

SUPPLEMENTARY MATERIAL

Diterpenoid alkaloids from *Delphinium pachycentrum* Hemsl.

Rui-Jie Lu¹, Yu-Qi Yang¹, Shu Wang^{1,3}, Lin Chen¹, Jiang Xie², Shuai Huang^{1,3*} and Xian-Li Zhou^{1,2*}

1. School of Life Science and Engineering, Southwest Jiaotong University, Chengdu 610031, Sichuan, P.R. China.

2. The Affiliated Hospital of Southwest Jiaotong University, The Third People ' s Hospital of Chengdu, Chengdu, Sichuan, P. R. China

3. Yibin Institute of Southwest Jiaotong University, Yibin, Sichuan, P. R. China

** Corresponding author:*

Dr. Shuai Huang; Email: shuaih@swjtu.edu.cn

Dr. Xianli Zhou; Phone: +86-28-66367232; Email: zhouxl@swjtu.edu.cn

Caption

	Page
Figure S1. ¹ H NMR spectrum in CDCl ₃ for compound 1	1
Figure S2. ¹³ C NMR spectrum in CDCl ₃ for compound 1	1
Figure S3. DEPT spectrum in CDCl ₃ for compound 1	2
Figure S4. ¹ H- ¹ H COSY spectrum in CDCl ₃ for compound 1	2
Figure S5. HMQC spectrum in CDCl ₃ for compound 1	3
Figure S6. HMBC spectrum in CDCl ₃ for compound 1	3
Figure S7. NOESY spectrum in CDCl ₃ for compound 1	4
Figure S8. HR-ESI-MS spectrum for compound 1	4
Figure S9. IR spectrum for compound 1	5
Figure S10. ¹ H NMR spectrum in CDCl ₃ for compound 2	5
Figure S11. ¹³ C NMR spectrum in CDCl ₃ for compound 2	6
Figure S12. DEPT spectrum in CDCl ₃ for compound 2	6
Figure S13. ¹ H- ¹ H COSY spectrum in CDCl ₃ for compound 2	7
Figure S14. HMQC spectrum in CDCl ₃ for compound 2	7
Figure S15. HMBC spectrum in CDCl ₃ for compound 2	8
Figure S16. NOESY spectrum in CDCl ₃ for compound 2	8
Figure S17. HR-ESI-MS spectrum for compound 2	9
Figure S18. IR spectrum for compound 2	9
Figure S19. ¹ H NMR spectrum in CDCl ₃ for compound 3	10
Figure S20. ¹³ C NMR spectrum in CDCl ₃ for compound 3	10
Figure S21. DEPT spectrum in CDCl ₃ for compound 3	11
Figure S22. ¹ H- ¹ H COSY spectrum in CDCl ₃ for compound 3	11
Figure S23. HMQC spectrum in CDCl ₃ for compound 3	12
Figure S24. HMBC spectrum in CDCl ₃ for compound 3	12
Figure S25. NOESY spectrum in CDCl ₃ for compound 3	13
Figure S26. HR-ESI-MS spectrum for compound 3	13
Figure S27. IR spectrum for compound 3	14
Figure S28. ¹ H NMR spectrum in CDCl ₃ for compound 4	14
Figure S29. ¹³ C NMR spectrum in CDCl ₃ for compound 4	15
Figure S30. DEPT spectrum in CDCl ₃ for compound 4	15
Figure S31. ¹ H- ¹ H COSY spectrum in CDCl ₃ for compound 4	16
Figure S32. HMQC spectrum in CDCl ₃ for compound 4	16
Figure S33. HMBC spectrum in CDCl ₃ for compound 4	17
Figure S34. NOESY spectrum in CDCl ₃ for compound 4	17
Figure S35. HR-ESI-MS spectrum for compound 4	18
Figure S36. IR spectrum for compound 4	18
Figure S37. ¹ H NMR spectrum in CDCl ₃ for compound 5	19
Figure S38. ¹³ C NMR spectrum in CDCl ₃ for compound 5	19
Figure S39. DEPT spectrum in CDCl ₃ for compound 5	20
Figure S40. ¹ H- ¹ H COSY spectrum in CDCl ₃ for compound 5	20
Figure S41. HMQC spectrum in CDCl ₃ for compound 5	21
Figure S42. HMBC spectrum in CDCl ₃ for compound 5	21
Figure S43. NOESY spectrum in CDCl ₃ for compound 5	22

Figure S44. HR-ESI-MS spectrum for compound 5	22
Figure S45. IR spectrum for compound 5	23

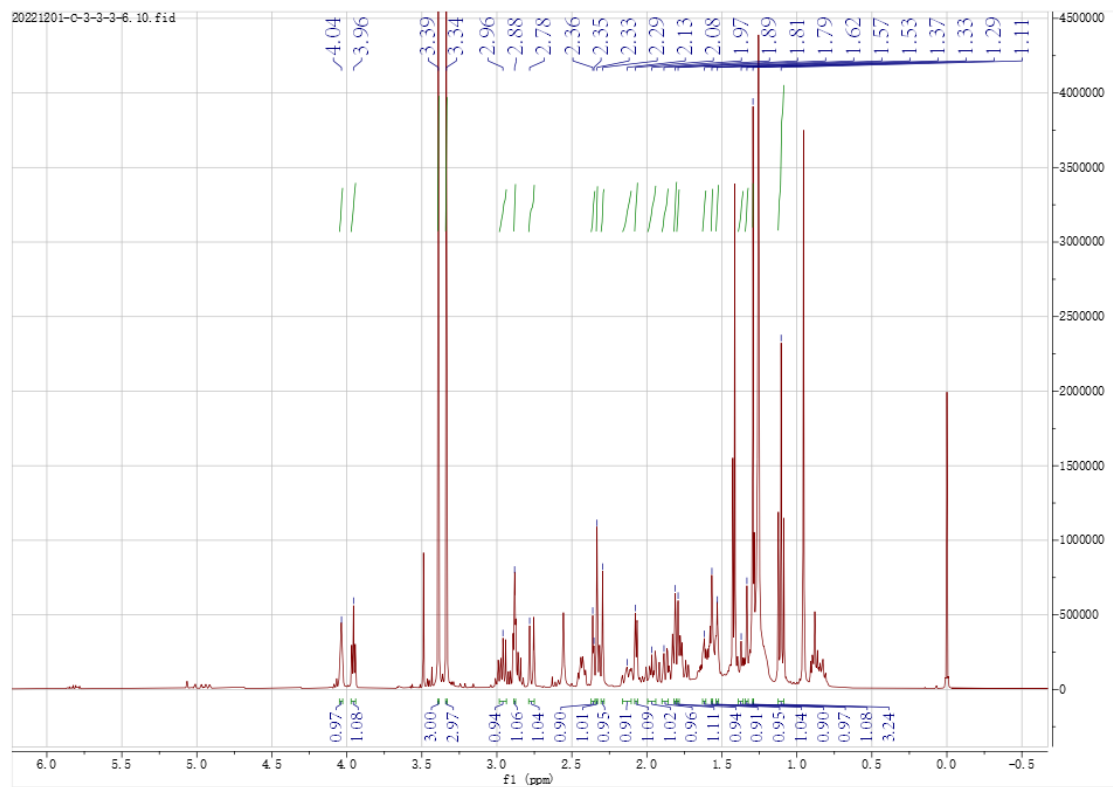


Figure S1. ^1H NMR spectrum in CDCl_3 for compound **1**

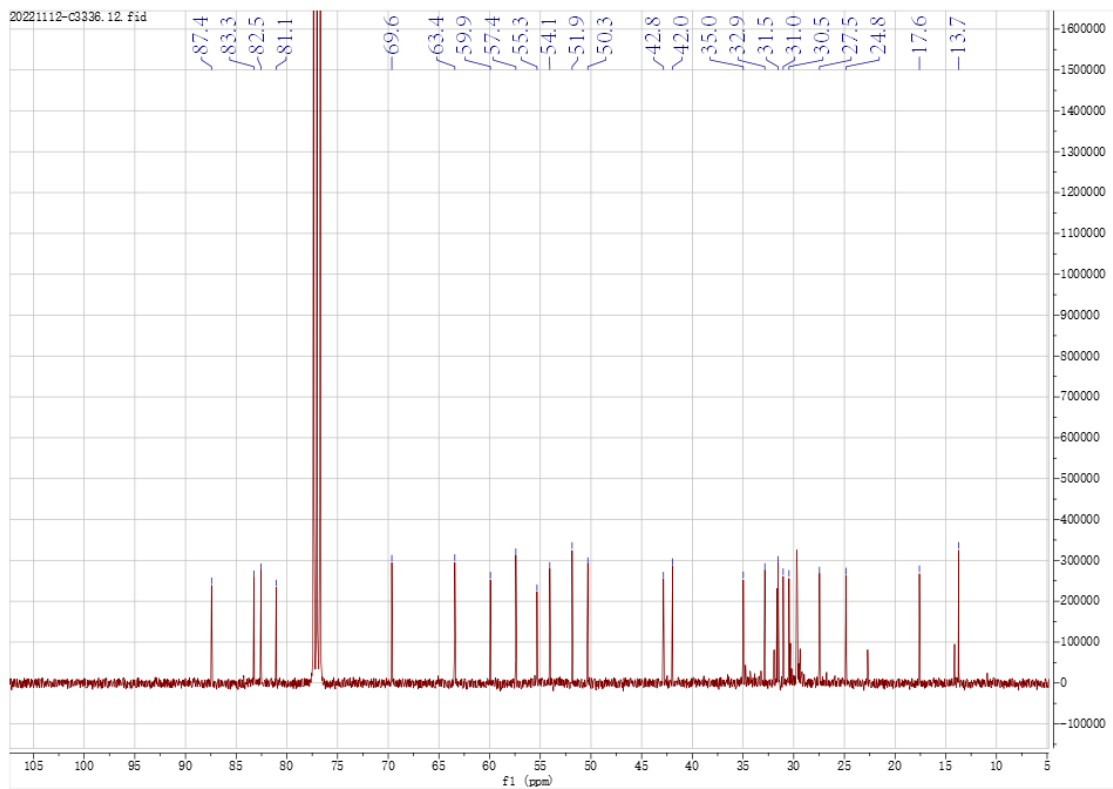


Figure S2. ^{13}C NMR spectrum in CDCl_3 for compound **1**

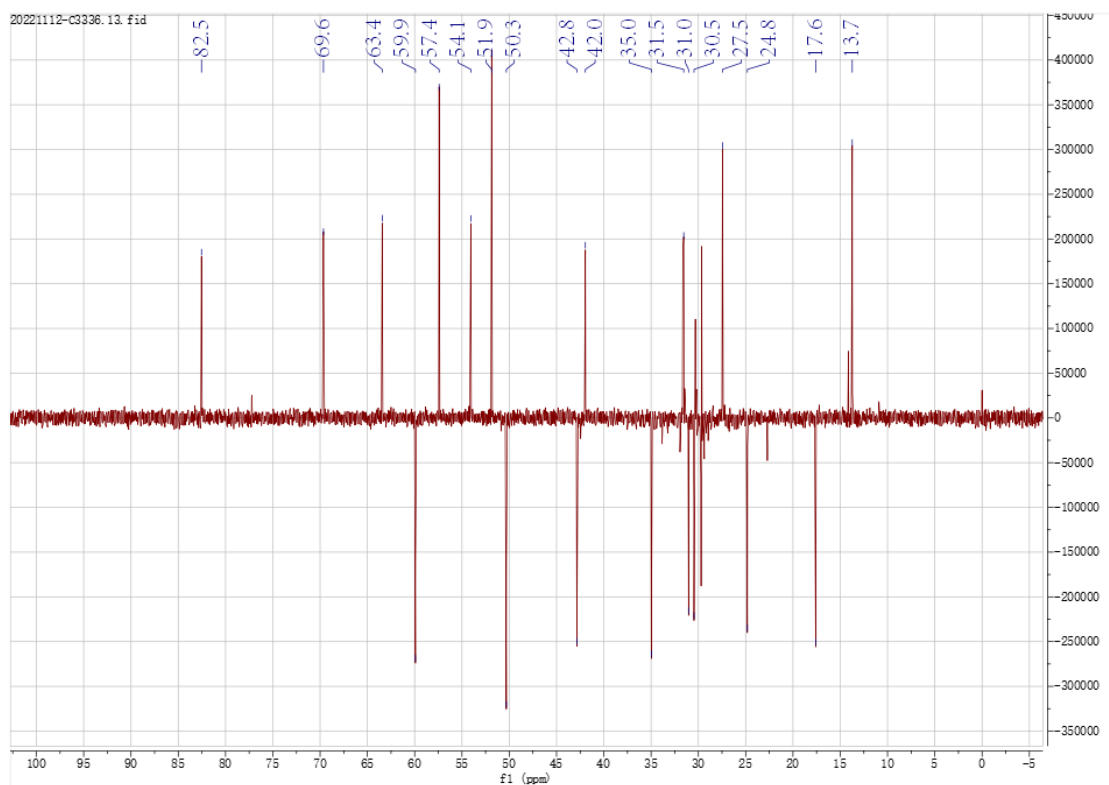


Figure S3. DEPT spectrum in CDCl_3 for compound **1**

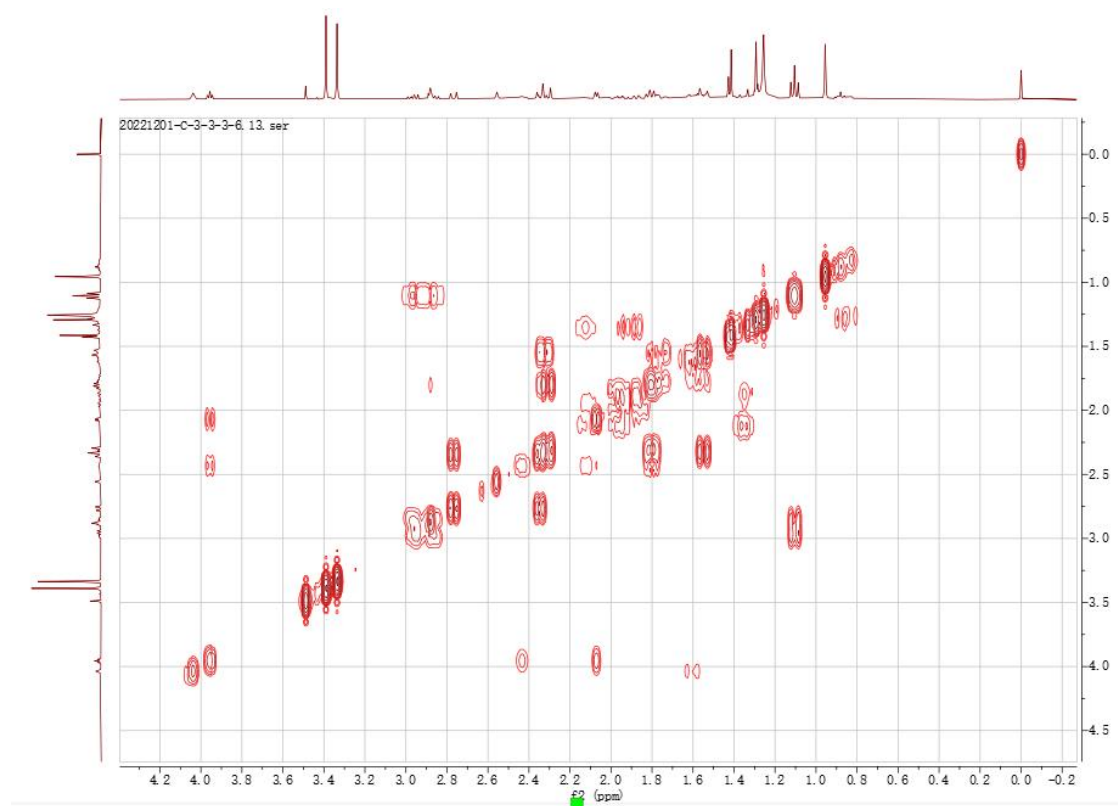


Figure S4. ^1H - ^1H COSY spectrum in CDCl_3 for compound **1**

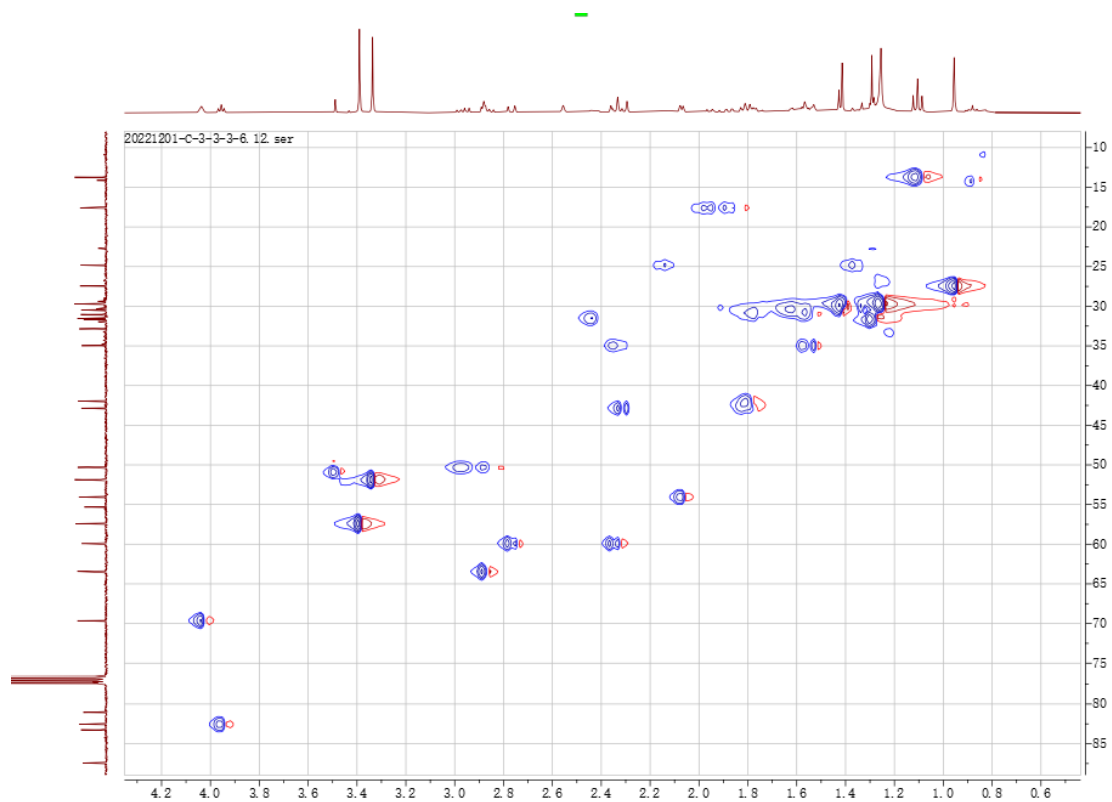


Figure S5. HMBC spectrum in CDCl_3 for compound **1**

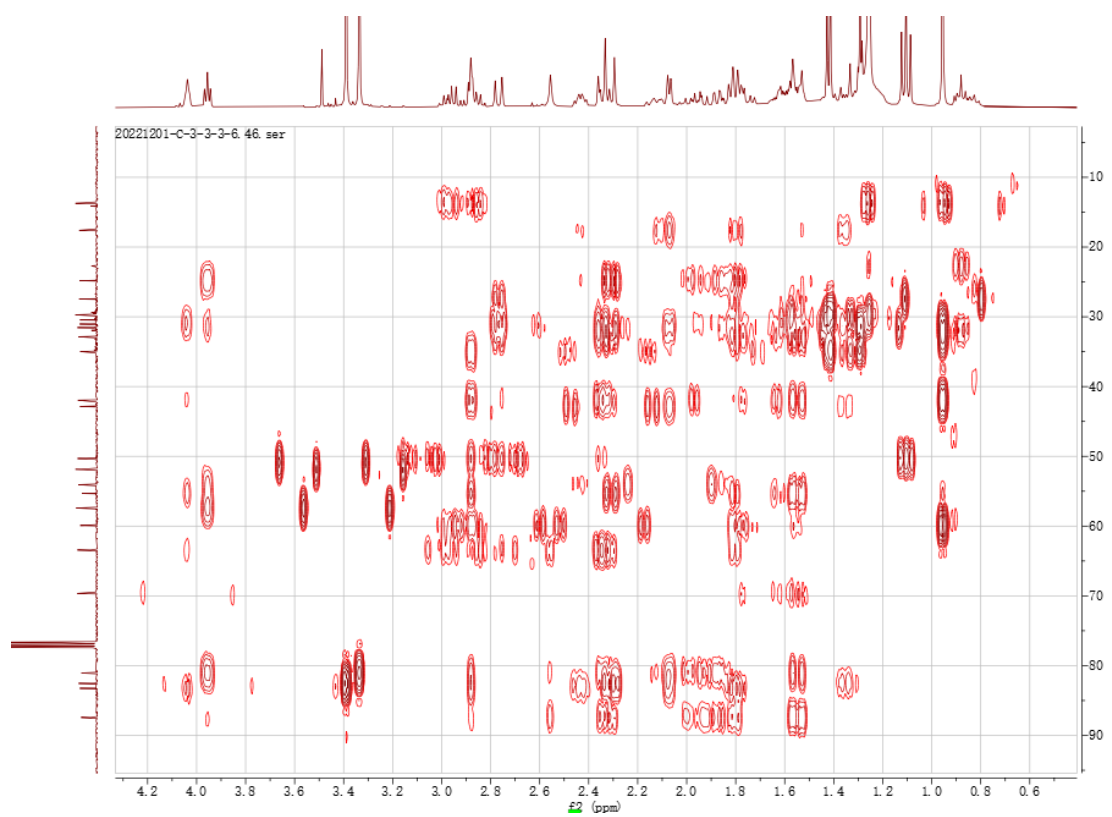


Figure S6. HMBC spectrum in CDCl_3 for compound **1**

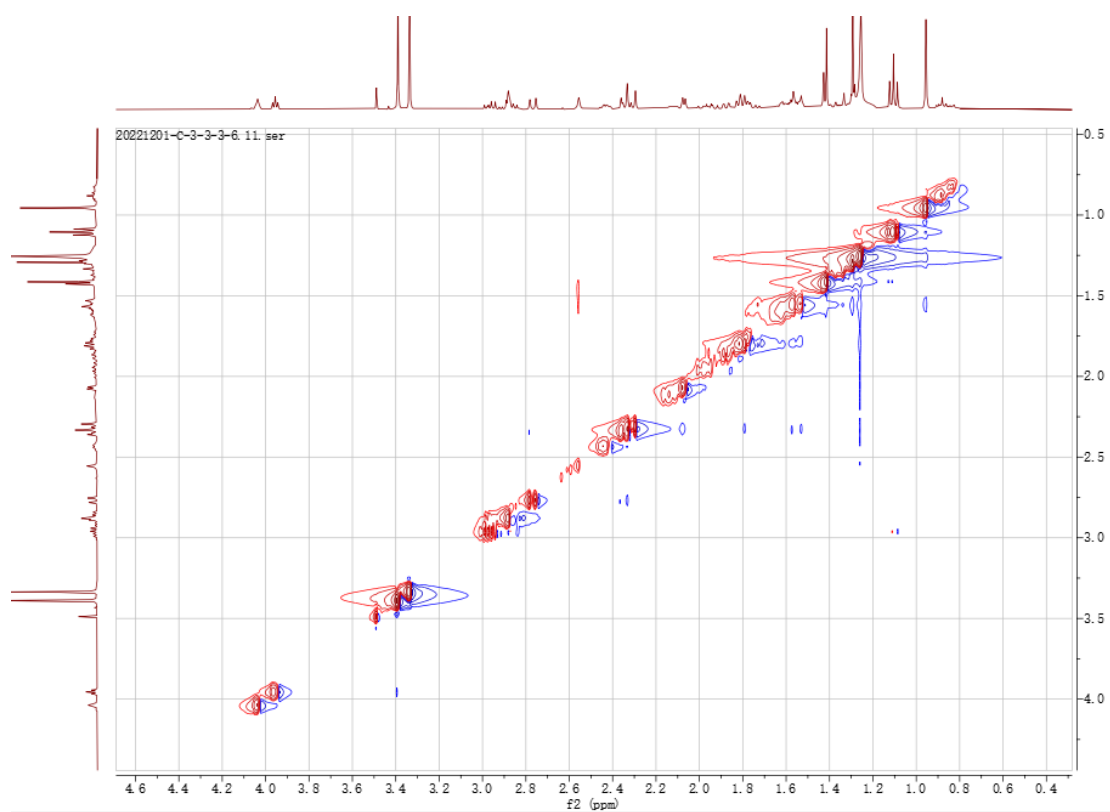


Figure S7. NOESY spectrum in CDCl_3 for compound **1**

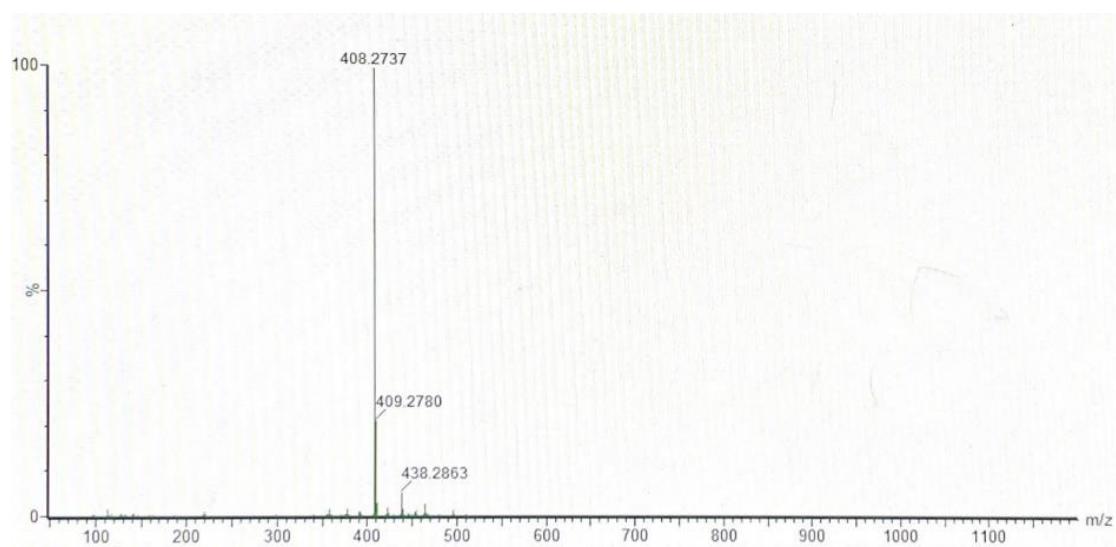


Figure S8. HR-ESI-MS spectrum for compound **1**

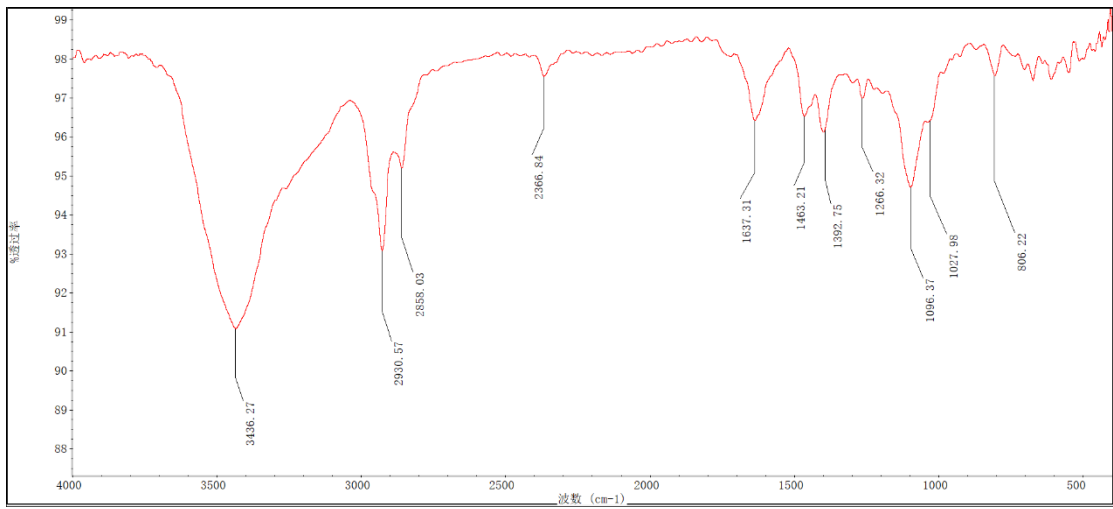


Figure S9. IR spectrum for compound 1

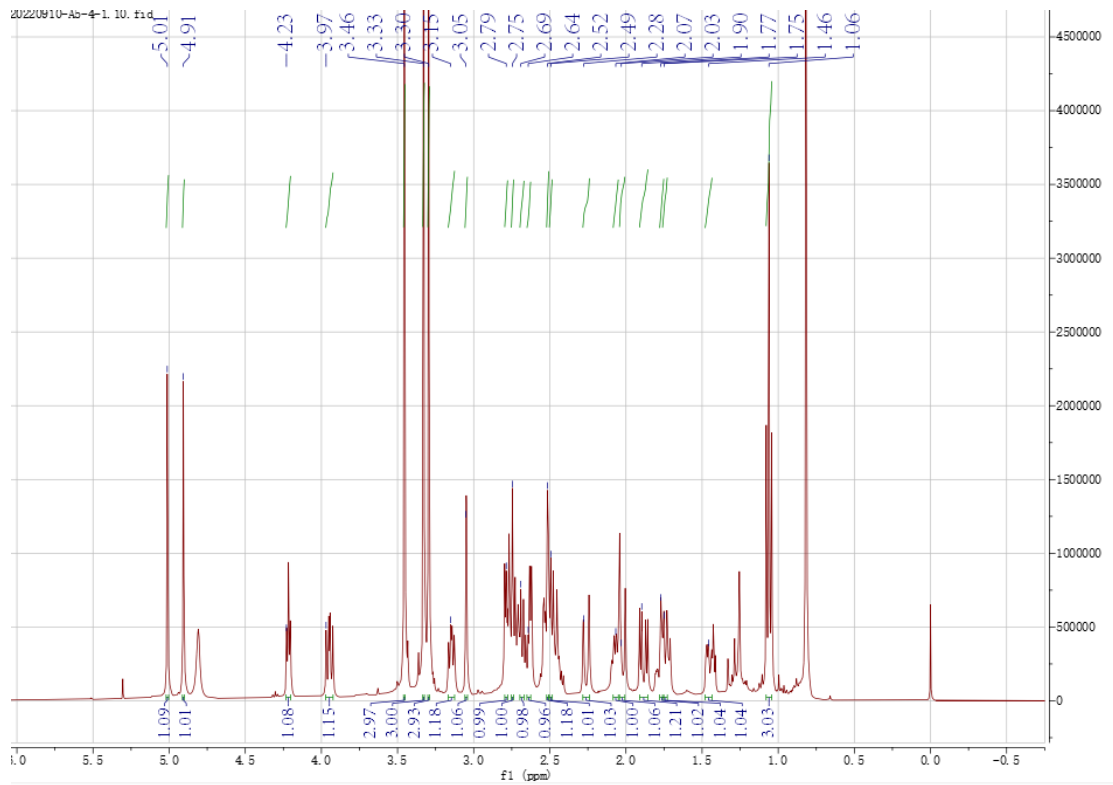


Figure S10. ¹H NMR spectrum in CDCl₃ for compound 2

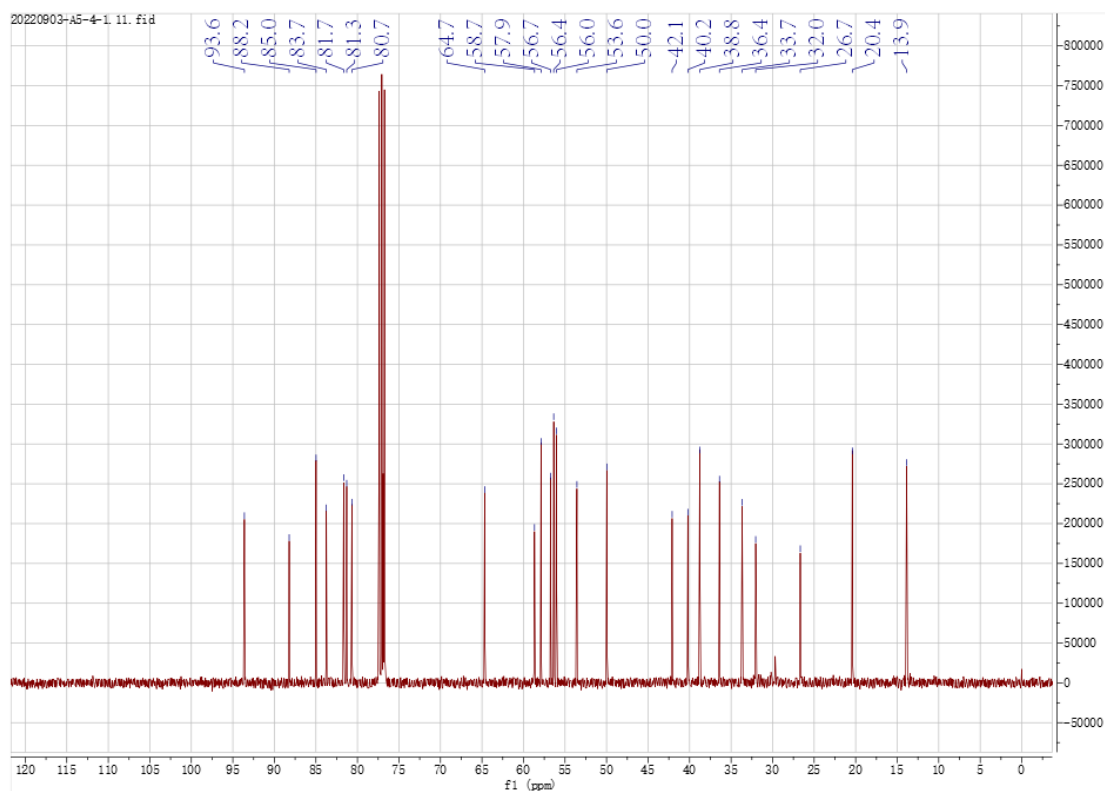


Figure S11. ^{13}C NMR spectrum in CDCl_3 for compound **2**

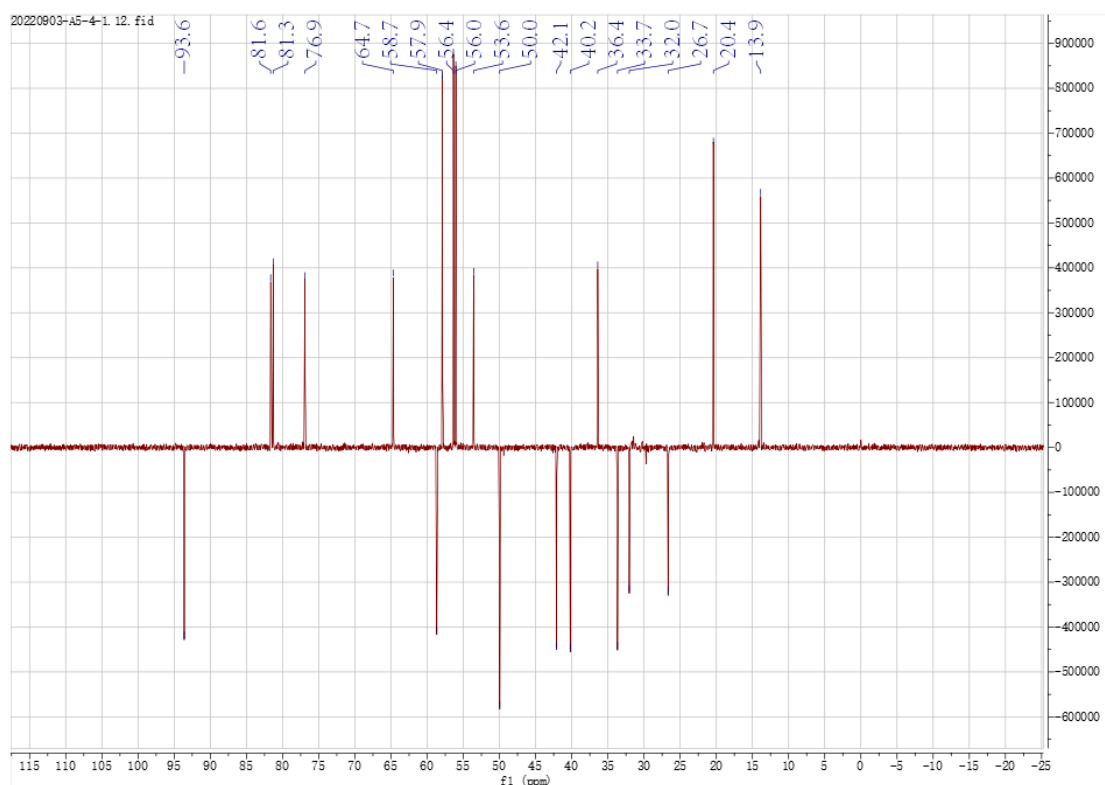


Figure S12. DEPT spectrum in CDCl_3 for compound **2**

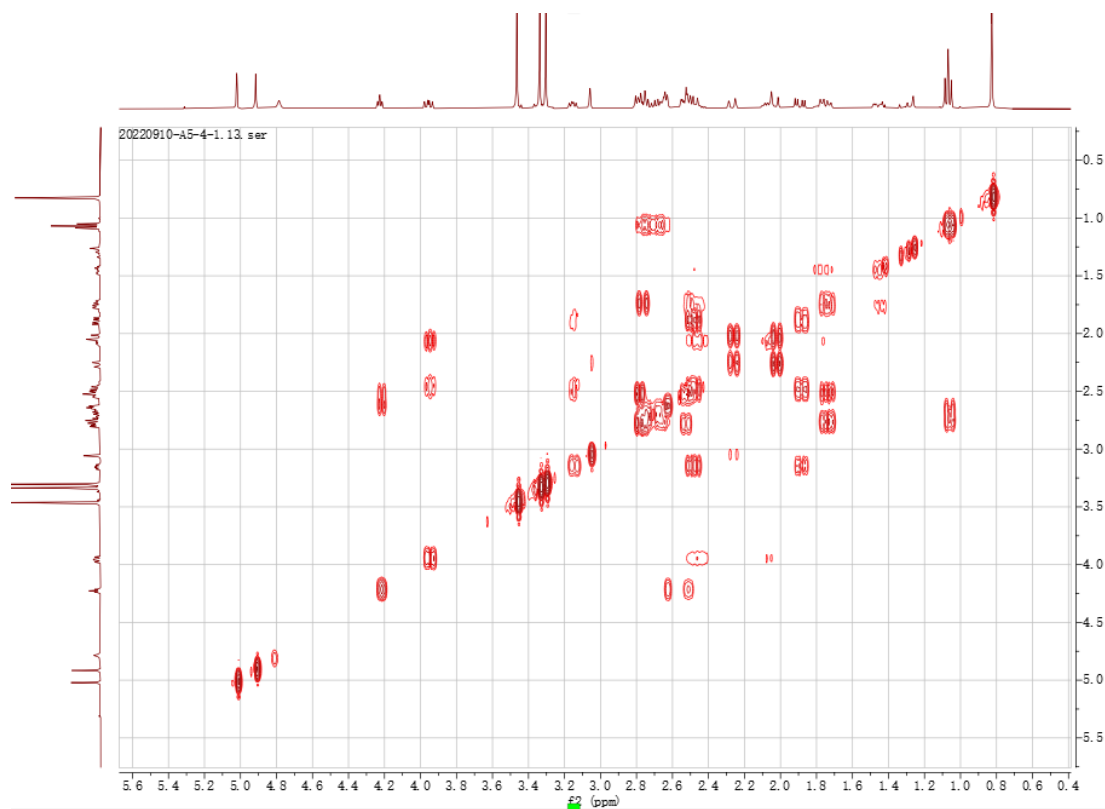


Figure S13. ^1H - ^1H COSY spectrum in CDCl_3 for compound **2**

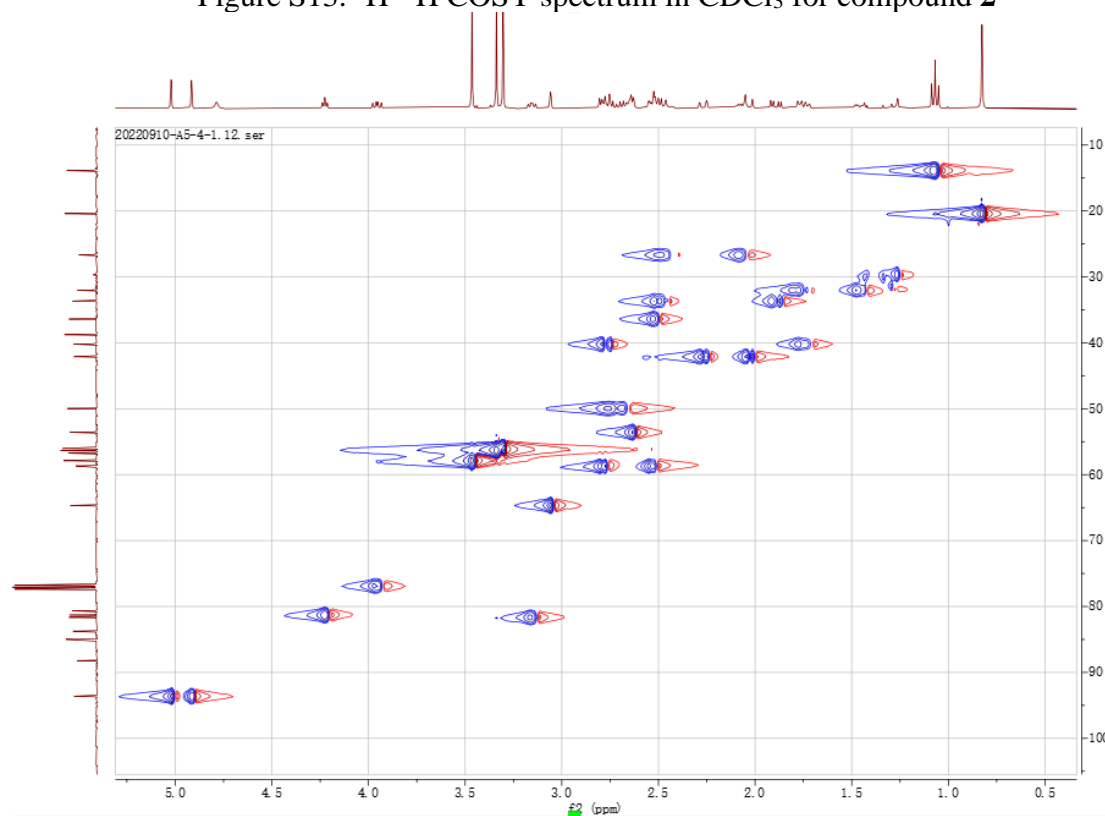


Figure S14. HMQC spectrum in CDCl_3 for compound **2**

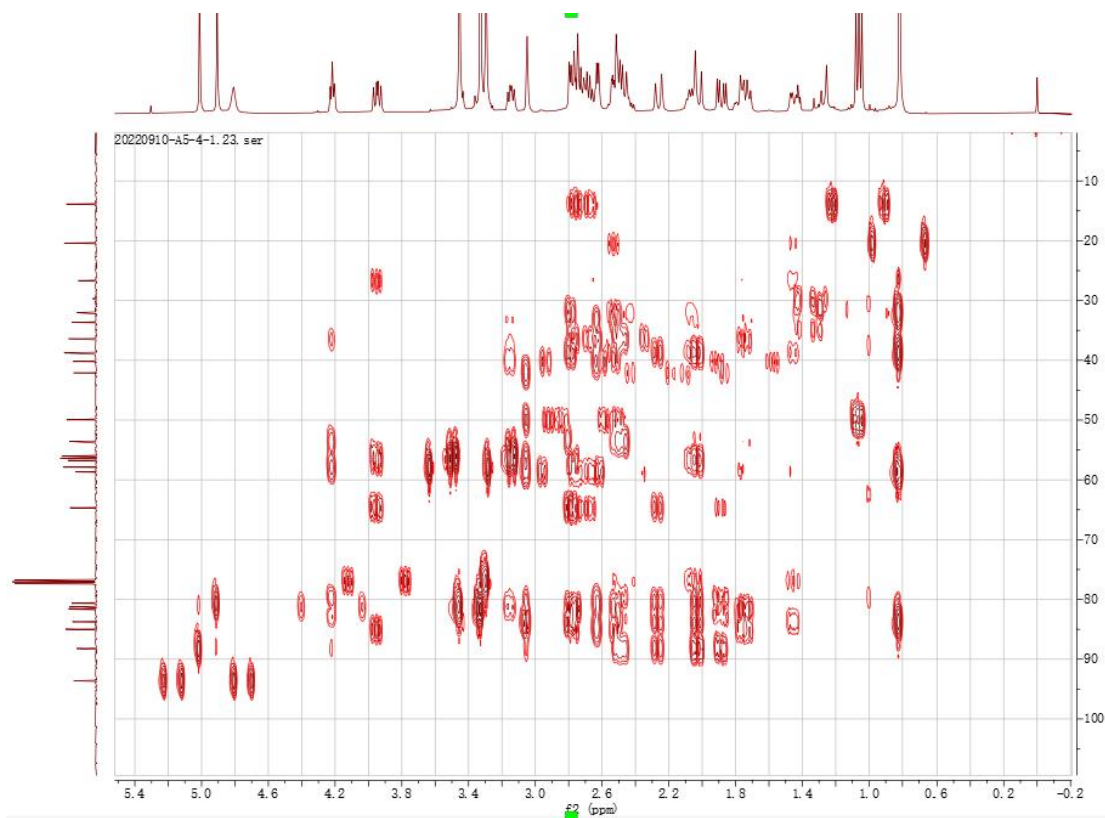


Figure S15. HMBC spectrum in CDCl_3 for compound **2**

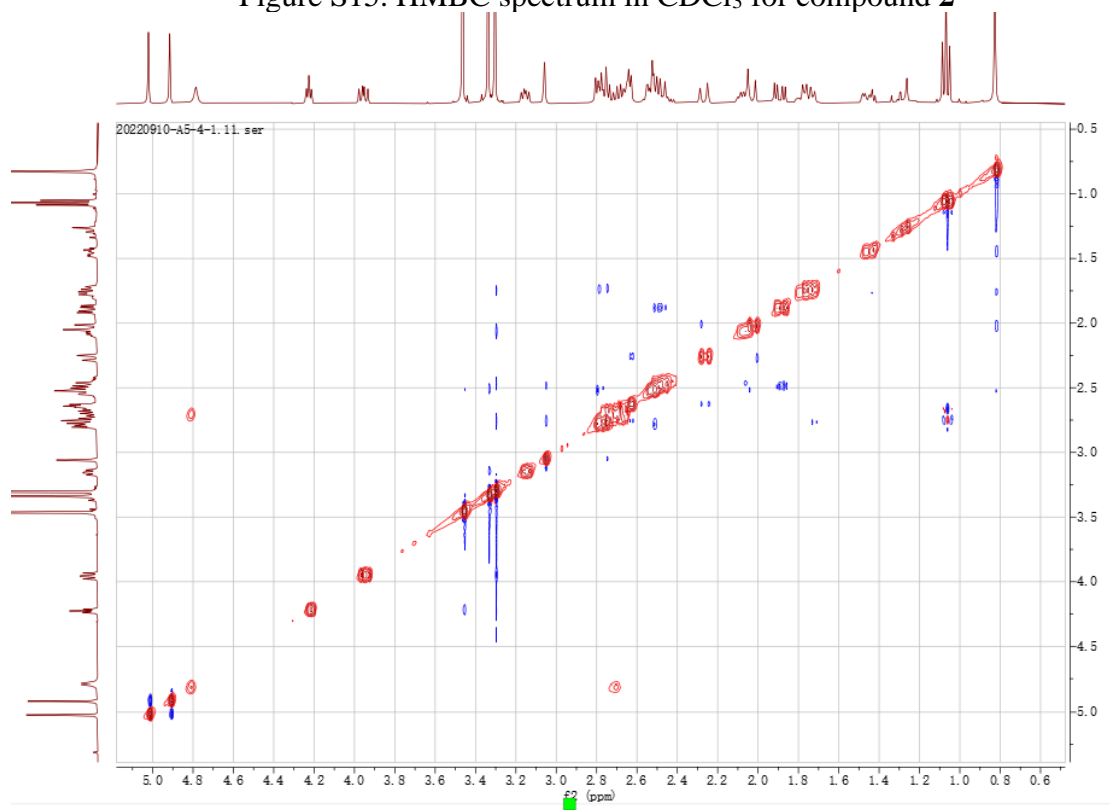


Figure S16. NOESY spectrum in CDCl_3 for compound **2**

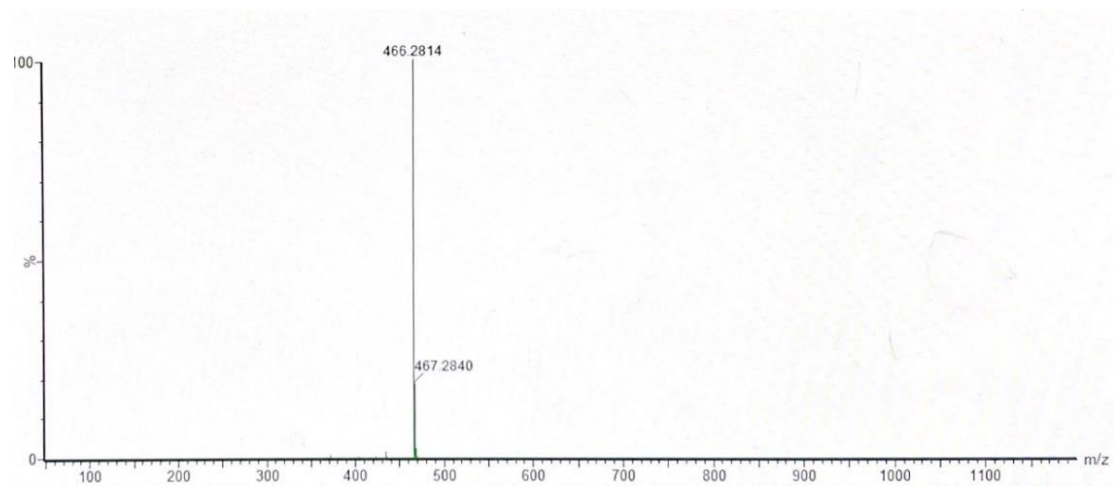


Figure S17. HR-ESI-MS spectrum for compound **2**

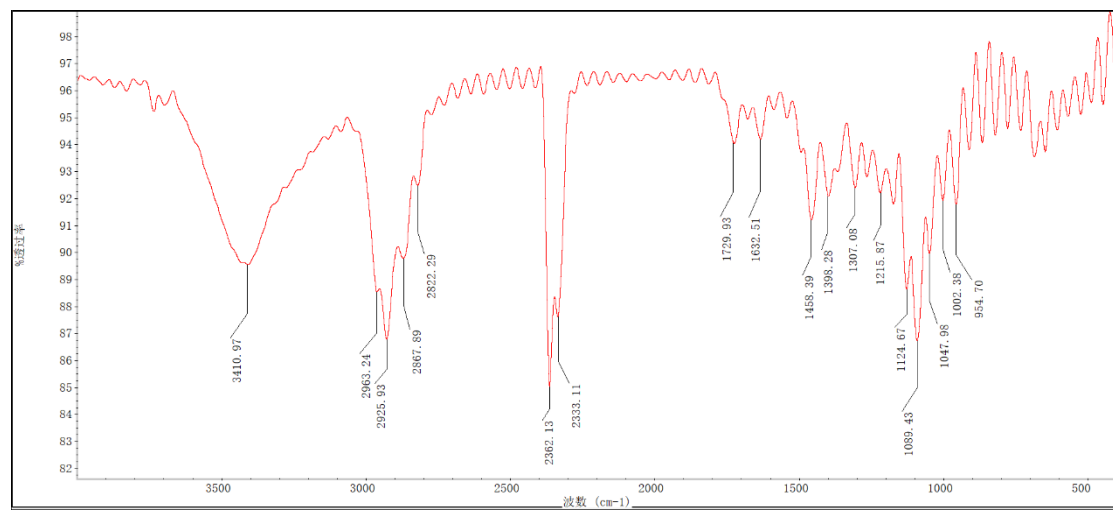


Figure S18. IR spectrum for compound **2**



Figure S19. ^1H NMR spectrum in CDCl_3 for compound **3**

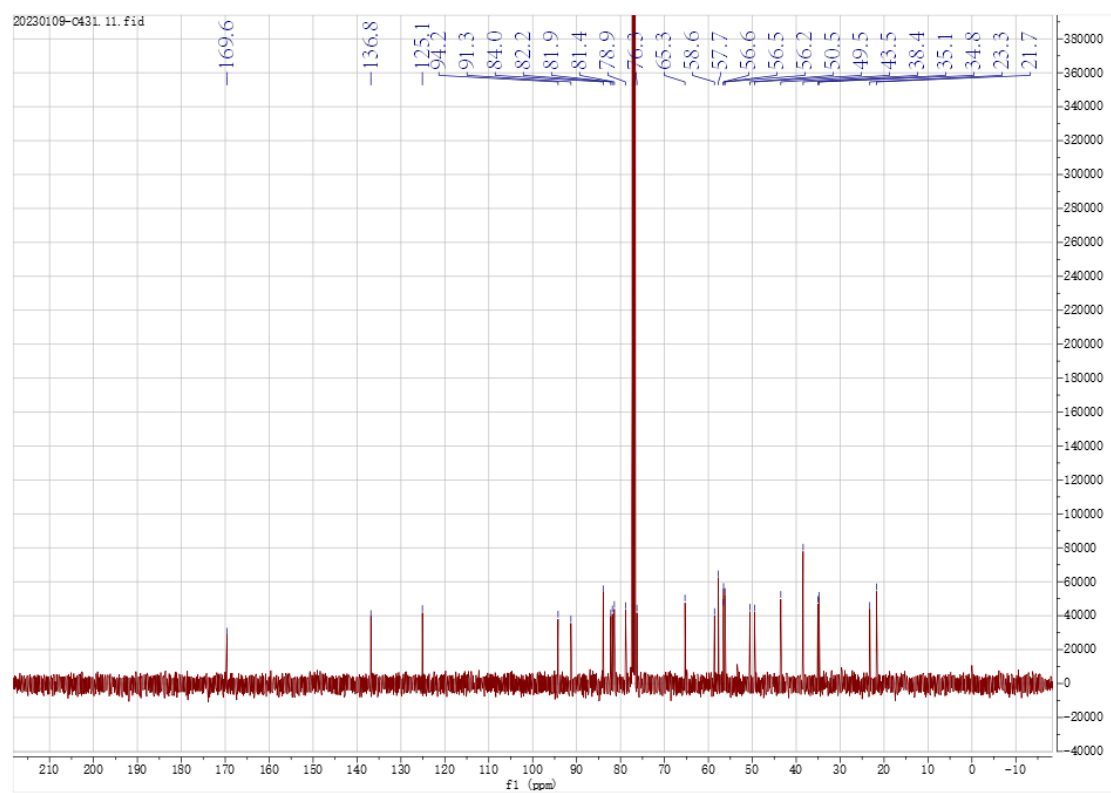


Figure S20. ^{13}C NMR spectrum in CDCl_3 for compound **3**

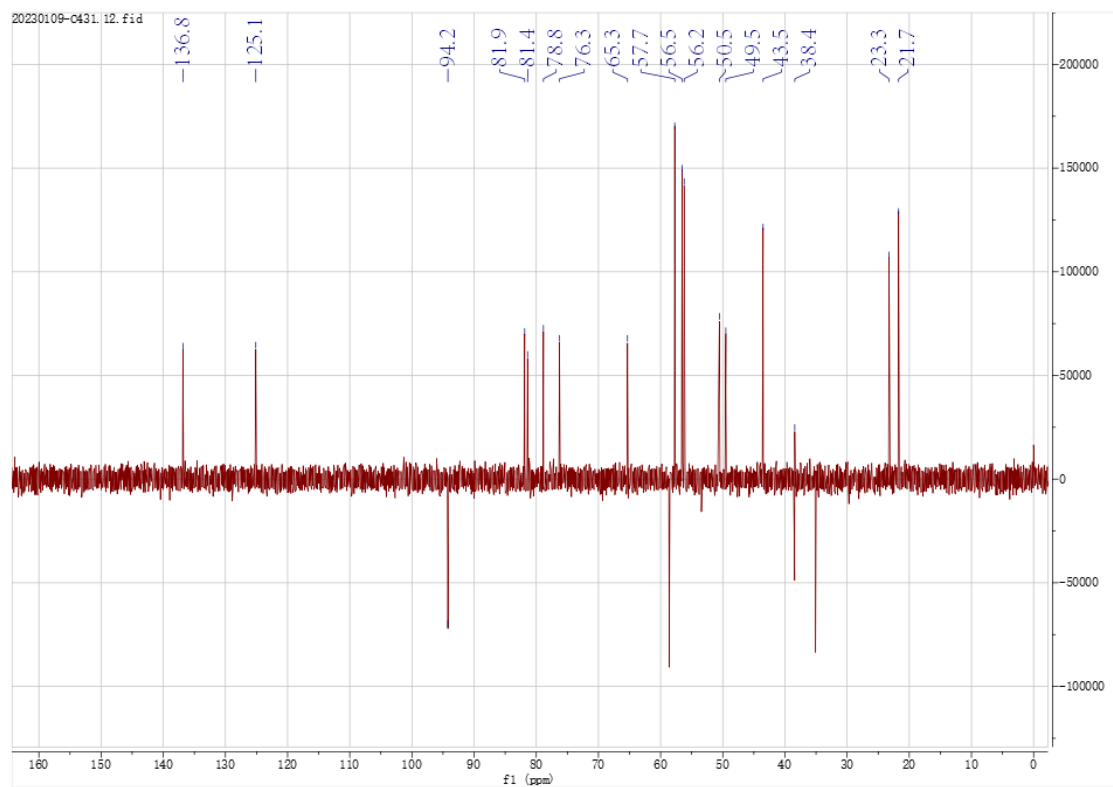


Figure S21. DEPT spectrum in CDCl_3 for compound **3**

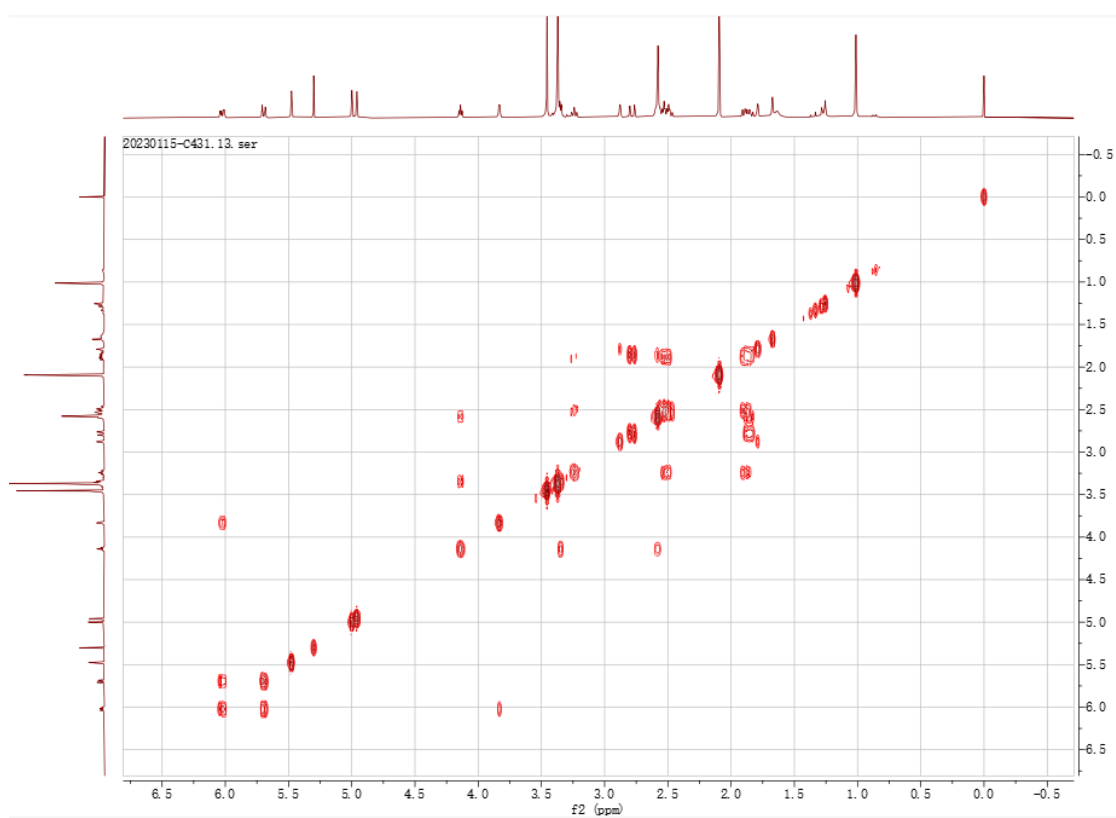


Figure S22. ^1H - ^1H COSY spectrum in CDCl_3 for compound **3**

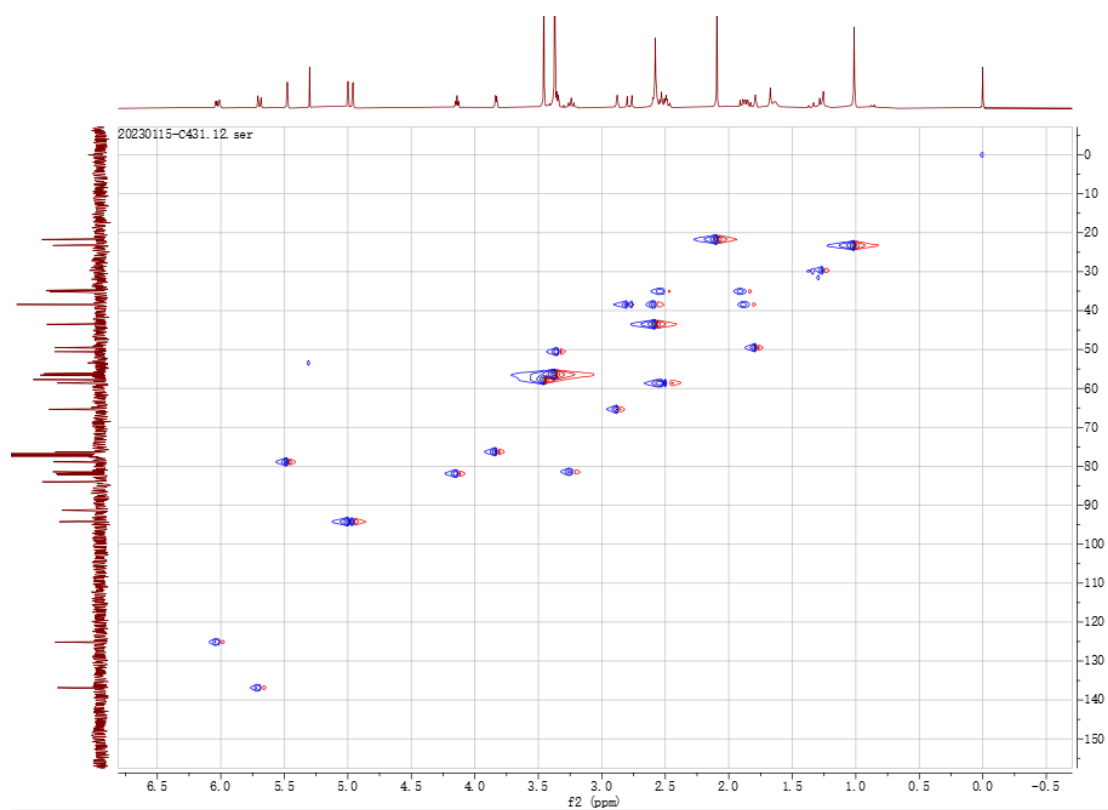


Figure S23. HMQC spectrum in CDCl₃ for compound **3**

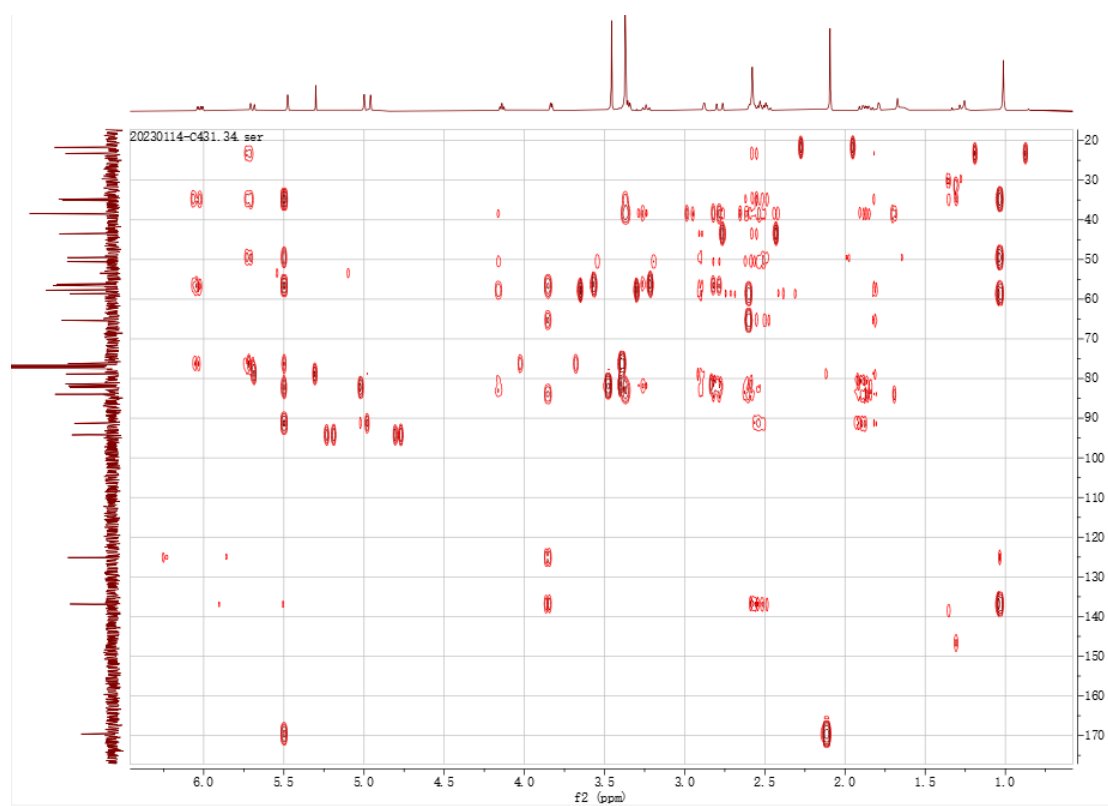


Figure S24. HMBC spectrum in CDCl₃ for compound **3**

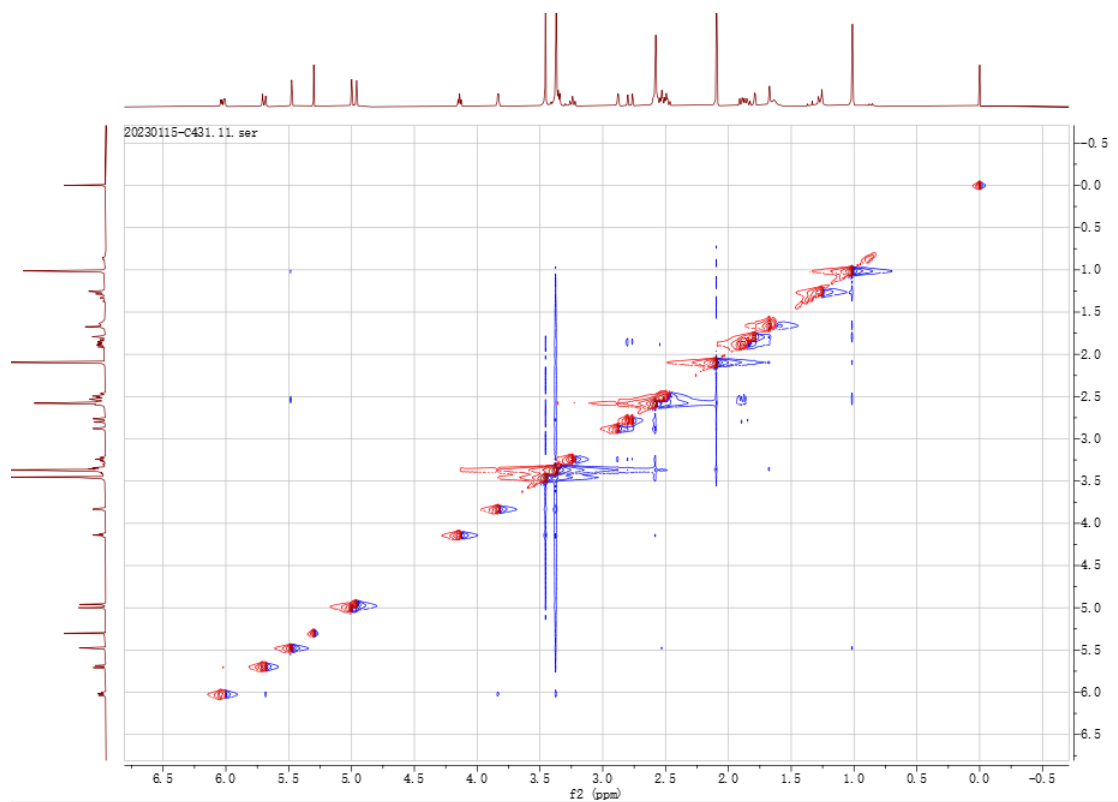


Figure S25. NOESY spectrum in CDCl_3 for compound **3**

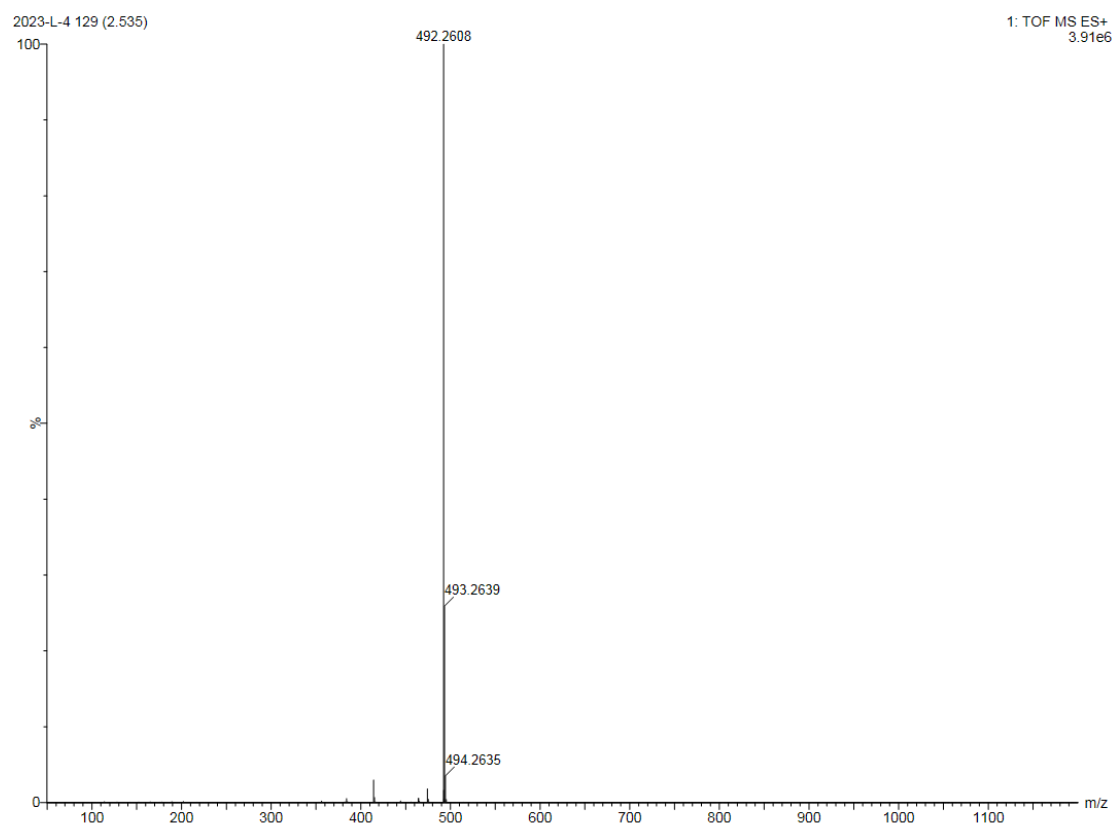


Figure S26. HR-ESI-MS spectrum for compound **3**

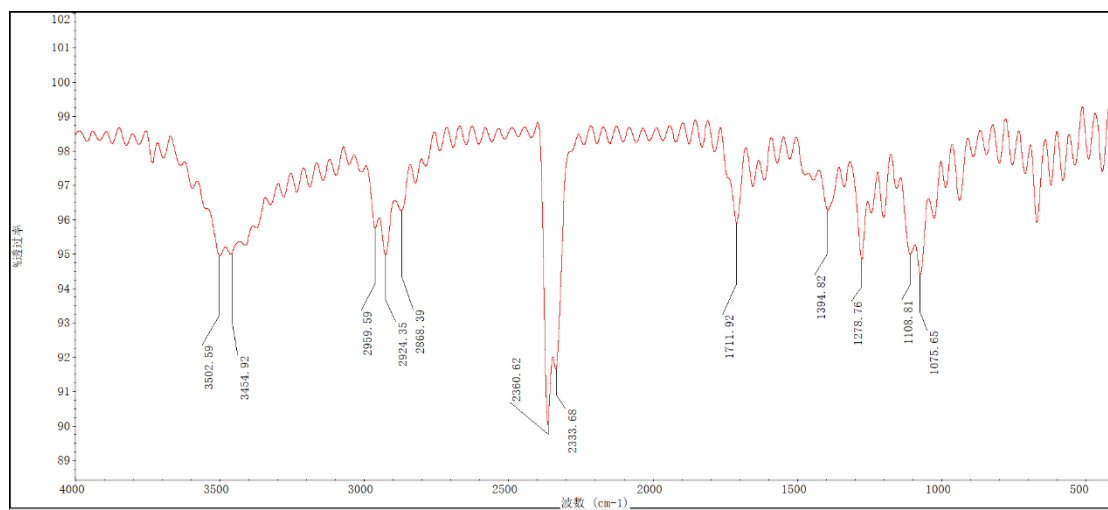


Figure S27. IR spectrum for compound 3

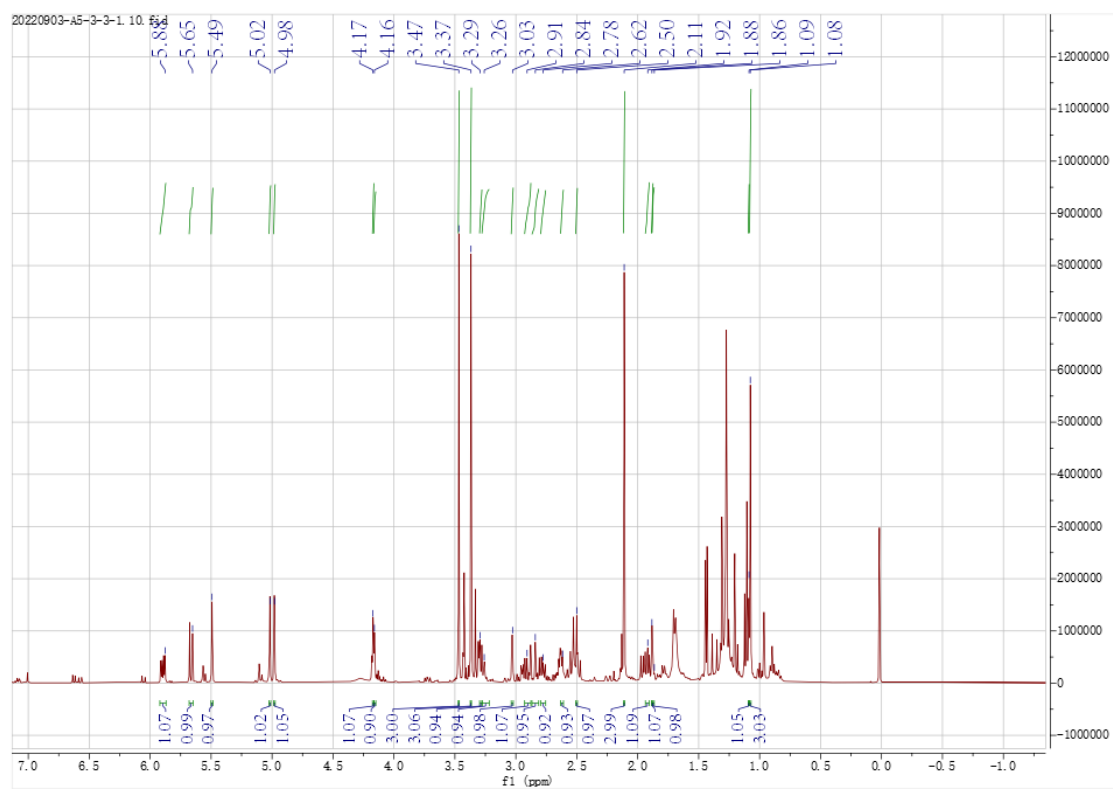


Figure S28. ¹H NMR spectrum in CDCl₃ for compound 4

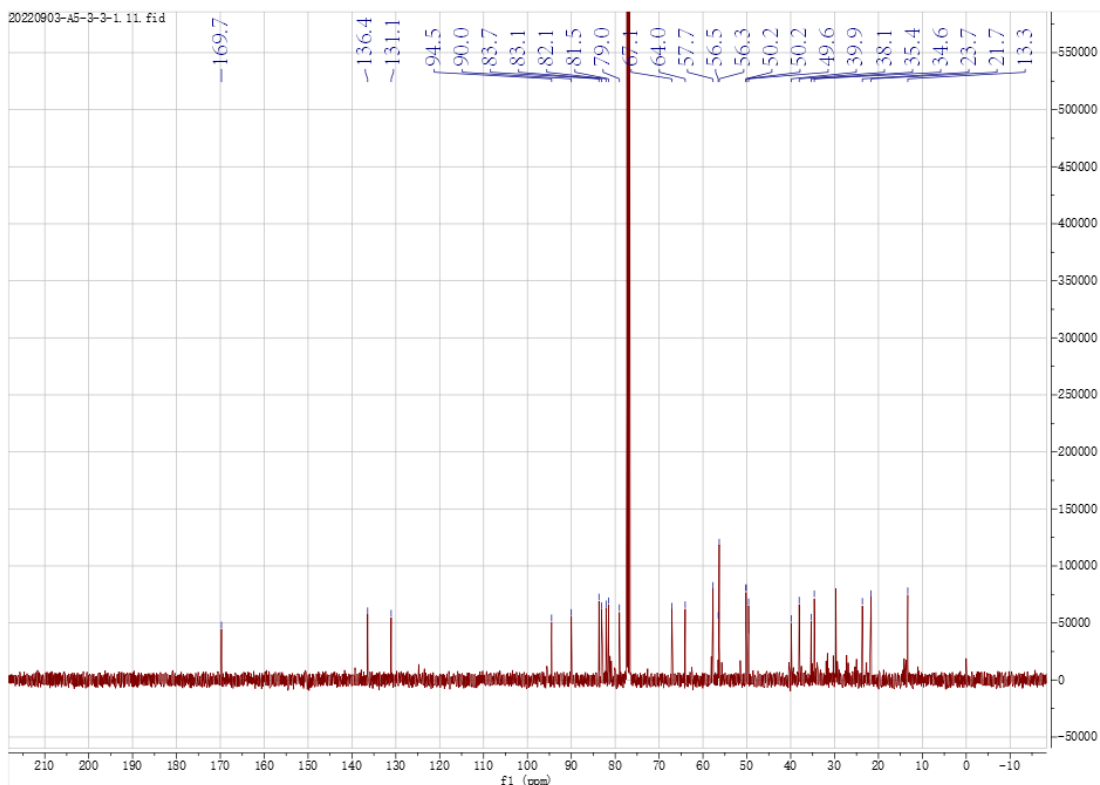


Figure S29. ^{13}C NMR spectrum in CDCl_3 for compound **4**

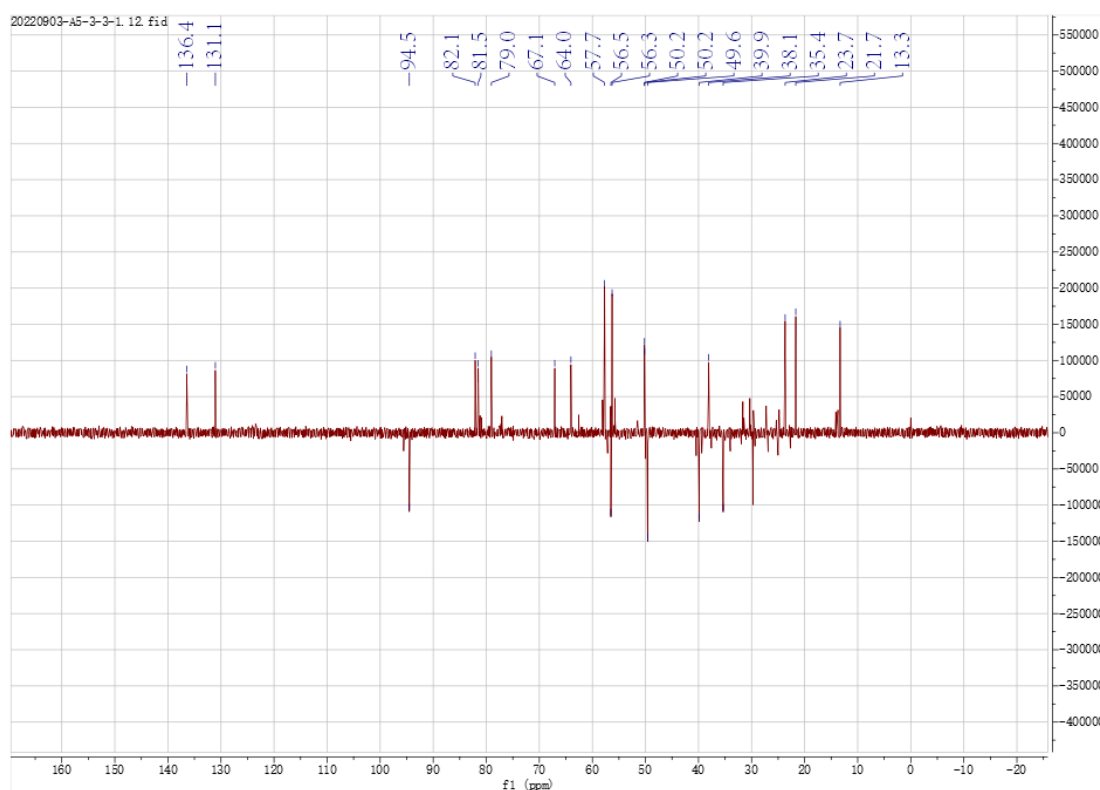


Figure S30. DEPT spectrum in CDCl_3 for compound **4**

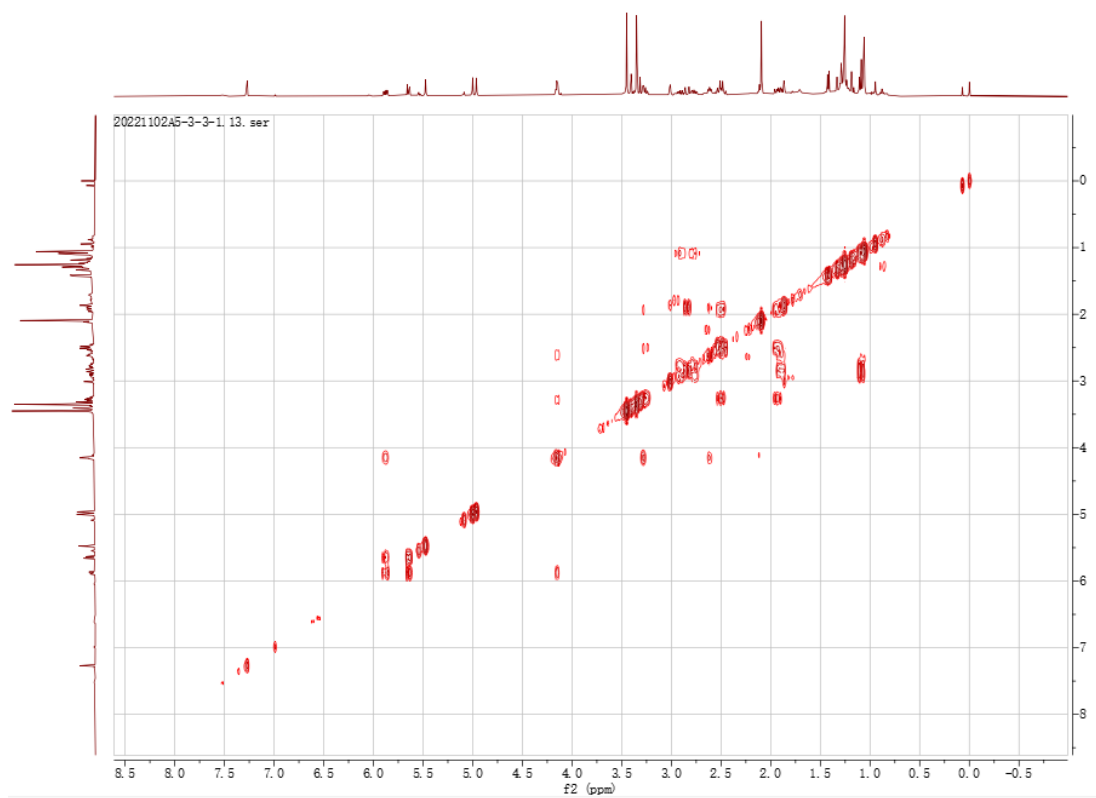


Figure S31. ^1H - ^1H COSY spectrum in CDCl_3 for compound **4**

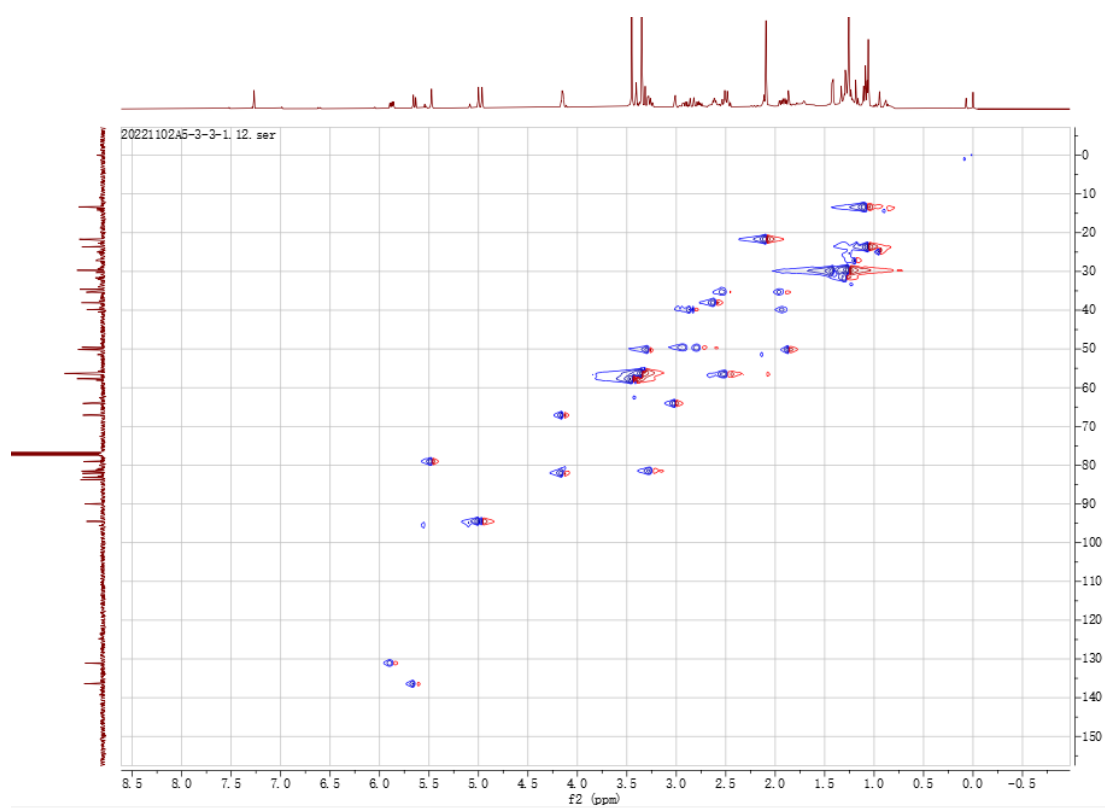


Figure S32. HMQC spectrum in CDCl_3 for compound **4**

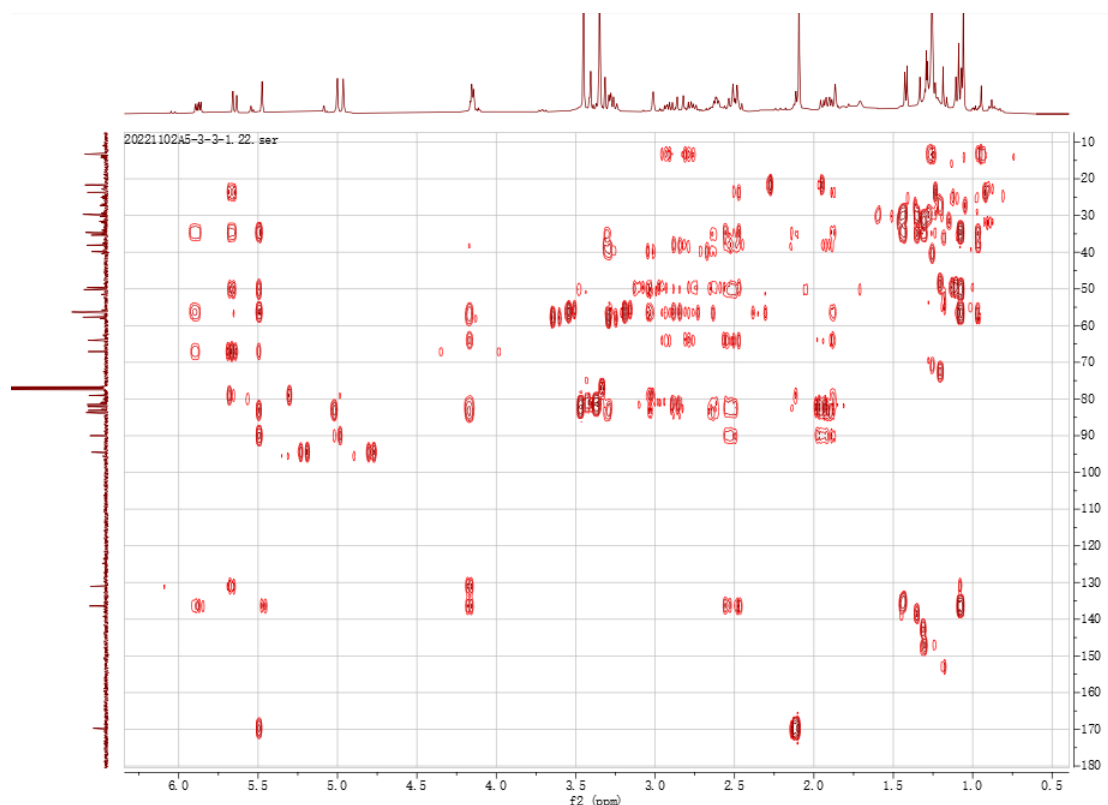


Figure S33. HMBC spectrum in CDCl₃ for compound **4**

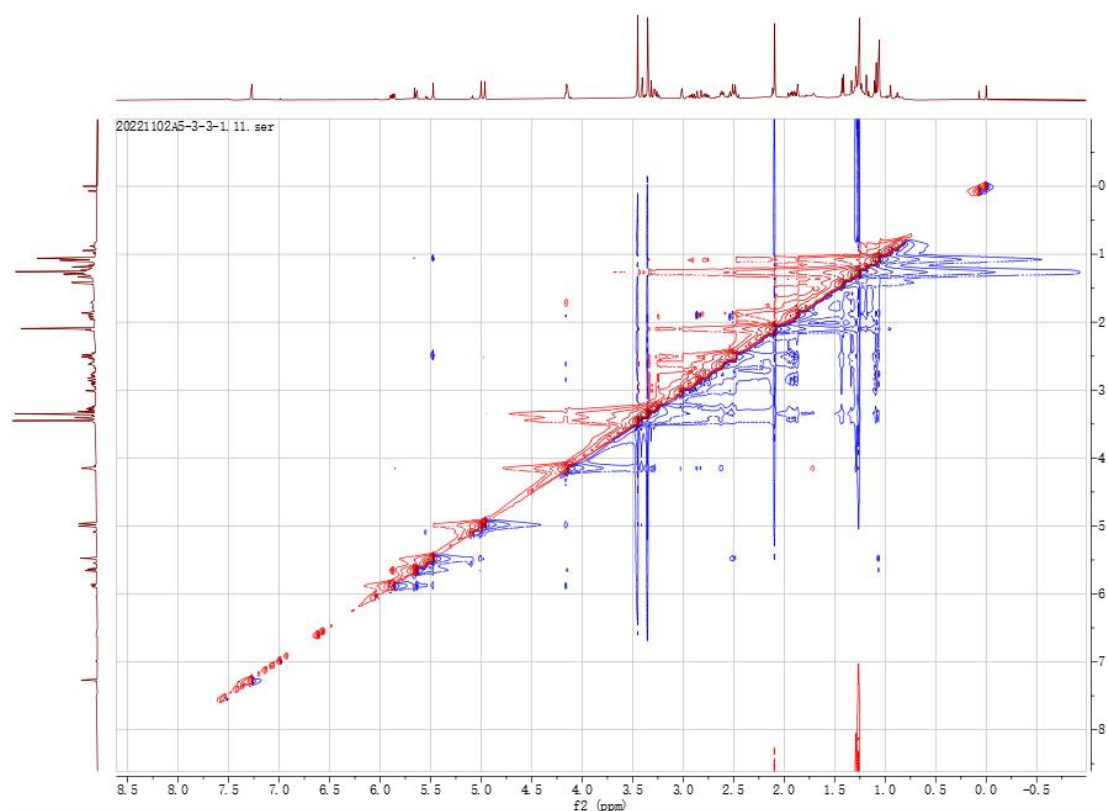


Figure S34. NOESY spectrum in CDCl₃ for compound **4**

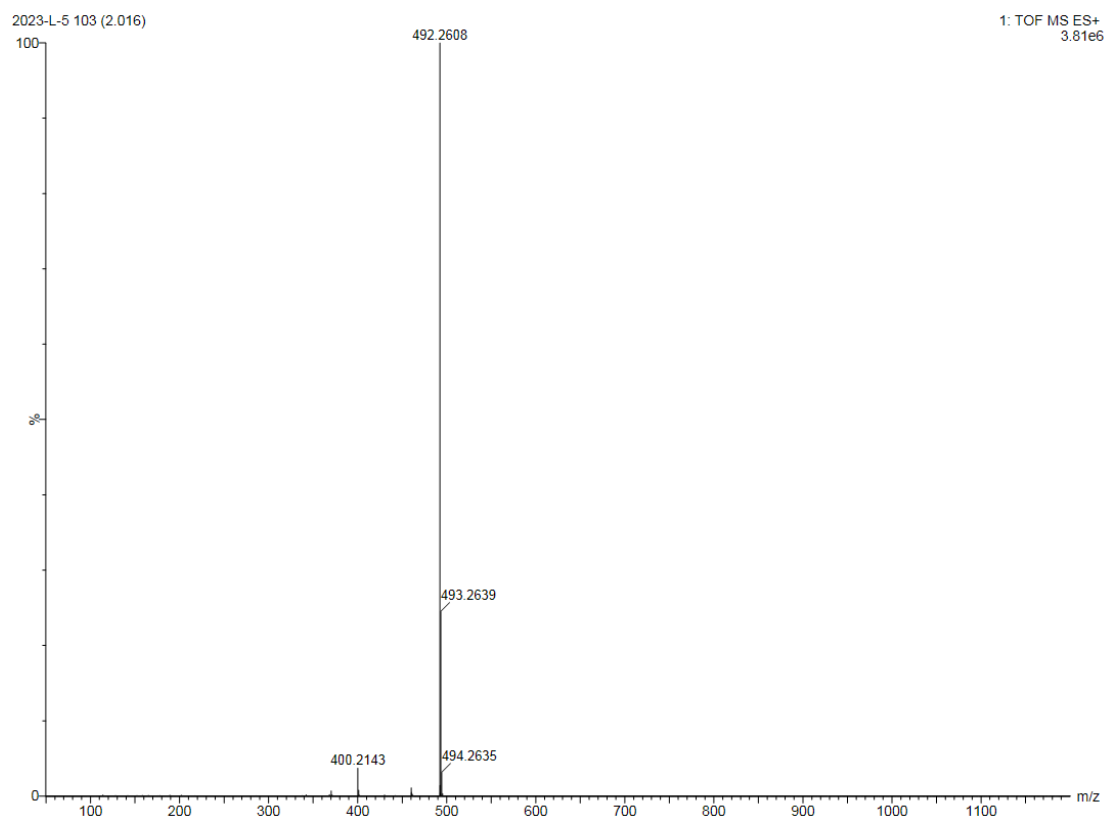


Figure S35. HR-ESI-MS spectrum for compound 4

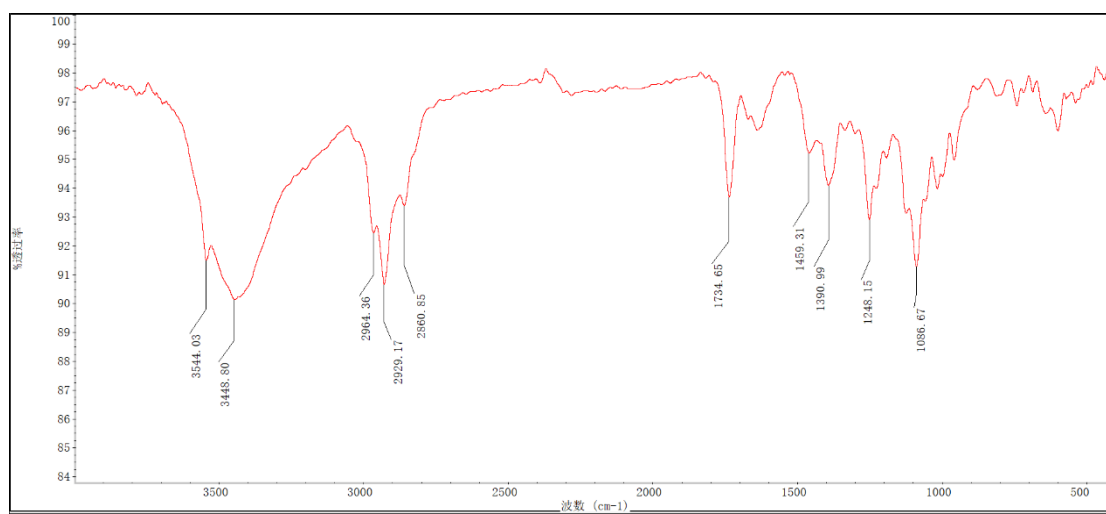


Figure S36. IR spectrum for compound 4

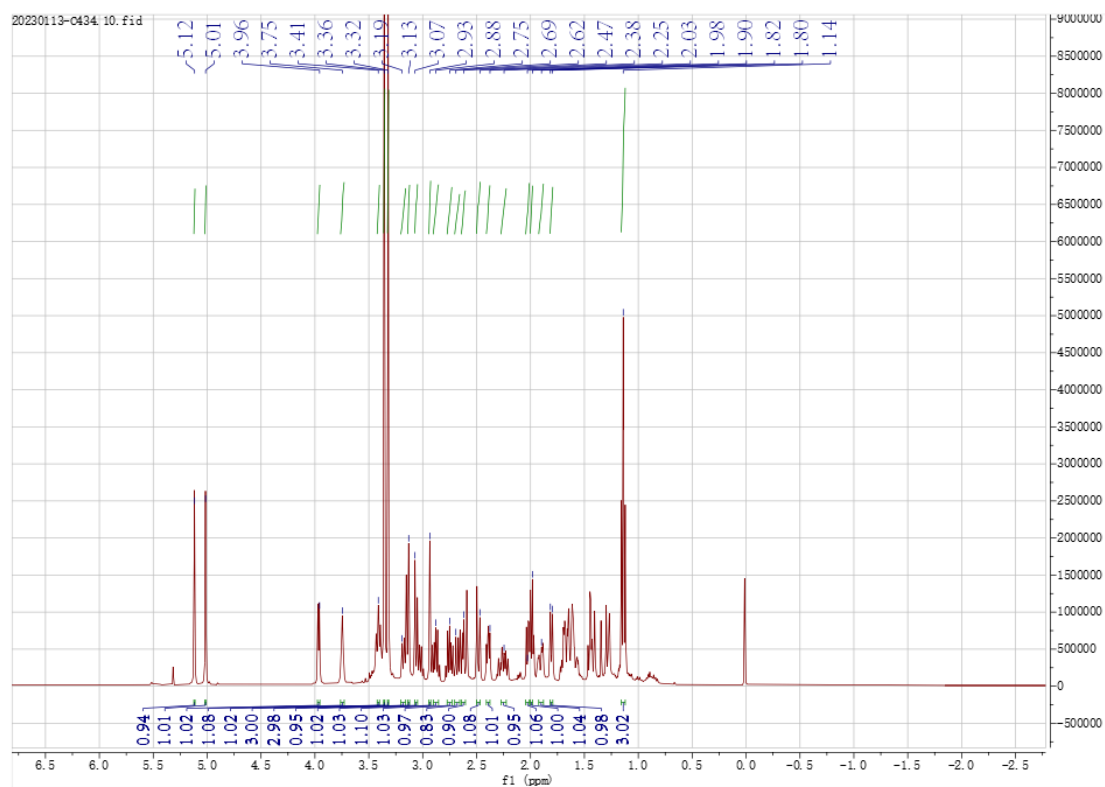


Figure S37. ^1H NMR spectrum in CDCl_3 for compound **5**

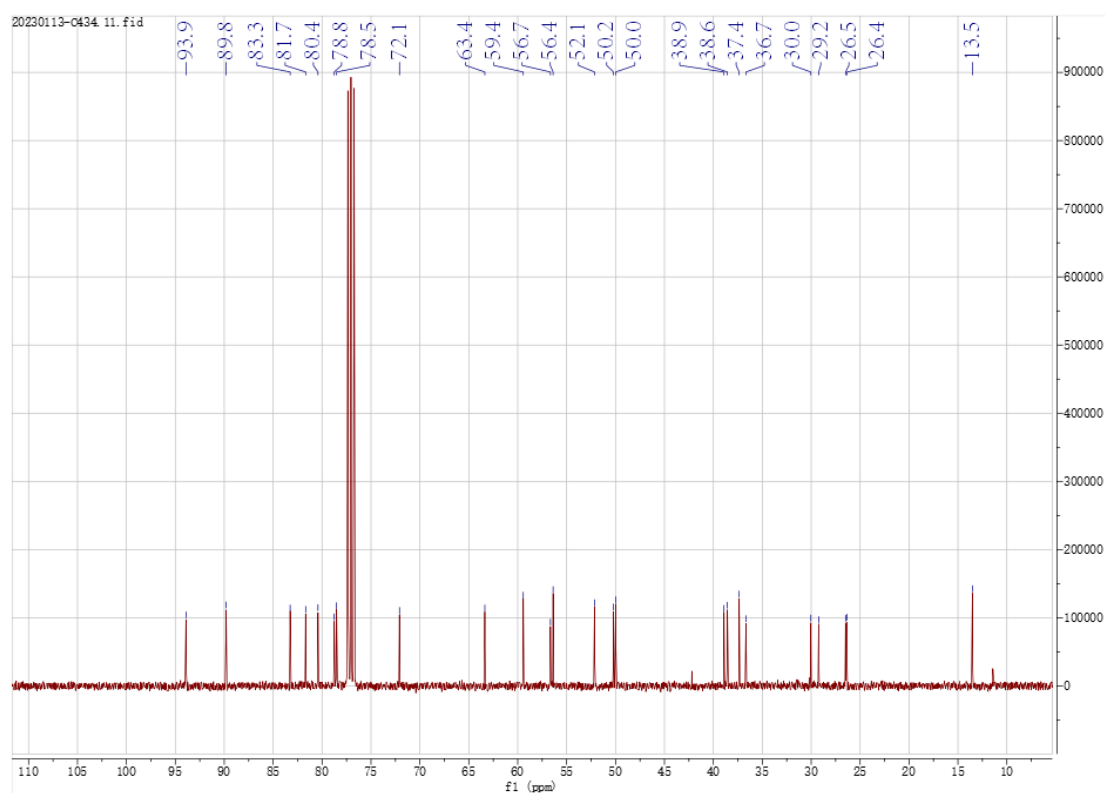


Figure S38. ^{13}C NMR spectrum in CDCl_3 for compound **5**

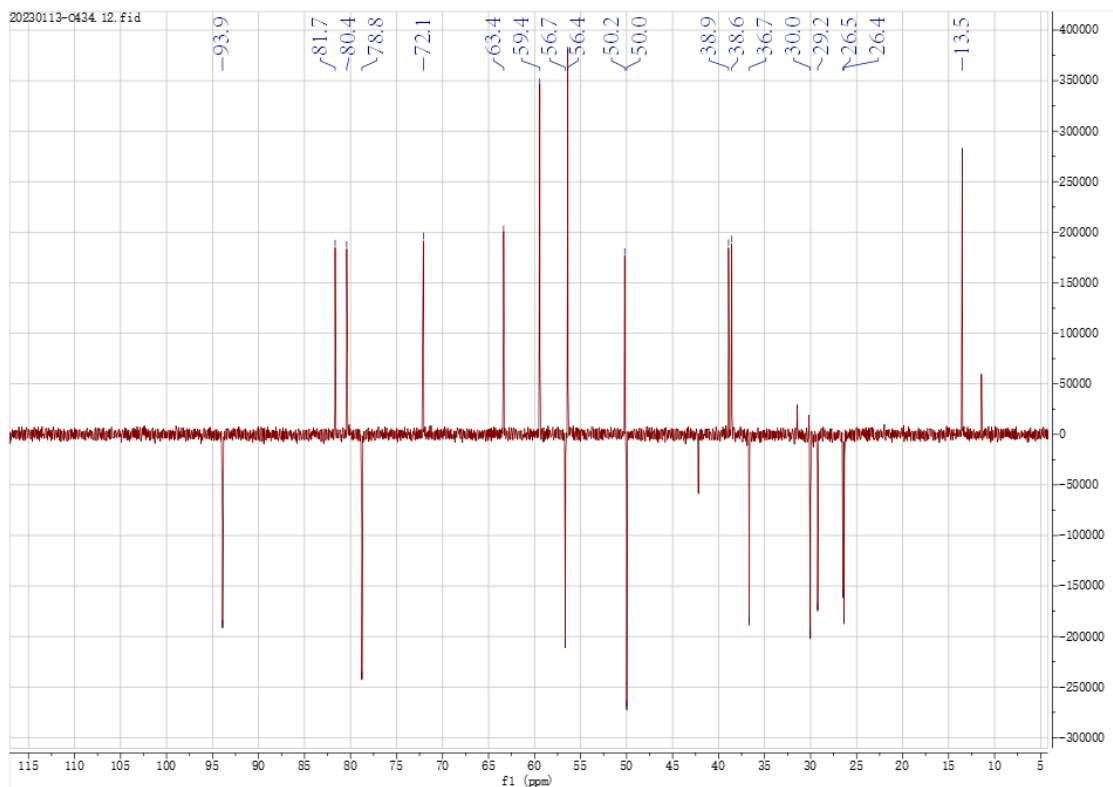


Figure S39. DEPT spectrum in CDCl_3 for compound **5**

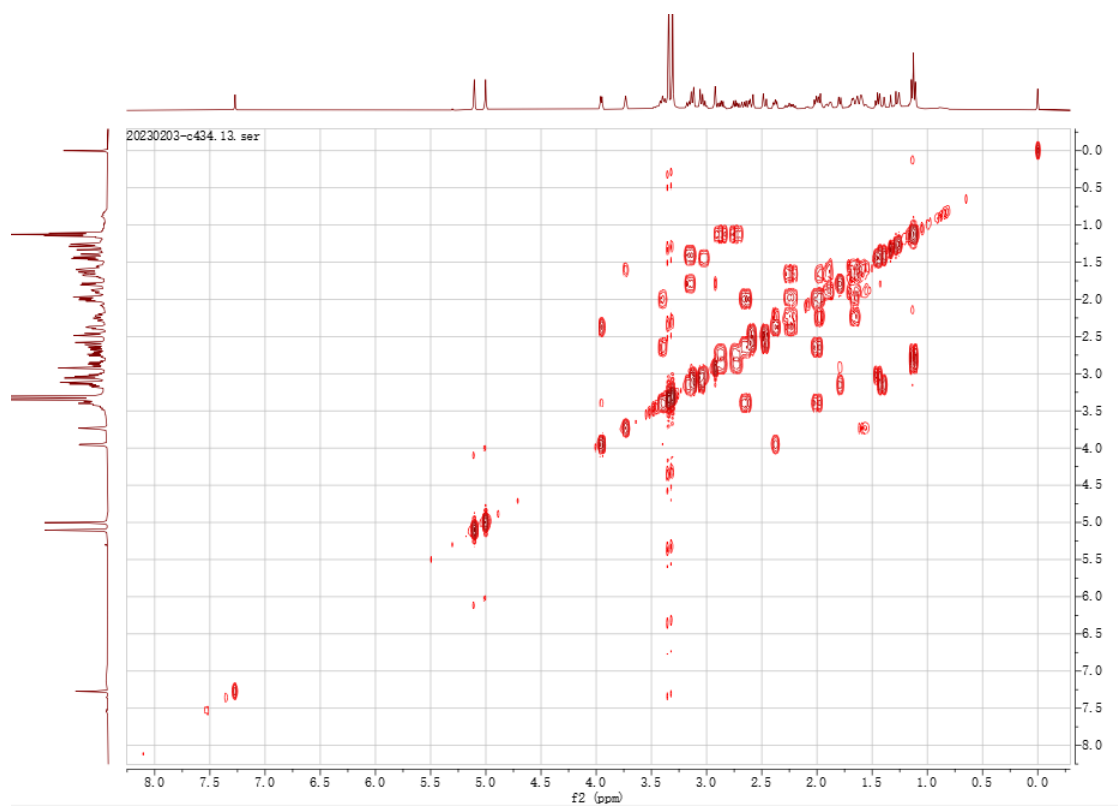


Figure S40. ^1H - ^1H COSY spectrum in CDCl_3 for compound **5**

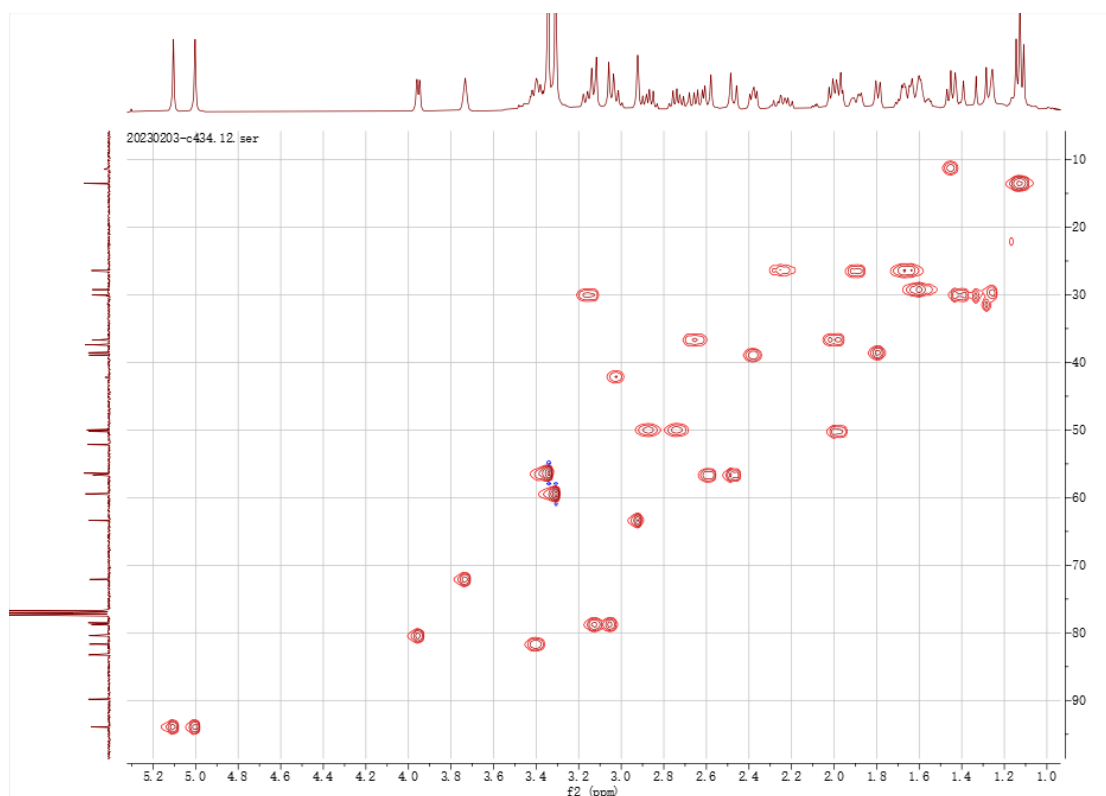


Figure S41. HMQC spectrum in CDCl₃ for compound **5**

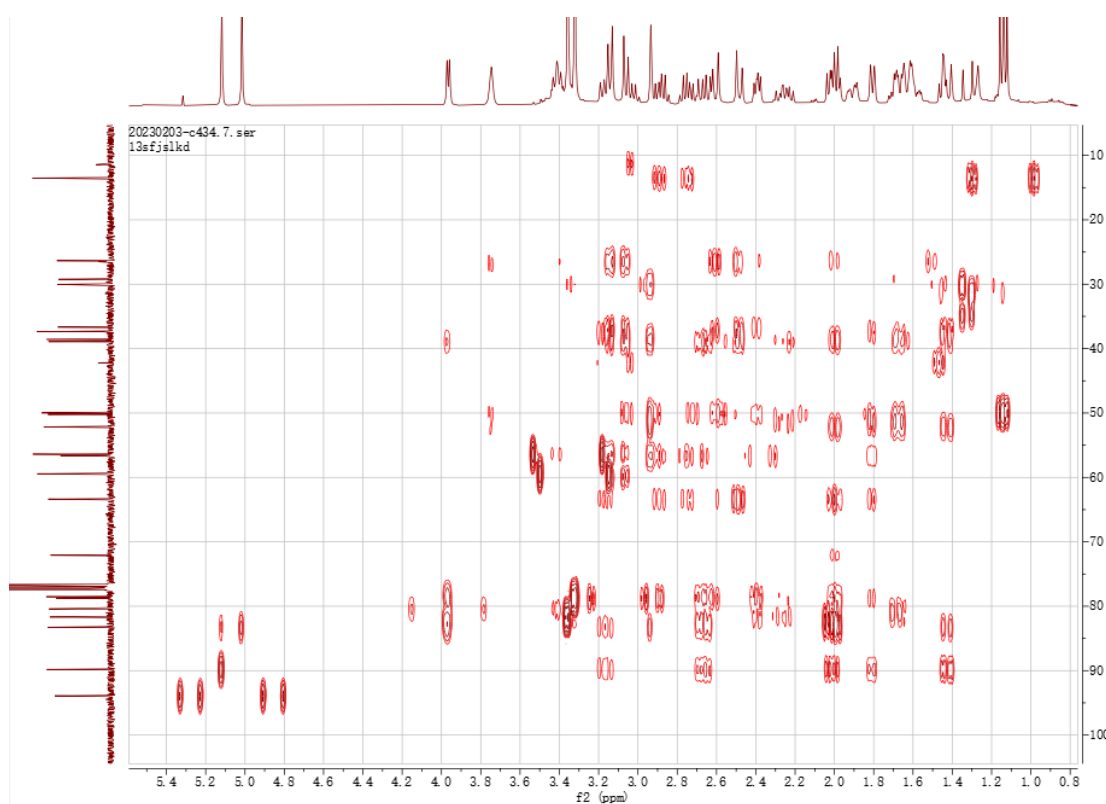


Figure S42. HMBC spectrum in CDCl₃ for compound **5**

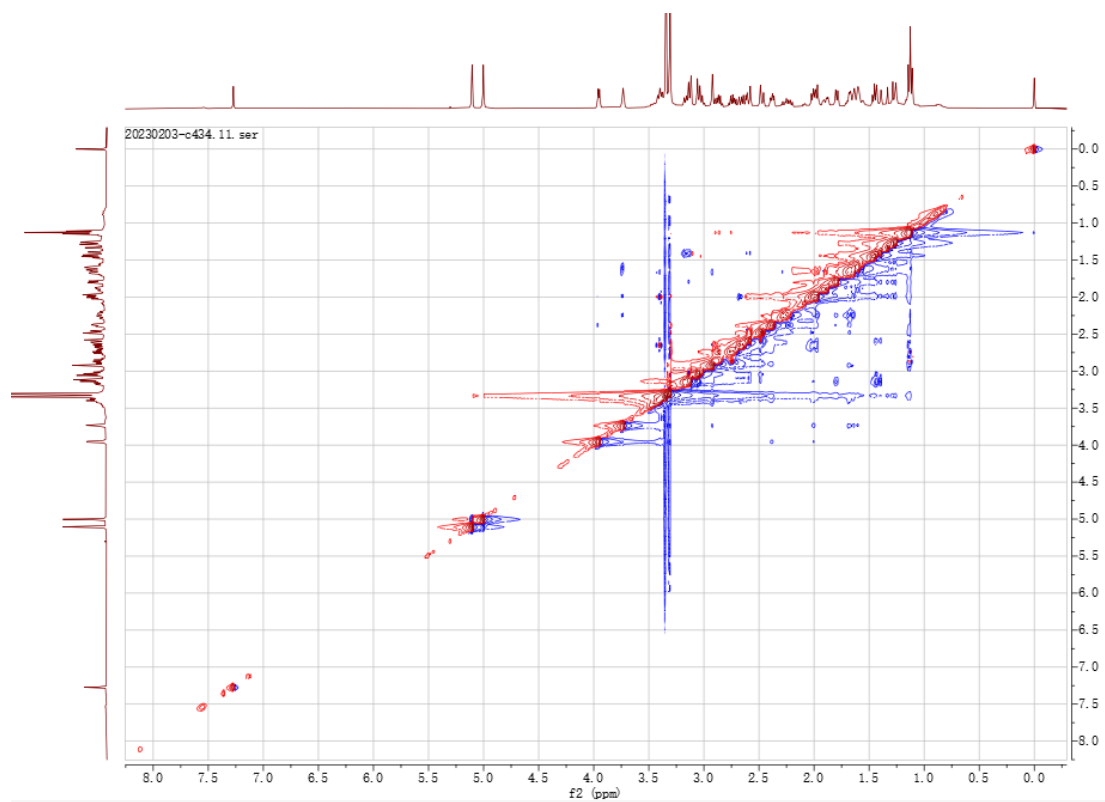


Figure S43. NOESY spectrum in CDCl_3 for compound **5**

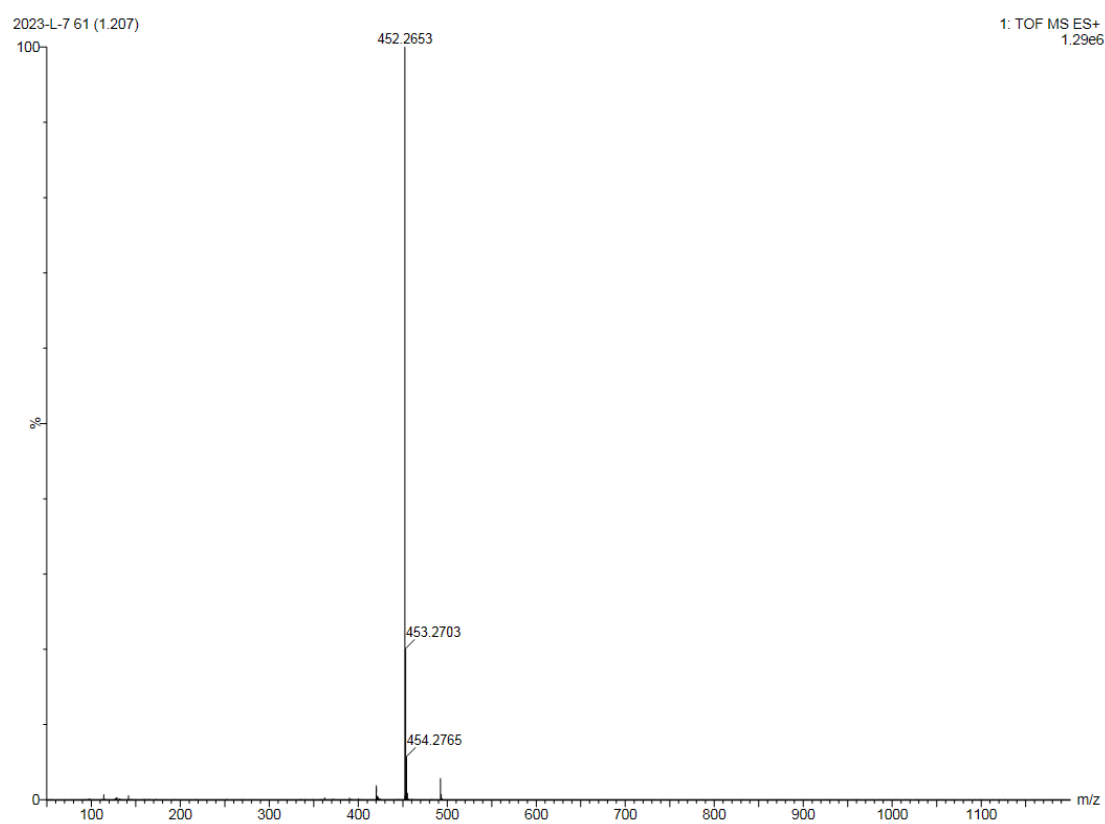


Figure S44. HR-ESI-MS spectrum for compound **5**

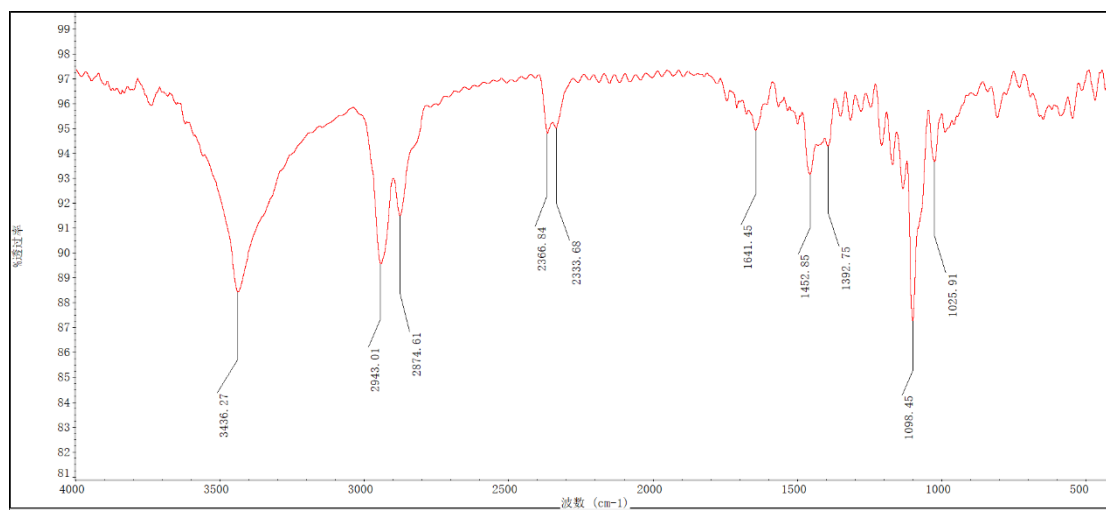


Figure S45. IR spectrum for compound **5**