

Stereoselective Synthesis of Activated 2-Arylazetidines via Imino-Aldol Reaction

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Supporting Information

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1. ^1H NMR and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra:

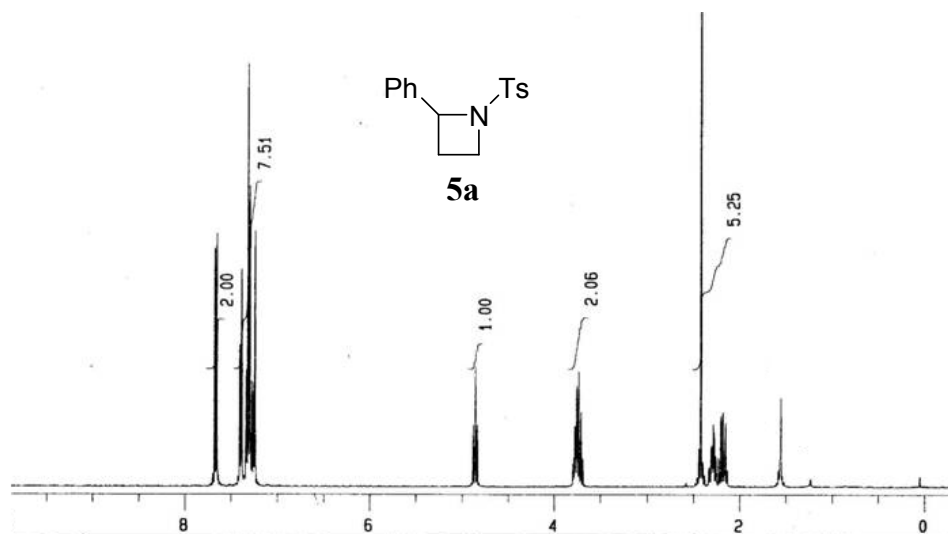


Fig 1: ^1H NMR spectrum of **5a** (CDCl_3 , 400 MHz)

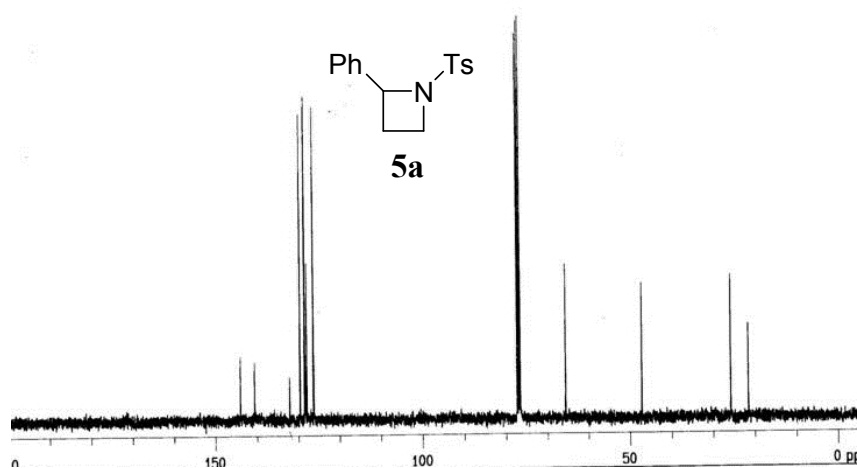


Fig 2: $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **5a** (CDCl_3 , 100 MHz)

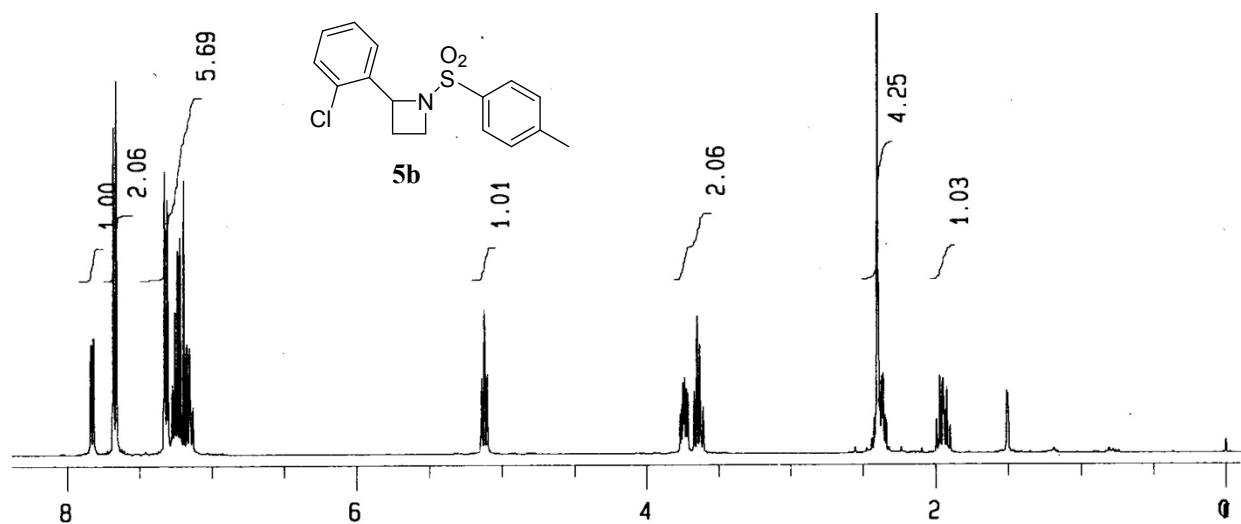


Fig 3: ¹H NMR spectrum of **5b** (CDCl₃, 400 MHz)

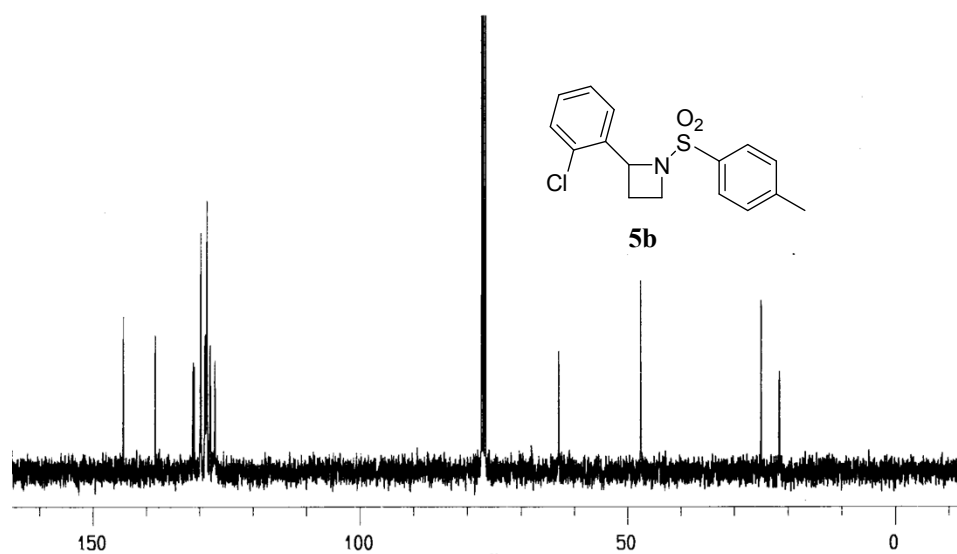


Fig 4: ¹³C{¹H} NMR spectrum of **5b** (CDCl₃, 100 MHz)

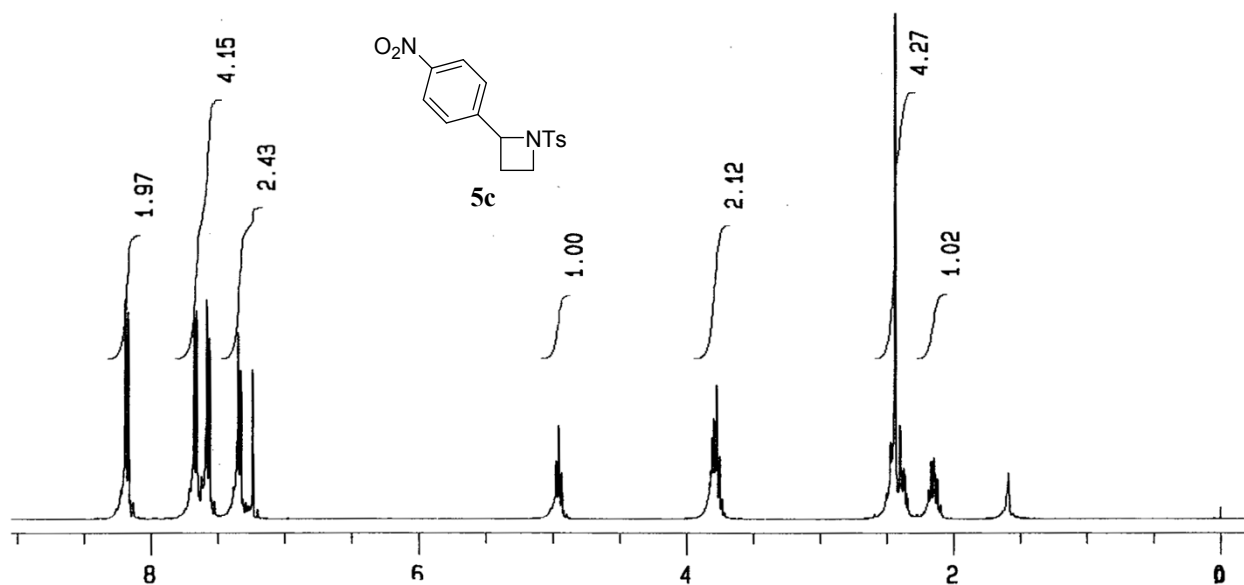


Fig 5: ¹H NMR spectrum of **5c** (CDCl₃, 400 MHz)

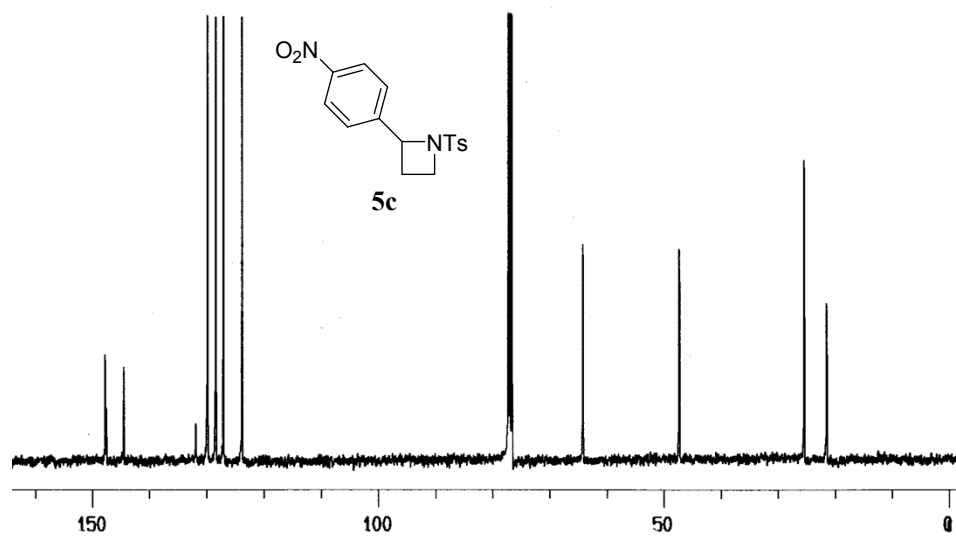


Fig 6: ¹³C{¹H} NMR spectrum of **5c** (CDCl₃, 100 MHz)

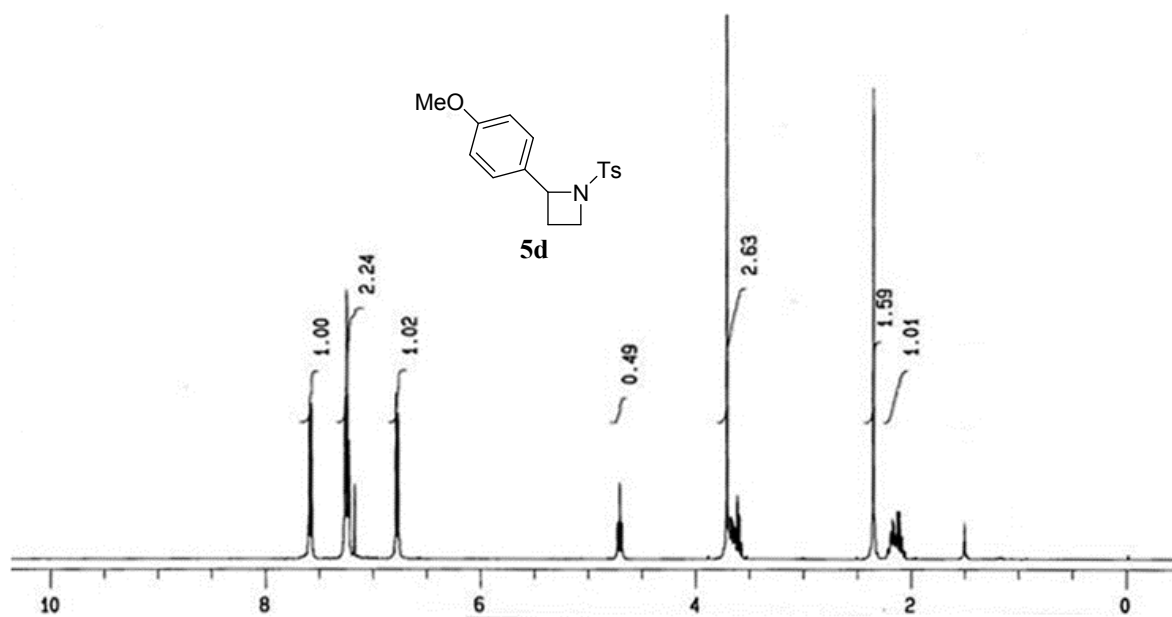


Fig 7: ¹H NMR spectrum of **5d** (CDCl₃, 400 MHz)

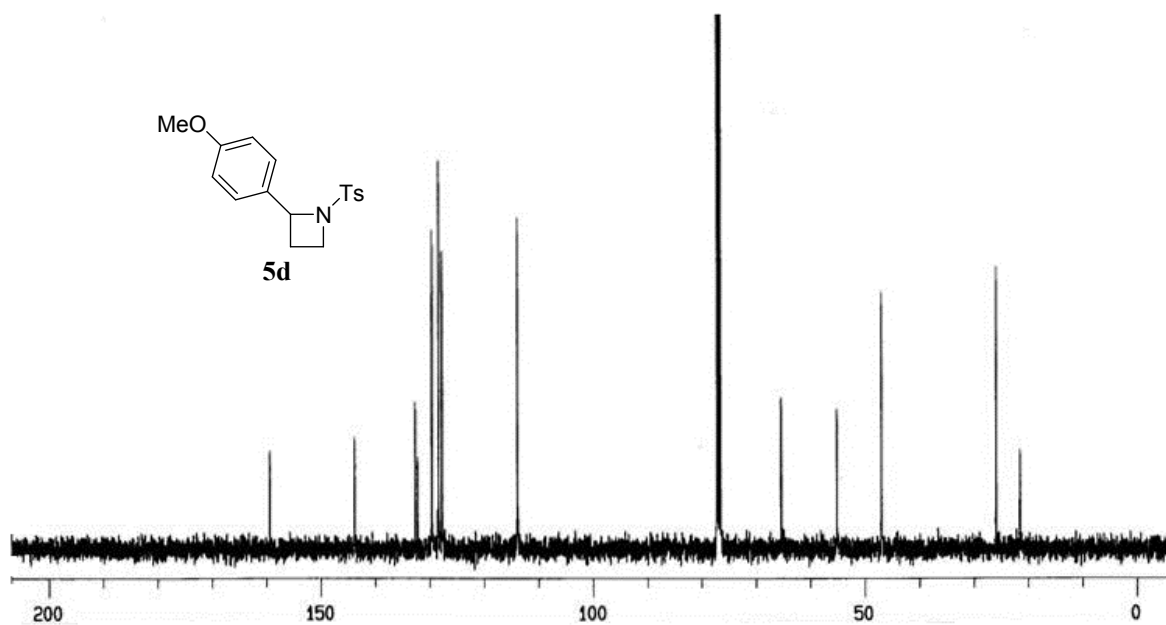


Fig 8: ¹³C{¹H} NMR spectrum of **5d** (CDCl₃, 100 MHz)

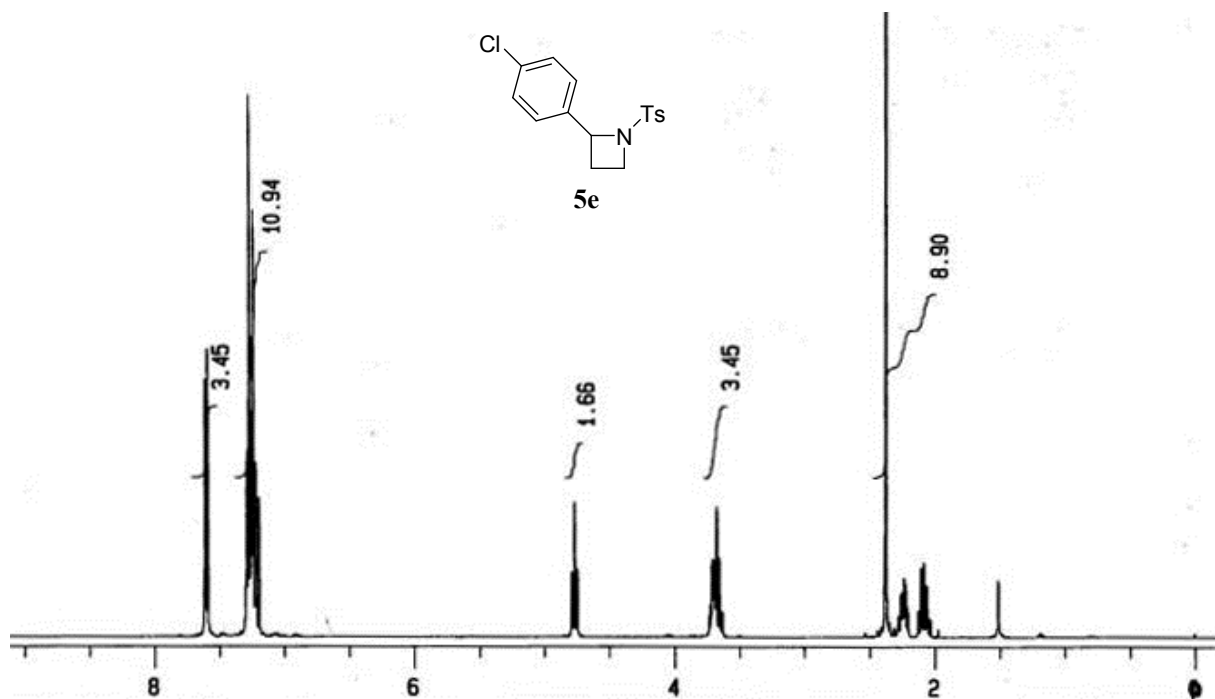


Fig 9: ^1H NMR spectrum of **5e** (CDCl_3 , 400 MHz)

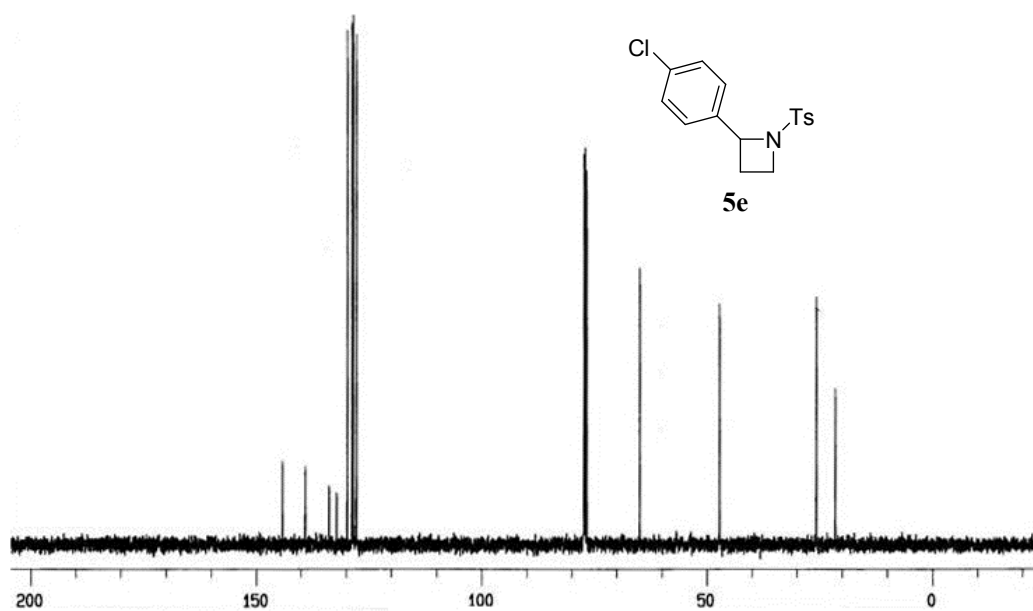


Fig 10: $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **5e** (CDCl_3 , 100 MHz)

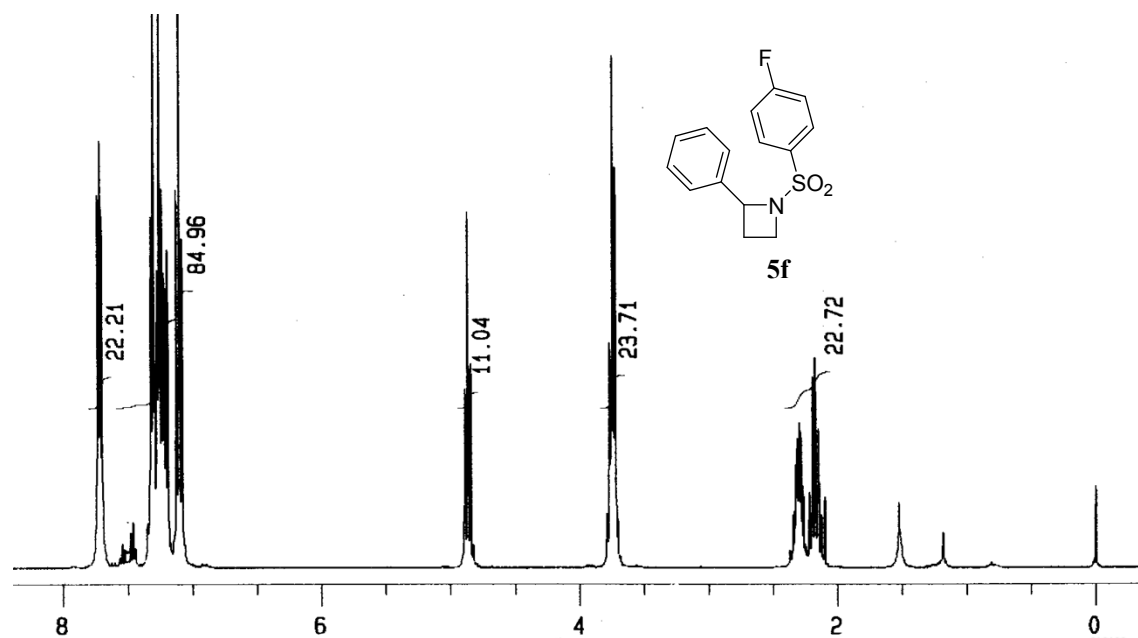


Fig 11: ^1H NMR spectrum of **5f** (CDCl_3 , 400 MHz)

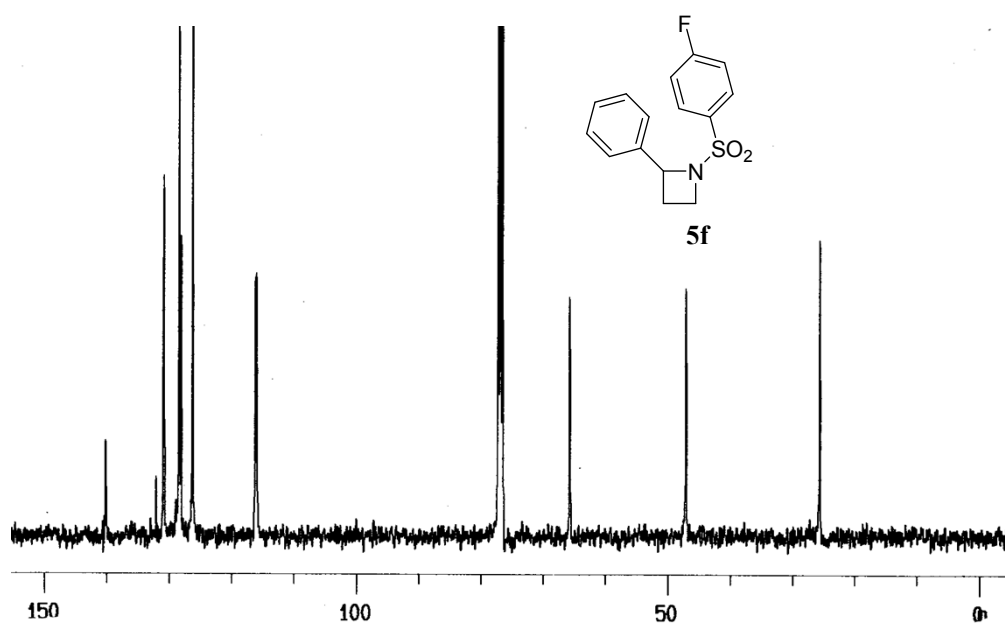


Fig 12: $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **5f** (CDCl_3 , 100 MHz)

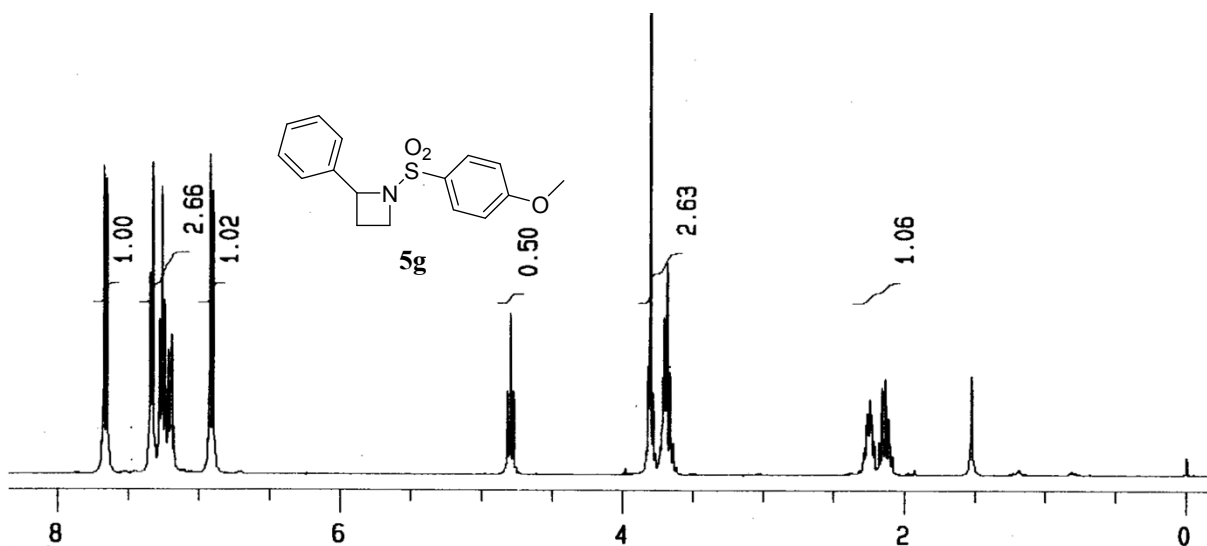


Fig 13: ¹H NMR spectrum of **5g** (CDCl₃, 400 MHz)

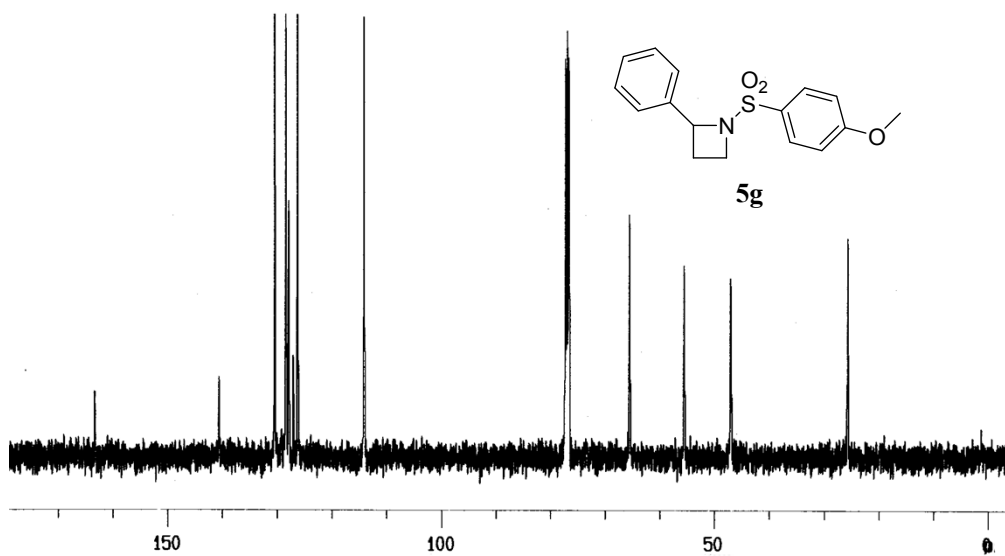
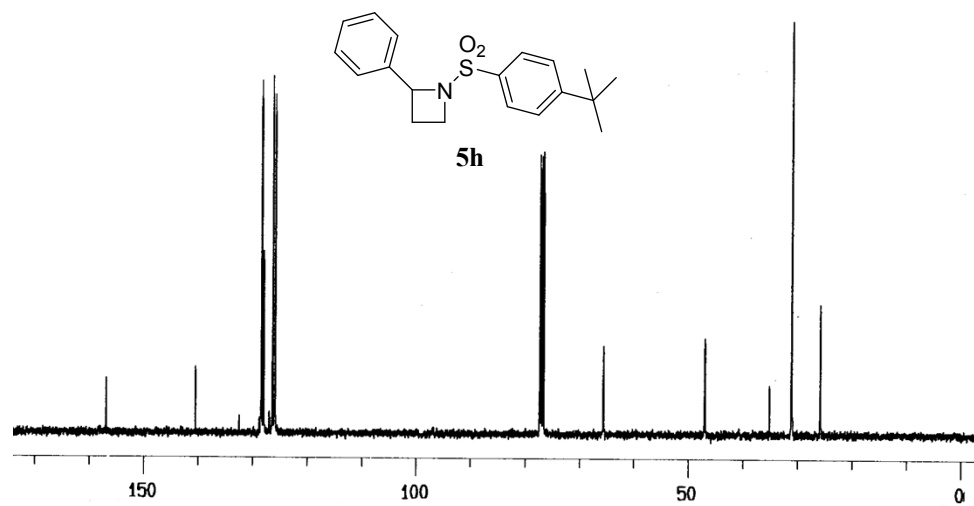
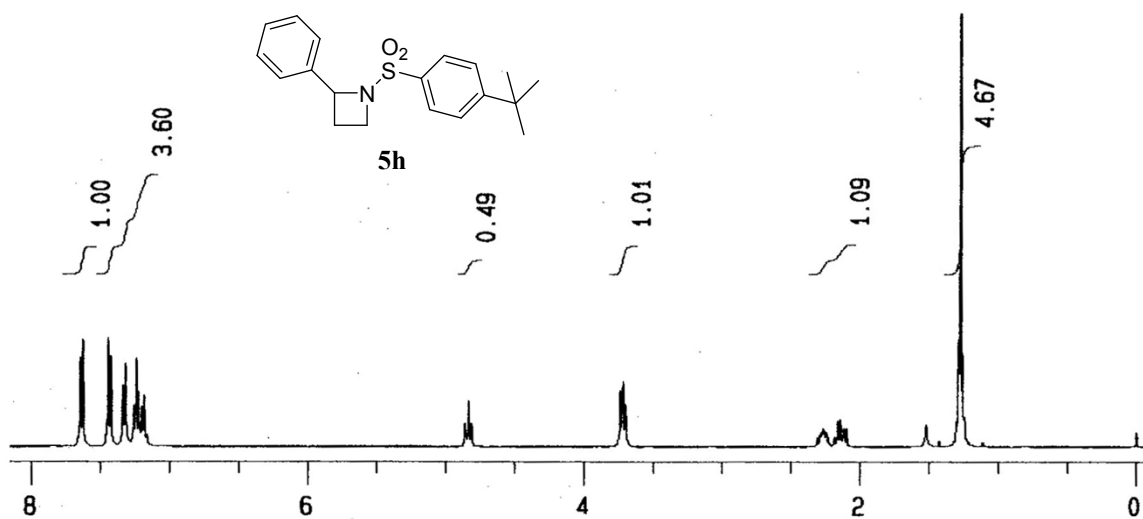


Fig 14: ¹³C{¹H} NMR spectrum of **5g** (CDCl₃, 100 MHz)



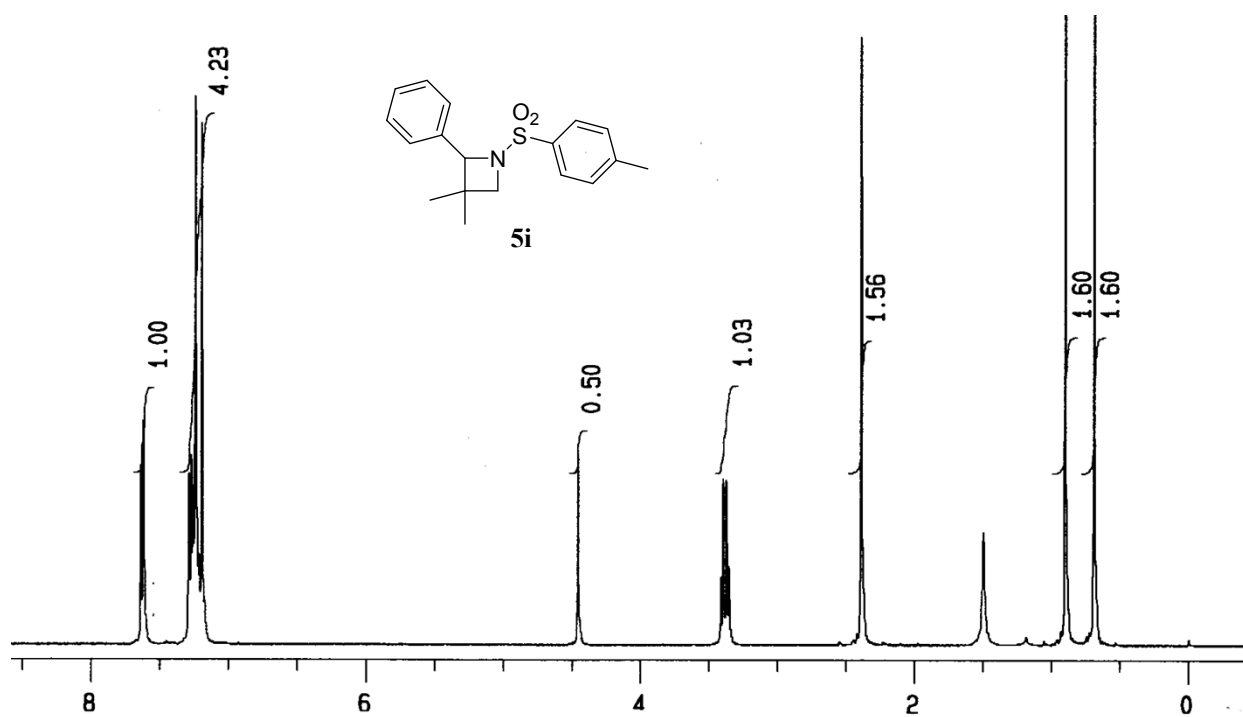


Fig 17: ¹H NMR spectrum of **5i** (CDCl₃, 400 MHz)

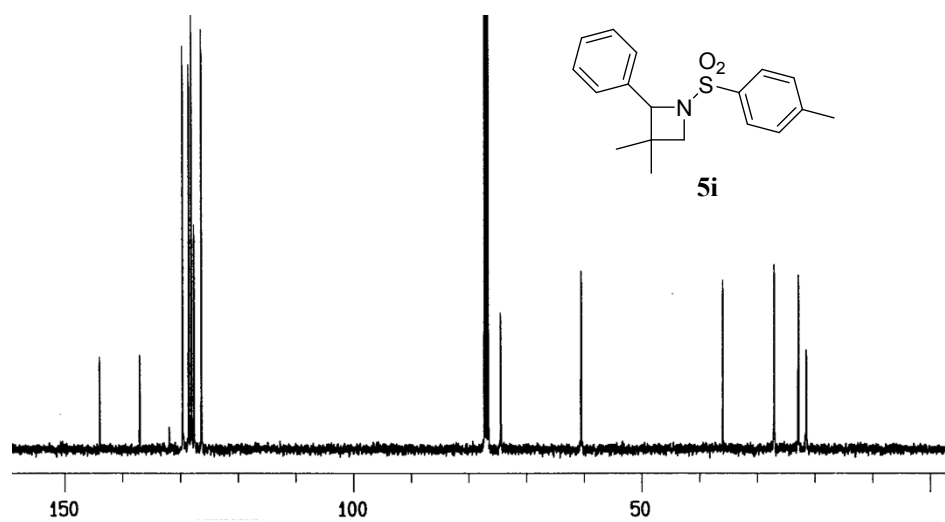


Fig 18: ¹³C{¹H} NMR spectrum of **5i** (CDCl₃, 100 MHz)

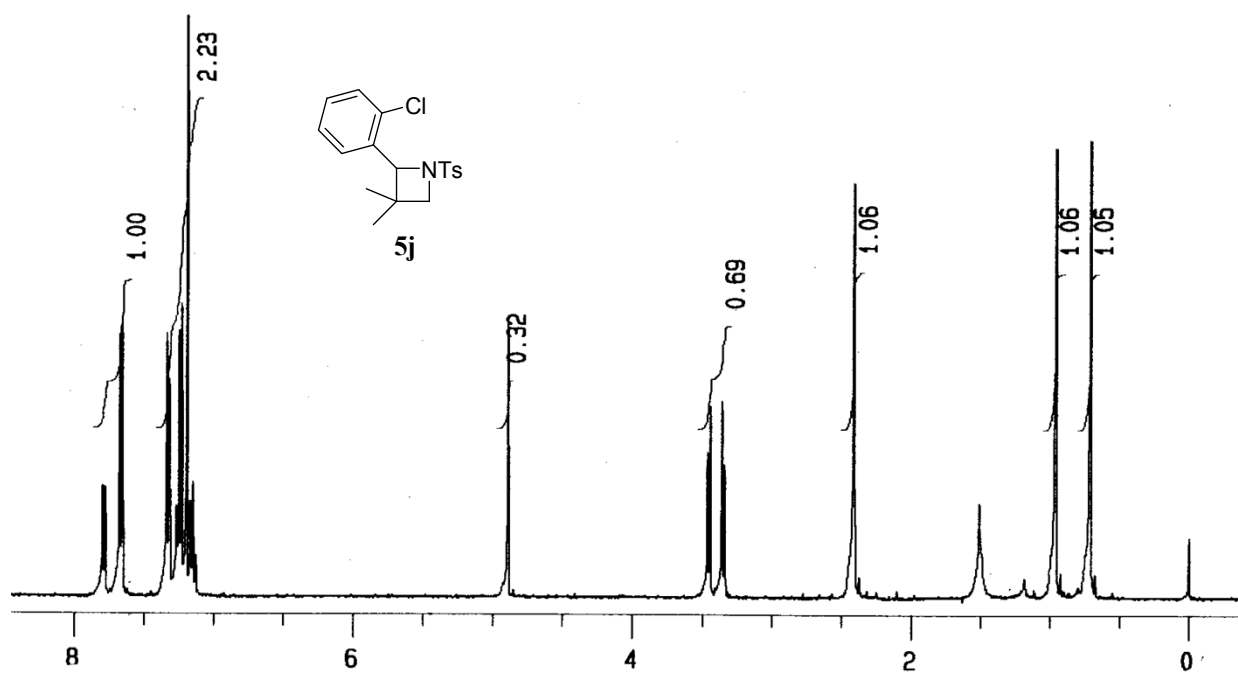


Fig 19: ^1H NMR spectrum of **5j** (CDCl_3 , 400 MHz)

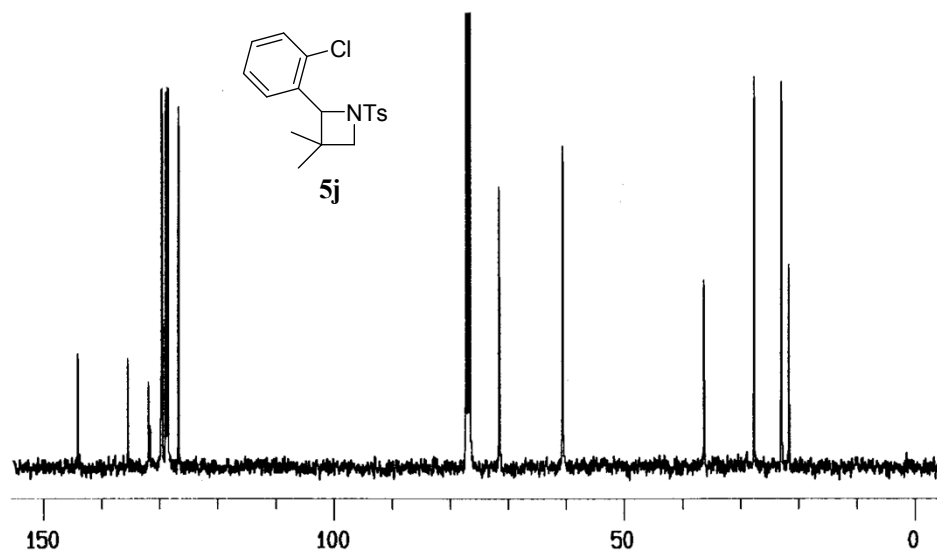


Fig 20: $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **5j** (CDCl_3 , 100 MHz)

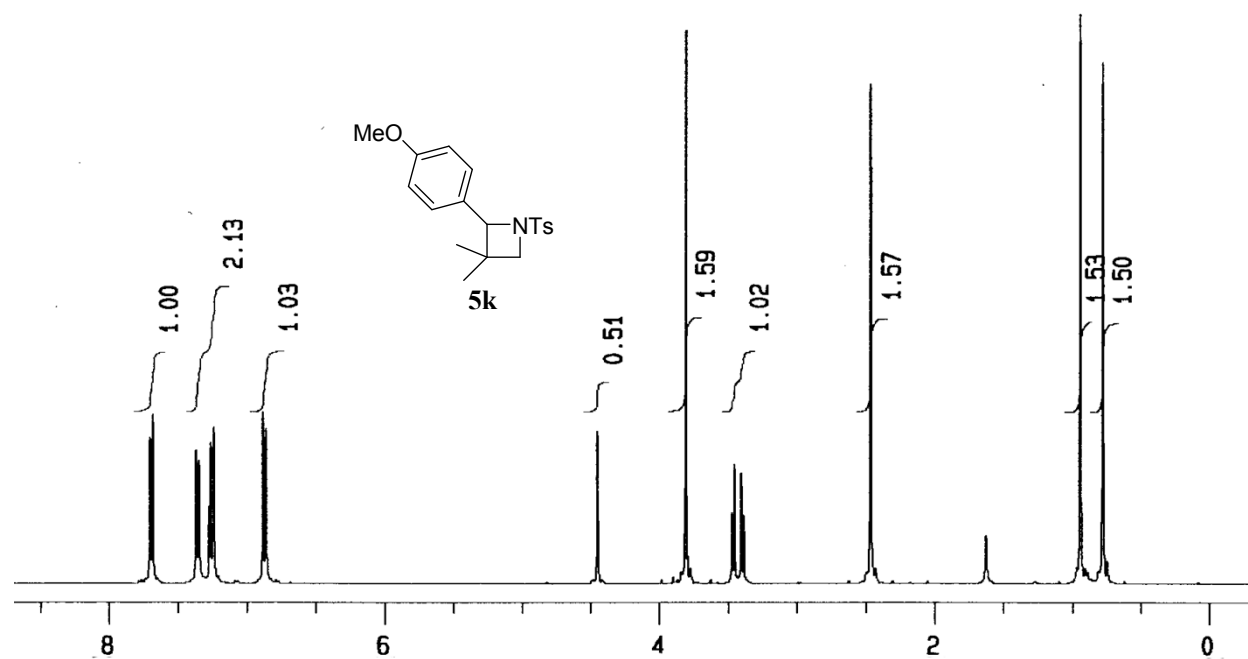


Fig 21: ¹H NMR spectrum of **5k** (CDCl₃, 400 MHz)

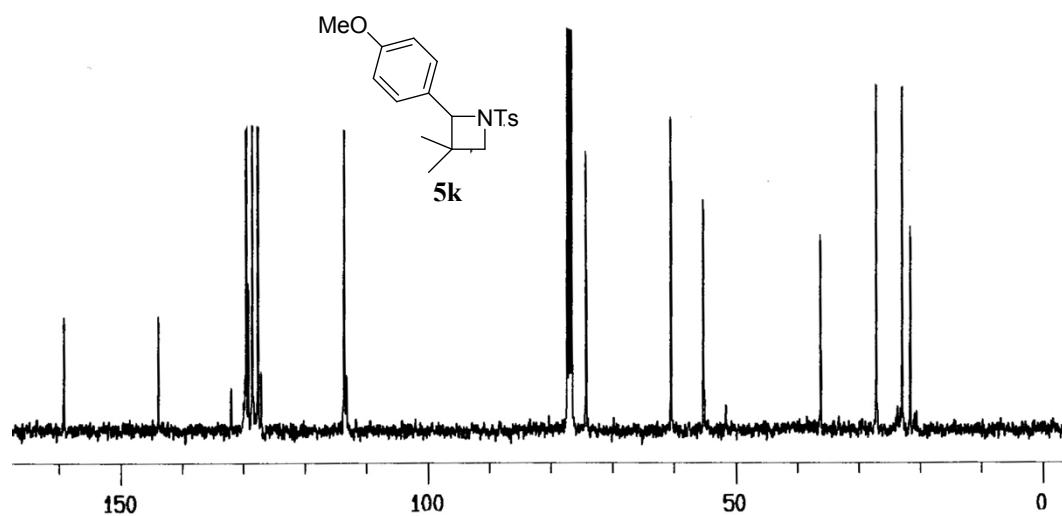


Fig 22: ¹³C{¹H} NMR spectrum of **5k** (CDCl₃, 100 MHz)

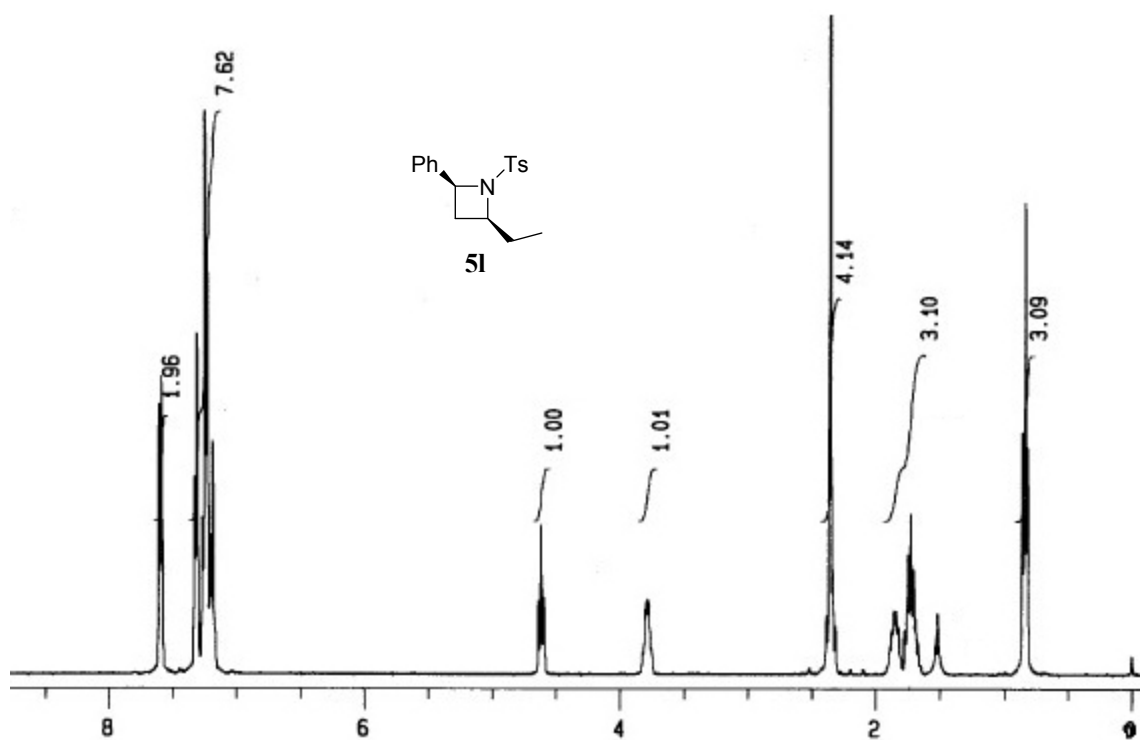


Fig 23: ^1H NMR spectrum of **5l** (CDCl_3 , 400 MHz)

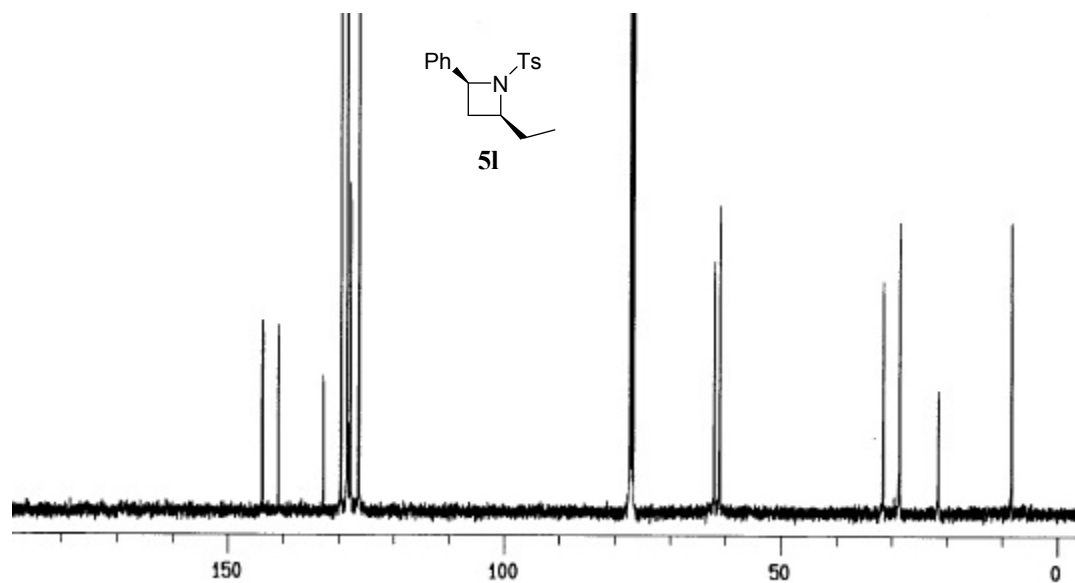


Fig 24: $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **5l** (CDCl_3 , 100 MHz)

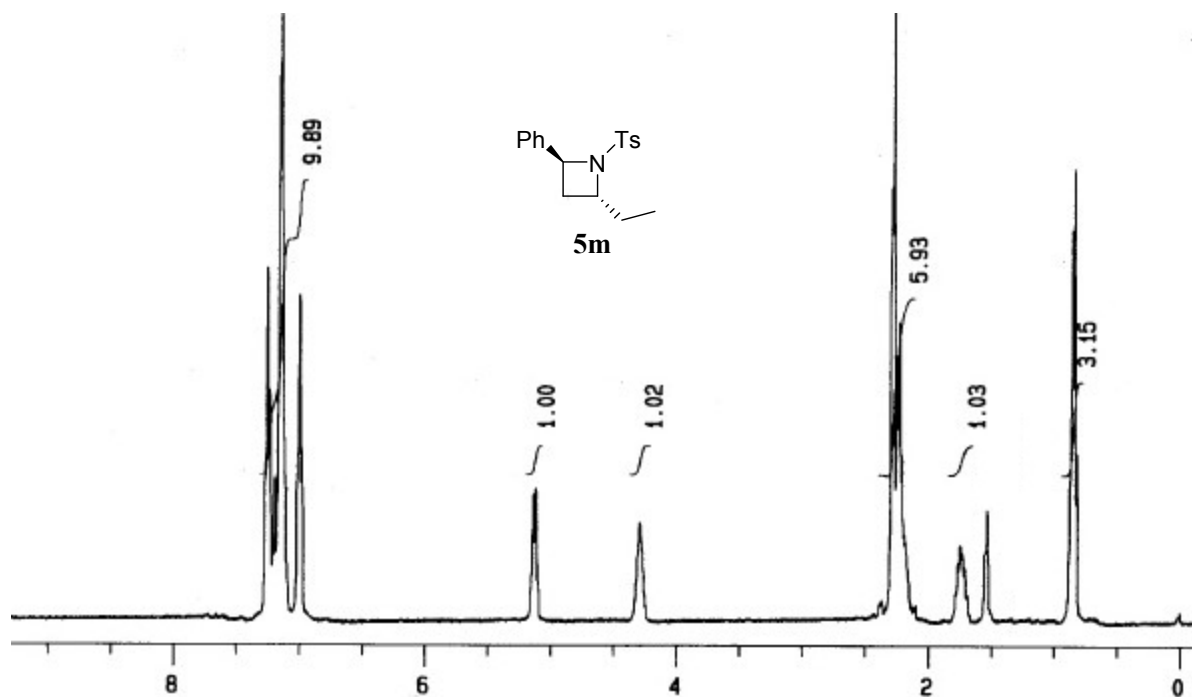


Fig 25: ¹H NMR spectrum of **5m** (CDCl₃, 400 MHz)

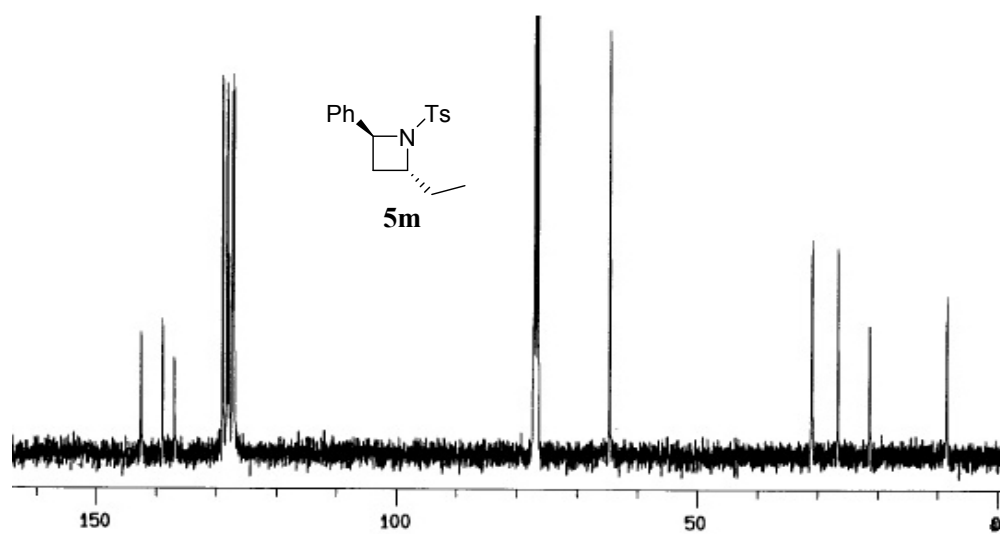


Fig 26: ¹³C{¹H} NMR spectrum of **5m** (CDCl₃, 100 MHz)

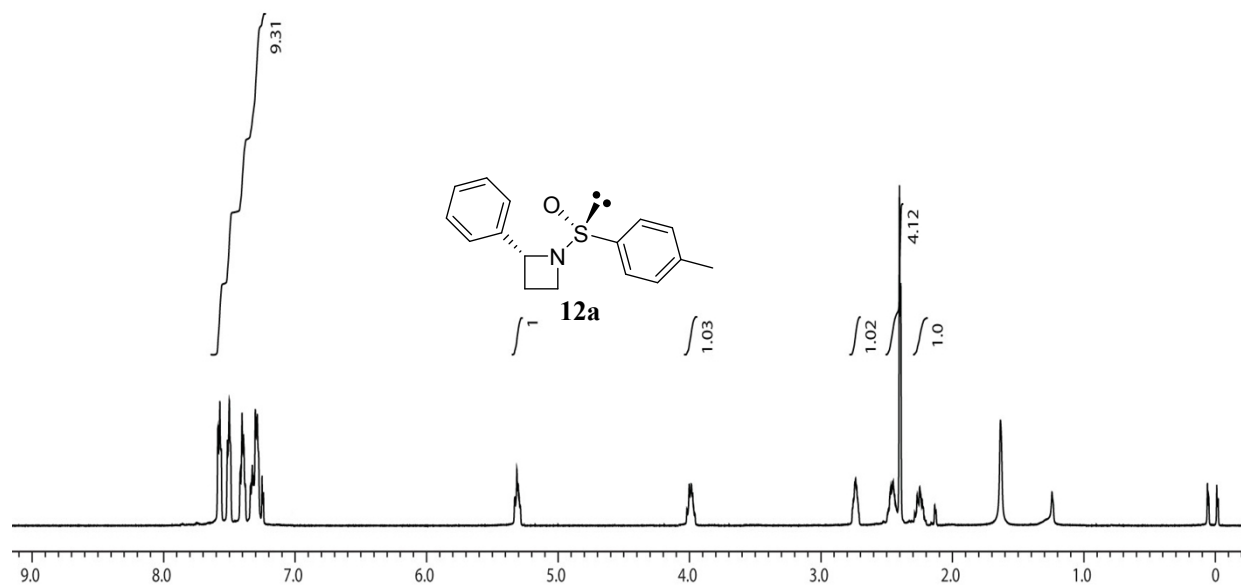


Fig 27: ¹H NMR spectrum of **12a** (CDCl₃, 500 MHz)

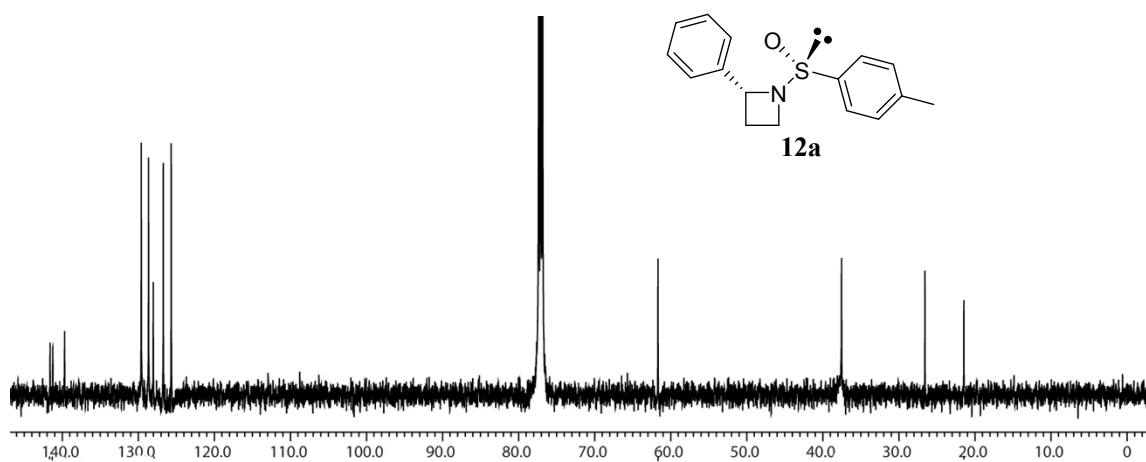


Fig 28: ¹³C{¹H} NMR spectrum of **12a** (CDCl₃, 125 MHz)

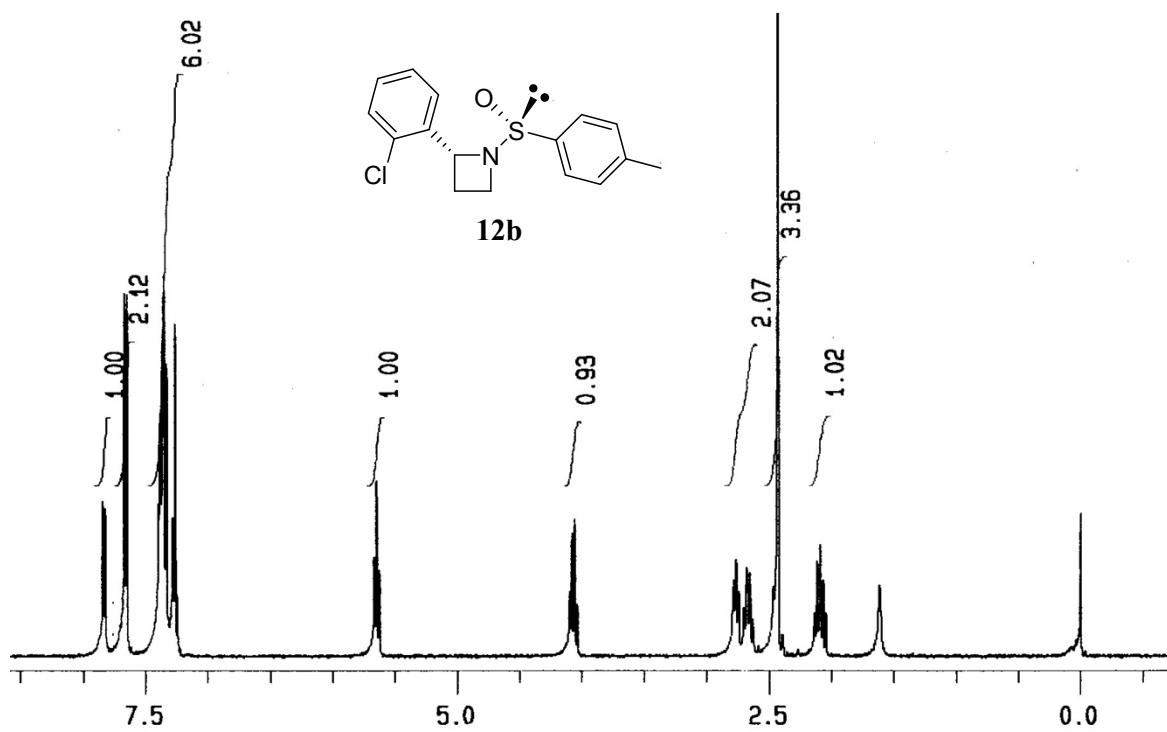


Fig 29: ¹H NMR spectrum of **12b** (CDCl₃, 400 MHz)

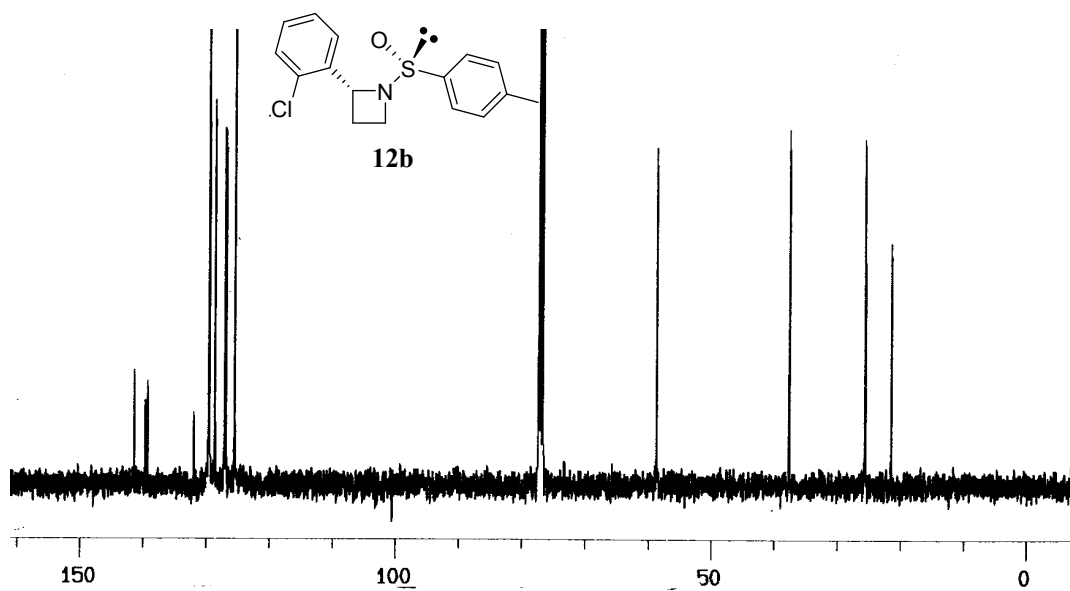
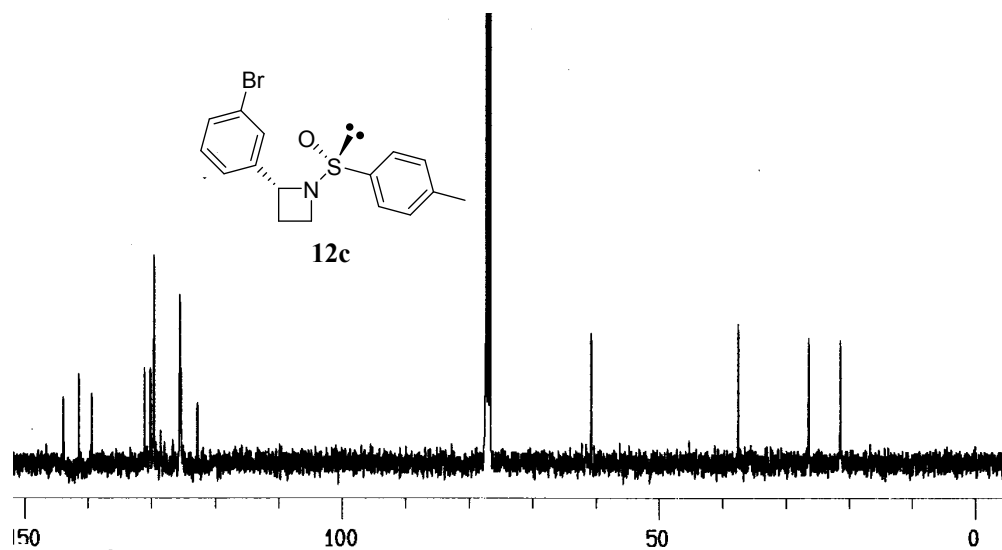
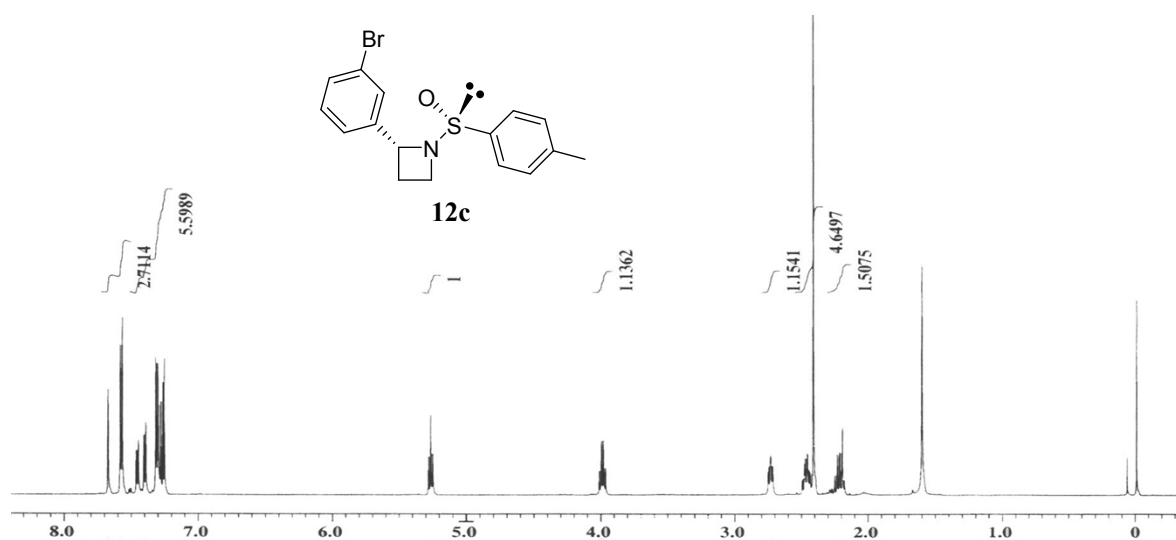


Fig 30: ¹³C {¹H} NMR spectrum of **12b** (CDCl₃, 100 MHz)



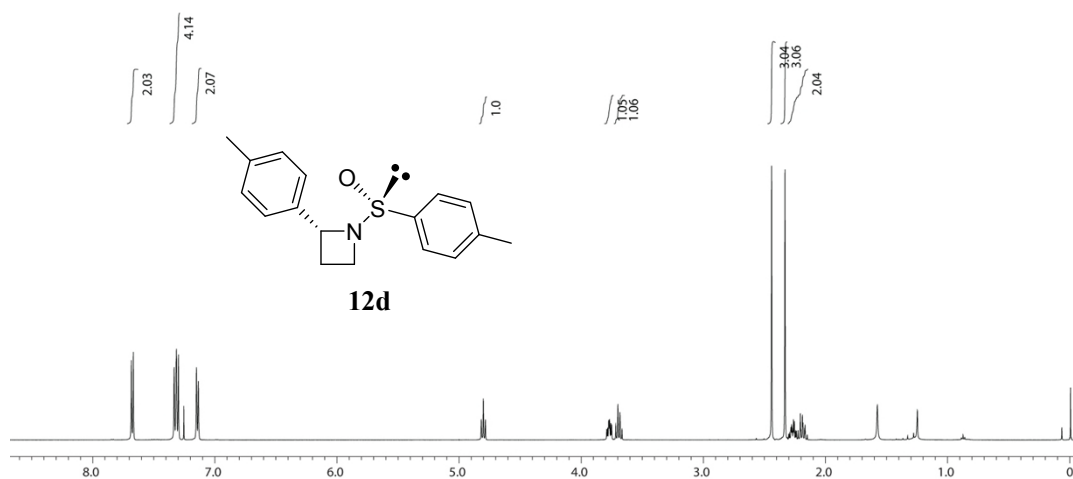


Fig 33: ¹H NMR spectrum of **12d** (CDCl₃, 500 MHz)

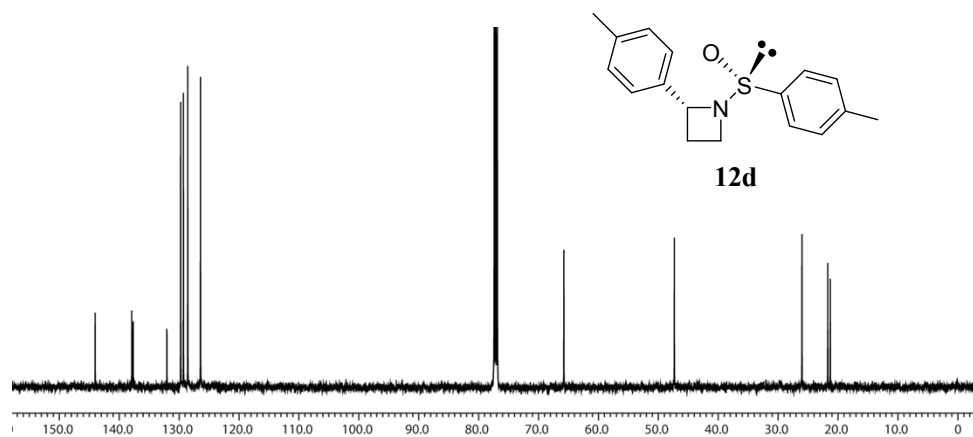


Fig 34: ¹³C{¹H} NMR spectrum of **12d** (CDCl₃, 125 MHz)

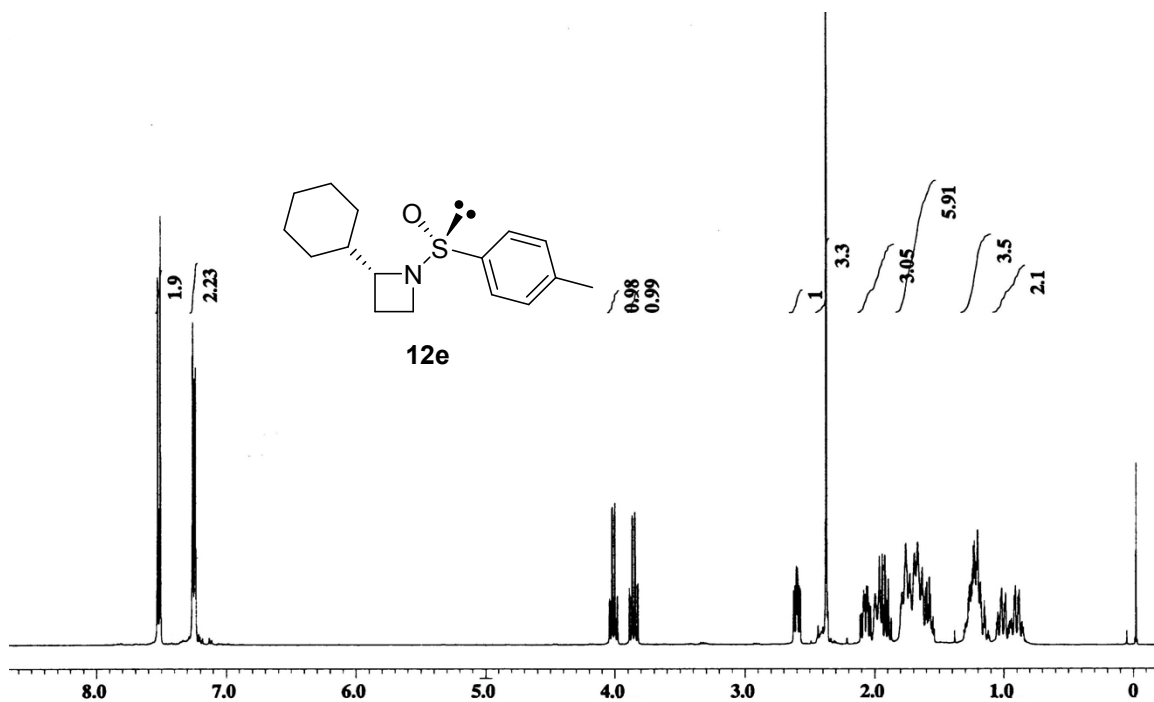


Fig 35: ^1H NMR spectrum of **12e** (CDCl_3 , 400 MHz)

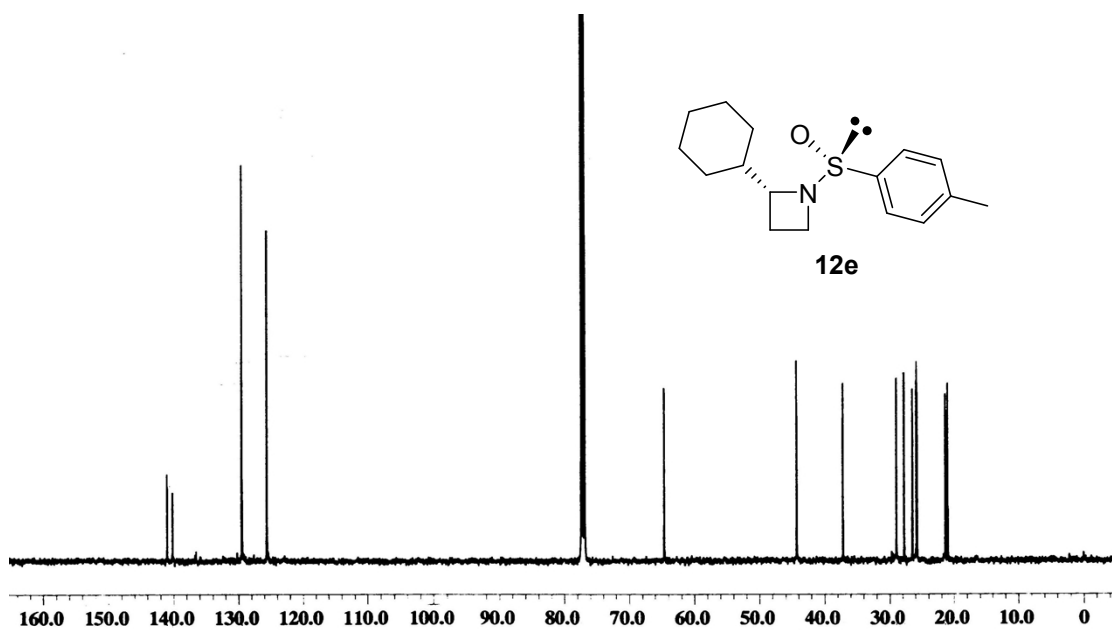


Fig 36: $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **12e** (CDCl_3 , 125 MHz)

2. HPLC Spectrum:

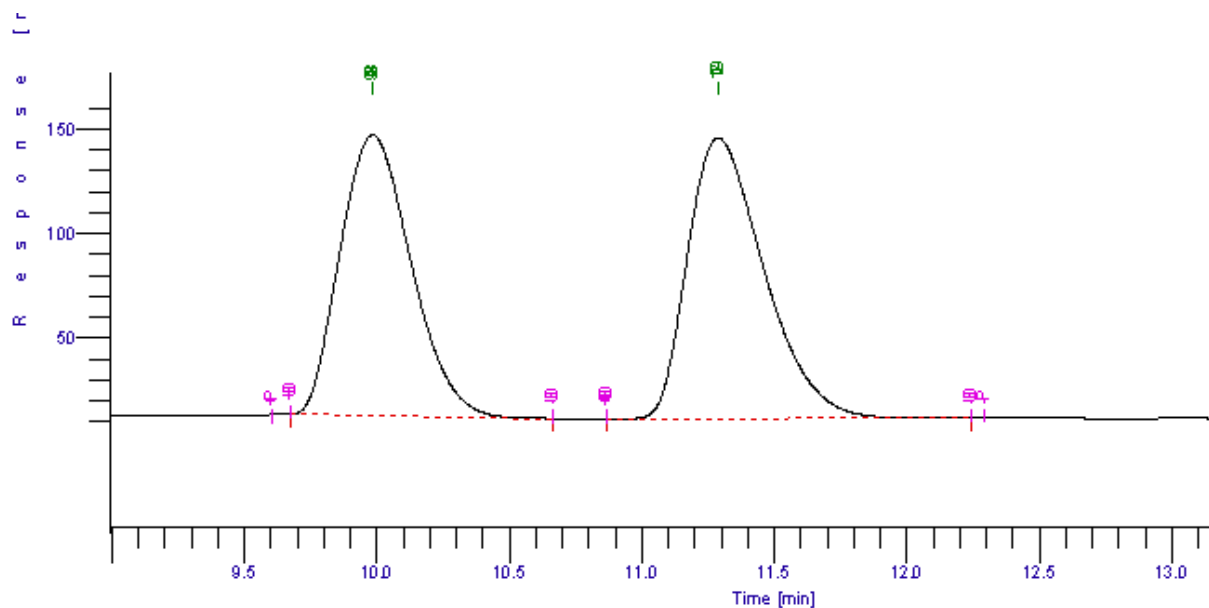


Fig 37: HPLC chromatogram of racemic compound **5a** (Cellulose-1 column; 90:10 *n*-hexane/*i*-propanol; flow rate = 1.0 mL min⁻¹)

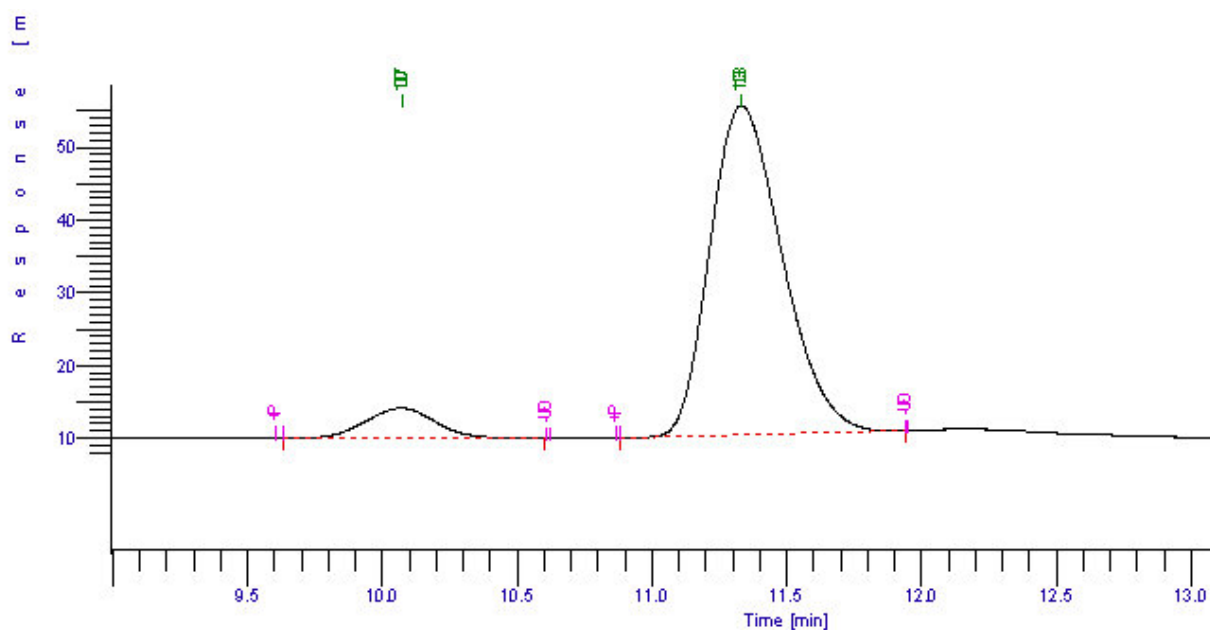


Fig 38: HPLC chromatogram of chiral compound (*R*)-**5a** (Cellulose 1 column; 90:10 *n*-hexane/*i*-propanol; flow rate = 1.0 mL min⁻¹) (*ee* 84%)