

Supplementary Data 1

List of original spectra of compounds 1–5

1. NMR, UV, ECD, IR, and HRESIMS spectra of a mixture of 1 and 2	3
Fig. S1. ^1H NMR spectrum of 1/2 in CDCl_3 (800 MHz)	3
Fig. S2. Expansion of ^1H NMR spectrum of 1/2 in CDCl_3 (800 MHz)	4
Fig. S3. Expansion of ^1H NMR spectrum of 1/2 in CDCl_3 (800 MHz)	5
Fig. S4. Expansion of ^1H NMR spectrum of 1/2 in CDCl_3 (800 MHz)	6
Fig. S5. Expansion of ^1H NMR spectrum of 1/2 in CDCl_3 (800 MHz)	7
Fig. S6. ^{13}C NMR spectrum of 1/2 in CDCl_3 (200 MHz)	8
Fig. S7. Expansion of ^{13}C NMR spectrum of 1/2 in CDCl_3 (200 MHz)	9
Fig. S8. Expansion of ^{13}C NMR spectrum of 1/2 in CDCl_3 (200 MHz)	10
Fig. S9. Expansion of ^{13}C NMR spectrum of 1/2 in CDCl_3 (200 MHz)	11
Fig. S10. Expansion of ^{13}C NMR spectrum of 1/2 in CDCl_3 (200 MHz)	12
Fig. S11. DEPT-135 spectrum of 1/2 in CDCl_3 (200 MHz)	13
Fig. S12. Expansion of DEPT-135 spectrum of 1/2 in CDCl_3 (200 MHz)	14
Fig. S13. DEPT-90 spectrum of 1/2 in CDCl_3 (200 MHz)	15
Fig. S14. COSY spectrum of 1/2 in CDCl_3 (800 MHz)	16
Fig. S15. HSQC spectrum of 1/2 in CDCl_3 (800 MHz)	17
Fig. S16. HMBC spectrum of 1/2 in CDCl_3 (800 MHz)	18
Fig. S17. ROESY spectrum of 1/2 in CDCl_3 (800 MHz)	19
Fig. S18. TOCSY spectrum of 1/2 in CDCl_3 (800 MHz)	20
Fig. S19. UV spectrum of 1/2 (in MeOH)	21
Fig. S20. ECD spectrum of 1/2 (in MeOH)	22
Fig. S21. IR spectrum (film on KBr pellet) of 1/2	23
Fig. S22. HRESIMS of 1/2	24
2. NMR, UV, ECD, IR, and HRESIMS spectra of a mixture of 3 and 4	25
Fig. S23. ^1H NMR spectrum of 3/4 in CDCl_3 (800 MHz)	25
Fig. S24. Expansion of ^1H NMR spectrum of 3/4 in CDCl_3 (800 MHz)	26
Fig. S25. Expansion of ^1H NMR spectrum of 3/4 in CDCl_3 (800 MHz)	27
Fig. S26. Expansion of ^1H NMR spectrum of 3/4 in CDCl_3 (800 MHz)	28
Fig. S27. Expansion of ^1H NMR spectrum of 3/4 in CDCl_3 (800 MHz)	29
Fig. S28. ^{13}C NMR spectrum of 3/4 in CDCl_3 (200 MHz)	30

Fig. S29. Expansion of ^{13}C NMR spectrum of 3/4 in CDCl_3 (200 MHz)·····	31
Fig. S30. Expansion of ^{13}C NMR spectrum of 3/4 in CDCl_3 (200 MHz)·····	32
Fig. S31. Expansion of ^{13}C NMR spectrum of 3/4 in CDCl_3 (200 MHz)·····	33
Fig. S32. Expansion of ^{13}C NMR spectrum of 3/4 in CDCl_3 (200 MHz)·····	34
Fig. S33. DEPT-135 spectrum of 3/4 in CDCl_3 (200 MHz)·····	35
Fig. S34. Expansion of DEPT-135 spectrum of 3/4 in CDCl_3 (200 MHz)·····	36
Fig. S35. DEPT-90 spectrum of 3/4 in CDCl_3 (200 MHz)·····	37
Fig. S36. COSY spectrum of 3/4 in CDCl_3 (800 MHz)·····	38
Fig. S37. HSQC spectrum of 3/4 in CDCl_3 (800 MHz)·····	39
Fig. S38. HMBC spectrum of 3/4 in CDCl_3 (800 MHz)·····	40
Fig. S39. ROESY spectrum of 3/4 in CDCl_3 (800 MHz)·····	41
Fig. S40. TOCSY spectrum of 3/4 in CDCl_3 (800 MHz)·····	42
Fig. S41. UV spectrum of 3/4 (in MeOH)·····	43
Fig. S42. ECD spectrum of 3/4 (in MeOH)·····	44
Fig. S43. IR spectrum (film on KBr pellet) of 3/4 ·····	45
Fig. S44. HRESIMS of 3/4 ·····	46
3. NMR, UV, ECD, IR, and HRESIMS spectra of 5 ·····	47
Fig. S45. ^1H NMR spectrum of 5 in CDCl_3 (800 MHz)·····	47
Fig. S46. Expansion of ^1H NMR spectrum of 5 in CDCl_3 (800 MHz)·····	48
Fig. S47. ^{13}C NMR spectrum of 5 in CDCl_3 (200 MHz)·····	49
Fig. S48. DEPT-135 spectrum of 5 in CDCl_3 (200 MHz)·····	50
Fig. S49. DEPT-90 spectrum of 5 in CDCl_3 (200 MHz)·····	51
Fig. S50. COSY spectrum of 5 in CDCl_3 (800 MHz)·····	52
Fig. S51. HSQC spectrum of 5 in CDCl_3 (800 MHz)·····	53
Fig. S52. HMBC spectrum of 5 in CDCl_3 (800 MHz)·····	54
Fig. S53. ROESY spectrum of 5 in CDCl_3 (800 MHz)·····	55
Fig. S54. ^1H - ^{15}N HSQC spectrum of 5 in CDCl_3 (400 MHz)·····	56
Fig. S55. UV spectrum of 5 (in MeOH)·····	57
Fig. S56. ECD spectrum of 5 (in MeOH)·····	58
Fig. S57. IR spectrum (film on KBr pellet) of 5 ·····	59
Fig. S58. HRESIMS of 5 ·····	60

1. NMR, UV, ECD, IR, and HRESIMS spectra of a mixture of 1 and 2

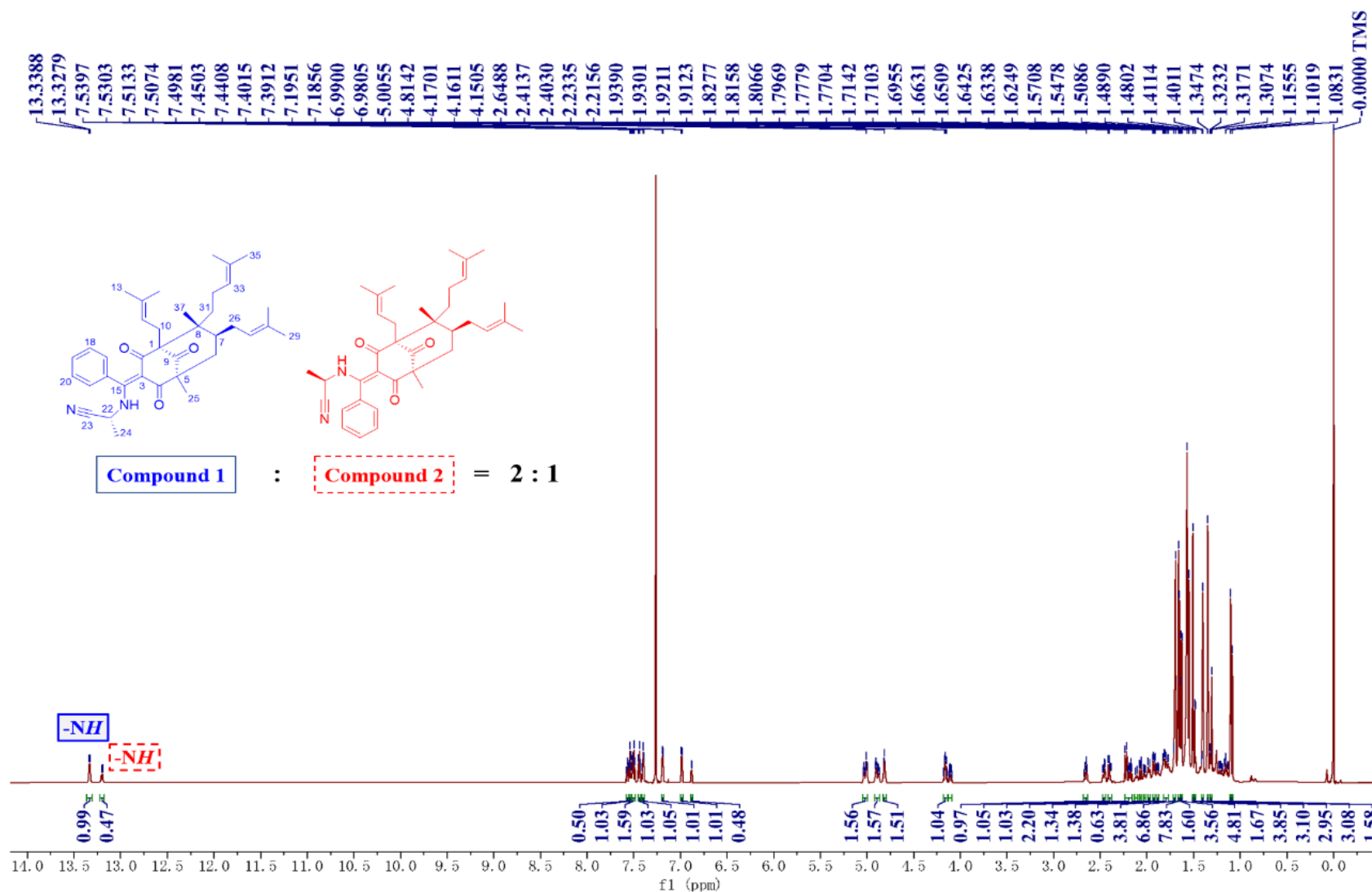


Fig. S1. ¹H NMR spectrum of 1/2 in CDCl₃ (800 MHz).

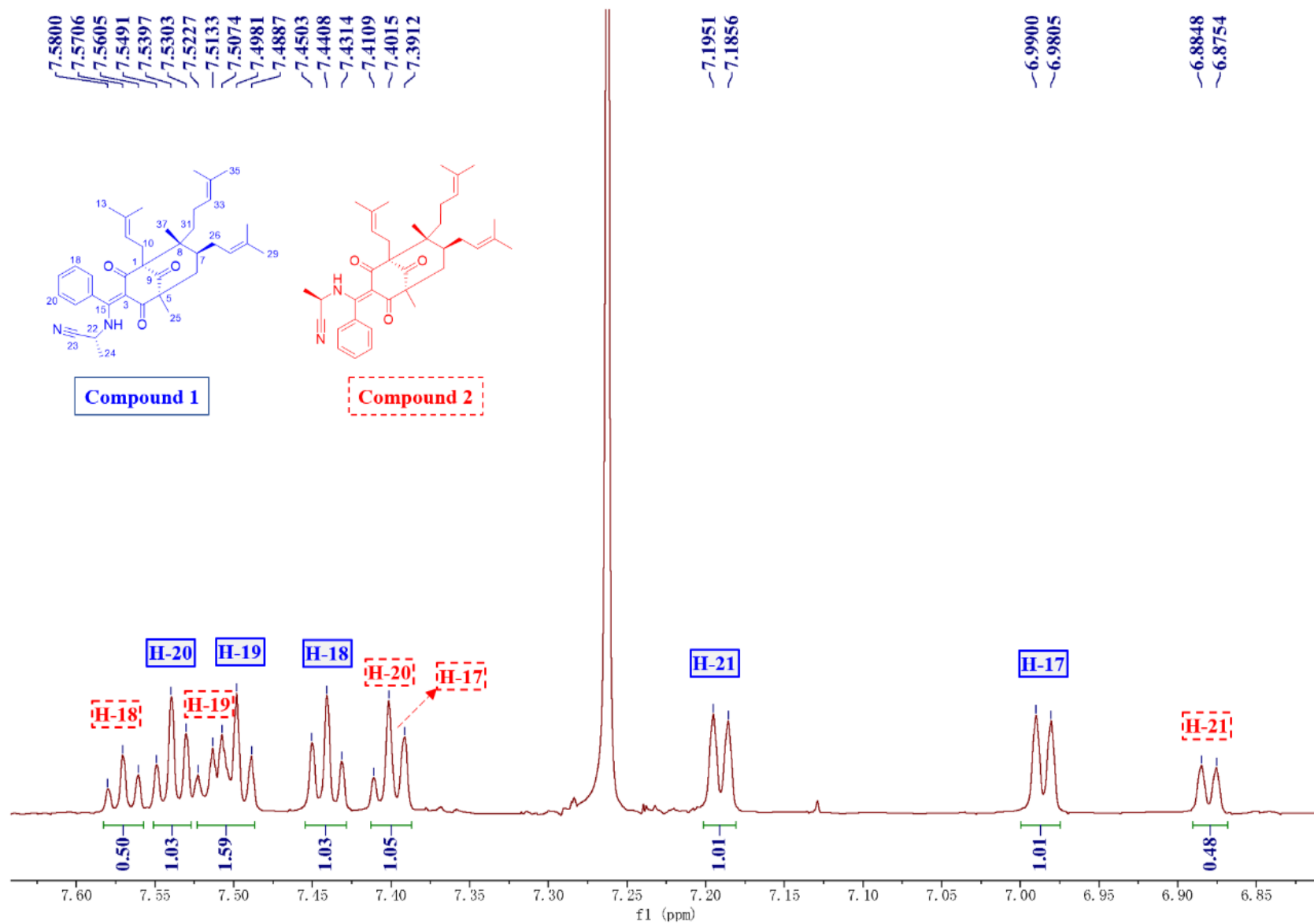


Fig. S2. Expansion of ^1H NMR spectrum of 1/2 in CDCl_3 (800 MHz).

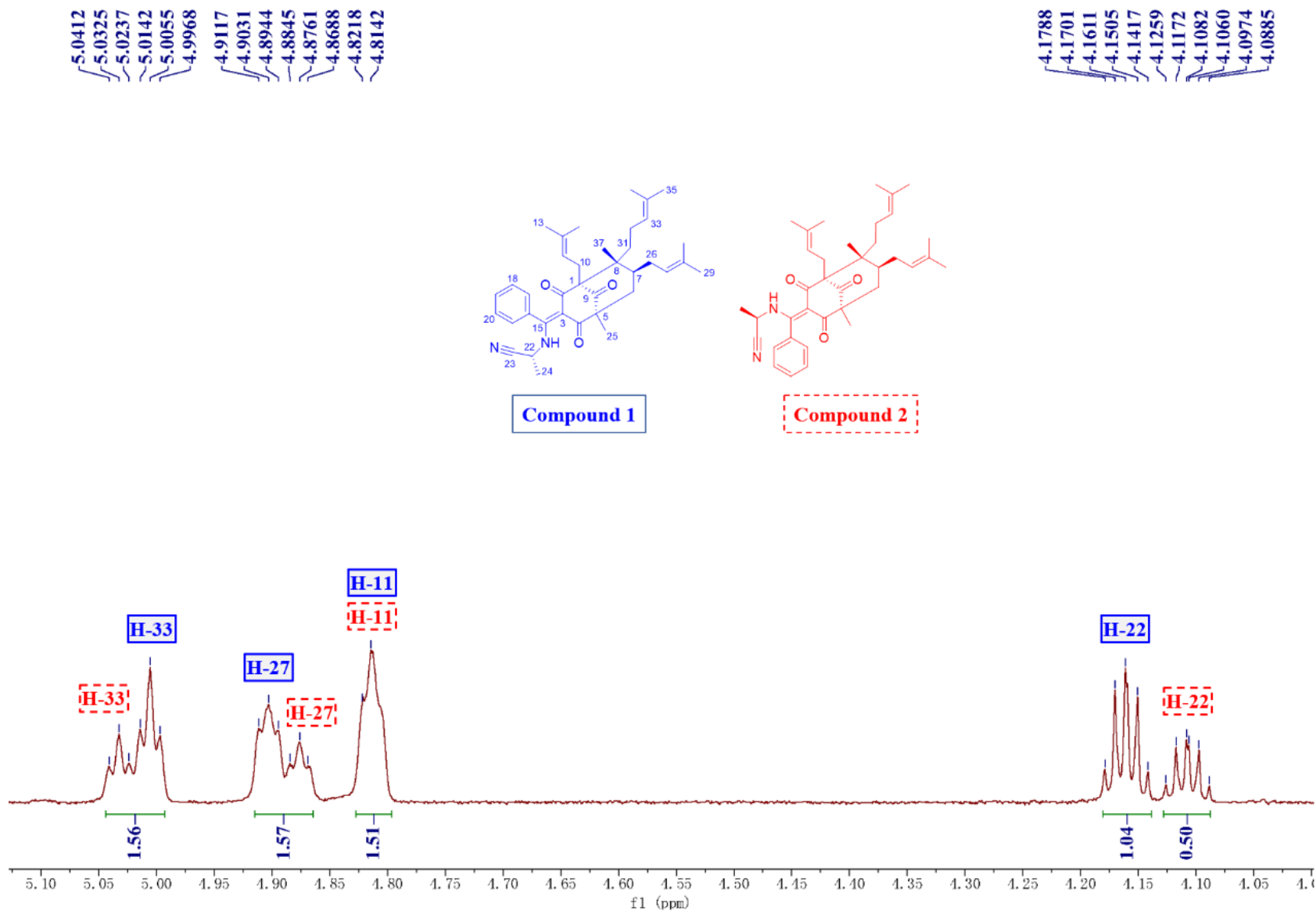


Fig. S3. Expansion of ^1H NMR spectrum of 1/2 in CDCl_3 (800 MHz).

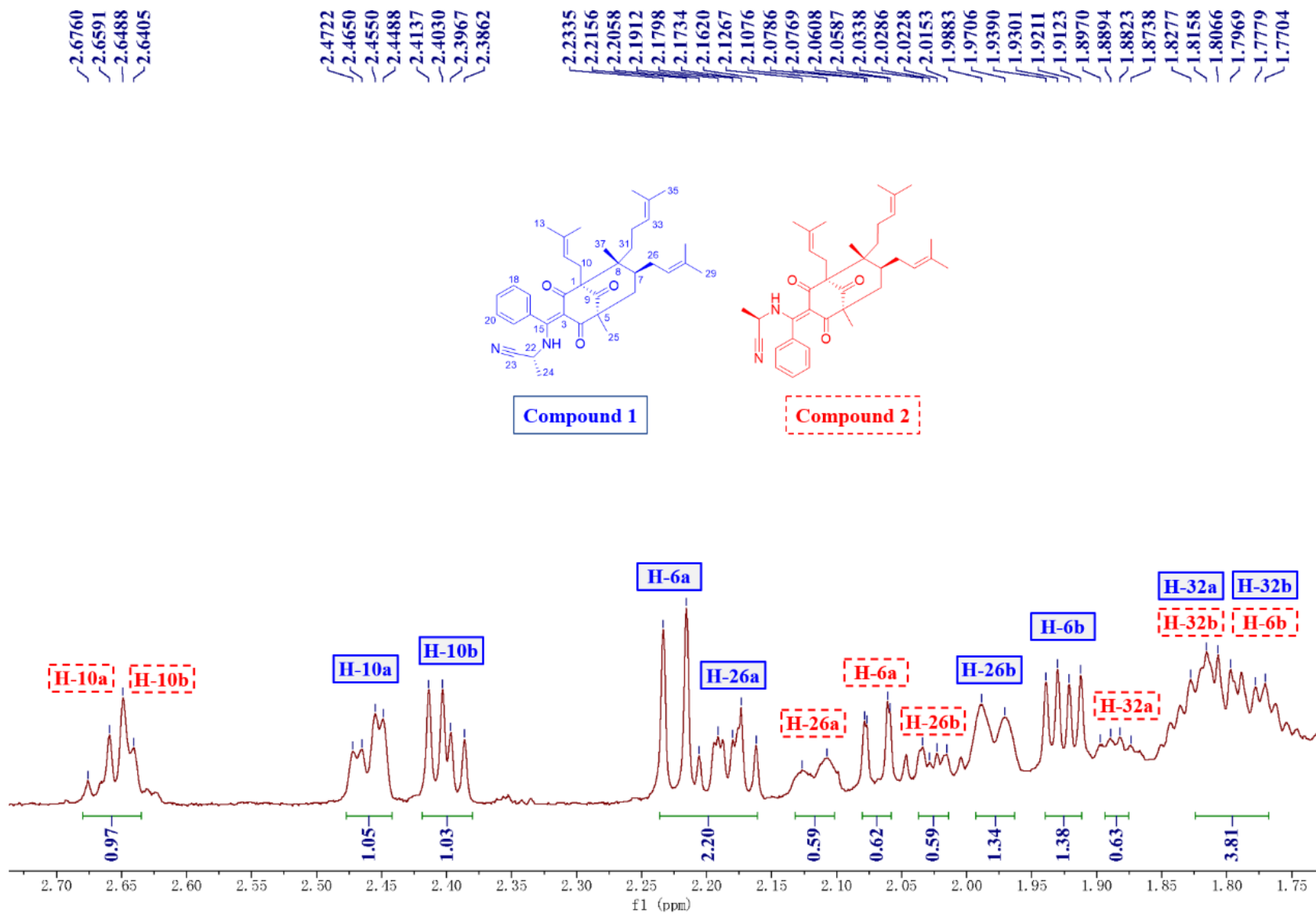


Fig. S4. Expansion of ^1H NMR spectrum of **1/2** in CDCl_3 (800 MHz).

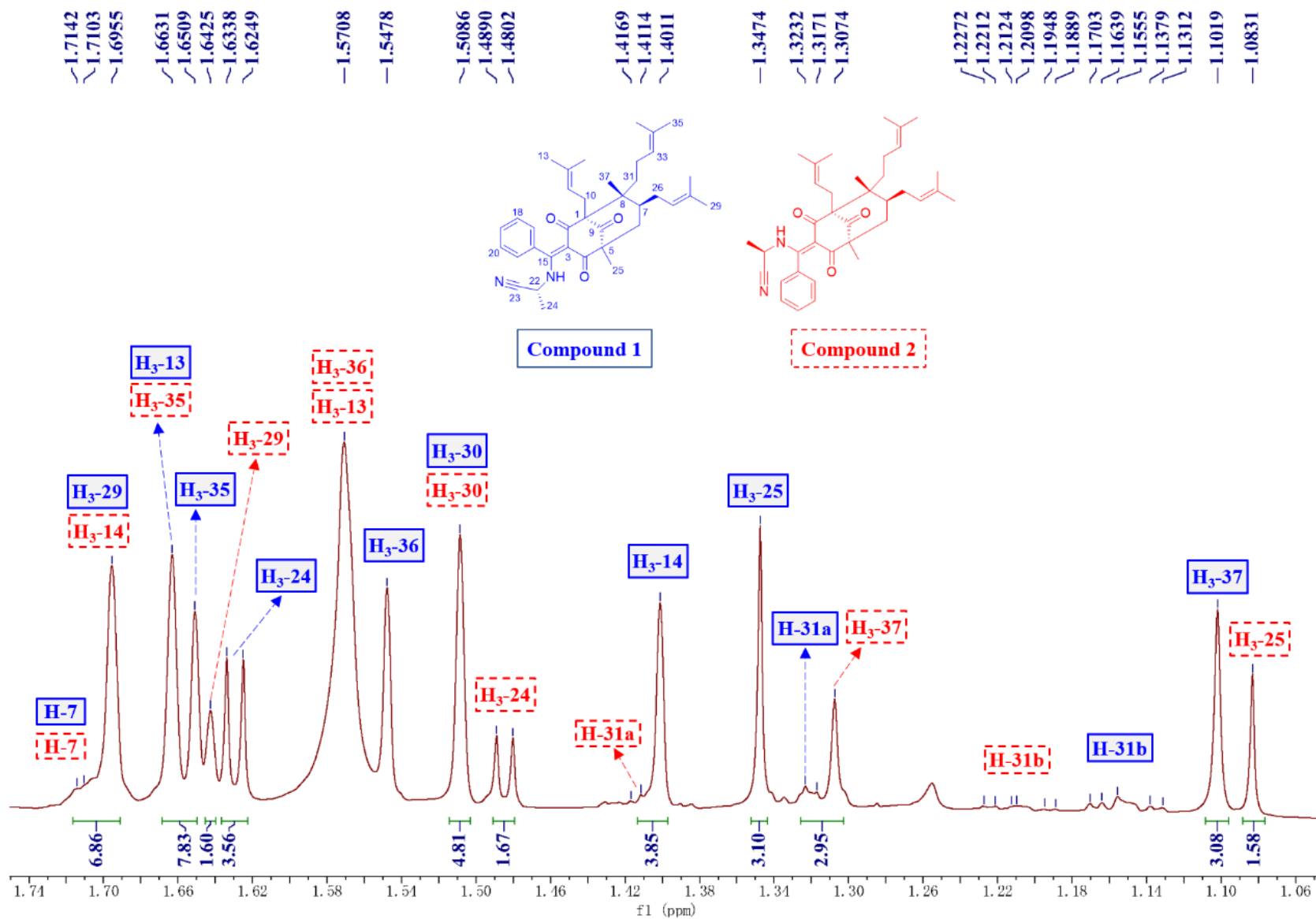


Fig. S5. Expansion of ^1H NMR spectrum of **1/2** in CDCl_3 (800 MHz).

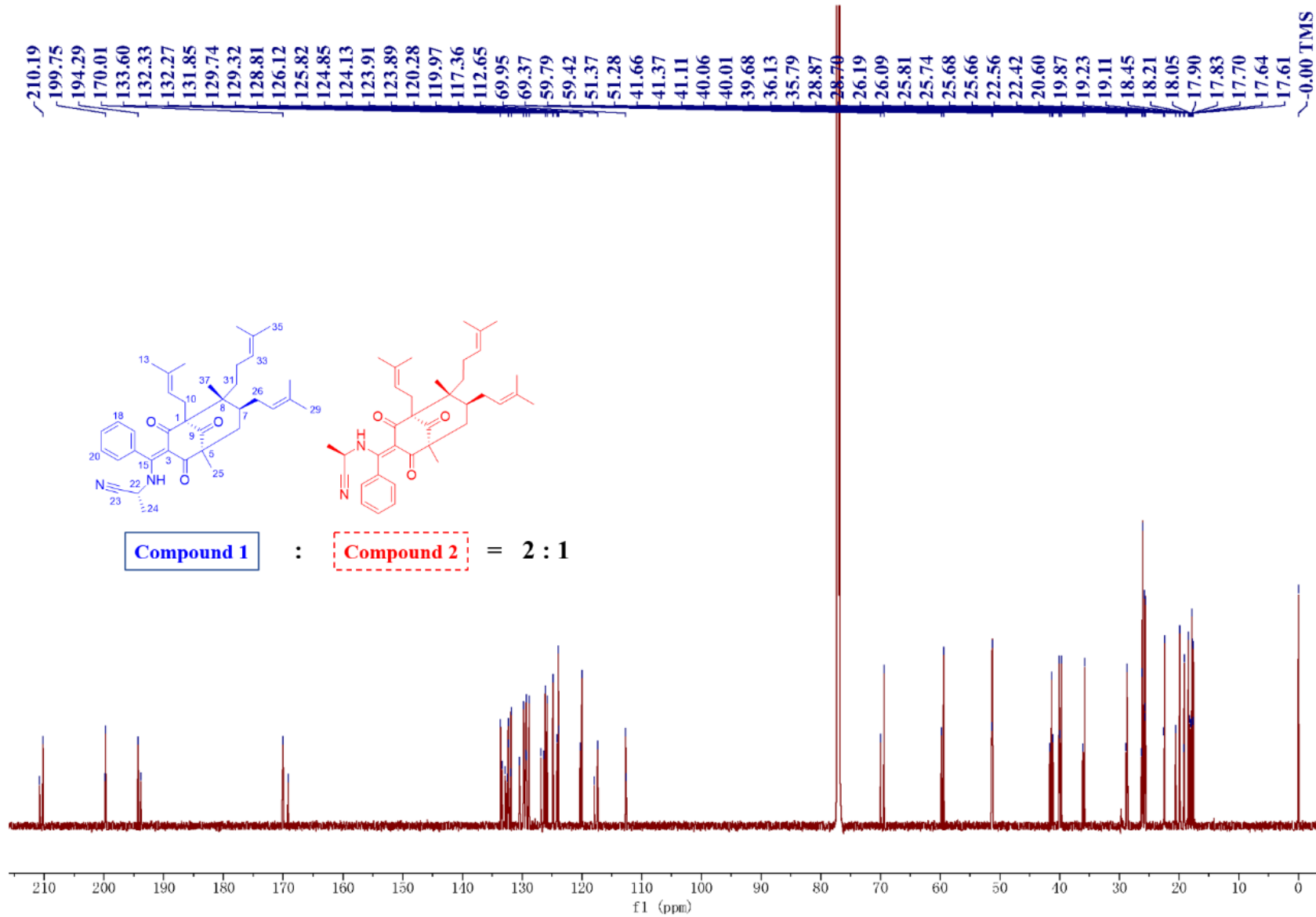


Fig. S6. ^{13}C NMR spectrum of **1/2** in CDCl_3 (200 MHz).

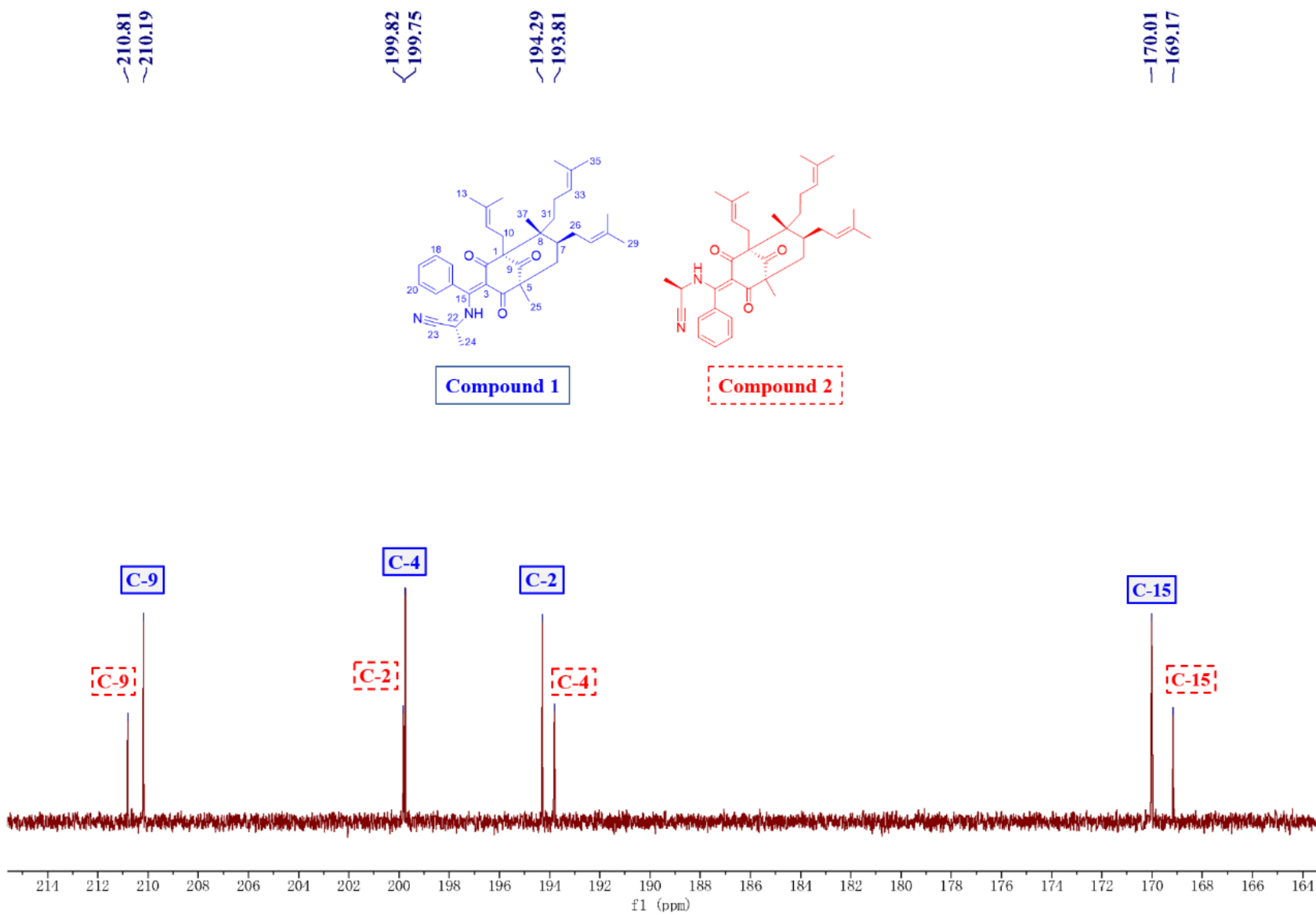


Fig. S7. Expansion of ^{13}C NMR spectrum of **1/2** in CDCl_3 (200 MHz).

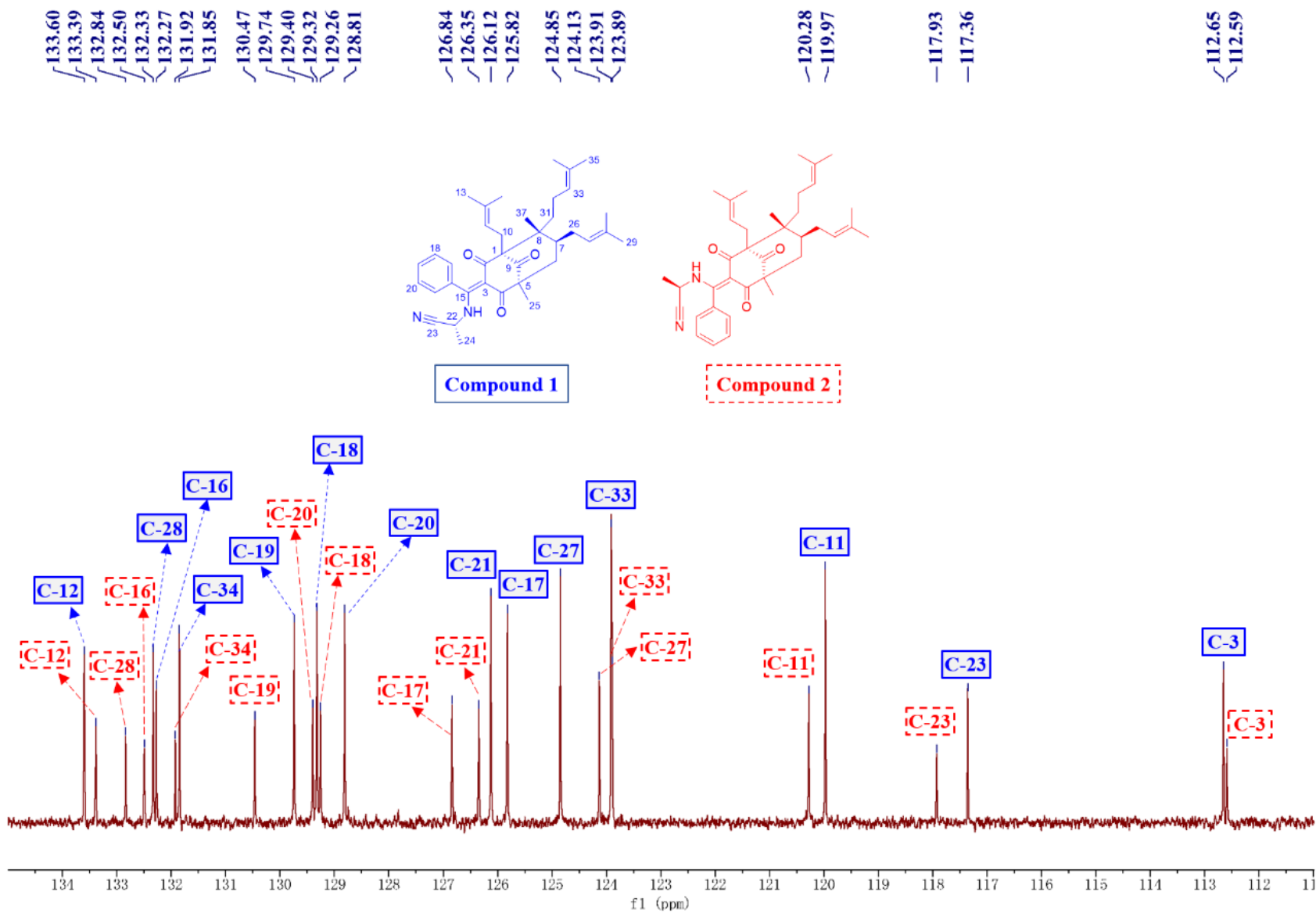


Fig. S8. Expansion of ^{13}C NMR spectrum of **1/2** in CDCl_3 (200 MHz).

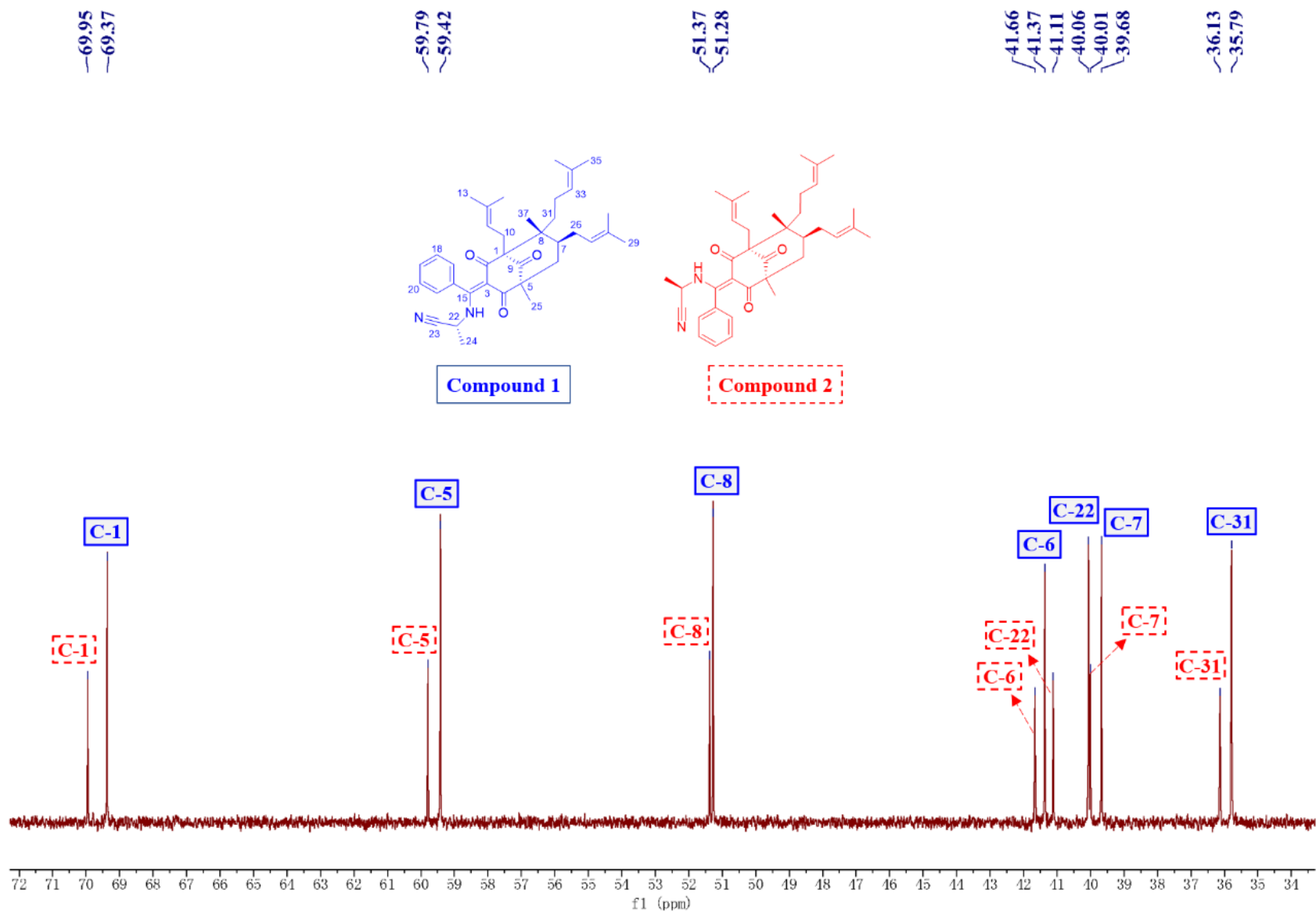


Fig. S9. Expansion of ^{13}C NMR spectrum of **1/2** in CDCl_3 (200 MHz).

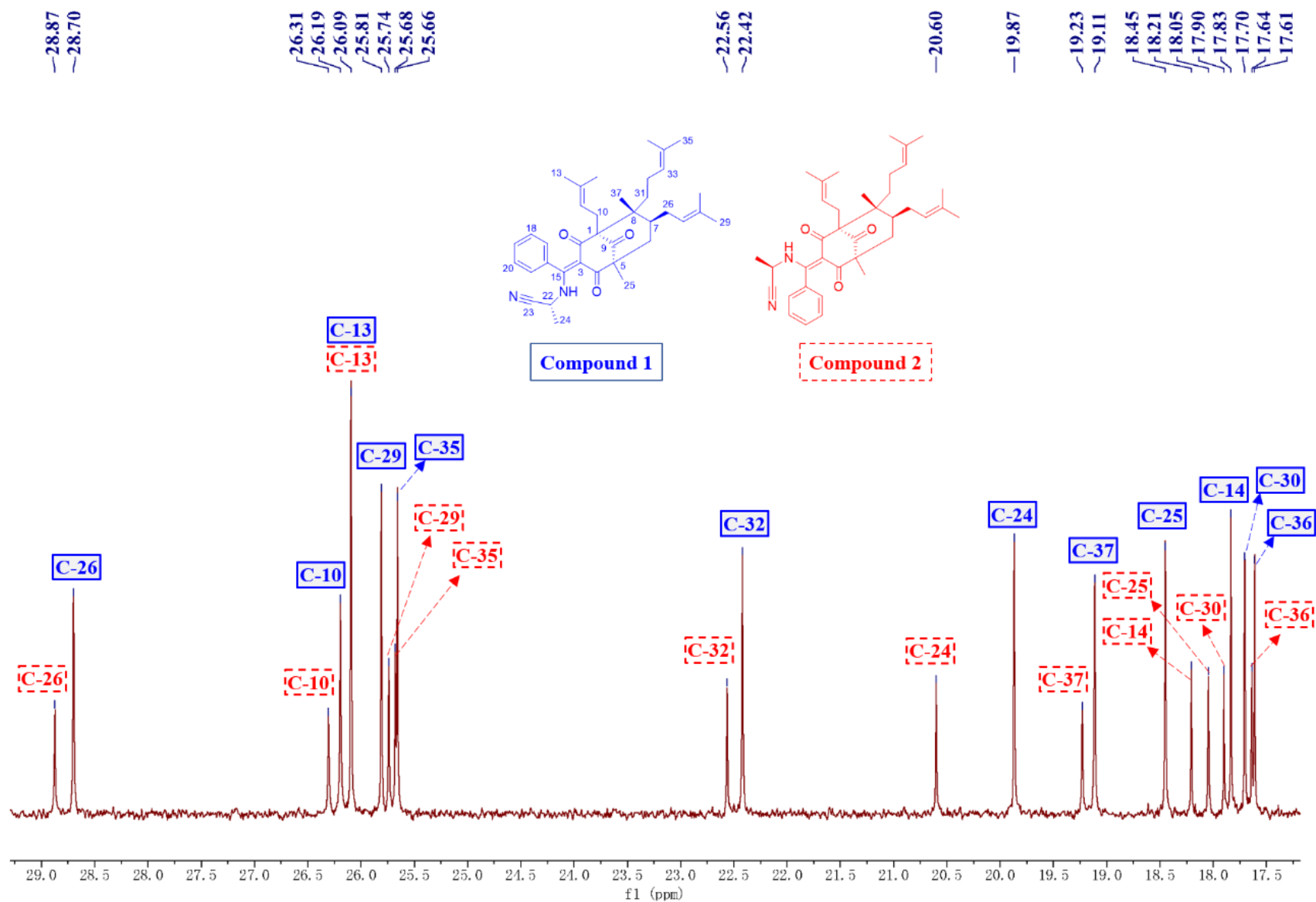


Fig. S10. Expansion of ¹³C NMR spectrum of **1/2** in CDCl₃ (200 MHz).

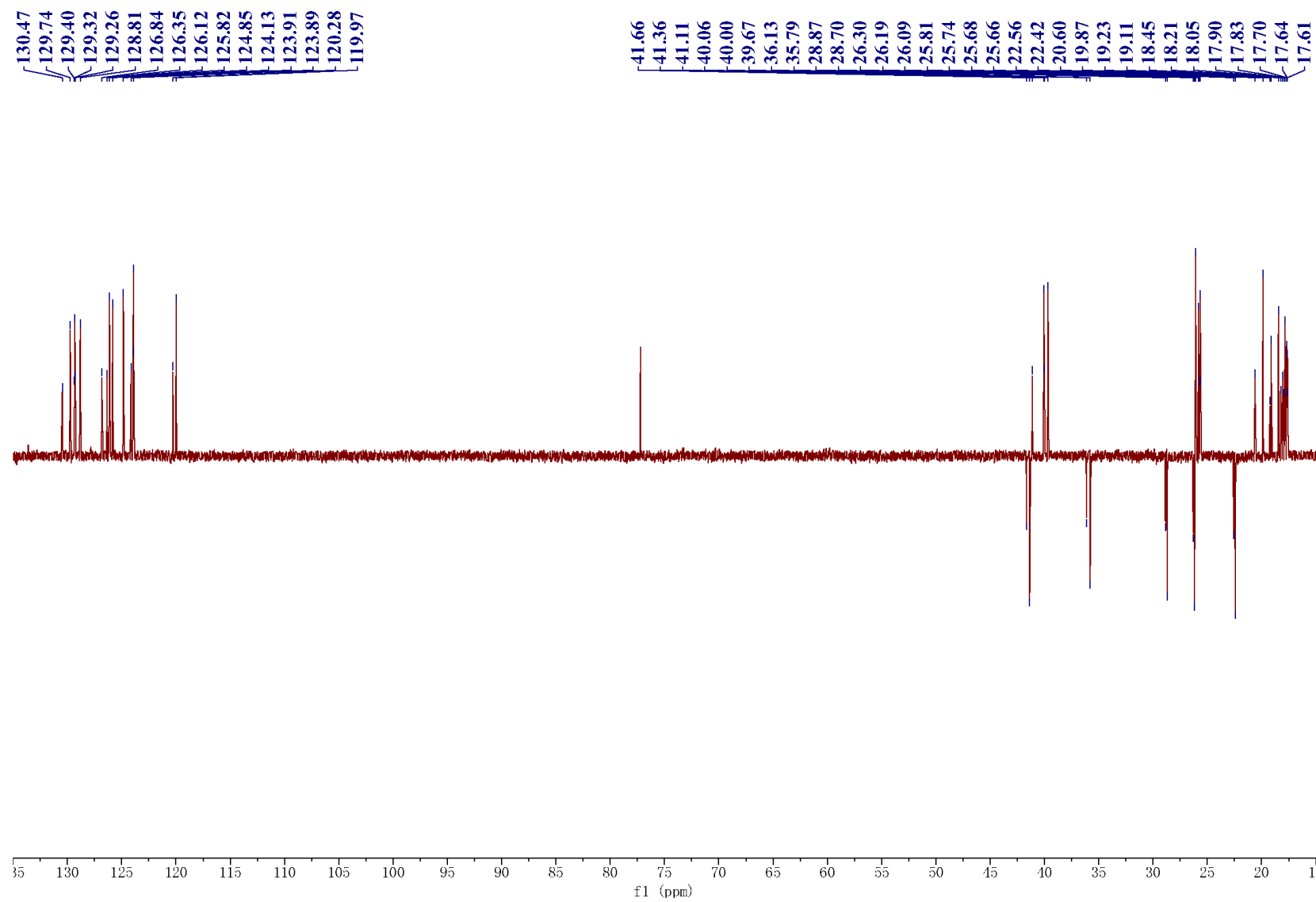


Fig. S11. DEPT-135 spectrum of **1/2** in CDCl_3 (200 MHz).

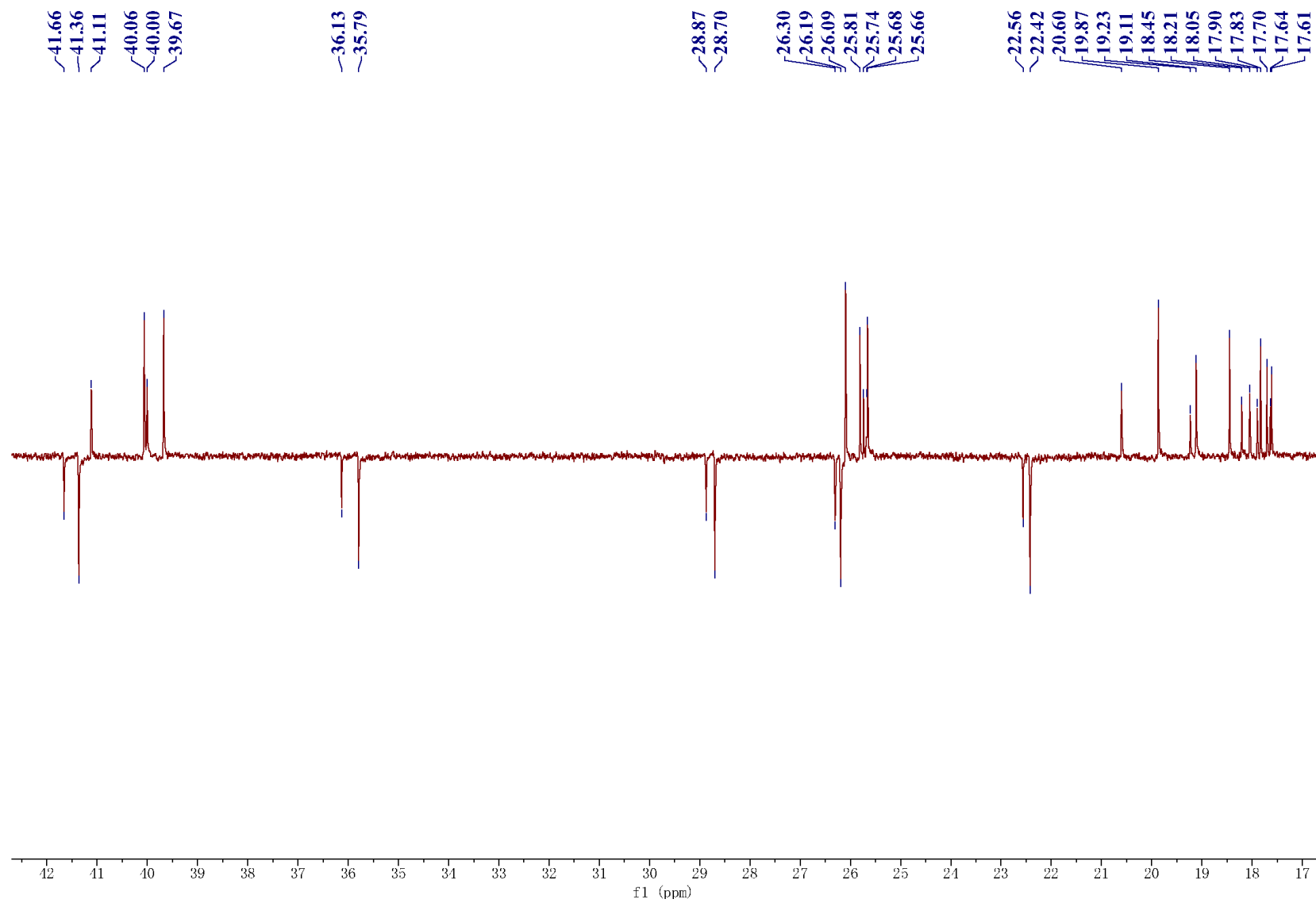


Fig. S12. Expansion of DEPT-135 spectrum of $1/2$ in CDCl_3 (200 MHz).

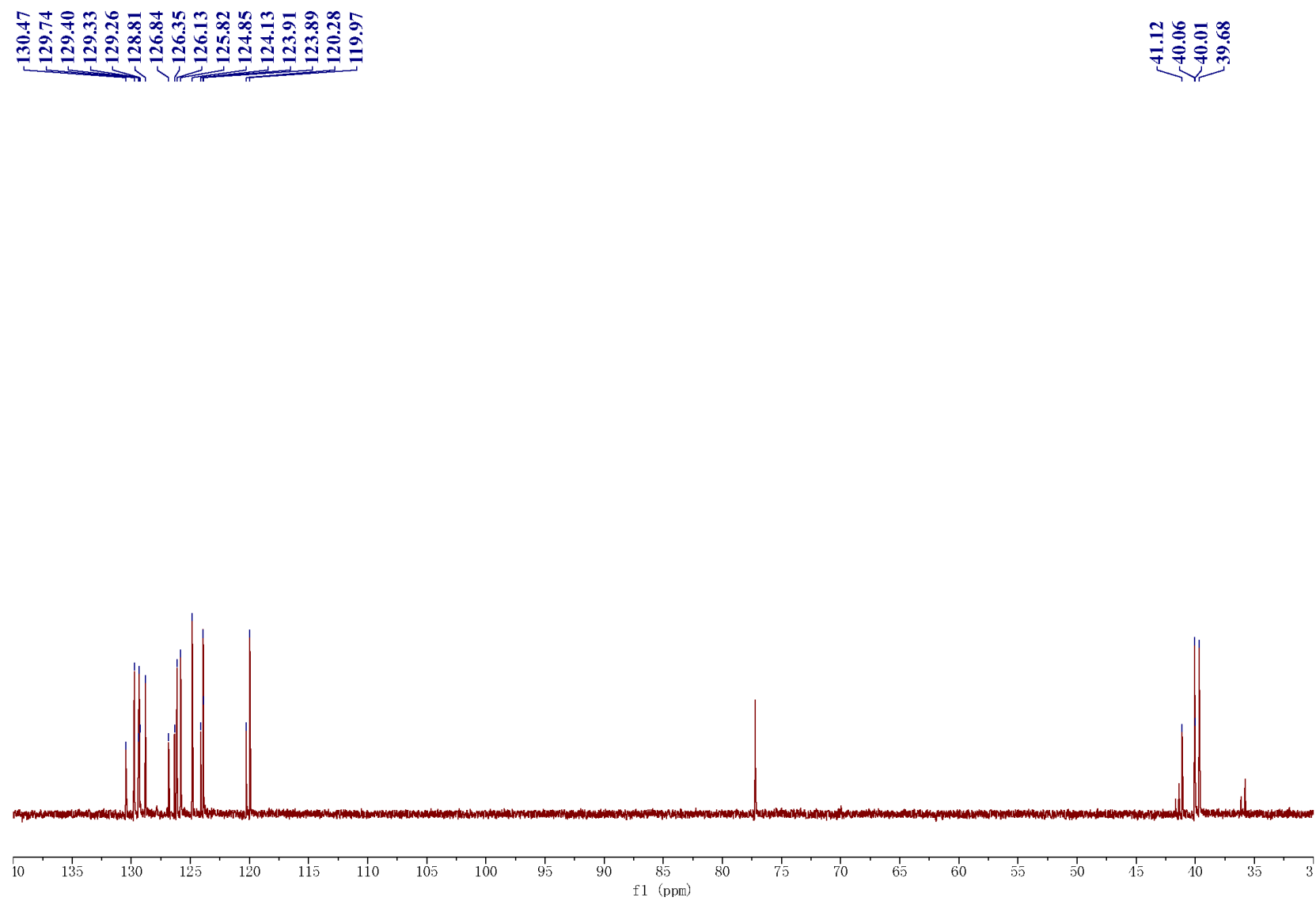


Fig. S13. DEPT-90 spectrum of **1/2** in CDCl₃ (200 MHz).

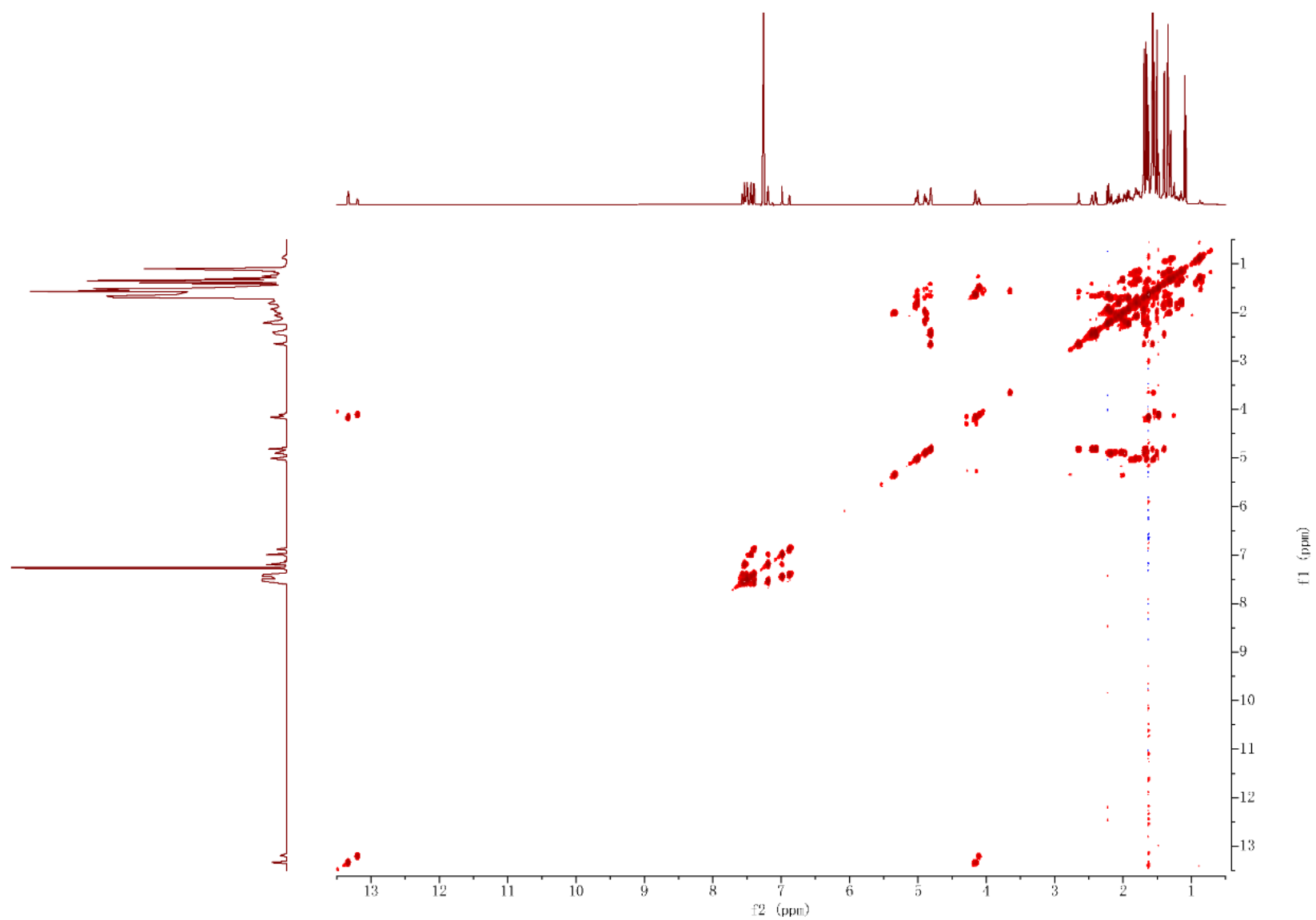


Fig. S14. COSY spectrum of **1/2** in CDCl₃ (800 MHz).

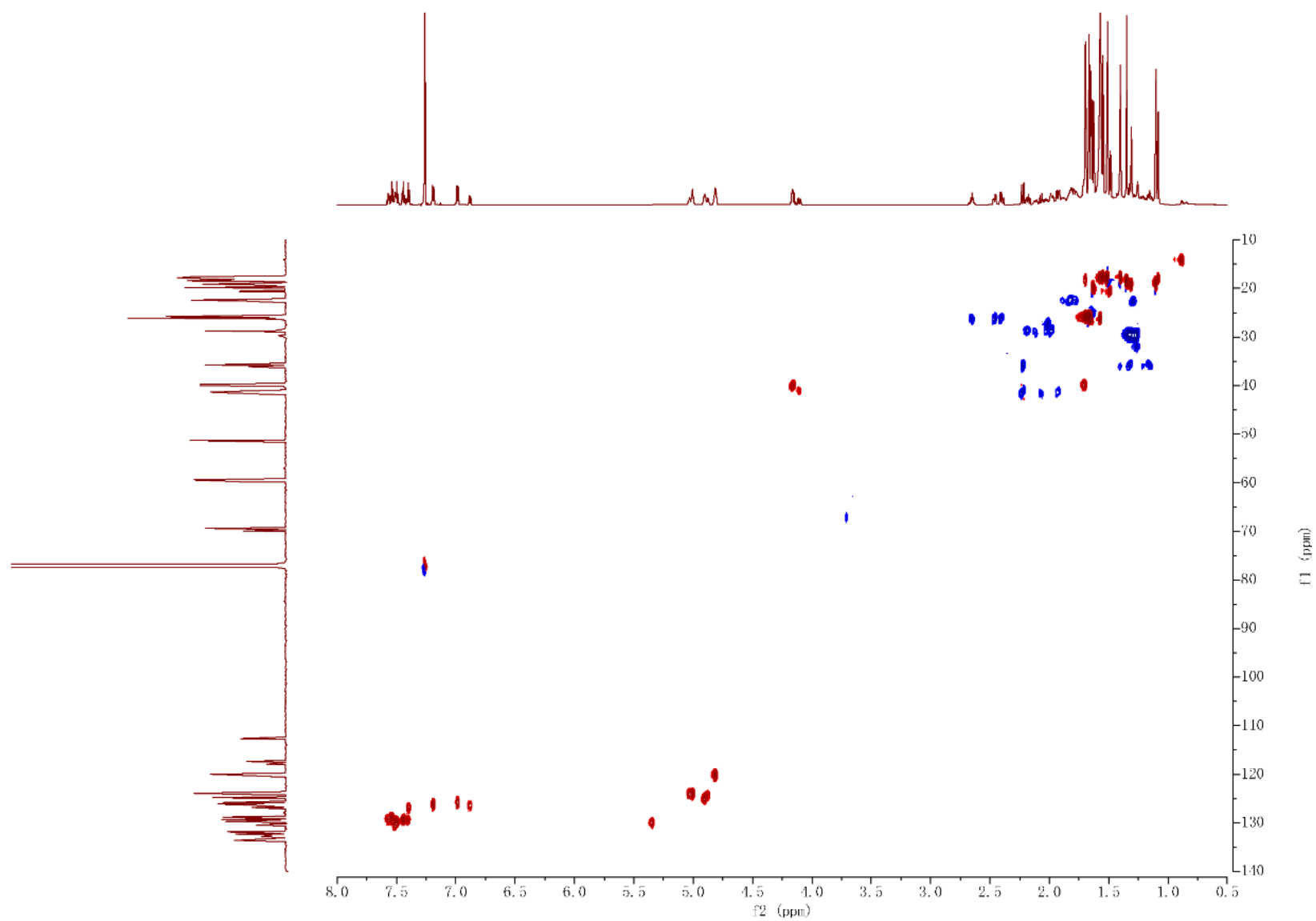


Fig. S15. HSQC spectrum of 1/2 in CDCl₃ (800 MHz).

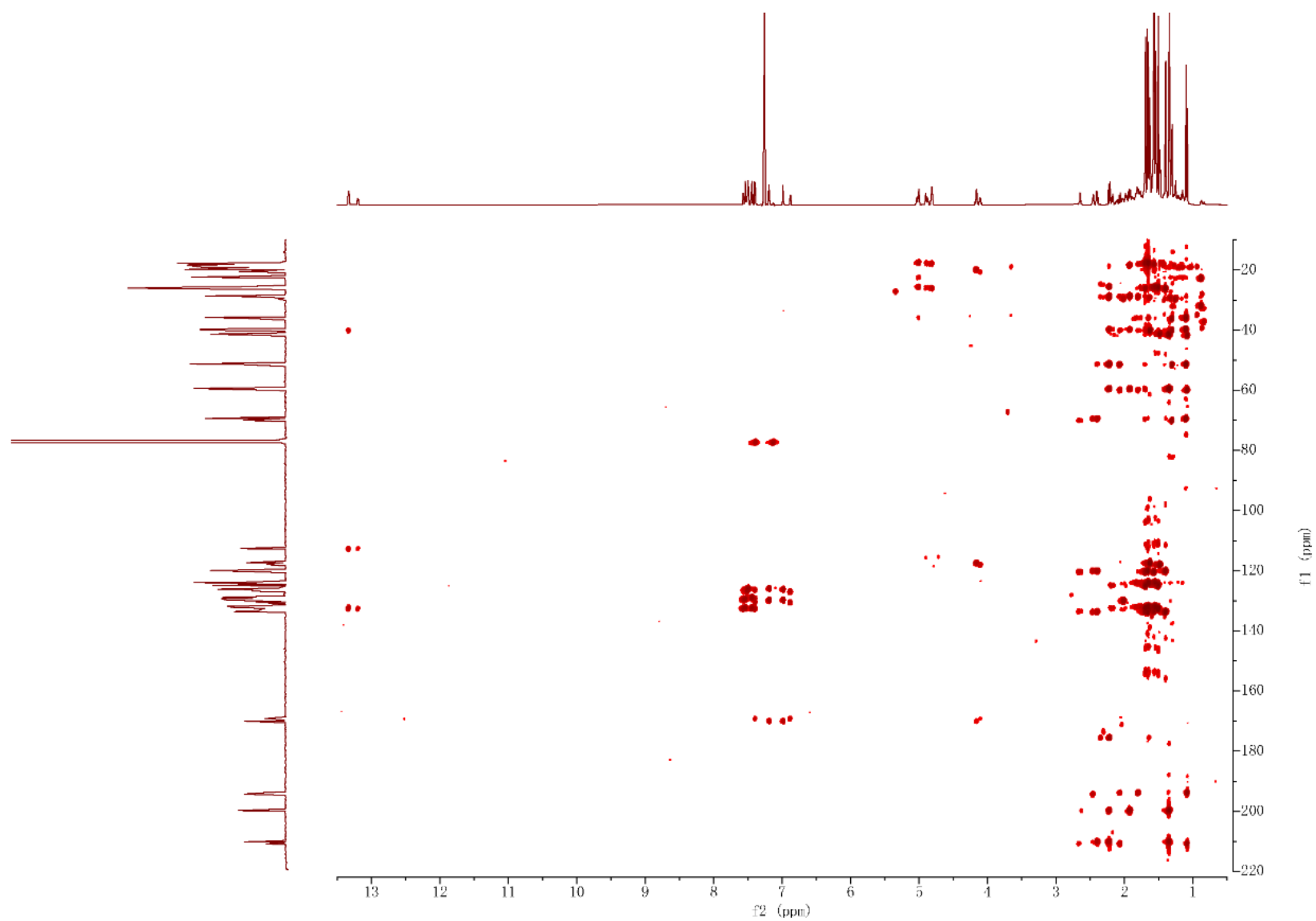


Fig. S16. HMBC spectrum of **1/2** in CDCl₃ (800 MHz).

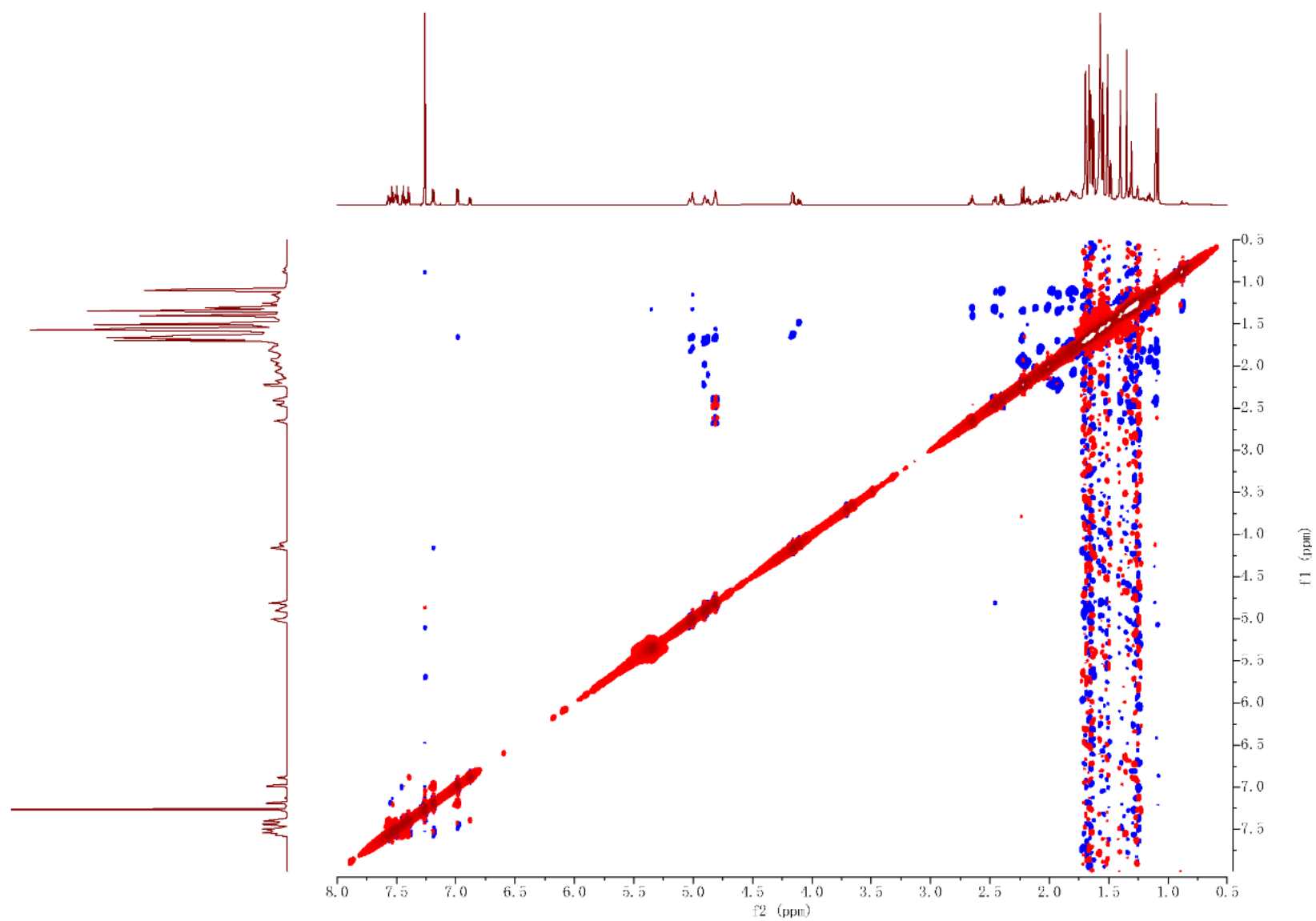


Fig. S17. ROESY spectrum of **1/2** in CDCl_3 (800 MHz).

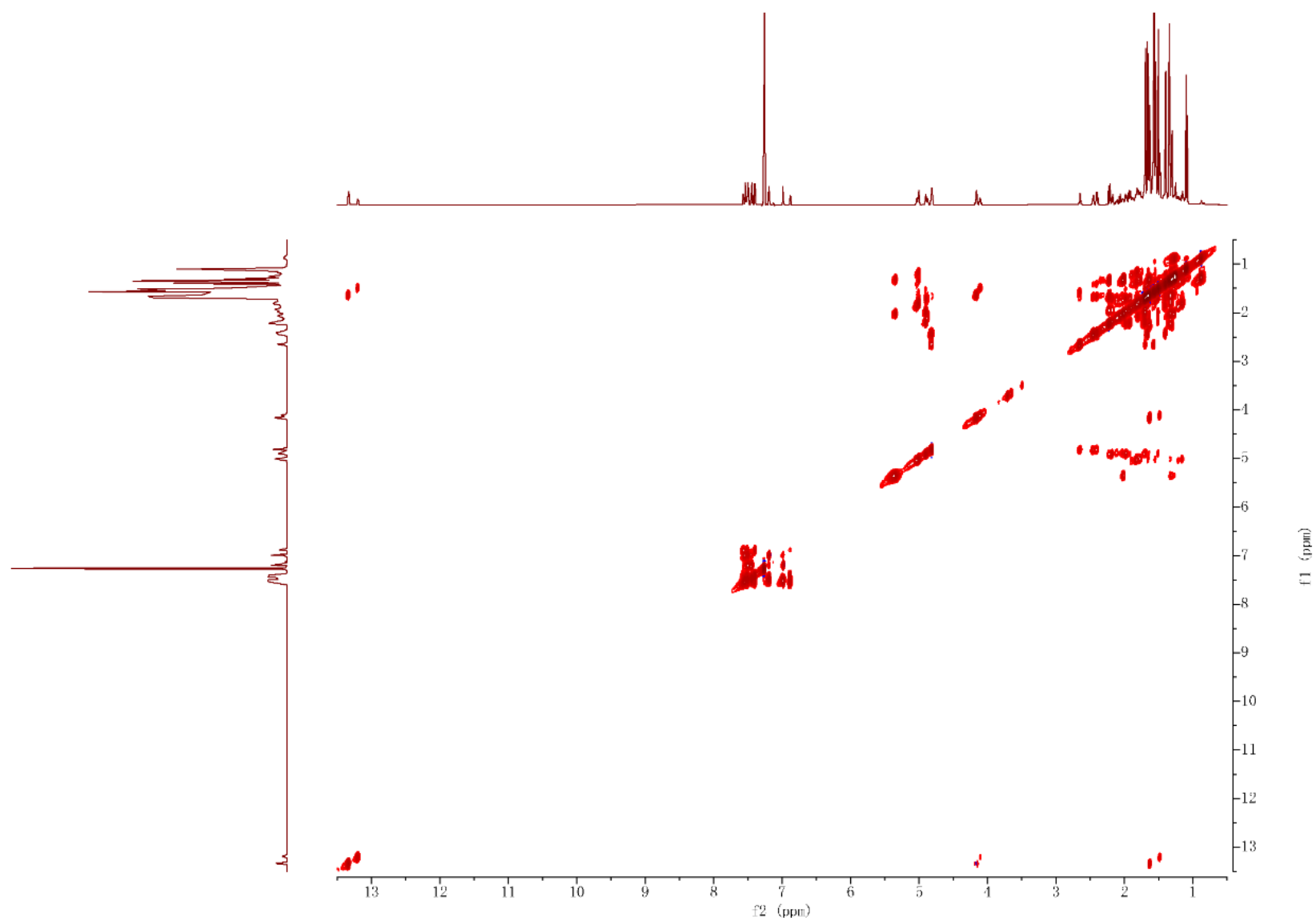


Fig. S18. TOCSY spectrum of 1/2 in CDCl₃ (800 MHz).

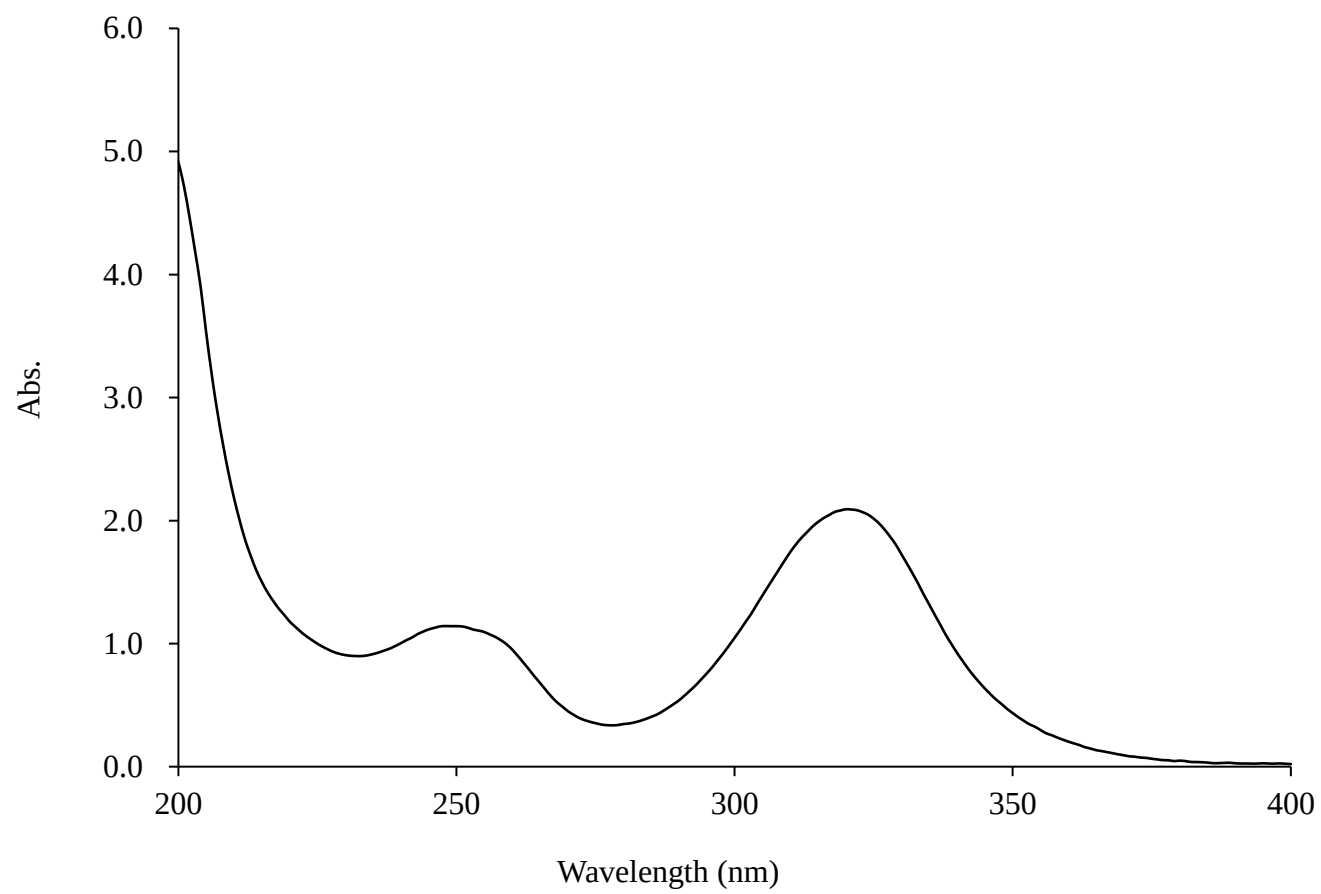


Fig. S19. UV spectrum of **1/2** (in MeOH).

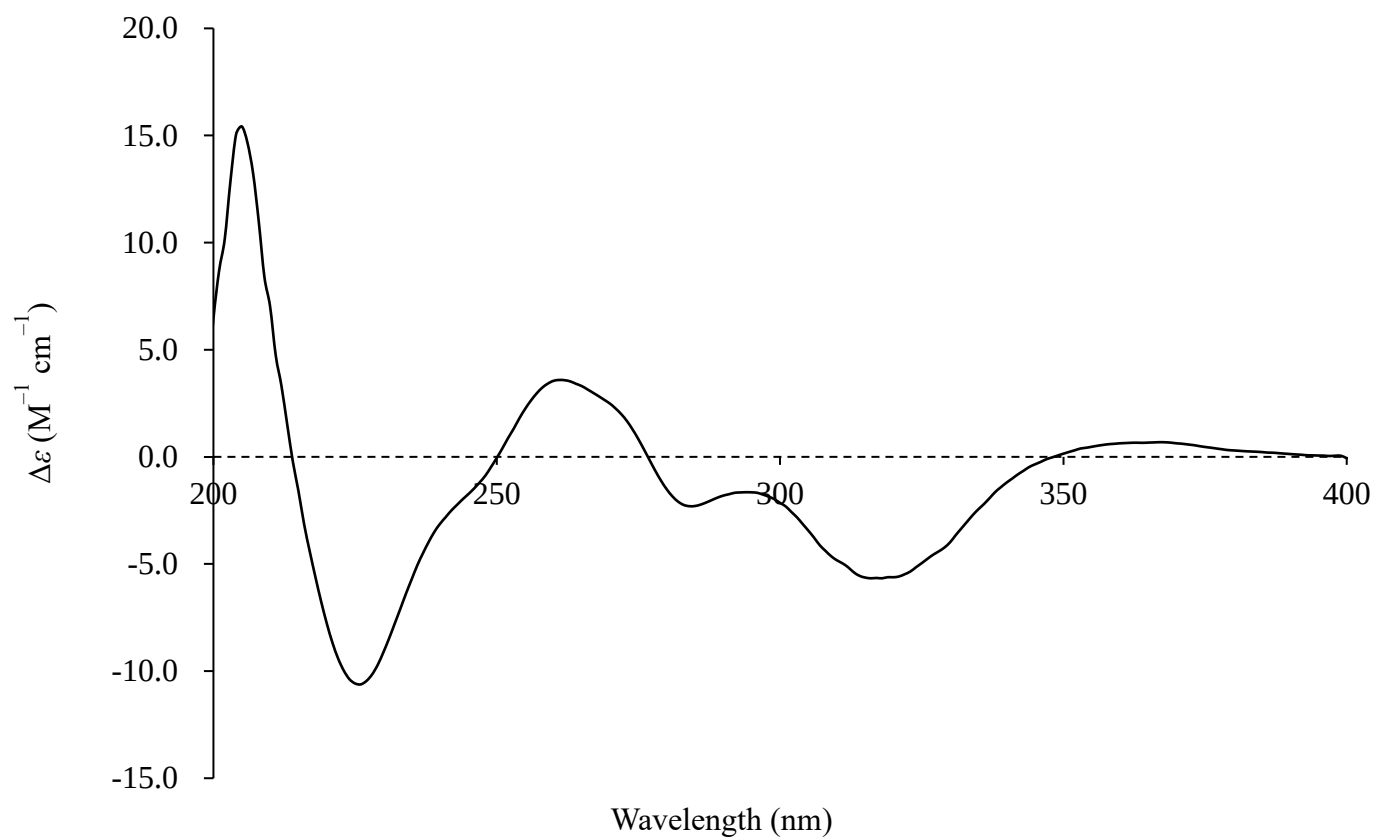


Fig. S20. ECD spectrum of **1/2** (in MeOH).

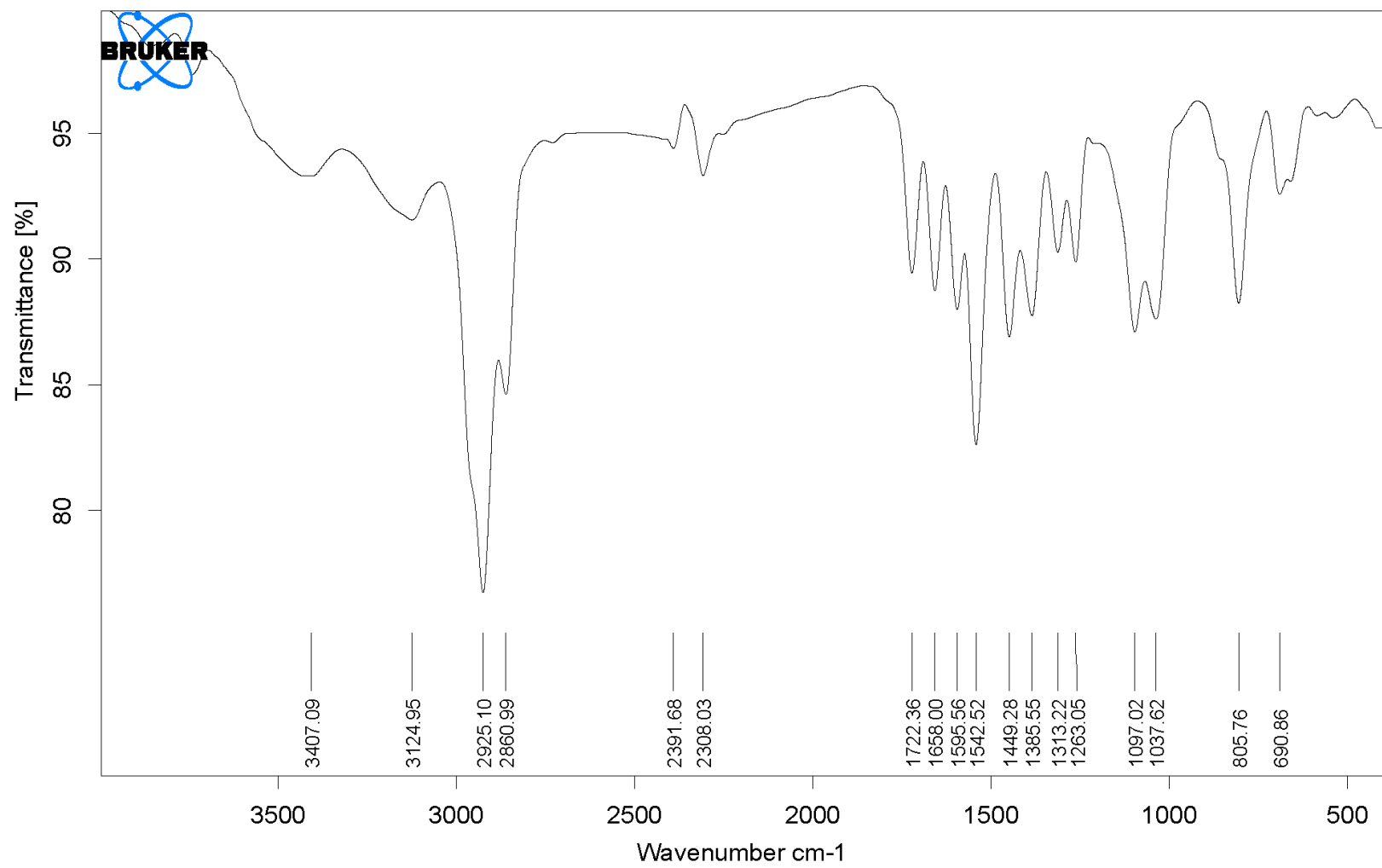


Fig. S21. IR spectrum (film on KBr pellet) of **1/2**.

(+)-HRESIMS m/z 591.3559 $[M + Na]^+$ (calcd for $C_{37}H_{48}N_2O_3Na^+$, 591.3557)

1-4 #17 RT: 0.11 AV: 1 NL: 2.83E7

T: FTMS + p ESI Full lock ms [80.0000-1200.0000]

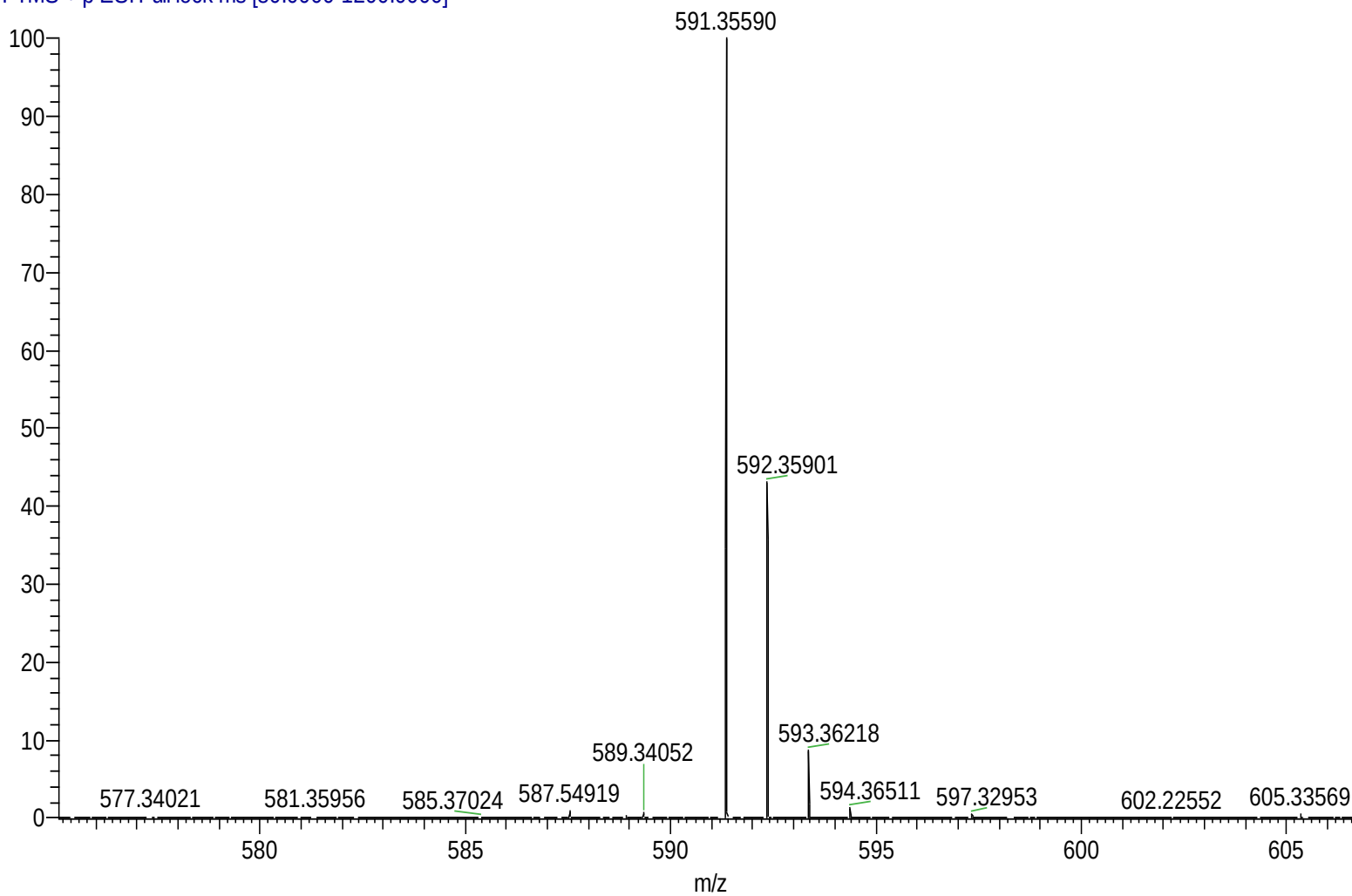


Fig. S22. HRESIMS of 1/2.

2. NMR, UV, ECD, IR, and HRESIMS spectra of a mixture of 3 and 4

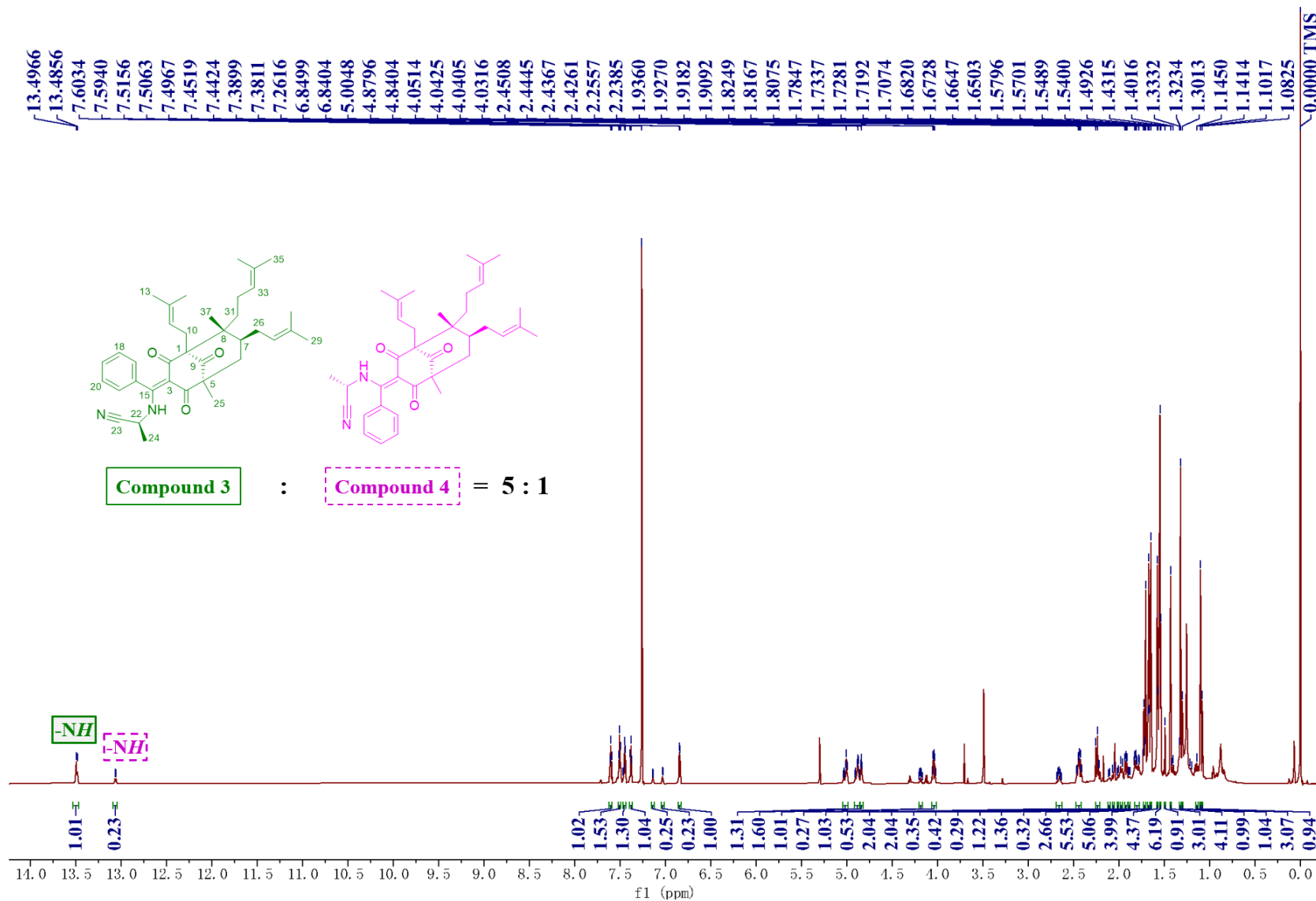


Fig. S23. ¹H NMR spectrum of 3/4 in CDCl₃ (800 MHz).

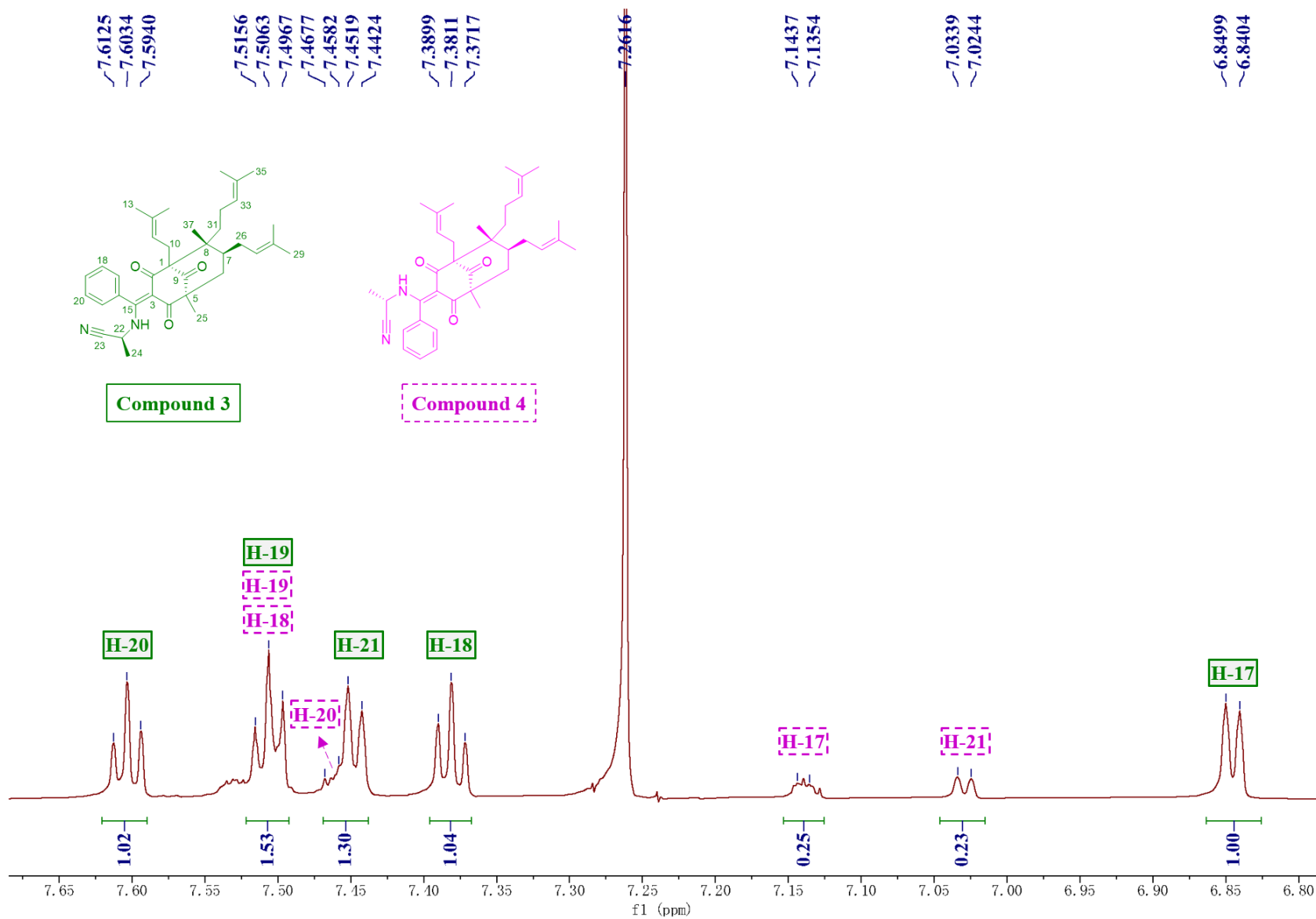


Fig. S24. Expansion of ¹H NMR spectrum of 3/4 in CDCl₃ (800 MHz).

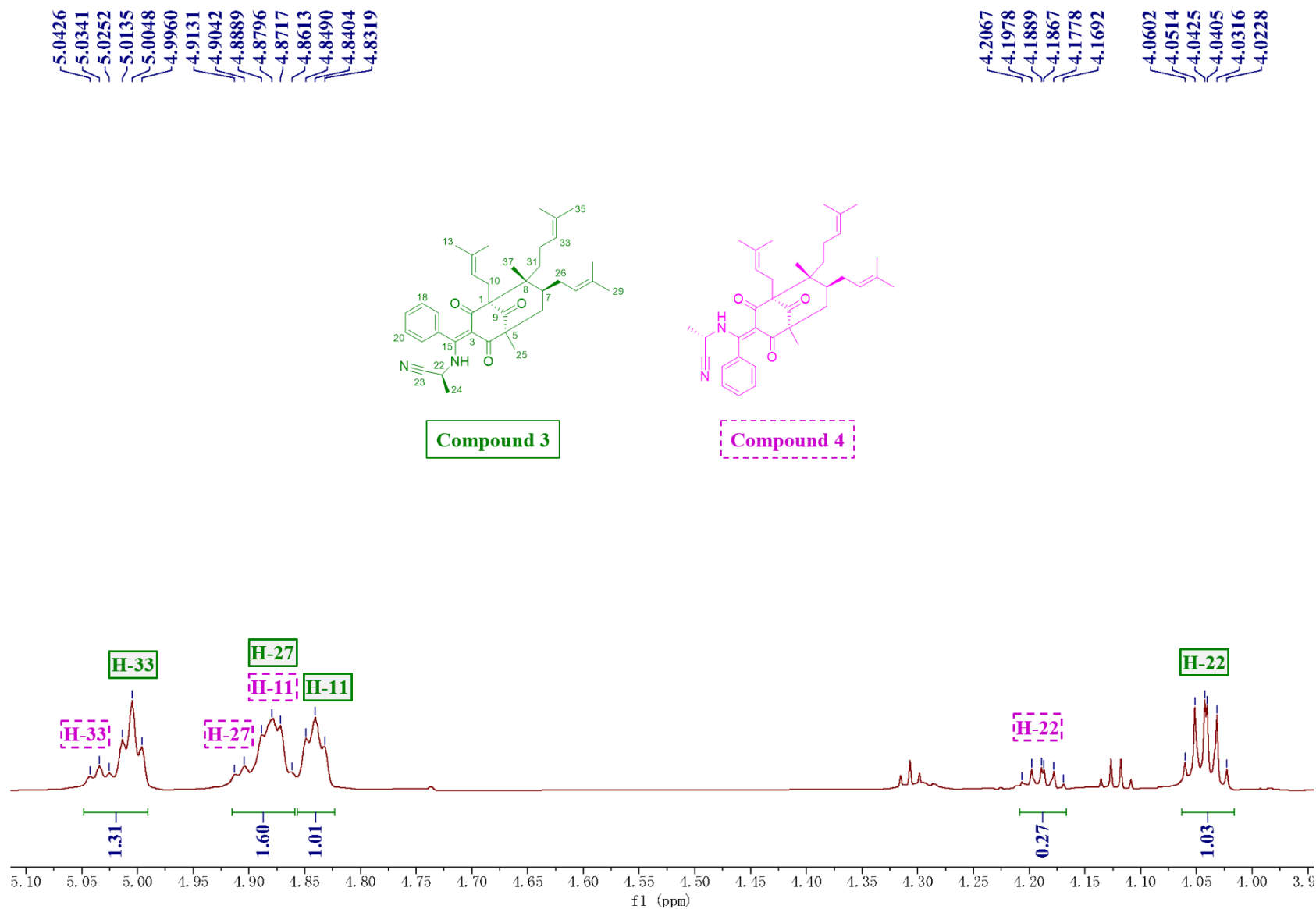


Fig. S25. Expansion of ^1H NMR spectrum of **3/4** in CDCl_3 (800 MHz).

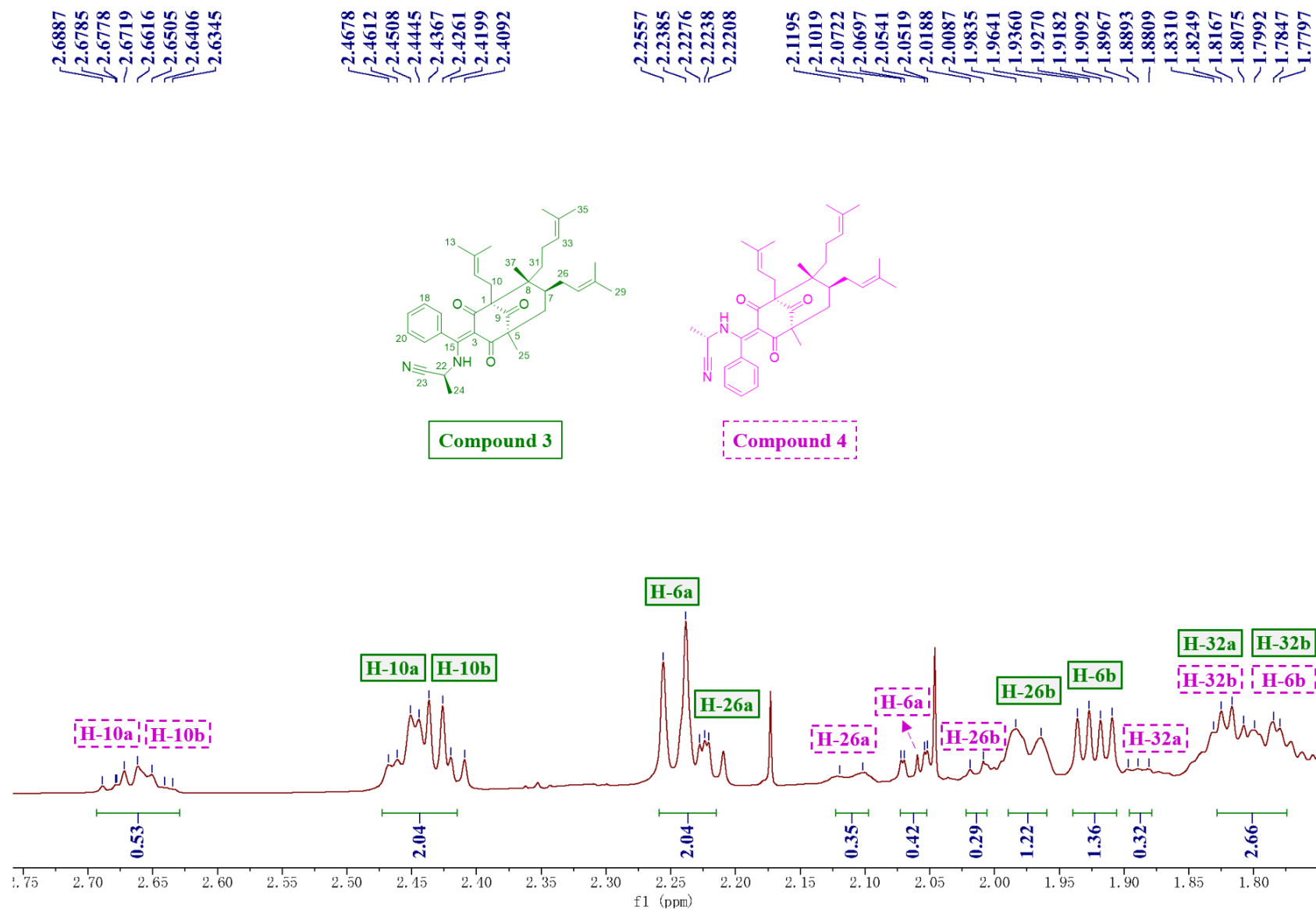


Fig. S26. Expansion of ^1H NMR spectrum of **3/4** in CDCl_3 (800 MHz).

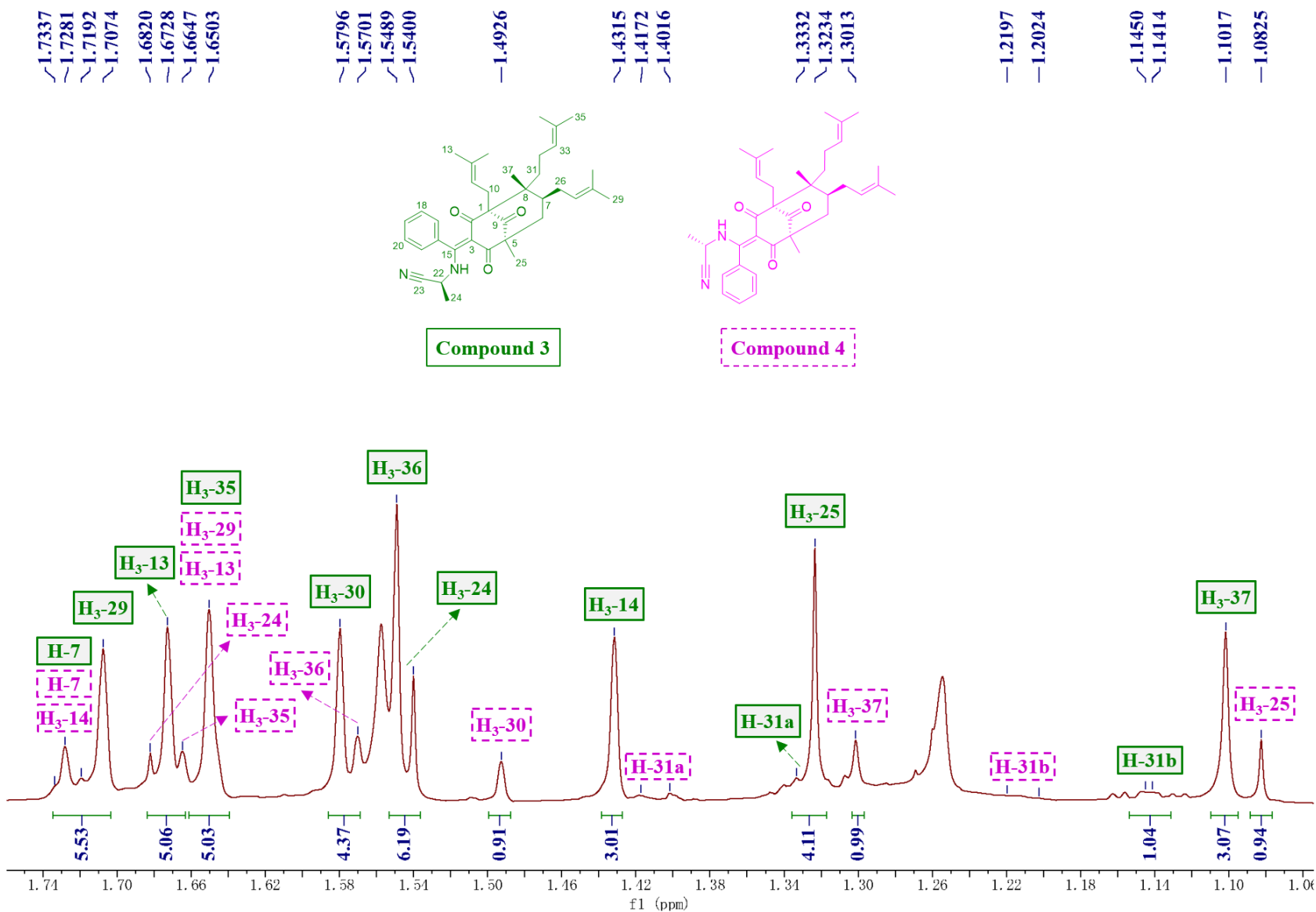


Fig. S27. Expansion of ^1H NMR spectrum of **3/4** in CDCl_3 (800 MHz).

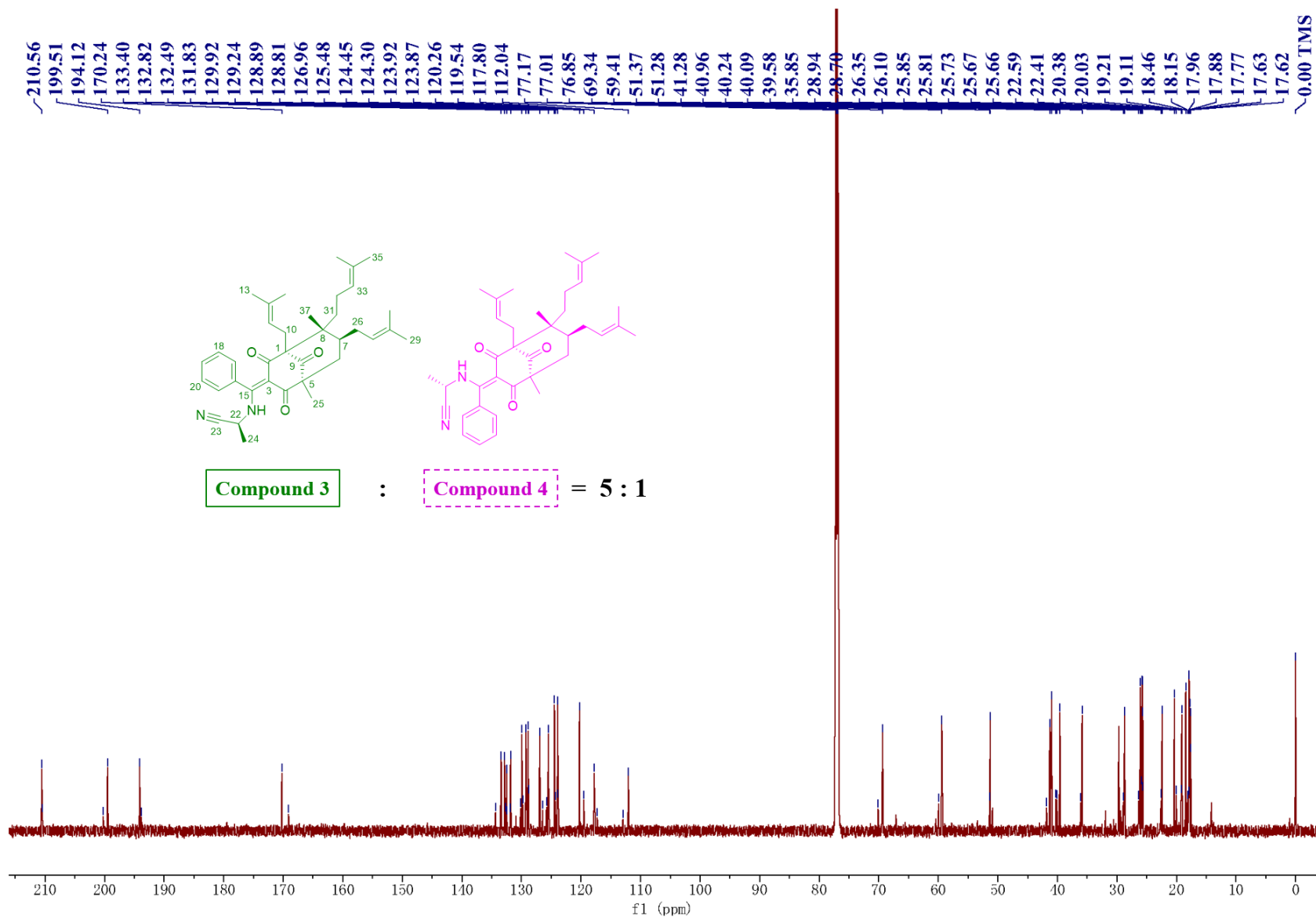


Fig. S28. ^{13}C NMR spectrum of 3/4 in CDCl_3 (200 MHz).

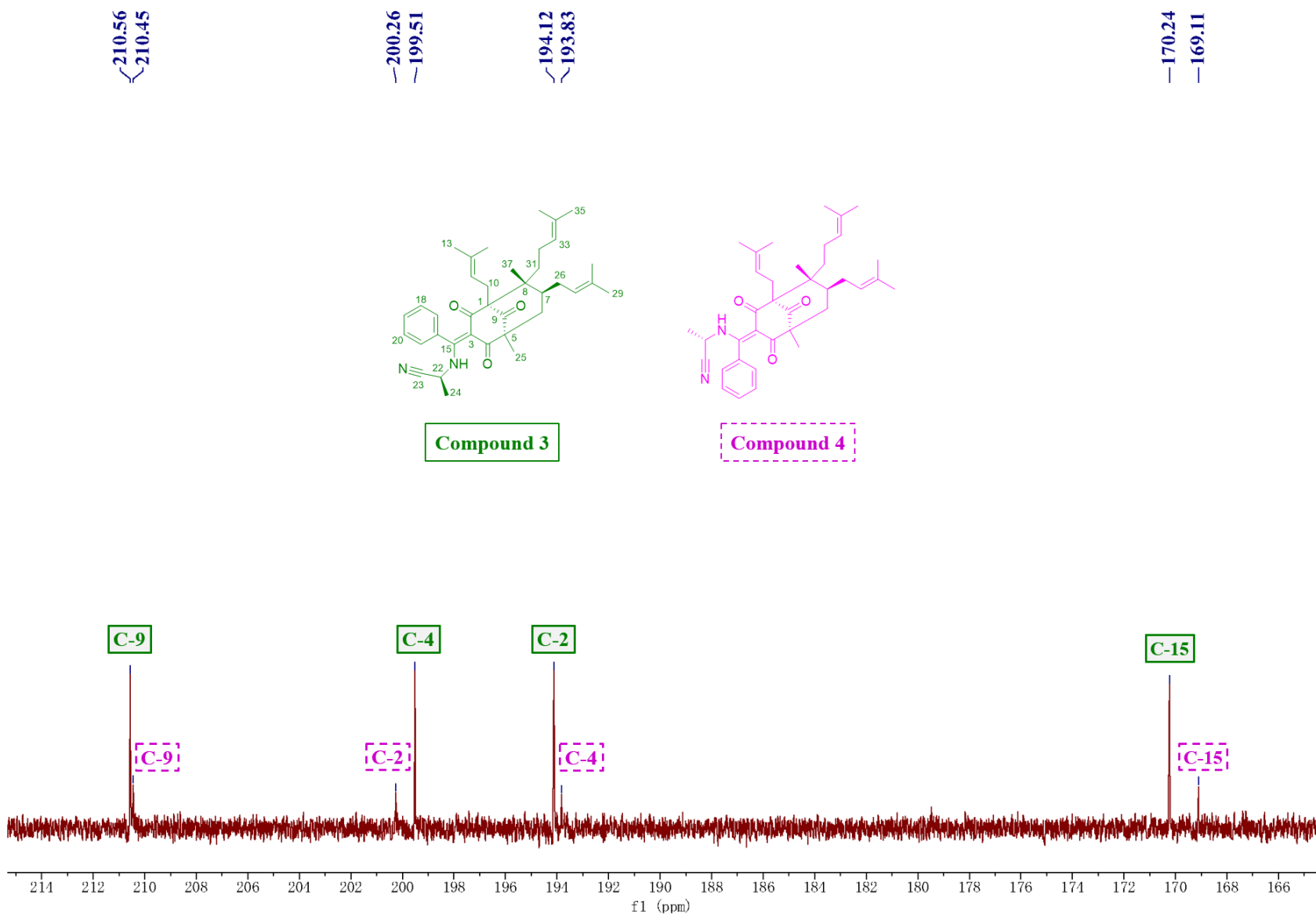


Fig. S29. Expansion of ^{13}C NMR spectrum of **3/4** in CDCl_3 (200 MHz).

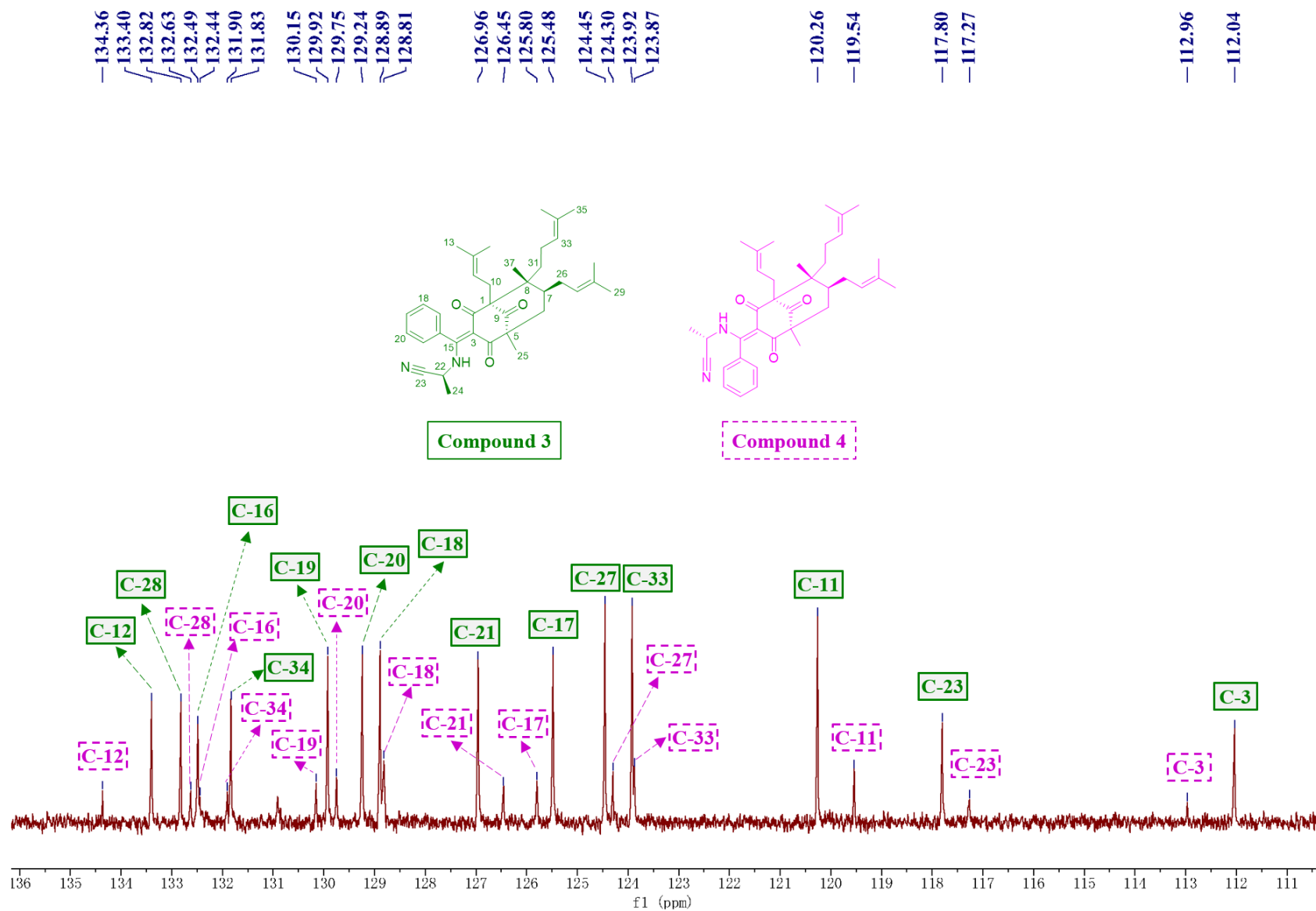


Fig. S30. Expansion of ^{13}C NMR spectrum of **3/4** in CDCl_3 (200 MHz).

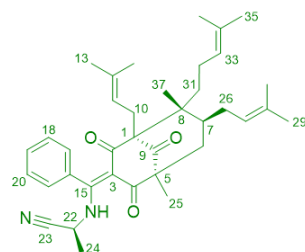
—70.10
—69.34

—59.94
—59.41

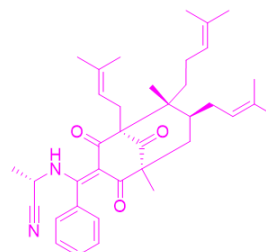
—51.37
—51.28

—41.82
—41.28
—40.96
—40.24
—40.09
—39.58

—36.12
—35.85



Compound 3



Compound 4

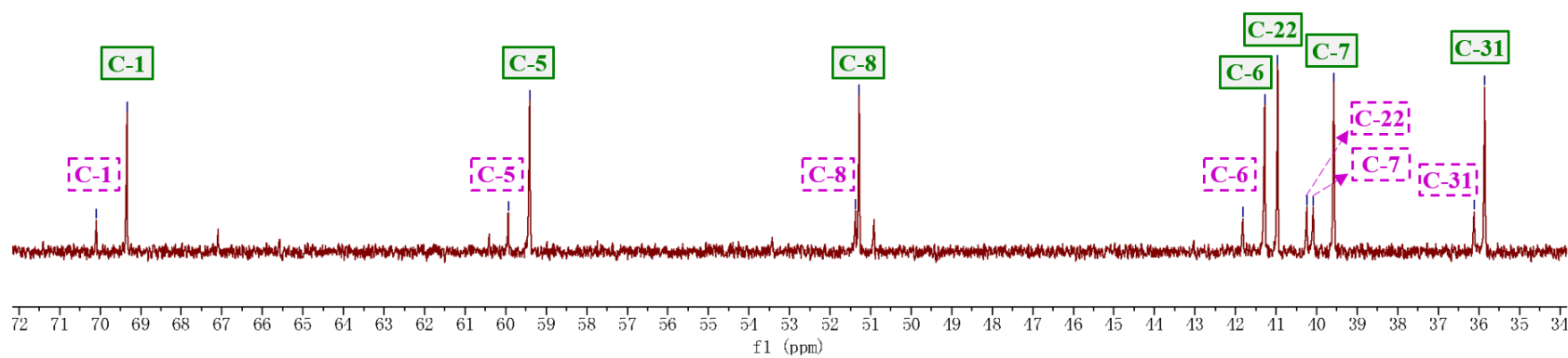


Fig. S31. Expansion of ^{13}C NMR spectrum of 3/4 in CDCl_3 (200 MHz).

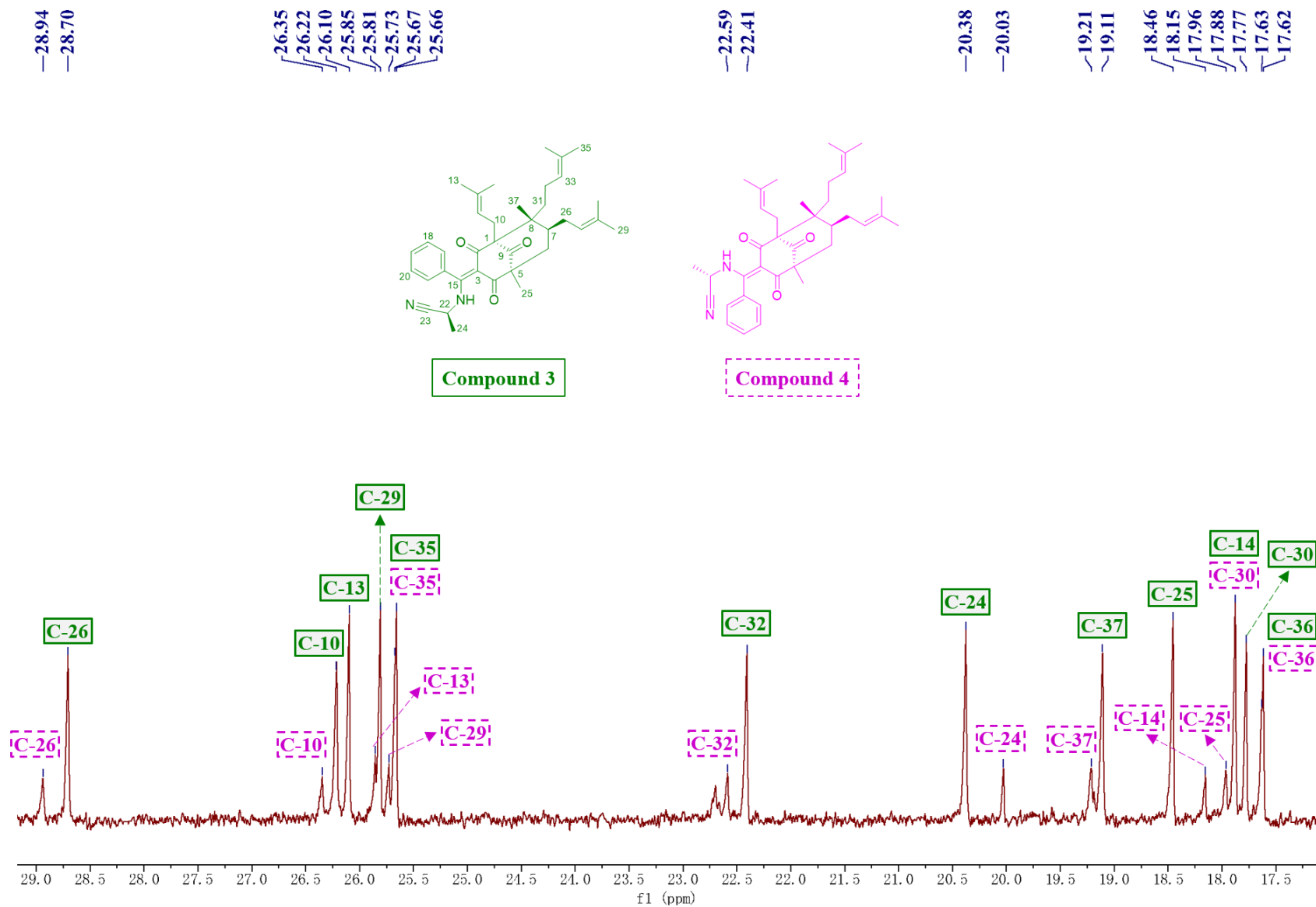


Fig. S32. Expansion of ^{13}C NMR spectrum of **3/4** in CDCl_3 (200 MHz).

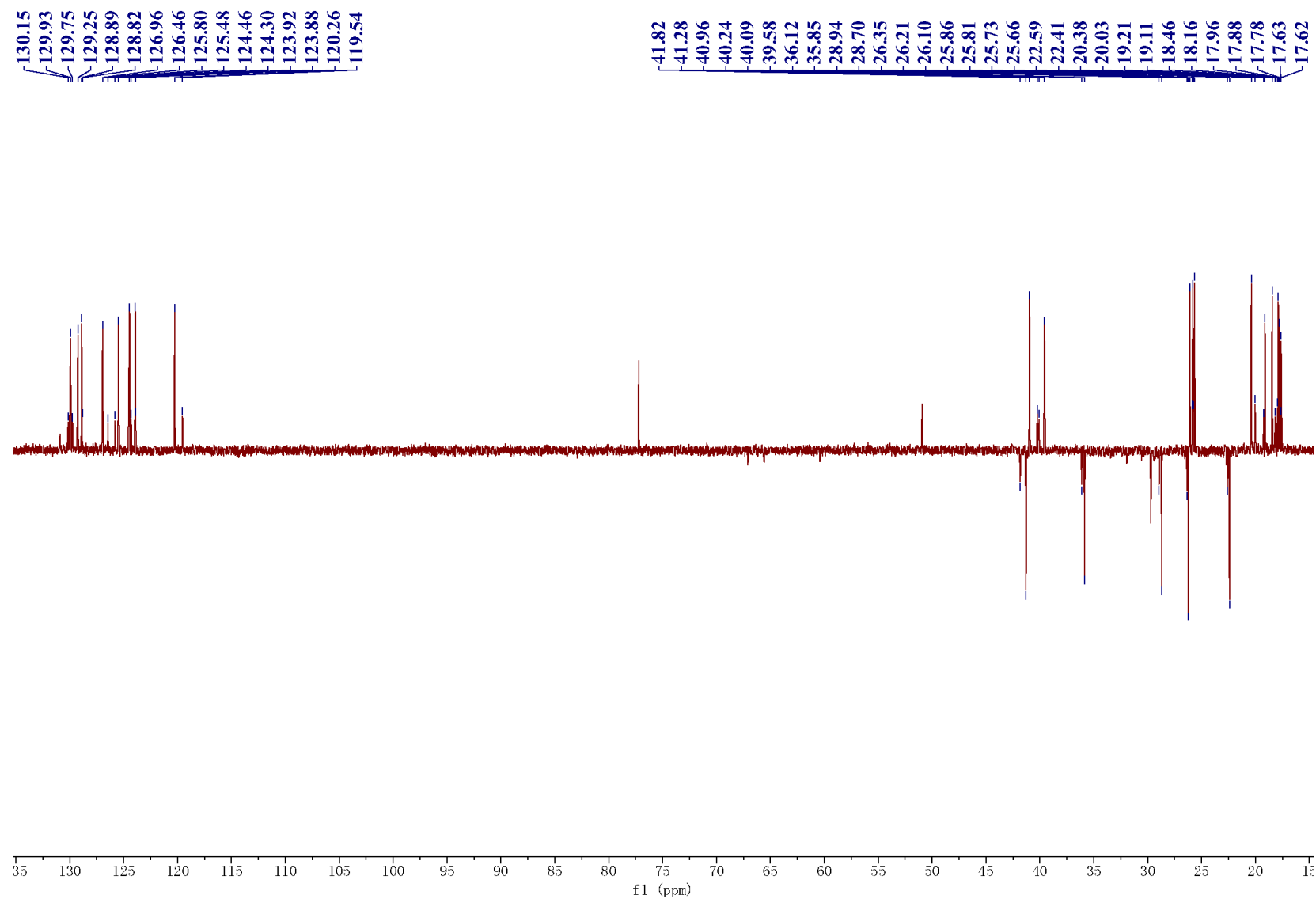


Fig. S33. DEPT-135 spectrum of **3/4** in CDCl_3 (200 MHz).

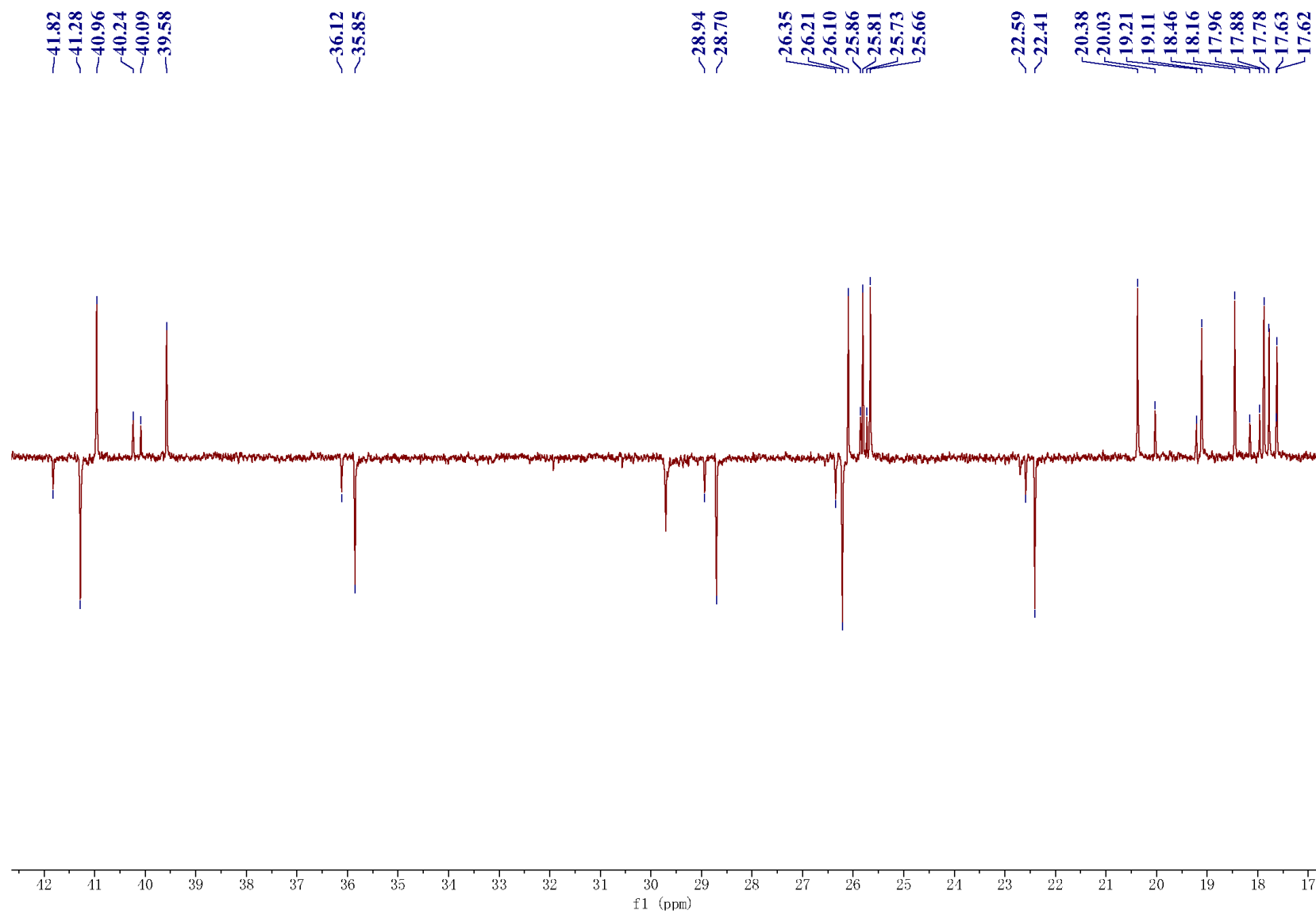


Fig. S34. Expansion of DEPT-135 spectrum of **3/4** in CDCl₃ (200 MHz).

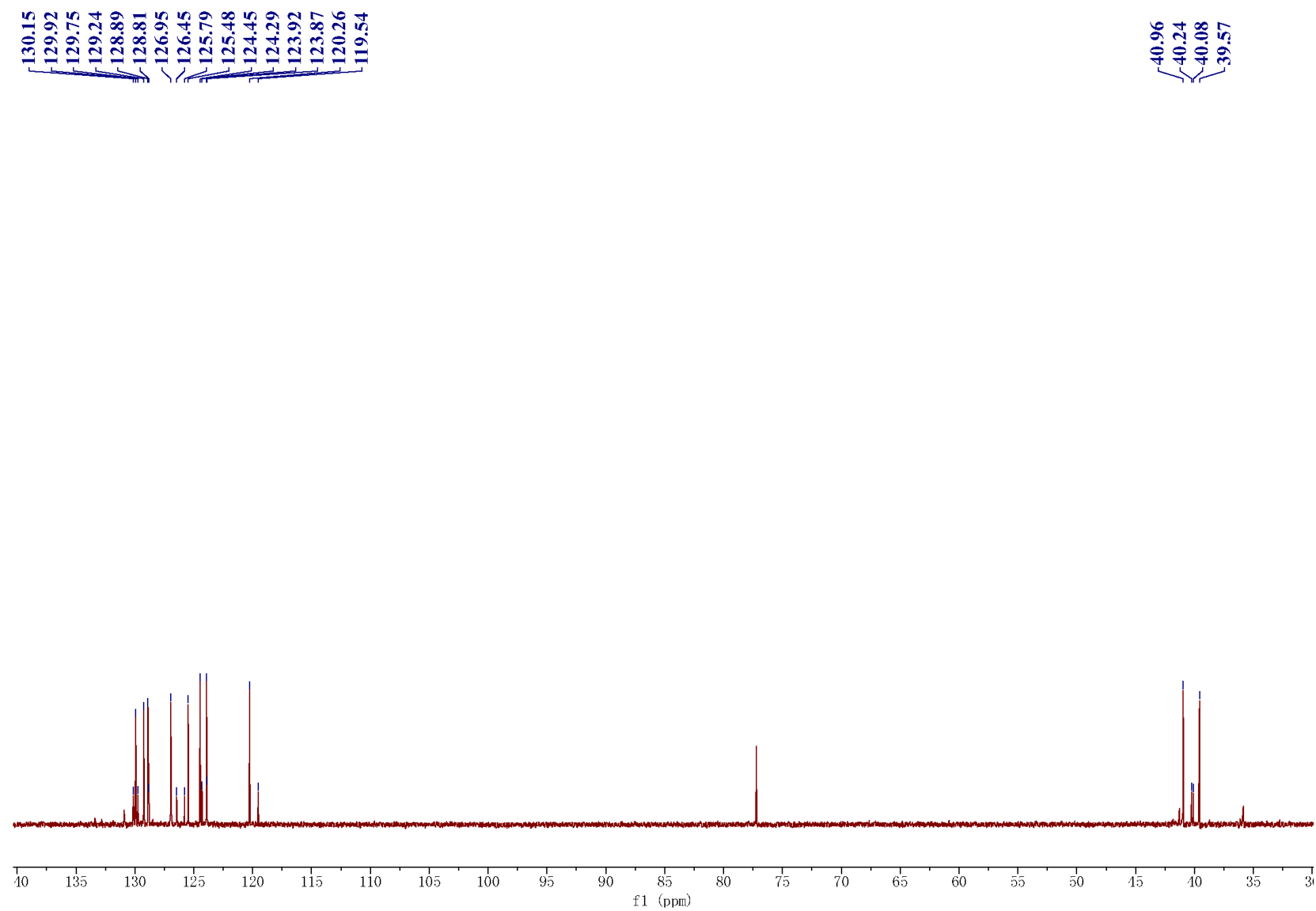


Fig. S35. DEPT-90 spectrum of **3/4** in CDCl₃ (200 MHz).

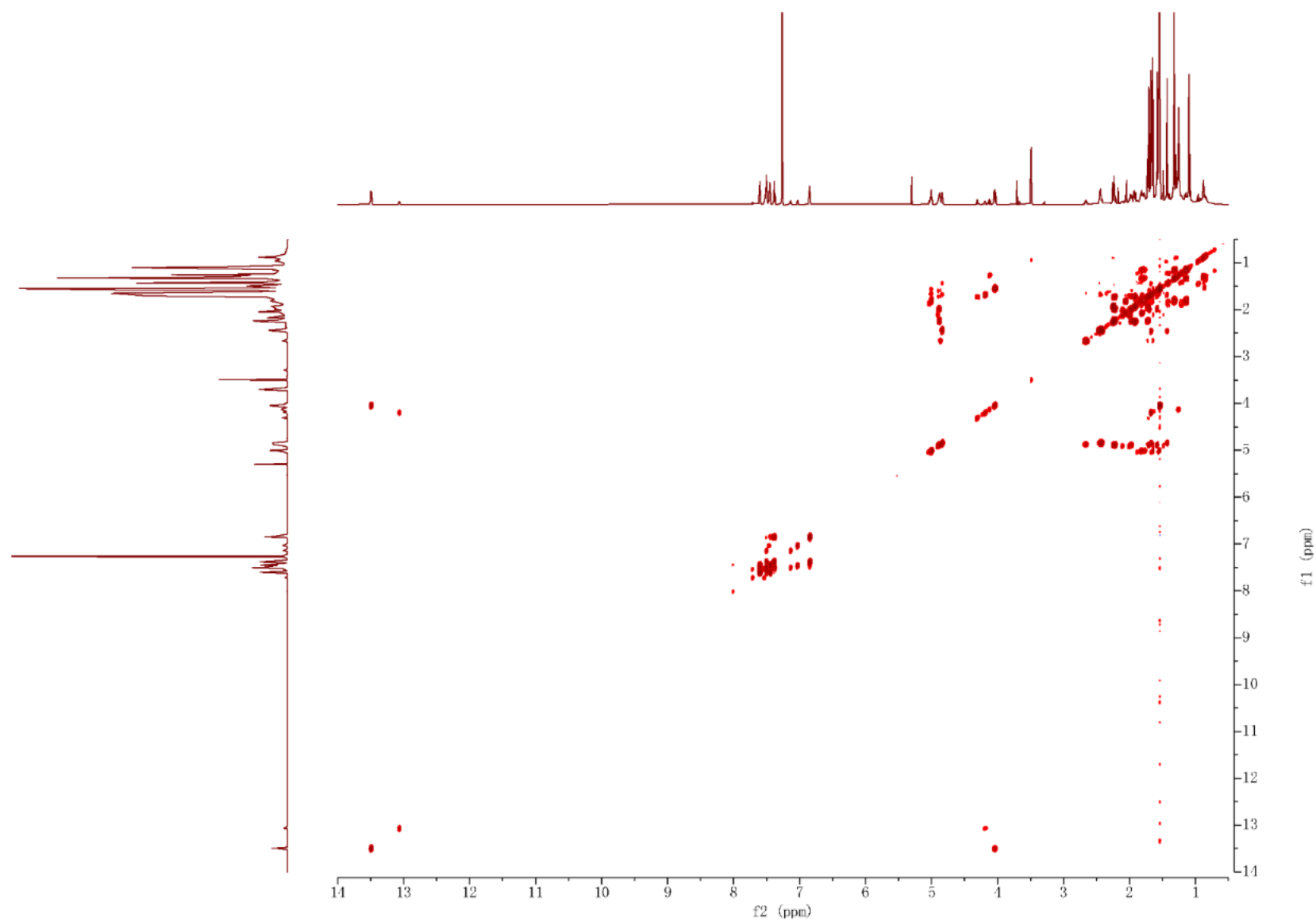


Fig. S36. COSY spectrum of **3/4** in CDCl_3 (800 MHz).

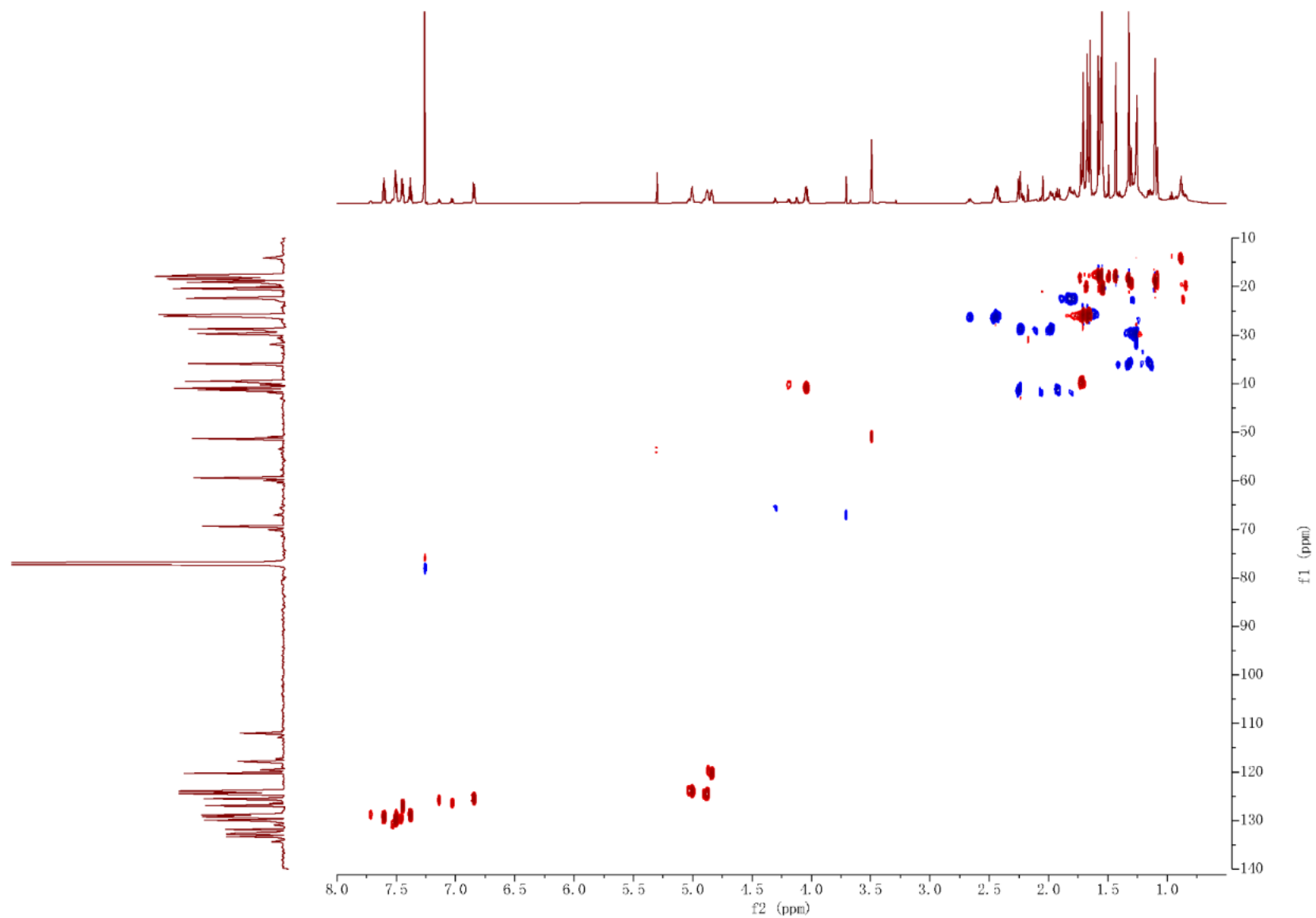


Fig. S37. HSQC spectrum of **3/4** in CDCl_3 (800 MHz).

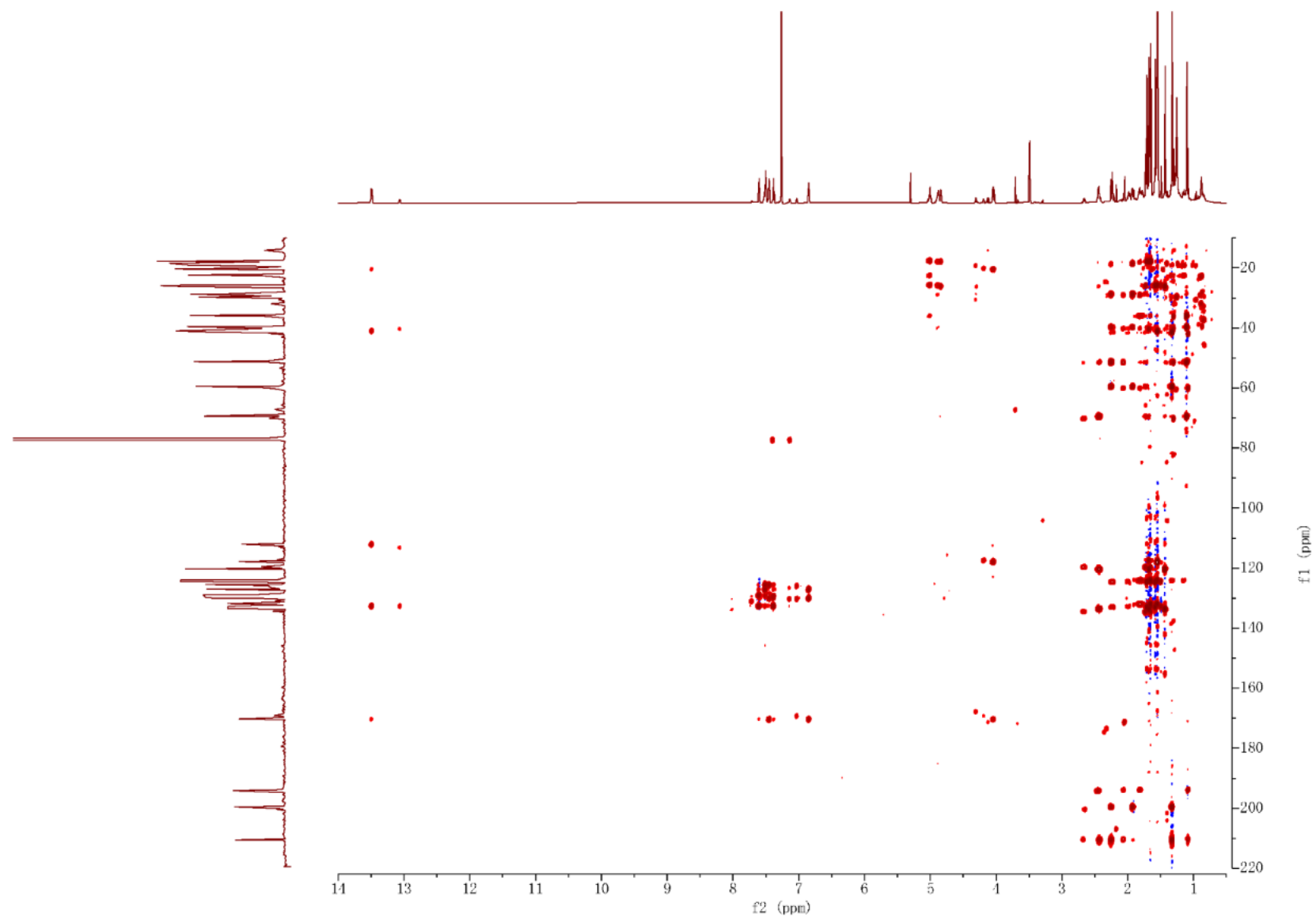


Fig. S38. HMBC spectrum of **3/4** in CDCl_3 (800 MHz).

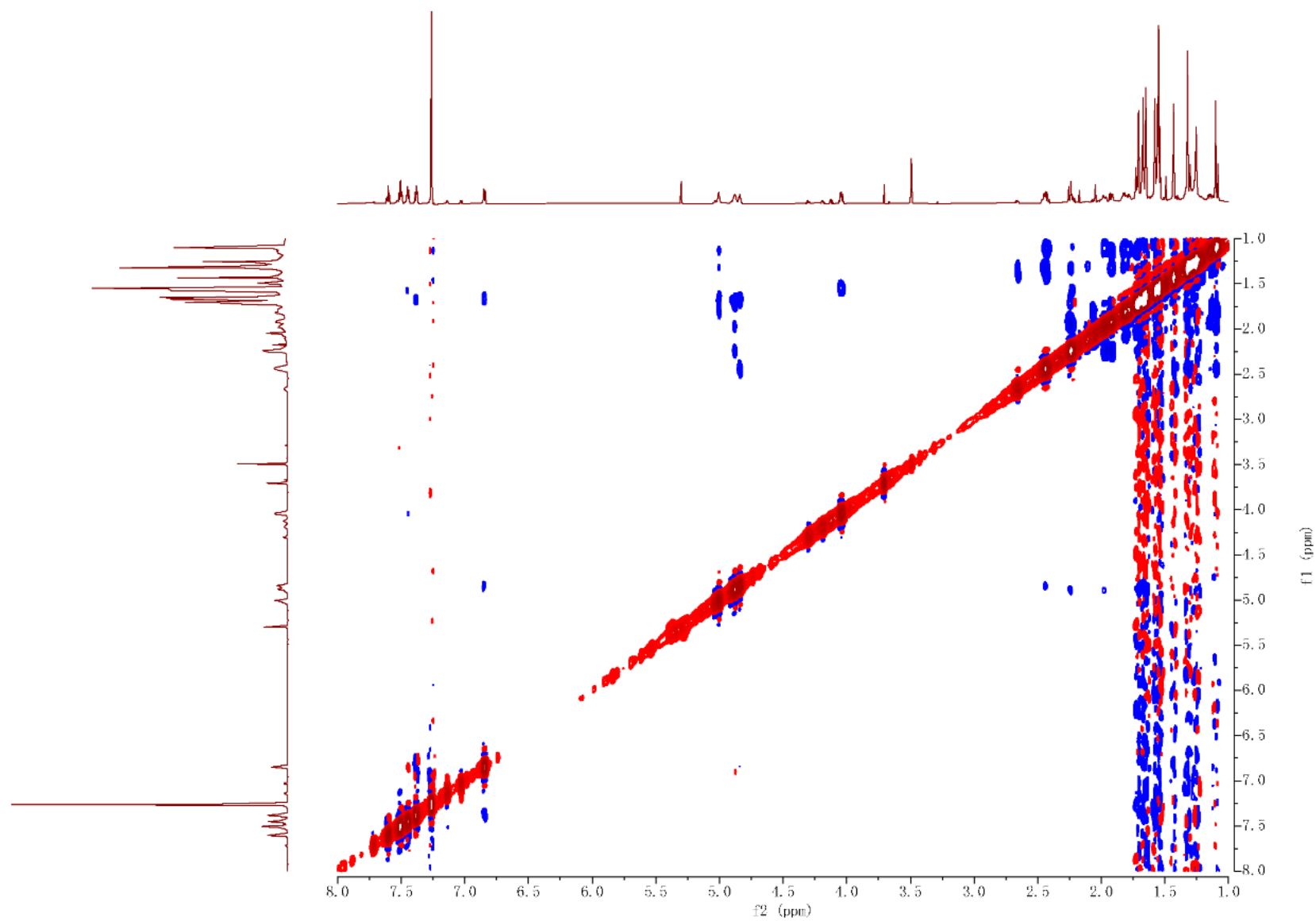


Fig. S39. ROESY spectrum of **3/4** in CDCl_3 (800 MHz).

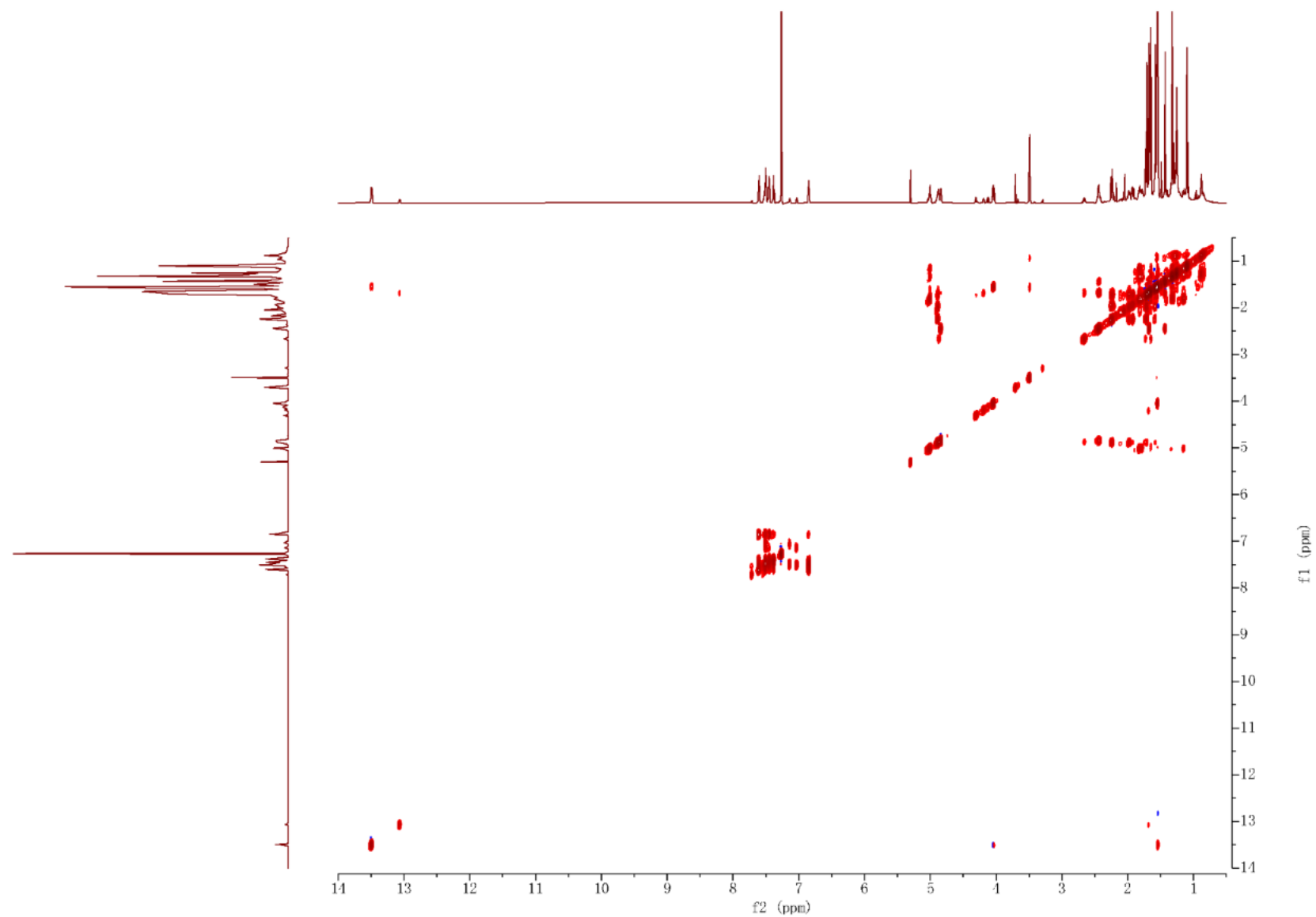


Fig. S40. TOCSY spectrum of **3/4** in CDCl_3 (800 MHz).

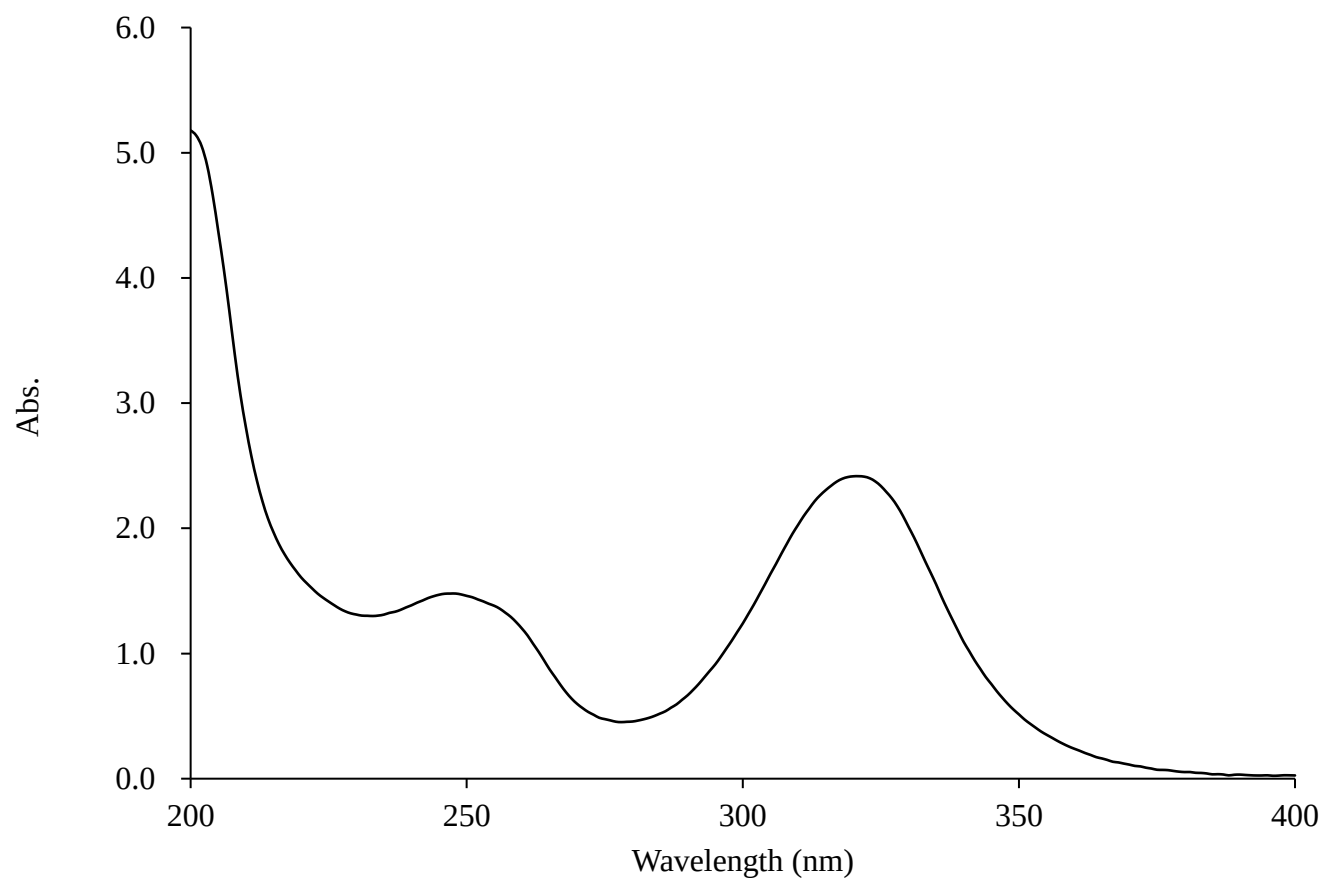


Fig. S41. UV spectrum of **3/4** (in MeOH).

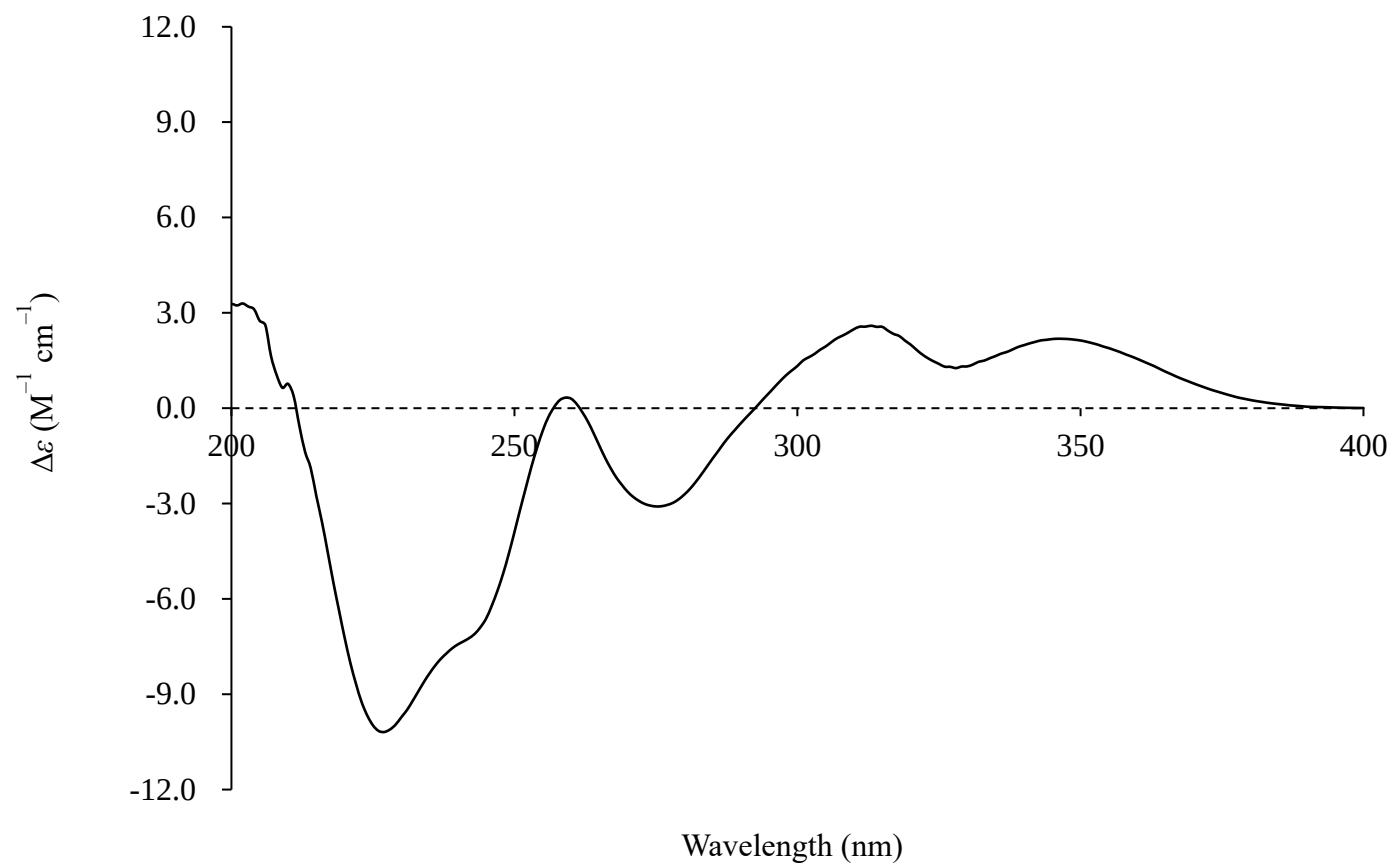


Fig. S42. ECD spectrum of **3/4** (in MeOH).

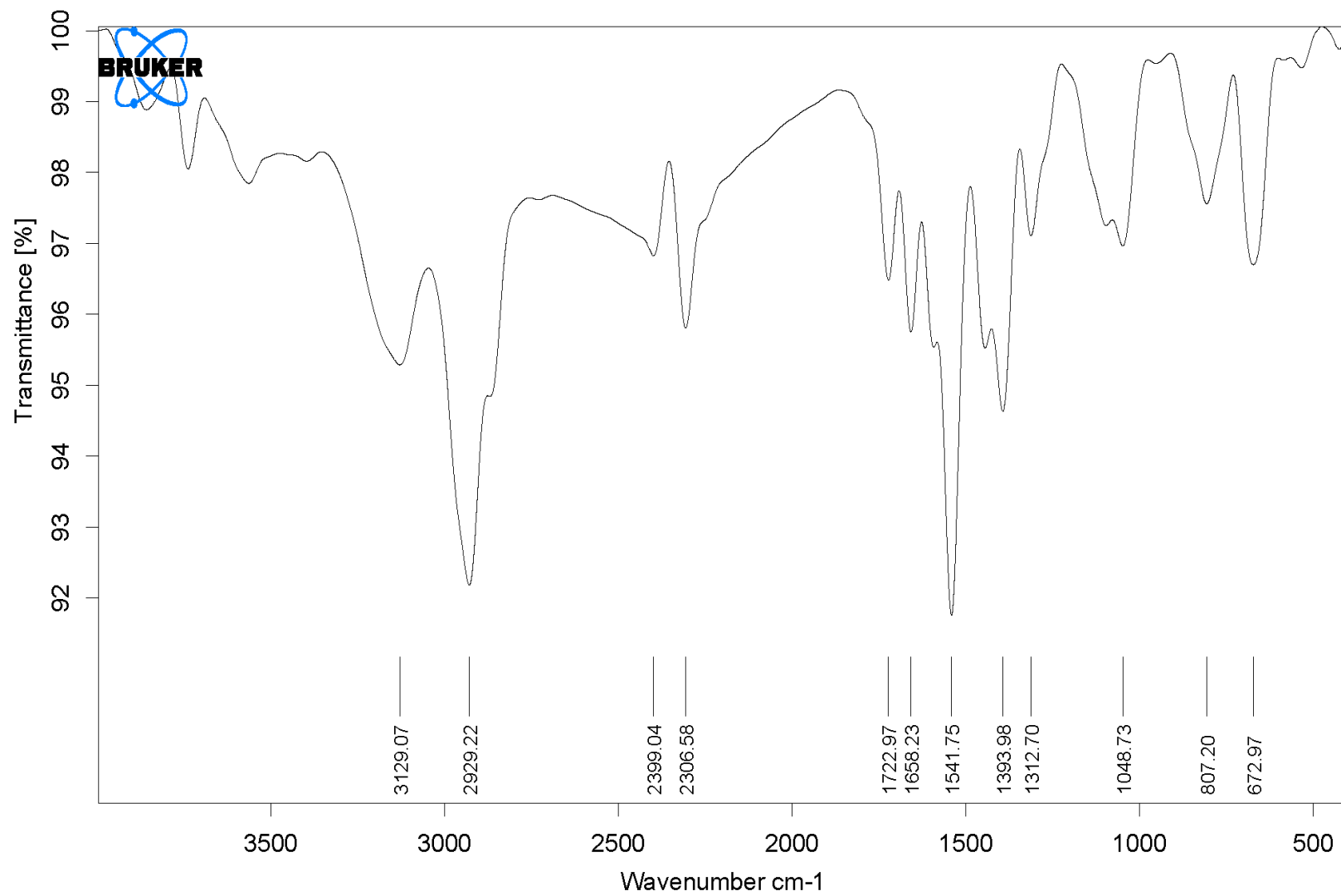


Fig. S43. IR spectrum (film on KBr pellet) of **3/4**.

(+)-HRESIMS m/z 591.3558 $[M + Na]^+$ (calcd for $C_{37}H_{48}N_2O_3Na^+$, 591.3557)

m/z 569.3740 $[M + H]^+$ (calcd for $C_{37}H_{49}N_2O_3^+$, 569.3738)

5-HE-PE-021A #29 RT: 0.16 AV: 1 NL: 1.35E7

T: FTMS + p ESI Full lock ms [80.0000-1200.0000]

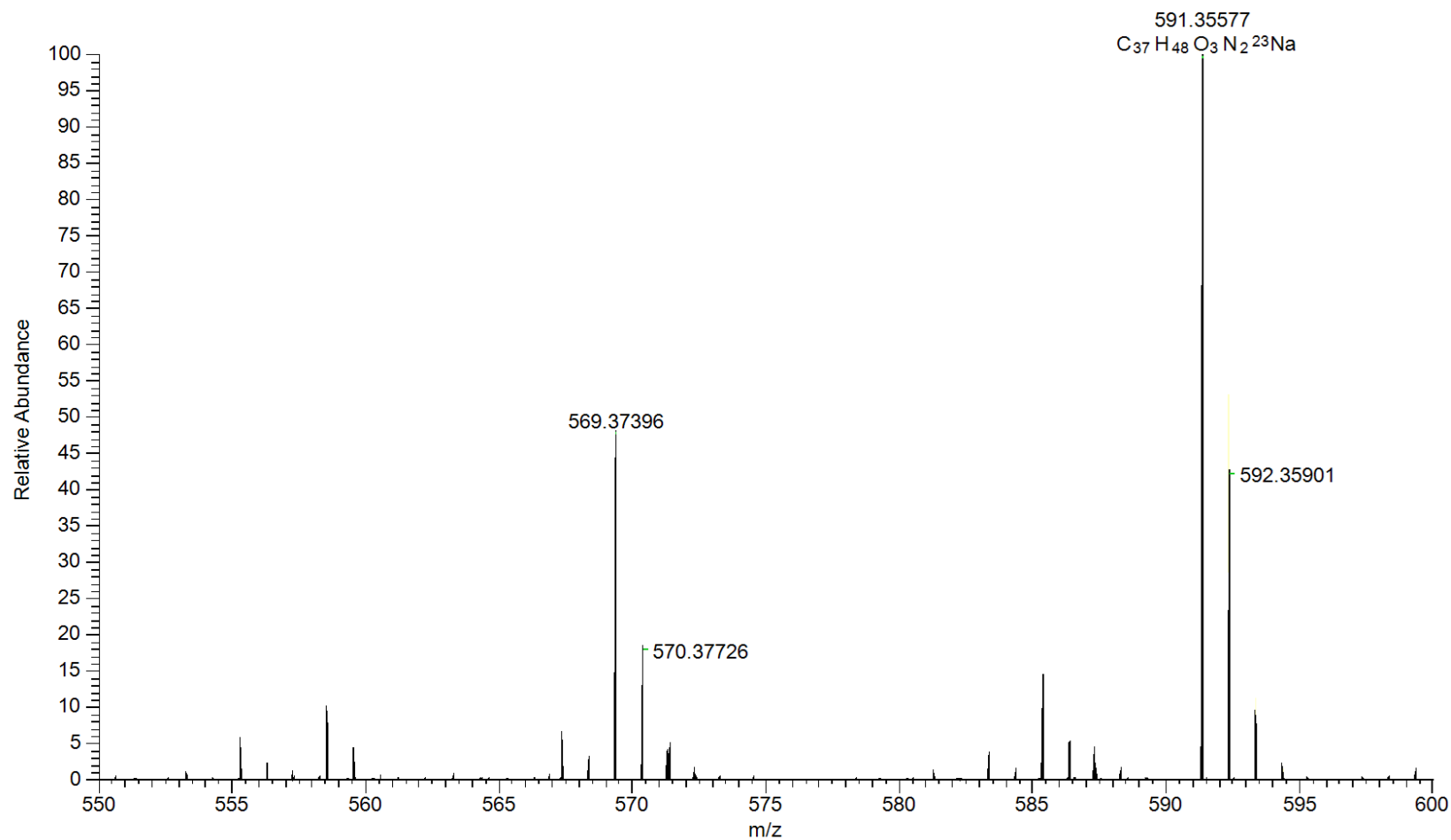


Fig. S44. HRESIMS of **3/4**.

3. NMR, UV, ECD, IR, and HRESIMS spectra of **5**

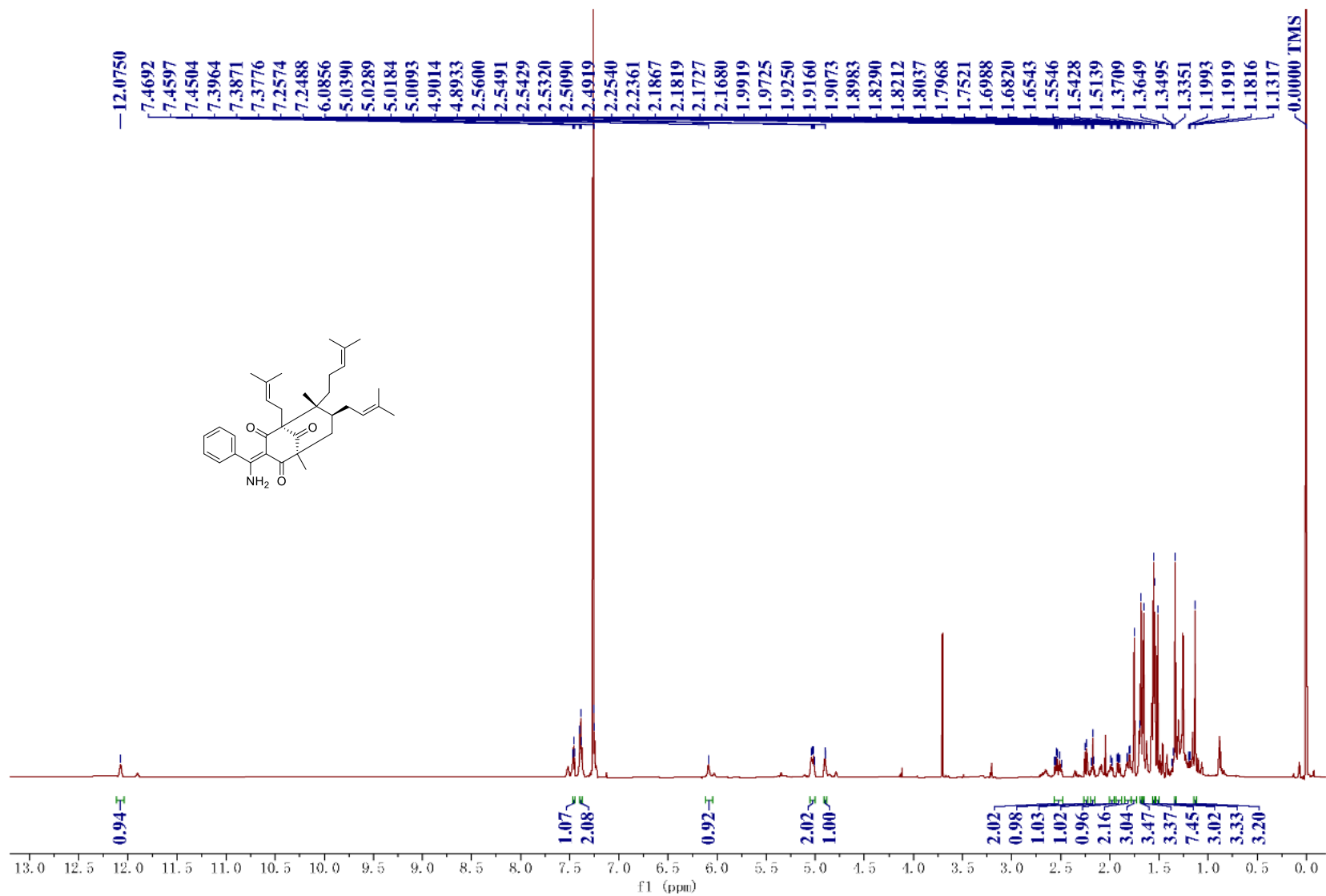


Fig. S45. ^1H NMR spectrum of **5** in CDCl_3 (800 MHz).

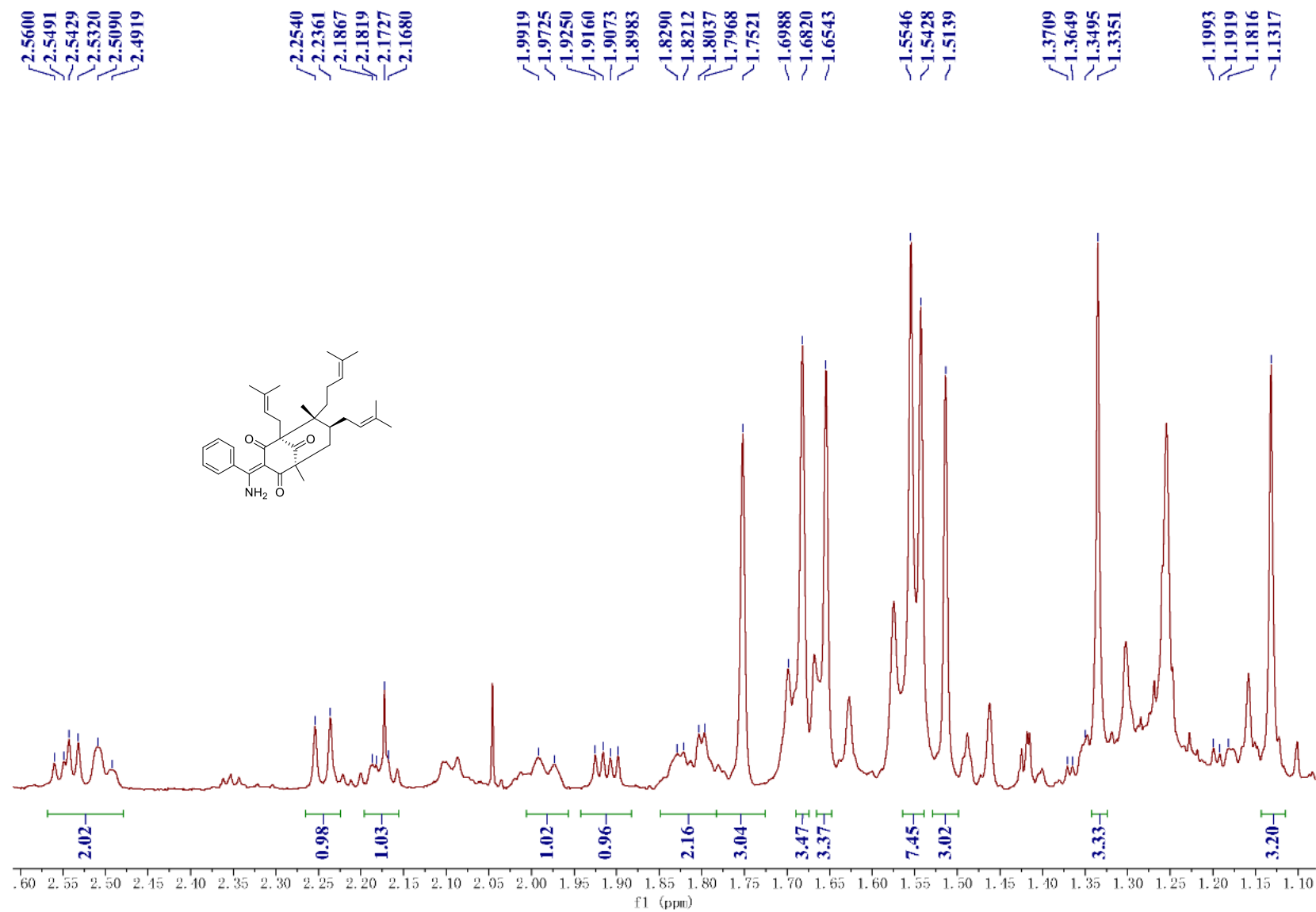


Fig. S46. Expansion of ^1H NMR spectrum of **5** in CDCl_3 (800 MHz).

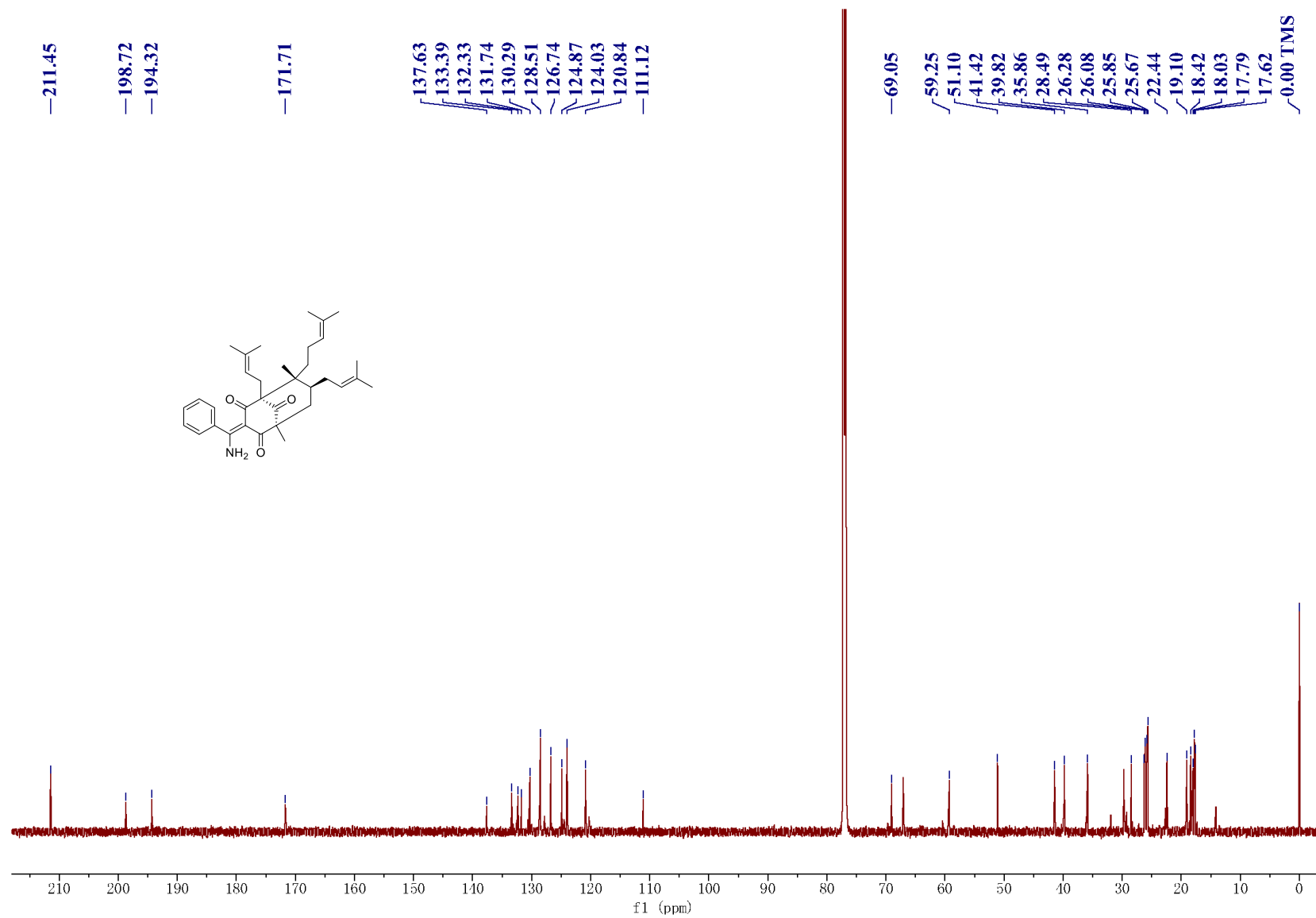


Fig. S47. ^{13}C NMR spectrum of **5** in CDCl_3 (200 MHz).

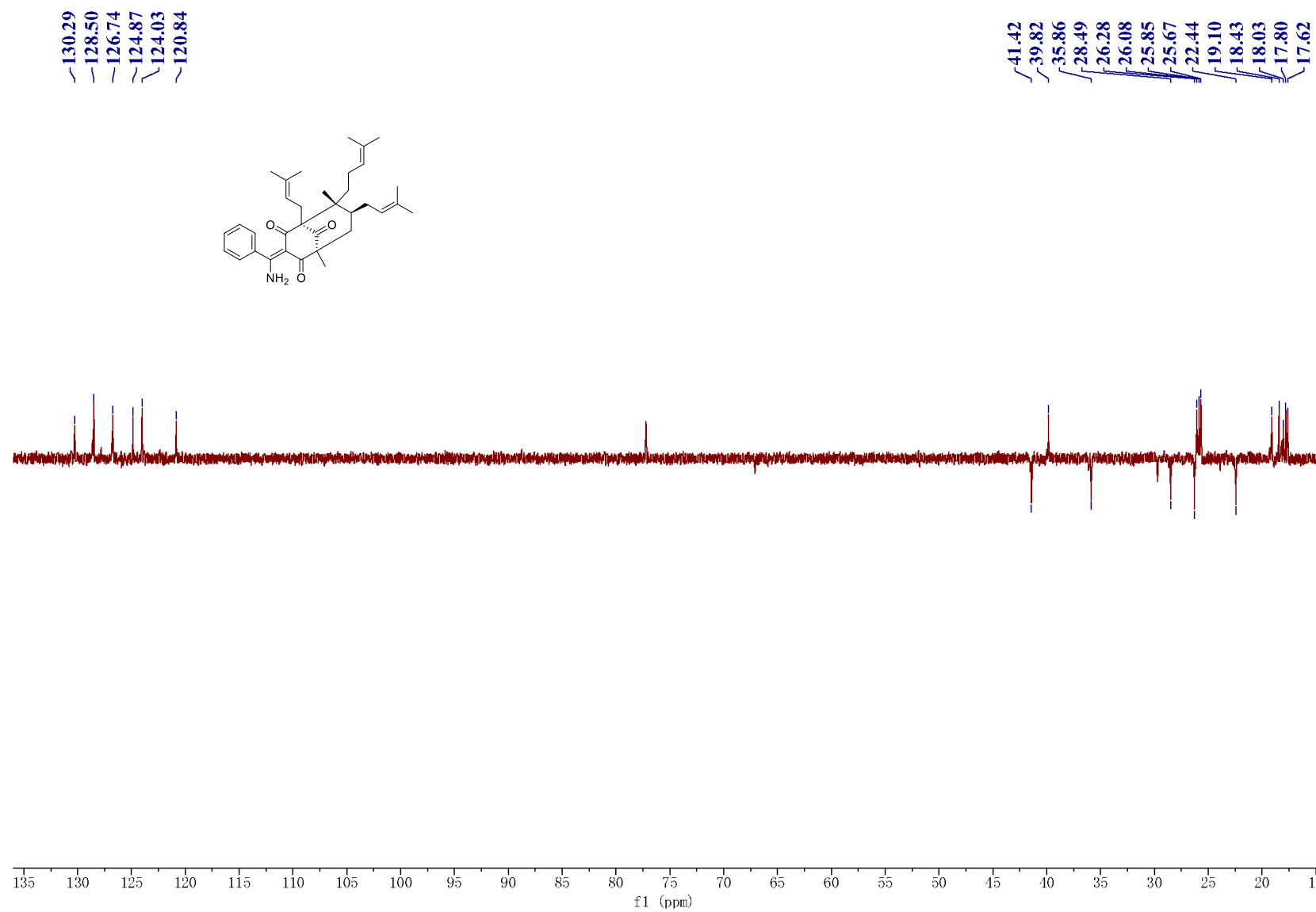


Fig. S48. DEPT-135 spectrum of **5** in CDCl_3 (200 MHz).

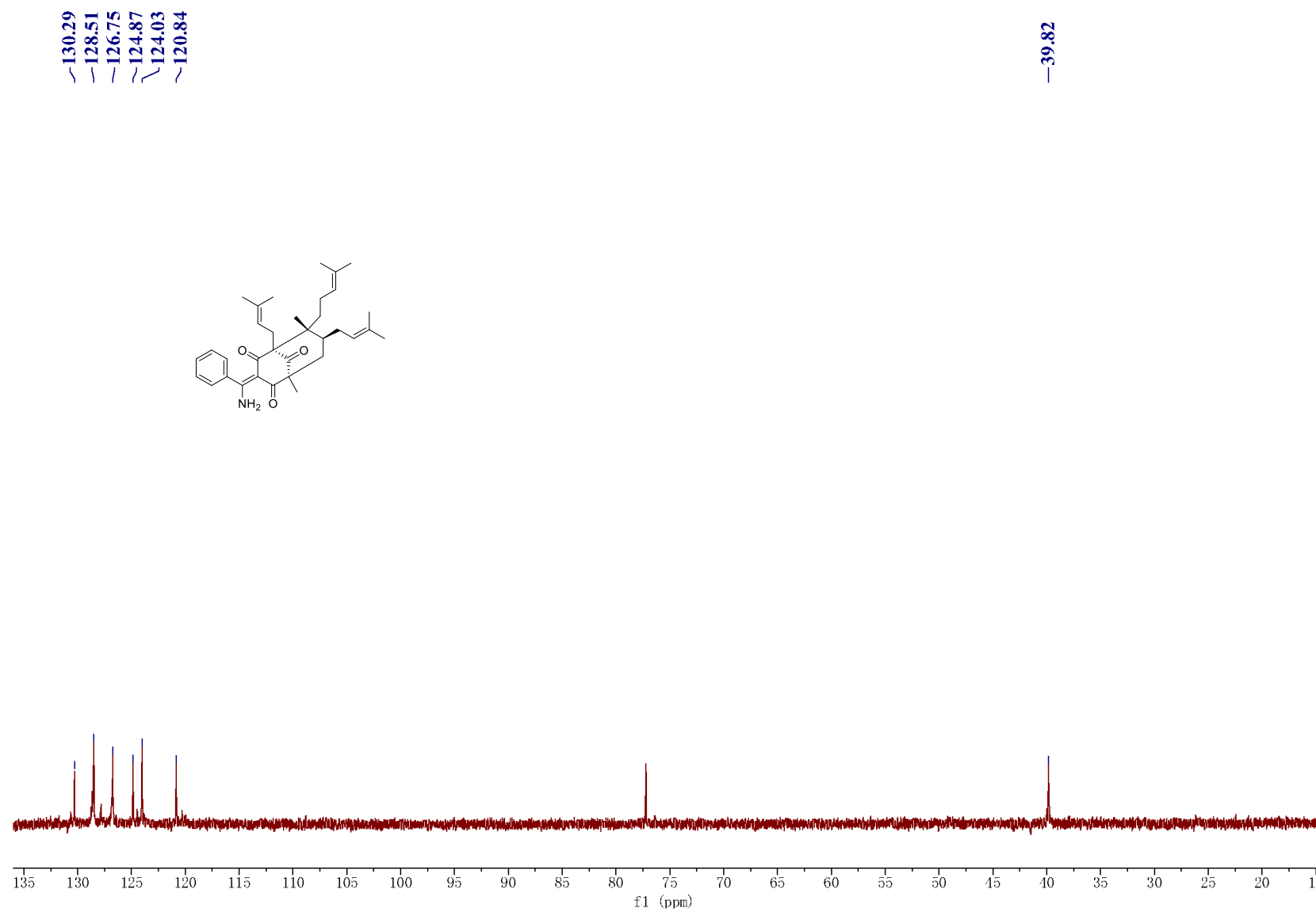


Fig. S49. DEPT-90 spectrum of **5** in CDCl₃ (200 MHz).

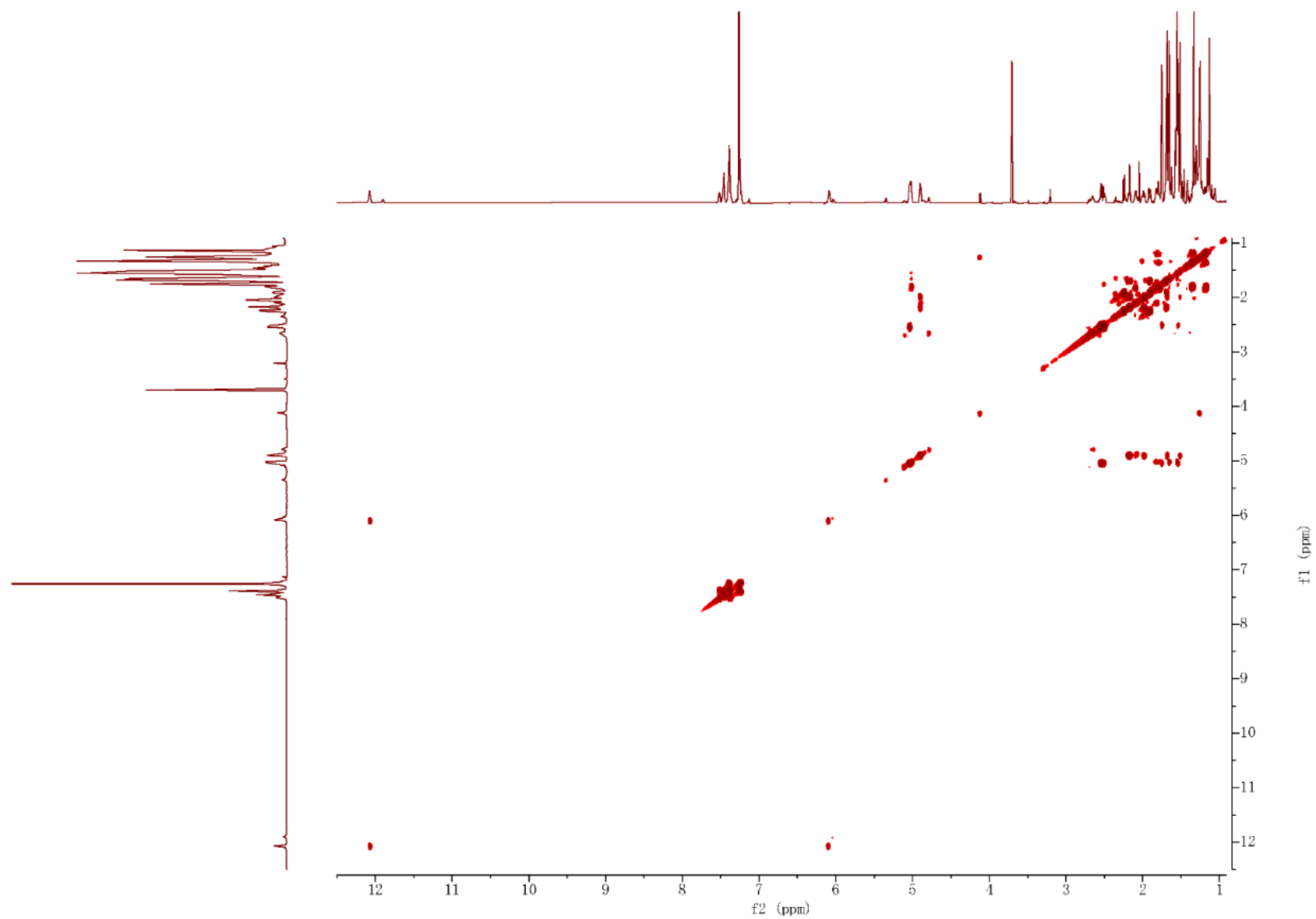


Fig. S50. COSY spectrum of **5** in CDCl₃ (800 MHz).

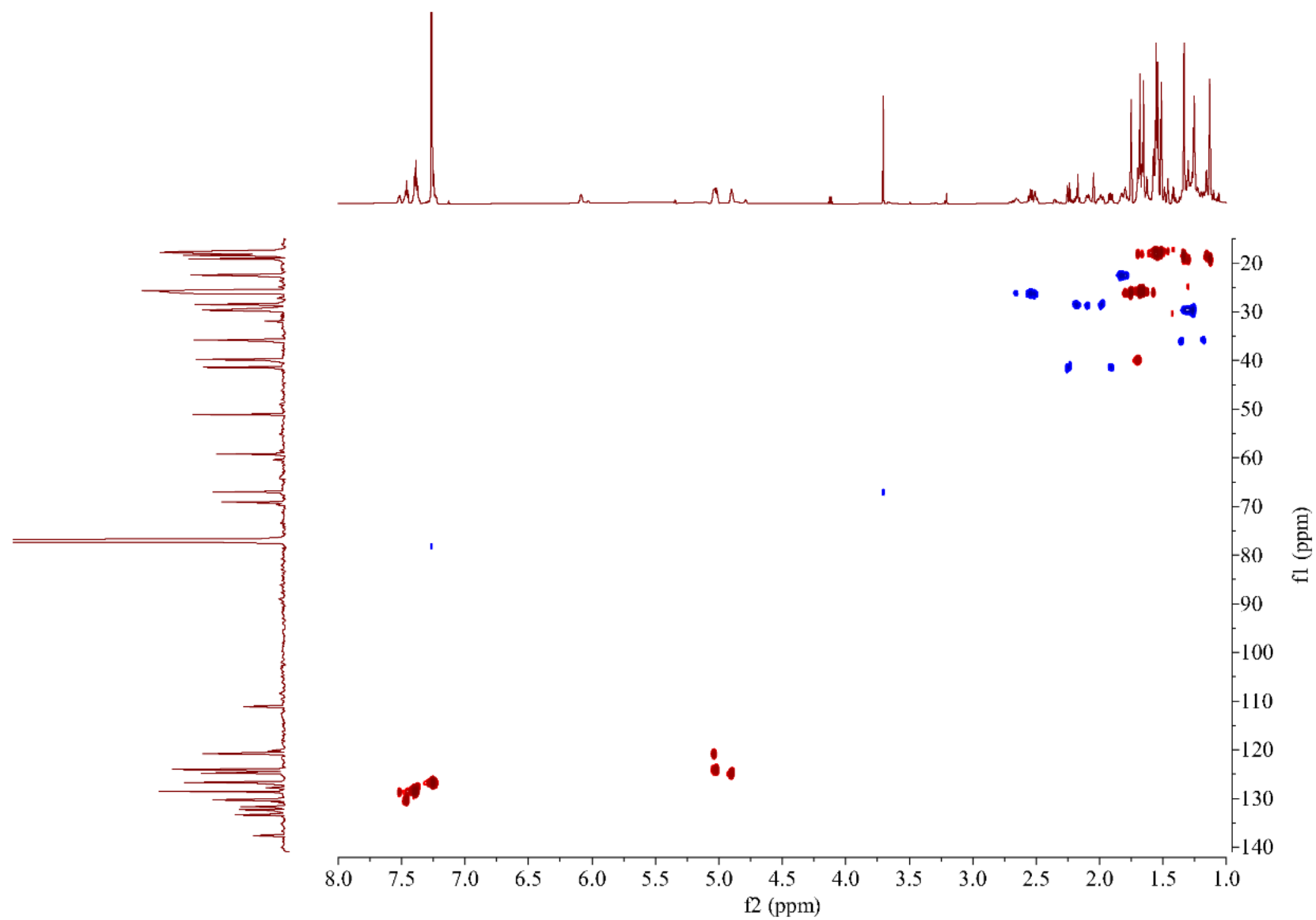


Fig. S51. HSQC spectrum of **5** in CDCl₃ (800 MHz).

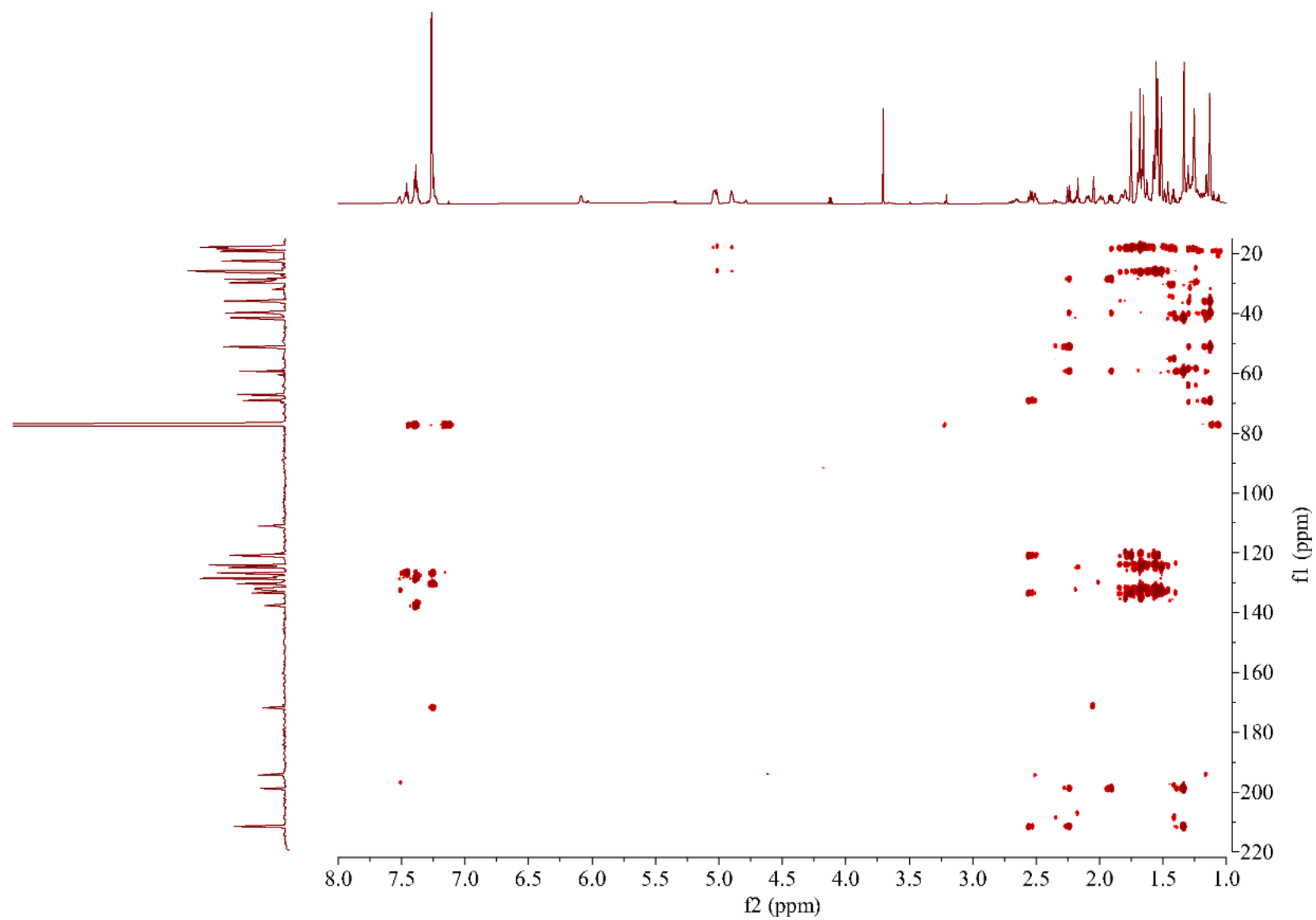


Fig. S52. HMBC spectrum of **5** in CDCl_3 (800 MHz).

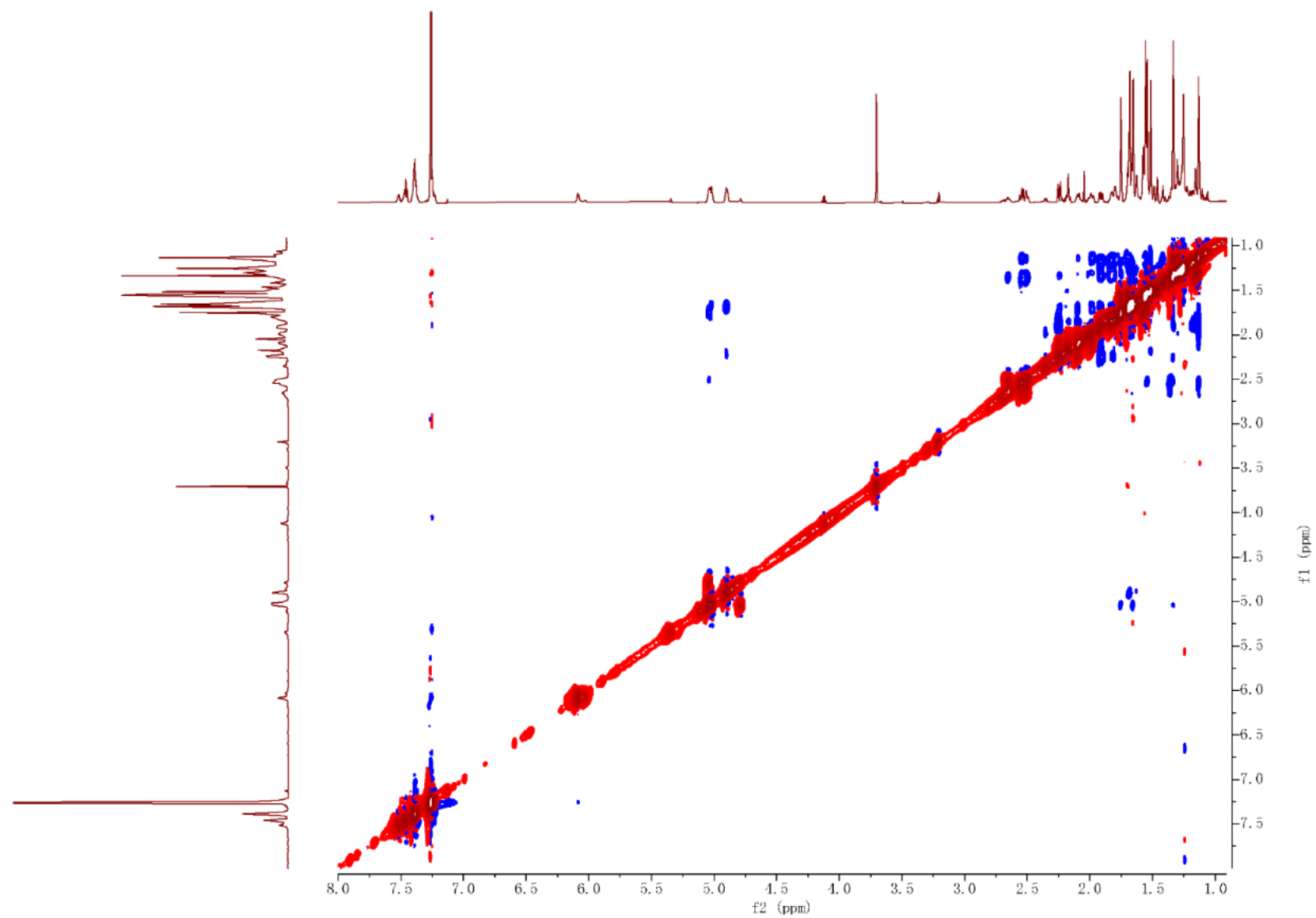


Fig. S53. ROESY spectrum of **5** in CDCl_3 (800 MHz).

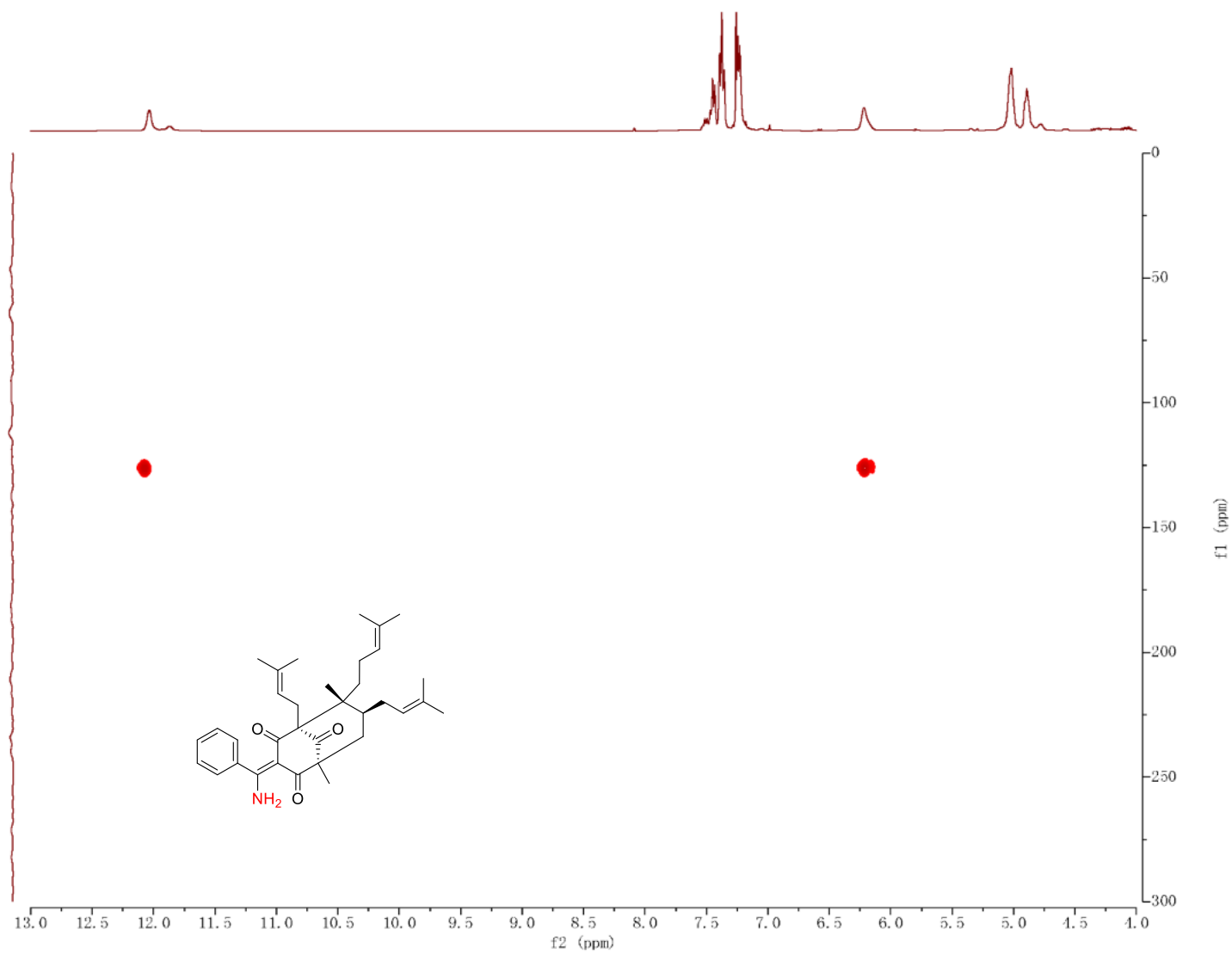


Fig. S54. ^1H - ^{15}N HSQC spectrum of **5** in CDCl_3 (400 MHz).

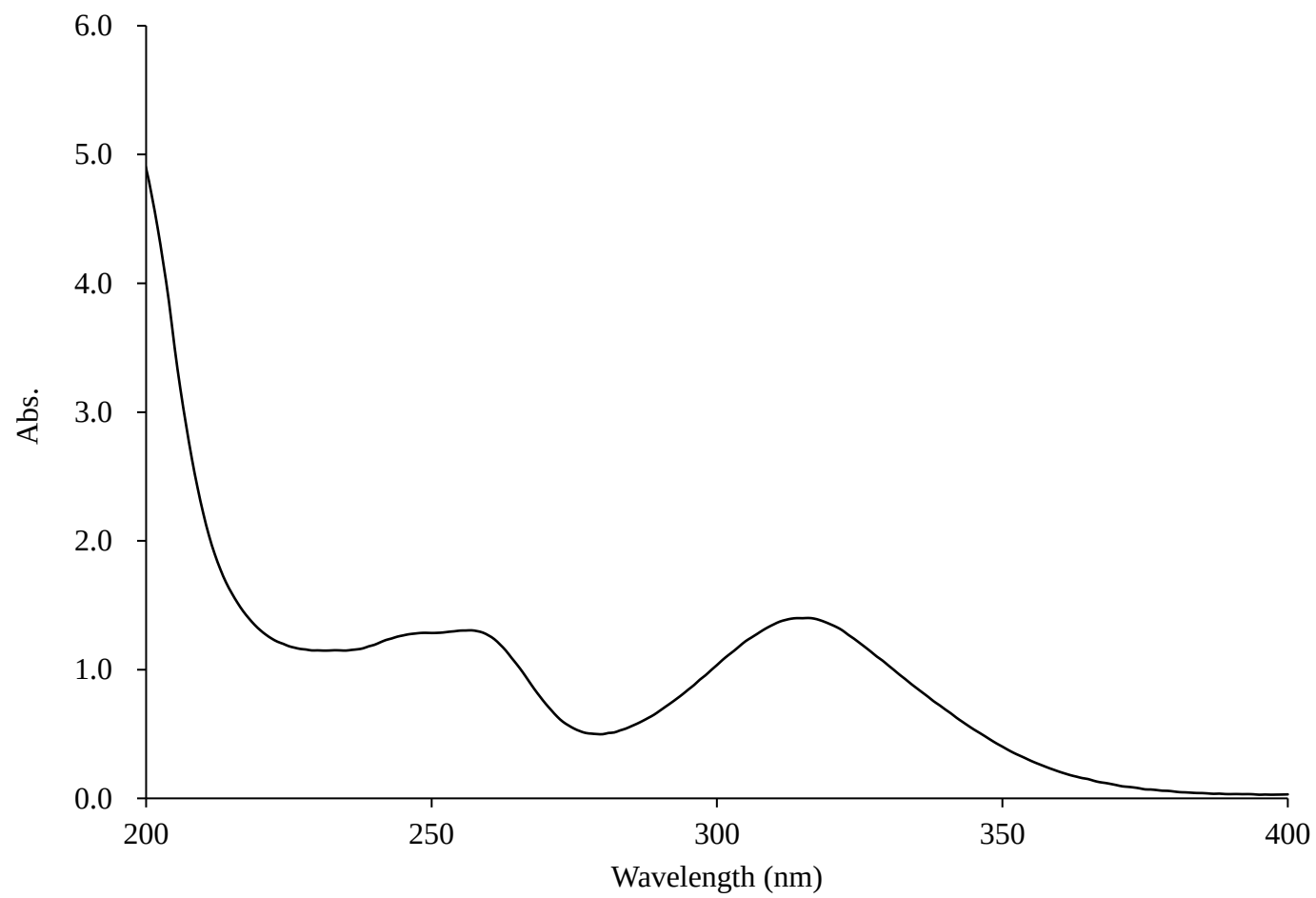


Fig. S55. UV spectrum of **5** (in MeOH).

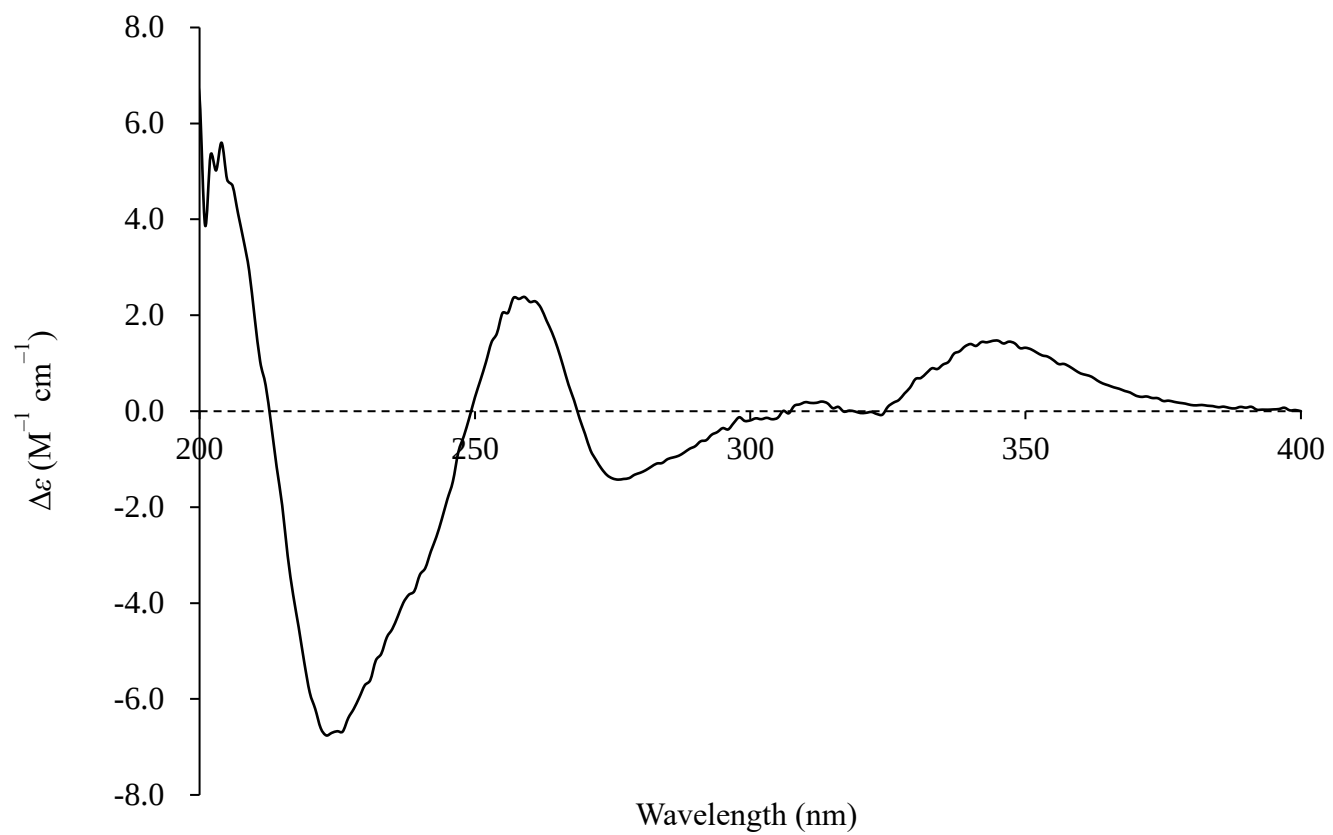


Fig. S56. ECD spectrum of **5** (in MeOH).

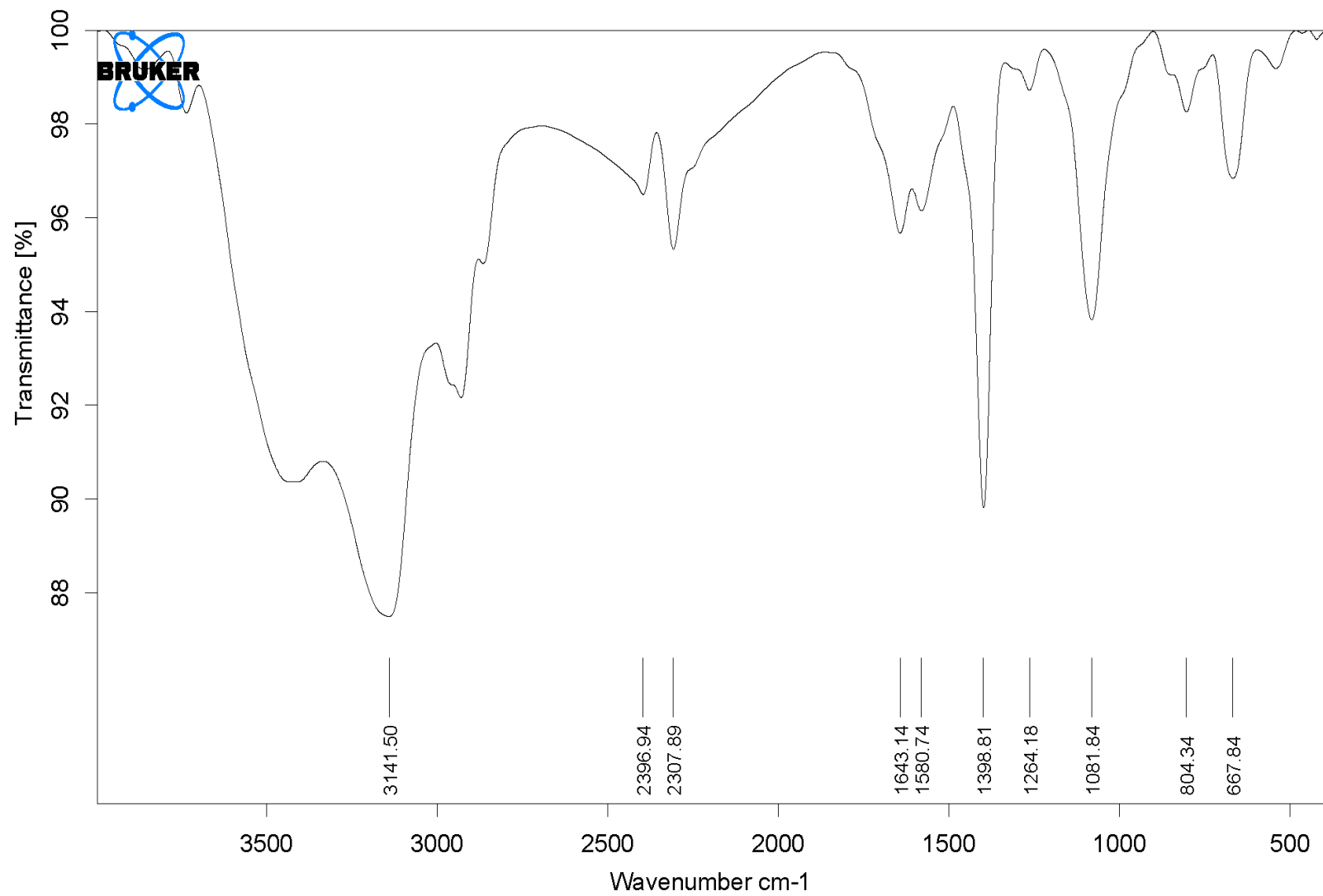


Fig. S57. IR spectrum (film on KBr pellet) of **5**.

(+)-HRESIMS m/z 538.3294 $[M + Na]^+$ (calcd for $C_{34}H_{45}NO_3Na^+$, 538.3292)

m/z 516.3475 $[M + H]^+$ (calcd for $C_{34}H_{46}NO_3^+$, 516.3472)

5-HE-PE-027B #33 RT: 0.18 AV: 1 NL: 6.06E6
T: FTMS + p ESI Full lock ms [80.0000-1200.0000]

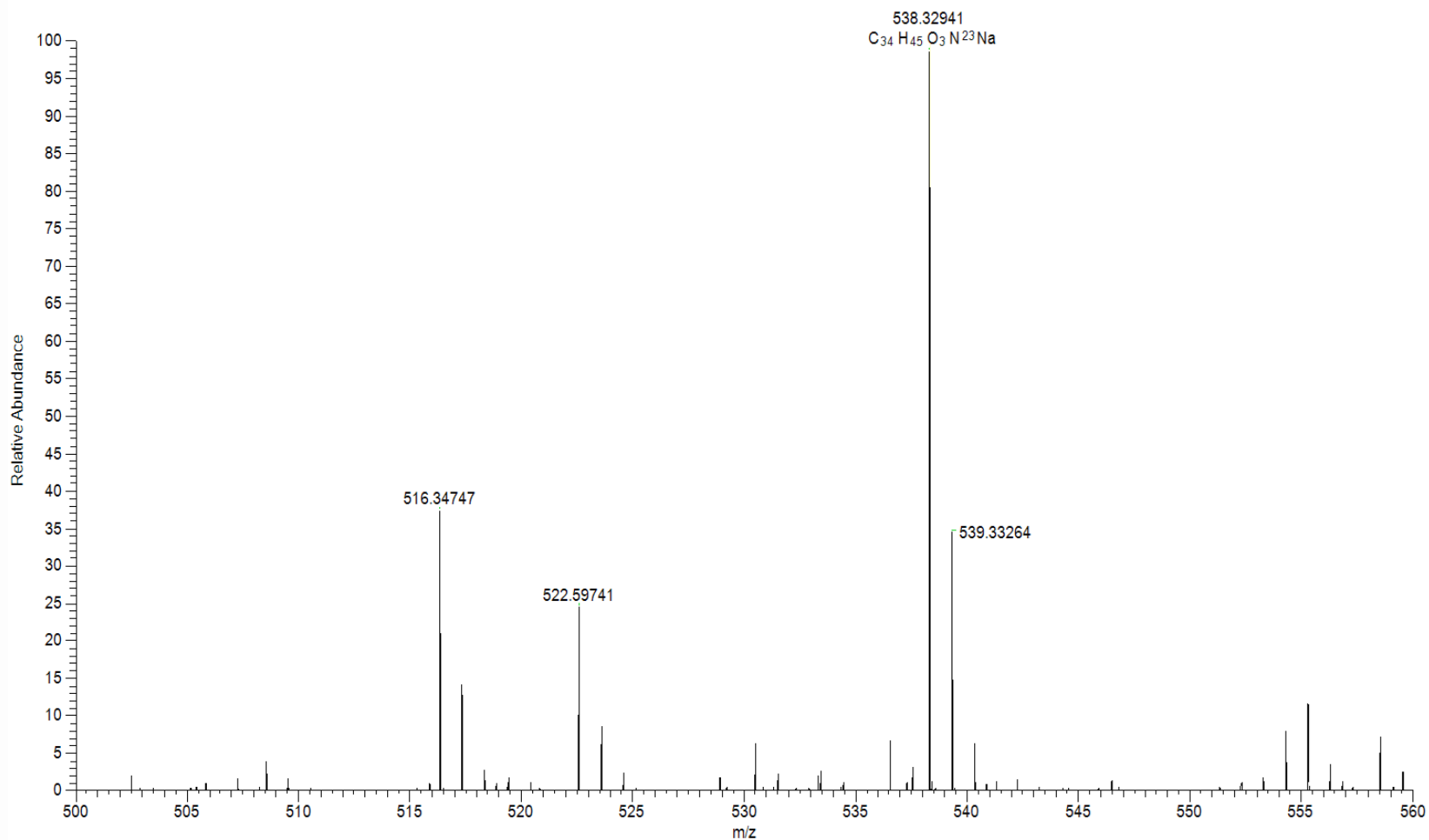


Fig. S58. HRESIMS of 5.