Supporting Information

I. General experimental details

1.1. Materials

All of the materials were purchased from Beijing Innochem Company, and used as received.

1.2 Characterization

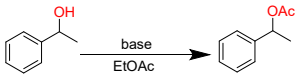
Some products were purified by flashchromatography on silica gel. Benzyl acetate,cyclohexylmethyl acetate,naphthalen-2-yl benzoate,1-phenylethyl acetate: analysis of crude reaction mixture was performed on a SHIMADZU 2030 GC System with a HPINNOWAX capillary column (30 m×0.25 mm×0.32 μm) and a FID detector. The following GC temperature program was used: 45 ℃ is maintained for 2 minutes, rises to 280 ℃ at 15 ℃/min, and hold for 5 minutes. Nitrogen was used as a carrier gas. The injector temperature was held at 250 ℃. ^{1}H-NMR and ^{13}C-NMR spectra spectra were acquired on a 400 MHz JNM-ECZ400S/L1 instrument. Chemical shifts were reported in ppm relative to a peak of a residual protiated solvent ($CDCl_3$ or DMSO). General procedure for identifying compounds by HRMS(LC-MS): (1) Chromatographic conditions: The product was analyzed on Agilent 6545 Q-TOF LC-MS using 1290 Infinity II liquid chromatography system, column type: Agilent ZORBAX SB-C18 (2.1x50mm). In the-ESI mode, the mobile phase is 60% acetonitrile-40% water; in the + ESI mode, the mobile phase is 60% acetonitrile-40% water (0.1% formic acid). (2) Mass spectrometry conditions: Agilent Jet Stream Technical conditions: The sheath gas temperature is set at 400 ℃, the sheath liquid is set at 12 L/min, measured in -ESI or +ESI modes, and the scan range is from 100 to 400 (m/z). General procedure for identifying compounds by GC-MS: (1) Chromatographic conditions: The products were analyzed on an Agilent 7890 B-7000 C GC-MS, using an HP-5MS chromatographic column (30 m×0.25 mm 0.25 μm) and a FID detector. Use the following GC temperature procedure: 50 ℃ for 3 min, rise to 100 ℃ at 10 ℃/min, then to 280 ℃ at a warming rate of 20 ℃/min and hold for 10 min. Nitrogen gas was used as a carrier gas. The injector temperature was kept at 250 ℃.(2) Mass spectrometry conditions: the interface temperature is set at 250 ℃, ionized by EI mode (70 eV), the ion source temperature is set at 230 ℃, and the MS quadrupole temperature is set at 150 ℃. Desay in full scan mode with a scan range of 40 to 500 (m/z).

1.3 General procedures for typical procedure

Typical procedure: For KOH used as the catalyst, desired amounts of primary alcohols substrate (0.5 mmol), KOH (0.75 mmol primary alcohol and 1.25 mmol secondary alcohol), EtOAc (3 mL) were added into a 10 mL reaction tube (open air)，and complete the reaction at room temperature a set time (primary alcohol reaction for 10 min; secondary alcohol reaction for 60 min). After cooling to room temperature, the reaction was acidificated with 2 mol/L HCl (2 mL), the solution was extracted by ethyl acetate (3 × 2 mL). Products were got from purification by column chromatography on 200-300 mesh silica gel using ethyl acetate/petroleum ether as eluent to afford the desired product. Some products was as following: the combined substrate was subjected to GC/FID for qualitative with dodecane as internal standard and for quantitative identification standard substrate.

II. Optimization of reaction conditions of 1-phenylethanol

Table S1: Optimization of Reaction Conditions

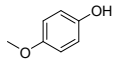
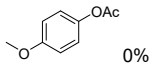


Entry	T/min	Temp/℃	Equiv.	Yield(%)
1	10	25℃	1.5	14
2	10	25℃	2	37
3	10	25℃	2.5	44
4	10	25℃	3	46
5	30	25℃	2.5	46
6	60	25℃	2.5	52
7	120	25℃	2.5	54
8	60	35℃	2.5	56
9	60	45℃	2.5	39
10	60	55℃	2.5	37

Condition: substrate (0.5 mmol), KOH, EtOAc (3 mL), GC yield.

III. phenols, acylation was acetylated

Table S2: phenols, acylation was acetylated

Entry	Substrate	Product /Yield
1		 0%
2		 0%
3		 0%
Condition: [a] substrate (0.5 mmol), KOH (0.75 mmol), EtOAc (3 mL), RT, 10 min, open air, isolated yield.		

IV. Data of ^{1}H NMR and ^{13}C NMR of products

3-methoxyphenyl acetate(table 3-1)[1]: yellow liquid, yield: 90%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.32 – 7.25 (m, 1H), 6.97 – 6.92 (m, 1H), 6.91 – 6.89 (m, 1H), 6.88 – 6.85 (m, 1H), 5.08 (s, 2H), 3.81 (s, 2H), 2.11 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.00, 159.85, 137.54, 129.75, 120.52, 113.84, 113.79, 77.48, 77.16, 76.84, 66.28, 55.35, 21.12. HRMS: [$C_{10}H_{12}O_3$] calculated 180.0786; measured 180.0783; found ([$C_{10}H_{12}O_3$]-H)$^-$: 179.0715.

2-methoxyphenyl acetate(table 3-2)[1]: colorless liquid, yield: 92%. ^{1}H NMR(400 MHz,CD_3Cl) δ 7.35 – 7.27 (m, 2H), 6.99 – 6.86 (m, 2H), 5.17 (s, 2H), 3.87 – 3.82 (m, 3H), 2.11 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 172.65, 133.95, 130.33, 129.41, 128.60. HRMS: [$C_{10}H_{12}O_3$] calculated 180.0786; measured 180.0793; found ([$C_{10}H_{12}O_3$]+Na)$^+$: 203.0685.

4-methoxyphenyl acetate(table 3-3)[1]: colorless liquid, yield: 99%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.30 (d, *J* = 8.6 Hz, 2H), 6.89 (d, *J* = 8.6 Hz, 2H), 5.04 (s, 2H), 3.81 (s, 3H), 2.08 (s, 3H). ^{13}C NMR (100 MHz, CD_3Cl) δ 171.14, 159.78, 130.27, 128.18, 114.08, 77.48, 77.16, 76.84, 66.26, 55.41, 21.21. HRMS: [$C_{10}H_{12}O_3$] calculated 180.0786; measured 180.0786; found ([$C_{10}H_{12}O_3$]+Na)$^+$: 203.0677.

naphthalen-2-ylmethyl acetate(table 3-4)[1]: white solid, yield: 92%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.69 – 7.60 (m, 5H), 7.33 – 7.25 (m, 3H), 5.08 (s, 2H), 1.95 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.08, 133.45, 133.31, 133.23, 128.51, 128.10, 127.83, 127.50, 126.44, 126.40, 126.03, 77.48, 77.16, 76.84, 66.57, 21.17. HRMS: [$C_{13}H_{12}O_2$] calculated 200.0837; measured 200.0832; found ([$C_{13}H_{12}O_2$]+Na)$^+$: 223.0722.

naphthalen-1-ylmethyl acetate(table 3-5)[1]: colorless liquid, yield: 90%. ^{1}H NMR (400 MHz, CD_3Cl) δ 8.06 – 8.00 (m, 1H), 7.93 – 7.84 (m, 1H), 7.63 – 7.42 (m, 5H), 5.59 (s, 2H), 2.12 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.12, 133.84, 131.53, 129.43, 128.84, 127.63, 126.70, 126.08, 125.40, 123.65, 77.48, 77.16, 76.84, 64.70, 21.14. HRMS: [$C_{13}H_{12}O_2$] calculated 200.0837; measured 200.0828; found ([$C_{13}H_{12}O_2$]+Na)$^+$: 223.0716.

2-methylbenzyl acetate(table 2-6)[8]: colorless liquid, yield: 93%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.37 – 7.16 (m, 5H), 5.13 (s, 2H), 2.36 (s, 3H), 2.11 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.10, 137.12, 133.96, 130.51, 129.37, 128.68, 126.16, 77.48, 77.16, 76.84, 64.85, 21.08, 19.00.. HRMS: [$C_{10}H_{12}O_2$] calculated 164.0837; measured 164.0833; found ([$C_{10}H_{12}O_2$]+H)$^+$: 165.0903.

4-methylbenzyl acetate(table 3-7)[2]: colorless liquid, yield: 96%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.26 (d, *J* = 8.1 Hz, 2H), 7.18 (d, *J* = 7.8 Hz, 2H), 5.07 (s, 2H), 2.36 (s, 3H), 2.09 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.10, 138.26, 133.03, 129.38, 128.58, 77.48, 77.16, 76.84, 66.40, 21.32, 21.18.. HRMS: [$C_{10}H_{12}O_2$] calculated 164.0837; measured 164.0835; found ([$C_{10}H_{12}O_2$]+H)$^+$: 165.0907.

4-bromobenzyl acetate(table 3-8)[5]: colorless liquid, yield: 96%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.49 (d, *J* = 8.4 Hz, 2H), 7.23 (d, *J* = 8.3 Hz, 2H), 5.05 (s, 2H), 2.10 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.91, 135.07, 131.85, 130.07, 122.42, 77.48, 77.16, 76.84, 65.61, 21.09. GC - MS (EI): [$C_9H_9BrO_2$] calculated 227.98; measured 228.1; found m/z: 228.1, 230.1, 188.1, 186.1, 171.1, 169.1, 107.2, 89.3, 77.2, 63.3, 43.3.

4-fluorobenzyl acetate(table 3-9)[10]: colorless liquid, yield: 90%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.38 – 7.29 (m, 2H), 7.09 – 6.98 (m, 2H), 5.06 (s, 2H), 2.09 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.99, 162.78 (d, *J* = 246.8 Hz), 131.93, 130.41 (d, *J* = 8.3 Hz), 115.62 (d, *J* = 21.6 Hz), 77.48, 77.16, 76.84, 65.71, 21.12.^{19}F NMR (376 MHz, CD_3Cl) δ -113.56.. HRMS: [$C_9H_9FO_2$] calculated 168.0587; measured 168.0572; found ([$C_9H_9FO_2$]+HCOO)$^-$: 213.0553.

4-chlorobenzyl acetate(table 3-10)[1]: colorless liquid, yield: 93%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.33 (d, *J* = 8.8 Hz, 2H), 7.29 (d, *J* = 8.7 Hz, 2H), 5.06 (s, 2H), 2.10 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.91, 134.56, 134.27, 129.77, 128.88, 77.48, 77.16, 76.84, 65.58, 21.09. GC - MS (EI): [$C_9H_9ClO_2$] calculated 184.62; measured 184.4; found m/z: 184.4, 142.4, 125.3, 107.4, 89.4, 77.3, 63.3, 43.4.

4-iodobenzyl acetate(table 3-11)[9]: white solid, yield: 94%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.69 (d, *J* = 8.4 Hz, 2H), 7.10 (d, *J* = 8.5 Hz, 2H), 5.04 (s, 2H), 2.10 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.89, 137.82, 135.73, 130.23, 94.07, 77.48, 77.16, 76.84, 65.70, 21.09. GC - MS (EI): [$C_9H_9IO_2$] calculated 276.07; measured 276.4; found m/z: 276.4, 234.3, 217.3, 107.3, 89.3, 78.3, 63.3, 43.4.

2-bromobenzyl acetate(table 3-12)[1]: colorless liquid, yield: 87%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.58 (dd, *J* = 7.9, 1.3 Hz, 1H), 7.41 (dd, *J* = 7.7, 1.8 Hz, 1H), 7.32 (td, *J* = 7.5, 1.3 Hz, 1H), 7.19 (td, *J* = 7.7, 1.8 Hz, 1H), 5.19 (s, 2H), 2.14 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.80, 135.37, 132.99, 129.99, 129.85, 127.63, 123.58, 77.48, 77.16, 76.84, 65.97, 21.01. GC - MS (EI):

[$C_9H_9BrO_2$] calculated 227.98; measured 228.2; found m/z: 228.2, 171.3, 149.4, 107.4, 89.3, 77.3, 63.3, 43.4.

4-(trifluoromethyl)benzyl acetate(table 3-13)[11]: colorless liquid, yield: 87%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.62 (d, *J* = 8.1 Hz, 2H), 7.47 (d, *J* = 8.0 Hz, 2H), 5.16 (s, 2H), 2.13 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.84, 140.05, 130.51 (d, *J* = 32.6 Hz), 128.31, 125.67 (q, *J* = 3.8 Hz), 124.14 (d, *J* = 272.0 Hz), 77.48, 77.16, 76.84, 65.44, 21.02.^{19}F NMR (376 MHz, CD_3Cl) δ -62.57.. HRMS: [$C_{10}H_9F_3O_2$] calculated 218.0534; measured 218.0555; found ([$C_{10}H_9F_3O_2$]-H)$^-$: 217.0458.

4-nitrobenzyl acetate(table 3-14)[2]: white solid, yield: 83%, ^{1}H NMR (400 MHz, CD_3Cl) δ 8.22 (d, *J* = 8.8 Hz, 2H), 7.51 (d, *J* = 8.9 Hz, 1H), 5.19 (s, 2H), 2.15 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.66, 147.81, 143.34, 128.50, 123.91, 77.48, 77.16, 76.84, 64.88, 20.95.. HRMS: [$C_9H_9NO_4$] calculated 195.0542; measured 195.0532; found ([$C_9H_9NO_4$]+Na)$^+$: 218.0433.

4-cyanobenzyl acetate(table 3-15)[2]: white solid, yield: 84%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.65 (d, *J* = 8.4 Hz, 2H), 7.45 (d, *J* = 8.2 Hz, 2H), 5.15 (s, 2H), 2.13 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.68, 141.36, 132.50, 128.43, 118.68, 112.11, 77.48, 77.16, 76.84, 65.17, 20.96.. HRMS: [$C_{10}H_9NO_2$] calculated 175.0633; measured 175.0628; found ([$C_{10}H_9NO_2$]+H)$^+$: 176.0704.

4-ethynylbenzyl acetate(table 3-16)[12]: white solid, yield: 91%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.48 (d, *J* = 8.2 Hz, 2H), 7.31 (d, *J* = 8.4 Hz, 2H), 5.09 (s, 2H), 3.09 (s, 1H), 2.11 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.92, 136.76, 132.43, 128.15, 122.13, 83.36, 77.75, 77.48, 77.16, 76.84, 65.85, 21.09.. HRMS: [$C_{11}H_{10}O_2$] calculated 174.0681; measured 174.0681; found ([$C_{11}H_{10}O_2$]+H)$^+$: 175.0751.

phenethyl acetate(table 3-17)[1]: colorless liquid, yield: 80%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.32 – 7.28 (m, 2H), 7.26 – 7.24 (m, 1H), 7.24 – 7.20 (m, 2H), 4.28 (t, *J* = 7.1 Hz, 2H), 2.94 (t, *J* = 7.1 Hz, 2H), 2.04 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.22, 137.95, 129.03, 128.64, 126.70, 77.48, 77.16, 76.84, 65.08, 35.21, 21.12.. HRMS: [$C_{10}H_{12}O_2$] calculated 164.0837; measured 164.083; found ([$C_{10}H_{12}O_2$]+H)$^+$: 165.0908.

4-methoxyphenethyl acetate(table 3-18)[13]: colorless liquid, yield: 85%. ^{1}H NMR(400 MHz, CD_3Cl) δ 7.13 (d, *J* = 8.6 Hz, 2H), 6.85 (d, *J* = 8.6 Hz, 2H), 4.24 (t, *J* = 7.1 Hz, 2H), 3.79 (s, 3H), 2.87 (t, *J* = 7.1 Hz, 2H), 2.04 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.24, 158.42, 129.98,

129.94, 114.03, 77.48, 77.16, 76.84, 65.32, 55.37, 34.31, 21.12.. HRMS: [$C_{11}H_{14}O_3$] calculated 194.0943; measured 194.0941; found ([$C_{11}H_{14}O_3$]+Na)$^+$: 217.0834.

3-phenylpropyl acetate(table 3-19)[1]: colorless liquid, yield: 83%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.32 – 7.27 (m, 2H), 7.22 – 7.19 (m, 2H), 7.18 (d, *J* = 1.7 Hz, 1H), 4.09 (t, *J* = 6.6 Hz, 2H), 2.72 – 2.67 (m, 2H), 2.06 (s, 3H), 2.00 – 1.92 (m, 2H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.32, 141.33, 128.57, 128.52, 126.13, 77.48, 77.16, 76.84, 63.96, 32.29, 30.29, 21.10.. HRMS: [$C_{11}H_{14}O_2$] calculated 178.0994; measured 178.0992; measured 194.0941; found ([$C_{11}H_{14}O_2$]+H)$^+$: 179.1065.

4-phenylbutyl acetate(table 3-20)[14]: colorless liquid, yield: 86%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.32 – 7.26 (m, 2H), 7.22 – 7.18 (m, 2H), 7.19 – 7.15 (m, 1H), 4.09 (t, *J* = 6.0 Hz, 2H), 2.65 (t, *J* = 7.0 Hz, 2H), 2.05 (s, 3H), 1.73 – 1.63 (m, 4H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.36, 142.16, 128.52, 128.48, 125.97, 77.48, 77.16, 76.84, 64.49, 35.58, 28.31, 27.85, 21.13.. HRMS: [$C_{12}H_{16}O_2$] calculated 192.115; measured 192.1142; found ([$C_{12}H_{16}O_2$]+HCOO)$^-$: 237.1124.

cyclohexylmethyl acetate(table 3-21)[15]: colorless liquid, yield: 92%. ^{1}H NMR (400 MHz, CD_3Cl) δ 3.87 (d, *J* = 6.6 Hz, 2H), 2.05 (s, 3H), 1.77 – 1.69 (m, 4H), 1.62 – 1.57 (m, 1H), 1.35 – 1.08 (m, 4H), 1.05 – 0.87 (m, 2H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.49, 77.48, 77.16, 76.84, 69.85, 37.17, 29.79, 26.49, 25.80, 21.12.. HRMS: [$C_9H_{16}O_2$] calculated 156.115; measured 156.1141; found ([$C_9H_{16}O_2$]+CH_3COO)$^-$: 215.1281.

cinnamyl acetate(table 3-22)[1]: light yellow liquid, yield: 96%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.41 – 7.37 (m, 2H), 7.35 – 7.29 (m, 2H), 7.28 – 7.23 (m, 1H), 6.65 (dt, *J* = 15.9, 1.4 Hz, 1H), 6.28 (dt, *J* = 15.9, 6.5 Hz, 1H), 4.72 (dd, *J* = 6.4, 1.4 Hz, 2H), 2.10 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.02, 136.31, 134.35, 128.73, 128.21, 126.73, 123.27, 77.48, 77.16, 76.84, 65.22, 21.13.. HRMS: [$C_{11}H_{12}O_2$] calculated 176.0837; measured 176.0834; found ([$C_{11}H_{12}O_2$]+H)$^+$: 177.0809.

farnesyl acetate(table 3-23)[7]: colorless liquid, **y**ield: 86%. ^{1}H NMR (400 MHz, CD_3Cl) δ 5.38 – 5.31 (m, 1H), 5.13 – 5.04 (m, 2H), 4.58 (d, J = 7.2 Hz, 2H), 2.15 – 2.05 (m, 6H), 2.05 (s, 3H), 2.03 – 1.94 (m, 2H), 1.70 (s, 3H), 1.69 – 1.67 (m, 3H), 1.60 (s, 6H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.31, 142.45, 135.61, 131.48, 124.44, 123.75, 118.36, 77.48, 77.16, 76.84, 61.54, 39.95, 39.82, 39.65, 26.83, 26.30, 25.83, 21.20, 17.81, 16.60, 16.14. GC - MS (EI): [$C_{17}H_{28}O_2$] calculated 264.41; measured 264.3; found m/z: 264.3, 136.2, 107.2, 93.2, 81.2, 77.3, 69.3, 43.2.

geranyl acetate(table 3-24)[7]: colorless liquid, yield: 92%. ^{1}H NMR (400 MHz, CD_3Cl) δ 5.34 (tq, *J* = 7.1, 1.3 Hz, 1H), 5.08 (ddq, *J* = 6.9, 5.4, 1.4 Hz, 1H), 4.58 (d, *J* = 7.1 Hz, 2H), 2.13 – 2.05 (m, 3H), 2.05 (s, 3H), 1.70 (s, 3H), 1.68 (s, 3H), 1.60 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.31, 142.45, 135.61, 131.48, 124.44, 123.75, 118.36, 77.48, 77.16, 76.84, 61.54, 39.95, 39.82, 39.65, 26.83, 26.30, 25.83, 21.20, 17.81, 16.60, 16.14. GC - MS (EI): [$C_{12}H_{20}O_2$] calculated 196.29; measured 196.3; found m/z: 196.3, 154.2, 136.3, 121.3 107.2, 93.4, 80.3, 77.2, 69.4, 43.2.

furan-2-ylmethyl acetate(table 3-27)[1]: light yellow liquid, yield: 92%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.42 (dd, *J* = 1.9, 0.8 Hz, 1H), 6.40 (dd, *J* = 3.1, 0.8 Hz, 1H), 6.36 (dd, *J* = 3.3, 1.8 Hz, 1H), 5.05 (s, 2H), 2.08 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl)) δ 170.80, 149.58, 143.41, 110.75, 110.69, 77.48, 77.16, 76.84, 58.17, 20.98. HRMS: [$C_7H_8O_3$] calculated 140.0473; measured 140.0471; found ([$C_7H_8O_3$]+CH_3COO)$^-$: 199.0609.

thiophen-2-ylmethyl acetate(table 3-28)[1]: colorless liquid, yield: 95%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.32 (dd, J = 5.1, 1.2 Hz, 1H), 7.09 (ddt, J = 3.6, 1.3, 0.7 Hz, 1H), 6.99 (dd, J = 5.1, 3.5 Hz, 1H), 5.26 (s, 2H), 2.08 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.84, 138.01, 128.34, 126.98, 126.95, 77.48, 77.16, 76.84, 60.58, 21.07. GC - MS (EI): [$C_7H_8O_2S$] calculated 156.20; measured 156.4; found m/z: 156.4, 114.4, 97.4, 85.3, 43.4.

1,4-phenylenebis(methylene) diacetate(table 3-29)[16]: white solid, yield: 62%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.35 (s, 4H), 5.10 (s, 4H), 2.10 (s, 6H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.97, 136.12, 128.58, 77.48, 77.16, 76.84, 66.01, 21.10. HRMS: [$C_{12}H_{14}O_4$] calculated 222.0892; measured 222.0891; found ([$C_{12}H_{14}O_4$]+H)$^+$: 245.0783.

naphthalen-2-ylmethyl formate(table 4-7)[16]: white solid, yield: 88%. ^{1}H NMR (400 MHz, CD_3Cl) δ 8.20 (s, 1H), 7.94 – 7.78 (m, 4H), 7.55 – 7.44 (m, 3H), 5.38 (s, 2H).^{13}C NMR (100 MHz, CD_3Cl) δ 160.95, 133.31, 133.27, 132.70, 128.63, 128.13, 127.85, 127.71, 126.56, 126.54, 125.91, 77.48, 77.16, 76.84, 65.96. GC - MS (EI): [$C_{12}H_{10}O_2$] calculated 186.21; measured 186.2; found m/z: 186.2, 158.1, 141.2, 129.2, 115.2, 44.1.

naphthalen-2-ylmethyl propionate(table 4-8)[18]: white solid, yield: 86%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.85 (dd, *J* = 9.1, 2.7 Hz, 4H), 7.55 – 7.44 (m, 3H), 5.29 (s, 2H), 2.43 (q, *J* = 7.5 Hz, 2H), 1.20 (t, *J* = 7.6 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 174.49, 133.64, 133.32, 133.21, 128.49, 128.09, 127.83, 127.42, 126.41, 126.36, 126.01, 77.48, 77.16, 76.84, 66.40, 27.75, 9.24. GC - MS (EI): [$C_{14}H_{14}O_2$] calculated 214.26; measured 214.2; found m/z: 214.2, 158.2, 141.2, 129.2, 115.2.

naphthalen-2-ylmethyl acrylate(table 4-9-1)[19]: white solid, yield: 42%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.99 – 7.37 (m, 7H), 6.49 (dd, *J* = 17.4, 1.5 Hz, 1H), 6.21 (dd, *J* = 17.3, 10.4 Hz, 1H), 5.88 (dd, *J* = 10.4, 1.4 Hz, 1H), 5.38 (s, 2H).^{13}C NMR (100 MHz, CD_3Cl) δ 166.21, 133.37, 133.31, 133.25, 131.35, 128.53, 128.42, 128.11, 127.84, 127.52, 126.44, 126.42, 126.02, 77.48, 77.16, 76.84, 66.61. GC - MS (EI): [$C_{14}H_{12}O_2$] calculated 212.25; measured 212.2; found m/z: 212.2, 158.2, 141.2, 129.2, 115.2, 55.2.

ethyl 3-(naphthalen-2-ylmethoxy)propanoate(table 4-9-2): colorless liquid, yield: 51%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.93 – 7.66 (m, 4H), 7.47 (q, *J* = 4.4 Hz, 3H), 4.70 (s, 2H), 4.16 (q, *J* = 6.4 Hz, 2H), 3.80 (t, *J* = 4.9 Hz, 2H), 2.64 (t, *J* = 5.1 Hz, 2H), 1.26 (t, *J* = 6.7 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.78, 135.71, 133.38, 133.13, 128.31, 127.99, 127.82, 126.56, 126.22, 125.99, 125.84, 77.48, 77.16, 76.84, 73.34, 65.80, 60.69, 35.36, 14.32. GC - MS (EI): [$C_{16}H_{18}O_3$] calculated 258.32; measured 258.3; found m/z: 258.3, 212.2, 157.2, 141.2, 129.2, 115.2, 102.2, 74.2, 55.2.

naphthalen-2-ylmethyl pivalate(table 4-10,11)[20]: white solid, yield: 57% (4-10); 60% (4-11). ^{1}H NMR (400 MHz, CD_3Cl) δ 7.93 – 7.78 (m, 4H), 7.51 – 7.41 (m, 3H), 5.27 (s, 2H), 1.25 (s, 9H).^{13}C NMR (100 MHz, CD_3Cl) δ 178.56, 134.01, 133.32, 133.16, 128.45, 128.10, 127.85, 127.00, 126.40, 126.30, 125.74, 66.36, 38.99, 27.35. GC - MS (EI): [$C_{16}H_{18}O_2$] calculated 242.32; measured 242.2; found m/z: 242.2, 158.2, 141.3, 127.2, 115.2, 85.2, 57.3, 41.2.

naphthalen-2-ylmethyl benzoate(table 4-13)[21]: white solid, yield: 84%. ^{1}H NMR (400 MHz, CD_3Cl) δ 8.15 – 8.08 (m, 2H), 7.92 (d, *J* = 1.6 Hz, 1H), 7.89 – 7.83 (m, 3H), 7.60 – 7.55 (m, 2H), 7.52 – 7.49 (m, 2H), 7.45 (dd, *J* = 8.4, 7.0 Hz, 2H), 5.54 (s, 2H).^{13}C NMR (100 MHz, CD_3Cl) δ 166.64, 133.60, 133.35, 133.28, 133.22, 130.26, 129.88, 128.57, 128.54, 128.15, 127.87, 127.48, 126.47, 126.42, 126.03, 77.48, 77.16, 76.84, 67.01. GC - MS (EI): [$C_{18}H_{14}O_2$] calculated 262.31; measured 262.2; found m/z: 262.2, 155.2, 141.2, 127.2, 115.2, 105.1, 77.2, 51.2.

1-phenylpropyl acetate(table 5-2)[17]: colorless liquid, yield: 44%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.40 – 7.23 (m, 5H), 5.66 (dd, *J* = 7.3, 6.5 Hz, 1H), 2.08 (s, 3H), 1.92 (dq, *J* = 14.8, 7.4 Hz, 1H), 1.82 (dq, *J* = 13.9, 7.1 Hz, 1H), 0.88 (t, *J* = 7.4 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.60, 140.68, 128.52, 127.96, 126.71, 77.48, 77.16, 76.84, 29.42, 21.41, 10.04. GC - MS (EI): [$C_{11}H_{14}O_2$] calculated 178.23; measured 178.4; found m/z: 178.4, 149.4, 136.4, 117.4, 107.4, 91.4, 79.3, 43.4.

1-phenylpentyl acetate(table 5-3)[17]: colorless liquid, yield: 33%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.43 – 7.21 (m, 5H), 5.75 – 5.69 (m, 1H), 2.07 (s, 3H), 1.97 – 1.69 (m, 2H), 1.40 – 1.16 (m, 4H), 0.87 (t, *J* = 7.0 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.58, 141.01, 128.53, 127.94, 126.67, 77.48, 77.16, 76.84, 76.30, 36.17, 27.78, 22.56, 21.44, 14.06. GC - MS (EI): [$C_{13}H_{18}O_2$] calculated 206.29; measured 206.3; found m/z: 206.3, 164.4, 149.4, 115.2, 104.3, 91.3, 77.2, 43.3.

2-methyl-1-phenylpropyl acetate(table 5-4)[17]: colorless liquid, yield: 15%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.37 – 7.21 (m, 5H), 5.45 (d, *J* = 7.6 Hz, 1H), 2.14 – 2.07 (m, 1H), 2.06 (s, 3H), 0.96 (d, *J* = 6.7 Hz, 3H), 0.79 (d, *J* = 6.8 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.53, 139.87, 128.28, 127.81, 127.17, 81.09, 77.48, 77.16, 76.84, 33.62, 21.32, 18.81, 18.62. GC - MS (EI): [$C_{12}H_{16}O_2$] calculated 192.26; measured 192.3; found m/z: 192.3, 149.4, 132.3, 117.2, 107.4, 91.4, 79.4, 43.4.

1-(4-methoxyphenyl)ethyl acetate(table 5-5)[3]: colorless liquid, yield: 63%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.30 (d, *J* = 8.6 Hz, 2H), 6.88 (d, *J* = 8.6 Hz, 2H), 5.85 (q, *J* = 6.6 Hz, 1H), 3.80 (s, 3H), 2.05 (s, 2H), 1.52 (d, *J* = 6.6 Hz, 3H).^{13}C NMR (101 MHz, CD_3Cl) δ 170.55, 159.39, 133.86, 127.73, 113.95, 77.48, 77.16, 76.84, 72.14, 55.39, 22.06, 21.53. GC - MS (EI): [$C_{11}H_{14}O_3$] calculated 194.23; measured 194.2; found m/z: 194.2, 137.2, 134.2, 119.2, 91.2, 77.2, 43.2.

1-(p-tolyl)ethyl acetate(table 5-6)[3]: colorless liquid, yield: 58%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.25 (d, *J* = 8.2 Hz, 2H), 7.16 (d, *J* = 8.3 Hz, 2H), 5.86 (q, *J* = 6.6 Hz, 1H), 2.34 (s, 3H), 2.06 (s, 3H), 1.52 (d, *J* = 6.6 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.50, 138.77, 137.74, 129.25, 126.22, 77.43, 77.12, 76.80, 72.32, 22.18, 21.48, 21.22. GC - MS (EI): [$C_{11}H_{14}O_3$] calculated 178.23; measured 178.2; found m/z: 178.2, 136.3, 121.3, 117.3, 91.3, 77.2, 43.2.

1-(4-(trifluoromethyl)phenyl)ethyl acetate(table 5-7)[3]: colorless liquid, yield: 53%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.61 (d, *J* = 8.1 Hz, 2H), 7.46 (d, *J* = 8.2 Hz, 1H), 5.90 (q, *J* = 6.6 Hz, 1H), 2.09 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.34, 145.85, 130.18 (d, *J* = 32.1 Hz), 129.71, 125.76 – 125.60 (m), 124.18 (d, *J* = 272.3 Hz), 77.48, 77.16, 76.84, 71.76, 22.41, 21.37.^{19}F NMR (376 MHz, CD_3Cl) δ -62.49. GC - MS (EI): [$C_{11}H_{11}F_3O_2$] calculated 232.20; measured 232.2; found m/z: 232.2, 213.2, 190.4, 172.3, 153.2, 145.2, 133.2 127.2, 121.3, 103.3, 91.2, 77.2, 43.4.

1-(3-nitrophenyl)ethyl acetate(table 5-8)[26]: light yellow liquid, yield: 69%. ^{1}H NMR (400 MHz, CD_3Cl) δ 8.26 – 8.20 (m, 1H), 8.17 – 8.13 (m, 1H), 7.71 – 7.63 (m, 1H), 7.57 – 7.49 (m, 1H), 5.93 (q, *J* = 6.7 Hz, 1H), 2.11 (s, 3H), 1.57 (d, *J* = 6.6 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.27, 148.56, 144.04, 132.42, 129.69, 122.99, 121.12, 77.48, 77.16, 76.84, 71.29, 22.38, 21.33. GC -

MS (EI): [$C_{10}H_{11}NO_4$] calculated 209.20; measured 209; found m/z: 209, 167.2 149.3, 132.2, 119.2, 103.3, 91.2, 77.3, 43.4.

1-(4-chlorophenyl)ethyl acetate(table 5-9)[3]: colorless liquid, yield: 64%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.39 – 7.21 (m, 5H), 5.83 (q, *J* = 6.6 Hz, 1H), 2.07 (s, 3H), 1.51 (d, *J* = 6.6 Hz, 3H).^{13}C NM (100 MHz, CD_3Cl) δ 170.38, 140.34, 133.75, 128.81, 127.66, 77.48, 77.16, 76.84, 71.73, 22.28, 21.43. GC - MS (EI): [$C_{10}H_{11}ClO_2$] calculated 198.65; measured 198.2; found m/z: 200.2, 198.2, 158.2, 156.2, 141.3, 138.2, 121.2, 103.4, 91.2, 77.3, 75.2, 43.4.

1-([1,1'-biphenyl]-4-yl)ethyl acetate(table 5-10)[24]: white solid, yield: 58%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.66 – 7.52 (m, 4H), 7.52 – 7.41 (m, 4H), 7.40 – 7.33 (m, 1H), 5.95 (q, *J* = 6.6 Hz, 1H), 2.11 (s, 3H), 1.59 (d, *J* = 6.6 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.53, 141.00, 140.88, 140.77, 128.90, 127.48, 127.41, 127.25, 126.71, 77.48, 77.16, 76.84, 72.23, 22.27, 21.51. GC - MS (EI): [$C_{16}H_{16}O_2$] calculated 240.30; measured 240.2; found m/z: 240.2, 198.2, 180.2, 165.2, 152.2, 139.2, 77.2, 43.2.

1-(naphthalen-2-yl)ethyl acetate(table 5-11)[3]: colorless liquid, yield: 57%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.71 – 7.55 (m, 4H), 7.35 – 7.20 (m, 3H), 5.85 (q, *J* = 6.6 Hz, 1H), 1.90 (s, 3H), 1.42 (d, *J* = 6.6 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.52, 139.13, 133.30, 133.14, 128.49, 128.15, 127.79, 126.36, 126.19, 125.15, 124.22, 77.48, 77.16, 76.84, 72.57, 22.31, 21.52. GC - MS (EI): [$C_{14}H_{14}O_2$] calculated 214.26; measured 214.2; found m/z: 214.2, 172.2, 154.2, 127.2, 115.1, 77.2, 43.2.

1-(naphthalen-1-yl)ethyl acetate(table 5-12)[3]: colorless liquid, yield: 53%. ^{1}H NMR (400 MHz, CD_3Cl) δ 8.13 – 8.07 (m, 1H), 7.92 – 7.85 (m, 1H), 7.85 – 7.78 (m, 1H), 7.65 – 7.59 (m, 1H), 7.58 – 7.45 (m, 3H), 6.67 (q, *J* = 6.6 Hz, 1H), 2.14 (s, 3H), 1.72 (d, *J* = 6.7 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.51, 137.53, 133.94, 130.36, 129.04, 128.57, 126.43, 125.80, 125.48, 123.31, 123.27, 77.48, 77.16, 76.84, 69.56, 21.81, 21.49. GC - MS (EI): [$C_{14}H_{14}O_2$] calculated 214.26; measured 214.3; found m/z: 214.3, 172.2, 153.3, 129.2, 115.1, 77.2, 43.2.

9H-fluoren-9-yl acetate(table 5-13)[4]: yellow solid, yield: 78%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.69 – 7.27 (m, 8H), 6.80 (s, 1H), 2.20 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.95, 144.57, 142.14, 141.16, 134.83, 134.28, 129.63, 129.22, 127.99, 126.02, 124.46, 120.44, 120.17, 75.27, 21.39. GC - MS (EI): [$C_{15}H_{12}O_2$] calculated 224.26; measured 224.2; found m/z: 224.2, 182.2, 165.2, 152.3, 129.2, 115.2, 82.6, 43.2.

phenyl(4-(trifluoromethyl)phenyl)methyl acetate(table 5-14): colorless liquid, yield: 49%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.67 – 7.56 (m, 2H), 7.50 – 7.45 (m, 2H), 7.39 – 7.35 (m, 1H), 7.35 – 7.29 (m, 4H), 6.90 (s, 1H), 2.18 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.03, 144.28, 139.49, 130.20 (d, *J* = 32.6 Hz), 128.86, 128.48, 127.39, 127.31, 125.67 (q, *J* = 3.8 Hz), 124.13 (d, *J* = 272.1 Hz), 77.48, 77.16, 76.84, 76.38, 21.33.^{19}F NMR (376 MHz, CD_3Cl) δ -62.51. GC - MS (EI): [$C_{15}H_{12}O_2$] calculated 294.27; measured 294.2; found m/z: 294.2, 252.3, 234.4, 215.2, 183.2, 165.4, 145.1, 129.2, 115.2, 77.2, 43.2.

(4-methoxyphenyl)(phenyl)methyl acetate(table 5-15)[24]: colorless liquid, yield: 51%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.37 – 7.32 (m, 4H), 7.27 (d, *J* = 8.5 Hz, 3H), 6.88 (s, 1H), 6.86 (s, 2H), 3.80 (s, 3H), 2.16 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.25, 159.41, 140.54, 132.55, 128.83, 128.58, 127.88, 126.97, 113.99, 77.48, 77.16, 76.84, 76.67, 55.39, 21.45. GC - MS (EI): [$C_{16}H_{16}O_3$] calculated 256.30; measured 256.2; found m/z: 256.2, 213.2, 196.2, 181.2, 165.2, 153.2, 77.2, 43.2.

(4-chlorophenyl)(phenyl)methyl acetate(table 5-16)[24]: colorless liquid, yield: 56%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.41 – 7.22 (m, 9H), 6.85 (s, 1H), 2.17 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.07, 139.84, 138.89, 133.92, 128.83, 128.74, 128.63, 128.26, 127.15, 77.48, 77.16, 76.84, 76.30, 21.36. GC - MS (EI): [$C_{15}H_{13}ClO_2$] calculated 260.72; measured 260.2; found m/z: 260.2, 218.2, 183.2, 165.4, 139.1, 77.2, 43.2.

bis(4-chlorophenyl)methyl acetate(table 5-17)[27]: colorless liquid, yield: 45%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.34 – 7.29 (m, 4H), 7.27 – 7.22 (m, 4H), 6.80 (s, 1H), 2.16 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 169.96, 138.39, 134.18, 128.95, 128.58, 77.48, 77.16, 76.84, 75.61, 21.32. GC - MS (EI): [$C_{15}H_{12}Cl_2O_2$] calculated 294.02; measured 294.2; found m/z: 294.2, 252.1, 234.1, 199.2, 165.2, 139.1, 75.2, 43.2.

2,3-dihydro-1H-inden-2-yl acetate(table 5-18)[28]: white solid, yield: 56%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.27 – 7.17 (m, 4H), 5.53 (tt, *J* = 6.3, 3.0 Hz, 1H), 3.32 (dd, *J* = 16.8, 6.4 Hz, 2H), 3.02 (dd, *J* = 16.9, 3.0 Hz, 2H), 2.03 (s, 2H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.24, 140.56, 126.91, 124.77, 77.48, 77.16, 76.84, 75.43, 39.70, 21.43. GC - MS (EI): [$C_{11}H_{12}O_2$] calculated 176.2; measured 176.2; found m/z: 176.2, 133.2, 115.2, 105.2, 91.2, 77.2, 43.3.

1-phenylpropan-2-yl acetate(table 5-19)[3]: colorless liquid, yield: 32%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.32 – 7.27 (m, 2H), 7.24 – 7.21 (m, 1H), 7.21 – 7.17 (m, 2H), 5.11 (h, *J* = 6.4 Hz, 1H),

2.93 (dd, *J* = 13.6, 6.7 Hz, 1H), 2.75 (dd, *J* = 13.6, 6.5 Hz, 1H), 2.00 (s, 3H), 1.22 (d, *J* = 6.3 Hz, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.73, 137.75, 129.56, 128.47, 126.61, 77.48, 77.16, 76.84, 71.61, 42.37, 21.46, 19.58. GC - MS (EI): [$C_{11}H_{14}O_2$] calculated 178.23; measured 178.0; found m/z: 178.0, 118.2, 91.2, 77.1, 65.2, 43.3.

2-phenoxy-1-phenylethyl acetate(table 5-20): yellow liquid, yield: 69%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.48 – 7.33 (m, 5H), 7.32 – 7.22 (m, 2H), 7.00 – 6.93 (m, 1H), 6.92 – 6.86 (m, 2H), 6.16 (dd, *J* = 7.9, 3.9 Hz, 1H), 4.28 (dd, *J* = 10.5, 7.9 Hz, 1H), 4.16 (dd, *J* = 10.4, 3.9 Hz, 1H), 2.13 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.33, 158.58, 137.23, 129.63, 128.78, 128.68, 126.94, 121.35, 114.89, 77.48, 77.16, 76.84, 74.13, 70.51, 21.30. GC - MS (EI): [$C_{16}H_{16}O_3$] calculated 256.30; measured 256.2; found m/z: 256.2, 163.3, 91.2, 77.2, 65.2, 43.3.

1,2-diphenylethyl acetate(table 5-21)[29]: colorless liquid, yield: 44%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.36 – 7.09 (m, 10H), 5.96 (dd, *J* = 8.0, 6.0 Hz, 1H), 3.21 (dd, *J* = 13.8, 8.0 Hz, 1H), 3.06 (dd, *J* = 13.7, 6.1 Hz, 1H), 2.03 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.26, 140.17, 137.14, 129.63, 128.49, 128.36, 128.10, 126.73, 126.68, 77.48, 77.16, 76.84, 76.76, 43.09, 21.29. GC - MS (EI): [$C_{16}H_{16}O_2$] calculated 240.30; measured 240.3; found m/z: 240.3, 198.2, 107.1, 77.2, 65.2, 43.2.

1-phenylethane-1,2-diyl diacetate(table 5-22-1)[22]: colorless liquid, yield: 25%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.39 – 7.34 (m, 6H), 6.09 – 5.95 (m, 1H), 4.34 – 4.27 (m, 2H), 2.12 (s, 3H), 2.05 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.81, 170.23, 136.61, 128.78, 126.83, 77.48, 77.16, 76.84, 73.45, 66.22, 21.22, 20.90. GC - MS (EI): [$C_{12}H_{14}O_4$] calculated 222.24; measured 222.1; found m/z: 179.2, 162.2, 107.4, 91.2, 79.3, 51.3, 43.4.

2-hydroxy-2-phenylethyl acetate(table 5-22-2)[22]: colorless liquid, yield: 51%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.44 – 7.28 (m, 5H), 4.95 (dd, *J* = 8.4, 3.3 Hz, 1H), 4.27 (dd, *J* = 11.6, 3.4 Hz, 1H), 4.15 (dd, *J* = 11.6, 8.4 Hz, 1H), 2.10 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 171.41, 139.87, 128.71, 128.37, 126.26, 77.48, 77.16, 76.84, 72.48, 69.42, 21.01. GC - MS (EI): [$C_{10}H_{12}O_3$] calculated 180.20; measured 180.20; found m/z: 180.20, 163.3,149.2, 107.3, 91.2, 79.4, 51.2, 43.3.

2-hydroxy-1-phenylethyl acetate(table 5-22-3)[22]: colorless liquid, yield: 14%. ^{1}H NMR (400 MHz, CD_3Cl) δ 7.43 – 7.27 (m, 5H), 5.85 (dd, *J* = 7.5, 4.1 Hz, 1H), 3.88 (dd, *J* = 12.0, 7.5 Hz, 1H), 3.81 (dd, *J* = 12.1, 4.1 Hz, 1H), 2.14 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.84, 137.15, 128.77, 128.57, 126.76, 77.48, 77.16, 76.98, 76.84, 66.10, 21.32. GC - MS (EI): [$C_{10}H_{12}O_3$]

calculated 180.20; measured 180.3; found m/z: 180.3, 162.2, 149.2, 120.2 107.2, 91.2, 79.2, 65.2, 43.2.

(±)-exo-1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane-5-yl acetate(table 5-23)[30]: colorless liquid, yield: 44%. ^{1}H NMR (400 MHz, CD_3Cl) δ 4.97 (ddd, *J* = 10.6, 6.0, 2.3 Hz, 1H), 2.13 – 2.06 (m, 2H), 2.05 (d, *J* = 0.6 Hz, 3H), 1.77 – 1.70 (m, 2H), 1.66 – 1.60 (m, 1H), 1.52 – 1.41 (m, 2H), 1.35 (s, 2H), 1.23 (s, 2H), 1.11 (s, 3H).^{13}C NMR (100 MHz, CD_3Cl) δ 170.90, 73.27, 72.92, 70.13, 40.38, 37.50, 30.54, 30.30, 30.24, 26.89, 21.65, 21.15. GC - MS (EI): [$C_{12}H_{20}O_3$] calculated 212.29; measured 212.3; found m/z: 212.3, 197.4, 170.3, 137.4, 127.2, 109.4, 93.4, 83.3, 55.3, 43.4.

Reference:

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IV. NMR spectra of the products

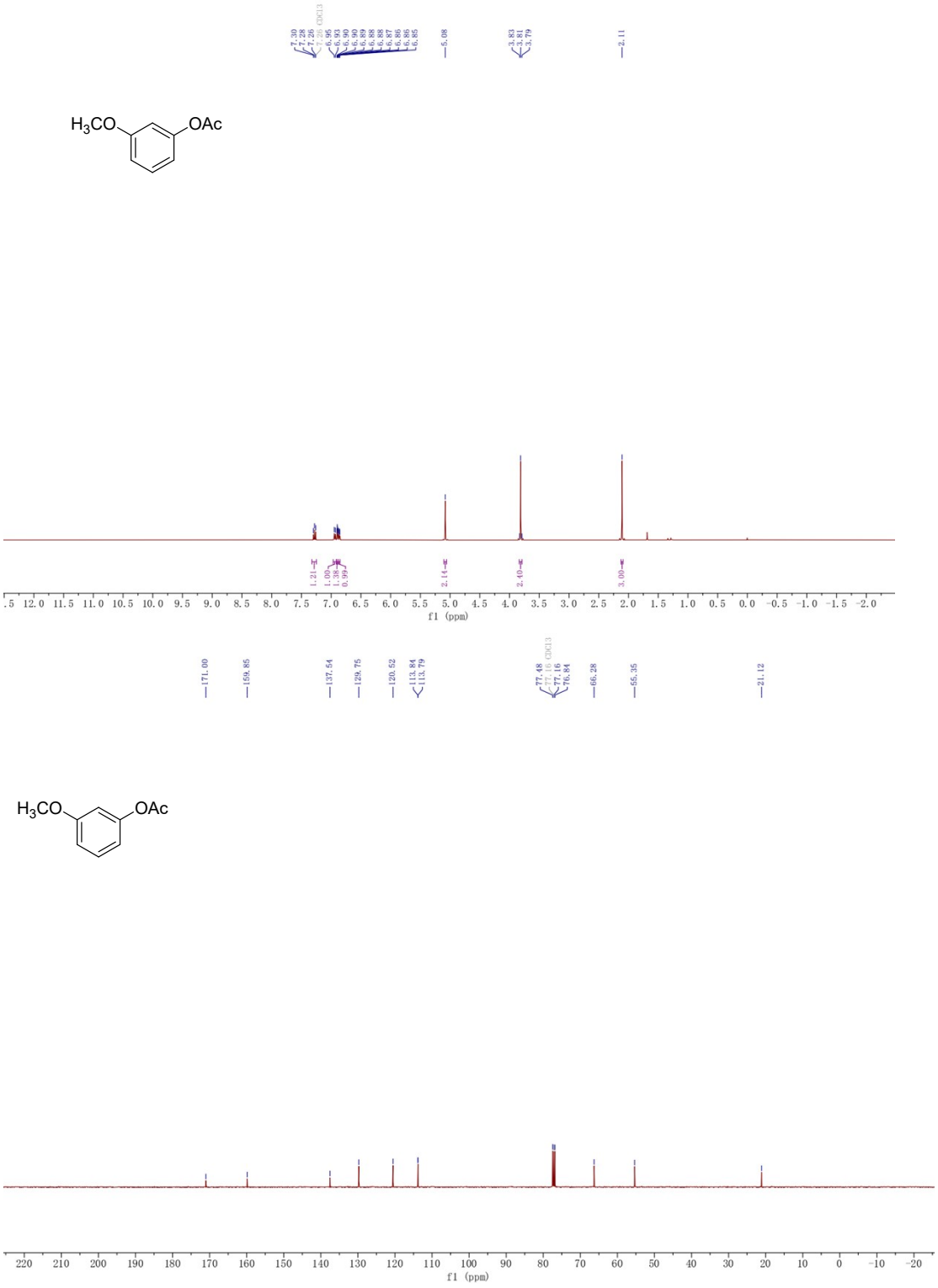


Figure S1. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 3-methoxyphenyl acetate from (3-methoxyphenyl)methanol(table 3, entry 1).

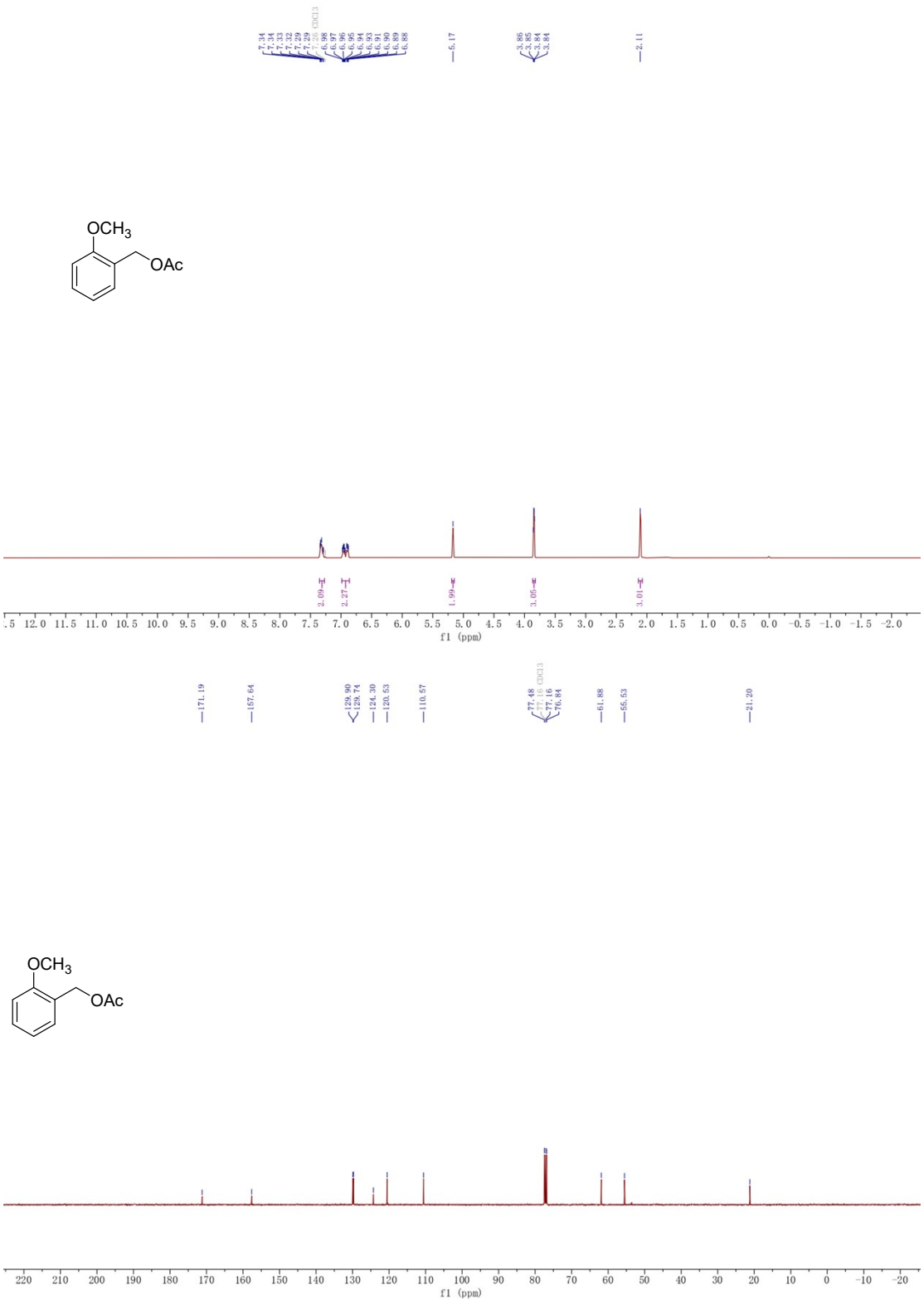


Figure S2. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 2-methoxyphenyl acetate from (2-methoxyphenyl)methanol(table 3, entry 2).

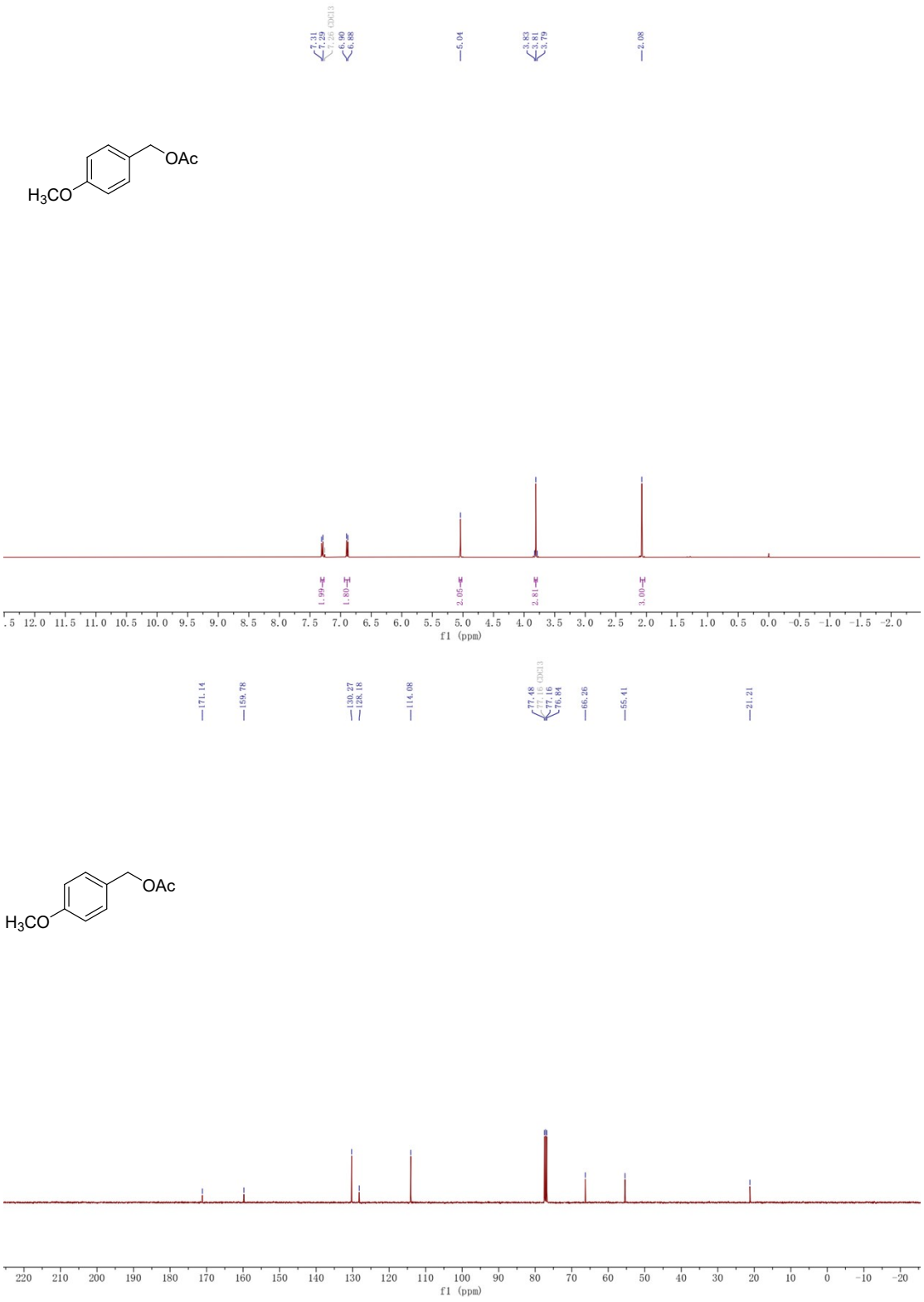


Figure S3. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-methoxyphenyl acetate from (4-methoxyphenyl)methanol(table 3, entry 3).

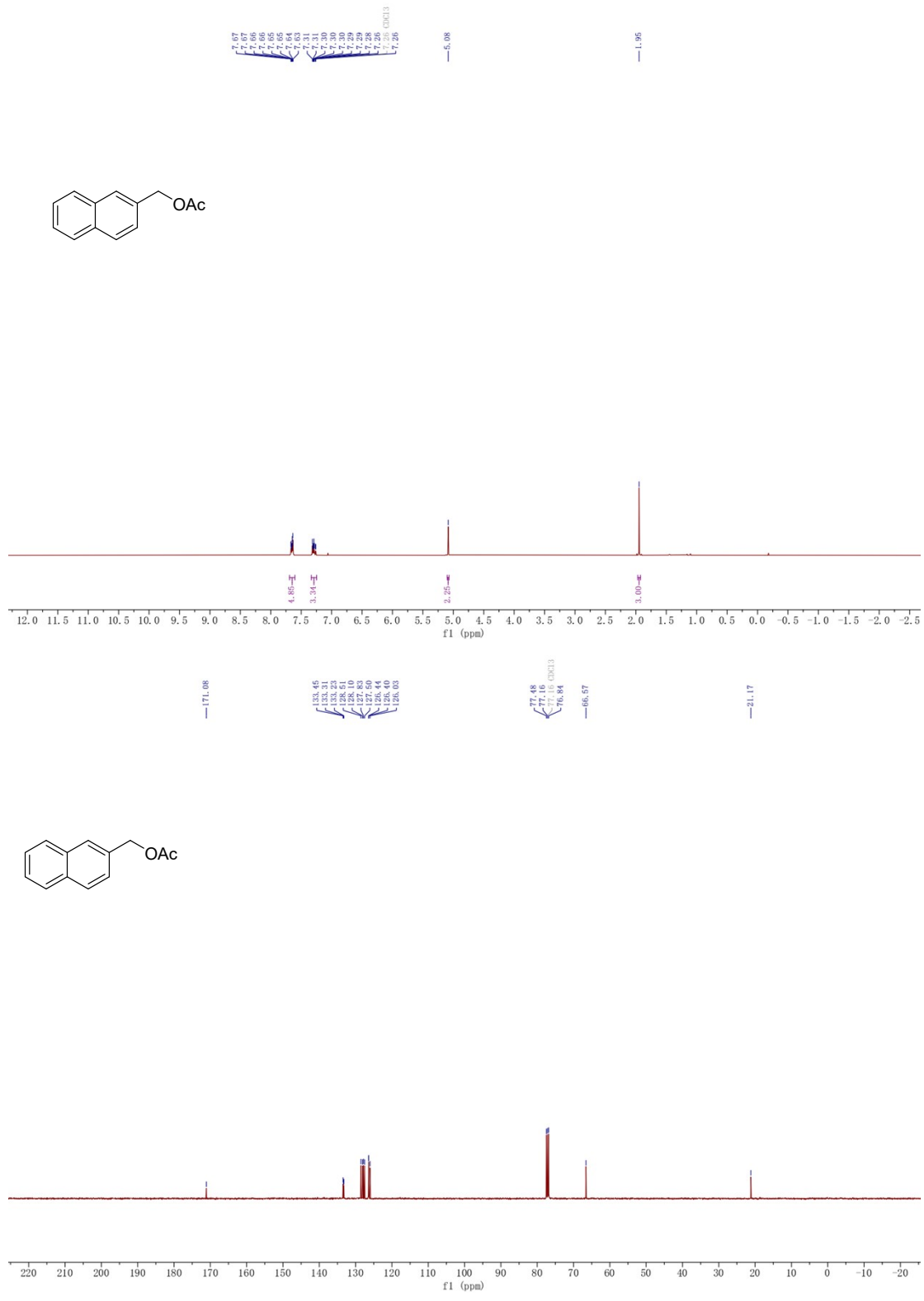


Figure S4. ^{1}H (top) and ^{13}C (bottom) NMR spectra of naphthalen-2-ylmethyl acetate from naphthalen-2-ylmethanol(table 3, entry 4).

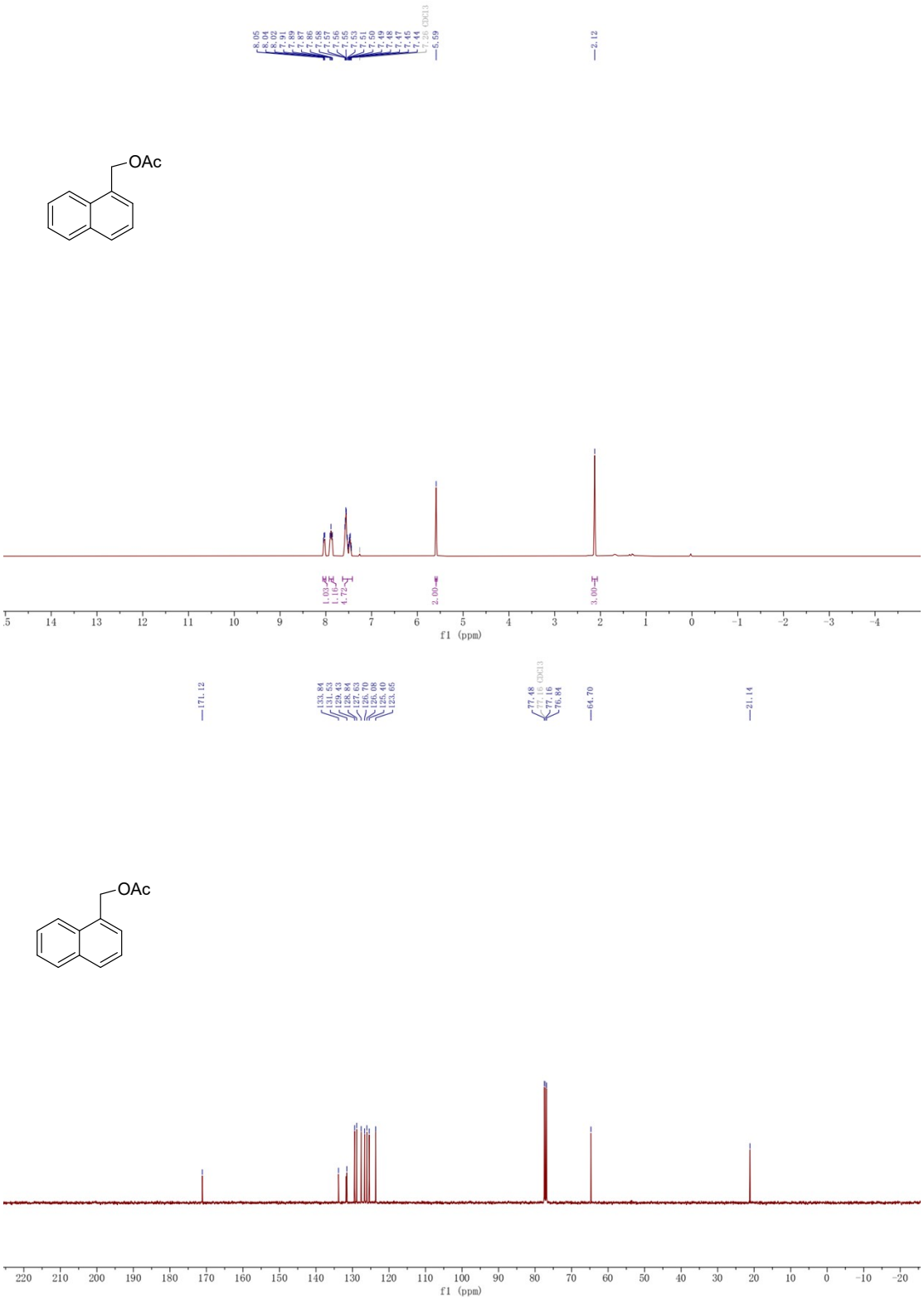


Figure S5. ^{1}H (top) and ^{13}C (bottom) NMR spectra of naphthalen-1-ylmethyl acetate from naphthalen-1-ylmethanol(table 3, entry 5).

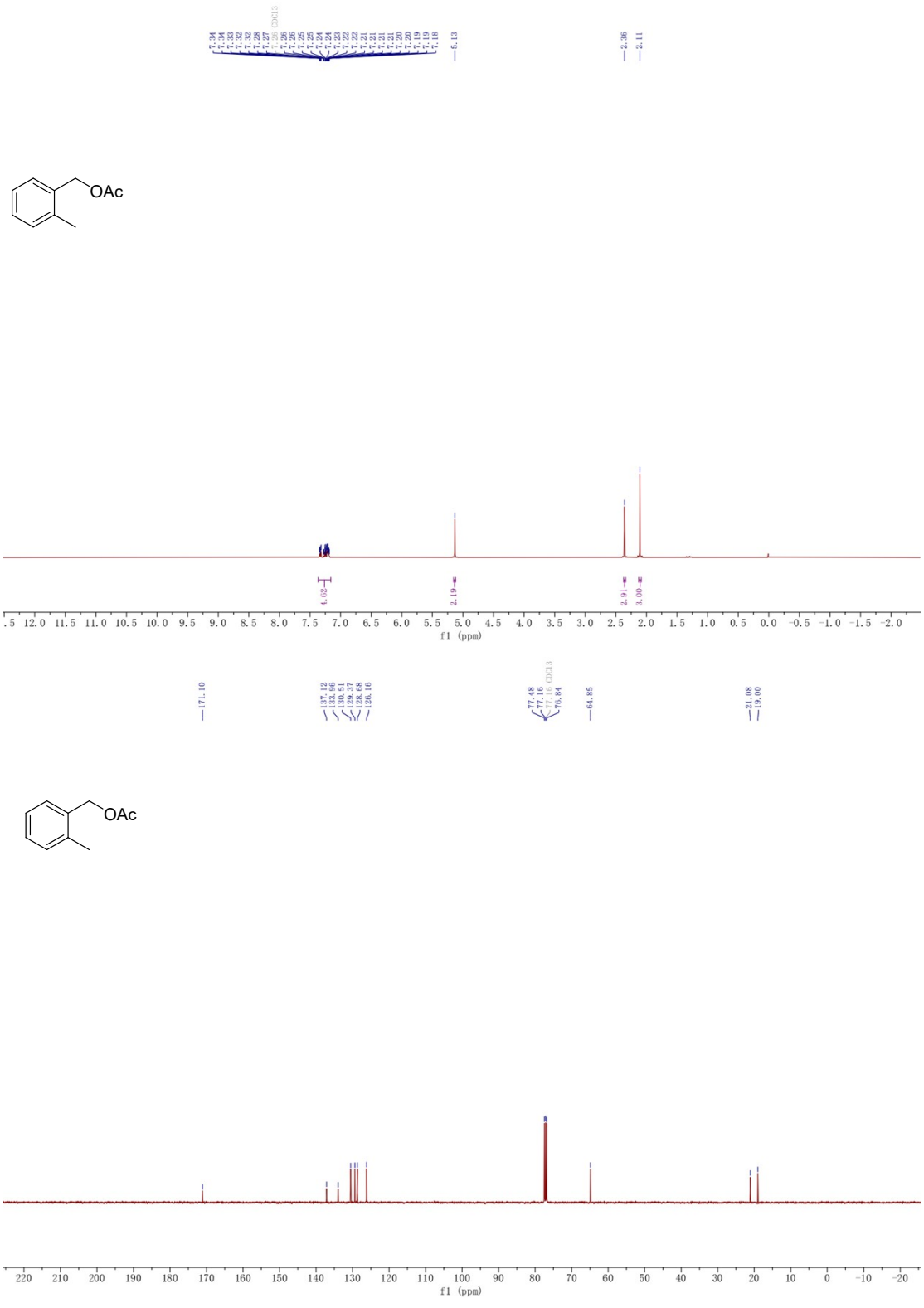


Figure S6. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 2-methylbenzyl acetate from 2-methylbenzyl alcohol(table 3, entry 6).

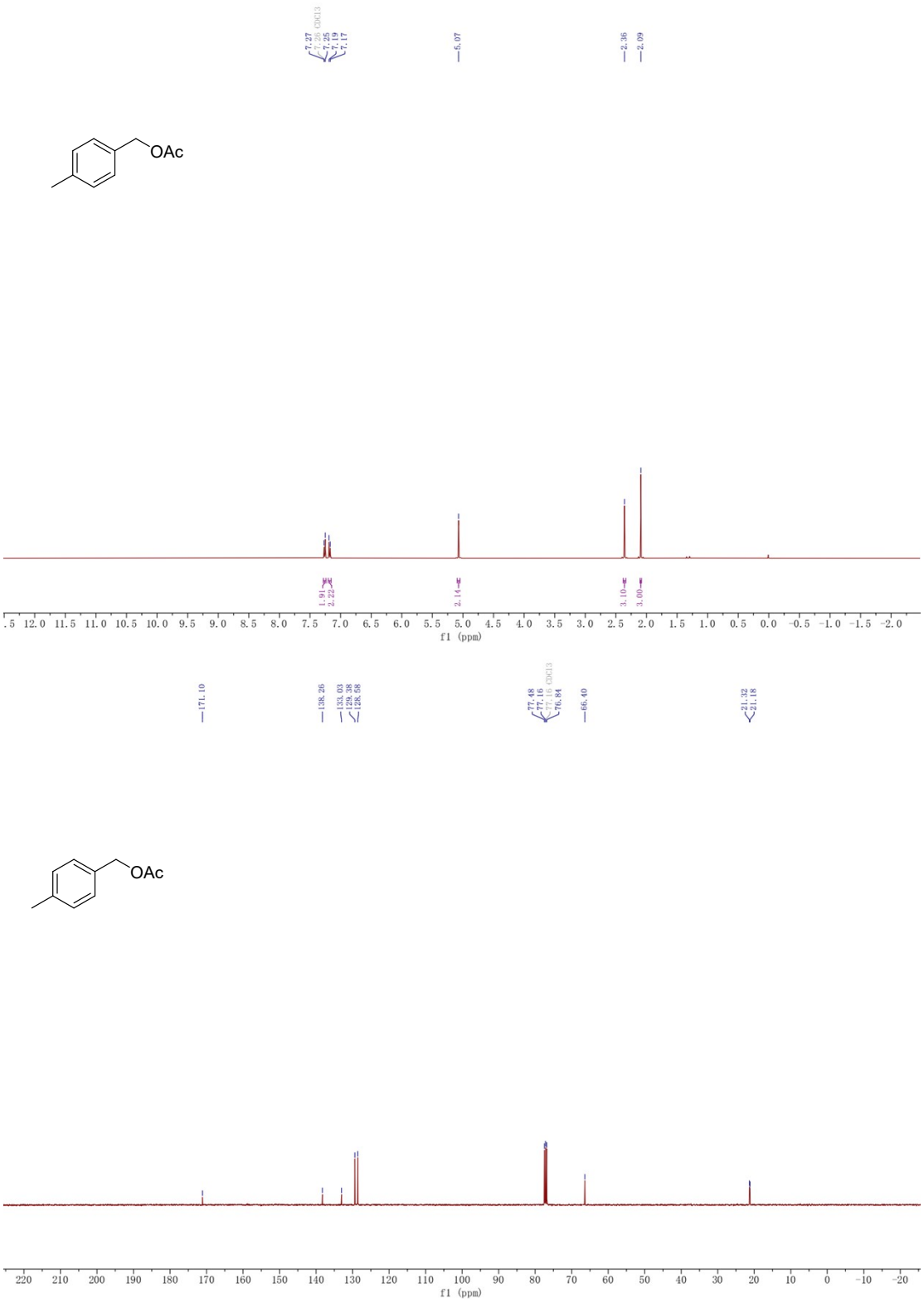


Figure S7. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-methylbenzyl acetate from 4-methylbenzyl alcohol(table 3, entry 7).

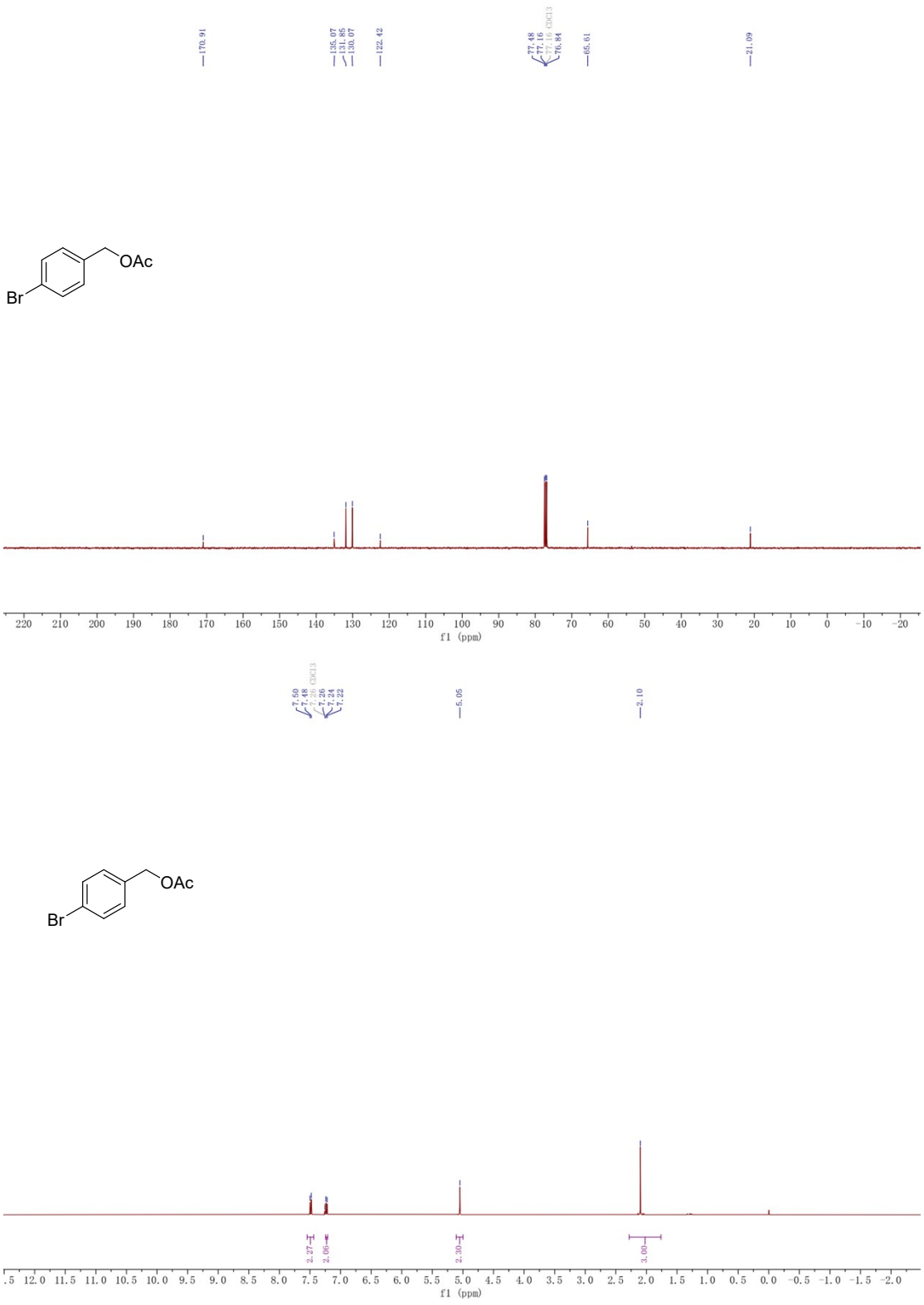
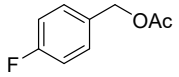
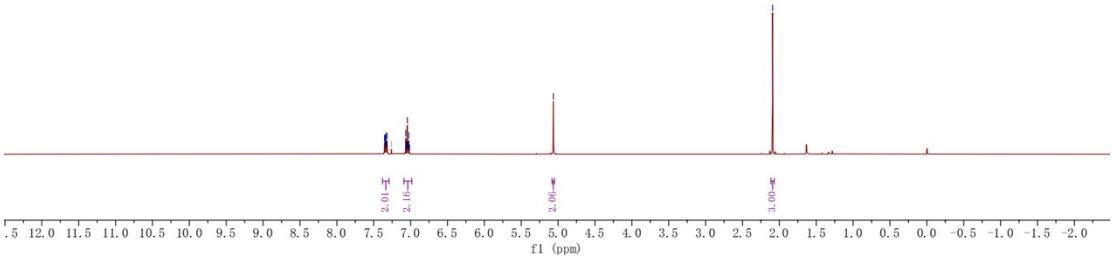


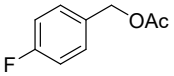
Figure S8. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-bromobenzyl acetate from (4-bromophenyl)methanol(table 3, entry 8).

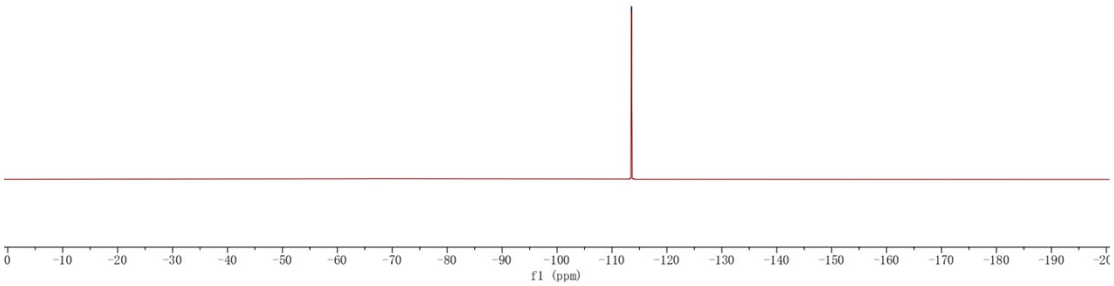

7.35
7.35
7.34
7.34
7.34
7.33
7.32
7.32
7.26 CDCl3
7.07
7.06
7.05
7.05
7.04
7.04
7.04
7.03
7.02
7.02
5.06
2.09


OAc
F


2.01
2.16
2.00
3.00
f1 (ppm)

113.66


OAc
F


f1 (ppm)

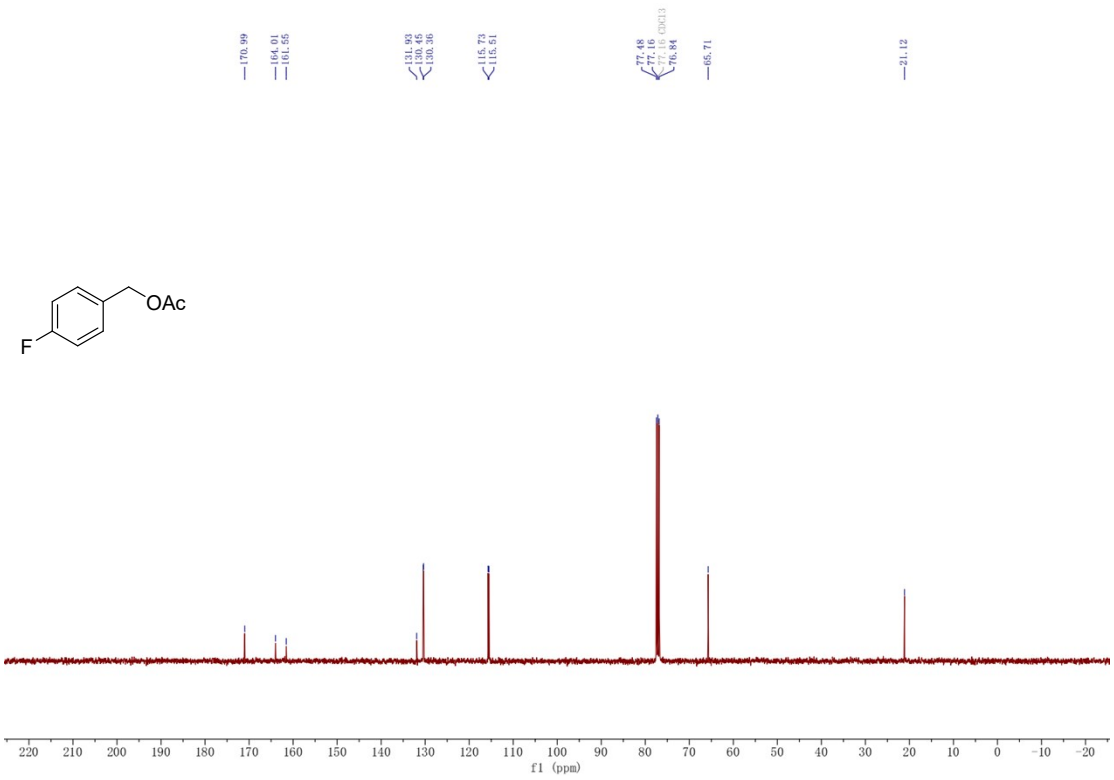


Figure S9. ^{1}H (top) , ^{19}F(middle) and ^{13}C (bottom) NMR spectra of 4-fluorobenzyl acetate from (4-fluorophenyl)methanol(table 3, entry 9).

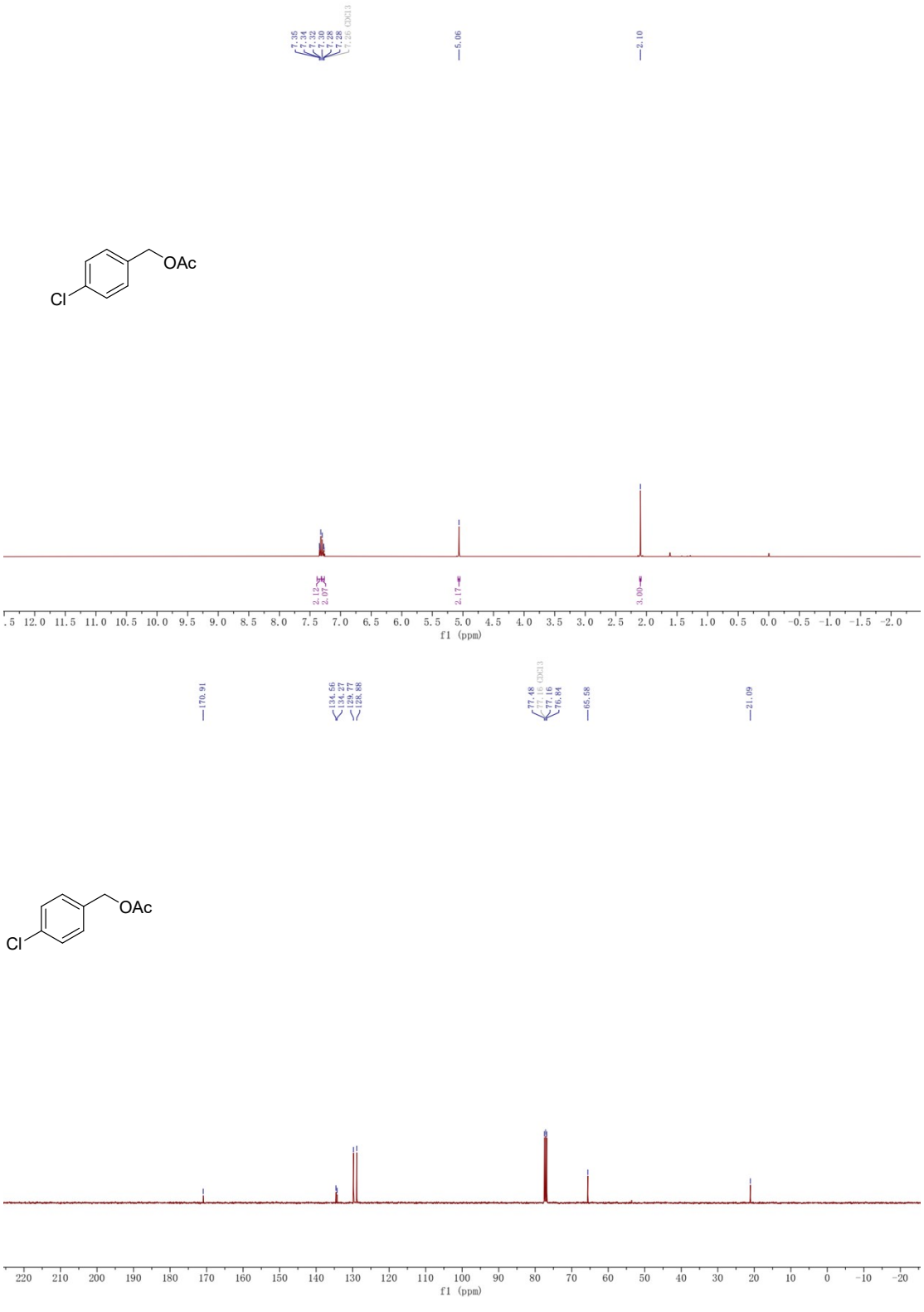


Figure S10. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-chlorobenzyl acetate from (4-chlorophenyl)methanol(table 3, entry 10).

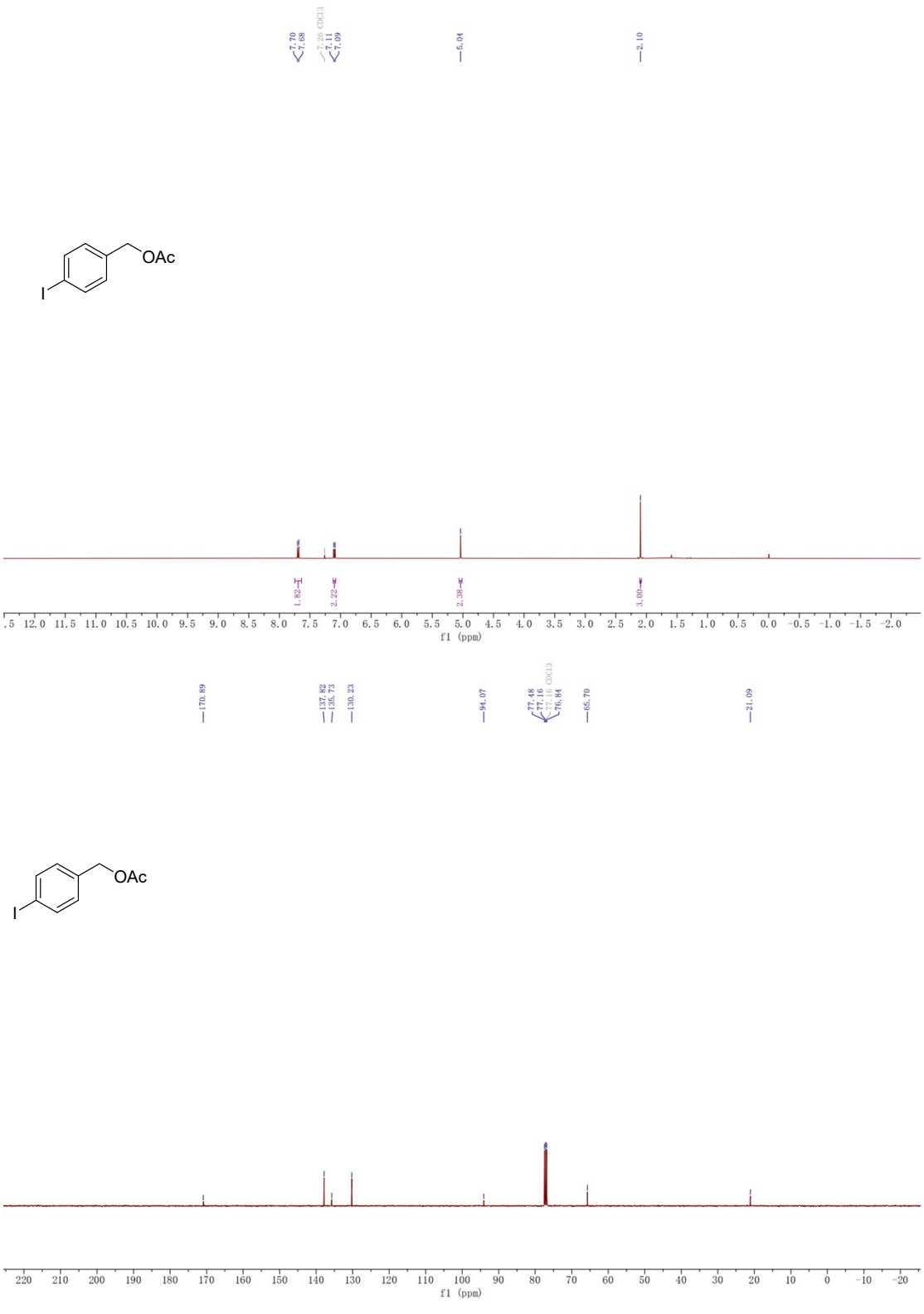


Figure S11. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-iodobenzyl acetate from (4-iodophenyl)methanol(table 3, entry 11).

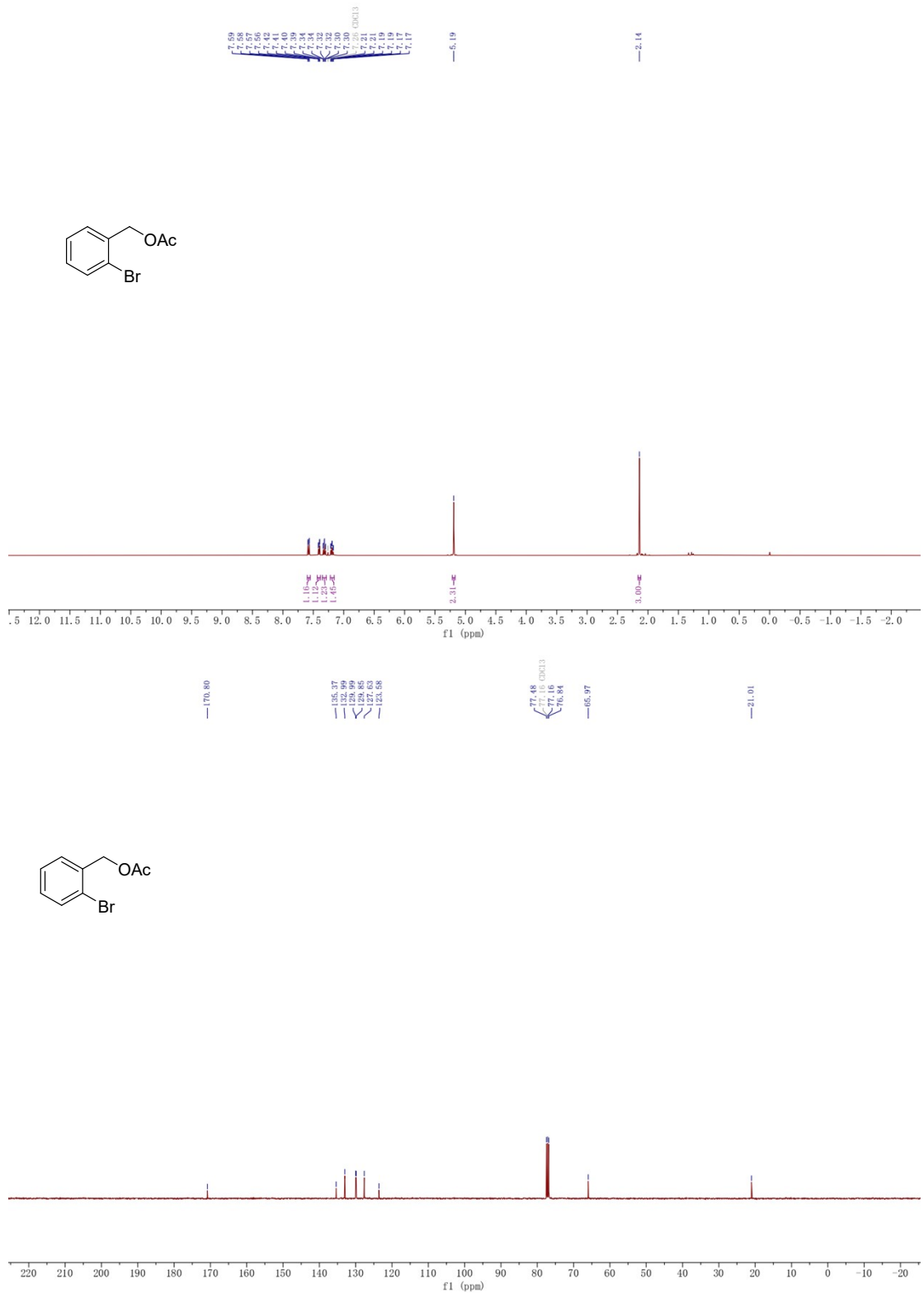
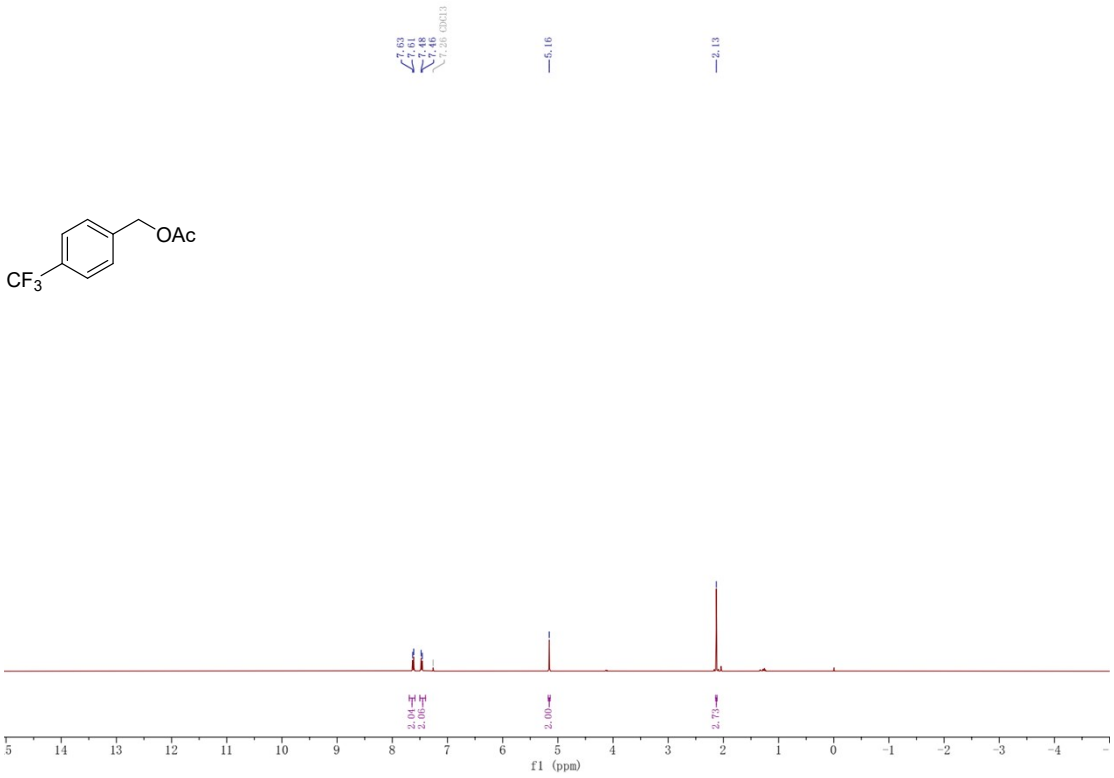
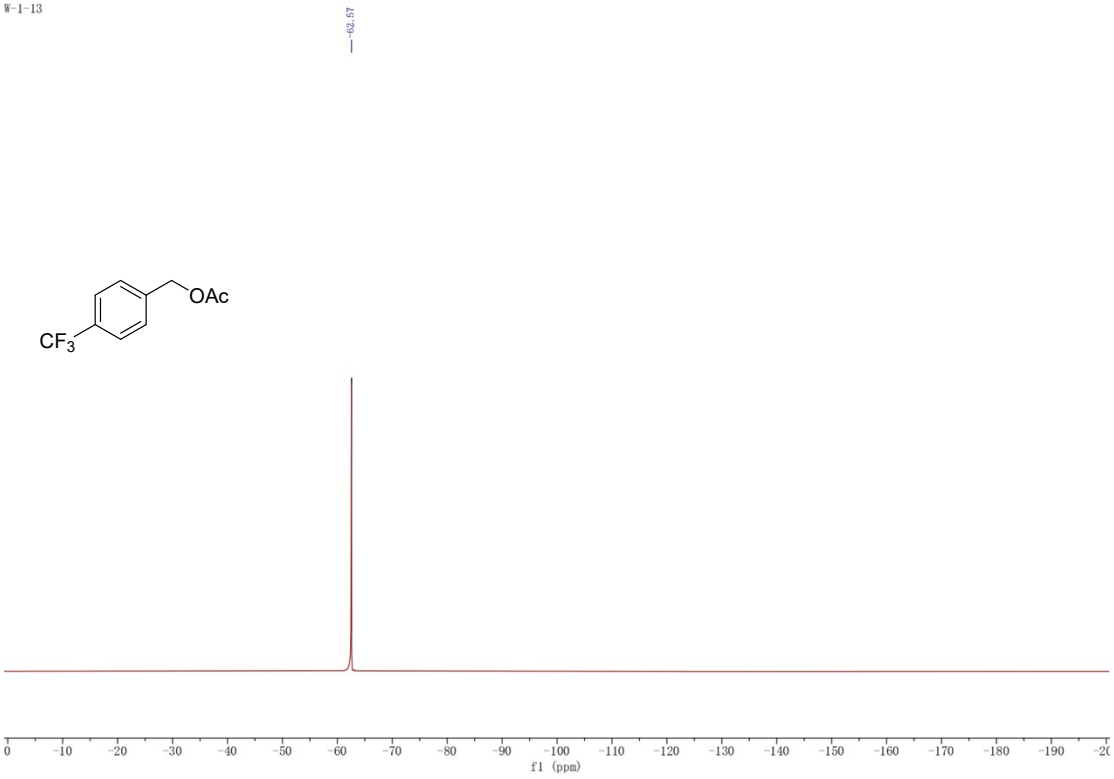


Figure S12. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 2-bromobenzyl acetate from (2-bromophenyl)methanol(table 3, entry 12).


7.63
7.61
7.48
7.46
7.26 CDCl3
5.16
2.13
OAc
CF3
2.04
2.00
2.00
2.73
f1 (ppm)

W-1-13


-62.67
OAc
CF3
f1 (ppm)

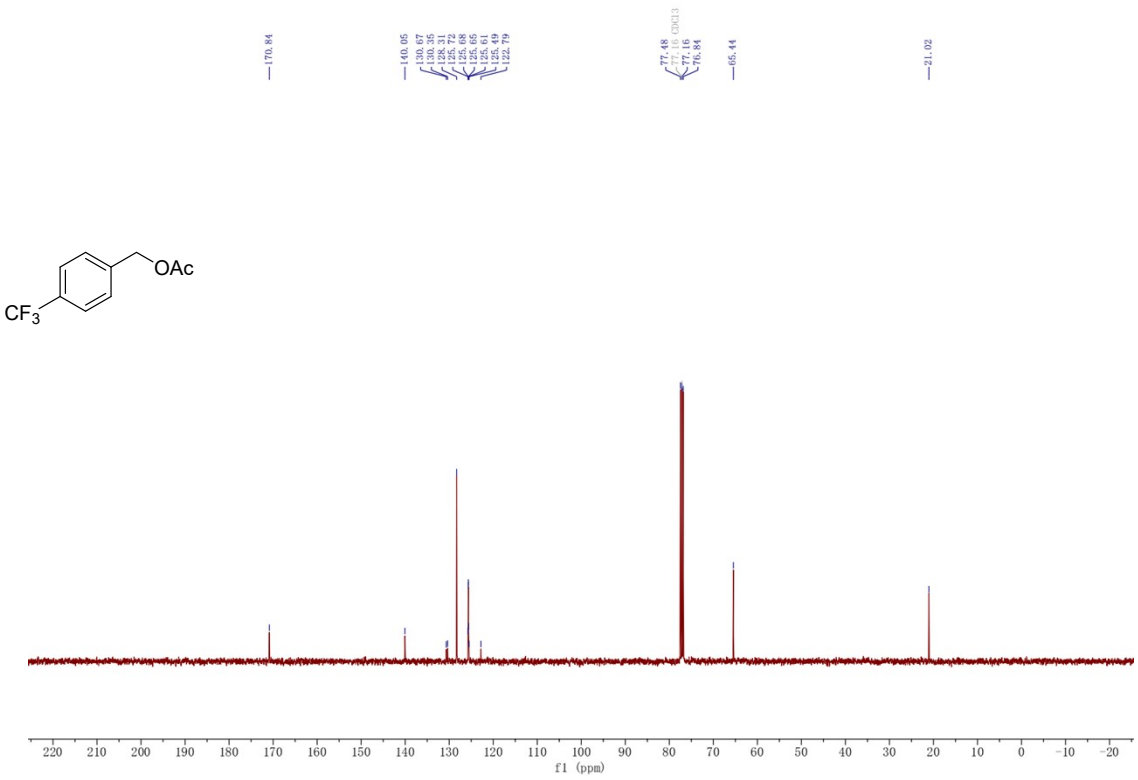


Figure S13. ^{1}H (top) , ^{19}F(middle) and ^{13}C (bottom) NMR spectra of 4-(trifluoromethyl)benzyl acetate from (4-(trifluoromethyl)phenyl)methanol(table 3, entry 13).

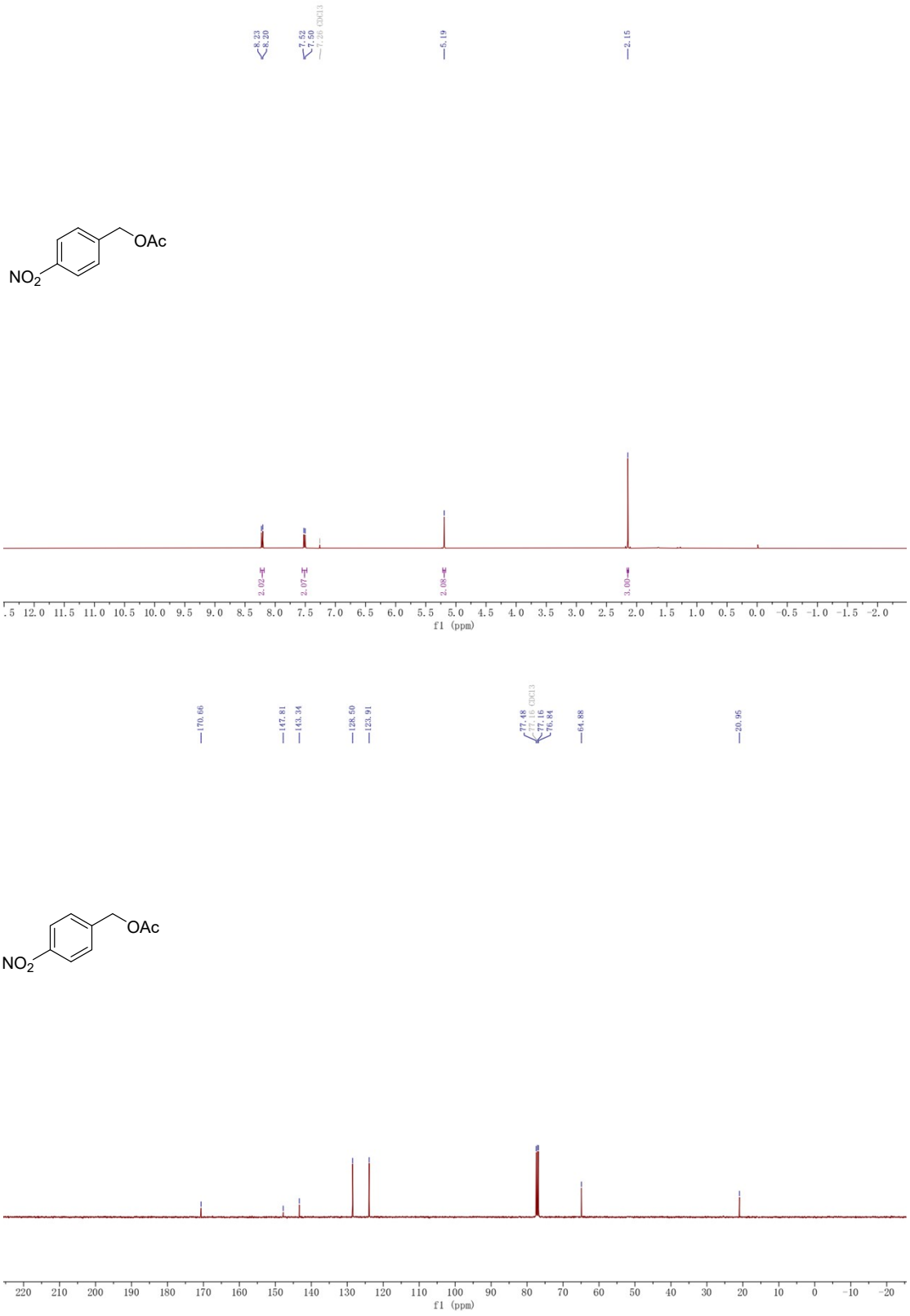


Figure S14. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-nitrobenzyl acetate from (4-nitrophenyl)methanol(table 3, entry 14).

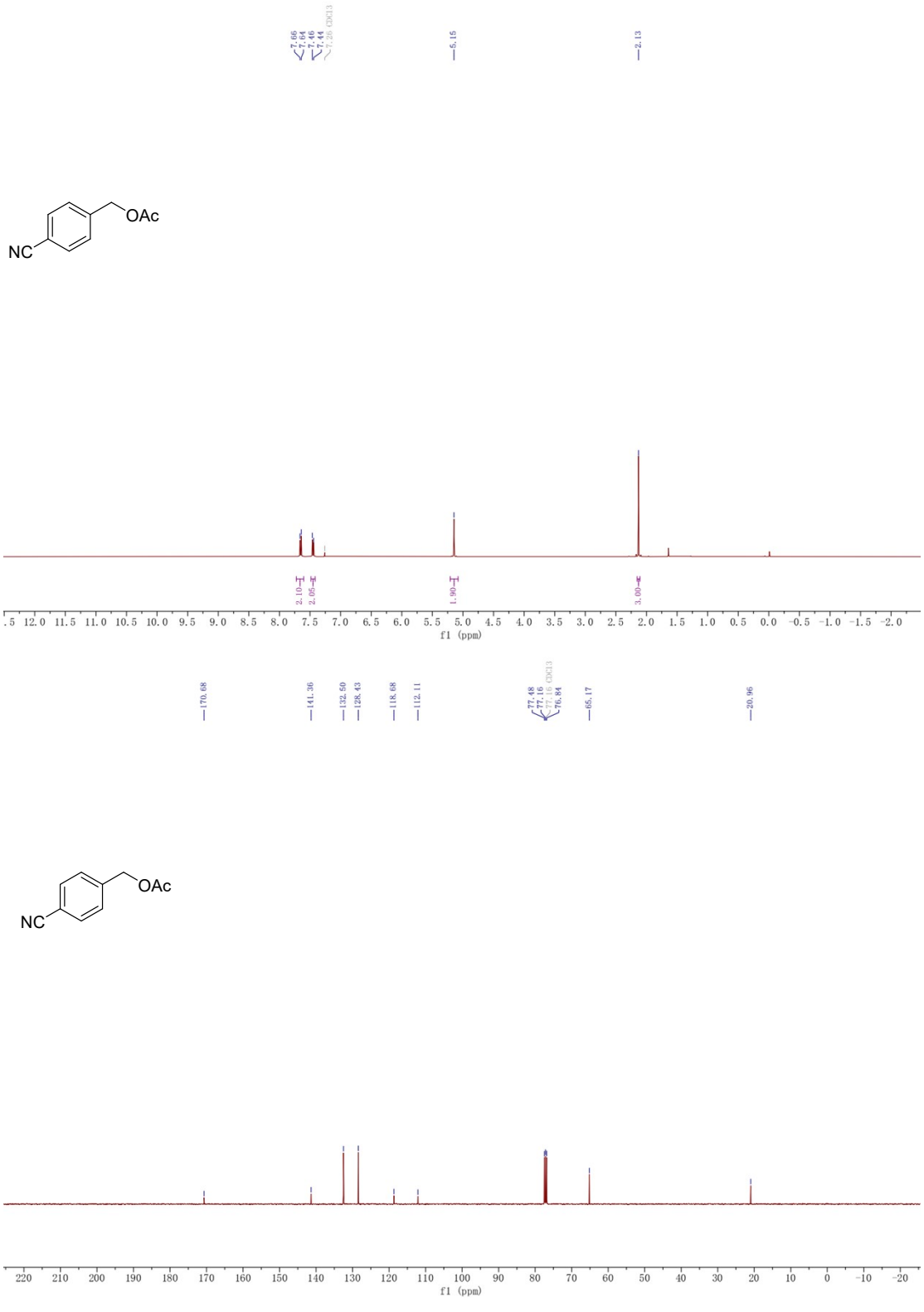


Figure S15. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-cyanobenzyl acetate from 4-(hydroxymethyl)benzonitrile(table 3, entry 15).

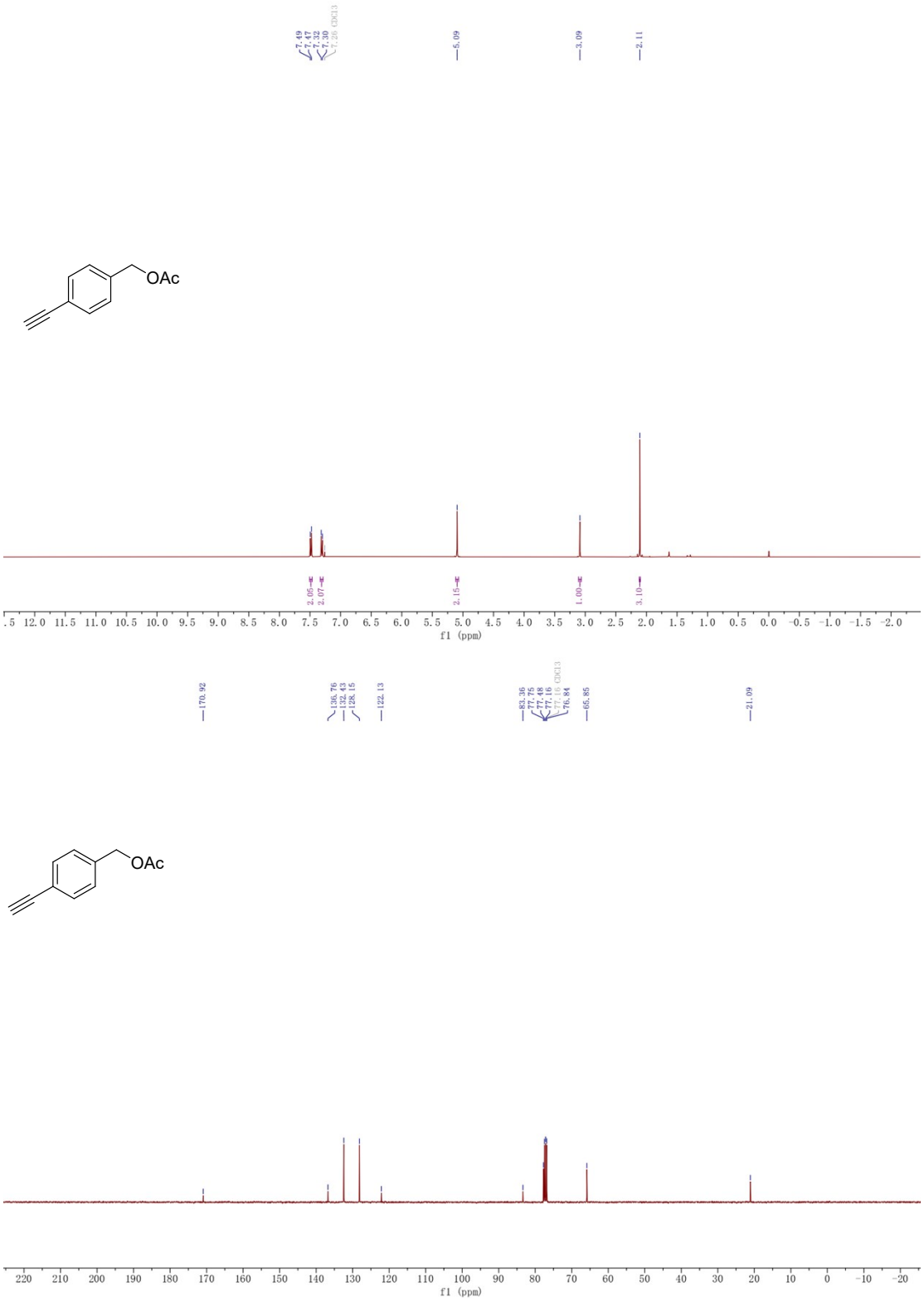


Figure S16. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-ethynylbenzyl acetate from (4-ethynylphenyl)methanol(table 3, entry 16).

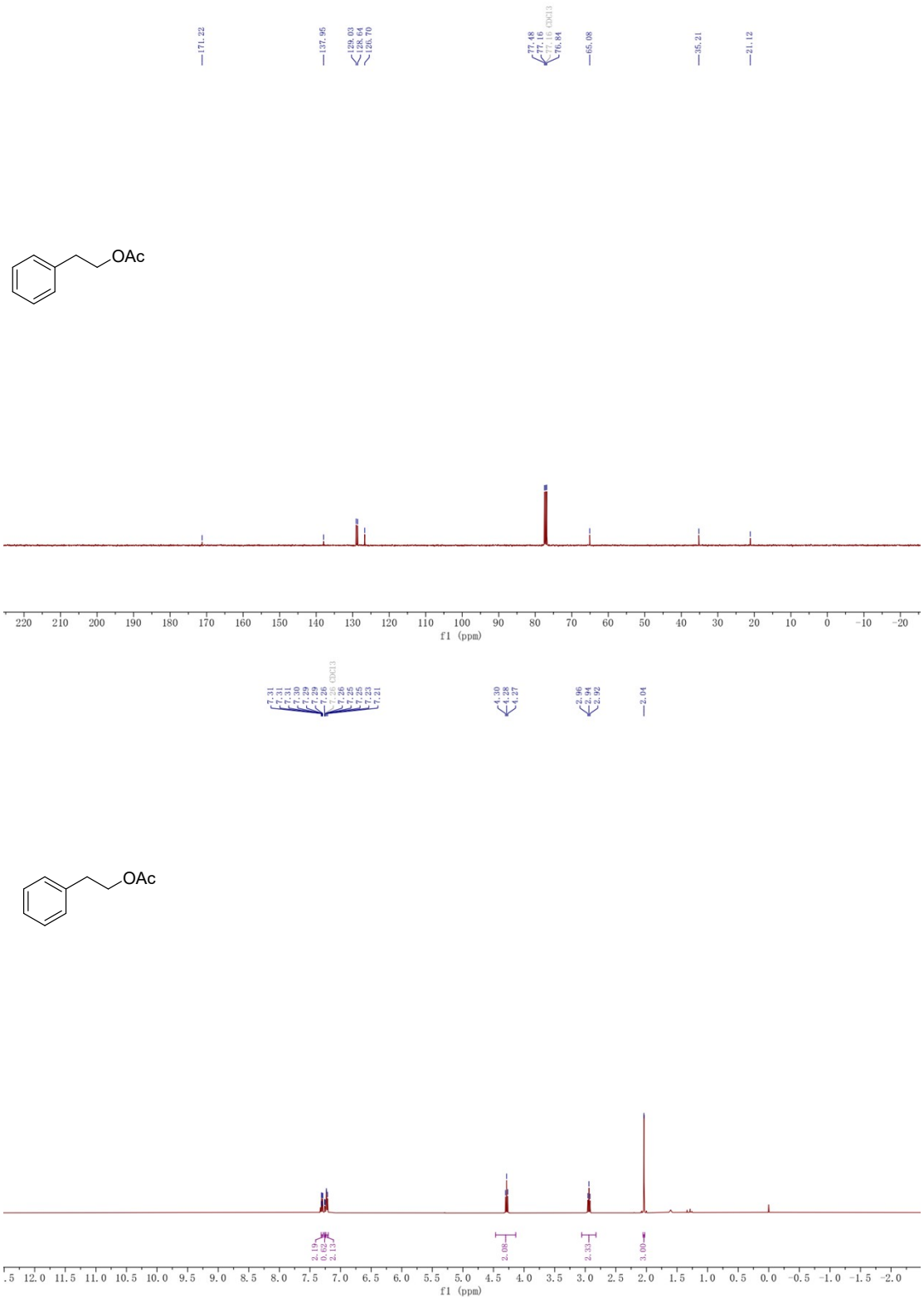


Figure S17. ^{1}H (top) and ^{13}C (bottom) NMR spectra of phenethyl acetate from 2-phenylethan-1-ol(table 3, entry 17).

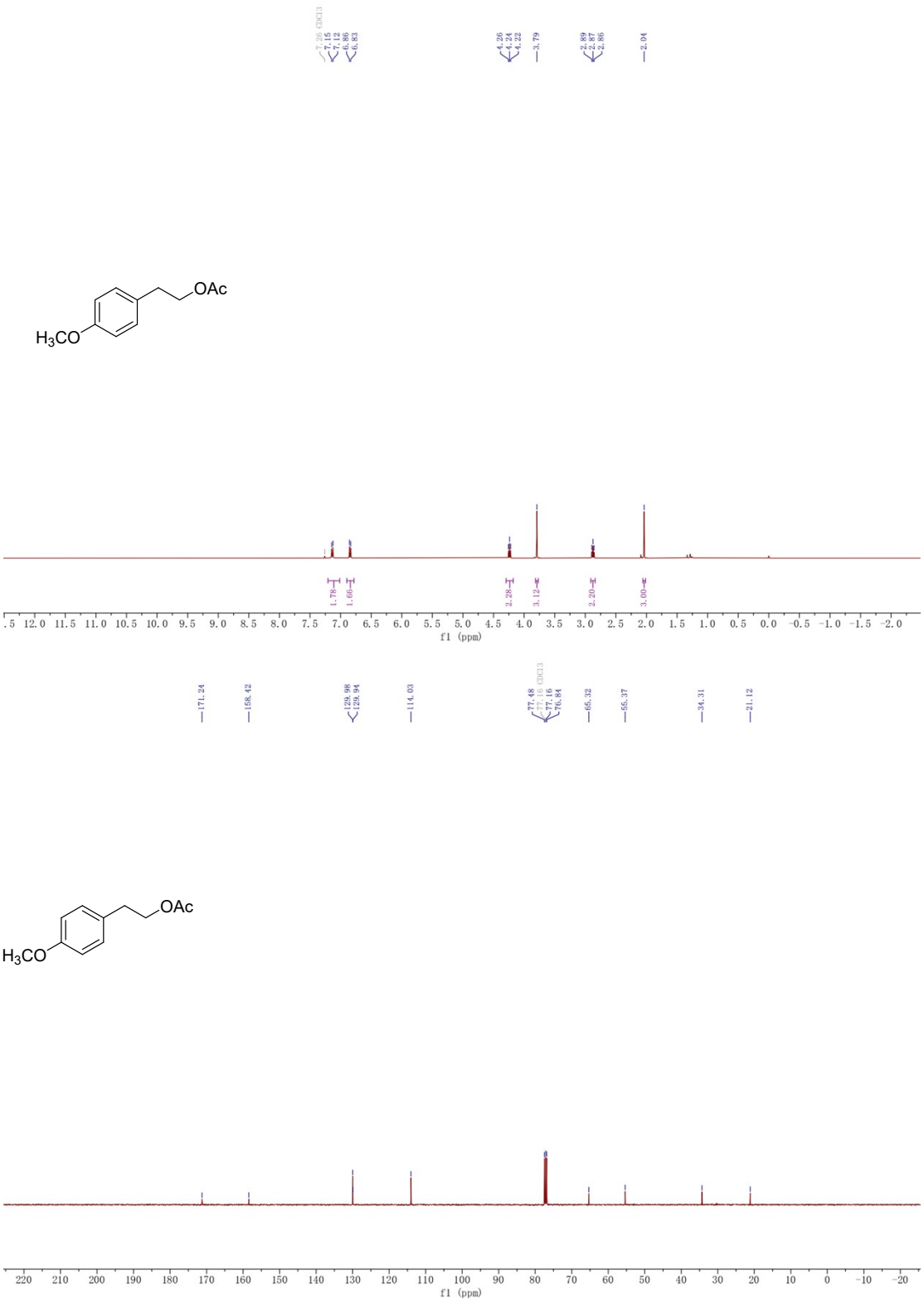


Figure S18. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-methoxyphenethyl acetate from 2-(4-methoxyphenyl)ethan-1-ol(table 3, entry 18).

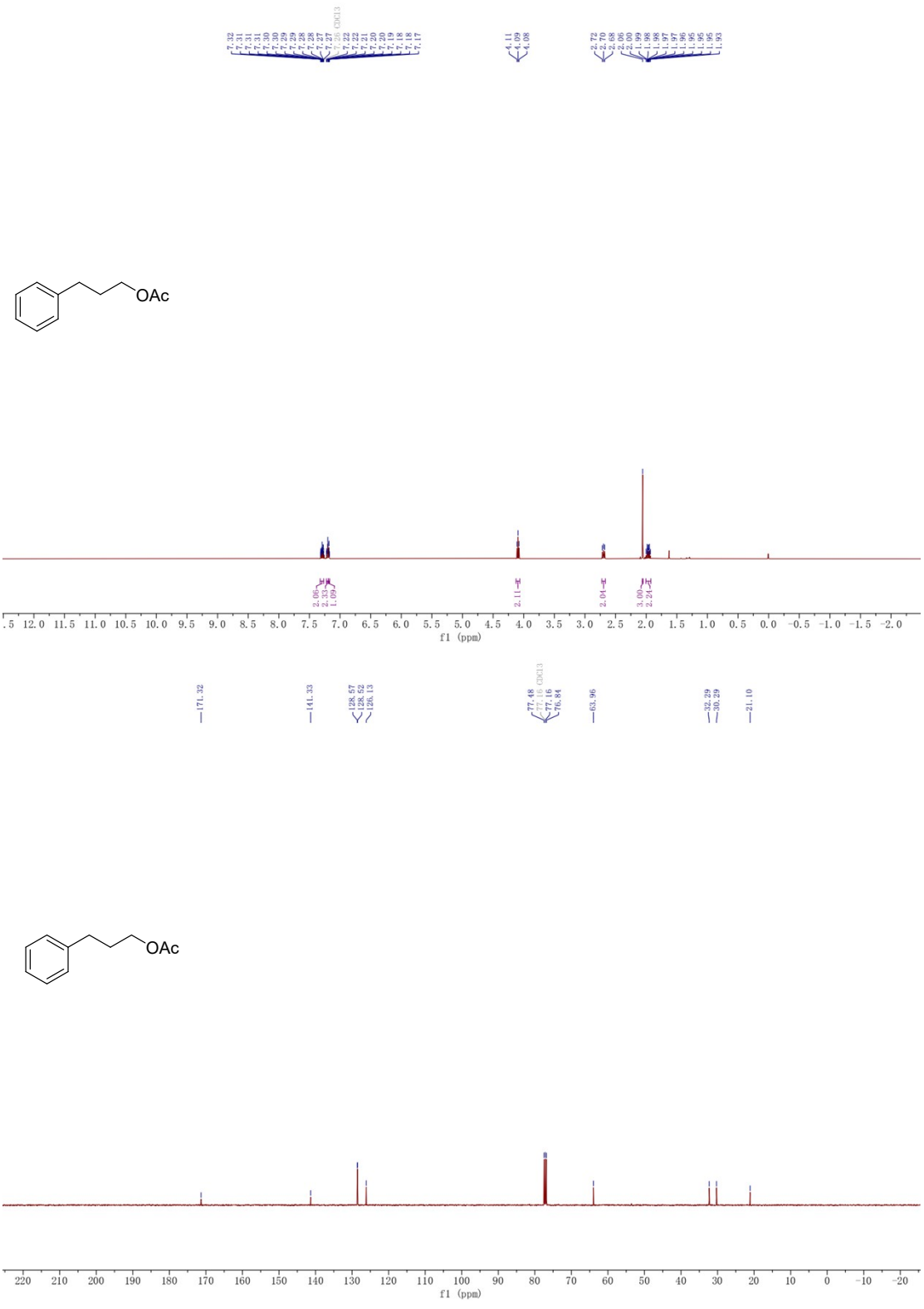


Figure S19. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 3-phenylpropyl acetate from 3-phenylpropan-1-ol(table 3, entry 19).

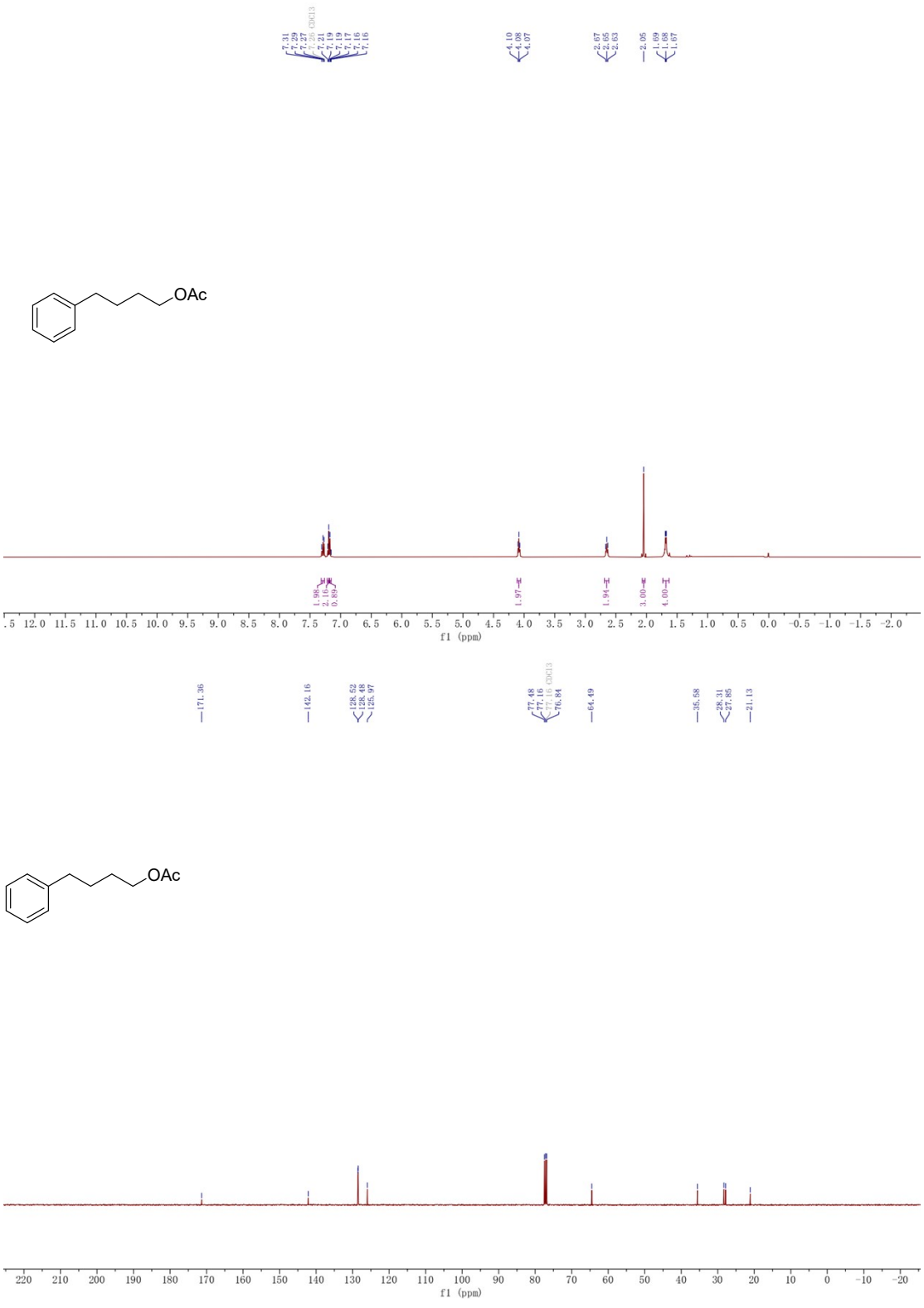


Figure S20. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 4-phenylbutyl acetate from 4-phenylbutan-1-ol(table 3, entry 20).

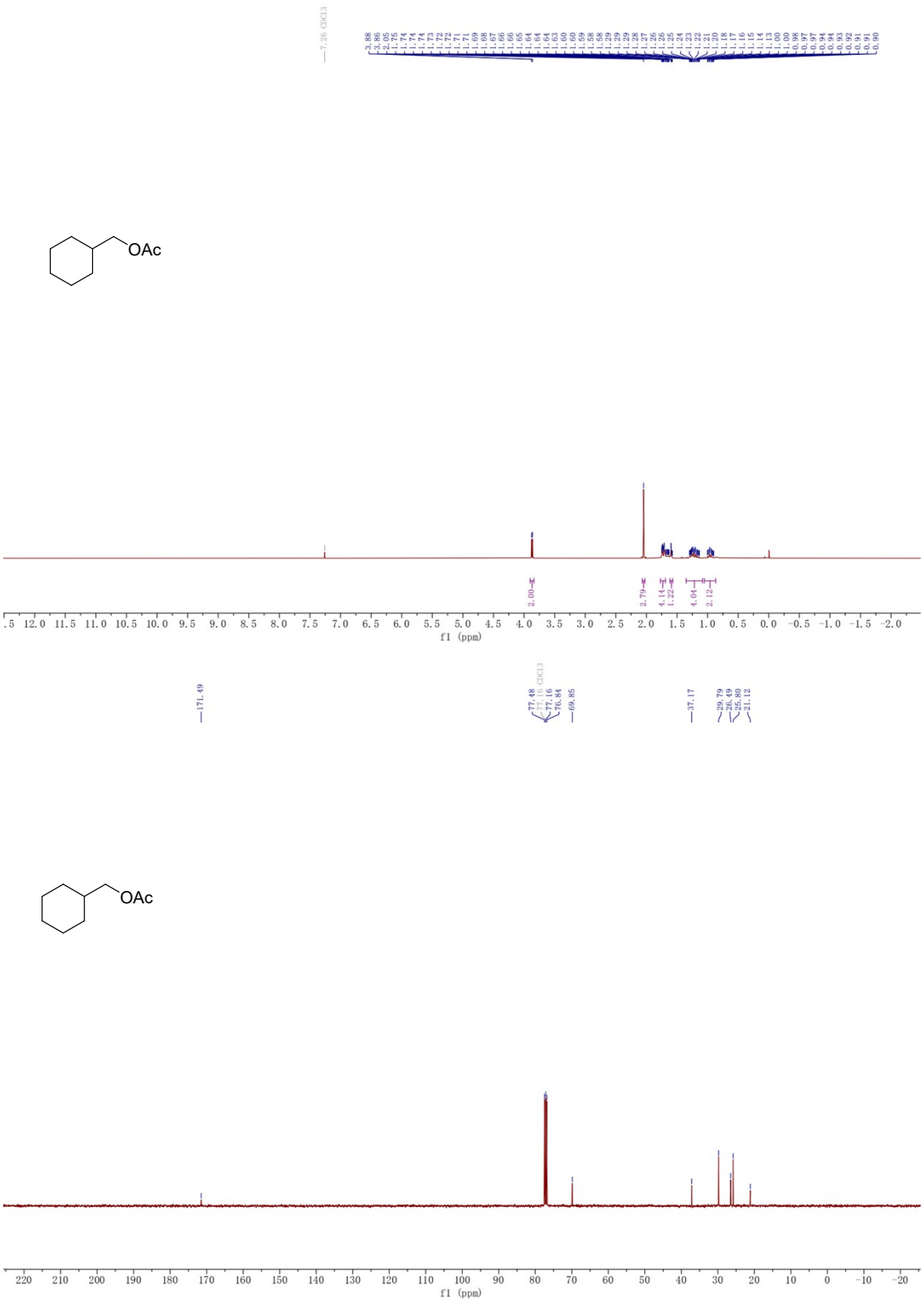


Figure S21. ^{1}H (top) and ^{13}C (bottom) NMR spectra of cyclohexylmethyl acetate from cyclohexylmethanol(table 3, entry 21).

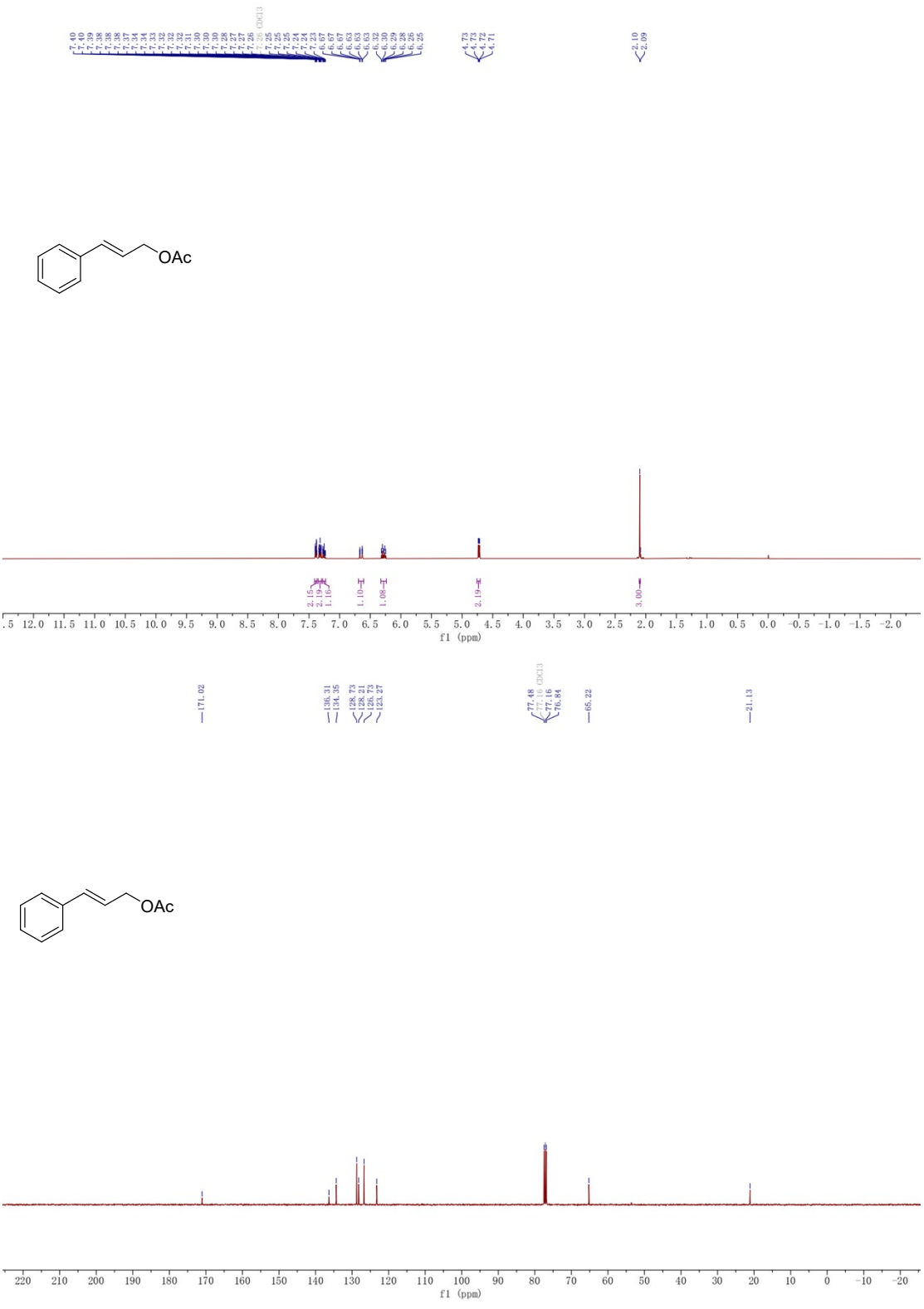


Figure S22. ^{1}H (top) and ^{13}C (bottom) NMR spectra of Cinnamyl acetate from Cinnamyl alcohol(table 3, entry 22).

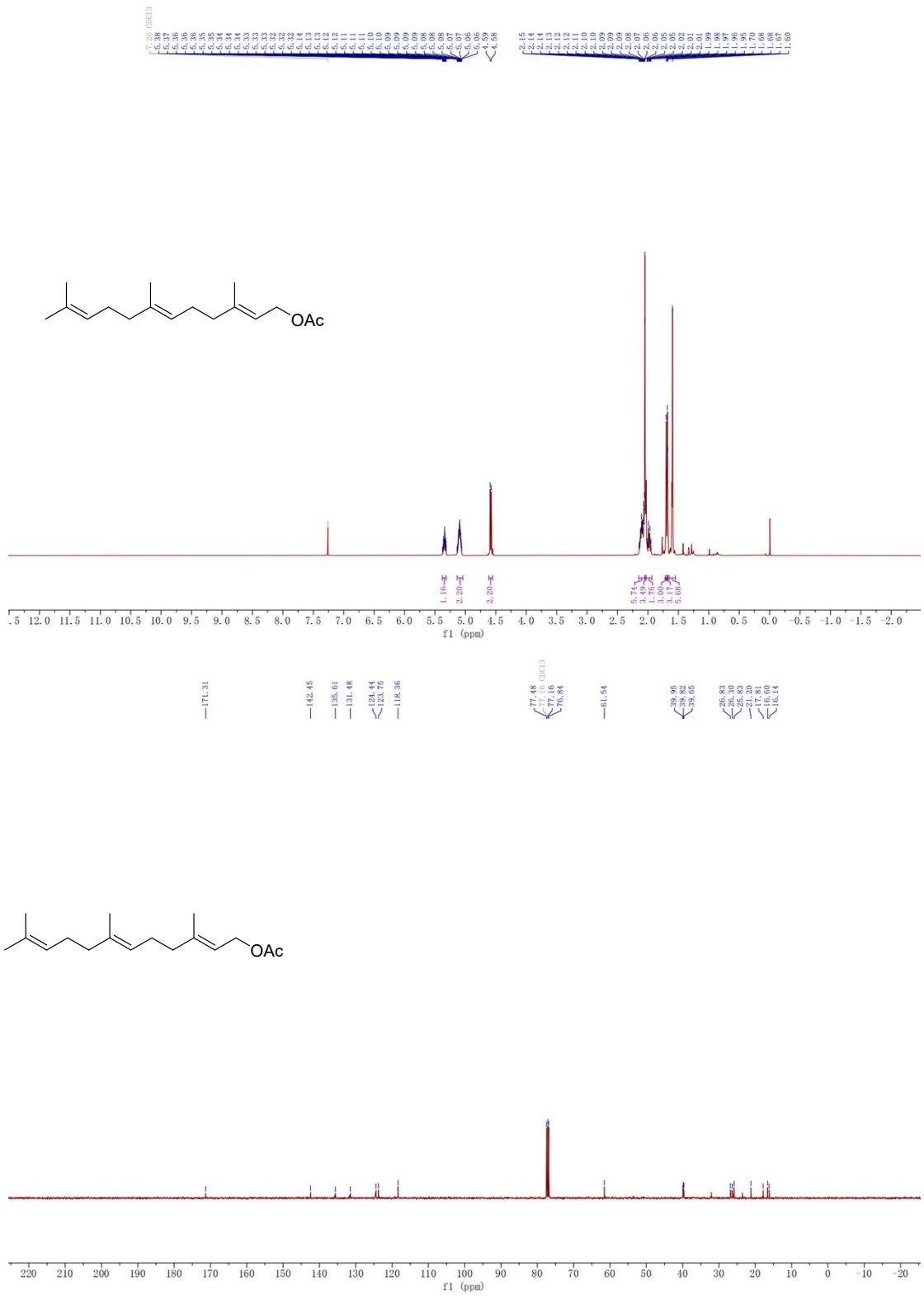


Figure S23. ^{1}H (top) and ^{13}C (bottom) NMR spectra of Farnesyl acetate from Farnesol(table 3, entry 23).

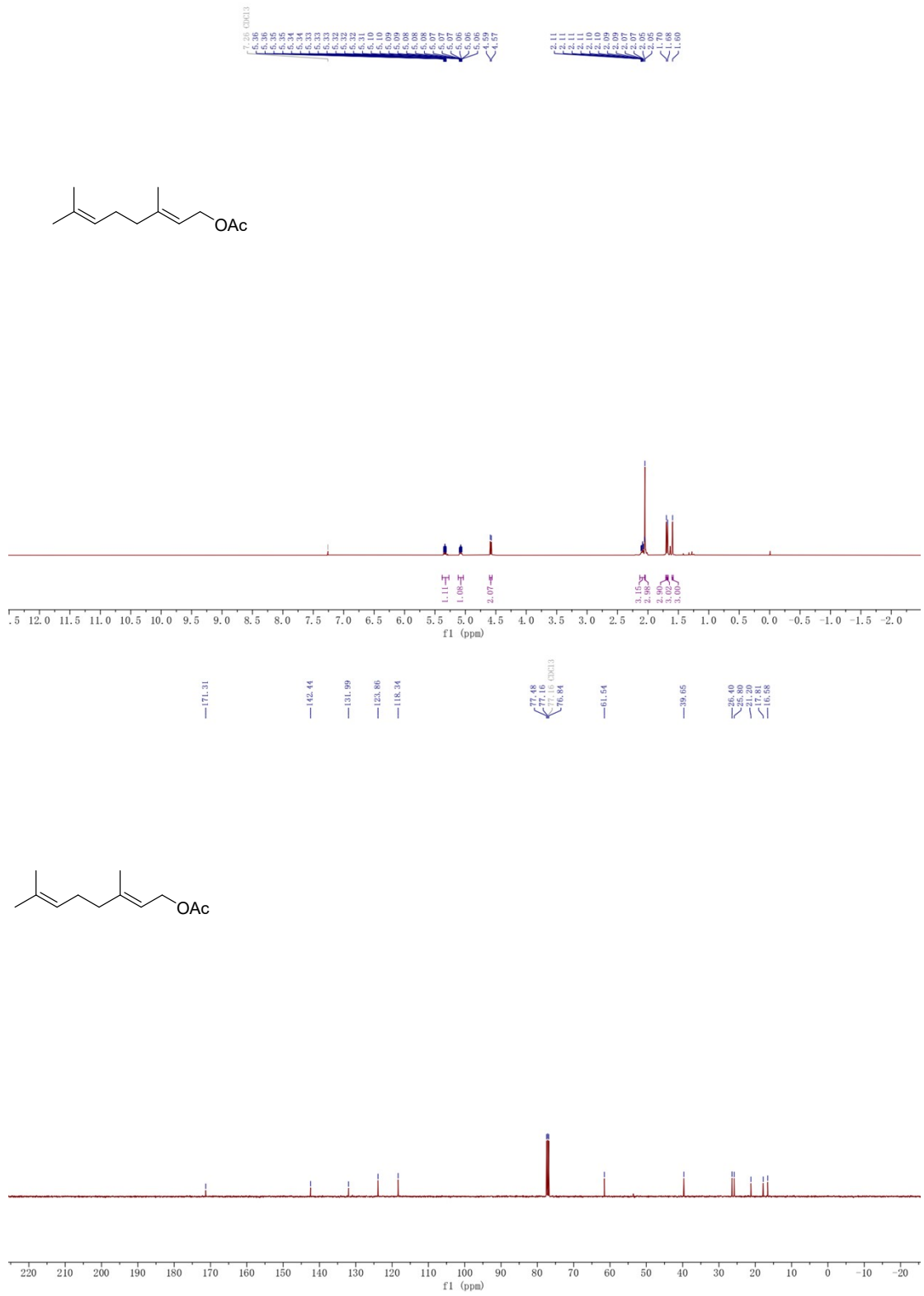


Figure S24. ^{1}H (top) and ^{13}C (bottom) NMR spectra of Geranyl acetate from Geraniol(table 3, entry 24).

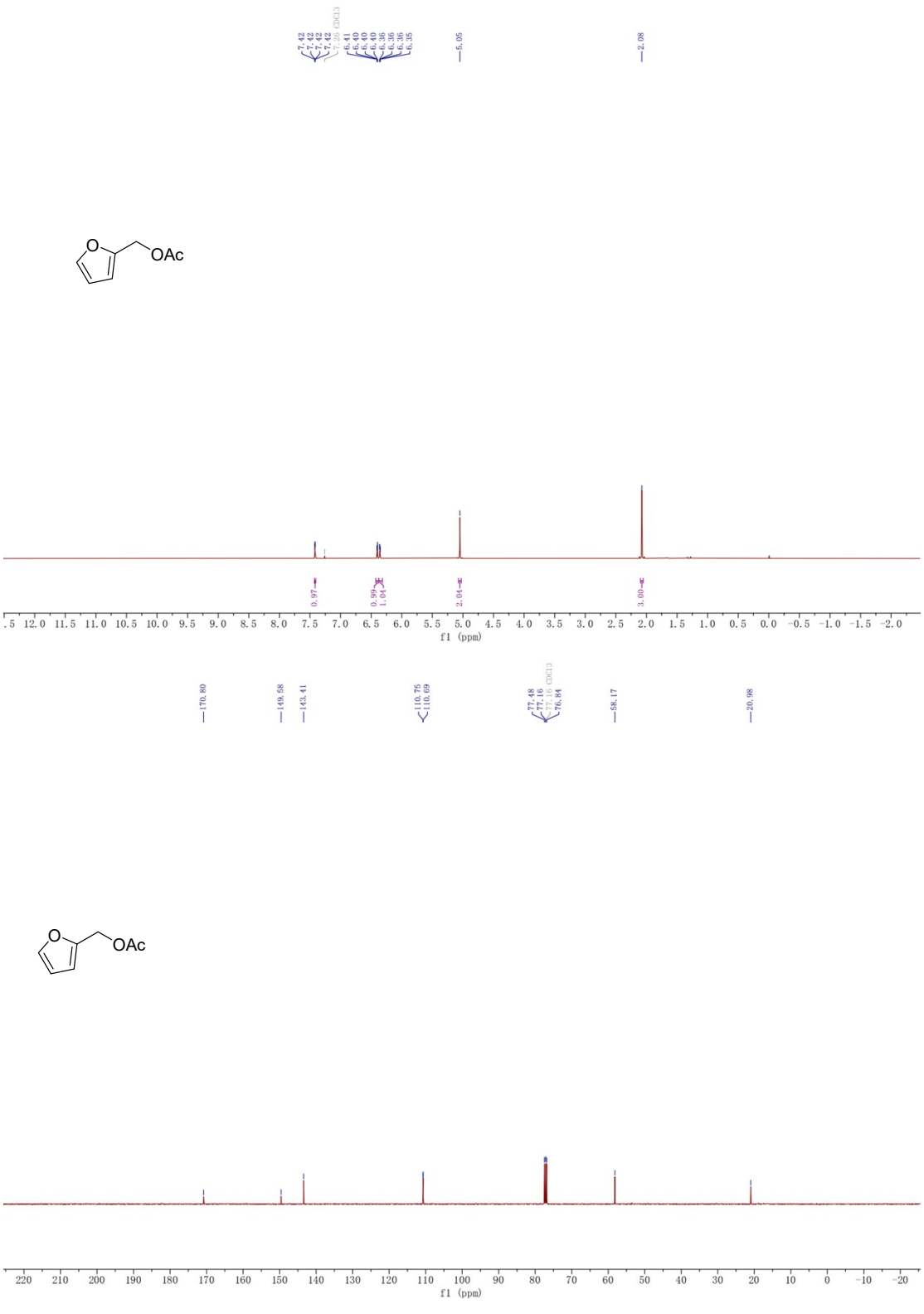


Figure S25. ^{1}H (top) and ^{13}C (bottom) NMR spectra of furan-2-ylmethyl acetate from furan-2-ylmethanol(table 3, entry 27).

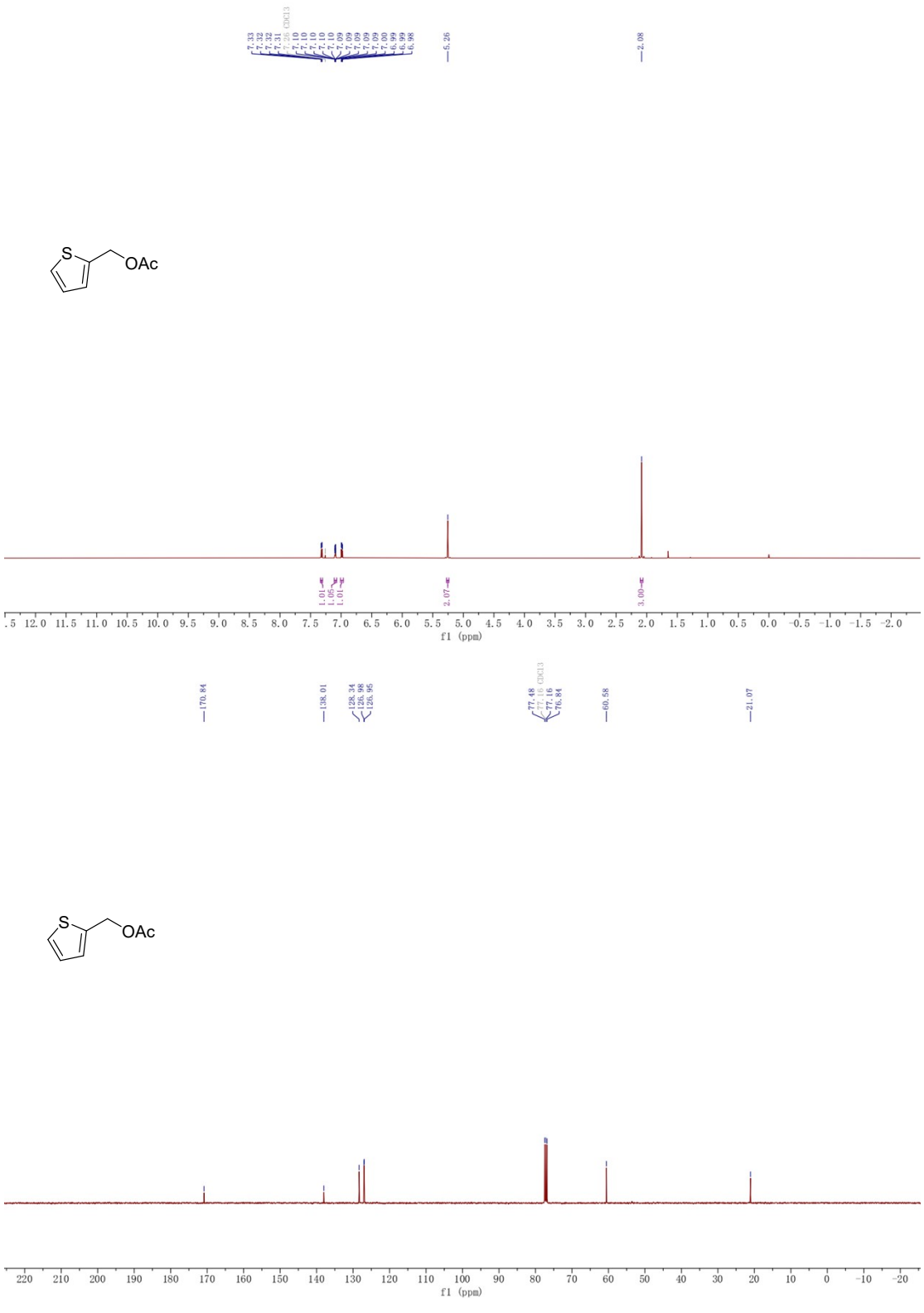


Figure S26. ^{1}H (top) and ^{13}C (bottom) NMR spectra of thiophen-2-ylmethyl acetate from thiophen-2-ylmethanol(table 3, entry 28).

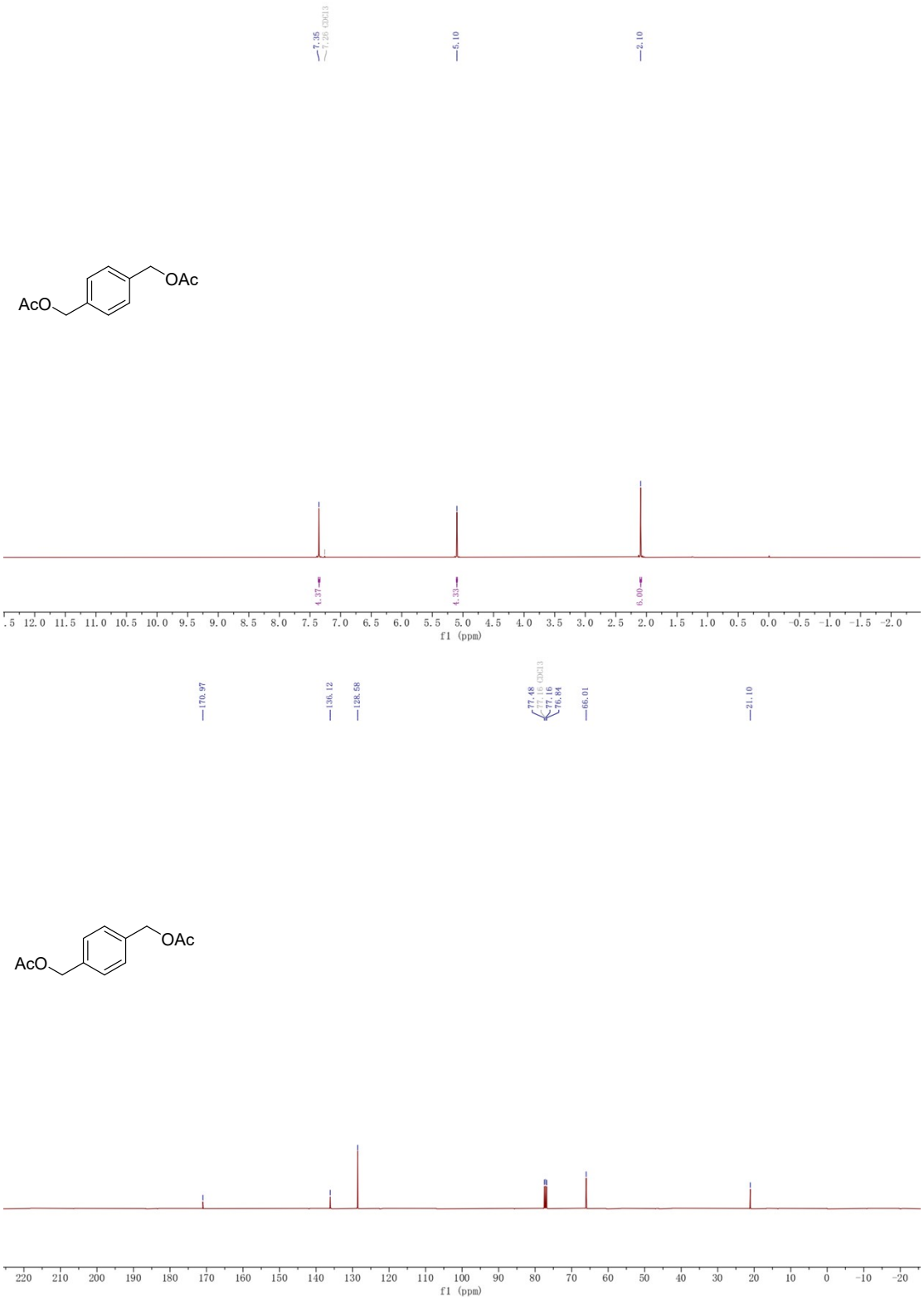


Figure S27. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1,4-phenylenebis(methylene) diacetate from 1,4-phenylenedimethanol(table 3, entry 29).

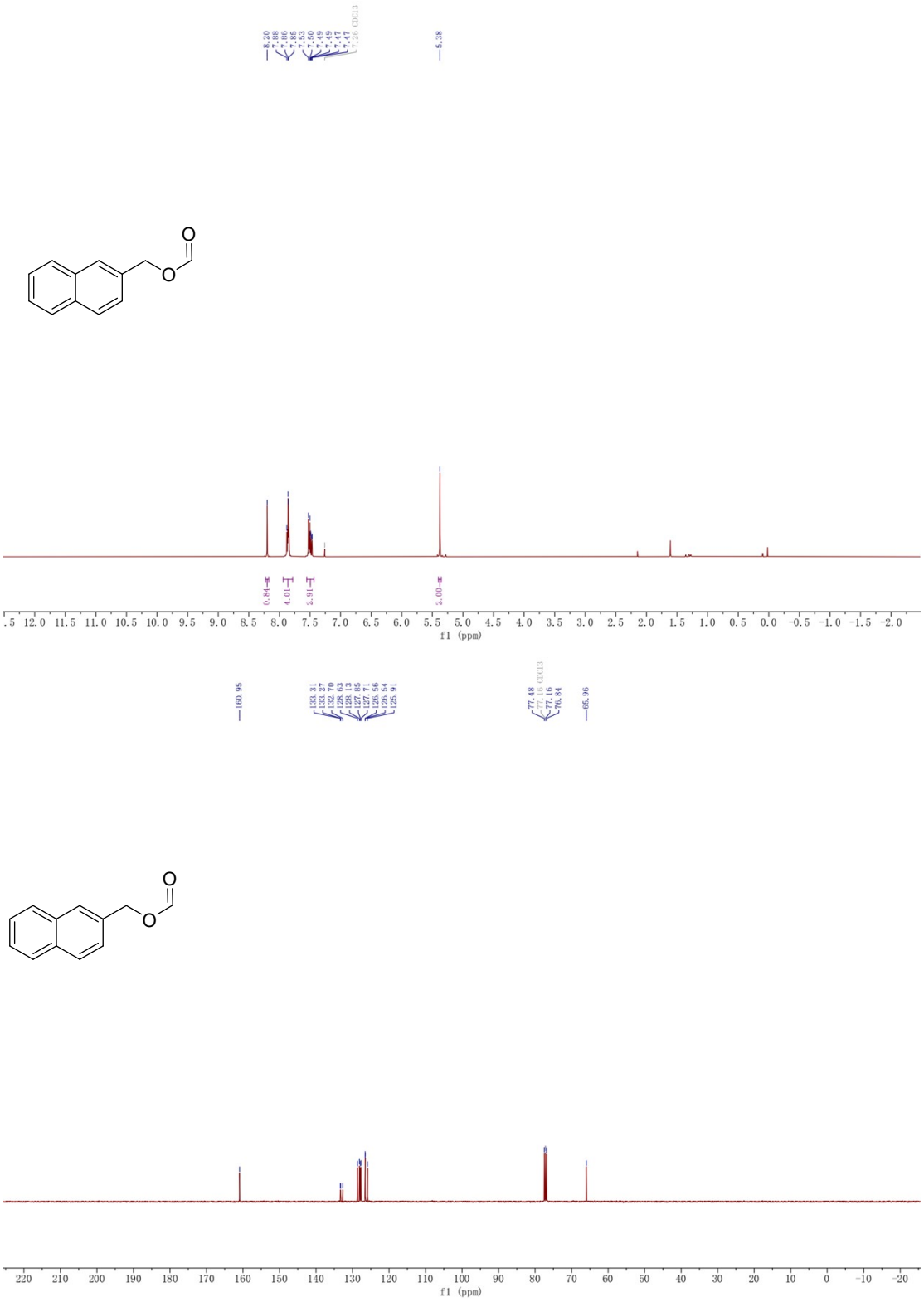


Figure S28. ^{1}H (top) and ^{13}C (bottom) NMR spectra of naphthalen-2-ylmethyl formate from naphthalen-2-ylmethanol(table 4, entry 7).

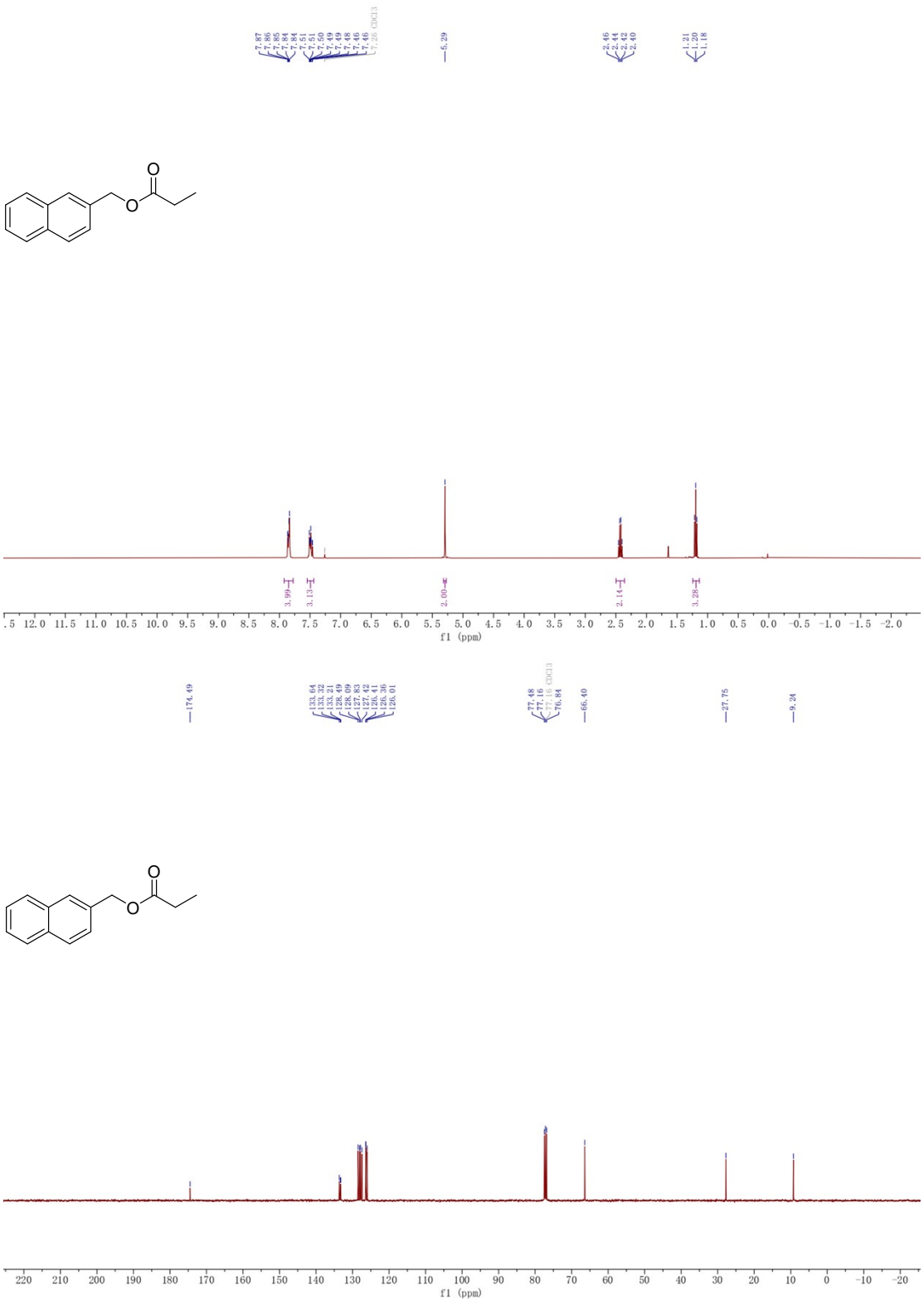


Figure S29. ^{1}H (top) and ^{13}C (bottom) NMR spectra of naphthalen-2-ylmethyl propionate from naphthalen-2-ylmethanol(table 4, entry 8).

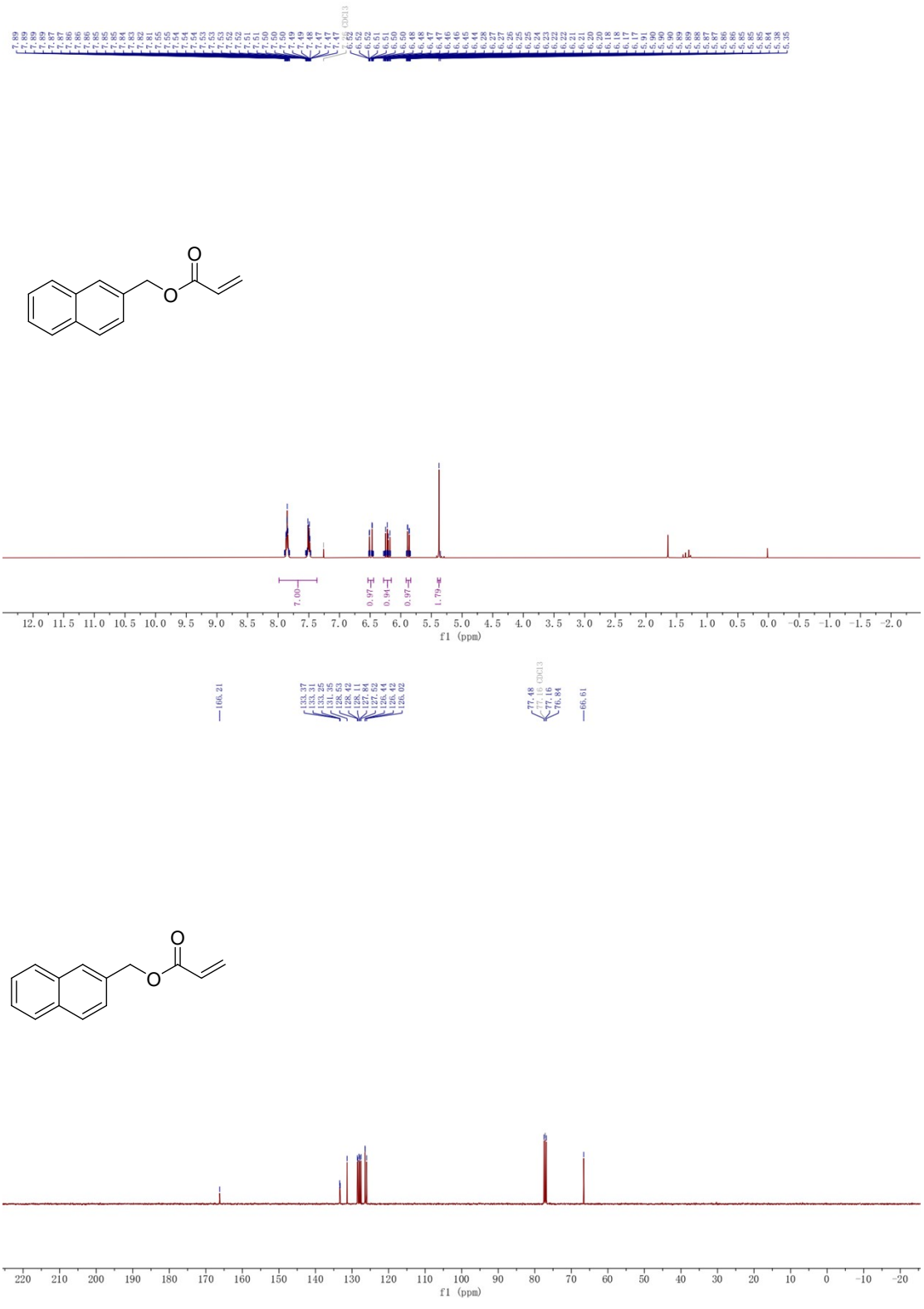


Figure S30. ^{1}H (top) and ^{13}C (bottom) NMR spectra of naphthalen-2-ylmethyl acrylate from naphthalen-2-ylmethanol(table 4, entry 9-1).

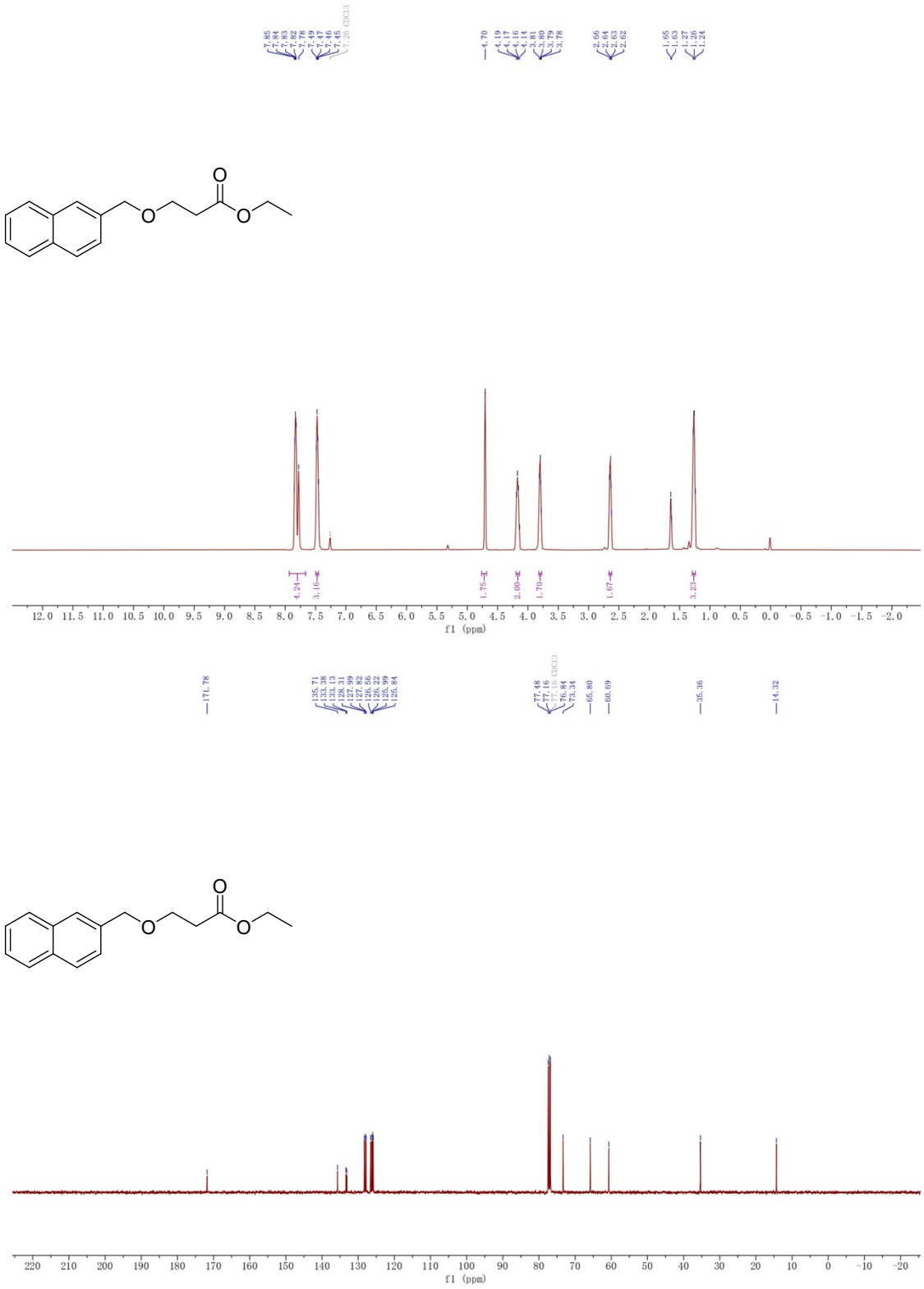


Figure S31. ^{1}H (top) and ^{13}C (bottom) NMR spectra of ethyl 3-(naphthalen-2-ylmethoxy)propanoate from naphthalen-2-ylmethanol(table 4, entry 9-2).

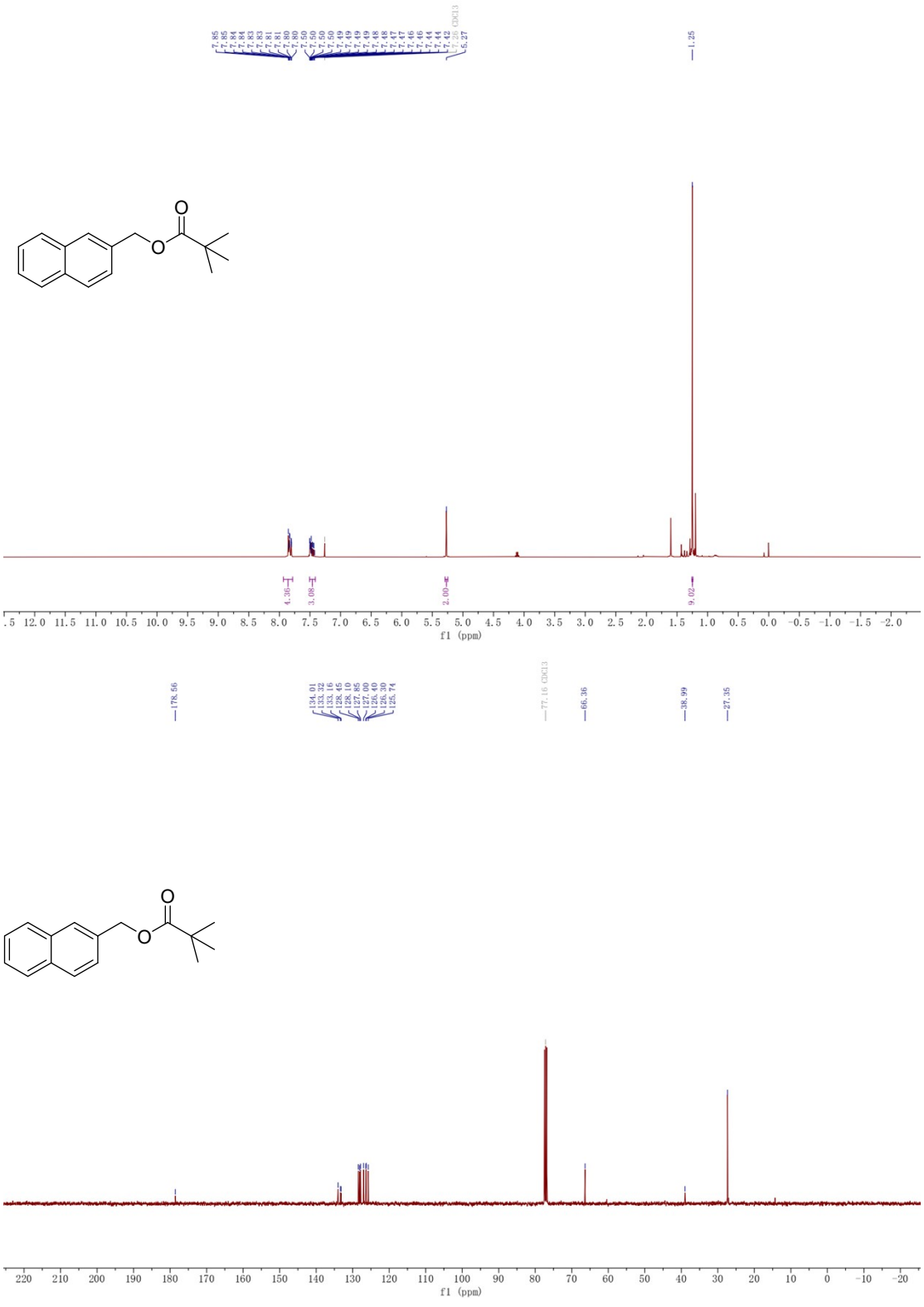


Figure S32. ^{1}H (top) and ^{13}C (bottom) NMR spectra of naphthalen-2-ylmethyl pivalate from naphthalen-2-ylmethanol(table4 , entry 11)

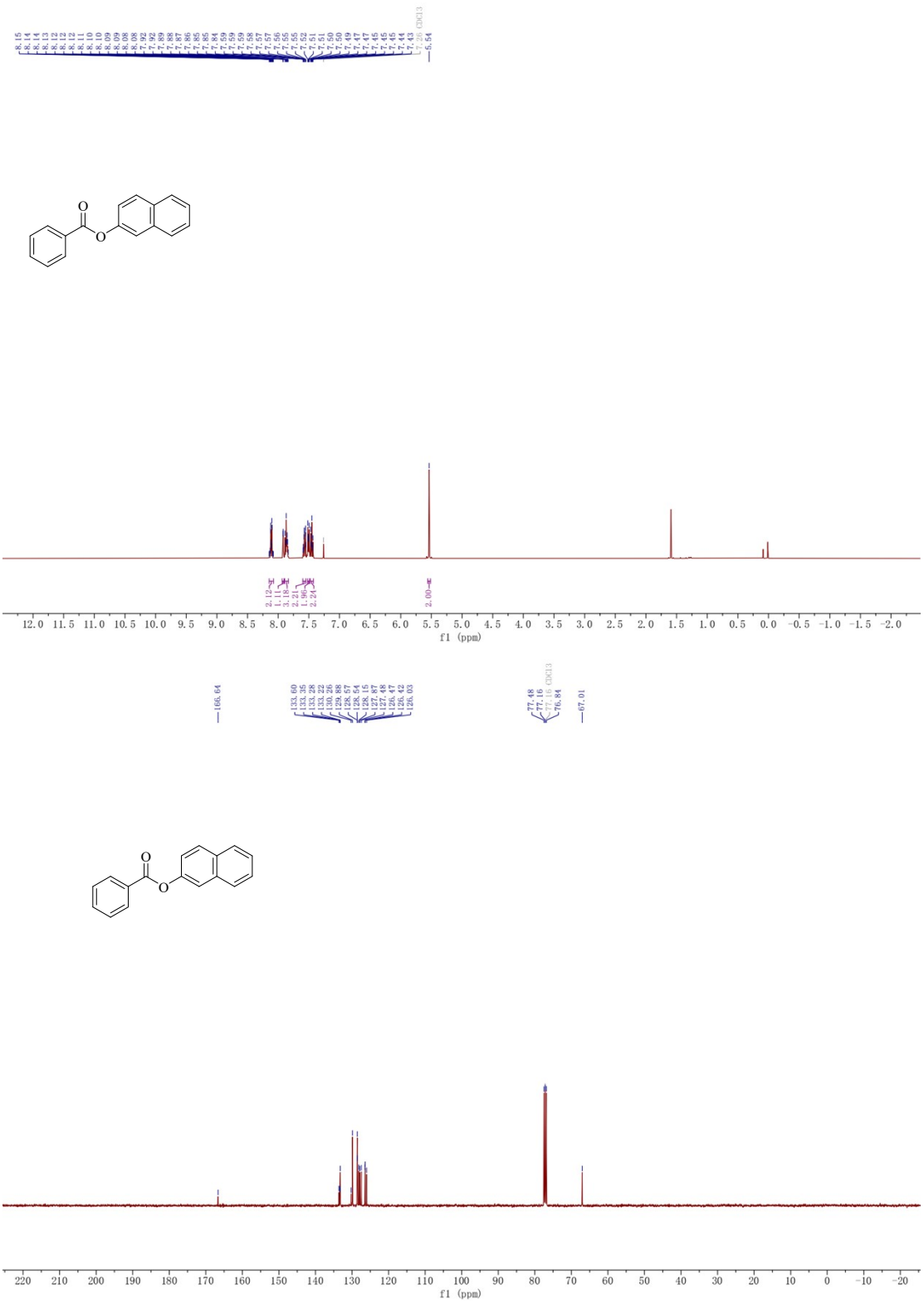


Figure S33. ^{1}H (top) and ^{13}C (bottom) NMR spectra of naphthalen-2-ylmethyl benzoate from naphthalen-2-ylmethanol(table 4, entry 13)

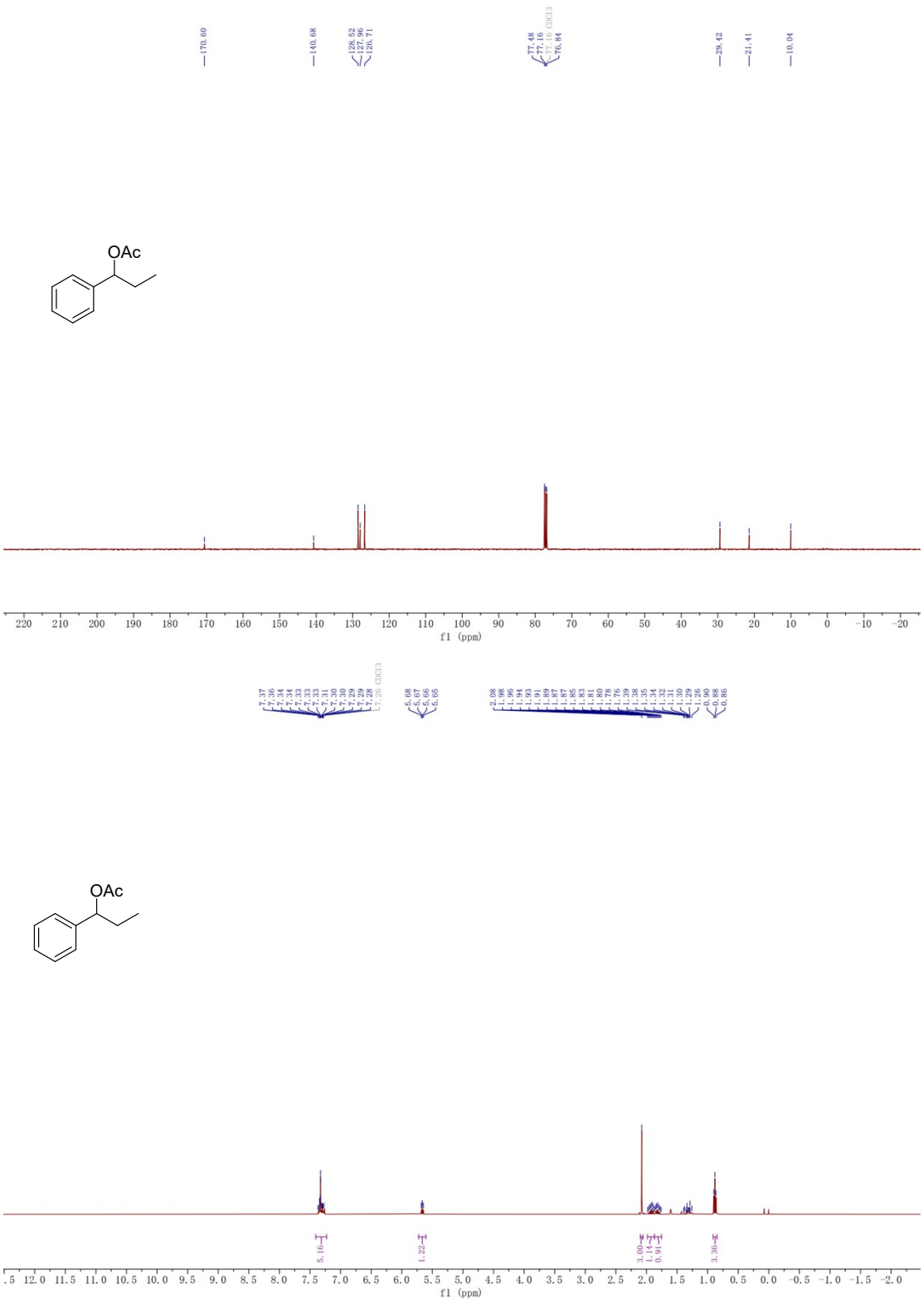


Figure S34. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-phenylpropyl acetate from 1-phenylpropan-1-ol(table 5, entry 2).

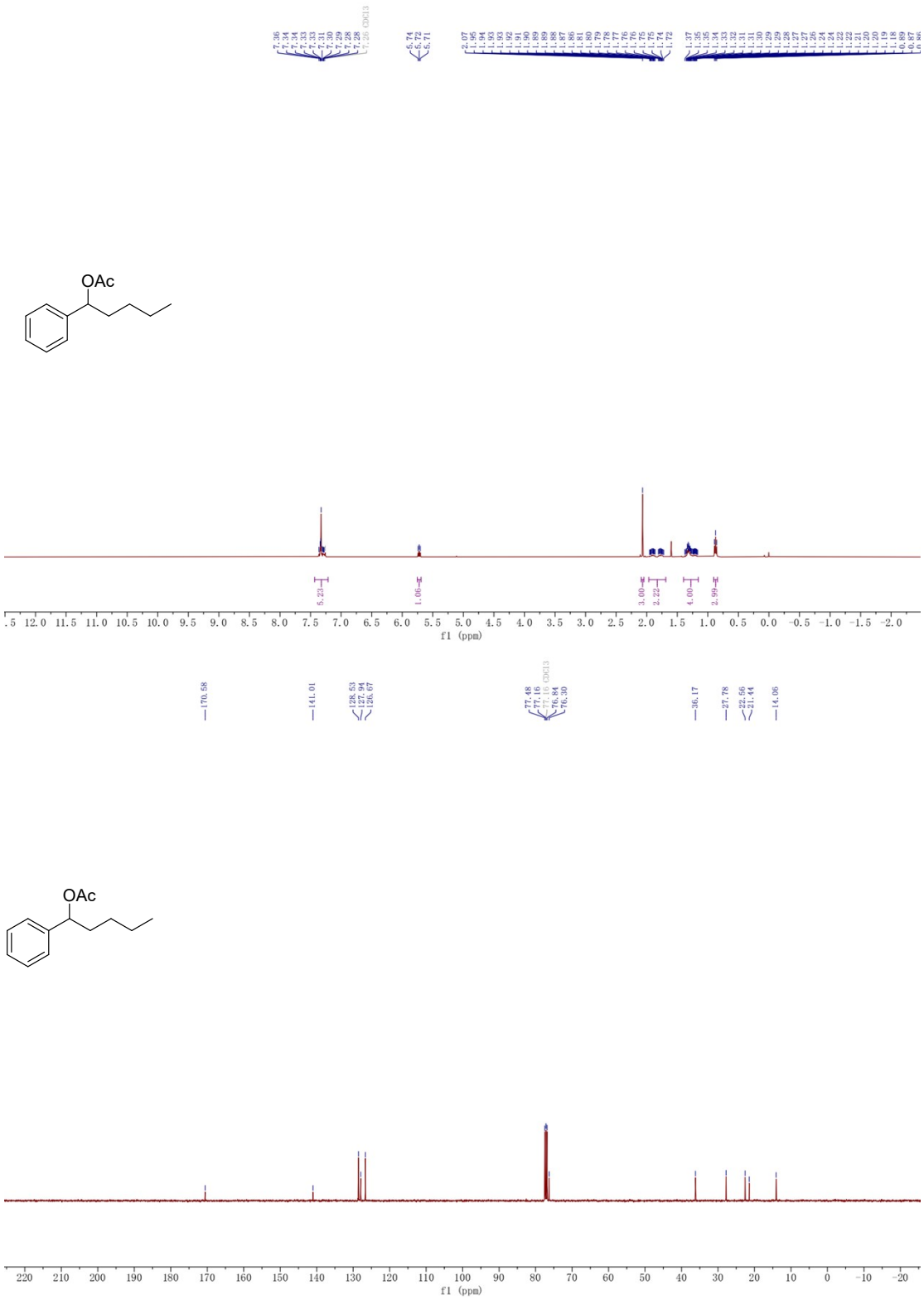


Figure S35. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-phenylpentyl acetate from 1-phenylpentan-1-ol(table 5, entry 3).

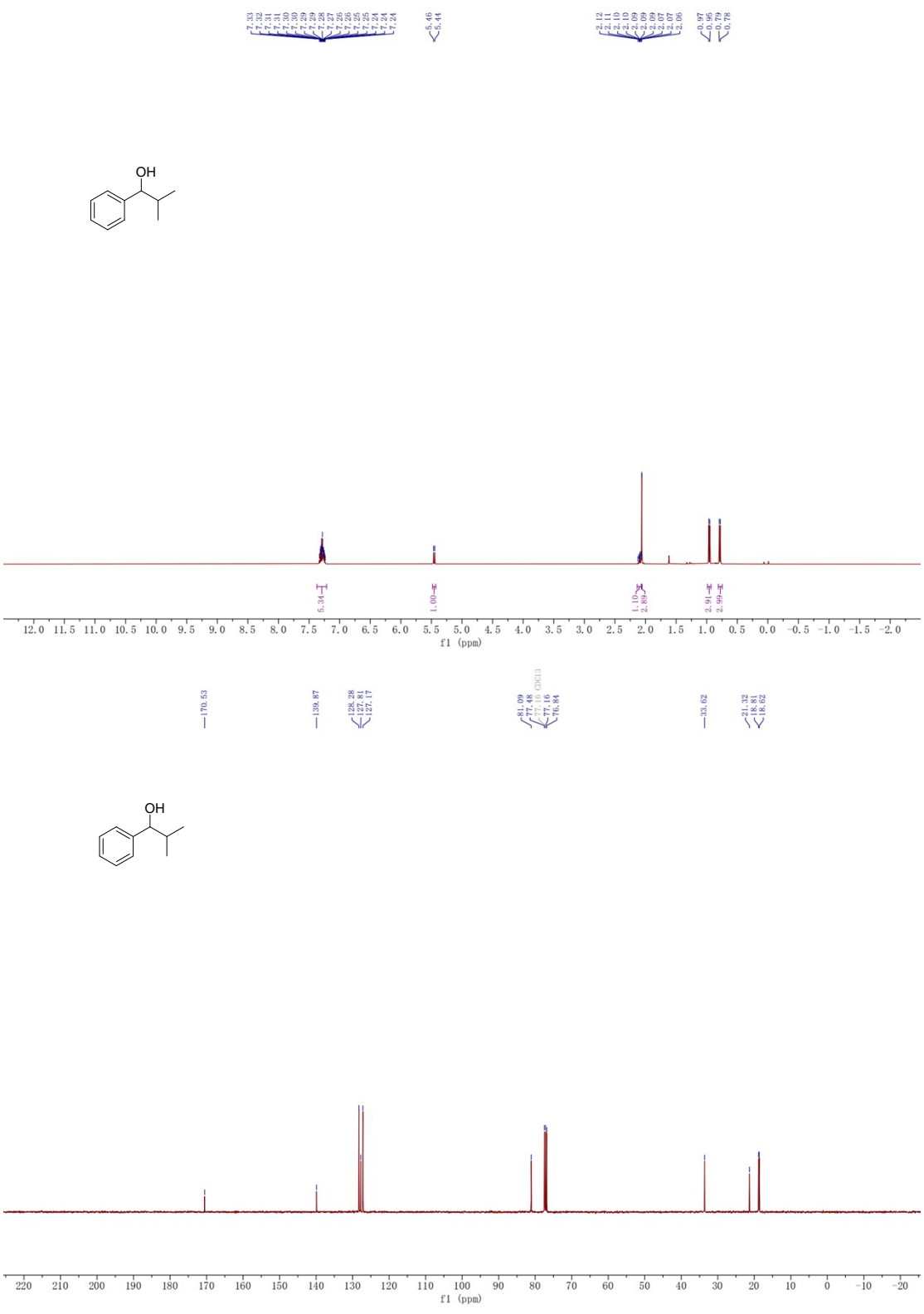


Figure S36. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-phenylpentyl acetate from 1-phenylpentan-1-ol(table 5, entry 4).

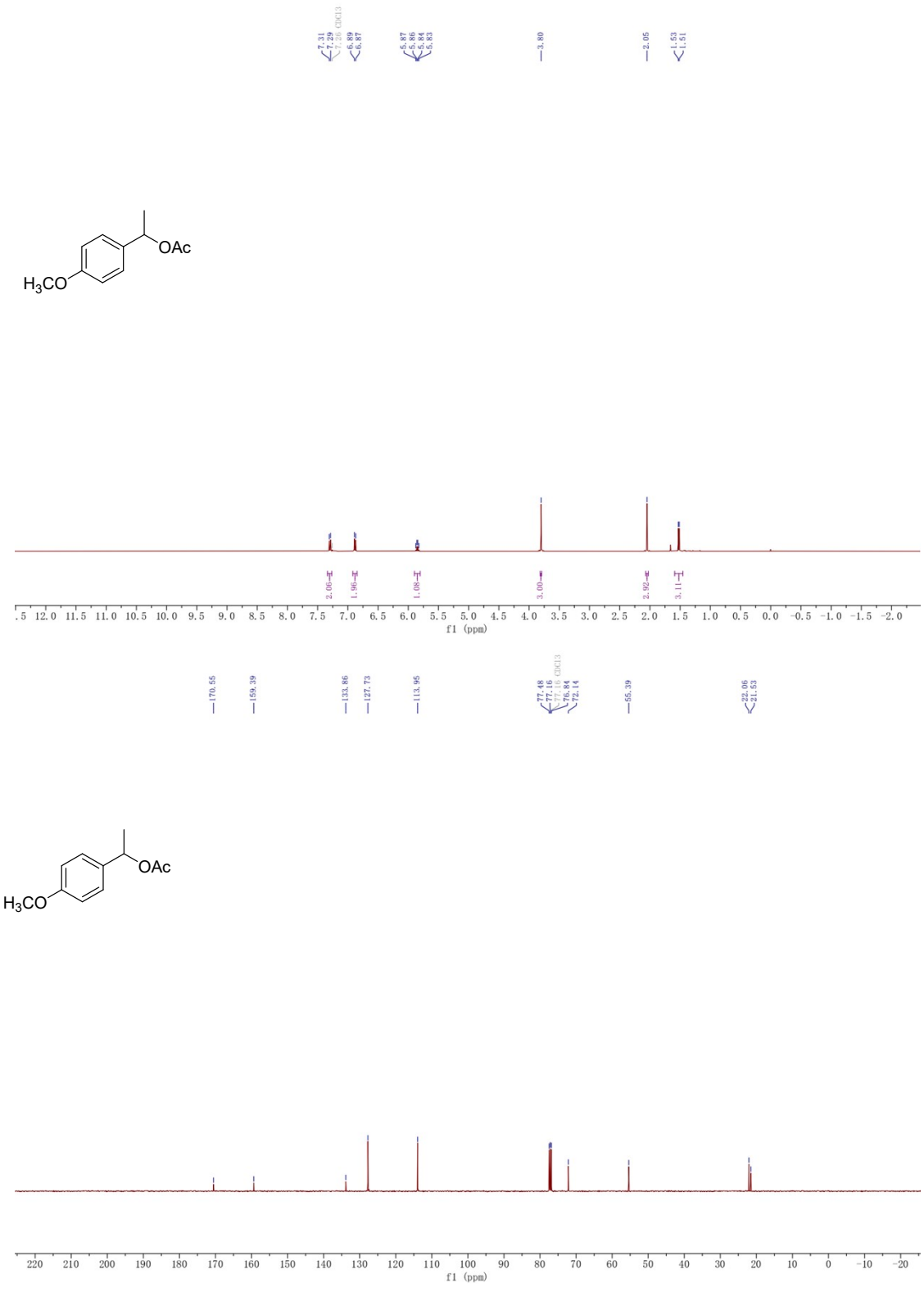


Figure S37. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-(4-methoxyphenyl)ethyl acetate from 1-(4-methoxyphenyl)ethan-1-ol(table 5, entry 5).

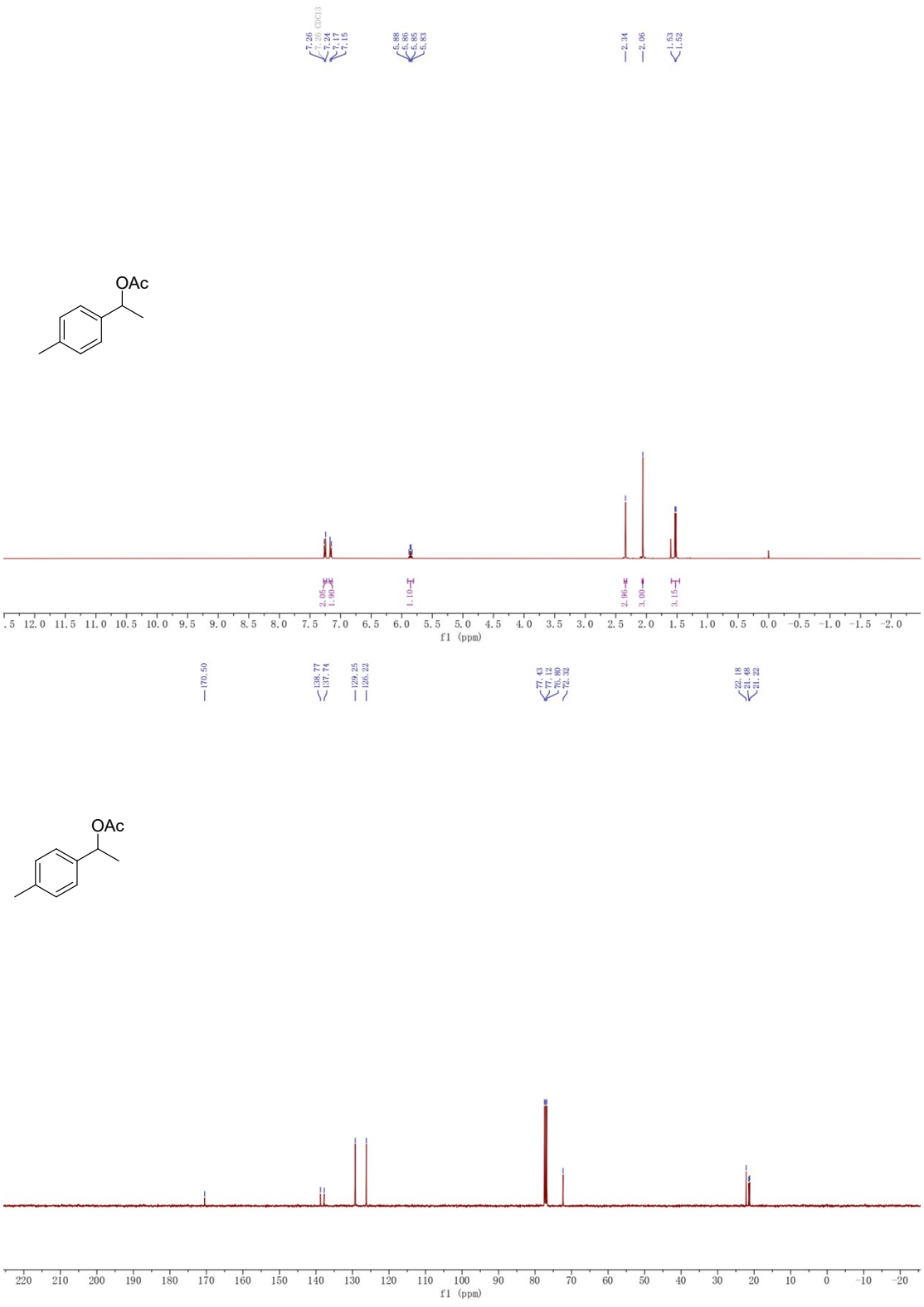
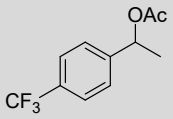
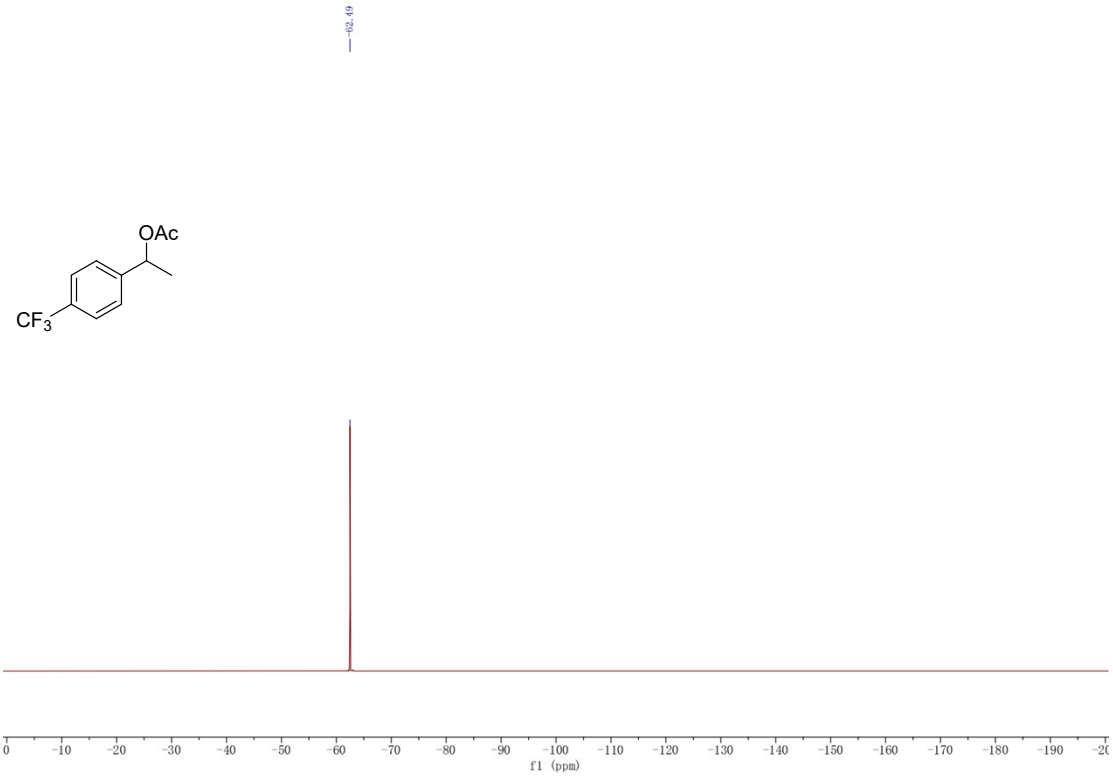


Figure S38. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-(p-tolyl)ethyl acetate from 1-(p-tolyl)ethan-1-ol(table 5, entry 6).


OAc
CF3


-62.49
OAc
CF3
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
-140
-150
-160
-170
-180
-190
f1 (ppm)

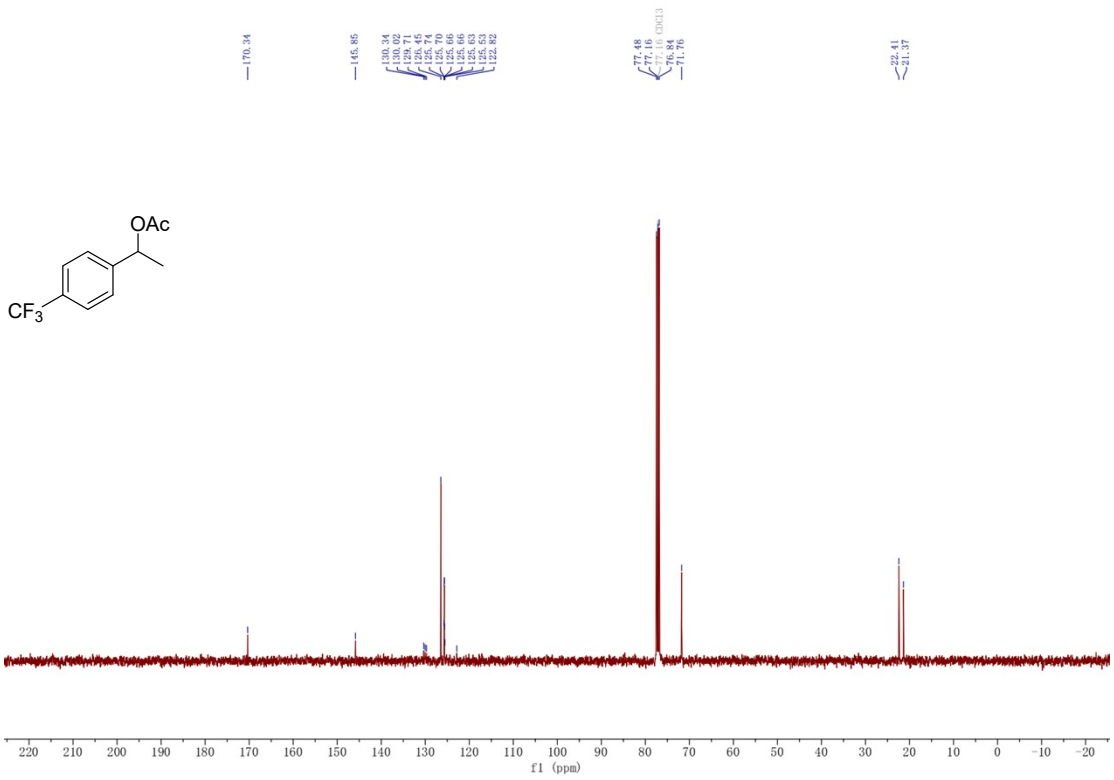


Figure S39. ^{1}H (top) , ^{19}F(middle) and ^{13}C (bottom) NMR spectra of 1-(4-(trifluoromethyl)phenyl)ethyl acetate from 1-(4-(trifluoromethyl)phenyl)ethan-1-ol(table 5, entry 7).

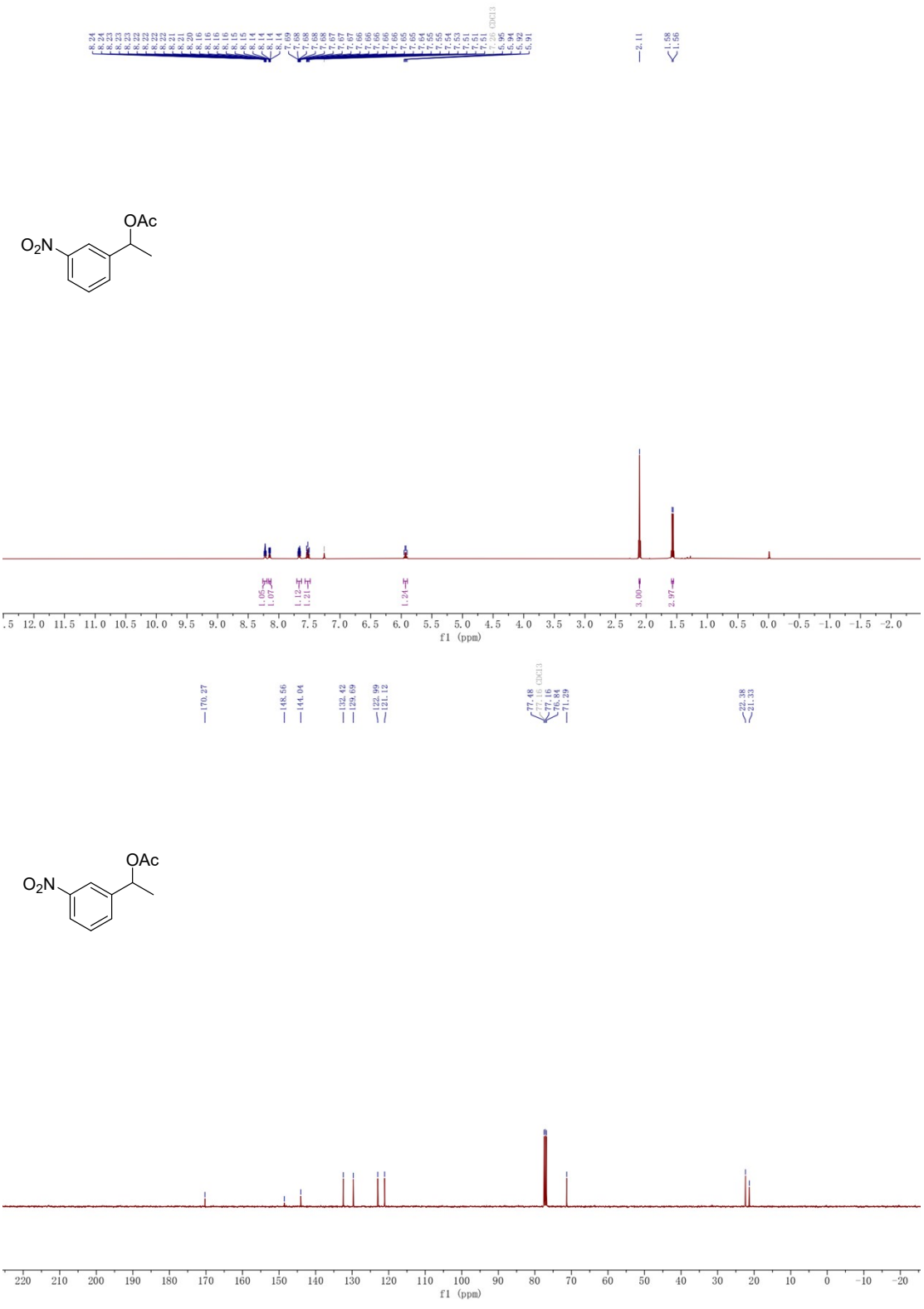


Figure S40. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-(3-nitrophenyl)ethyl acetate from 1-(3-nitrophenyl)ethan-1-ol(table 5, entry 8).

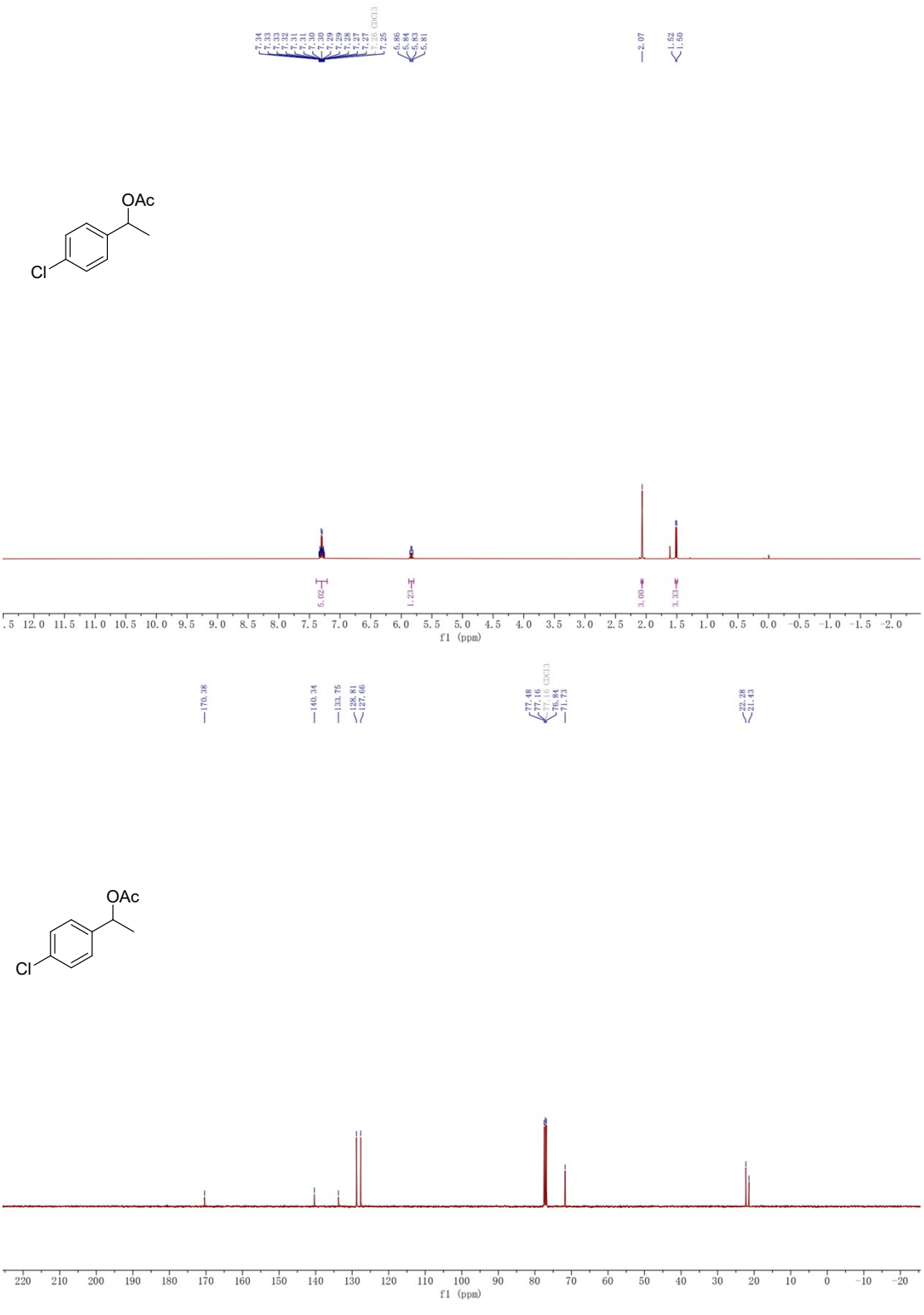


Figure S41. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-(4-chlorophenyl)ethyl acetate from 1-(4-chlorophenyl)ethan-1-ol(table 5, entry 9).

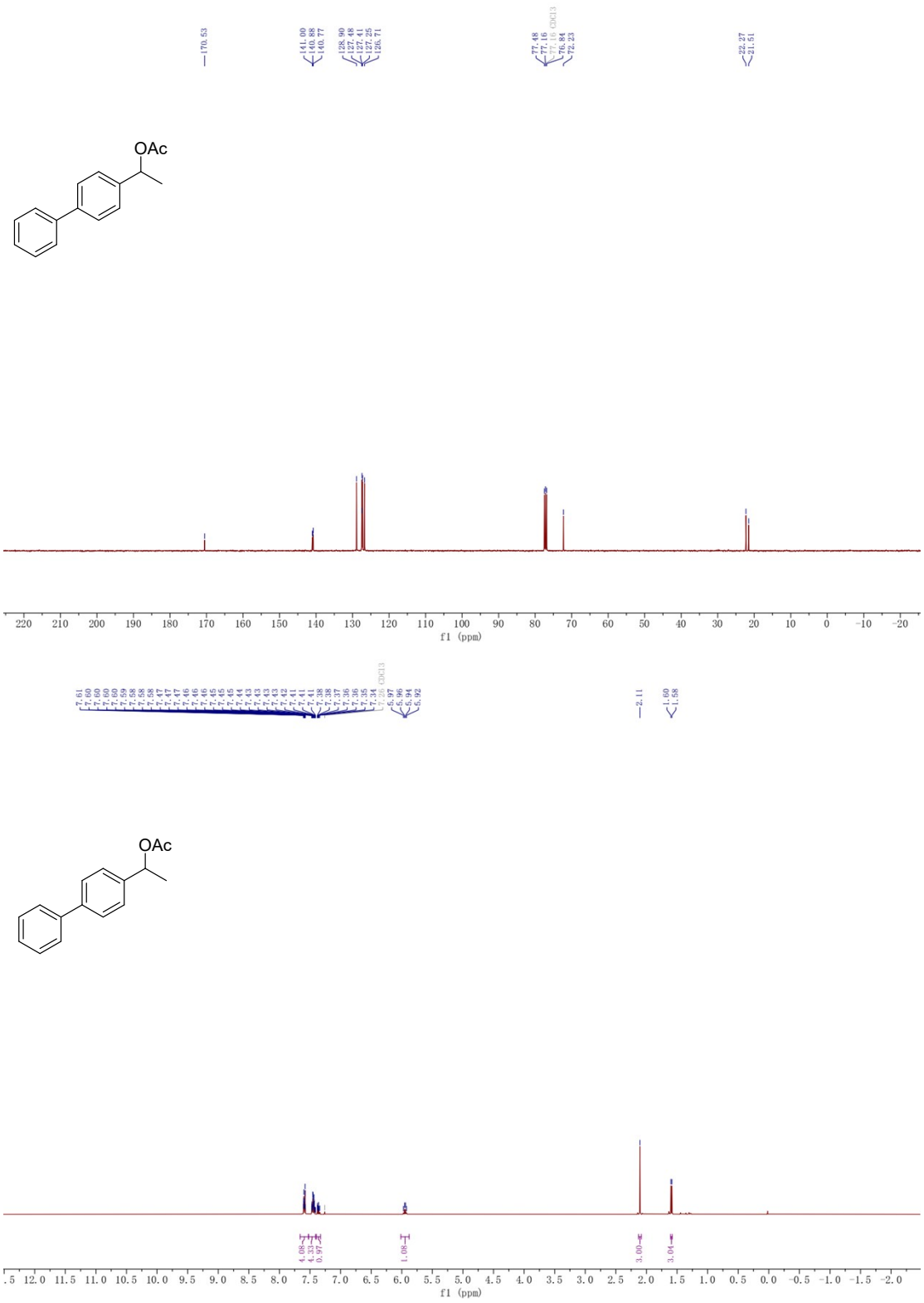


Figure S42. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-([1,1'-biphenyl]-4-yl)ethyl acetate from 1-([1,1'-biphenyl]-4-yl)ethan-1-ol(table 5, entry 10).

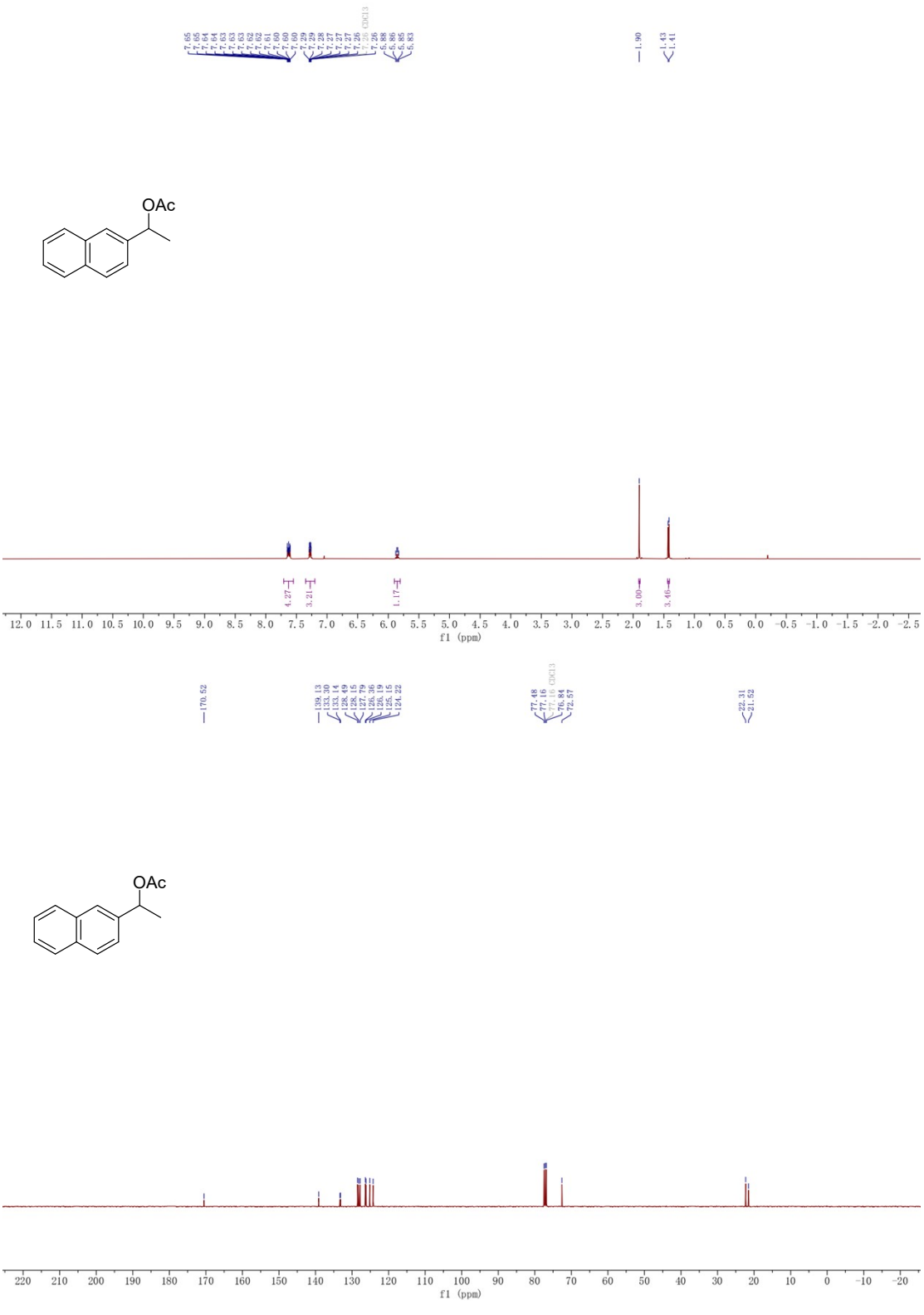


Figure S43. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-(naphthalen-2-yl)ethyl acetate from 1-(naphthalen-2-yl)ethan-1-ol(table 5, entry 11).

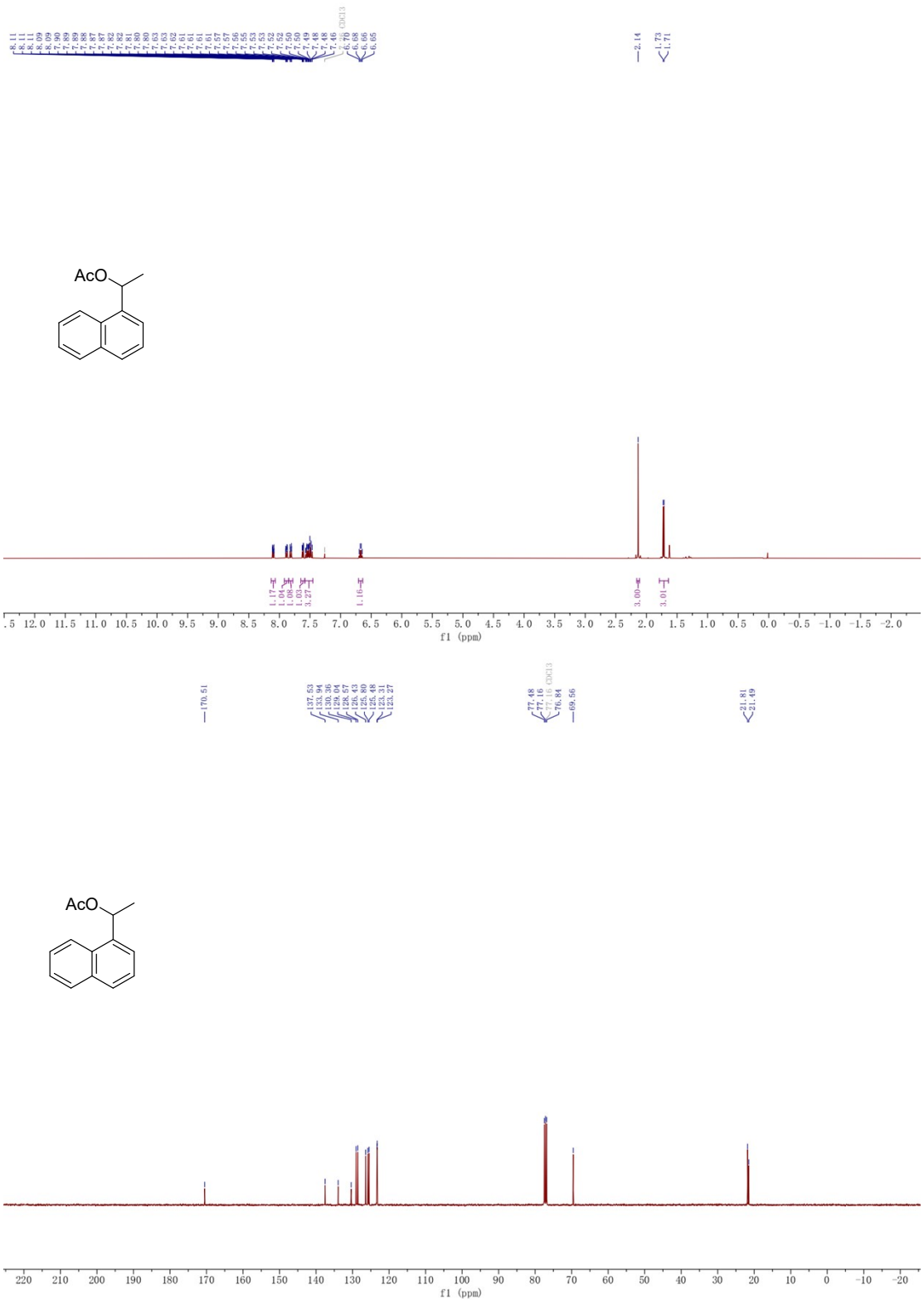


Figure S44. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-(naphthalen-1-yl)ethyl acetate from 1-(naphthalen-1-yl)ethan-1-ol(table 5, entry 12).

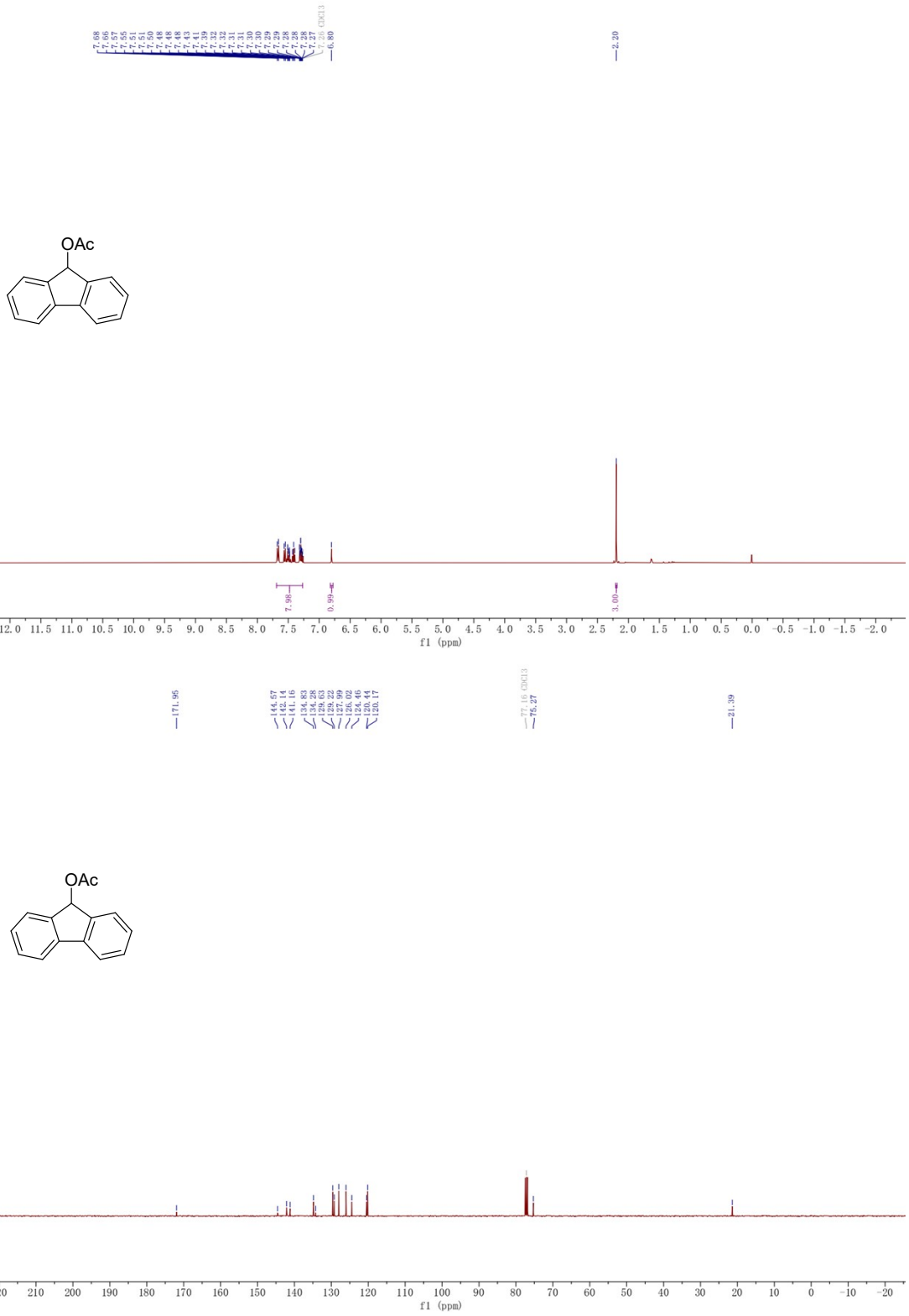


Figure S45. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 9H-fluoren-9-yl acetate from 9H-fluoren-9-ol(table 5, entry 13).


7.61
7.61
7.59
7.59
7.48
7.46
7.46
7.46
7.46
7.38
7.38
7.37
7.36
7.36
7.35
7.35
7.34
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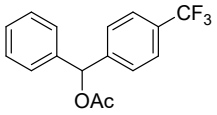
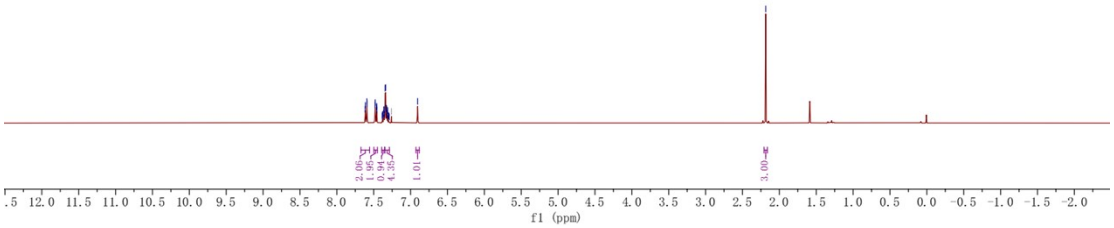
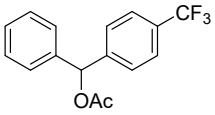
7.30
7.29
7.29
CDCl3
6.90
2.18

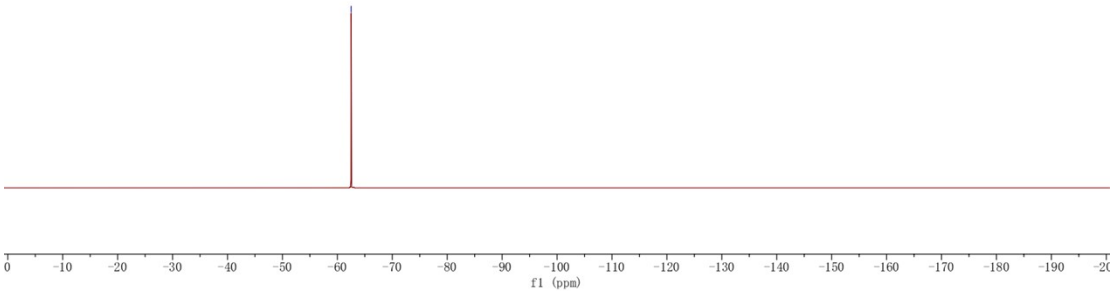

CF3
OAc


2.06
1.95
0.94
2.35
1.01
3.00
f1 (ppm)

W-3-14

-62.61


CF3
OAc


f1 (ppm)

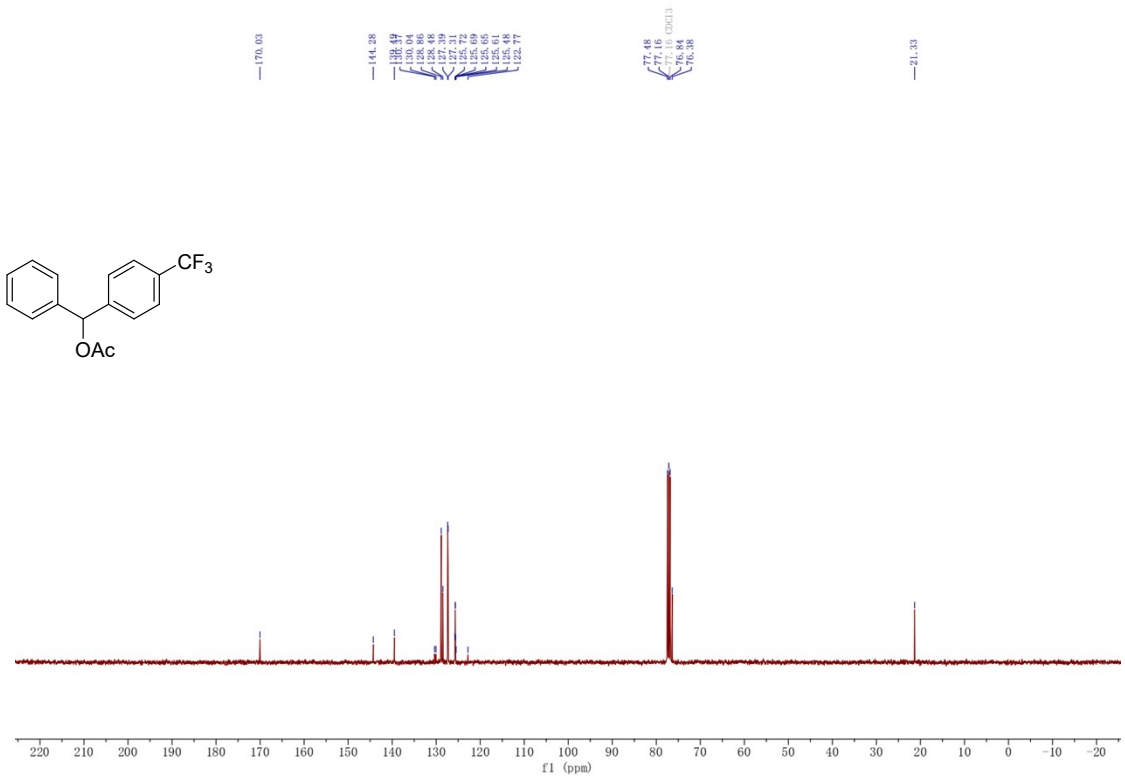


Figure S46. ^{1}H (top) , ^{19}F(middle) and ^{13}C (bottom) NMR spectra of phenyl(4-(trifluoromethyl)phenyl)methyl acetate from phenyl(4-(trifluoromethyl)phenyl)methanol(table 5, entry 14).

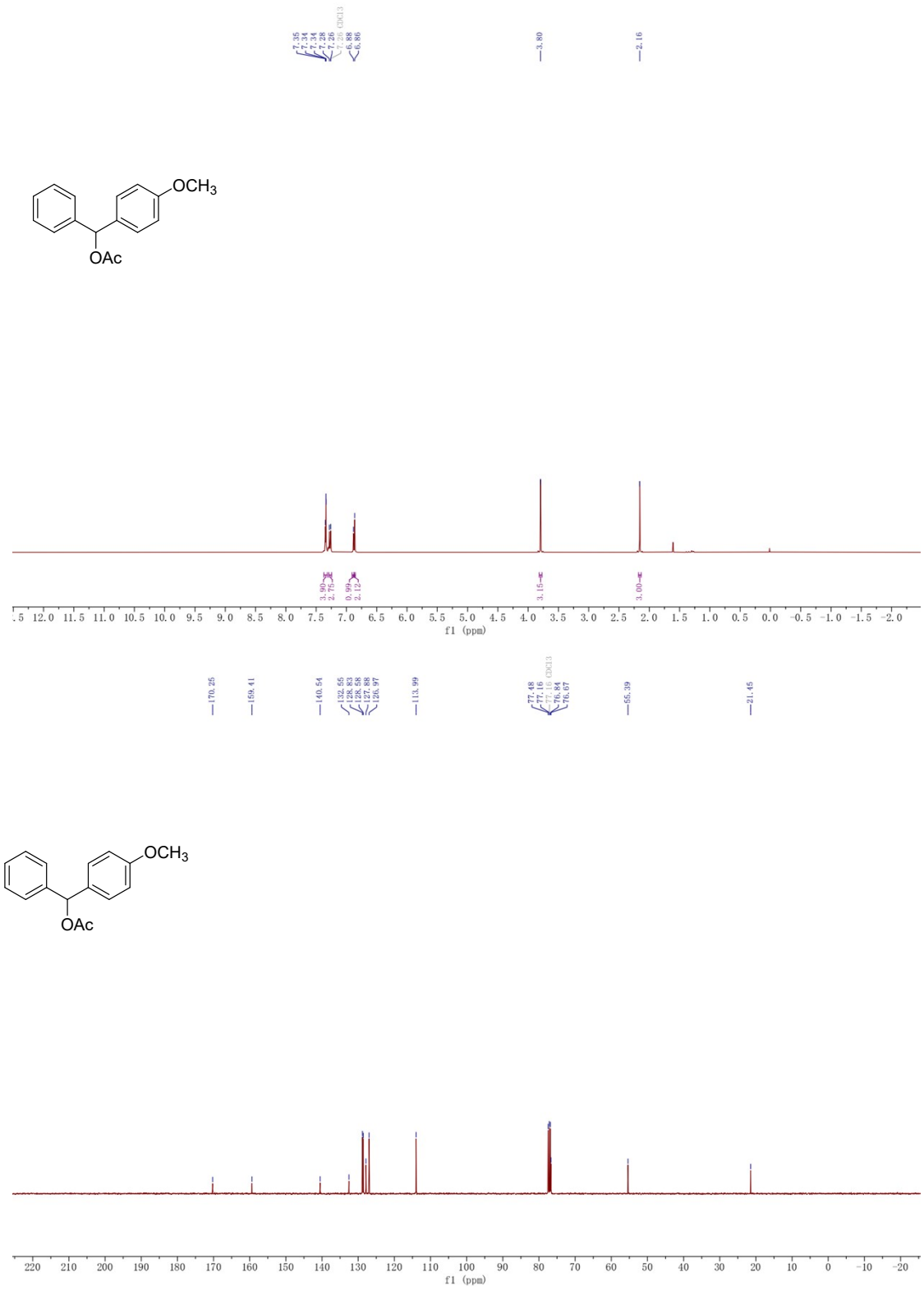


Figure S47. ^{1}H (top) and ^{13}C (bottom) NMR spectra of (4-methoxyphenyl)(phenyl)methyl acetate from (4-methoxyphenyl)(phenyl)methanol(table 5, entry 15).

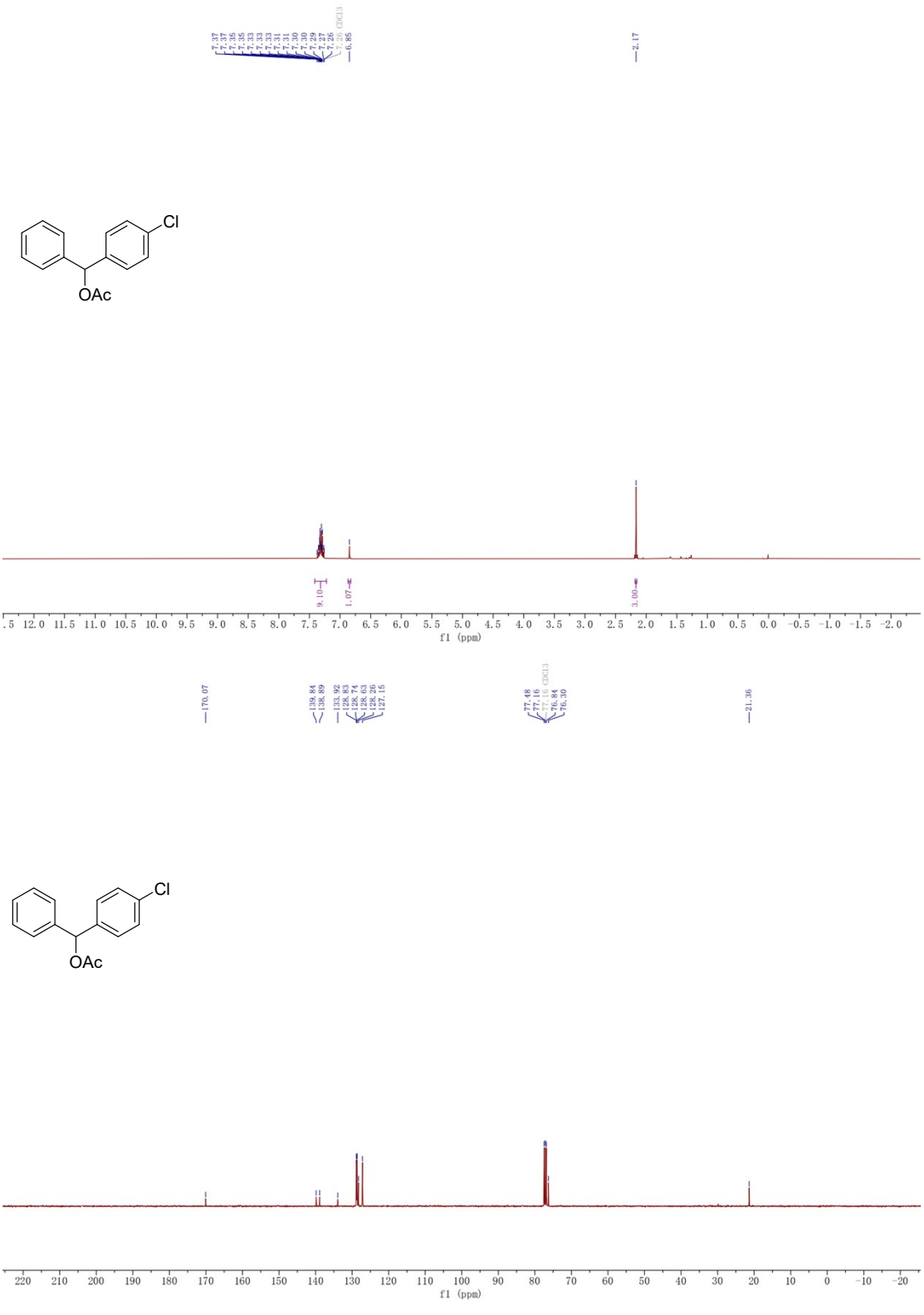


Figure S48. ^{1}H (top) and ^{13}C (bottom) NMR spectra of (4-chlorophenyl)(phenyl)methyl acetate from (4-chlorophenyl)(phenyl)methanol(table 5, entry 16).

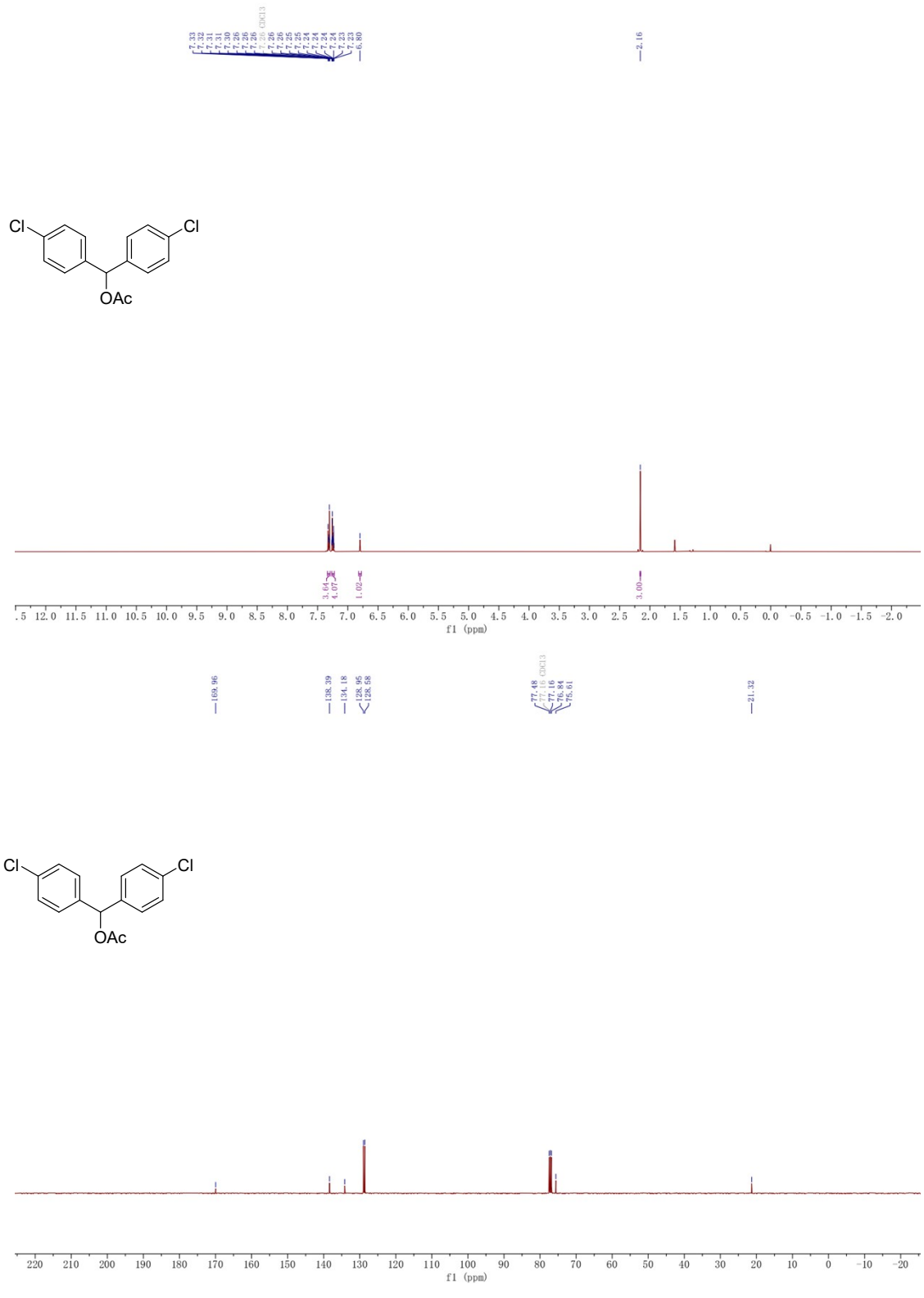


Figure S49. ^{1}H (top) and ^{13}C (bottom) NMR spectra of bis(4-chlorophenyl)methyl acetate from bis(4-chlorophenyl)methanol(table 5, entry 17).

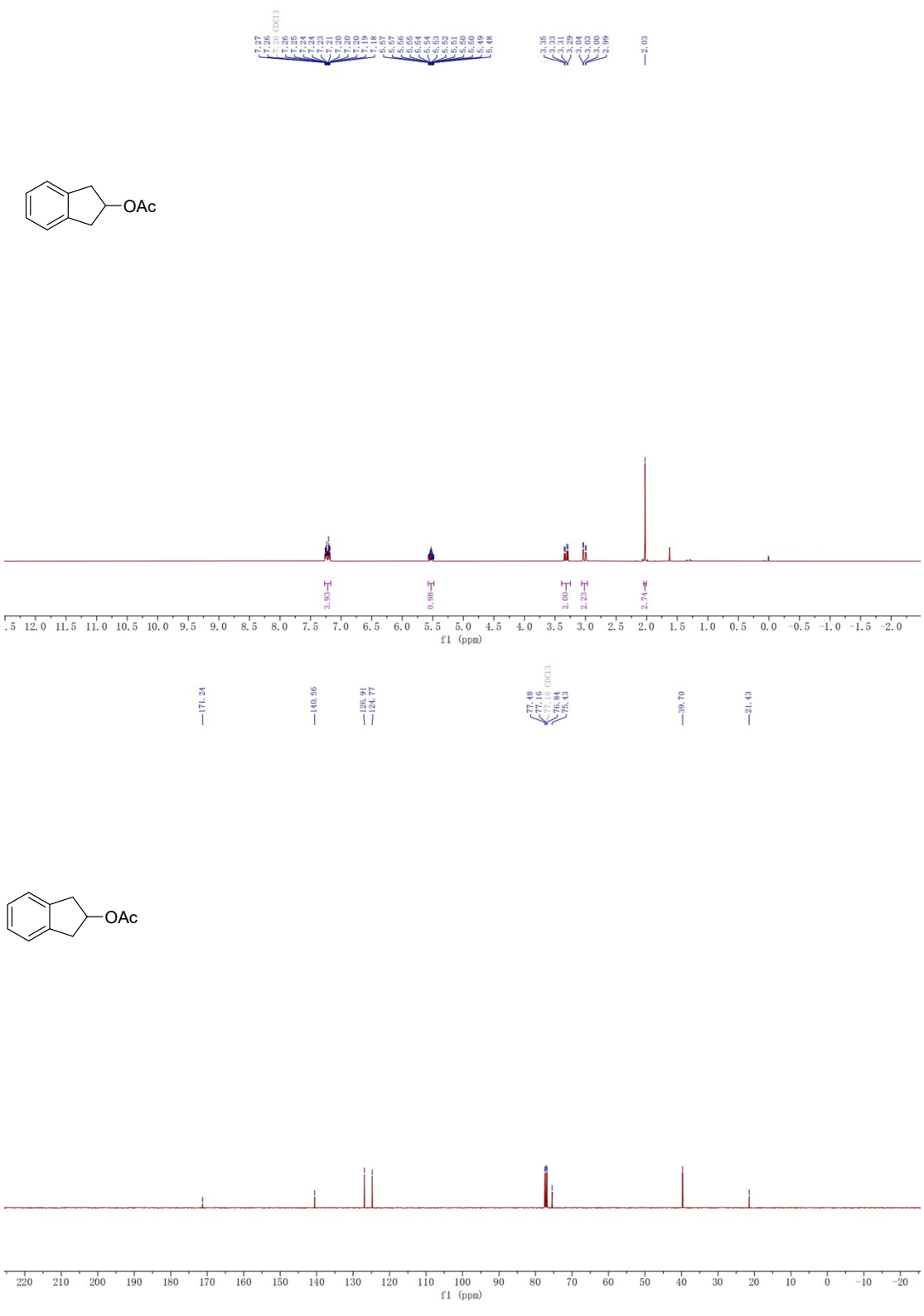


Figure S50. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 2,3-dihydro-1H-inden-2-yl acetate from 2,3-dihydro-1H-inden-2-ol(table 5, entry 18).

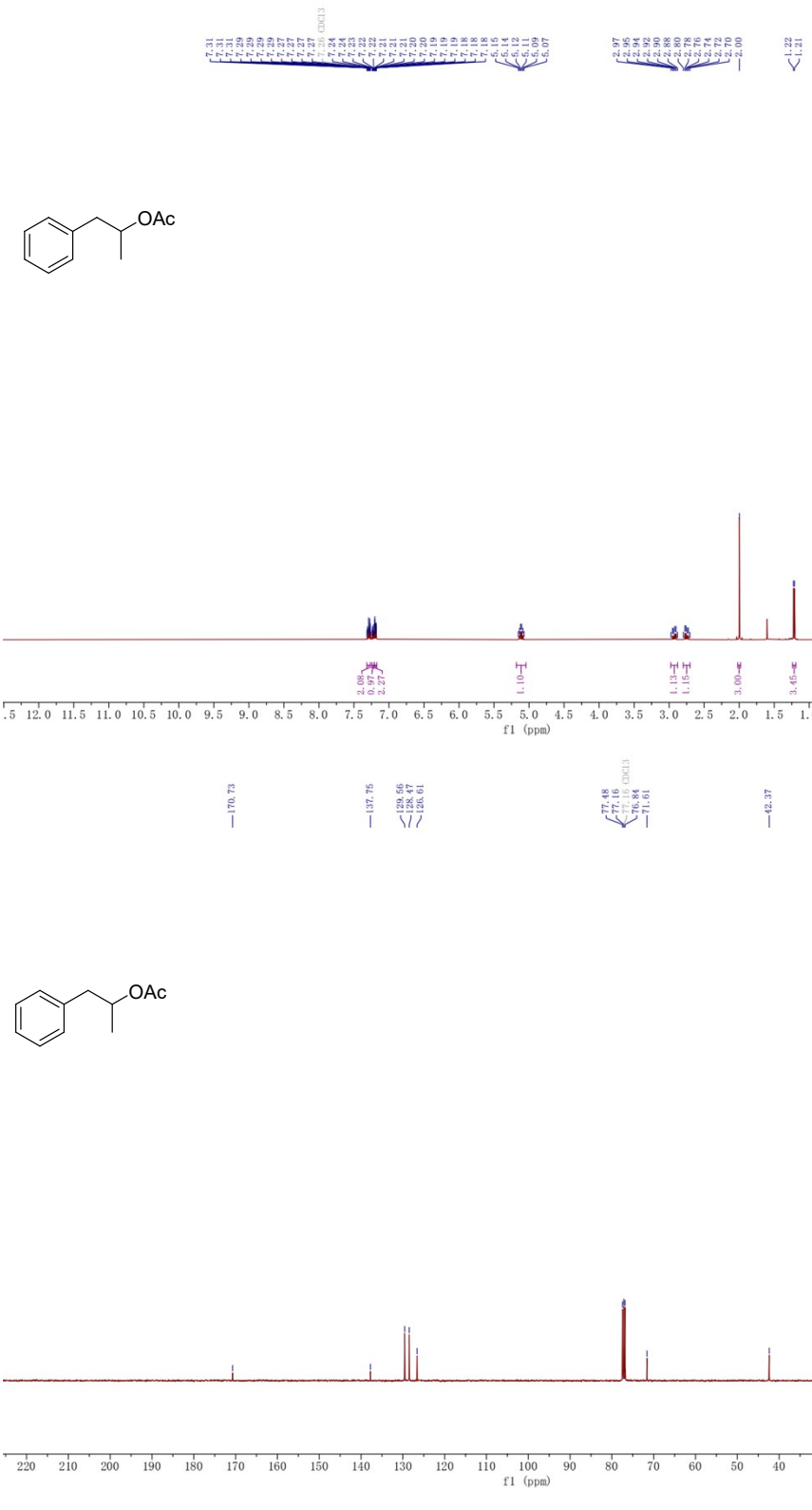


Figure S51. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-phenylpropan-2-yl acetate from 1-phenylpropan-2-ol(table 5, entry 19).

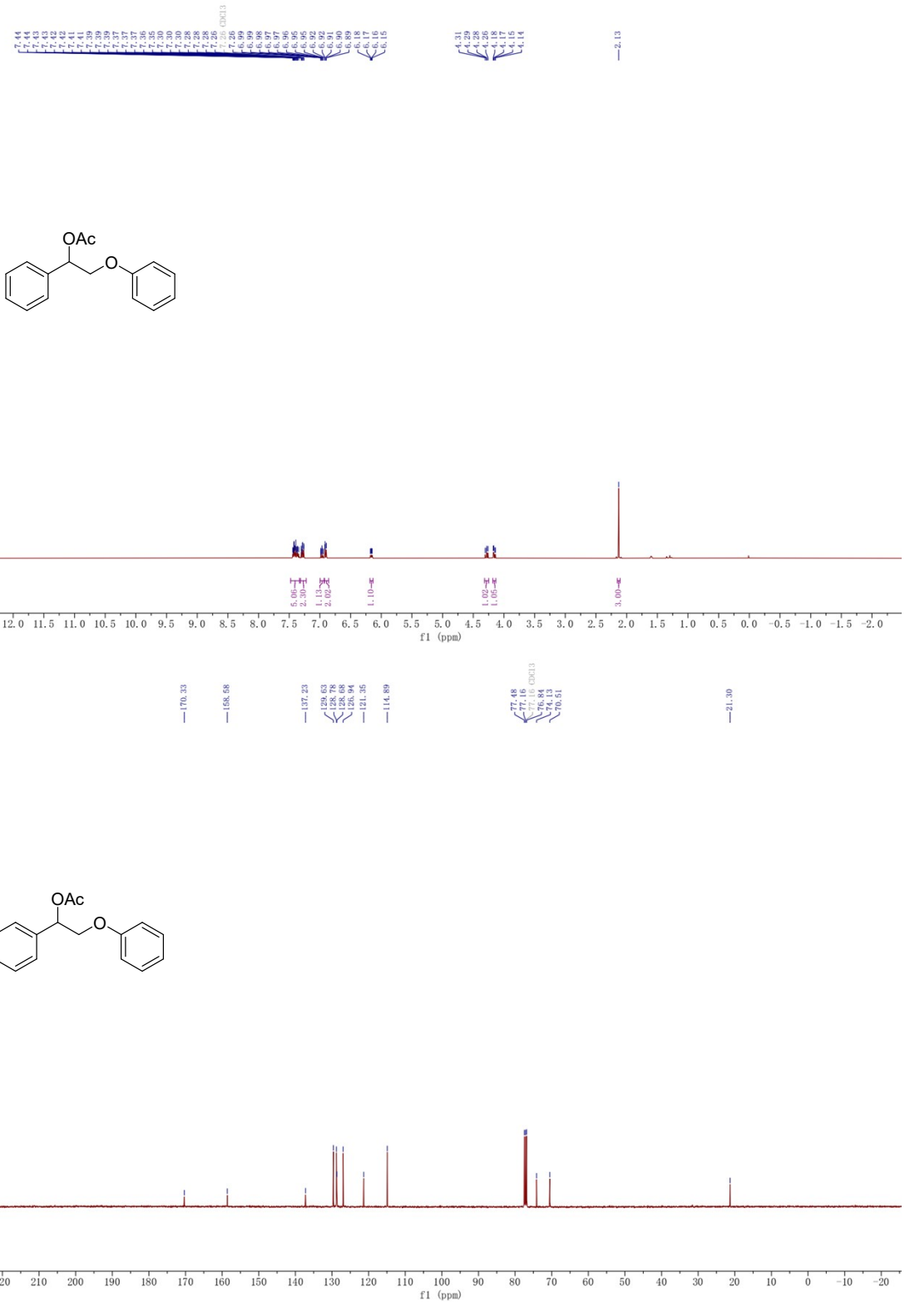


Figure S52. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 2-phenoxy-1-phenylethyl acetate from 2-phenoxy-1-phenylethan-1-ol(table 5, entry 20).

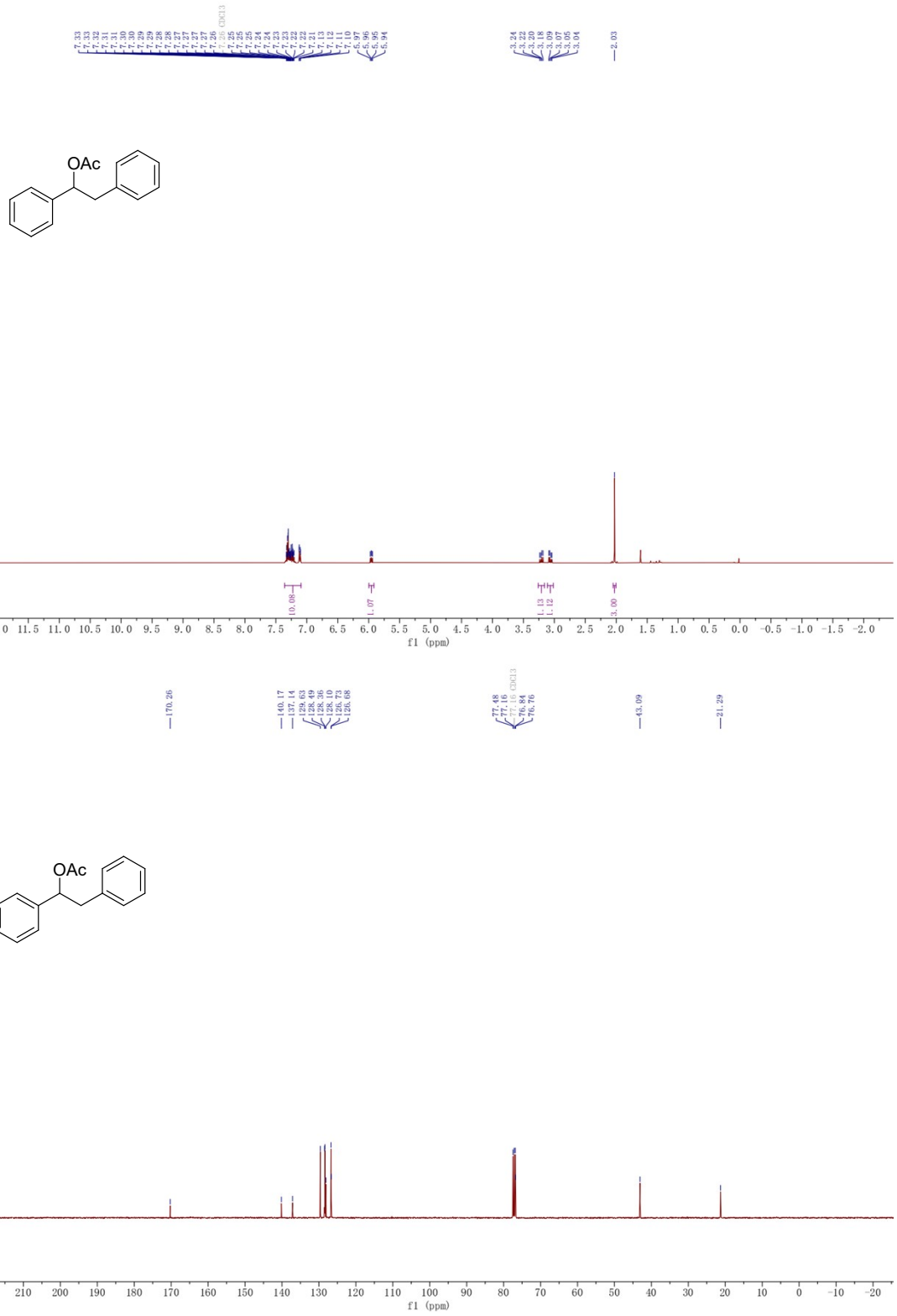


Figure S53. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1,2-diphenylethyl acetate from 1,2-diphenylethan-1-ol(table 5, entry 21).

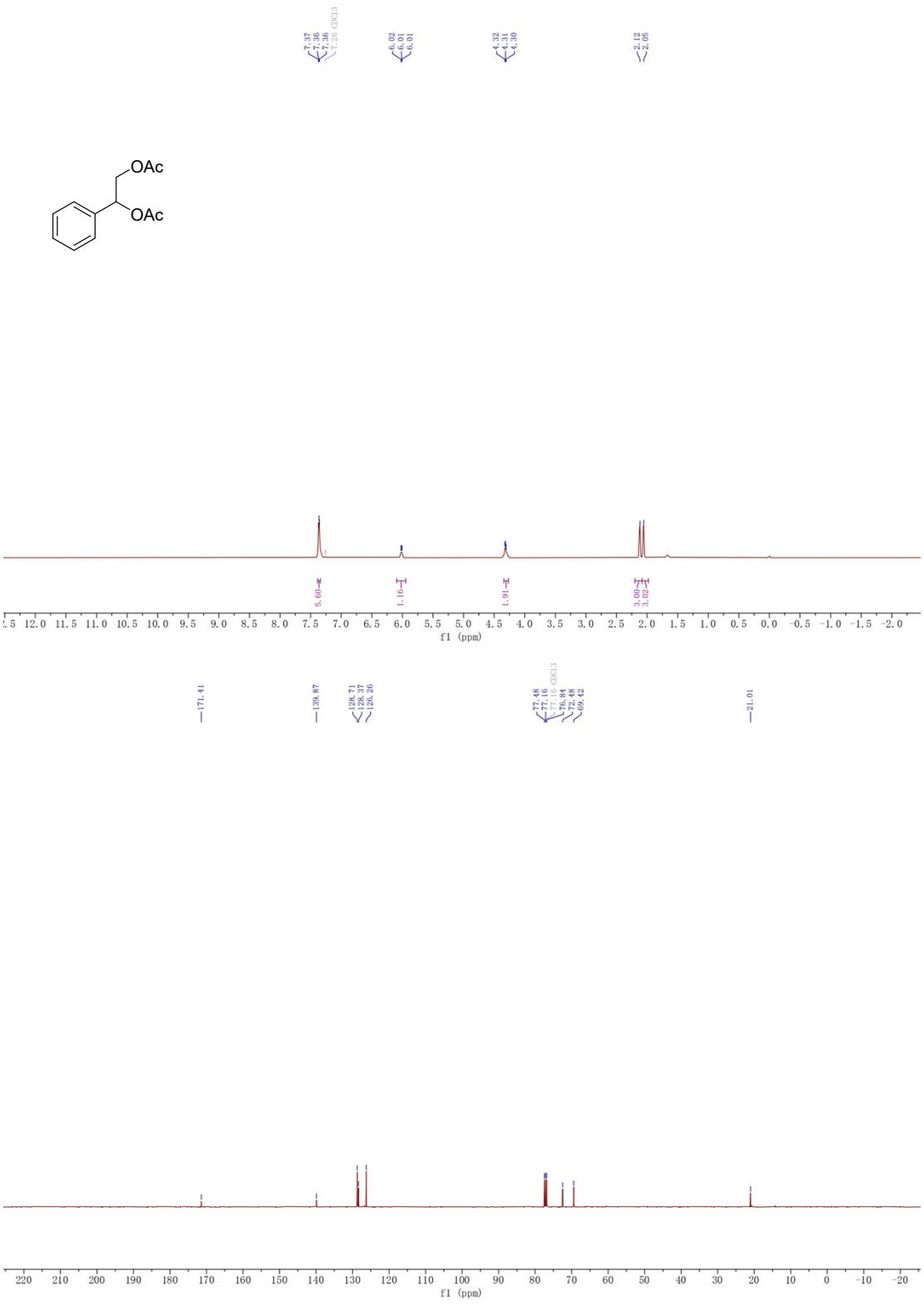


Figure S54. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 1-phenylethane-1,2-diyl diacetate from 1-phenylethane-1,2-diol(table 5, entry 22-1).

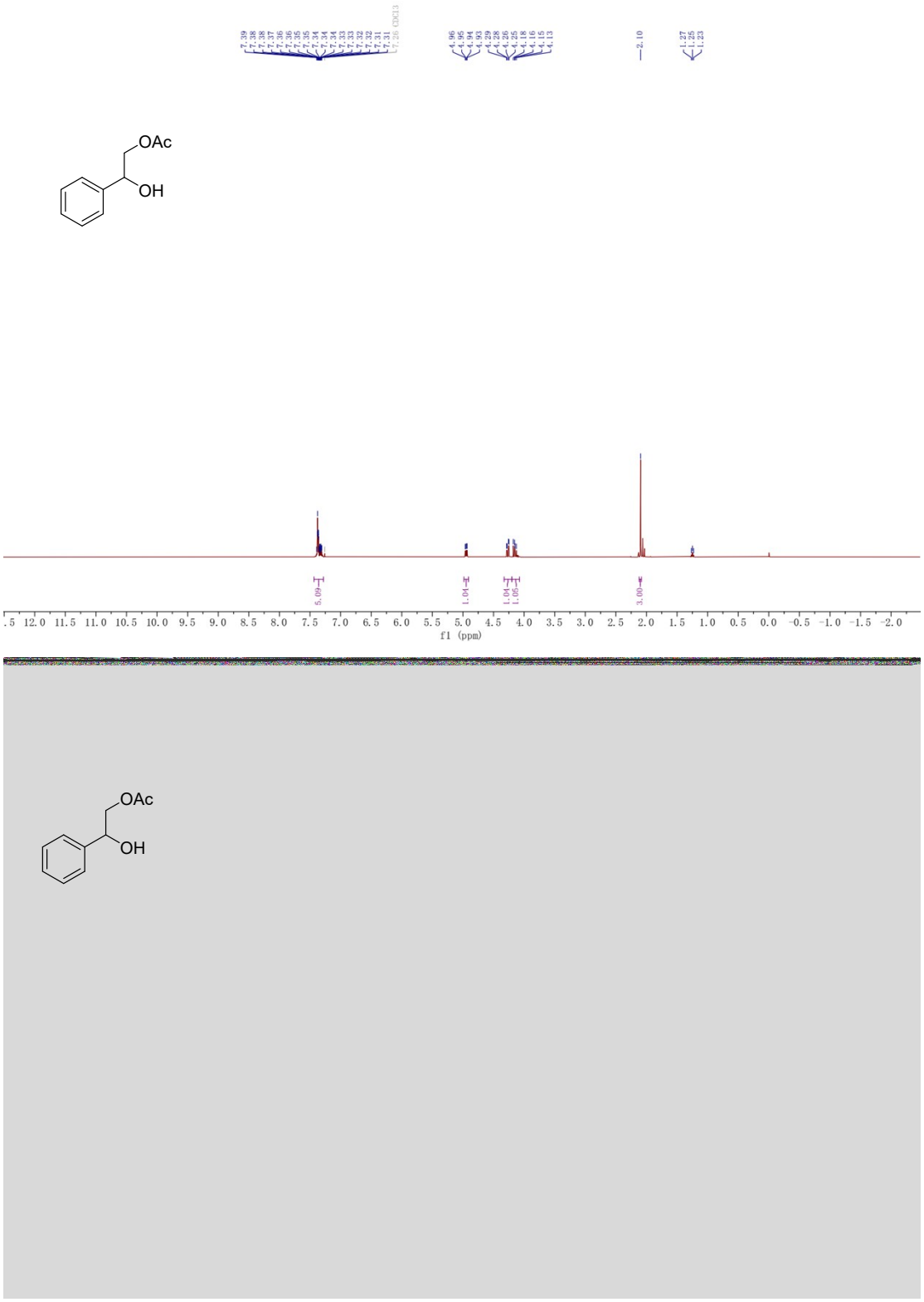


Figure S55. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 2-hydroxy-2-phenylethyl acetate from 1-phenylethane-1,2-diol(table 5, entry 22-2).

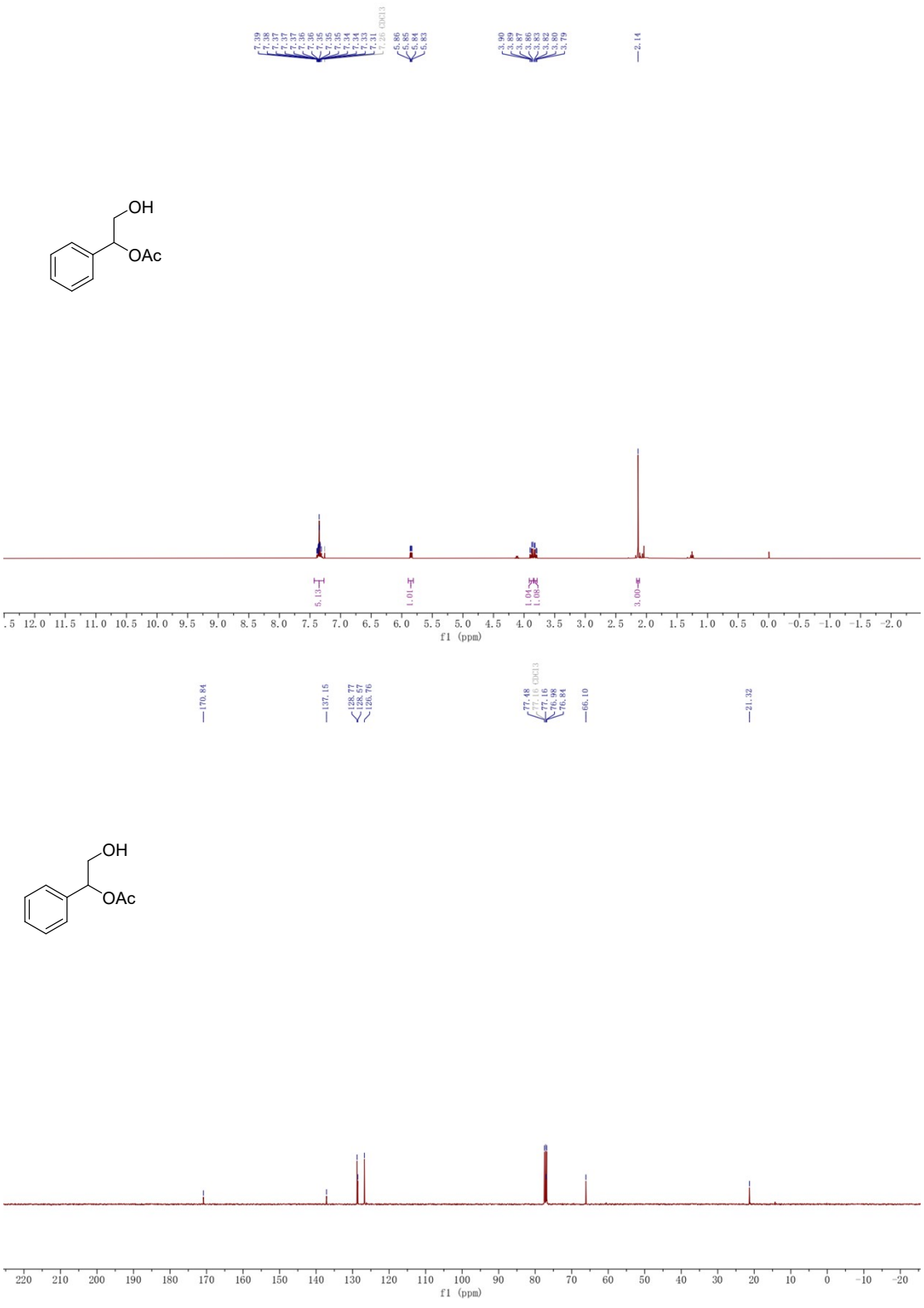


Figure S56. ^{1}H (top) and ^{13}C (bottom) NMR spectra of 2-hydroxy-1-phenylethyl acetate from 1-phenylethane-1,2-diol(table 5, entry 22-3).

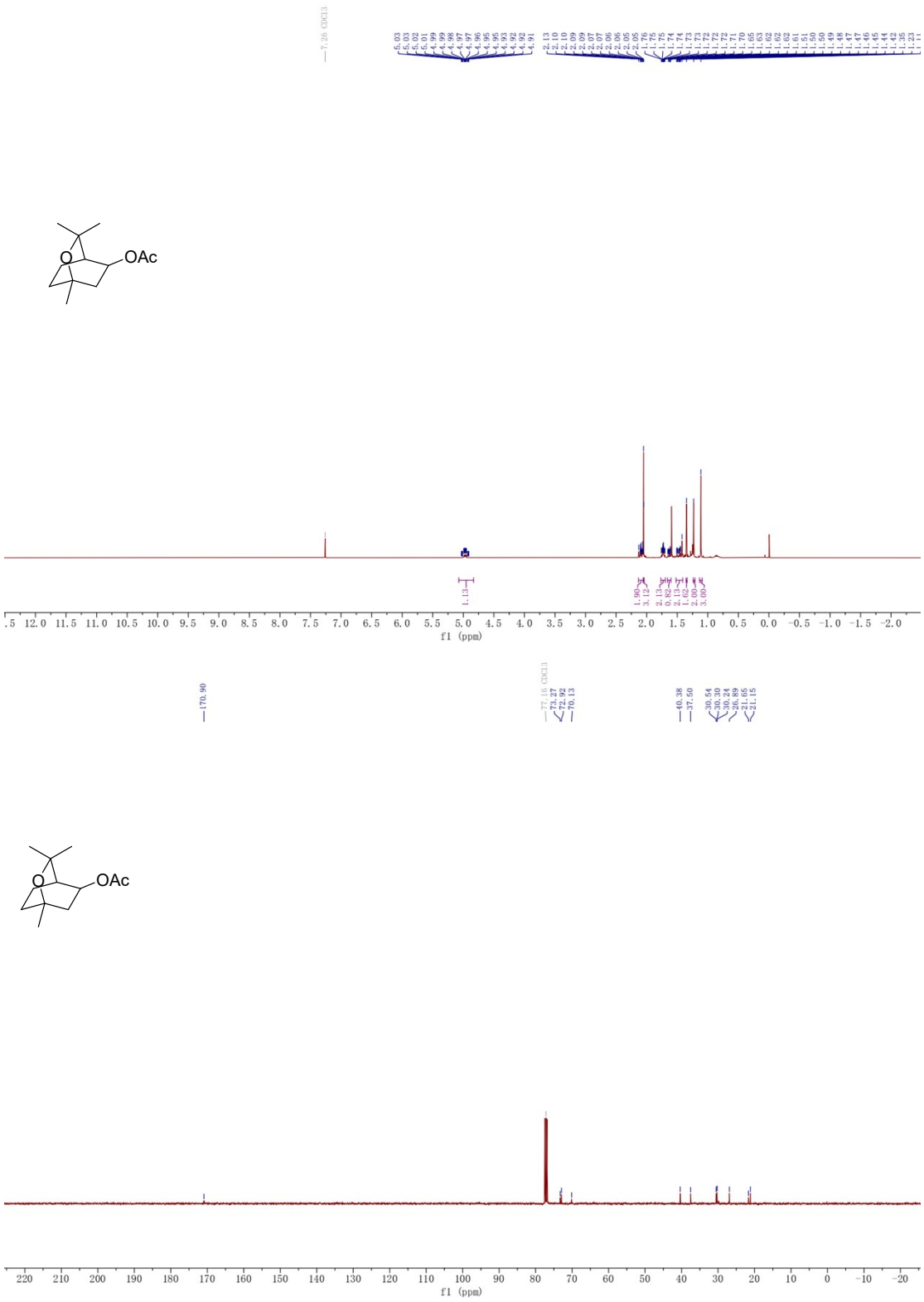


Figure S57. ^{1}H (top) and ^{13}C (bottom) NMR spectra of (±)-exo-1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane-5-yl acetate from (±)-exo-1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane-5-ol(table 5, entry 23).

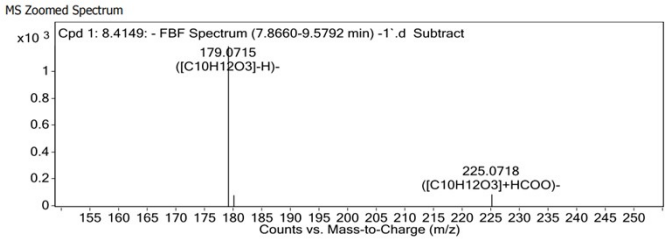
V. HRMS and GC-MS of the products

5.1. HRMS(LC-MS) of some products

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 8.4149	8.4149	180.0783	1193	C10 H12 O3	180.0786	-1.81	C10 H12 O3	C10 H12 O3

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 8.4149	179.0715	8.4149	Find By Formula	180.0783



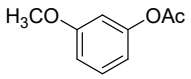
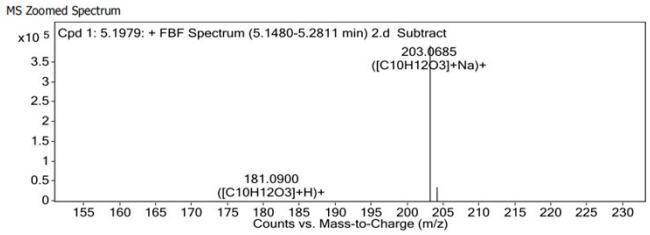


Figure S58. HRMS of 3-methoxyphenyl acetate from (3-methoxyphenyl)methanol (table 3, entry1).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 5.1979	5.1979	180.0793	392298	C10 H12 O3	180.0786	3.72	C10 H12 O3	C10 H12 O3

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 5.1979	203.0685	5.1979	Find By Formula	180.0793



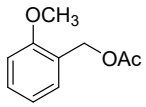
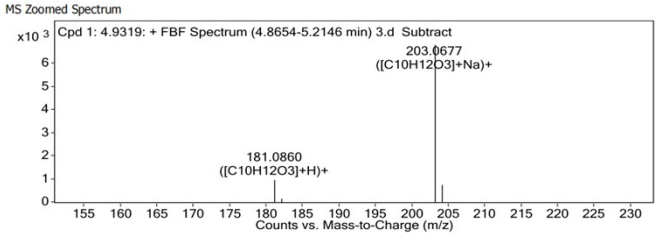


Figure S59. HRMS of 2-methoxyphenyl acetate from (2-methoxyphenyl)methanol(table 3, entry 2).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 4.9319	4.9319	180.0786	6818	C10 H12 O3	180.0786	-0.49	C10 H12 O3	C10 H12 O3

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 4.9319	203.0677	4.9319	Find By Formula	180.0786



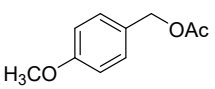
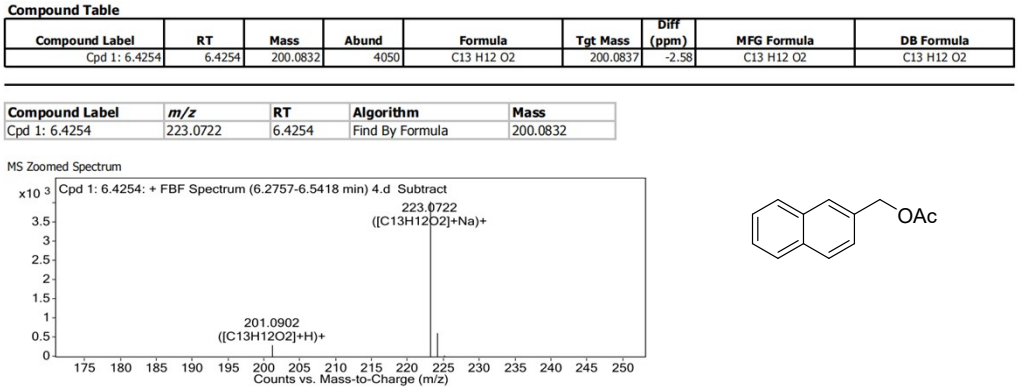


Figure S60. HRMS of 4-methoxyphenyl acetate from (4-methoxyphenyl)methanol(table 3, entry 3).

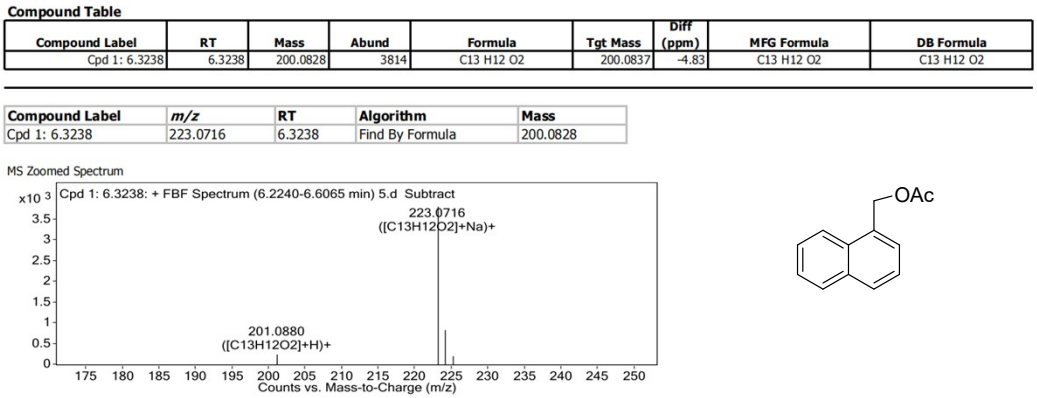


Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 6.4254	6.4254	200.0832	4050	C13 H12 O2	200.0837	-2.58	C13 H12 O2	C13 H12 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 6.4254	223.0722	6.4254	Find By Formula	200.0832

Figure S61. HRMS of naphthalen-2-ylmethyl acetate from naphthalen-2-ylmethanol(table 3, entry 4).

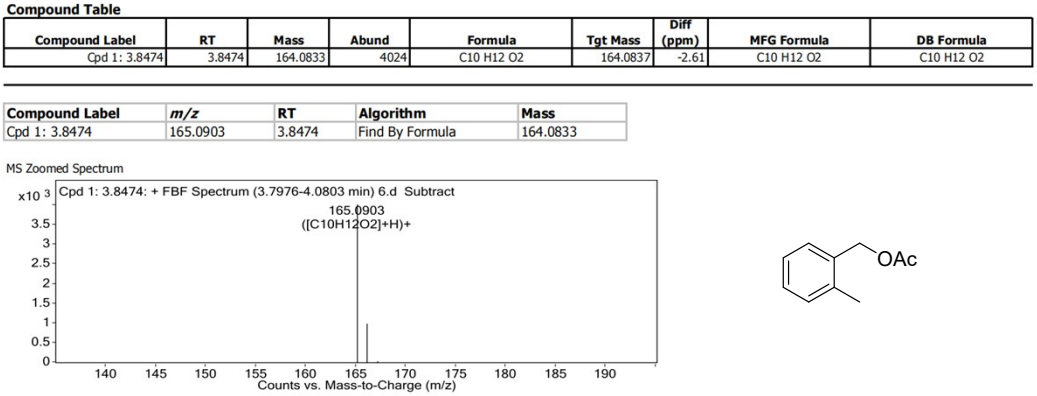


Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 6.3238	6.3238	200.0828	3814	C13 H12 O2	200.0837	-4.83	C13 H12 O2	C13 H12 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 6.3238	223.0716	6.3238	Find By Formula	200.0828

Figure S62. HRMS of naphthalen-1-ylmethyl acetate from naphthalen-1-ylmethanol(table 3, entry 5).



Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 3.8474	3.8474	164.0833	4024	C10 H12 O2	164.0837	-2.61	C10 H12 O2	C10 H12 O2

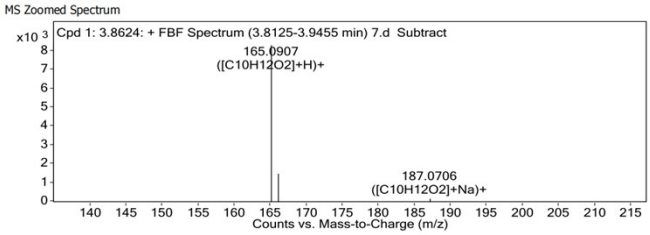
Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 3.8474	165.0903	3.8474	Find By Formula	164.0833

Figure S63. HRMS of 2-methylbenzyl acetate from 2-methylbenzyl alcohol(table 3, entry 6).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 3.8624	3.8624	164.0835	8288	C10 H12 O2	164.0837	-1.11	C10 H12 O2	C10 H12 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 3.8624	165.0907	3.8624	Find By Formula	164.0835



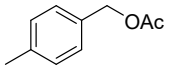
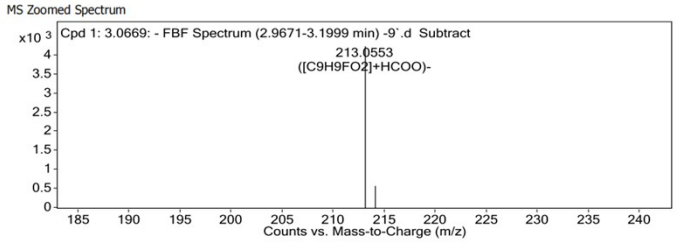


Figure S64. HRMS of 4-methylbenzyl acetate from 4-methylbenzyl alcohol(table 3, entry 7).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 3.0669	3.0669	168.0572	4239	C9 H9 F O2	168.0587	-8.92	C9 H9 F O2	C9 H9 F O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 3.0669	213.0553	3.0669	Find By Formula	168.0572



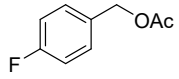
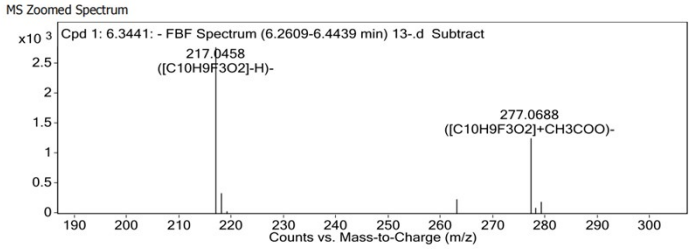


Figure S65. HRMS of 4-fluorobenzyl acetate from (4-fluorophenyl)methanol(table 3, entry 9).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 6.3441	6.3441	218.0534	2765	C10 H9 F3 O2	218.0555	-9.55	C10 H9 F3 O2	C10 H9 F3 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 6.3441	217.0458	6.3441	Find By Formula	218.0534



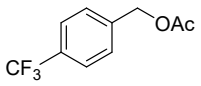


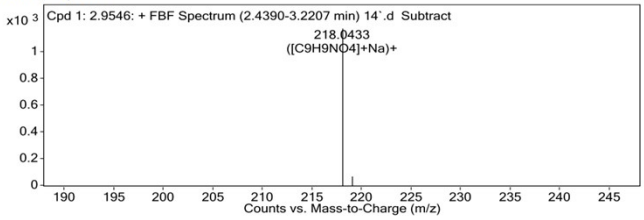
Figure S66. HRMS of 4-(trifluoromethyl)benzyl acetate from (4-(trifluoromethyl)phenyl)methanol(table 3, entry 13).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 2.9546	2.9546	195.0542	1176	C9 H9 N O4	195.0532	5.55	C9 H9 N O4	C9 H9 N O4

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 2.9546	218.0433	2.9546	Find By Formula	195.0542

MS Zoomed Spectrum



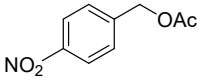


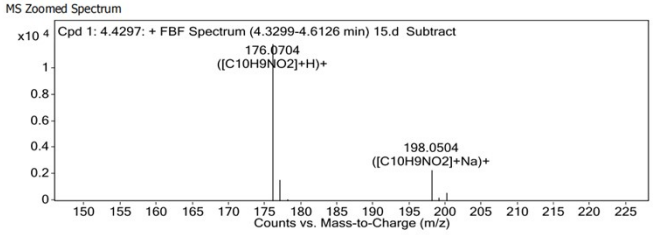
Figure S67. HRMS of 4-nitrobenzyl acetate from (4-nitrophenyl)methanol(table 3, entry 14).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 4.4297	4.4297	175.0628	11831	C10 H9 N O2	175.0633	-2.86	C10 H9 N O2	C10 H9 N O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 4.4297	176.0704	4.4297	Find By Formula	175.0628

MS Zoomed Spectrum



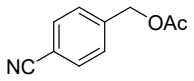


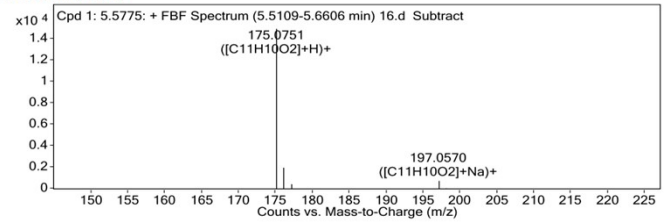
Figure S68. HRMS of 4-cyanobenzyl acetate from 4-(hydroxymethyl)benzonitrile(table 3, entry 15).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 5.5775	5.5775	174.0681	14928	C11 H10 O2	174.0681	-0.11	C11 H10 O2	C11 H10 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 5.5775	175.0751	5.5775	Find By Formula	174.0681

MS Zoomed Spectrum



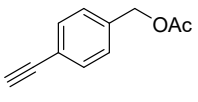
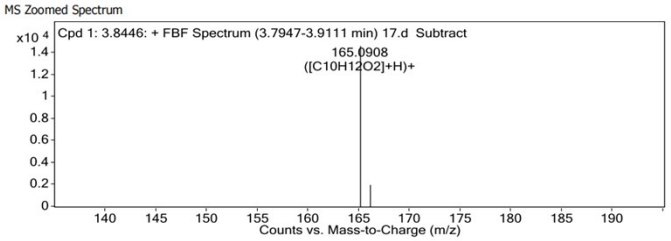


Figure S69. HRMS of 4-ethynylbenzyl acetate from (4-ethynylphenyl)methanol(table 3, entry 16).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 3.8446	3.8446	164.0835	14617	C10 H12 O2	164.0837	-1.24	C10 H12 O2	C10 H12 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 3.8446	165.0908	3.8446	Find By Formula	164.0835



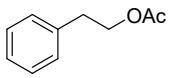
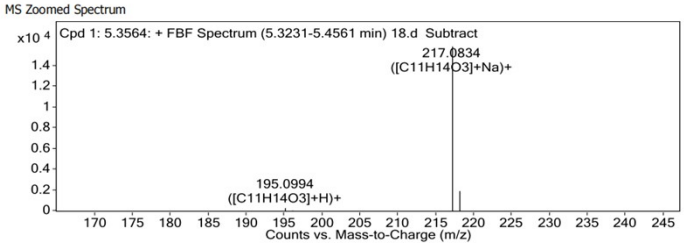


Figure S70. HRMS of phenethyl acetate from 2-phenylethan-1-ol(table 3, entry 17).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 5.3564	5.3564	194.0941	15852	C11 H14 O3	194.0943	-1.17	C11 H14 O3	C11 H14 O3

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 5.3564	217.0834	5.3564	Find By Formula	194.0941



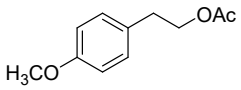
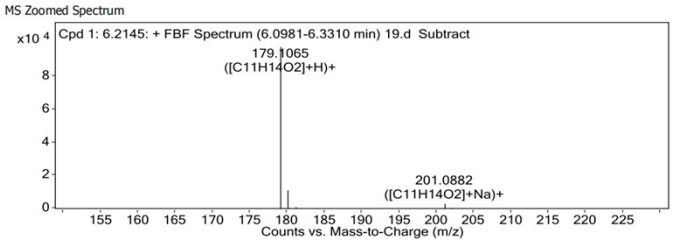


Figure S71. HRMS of 4-methoxyphenethyl acetate from 2-(4-methoxyphenyl)ethan-1-ol(table 3, entry 18).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 6.2145	6.2145	178.0992	97830	C11 H14 O2	178.0994	-0.93	C11 H14 O2	C11 H14 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 6.2145	179.1065	6.2145	Find By Formula	178.0992



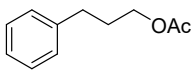


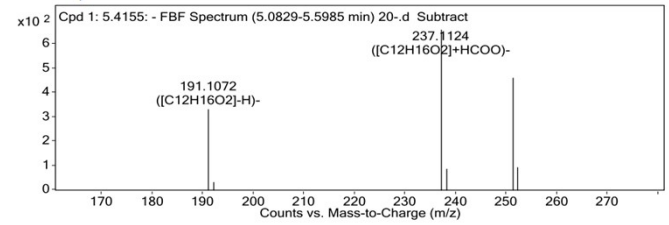
Figure S72. HRMS of 3-phenylpropyl acetate from 3-phenylpropan-1-ol(table 3, entry 19).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 5.4155	5.4155	192.1142	658	C12 H16 O2	192.115	-4.16	C12 H16 O2	C12 H16 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 5.4155	237.1124	5.4155	Find By Formula	192.1142

MS Zoomed Spectrum



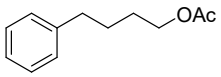


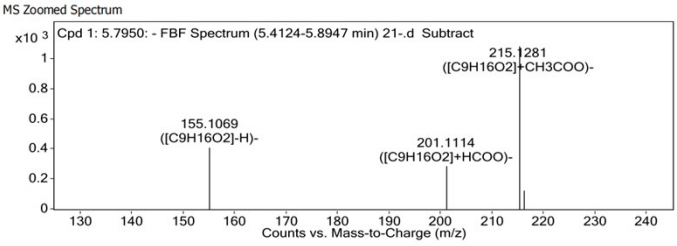
Figure S73. HRMS of 4-phenylbutyl acetate from 4-phenylbutan-1-ol(table 3, entry 20).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 5.7950	5.795	156.1141	1085	C9 H16 O2	156.115	-6.23	C9 H16 O2	C9 H16 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 5.7950	215.1281	5.795	Find By Formula	156.1141

MS Zoomed Spectrum



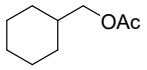


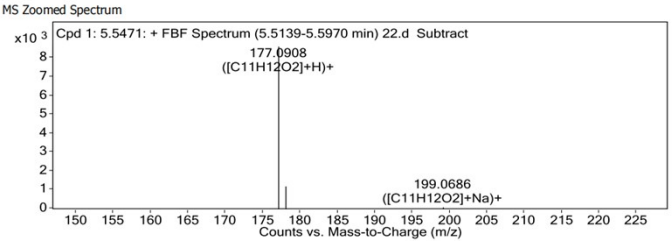
Figure S74. HRMS of cyclohexylmethyl acetate from cyclohexylmethanol(table 3, entry 21).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 5.5471	5.5471	176.0834	8596	C11 H12 O2	176.0837	-1.66	C11 H12 O2	C11 H12 O2

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 5.5471	177.0908	5.5471	Find By Formula	176.0834

MS Zoomed Spectrum



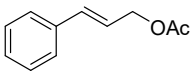
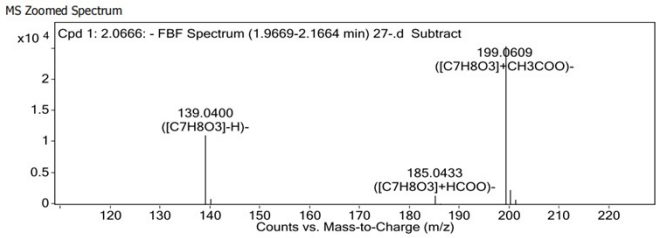


Figure S75. HRMS of Cinnamyl acetate from Cinnamyl alcohol(table 3, entry 22).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 2.0666	2.0666	140.0471	25351	C7 H8 O3	140.0473	-2.01	C7 H8 O3	C7 H8 O3

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 2.0666	199.0609	2.0666	Find By Formula	140.0471



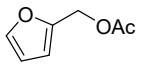
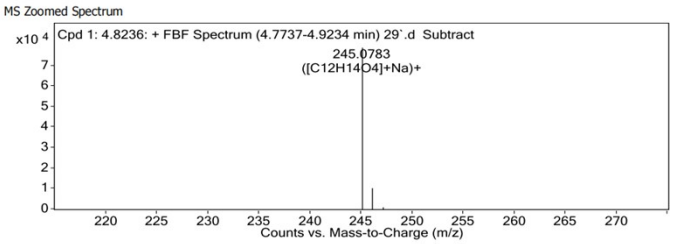


Figure S76. HRMS of furan-2-ylmethyl acetate from furan-2-ylmethanol(table 3, entry 27).

Compound Table

Compound Label	RT	Mass	Abund	Formula	Tgt Mass	Diff (ppm)	MFG Formula	DB Formula
Cpd 1: 4.8236	4.8236	222.0891	78725	C12 H14 O4	222.0892	-0.67	C12 H14 O4	C12 H14 O4

Compound Label	*m/z*	RT	Algorithm	Mass
Cpd 1: 4.8236	245.0783	4.8236	Find By Formula	222.0891



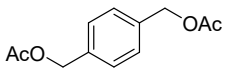


Figure S77. HRMS of 1,4-phenylenebis(methylene) diacetate from 1,4-phenylenedimethanol(table 3, entry 29).

5.2. GC-MS of some products

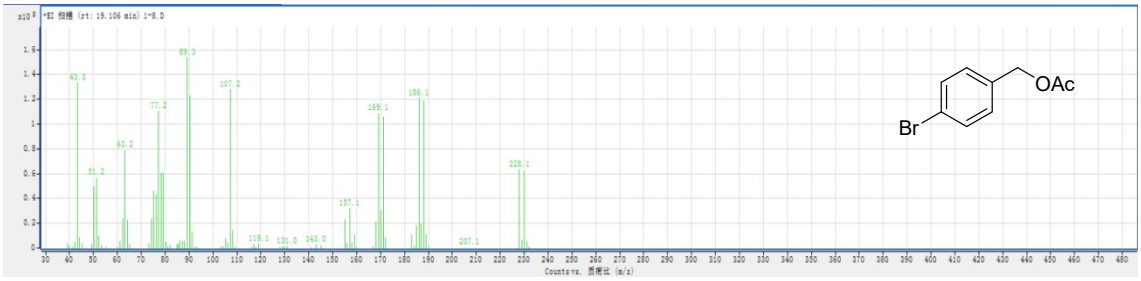


Figure S78. GC-MS of 4-bromobenzyl acetate from (4-bromophenyl)methanol(table 3, entry 8).

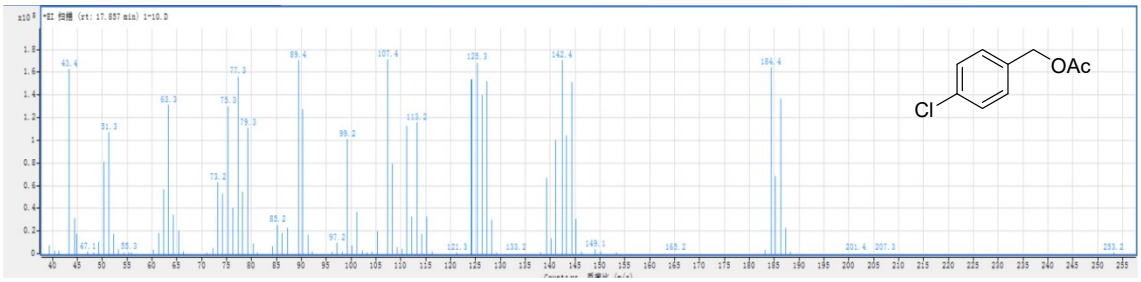


Figure S79. GC-MS of 4-chlorobenzyl acetate from (4-chlorophenyl)methanol(table 3, entry 10).

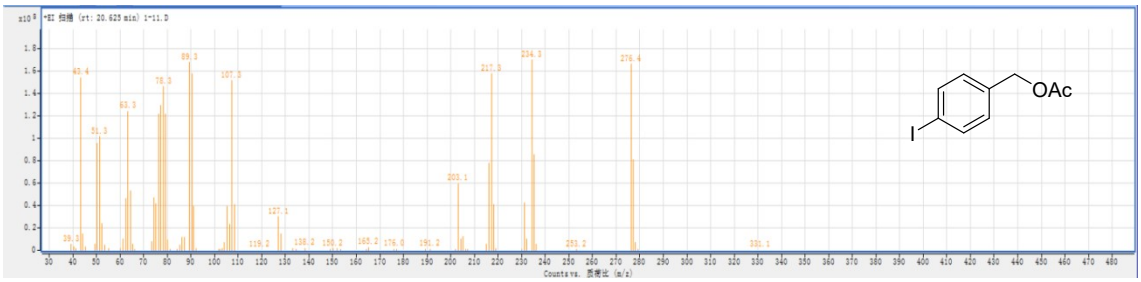


Figure S80. GC-MS of 4-iodobenzyl acetate from (4-iodophenyl)methanol(table 3, entry 11).

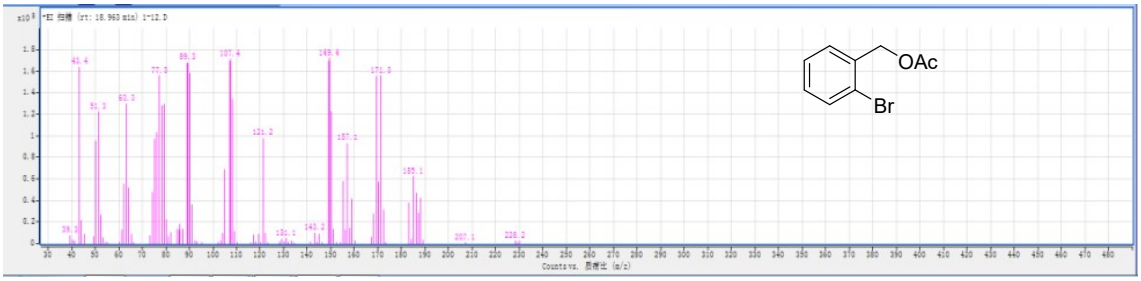


Figure S81. GC-MS of 2-bromobenzyl acetate from (2-bromophenyl)methanol(table 3, entry 12).

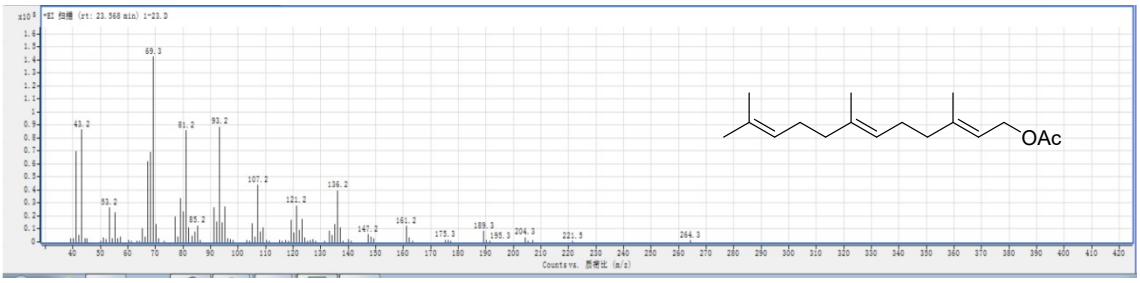


Figure S82. GC-MS of Farnesyl acetate from Farnesol(table 3, entry 23).

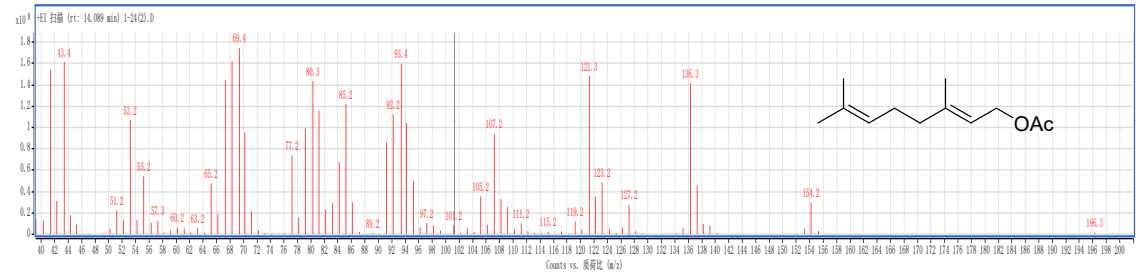


Figure S83. GC-MS of Geranyl acetate from Geraniol(table 3, entry 24).

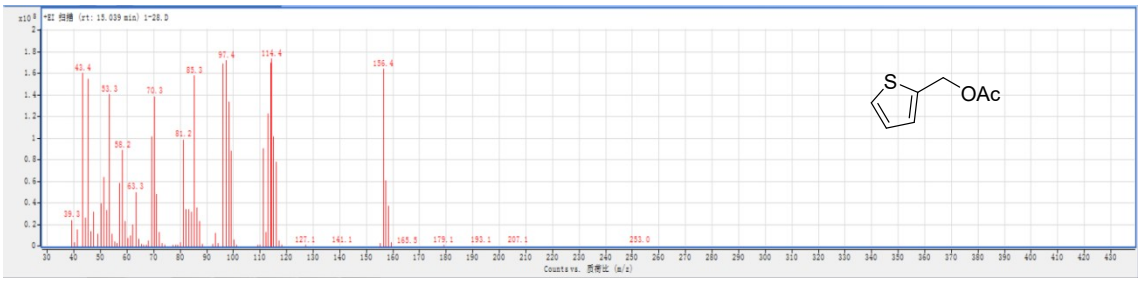


Figure S84. GC-MS of thiophen-2-ylmethyl acetate from thiophen-2-ylmethanol(table 3, entry 28).

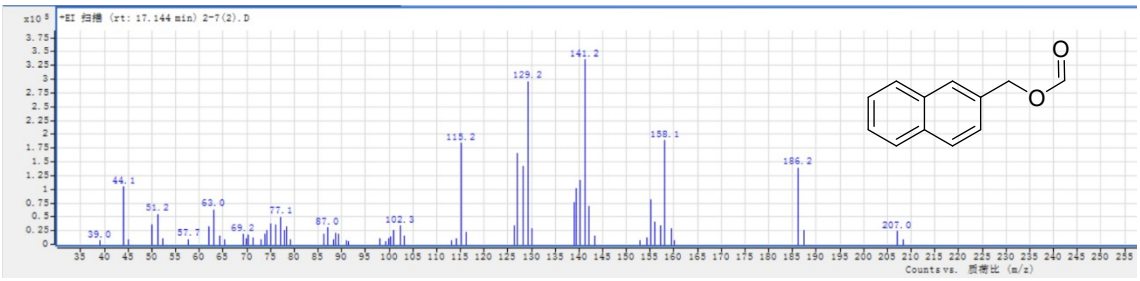


Figure S85. GC-MS of naphthalen-2-ylmethyl formate from naphthalen-2-ylmethanol(table 4, entry 7).

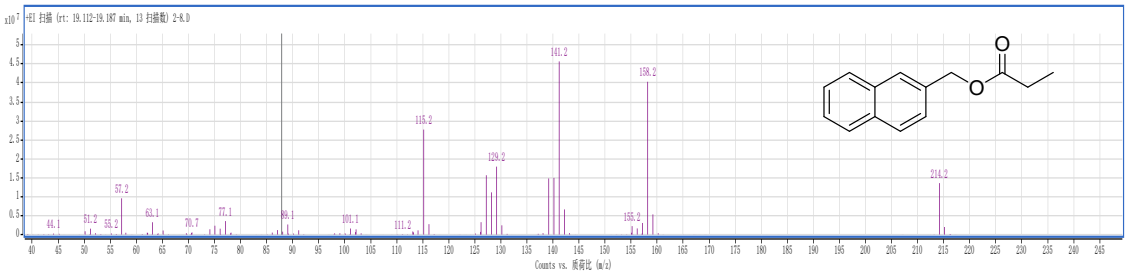


Figure S86. GC-MS of naphthalen-2-ylmethyl propionate from naphthalen-2-ylmethanol(table 4, entry 8).

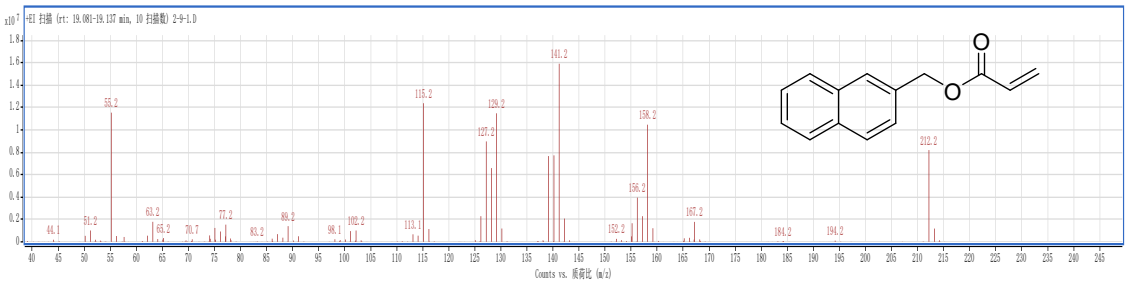


Figure S87. GC-MS of naphthalen-2-ylmethyl acrylate from naphthalen-2-ylmethanol(table 4, entry 9-1).

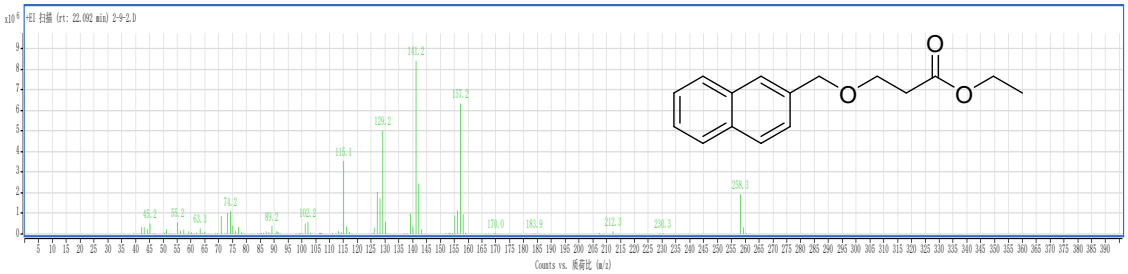


Figure S88. GC-MS of ethyl 3-(naphthalen-2-ylmethoxy)propanoate from naphthalen-2-ylmethanol(table 4, entry 9-2).

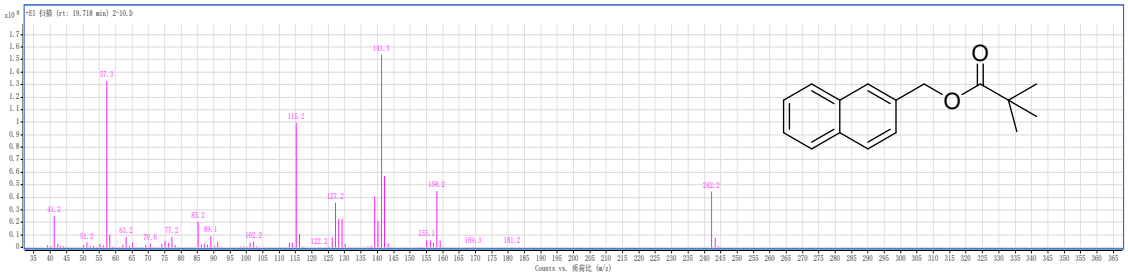


Figure S89. GC-MS of naphthalen-2-ylmethyl pivalate from naphthalen-2-ylmethanol(table4 , entry 11)

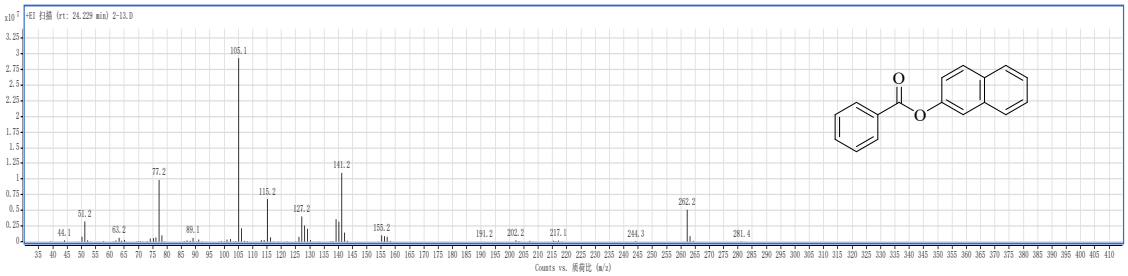


Figure S90. GC-MS of naphthalen-2-ylmethyl benzoate from naphthalen-2-ylmethanol(table 4, entry 13)

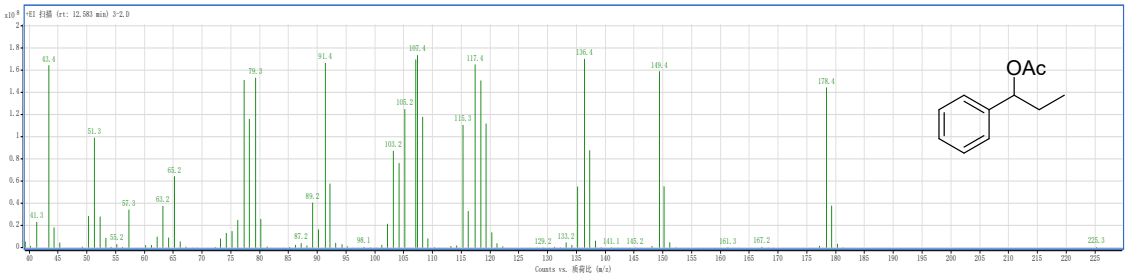


Figure S91. GC-MS of 1-phenylpropyl acetate from 1-phenylpropan-1-ol(table 5, entry 2).

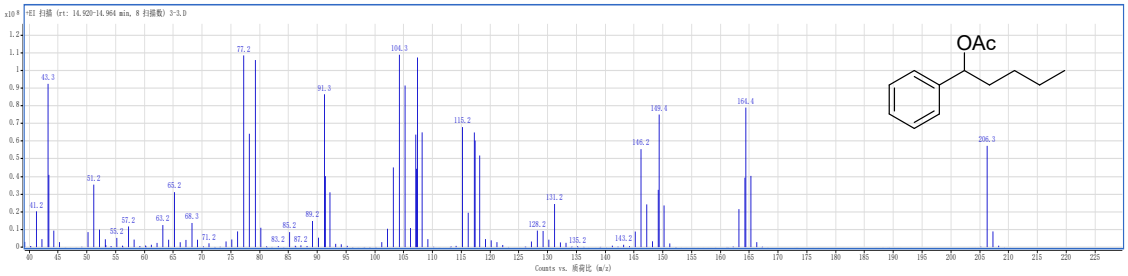


Figure S92. GC-MS of 1-phenylpentyl acetate from 1-phenylpentan-1-ol(table 5, entry 3).

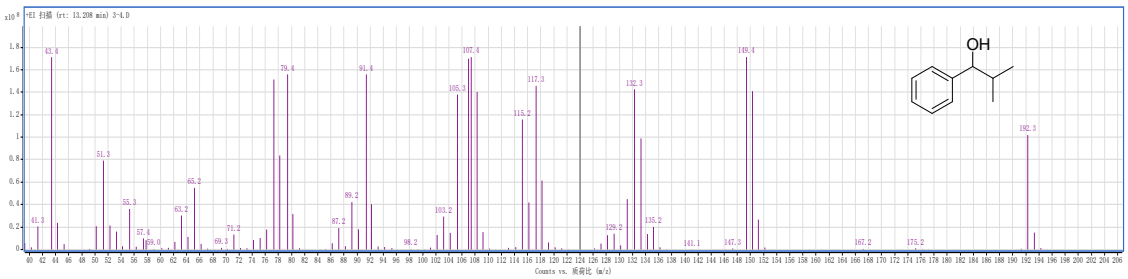


Figure S93. GC-MS of 1-phenylpentyl acetate from 1-phenylpentan-1-ol(table 5, entry 4).

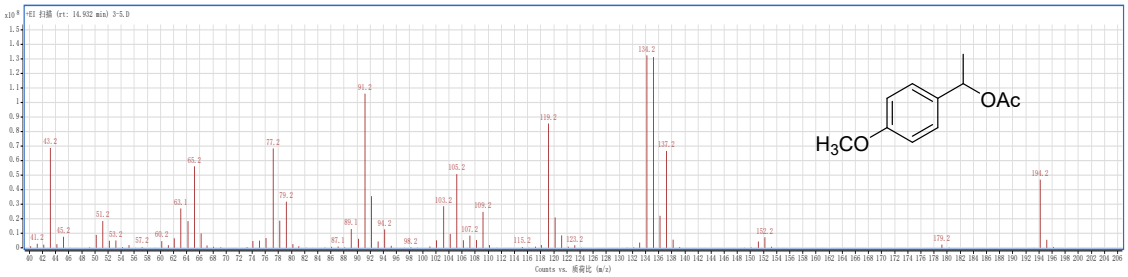


Figure S94. GC-MS of 1-(4-methoxyphenyl)ethyl acetate from 1-(4-methoxyphenyl)ethan-1-ol(table 5, entry 5).

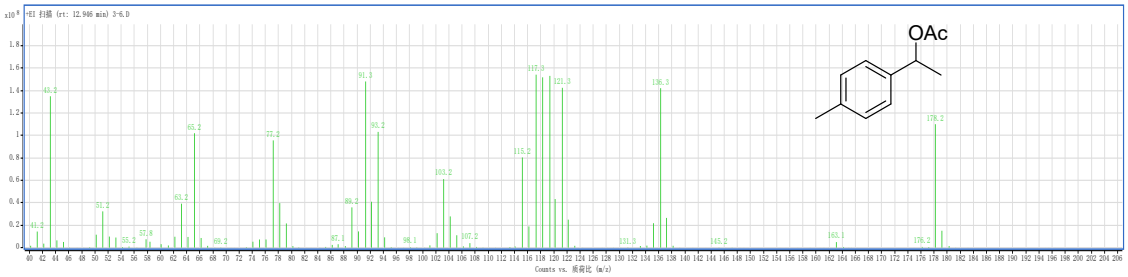


Figure S95. GC-MS of 1-(p-tolyl)ethyl acetate from 1-(p-tolyl)ethan-1-ol(table 5, entry 6).

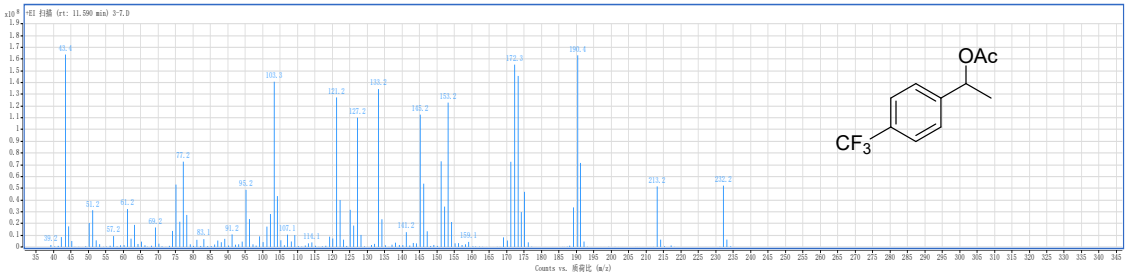


Figure S96. GC-MS of 1-(4-(trifluoromethyl)phenyl)ethyl acetate from 1-(4-(trifluoromethyl)phenyl)ethan-1-ol(table 5, entry 7).

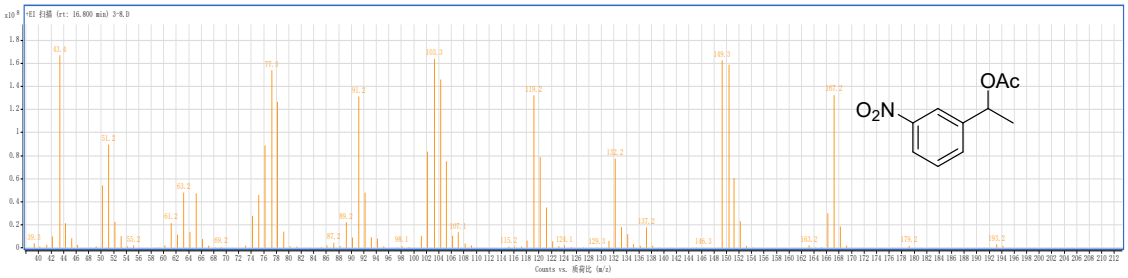


Figure S97. GC-MS of 1-(3-nitrophenyl)ethyl acetate from 1-(3-nitrophenyl)ethan-1-ol(table 5, entry 8).

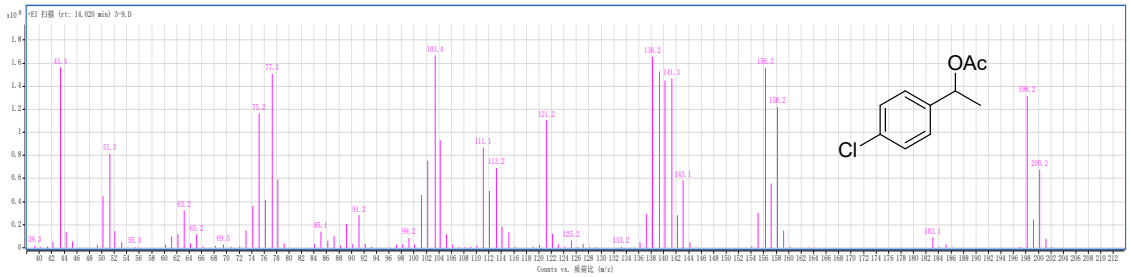


Figure S98. GC-MS of 1-(4-chlorophenyl)ethyl acetate from 1-(4-chlorophenyl)ethan-1-ol(table 5, entry 9).

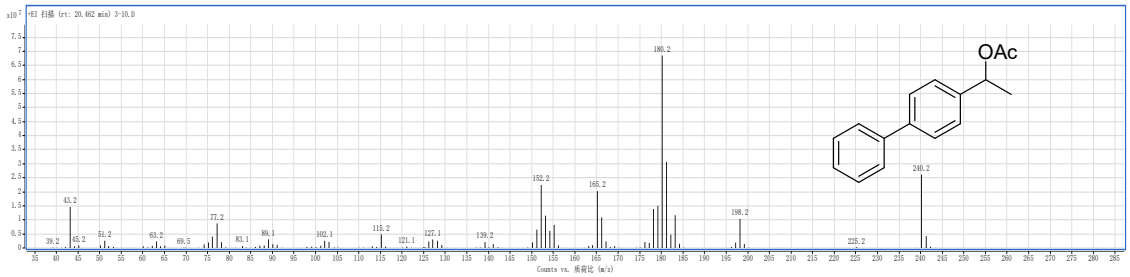


Figure S99. GC-MS of 1-([1,1'-biphenyl]-4-yl)ethyl acetate from 1-([1,1'-biphenyl]-4-yl)ethan-1-ol(table 5, entry 10).

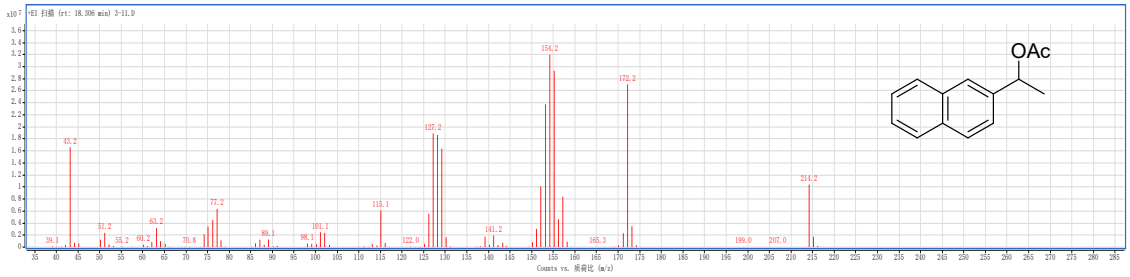


Figure S100. GC-MS of 1-(naphthalen-2-yl)ethyl acetate from 1-(naphthalen-2-yl)ethan-1-ol(table 5, entry 11).

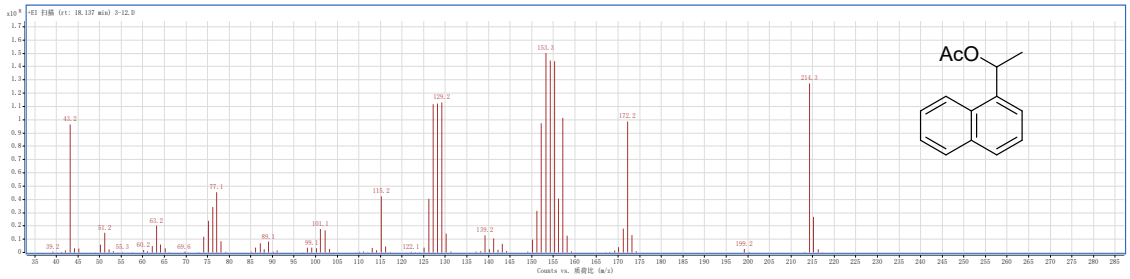


Figure S101. GC-MS of 1-(naphthalen-1-yl)ethyl acetate from 1-(naphthalen-1-yl)ethan-1-ol(table 5, entry 12).

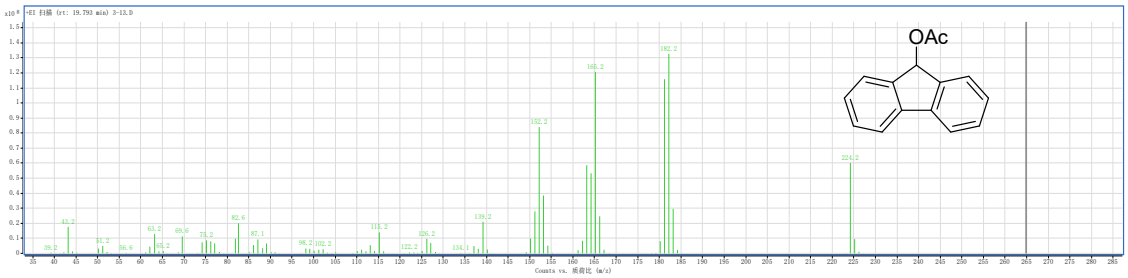


Figure S102. GC-MS of 9H-fluoren-9-yl acetate from 9H-fluoren-9-ol(table 5, entry 13).

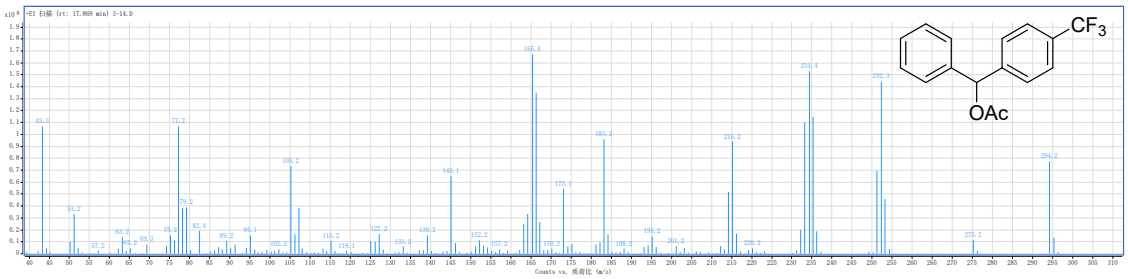


Figure S103. GC-MS of phenyl(4-(trifluoromethyl)phenyl)methyl acetate from phenyl(4-(trifluoromethyl)phenyl)methanol(table 5, entry 14).

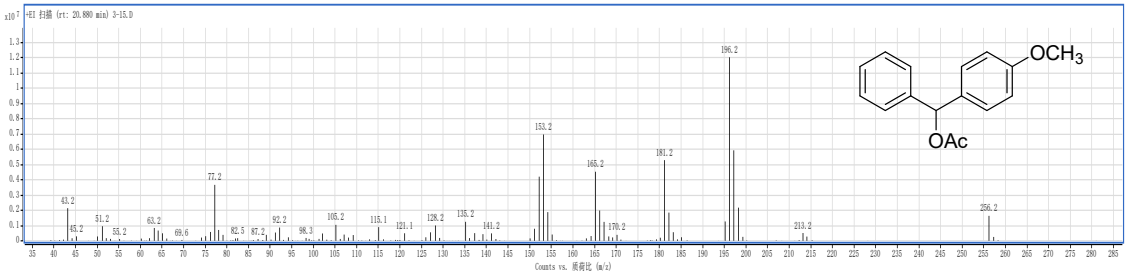


Figure S104. GC-MS of (4-methoxyphenyl)(phenyl)methyl acetate from (4-methoxyphenyl)(phenyl)methanol(table 5, entry 15).

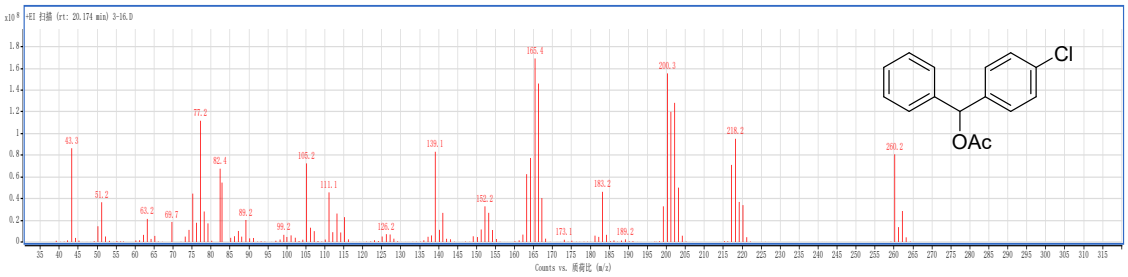


Figure S105. GC-MS of (4-chlorophenyl)(phenyl)methyl acetate from (4-chlorophenyl)(phenyl)methanol(table 5, entry 16)

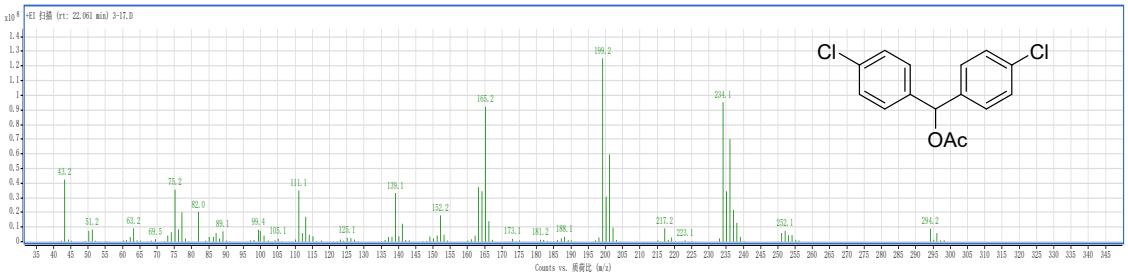


Figure S106. GC-MS of bis(4-chlorophenyl)methyl acetate from bis(4-chlorophenyl)methanol(table 5, entry 17).

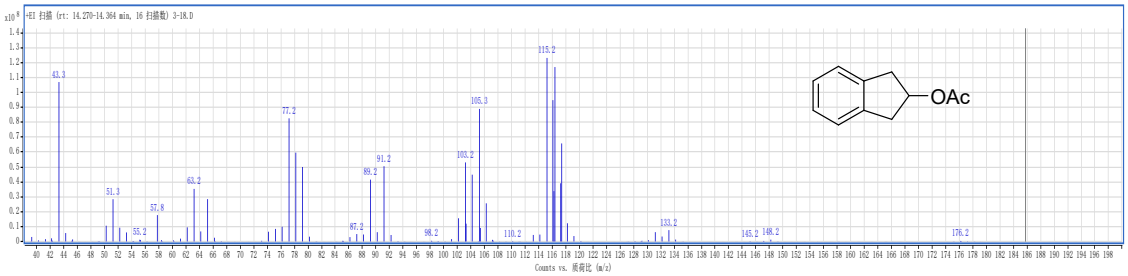


Figure S107. GC-MS of 2,3-dihydro-1H-inden-2-yl acetate from 2,3-dihydro-1H-inden-2-ol(table 5, entry 18).

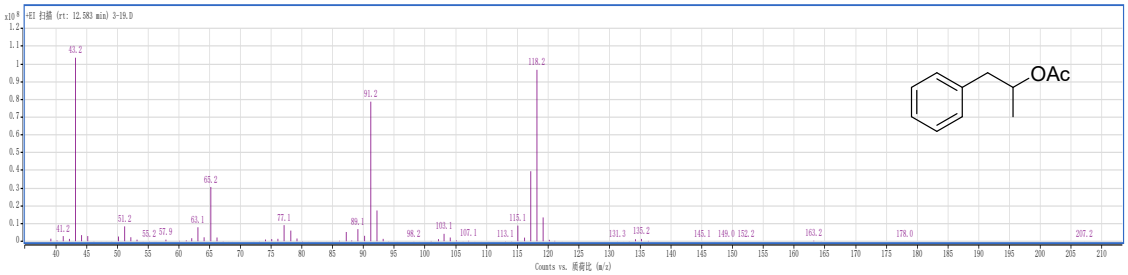


Figure S108. GC-MS of 1-phenylpropan-2-yl acetate from 1-phenylpropan-2-ol(table 5, entry 19).

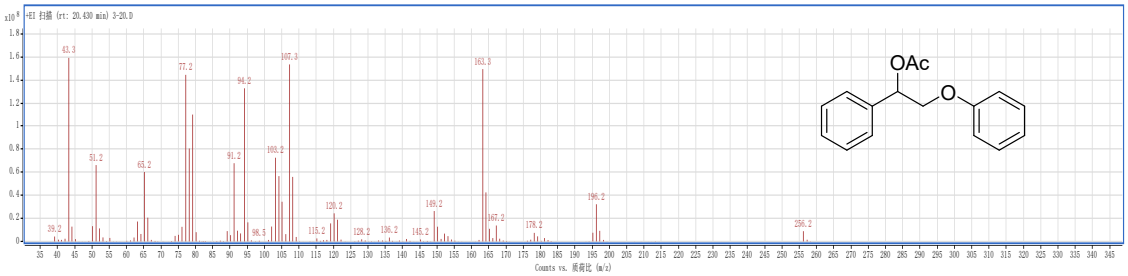


Figure S109. GC-MS of 2-phenoxy-1-phenylethyl acetate from 2-phenoxy-1-phenylethan-1-ol(table 5, entry 20).

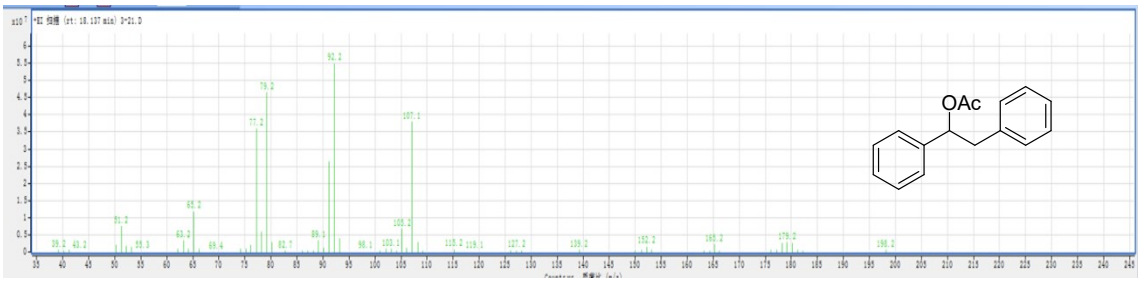


Figure S110. GC-MS of 1,2-diphenylethyl acetate from 1,2-diphenylethan-1-ol(table 5, entry 21).

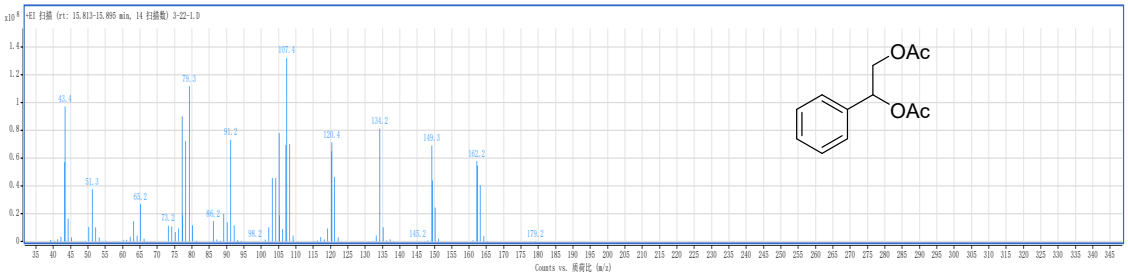


Figure S111. GC-MS of 1-phenylethane-1,2-diyl diacetate from 1-phenylethane-1,2-diol(table 5, entry 22-1).

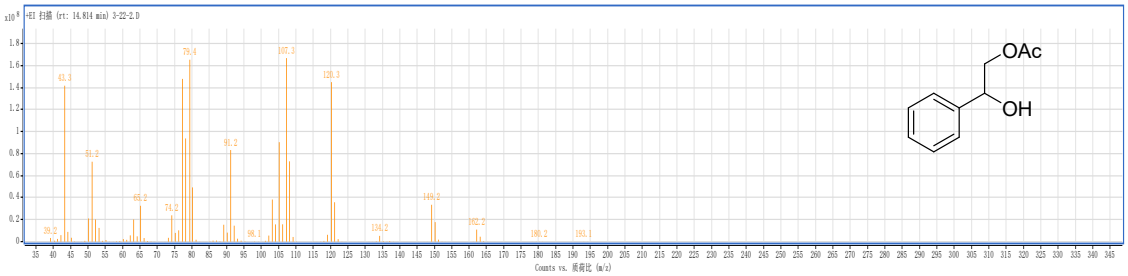


Figure S112. GC-MS of 2-hydroxy-2-phenylethyl acetate from 1-phenylethane-1,2-diol(table 5, entry 22-2).

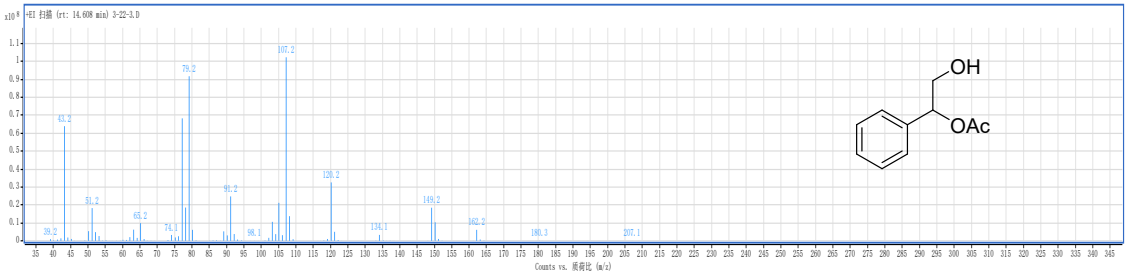


Figure S113. GC-MS of 2-hydroxy-1-phenylethyl acetate from 1-phenylethane-1,2-diol(table 5, entry 22-3).

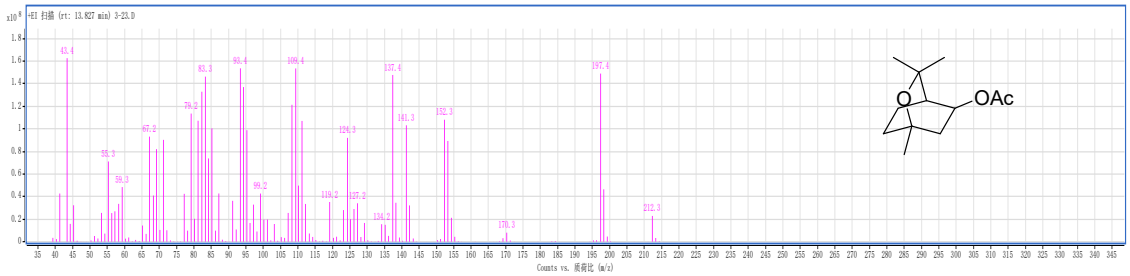


Figure S114. GC-MS of (±)-exo-1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane-5-yl acetate from (±)-exo-1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane- 5-ol(table 5, entry 23).