

Supporting Information for the **Acylated lignans isolated from *Brachanthemum gobicum* and their trypanocidal activity**

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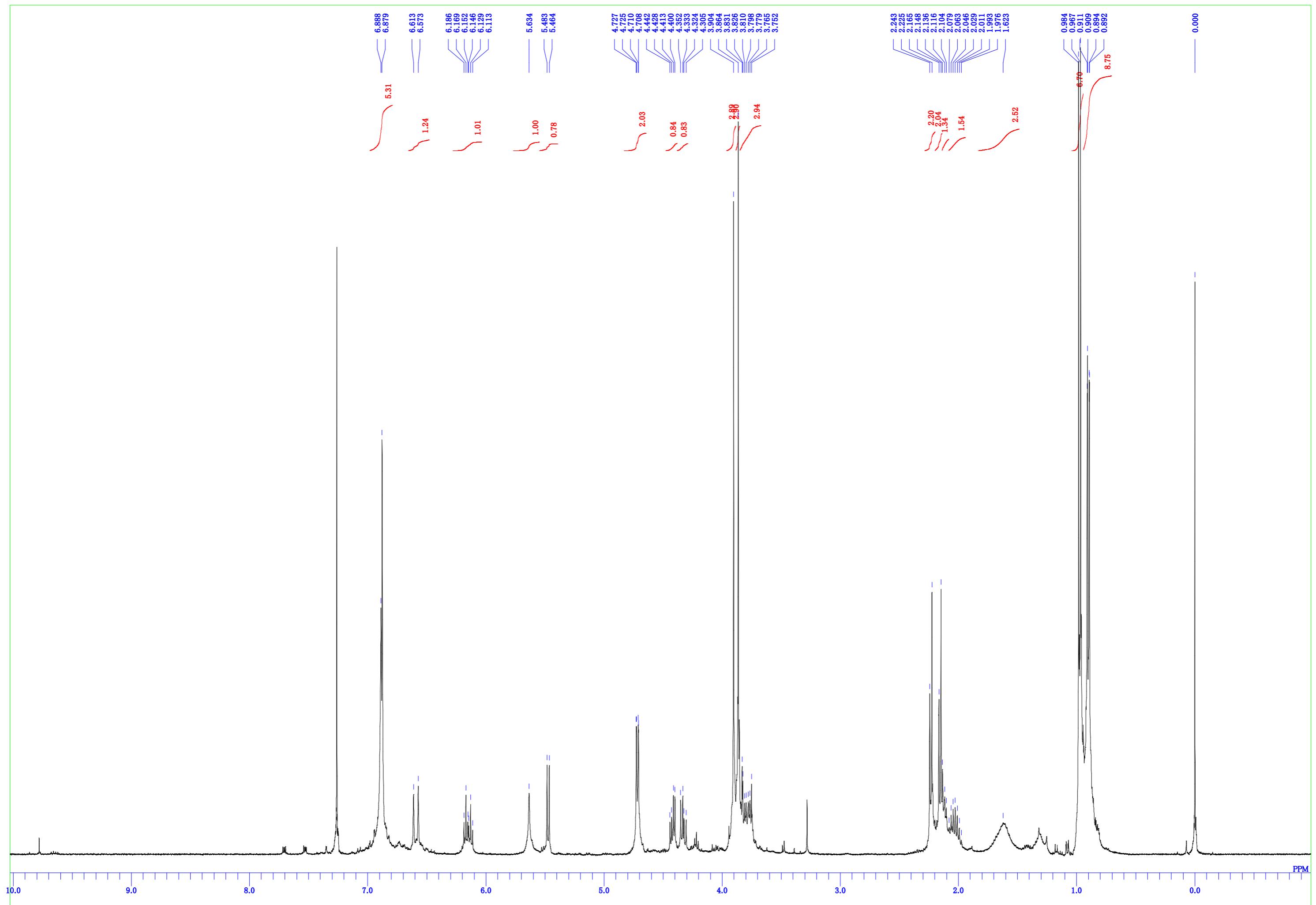


Figure S1.  $^1\text{H}$  NMR spectrum of 1 (in chloroform-d)

S3

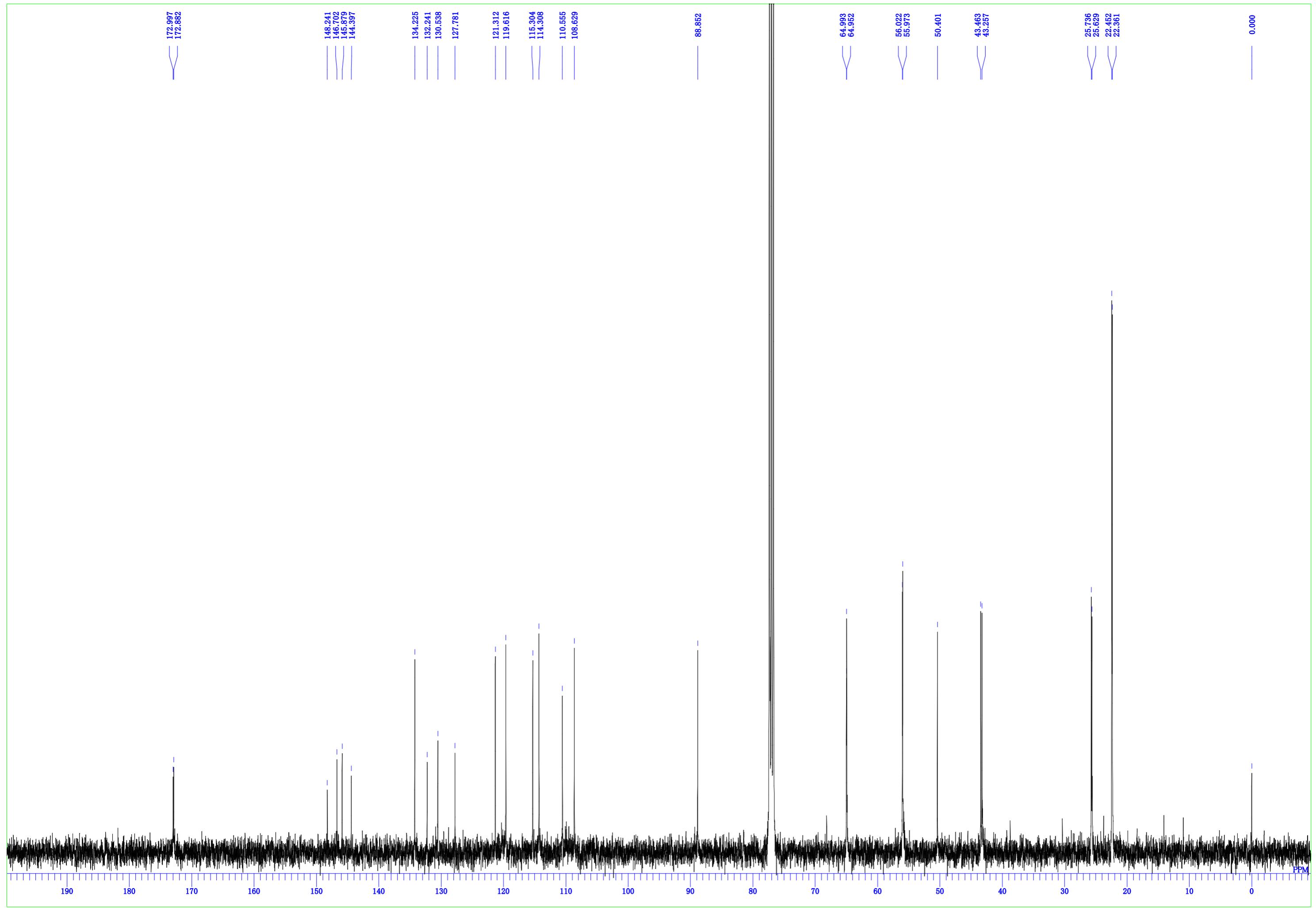


Figure S2.  $^{13}\text{C}$  NMR spectrum of 1 (in chloroform-d)

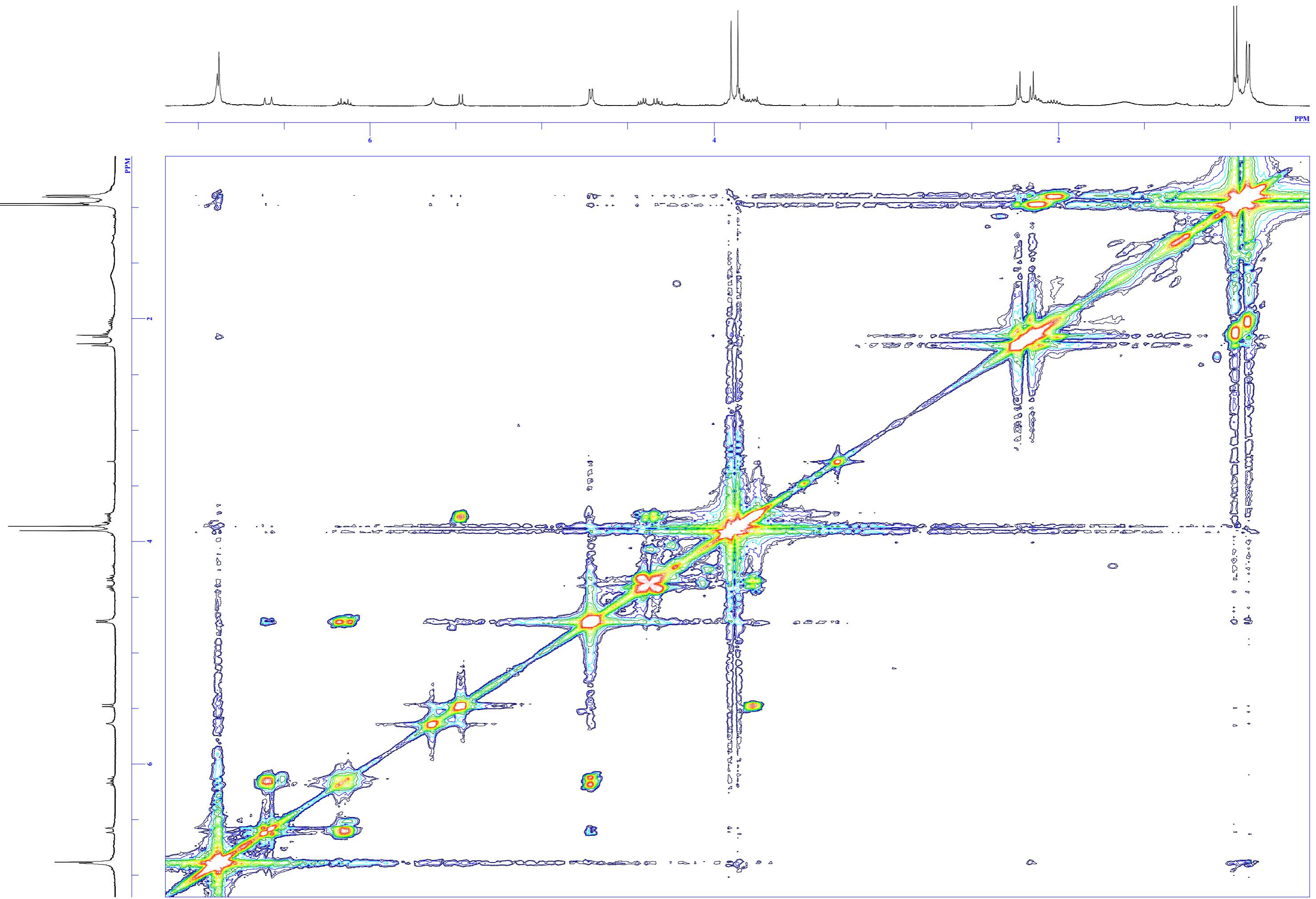


Figure S3.1H-1HCOSY spectrum of 1 (in chloroform-d) S5

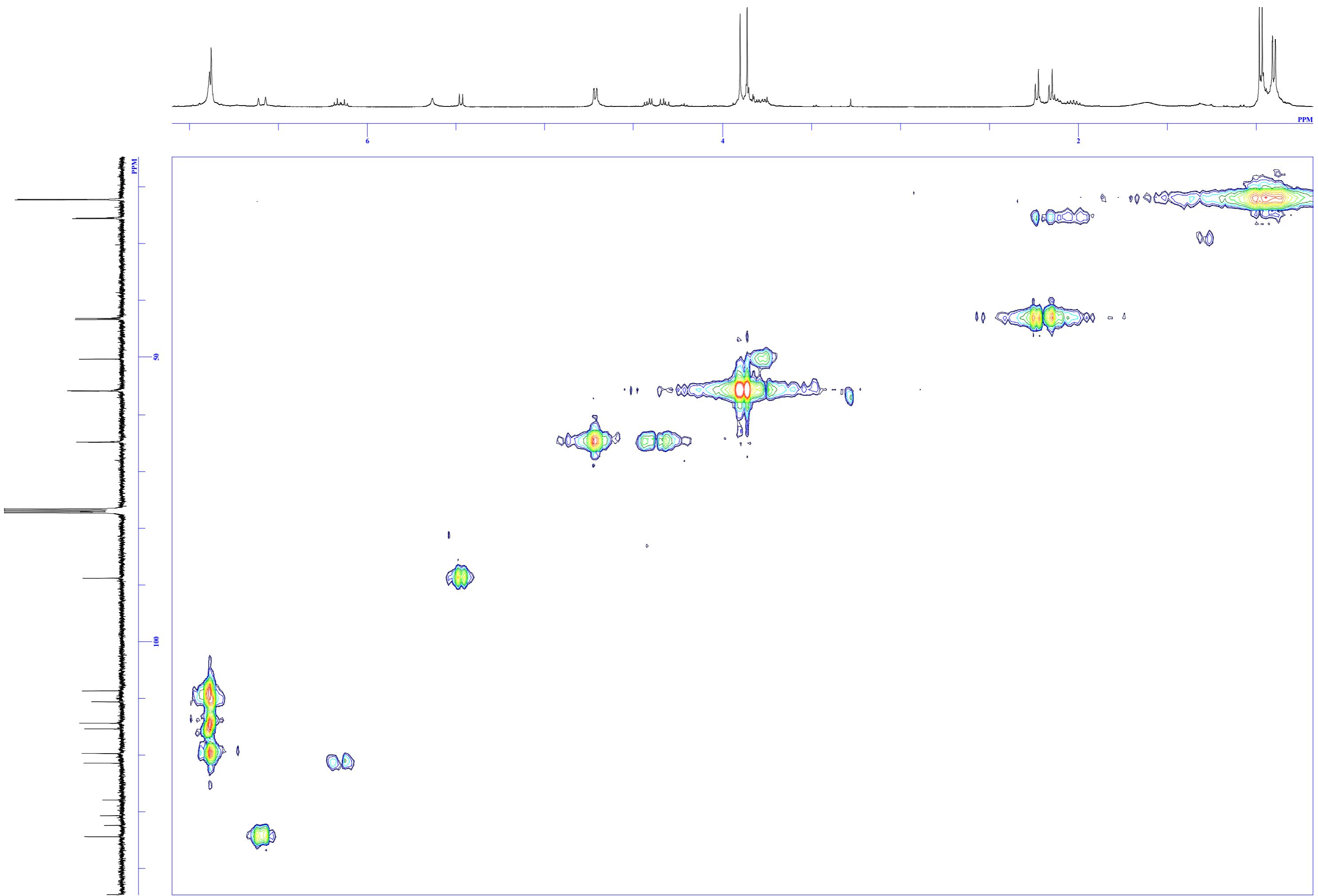


Figure S4. HMQC spectrum of 1 (in chloroform-d)

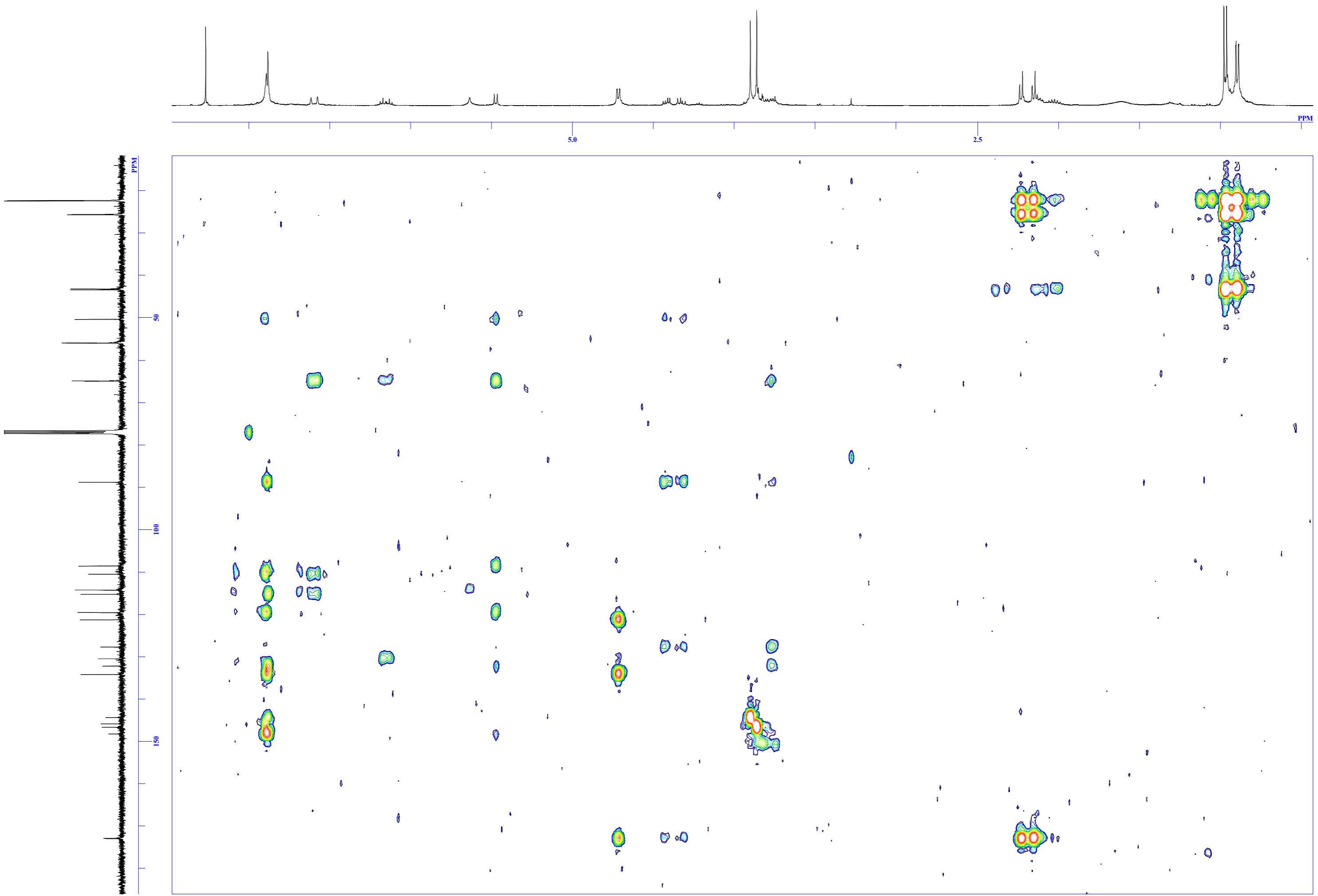
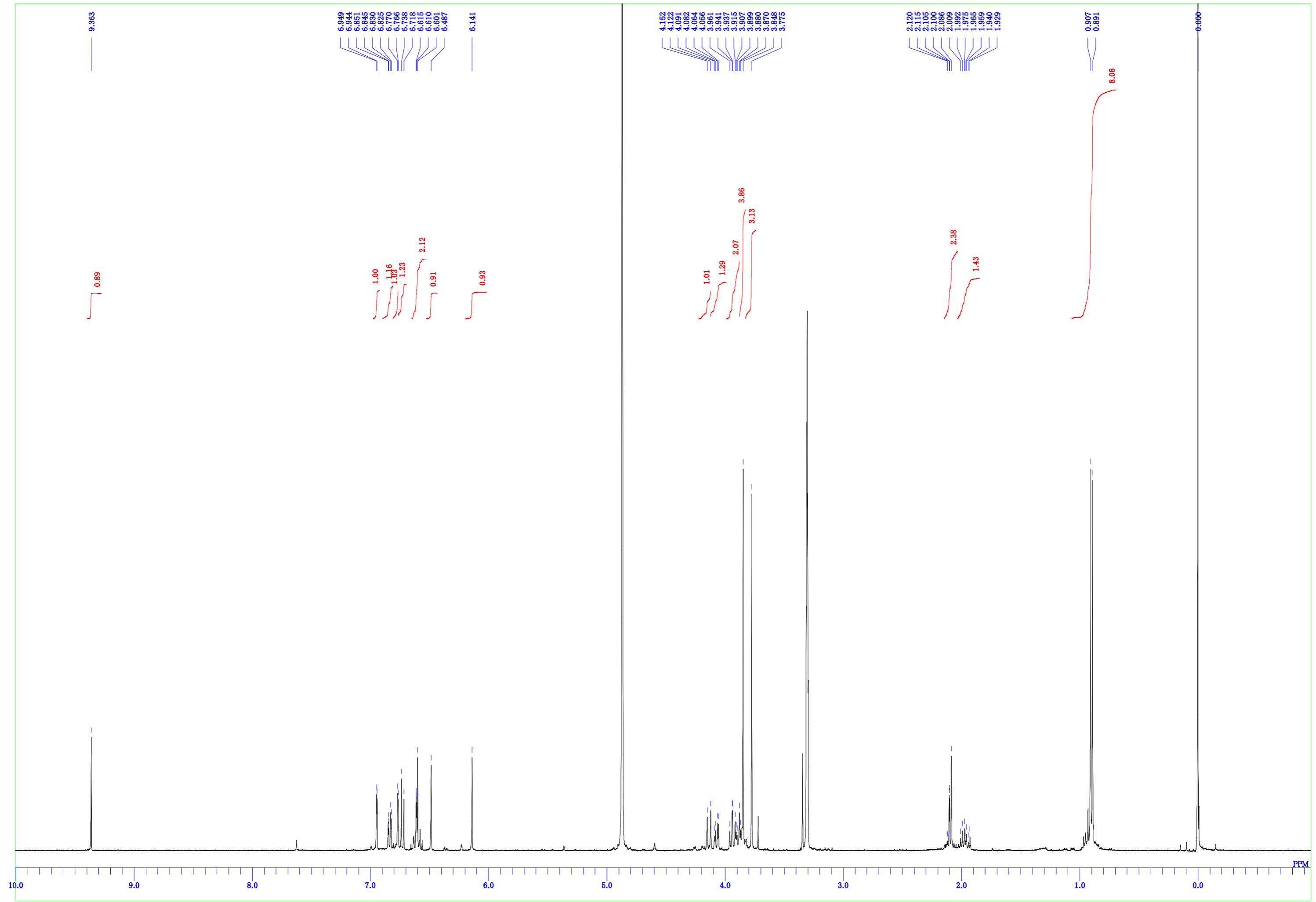


Figure S5. HMBC spectrum of 1 (in chloroform-d)



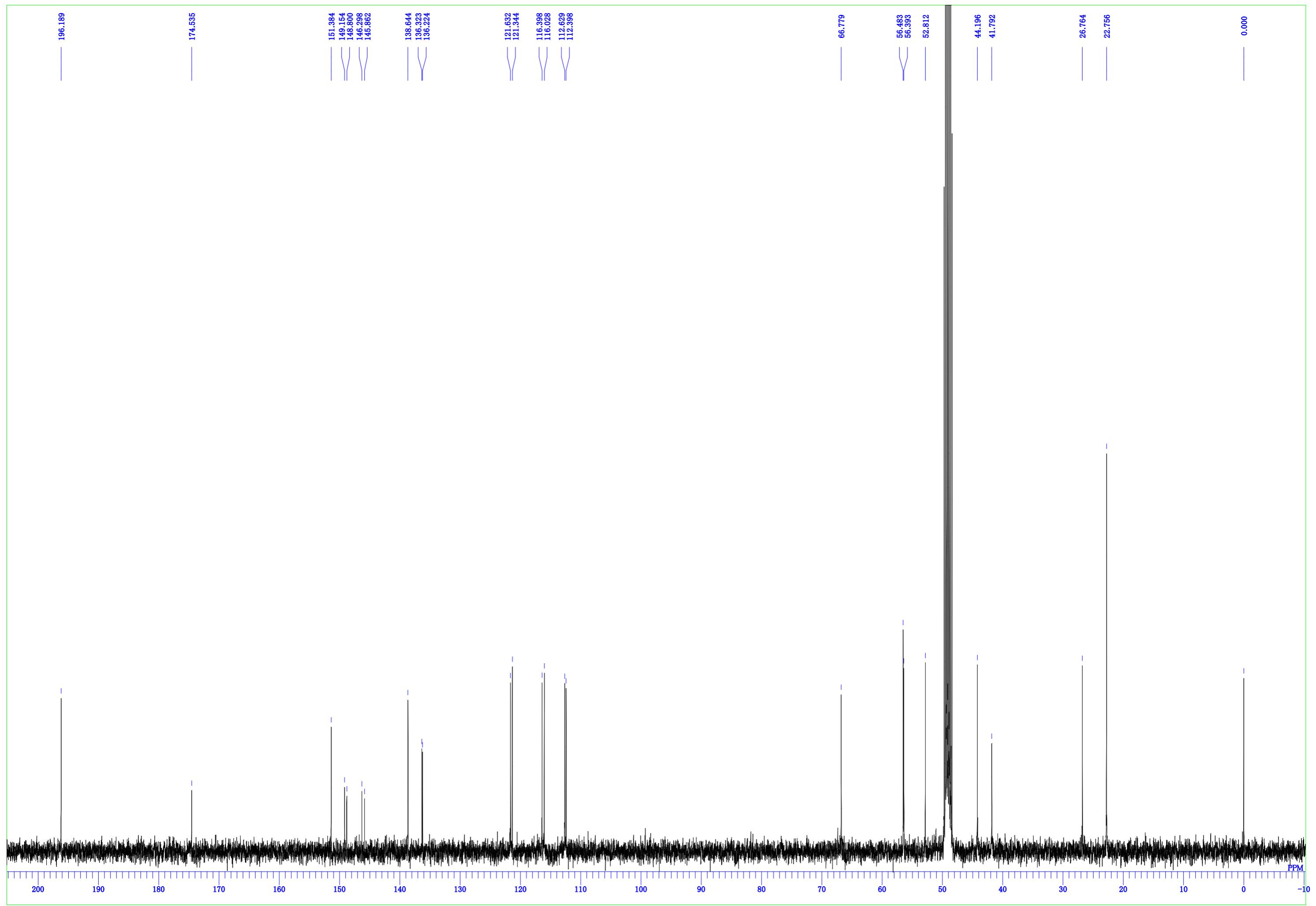


Figure S7. <sup>13</sup>C NMR spectrum of 2 (in methanol-d<sub>4</sub>) S9

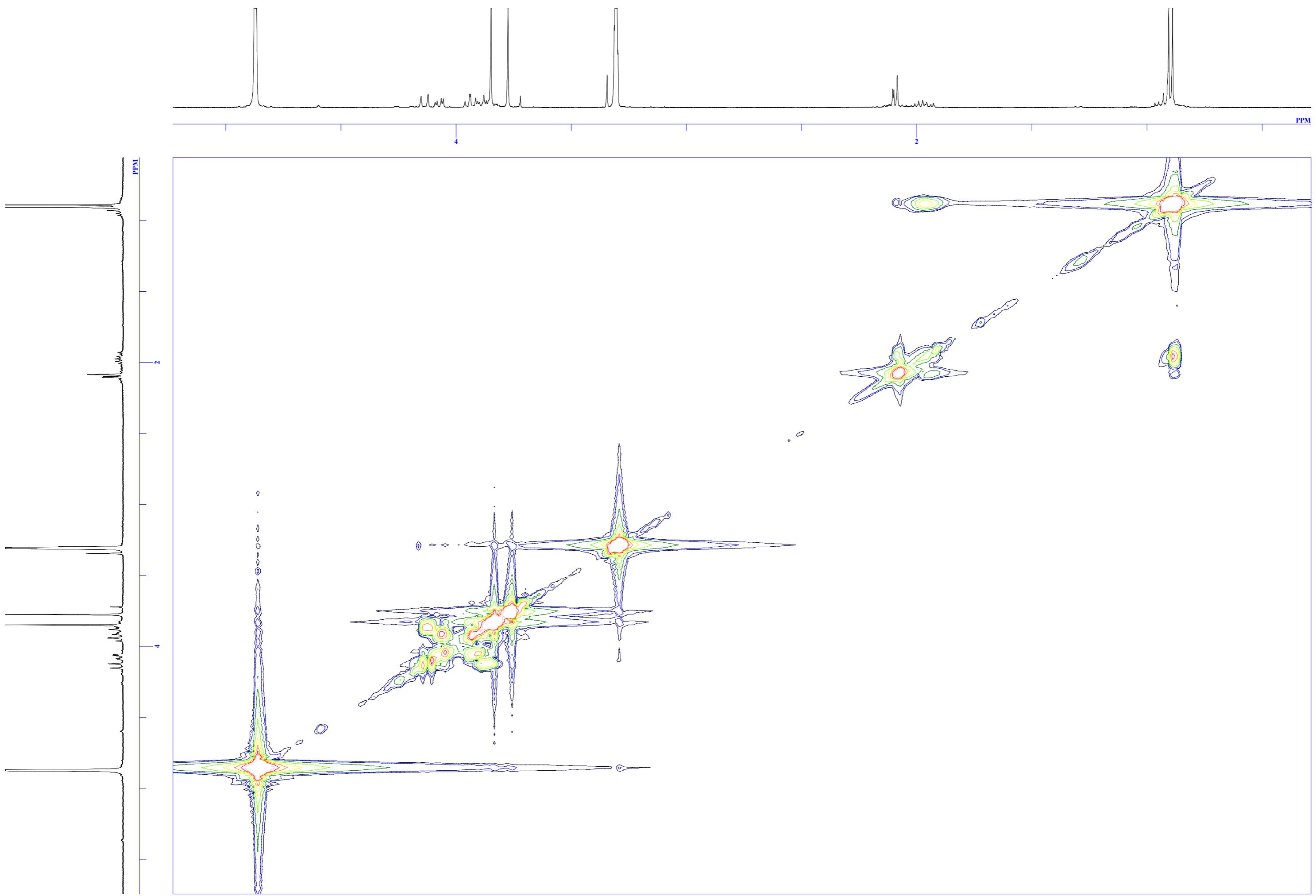


Figure S8.  $^1\text{H}$ - $^1\text{H}$ COSY spectrum of 2 (in methanol- $d_4$ ) S10

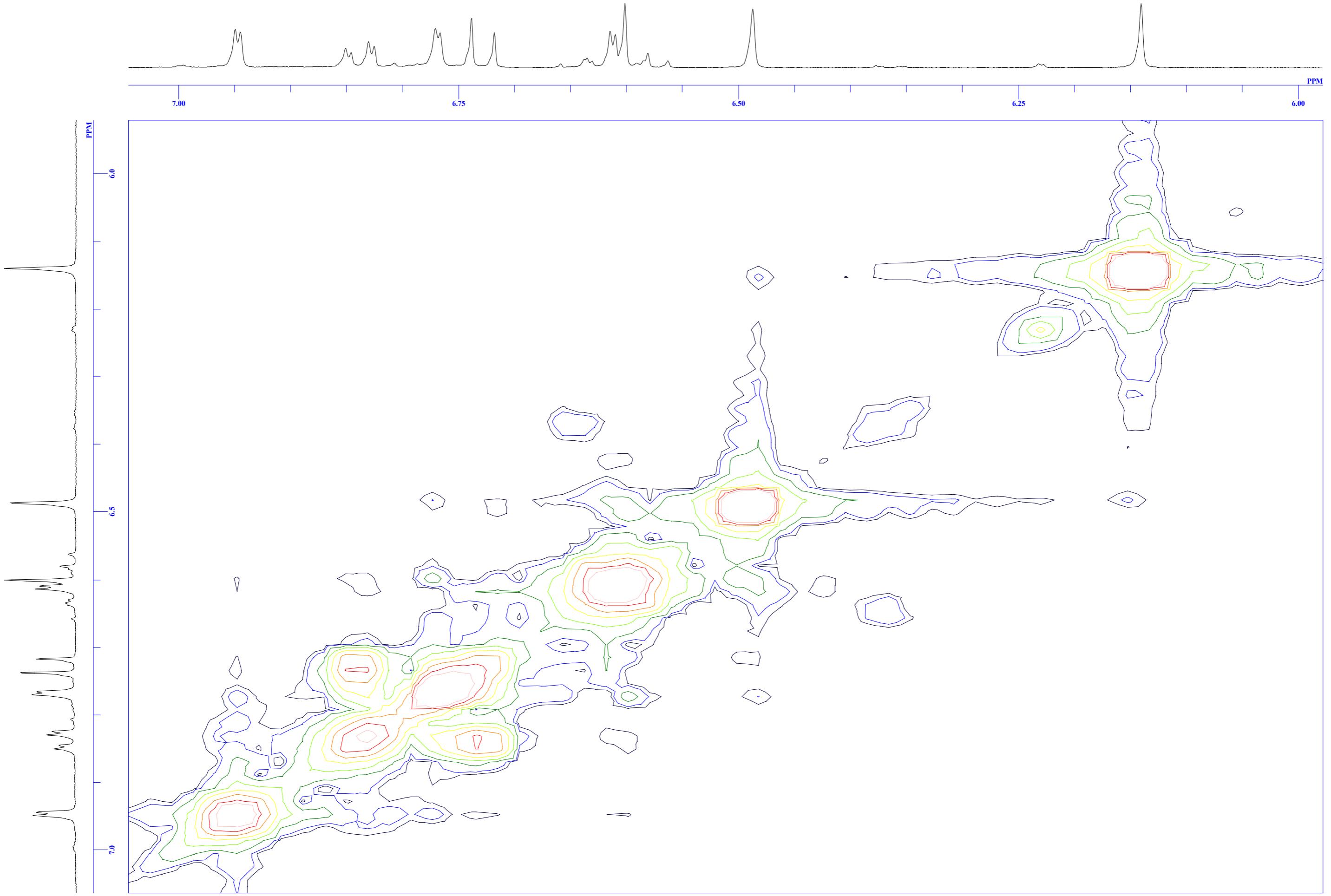


Figure S9.  $^1\text{H}$ - $^1\text{H}$ COSY spectrum of 2 (in methanol- $d_4$ ) S11

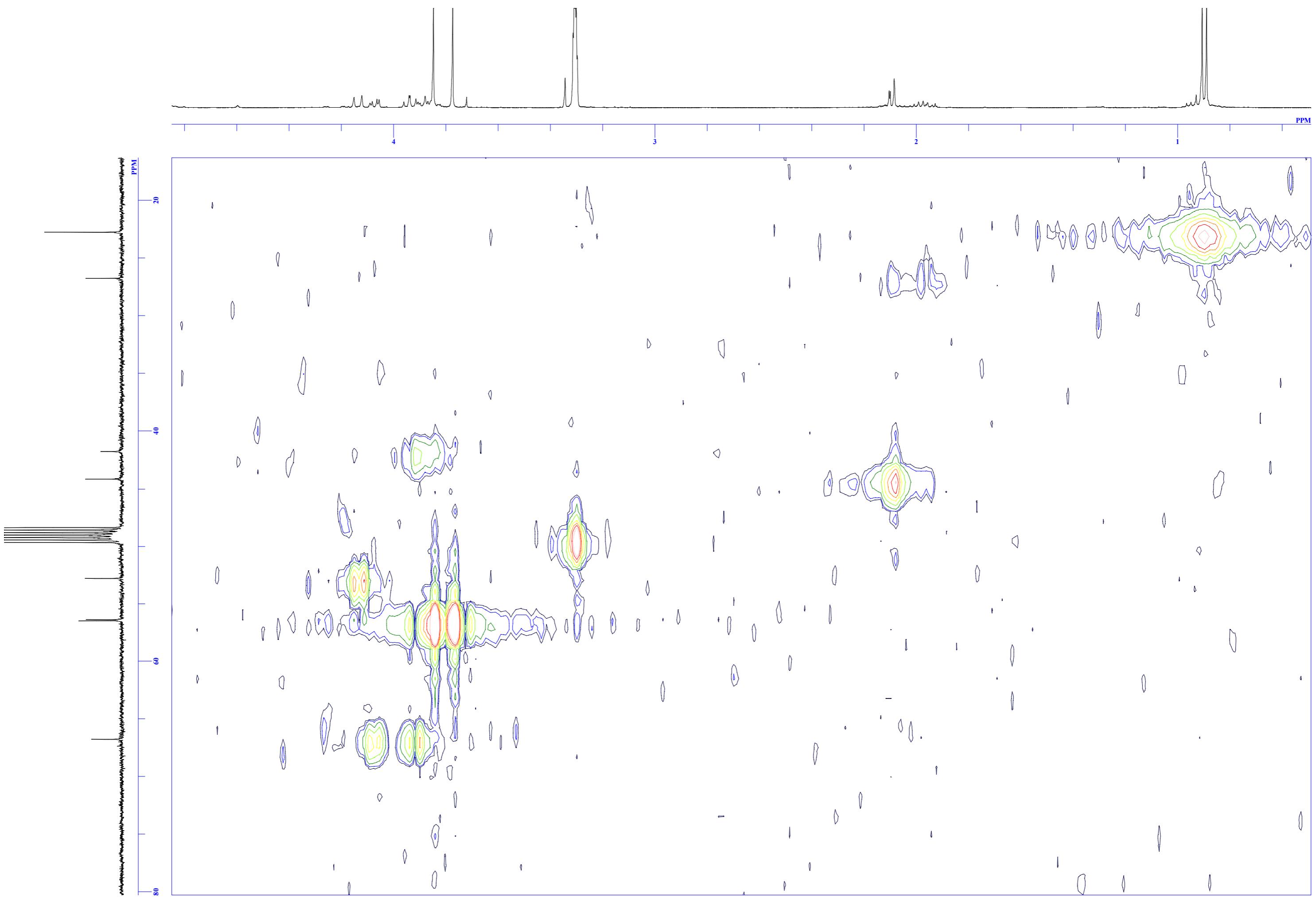


Figure S10. HMQC spectrum of 2 (in methanol-d<sub>4</sub>)

S12

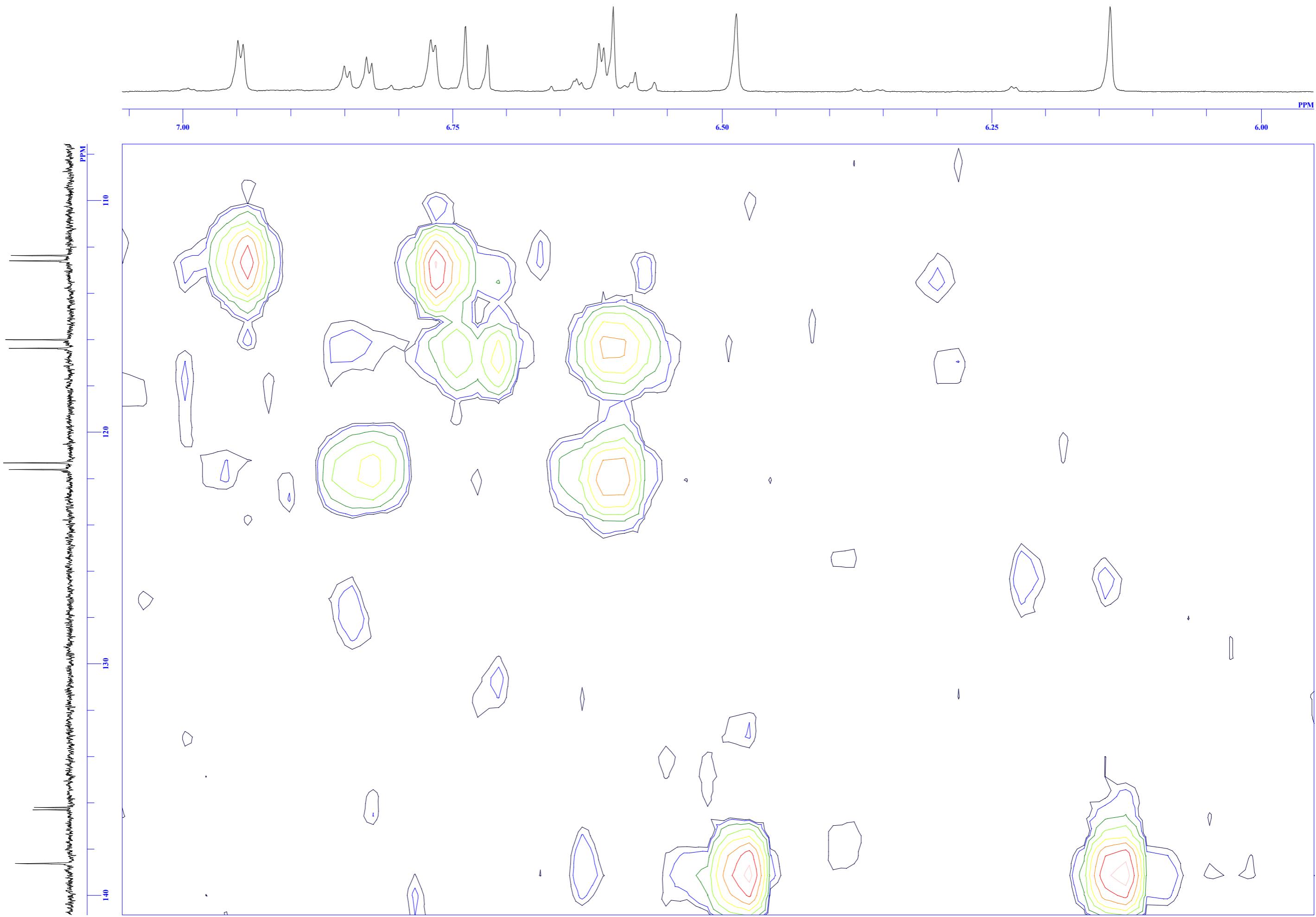


Figure S11. HMQC spectrum of 2 (in methanol-d4)

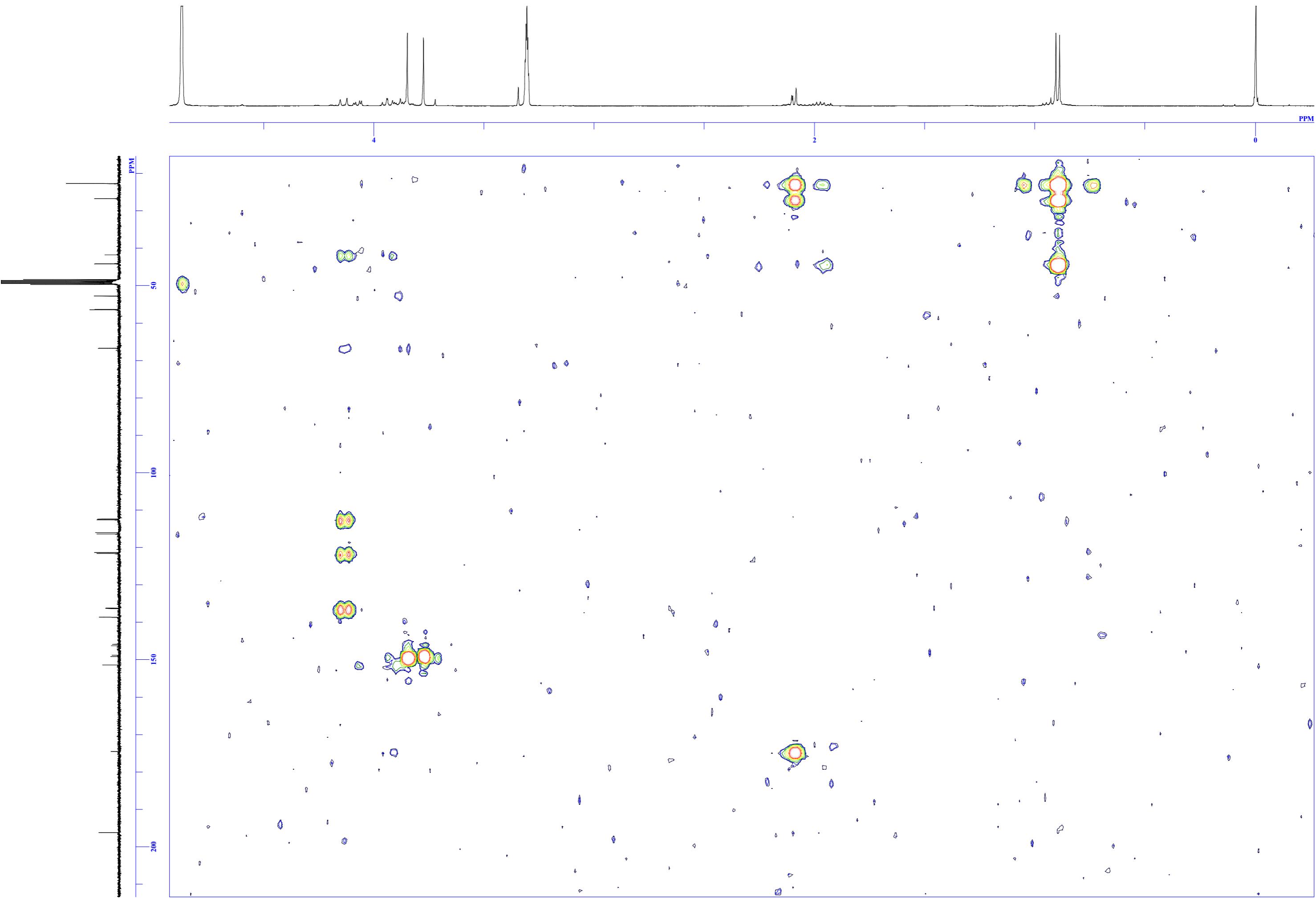


Figure S12. HMBC spectrum of 2 (in methanol-d<sub>4</sub>)

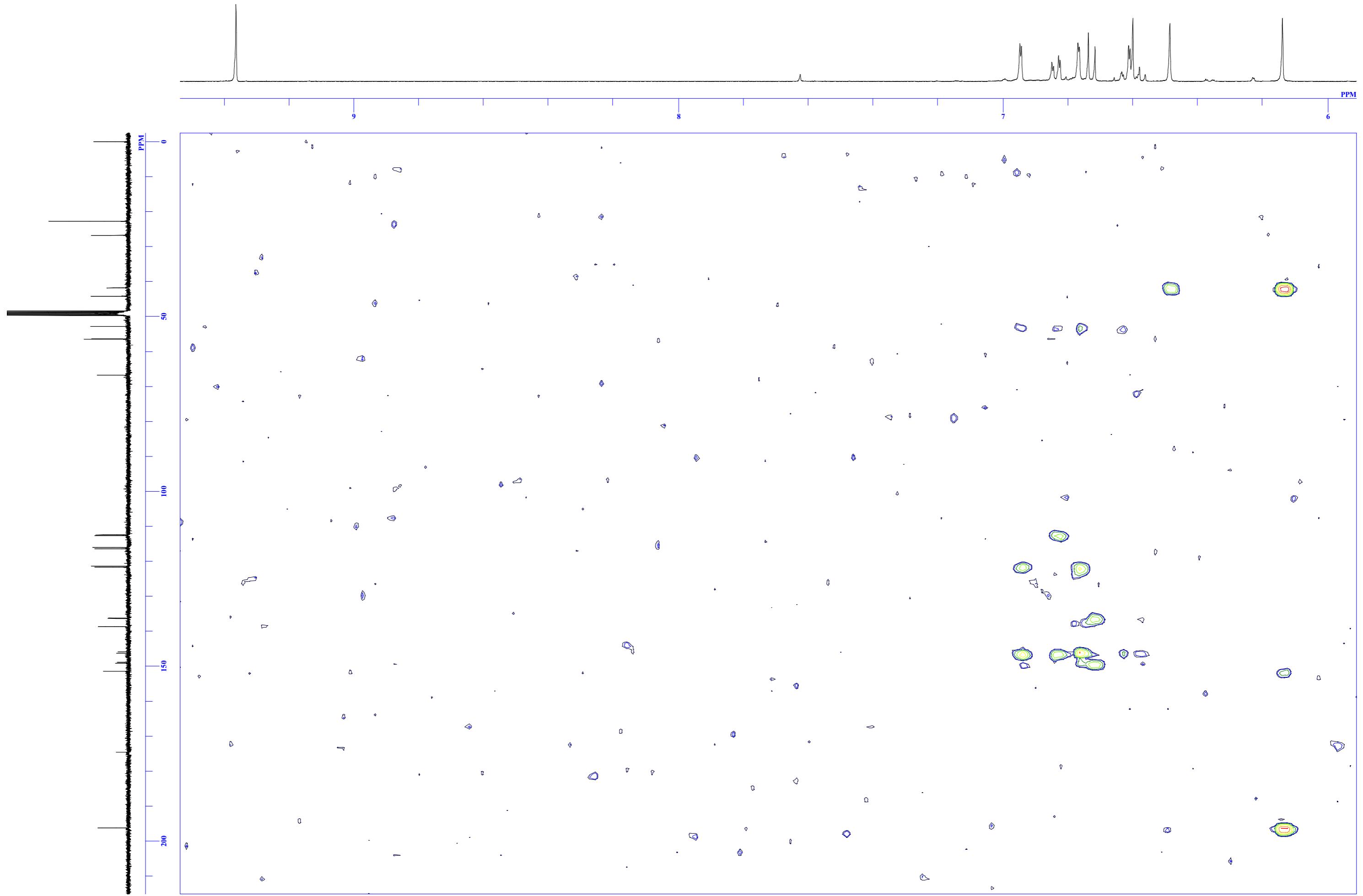


Figure S13. HMBC spectrum of 2 (in methanol-d<sub>4</sub>)

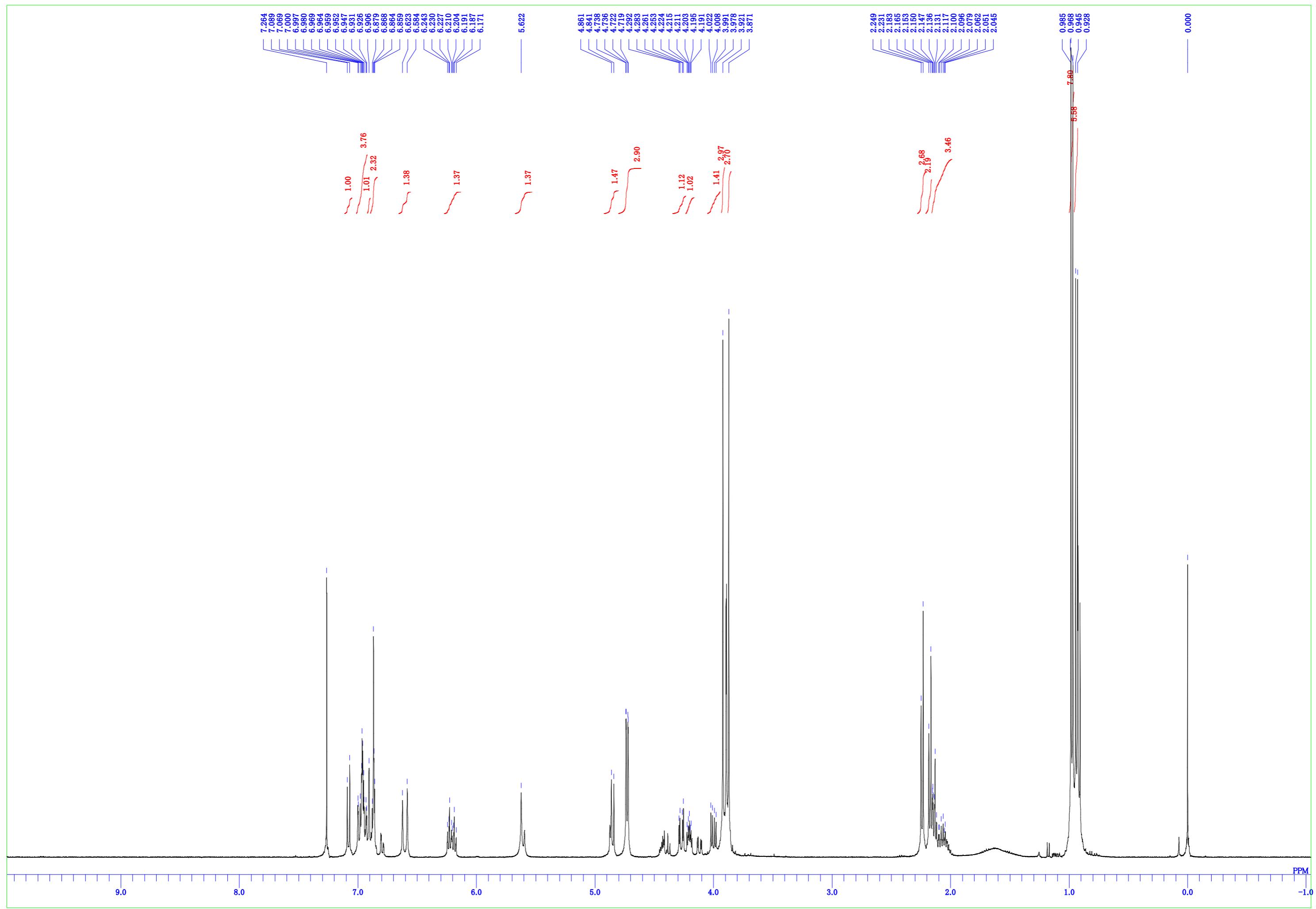


Figure S14. <sup>1</sup>H NMR spectrum of 3 (in chloroform-d)

S16

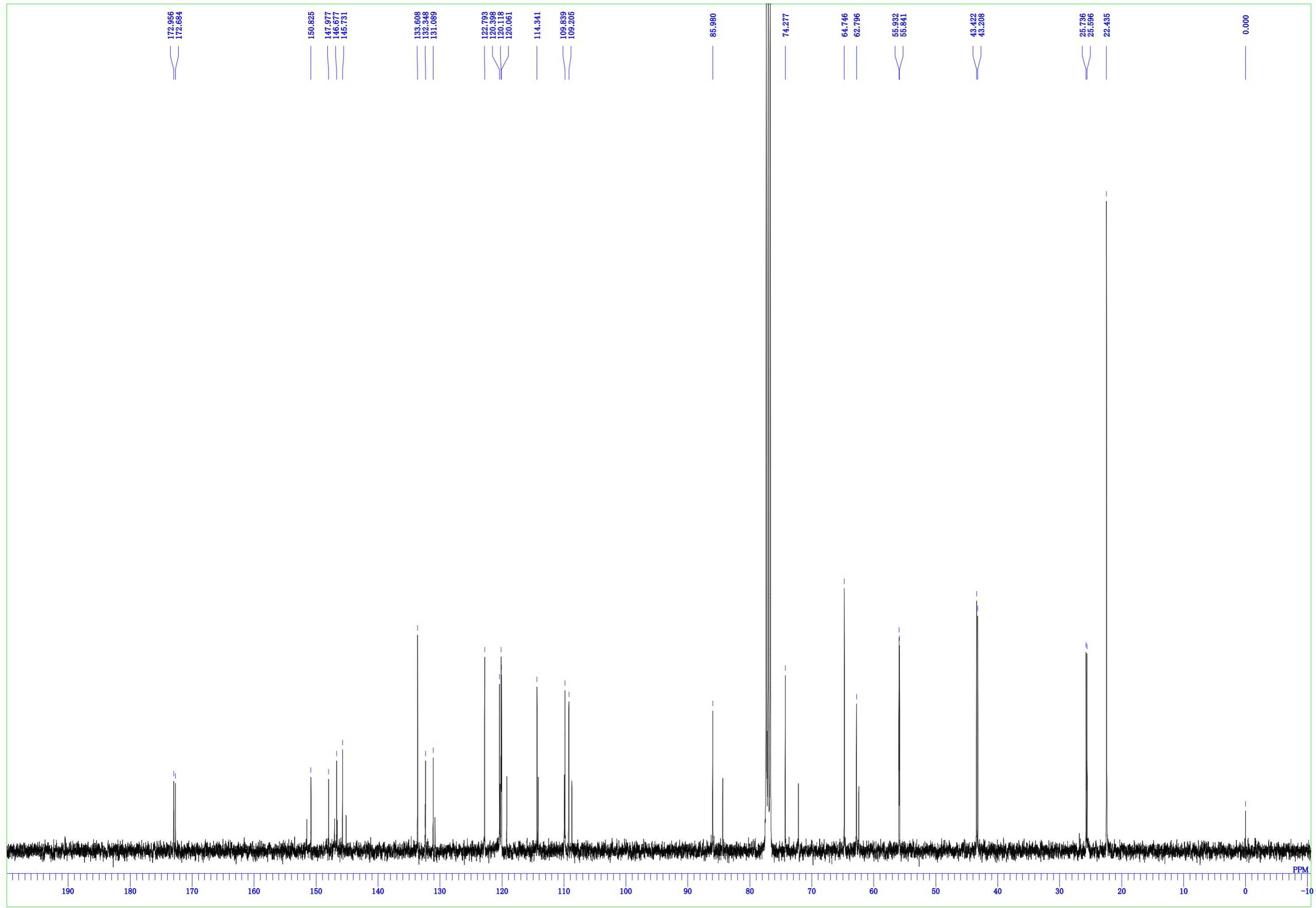


Figure S15.  $^{13}\text{C}$  NMR spectrum of 3 (in chloroform-d)

S17

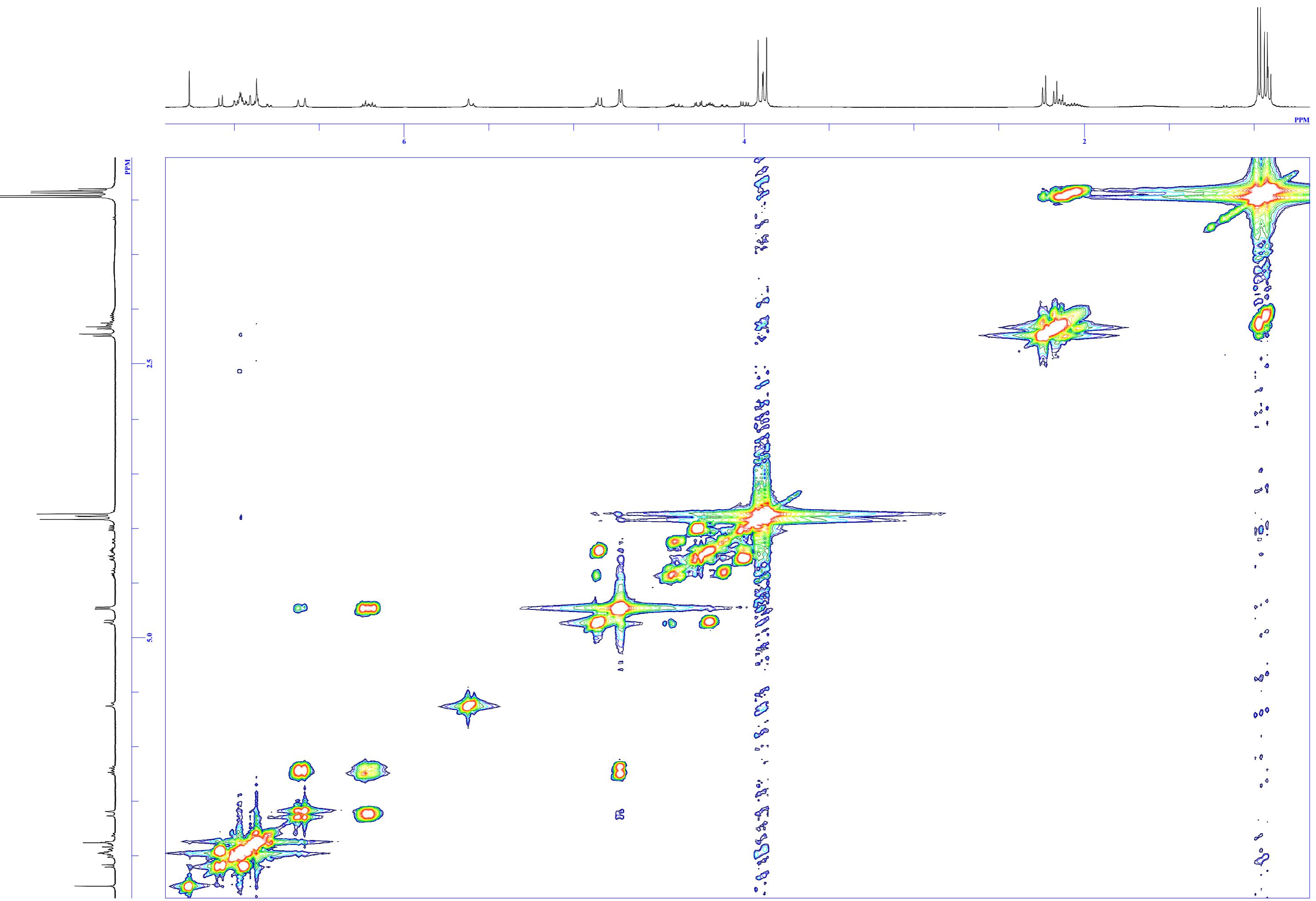


Figure S16. <sup>1</sup>H-<sup>1</sup>HCOSY spectrum of 3 (in chloroform-d) S18

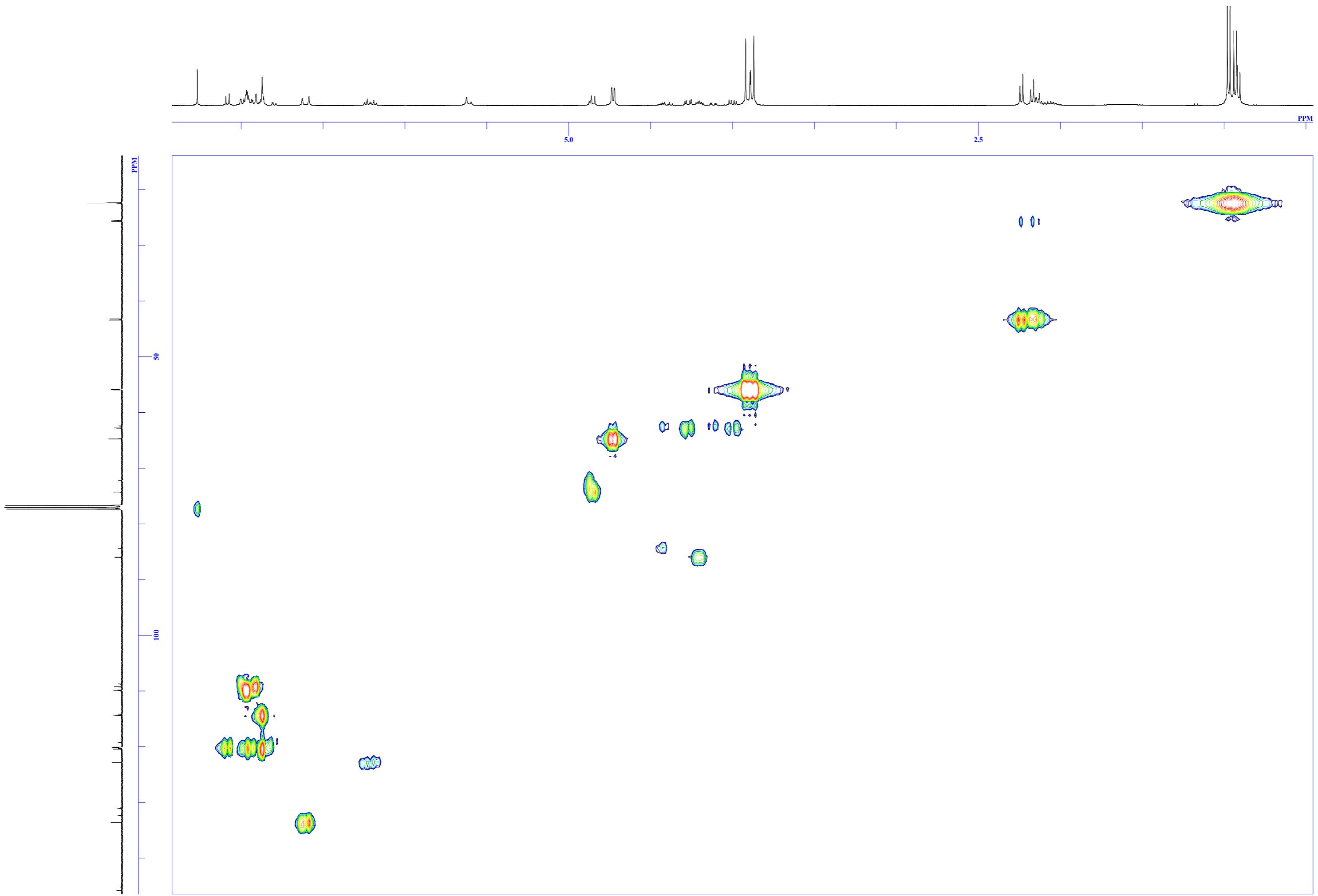


Figure S17. HMQC spectrum of 3 (in chloroform-d)

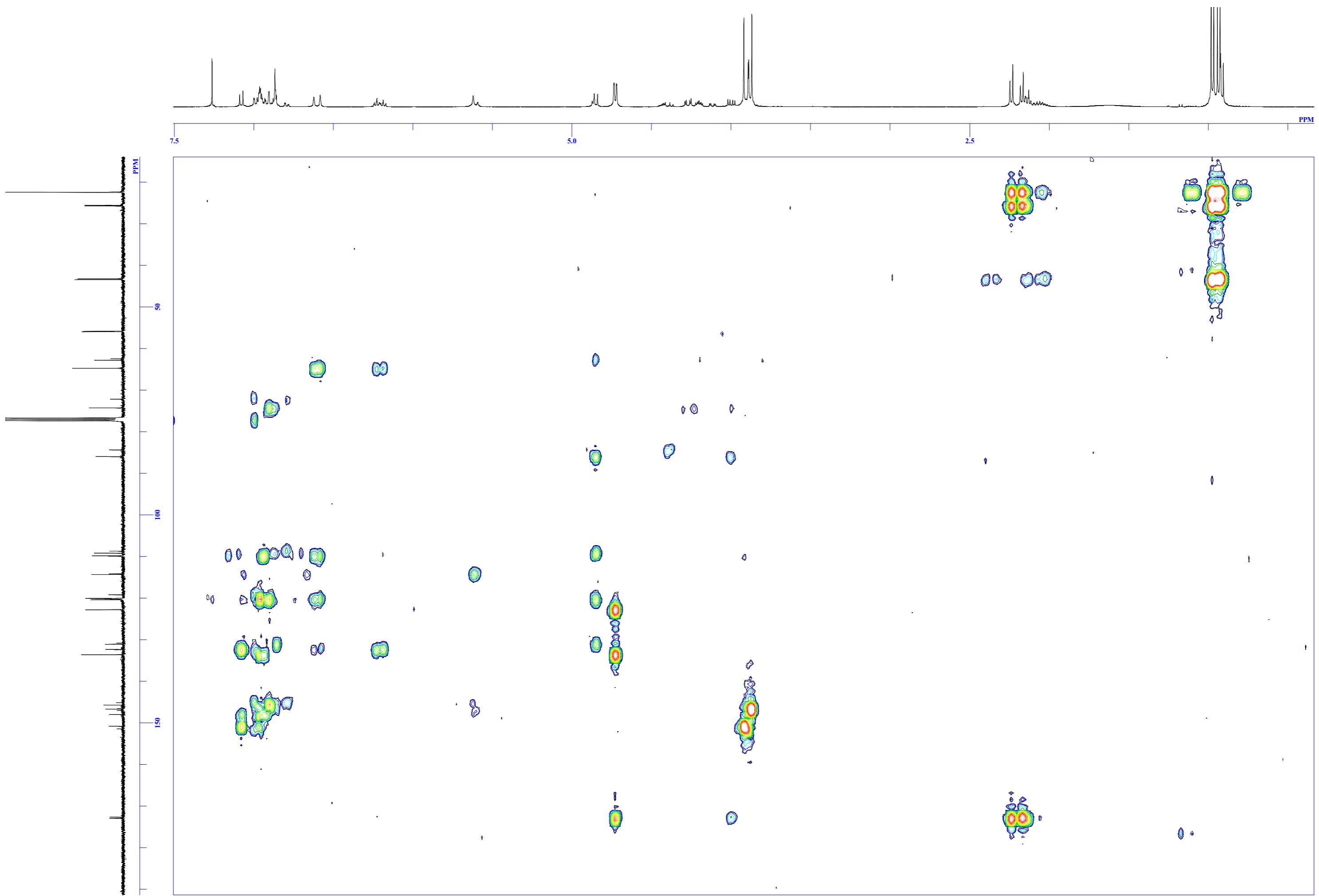


Figure S18. HMBC spectrum of 3 (in chloroform-d)

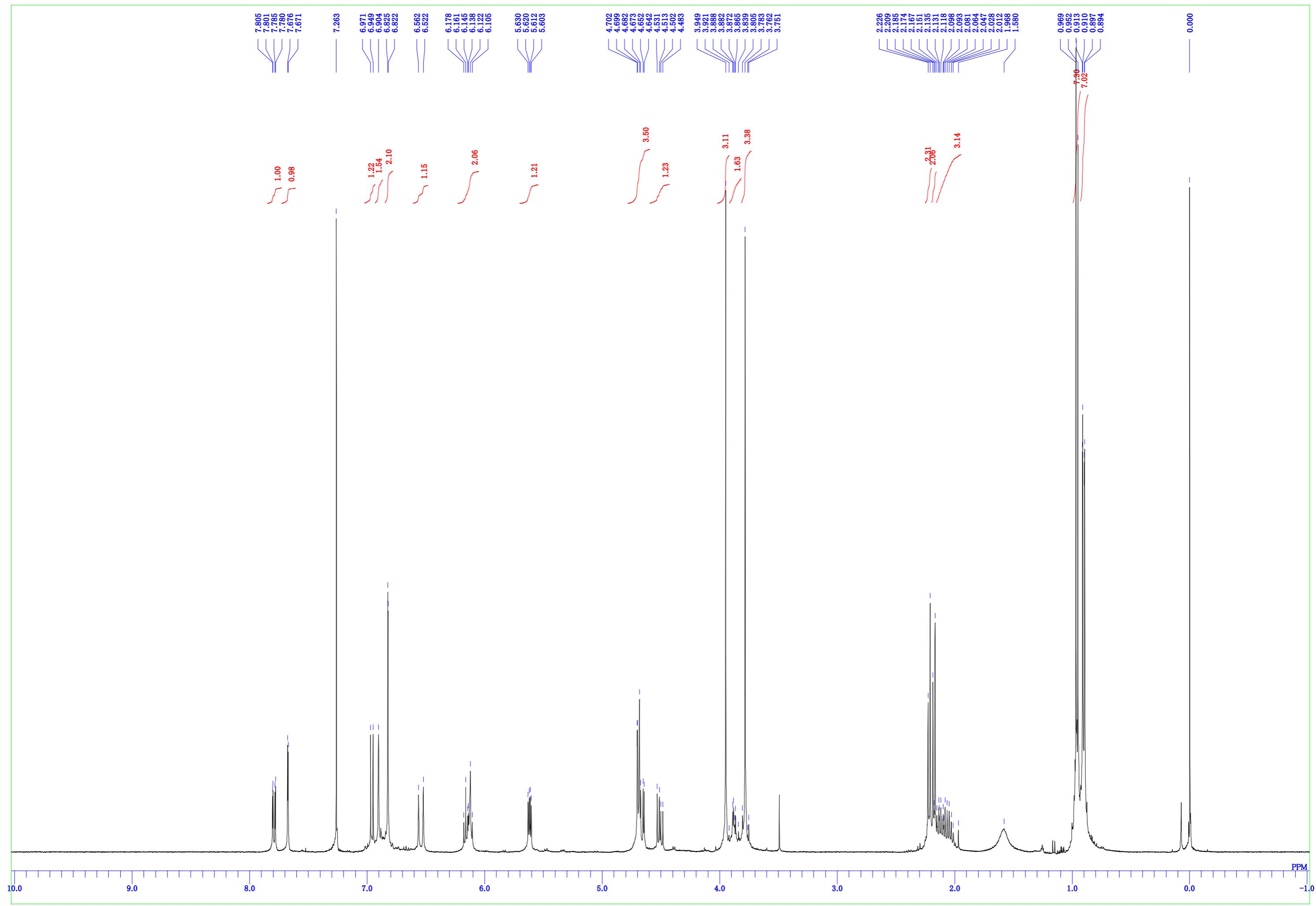


Figure S19.  $^1\text{H}$  NMR spectrum of 4 (in chloroform-d)

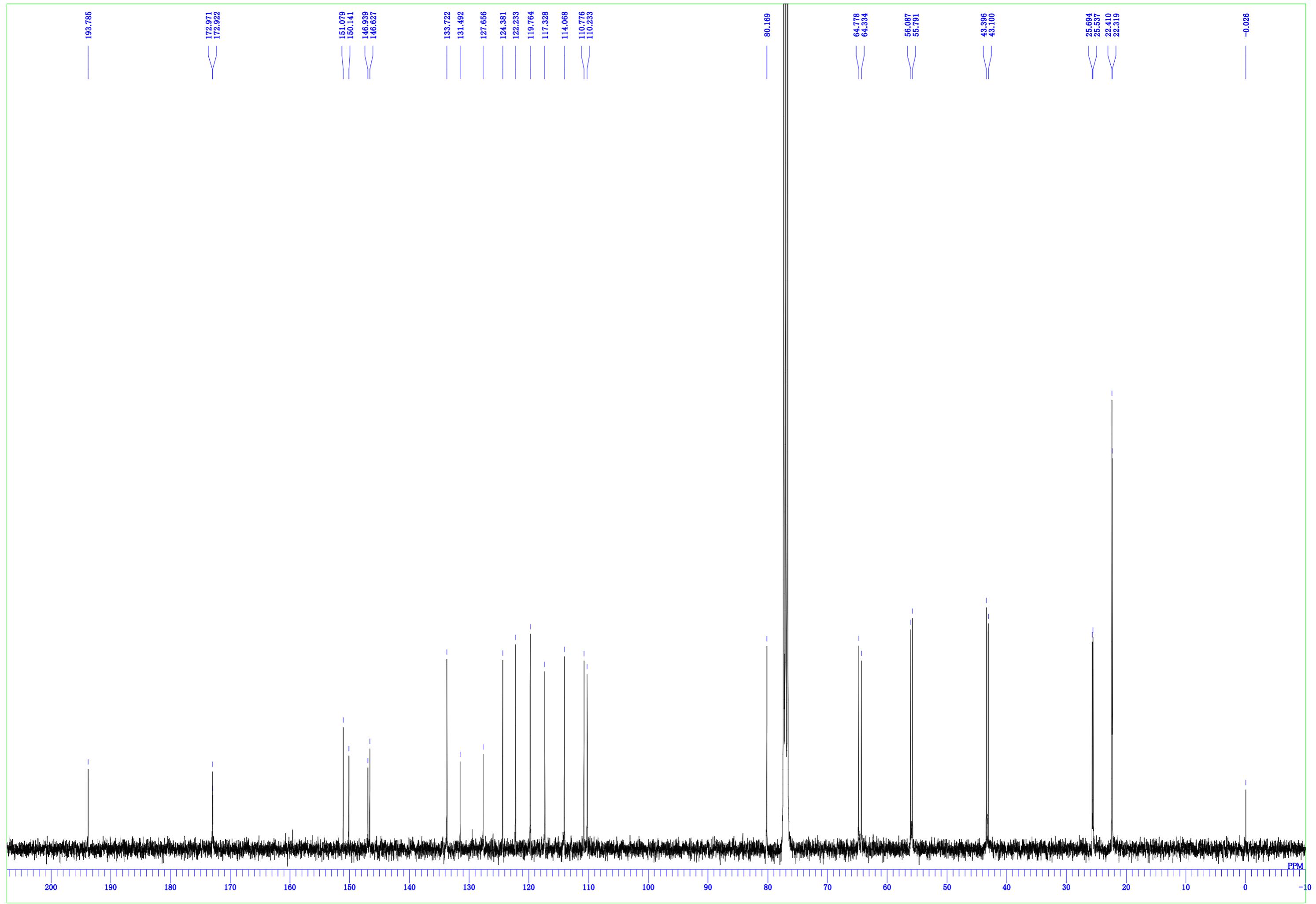


Figure S20. 13C NMR spectrum of 4 (in chloroform-d) S22

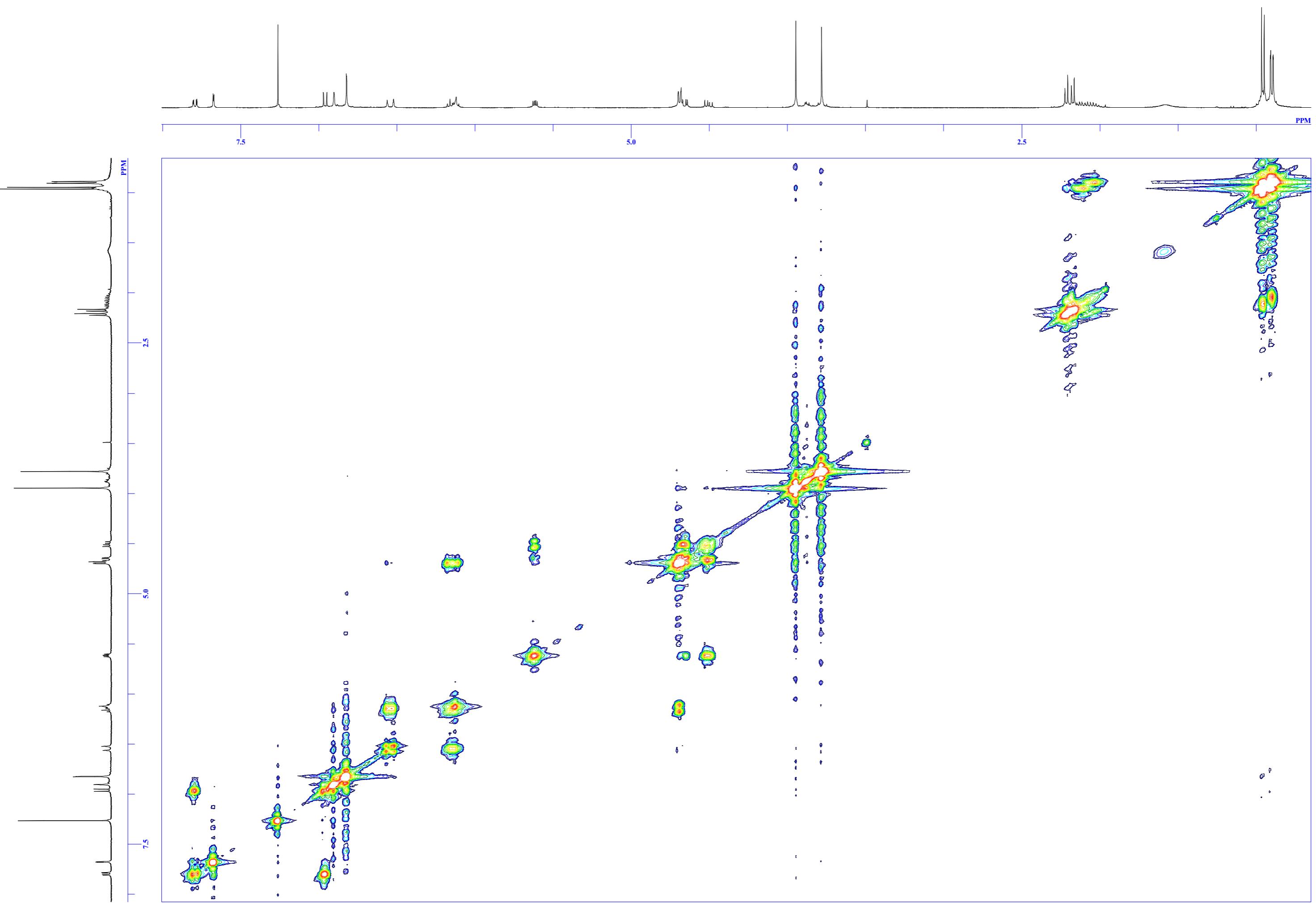


Figure S21.1H-1HCOSY spectrum of 4 (in chloroform-d) S23

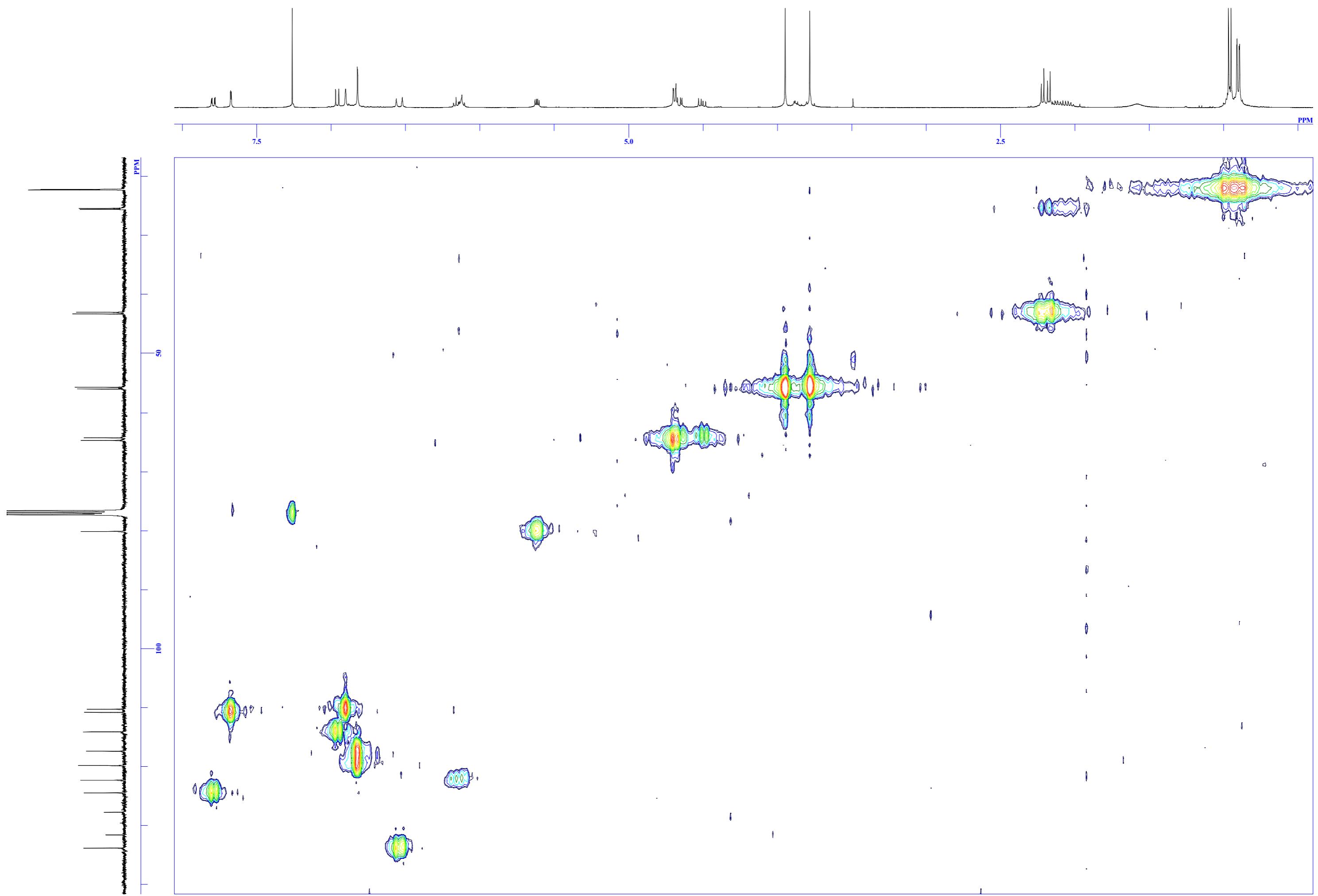


Figure S22. HMQC spectrum of 4 (in chloroform-d)

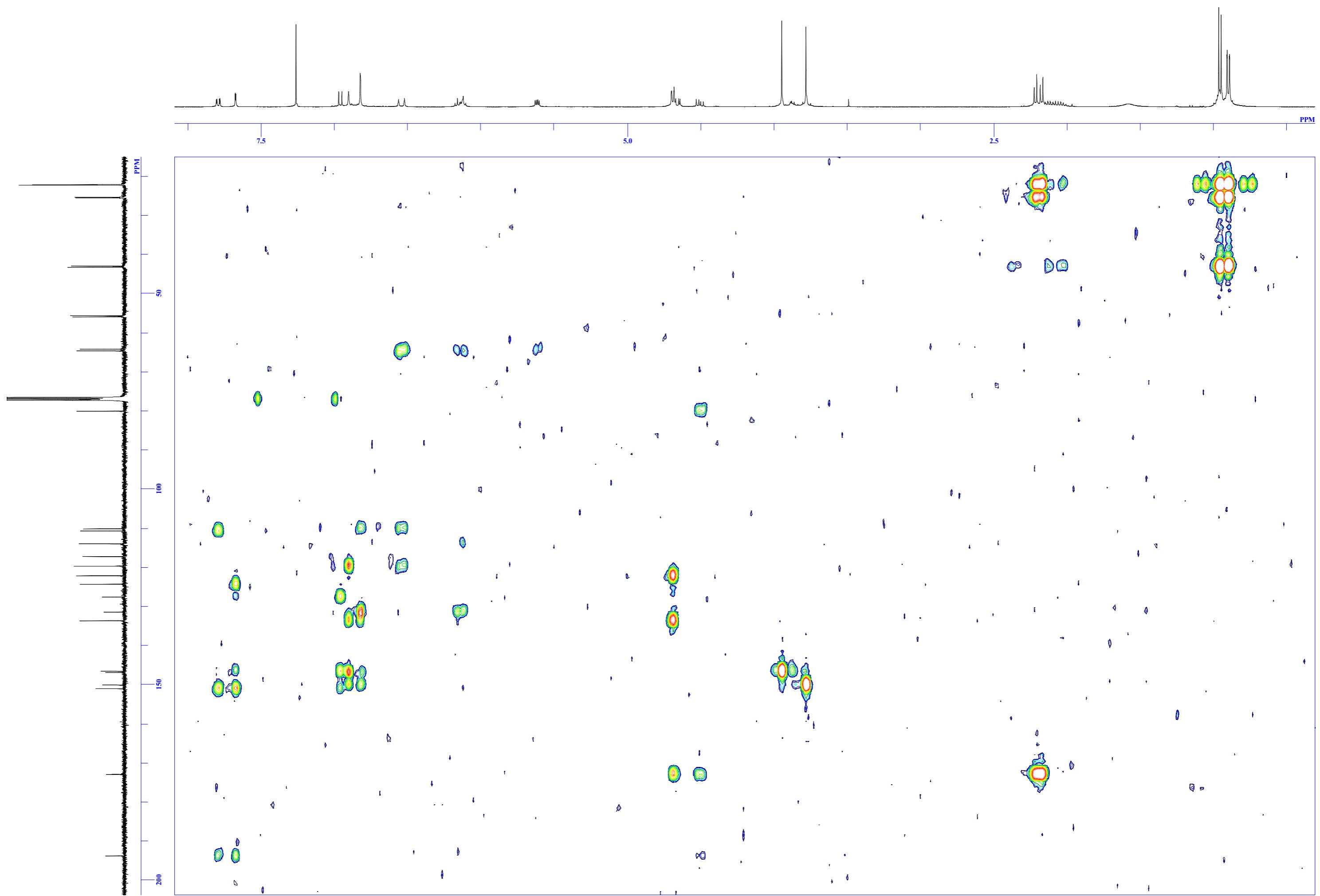


Figure S23. HMBC spectrum of 4 (in chloroform-d)

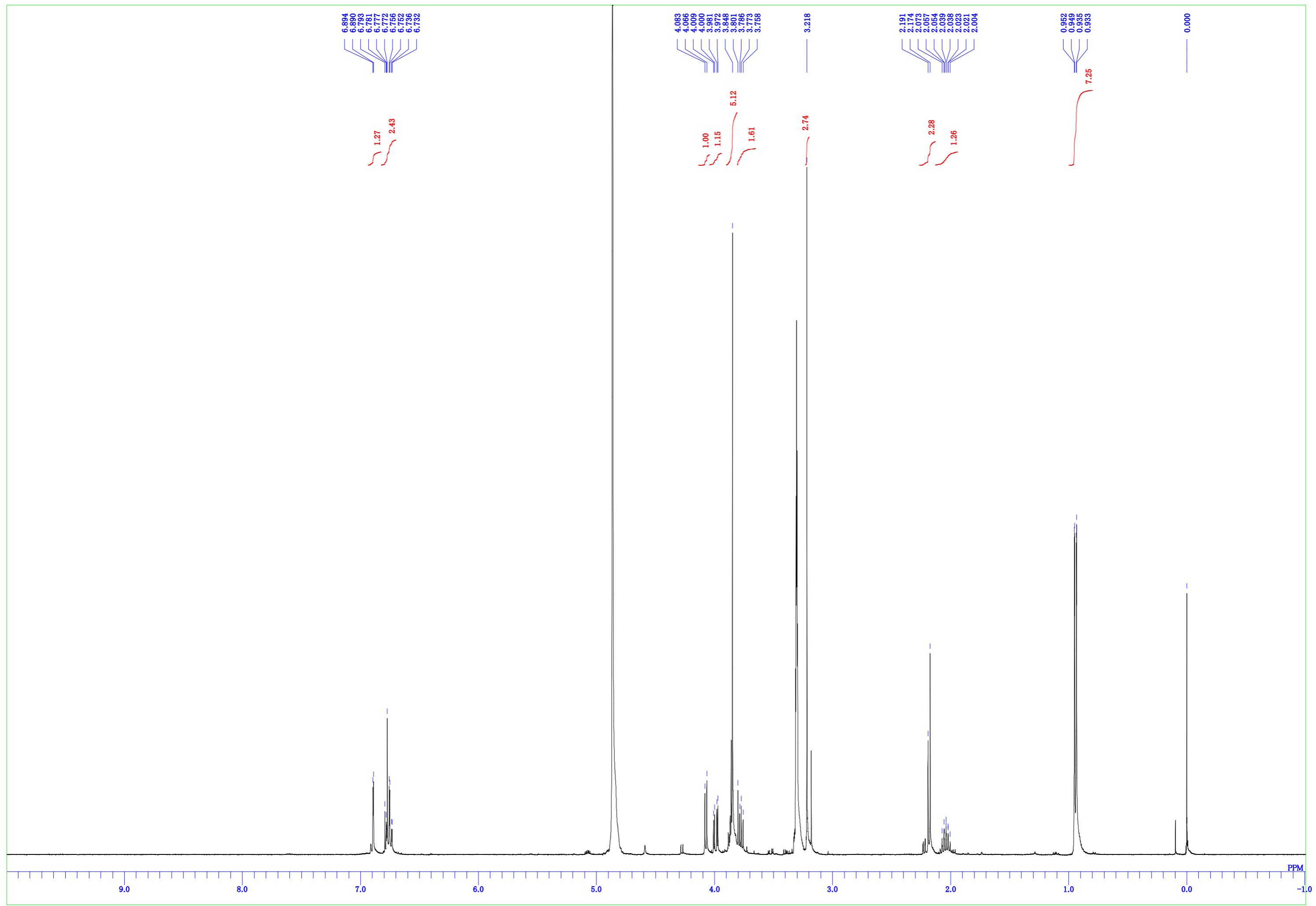


Figure S24. <sup>1</sup>H NMR spectrum of 5 (in methanol-d<sub>4</sub>)

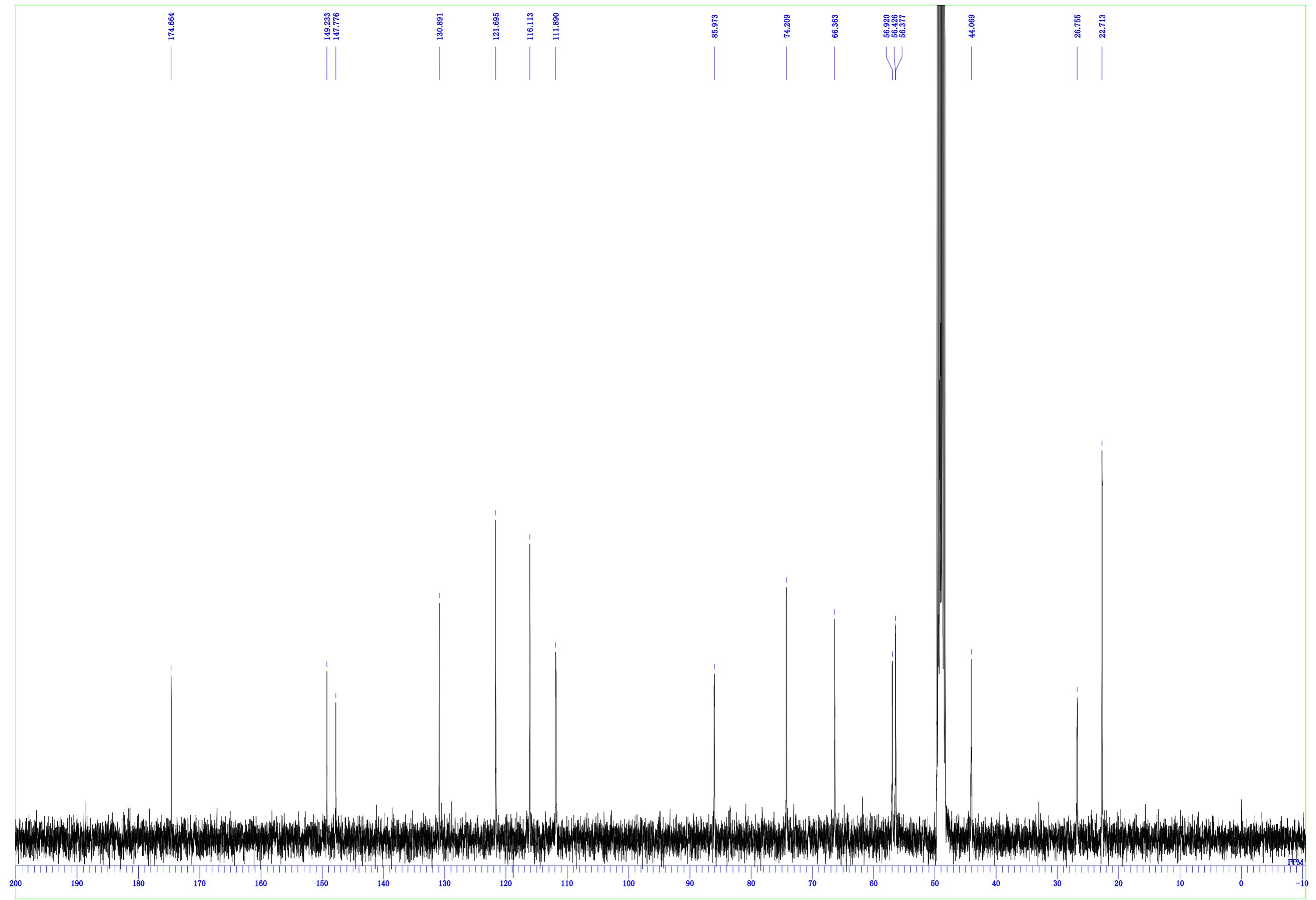


Figure S25. <sup>13</sup>C NMR spectrum of 5 (in methanol-d<sub>4</sub>)

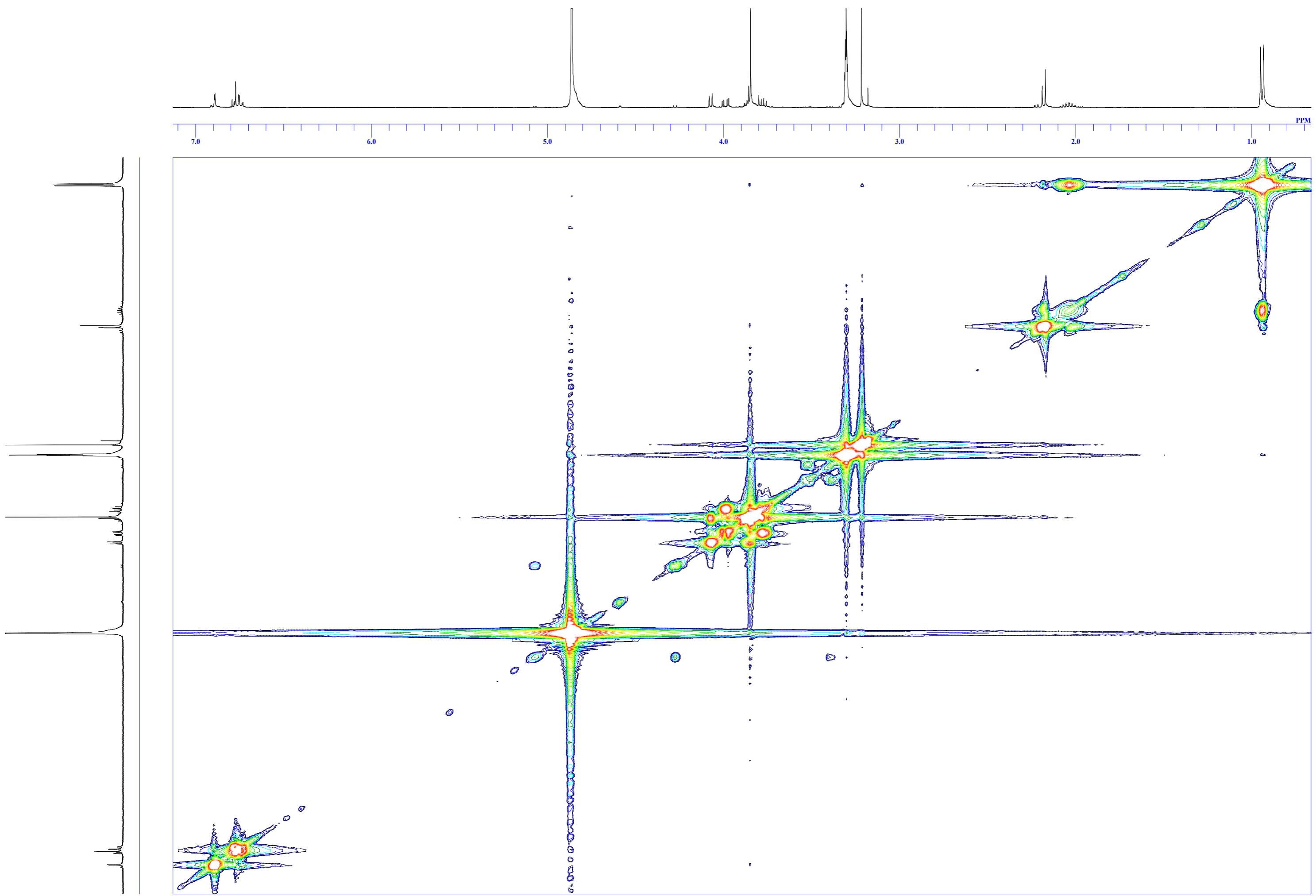


Figure S26.  $^1\text{H}$ - $^1\text{H}$ COSY spectrum of 5 (in methanol- $\text{d}_4$ )

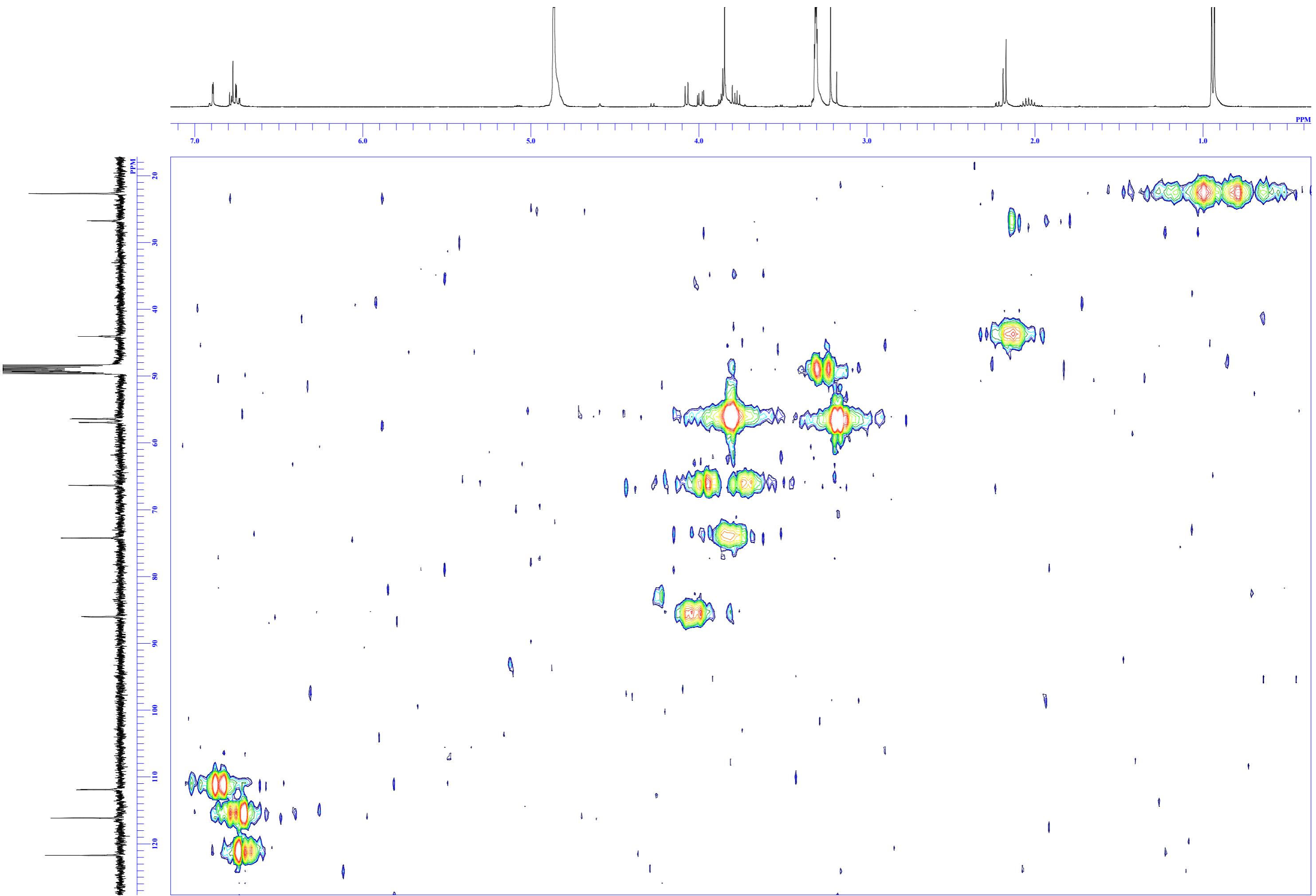


Figure S27. HMQC spectrum of 5 (in methanol-d4)

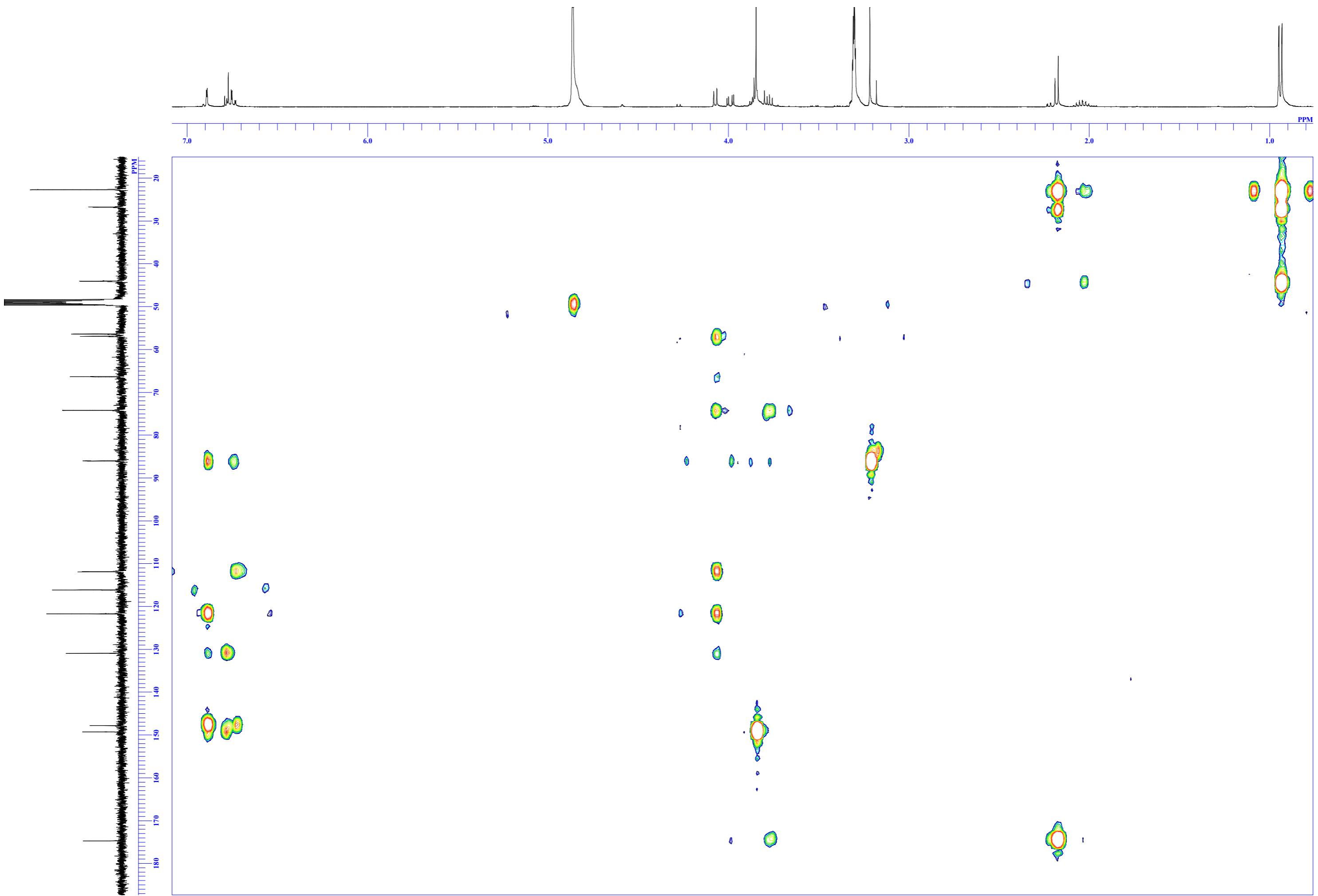


Figure S28. HMBC spectrum of 5 (in methanol-d4)

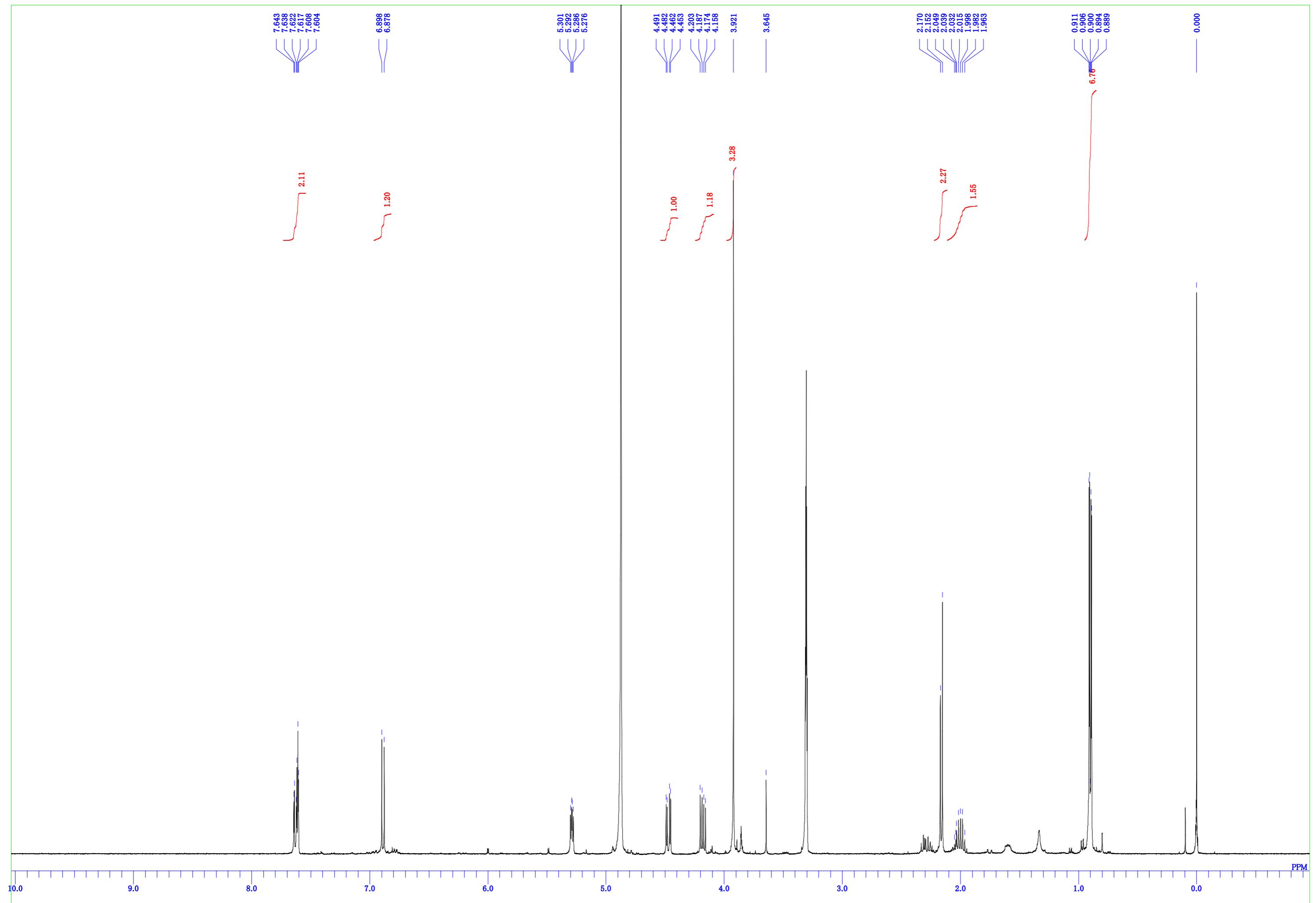


Figure S29. <sup>1</sup>H NMR spectrum of 6 (in methanol-d<sub>4</sub>)

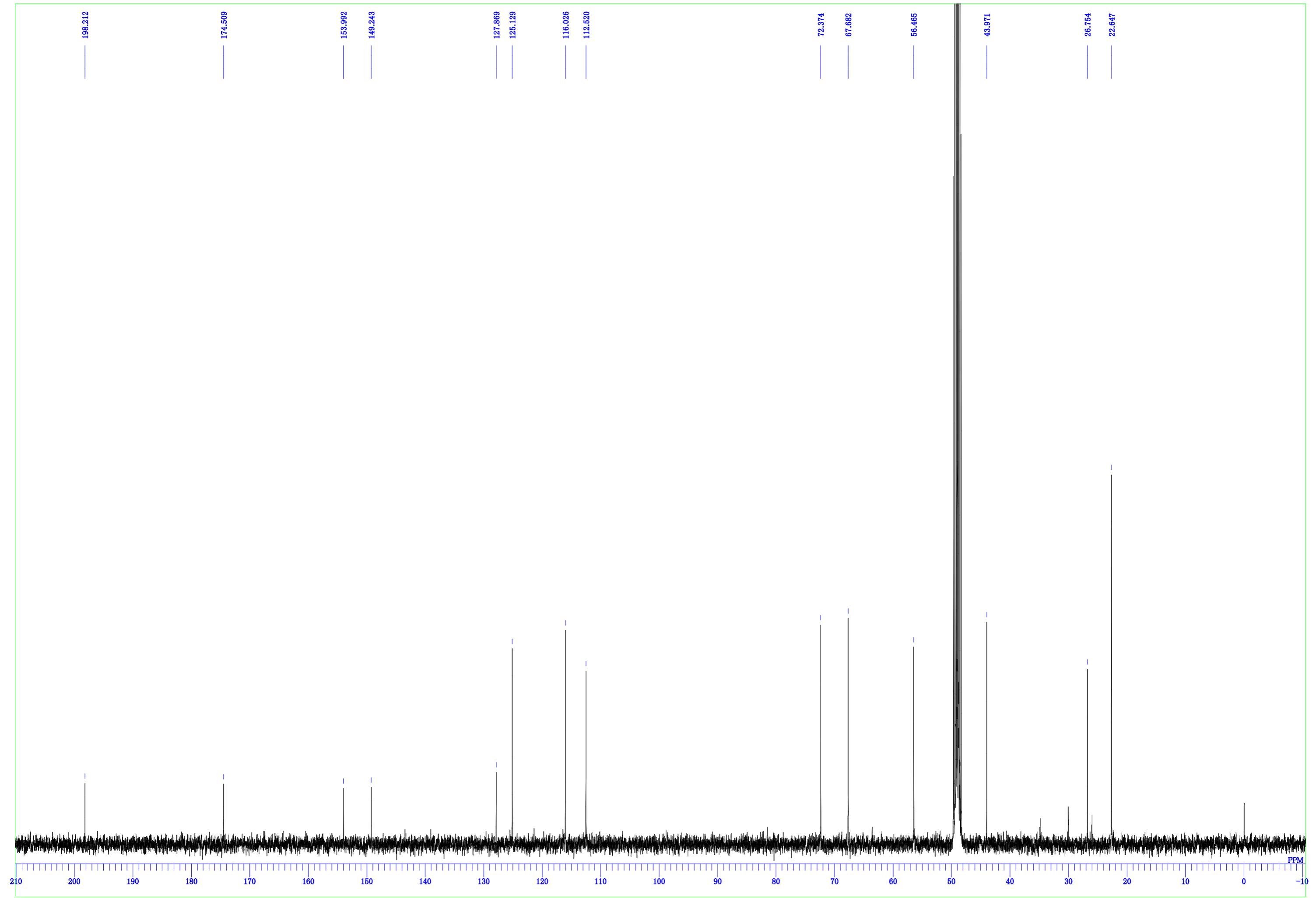


Figure S30. <sup>13</sup>C NMR spectrum of 6 (in methanol-d<sub>4</sub>)

S32

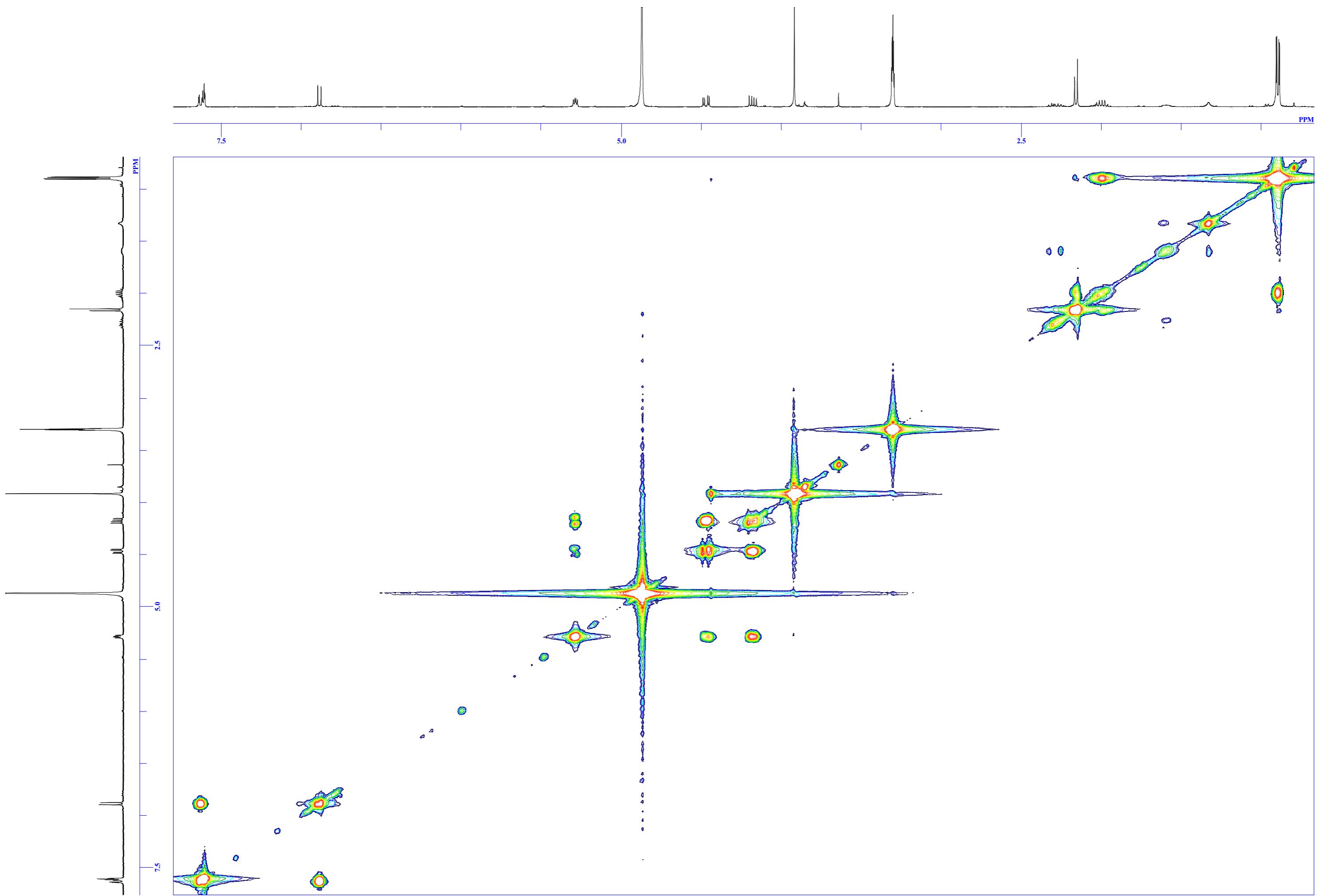


Figure S31.  $^1\text{H}$ - $^1\text{H}$ COSY spectrum of 6 (in methanol- $d_4$ ) S33

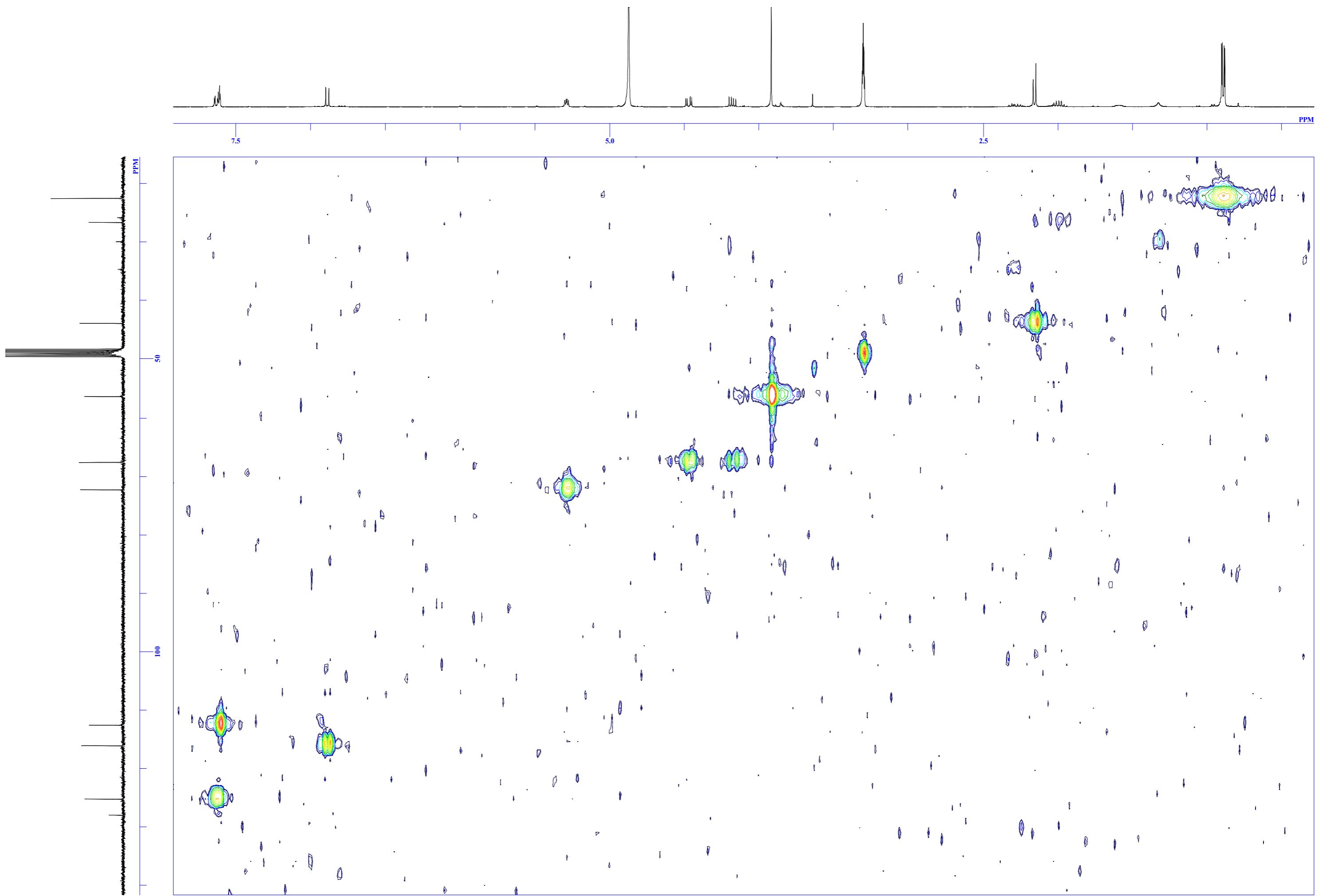


Figure S32. HMQC spectrum of 6 (in methanol- $d_4$ )

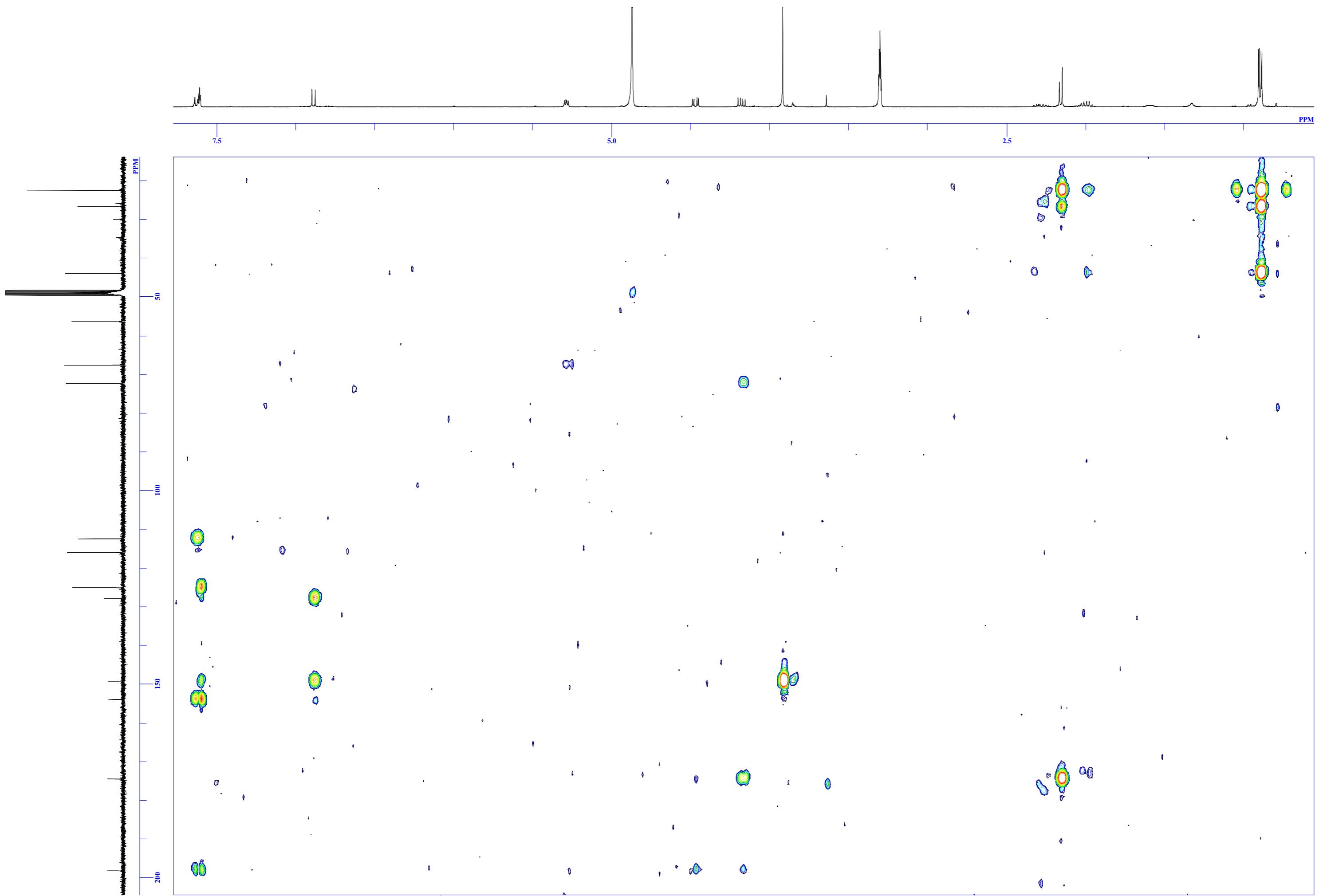


Figure S33. HMBC spectrum of 6 (in methanol-d4)

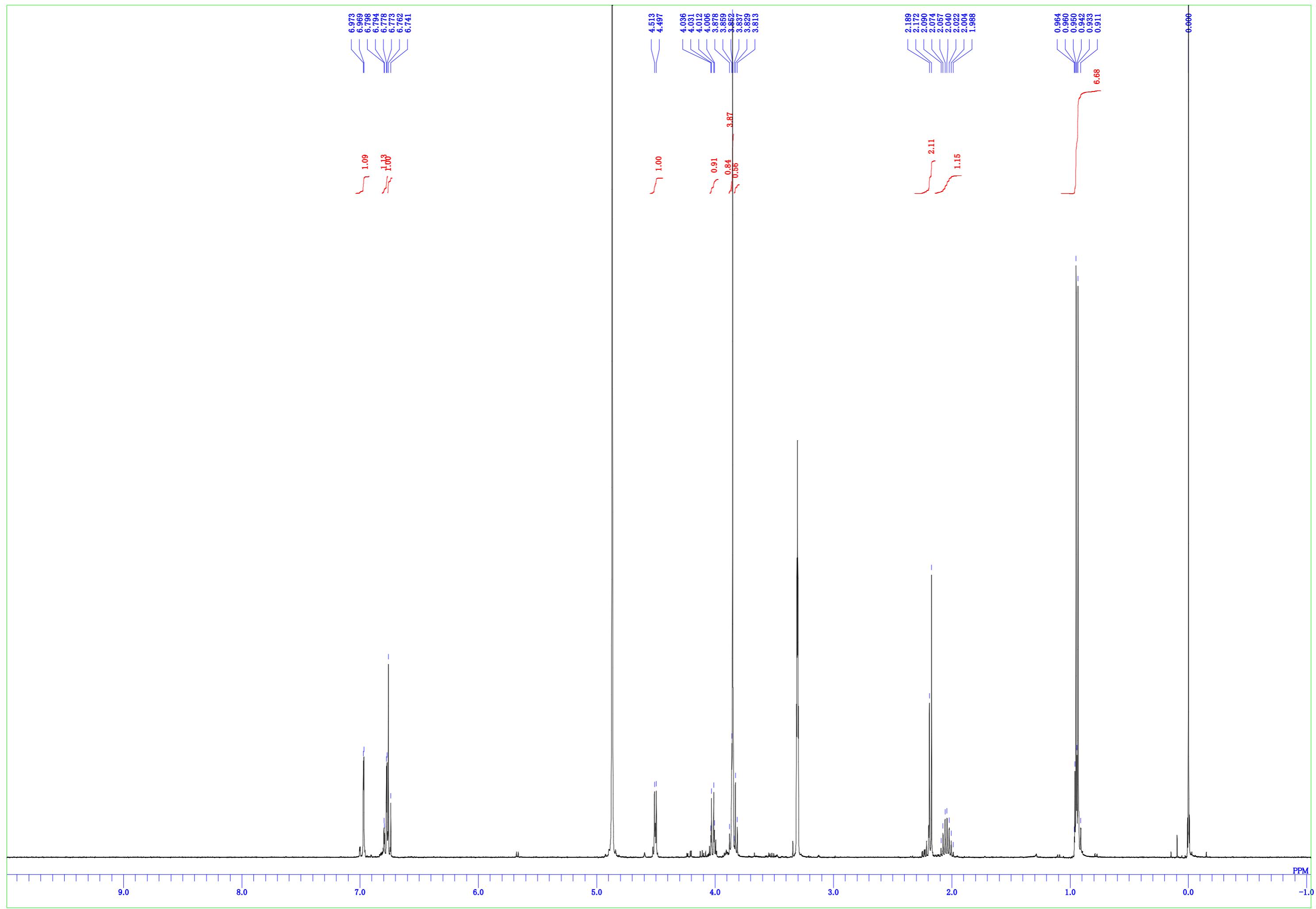


Figure S34. <sup>1</sup>H NMR spectrum of 7 (in methanol-d<sub>4</sub>)

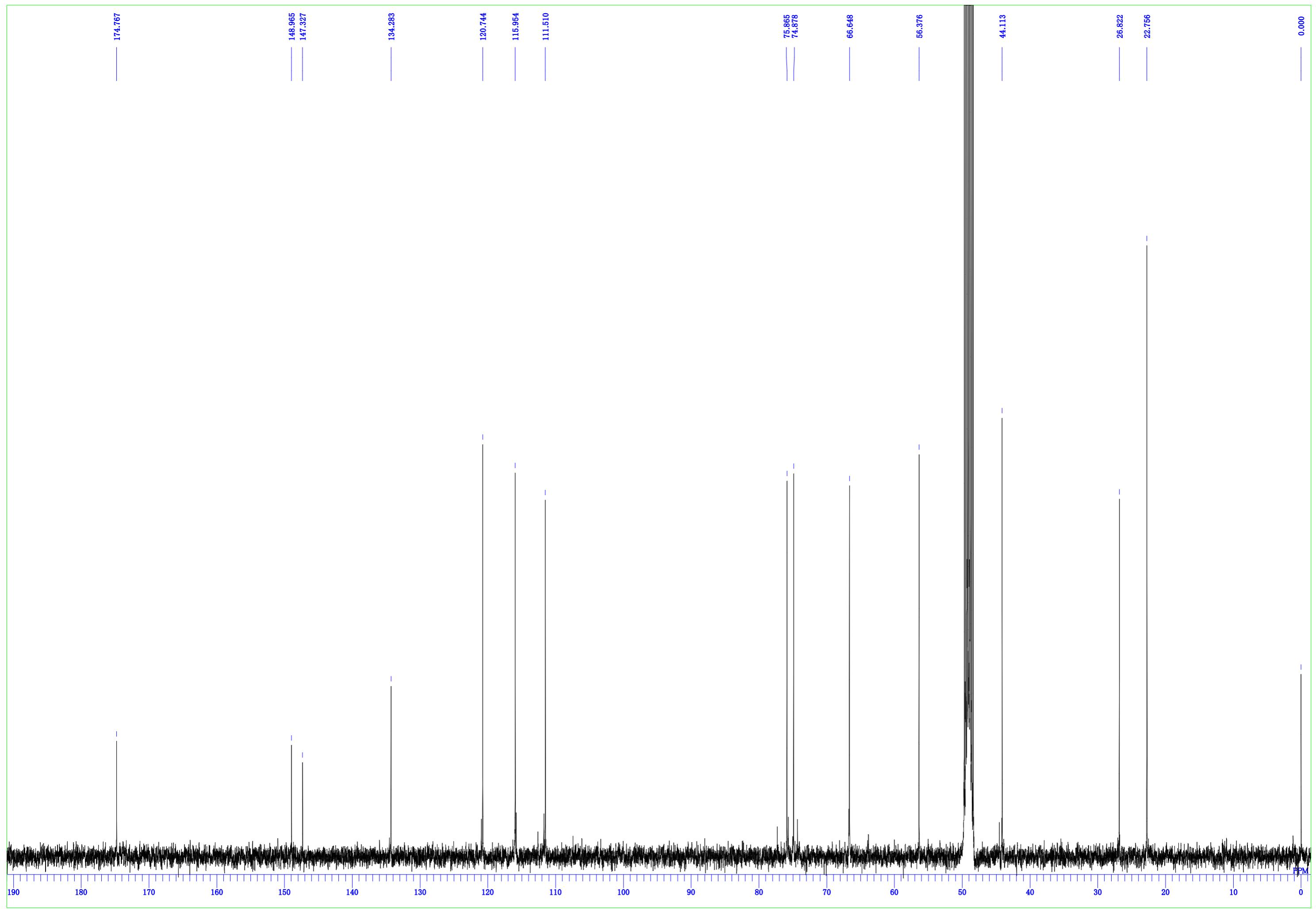


Figure S35. <sup>13</sup>C NMR spectrum of 7 (in methanol-d<sub>4</sub>)

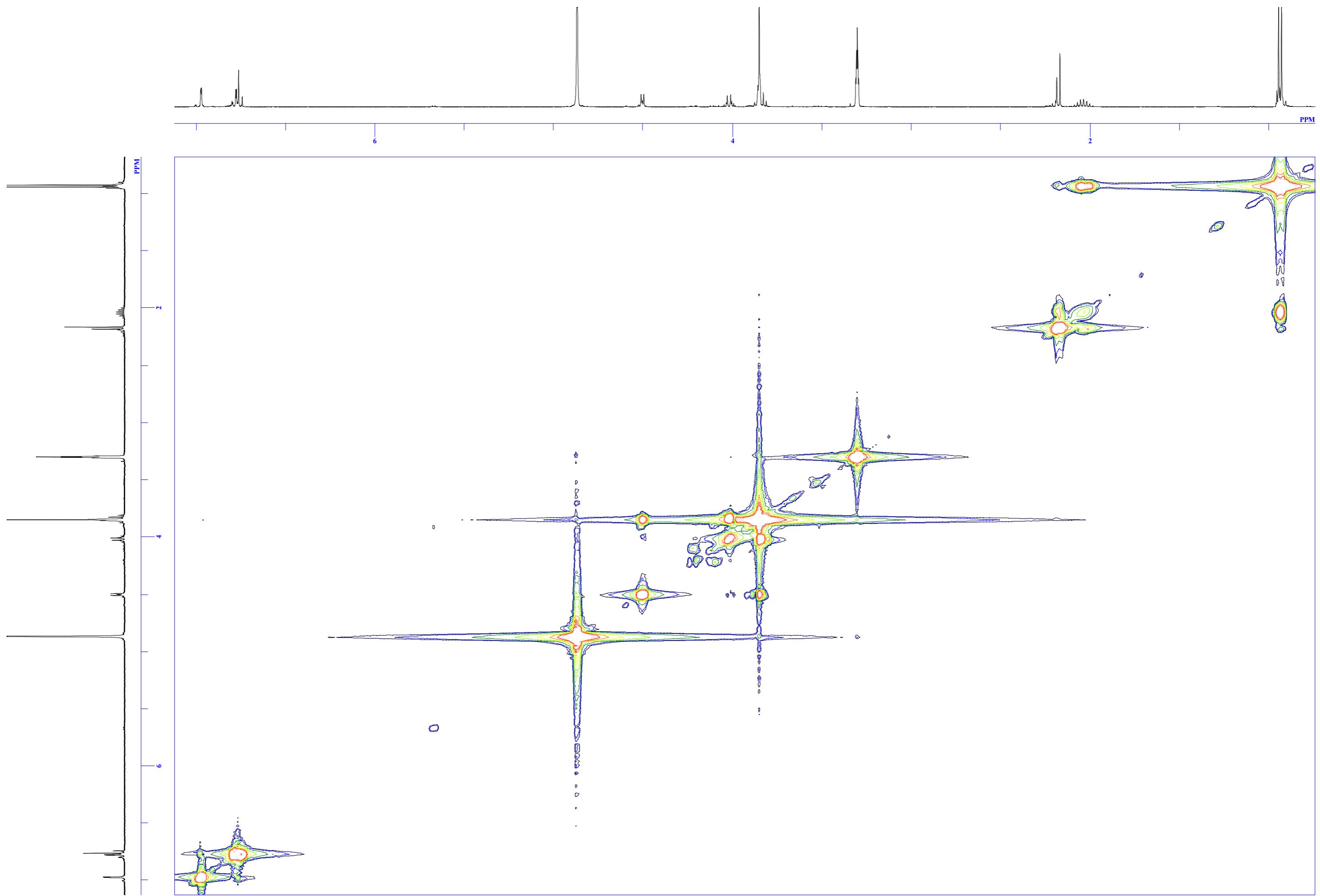


Figure S36.  $^1\text{H}$ - $^1\text{H}$ COSY spectrum of 7 (in methanol-d4) S38

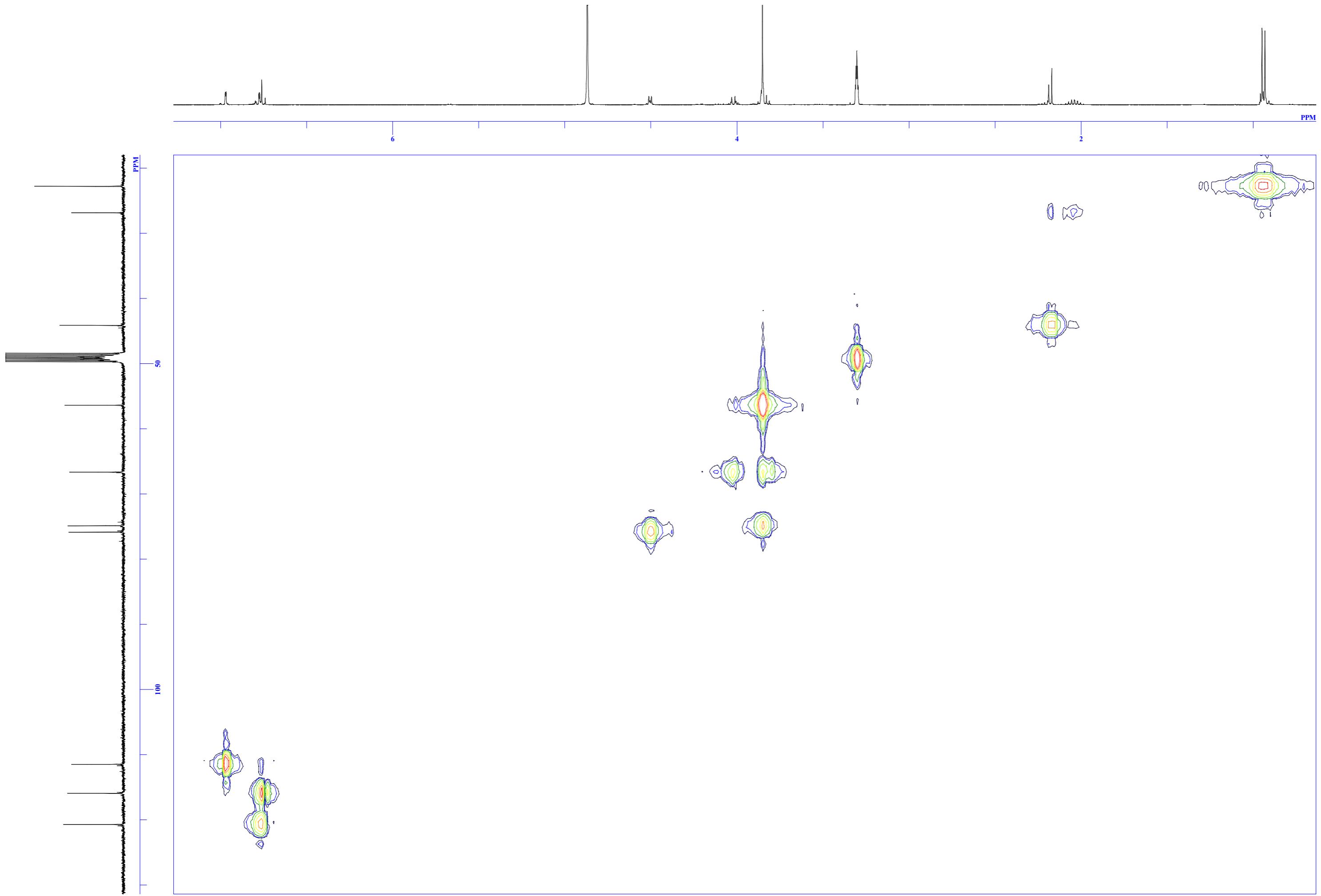


Figure S37. HMQC spectrum of 7 (in methanol-d4)

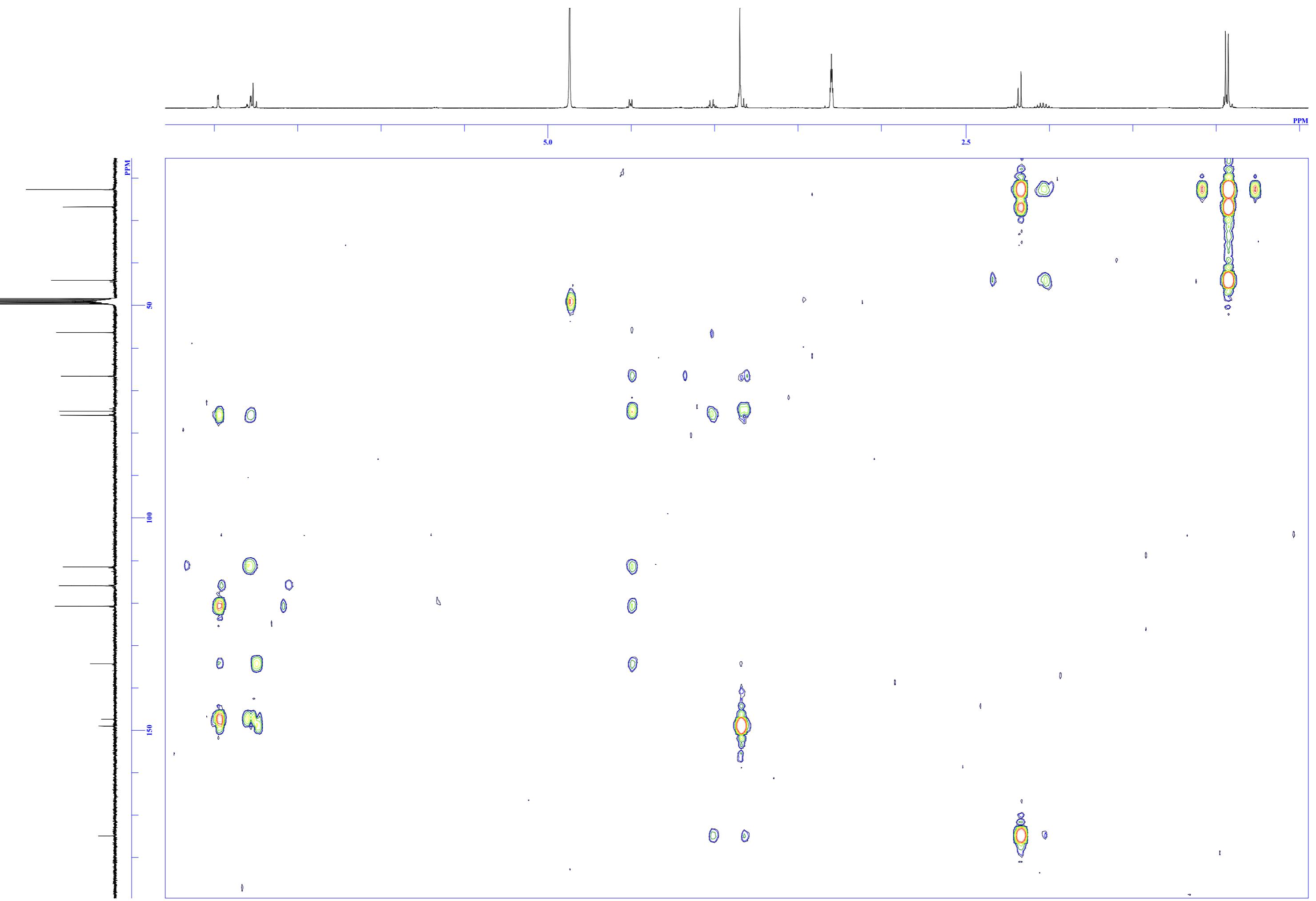


Figure S38. HMBC spectrum of 7 (in methanol-d4)

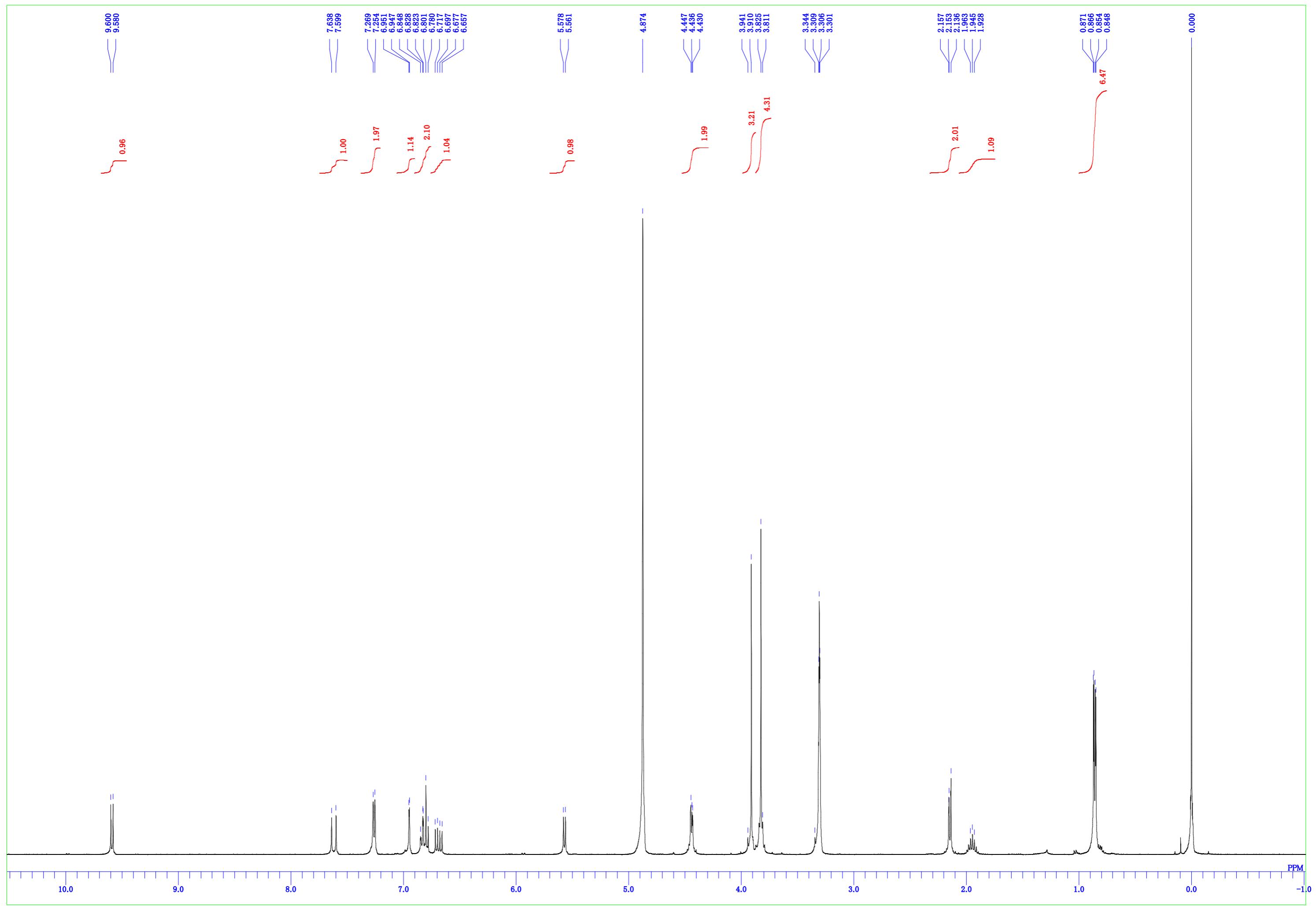


Figure S39. <sup>1</sup>H NMR spectrum of 8 (in methanol-d<sub>4</sub>)

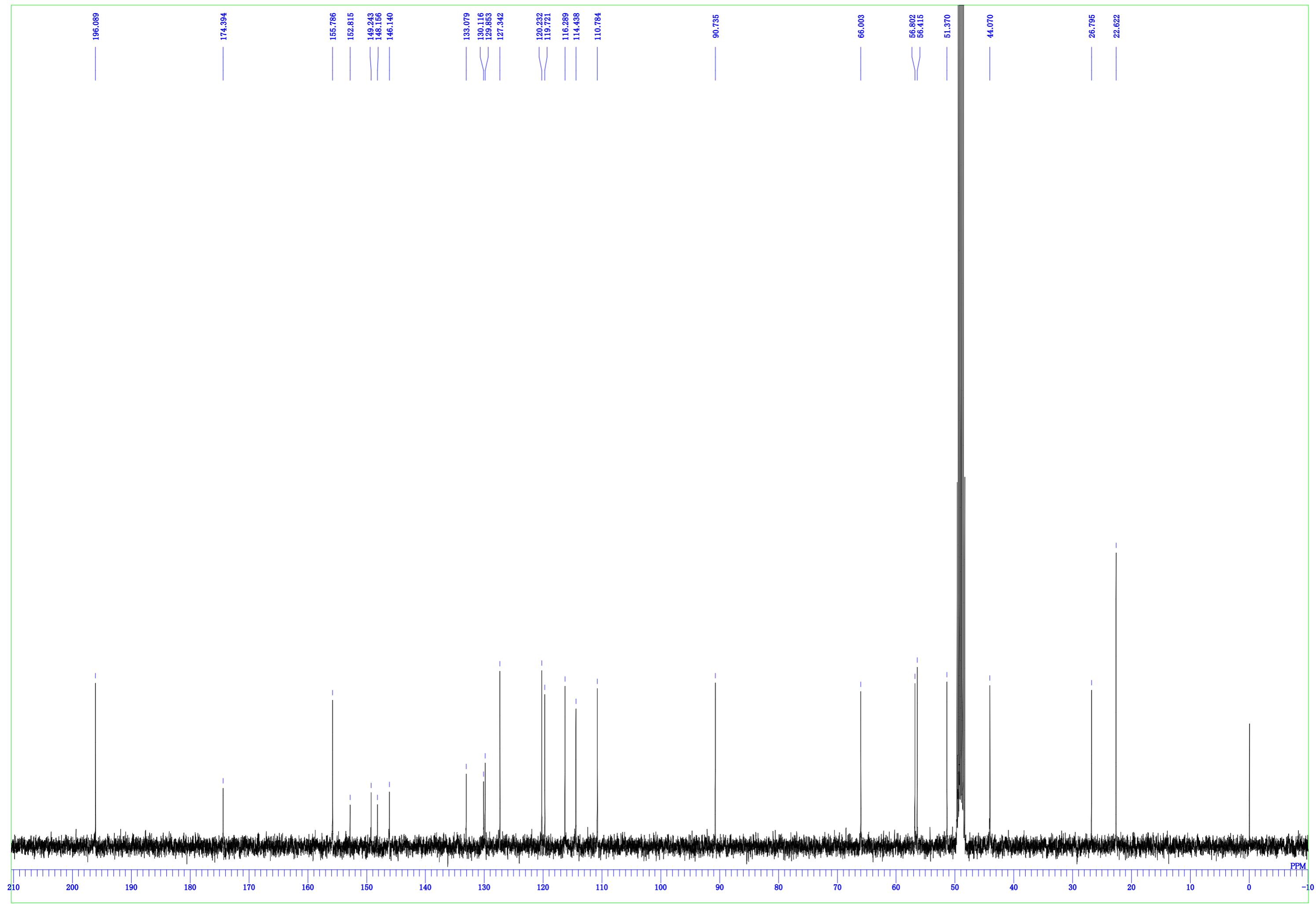


Figure S40. <sup>13</sup>C NMR spectrum of 8 (in methanol-d<sub>4</sub>)

S42

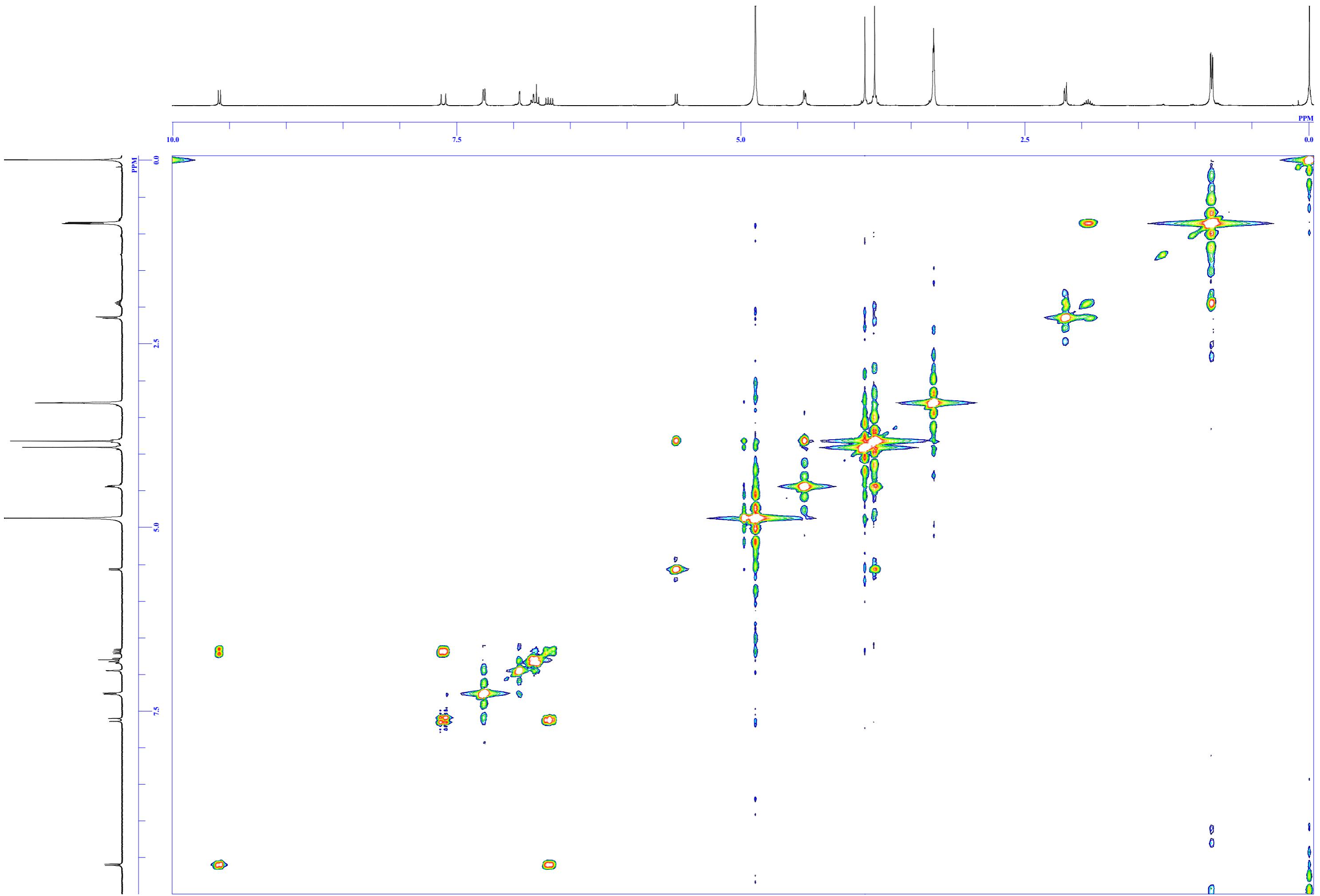


Figure S41.  $^1\text{H}$ - $^1\text{H}$ COSY spectrum of 8 (in methanol-d4) S43

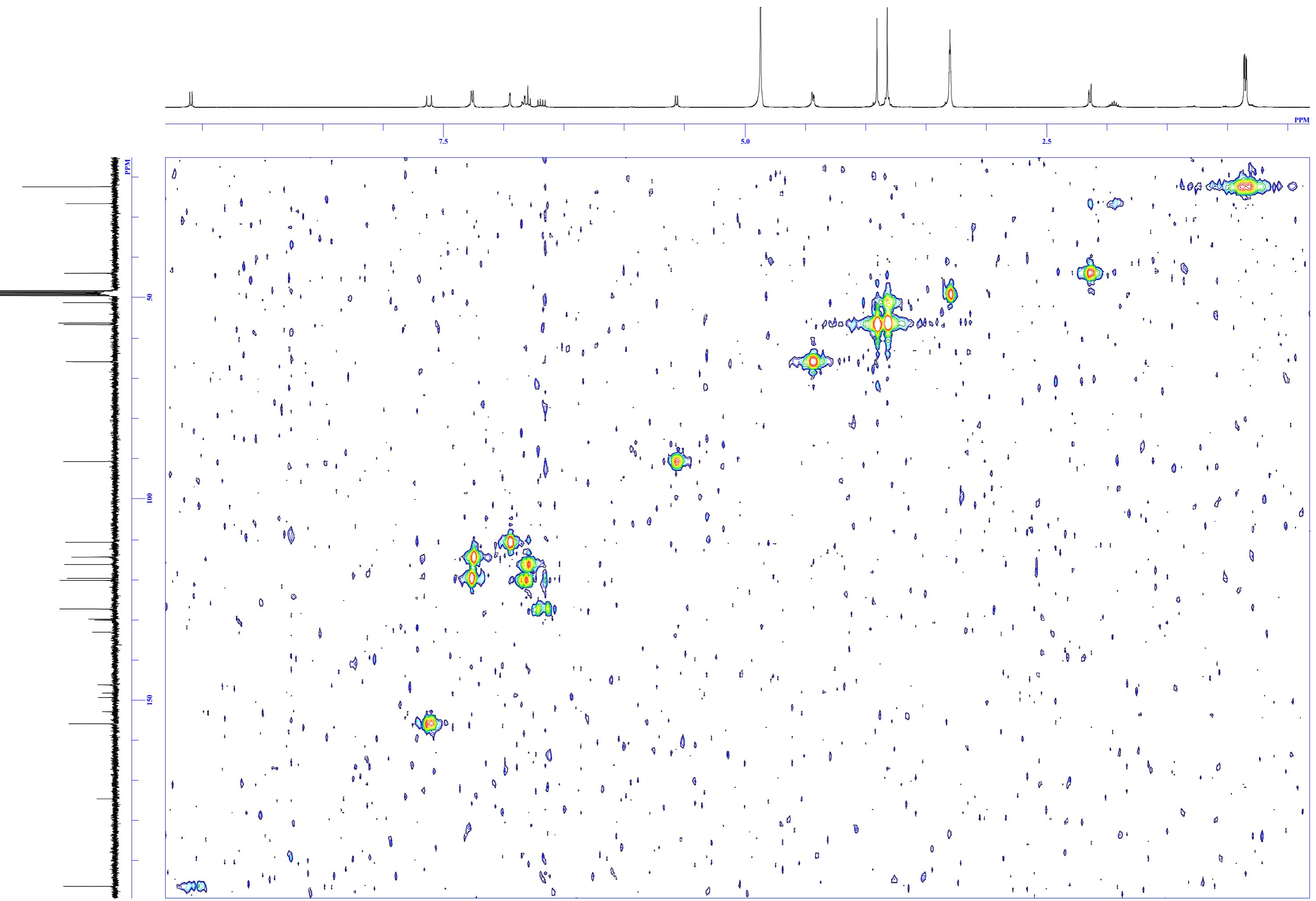


Figure S42. HMQC spectrum of 8 (in methanol-d<sub>4</sub>)

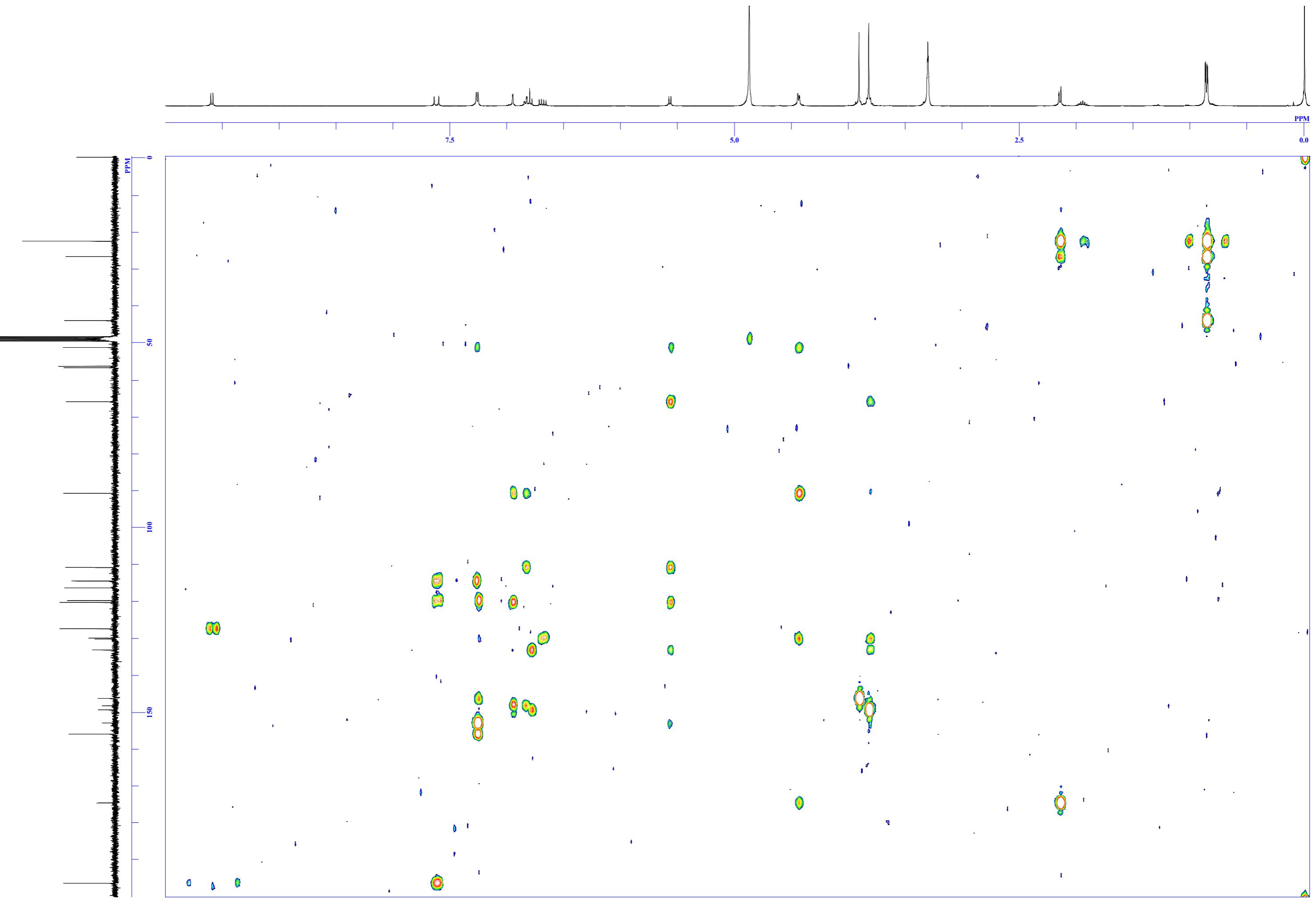
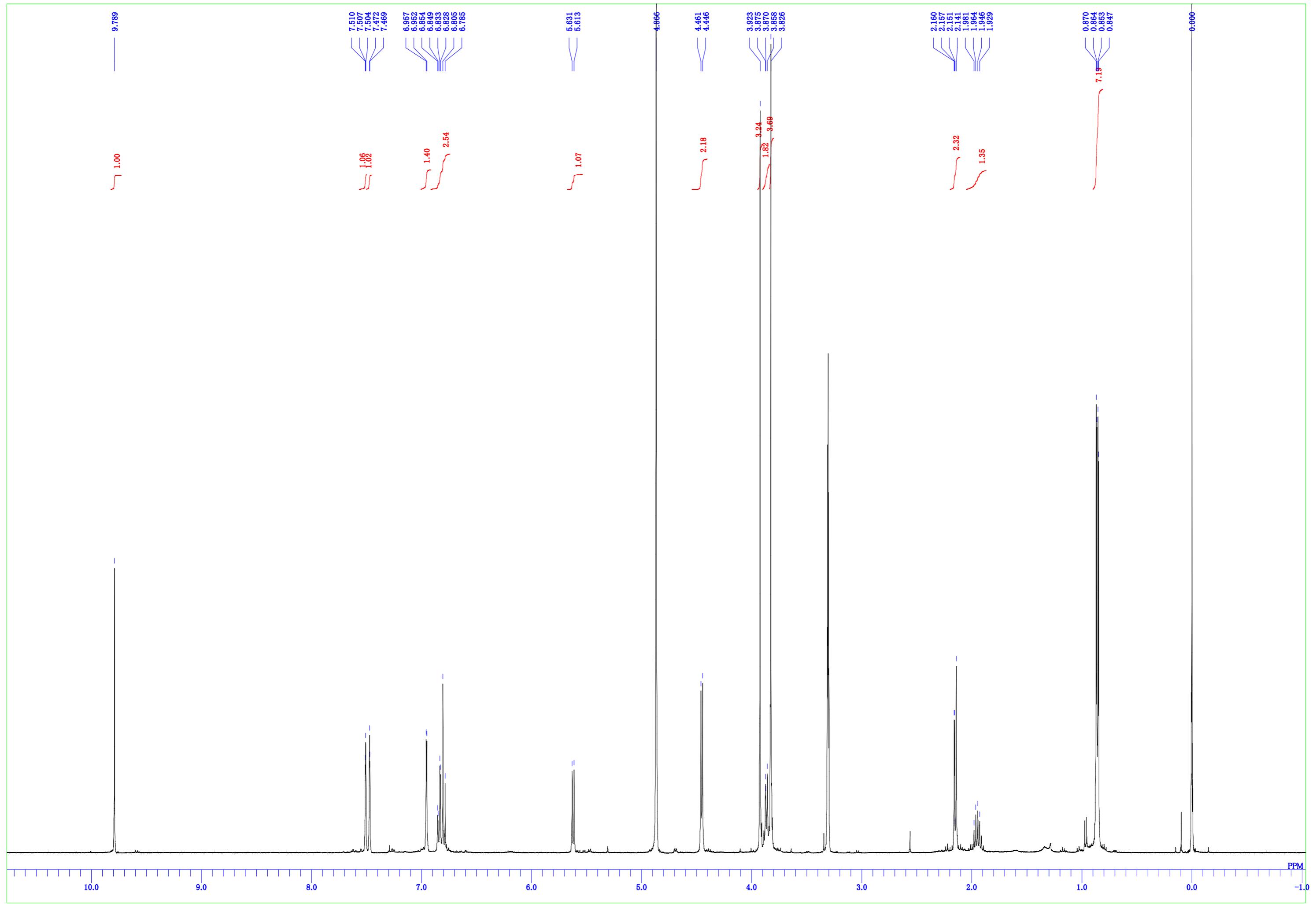


Figure S43. HMBC spectrum of 8 (in methanol-d<sub>4</sub>)



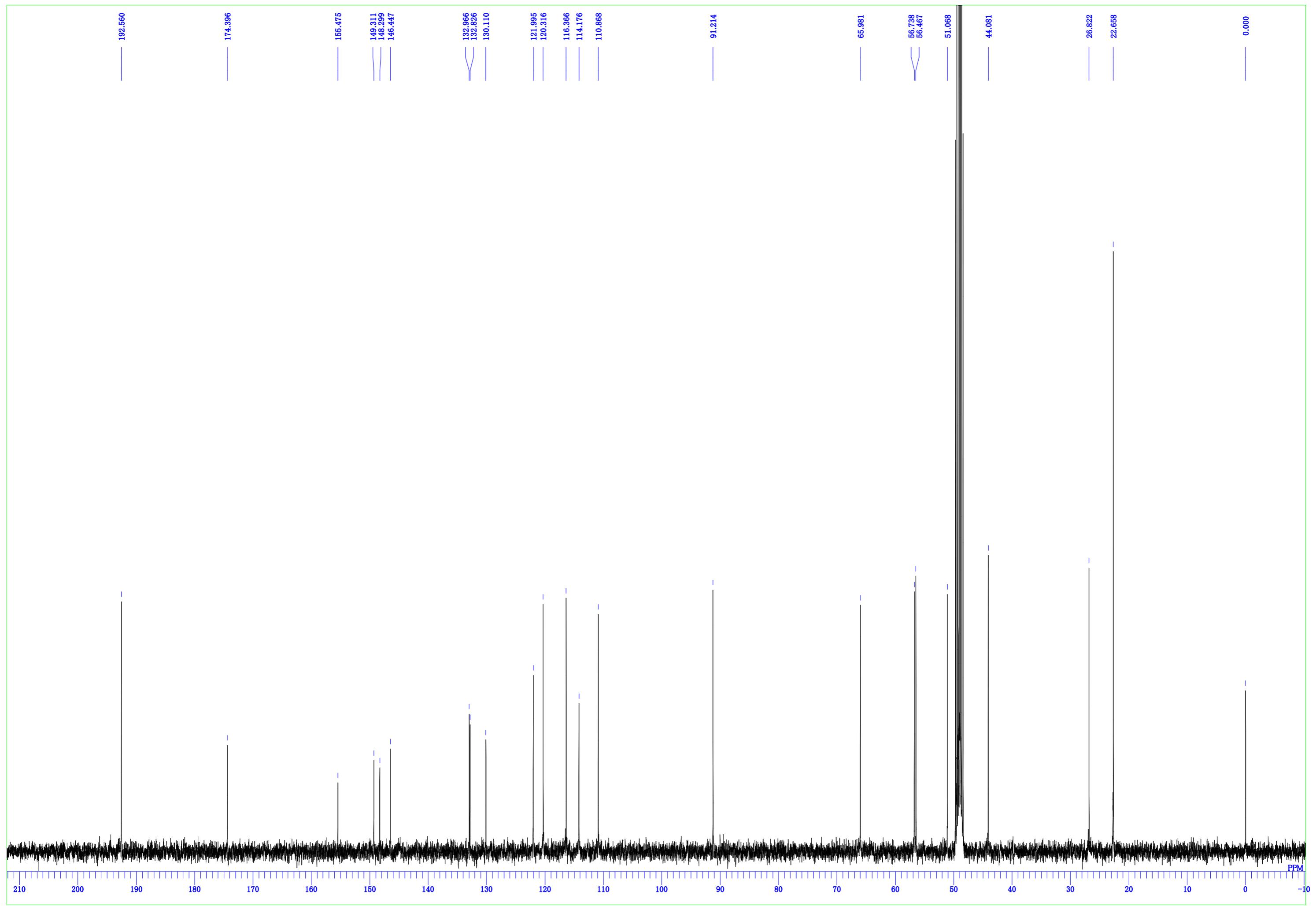
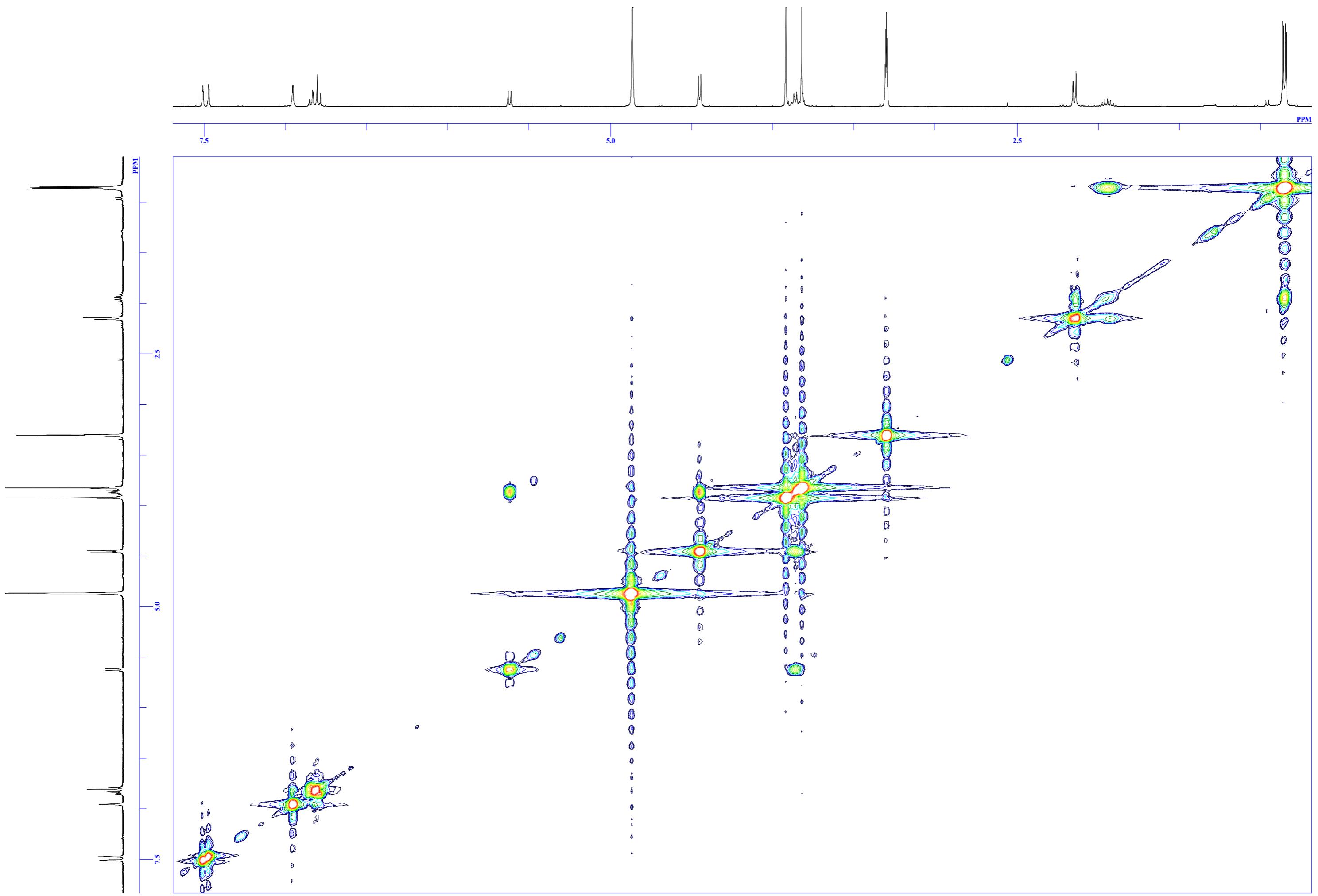


Figure S45. <sup>13</sup>C NMR spectrum of 9 (in methanol-d<sub>4</sub>)



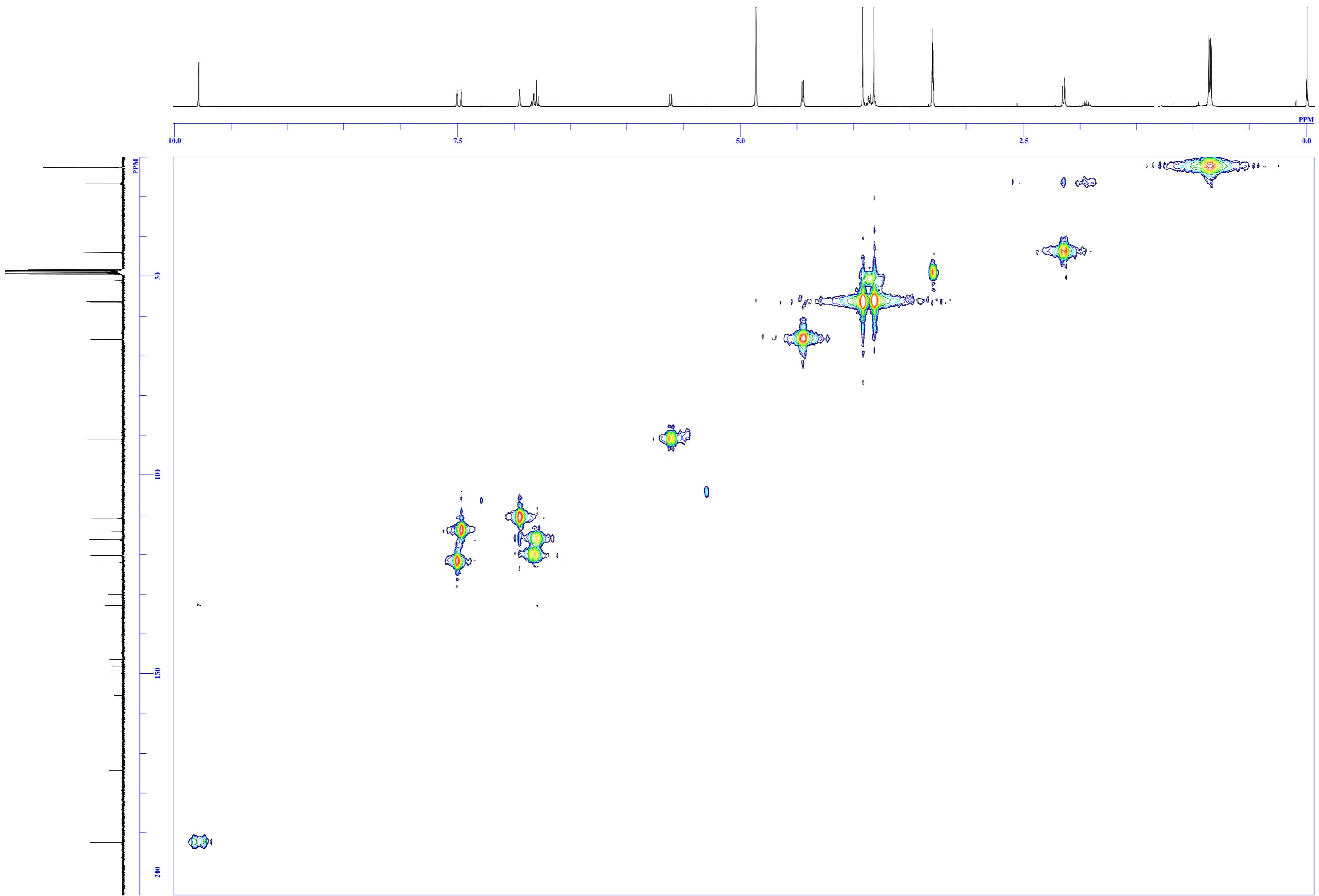


Figure S47. HMQC spectrum of 9 (in methanol-d4)

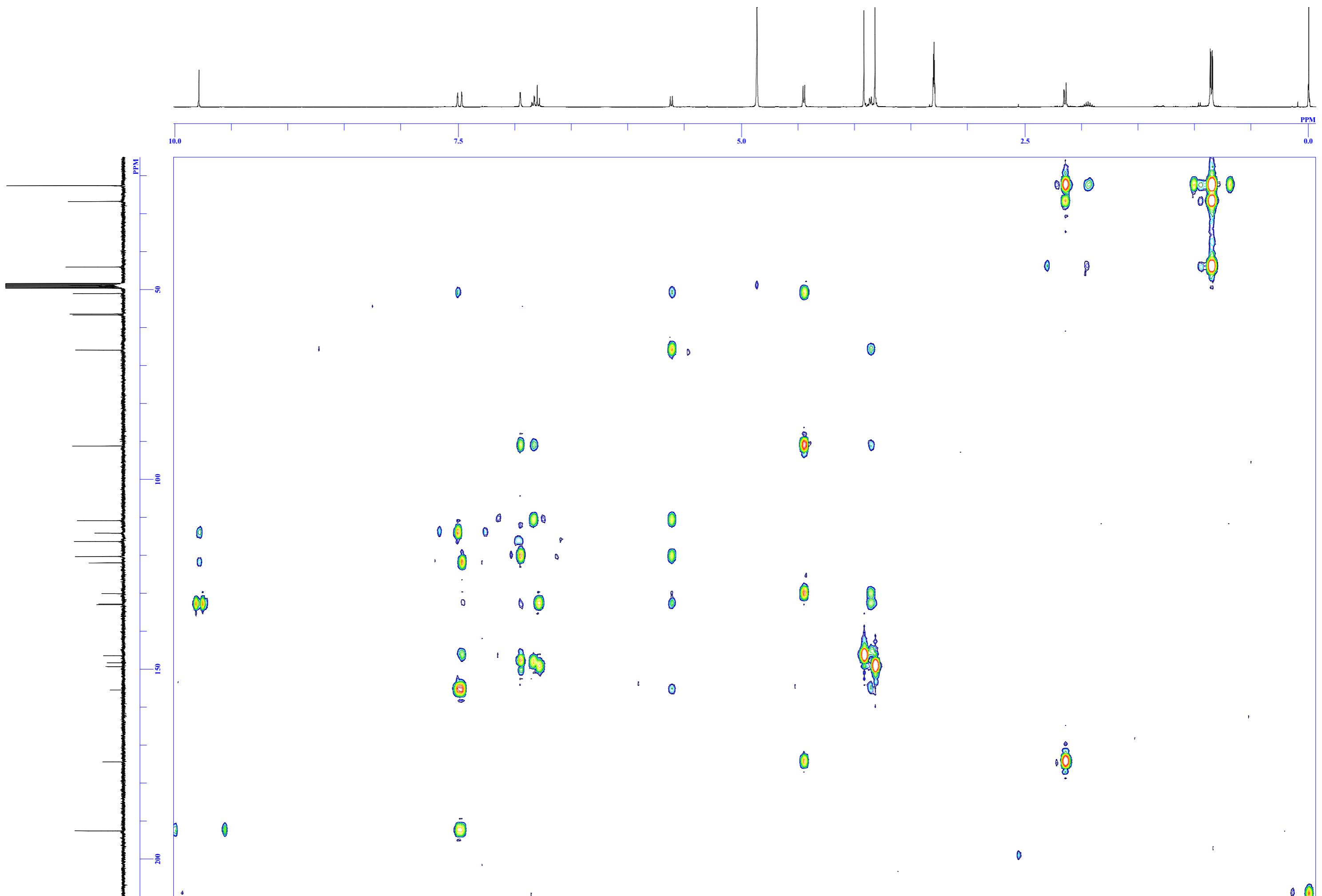


Figure S48. HMBC spectrum of 9 (in methanol-d<sub>4</sub>)

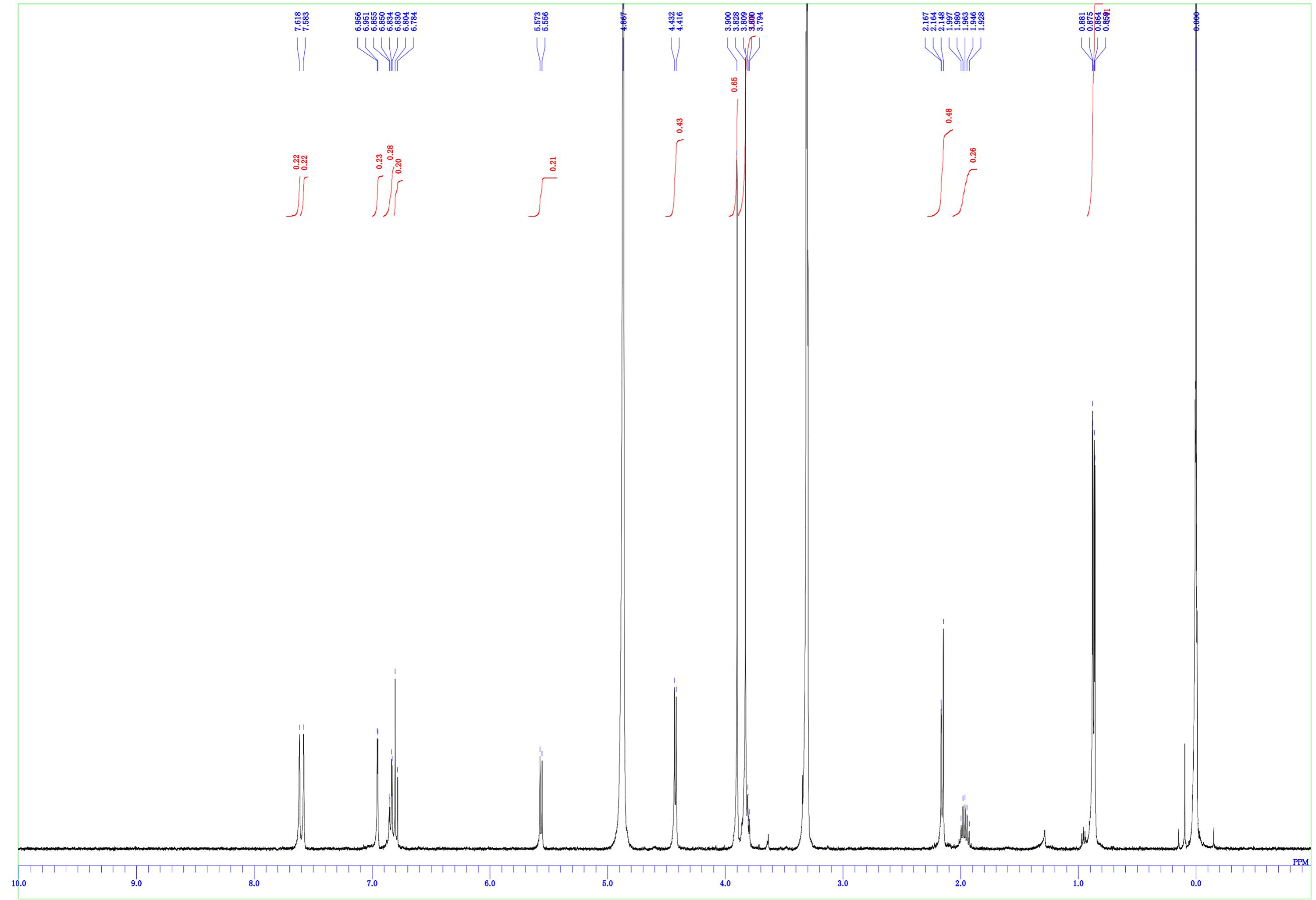


Figure S49. <sup>1</sup>H NMR spectrum of 10 (in methanol-d<sub>4</sub>)

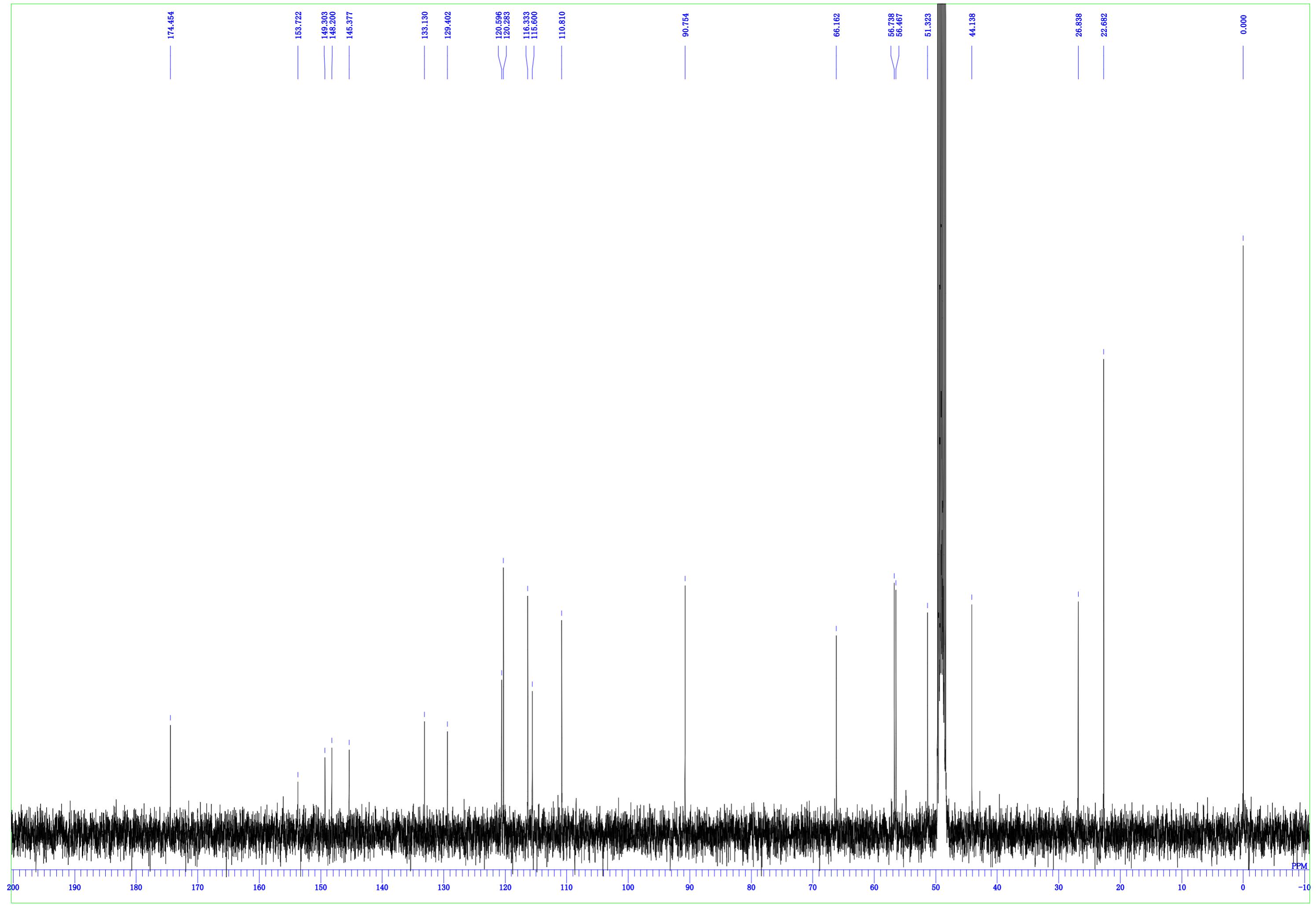


Figure S50. <sup>13</sup>C NMR spectrum of 10 (in methanol-d<sub>4</sub>)

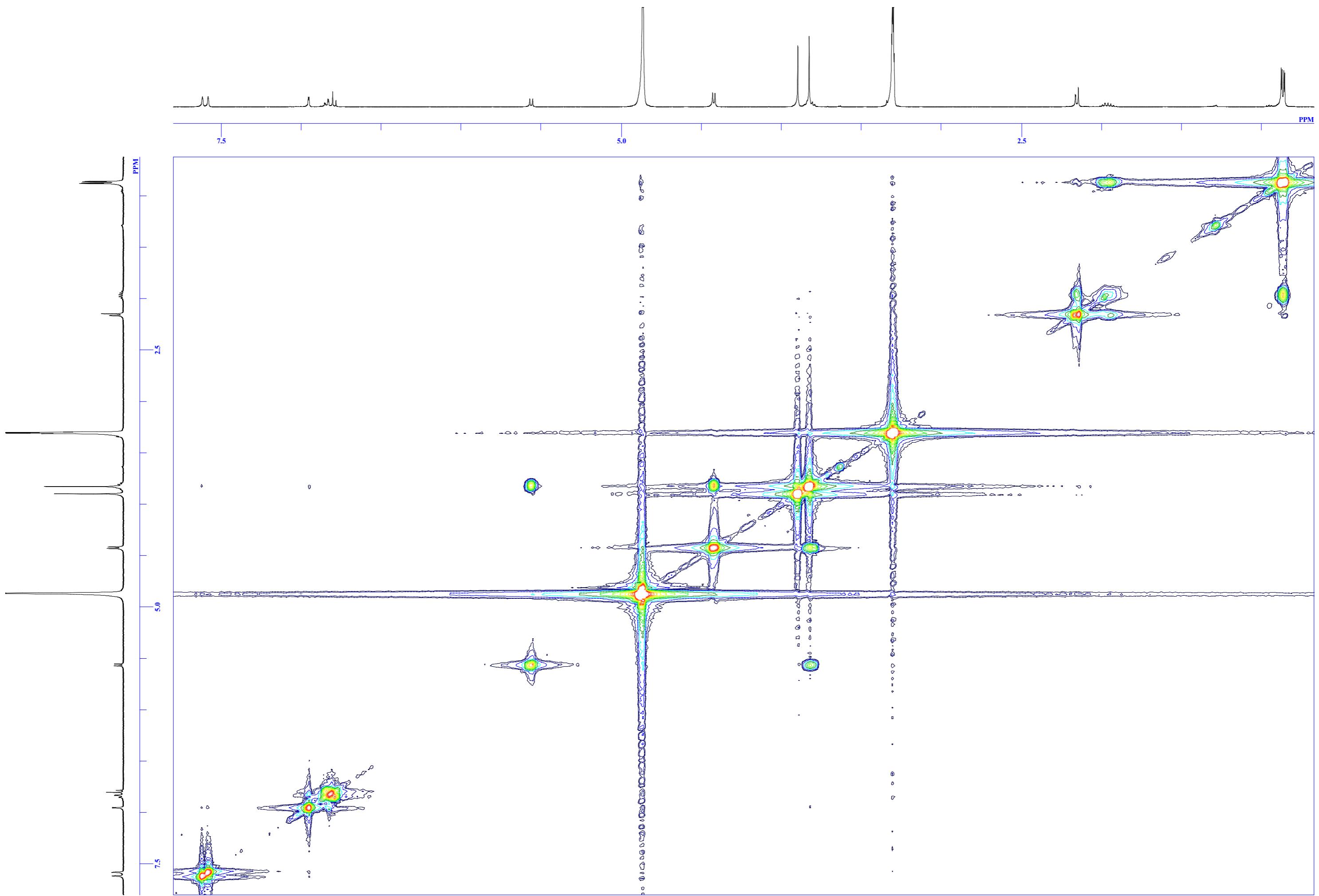


Figure S51.  $^1\text{H}$ - $^1\text{H}$ COSY spectrum of 10 (in methanol- $\text{d}_4$ ) S53

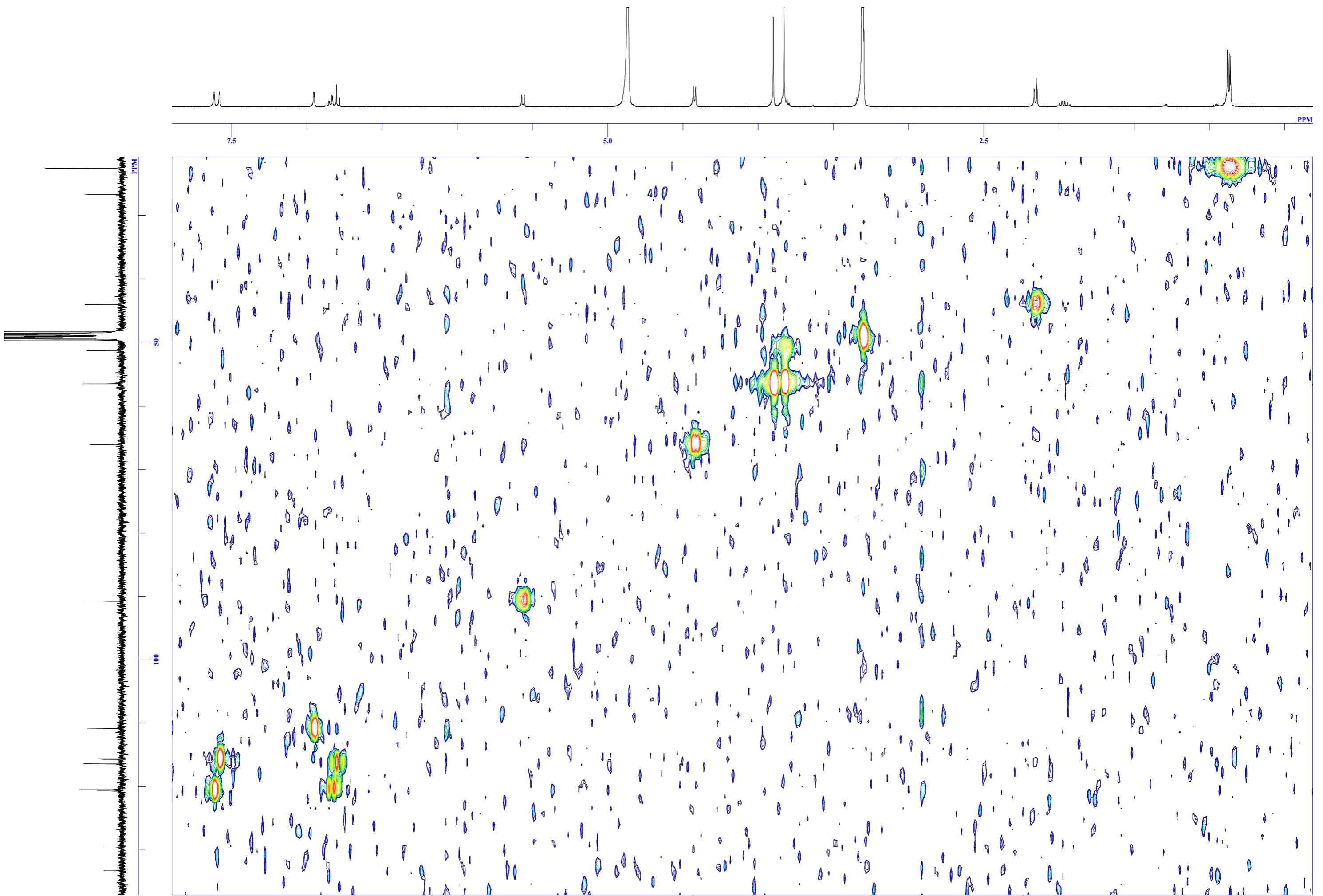


Figure S52. HMQC spectrum of 10 (in methanol-d<sub>4</sub>)

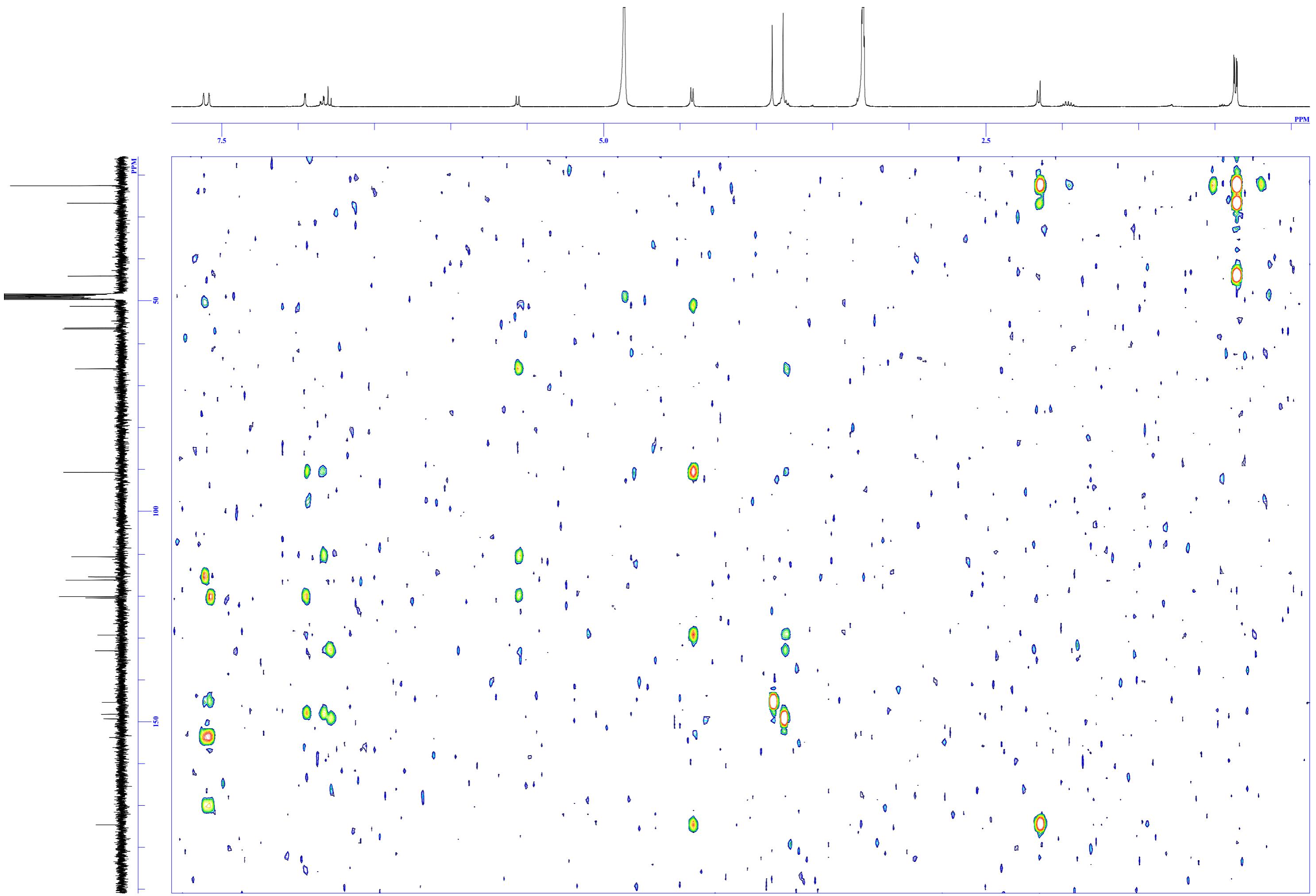


Figure S53. HMBC spectrum of 10 (in methanol-d4)

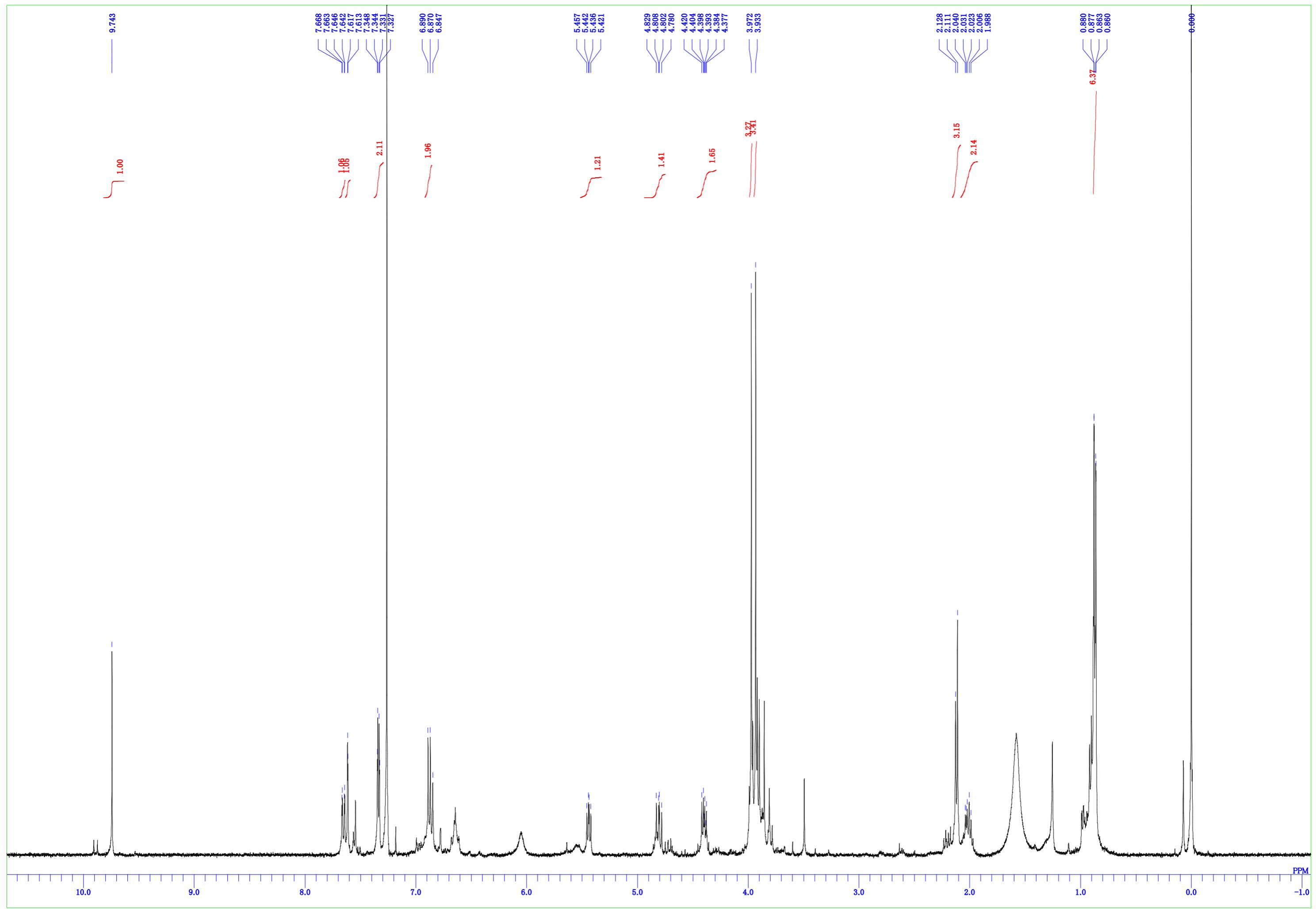


Figure S54. <sup>1</sup>H NMR spectrum of 11 (in chloroform-d)

S56

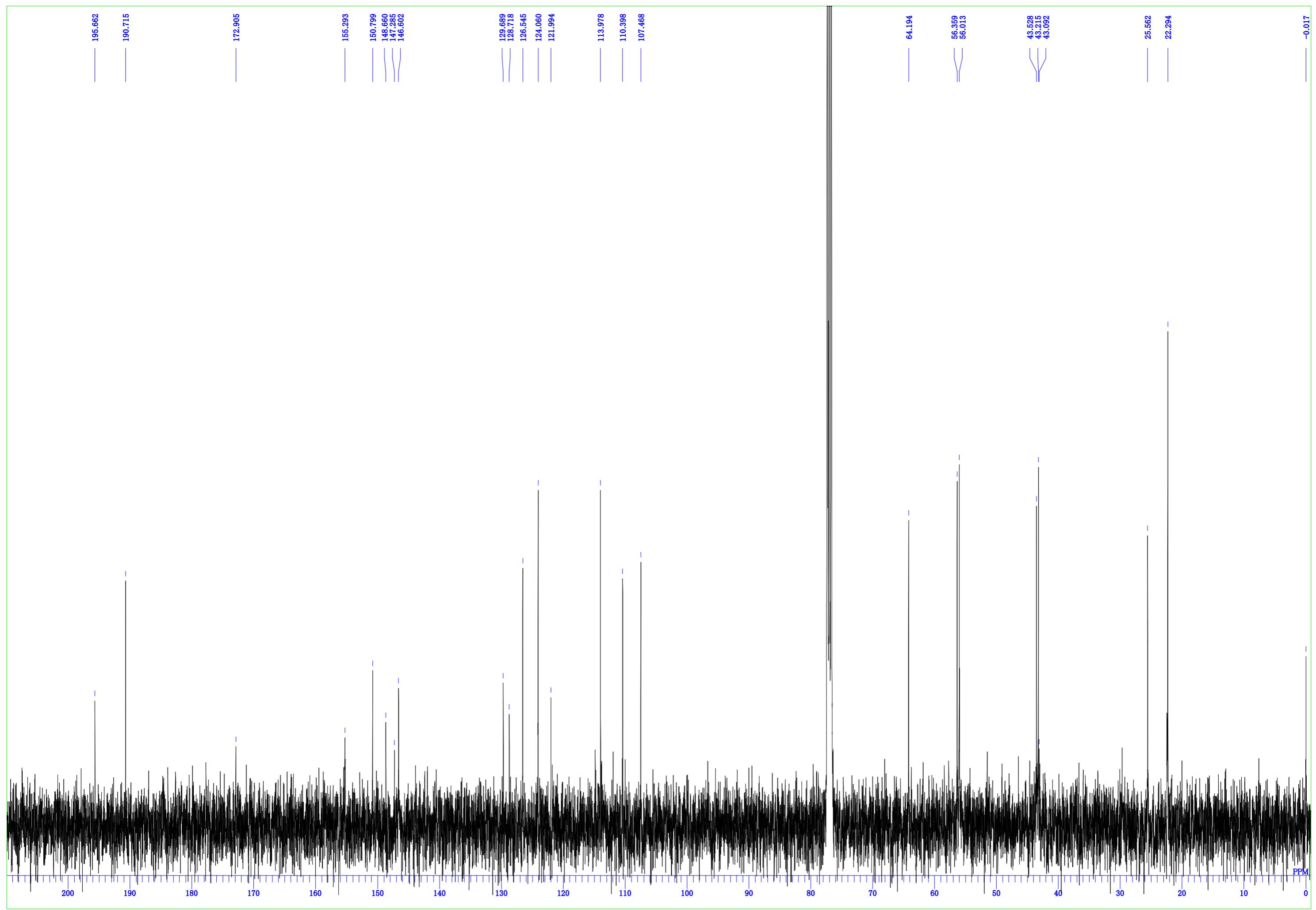


Figure S55.  $^{13}\text{C}$  NMR spectrum of 11 (in chloroform-d)

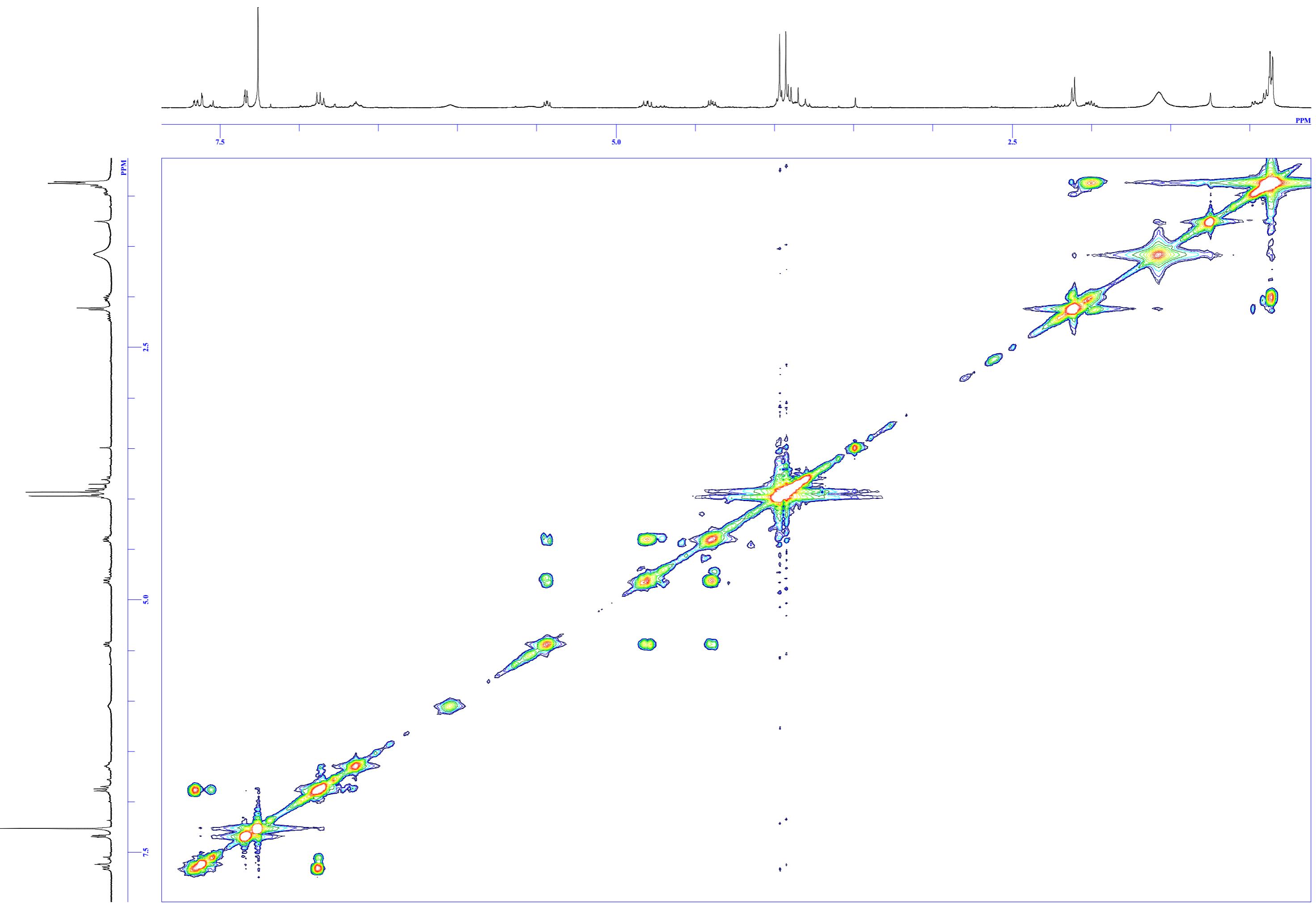


Figure S56.  $^1\text{H}$ - $^1\text{H}$  COSY of 11 (in chloroform- $d$ )

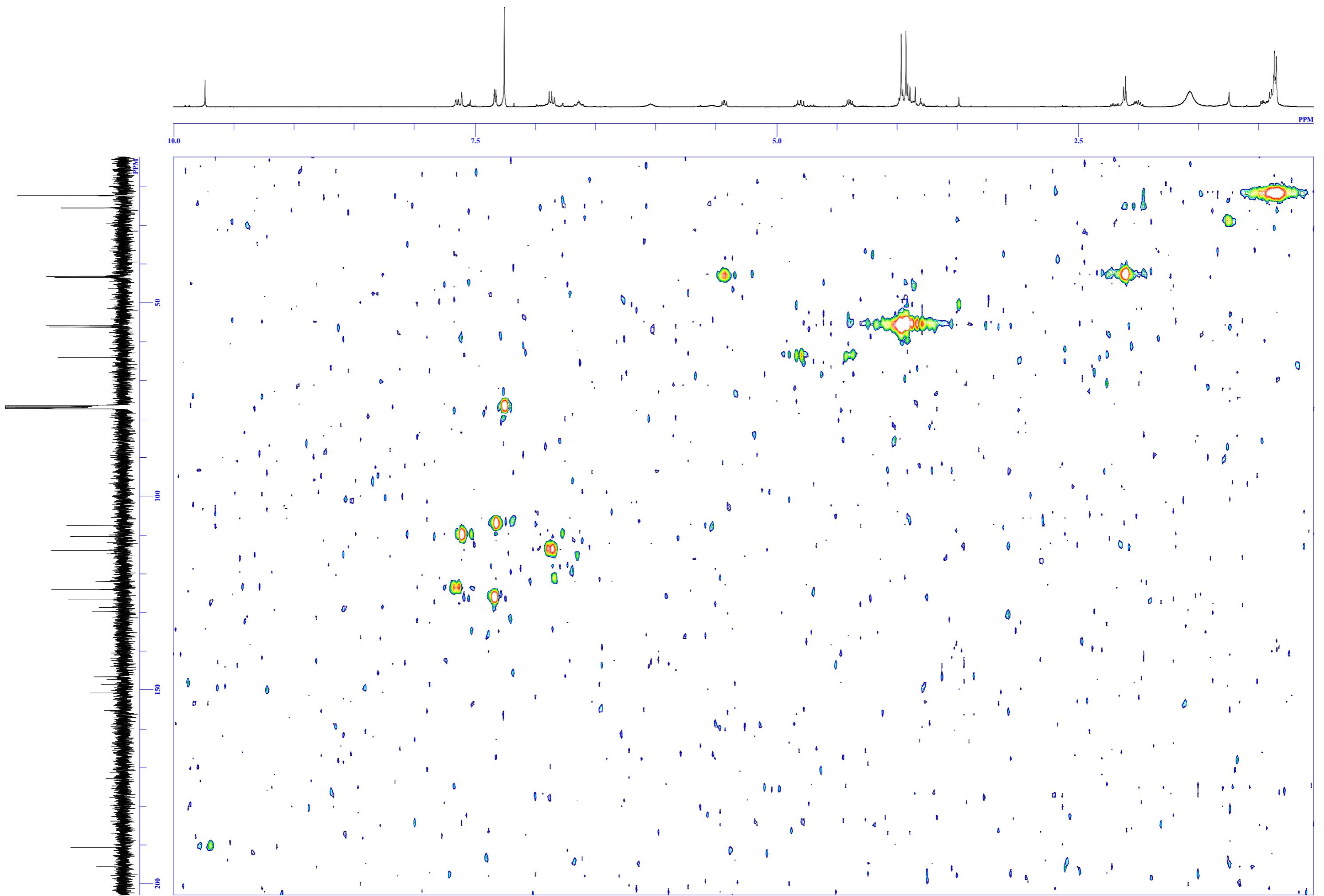


Figure S57. HMQC spectrum of 11 (in chloroform-d)

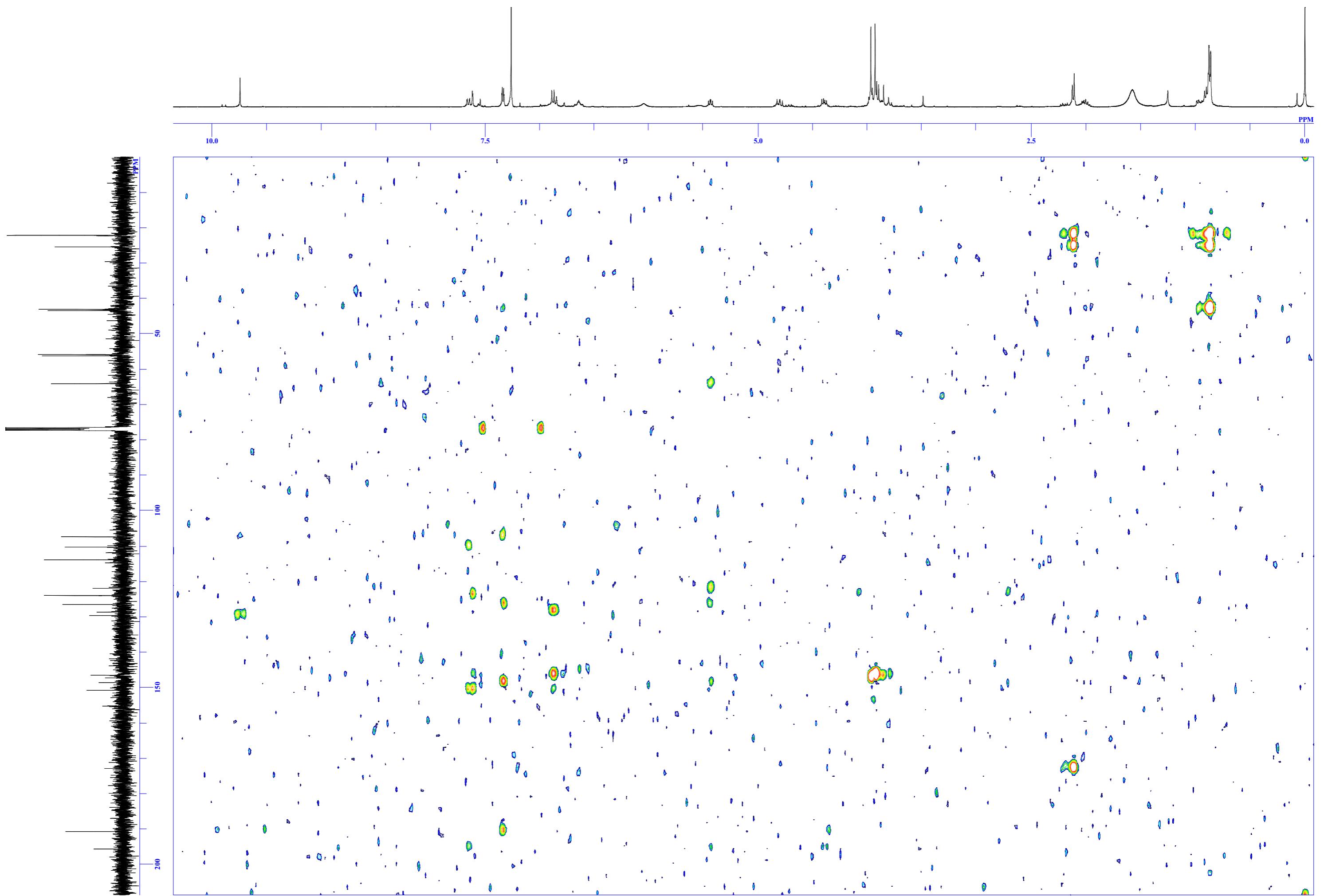


Figure S58. HMBC spectrum of 11 (in chloroform-d)

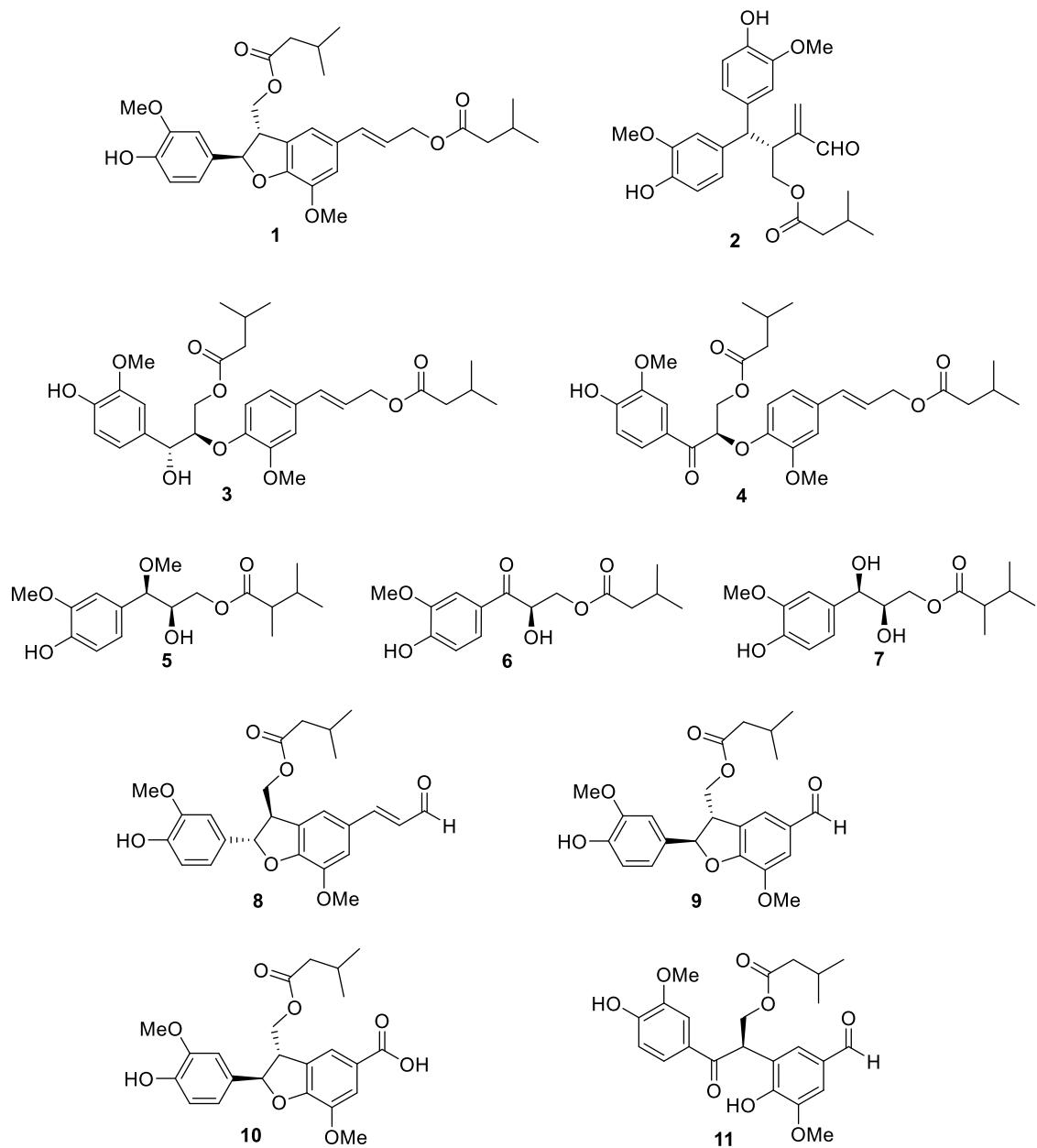


Figure S59. Chemical structure of compounds 1-11

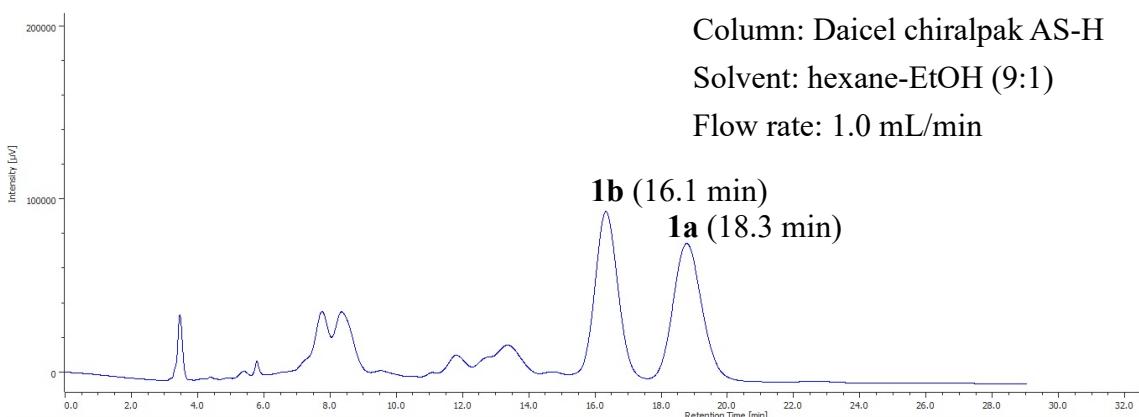


Figure S60. HPLC chromatogram of compound **1**

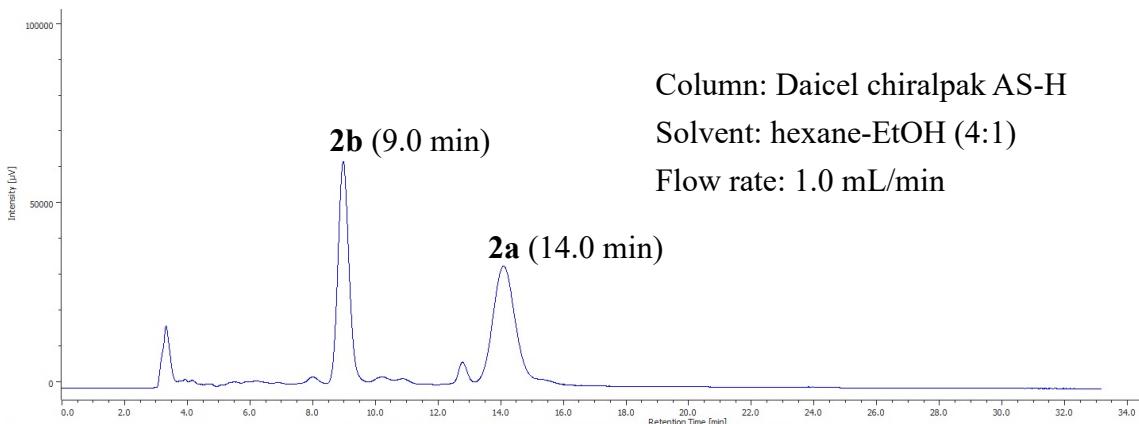


Figure S61. HPLC chromatogram of compound **2**

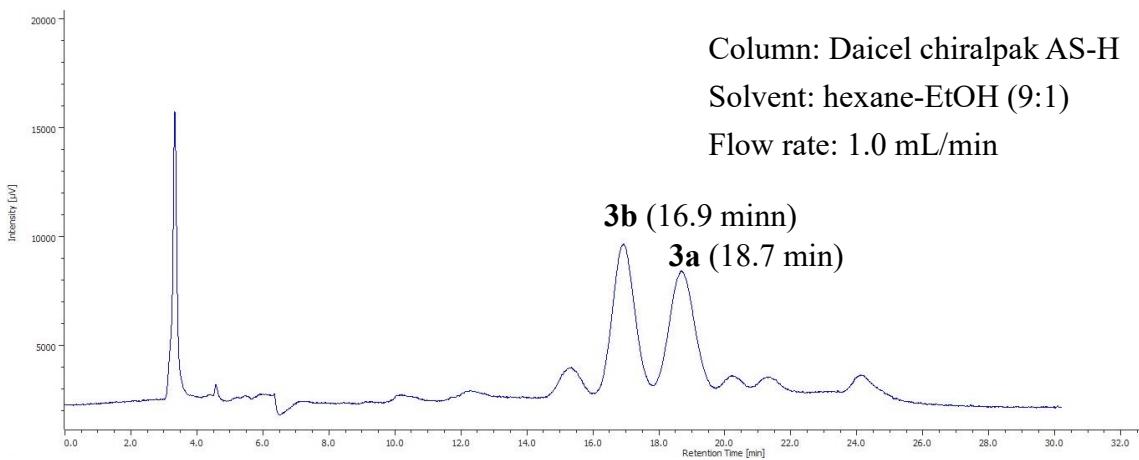


Figure S62. HPLC chromatogram of compound **3**

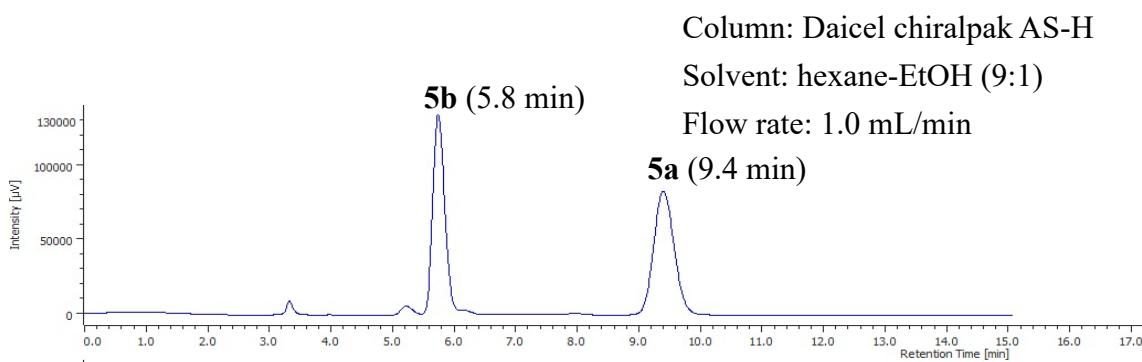


Figure S63. HPLC chromatogram of compound **5**

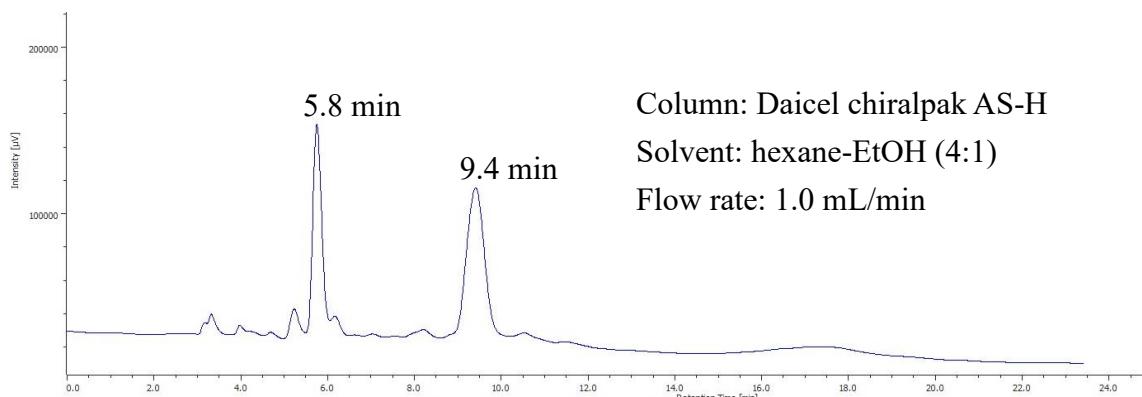


Figure S64. HPLC chromatogram of compound **7**

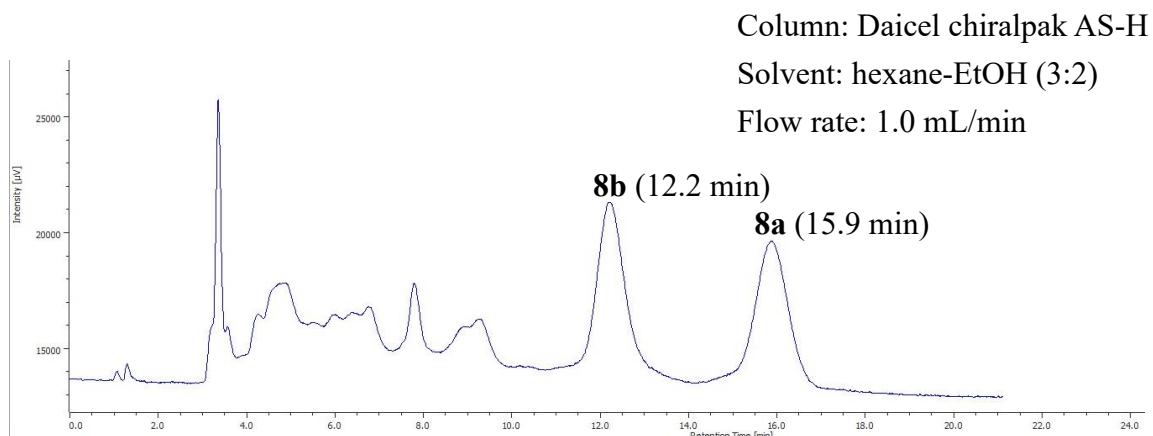


Figure S65. HPLC chromatogram of compound **8**

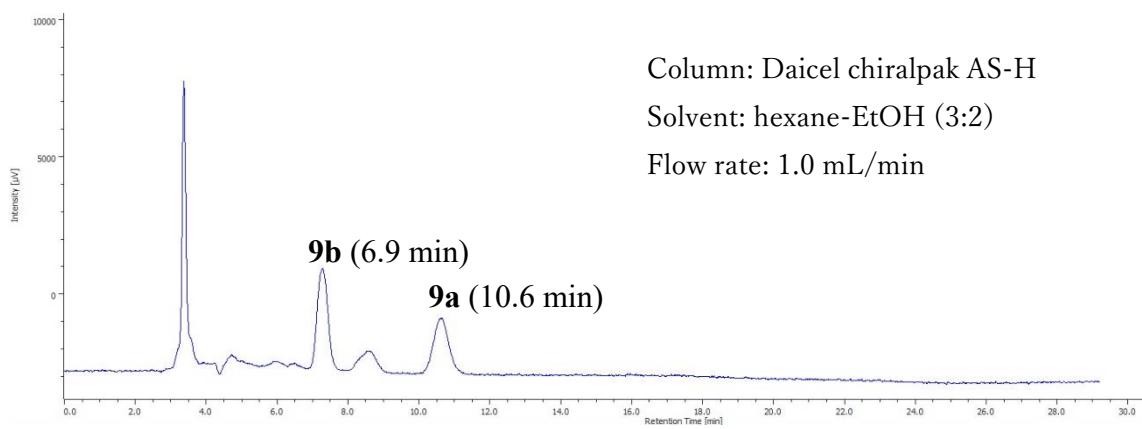


Figure S66. HPLC chromatogram of compound **9**

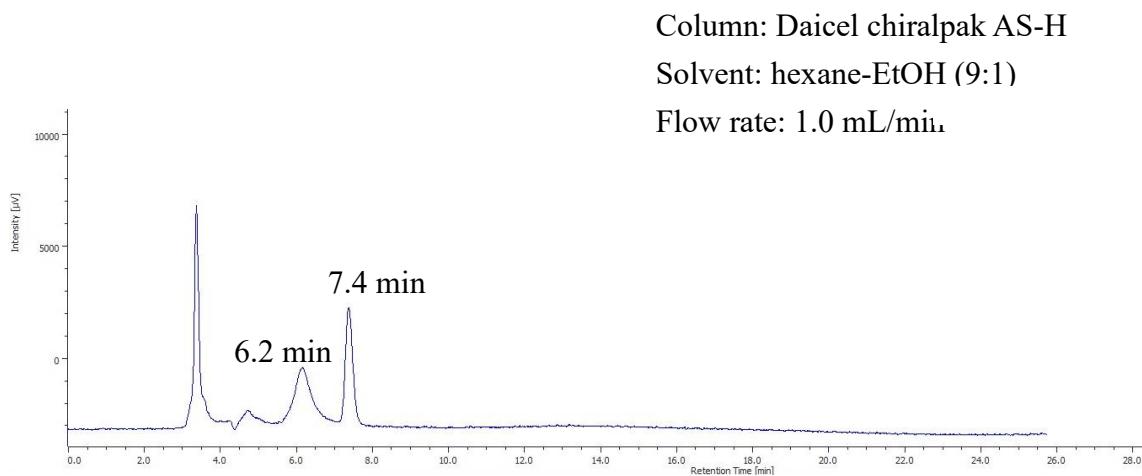


Figure S67. HPLC chromatogram of compound **10**

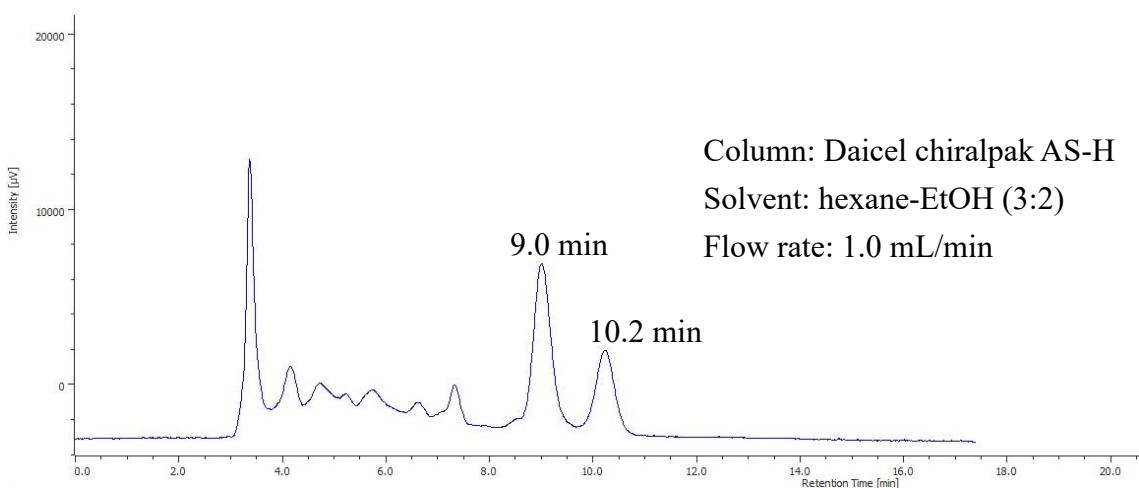


Figure S68. HPLC chromatogram of compound **12**

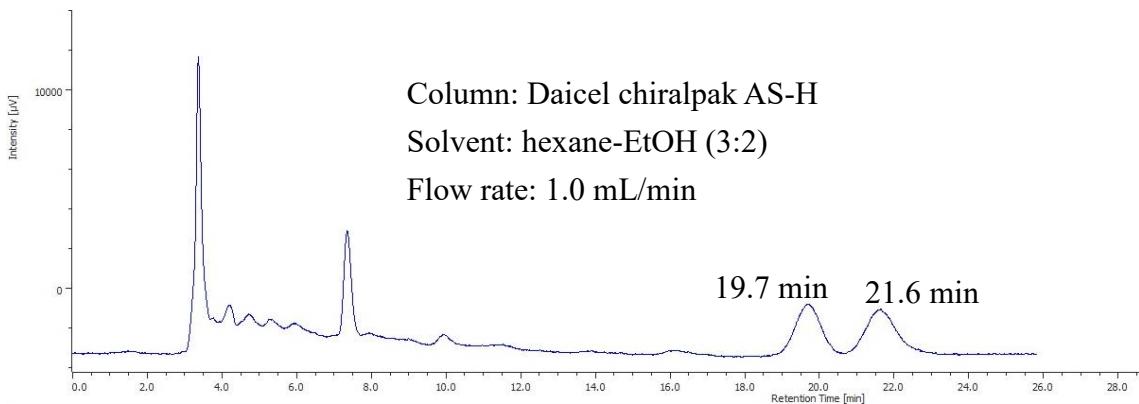


Figure S69. HPLC chromatogram of compound **13**

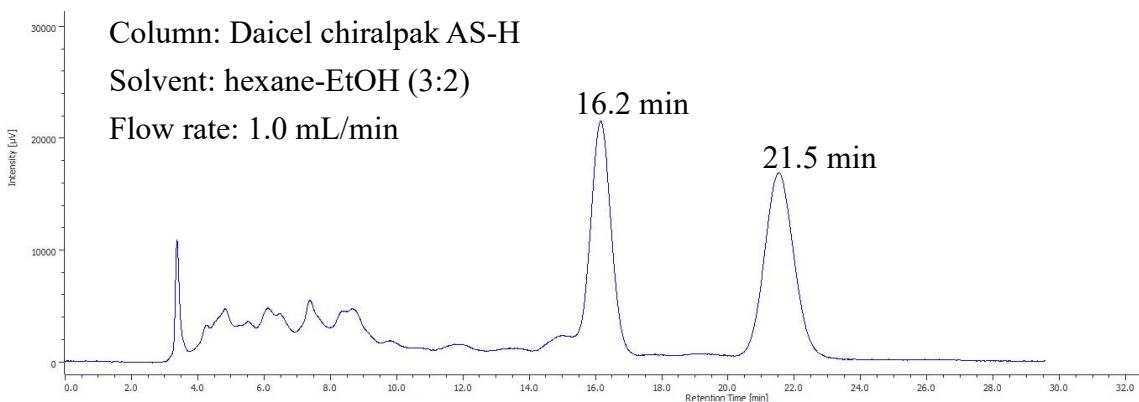


Figure S70. HPLC chromatogram of compound **14**