Supplementary Materials for

Dimethyloxonium and Methoxy Derivatives of *nido*-Carborane and Metal Complexes Thereof

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Compound 10-Me_2O-7,8-$C_2B_9H_{11}$ (1)

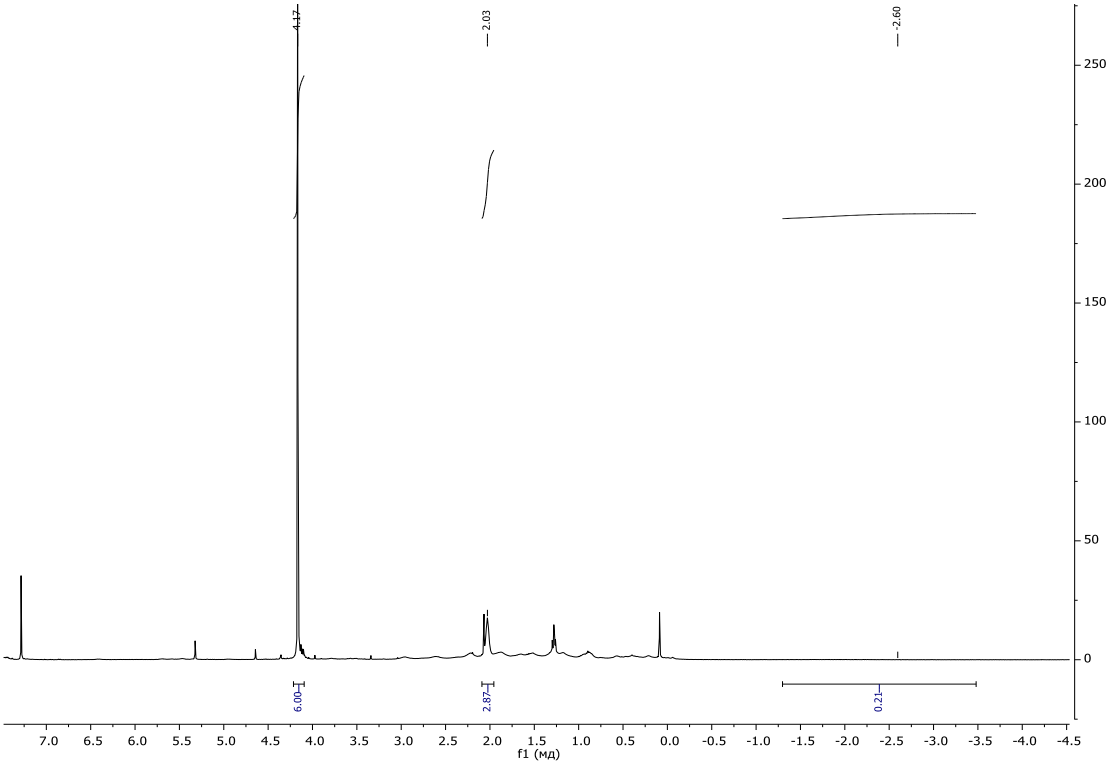

Fig. 1. ^1H NMR spectrum of 10-Me_2O-7,8-$C_2B_9H_{11}$ (**1**)

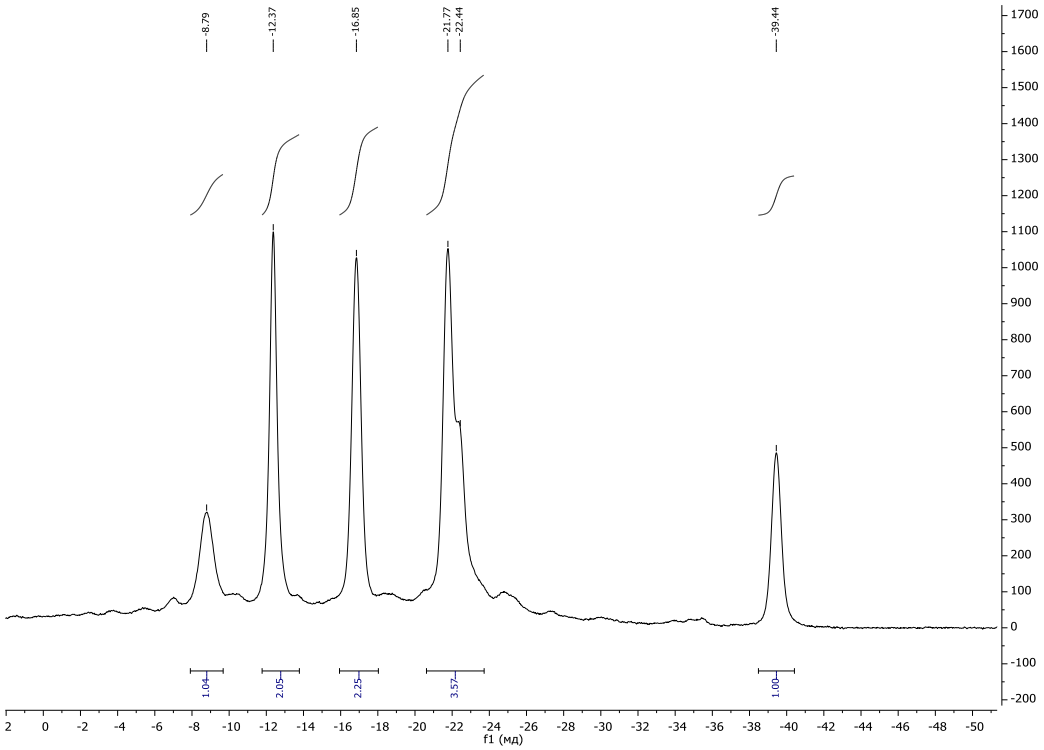

Fig. 2. ^{11}B NMR spectrum of 10-Me_2O-7,8-$C_2B_9H_{11}$ (**1**)

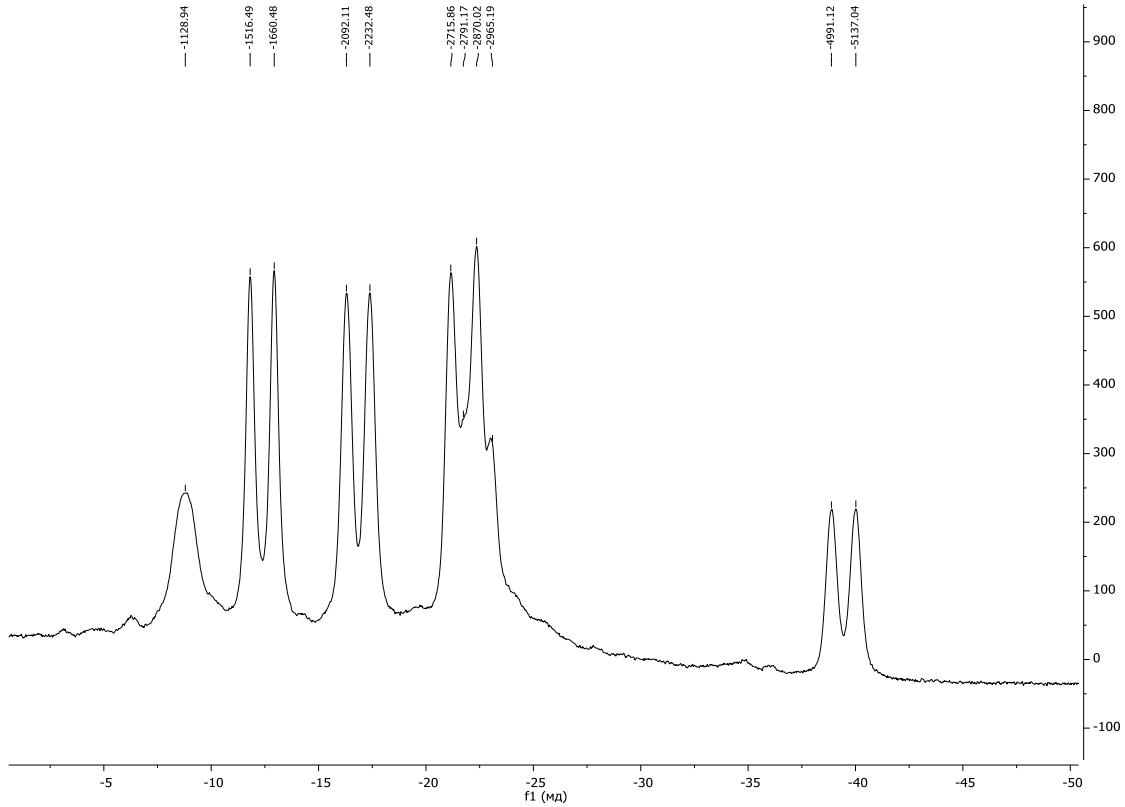

Fig. 3. $^{11}B\{^{1}H\}$ NMR spectrum of 10-Me_2O-7,8-$C_2B_9H_{11}$ (**1**)

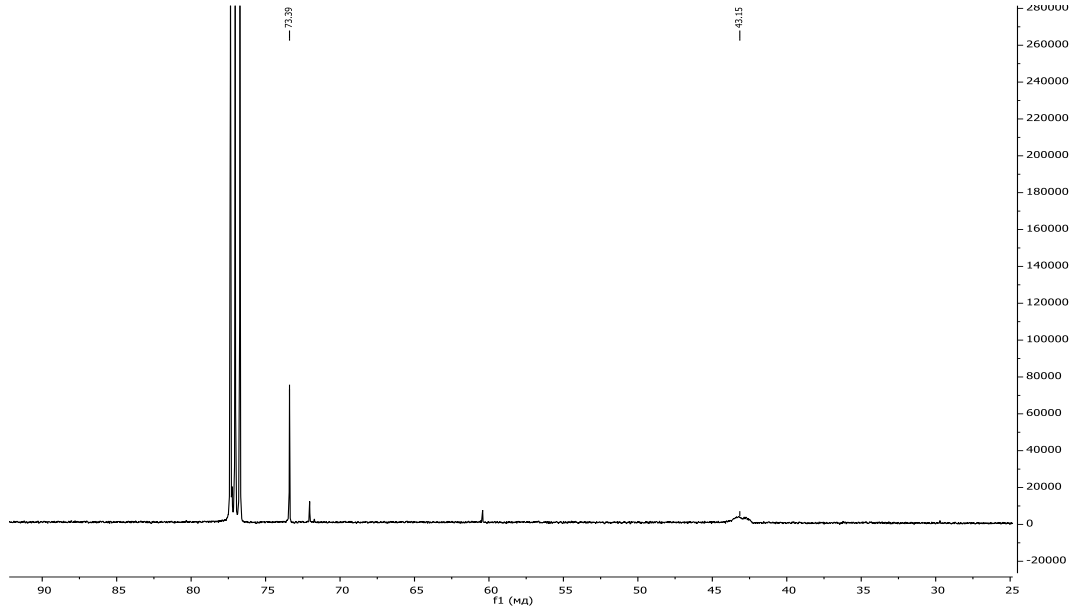

Fig. 4. ^{13}C NMR spectrum of 10-Me_2O-7,8-$C_2B_9H_{11}$ (**1**)

Compound 9-Me_2O-7,8-$C_2B_9H_{11}$ (2)

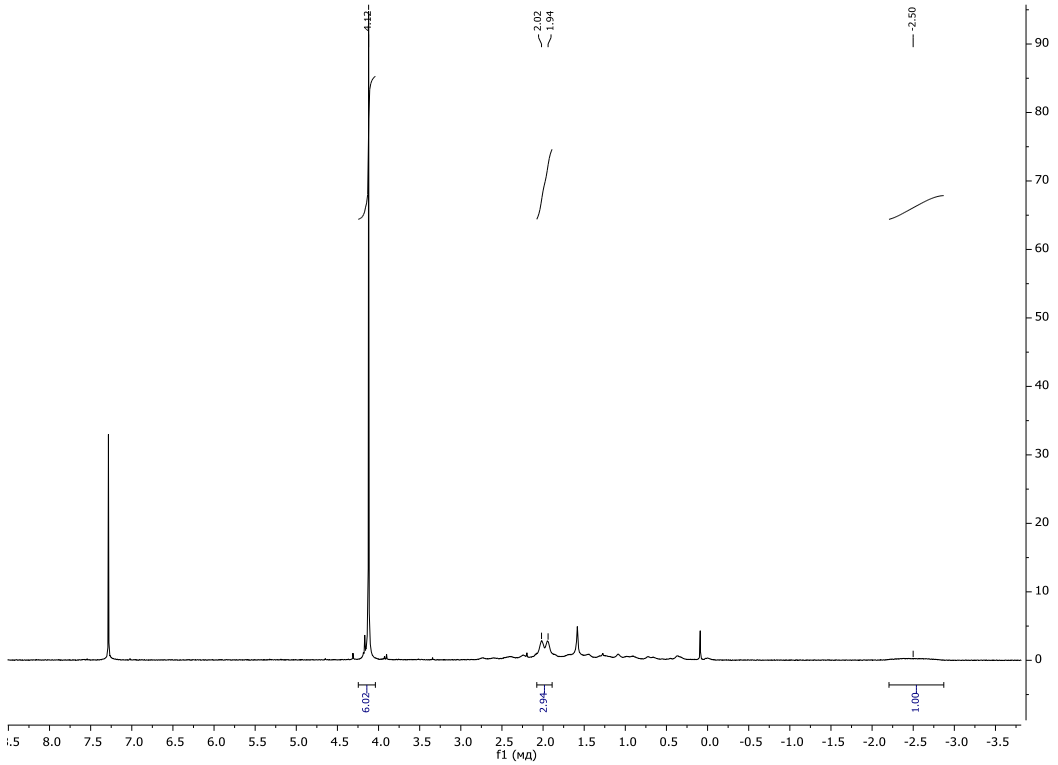

Fig. 5. ^{1}H NMR spectrum of 9-Me_2O-7,8-$C_2B_9H_{11}$ (**2**)

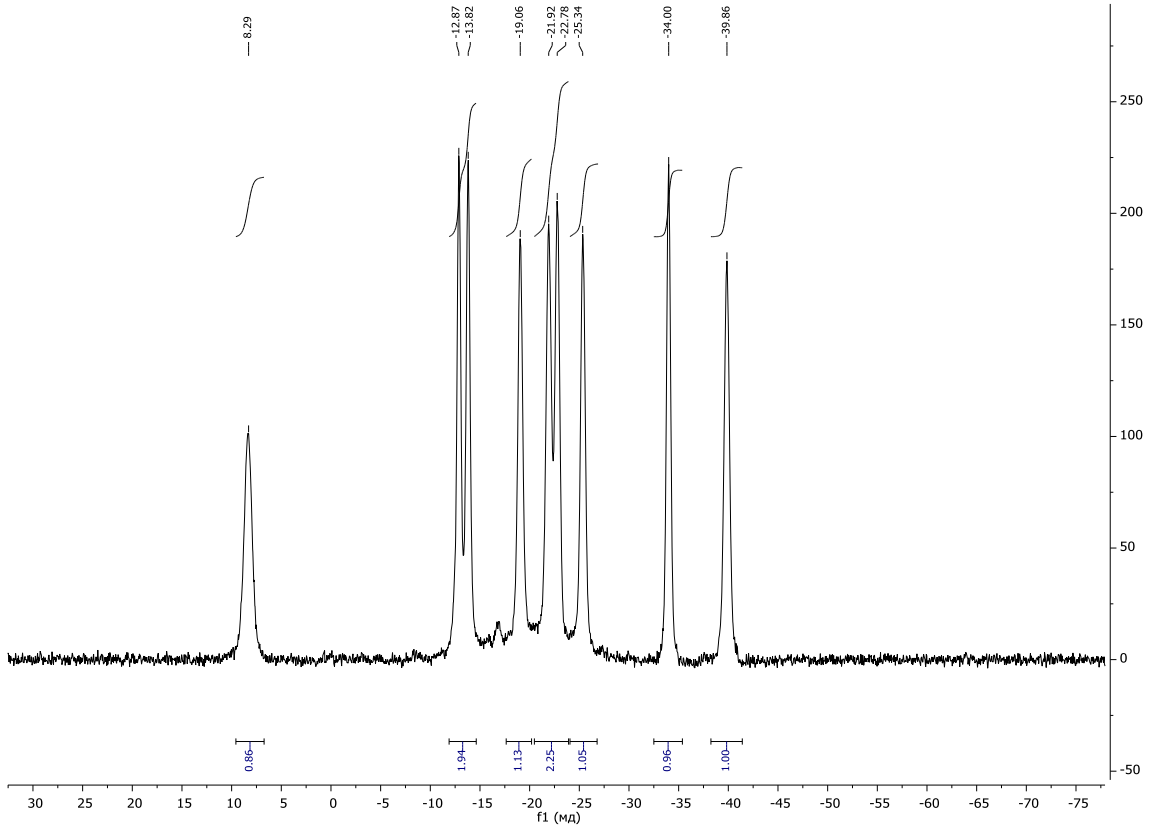

Fig. 6. ^{11}B NMR spectrum of 9-Me_2O-7,8-$C_2B_9H_{11}$ (**2**)

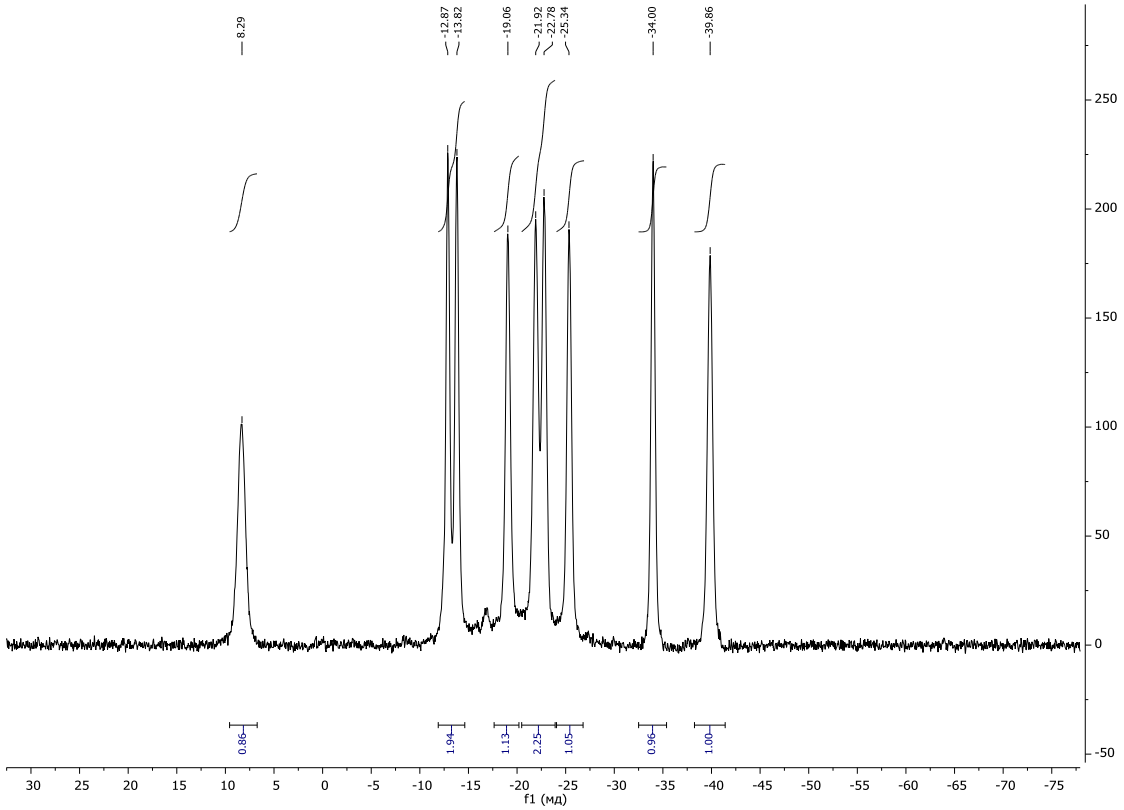

Fig. 7. $^{11}B\{^{1}H\}$ NMR spectrum of 9-Me_2O-7,8-$C_2B_9H_{11}$ (**2**)

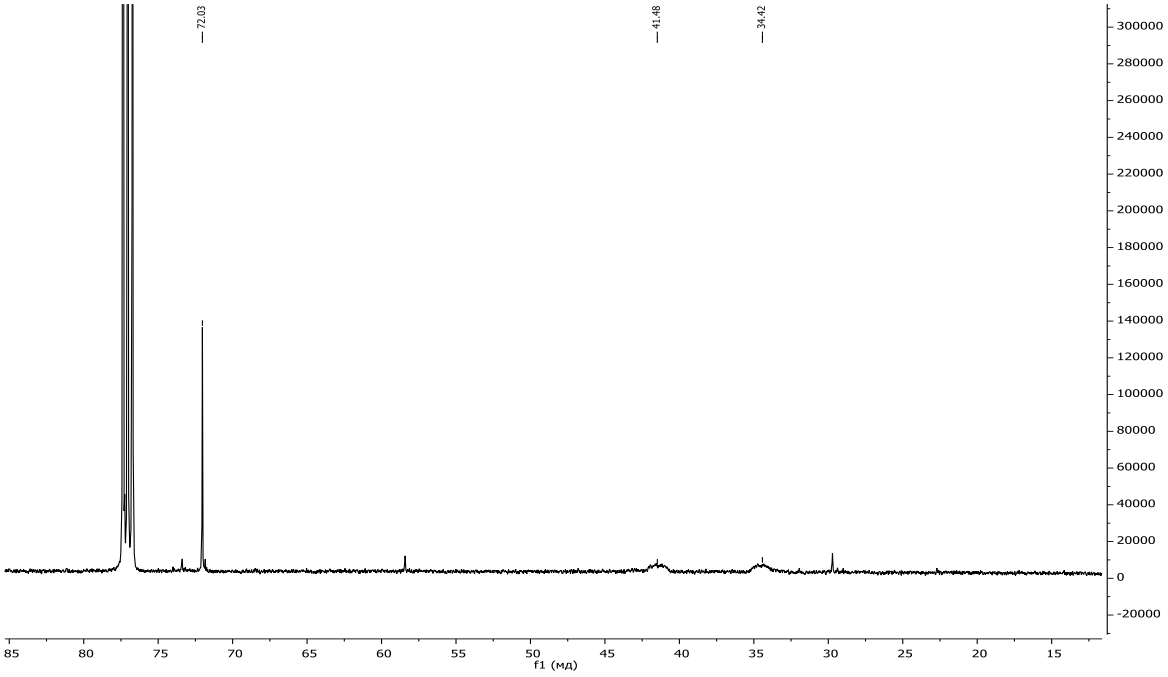

Fig. 8. ^{13}C NMR spectrum of 9-Me_2O-7,8-$C_2B_9H_{11}$ (**2**)

Compound K[10-MeO-7,8-$C_2B_9H_{11}$] (K[3])

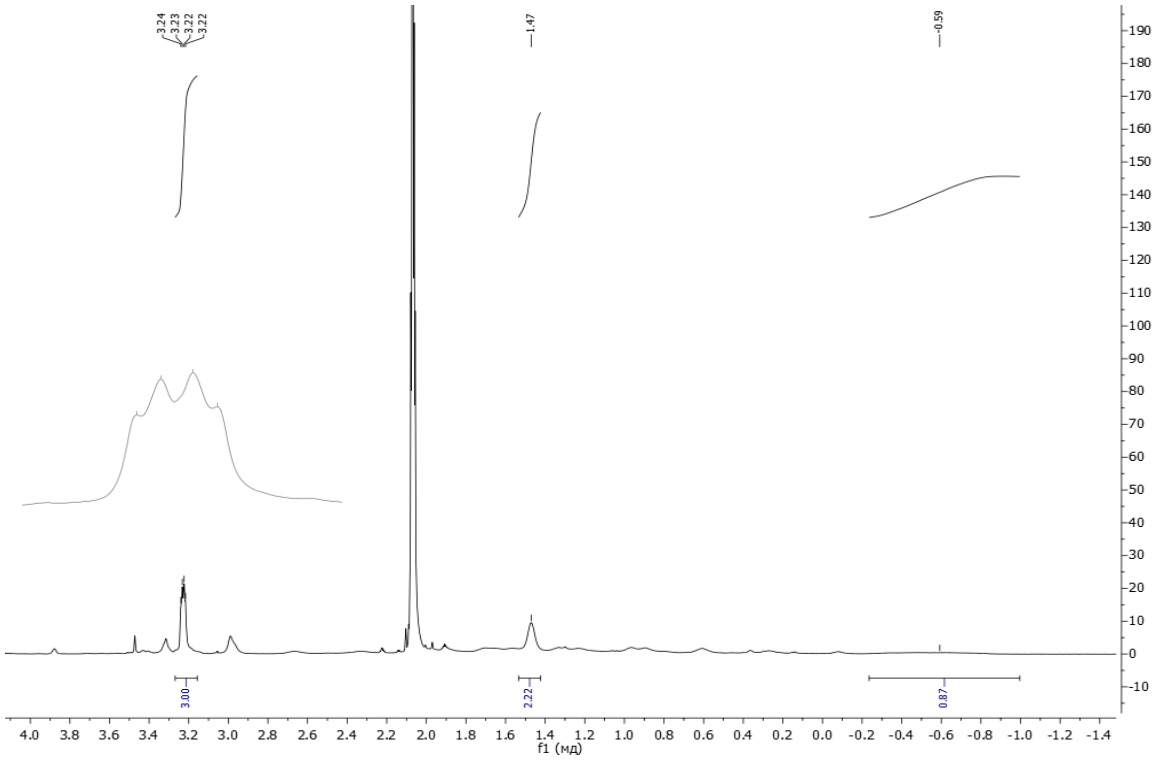

Fig. 9. ^{1}H NMR spectrum of K[10-MeO-7,8-$C_2B_9H_{11}$] (**K[3]**)

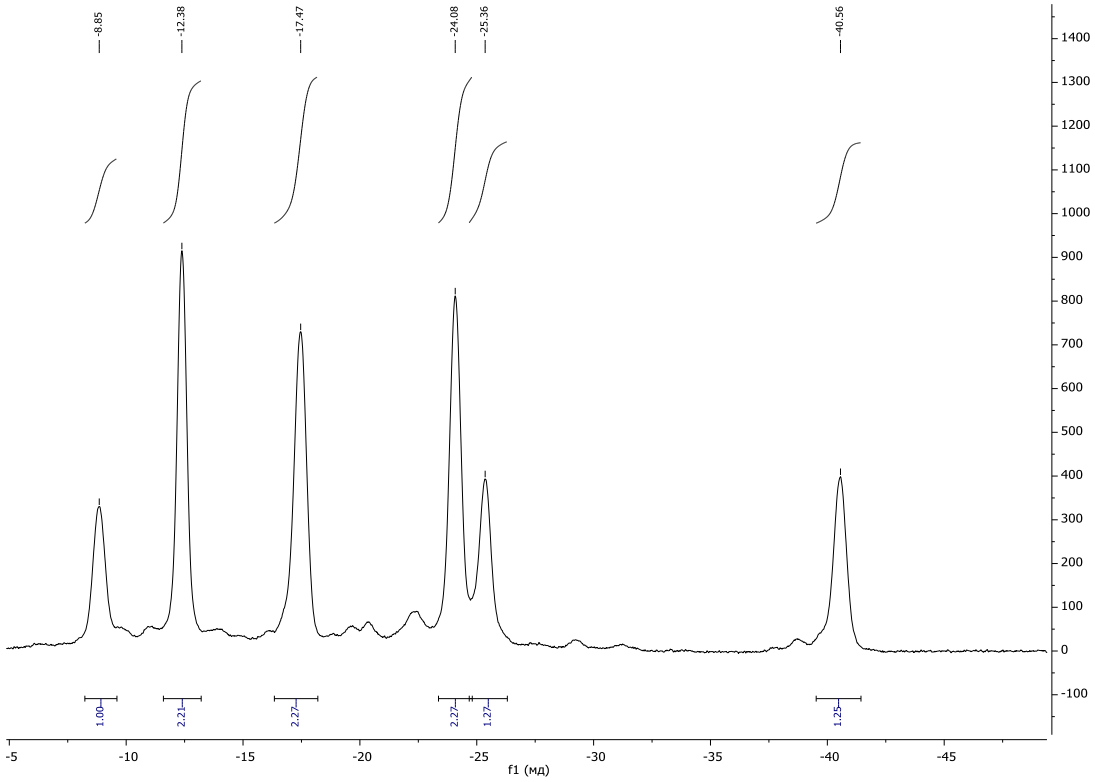

Fig. 10. ^{11}B NMR spectrum of K[10-MeO-7,8-$C_2B_9H_{11}$] (**K[3]**)

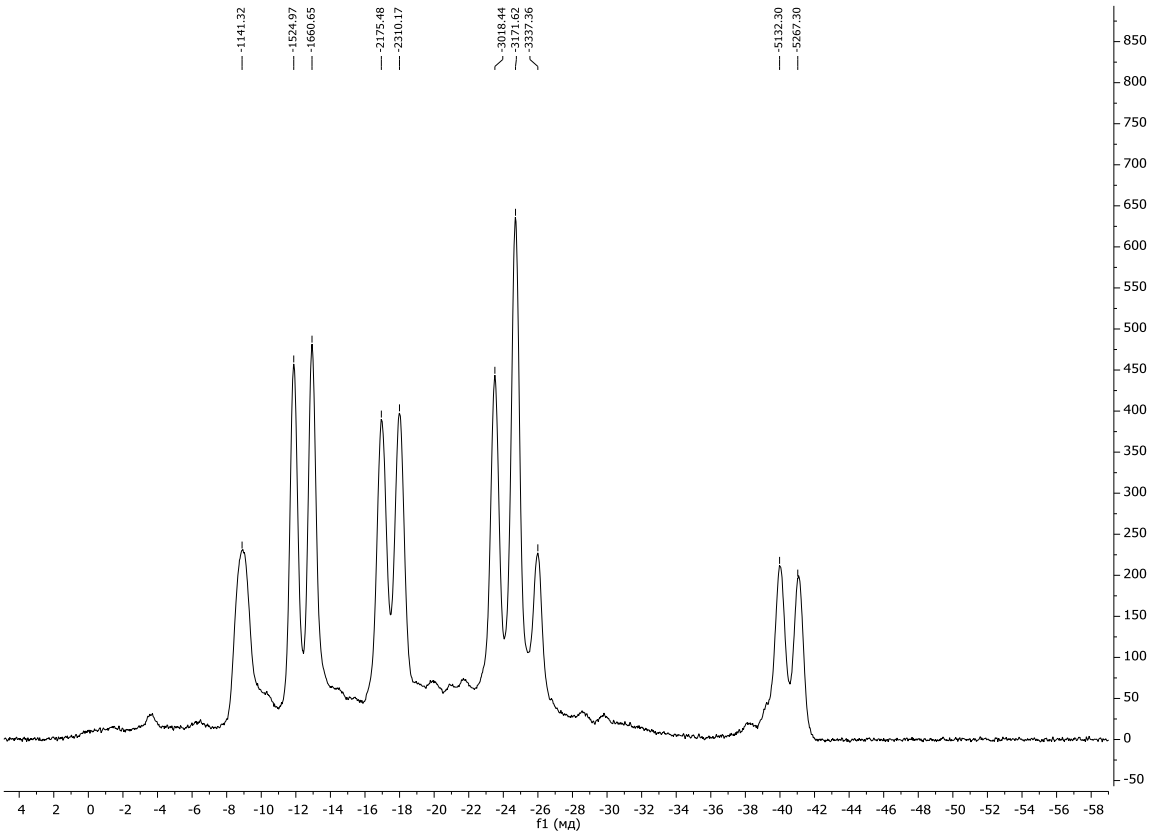

Fig. 11. $^{11}B\{^{1}H\}$ NMR spectrum of K[10-MeO-7,8-$C_2B_9H_{11}$] (**K[3]**)

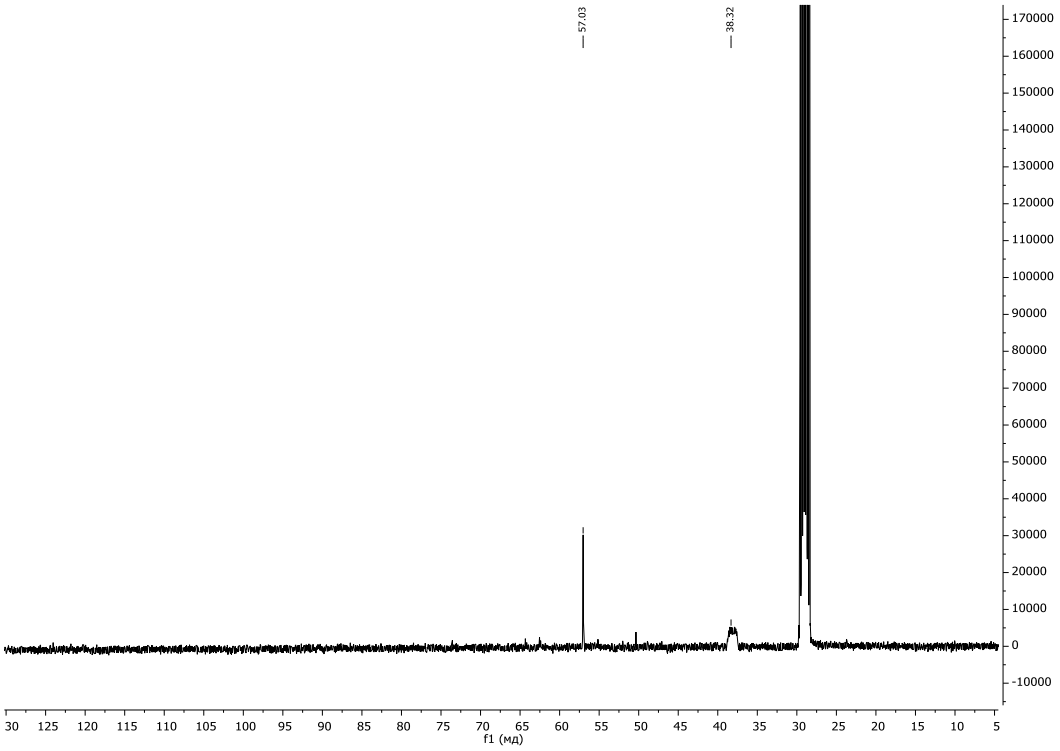

Fig. 12. ^{13}C NMR spectrum of K[10-MeO-7,8-$C_2B_9H_{11}$] (**K[3]**)

Compound K[9-MeO-7,8-$C_2B_9H_{11}$] (K[4])

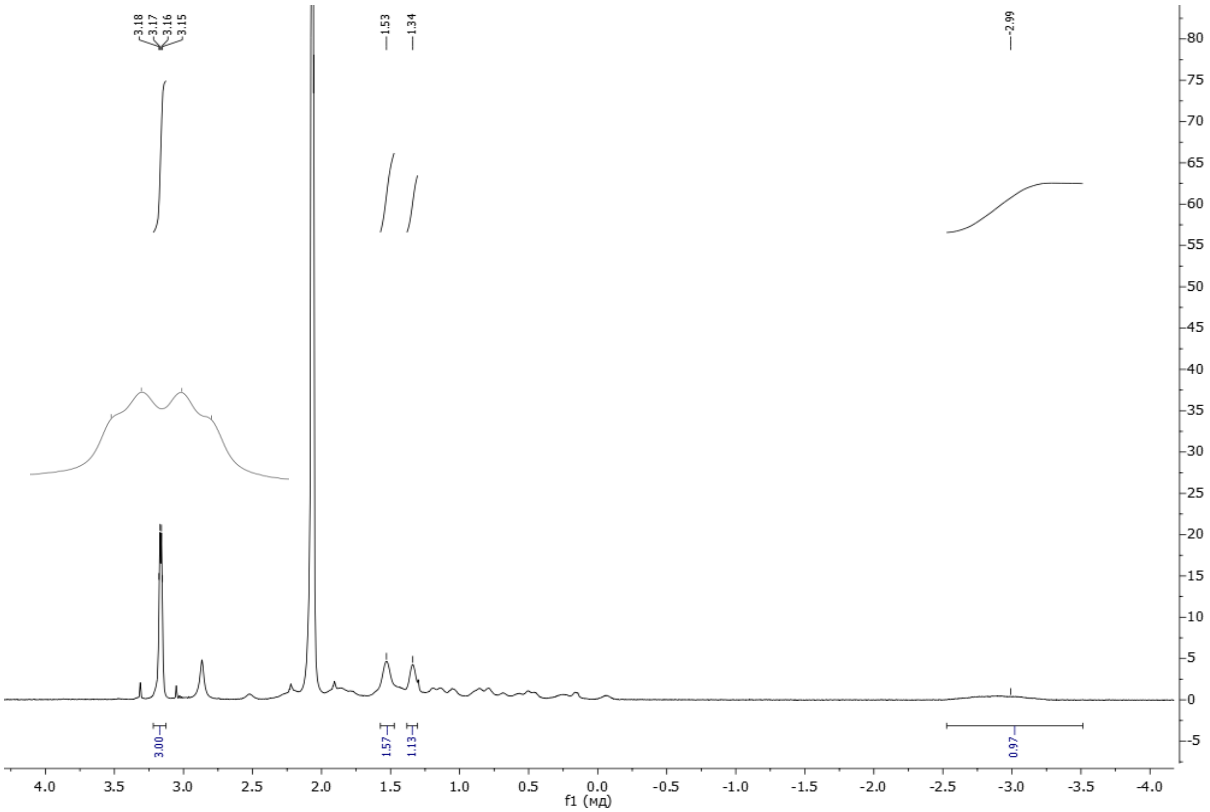

Fig. 13. ^{1}H NMR spectrum of K[9-MeO-7,8-$C_2B_9H_{11}$] (**K[4]**)

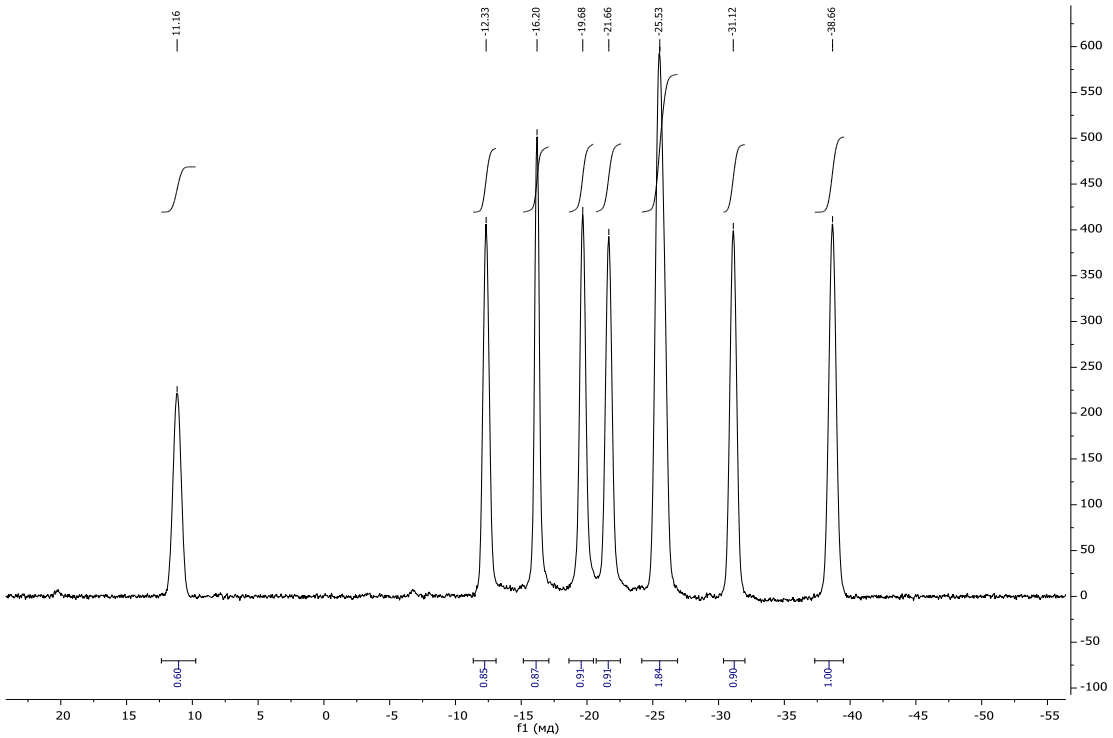

Fig. 14. ^{11}B NMR spectrum of K[9-MeO-7,8-$C_2B_9H_{11}$] (**K[4]**)

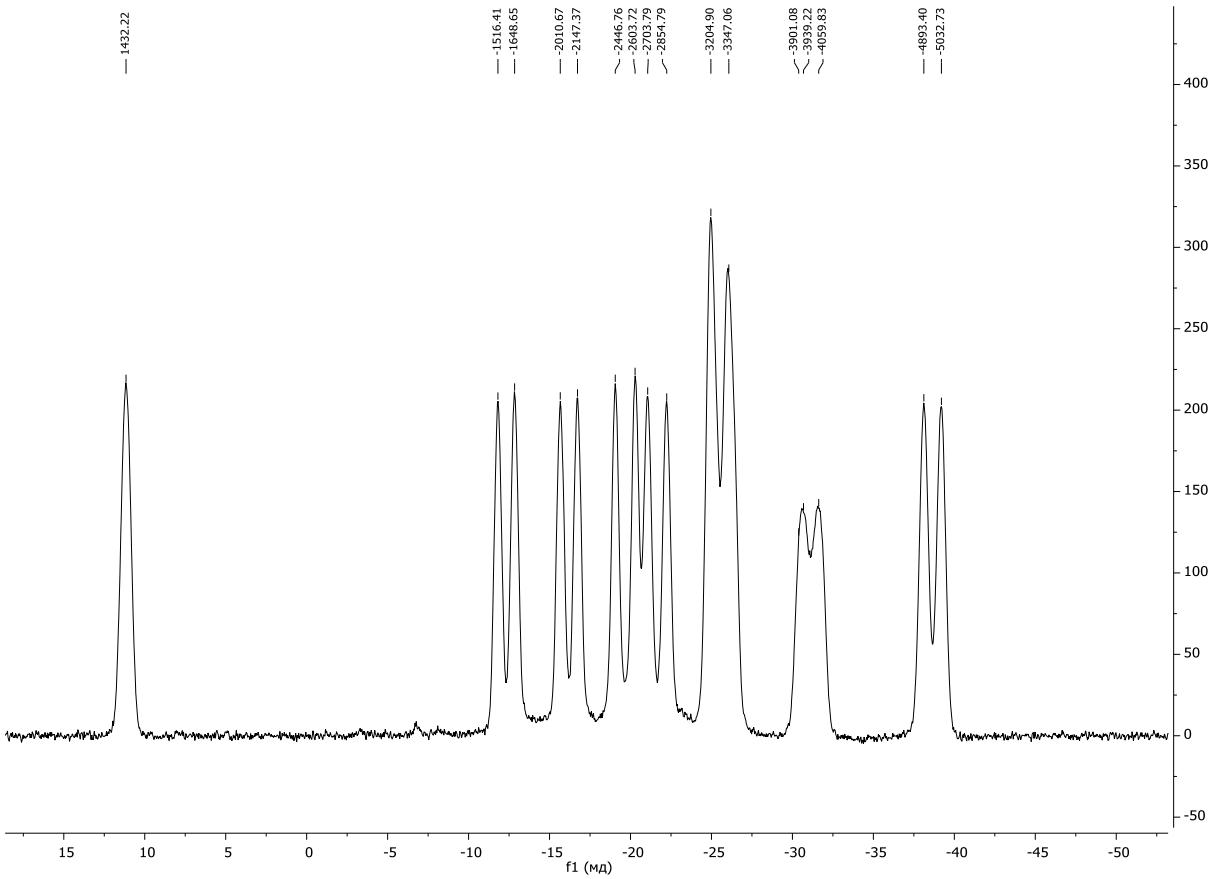

Fig. 15. $^{11}B\{^{1}H\}$ NMR spectrum of K[9-MeO-7,8-$C_2B_9H_{11}$] (**K[4]**)

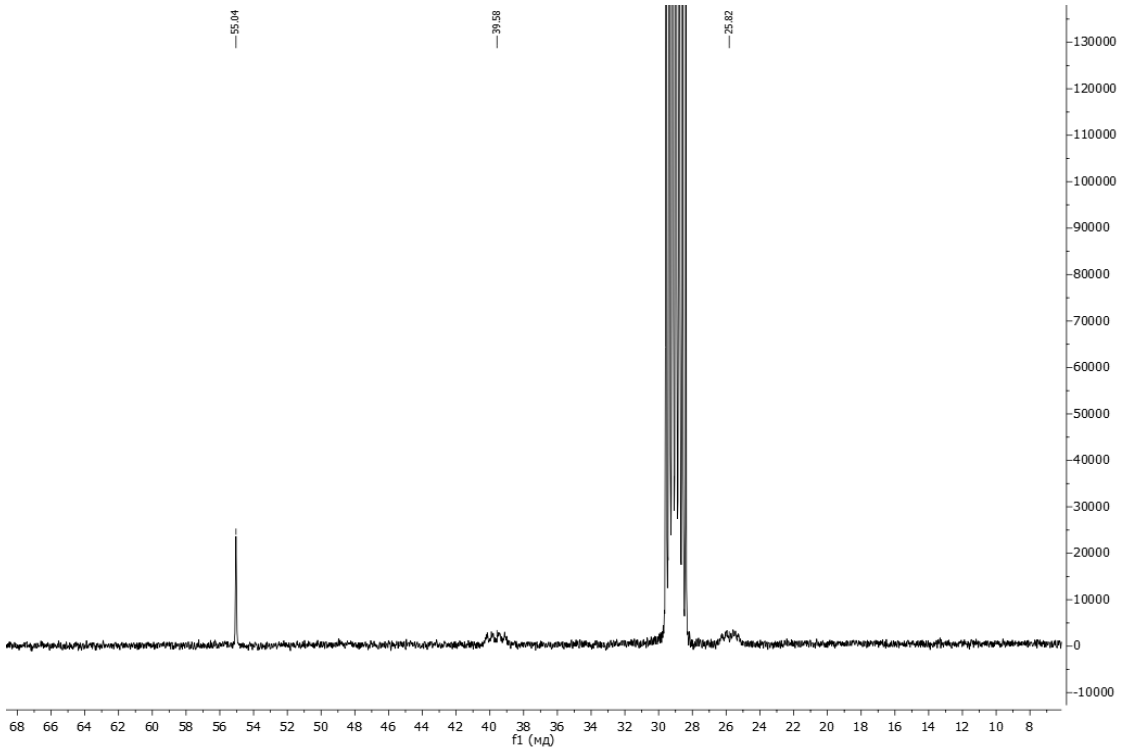

Fig. 16. ^{13}C NMR spectrum of K[9-MeO-7,8-$C_2B_9H_{11}$] (**K[4]**)

Compound (Et$_3$NMe)[10-MeO-7,8-C$_2$B$_9$H$_{11}$] (Et$_3$NMe)[3]

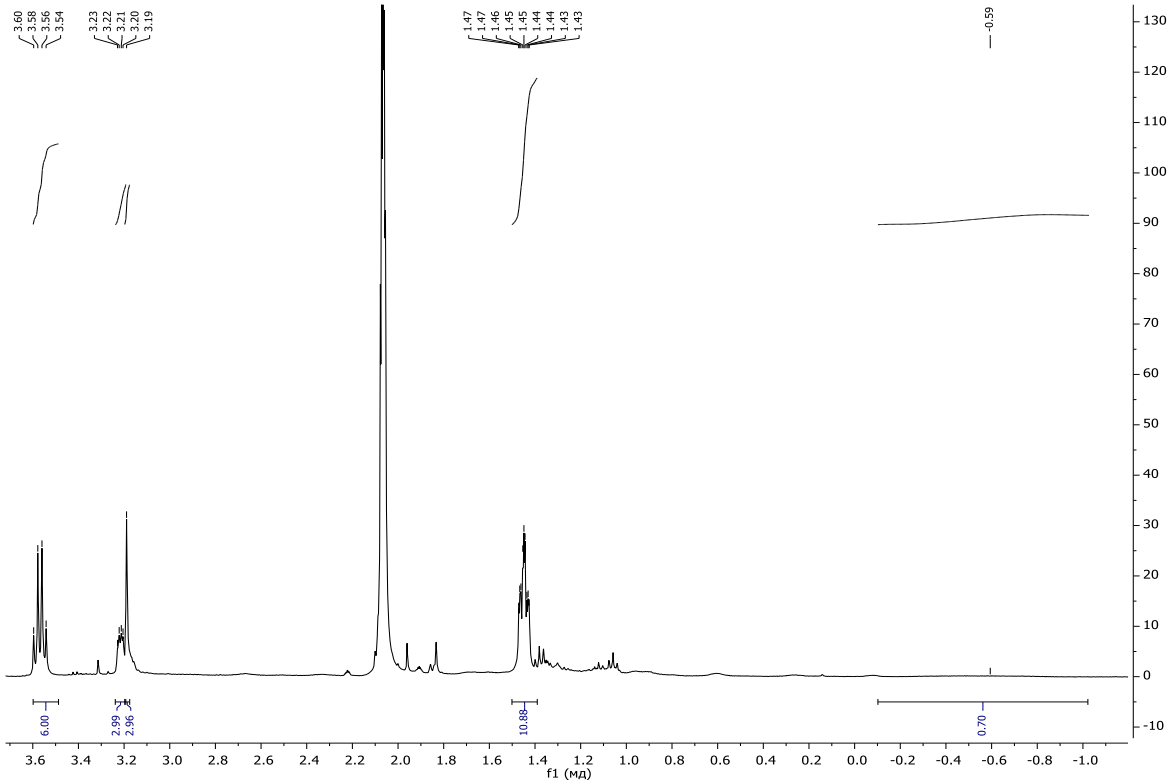

Fig. 17. ^{1}H NMR spectrum of (Et$_3$NMe)[10-MeO-7,8-C$_2$B$_9$H$_{11}$] **(Et$_3$NMe)[3]**

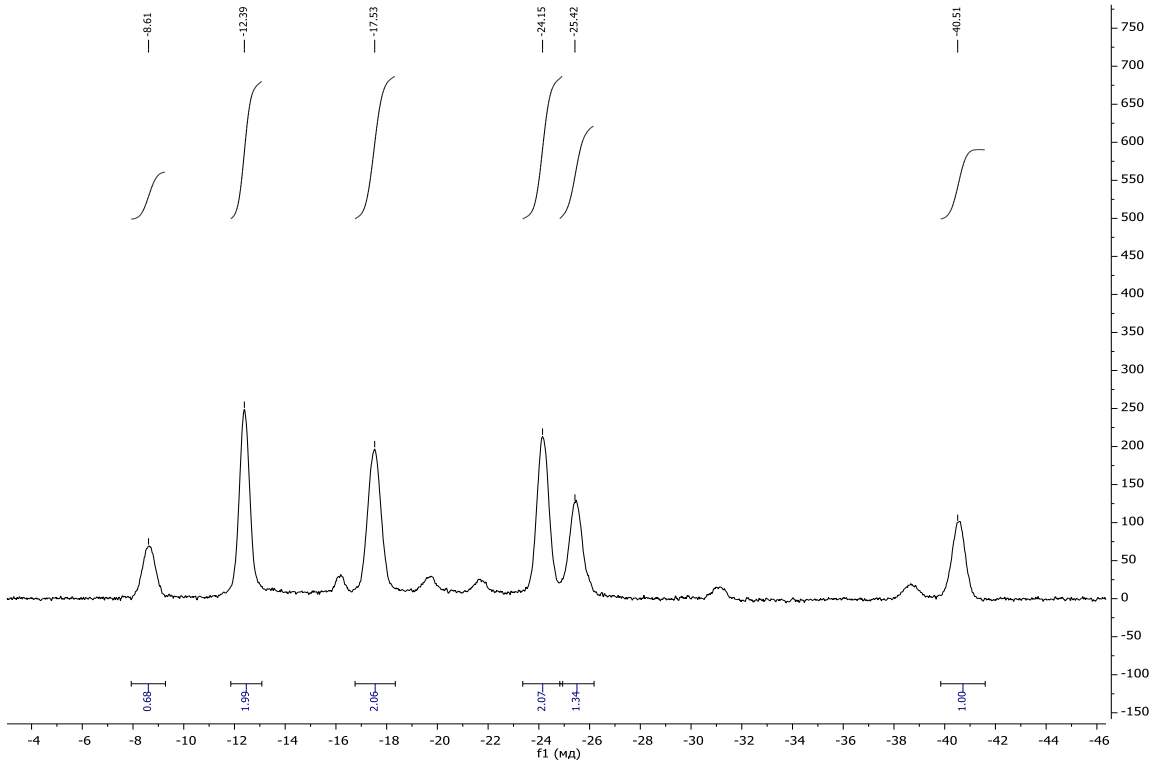

Fig. 18. ^{11}B NMR spectrum of (Et$_3$NMe)[10-MeO-7,8-C$_2$B$_9$H$_{11}$] **(Et$_3$NMe)[3]**

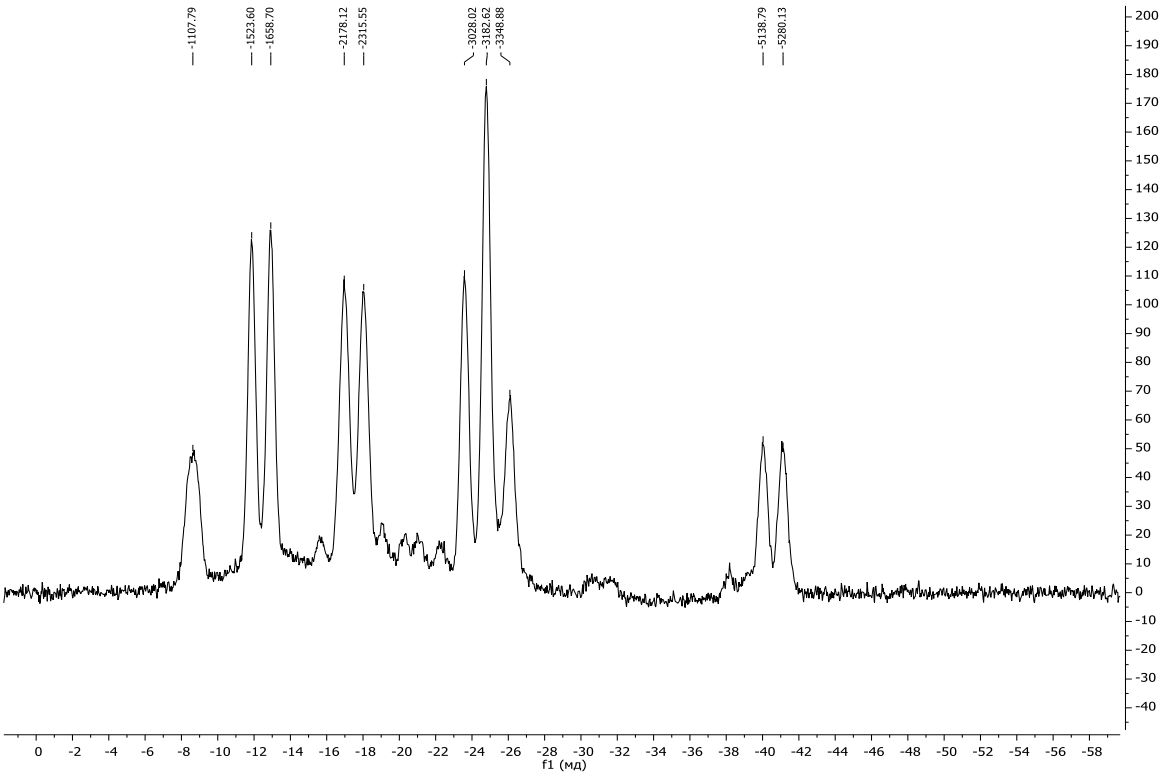

Fig. 19. $^{11}B\{^{1}H\}$ NMR spectrum of (Et_3NMe)[10-MeO-7,8-$C_2B_9H_{11}$] **(Et_3NMe)[3]**

Compound (Et_3NMe)[9-MeO-7,8-$C_2B_9H_{11}$] (Et_3NMe)[4]

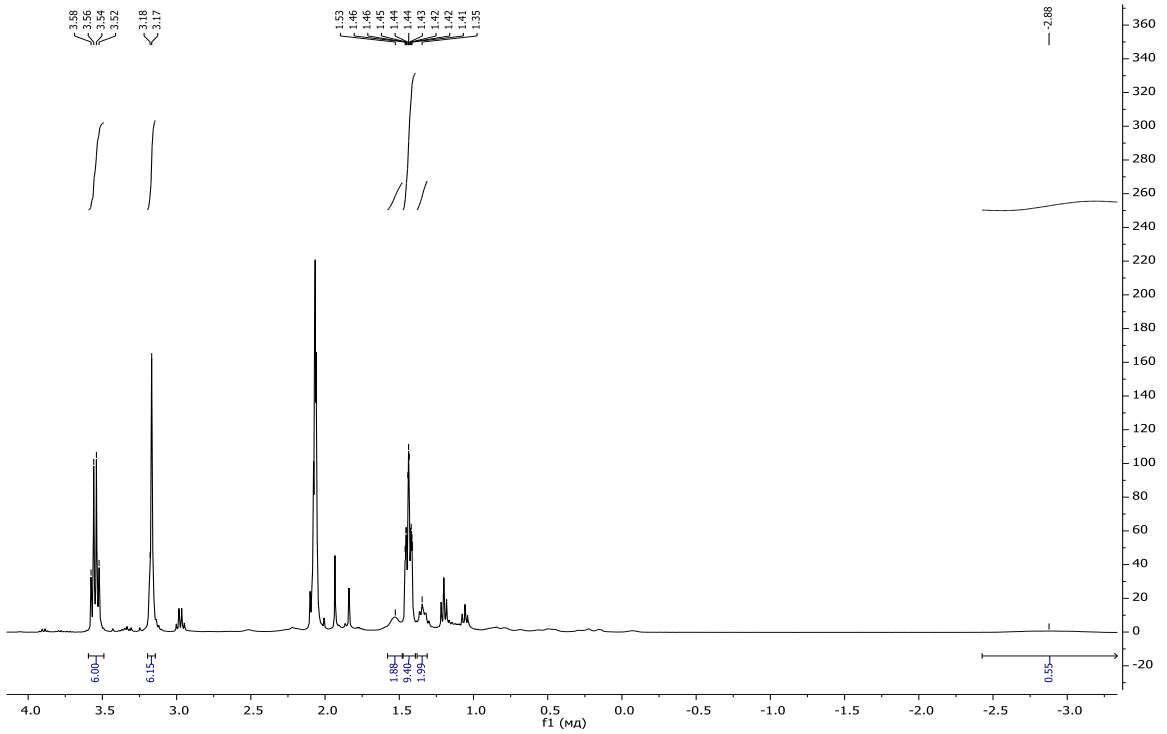

Fig. 20. ^{1}H NMR spectrum of (Et_3NMe)[9-MeO-7,8-$C_2B_9H_{11}$] **(Et_3NMe)[4]**

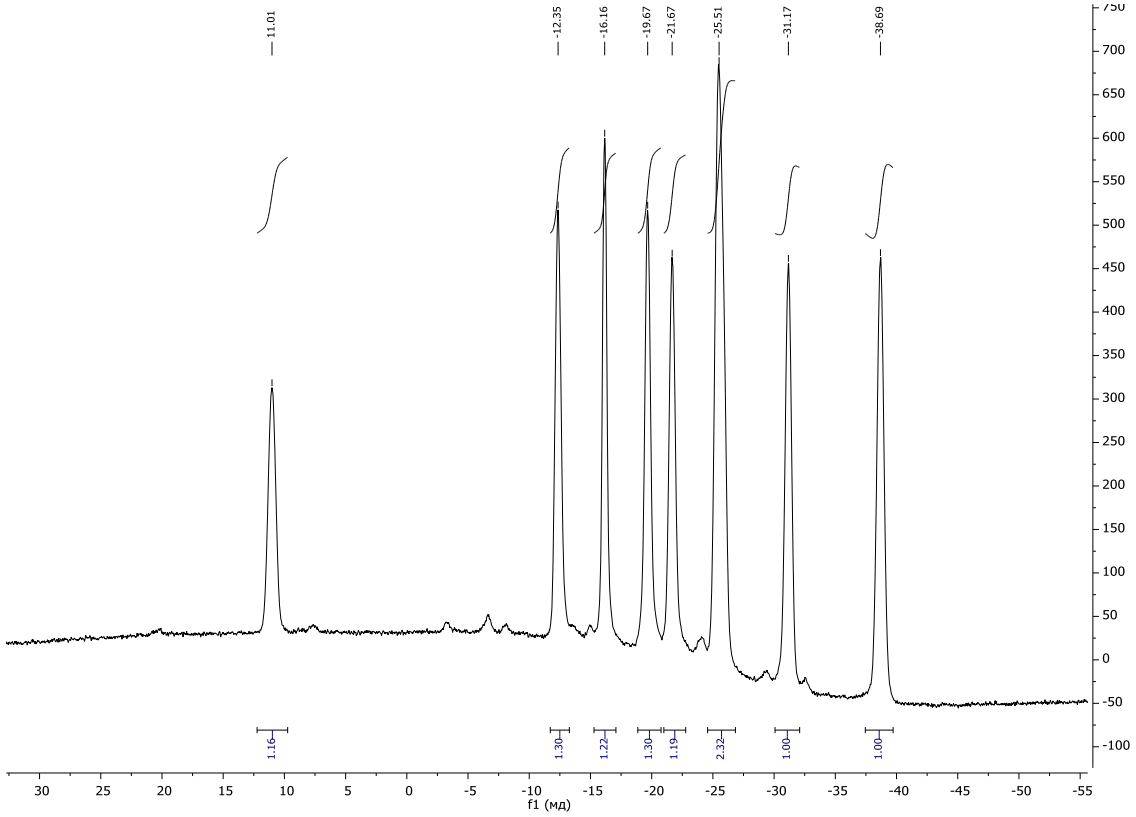

Fig. 21. ^{11}B NMR spectrum of (Et$_3$NMe)[9-MeO-7,8-C$_2$B$_9$H$_{11}$] **(Et$_3$NMe)[4]**

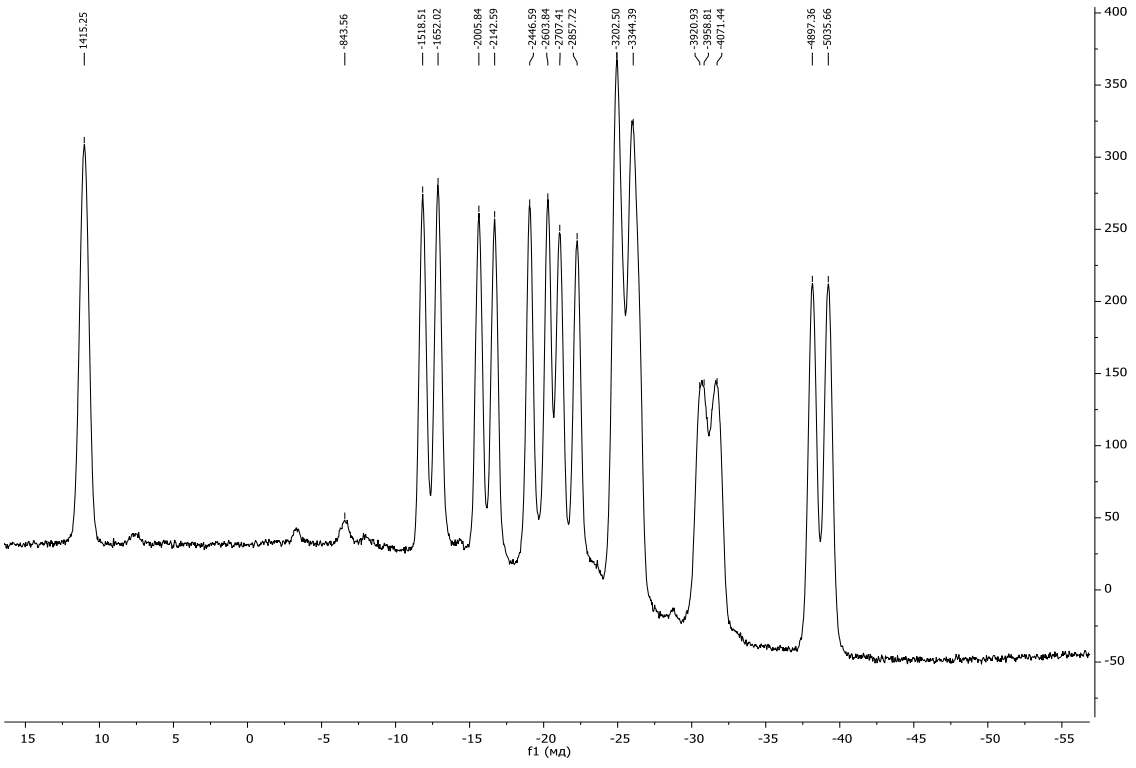

Fig. 22. ^{11}B{^{1}H} NMR spectrum of (Et$_3$NMe)[9-MeO-7,8-C$_2$B$_9$H$_{11}$] **(Et$_3$NMe)[4]**

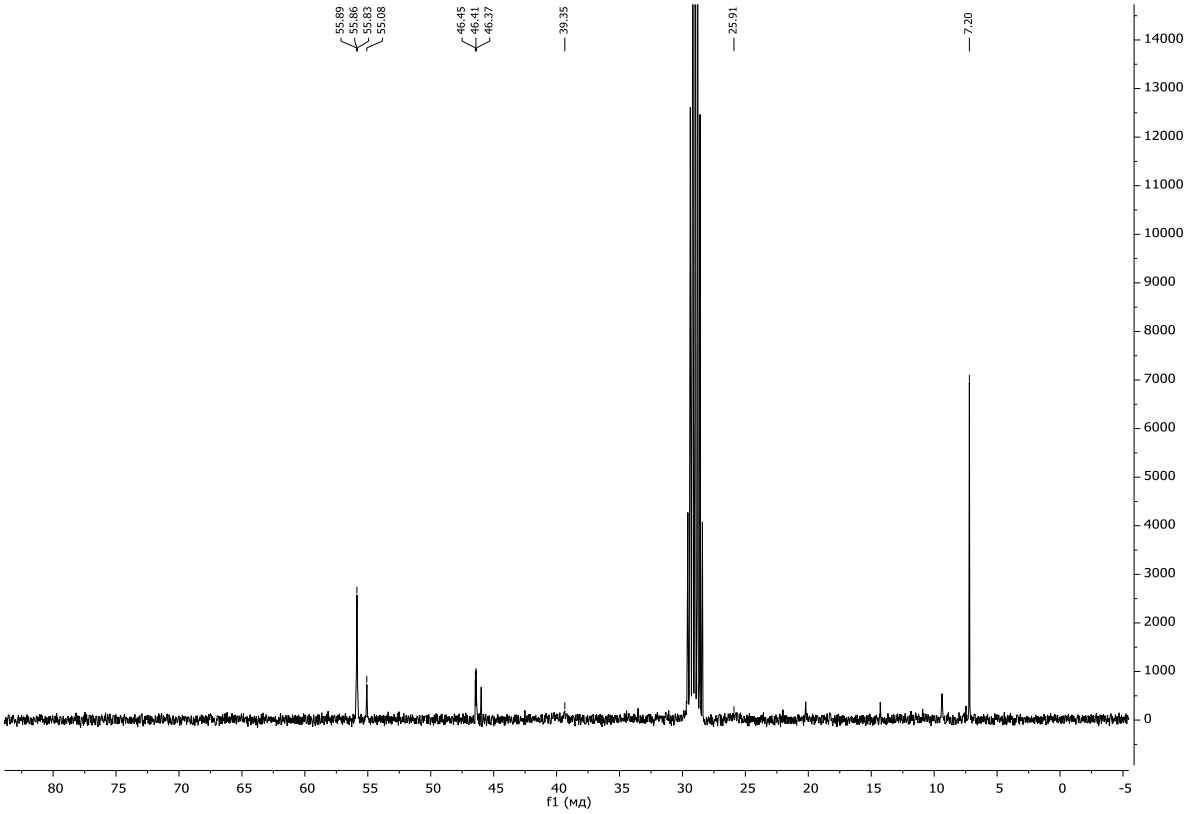

Fig. 23. ^{13}C NMR spectrum of (Et$_3$NMe)[9-MeO-7,8-C$_2$B$_9$H$_{11}$] **(Et$_3$NMe)[4]**

Compound (C$_5$H$_5$NMe)[9-Me$_2$O-7,8-C$_2$B$_9$H$_{11}$] (*N*-MePy)[4]

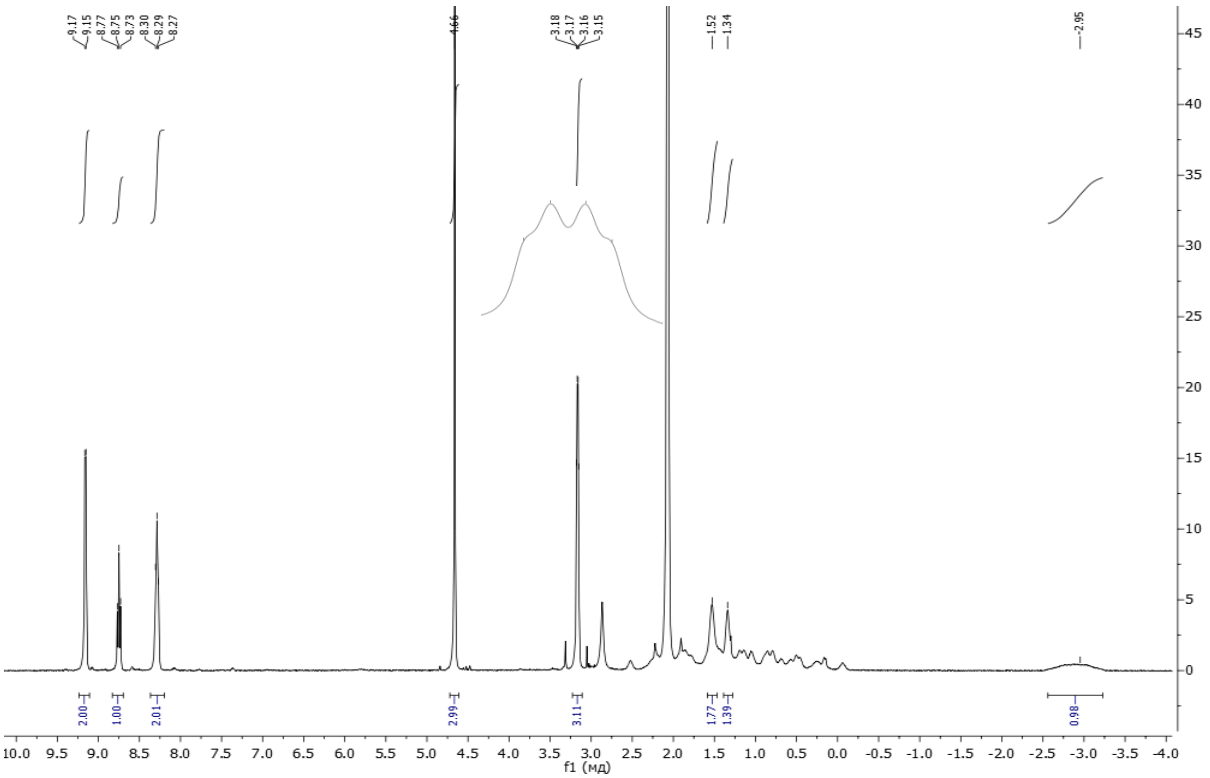

Fig. 24. ^{1}H NMR spectrum of (C$_5$H$_5$NMe)[9-Me$_2$O-7,8-C$_2$B$_9$H$_{11}$] **(*N*-MePy)[4]**

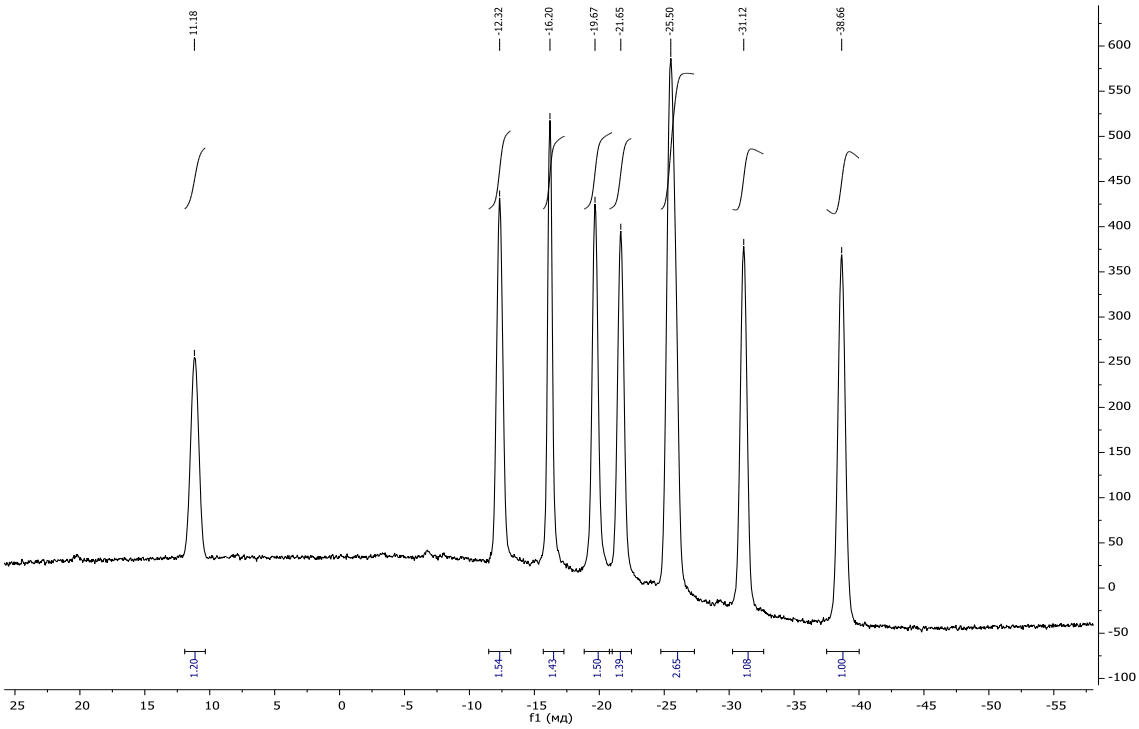

Fig. 25. ^{11}B NMR spectrum of (C_5H_5NMe)[9-Me_2O-7,8-$C_2B_9H_{11}$] **(*N*-MePy)[4]**

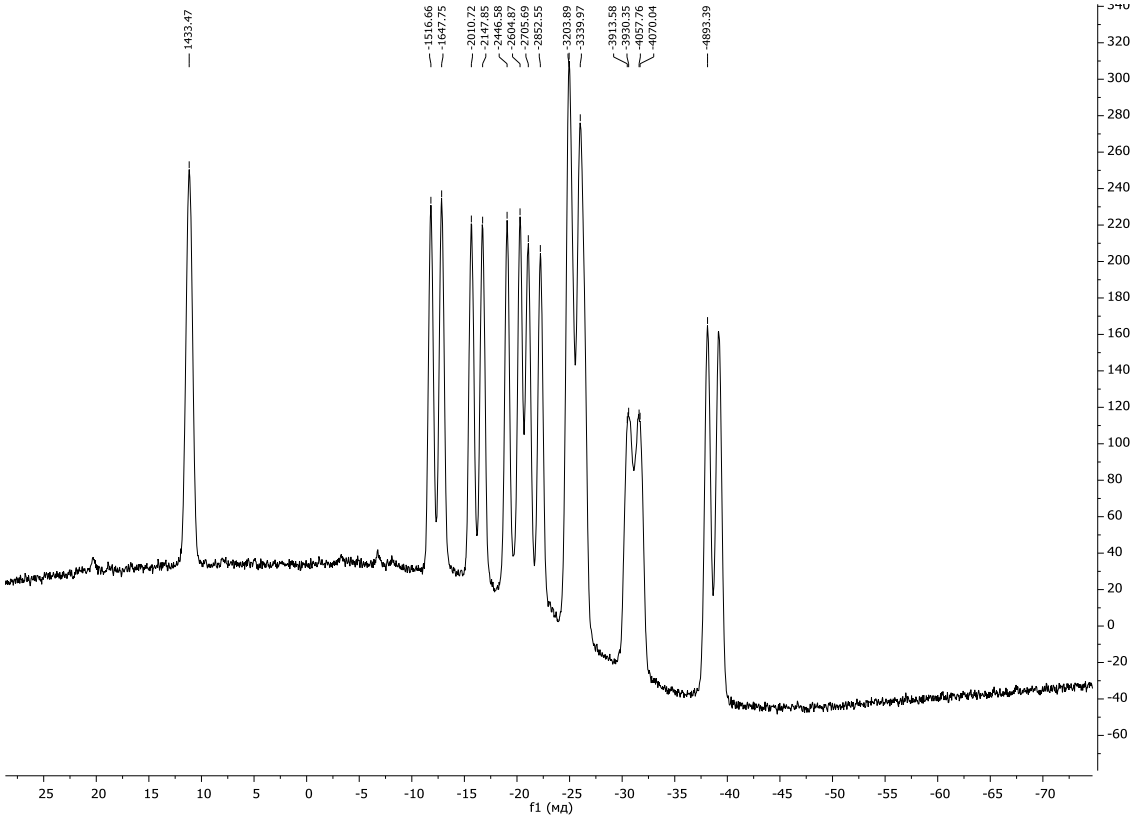

Fig. 26. ^{11}B{^{1}H} NMR spectrum of (C_5H_5NMe)[9-Me_2O-7,8-$C_2B_9H_{11}$] **(*N*-MePy)[4]**

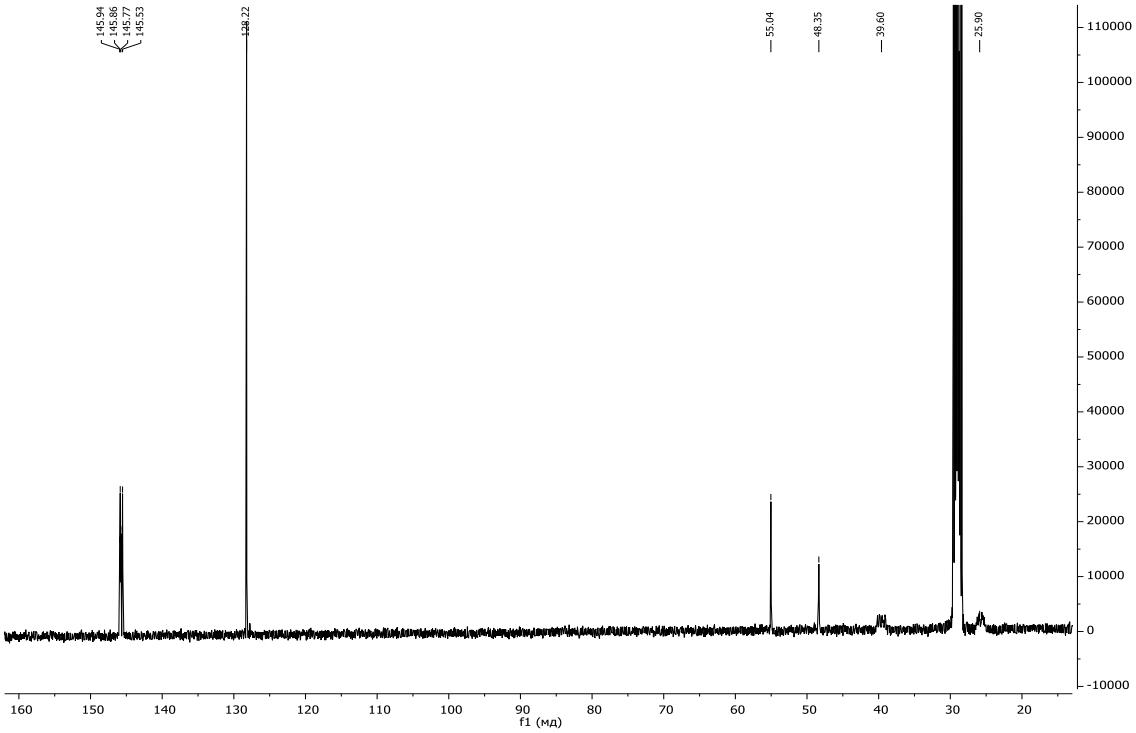

Fig. 27. ^{13}C NMR spectrum of (C_5H_5NMe)[9-Me_2O-7,8-$C_2B_9H_{11}$] **(*N*-MePy)[4]**

Reactions of 10-Me_2O-7,8-$C_2B_9H_{11}$ and 9-Me_2O-7,8-$C_2B_9H_{11}$ with 3-methyl-6-nitro-1H-indazole.

Compound 6

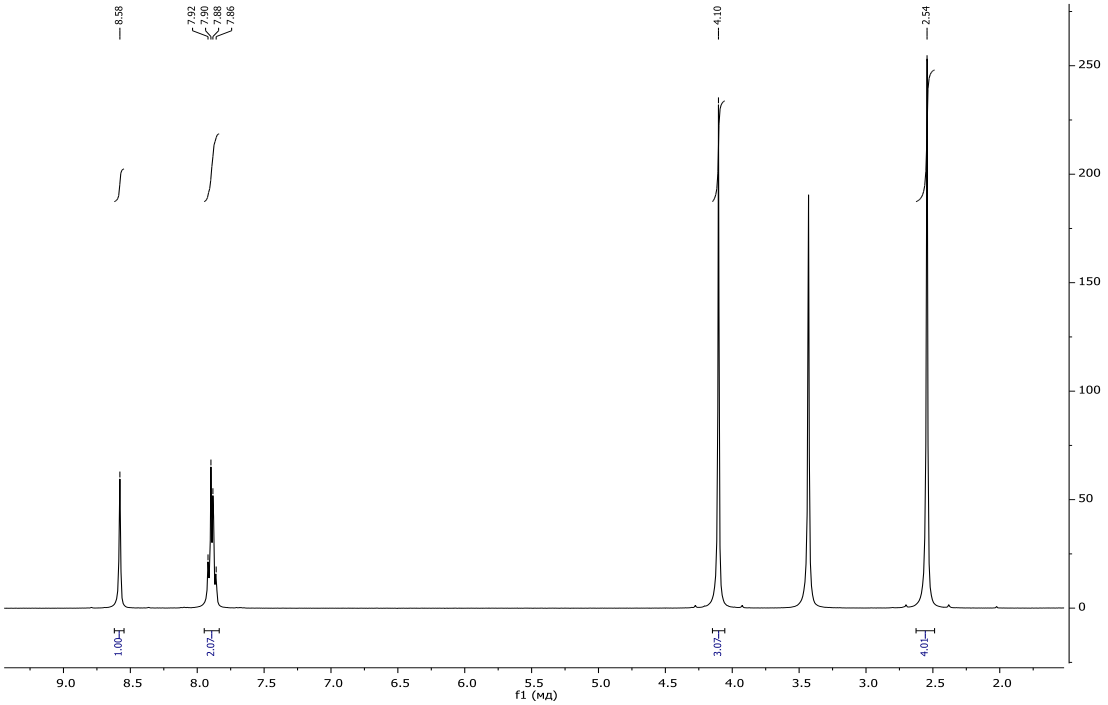

Fig. 28. ^{1}H NMR spectrum of Compound **6**

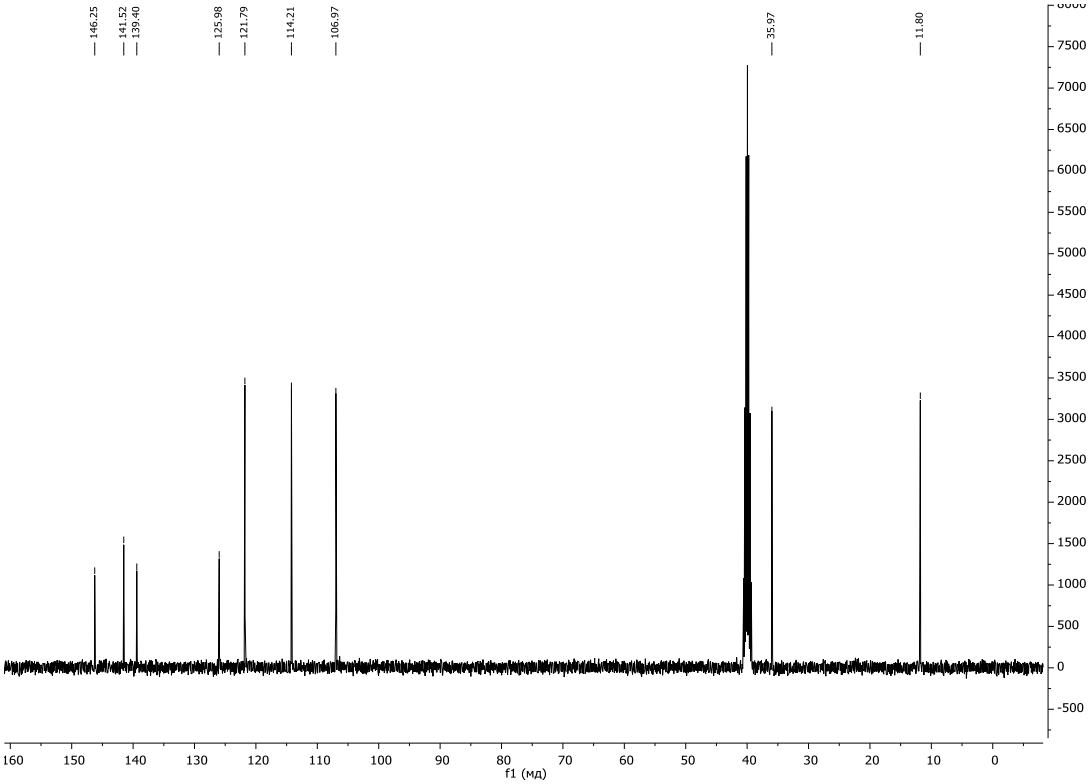

Fig. 29. ^{13}C NMR spectrum of Compound **6**

Compound K[8,8′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (K[7])

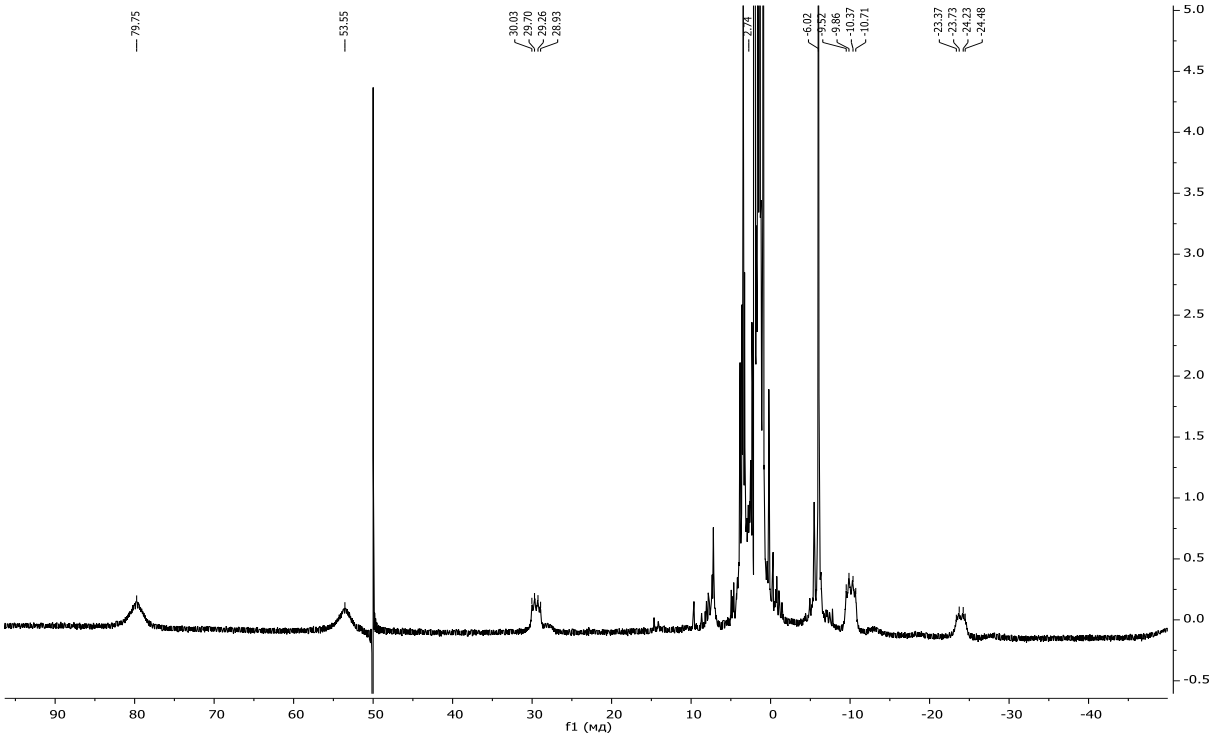

Fig. 30. ^{1}H NMR spectrum of K[8,8′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**K[7]**)

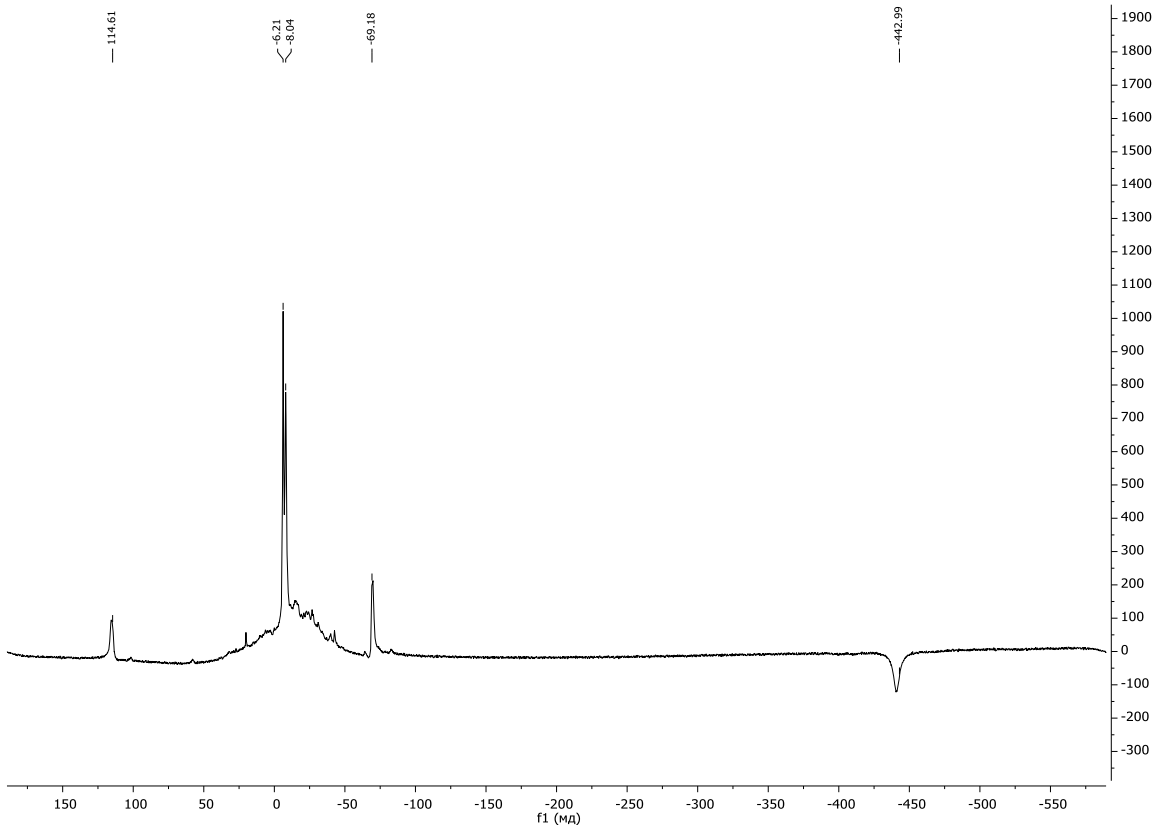

Fig. 31. ^{11}B NMR spectrum of K[8,8′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**K[7]**)

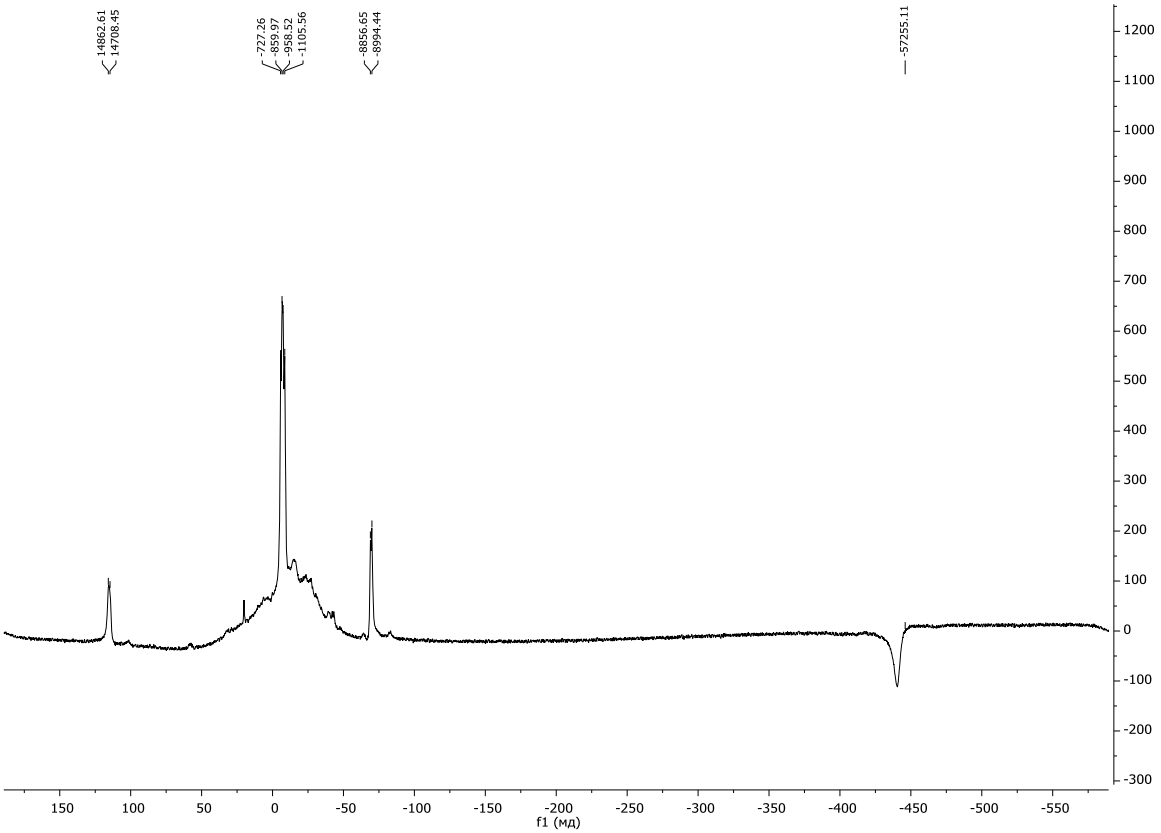

Fig. 32. ^{11}B{^{1}H} NMR spectrum of K[8,8′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**K[7]**)

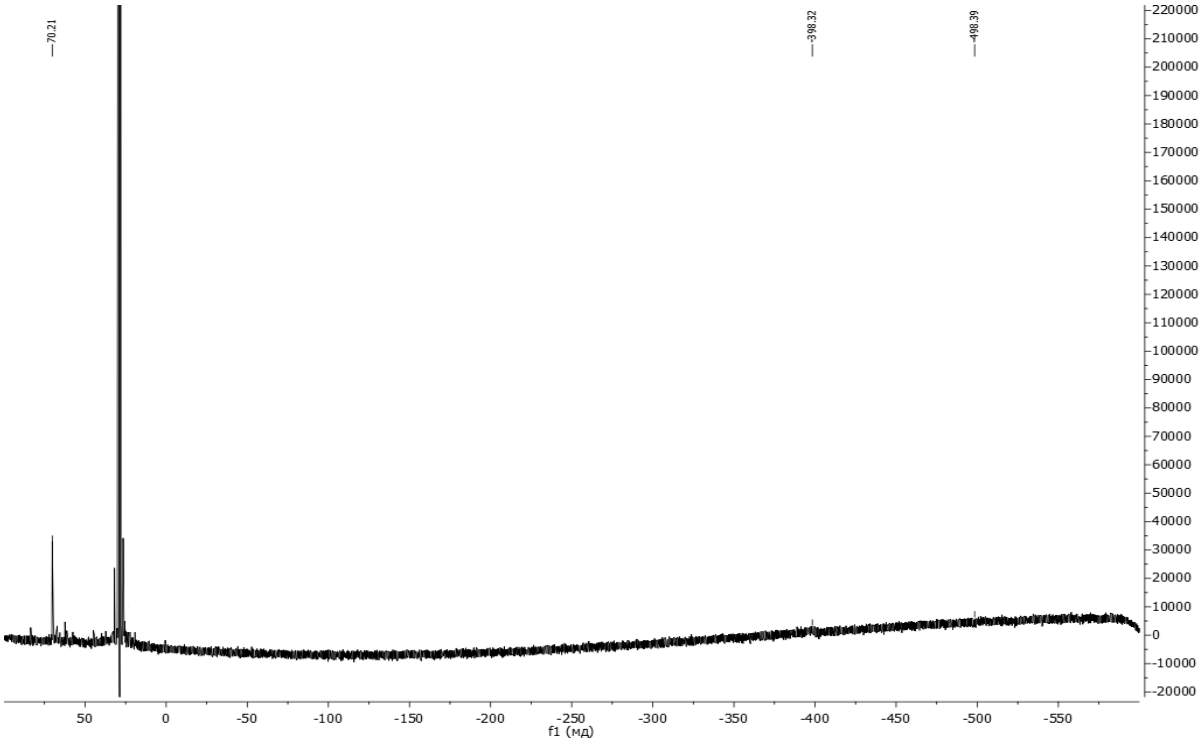

Fig. 33. ^{13}C NMR spectrum of K[8,8′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**K[7]**)

Compound (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] ((Bu$_4$N)[8])

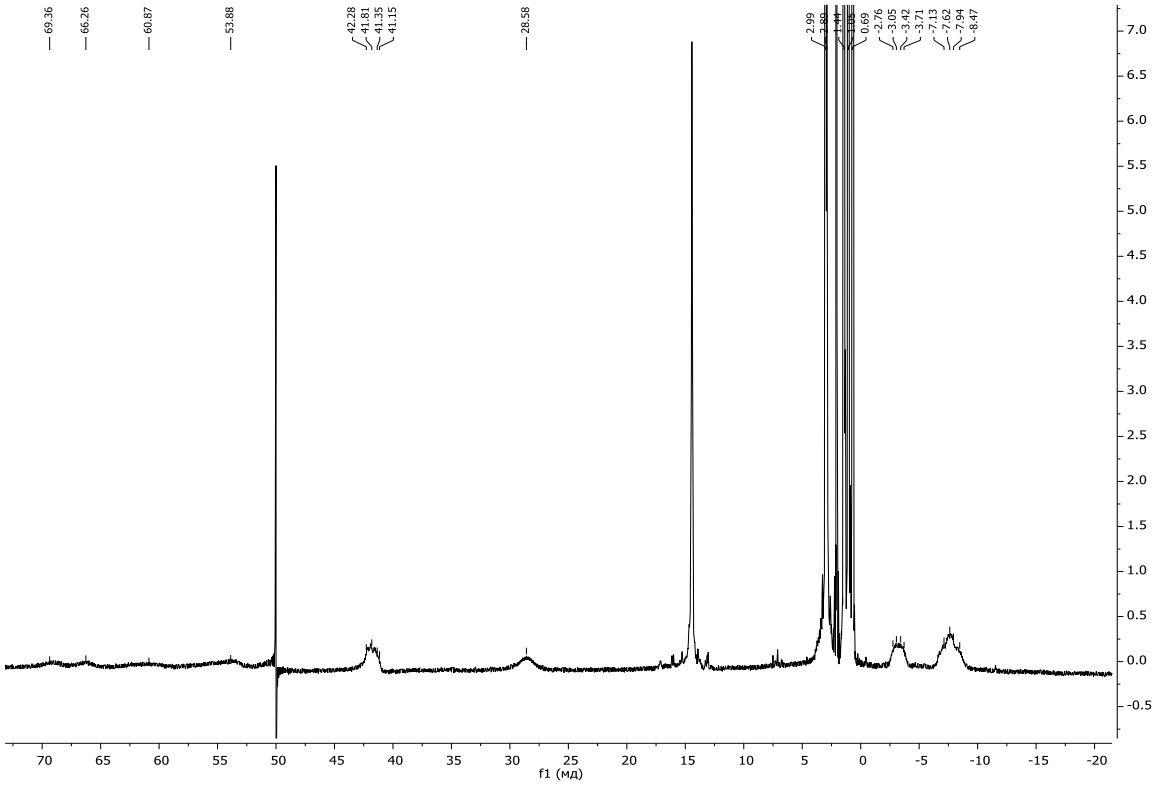

Fig. 34. ^{1}H NMR spectrum of (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**(Bu$_4$N)[8]**)

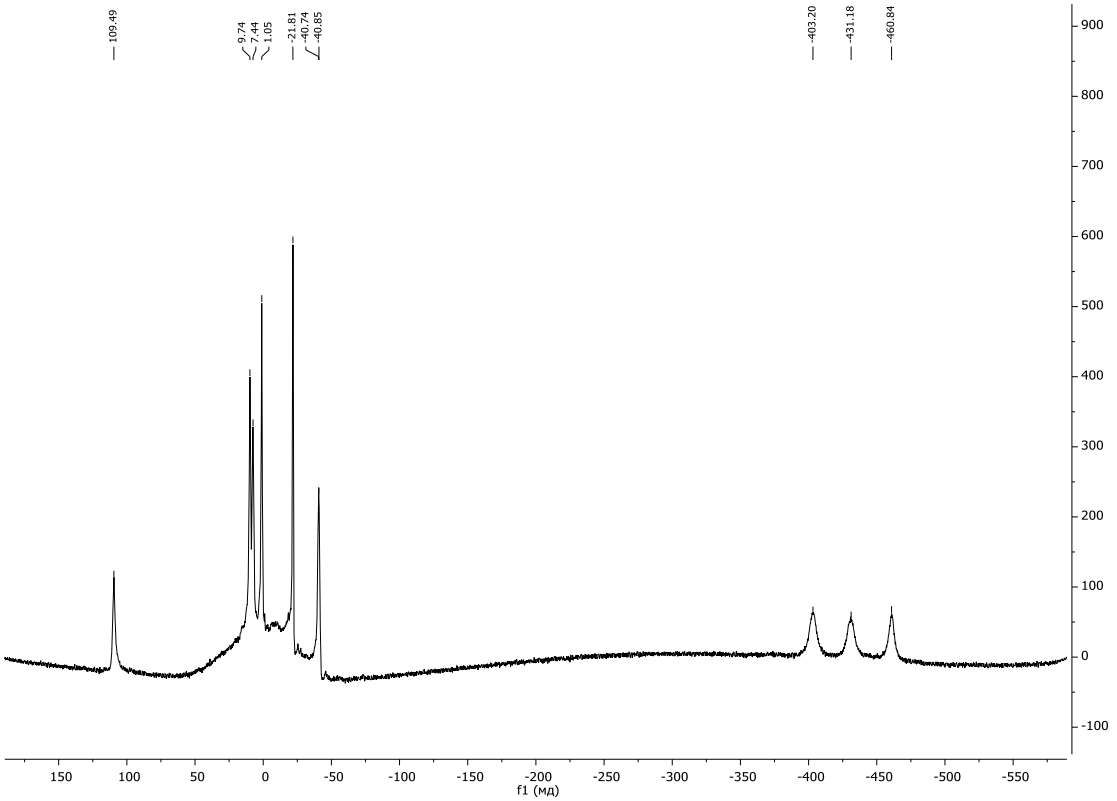

Fig. 35. ^{11}B NMR spectrum of (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**(Bu$_4$N)[8]**)

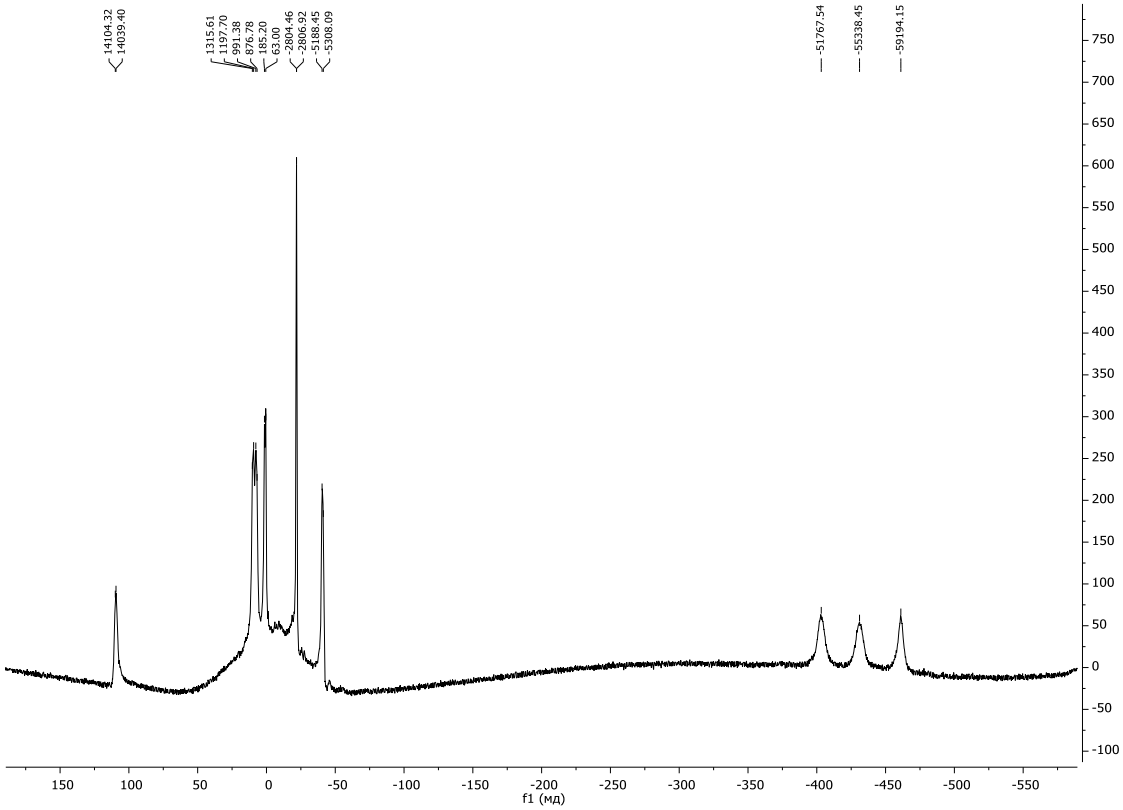

Fig. 36. ^{11}B{^{1}H} NMR spectrum of (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**(Bu$_4$N)[8]**)

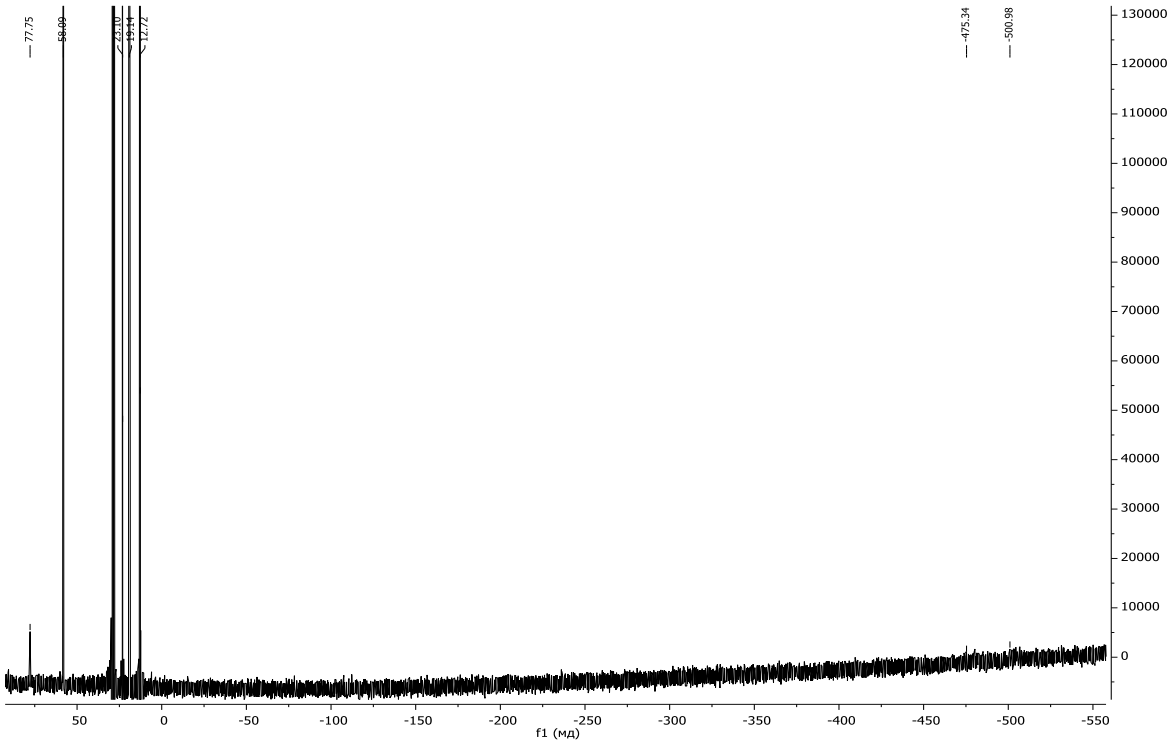

Fig. 37. ^{13}C NMR spectrum of (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Fe(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**(Bu$_4$N)[8]**)

Compound (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Co(1,2-C$_2$B$_9$H$_{10}$)$_2$] ((Bu$_4$N)[9])

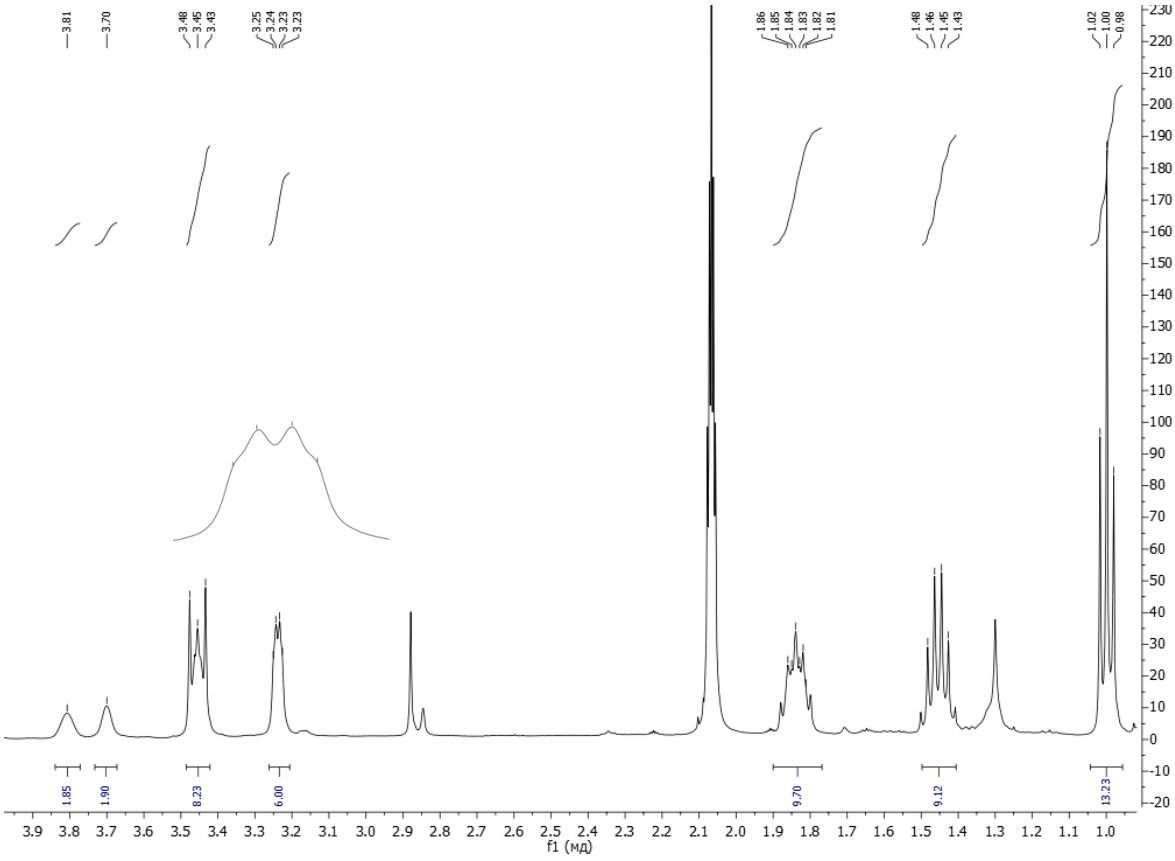

Fig. 38. ^{1}H NMR spectrum of (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Co(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**(Bu$_4$N)[9]**)

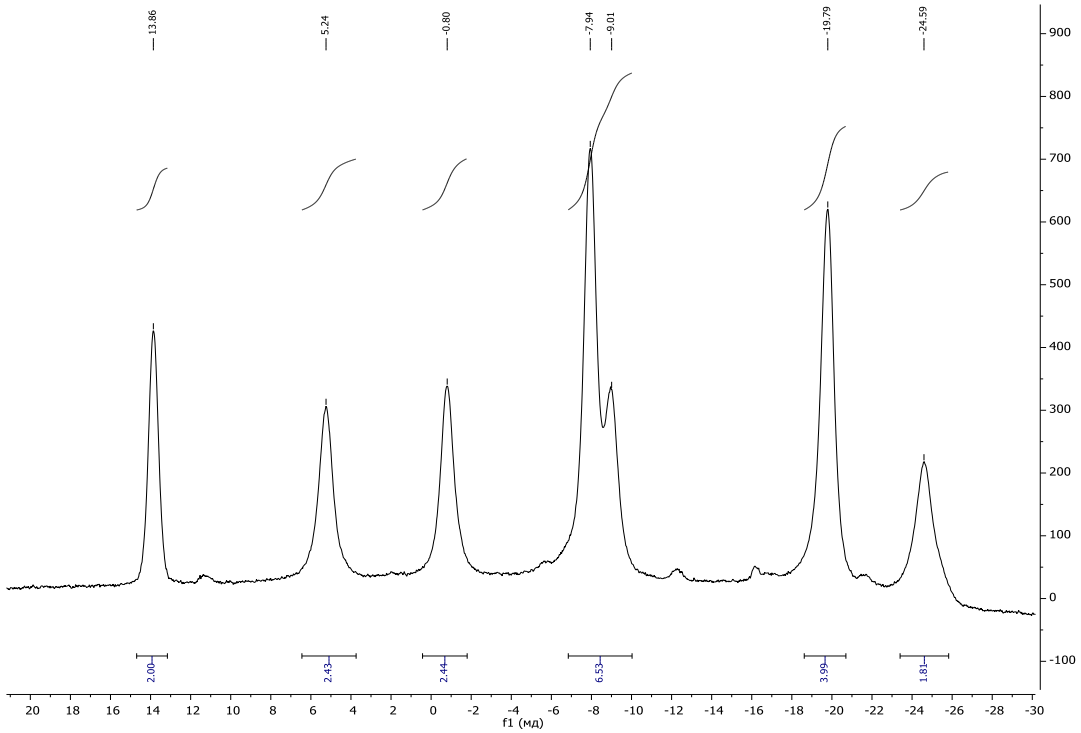

Fig. 39. ^{11}B NMR spectrum of (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Co(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**(Bu$_4$N)[9]**)

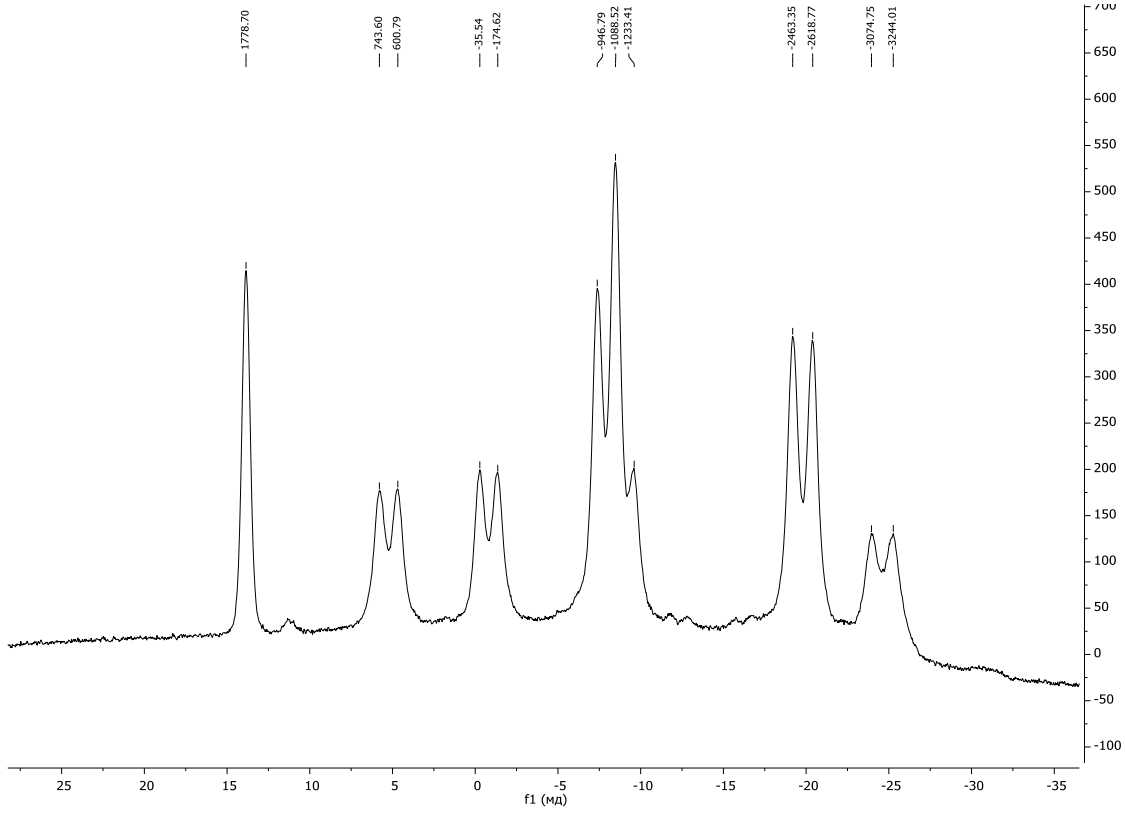

Fig. 40. ^{11}B{^{1}H} NMR spectrum of (Bu$_4$N)[4,7′-(MeO)$_2$-3,3′-Co(1,2-C$_2$B$_9$H$_{10}$)$_2$] (**(Bu$_4$N)[9]**)

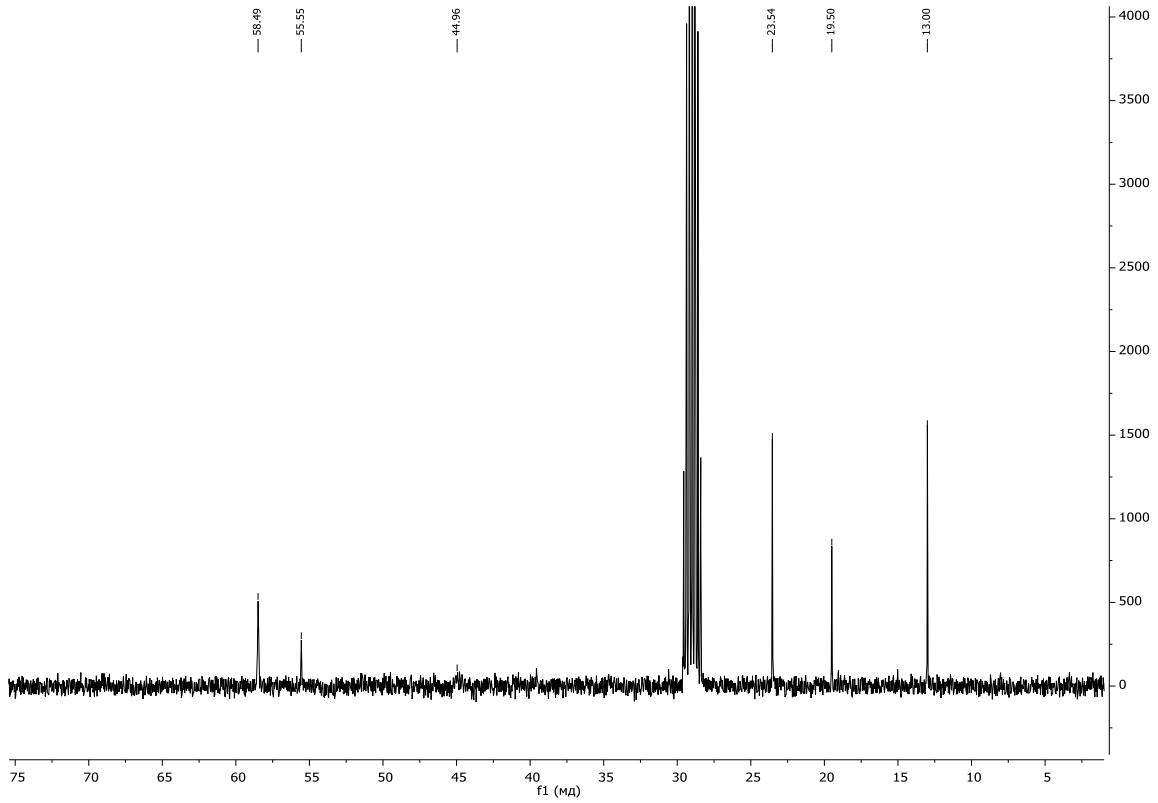

Fig. 41. ^{13}C NMR spectrum of (Bu_4N)[4,7′-$(MeO)_2$-3,3′-Co(1,2-$C_2B_9H_{10})_2$] (**(Bu_4N)[9]**)