

Supplementary Information

CuI-catalyzed Amination of Tröger's Base Halides: A Convenient Method for Synthesis of Unsymmetrical Tröger's Bases

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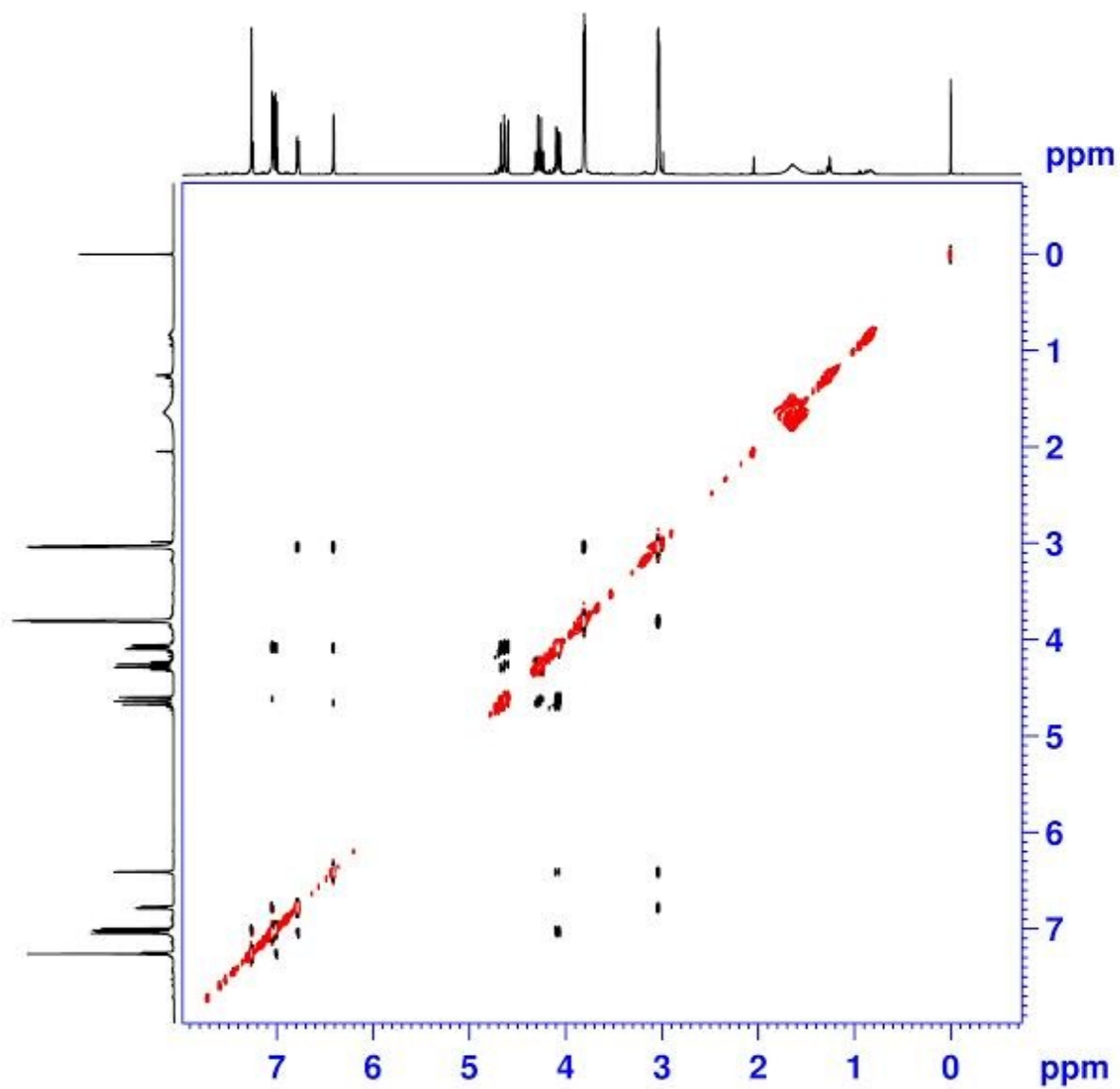
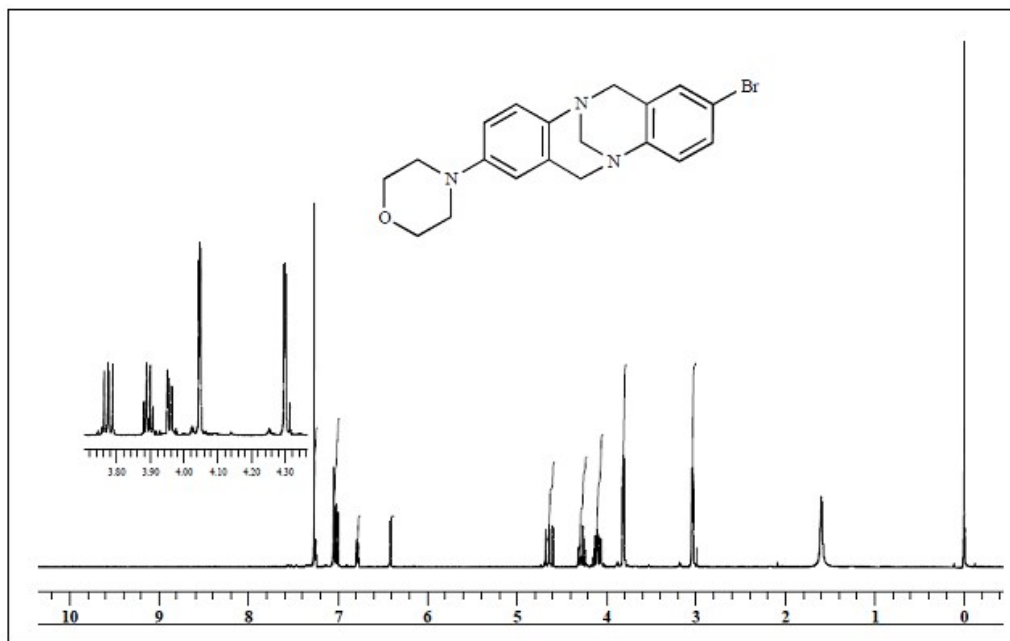
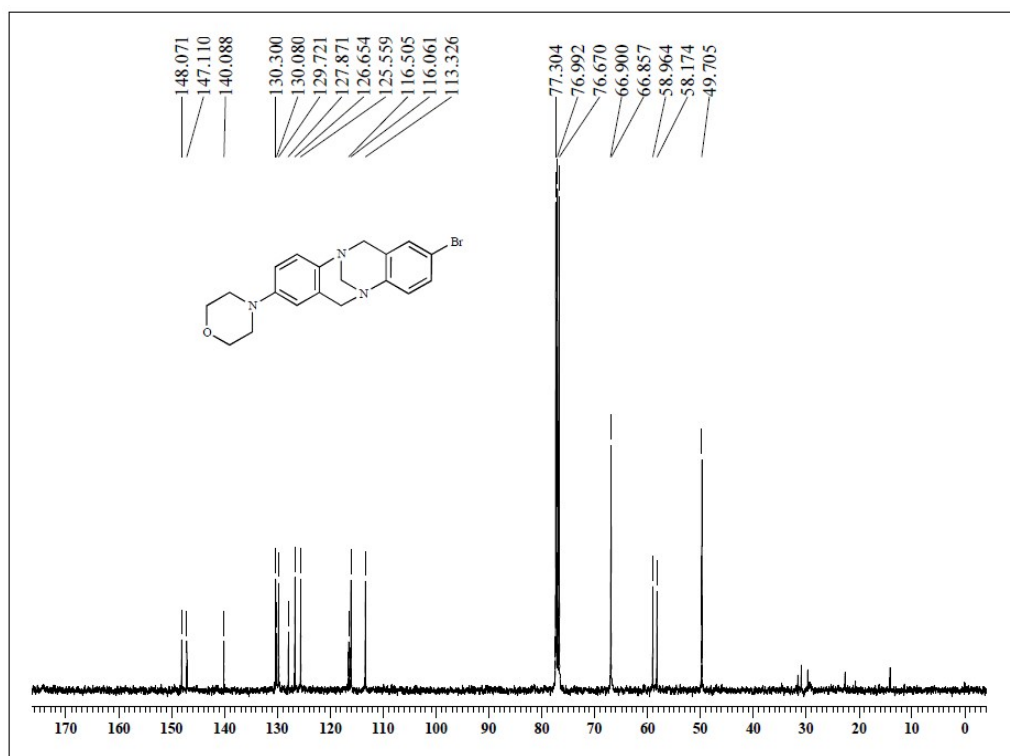


Figure: NOESY ^1H NMR (700 MHz, CDCl_3) spectrum of compound 5.

Spectra:



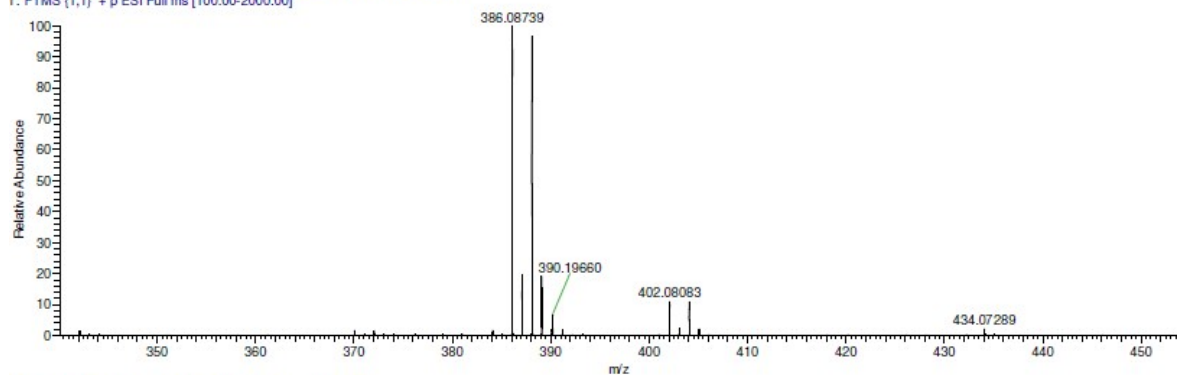
¹H NMR (500 MHz, CDCl₃) spectrum of compound 5



¹³C NMR (75 MHz, CDCl₃) spectrum of compound 5

File Name C:\ICT-HRMS\01.04.2014\AM-MORPD
Sample Name M-BHASKAR-REDDY
Sample ID 1
Date and Time 02-04-14 16:13:12

AM-MORPD #5-88 RT: 0.02-0.30 AV: 84 SB: 327 0.80-1.90 NL: 2.13E7
T: FTMS (1,1) + p ESI Full ms [100.00-2000.00]



AM-MORPD#8-30 RT: 0.03-0.11 AV: 23

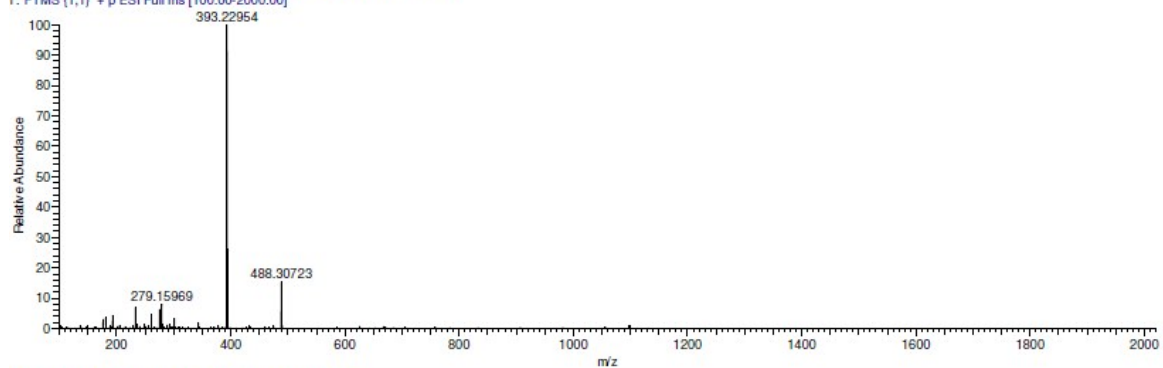
T: FTMS (1,1) + p ESI Full ms [100.00-2000.00]

m/z	Intensity	Relative	Theo. Mass	Delta (ppm)	RDB equiv.	Composition
386.08732	46051360.0	100.00				

HRMS spectrum of compound 5

File Name C:\ICT-HRMS\01.04.2014\AM-MORPM
Sample Name M-BHASKAR-REDDY
Sample ID 1
Date and Time 02-04-14 15:57:50

AM-MORPM #5-88 RT: 0.02-0.30 AV: 84 SB: 326 0.80-1.90 NL: 1.05E7
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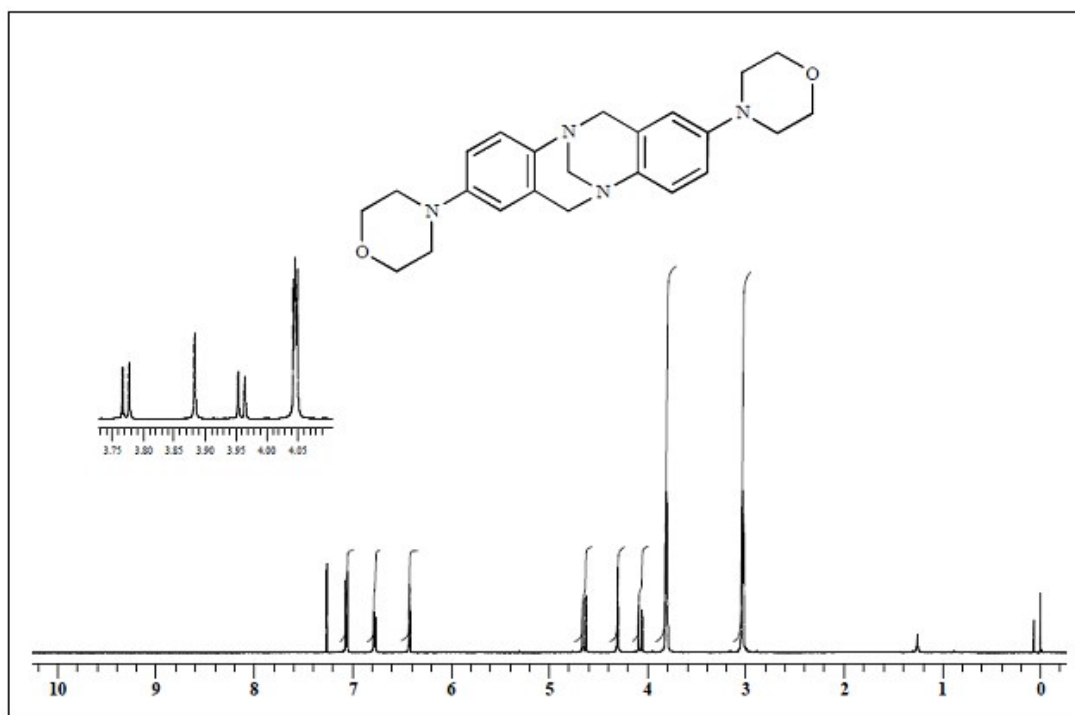


AM-MORPM#8-30 RT: 0.03-0.10 AV: 23

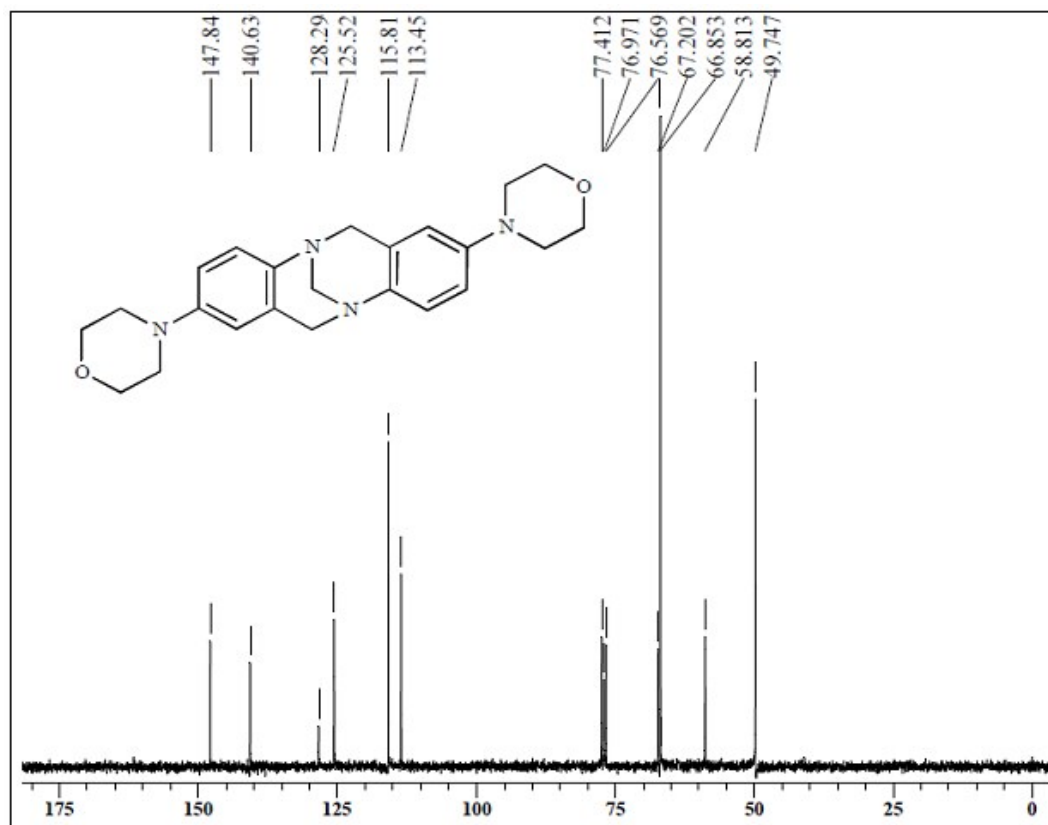
T: FTMS (1,1) + p ESI Full ms [100.00-2000.00]

m/z	Intensity	Relative	Theo. Mass	Delta (ppm)	RDB equiv.	Composition
393.22948	27077956.0	100.00	393.23106	-4.02	5.0	C ₁₈ H ₃₀ O ₅ F ₂ Na

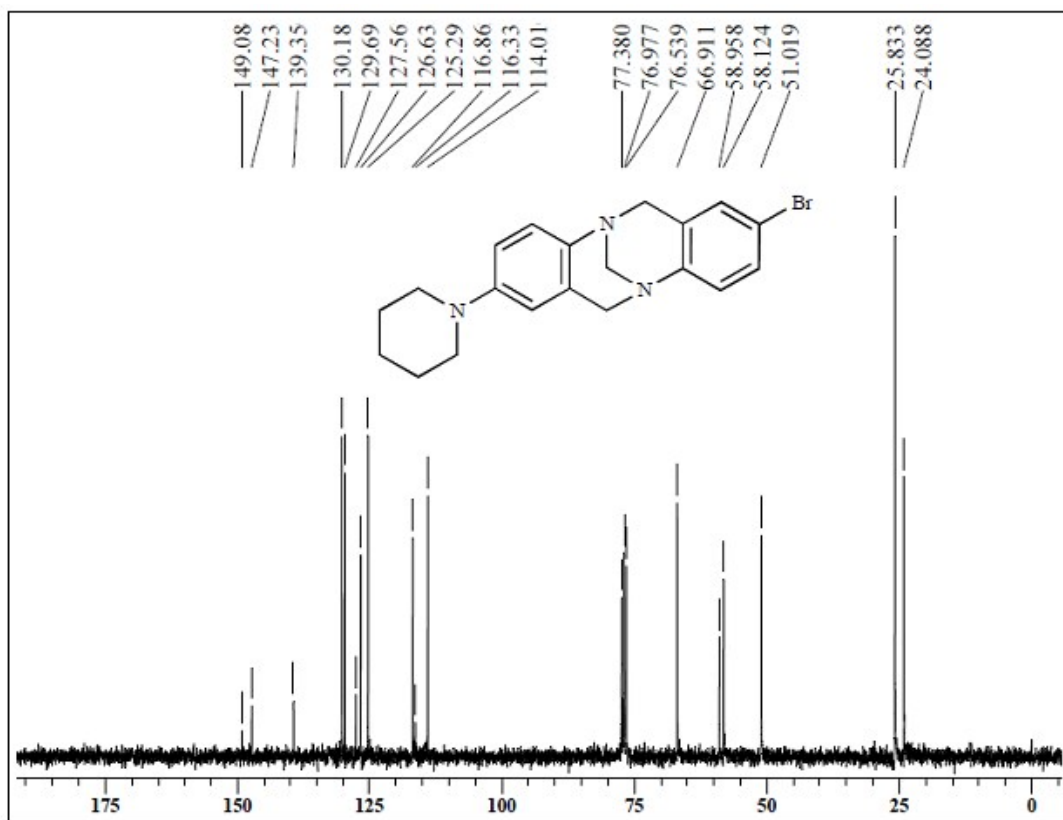
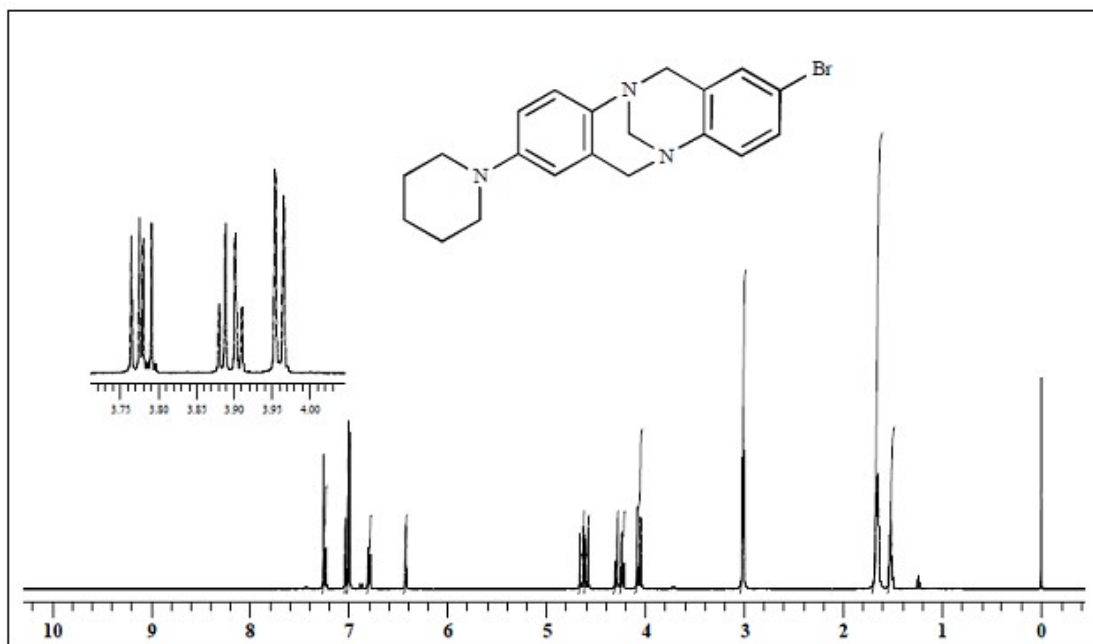
HRMS spectrum of compound 6

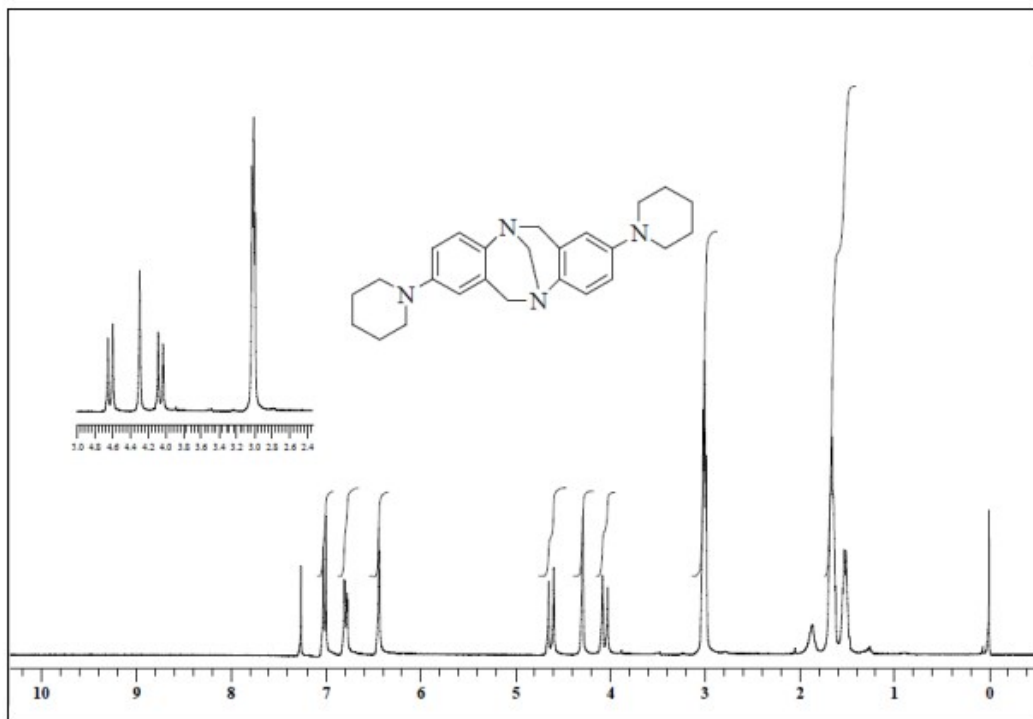


¹H NMR (500 MHz, CDCl₃) spectrum of compound 6

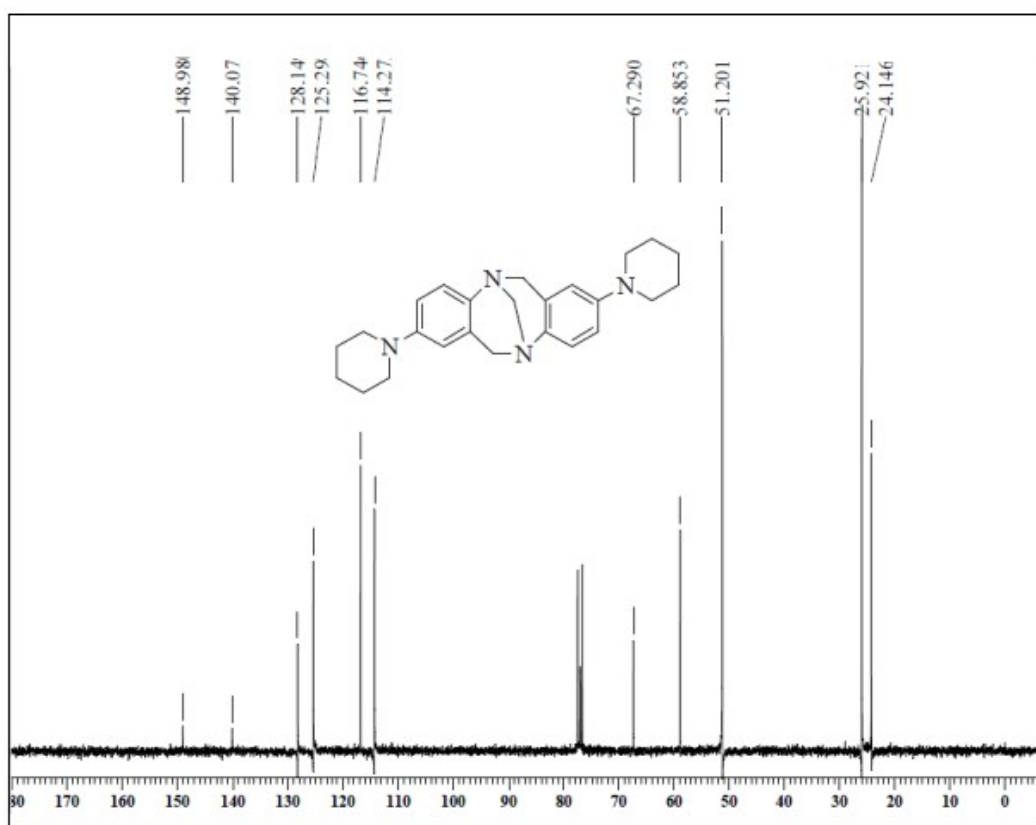


¹³C NMR (75 MHz, CDCl₃) spectrum of compound 6

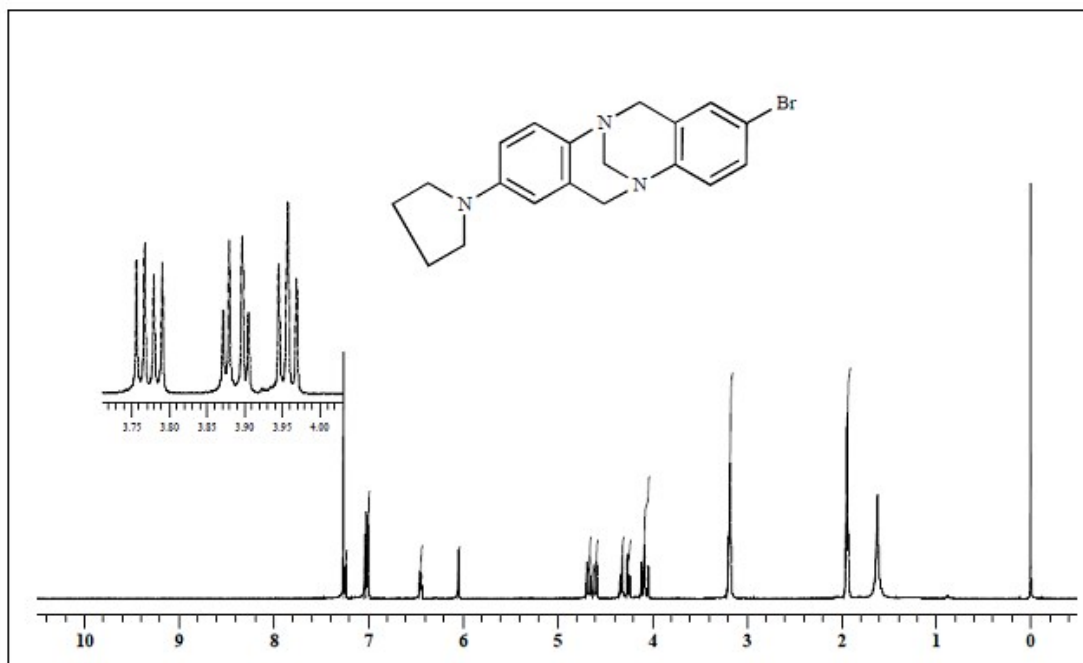




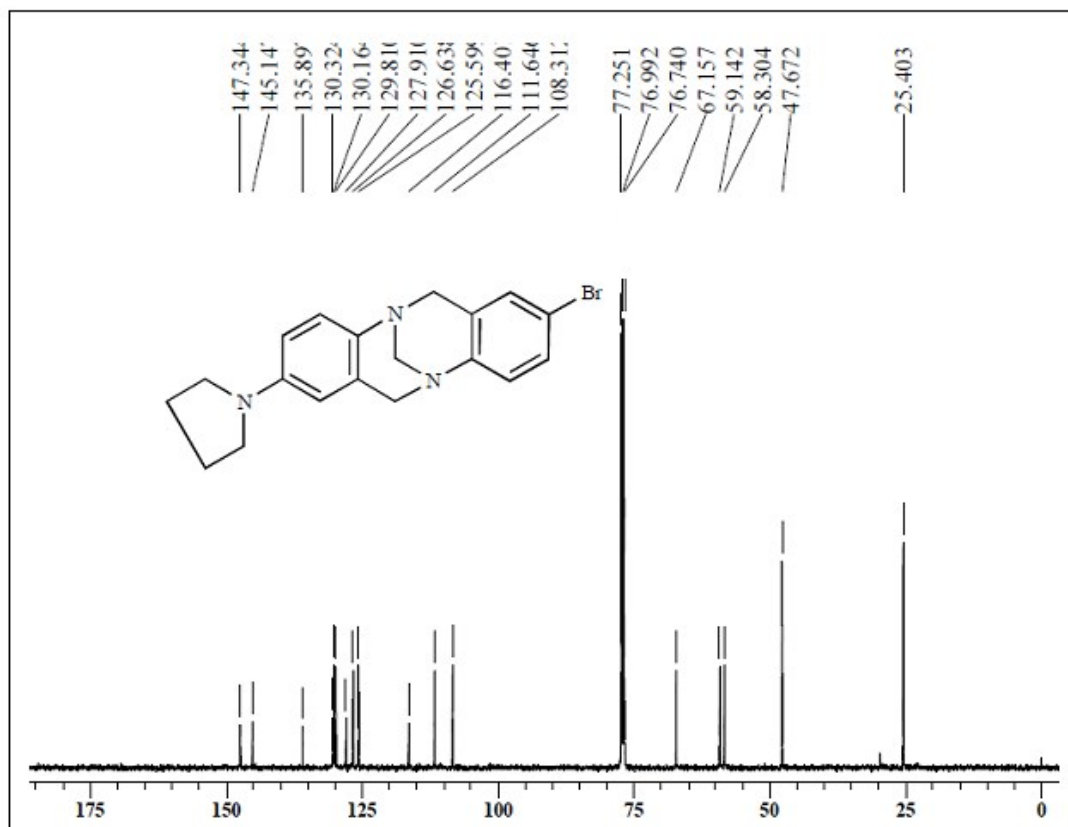
¹H NMR (300 MHz, CDCl₃) spectrum of compound 11a



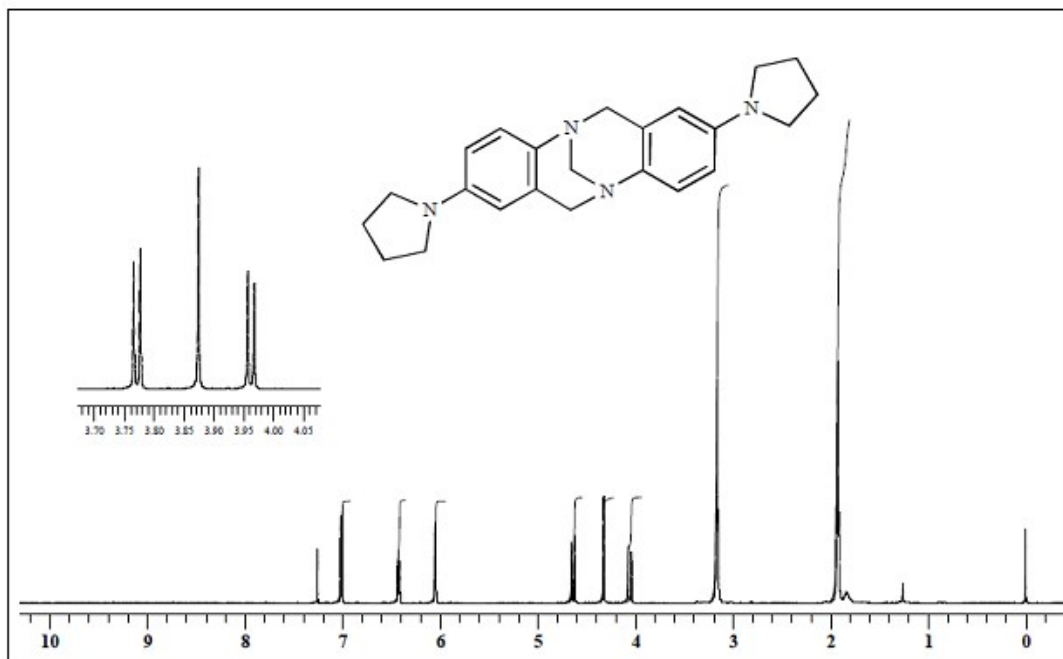
¹³C NMR (75 MHz, CDCl₃) spectrum of compound 11a



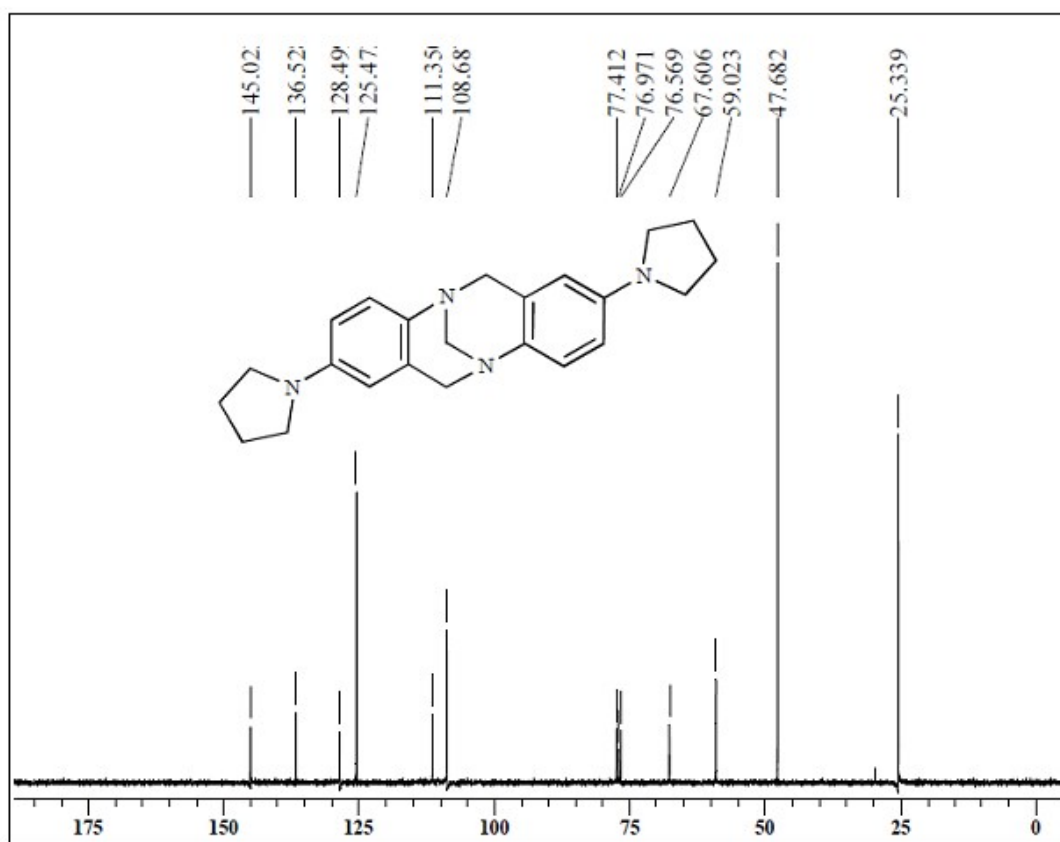
¹H NMR (500 MHz, CDCl₃) spectrum of compound 10b



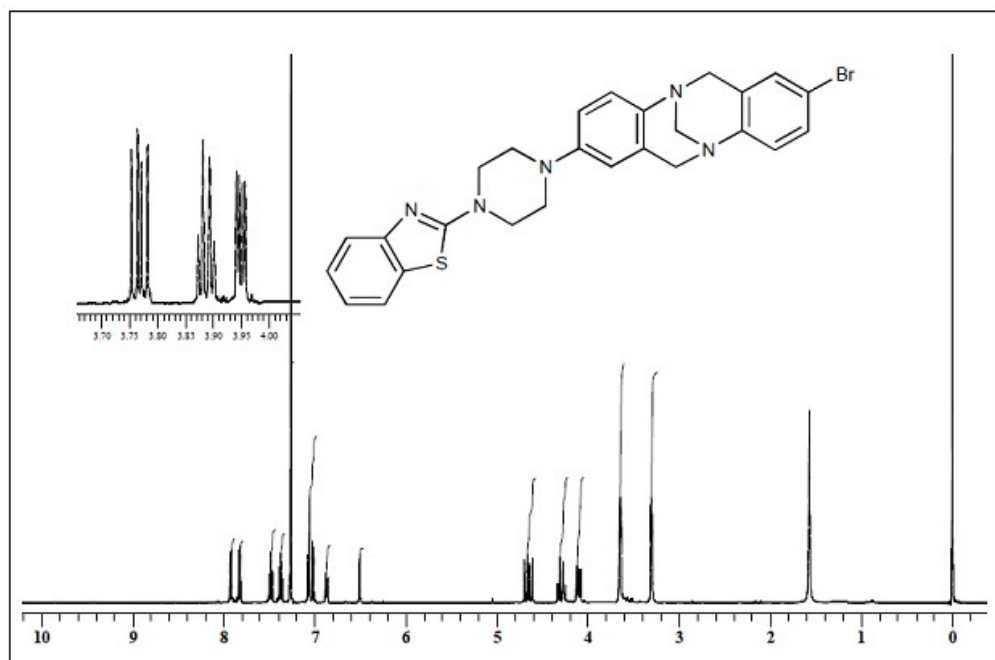
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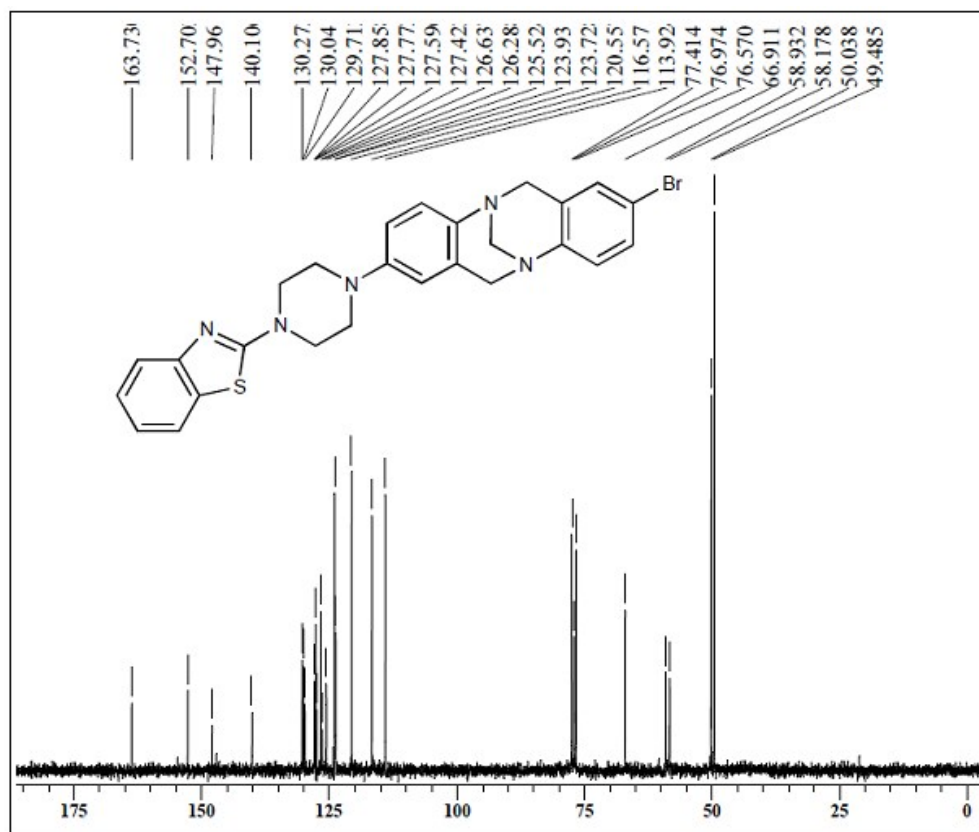
¹H NMR (500 MHz, CDCl₃) spectrum of compound 11b



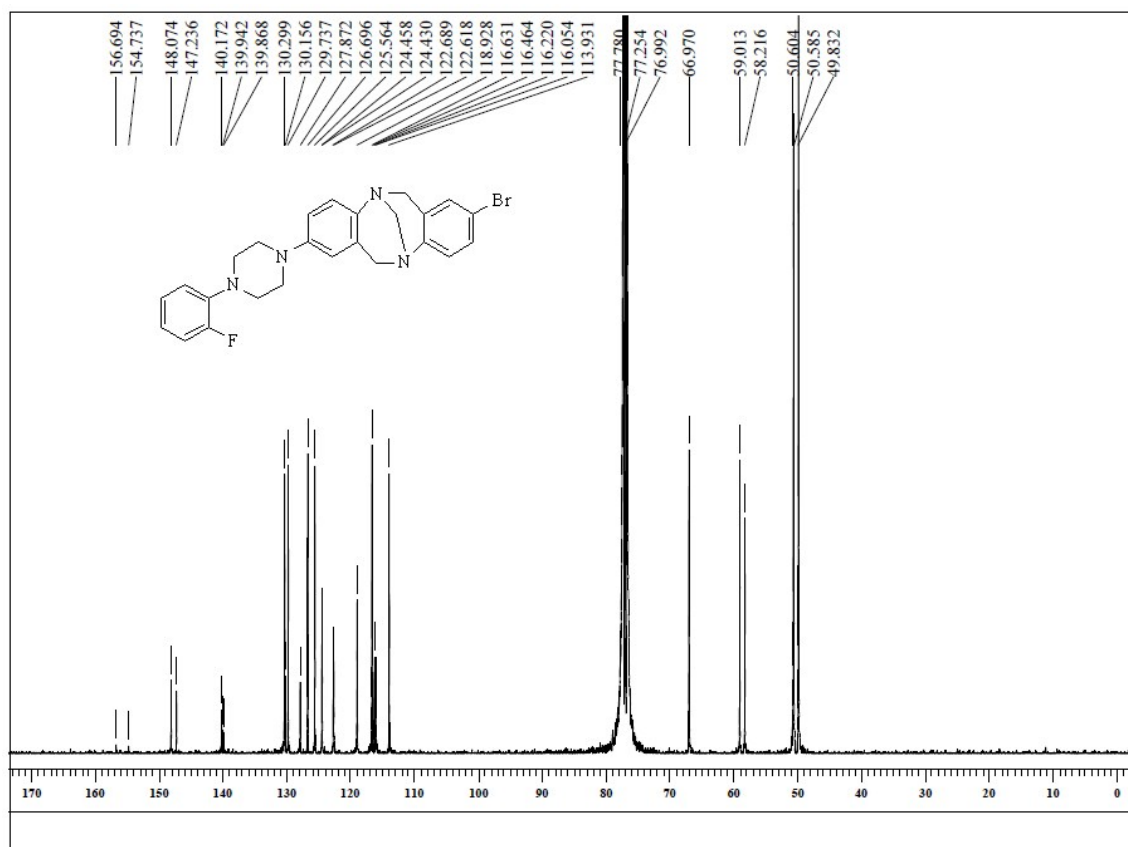
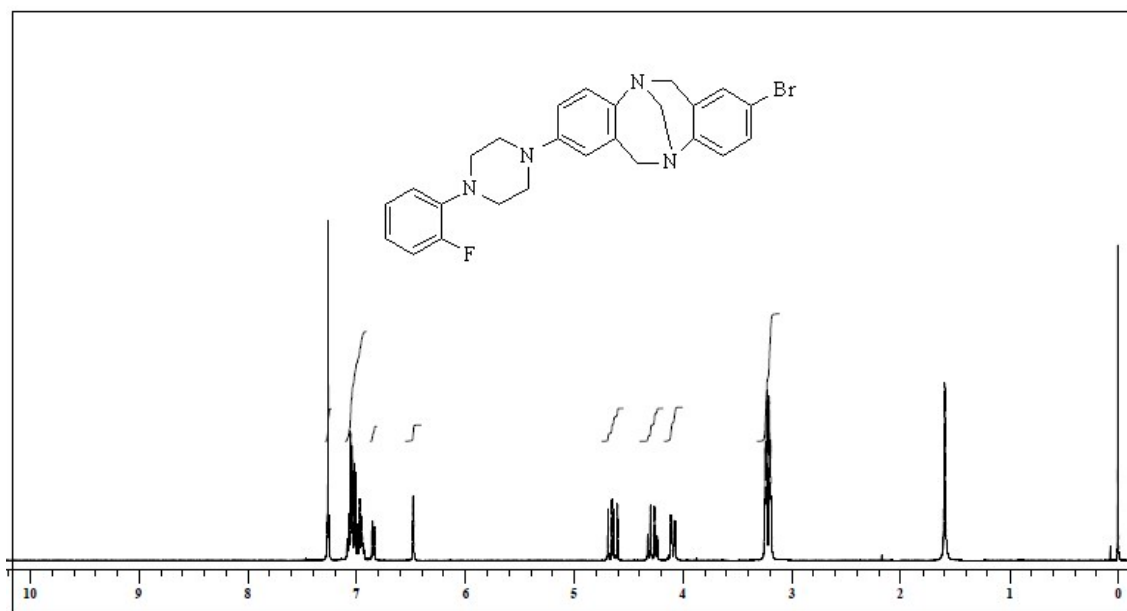
¹³C NMR (75 MHz, CDCl₃) spectrum of compound 11b

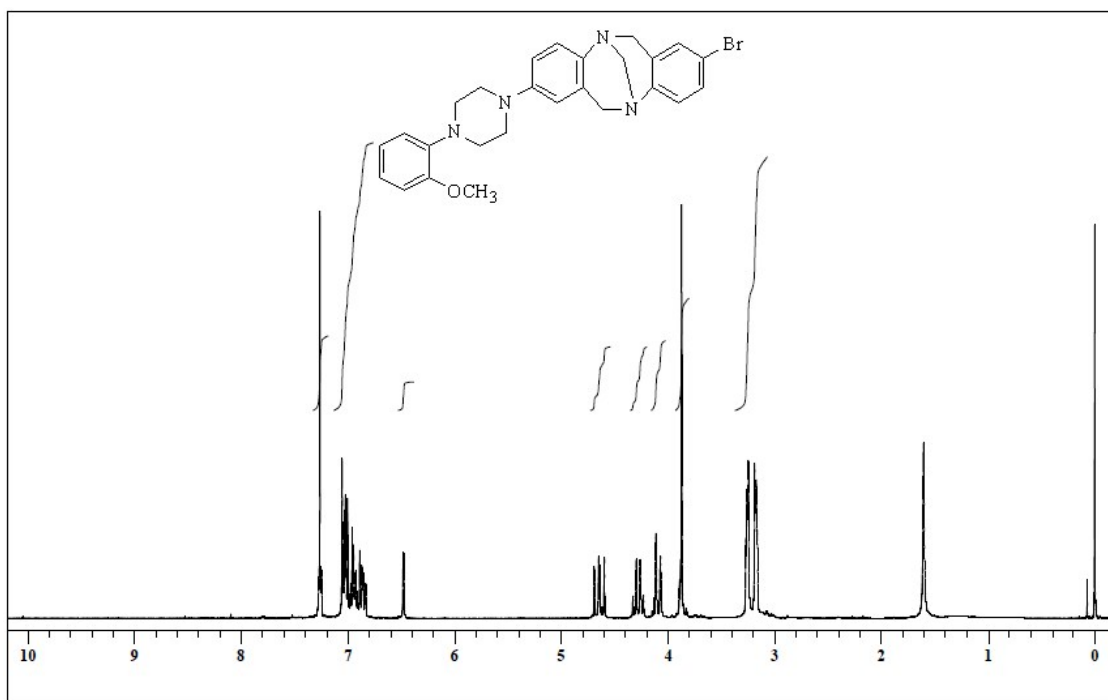


¹H NMR (500 MHz, CDCl₃) spectrum of compound 10c

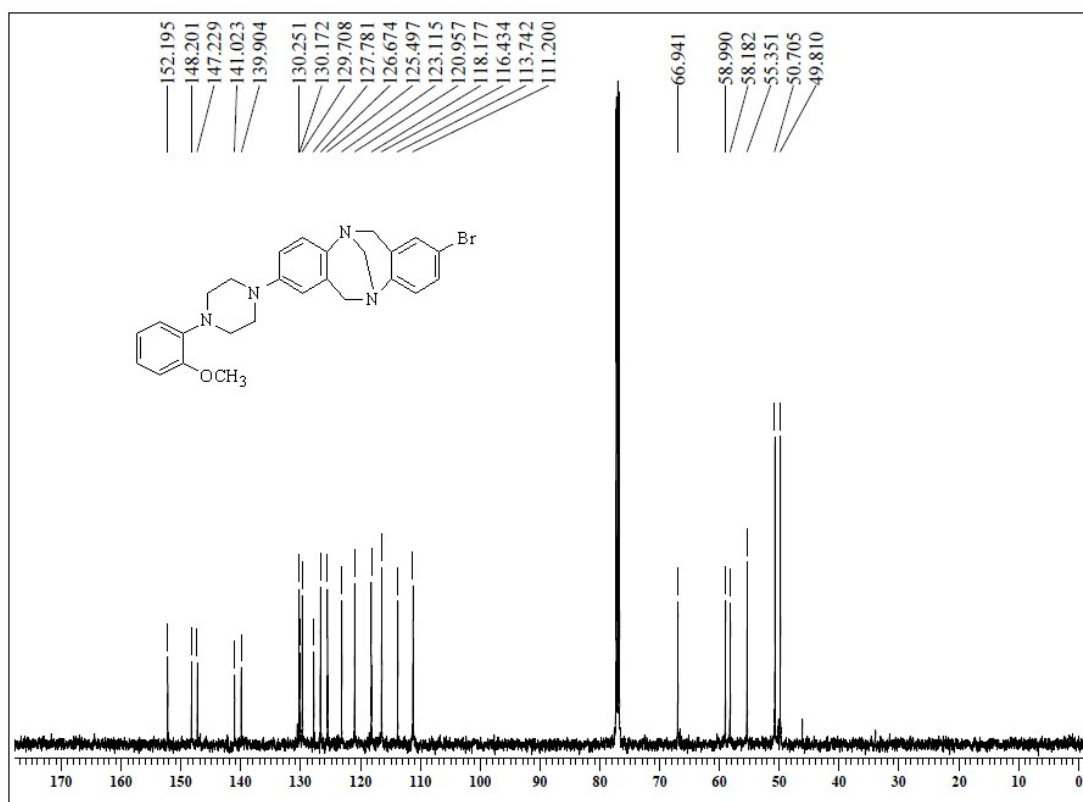


¹³C NMR (75 MHz, CDCl₃) spectrum of compound 10c

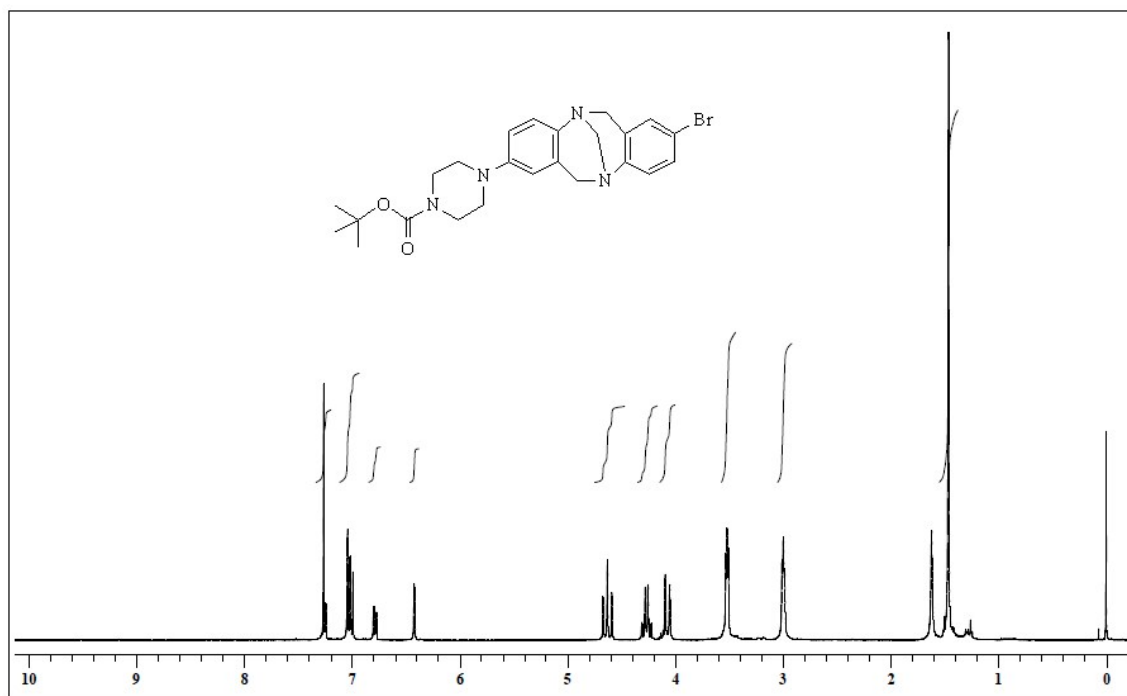




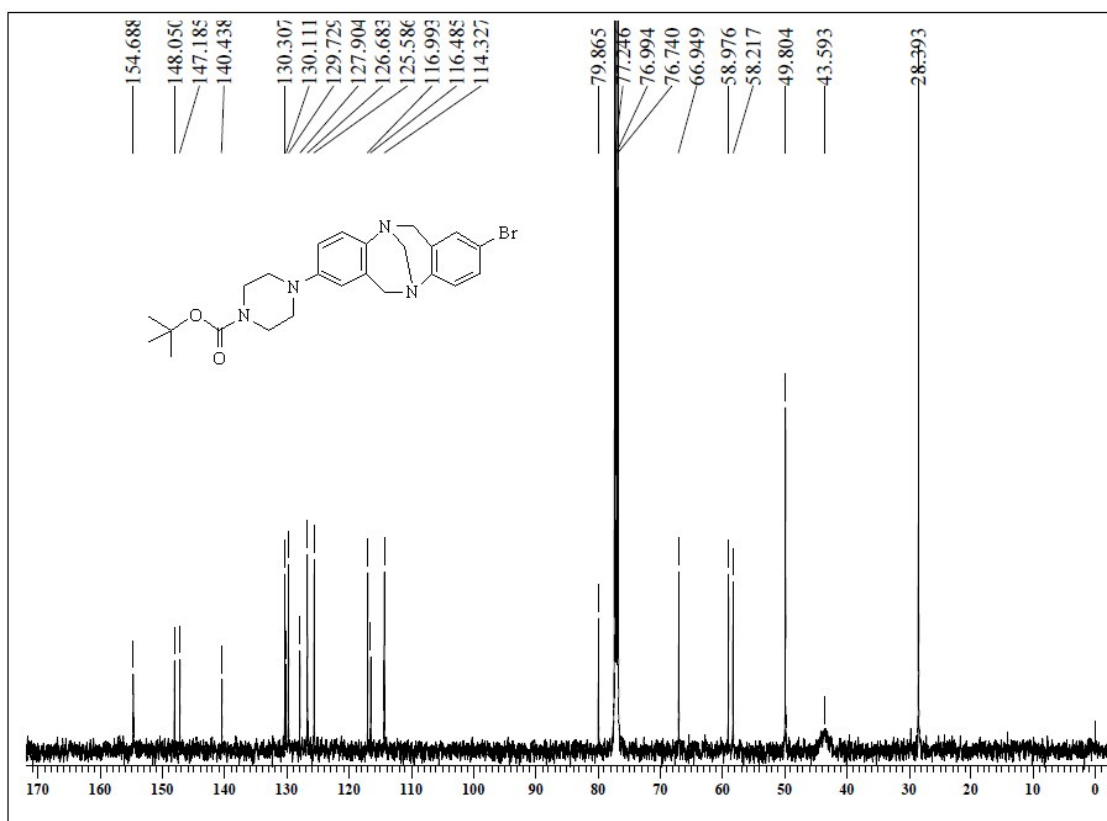
¹H NMR (400 MHz, CDCl₃) spectrum of compound 10e



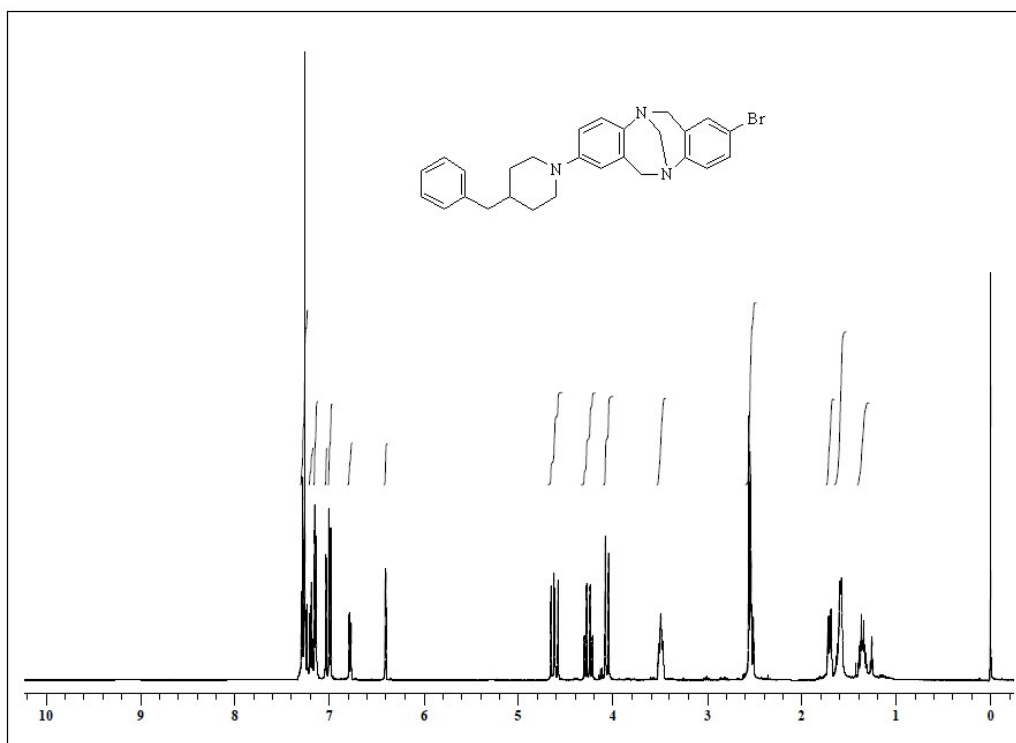
¹³C NMR (75 MHz, CDCl₃) spectrum of compound 10e



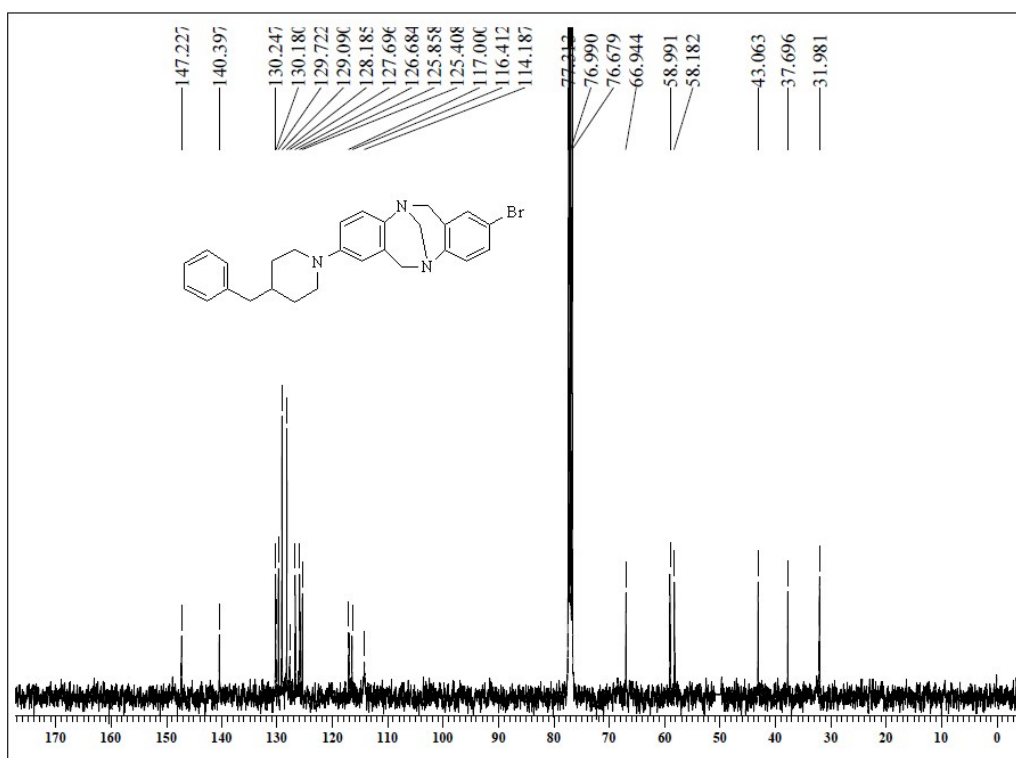
¹H NMR (400 MHz, CDCl₃) spectrum of compound 10f



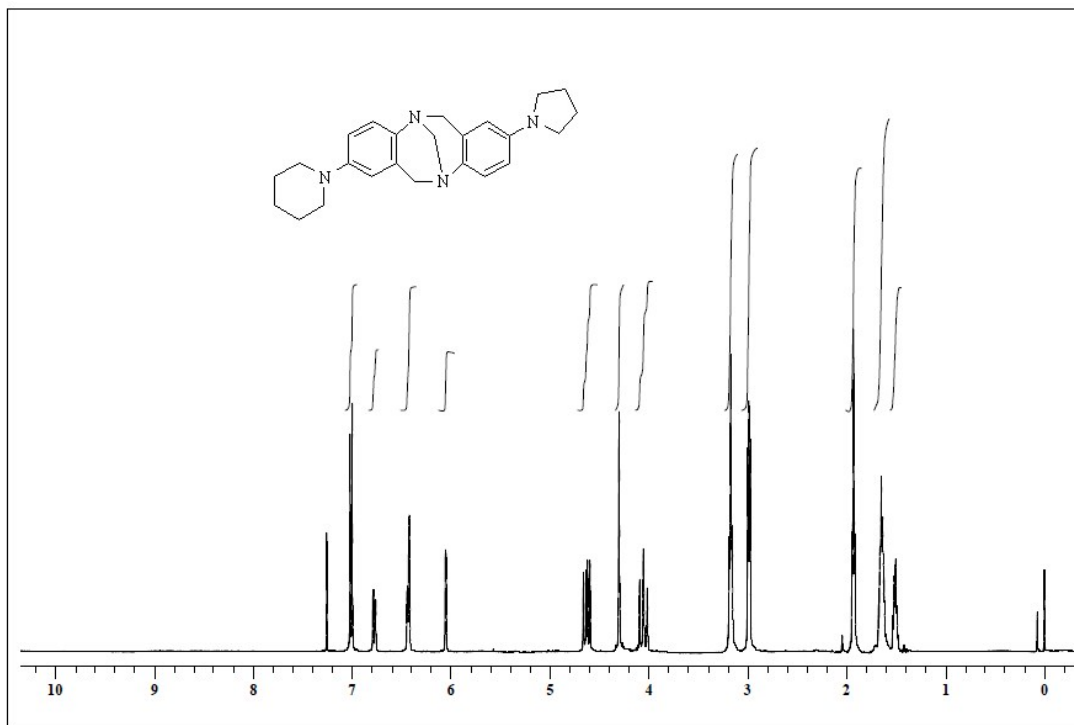
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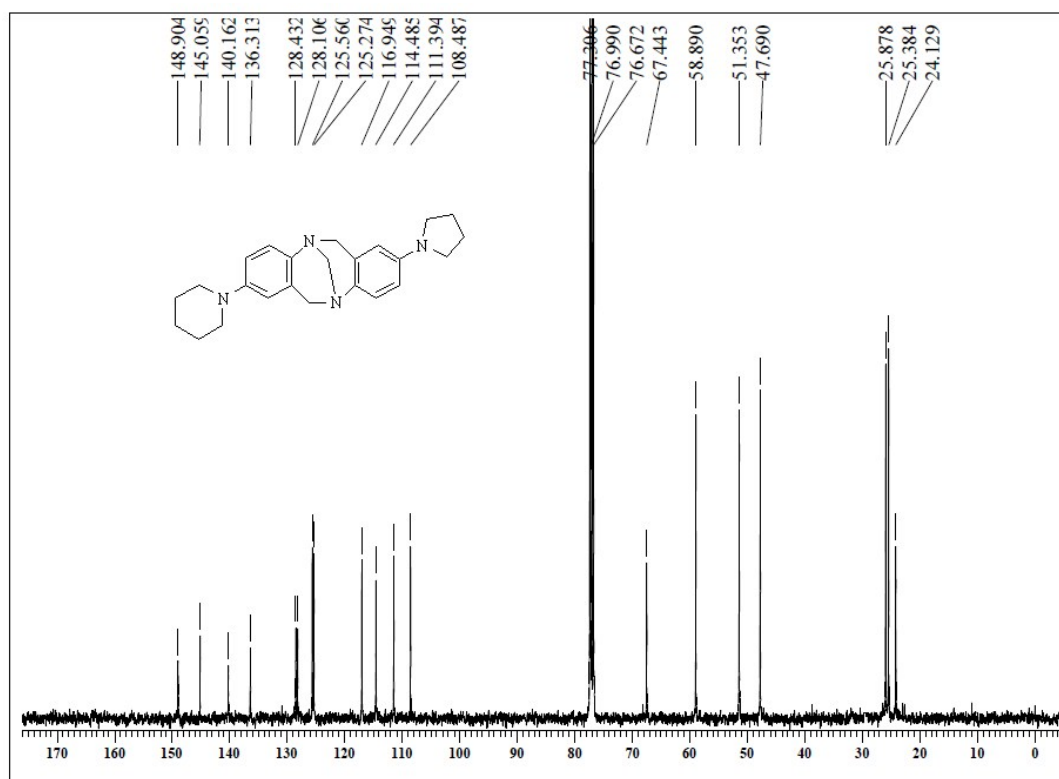
¹H NMR (500 MHz, CDCl₃) spectrum of compound 10g



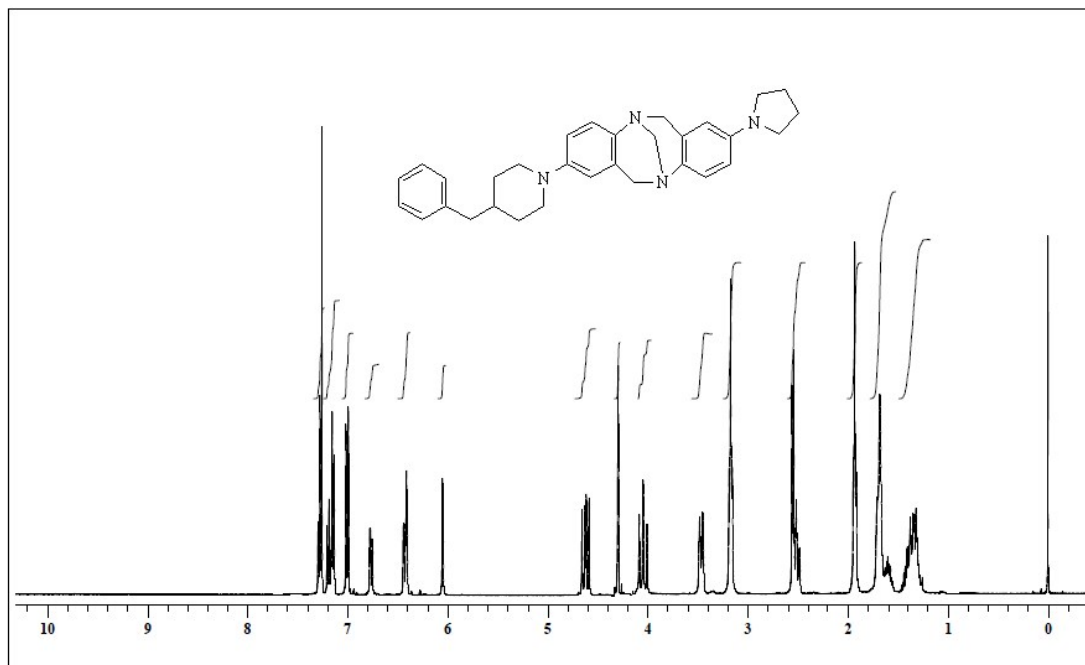
¹³C NMR (75 MHz, CDCl₃) spectrum of compound 10g



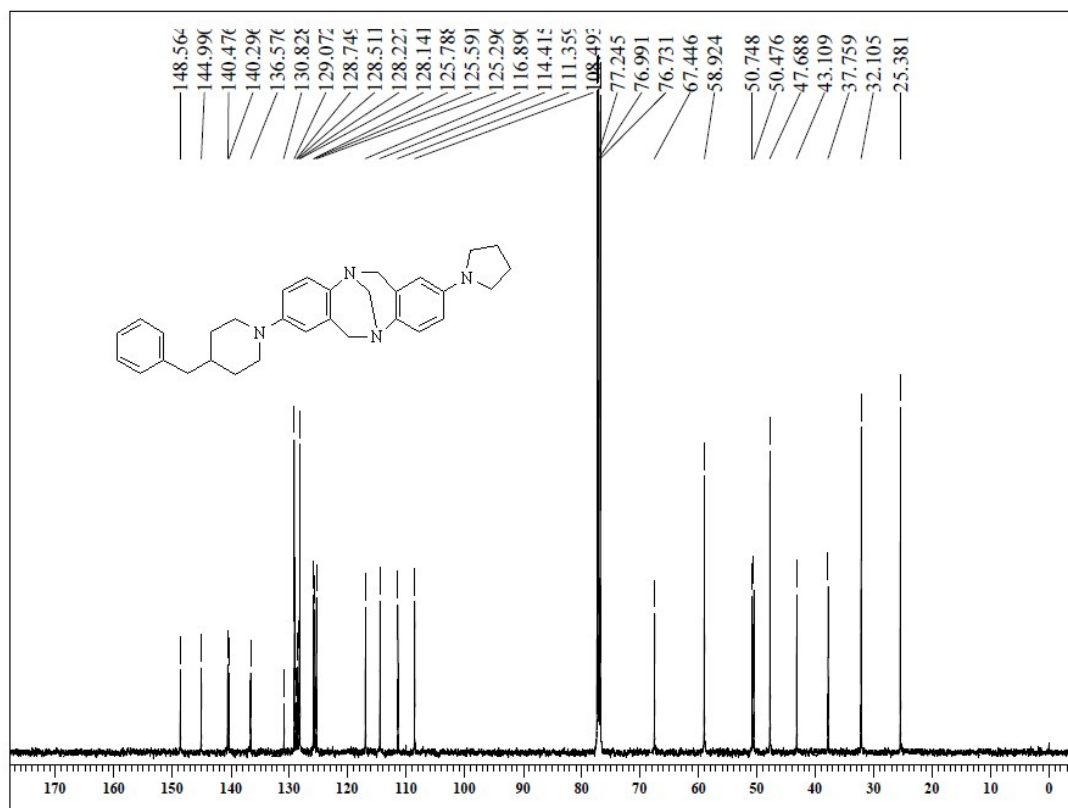
¹H NMR (400 MHz, CDCl₃) spectrum of compound 12



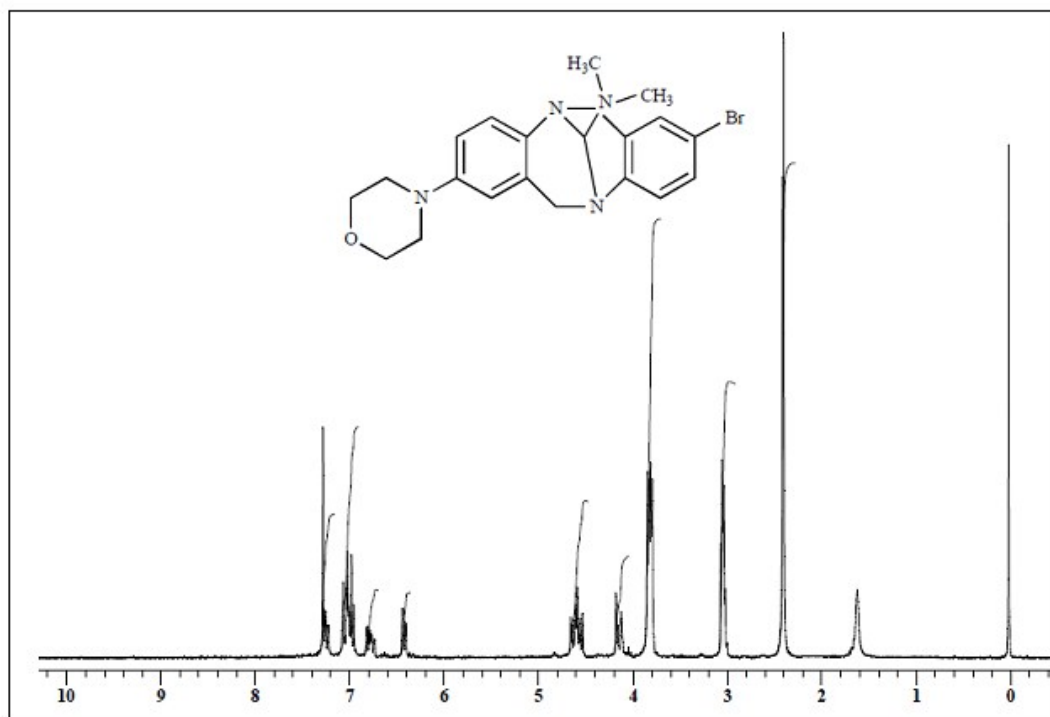
¹³C NMR (75 MHz, CDCl₃) spectrum of compound 12



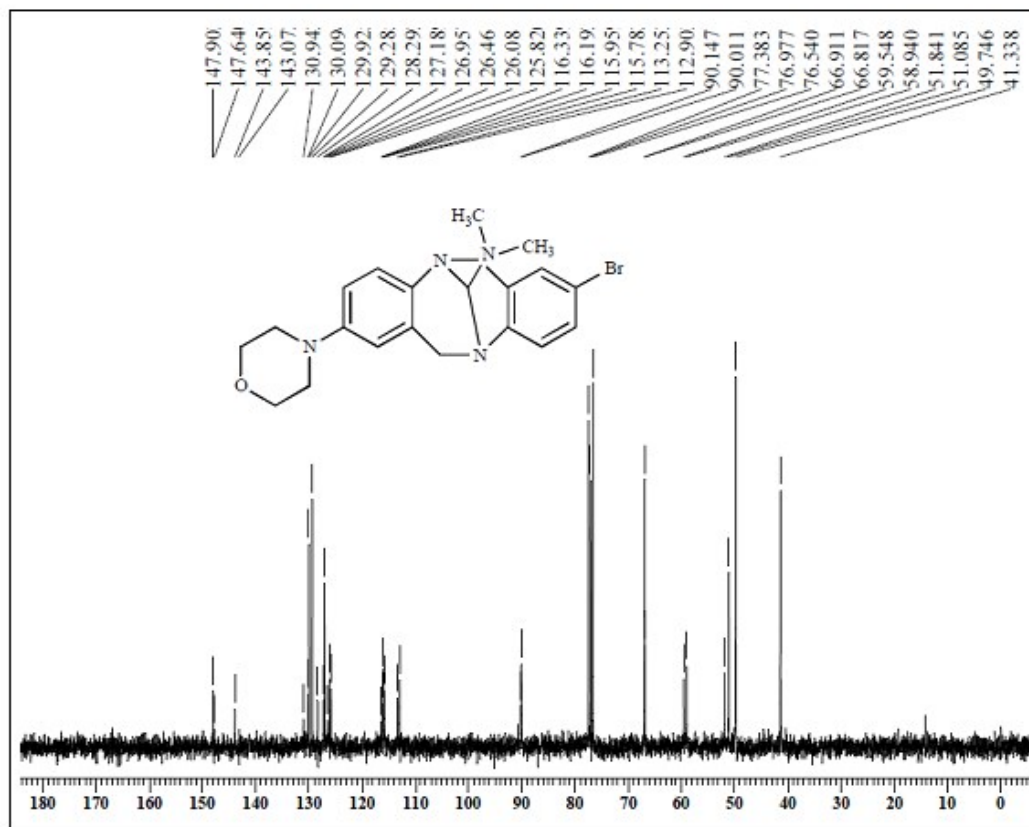
¹H NMR (400 MHz, CDCl₃) spectrum of compound 13



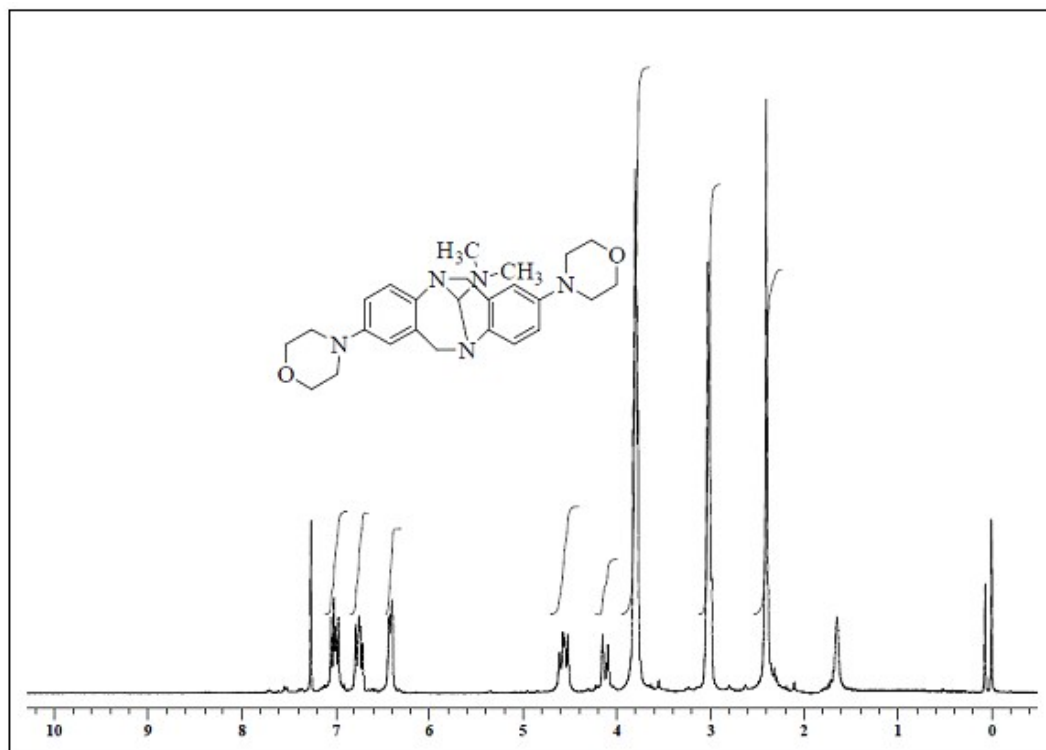
¹³C NMR (75 MHz, CDCl₃) spectrum of compound 13



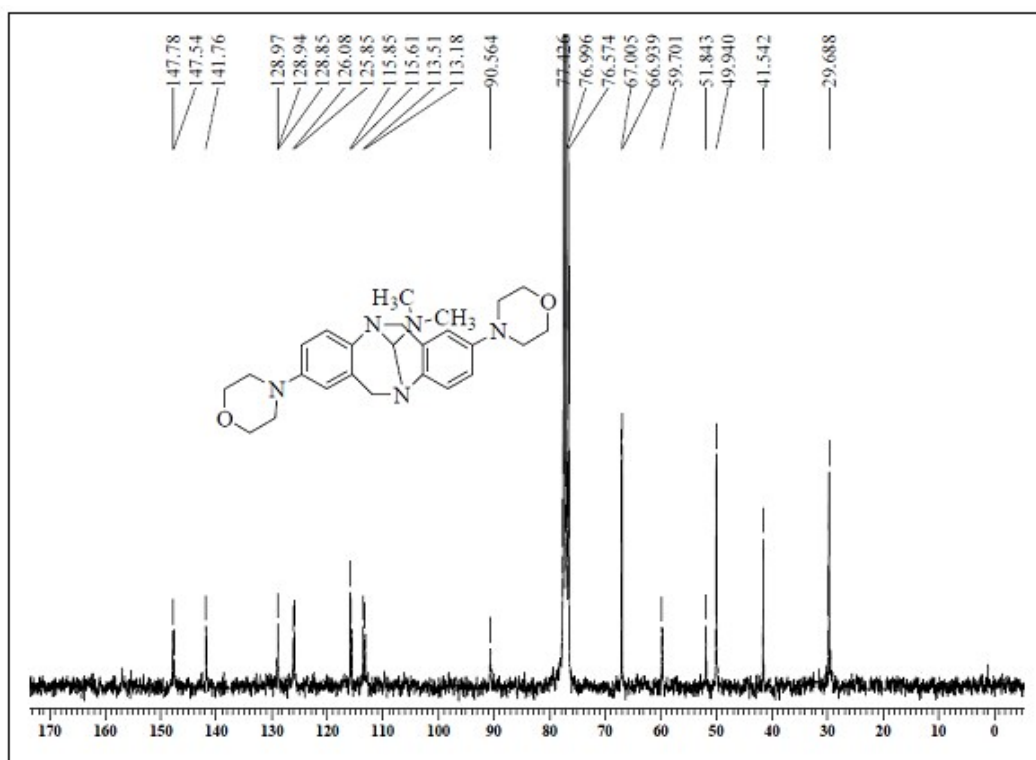
¹H NMR (300 MHz, CDCl₃) spectrum of compound 15



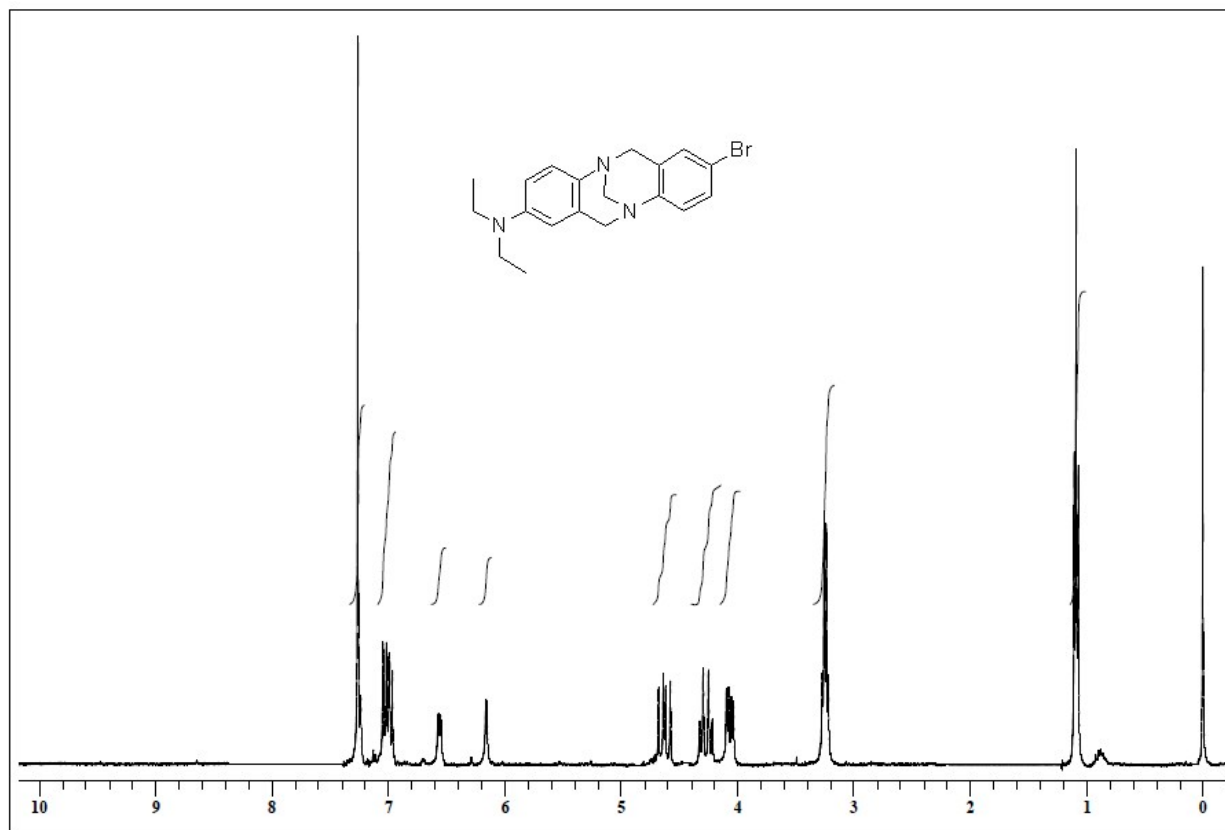
¹³C NMR (75 MHz, CDCl₃) spectrum of compound 15



¹H NMR (300 MHz, CDCl₃) spectrum of compound 16



¹³C NMR (75 MHz, CDCl₃) spectrum of compound 16



^1H NMR (400 MHz, CDCl_3) spectrum of compound 17