



Supporting Information

for

A new method for the synthesis of diamantane by hydroisomerization of binor-S on treatment with sulfuric acid

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Experimental procedures, NMR, and mass spectral data

The graphical spectra of diamantane are identical to the literature data [Aminov, R. I., Akshieva, A. N., Khusnutdinov, R. I. *Catal. Commun.* **2019**, 130, 105756].

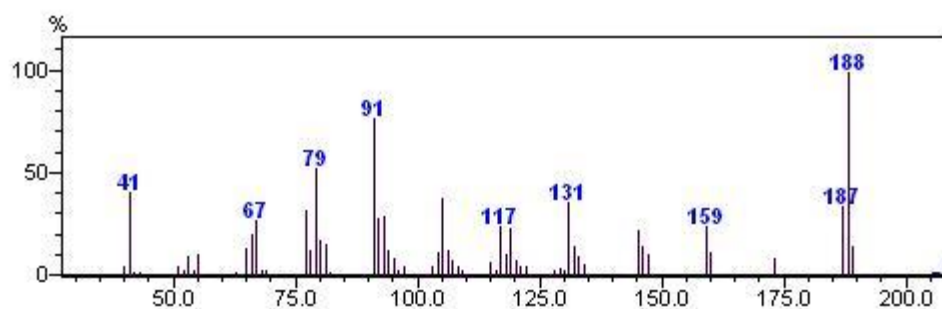


Figure S1: Mass spectrum of tetrahydrobinor-S (3c).

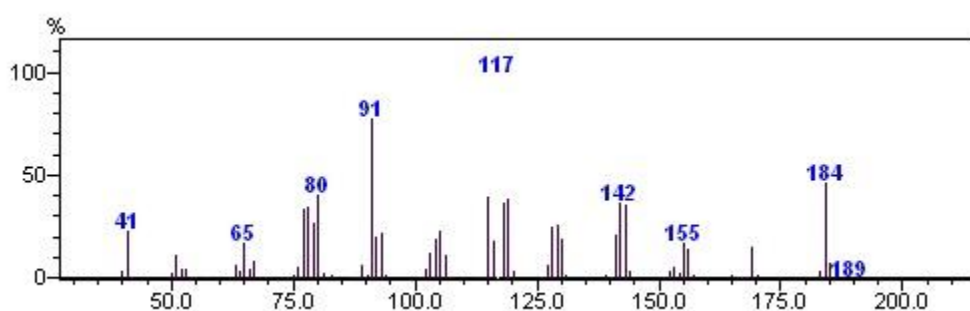


Figure S2: Mass spectrum of hexacyclo[8.4.0.0^{2,7}.0^{3,14}.0^{4,8}.0^{9,13}]tetradec-5-ene (4a).

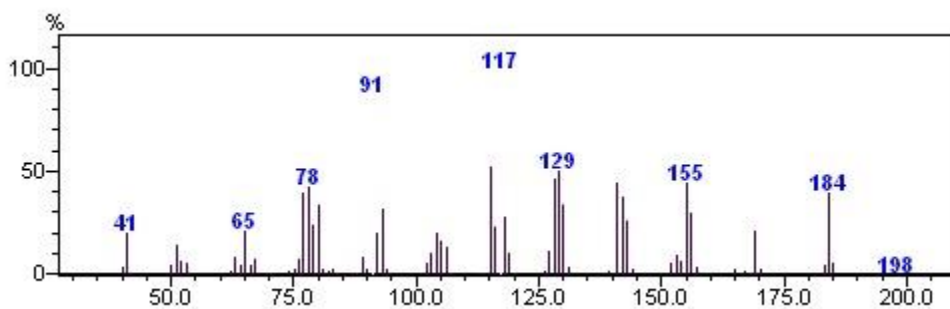


Figure S3: Mass spectrum of hexacyclo[6.6.0.0^{2,6}.0^{5,14}.0^{7,12}.0^{9,13}]tetradec-3-ene (4b)

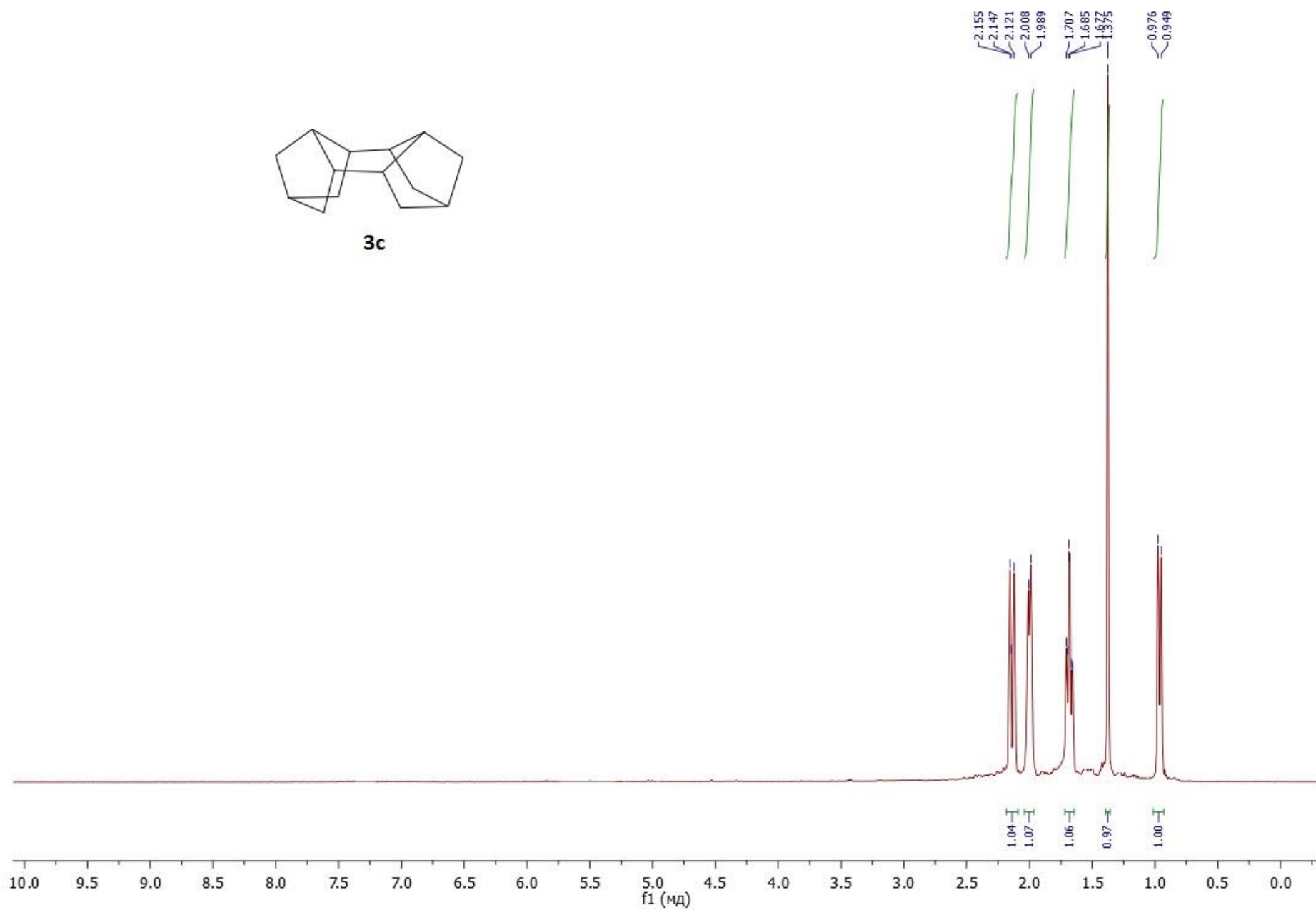


Figure S4: ¹H NMR spectrum of tetrahydrobinor-S (**3c**) in CDCl₃.

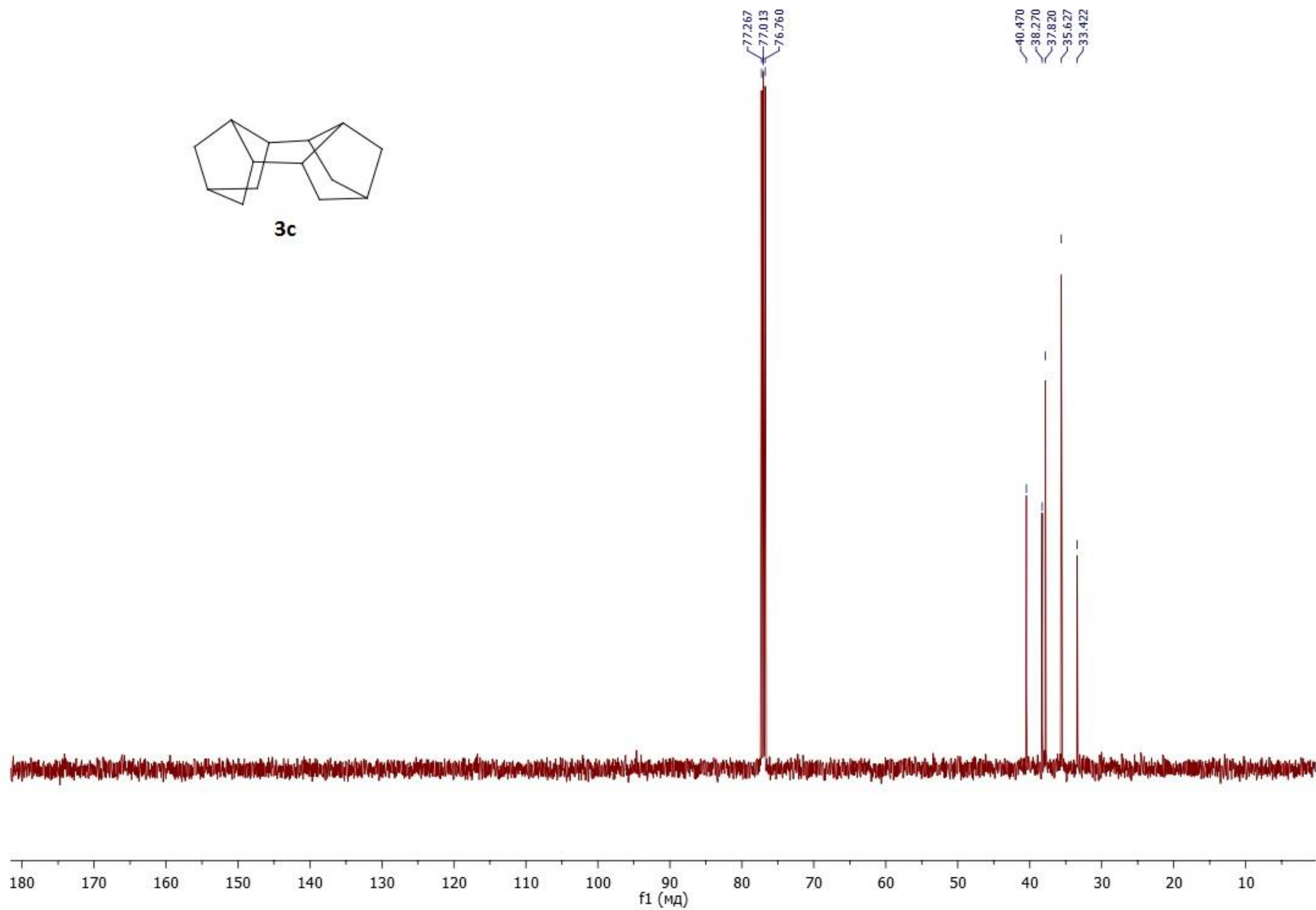


Figure S5: ^{13}C NMR spectrum of tetrahydrobinor-S (**3c**) in CDCl_3 .

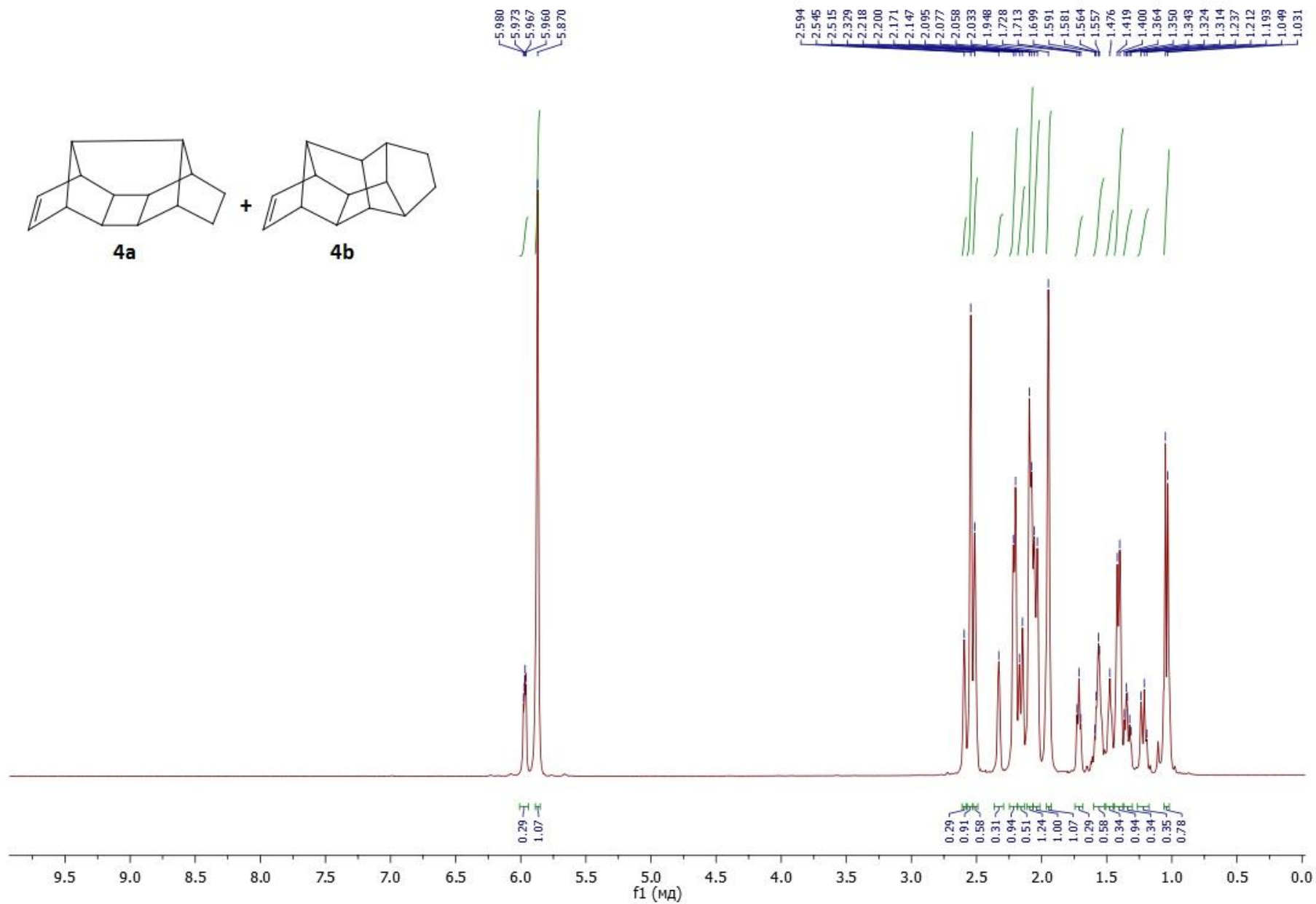


Figure S6: ^1H NMR spectrum of mixture hexacyclo[8.4.0.0^{2,7}.0^{3,14}.0^{4,8}.0^{9,13}]tetradec-5-ene (**4a**) and hexacyclo[6.6.0.0^{2,6}.0^{5,14}.0^{7,12}.0^{9,13}]tetradec-3-ene (**4b**) in CDCl_3 .

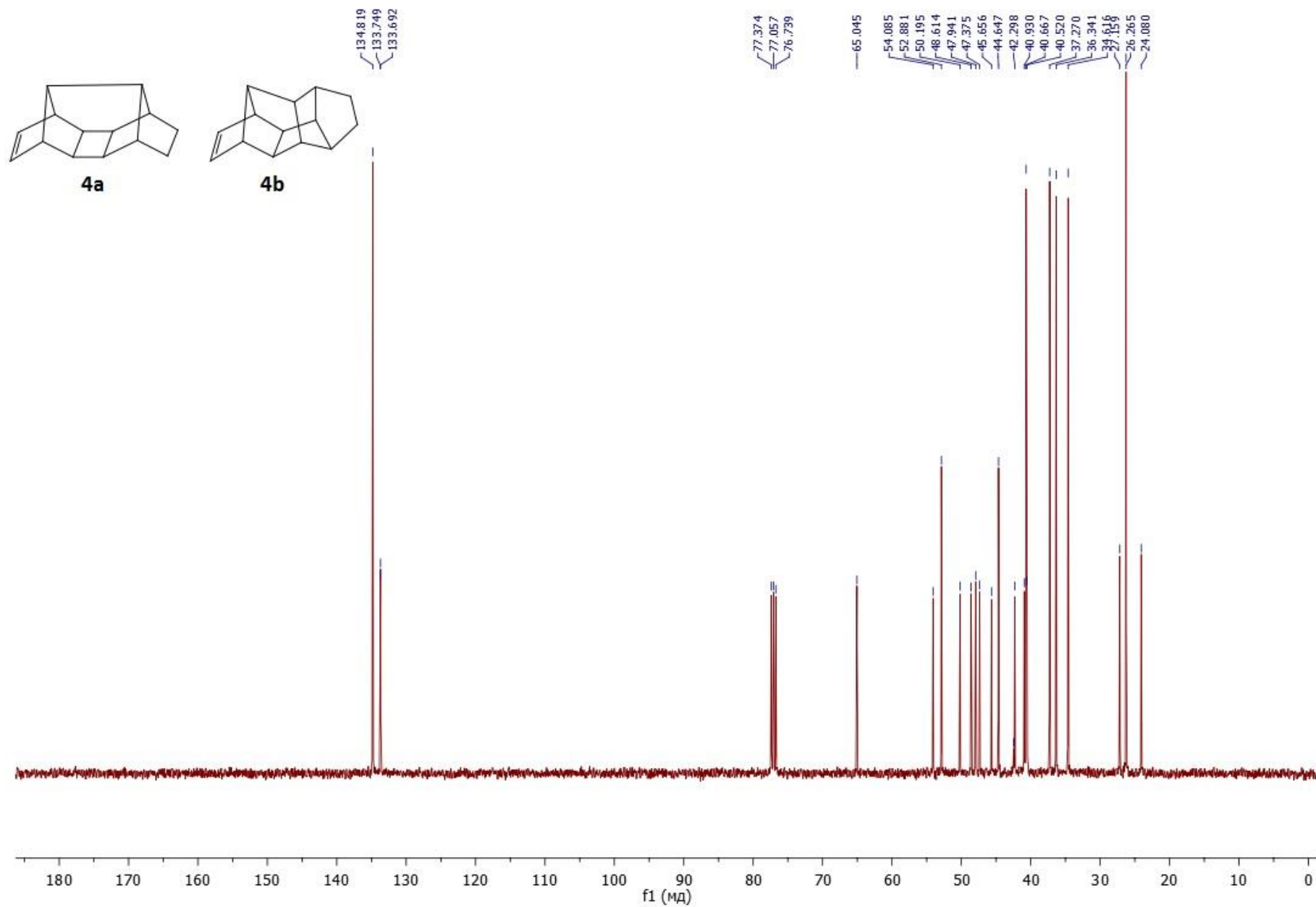


Figure S7: ^{13}C NMR spectrum of mixture hexacyclo[8.4.0.0^{2,7}.0^{3,14}.0^{4,8}.0^{9,13}]tetradec-5-ene (**4a**) and hexacyclo[6.6.0.0^{2,6}.0^{5,14}.0^{7,12}.0^{9,13}]tetradec-3-ene (**4b**) in CDCl_3 .