

Supporting Information

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NMR spectra of compounds 4 – 10

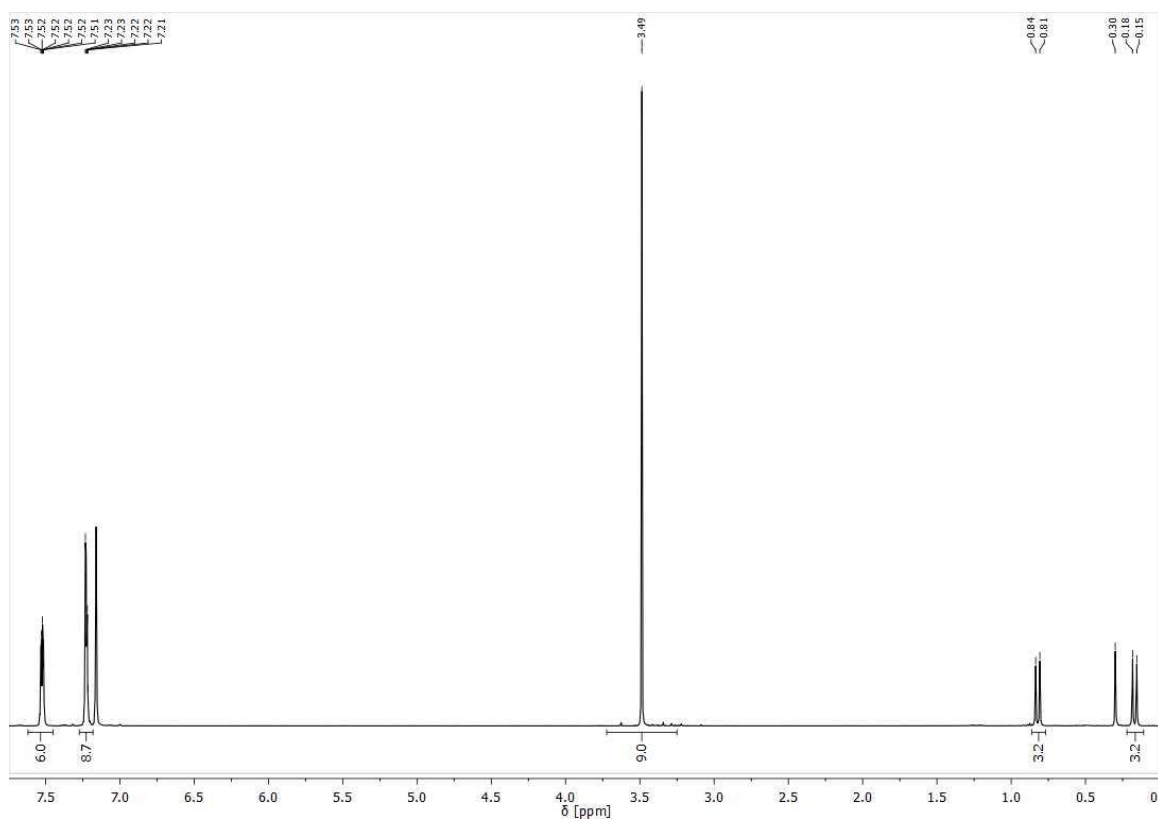


Figure S 1. ^1H NMR spectrum of all-*cis*-1,3,5-trimethoxy-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**4**) in C_6D_6 at 298 K.

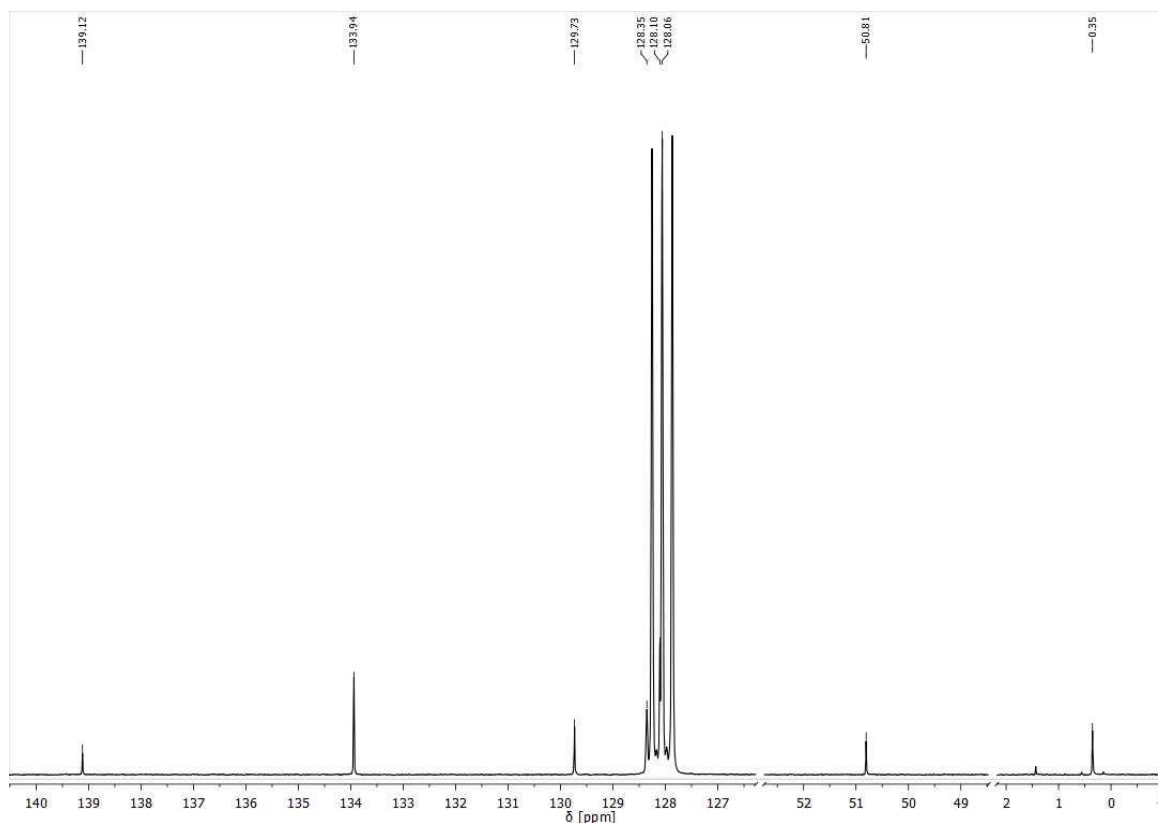


Figure S 2. Sections of $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of all-*cis*-1,3,5-trimethoxy-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**4**) in C_6D_6 at 298 K.

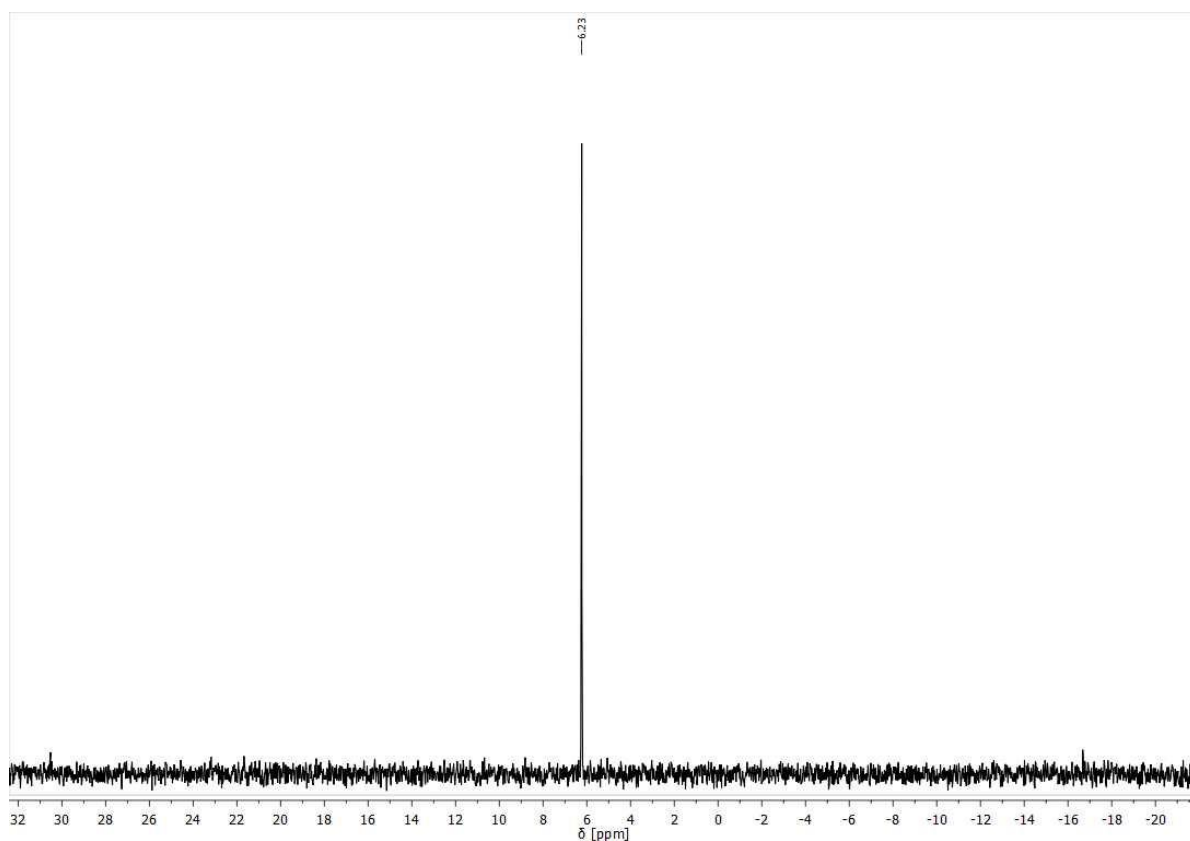


Figure S 3. Sections of $^{29}\text{Si}\{^1\text{H}\}$ NMR spectrum of all-*cis*-1,3,5-trimethoxy-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**4**) in C_6D_6 at 298 K.

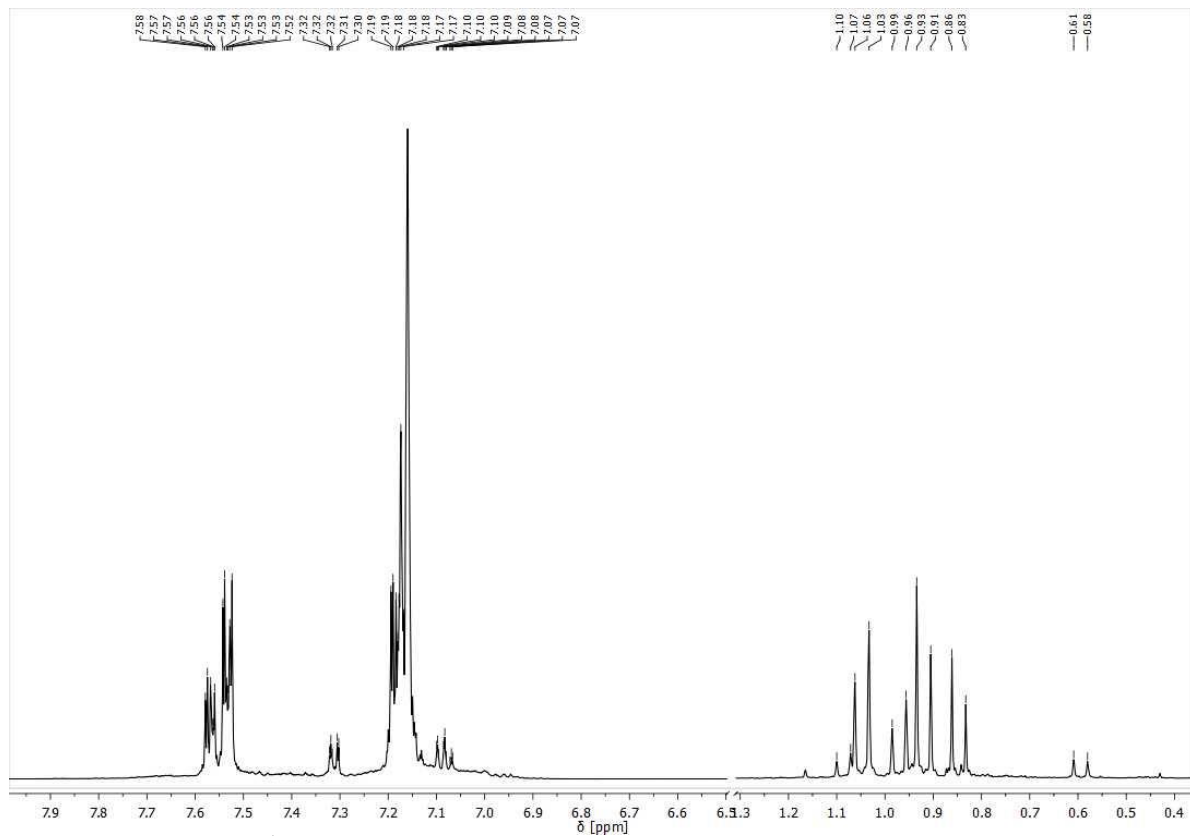


Figure S 4. Sections of ^1H NMR spectrum of 1,3,5-trichloro-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**5**) in C_6D_6 at 298 K.

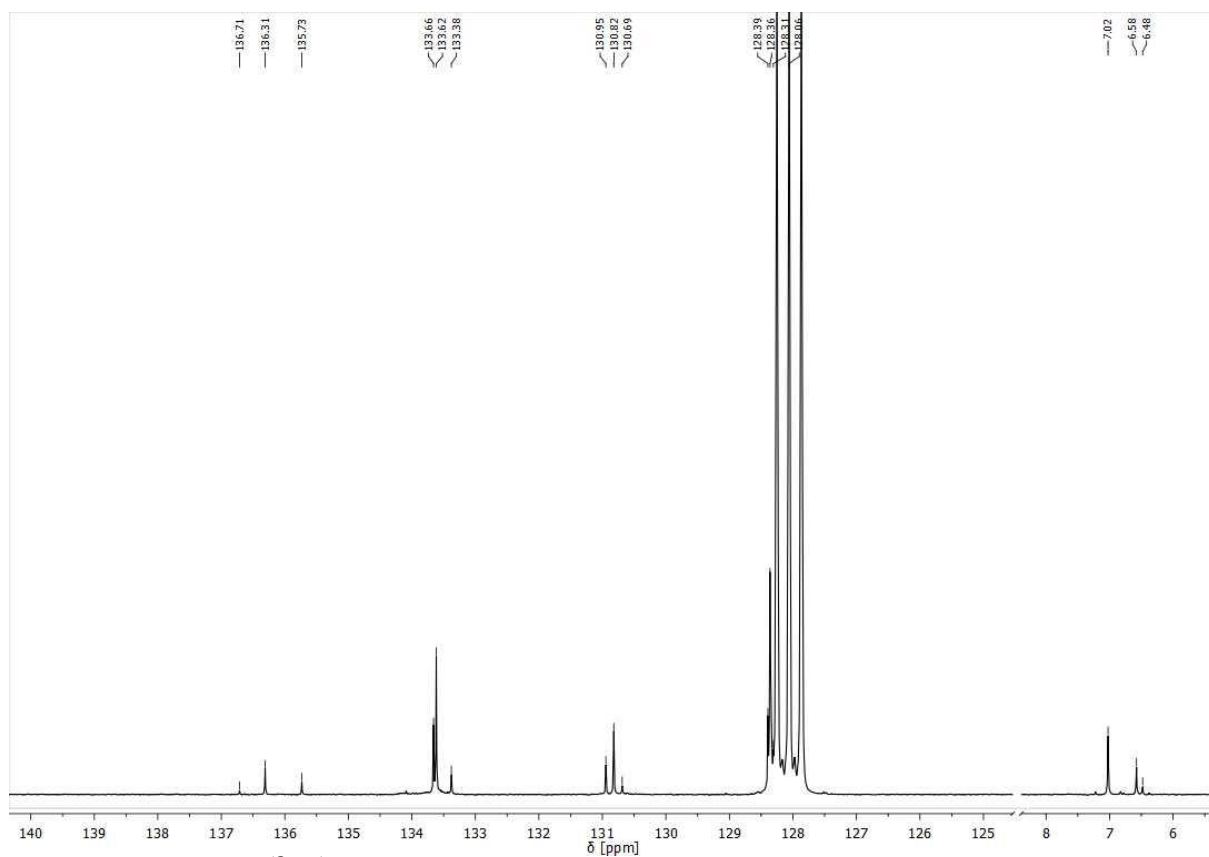


Figure S 5. Sections of $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of 1,3,5-trichloro-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**5**) in C_6D_6 at 298 K.

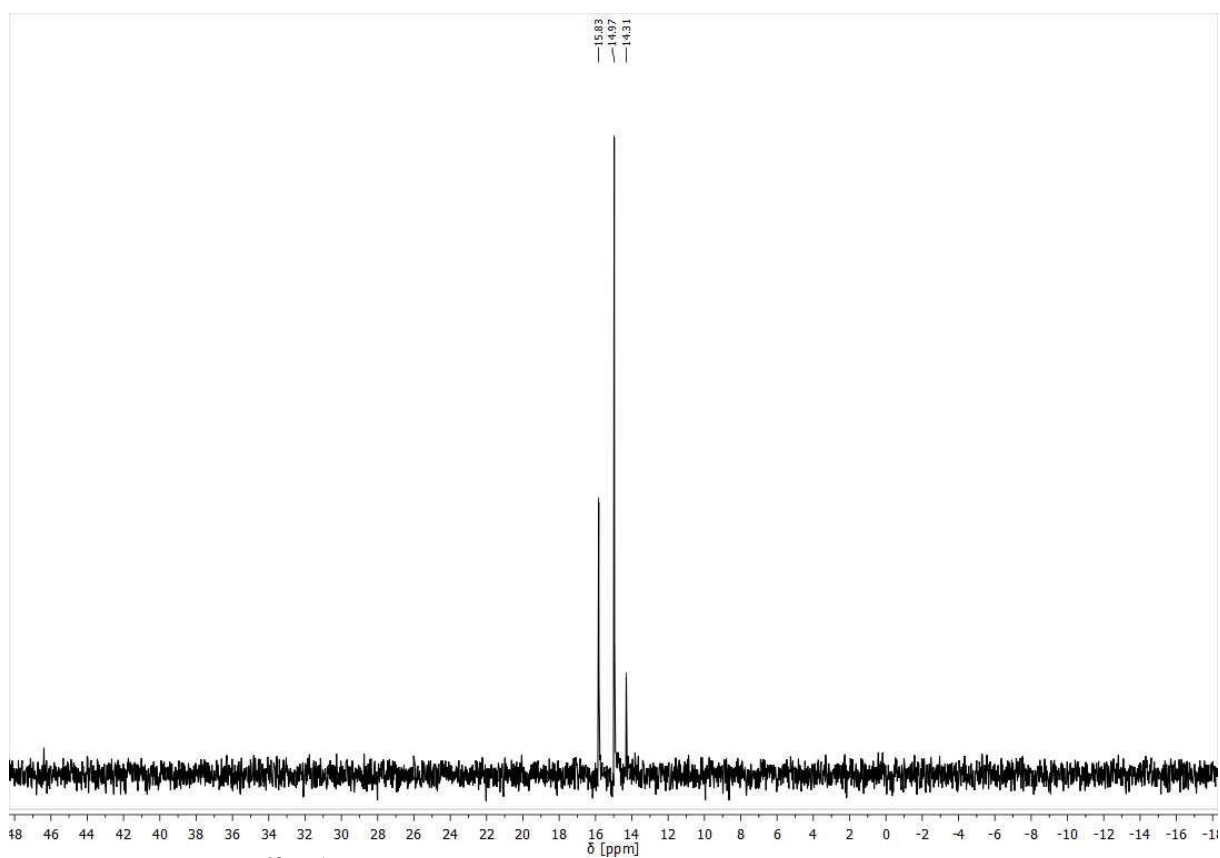


Figure S 6. Sections of $^{29}\text{Si}\{^1\text{H}\}$ NMR spectrum of 1,3,5-trichloro-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**5**) in C_6D_6 at 298 K.

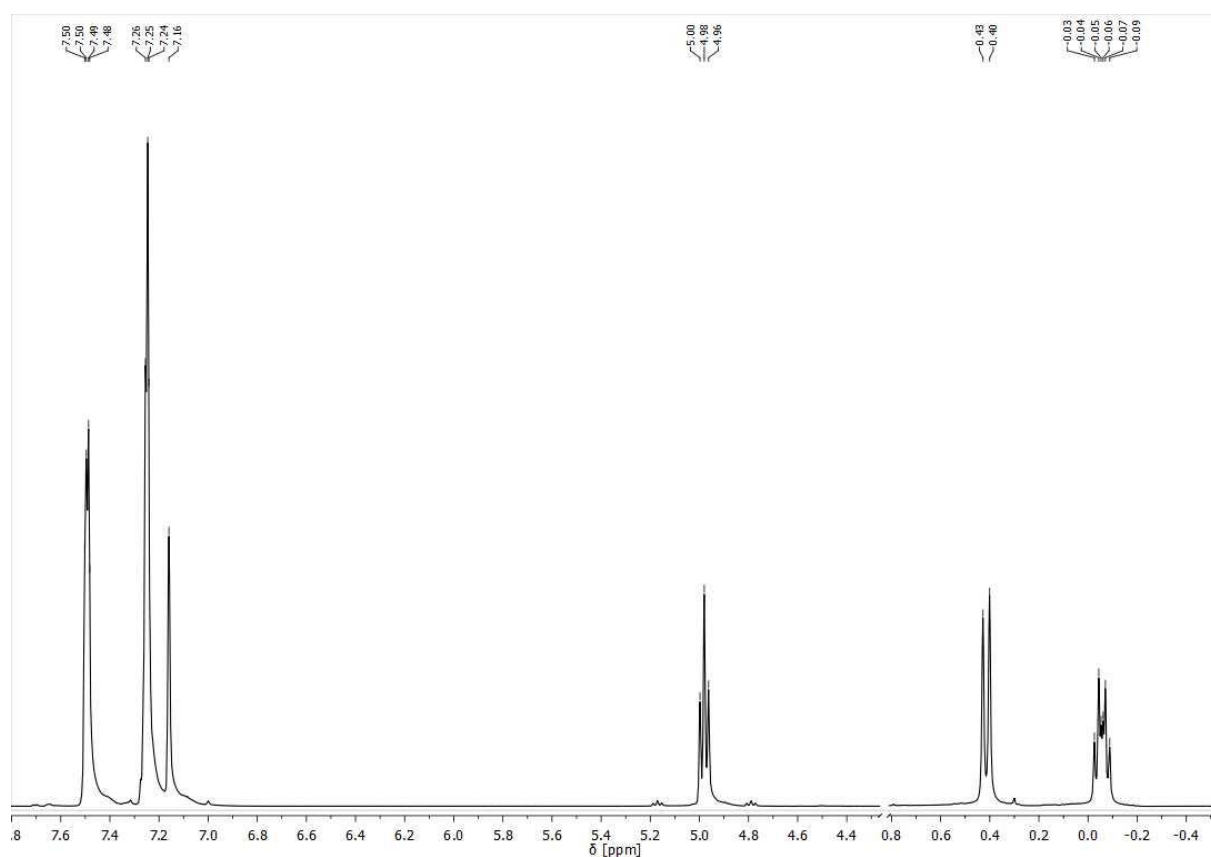


Figure S 7. Sections of ^1H NMR spectrum of all-*cis*-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**6**) in C_6D_6 at 298 K.

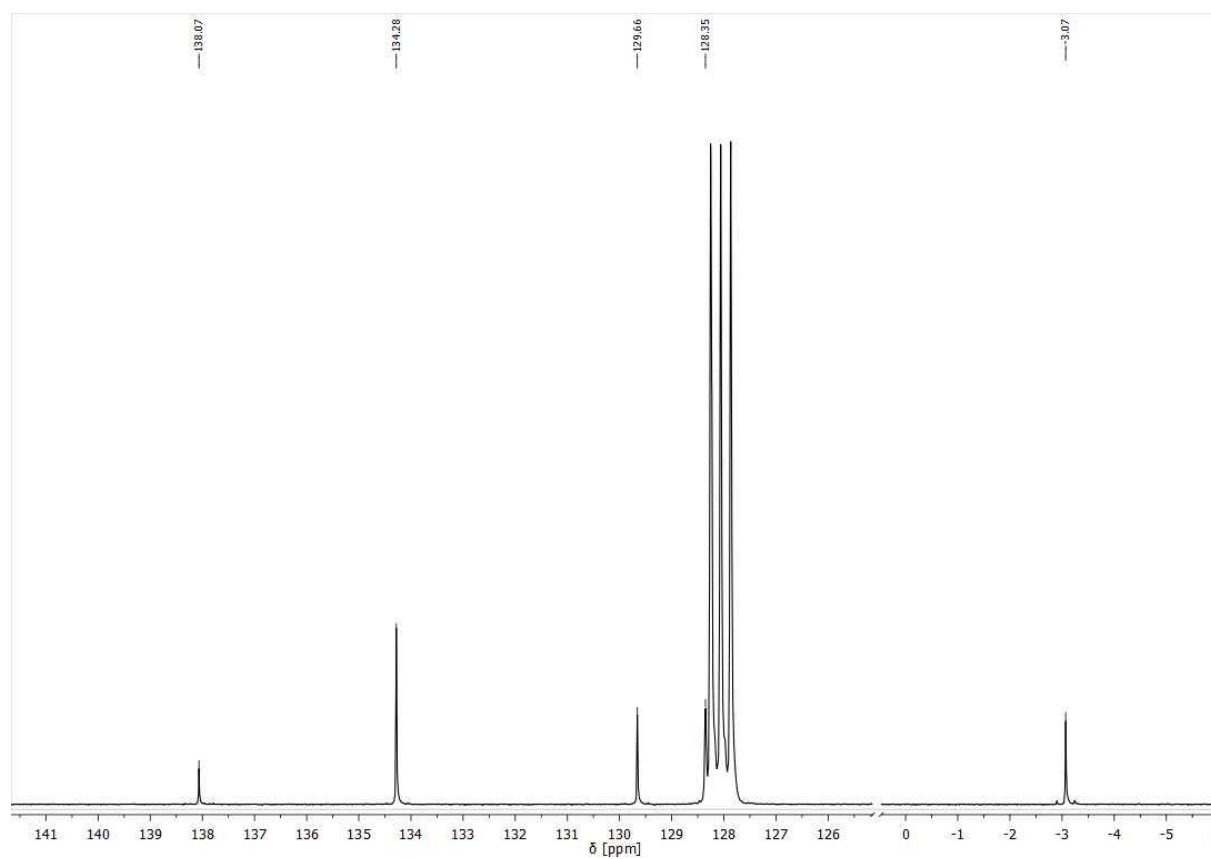


Figure S 8. Sections of $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of all-*cis*-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**6**) in C_6D_6 at 298 K.

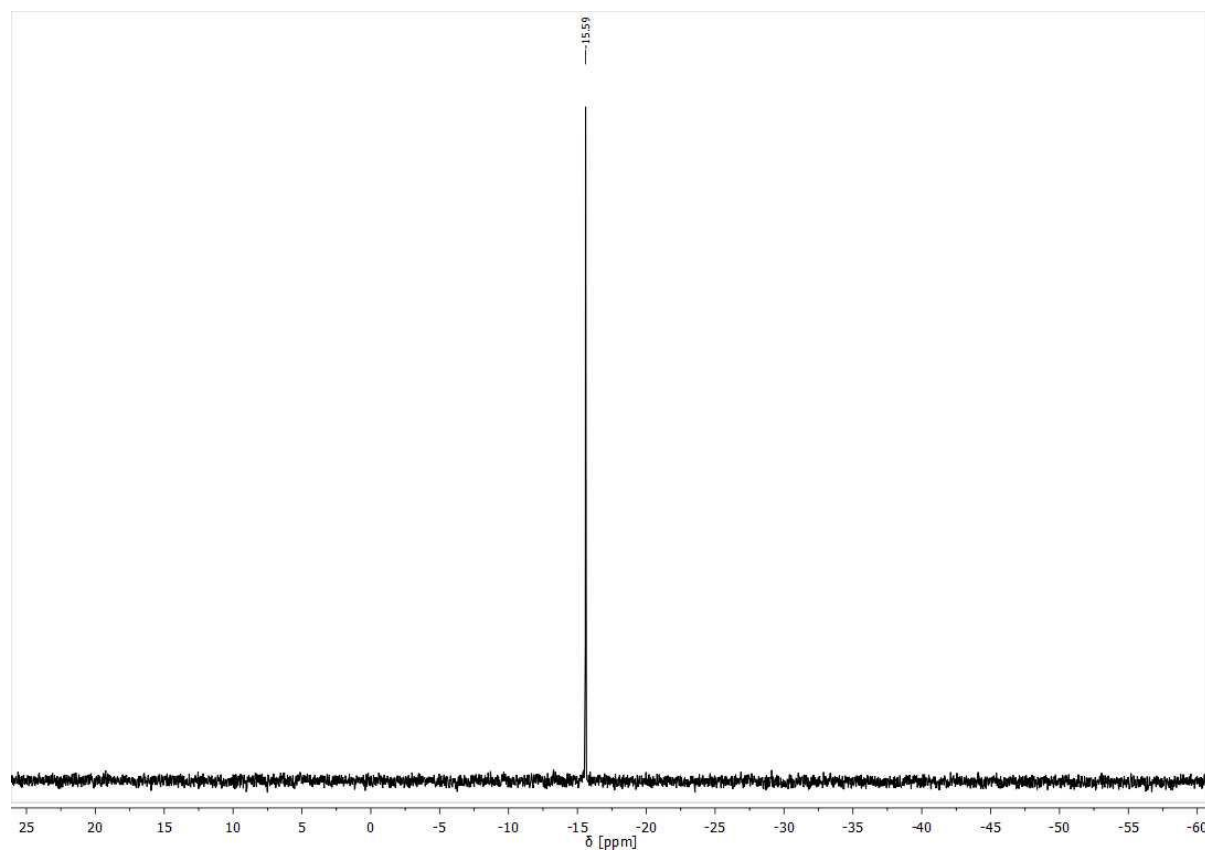


Figure S 9. Sections of $^{29}\text{Si}\{^1\text{H}\}$ NMR spectrum of all-*cis*-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**6**) in C_6D_6 at 298 K.

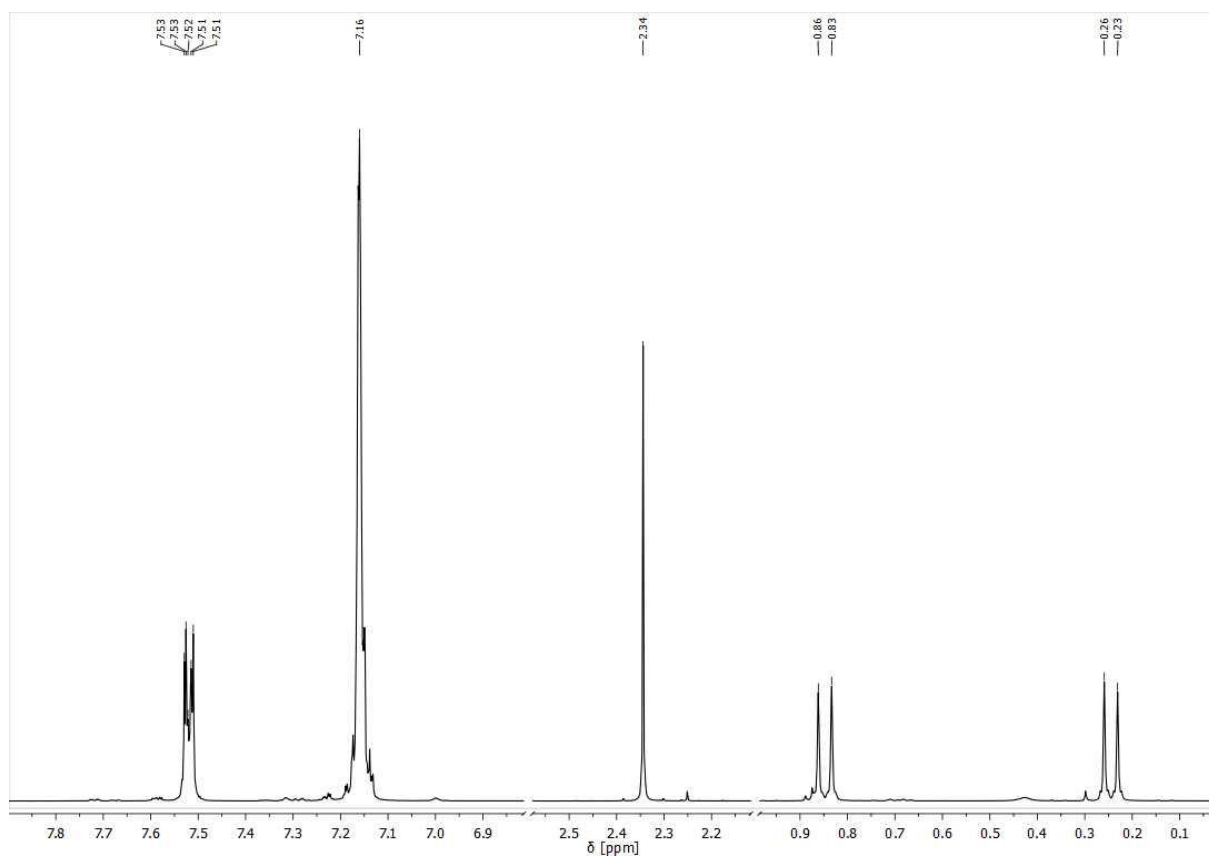


Figure S 10. Sections of ^1H NMR spectrum of all-*cis*-1,3,5-triethynyl-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**7**) in C_6D_6 at 298 K.

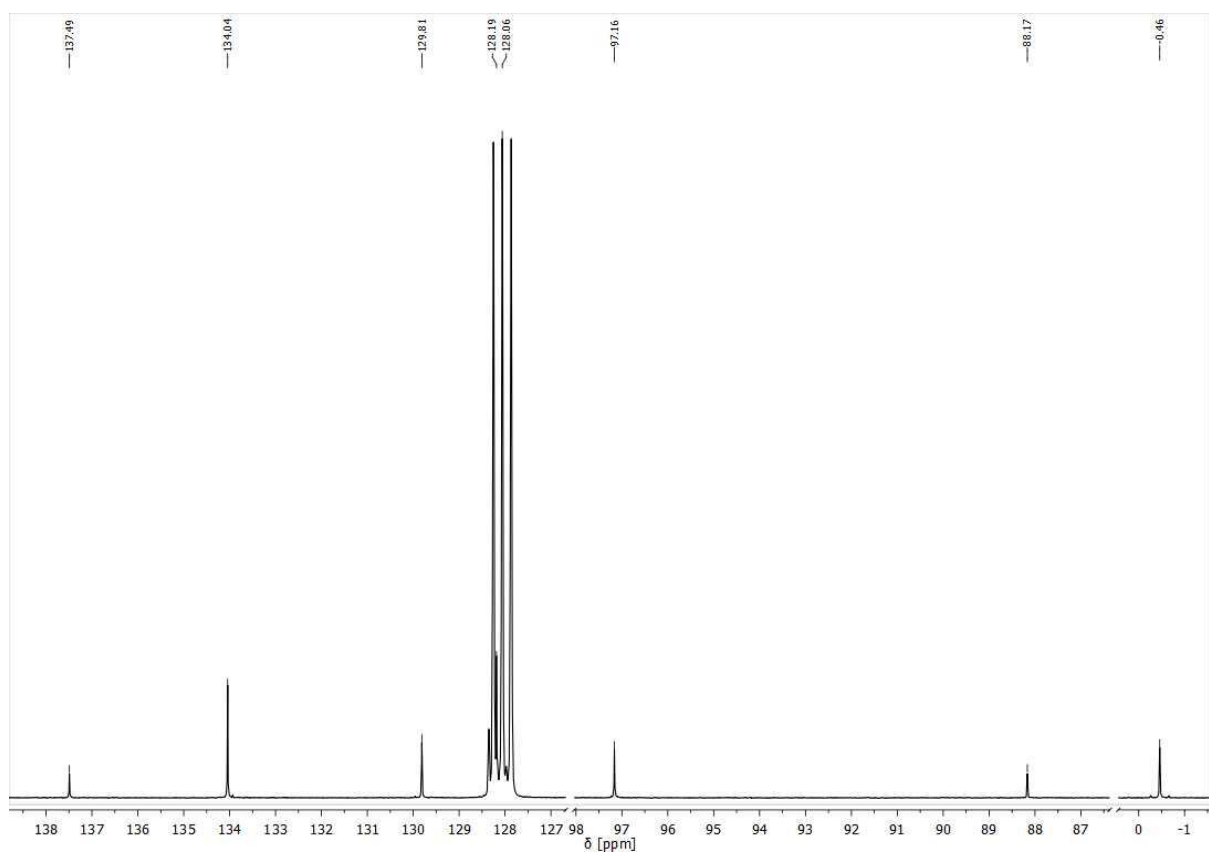


Figure S 11. Sections of $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of all-*cis*-1,3,5-triethynyl-1,3,5-triphenyl-1,3,5-trisilacyclohexane (7) in C_6D_6 at 298 K.

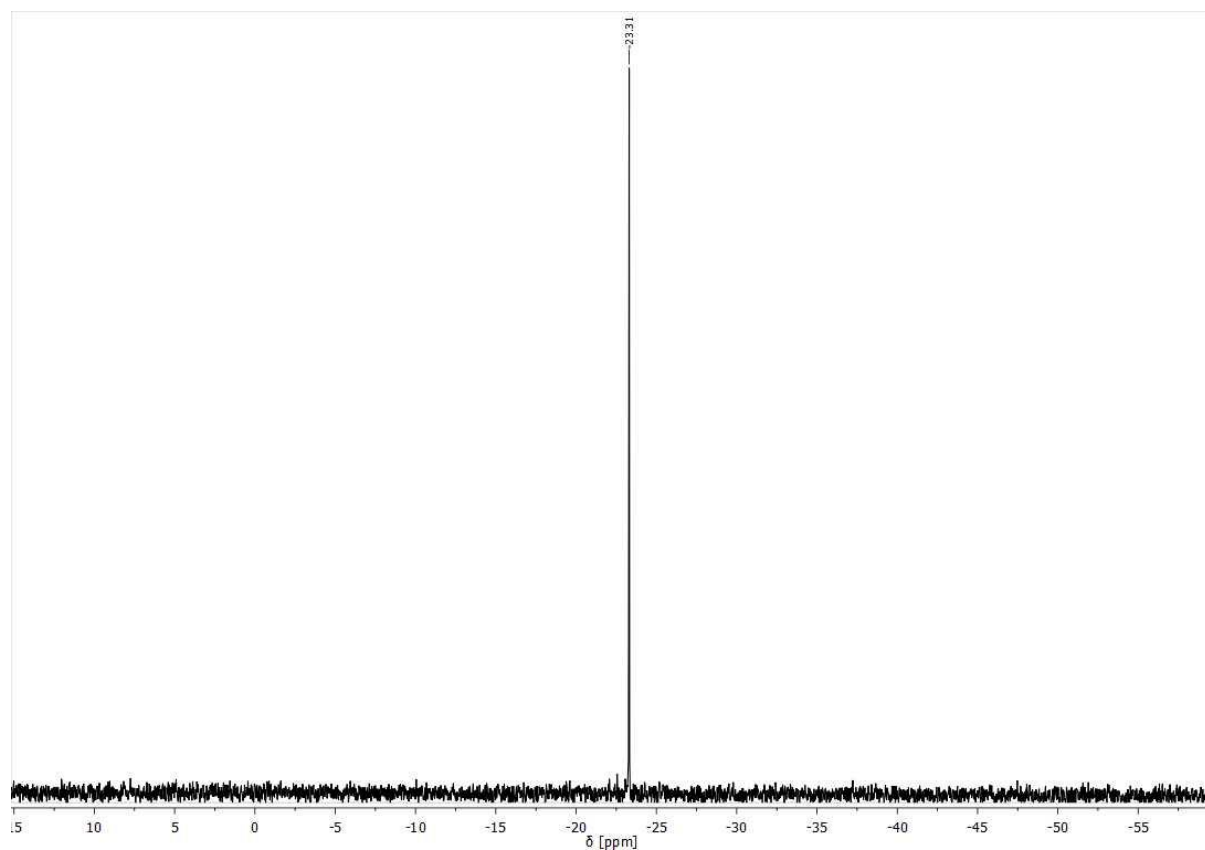


Figure S 12. Sections of $^{29}\text{Si}\{^1\text{H}\}$ NMR spectrum of all-*cis*-1,3,5-triethynyl-1,3,5-triphenyl-1,3,5-trisilacyclohexane (7) in C_6D_6 at 298 K.

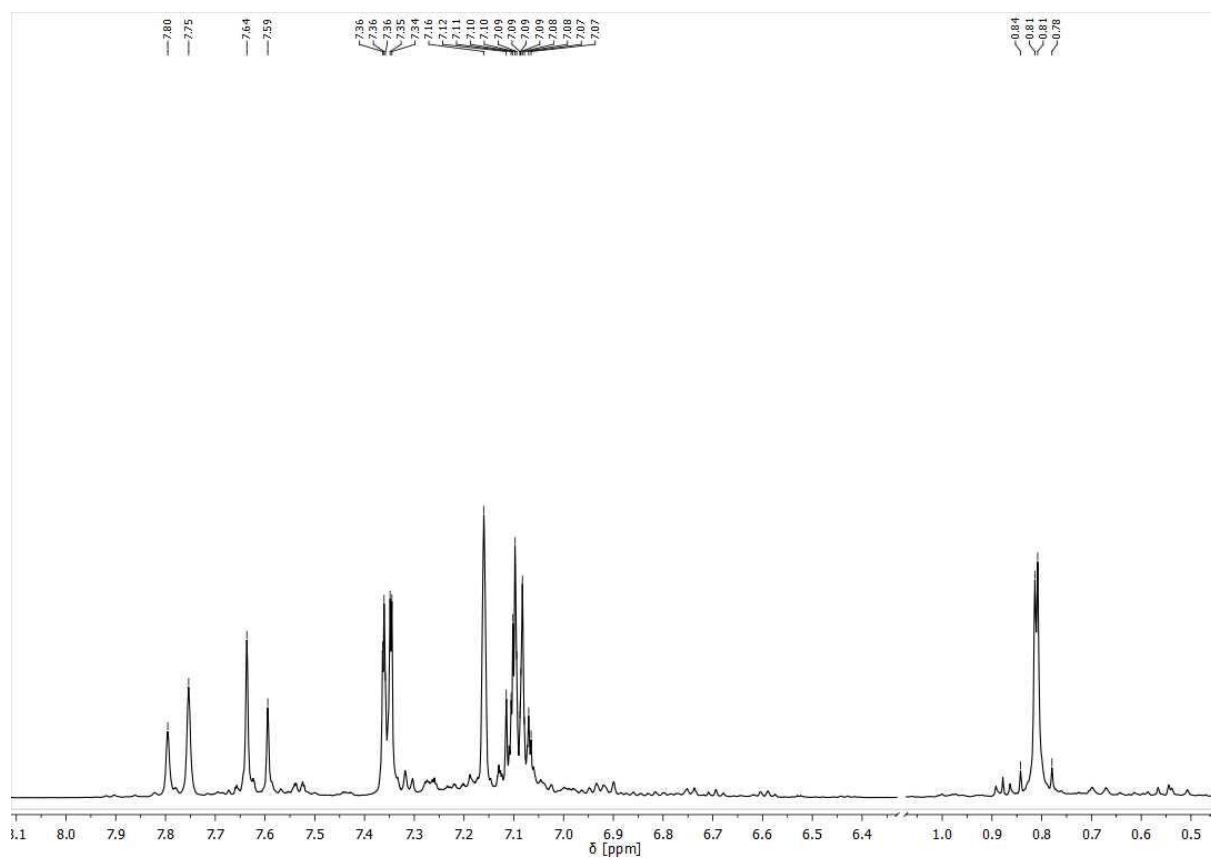


Figure S 13. Sections of ^1H NMR spectrum of boron compound **8** in C_6D_6 at 298 K.

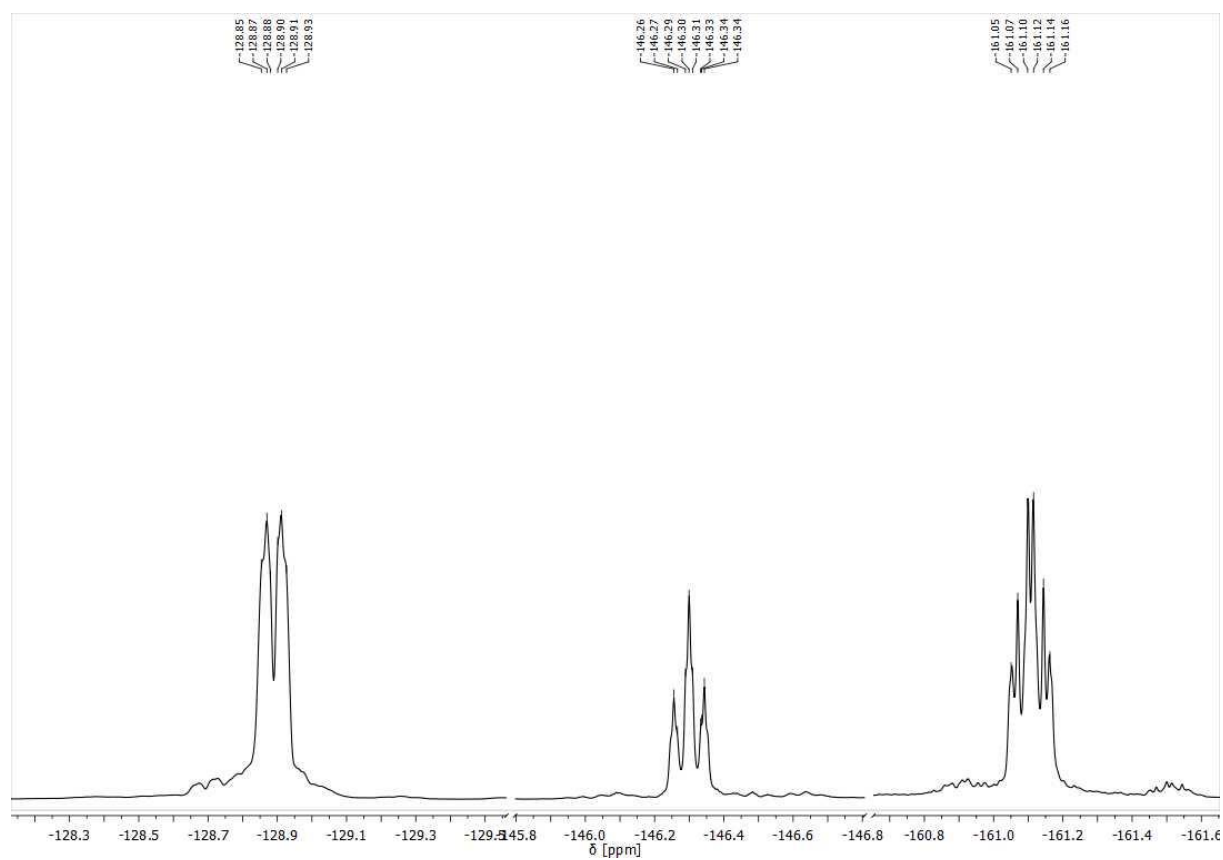


Figure S 14. Sections of $^{19}\text{F}\{^1\text{H}\}$ NMR spectrum of boron compound **8** in C_6D_6 at 298 K.

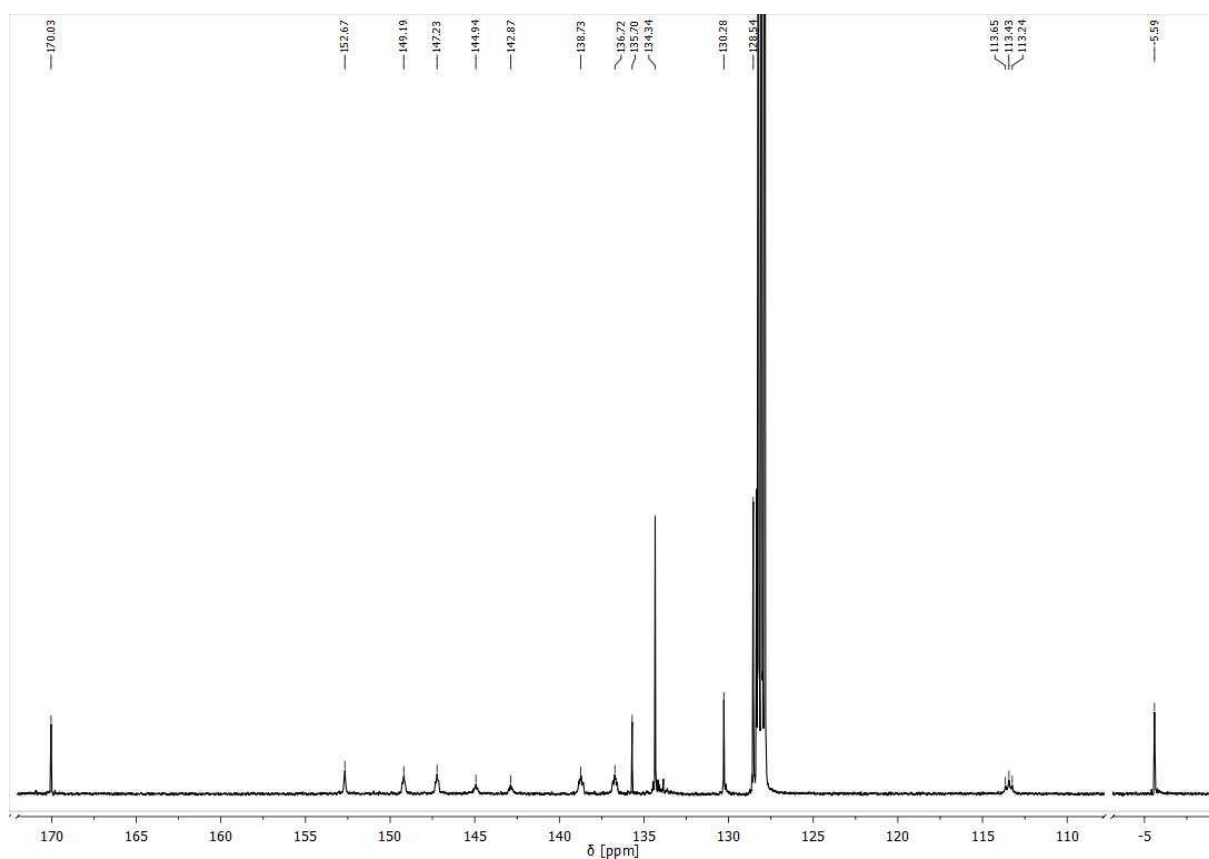


Figure S 15. Sections of $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of boron compound **8** in C_6D_6 at 298 K.

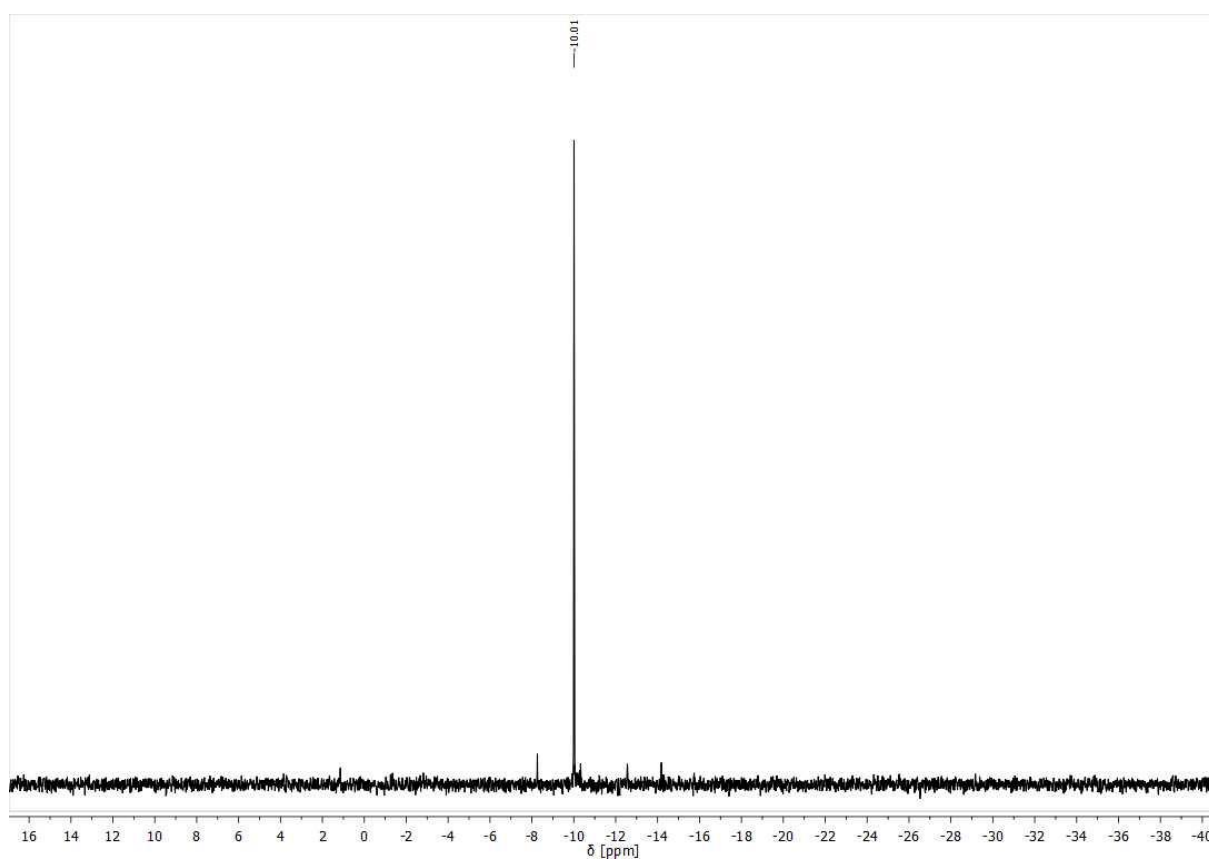


Figure S 16. Sections of $^{29}\text{Si}\{^1\text{H}\}$ NMR spectrum of boron compound **8** in C_6D_6 at 298 K.

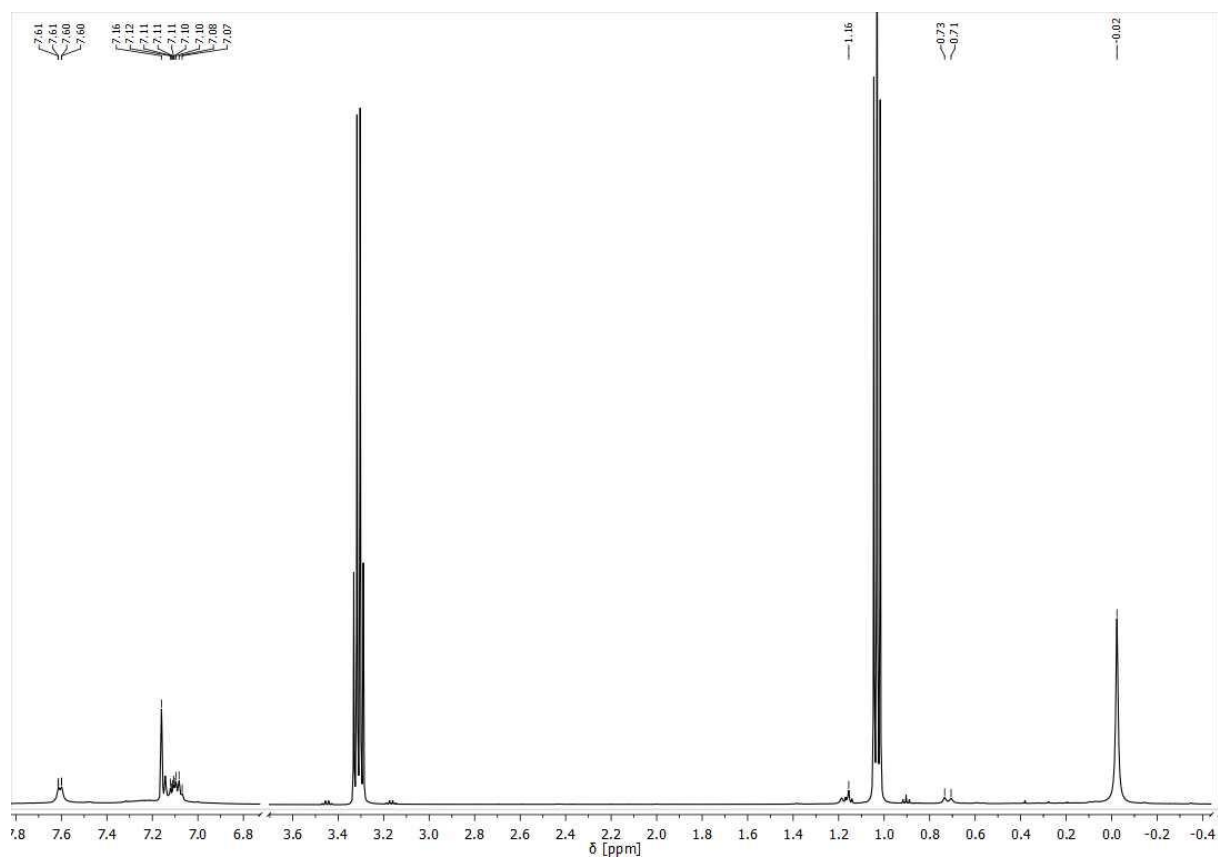


Figure S 17. Sections of ^1H NMR spectrum of 1,3,5-tris(dimethylgallanylethynyl)-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**9**) in C_6D_6 / Et_2O mixture at 298 K.

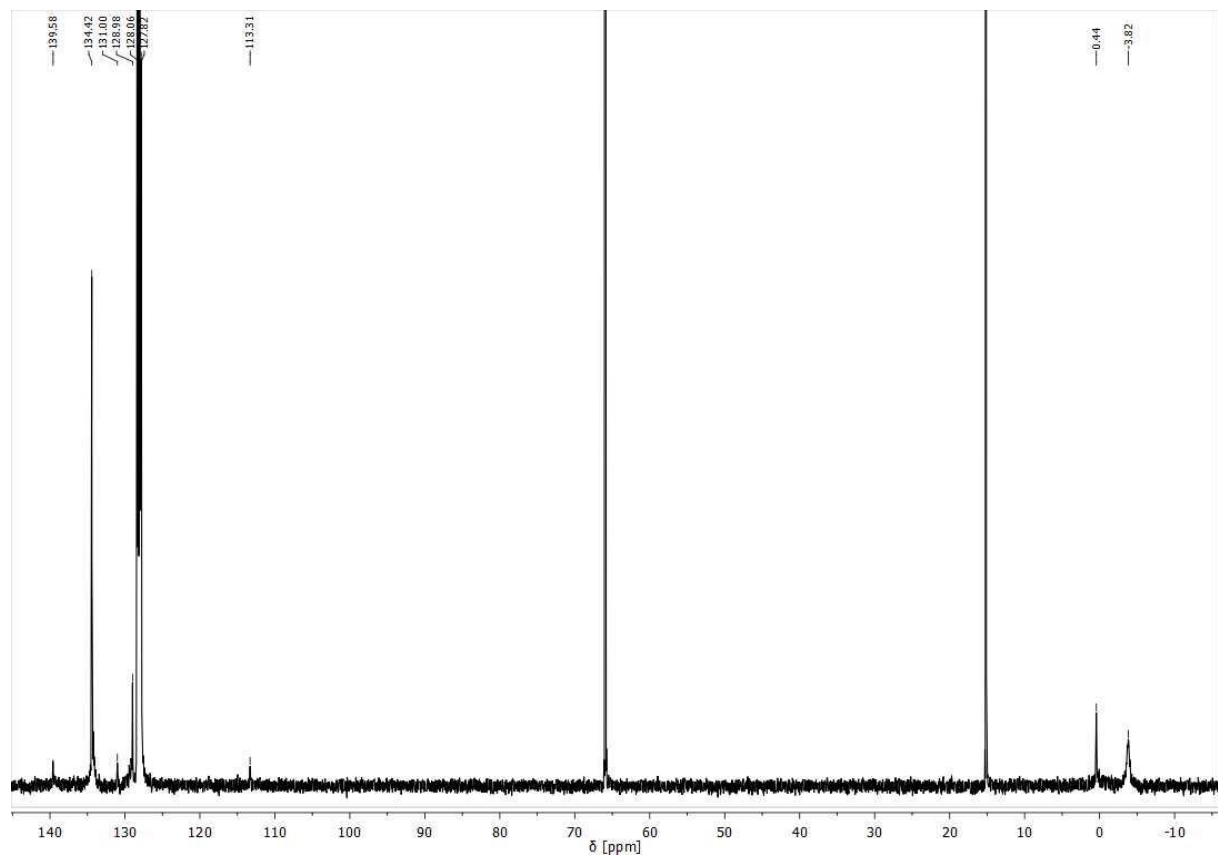


Figure S 18. Sections of $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of 1,3,5-tris(dimethylgallanylethynyl)-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**9**) in C_6D_6 / Et_2O mixture at 298 K.

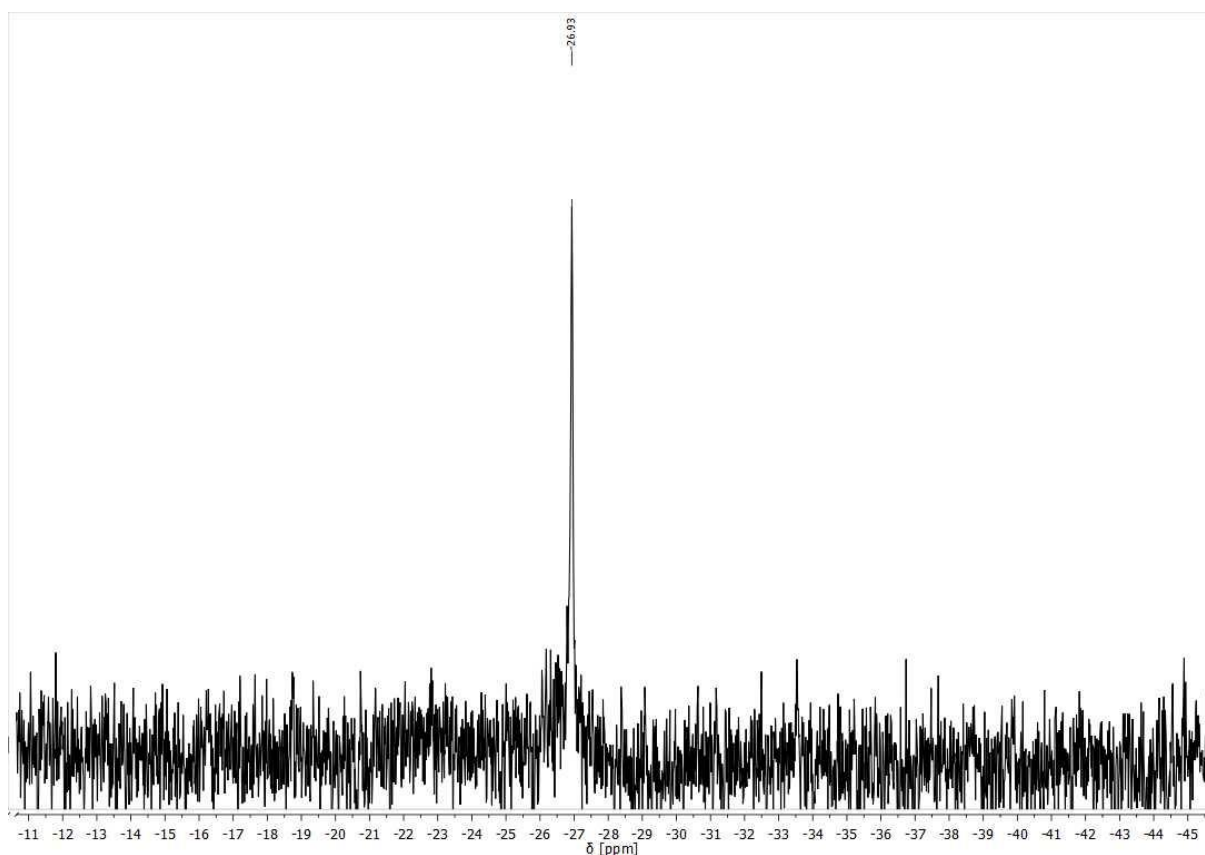


Figure S 19. Sections of $^{29}\text{Si}\{^1\text{H}\}$ NMR spectrum of 1,3,5-tris(dimethylgallanylethynyl)-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**9**) in C_6D_6 / Et_2O mixture at 298 K.

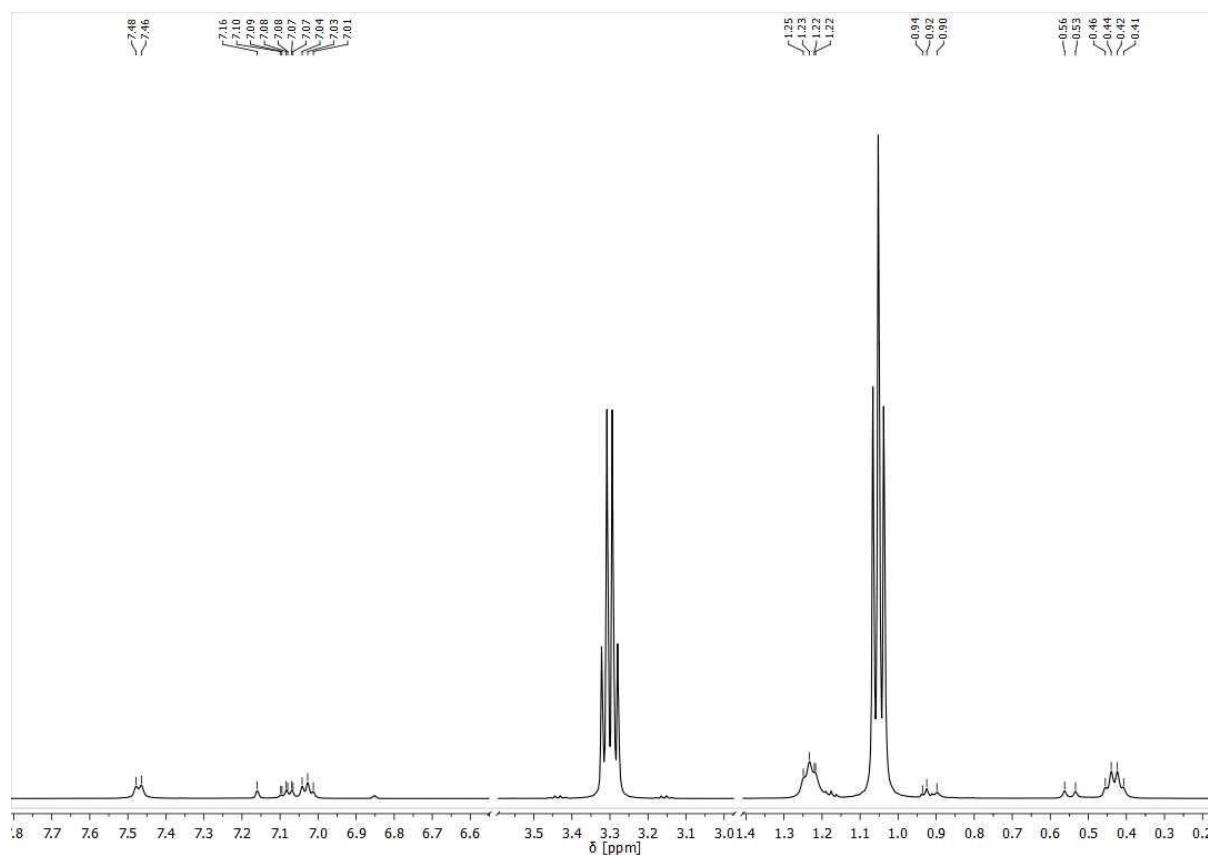


Figure S 20. Sections of ^1H NMR spectrum of 1,3,5-tris(diethylgallanylethynyl)-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**10**) in C_6D_6 / Et_2O mixture at 298 K.

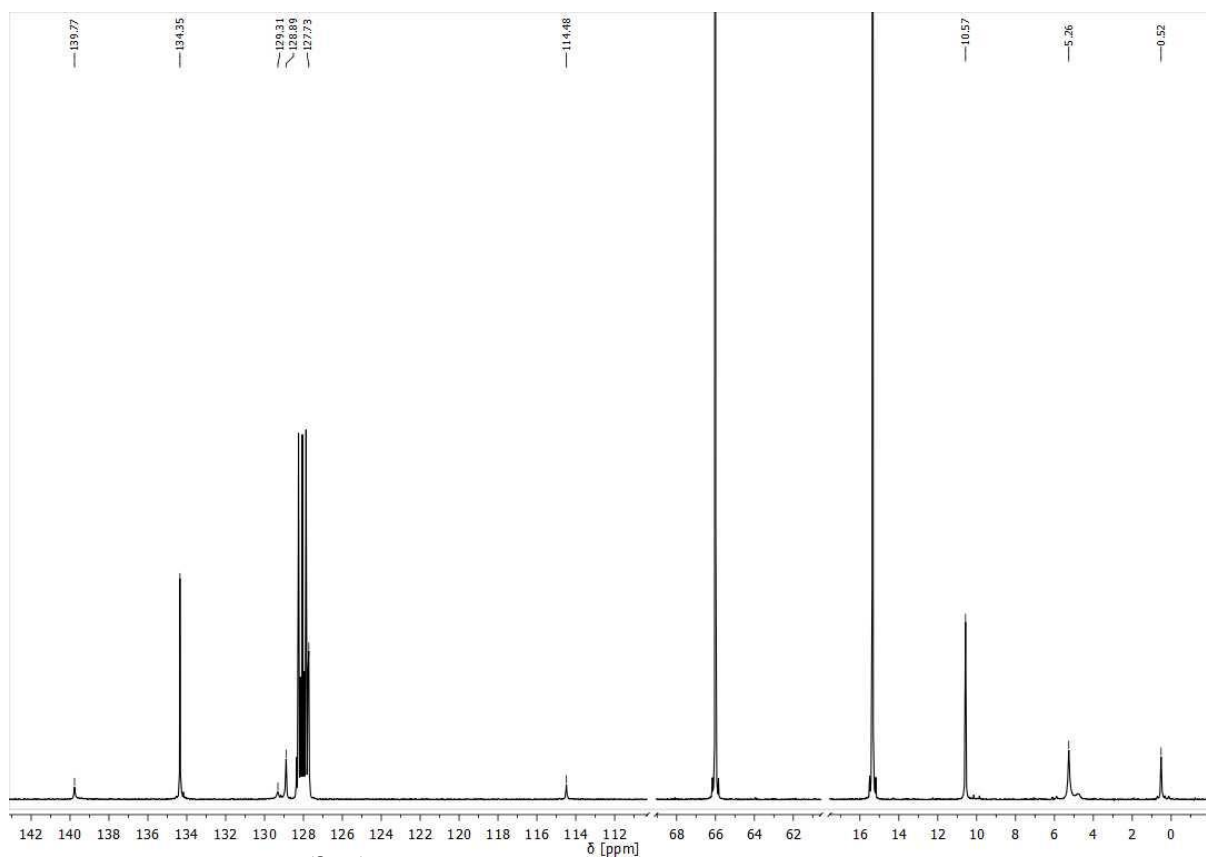


Figure S 21. Sections of $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of 1,3,5-tris(diethylgallanylethynyl)-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**10**) in $\text{C}_6\text{D}_6 / \text{Et}_2\text{O}$ mixture at 298 K.

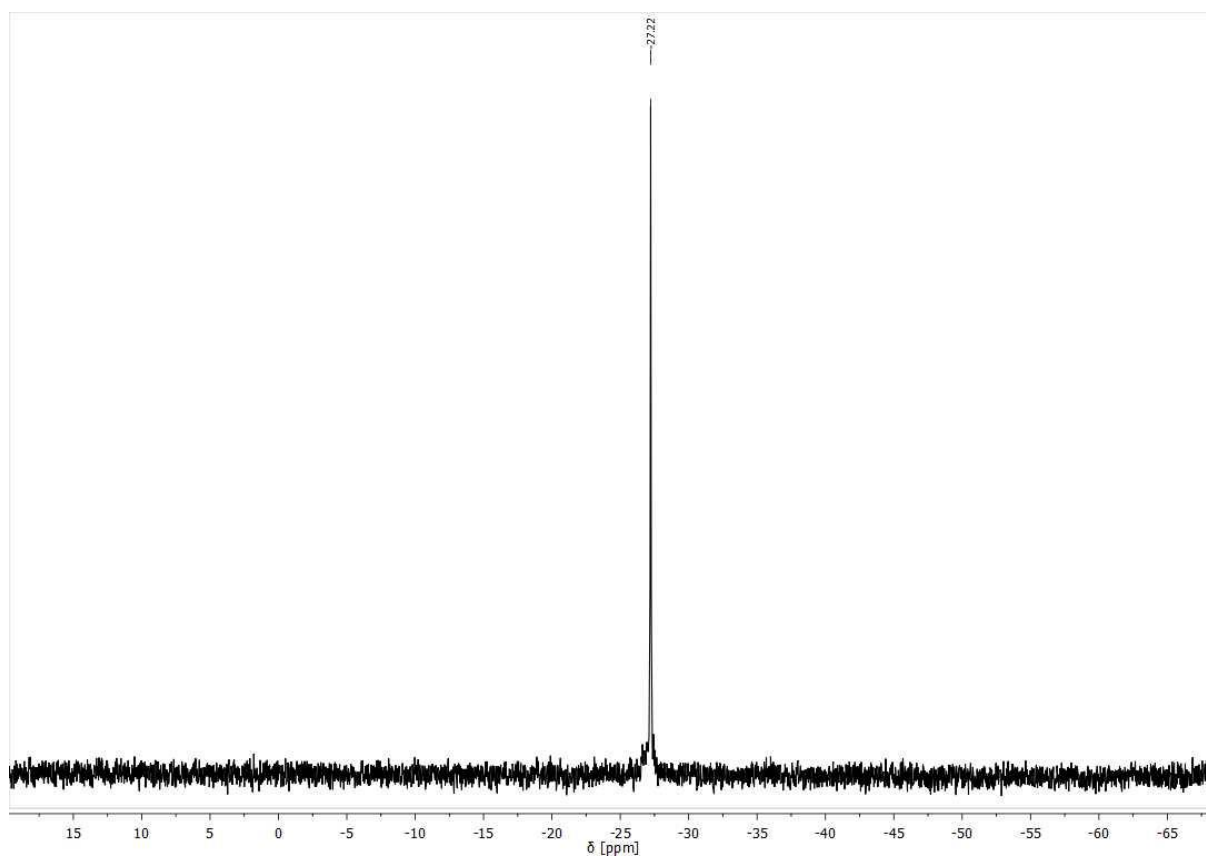


Figure S 22. Sections of $^{29}\text{Si}\{^1\text{H}\}$ NMR spectrum of 1,3,5-tris(diethylgallanylethynyl)-1,3,5-triphenyl-1,3,5-trisilacyclohexane (**10**) in $\text{C}_6\text{D}_6 / \text{Et}_2\text{O}$ mixture at 298 K.