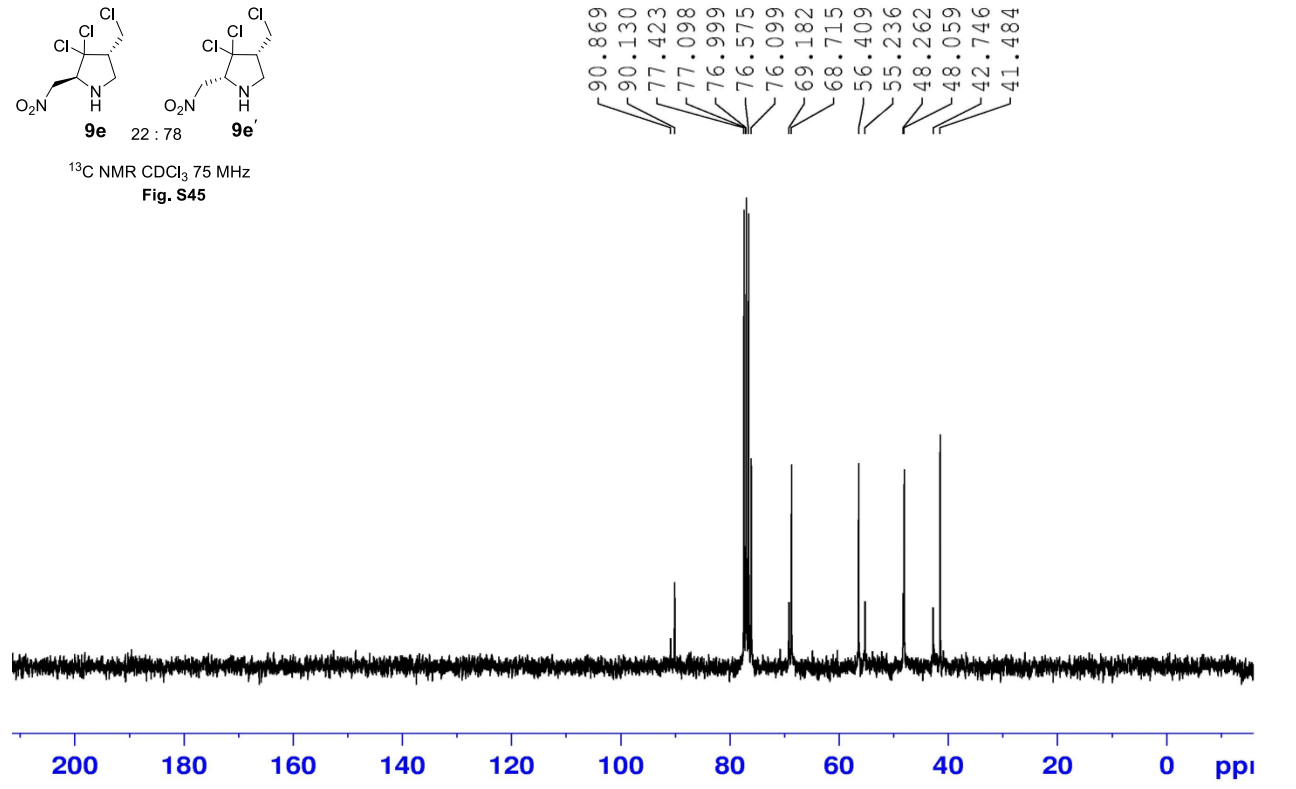






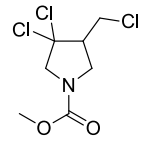
^{1}H NMR $CDCl_3$ 300 MHz

Fig. S44



^{13}C NMR $CDCl_3$ 75 MHz

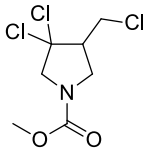
Fig. S45



11a

^{1}H NMR $CDCl_3$ 300 MHz

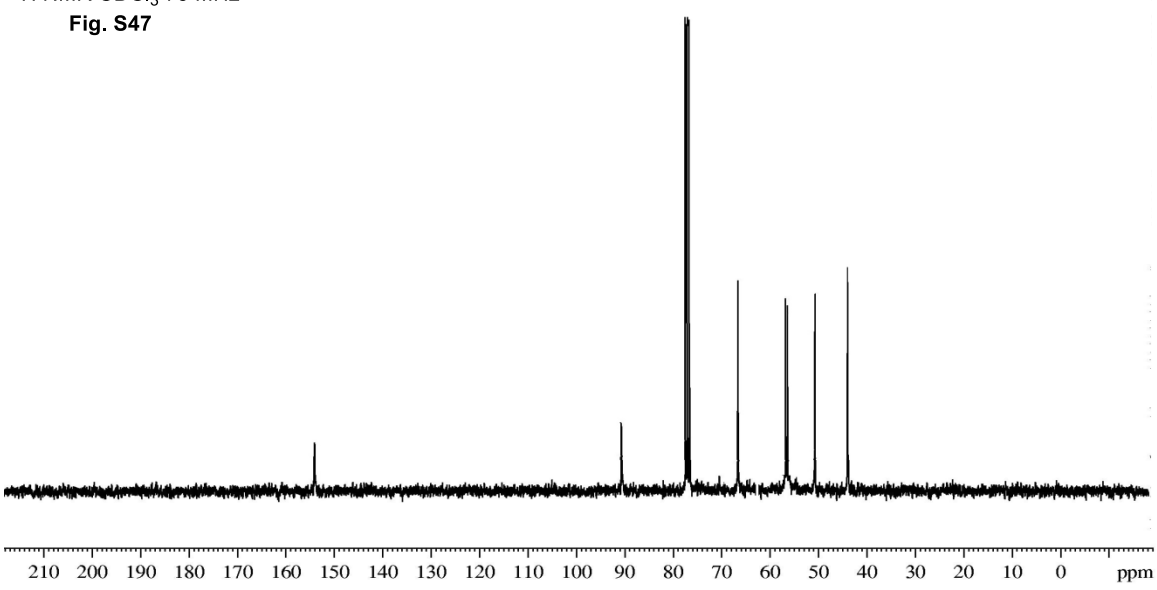
Fig. S46

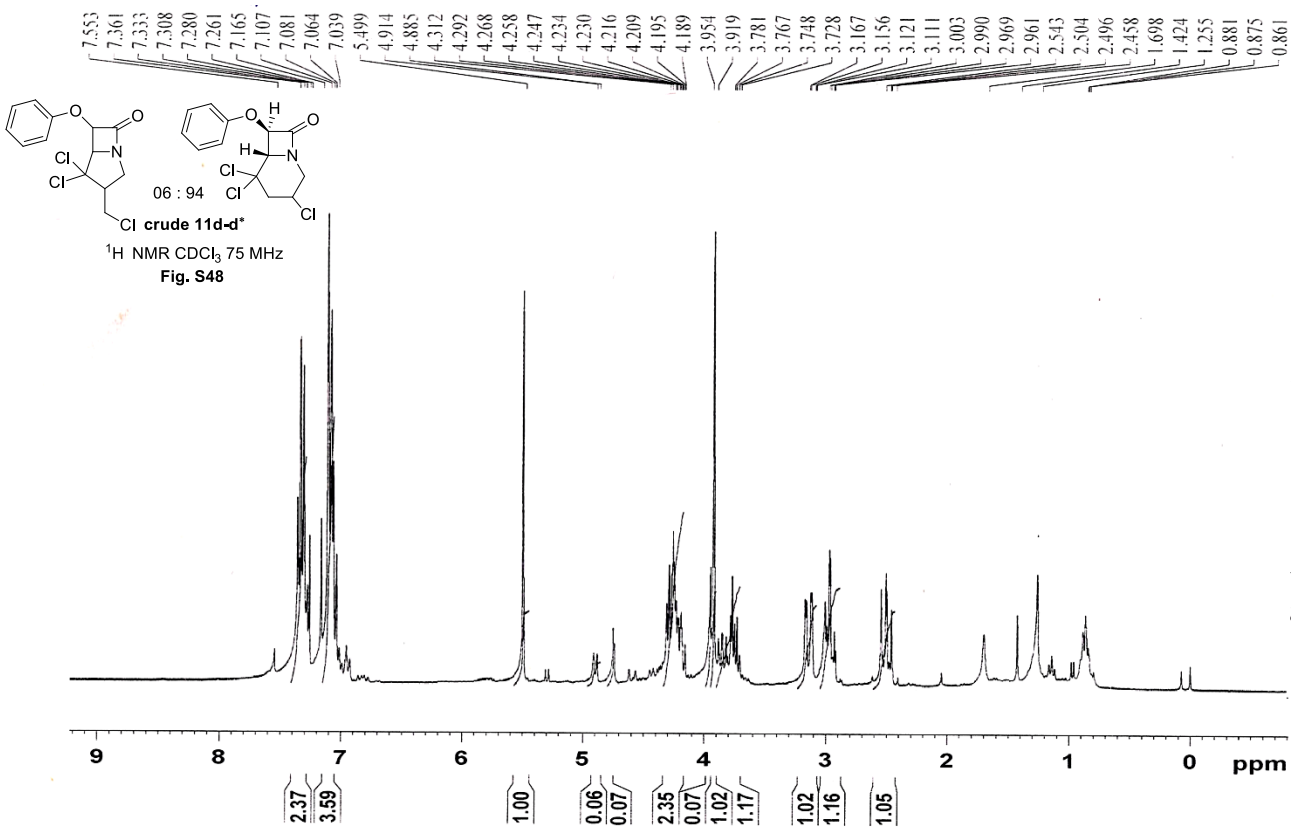


11a

^{13}H NMR $CDCl_3$ 75 MHz

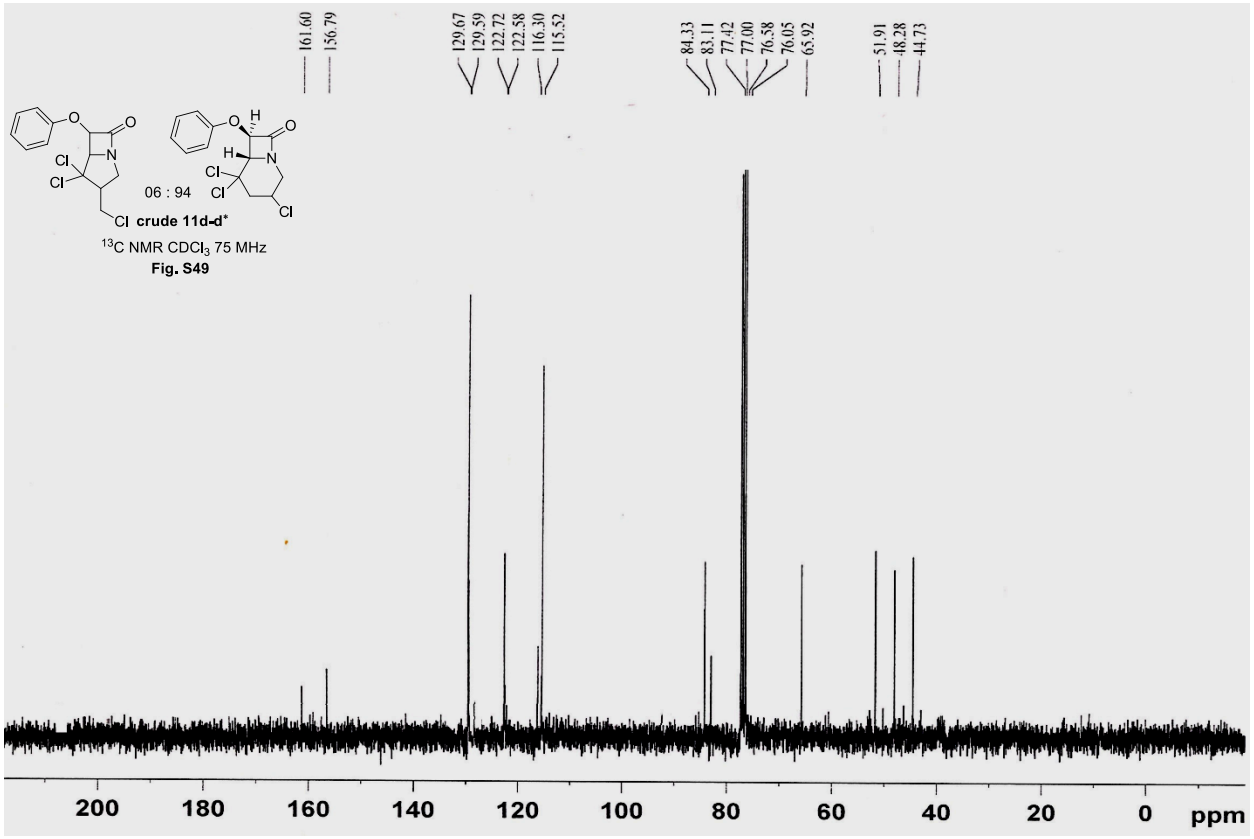
Fig. S47





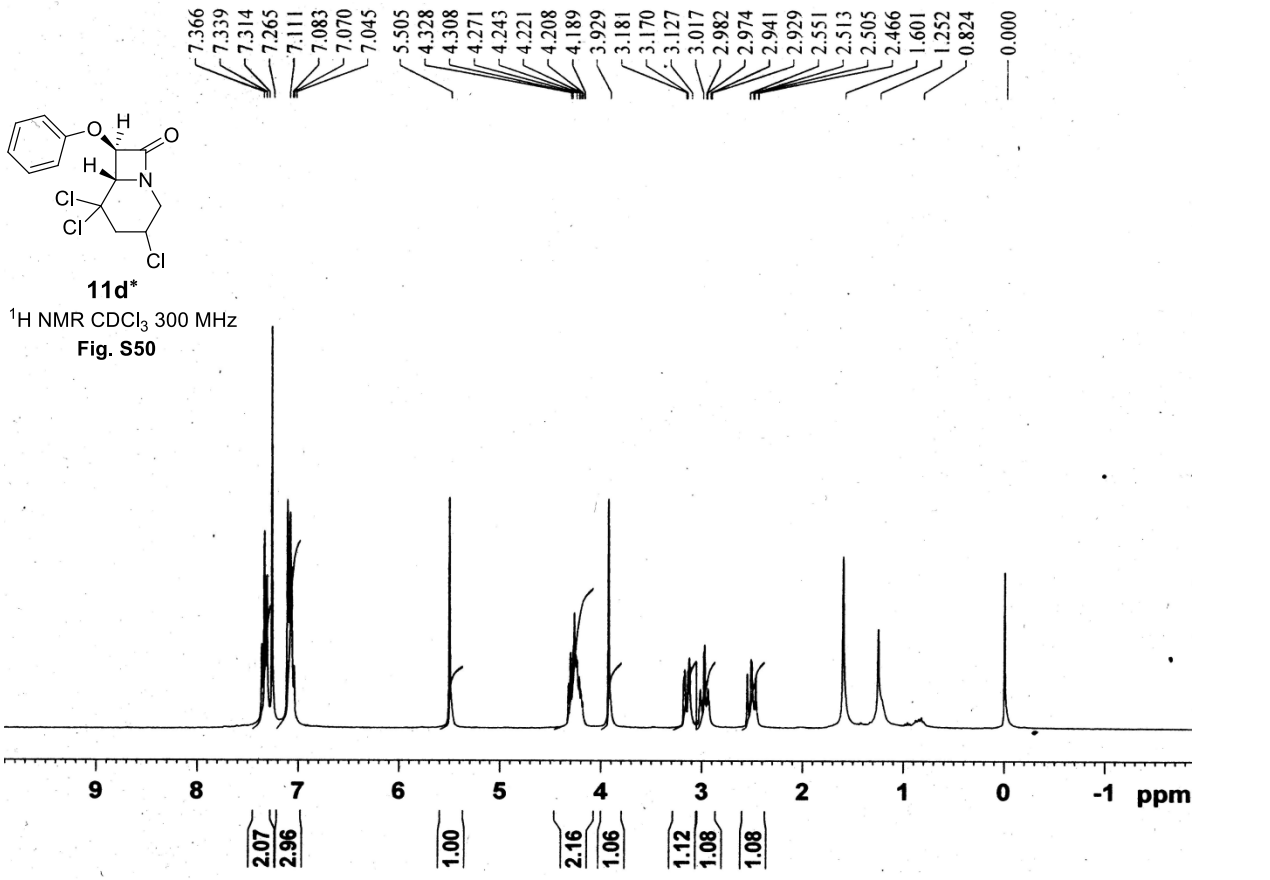
^{1}H NMR $CDCl_3$ 75 MHz

Fig. S48



^{13}C NMR $CDCl_3$ 75 MHz

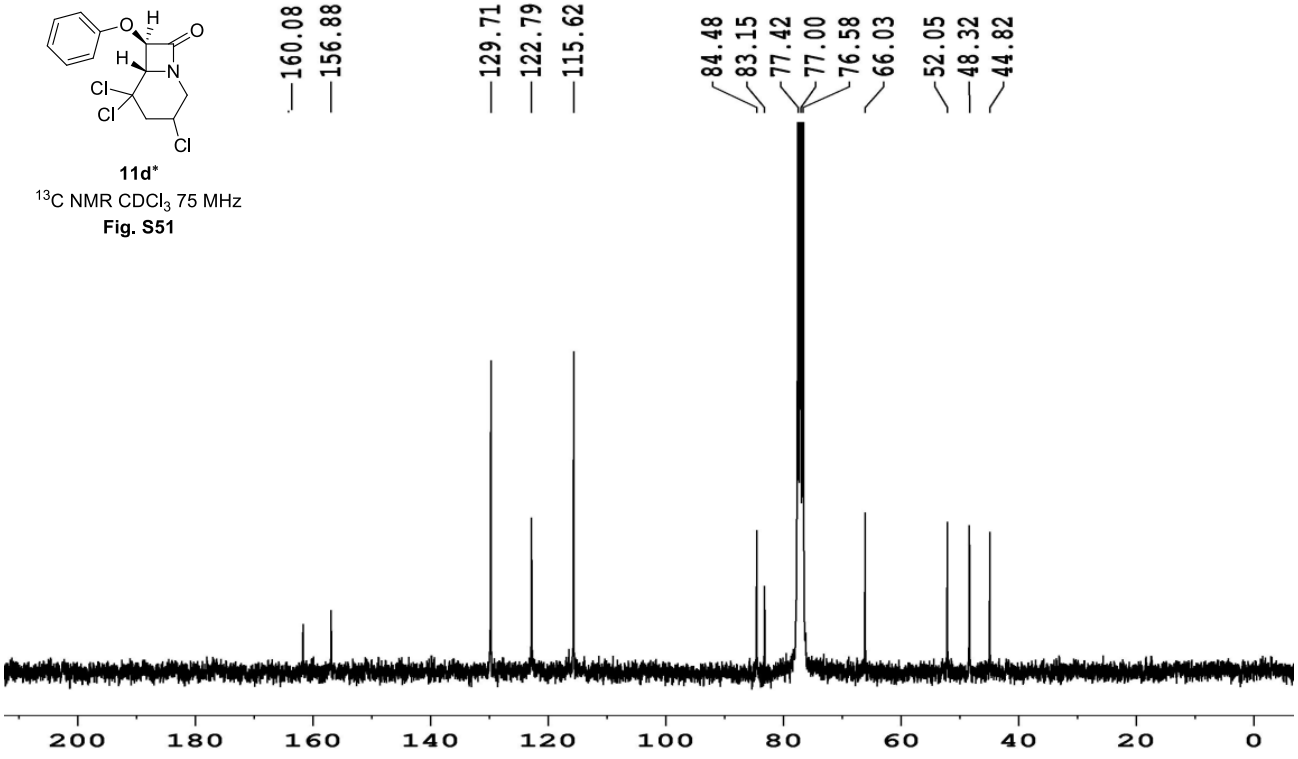
Fig. S49



11d*

^{1}H NMR $CDCl_3$ 300 MHz

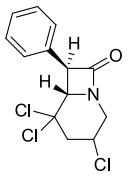
Fig. S50



11d*

^{13}C NMR $CDCl_3$ 75 MHz

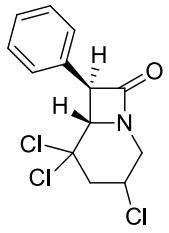
Fig. S51



11e*

^{1}H NMR $CDCl_3$ 300 MHz

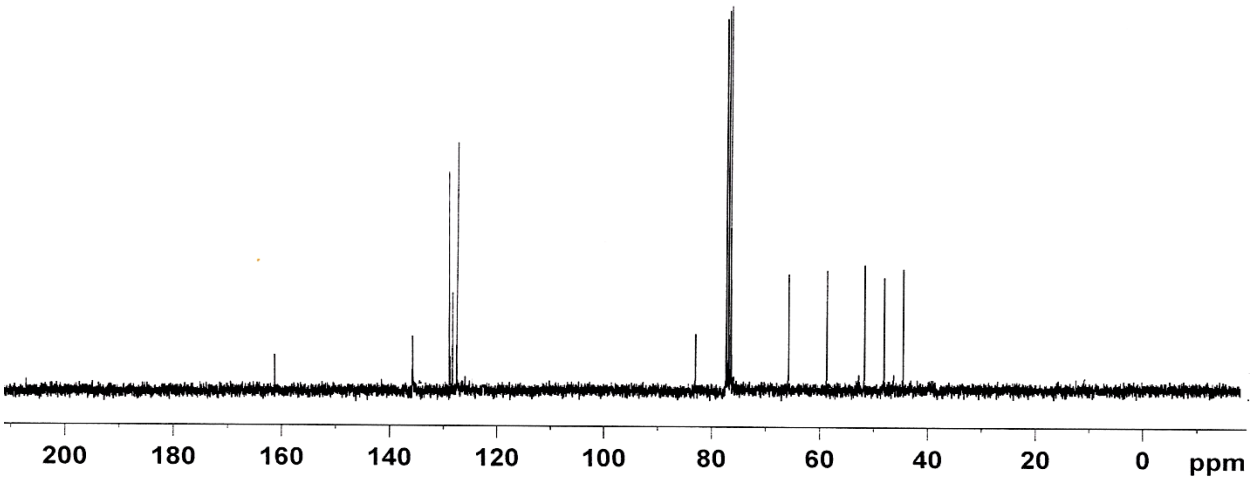
Fig. S52

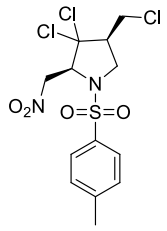


11e*

^{13}C NMR $CDCl_3$ 75 MHz

Fig. S53

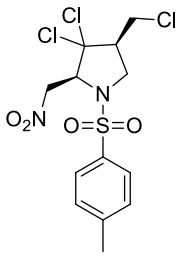




12

^{1}H NMR $CDCl_3$ 300 MHz

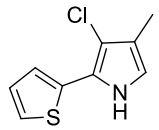
Fig. S54



12

^{13}C NMR $CDCl_3$ 75 MHz

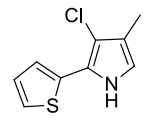
Fig. S55



15

^{1}H NMR $CDCl_3$ 300 MHz

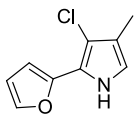
Fig. S56



15

^{13}C NMR $CDCl_3$ 75 MHz

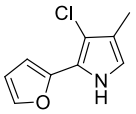
Fig. S57



18

^{13}C NMR $CDCl_3$ 75 MHz

Fig. S58



18

^{1}H NMR $CDCl_3$ 300 MHz

Fig. S59