

^1H and ^{13}C spectra for all compounds

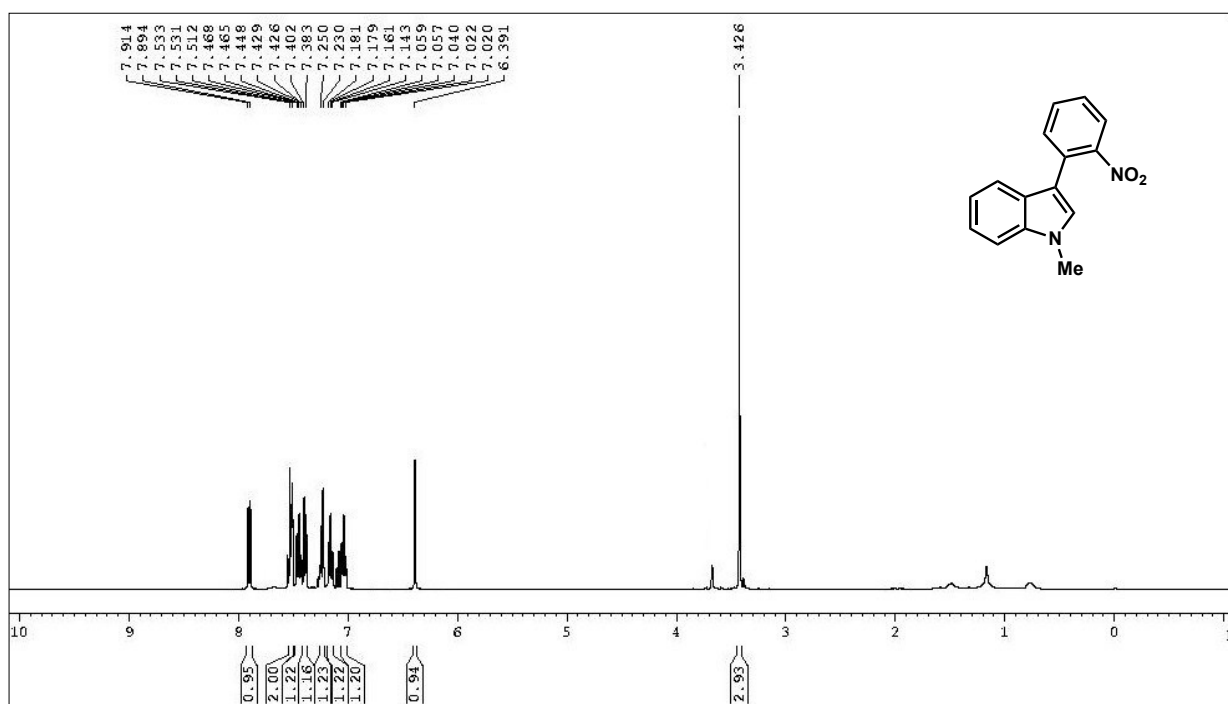


Figure : 400 MHz ^1H -NMR spectrum of **10a** in CDCl_3

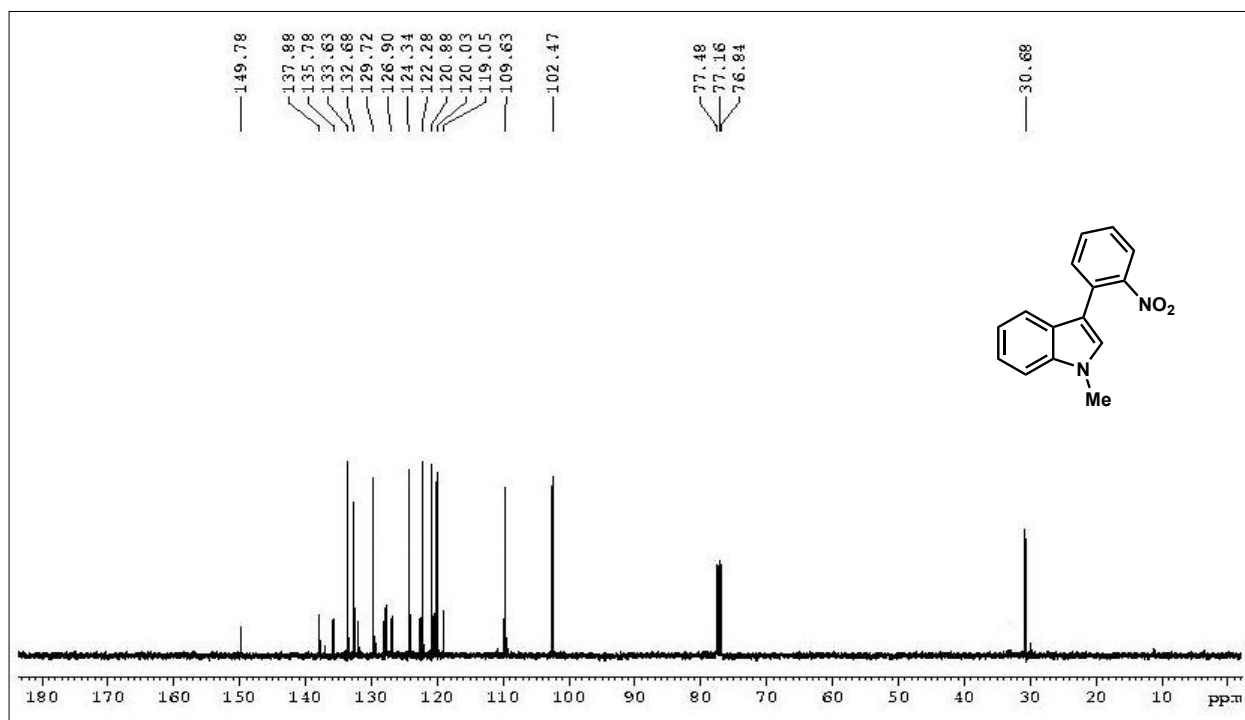


Figure : 100 MHz ^{13}C -NMR spectrum of **10a** in CDCl_3

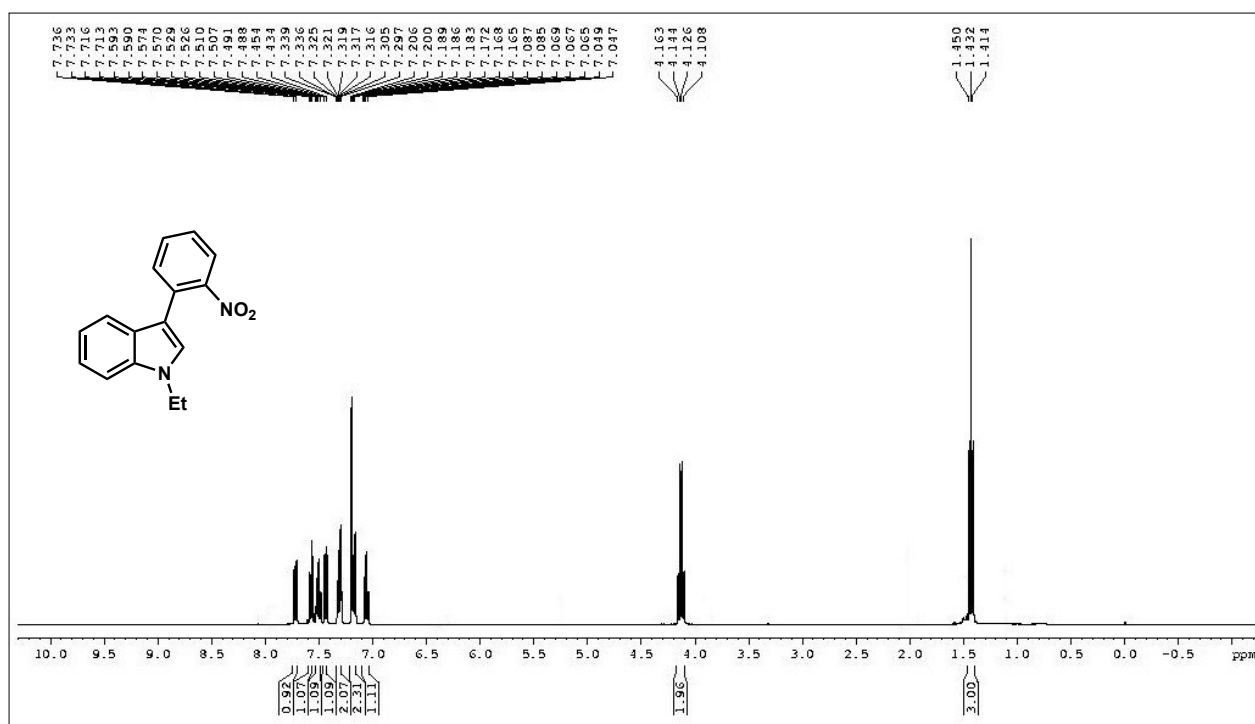


Figure : 400 MHz ¹H-NMR spectrum of **10b** in CDCl₃

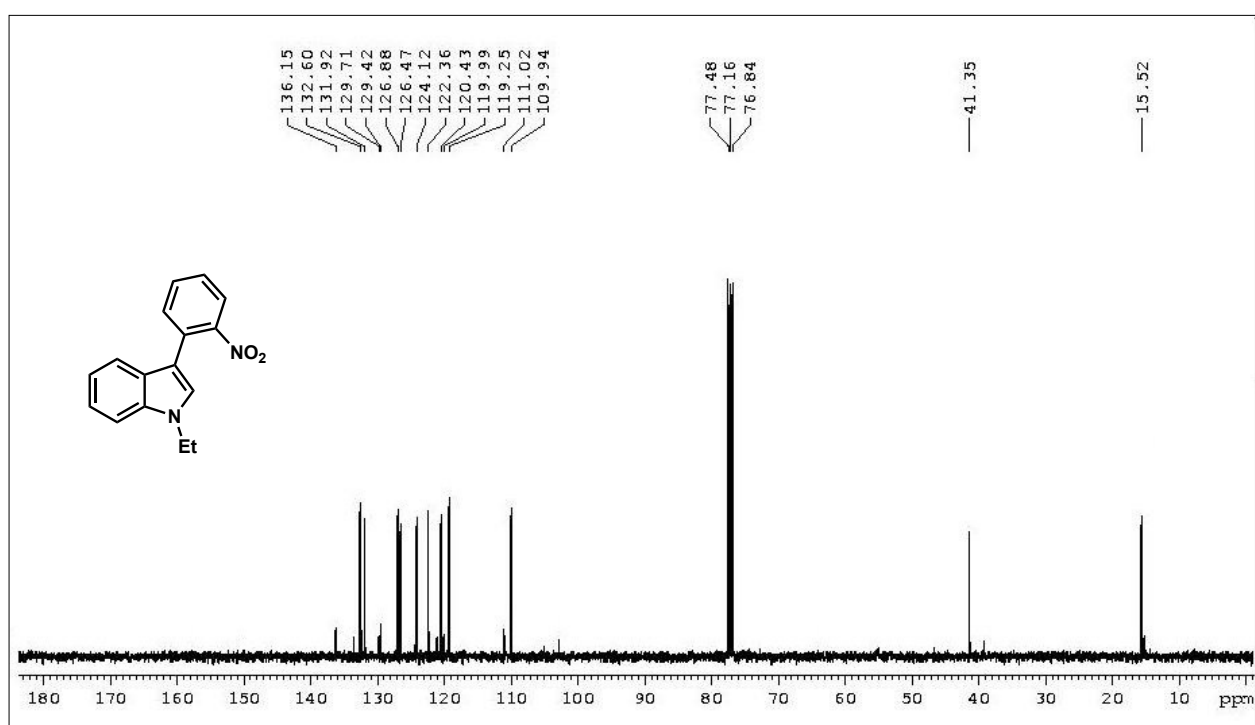


Figure : 100 MHz ¹³C-NMR spectrum of **10b** in CDCl₃

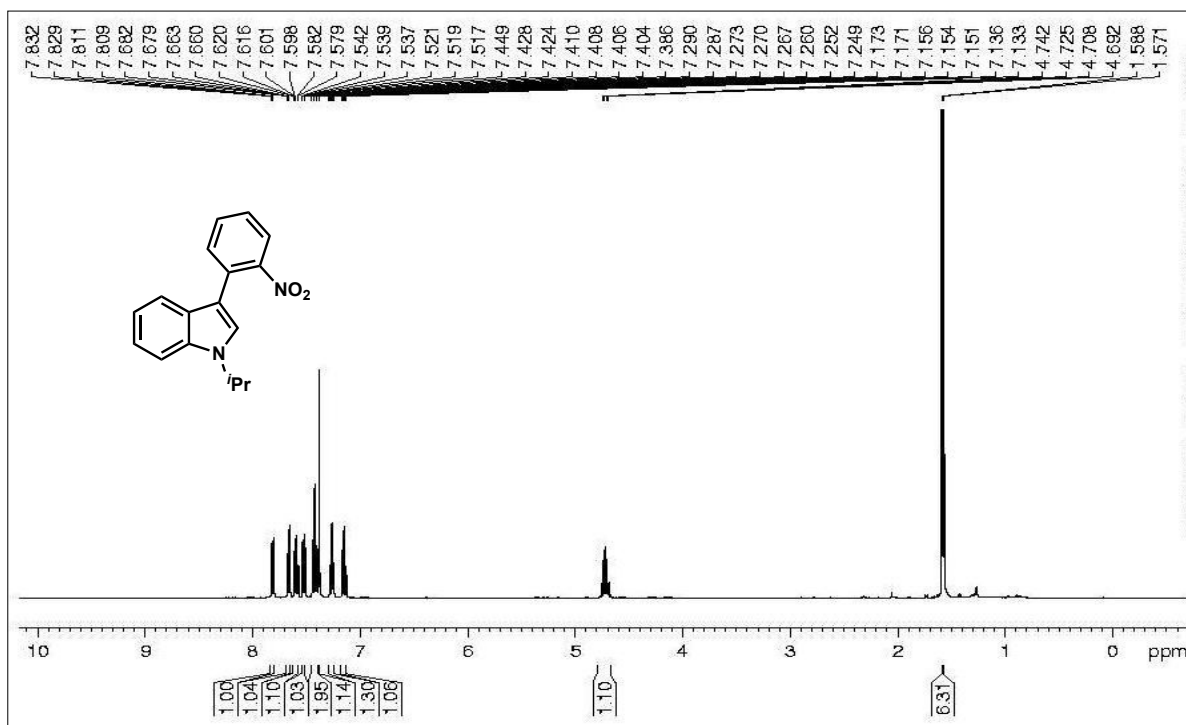


Figure : 400 MHz ¹H-NMR spectrum of 10c in CDCl₃

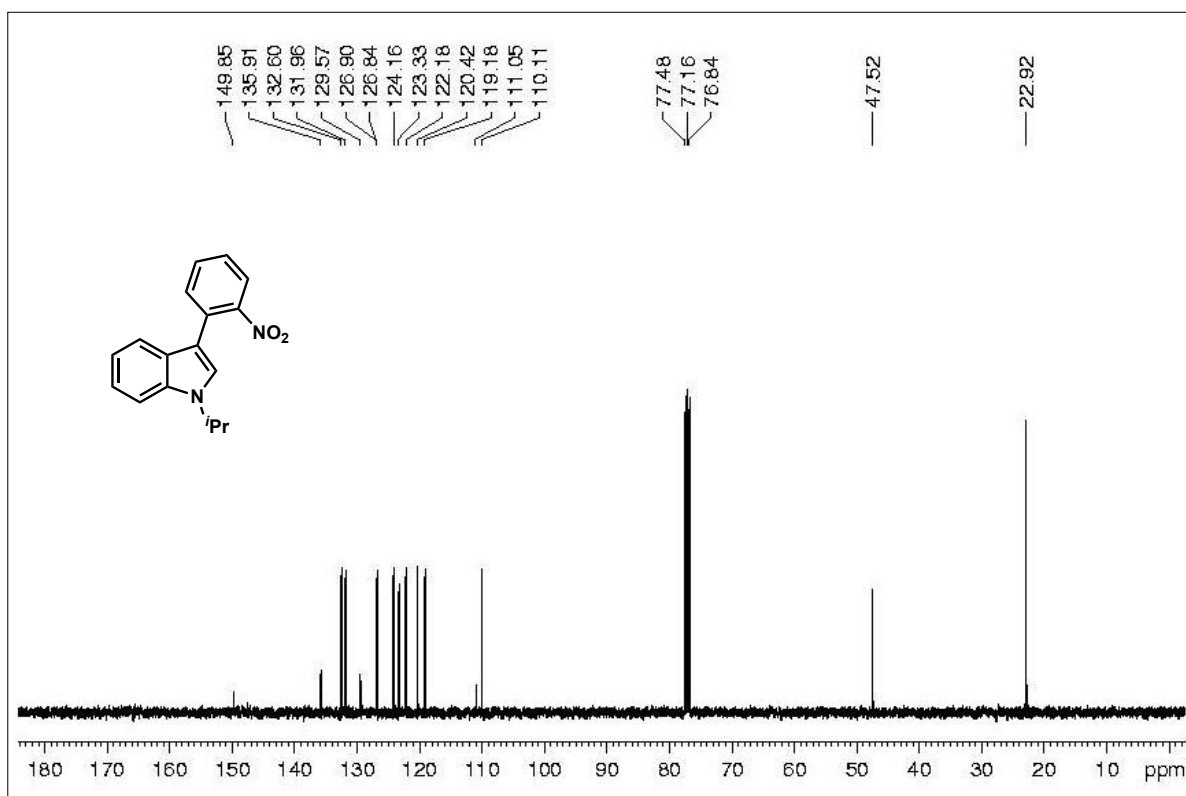


Figure : 100 MHz ¹³C-NMR spectrum of 10c in CDCl₃

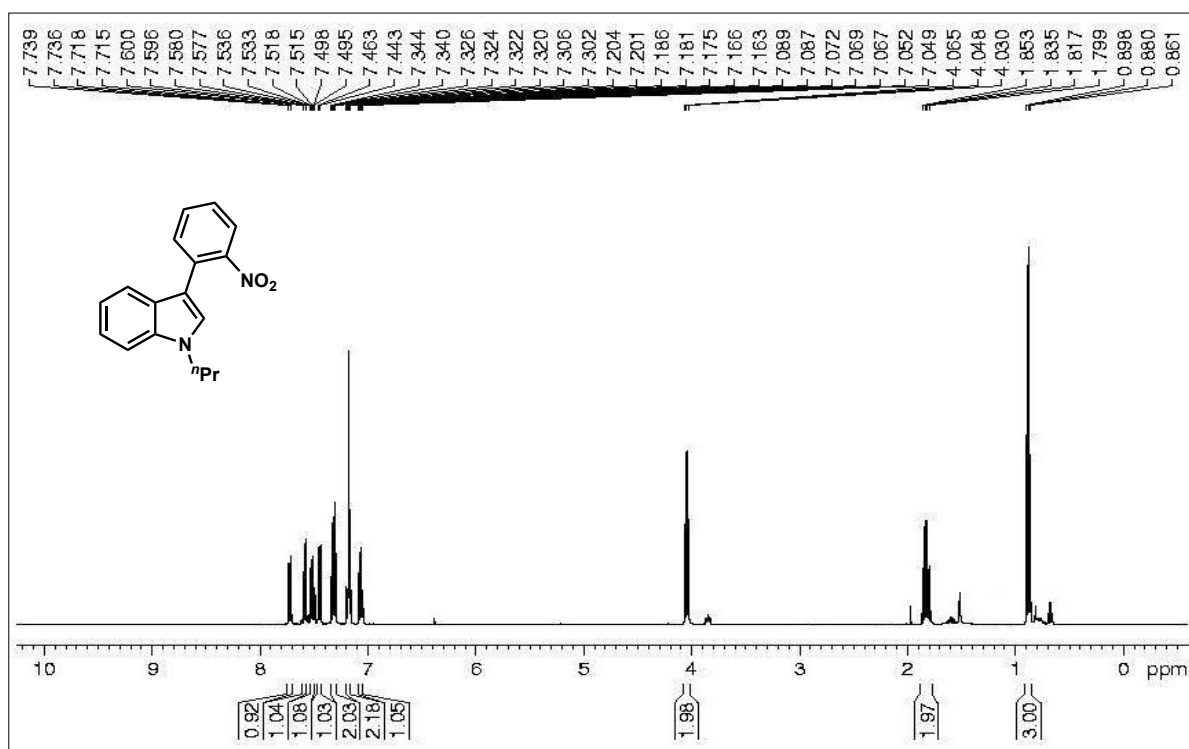


Figure : 400 MHz ^1H -NMR spectrum of **10d** in CDCl_3

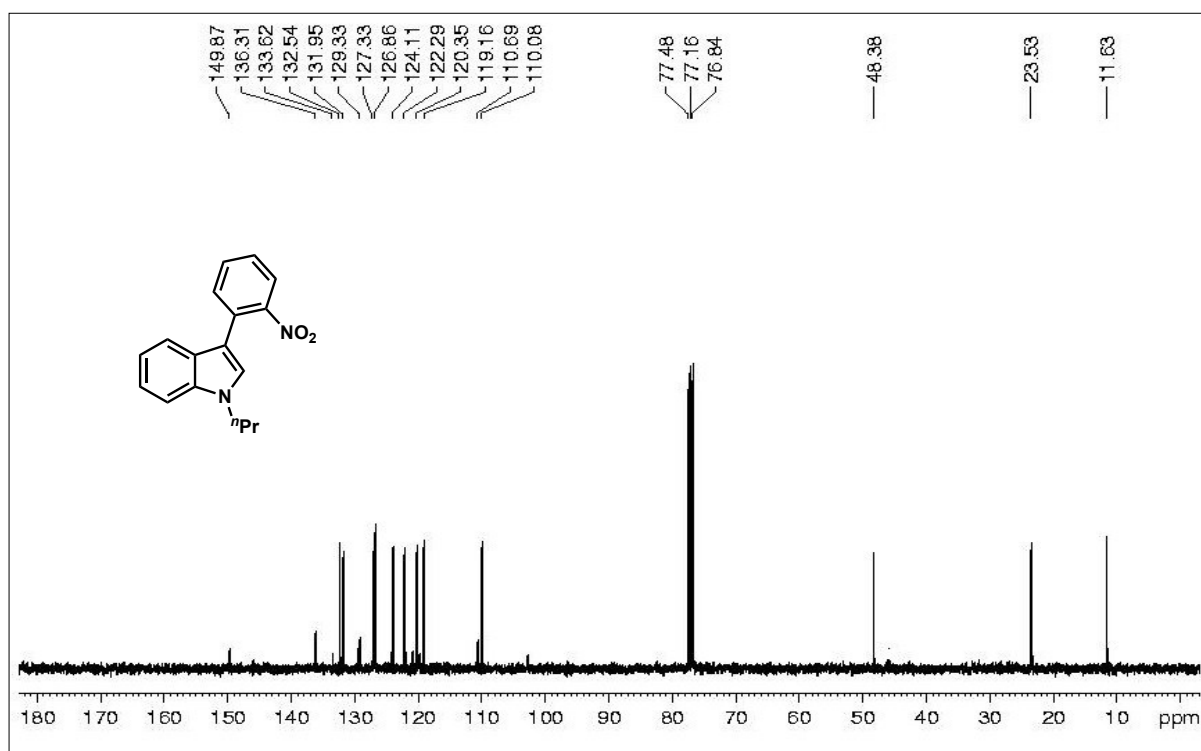


Figure : 100 MHz ^{13}C -NMR spectrum of **10d** in CDCl_3

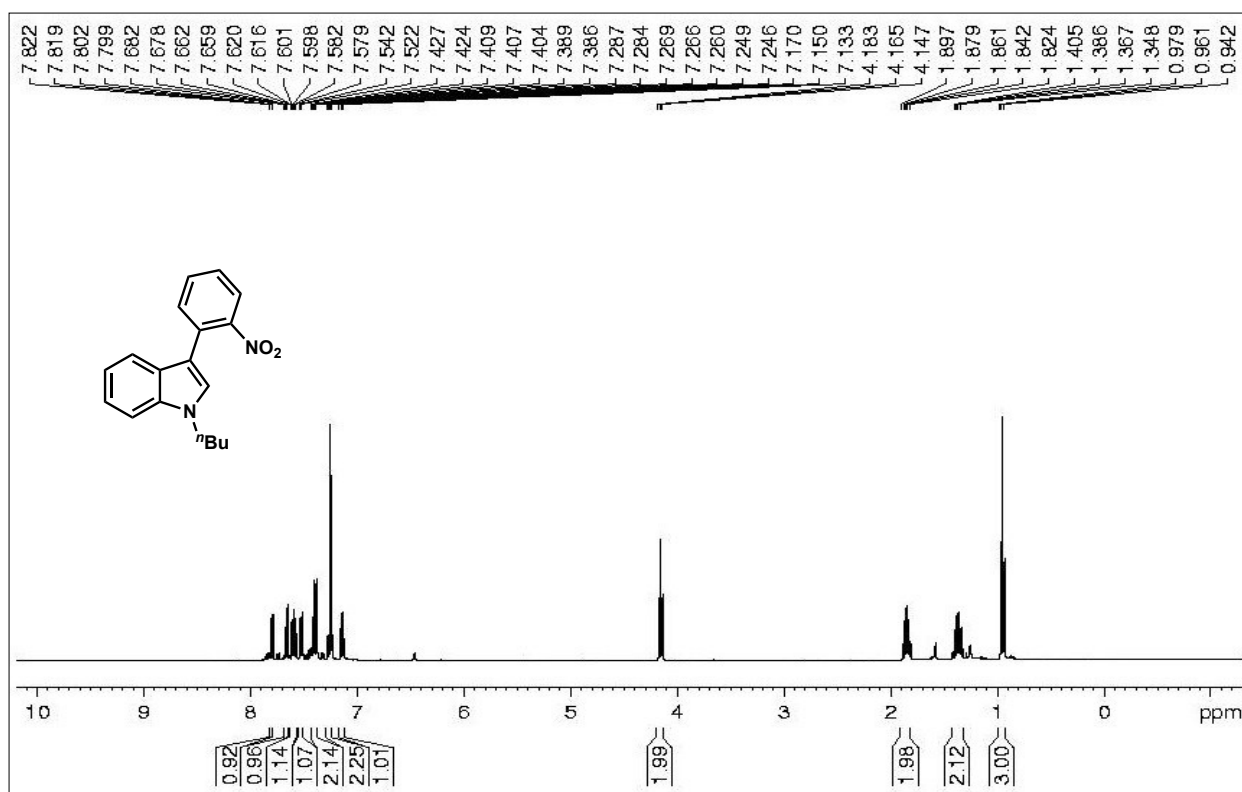


Figure : 400 MHz ^1H -NMR spectrum of **10e** in CDCl_3

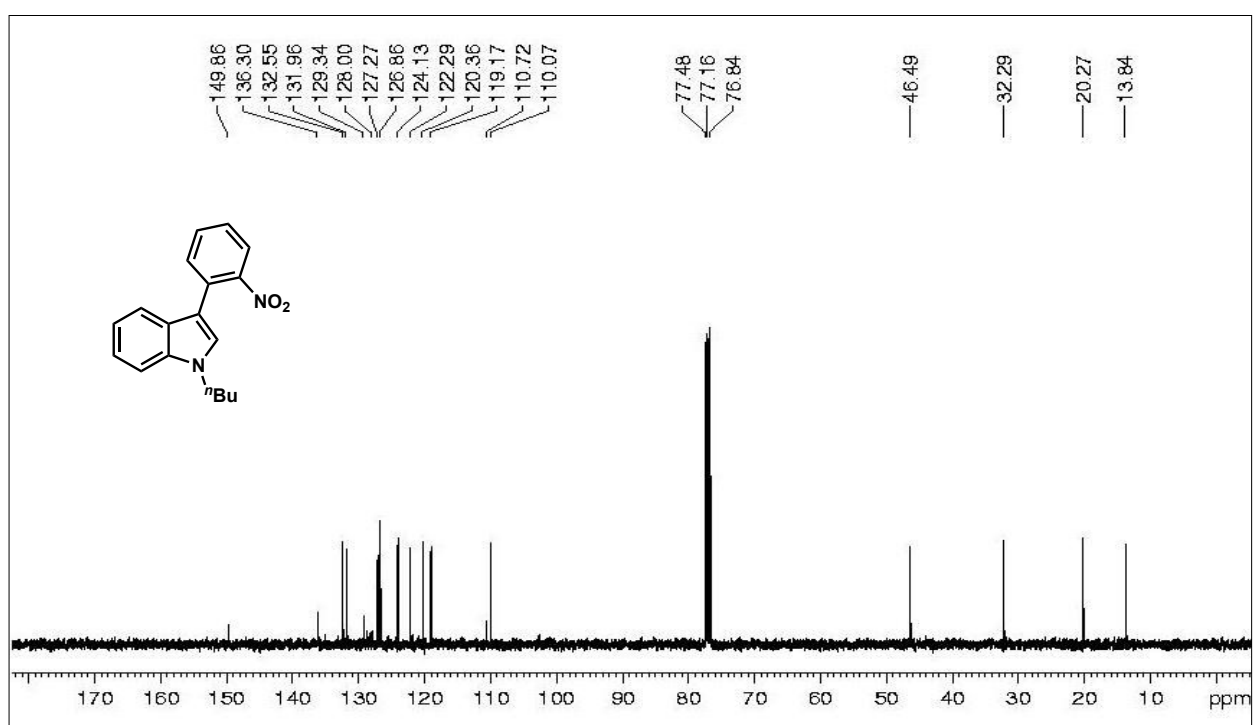


Figure : 100 MHz ^{13}C -NMR spectrum of **10e** in CDCl_3

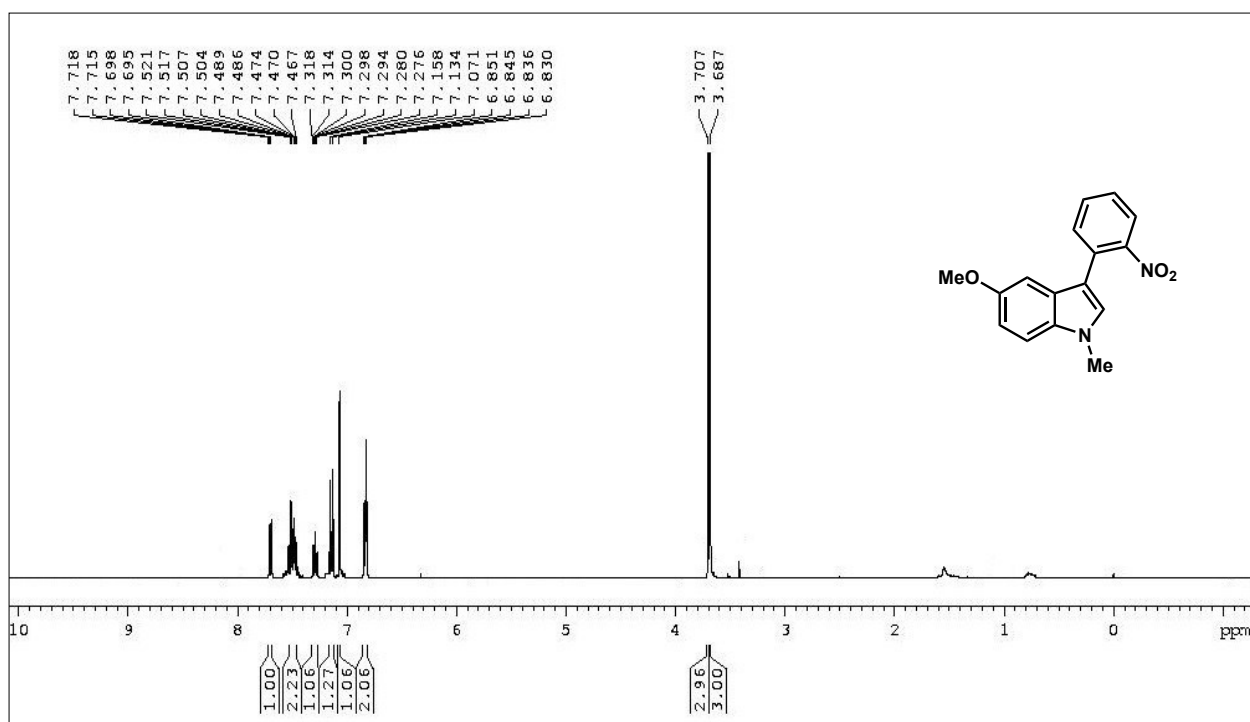


Figure : 400 MHz ^1H -NMR spectrum of **10f** in CDCl_3

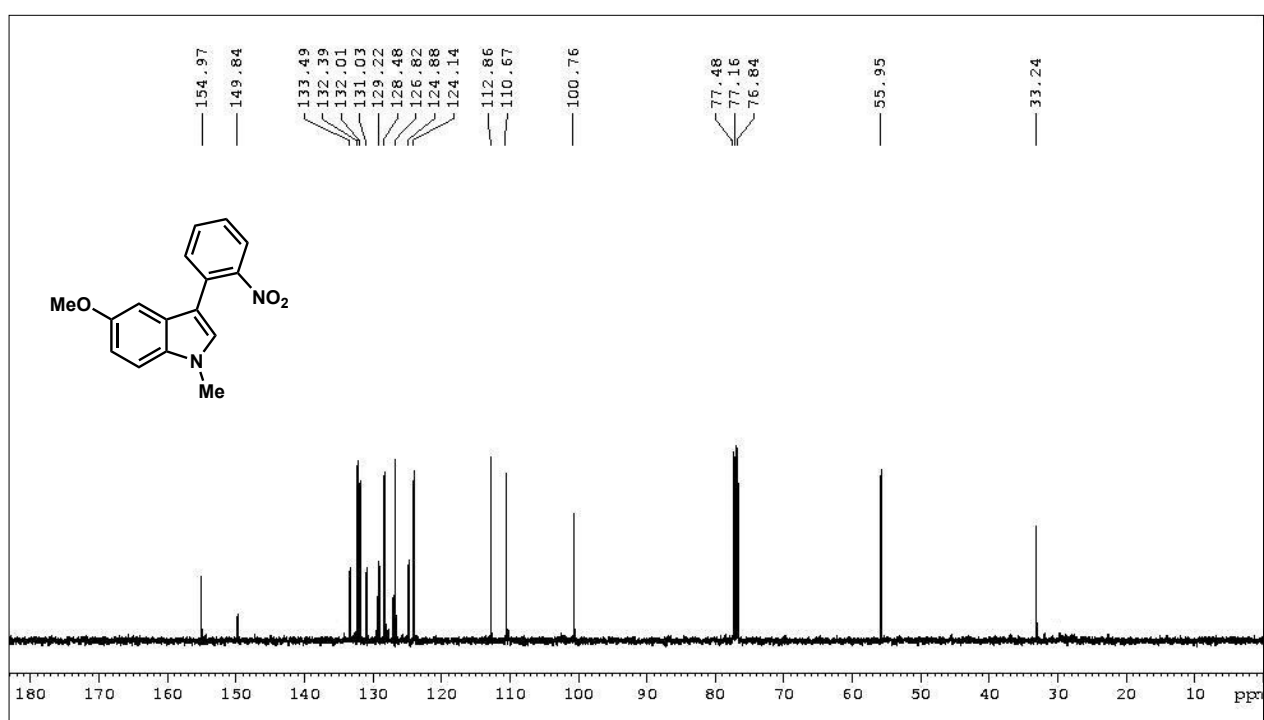


Figure : 100 MHz ^{13}C -NMR spectrum of **10f** in CDCl_3

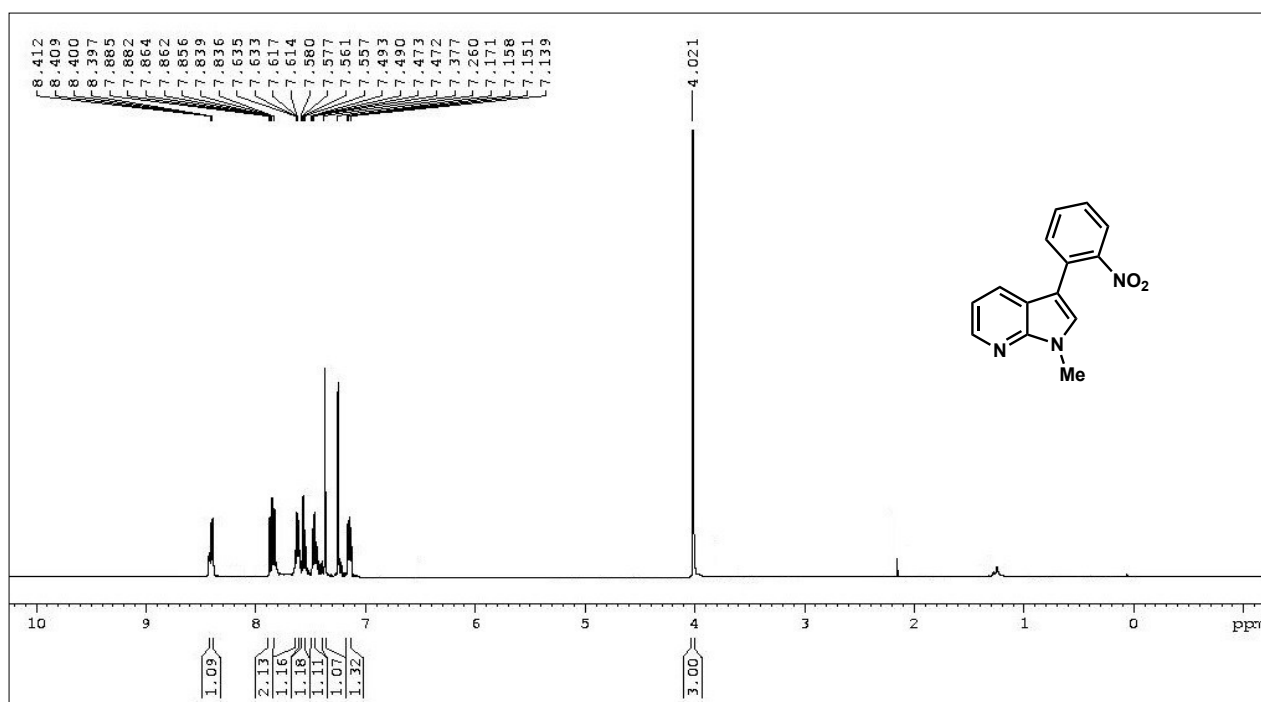


Figure : 400 MHz ^1H -NMR spectrum of **10g** in CDCl_3

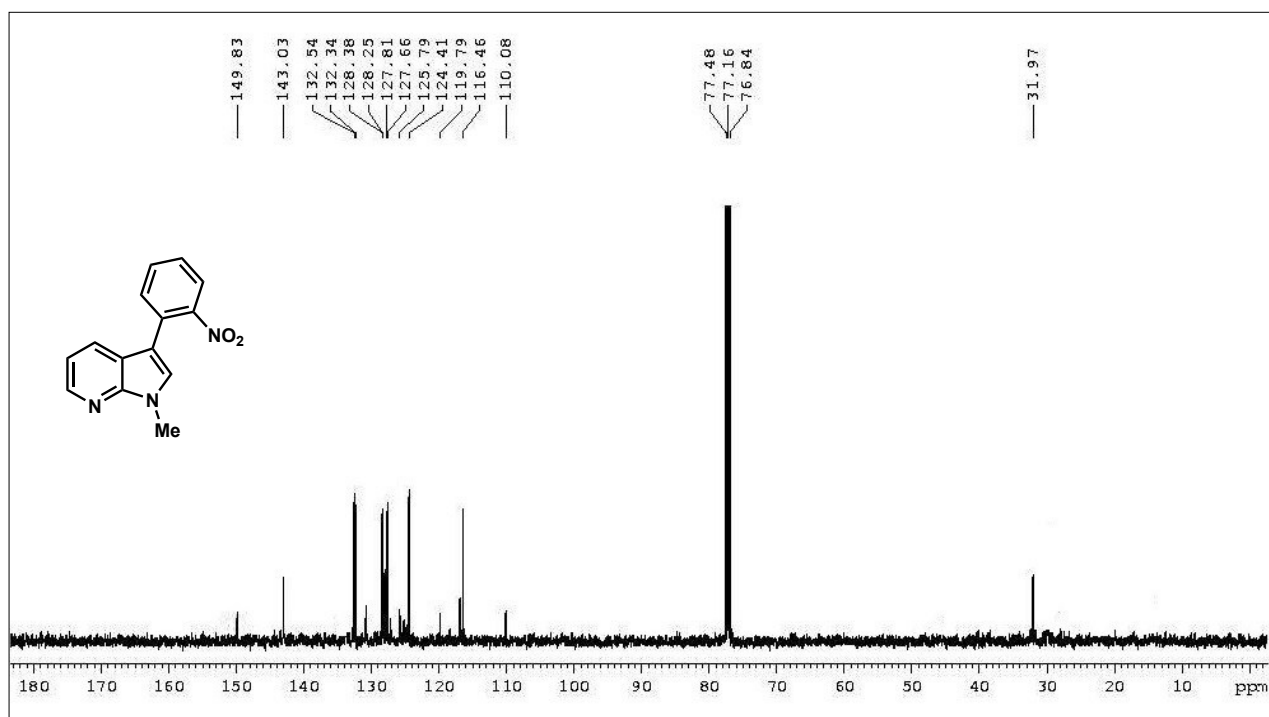


Figure : 100 MHz ^{13}C -NMR spectrum of **10g** in CDCl_3

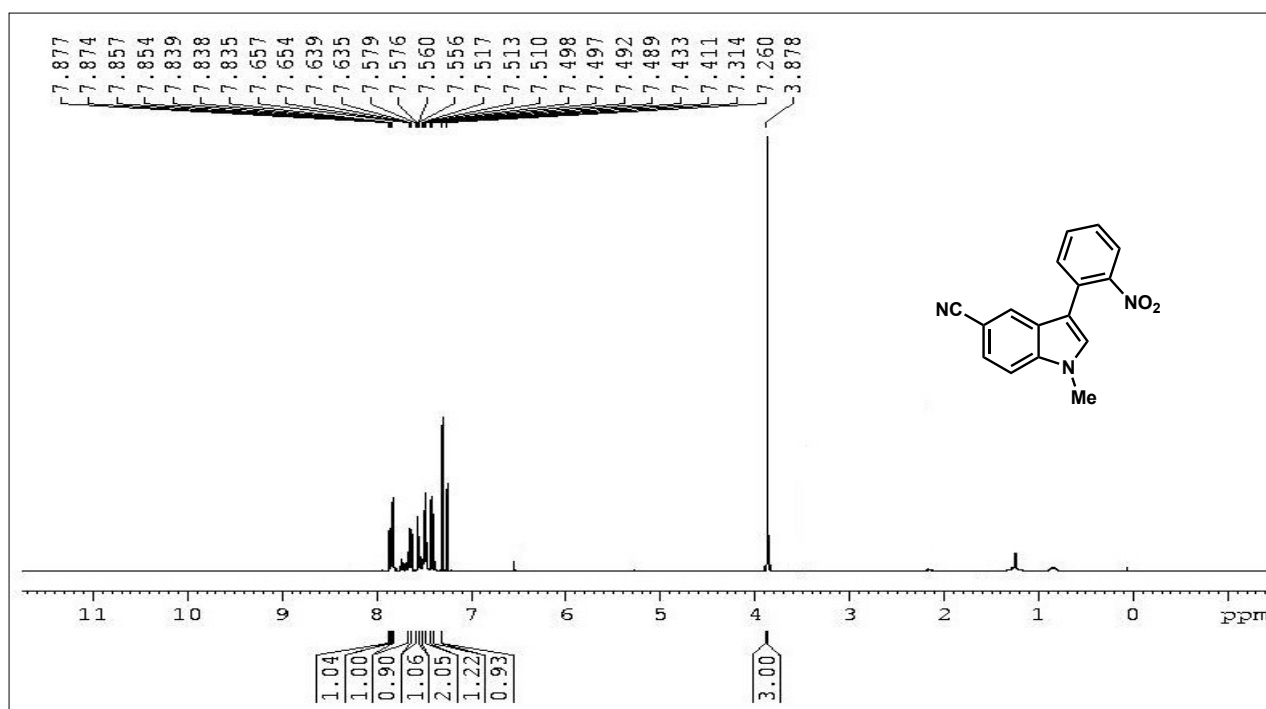


Figure : 400 MHz ¹H-NMR spectrum of **10h** in CDCl₃

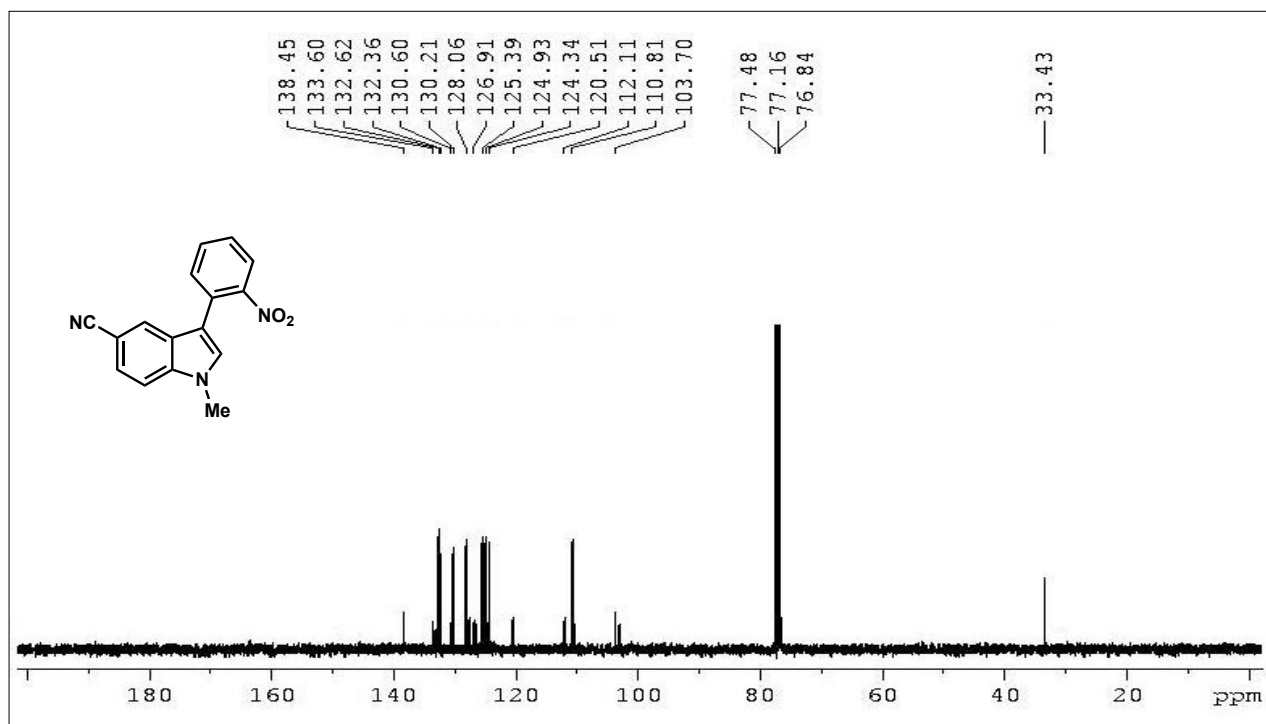


Figure : 100 MHz ¹³C-NMR spectrum of **10h** in CDCl₃

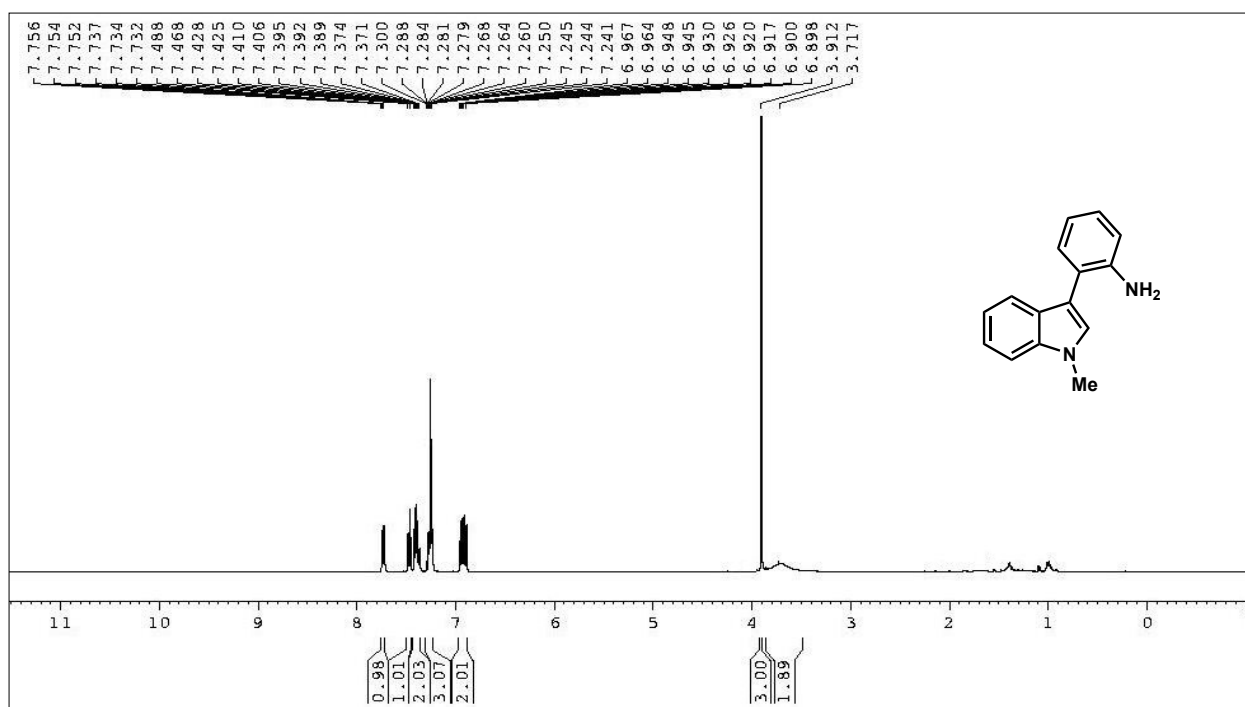


Figure : 400 MHz ¹H-NMR spectrum of **11a** in CDCl₃

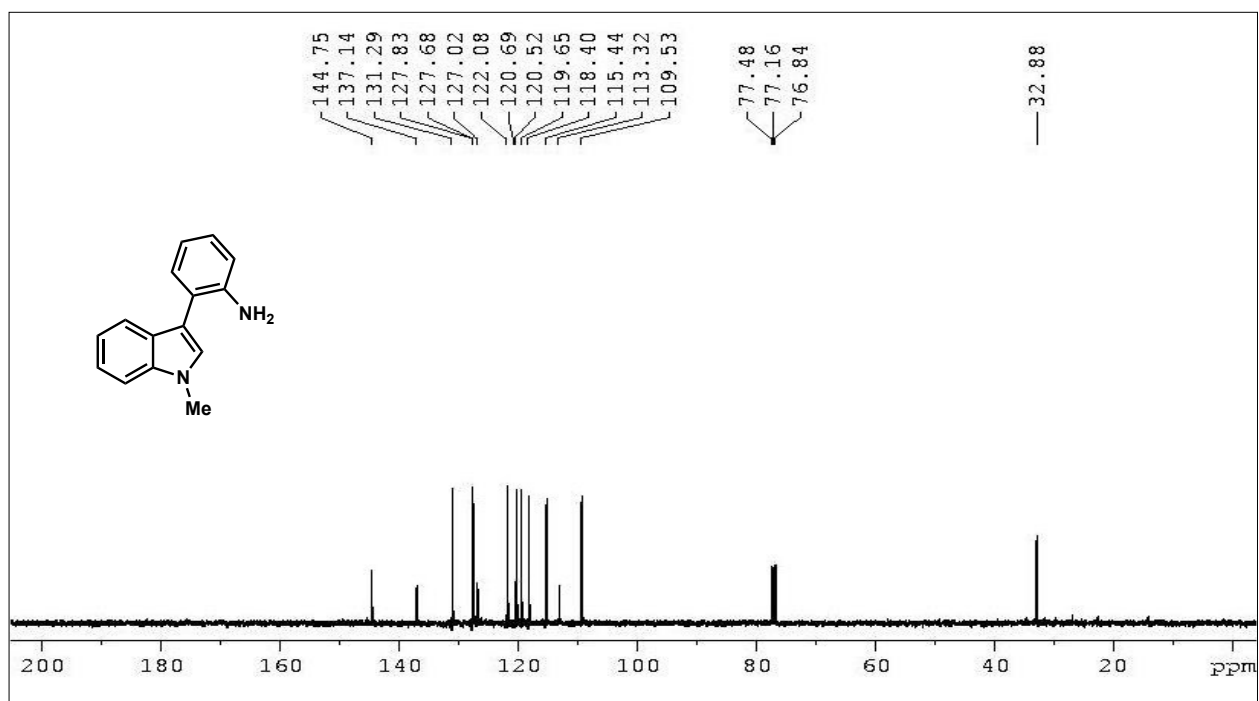


Figure : 100 MHz ¹³C-NMR spectrum of **11a** in CDCl₃

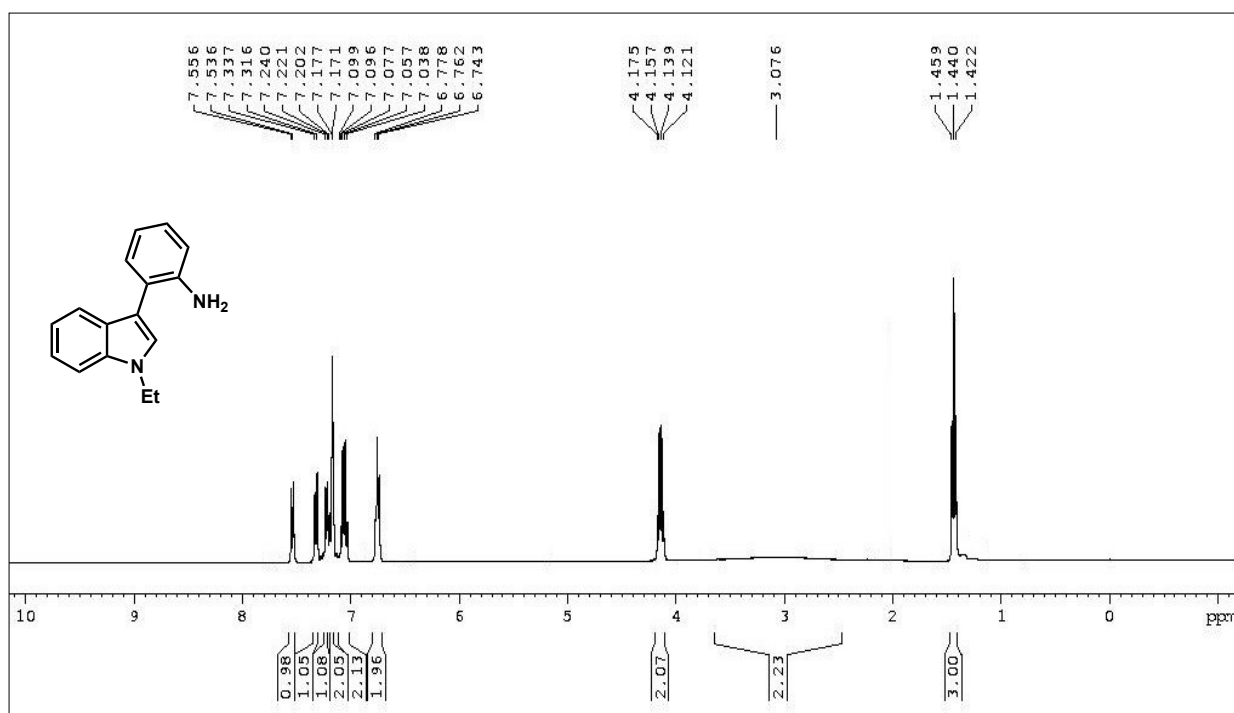


Figure : 400 MHz ¹H-NMR spectrum of **11b** in CDCl₃

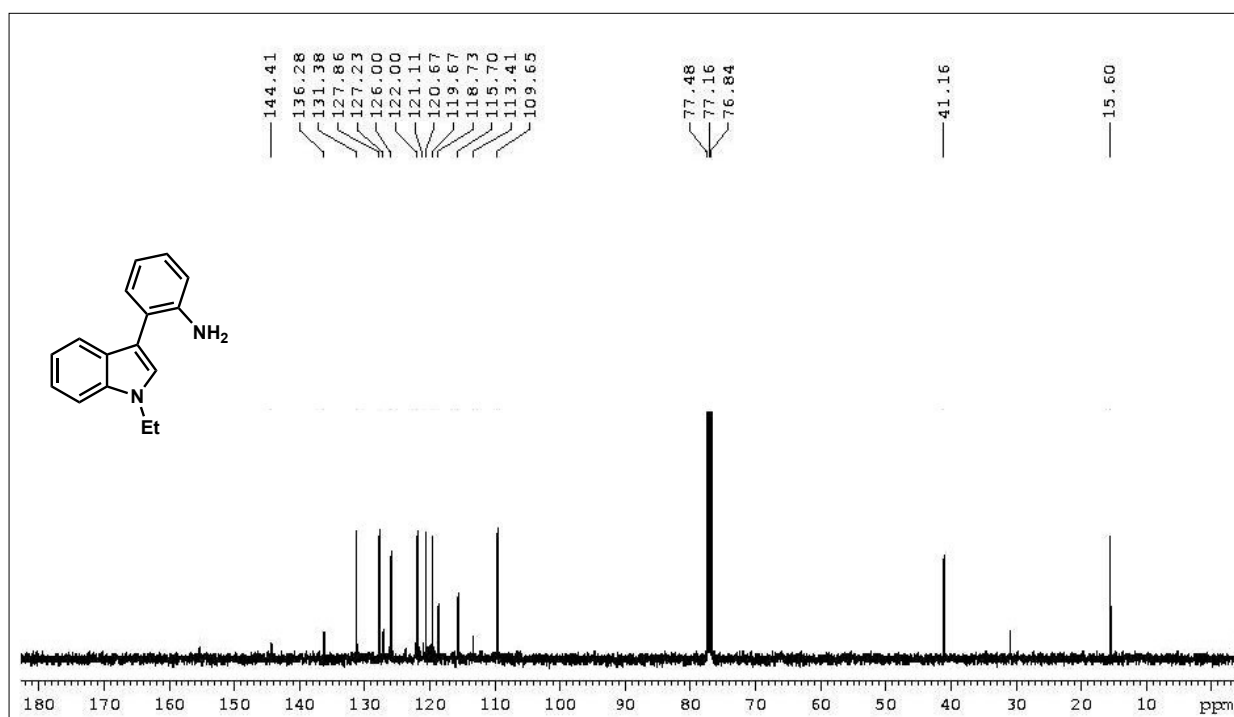


Figure : 100 MHz ¹³C-NMR spectrum of **11b** in CDCl₃

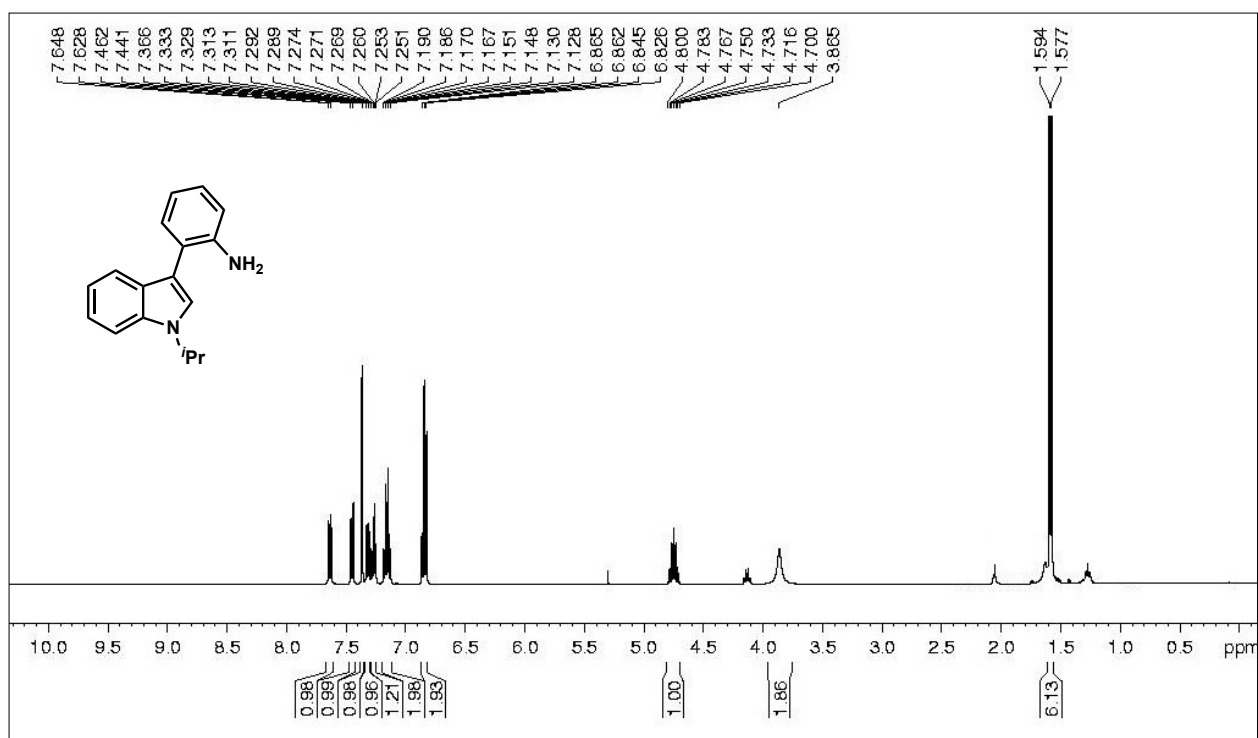


Figure : 400 MHz ¹H-NMR spectrum of 11c in CDCl₃

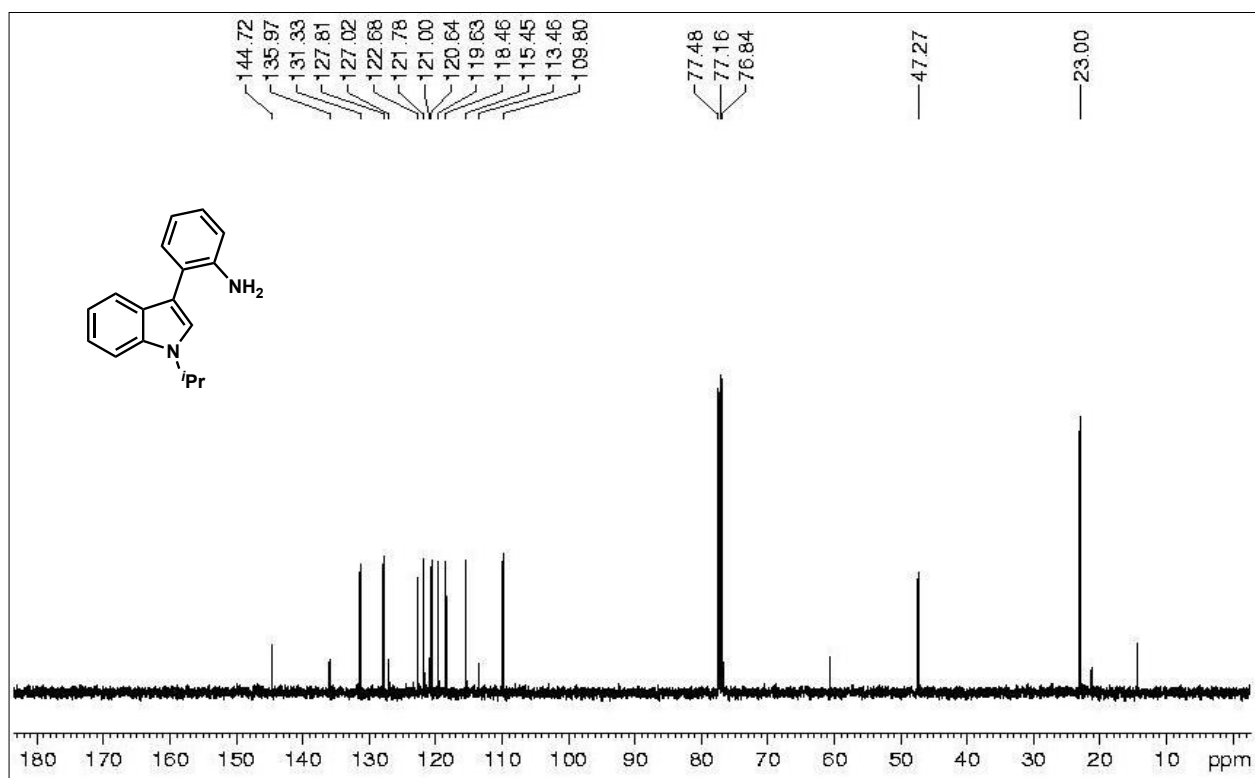


Figure : 100 MHz ¹³C-NMR spectrum of 11c in CDCl₃

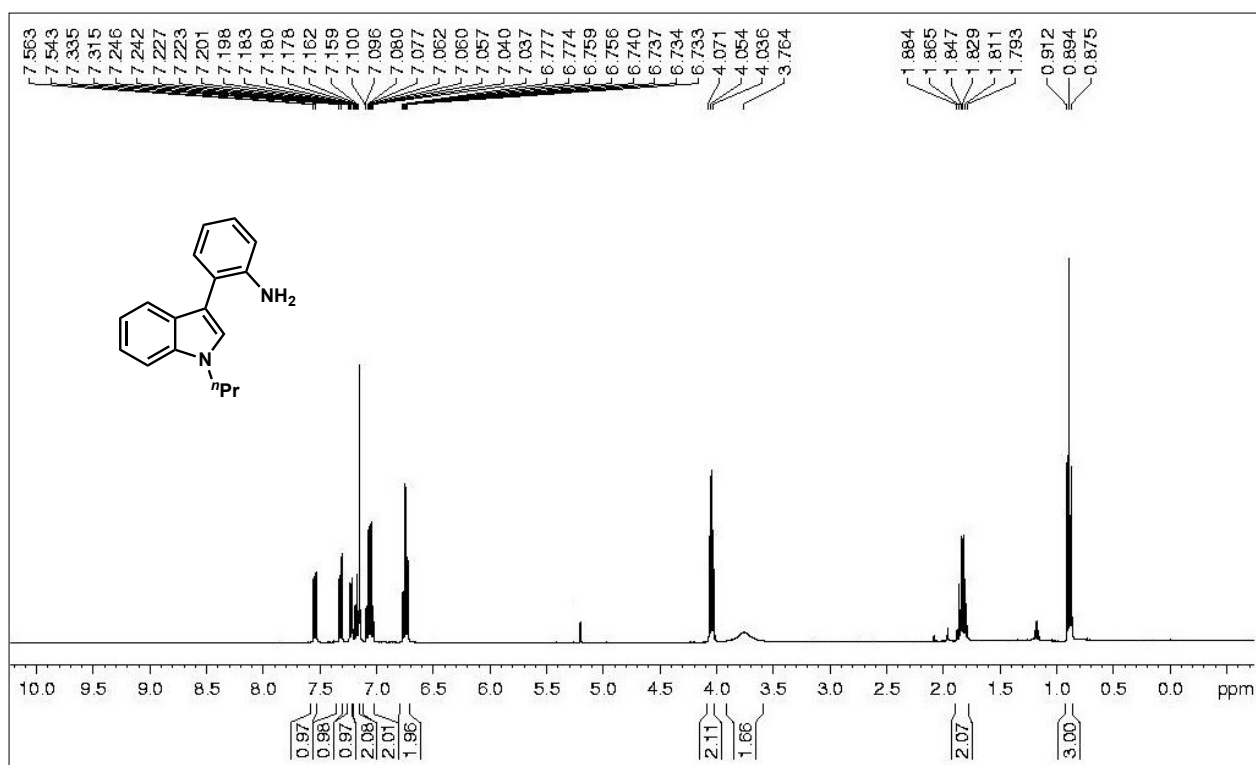


Figure : 400 MHz ¹H-NMR spectrum of **11d** in CDCl₃

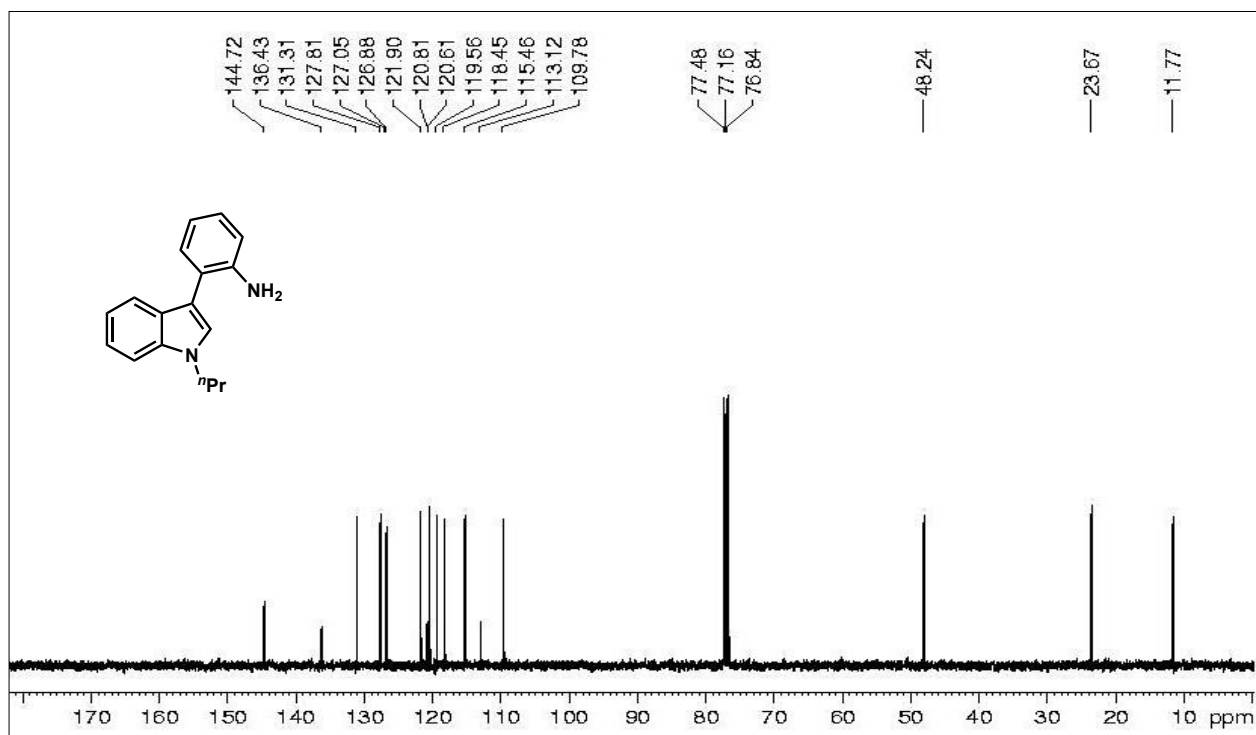


Figure : 100 MHz ¹³C-NMR spectrum of **11d** in CDCl₃

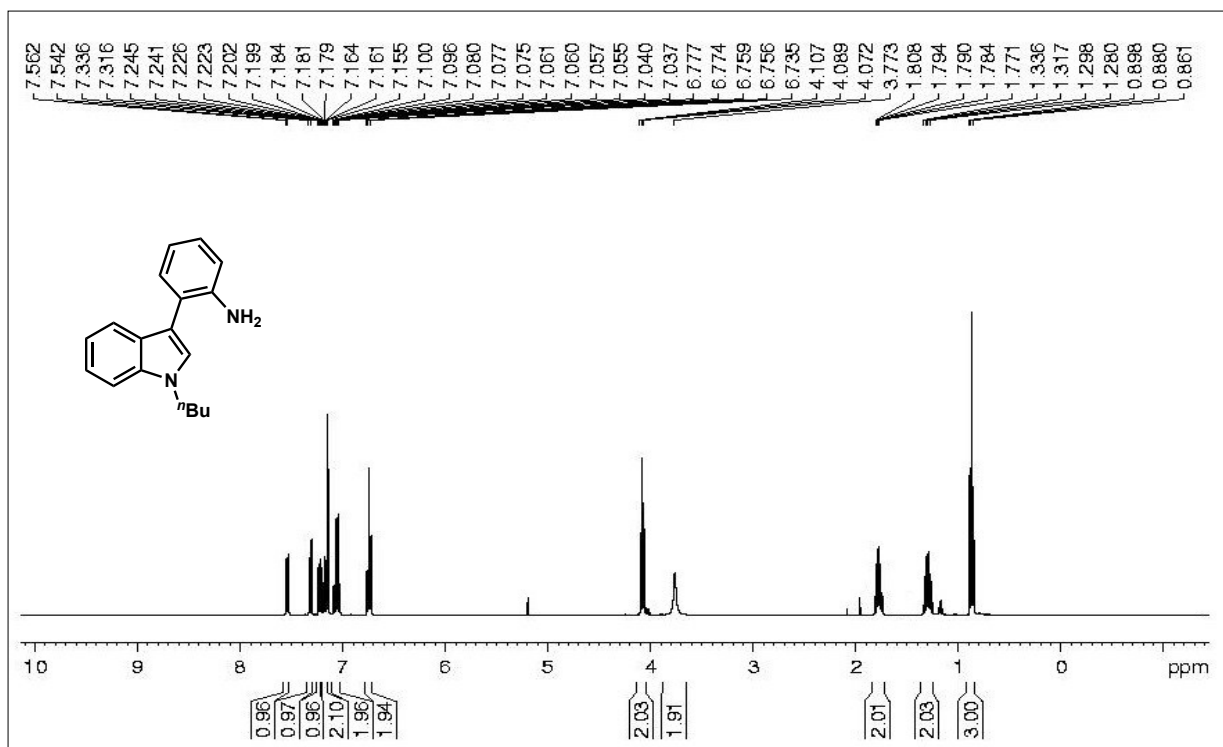


Figure : 400 MHz ¹H-NMR spectrum of 11e in CDCl₃

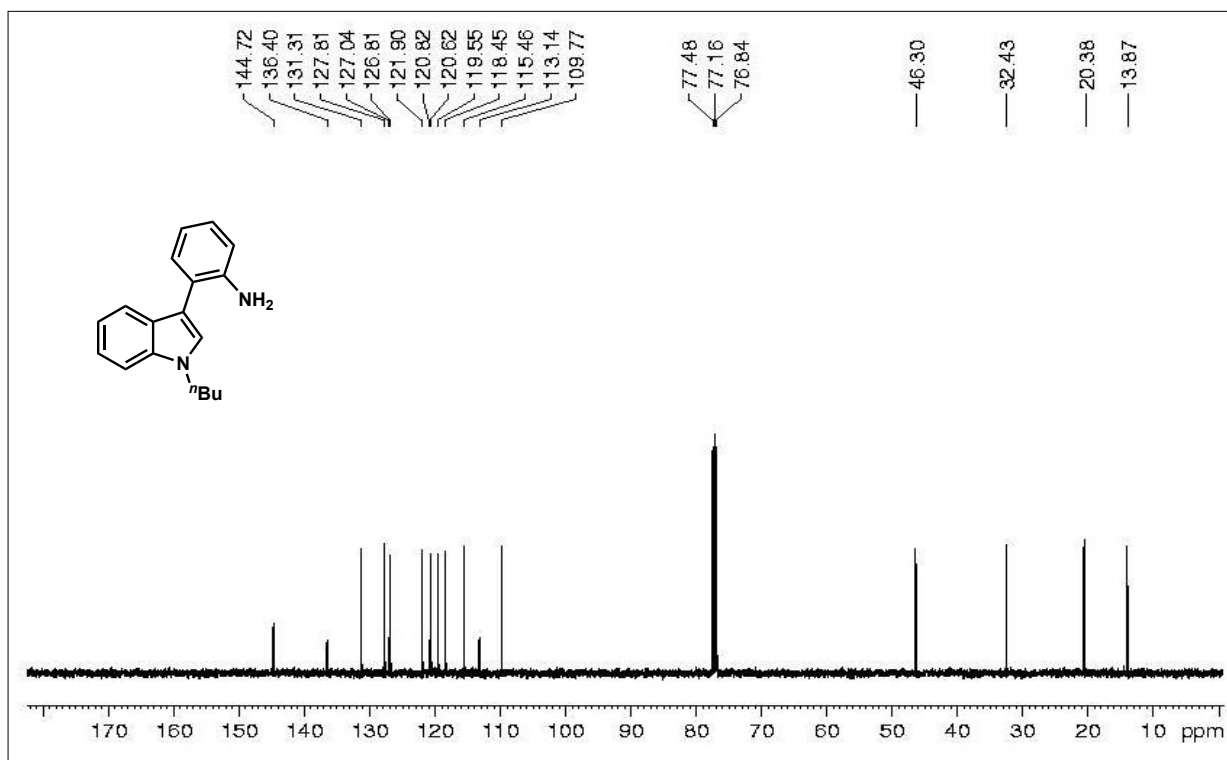


Figure : 100 MHz ¹³C-NMR spectrum of 11e in CDCl₃

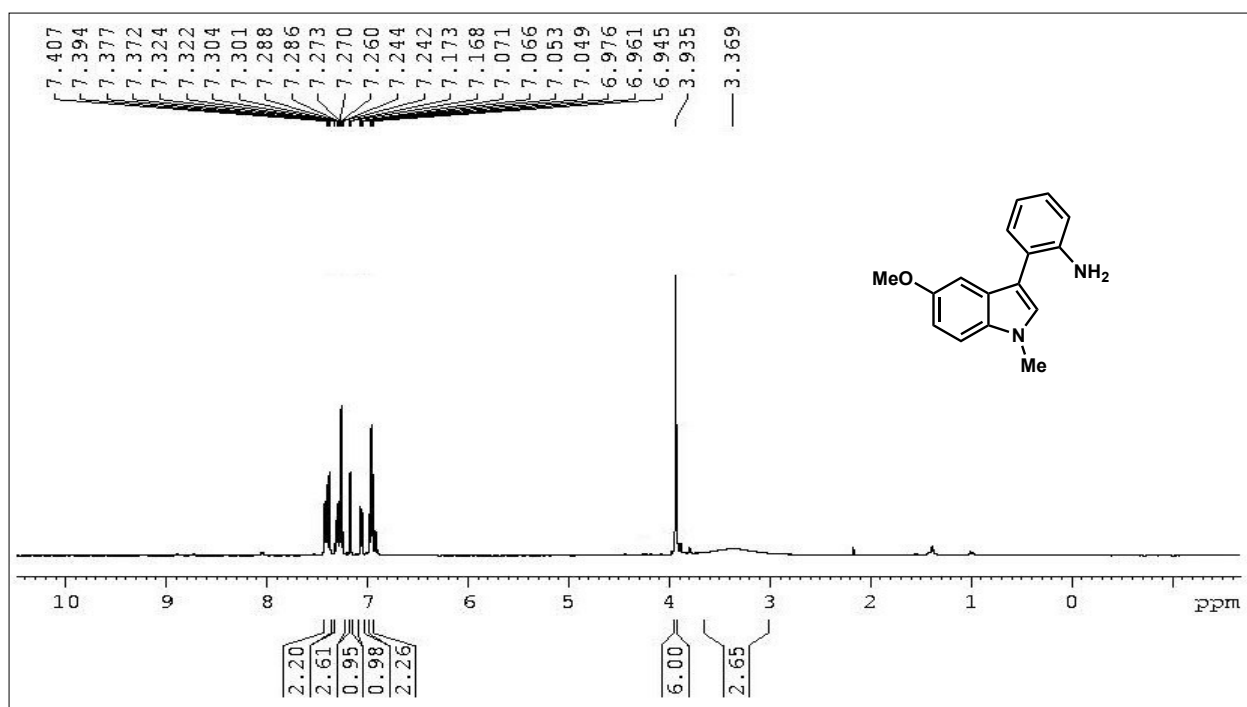


Figure : 400 MHz ¹H-NMR spectrum of **11f** in CDCl₃

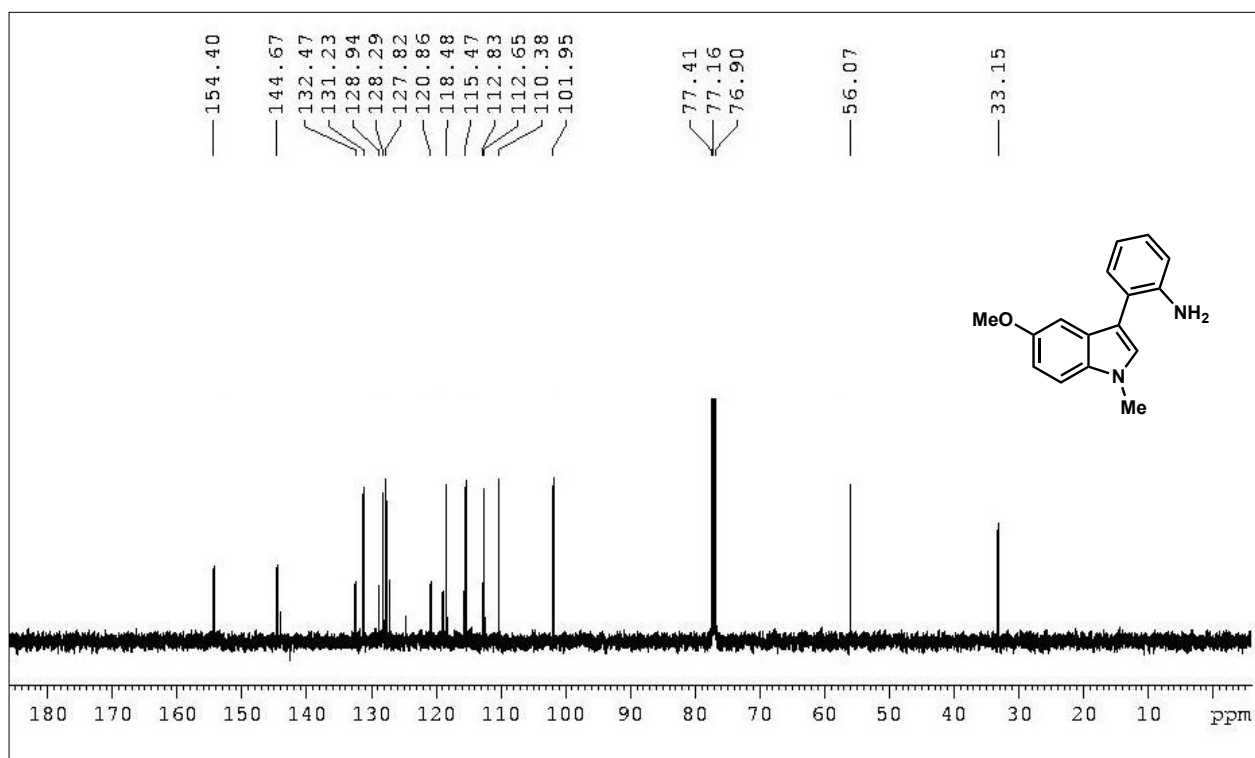


Figure : 100 MHz ¹³C-NMR spectrum of **11f** in CDCl₃

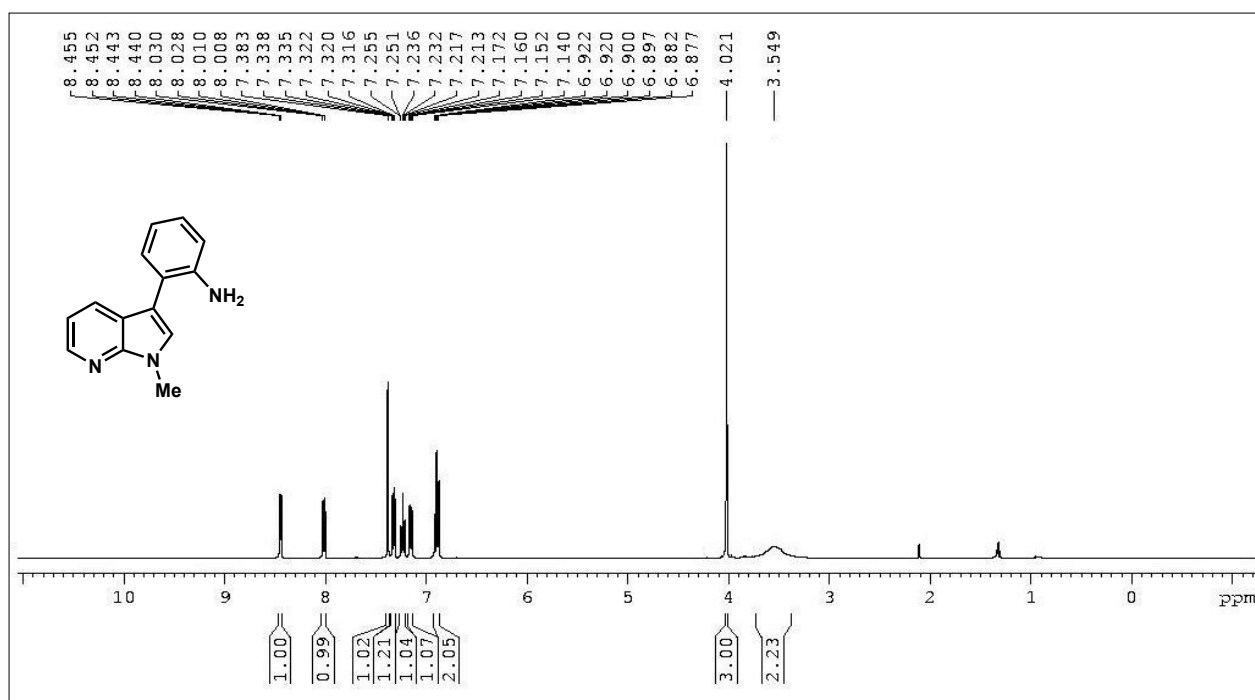


Figure : 400 MHz ^1H -NMR spectrum of **11g** in CDCl_3

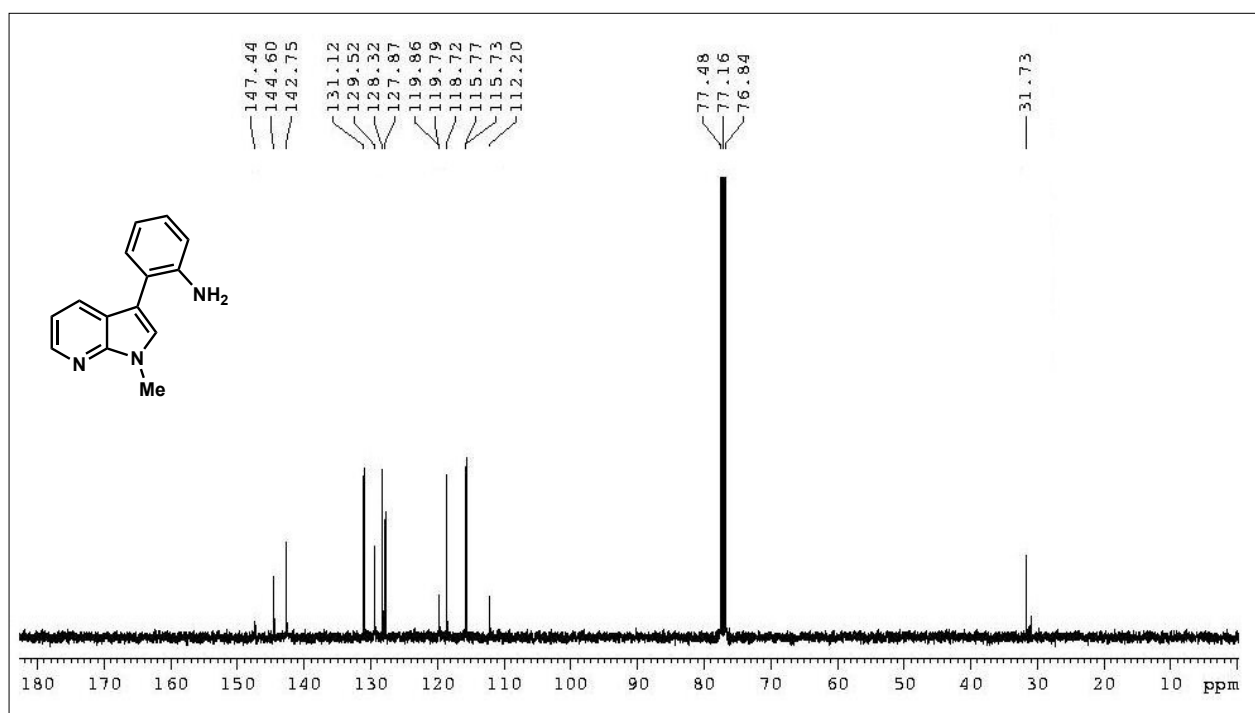


Figure : 100 MHz ^{13}C -NMR spectrum of **11g** in CDCl_3

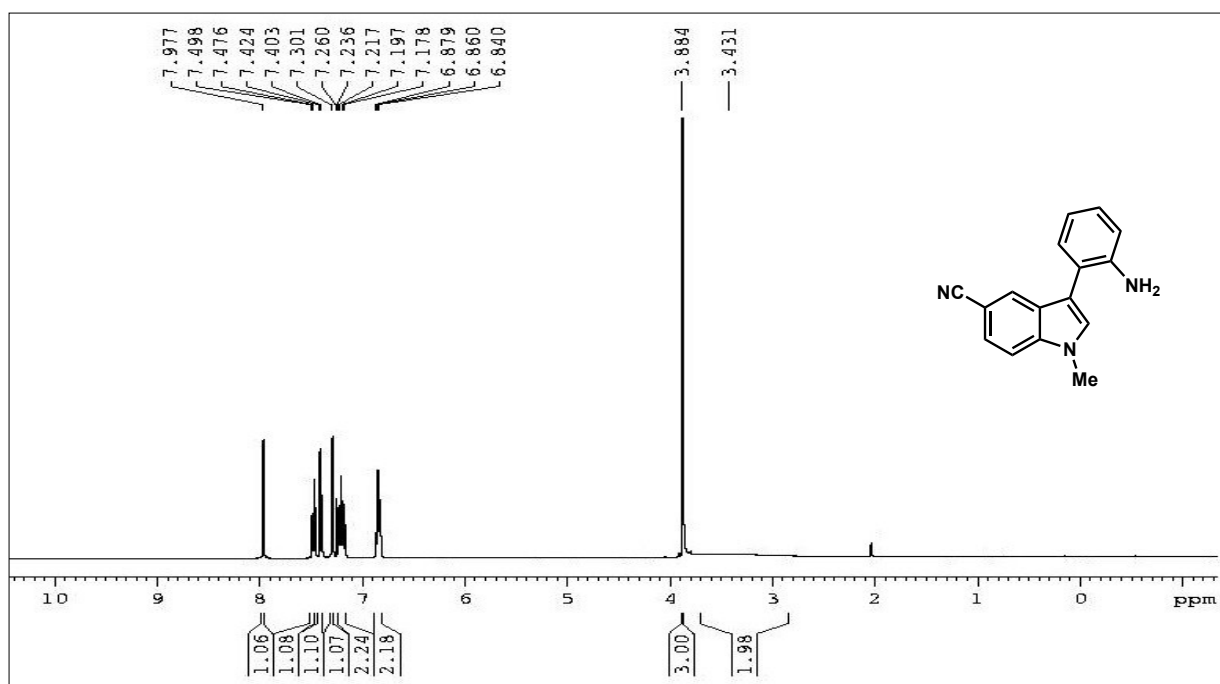


Figure : 400 MHz ^1H -NMR spectrum of **11h** in CDCl_3

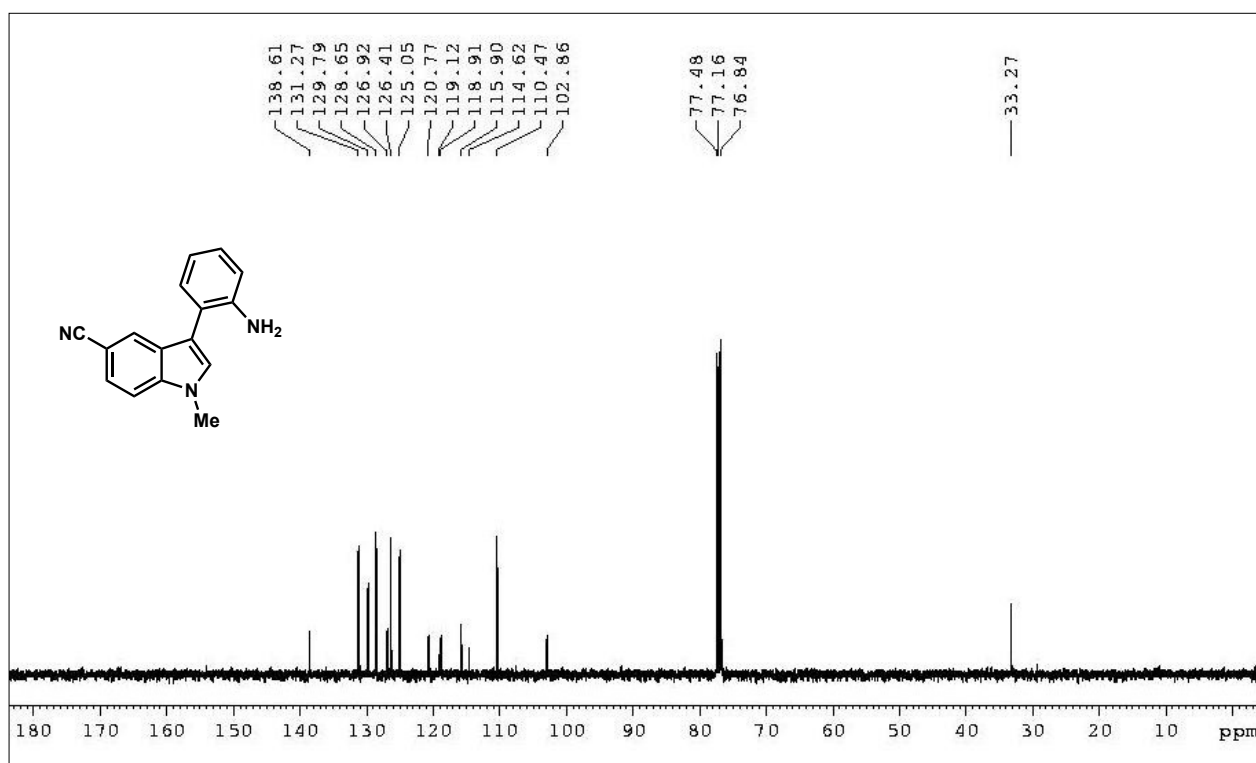


Figure : 100 MHz ^{13}C -NMR spectrum of **11h** in CDCl_3

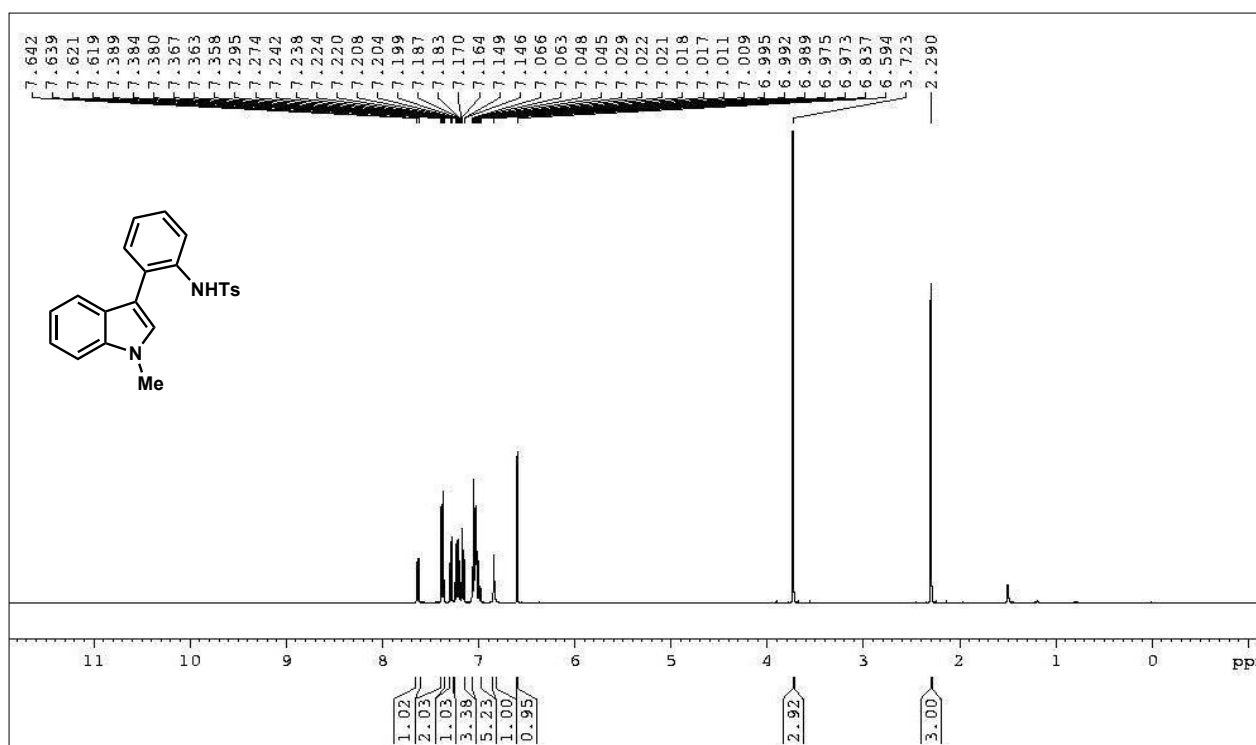


Figure : 400 MHz ¹H-NMR spectrum of 3a in CDCl₃

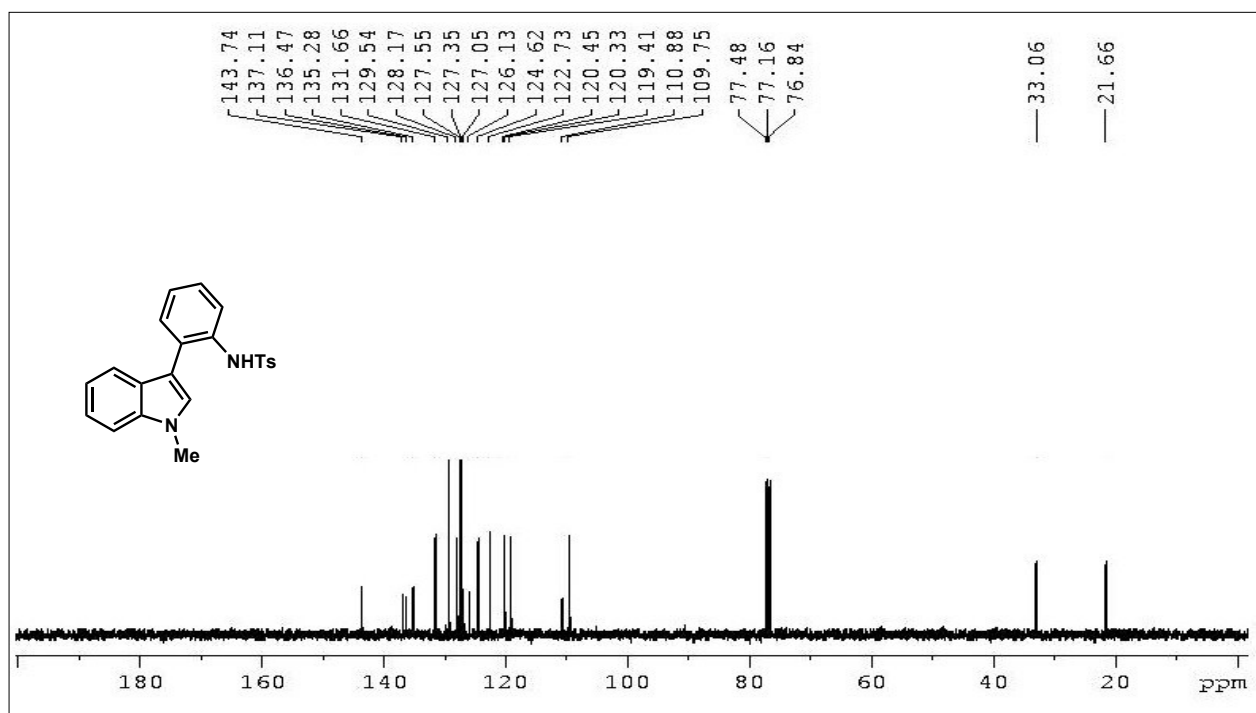


Figure : 100 MHz ¹³C-NMR spectrum of 3a in CDCl₃

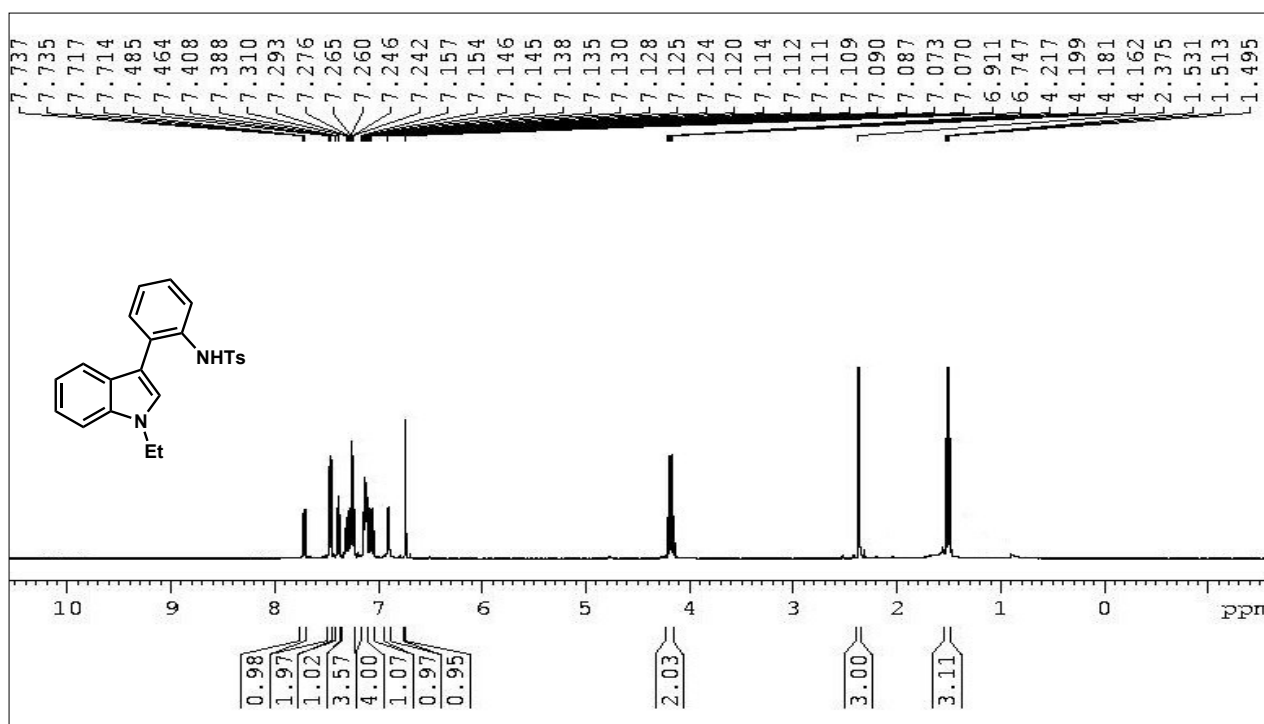


Figure : 400 MHz ¹H-NMR spectrum of **3b** in CDCl₃

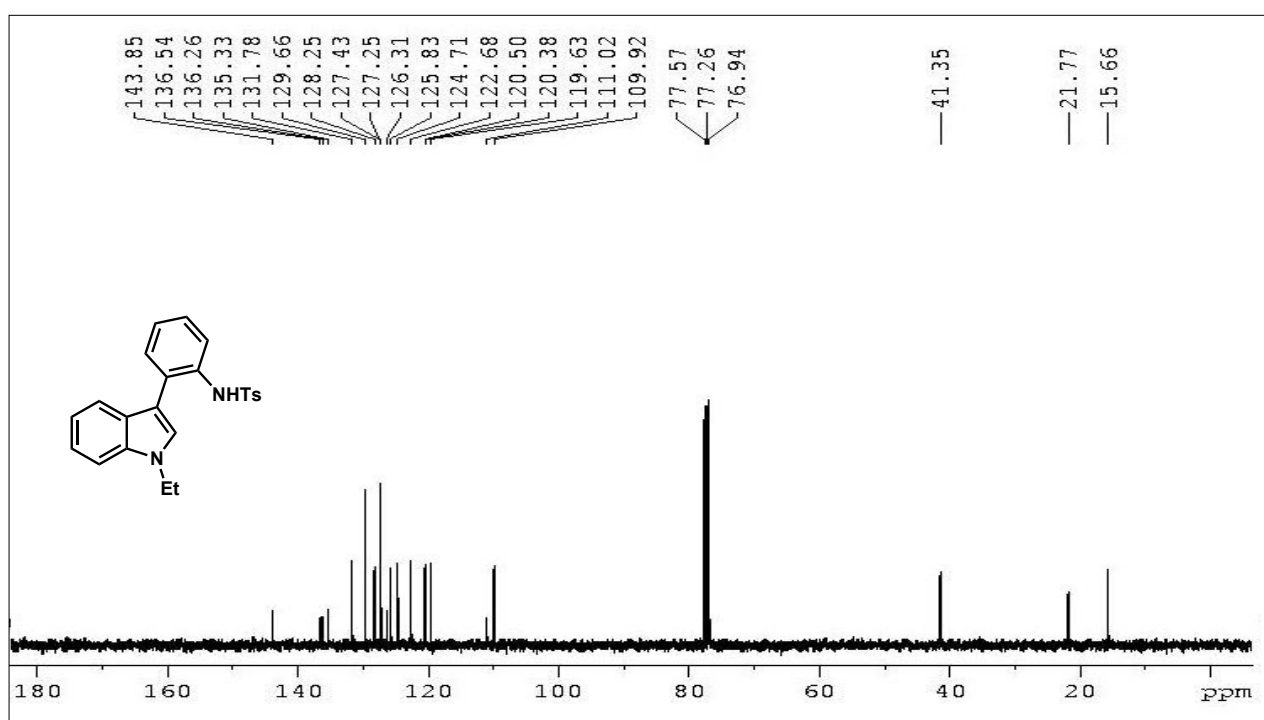


Figure : 100 MHz ¹³C-NMR spectrum of **3b** in CDCl₃

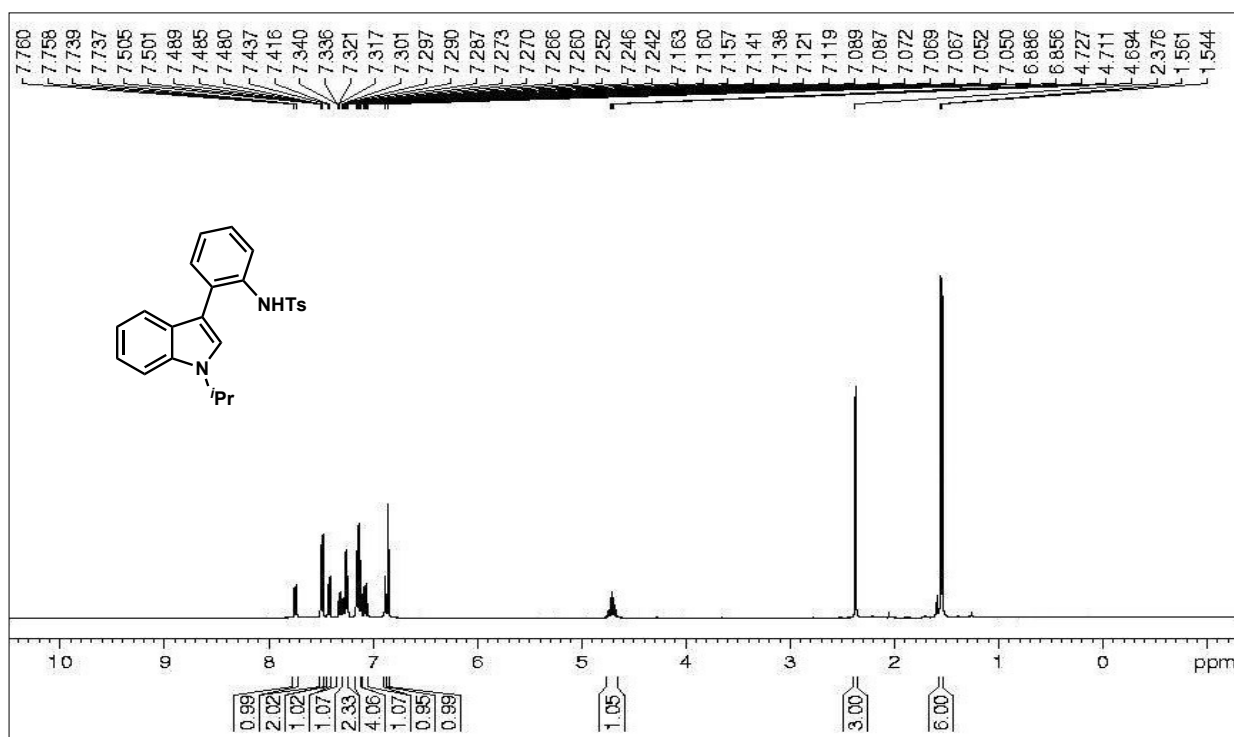


Figure : 400 MHz $^1\text{H-NMR}$ spectrum of **3c** in CDCl_3

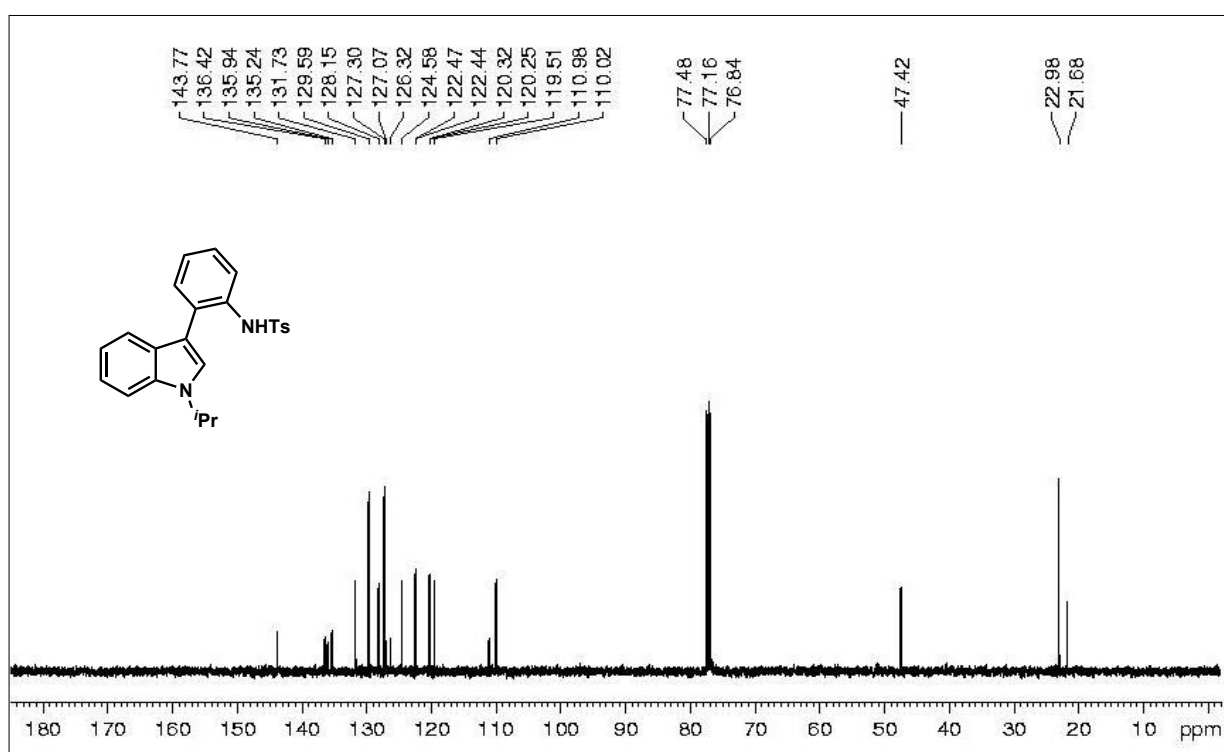


Figure : 100 MHz $^{13}\text{C-NMR}$ spectrum of **3c** in CDCl_3

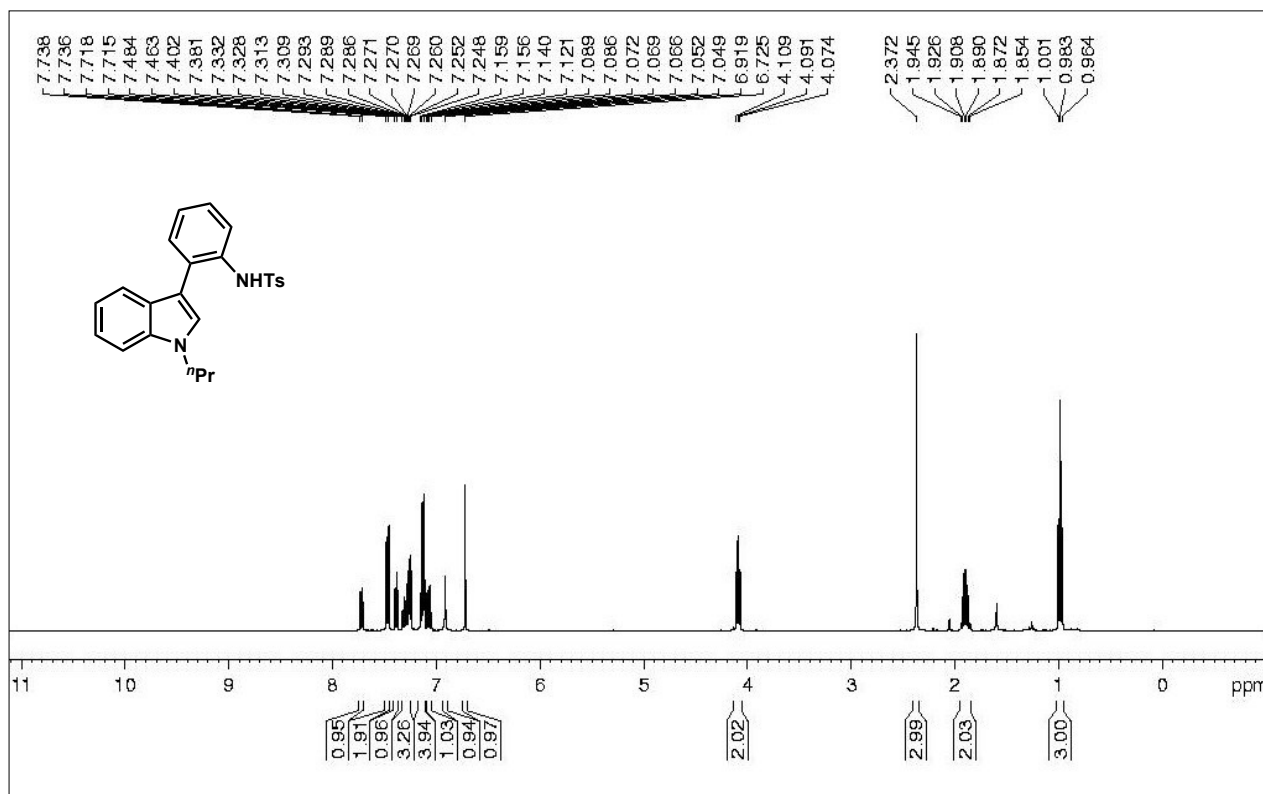


Figure : 400 MHz ¹H-NMR spectrum of **3d** in CDCl₃

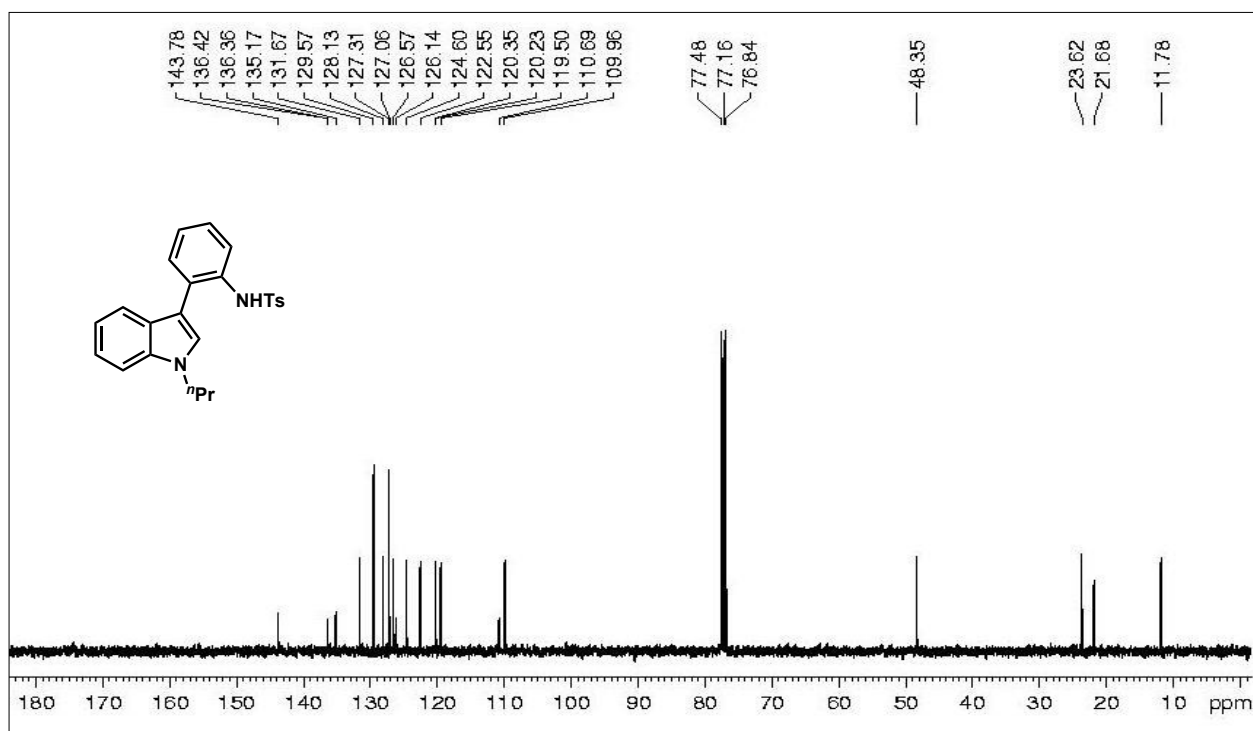


Figure : 100 MHz ¹³C-NMR spectrum of **3d** in CDCl₃

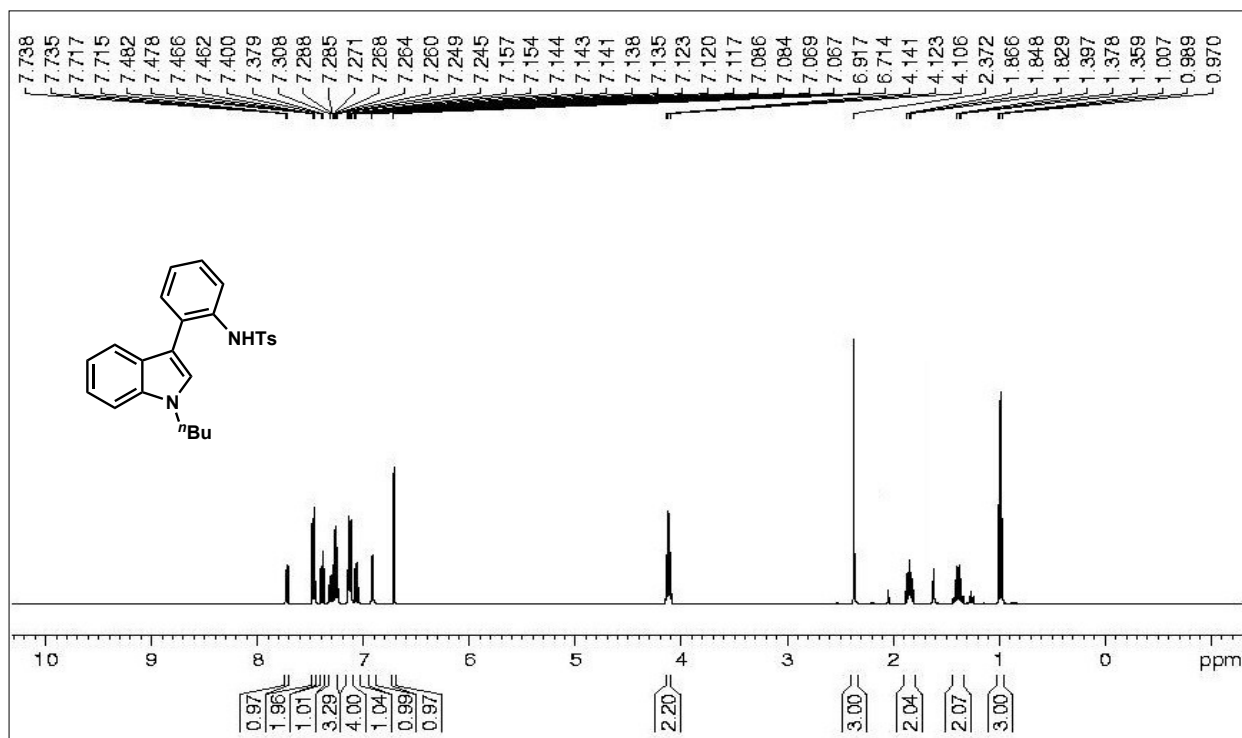


Figure : 400 MHz ¹H-NMR spectrum of **3e** in CDCl₃

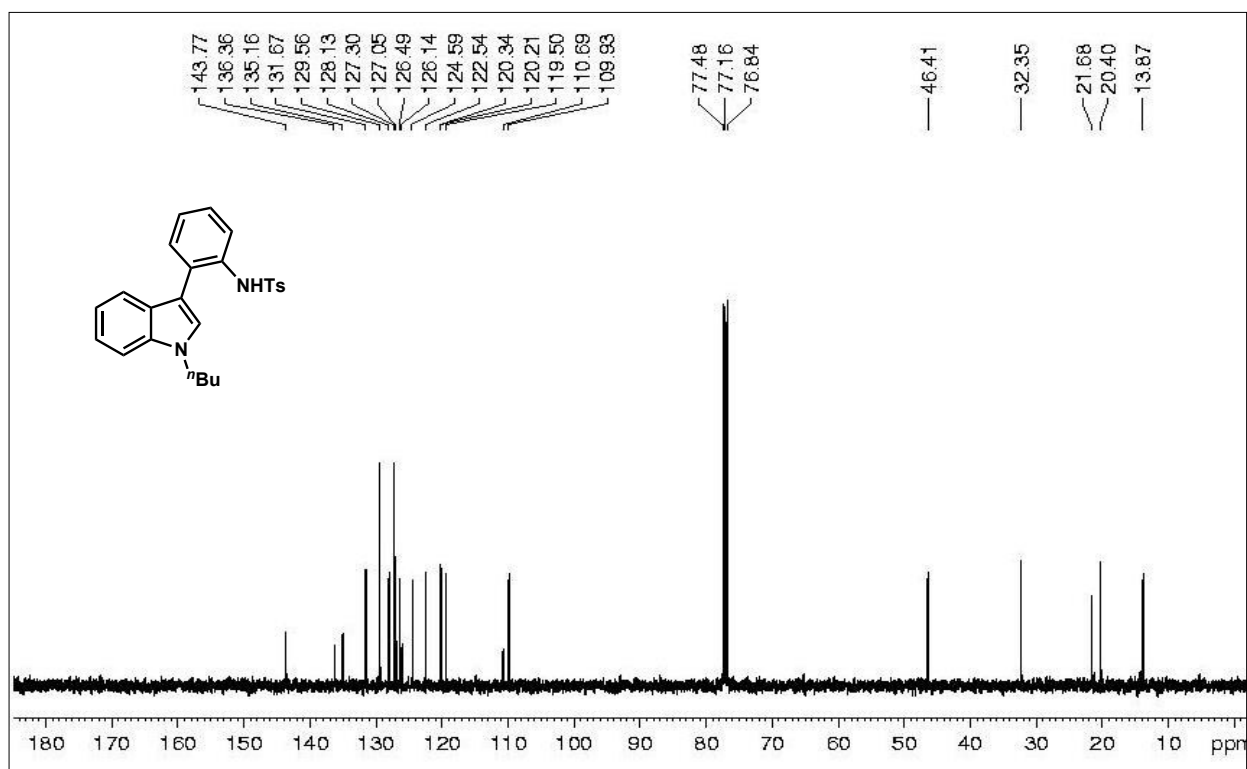


Figure : 100 MHz ¹³C-NMR spectrum of **3e** in CDCl₃

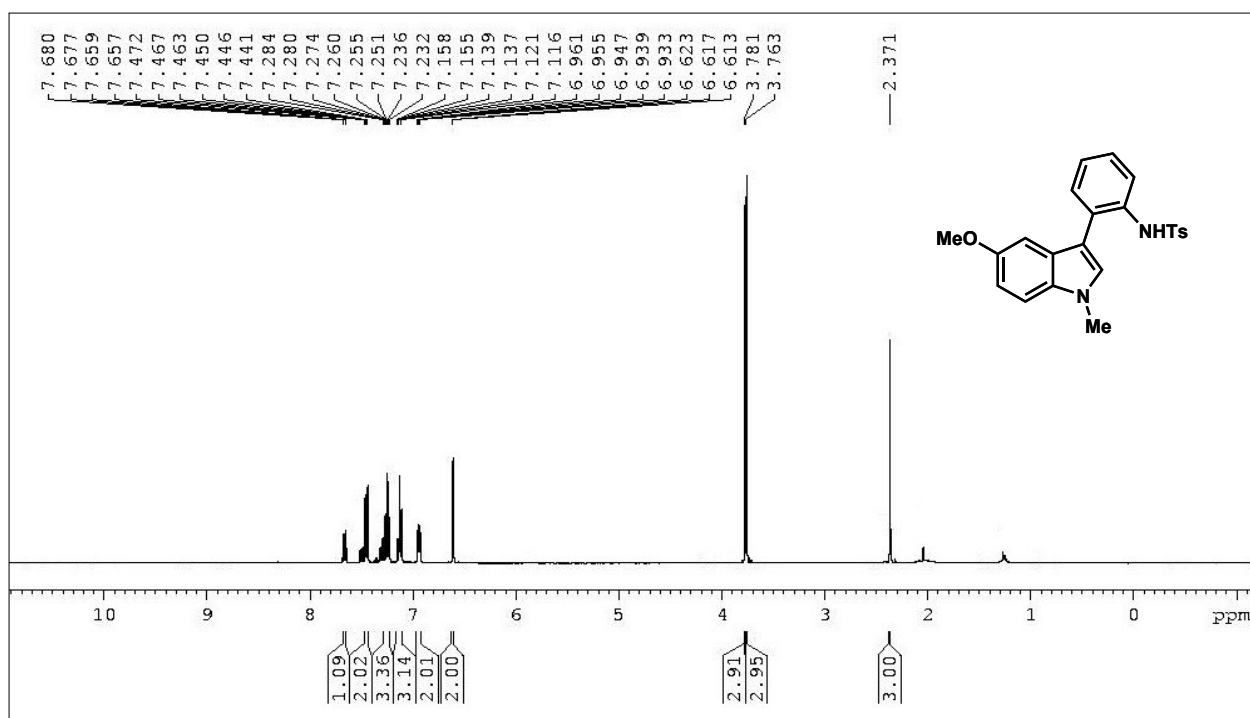


Figure : 400 MHz ^1H -NMR spectrum of **3f** in CDCl_3

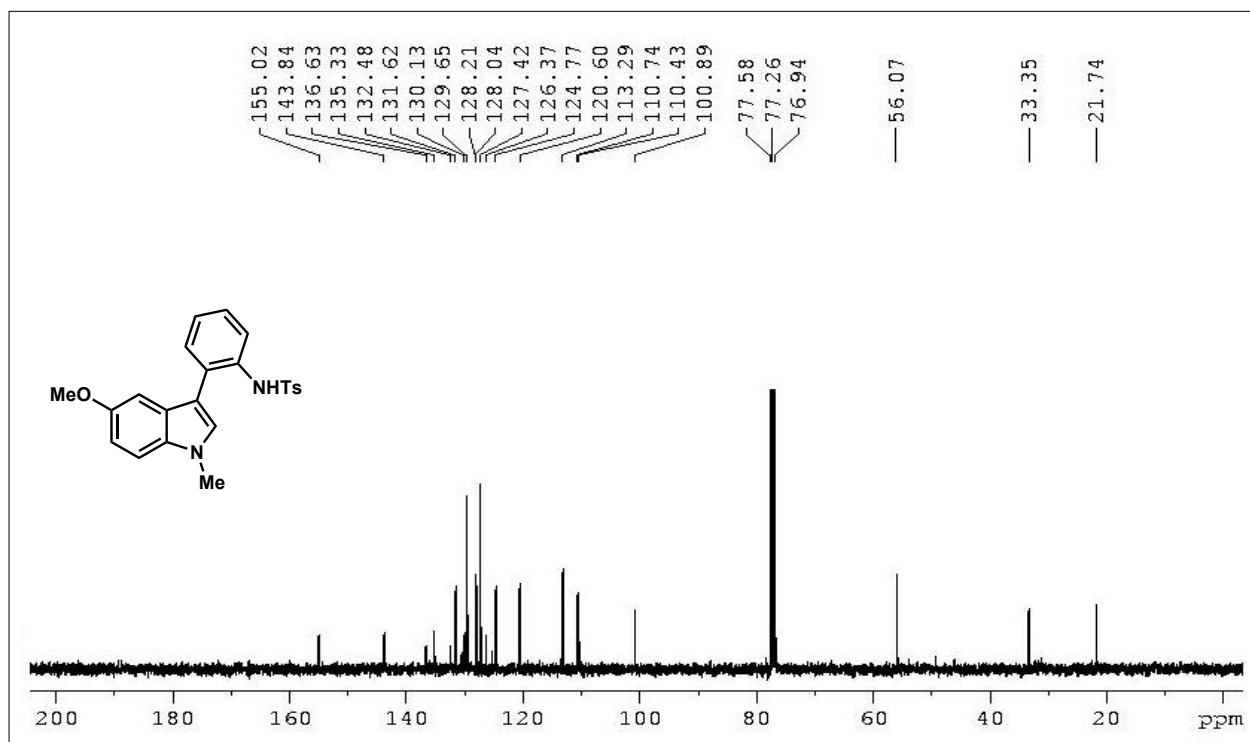


Figure : 100 MHz ^{13}C -NMR spectrum of **3f** in CDCl_3

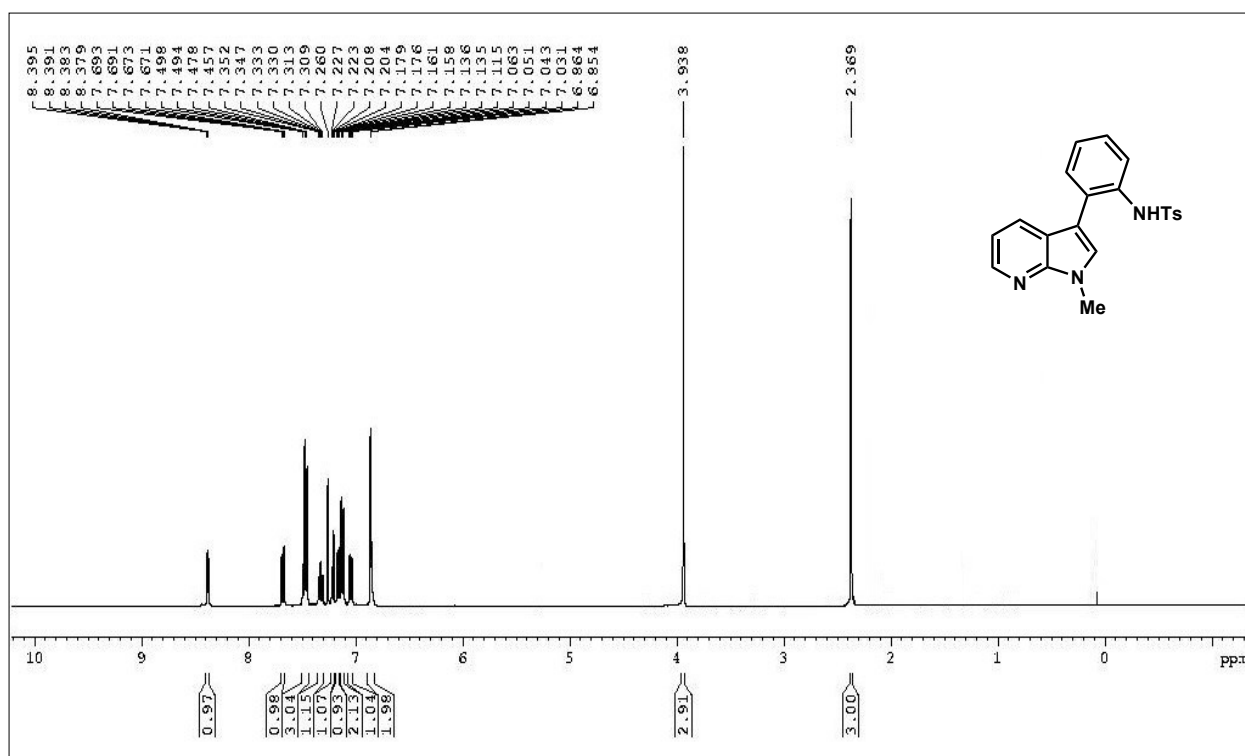


Figure : 400 MHz ¹H-NMR spectrum of **3g** in CDCl₃

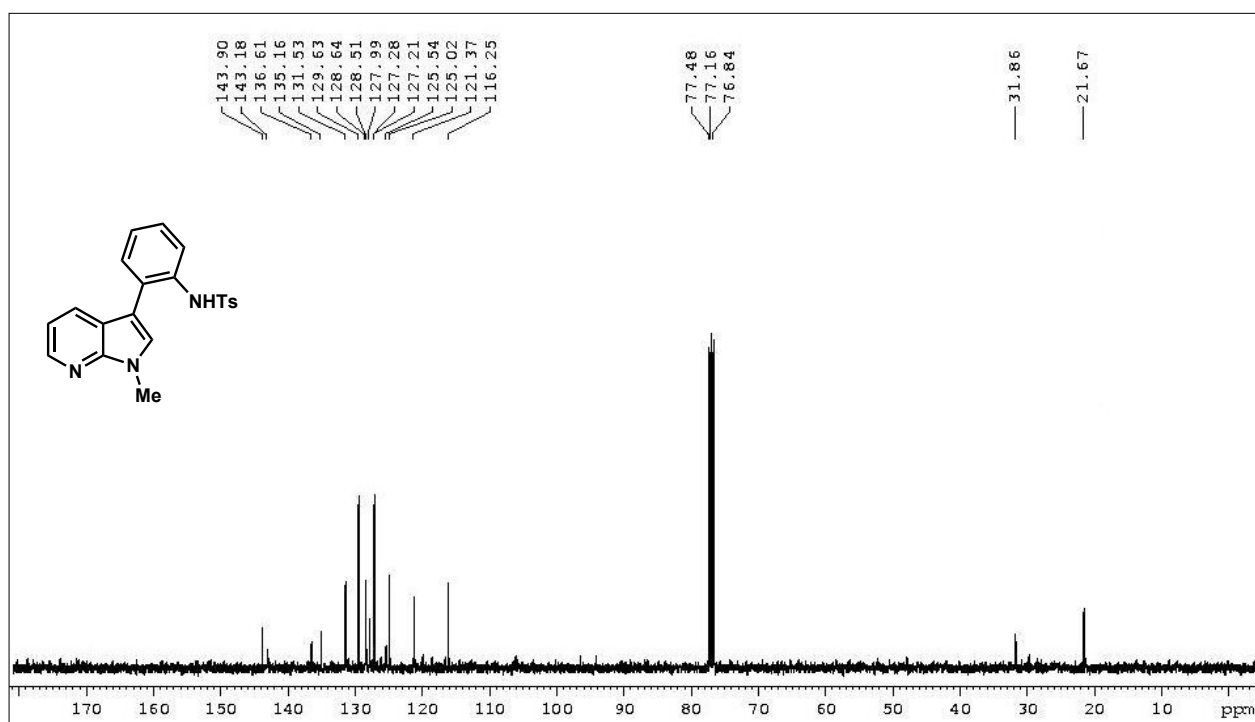


Figure : 100 MHz ¹³C-NMR spectrum of **3g** in CDCl₃

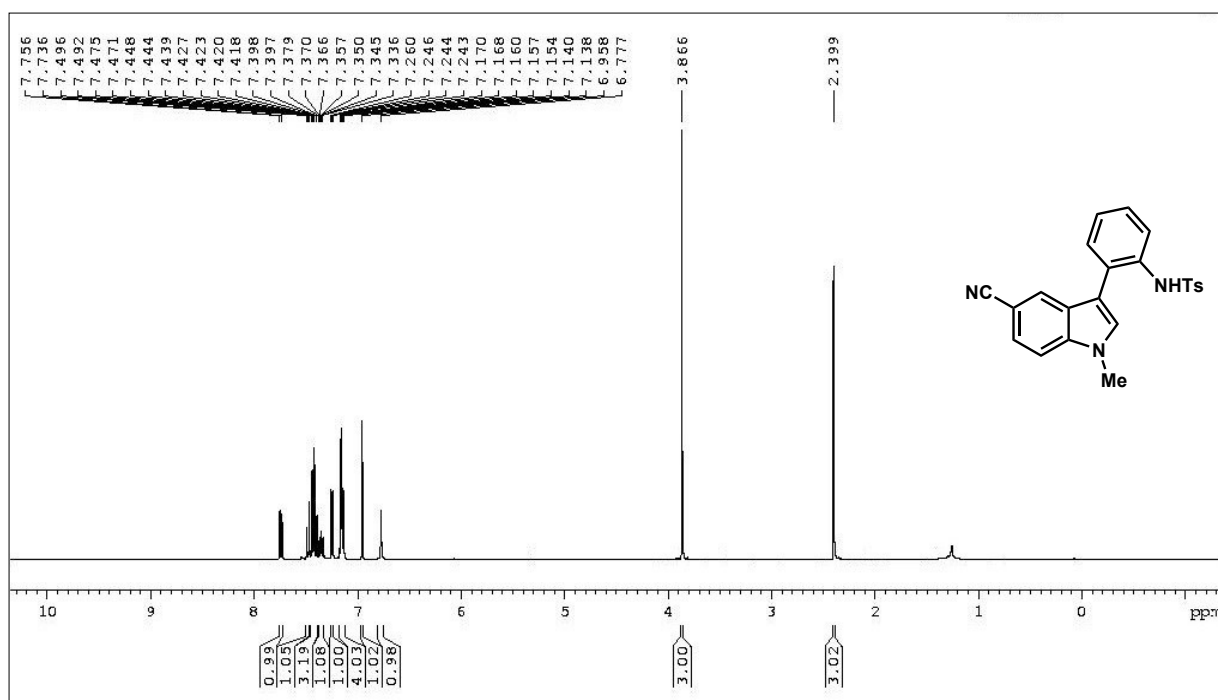


Figure : 400 MHz ^1H -NMR spectrum of **3h** in CDCl_3

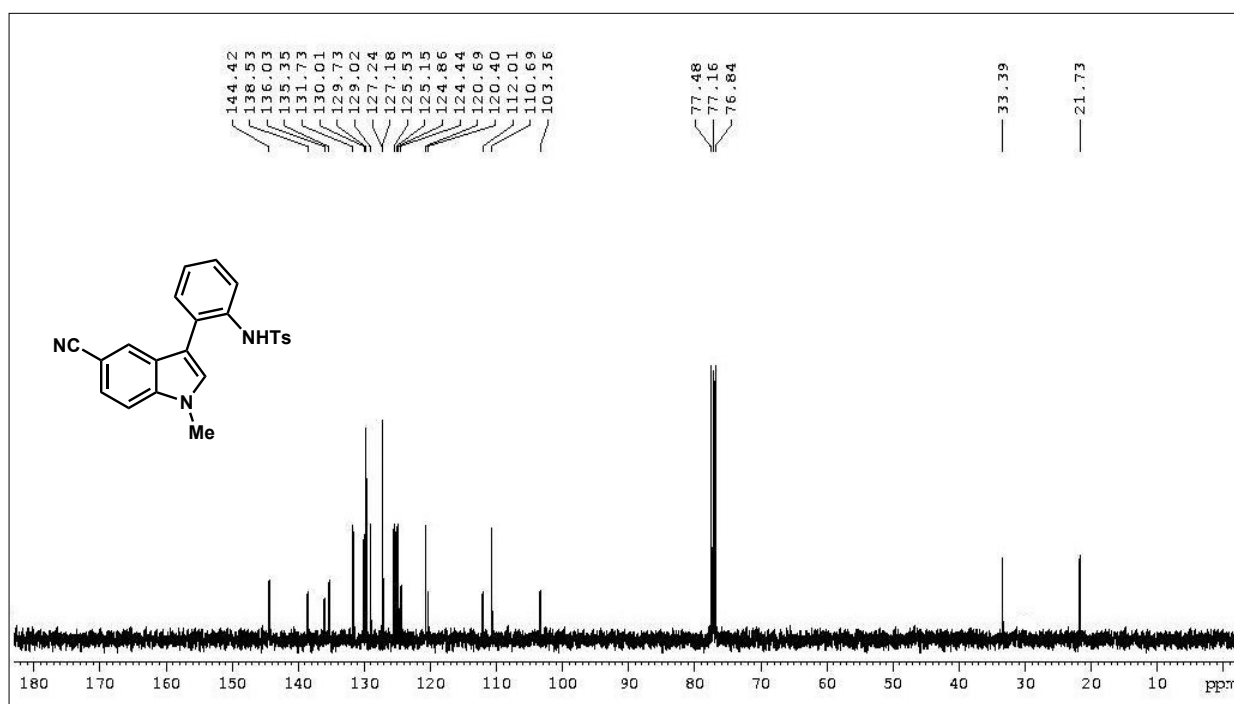


Figure : 100 MHz ^{13}C -NMR spectrum of **3h** in CDCl_3

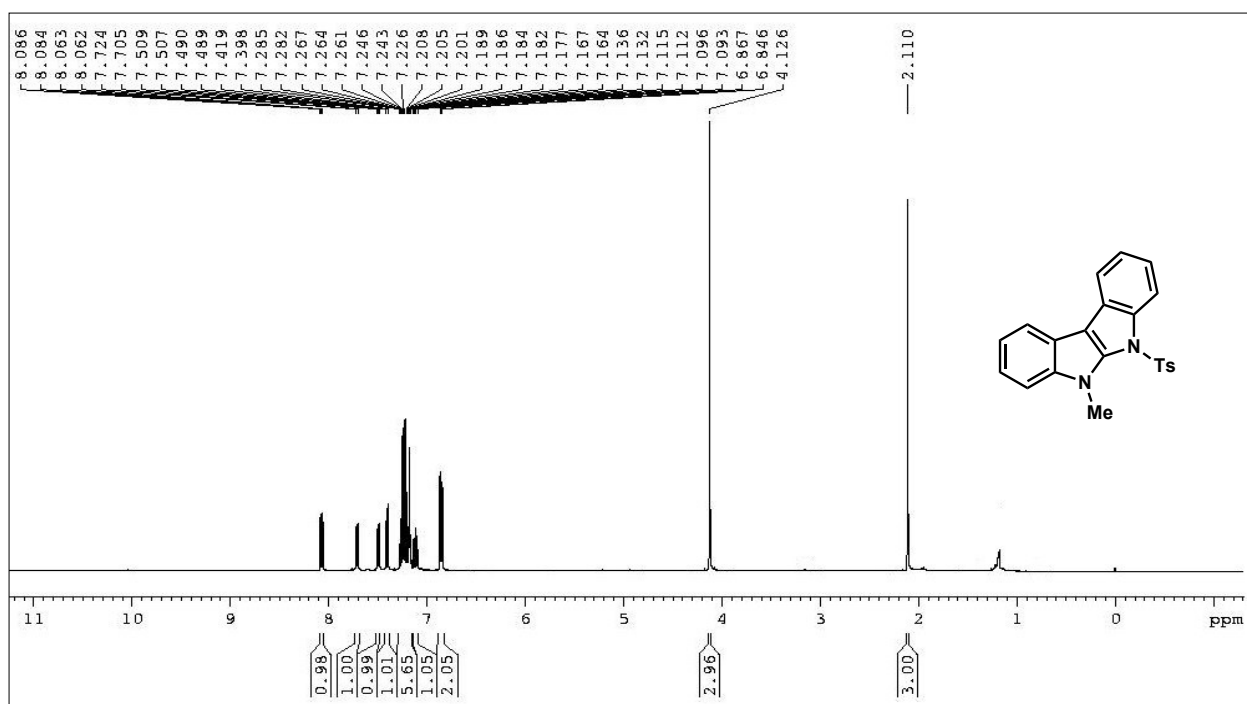


Figure : 400 MHz ^1H -NMR spectrum of **4a** in CDCl_3

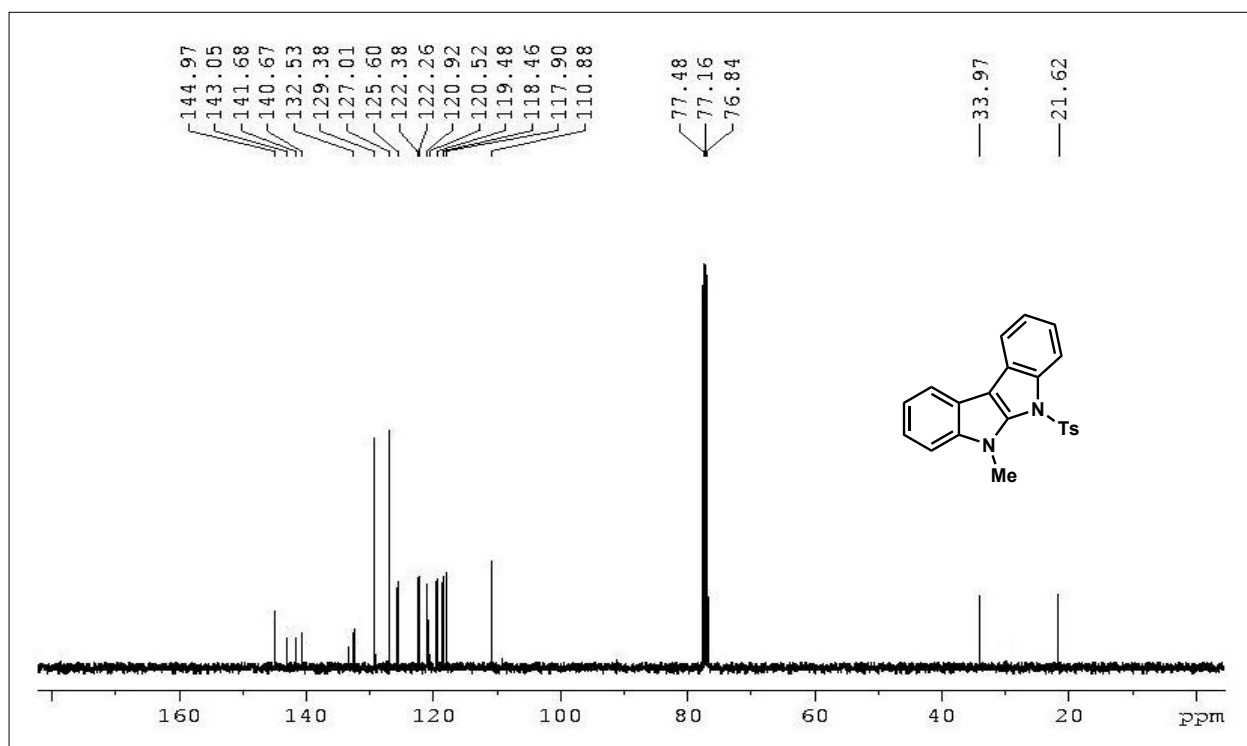


Figure : 100 MHz ^{13}C -NMR spectrum of **4a** in CDCl_3

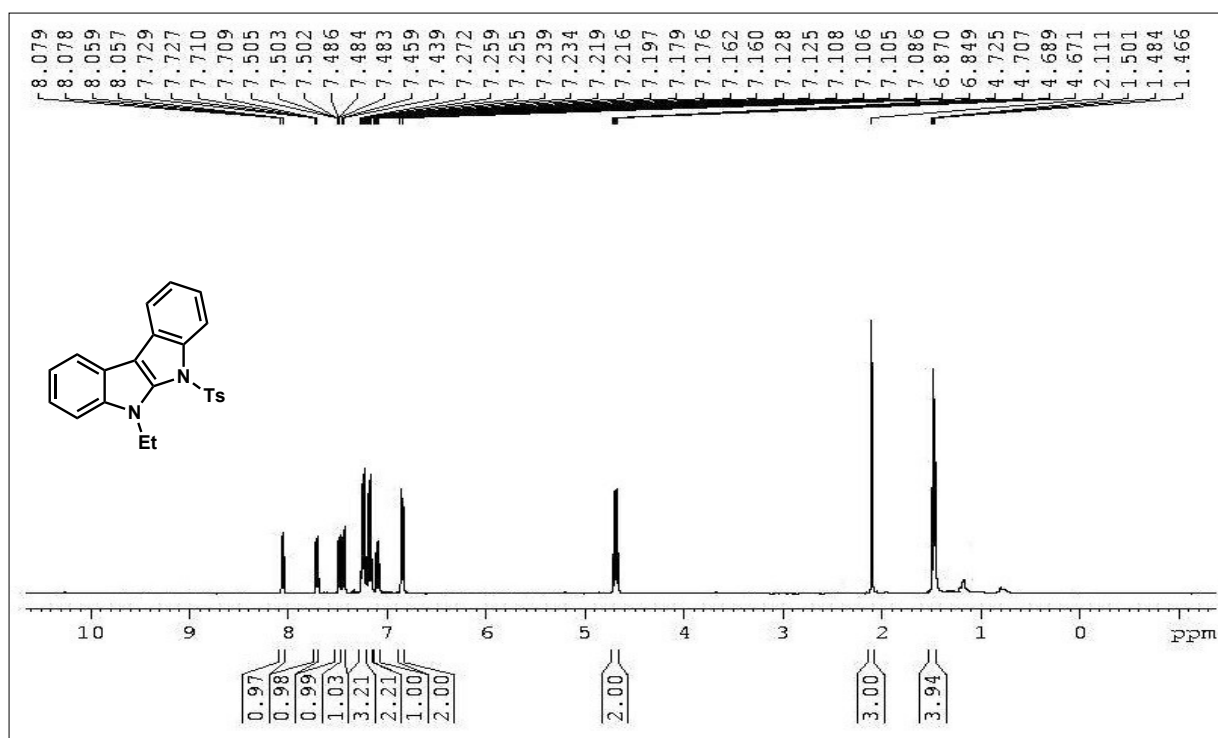


Figure : 400 MHz ^1H -NMR spectrum of **4b** in CDCl_3

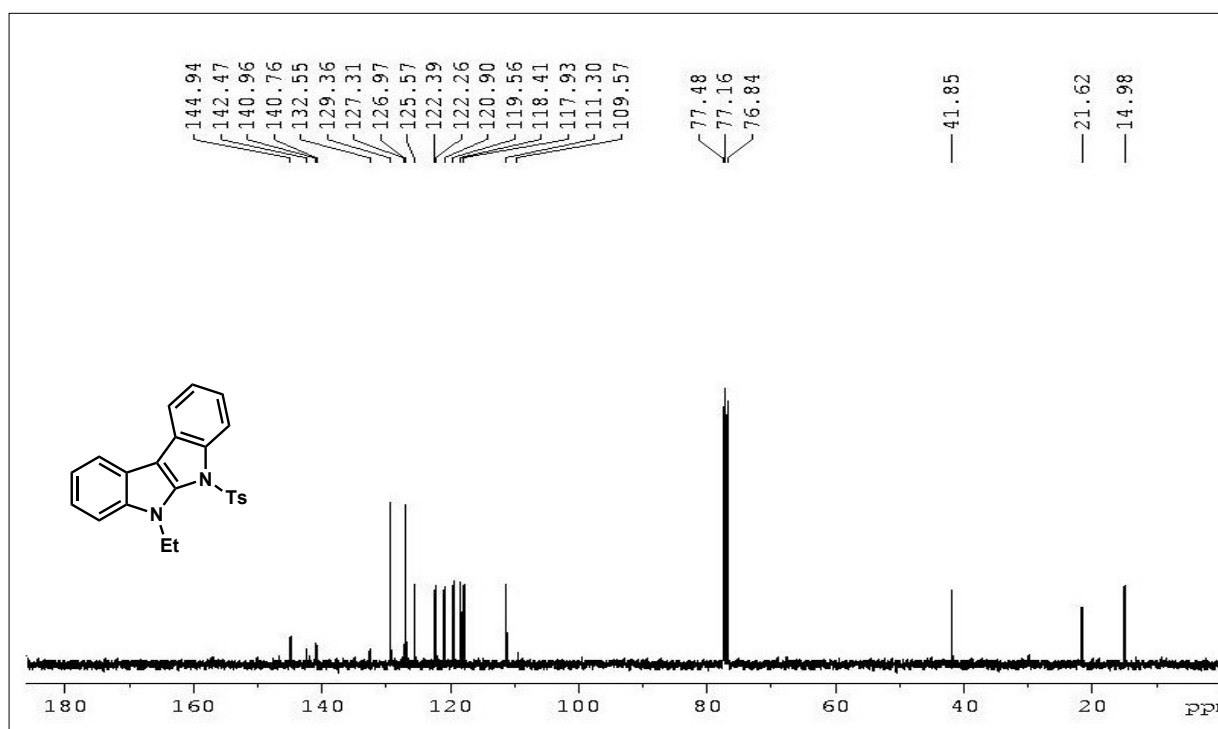


Figure : 100 MHz ^{13}C -NMR spectrum of **4b** in CDCl_3

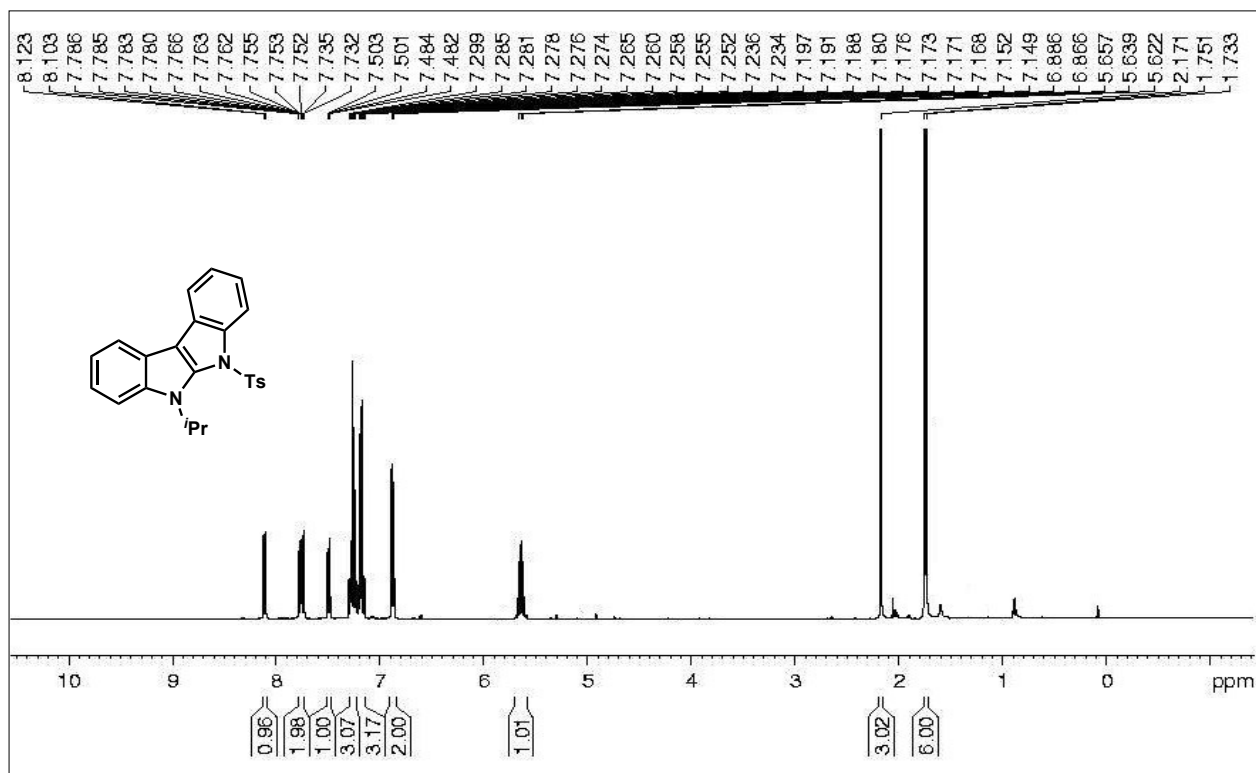


Figure : 400 MHz ¹H-NMR spectrum of 4c in CDCl₃

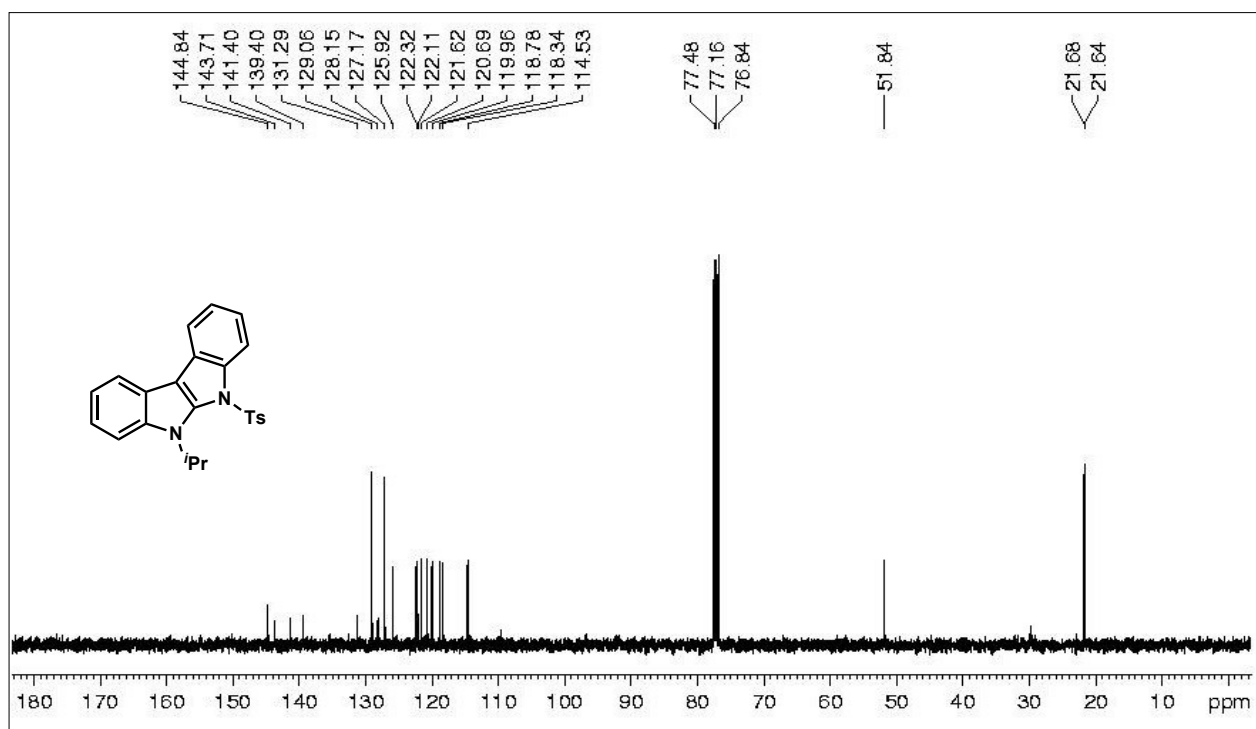


Figure : 100 MHz ¹³C-NMR spectrum of 4c in CDCl₃

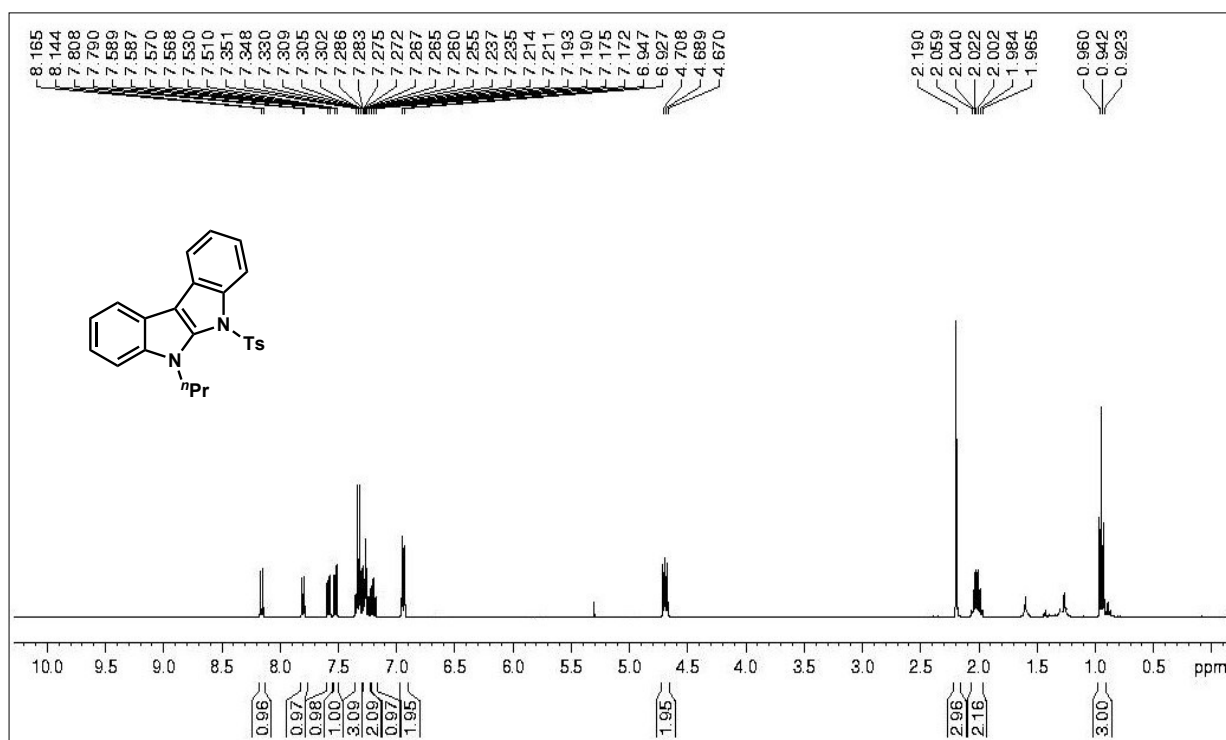


Figure : 400 MHz ¹H-NMR spectrum of **4d** in CDCl₃

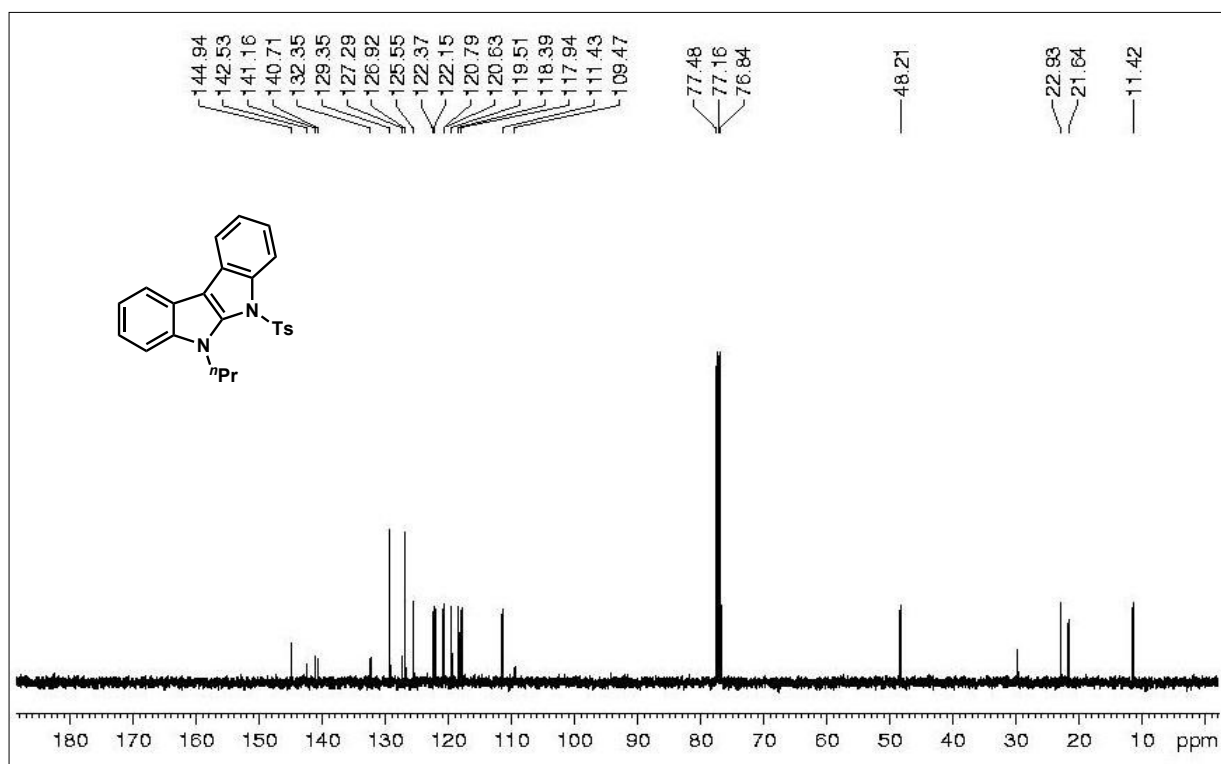


Figure : 100 MHz ¹³C-NMR spectrum of **4d** in CDCl₃

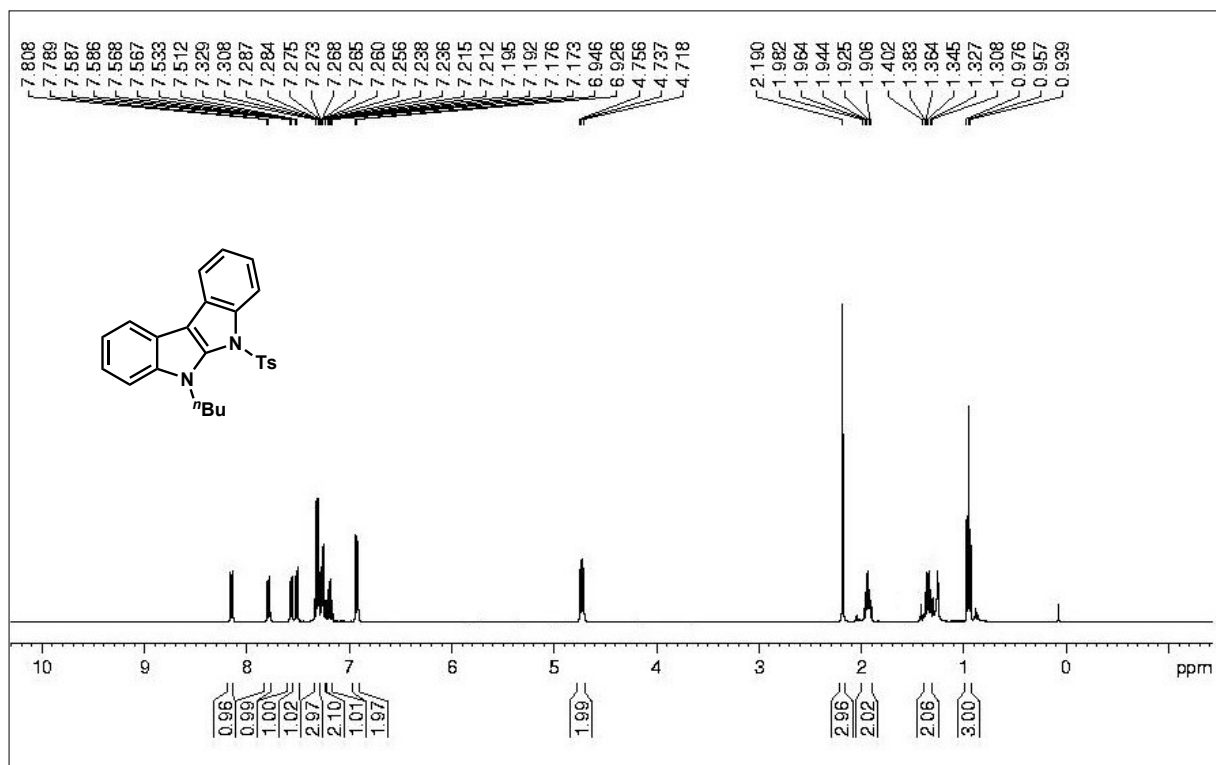


Figure : 400 MHz $^1\text{H-NMR}$ spectrum of **4e** in CDCl_3

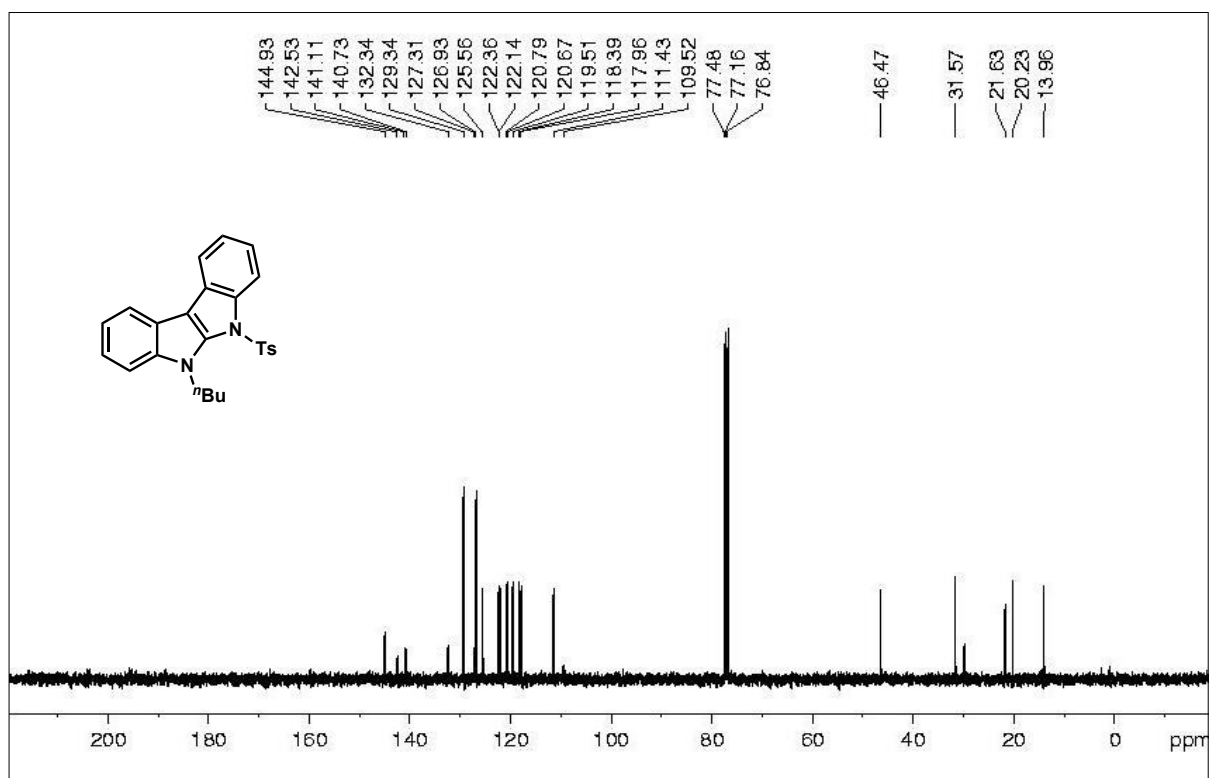


Figure : 100 MHz $^{13}\text{C-NMR}$ spectrum of **4e** in CDCl_3

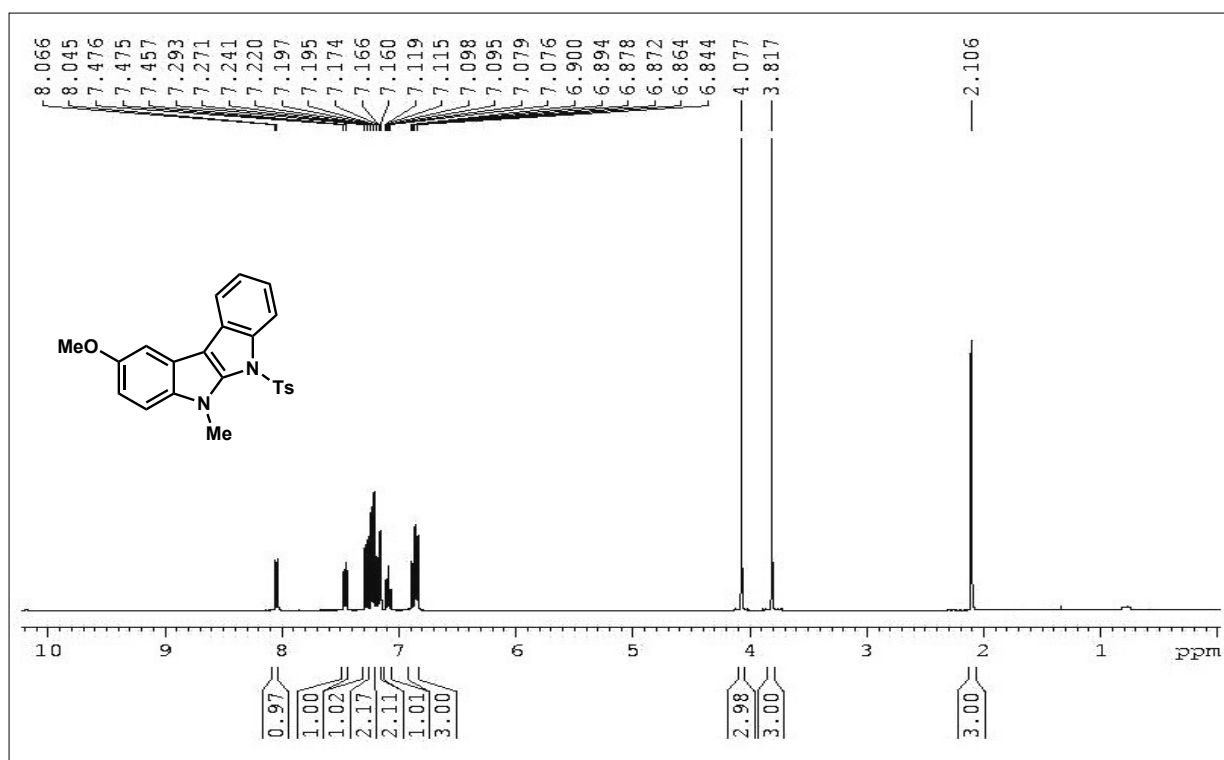


Figure : 400 MHz ^1H -NMR spectrum of **4f** in CDCl_3

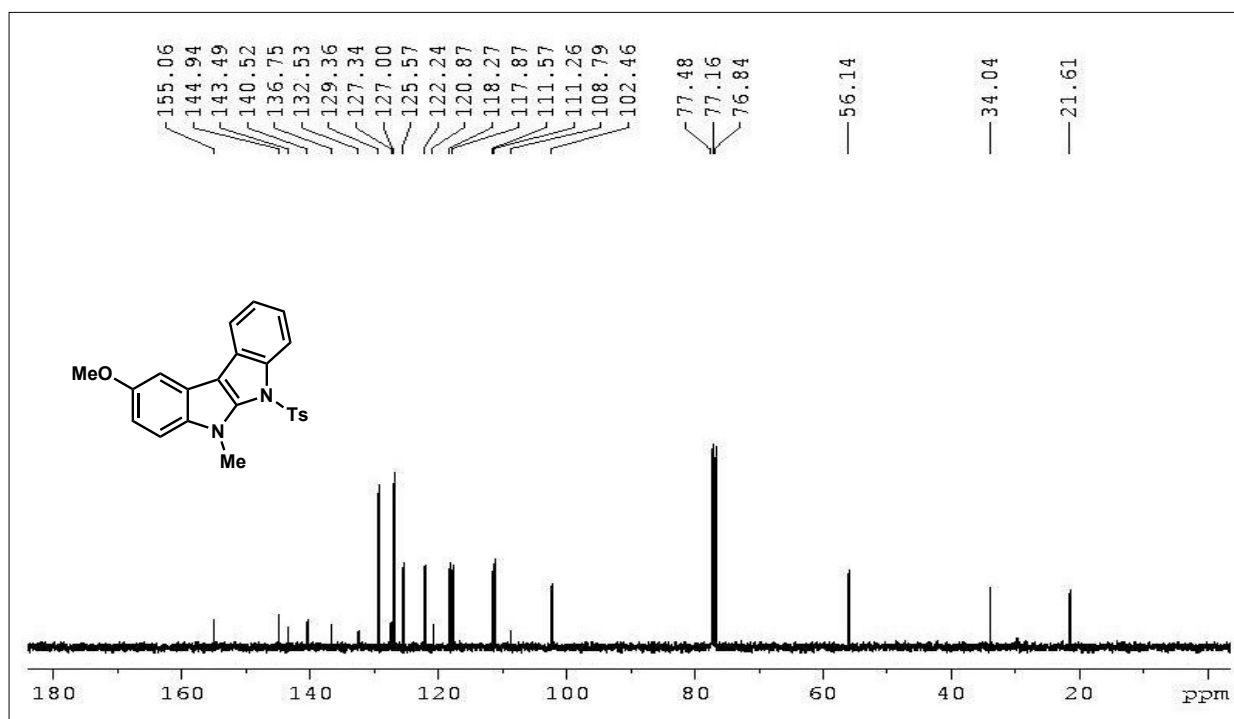


Figure : 100 MHz ^{13}C -NMR spectrum of **4f** in CDCl_3

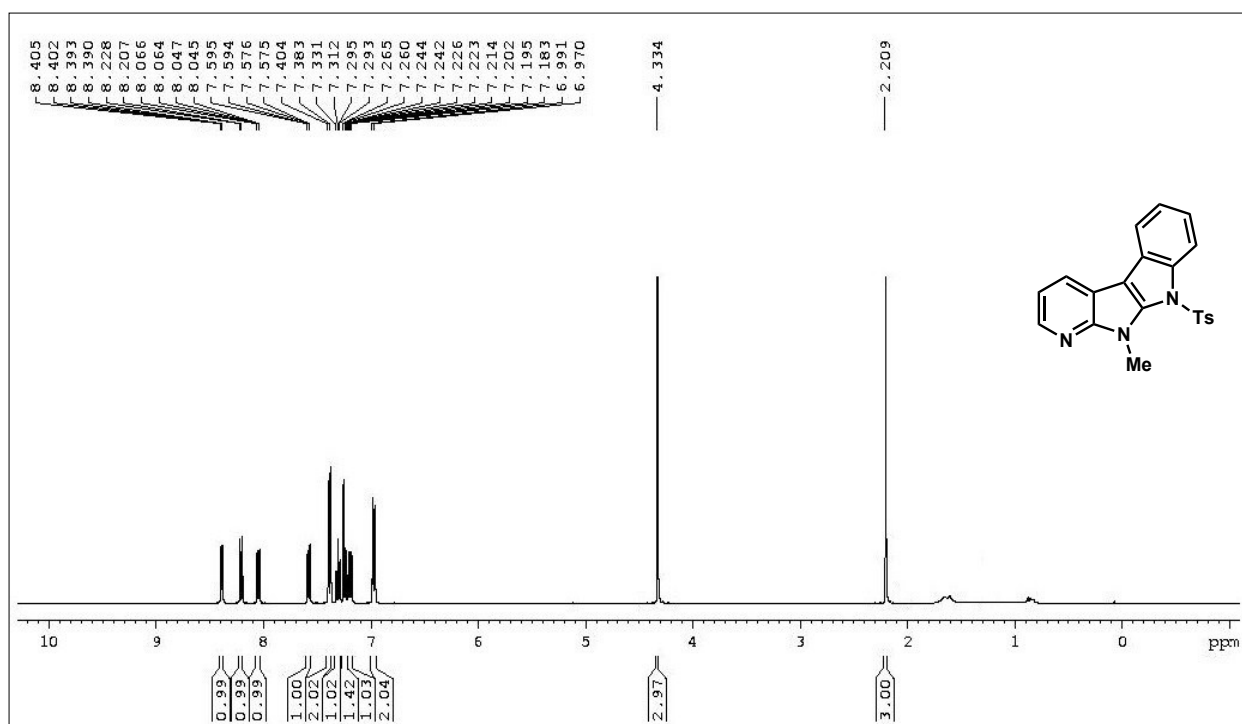


Figure : 400 MHz ^1H -NMR spectrum of **4g** in CDCl_3

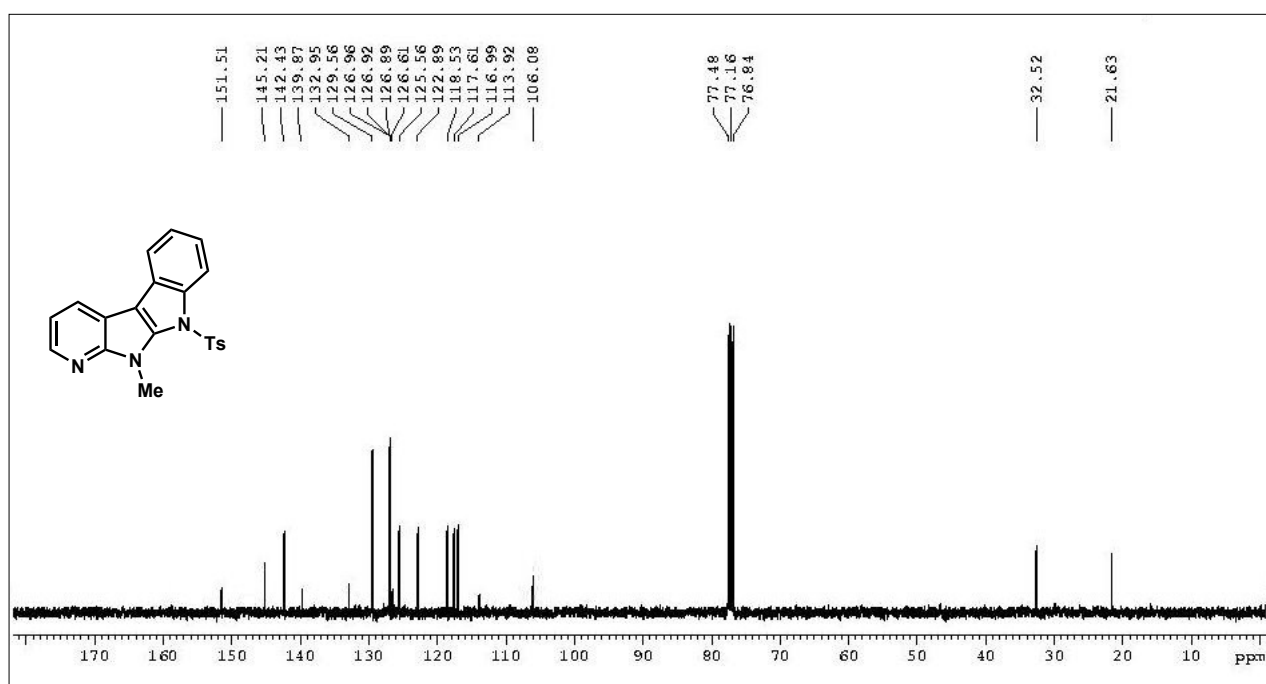
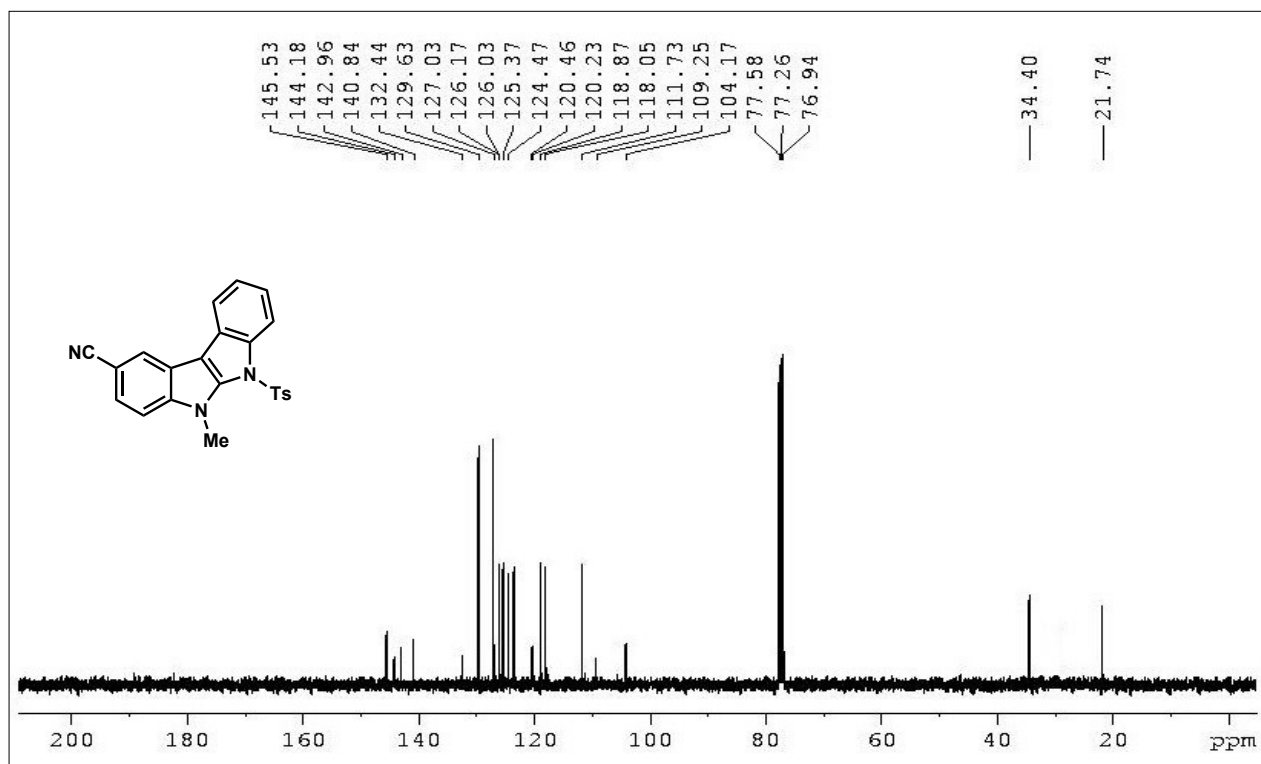
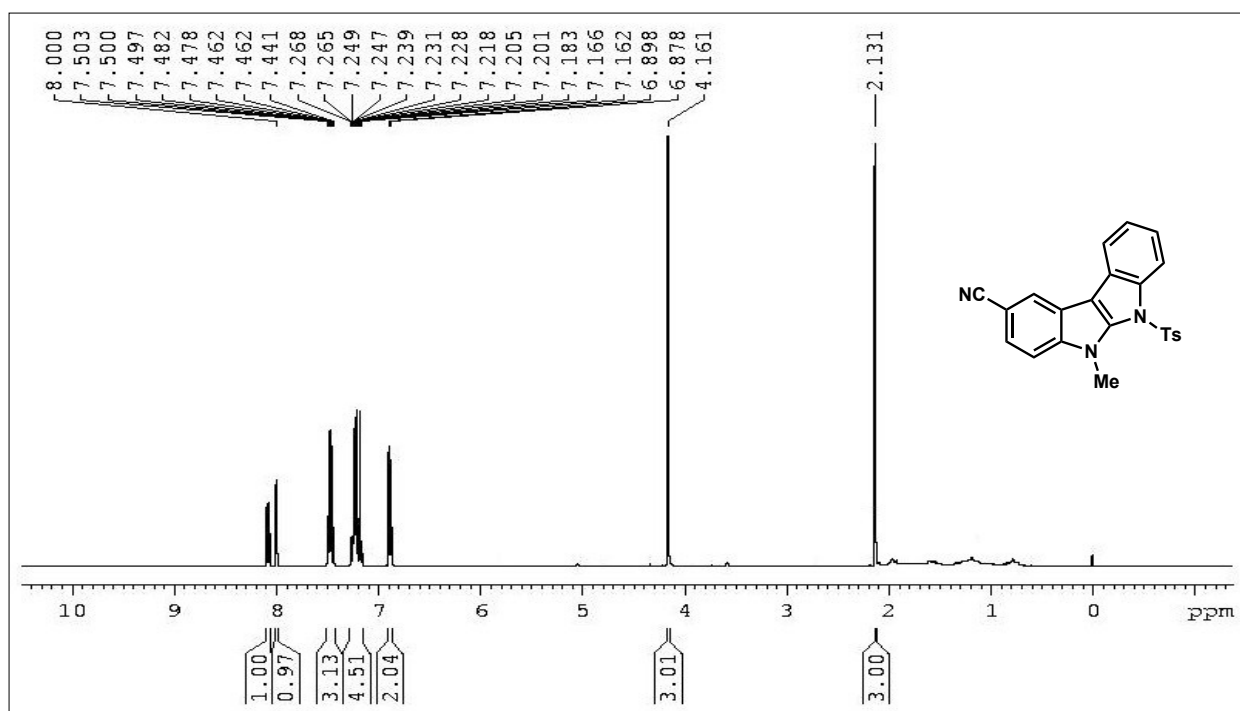


Figure : 100 MHz ^{13}C -NMR spectrum of **4g** in CDCl_3



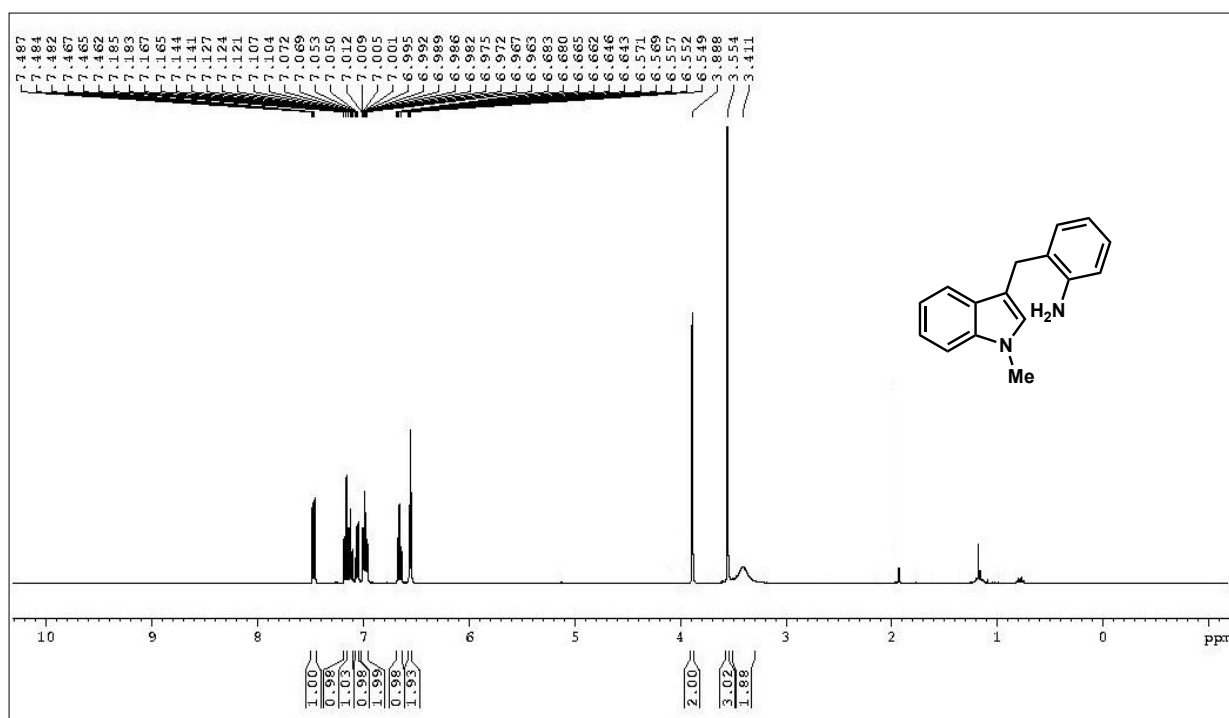


Figure : 400 MHz ^1H -NMR spectrum of **12a** in CDCl_3

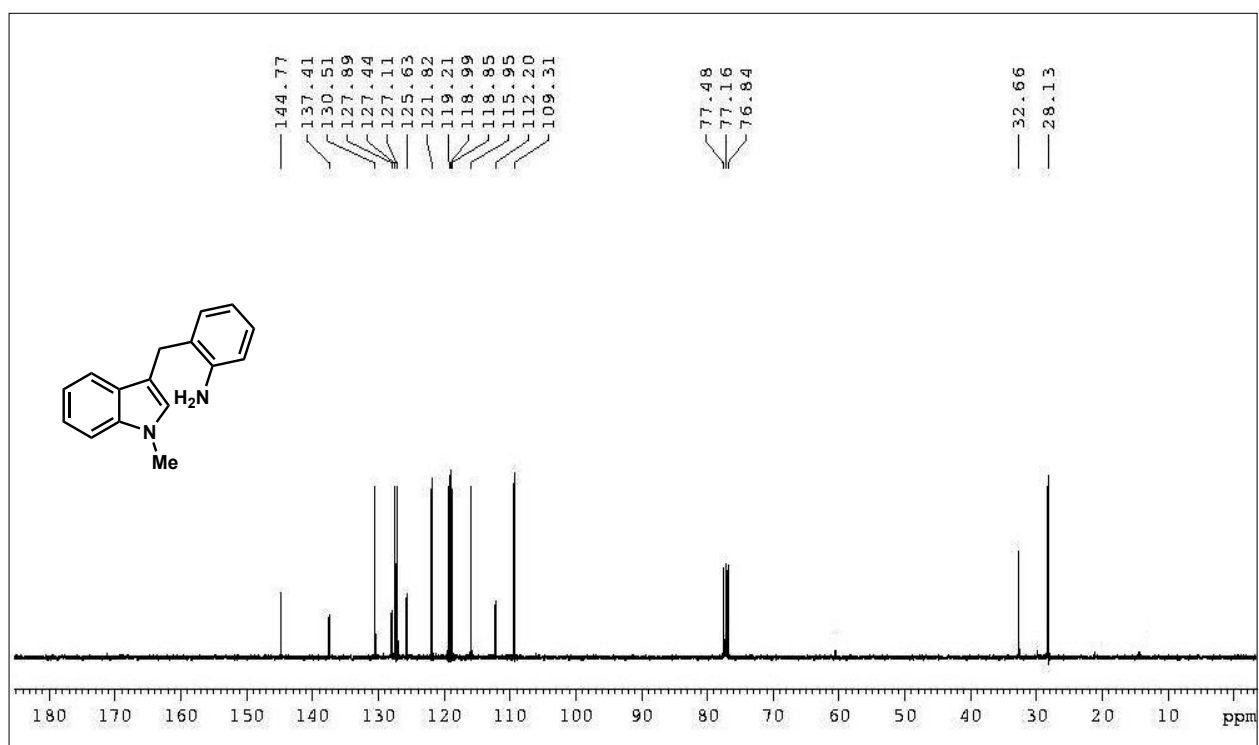


Figure : 100 MHz ^{13}C -NMR spectrum of **12a** in CDCl_3

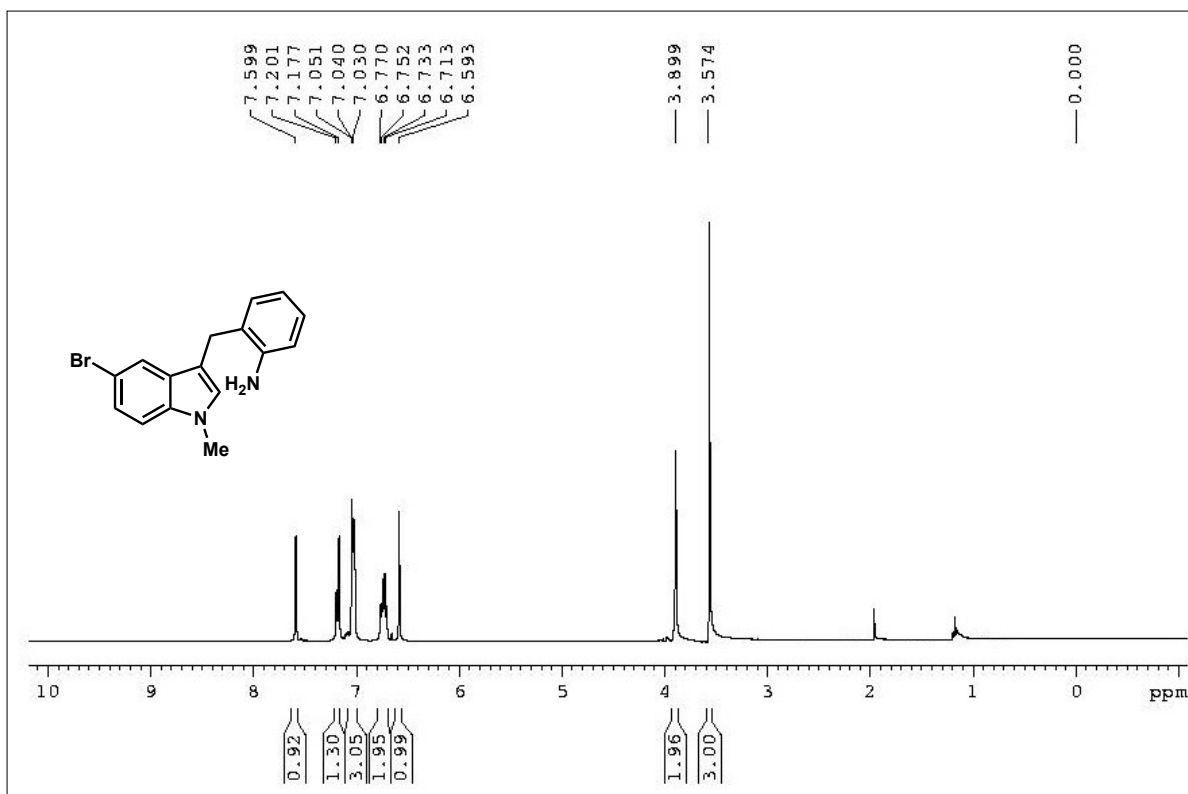


Figure : 400 MHz ¹H-NMR spectrum of **12b** in CDCl₃

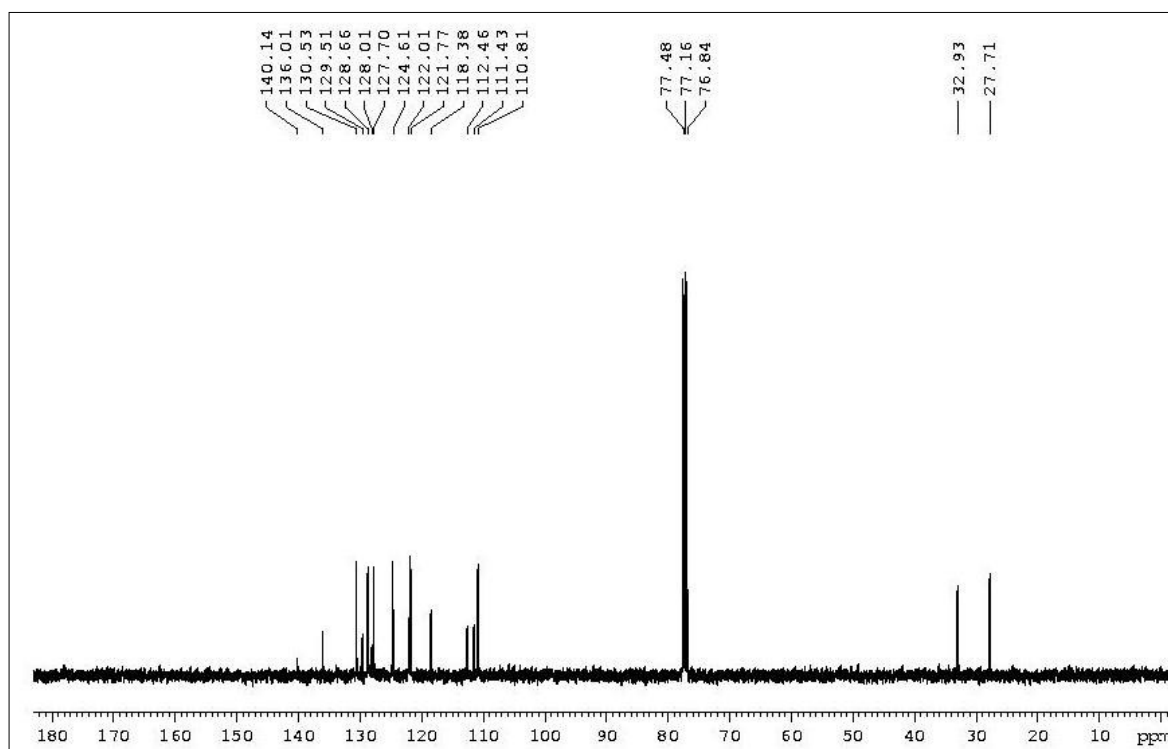


Figure : 100 MHz ¹³C-NMR spectrum of **12b** in CDCl₃

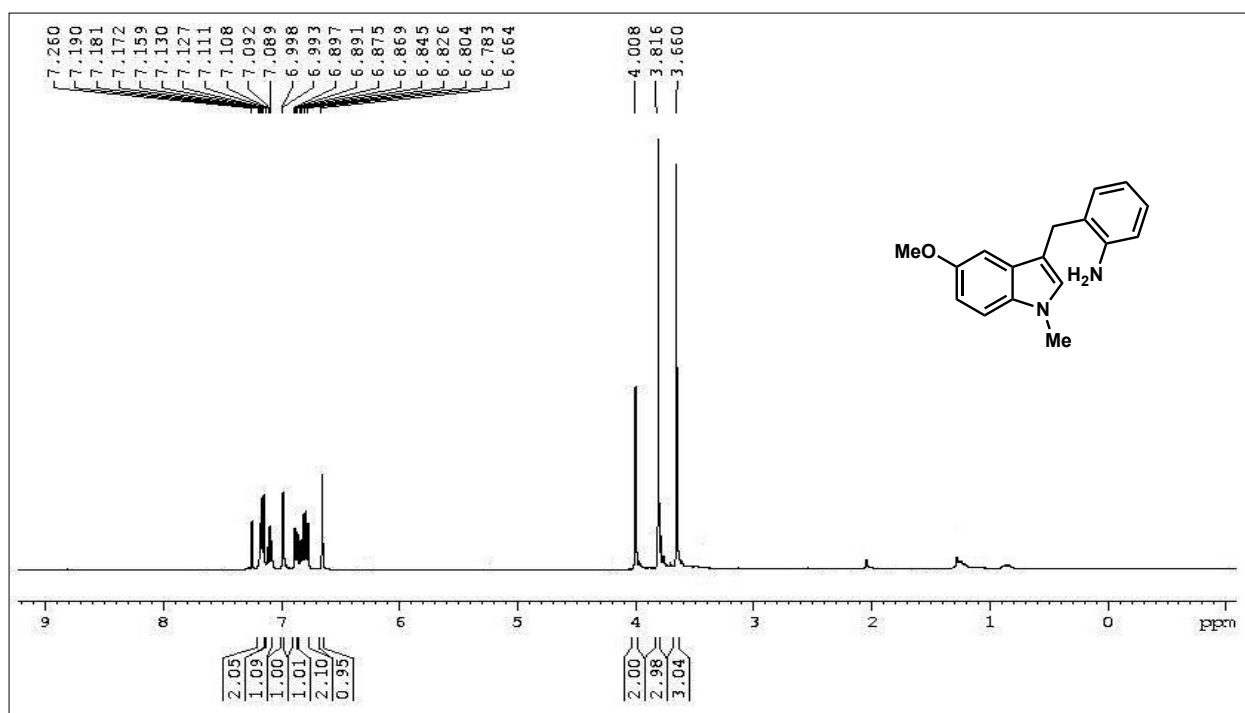


Figure : 400 MHz ¹H-NMR spectrum of **12c** in CDCl₃

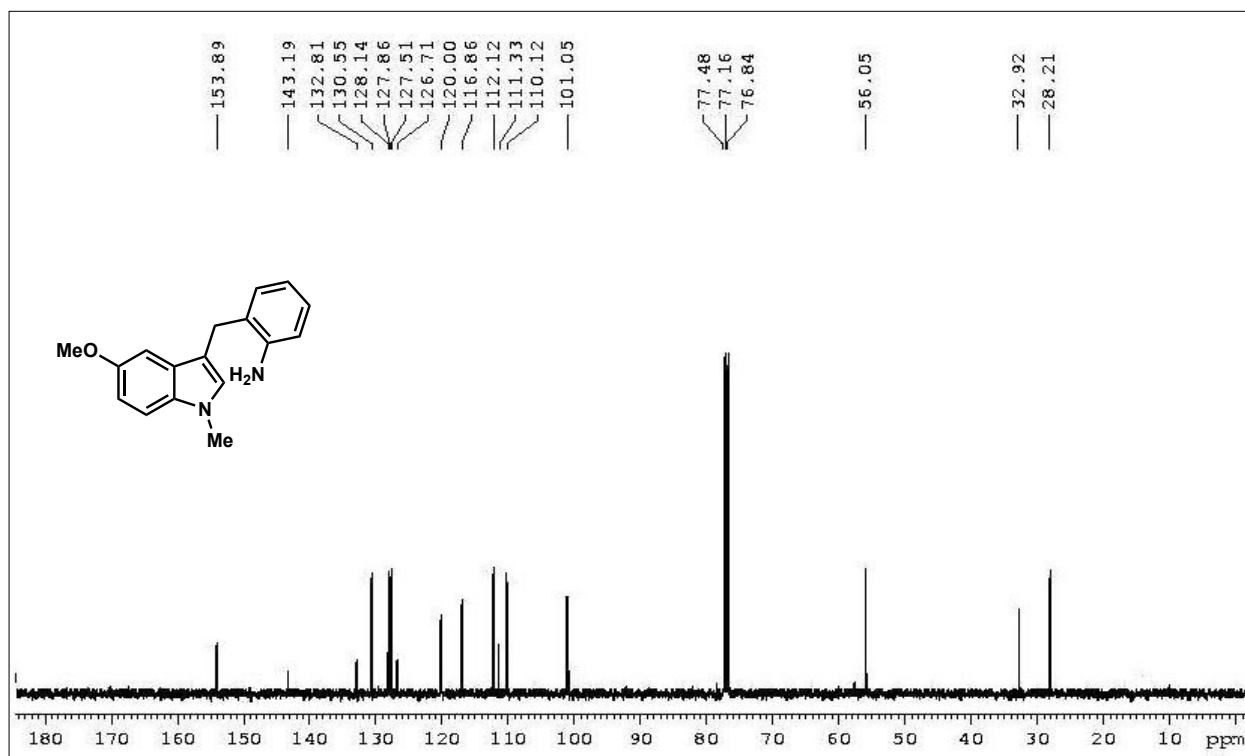


Figure : 100 MHz ¹³C-NMR spectrum of **12c** in CDCl₃

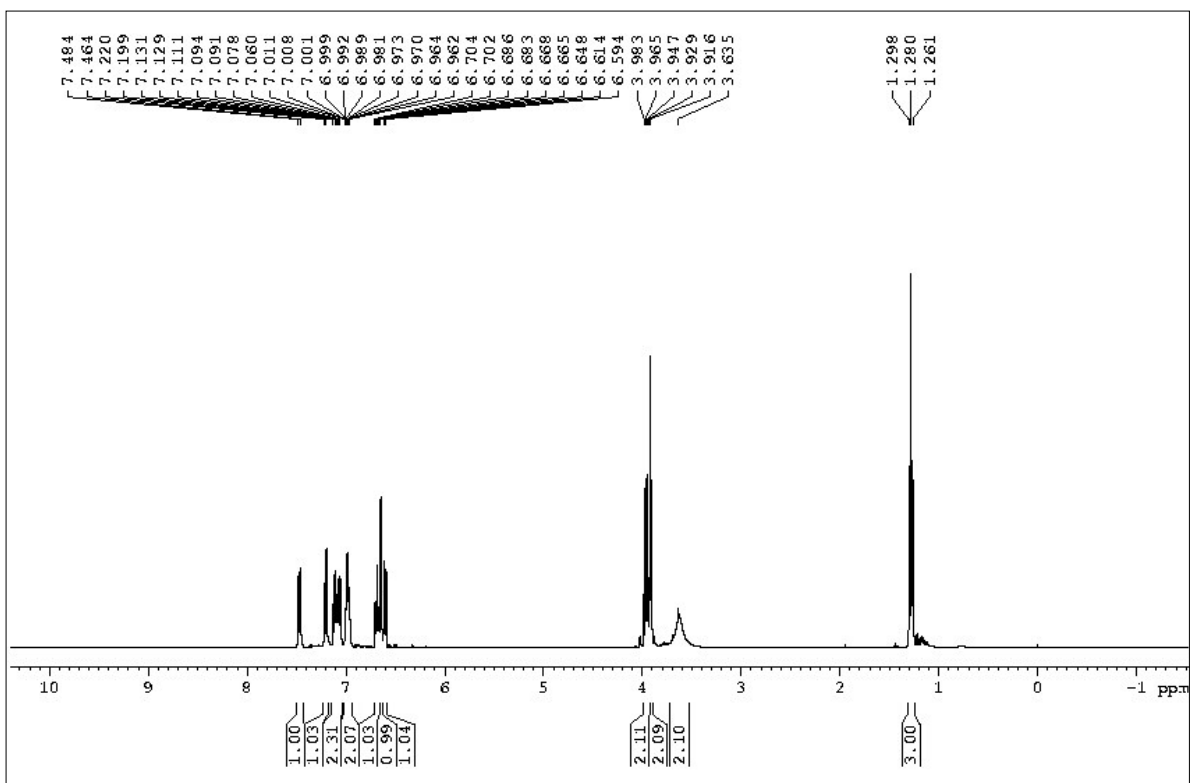


Figure : 400 MHz ^1H -NMR spectrum of **12d** in CDCl_3

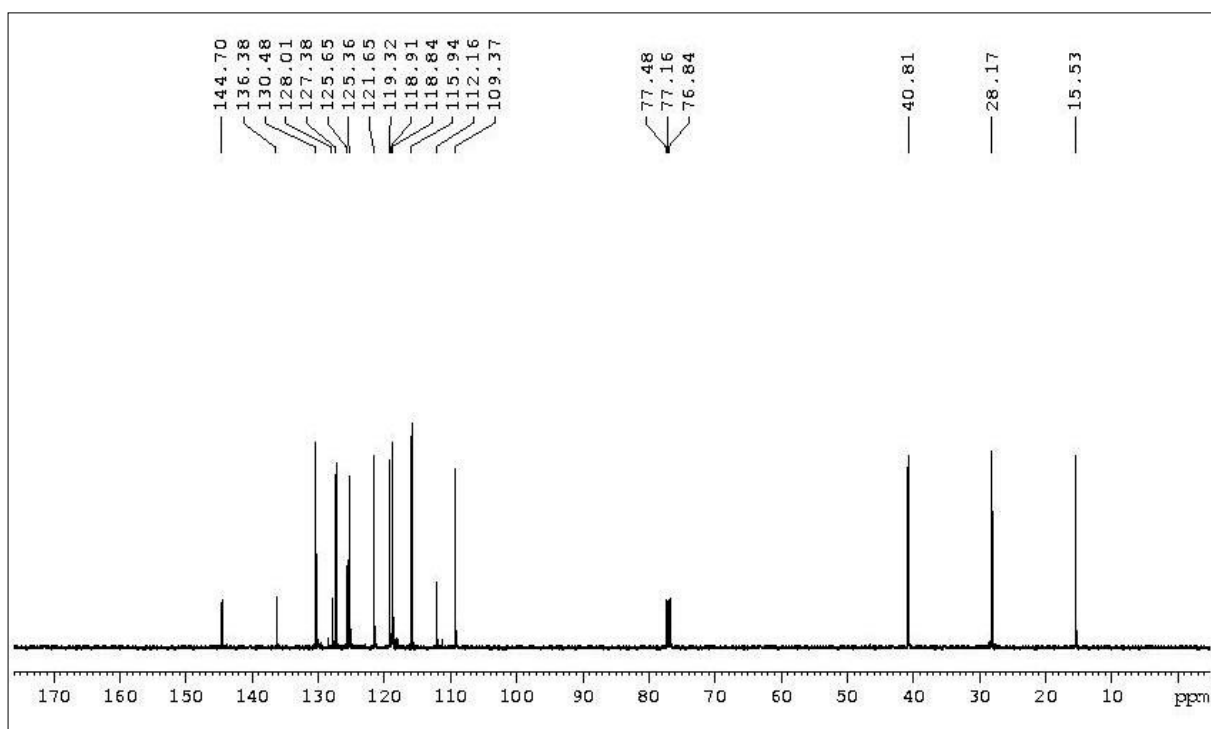


Figure : 100 MHz ^{13}C -NMR spectrum of **12d** in CDCl_3



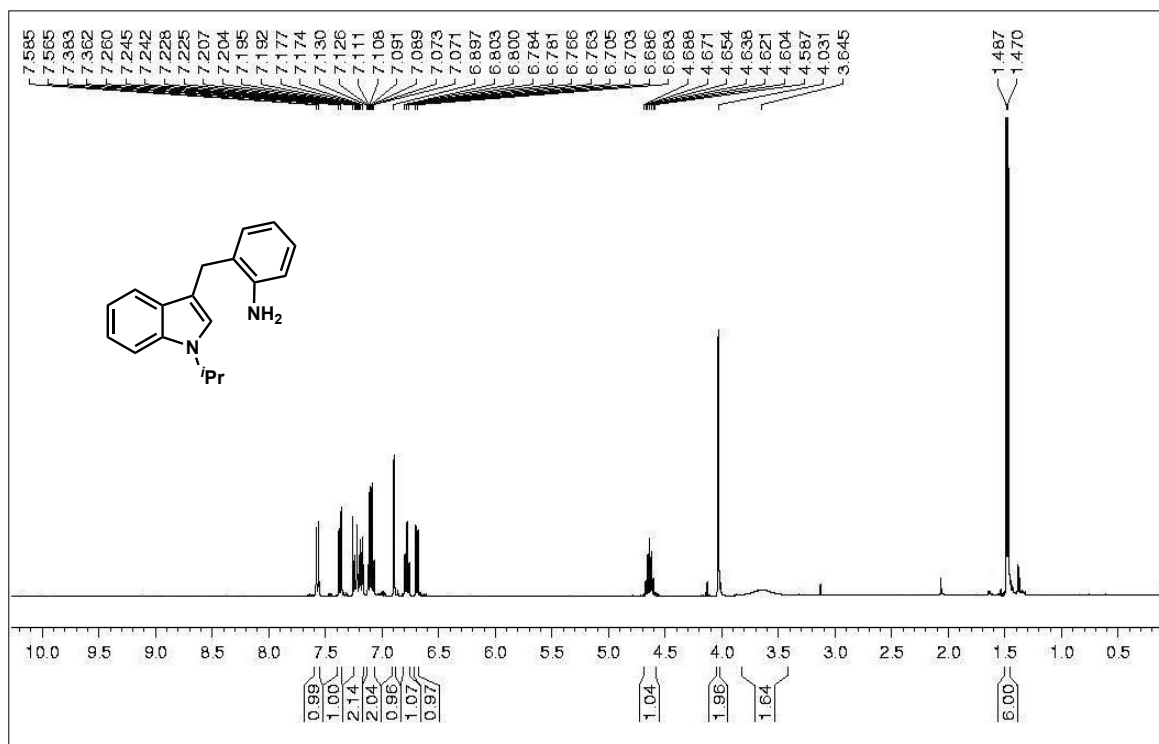


Figure : 400 MHz ^1H -NMR spectrum of **12e** in CDCl_3

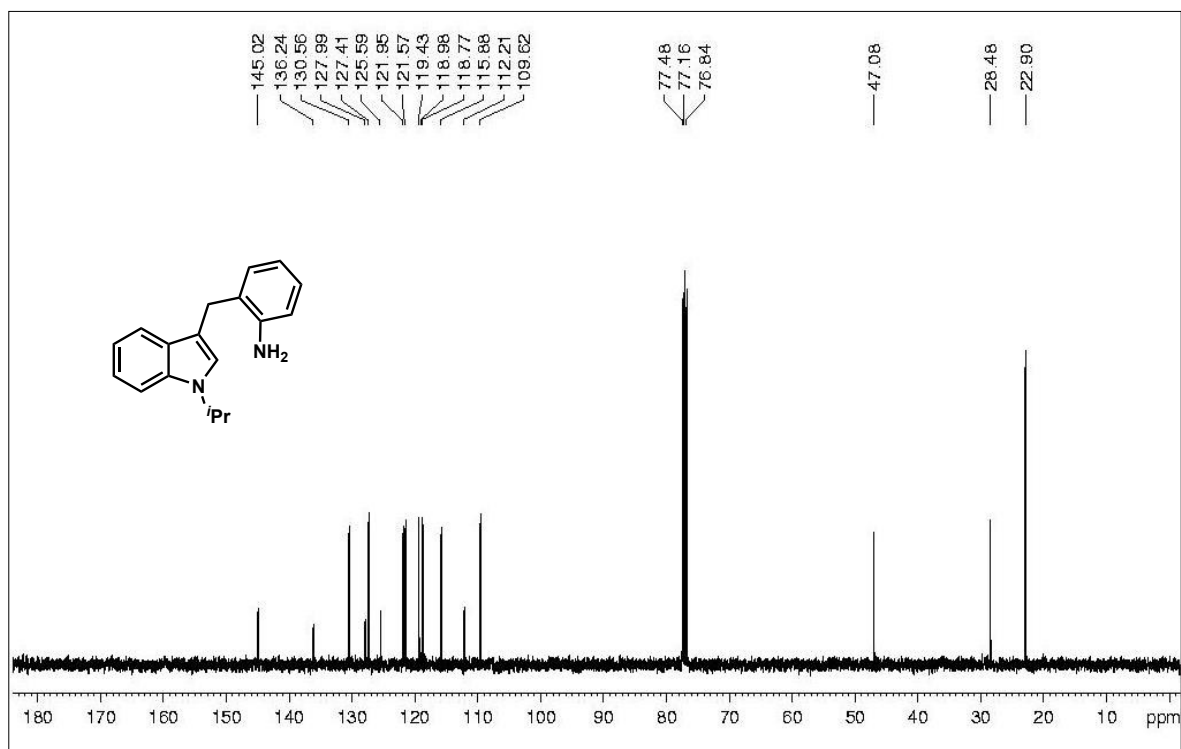


Figure : 100 MHz ^{13}C -NMR spectrum of **12e** in CDCl_3

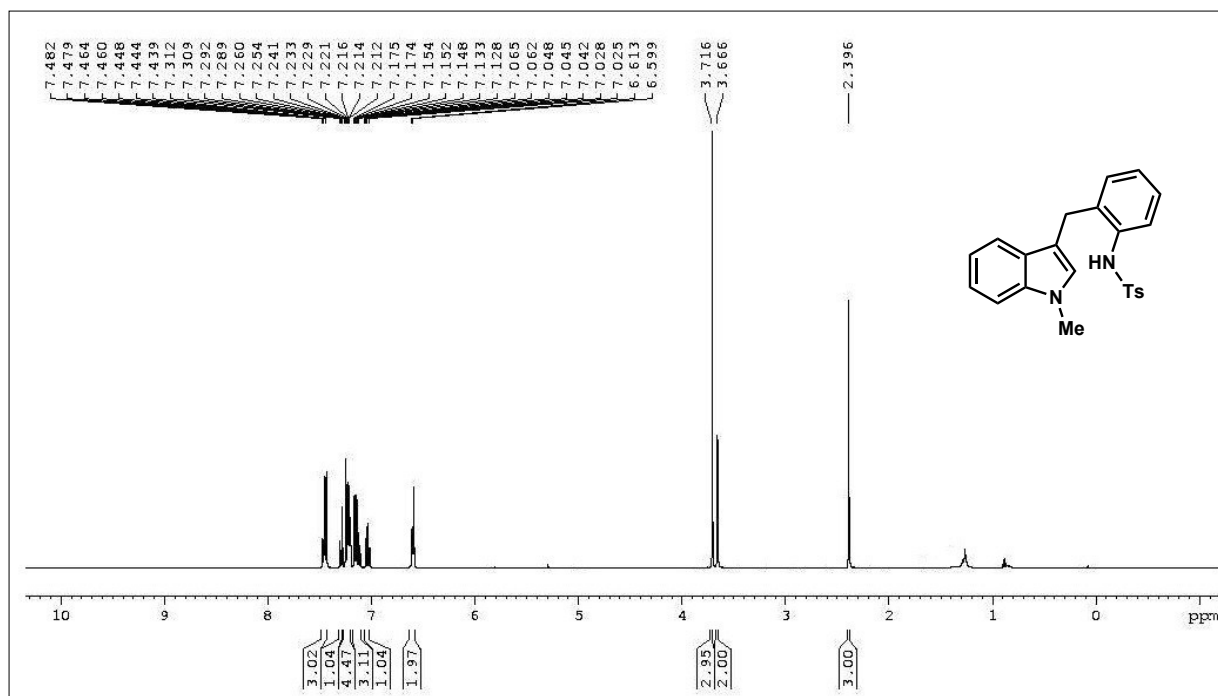


Figure : 400 MHz $^1\text{H-NMR}$ spectrum of **3i** in CDCl_3

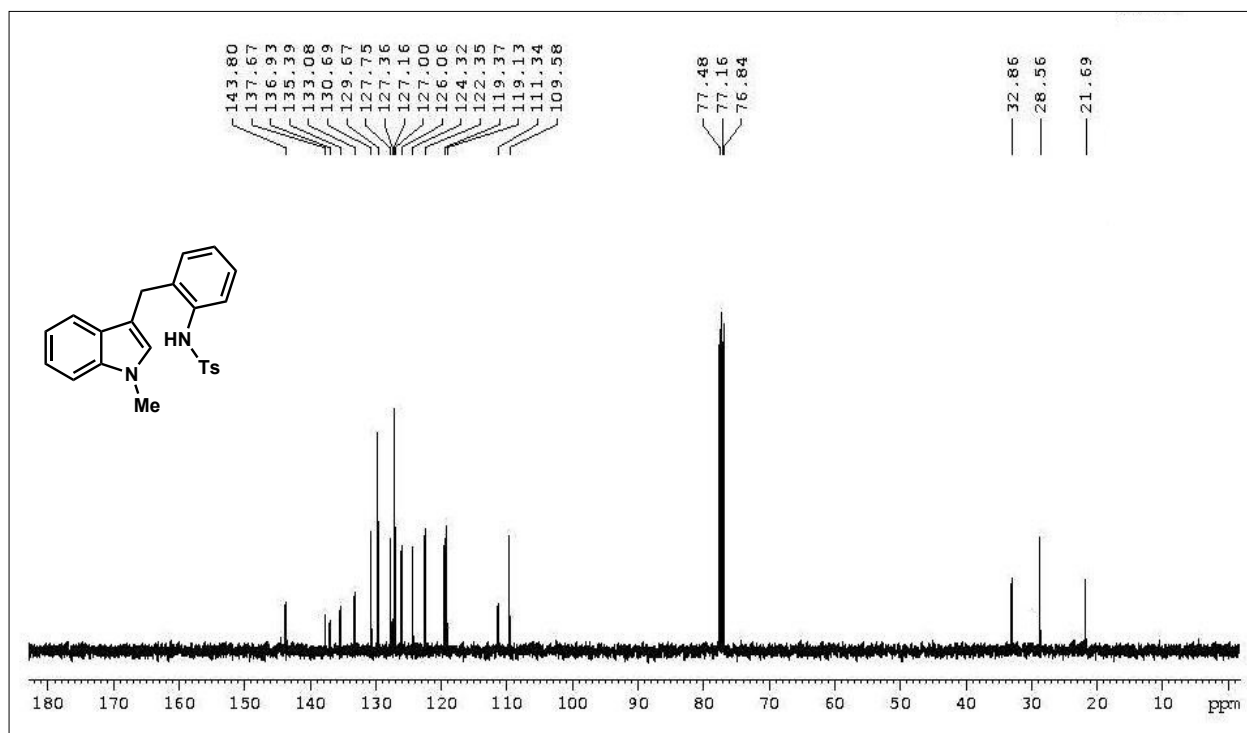


Figure : 100 MHz $^{13}\text{C-NMR}$ spectrum of **3i** in CDCl_3

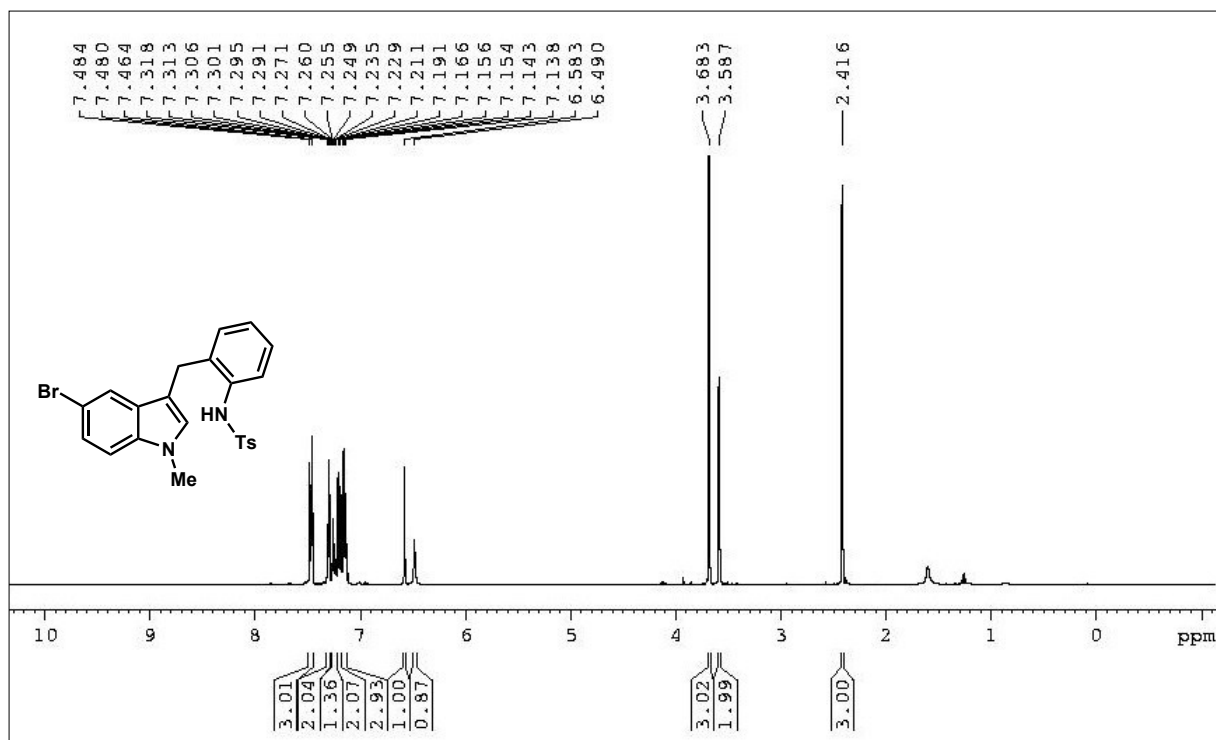


Figure : 400 MHz ^1H -NMR spectrum of **3j** in CDCl_3

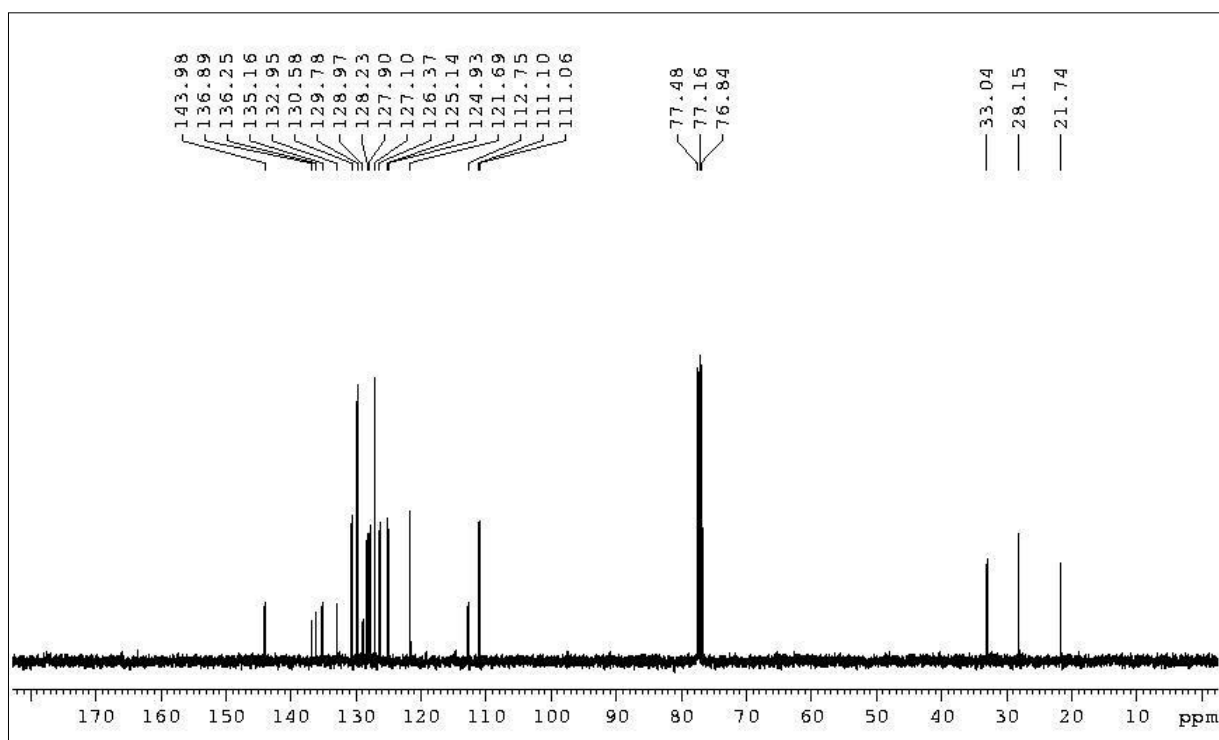


Figure : 100 MHz ^{13}C -NMR spectrum of **3j** in CDCl_3

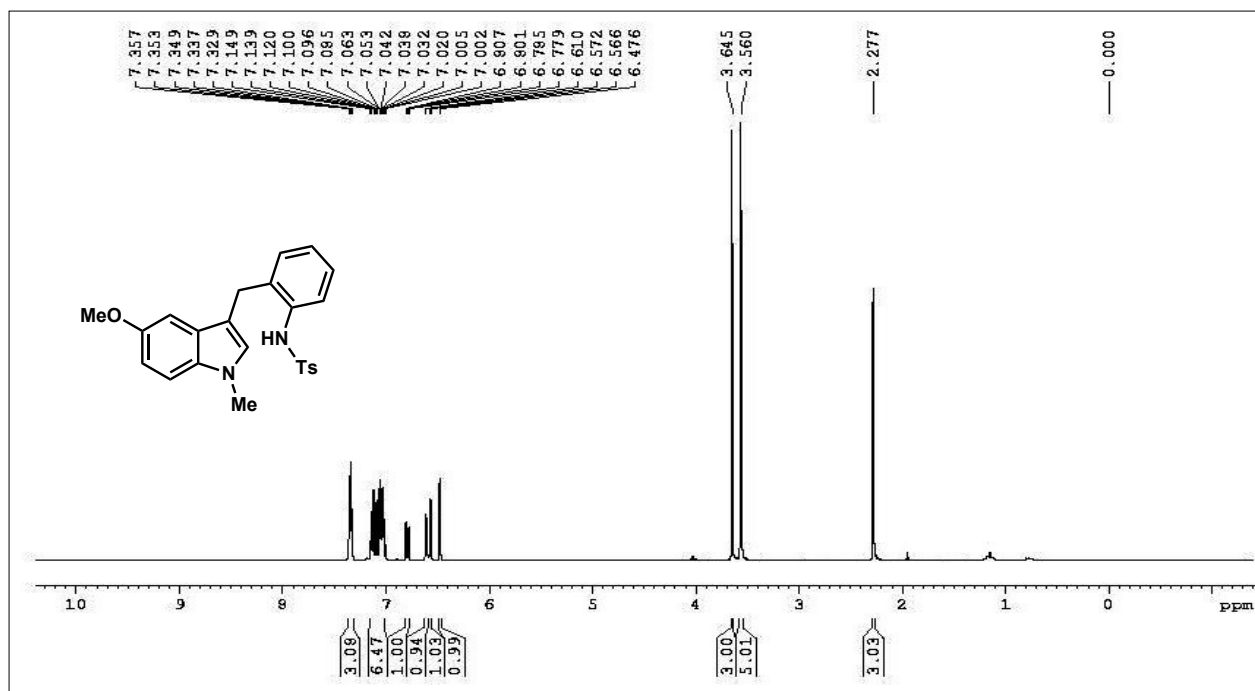


Figure : 400 MHz ¹H-NMR spectrum of **3k** in CDCl₃

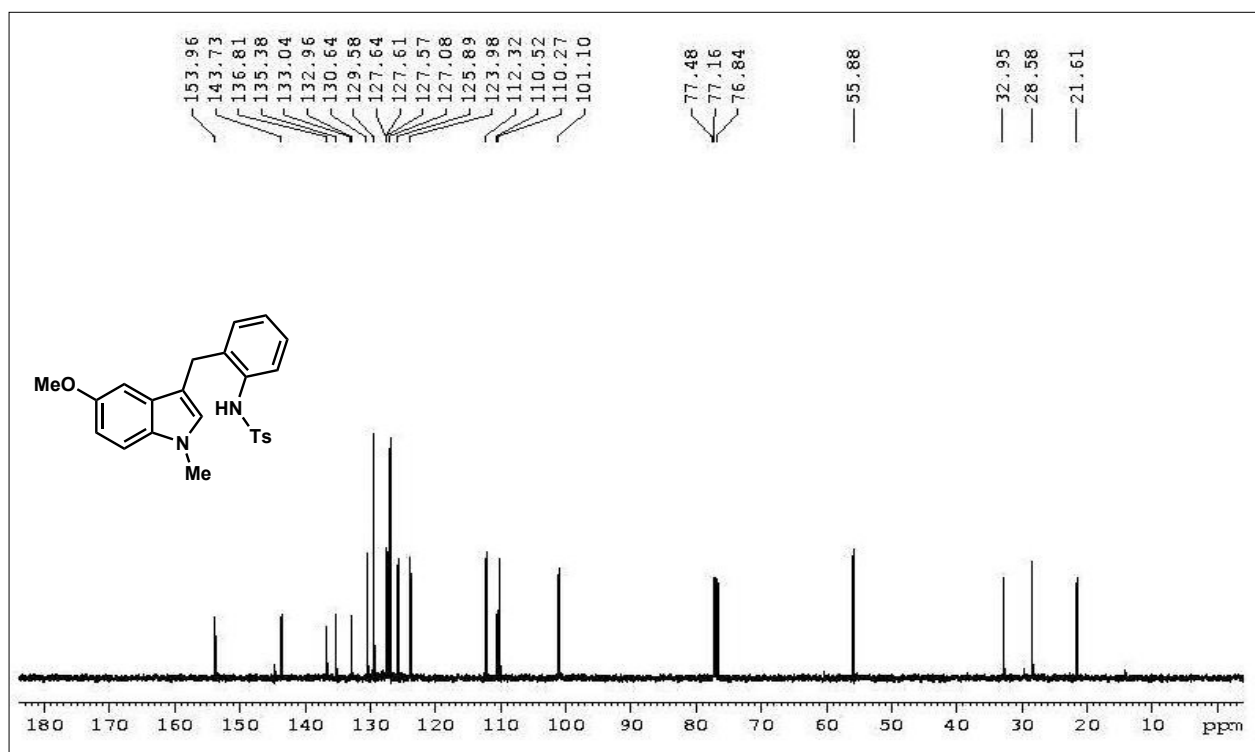


Figure : 100 MHz ¹³C-NMR spectrum of **3k** in CDCl₃

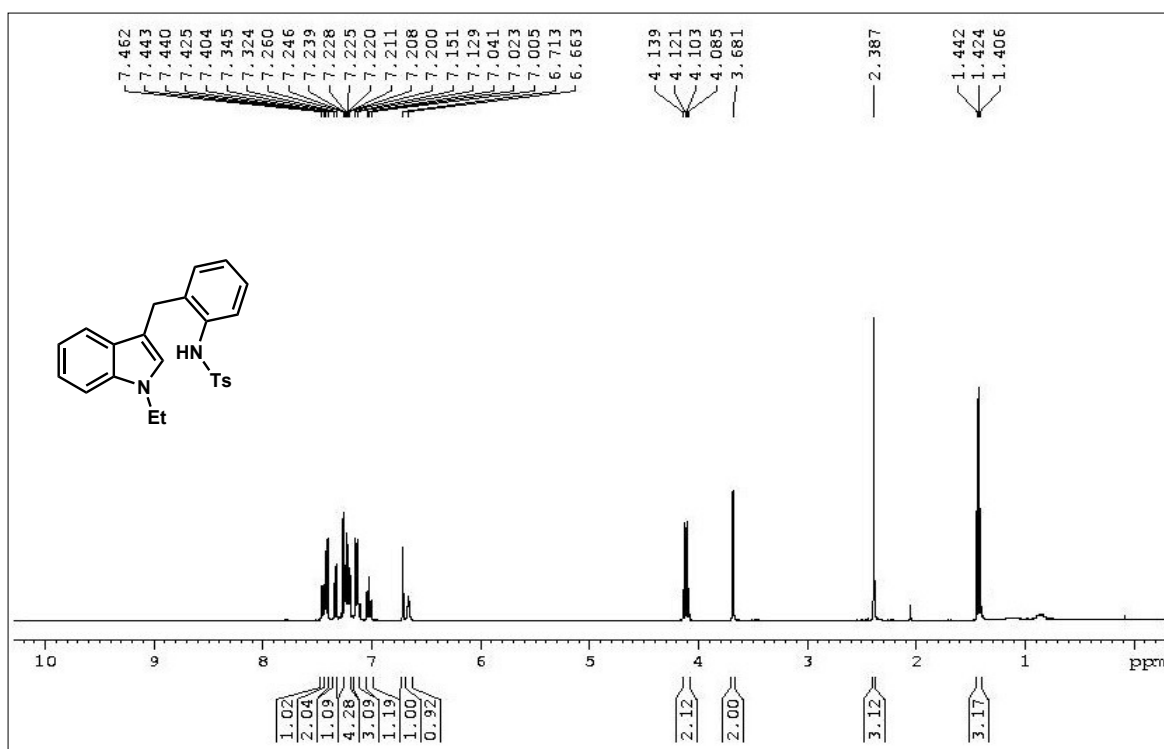


Figure : 400 MHz ¹H-NMR spectrum of **31** in CDCl₃

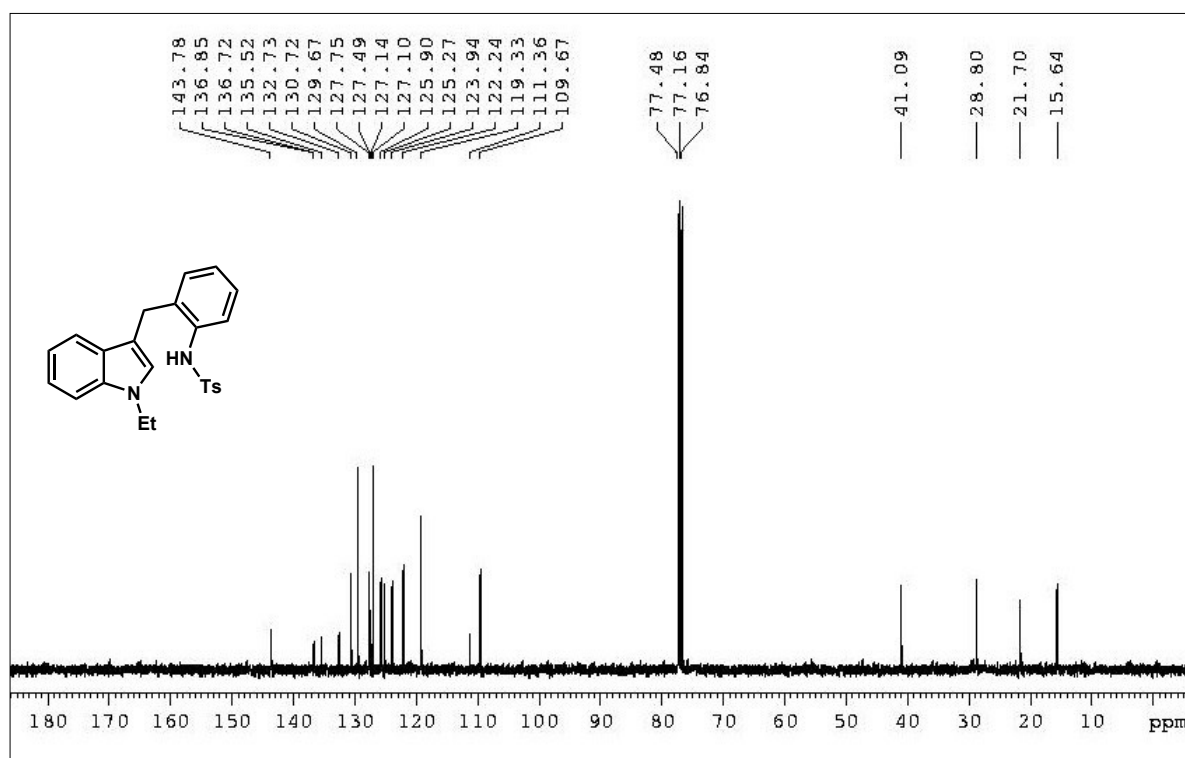


Figure : 100 MHz ¹³C-NMR spectrum of **31** in CDCl₃

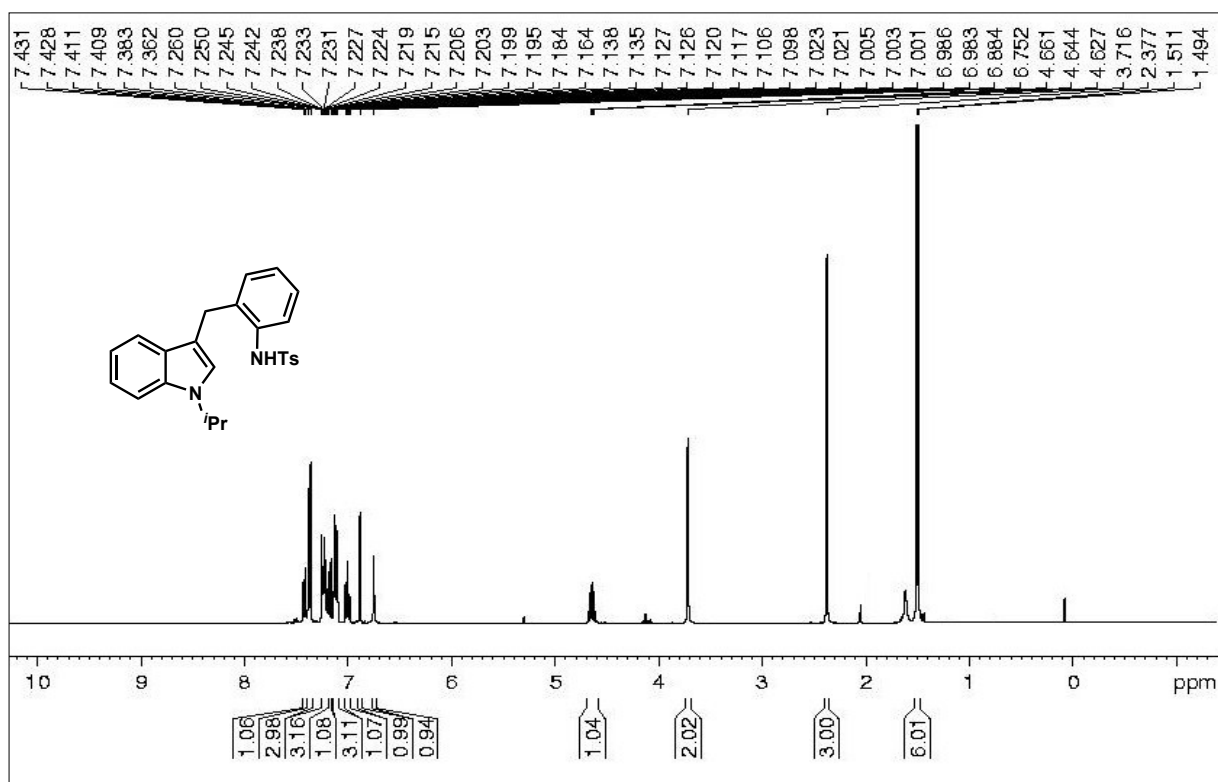


Figure : 400 MHz ¹H-NMR spectrum of **3m** in CDCl₃

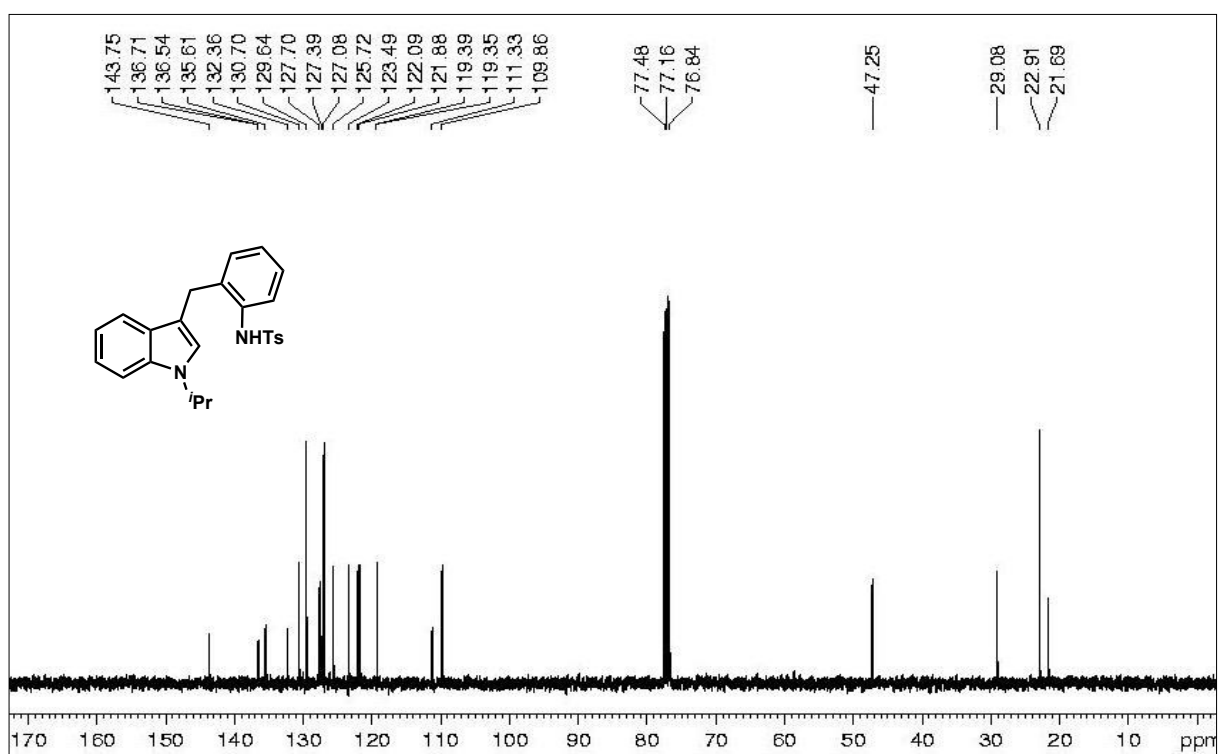


Figure : 100 MHz ¹³C-NMR spectrum of **3m** in CDCl₃



Figure : 400 MHz ^1H -NMR spectrum of **4i** in CDCl_3

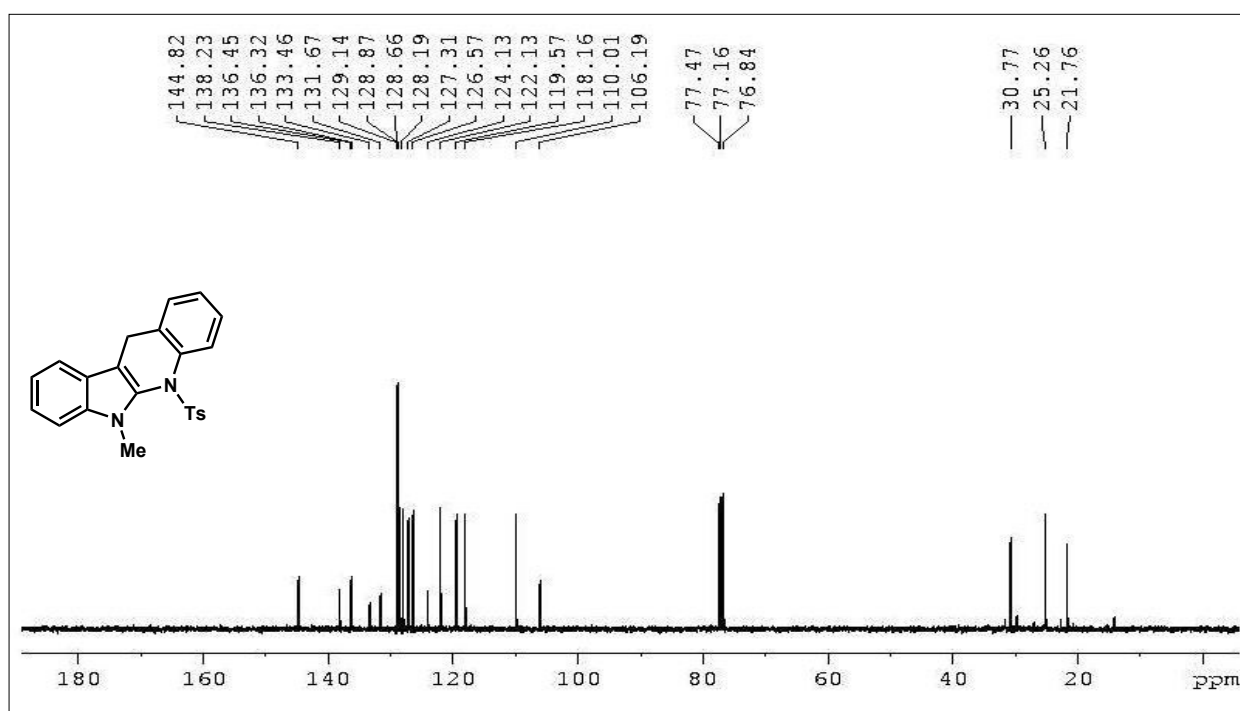


Figure : 400 MHz ^{13}C -NMR spectrum of **4i** in CDCl_3

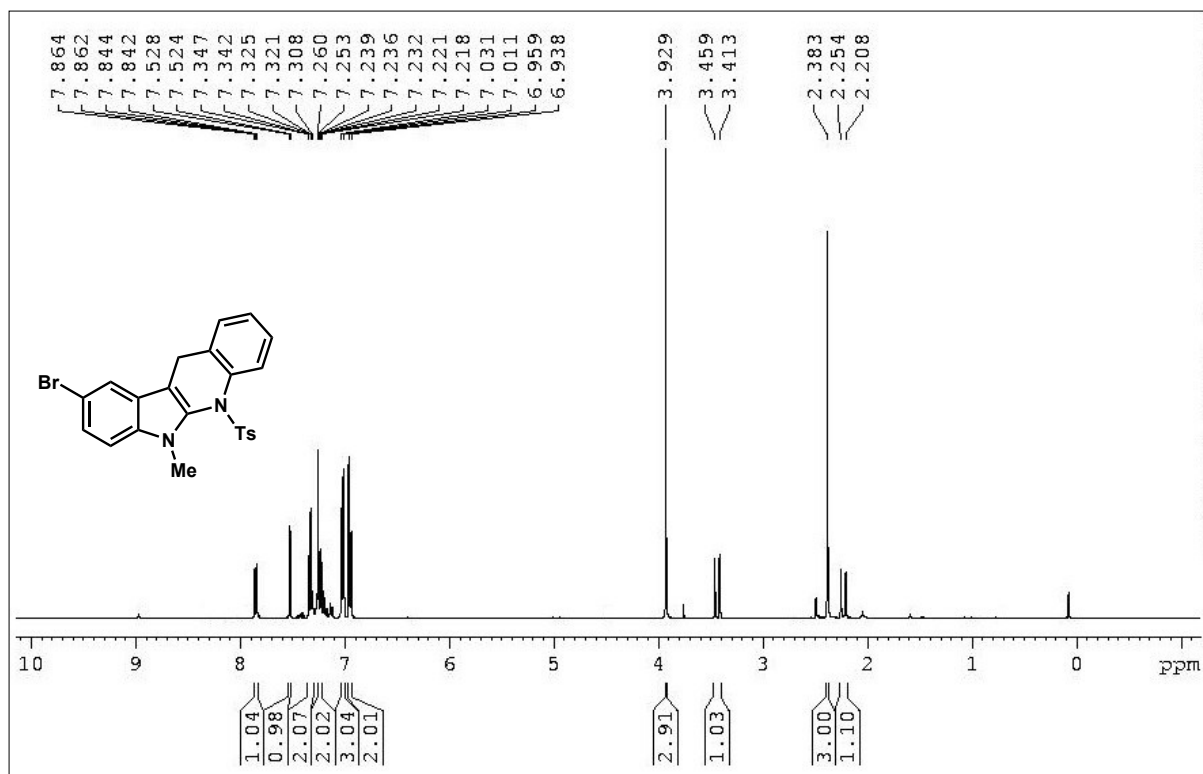


Figure : 400 MHz ^1H -NMR spectrum of **4j** in CDCl_3

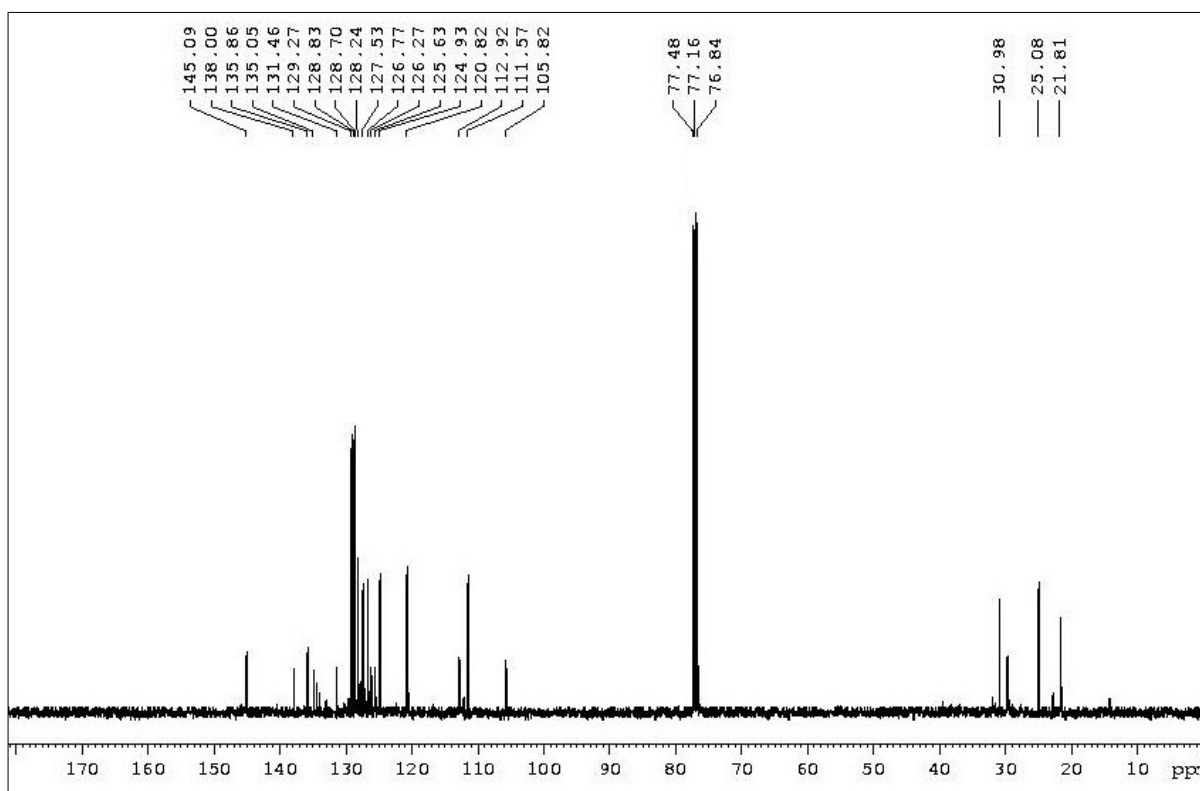


Figure : 100 MHz ^{13}C -NMR spectrum of **4j** in CDCl_3

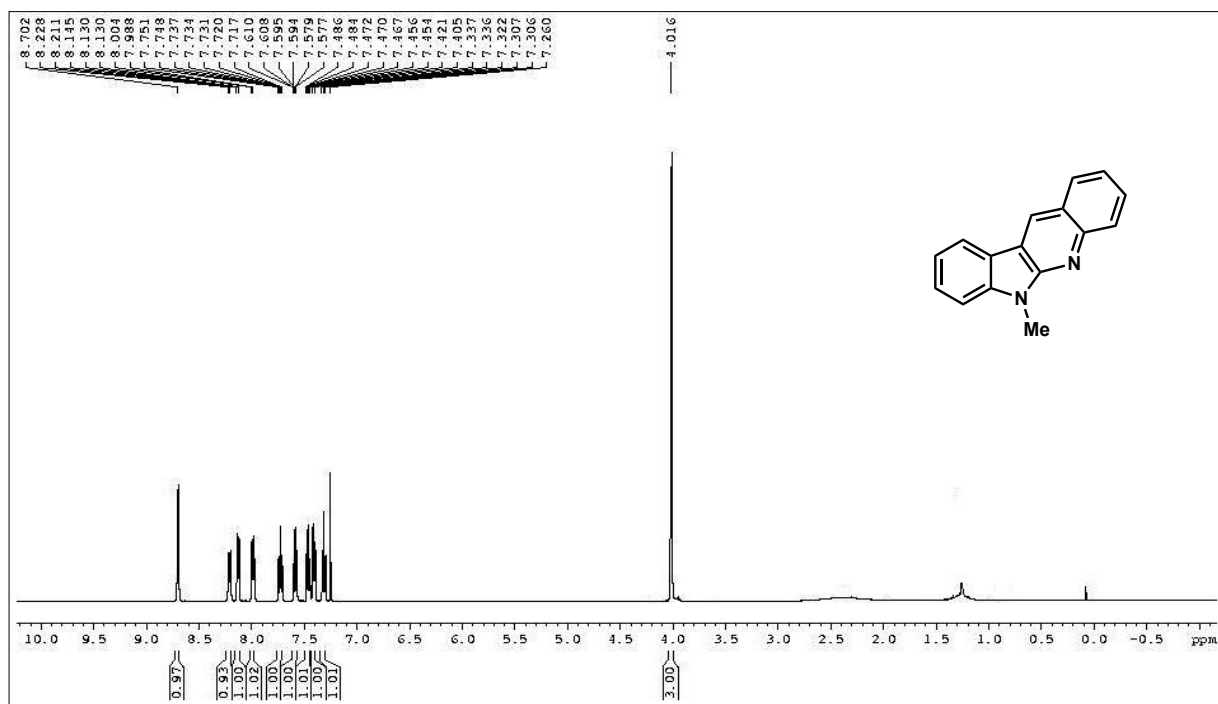


Figure : 400 MHz ^1H -NMR spectrum of **5a** in CDCl_3

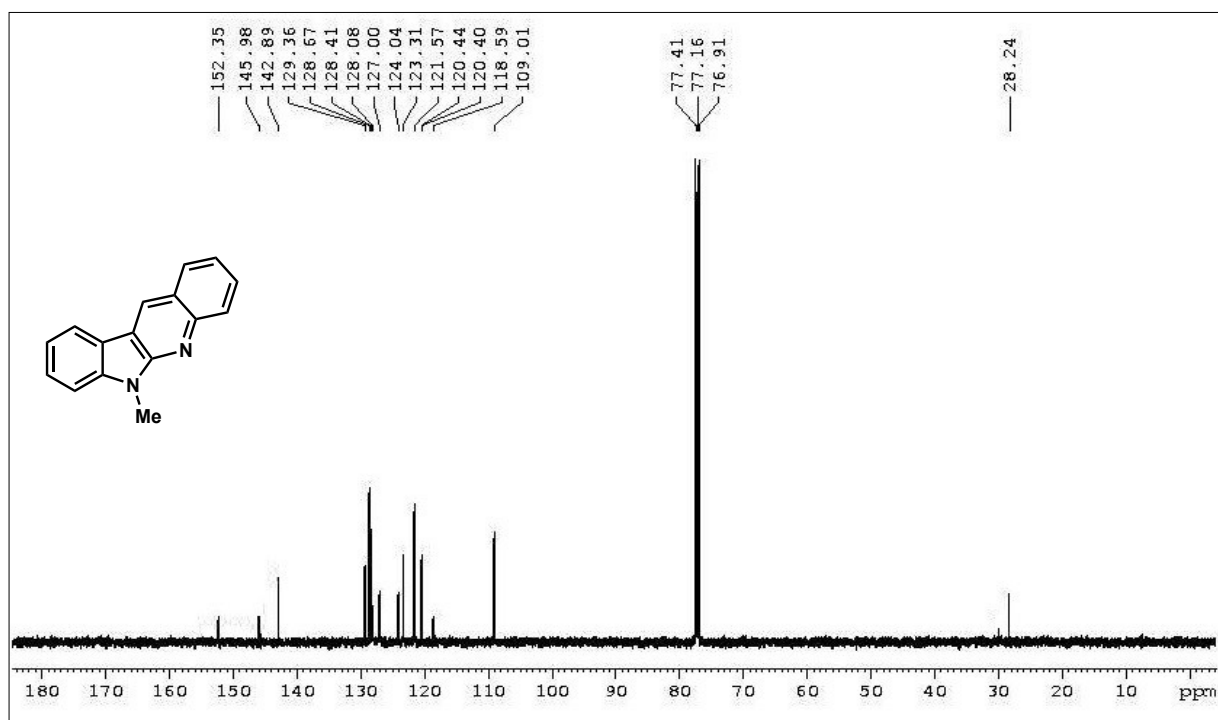


Figure : 100 MHz ^{13}C -NMR spectrum of **5a** in CDCl_3

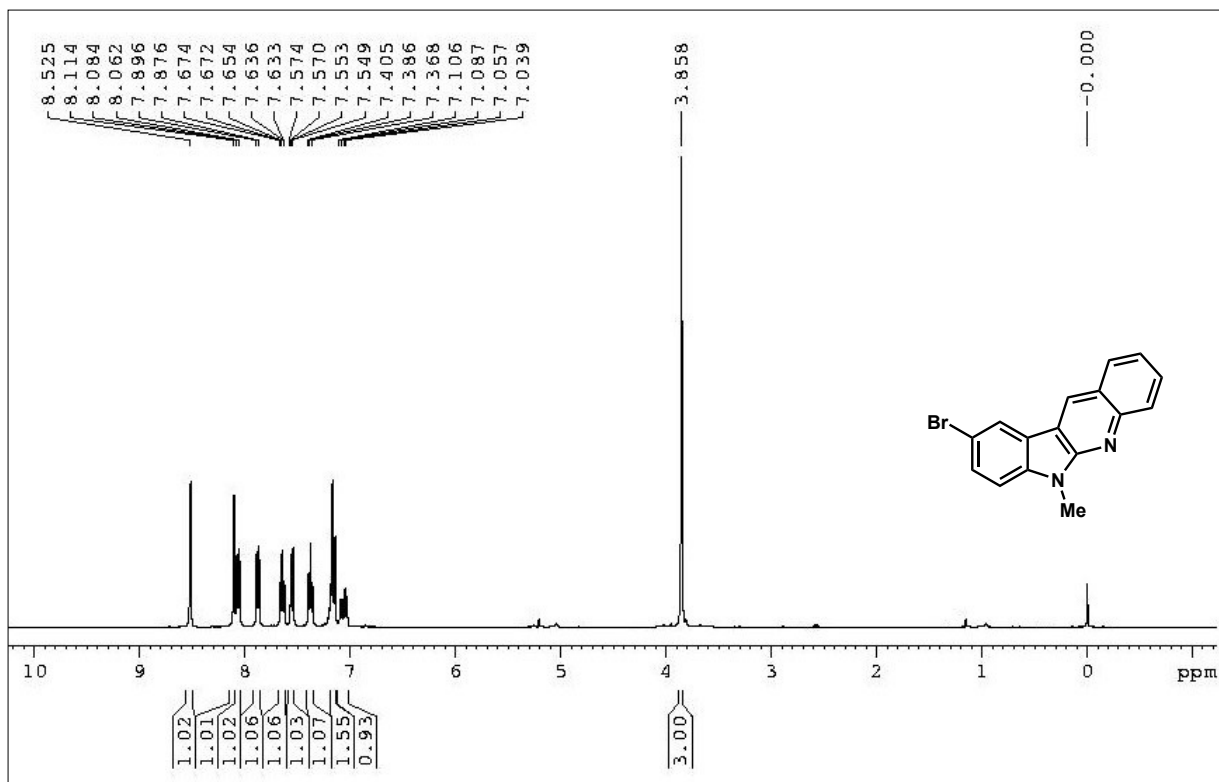


Figure : 400 MHz ^1H -NMR spectrum of **5b** in CDCl_3

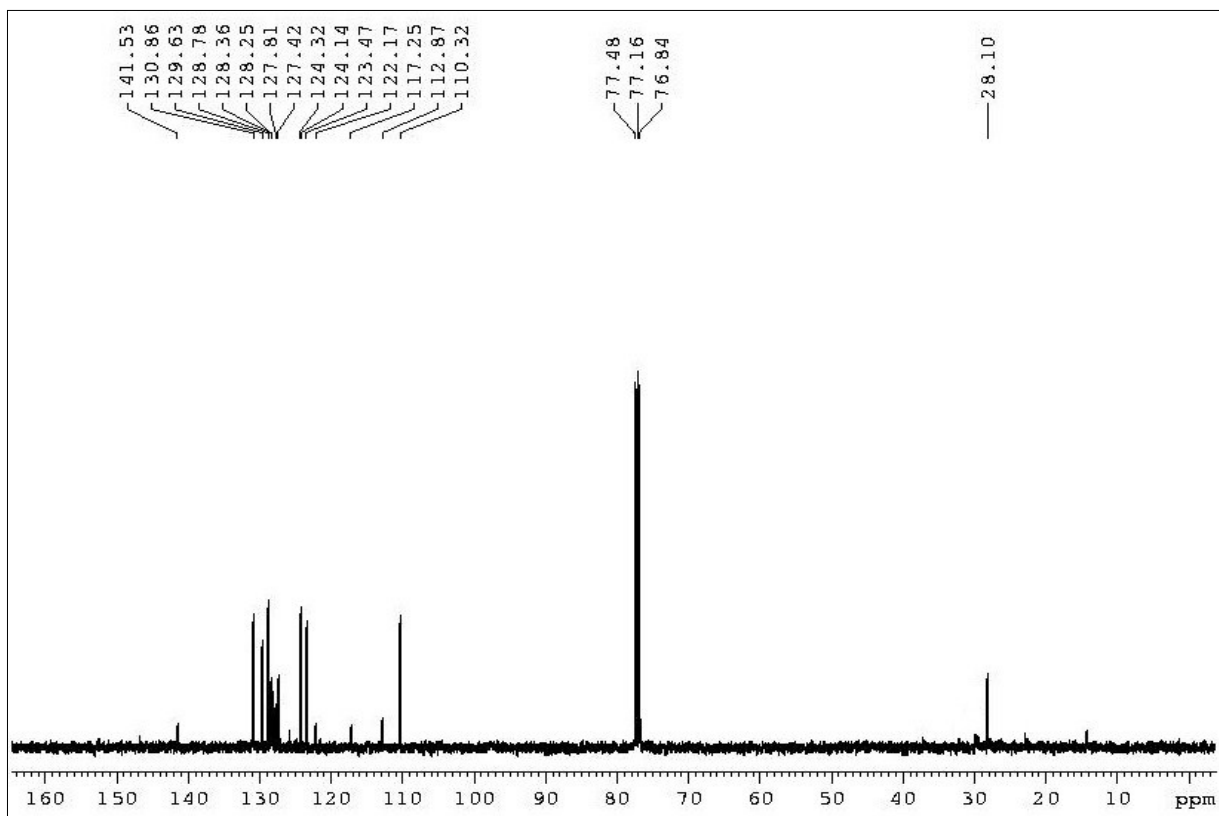


Figure : 100 MHz ^{13}C -NMR spectrum of **5b** in CDCl_3

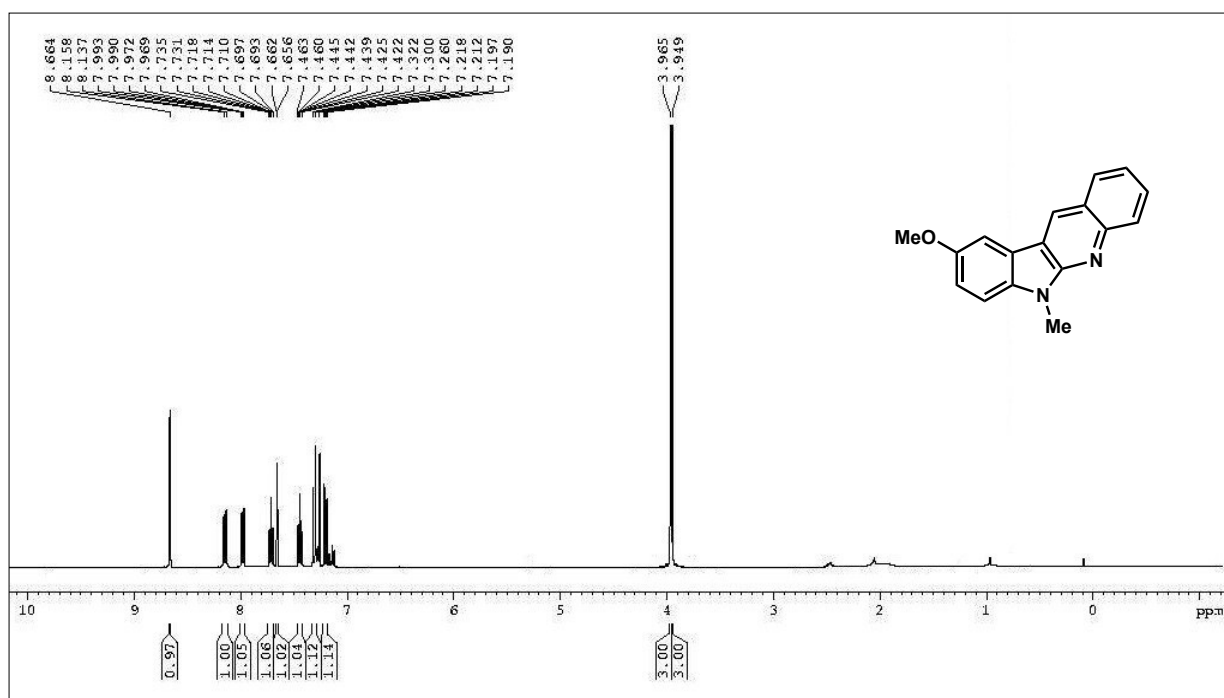


Figure : 400 MHz ^1H -NMR spectrum of **5c** in CDCl_3

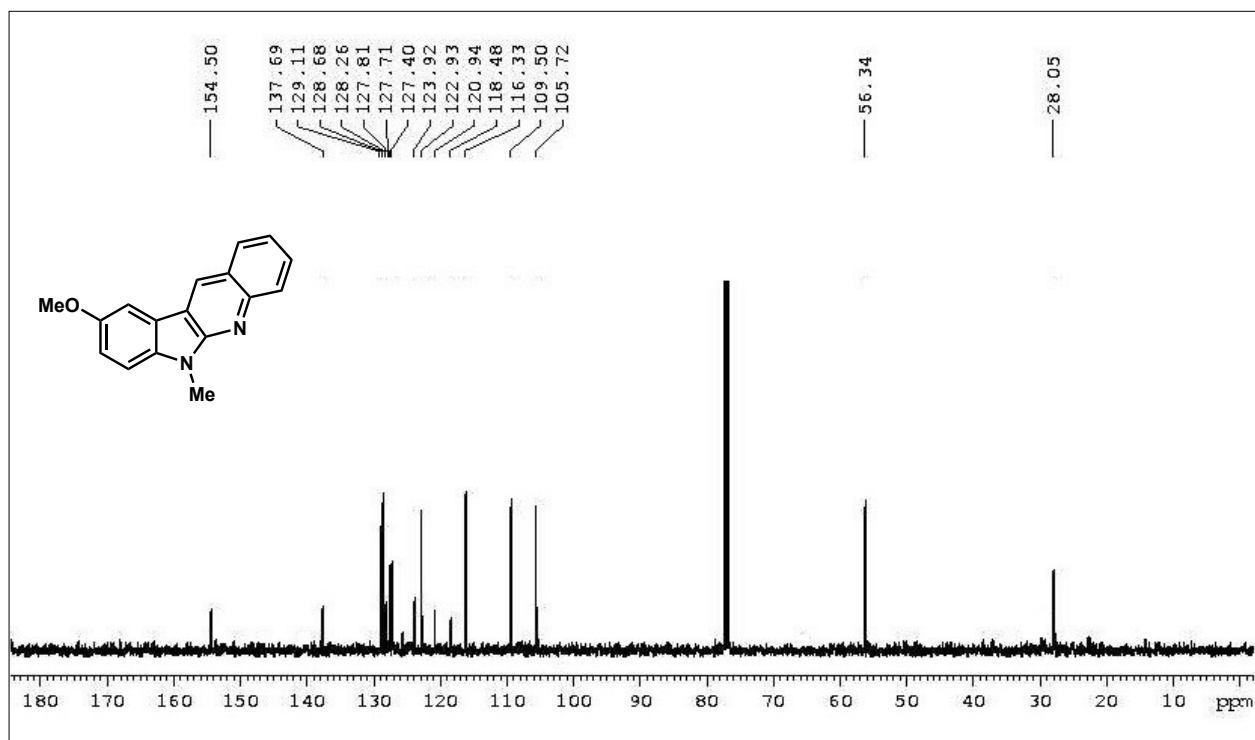


Figure : 100 MHz ^{13}C -NMR spectrum of **5c** in CDCl_3

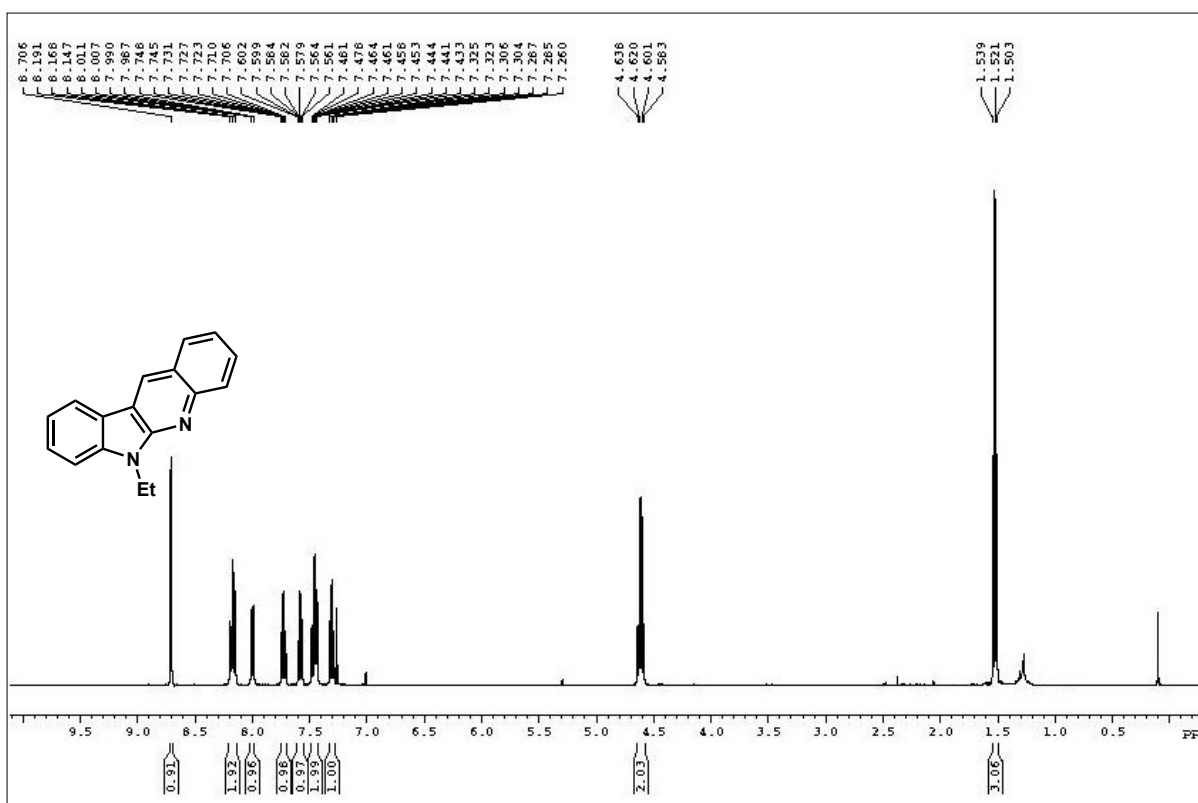


Figure : 400 MHz ^1H -NMR spectrum of **5d** in CDCl_3

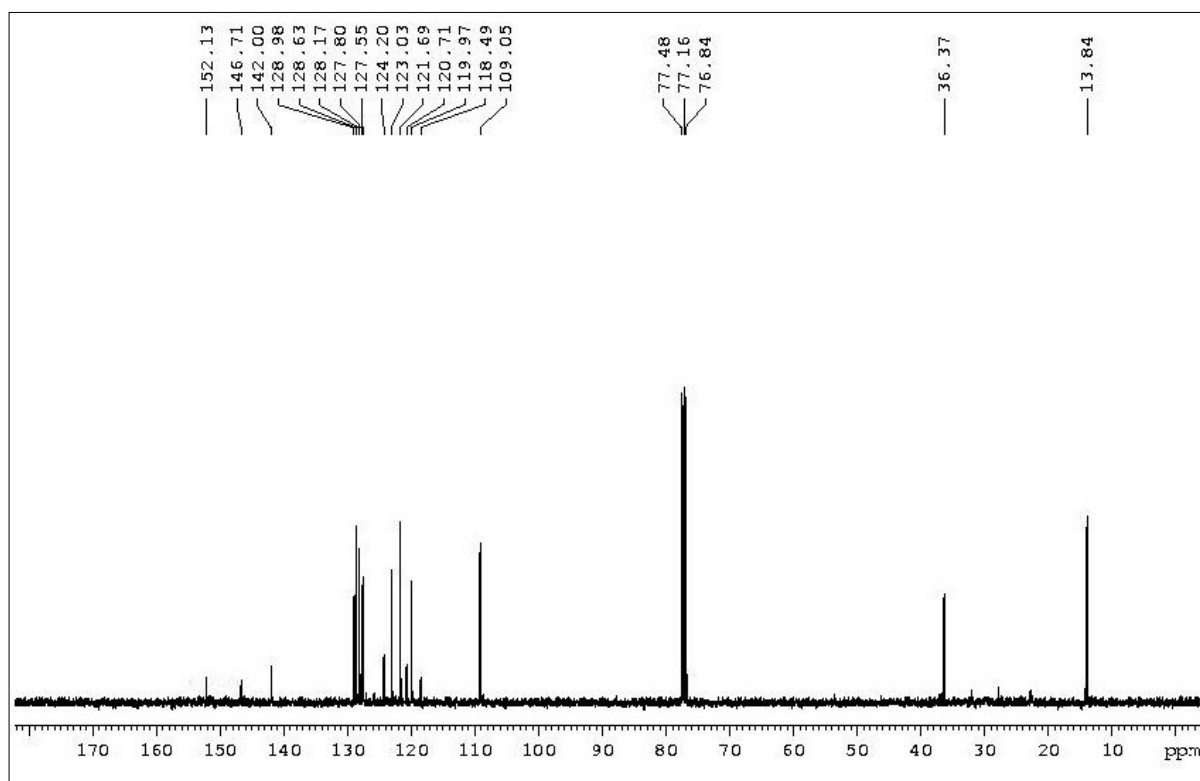


Figure : 100 MHz ^{13}C -NMR spectrum of **5d** in CDCl_3

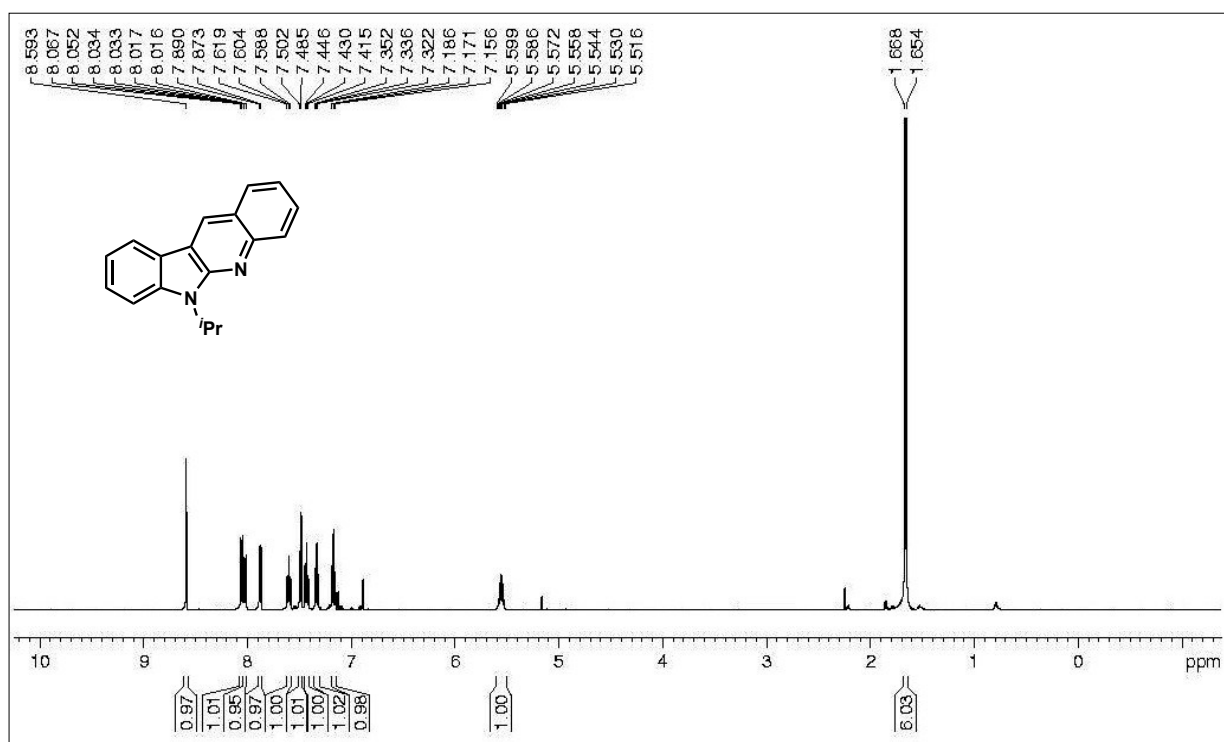


Figure : 500 MHz ^1H -NMR spectrum of **5e** in CDCl_3

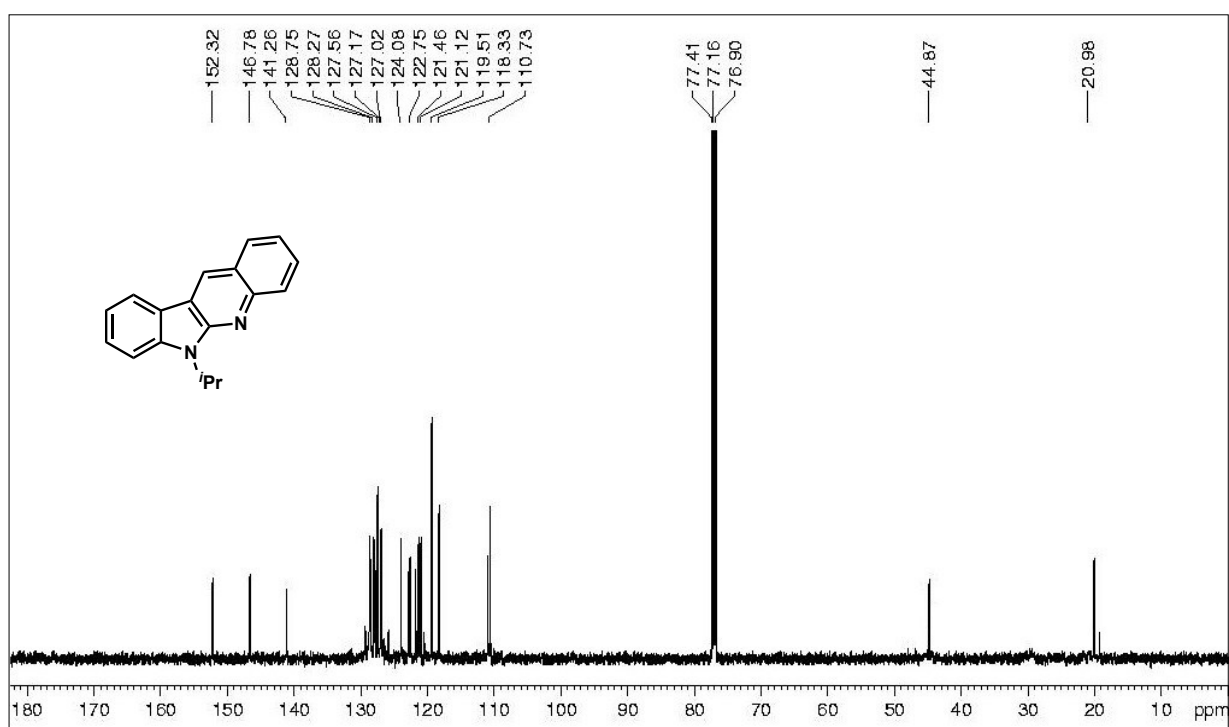


Figure : 125 MHz ^{13}C -NMR spectrum of **5e** in CDCl_3

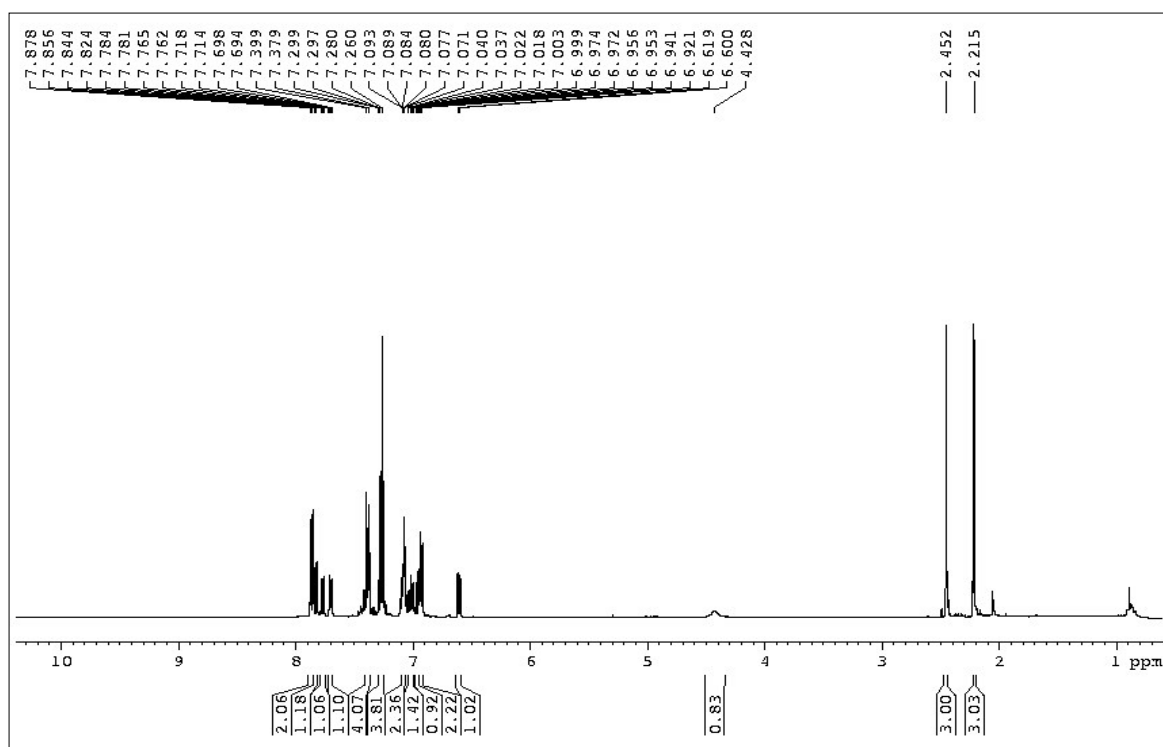


Figure : 400 MHz ^1H -NMR spectrum of **7a** in CDCl_3

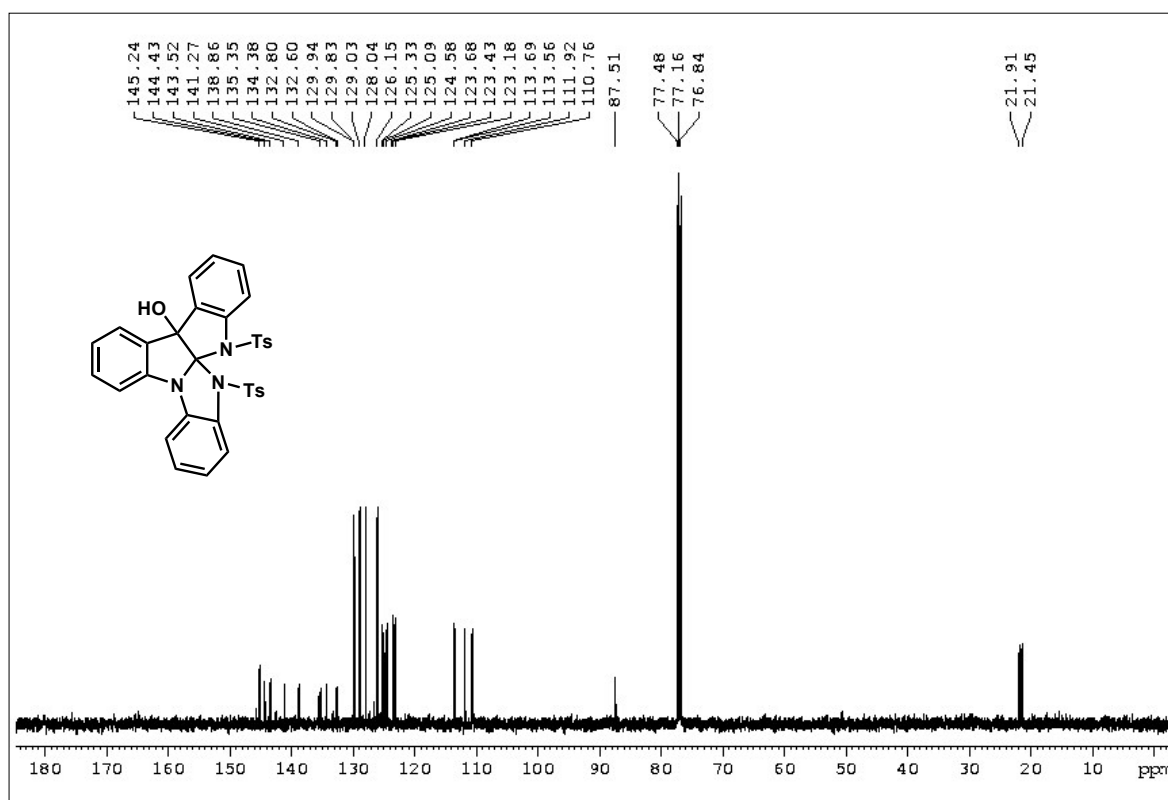


Figure : 100 MHz ^{13}C -NMR spectrum of **7a** in CDCl_3

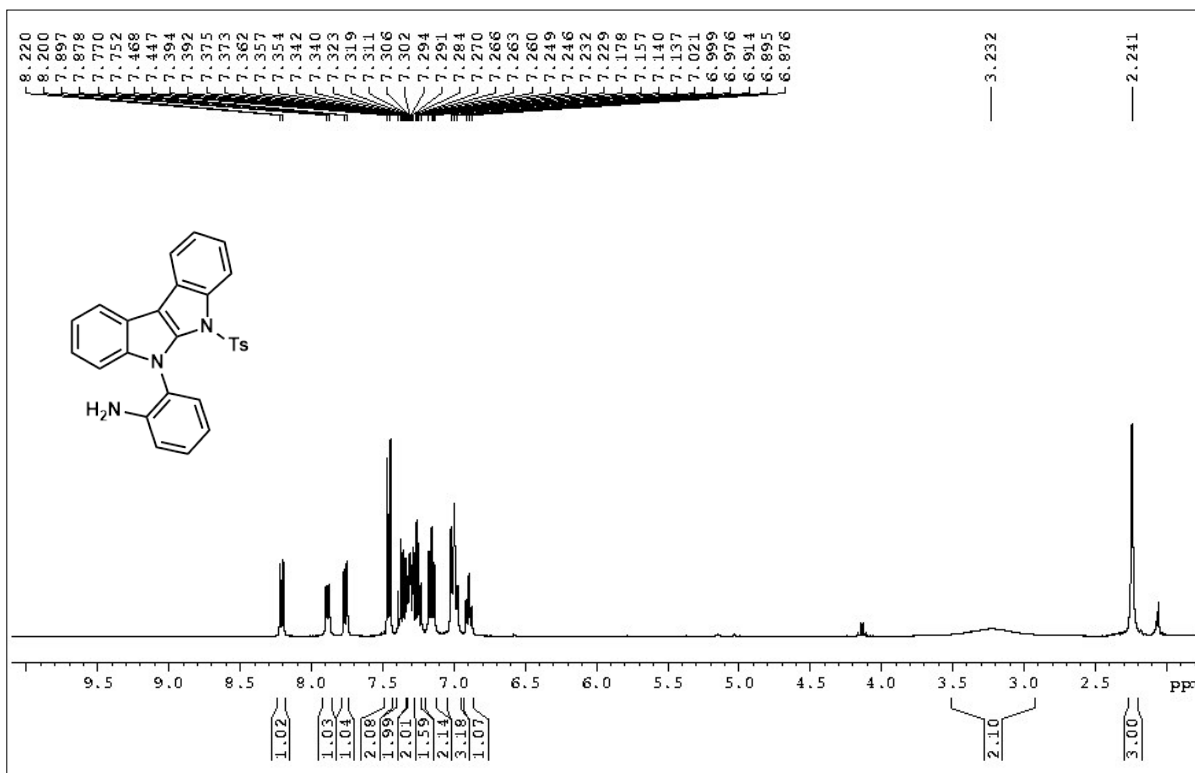


Figure : 400 MHz ¹H-NMR spectrum of **7b** in CDCl₃

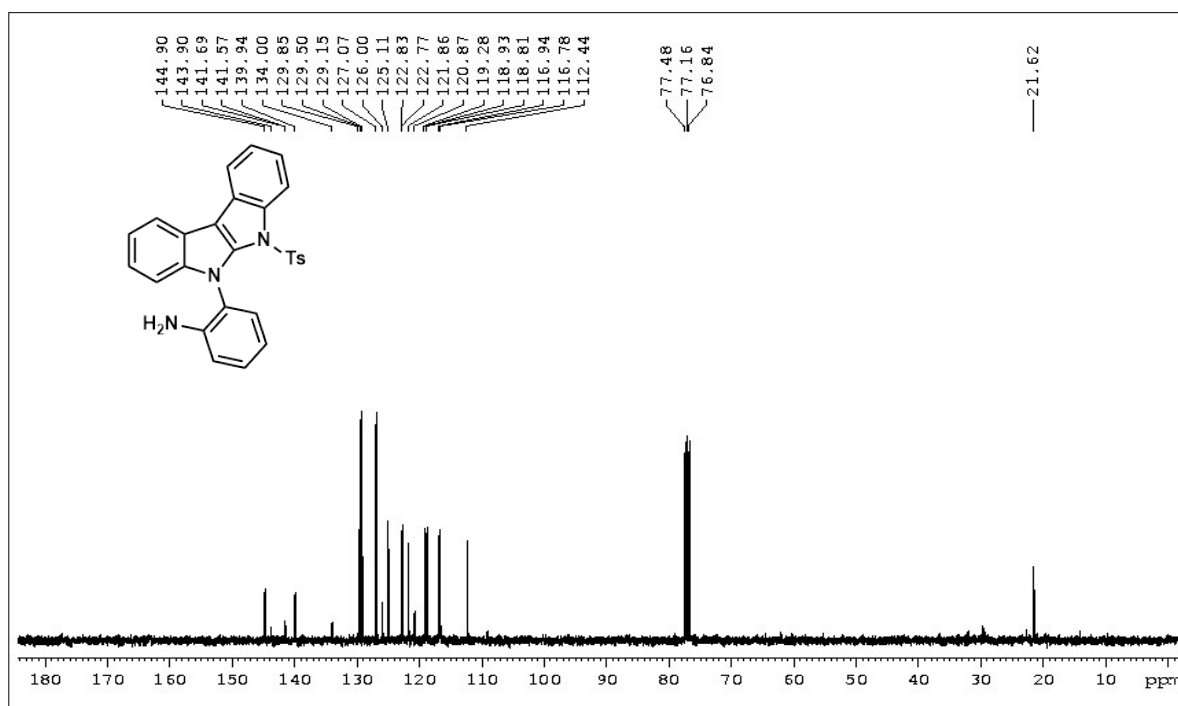


Figure : 100 MHz ¹³C-NMR spectrum of **7b** in CDCl₃