Electronic Supplementary Material (ESI) for Organic Chemistry Frontiers.

Supporting Information

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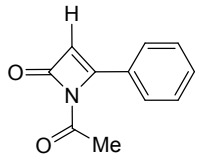
Contents:

1. General Information

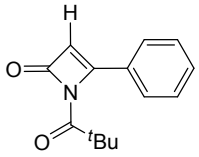
Unless otherwise stated, all commercial reagents were used as received. Reactions were conducted in dry glassware using anhydrous solvents (pass through activated alumina columns). Reaction temperatures were controlled using IKAmag temperature modulator, and unless stated otherwise, reactions were performed at room temperature (rt, approximately, 24 ^{o}C). Thin-layer chromatography (TLC) was conducted on plates (GF254) supplied by Yantai Chemicals (China) and visualized using a combination of UV, anisaldehyde, iodine, and potassium permanganate staining. Silica gel (200-300 mesh) supplied by Tsingdao Haiyang Chemicals (China) was used for flash column chromatography. ^{1}H, ^{13}C and ^{19}F NMR spectra were recorded on Bruker spectrometers (400 MHz). Chemical shifts were reported in parts per million (ppm), and the residual solvent peak was used as an internal reference: proton (chloroform δ 7.26), carbon (chloroform δ 77.16) or tetramethylsilane (TMS δ 0.00) was used as a reference. Multiplicity was indicated as follows: s (singlet), d (doublet), t (triplet), q (quartet), m (multiplet), dd (doublet of doublet), bs (broad singlet). Coupling constants were reported in Hertz (Hz). All high resolution mass spectra were obtained from the Tsinghua University Mass Spectrometry Facility.

2. Experimental Procedure

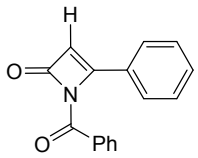
The NHC precatalyst **C** (0.02 mmol), $KHCO_3$ (0.04 mmol) and compound **1a** (0.2 mmol) were placed in an oven-dried Schlenk tube equipped with a magnetic stir bar. The tube was closed with a septum, evacuated and refilled with argon. Dry THF (4.0 mL) were added. The reaction mixture stirred at room temperature till the starting material was completely consumed (monitored by TLC or GC-MS). The mixture was concentrated under reduced pressure and purified by flash chromatography eluted with hexane/EtOAc = 10:1 to afford the corresponding desired product **2a** as white solid (33 mg, 87% yield).



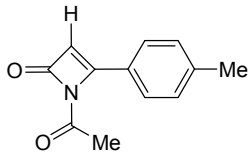
1-Acetyl-4-phenylazet-2(1H)-one (2a): 33mg, 87% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.96 (d, *J* = 6 Hz, 1H), 7.52 – 7.46 (m, 3H), 6.52 (s, 1H), 2.50 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 166.97, 161.68, 160.27, 134.32, 131.99, 129.07, 127.41, 101.87, 21.94; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{11}H_9NO_2Na$) requires *m/z* 210.0531, found *m/z* 210.0534.



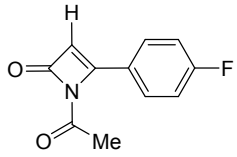
4-Phenyl-1-pivaloylazet-2(1H)-one (2b): 35mg, 77% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.01 (d, *J* = 7.2 Hz, 2H), 7.54 – 7.46 (m, 3H), 6.51 (s, 1H), 1.42 (s, 9H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 175.15, 161.25, 160.70, 134.59, 131.94, 129.01, 127.47, 101.55, 38.70, 27.82; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{14}H_{15}NO_2Na$) requires *m/z* 252.1000, found *m/z* 252.1001.



1-Benzoyl-4-phenylazet-2(1H)-one (2c): 41mg, 83% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.35 (d, *J* = 8 Hz, 2H), 8.09 (d, *J* = 6.8 Hz, 2H), 7.63 – 7.60 (m, 1H), 7.54 – 7.51 (m, 5H), 6.59 (s, 1H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 163.26, 161.95, 159.99, 134.55, 133.49, 132.04, 130.13, 129.06, 128.93, 128.85, 127.48, 101.82; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{16}H_{11}NO_2Na$) requires *m/z* 272.0687, found *m/z* 272.0689.

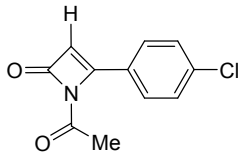


1-Acetyl-4-(p-tolyl)azet-2(1H)-one (2d): 31 mg, 78% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.89 (d, *J* = 8.4 Hz, 2H), 7.30 (d, *J* = 8.4 Hz, 2H), 6.49 (s, 1H), 2.50 (s, 3H), 2.44 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 166.77, 161.64, 160.43, 142.70, 131.51, 129.80, 127.38, 100.93, 21.91, 21.66; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{12}H_{11}NO_2Na$) requires *m/z* 224.0687, found *m/z* 224.0689.

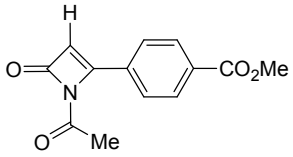


1-Acetyl-4-(4-fluorophenyl)azet-2(1H)-one (2e): 36 mg, 87% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.98 (t, *J* = 7.6 Hz, 2H), 7.15 (t *J* = 8.4 Hz, 2H), 6.46 (s, 1H), 2.49 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.09, 165.19 (d, *J* = 252 Hz), 160.52, 160.08, 130.46 (d, *J* = 3.1 Hz), 129.68 (d, *J* = 8.9 Hz), 116.23 (d, *J* = 21.8 Hz), 101.41, 21.93; ^{19}F NMR (376 MHz, $CDCl_3$) δ (ppm): –107.37; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{11}H_8FNO_2Na$) requires *m/z* 228.0437,

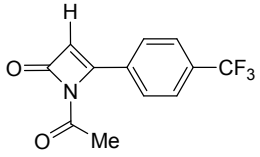
found *m/z* 228.0439.



1-Acetyl-4-(4-chlorophenyl)azet-2(1H)-one (2f): 37 mg, 84% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.91 (d, *J* = 8.4 Hz, 2H), 7.44 (d, *J* = 8.4 Hz, 2H), 6.49 (s, 1H), 2.49 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.19, 160.43, 160.00, 138.32, 132.73, 129.36, 128.72, 101.90, 21.94; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{11}H_8ClNO_2Na$) requires *m/z* 244.0141, found *m/z* 244.0145.

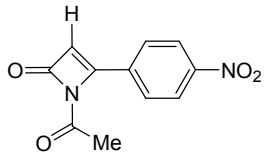


Methyl 4-(1-acetyl-4-oxo-1,4-dihydroazet-2-yl)benzoate (2g): 40 mg, 81% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.26 (d, *J* = 8.4 Hz, 2H), 8.03 (d, *J* = 8.4 Hz, 2H), 6.58 (s, 1H), 3.95 (s, 3H), 2.51 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.34, 166.41, 160.47, 159.84, 138.34, 133.00, 130.19, 127.38, 103.36, 52.56, 21.97; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{13}H_{11}NNaO_4Na$) requires *m/z* 268.0586, found *m/z* 268.0590

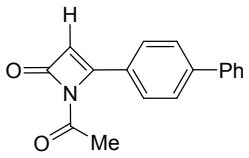


1-Acetyl-4-(4-(trifluoromethyl)phenyl)azet-2(1H)-one (2h): 45 mg, 88% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.08 (d, *J* = 8 Hz, 2H), 7.73 (d *J* = 8 Hz, 2H), 6.58 (s, 1H), 2.52 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.53, 160.10, 159.72, 137.67, 133.43 (q, *J* = 32.6 Hz), 127.76,

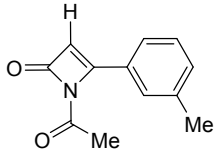
126.01 (q, J = 3.7 Hz), 123.81 (q, J = 270.8 Hz), 103.40, 21.96; ^{19}F NMR (376 MHz, $CDCl_3$) δ (ppm): – 63.02; HRMS (ESI) exact mass calculated for $[M+H]^+$ ($C_{12}H_9F_3NO_2$) requires *m/z* 256.0585, found *m/z* 256.0587.



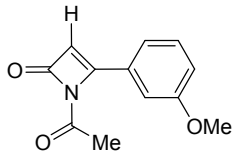
1-Acetyl-4-(4-nitrophenyl)azet-2(1H)-one (2i): 38 mg, 83% yield; White solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.33 (d, J = 8.4 Hz, 2H), 8.14 (d, J = 8.8 Hz, 2H), 6.63 (s, 1H), 2.53 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.82, 159.37, 159.14, 149.80, 140.11, 128.40, 124.19, 104.43, 22.01; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{11}H_8N_2O_4Na$) requires *m/z* 255.0382, found *m/z* 255.0385.



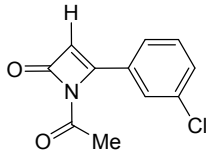
4-([1,1'-Biphenyl]-4-yl)-1-acetylazet-2(1H)-one (2j): 44 mg, 84% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.05 (d, J = 8.4 Hz, 2H), 7.71 (d, J = 8.4 Hz, 2H), 7.64 (d, J = 7.2 Hz, 2H), 7.48 (t, J = 7.2 Hz, 2H), 7.42 – 7.38 (m, 1H), 6.56 (s, 1H), 2.51 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 166.94, 161.25, 160.27, 144.75, 139.96, 133.09, 129.09, 128.28, 127.92, 127.67, 127.27, 101.51, 21.95;; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{17}H_{13}NO_2Na$) requires *m/z* 286.0844, found *m/z* 286.0845.



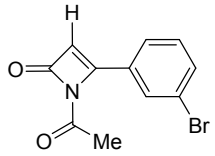
1-Acetyl-4-(m-tolyl)azet-2(1H)-one (2k): 31 mg, 78% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.78 – 7.30 (m, 2H), 7.36 – 7.33 (m, 2H), 6.49 (s, 1H), 2.49 (s, 3H), 2.42 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 166.84, 161.81, 160.26, 138.82, 134.28, 132.77, 128.94, 127.97, 124.53, 101.76, 21.90, 21.56; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{12}H_{11}NO_2Na$) requires *m/z* 224.0687, found *m/z* 224.0688



1-Acetyl-4-(3-methoxyphenyl)azet-2(1H)-one (2l): 32 mg, 73% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.52 – 7.50 (m, 2H), 7.37 (t, J = 8.4 Hz, 1H), 7.06 – 7.03 (m, 1H), 6.49 (s, 1H), 3.86 (s, 3H), 2.48 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 166.85, 161.42, 160.24, 160.07, 135.67, 130.06, 119.67, 117.79, 112.58, 102.07, 55.52, 21.90; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{12}H_{11}NO_3Na$) requires *m/z* 240.0637, found *m/z* 240.0639;

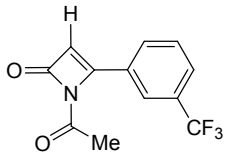


1-Acetyl-4-(3-chlorophenyl)azet-2(1H)-one (2m): 40 mg, 91% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.99 (t, J = 2 Hz, 1H), 7.81 (dt, J_1 = 7.6 Hz, J_2 = 1.2 Hz, 1H), 7.50 – 7.42 (m, 1H) 7.41 (t, J = 7.6 Hz, 1H), 6.51 (s, 1H), 2.50 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.31, 160.19, 159.89, 136.10, 135.30, 131.88, 130.31, 127.64, 125.33, 102.62, 21.96; HRMS (ESI) exact mass calculated for $[M+H]^+$ ($C_{11}H_9ClNO_2$) requires *m/z* 222.0322, found *m/z* 222.0324;

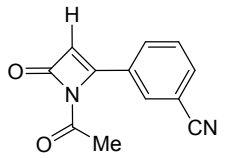


1-Acetyl-4-(3-bromophenyl)azet-2(1H)-one (2n): 43 mg, 80% yield; white solid; ^{1}H NMR (400 MHz,

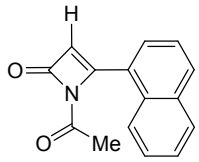
$CDCl_3$) δ (ppm): 8.14 (s, 1H), 7.85 (d, *J* = 8 Hz, 1H), 7.63 (d, *J* = 8 Hz, 1H),7.34 (t, *J* = 8 Hz, 1H), 6.50 (s, 1H), 2.50 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.32, 160.07, 159.80, 136.35, 134.78, 130.56, 130.54, 125.78, 123.35, 102.62, 21.94; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{11}H_8BrNO_2Na$) requires *m/z* 287.9636, found *m/z* 287.9639.



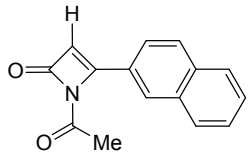
1-Acetyl-4-(3-(trifluoromethyl)phenyl)azet-2(1H)-one (2o): 44 mg, 86% yield; white solid; ^1H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.26 (s, 1H), 8.11 (d, *J* = 7.6 Hz, 1H), 7.76 (d, *J* = 7.6 Hz, 1H), 7.61 (t, *J* = 7.6 Hz, 1H), 6.57 (s, 1H), 2.52 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.55, 160.00, 159.72, 135.18, 131.67 (q, *J* = 32.6 Hz), 130.33, 129.63, 128.38 (q, *J* = 3.5 Hz), 124.43 (q, *J* = 3.8 Hz), 123.85 (q, *J* = 270.9 Hz), 102.85, 21.92; ^{19}F NMR (376 MHz, $CDCl_3$) δ (ppm): –62.94; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{12}H_8F_3NO_2Na$) requires *m/z* 278.0405, found *m/z* 278.0409.



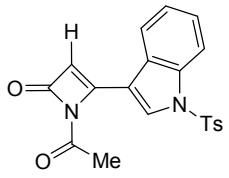
3-(1-Acetyl-4-oxo-1,4-dihydroazet-2-yl)benzonitrile (2p): 33 mg, 79% yield; white solid; ^1H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.32 (s, 1H), 8.15 (d, *J* = 8 Hz, 1H), 7.79 (d, *J* = 7.6 Hz, 1H), 7.61 (t, *J* = 8 Hz, 1H), 6.55 (s, 1H), 2.52 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.81, 159.46, 159.18, 135.62, 134.86, 131.25, 131.14, 129.96, 118.14, 113.66, 103.18, 21.98; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{12}H_8N_2O_2Na$) requires *m/z* 235.0483, found *m/z* 235.0485.



1-Acetyl-4-(naphthalen-1-yl)azet-2(1H)-one (2q): 30 mg, 63% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.18 – 8.16 (m, 1H), 7.97 (d, *J* = 8 Hz, 1H), 7.93 – 7.90 (m, 1H), 7.67 (d, *J* = 7.2 Hz, 1H), 7.57 – 7.52 (m, 3H), 6.45 (s, 1H), 2.55 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 167.17, 164.53, 159.66, 134.04, 133.75, 131.40, 130.25, 128.89, 127.67, 127.33, 126.58, 125.23, 125.06, 107.96, 29.84; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{15}H_{11}NO_2Na$) requires *m/z* 260.0687, found *m/z* 260.0689.

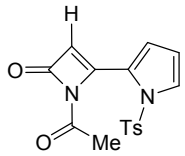


1-acetyl-4-(naphthalen-2-yl)azet-2(1H)-one (2r): 41 mg, 86% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.60 (s, 1H), 7.96 (d, *J* = 7.6 Hz, 1H), 7.90 (brs, 2H), 7.87 (d, *J* = 7.6 Hz, 1H), 7.56 (m, 2H), 6.63 (s, 1H), 2.53 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 166.83, 161.37, 160.29, 135.04, 133.10, 131.42, 129.43, 128.92, 128.74, 128.16, 127.87, 126.99, 123.23, 101.94, 21.96; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{15}H_{11}NO_2Na$) requires *m/z* 260.0687, found *m/z* 260.0690.

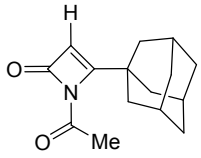


1-Acetyl-4-(1-tosyl-1H-indol-3-yl)azet-2(1H)-one (2s): 52 mg, 69% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.42 (s, 1H), 8.02 (d, *J* = 8 Hz, 1H), 7.93 (d, *J* = 7.6 Hz, 1H), 7.84 (d, *J* = 8.4Hz, 2H), 7.42 – 7.33 (m, 2H), 7.26 (d, *J* = 8 Hz, 2H), 6.49 (s, 1H), 2.49 (s, 3H), 2.35 (s, 3H); ^{13}C NMR

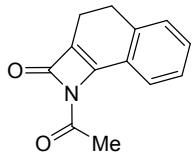
(100 MHz, $CDCl_3$) δ (ppm): 166.64, 160.04, 156.93, 145.92, 135.86, 134.69, 130.58, 130.30, 127.25, 126.91, 125.66, 124.58, 121.16, 118.11, 114.06, 101.37, 21.85, 21.75; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{20}H_{16}N_2O_4SNa$) requires *m/z* 403.0728, found *m/z* 403.0729.



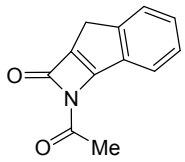
1-Acetyl-4-(1-tosyl-1H-pyrrol-2-yl)azet-2(1H)-one (2t): 43 mg,65% yield; white solid; ^1H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.71 (d, *J* = 8.4 Hz, 2H), 7.61 – 7.59 (m, 1H), 7.30 (d, *J* = 8 Hz, 2H), 6.79 – 6.78 (m, 1H), 6.41 (s, 1H), 6.37 (t, *J* = 3.6 Hz, 1H), 2.42 (s, 3H), 2.29 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 165.88, 159.47, 154.34, 145.37, 136.27, 131.10, 129.83, 129.28, 127.30, 121.28, 112.50, 104.67, 21.83, 21.48; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{16}H_{14}N_2O_4SNa$) requires *m/z* 353.0572, found *m/z* 353.0574.



1-Acetyl-4-((3r,5r,7r)-adamantan-1-yl)azet-2(1H)-one (2u): 37 mg, 76% yield; white solid; ^1H NMR (400 MHz, $CDCl_3$) δ (ppm): 5.90 (s, 1H), 2.38 (s, 3H), 2.07 (brs, 3H), 1.81 – 1.69 (m, 12H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 175.84, 165.99, 160.92, 102.06, 39.51, 38.77, 36.60, 28.15, 21.68. HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{15}H_{19}NO_2Na$) requires *m/z* 268.1313, found *m/z* 268.1317.



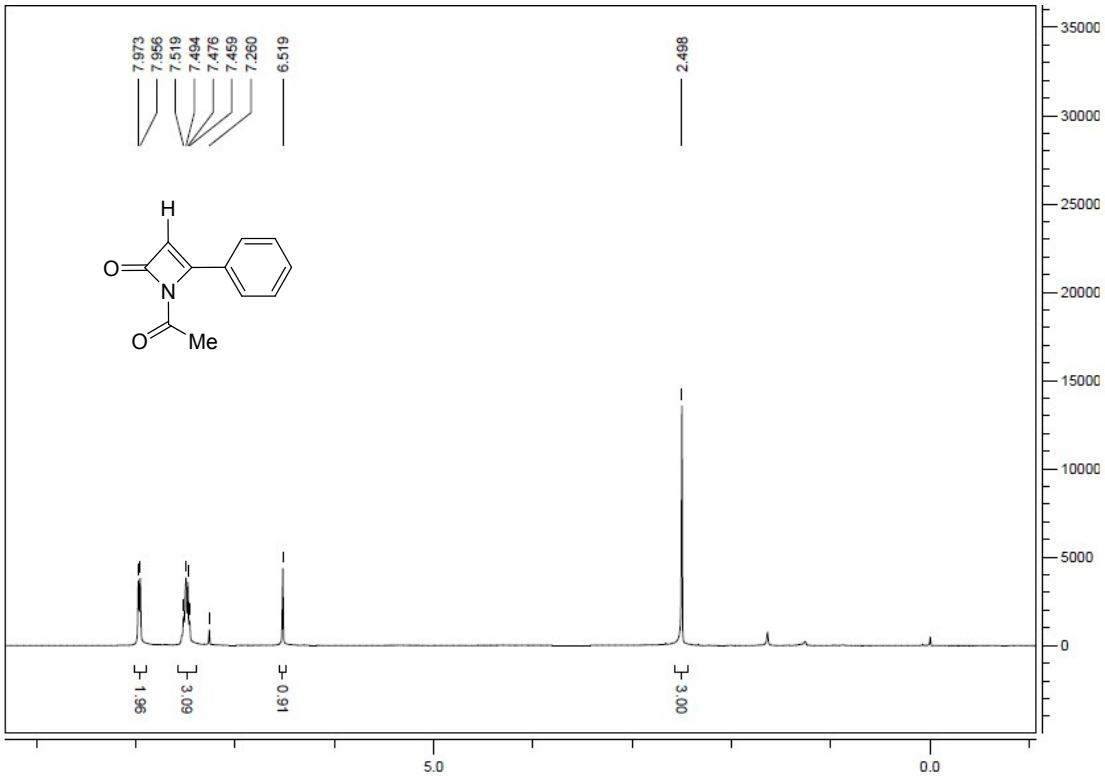
1-Acetyl-3,4-dihydronaphtho[1,2-b]azet-2(1H)-one (2v): 13 mg, 31% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 8.07 (d, *J* = 7.2 Hz, 1H), 7.39 – 7.32 (m, 2H), 7.22 (d, *J* = 7.2 Hz, 1H), 2.92 (t, *J* = 8 Hz, 2H), 2.77 (t, *J* = 8 Hz, 2H), 2.46 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 164.86, 160.93, 154.27, 138.83, 131.48, 130.87, 128.15, 127.13, 126.03, 112.45, 26.85, 21.69, 19.69; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{13}H_{11}NO_2Na$) requires *m/z* 236.0687, found *m/z* 236.0691.

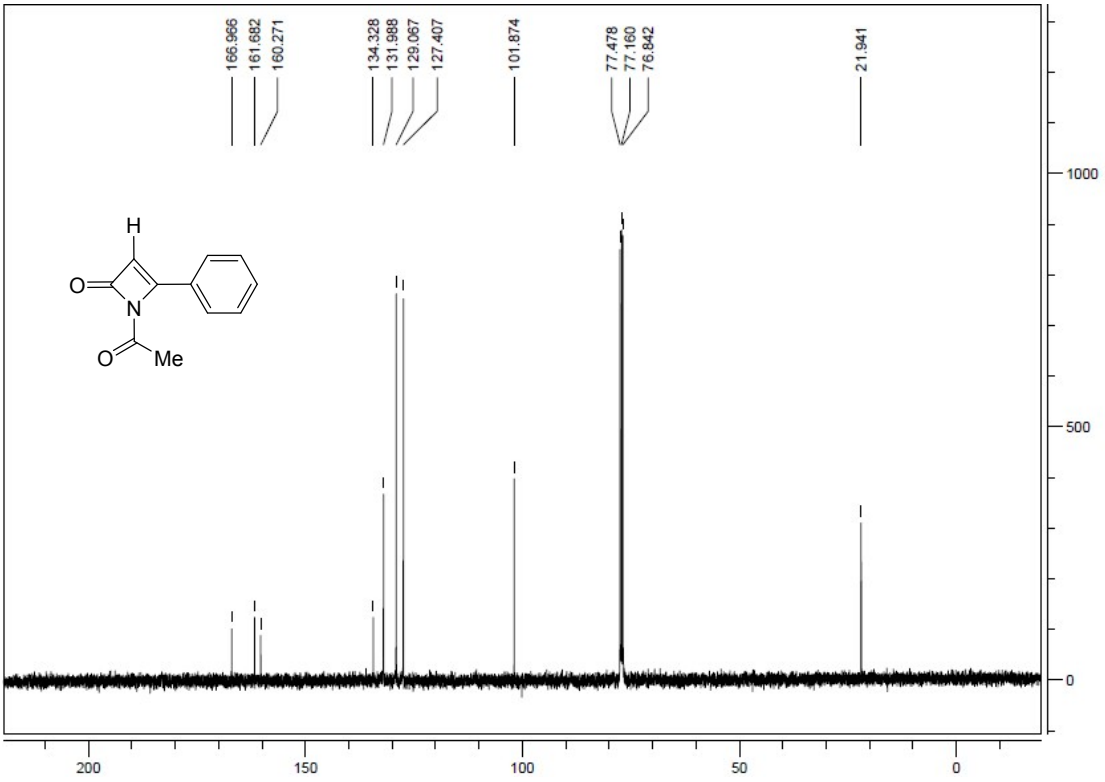


1-acetyl-1H-indeno[1,2-b]azet-2(3H)-one (2w): 15 mg, 38% yield; white solid; ^{1}H NMR (400 MHz, $CDCl_3$) δ (ppm): 7.89 (d, *J* = 7.2 Hz, 1H), 7.60 (d, *J* = 7.6 Hz, 1H), 7.53 – 7.45 (m, 2H), 3.80 (s, 2H), 2.55 (s, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ (ppm): 169.64, 164.63, 158.36, 145.22, 138.29, 130.67, 127.69, 125.31, 122.43, 116.84, 33.15, 21.91; HRMS (ESI) exact mass calculated for $[M+Na]^+$ ($C_{12}H_9NO_2Na$) requires *m/z* 222.0531, found *m/z* 222.0533.

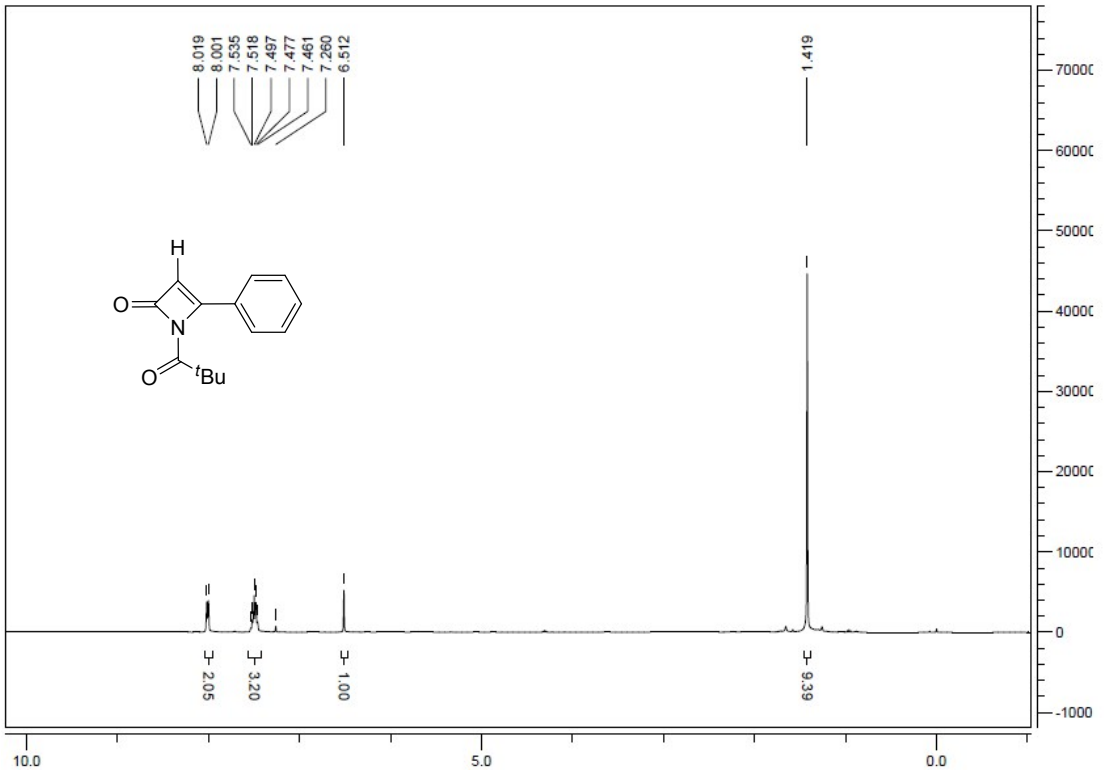
3. NMR Spectra:

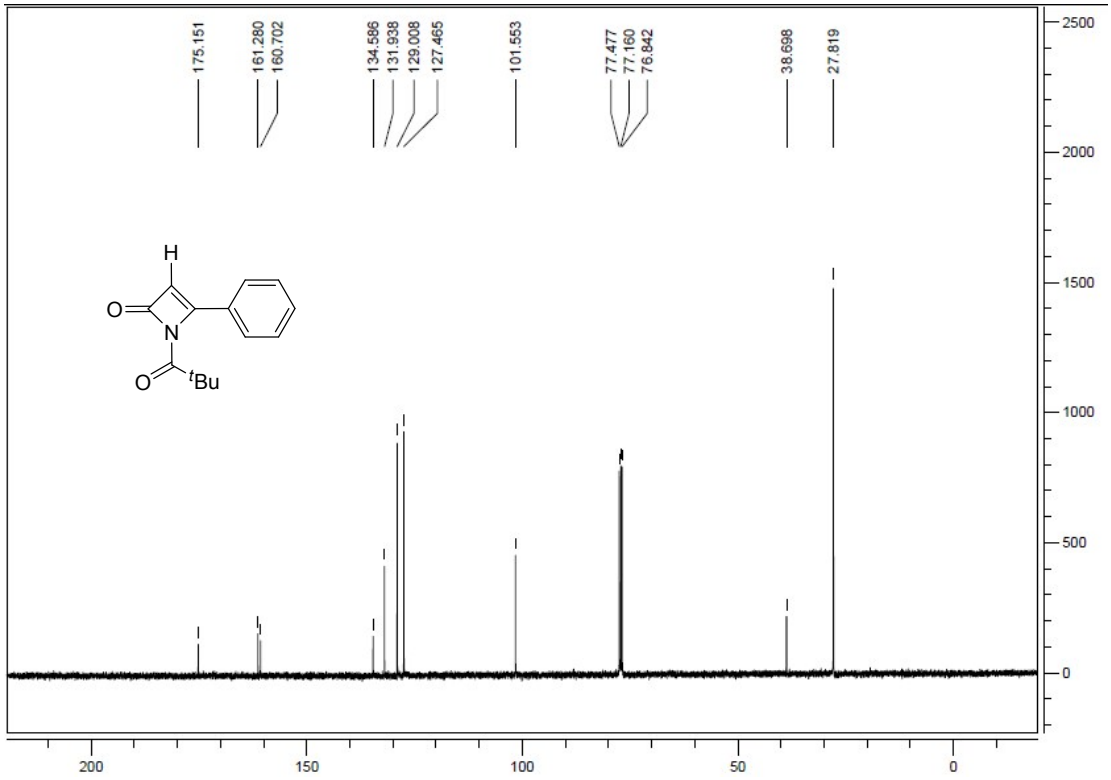
1-Acetyl-4-phenylazet-2(1H)-one (2a):



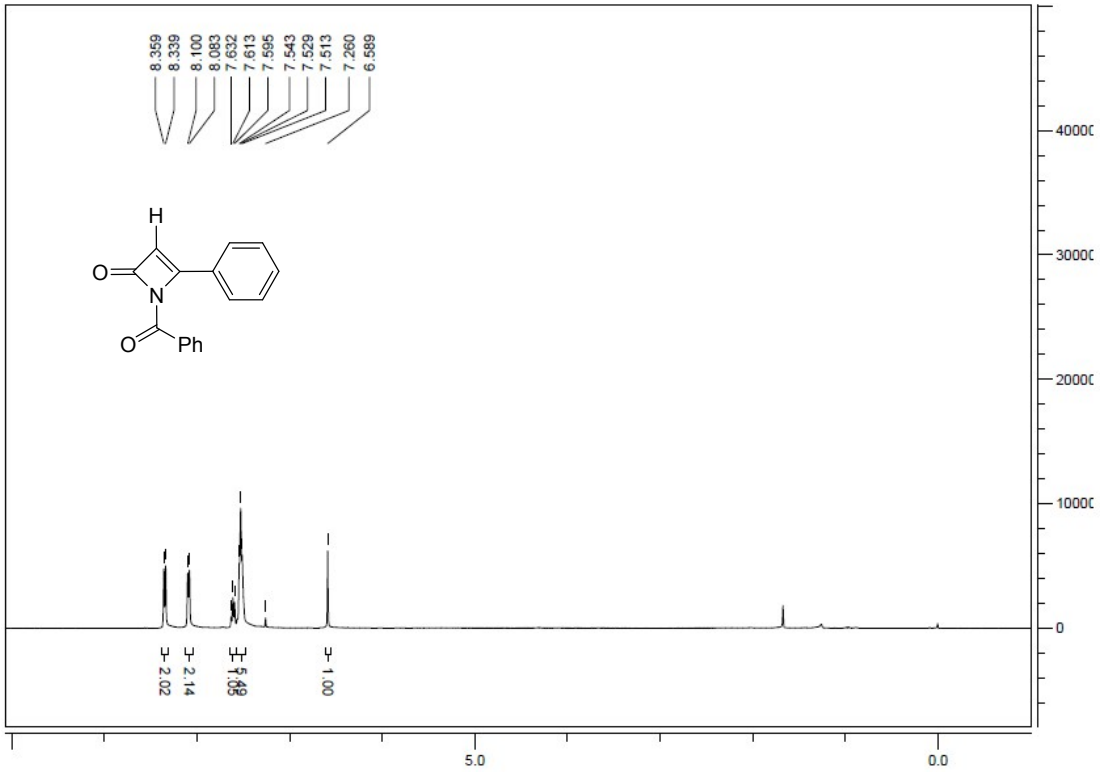


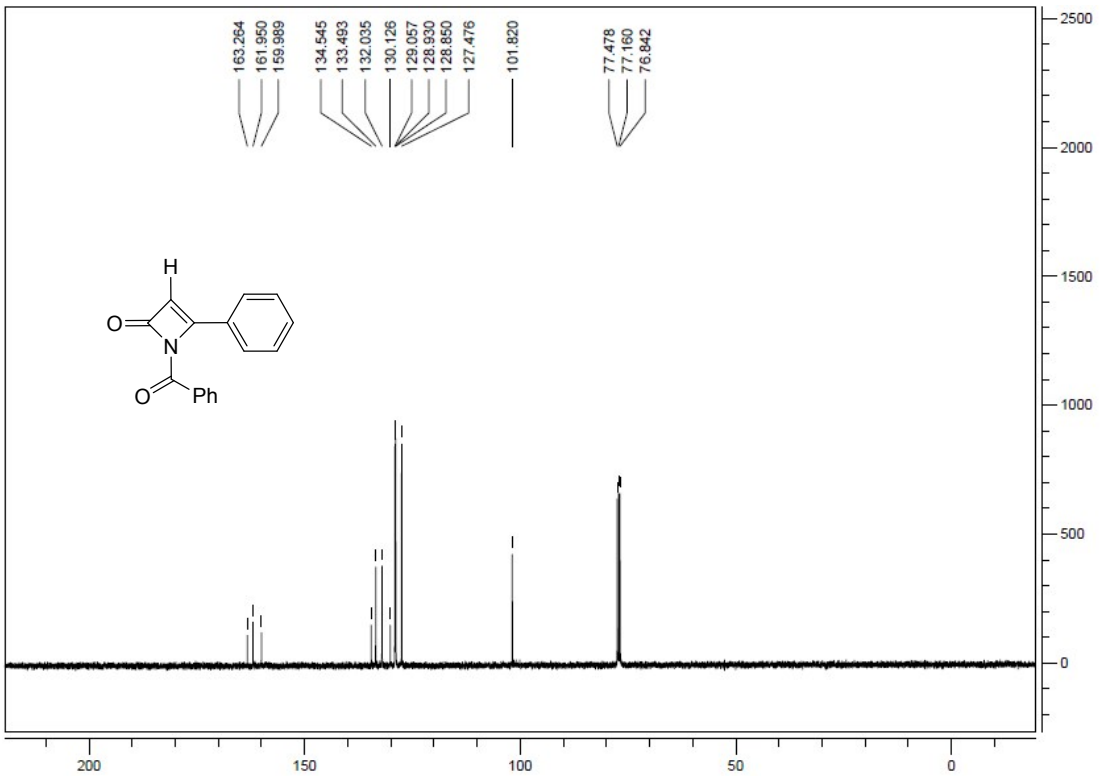
4-Phenyl-1-pivaloylazet-2(1H)-one (2b):



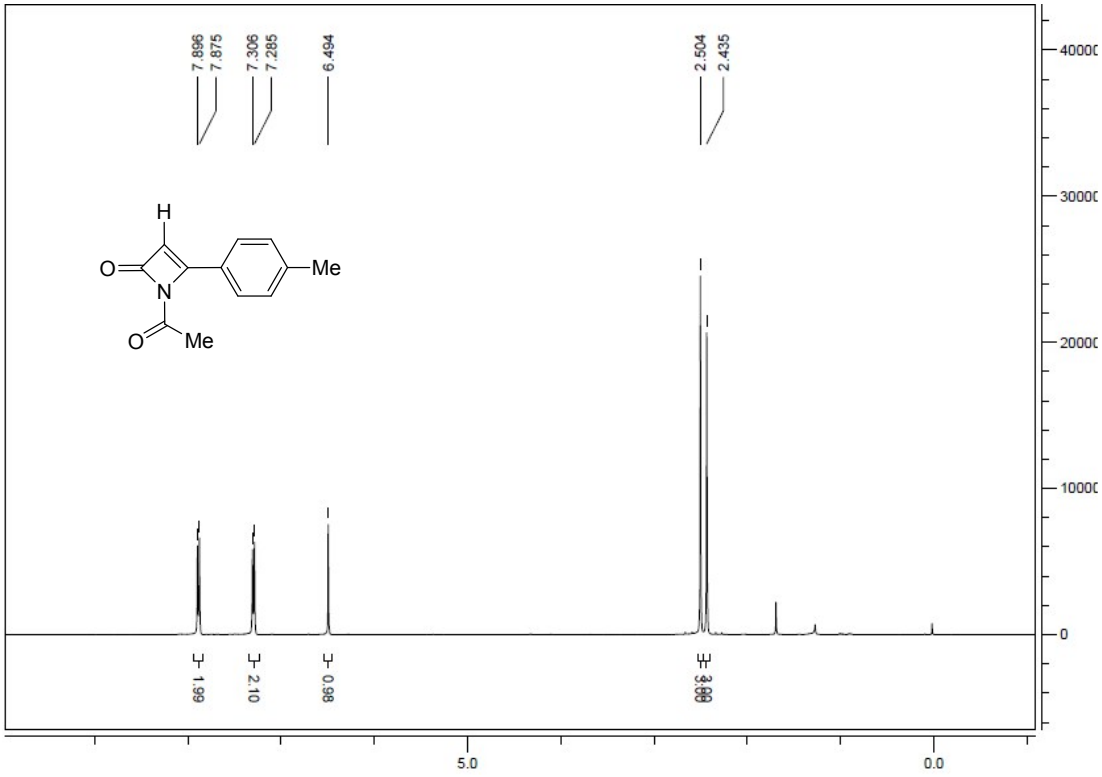


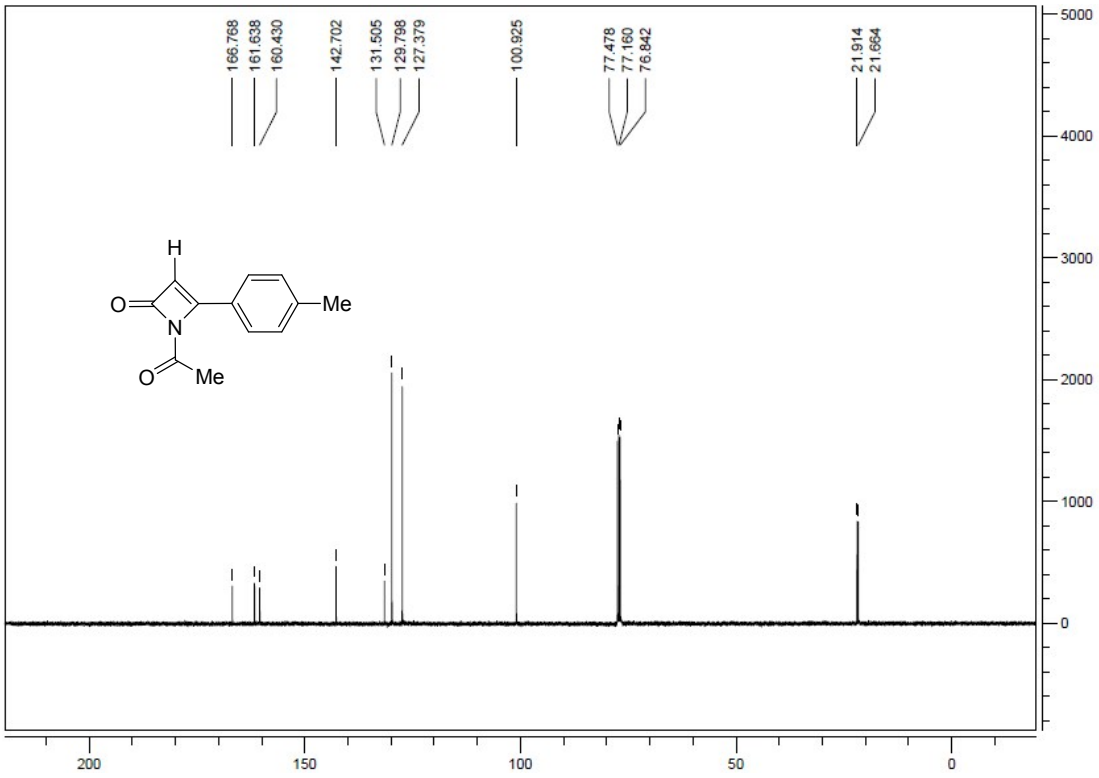
1-Benzoyl-4-phenylazet-2(1H)-one (2c):



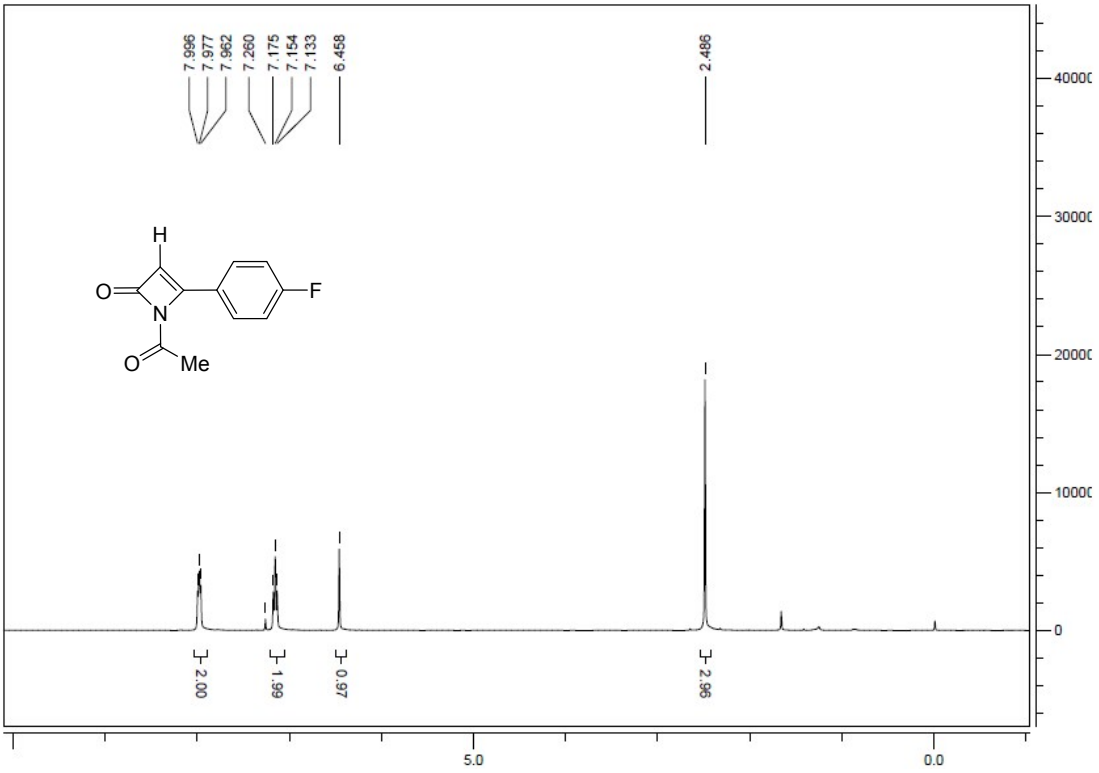


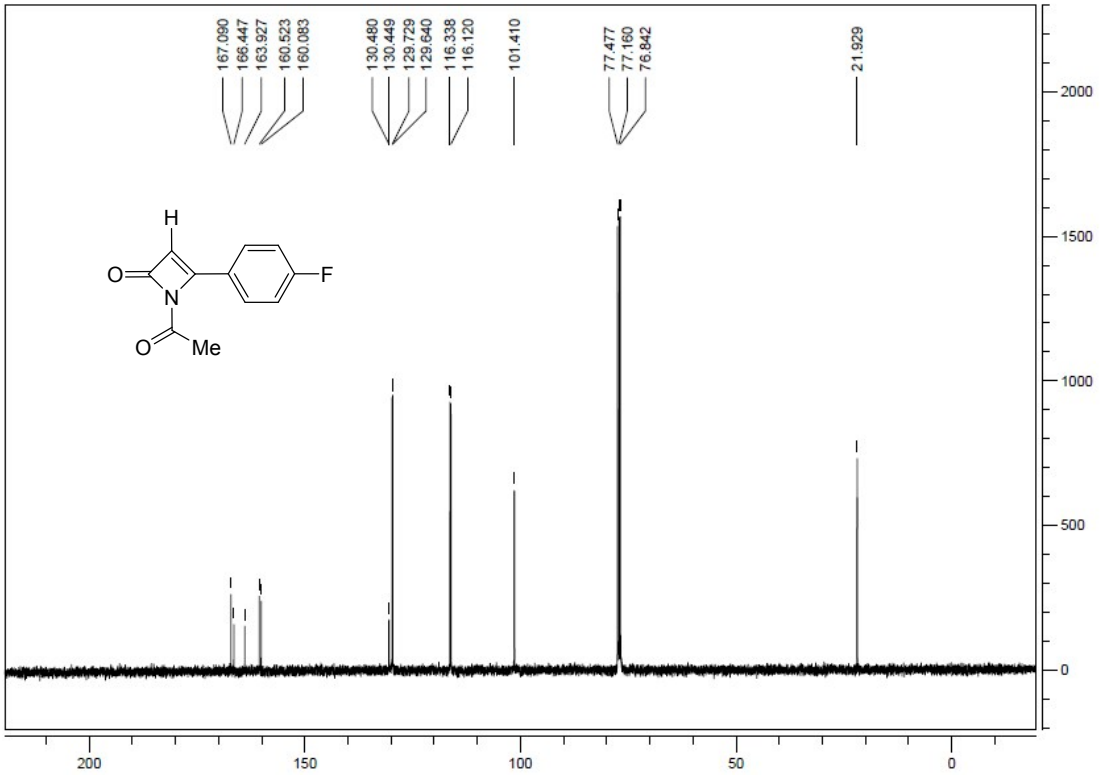
1-Acetyl-4-(p-tolyl)azet-2(1H)-one (2d):

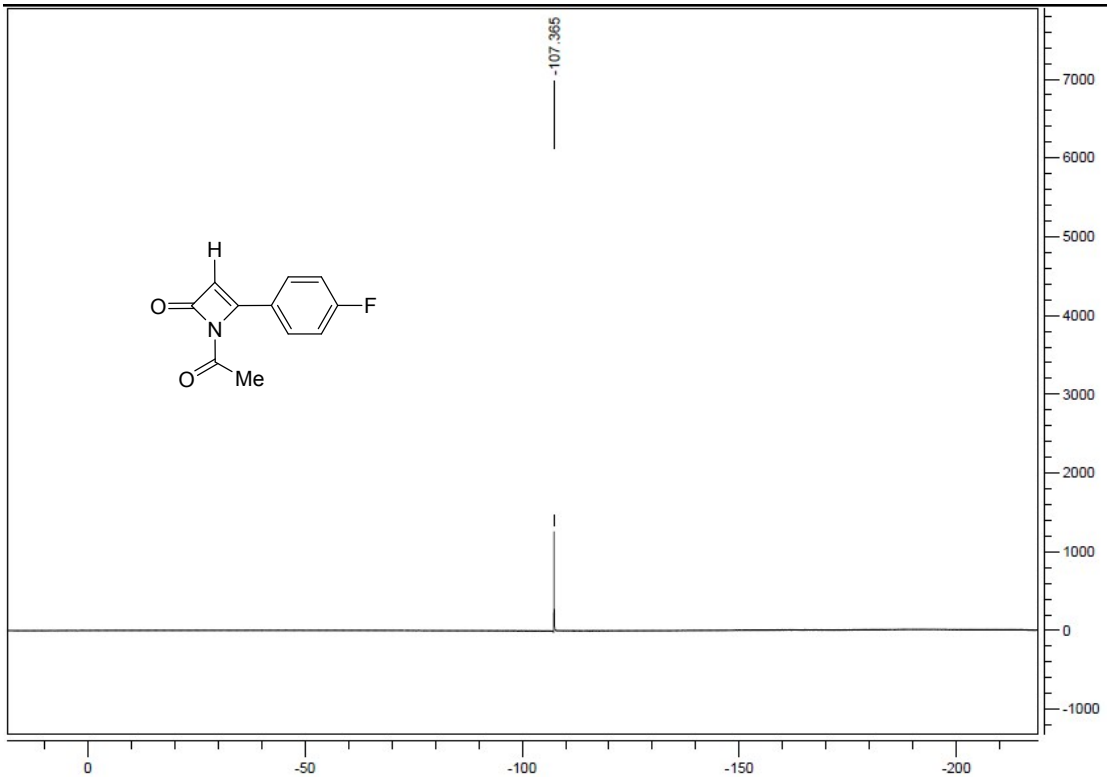




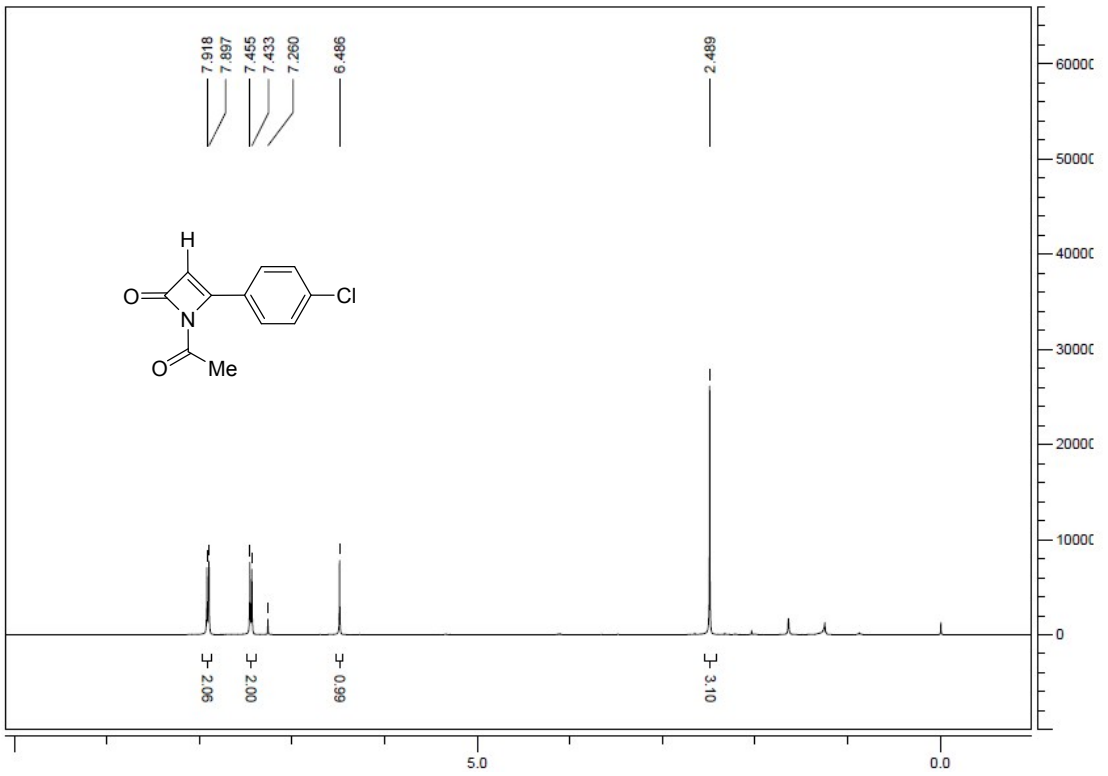
1-Acetyl-4-(4-fluorophenyl)azet-2(1H)-one (2e):

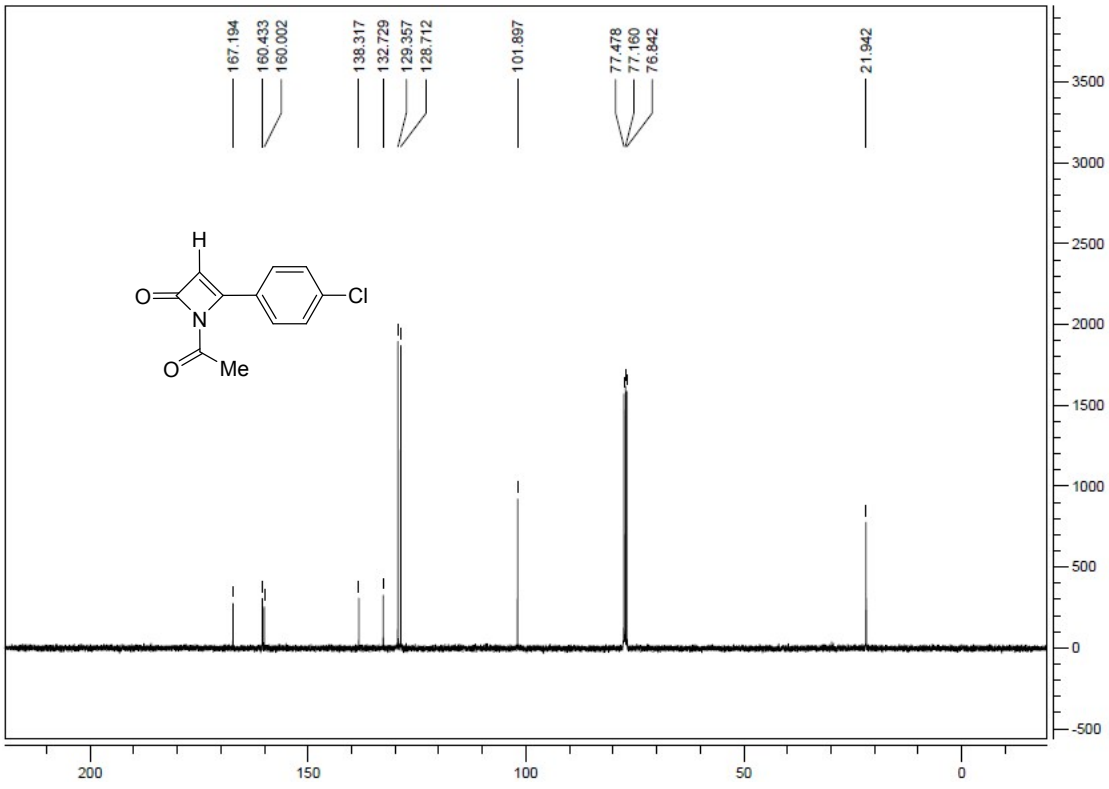




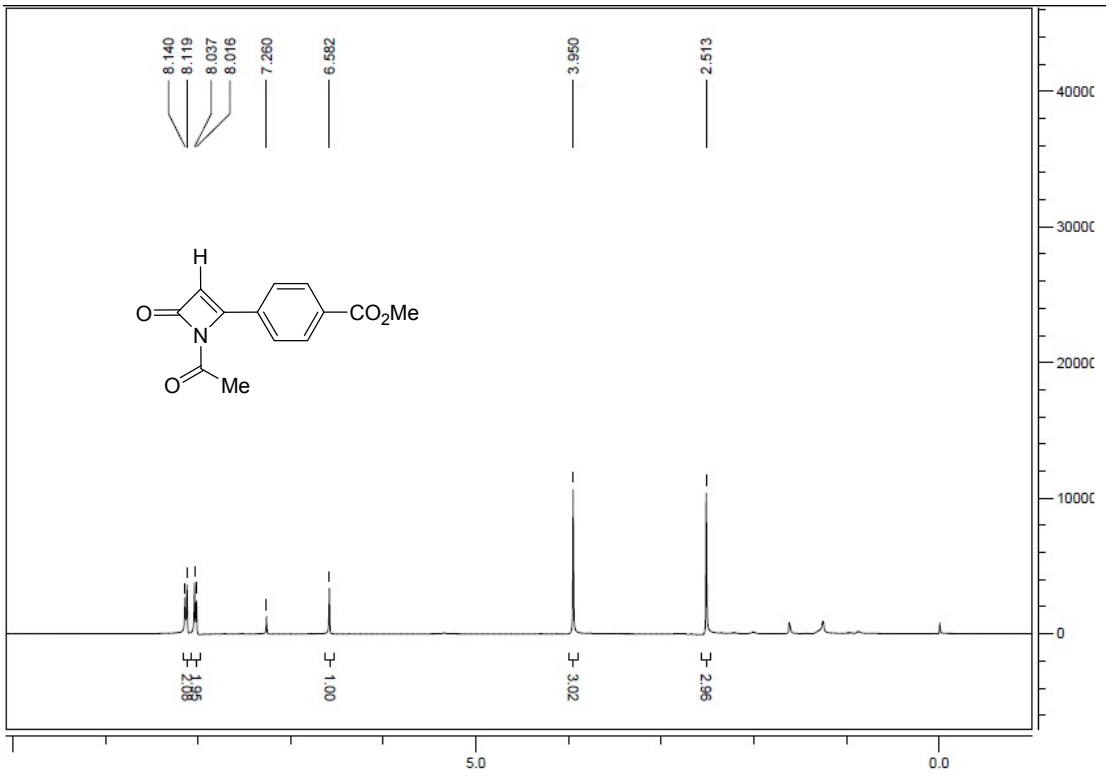


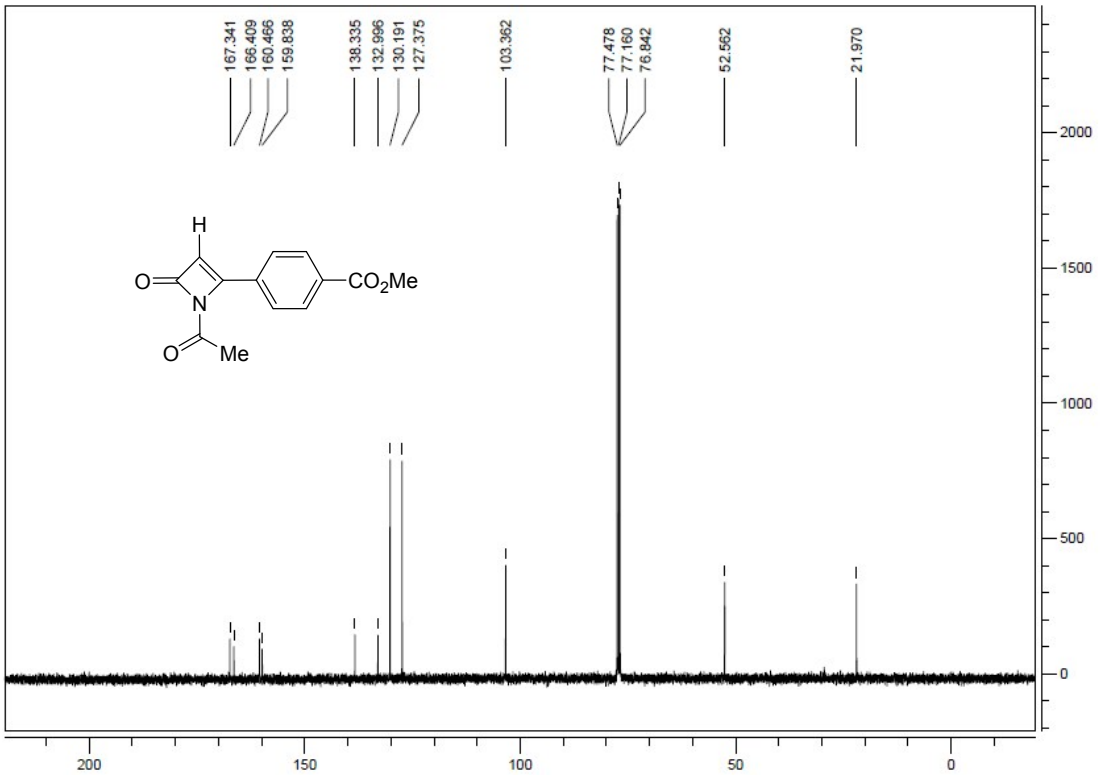
1-Acetyl-4-(4-chlorophenyl)azet-2(1H)-one (2f):



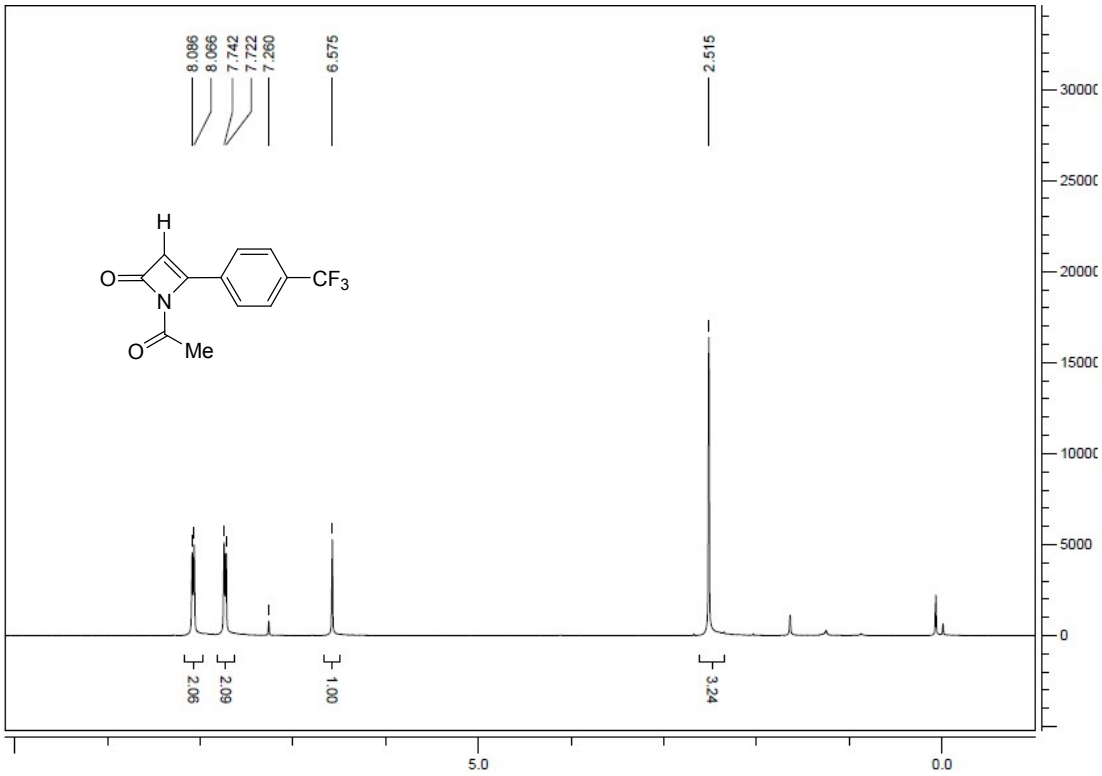


Methyl 4-(1-acetyl-4-oxo-1,4-dihydroazet-2-yl)benzoate (2g):





1-Acetyl-4-(4-(trifluoromethyl)phenyl)azet-2(1H)-one (2h)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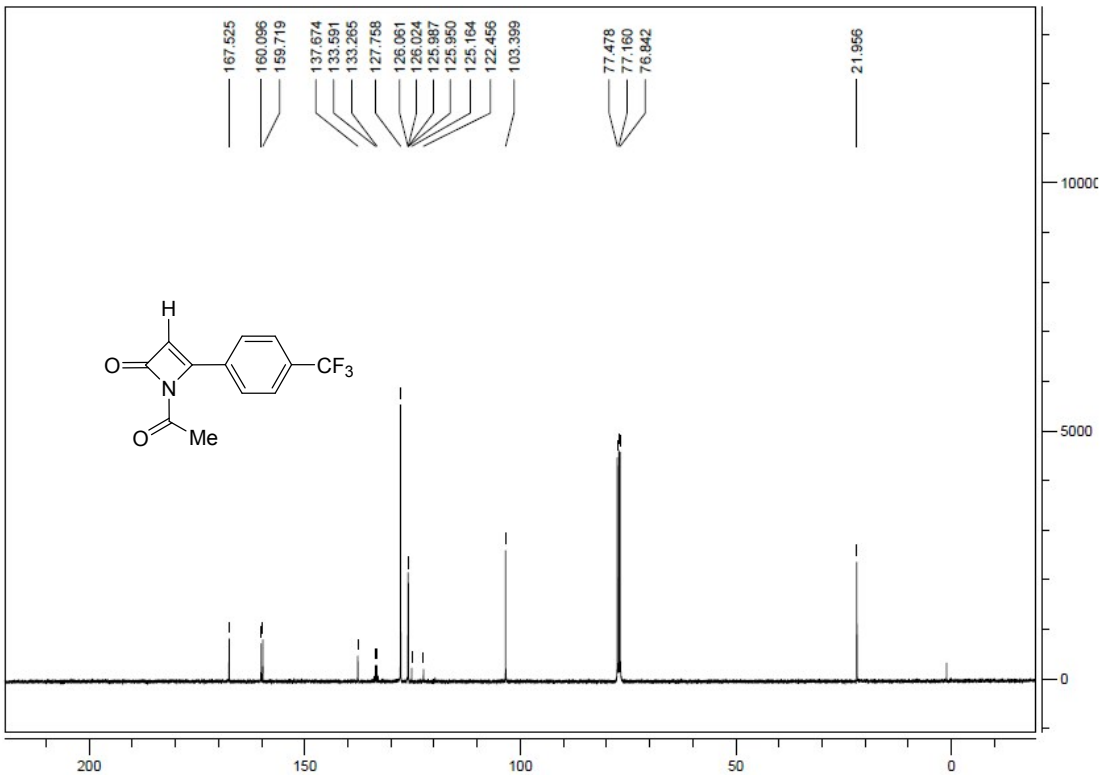
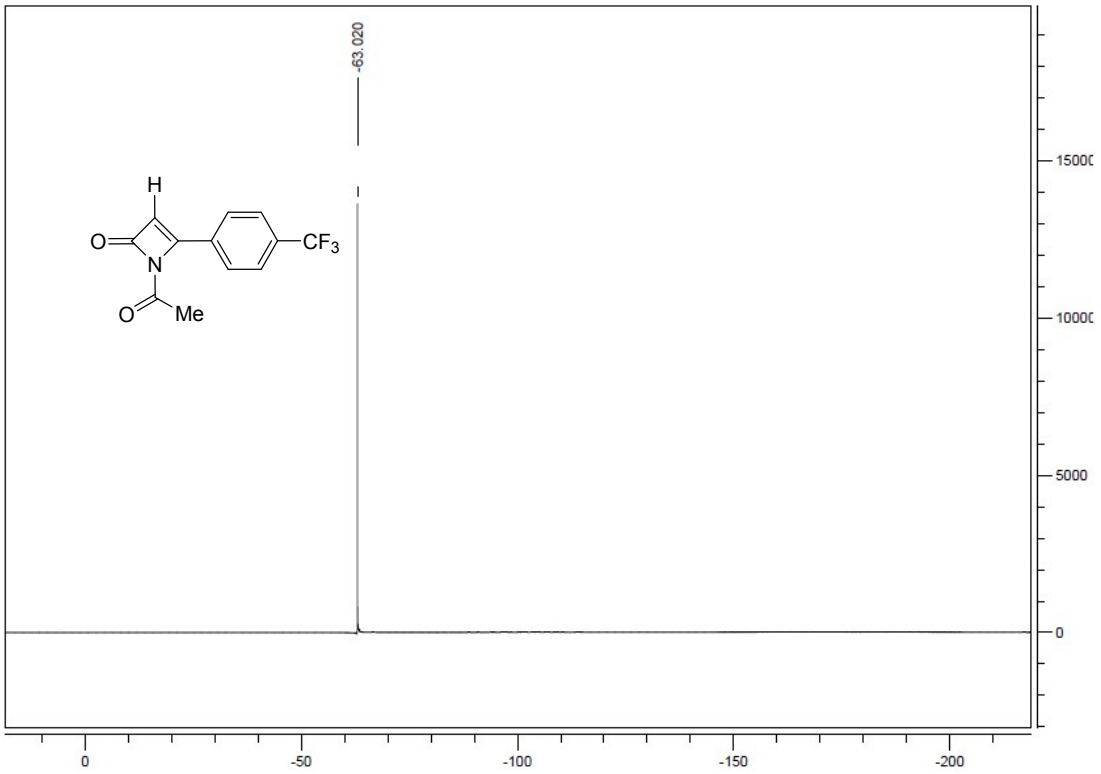
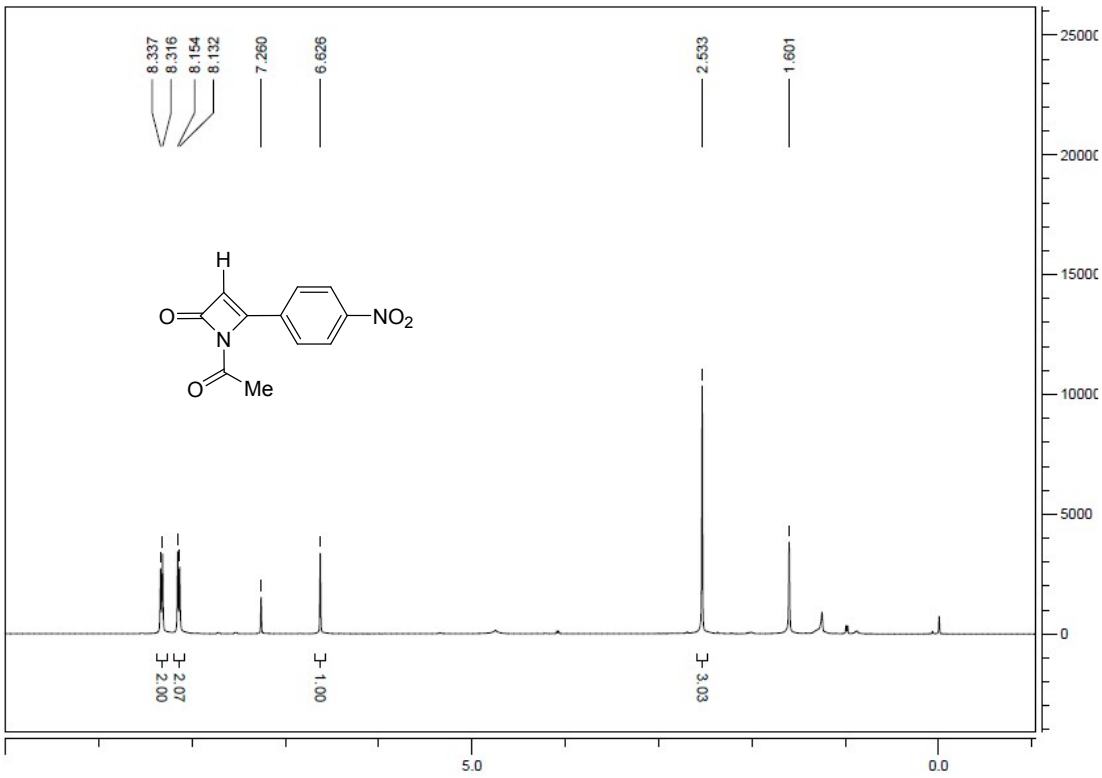
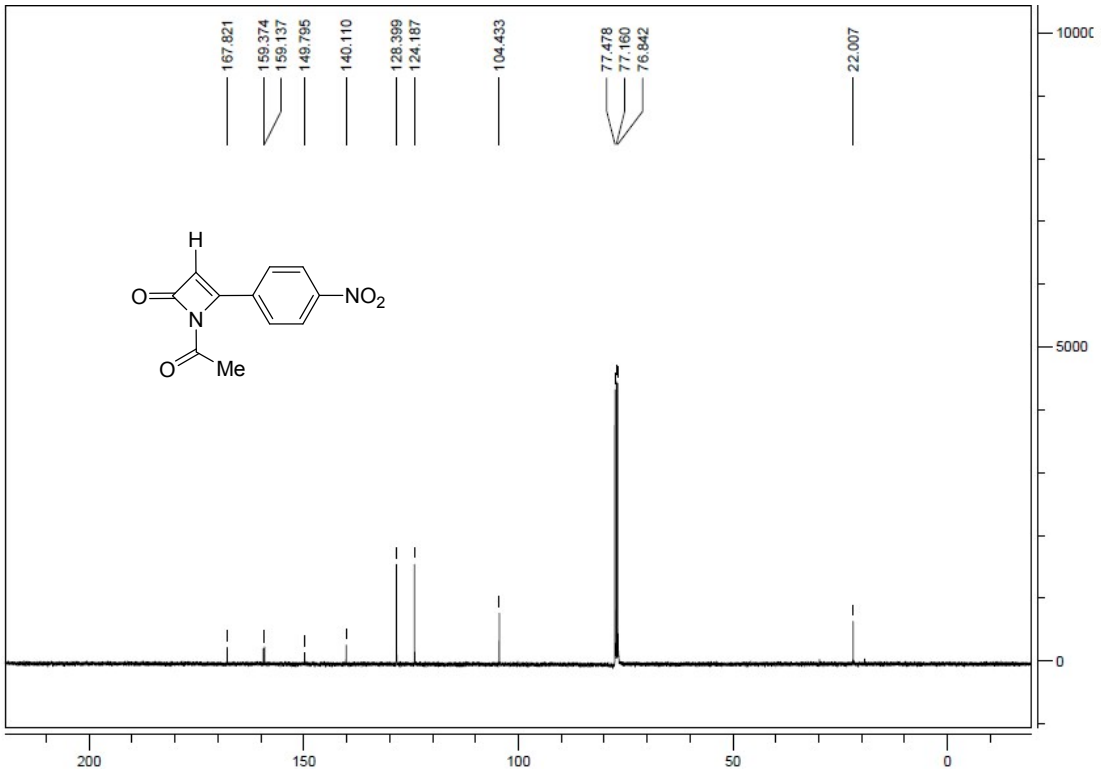
8.066
7.742
7.722
7.260
6.575
2.515
H
O
N
O
Me
CF3
2.06
2.09
1.00
3.24
5.0
0.0


167.525
160.096
159.719
137.674
133.591
133.265
127.758
126.061
126.024
125.987
125.950
125.164
122.456
103.399
77.478
77.160
76.842
21.956
H
O
N
O
Me
CF3
200
150
100
50
0

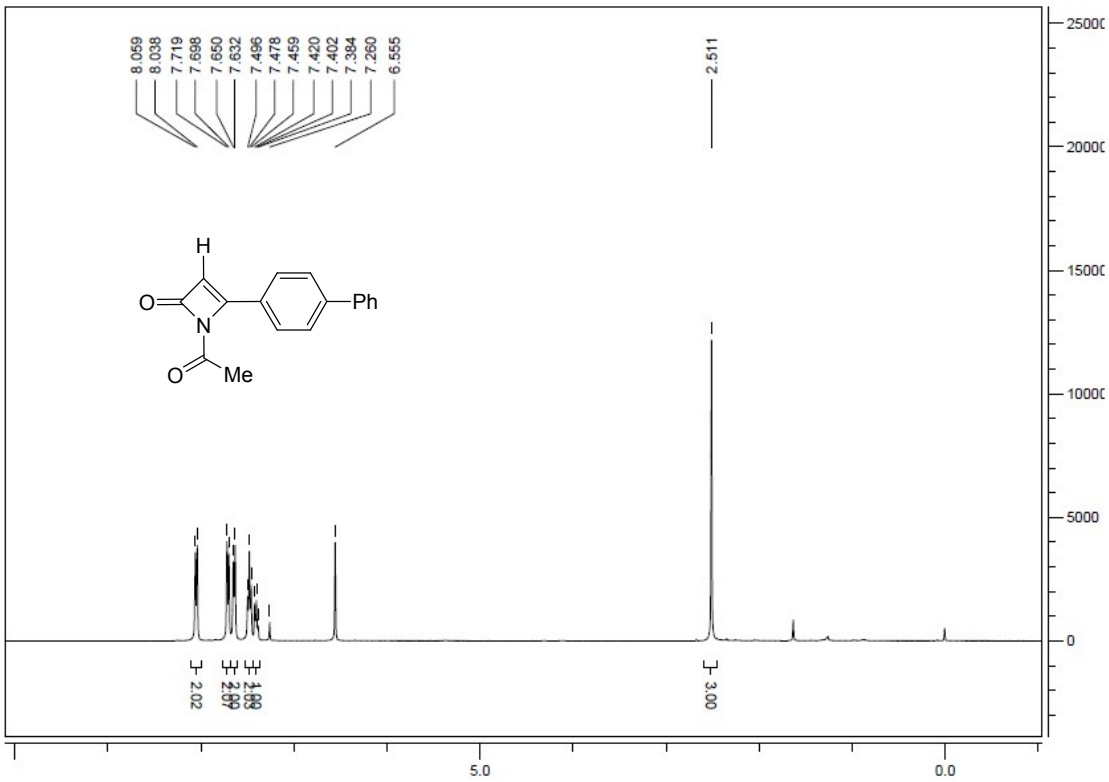


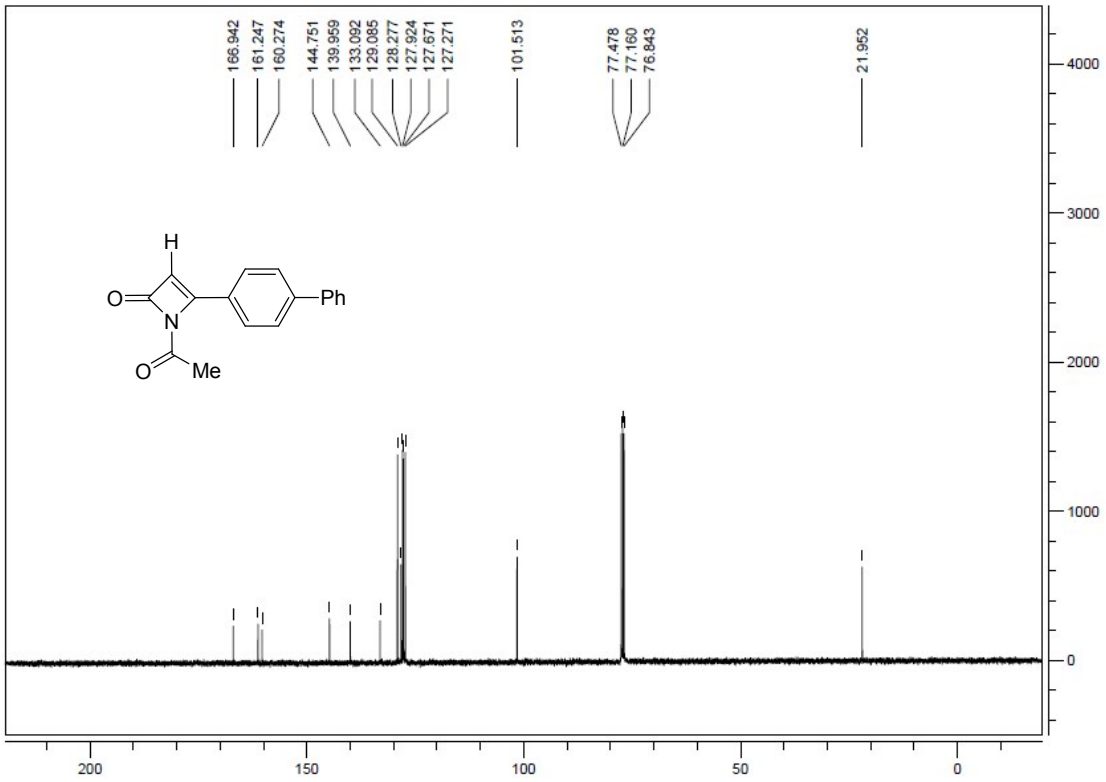
1-Acetyl-4-(4-nitrophenyl)azet-2(1H)-one (2i):



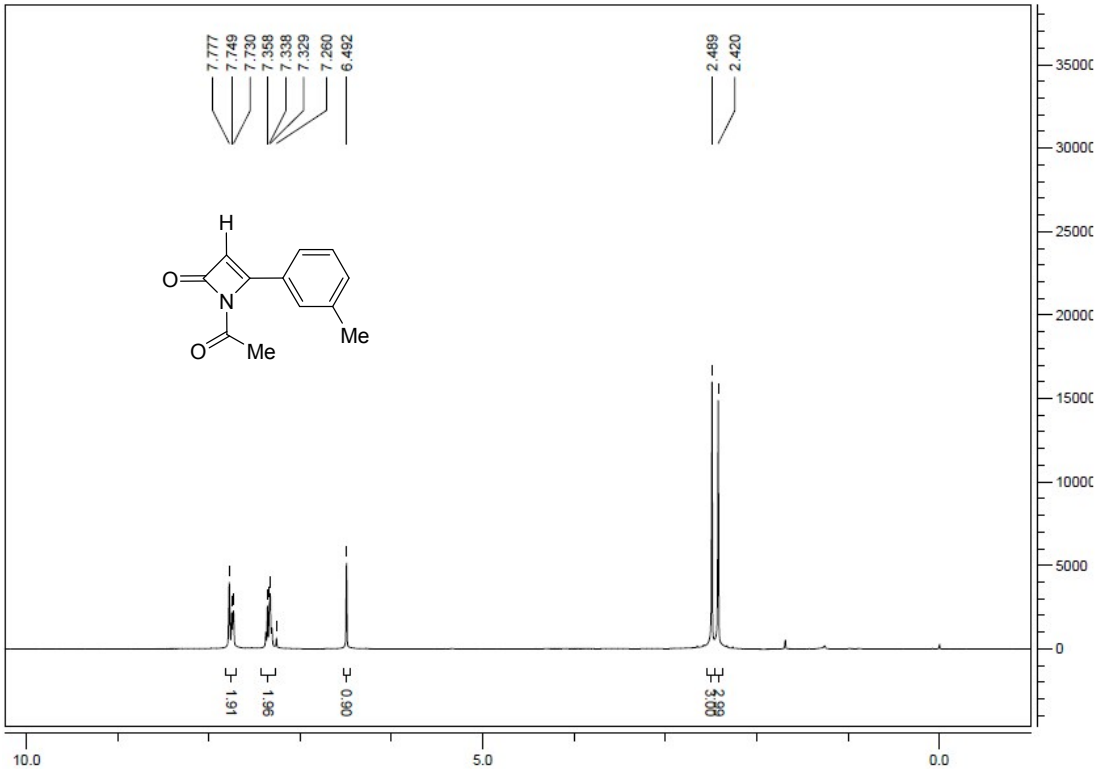


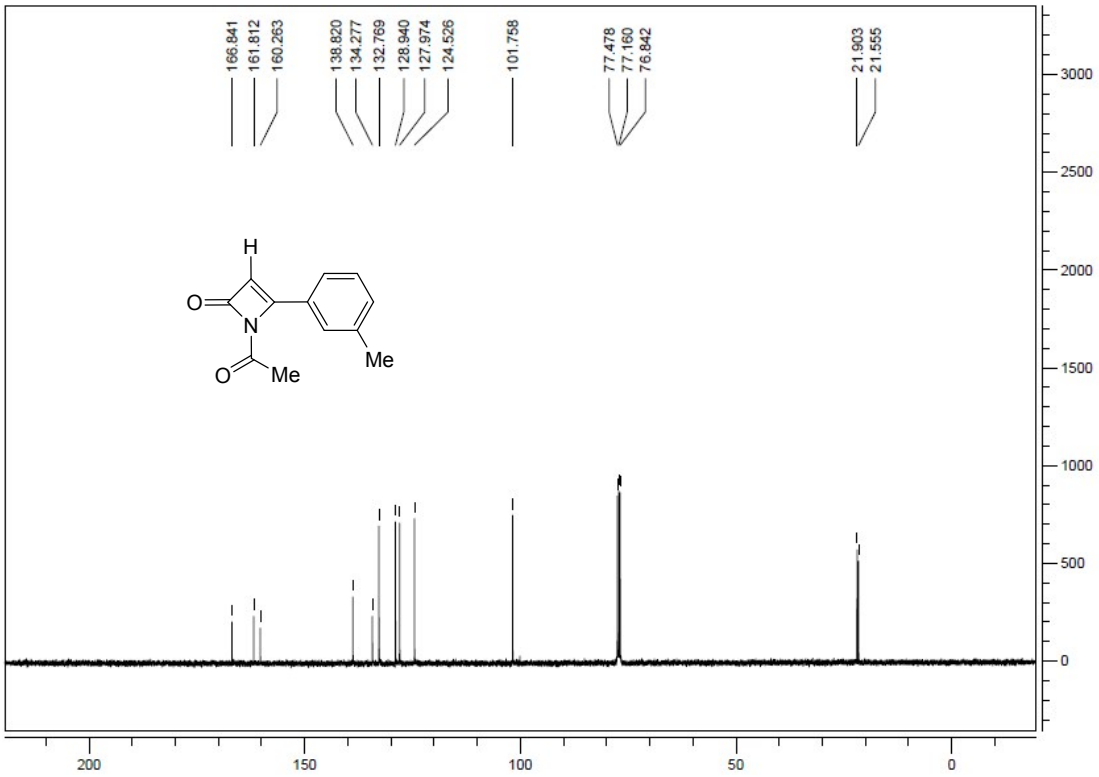
4-([1,1'-biphenyl]-4-yl)-1-acetylazet-2(1H)-one (2j):



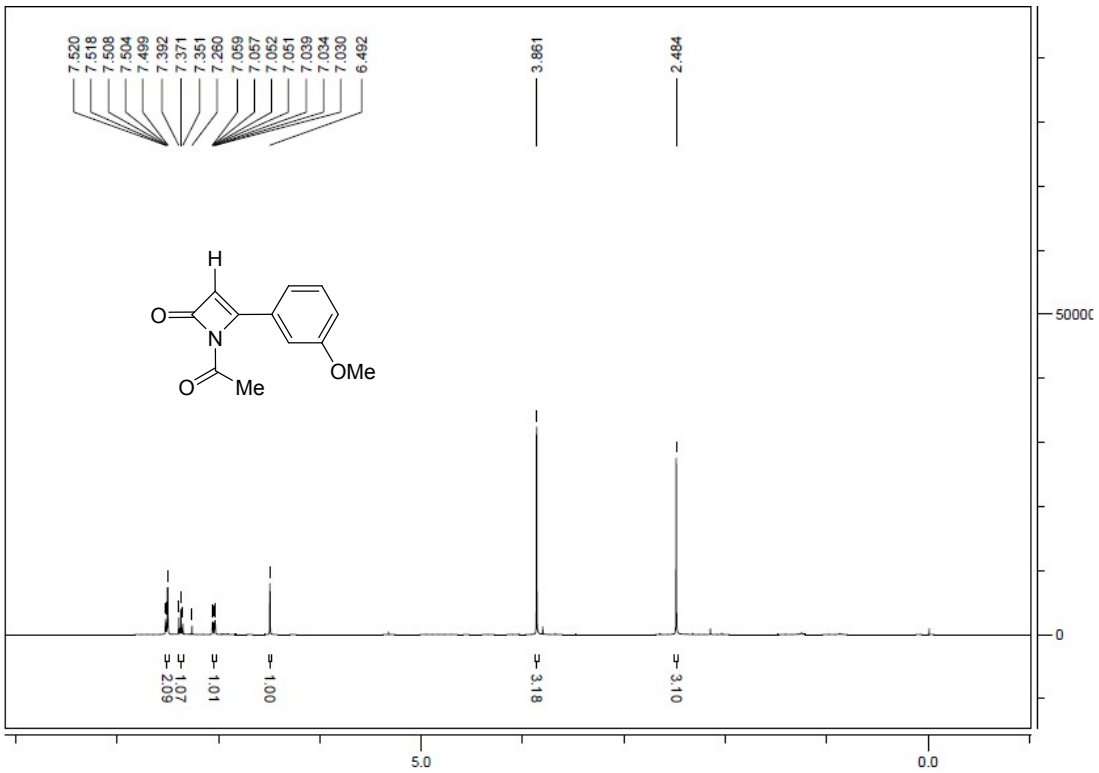


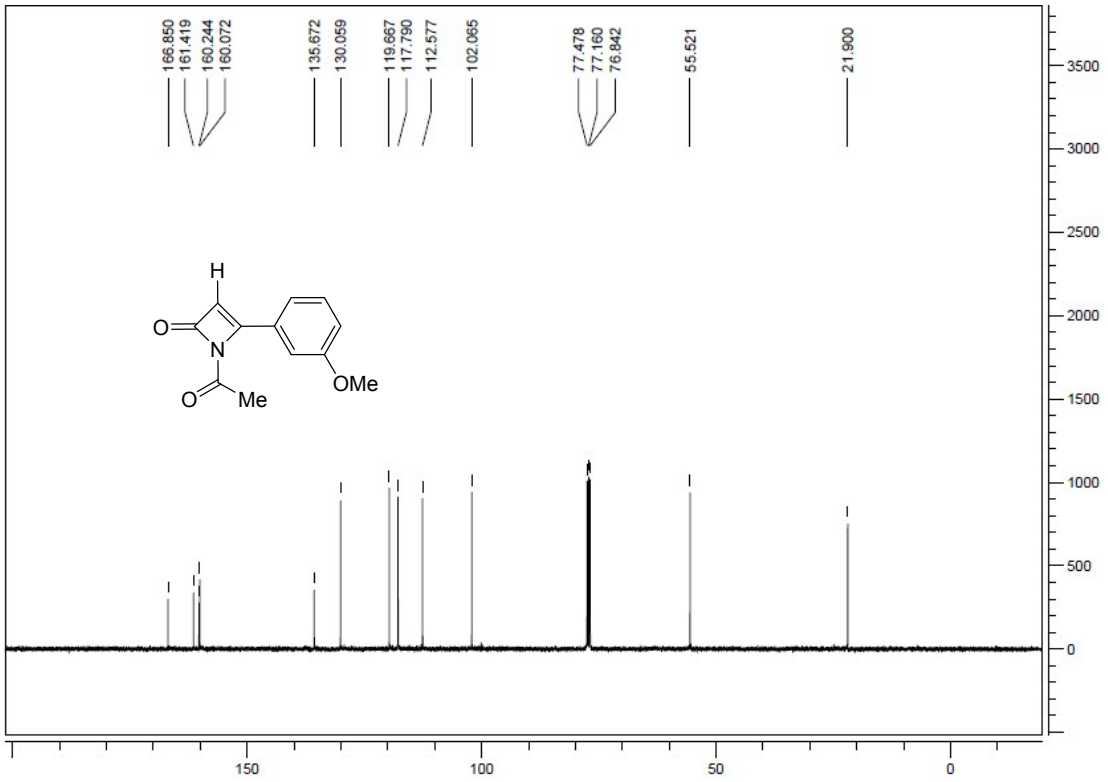
1-Acetyl-4-(m-tolyl)azet-2(1H)-one (2k):



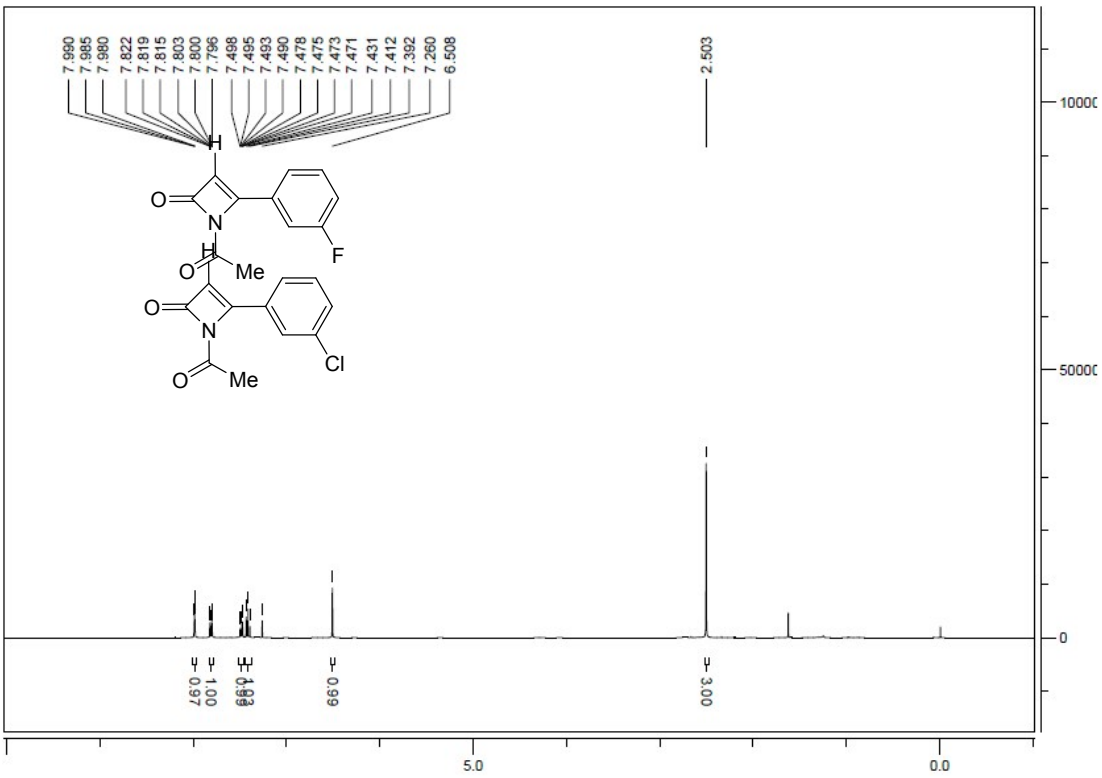


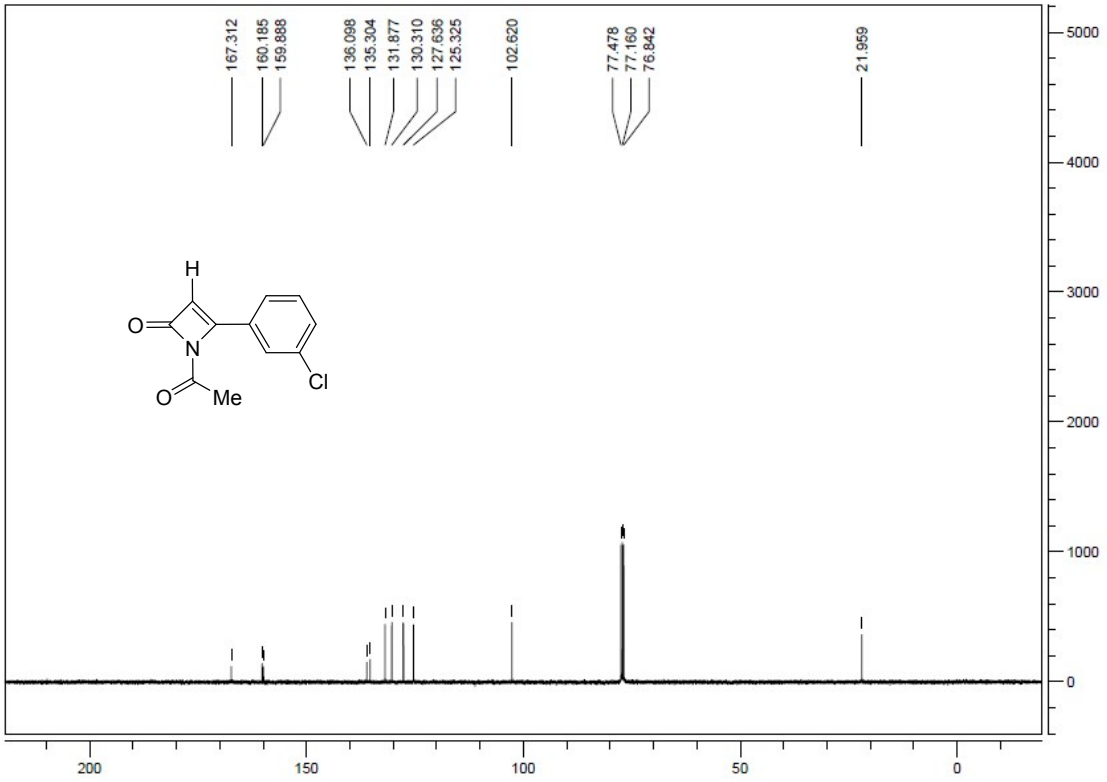
1-Acetyl-4-(3-methoxyphenyl)azet-2(1H)-one (2l)



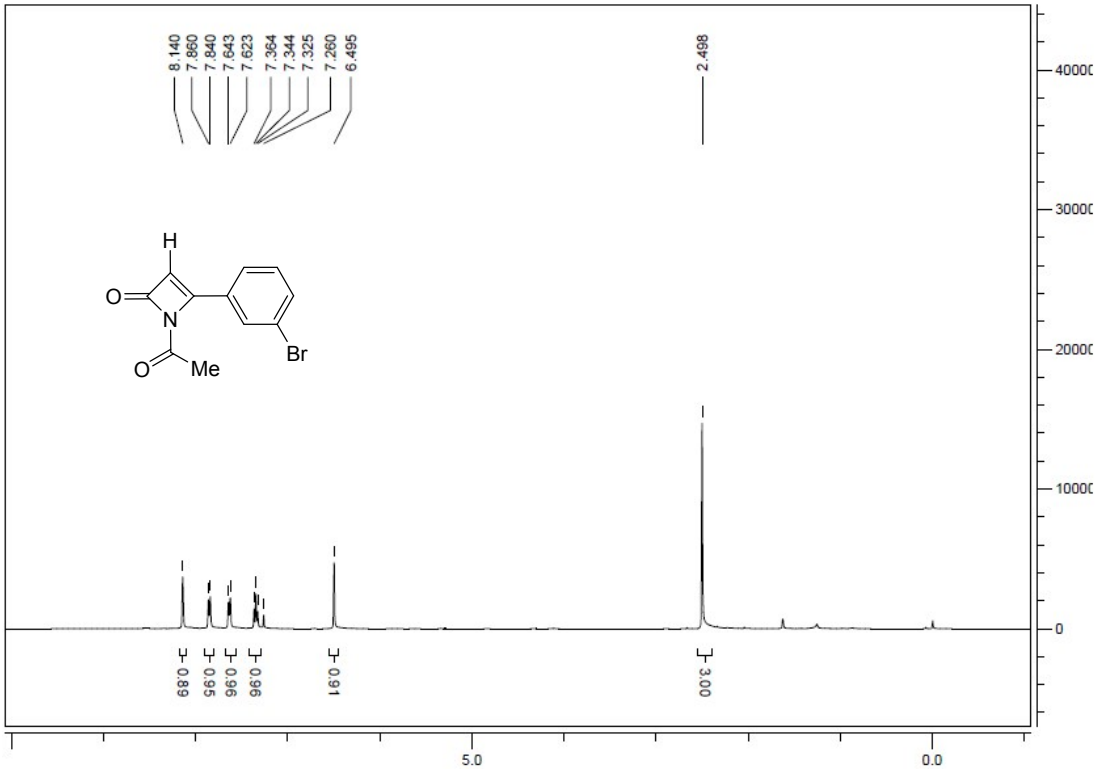


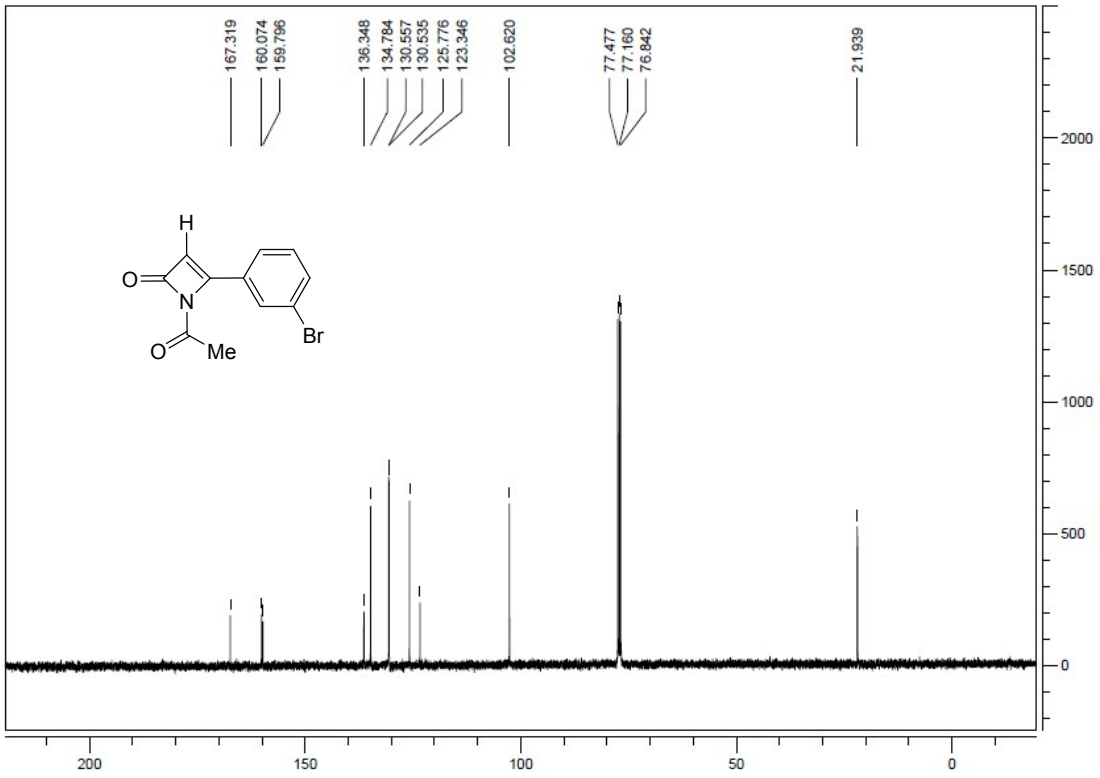
1-Acetyl-4-(3-chlorophenyl)azet-2(1H)-one (2m):



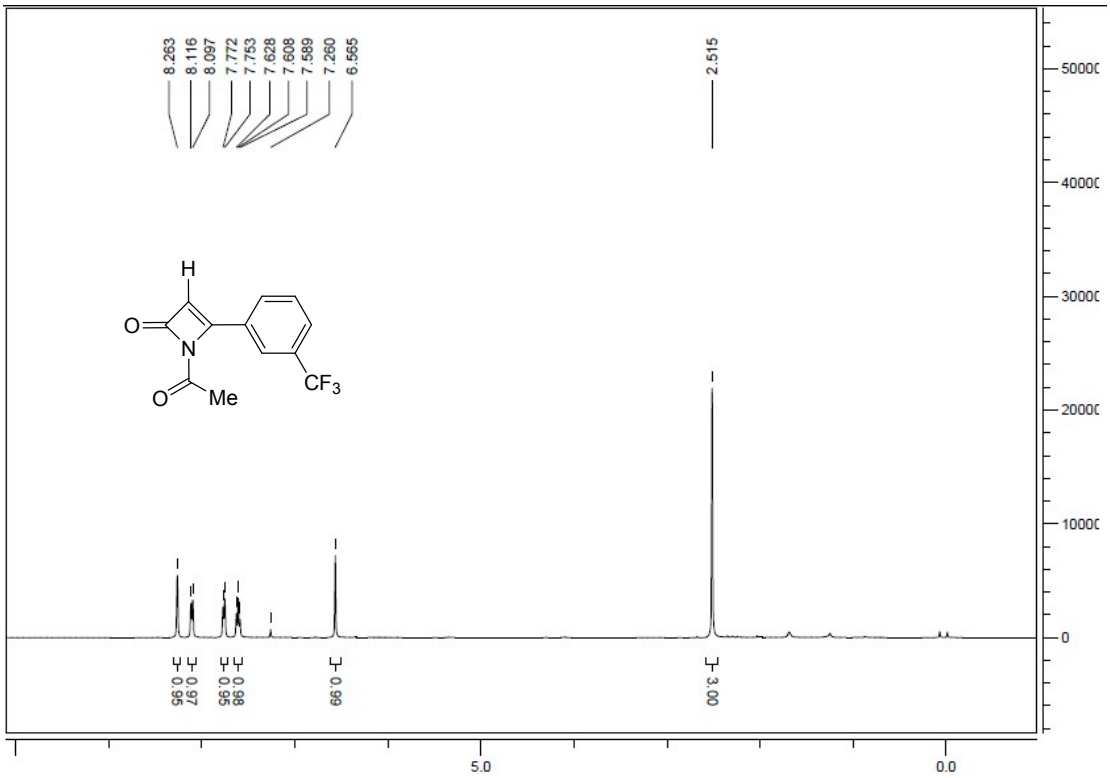


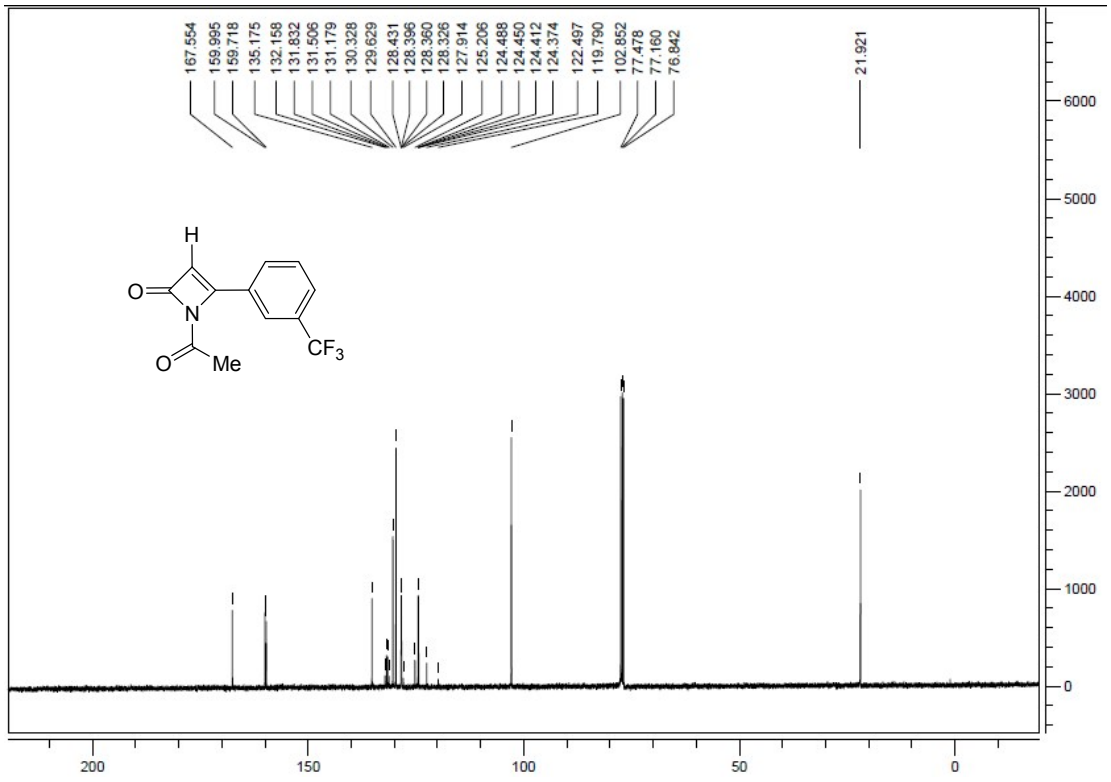
1-Acetyl-4-(3-bromophenyl)azet-2(1H)-one (2n):

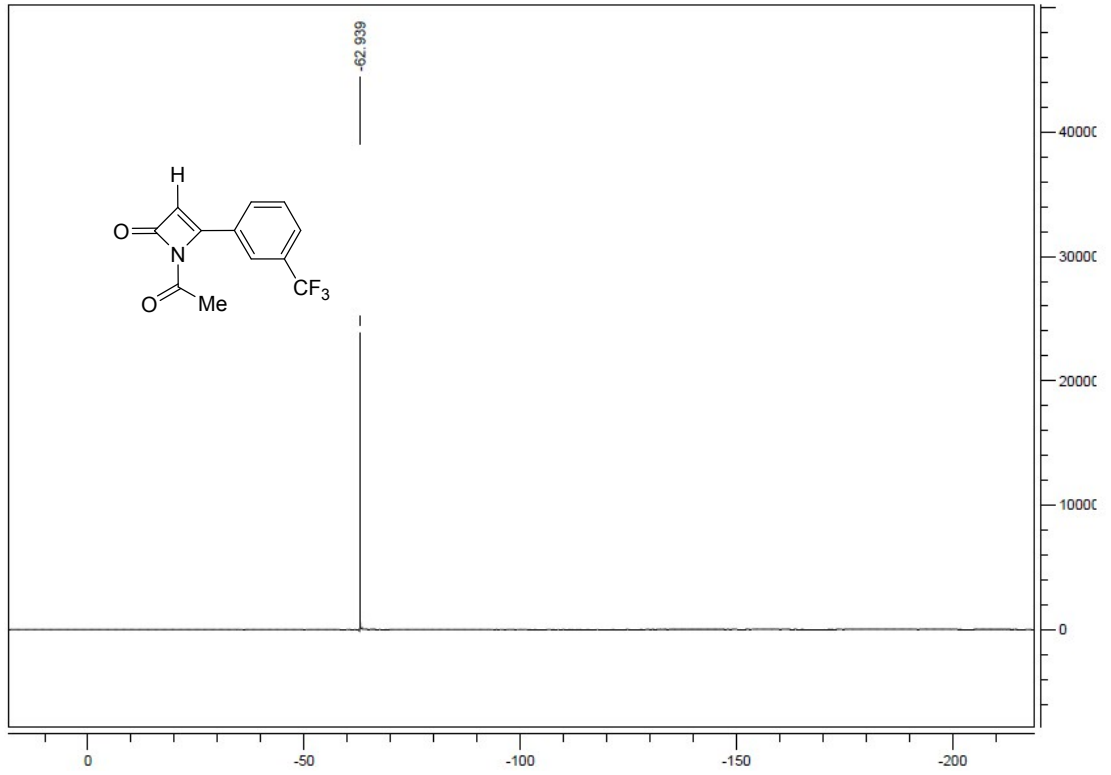




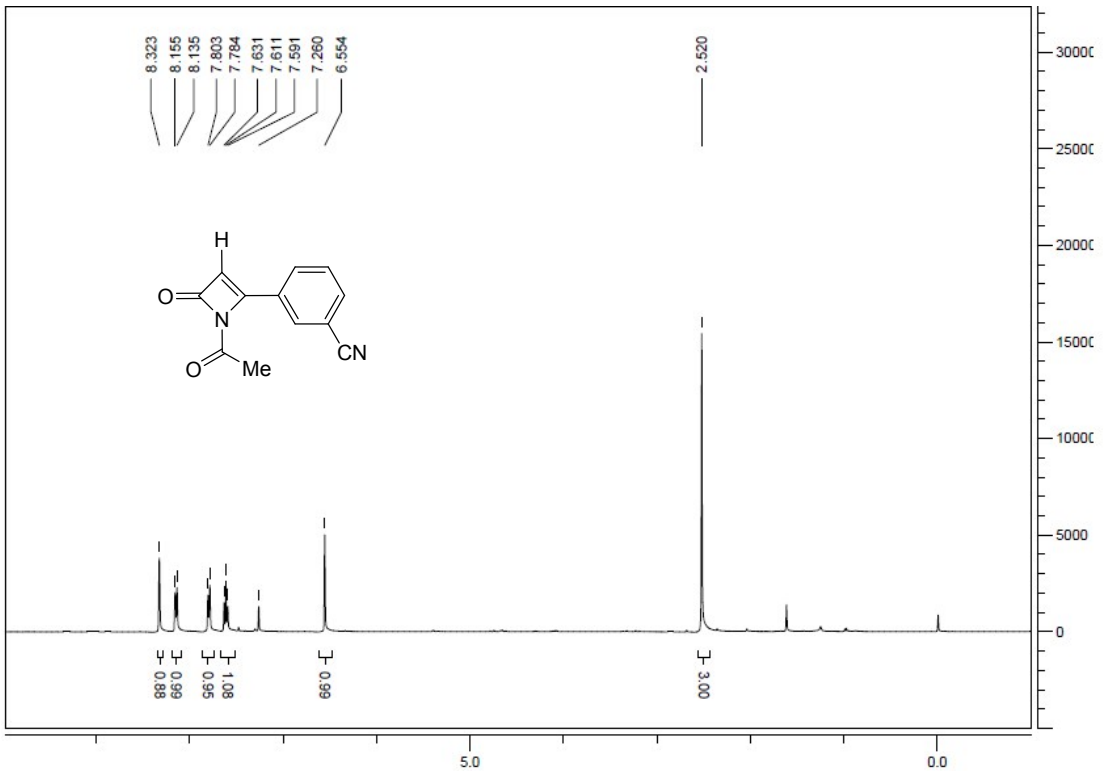
1-Acetyl-4-(3-(trifluoromethyl)phenyl)azet-2(1H)-one (2o):

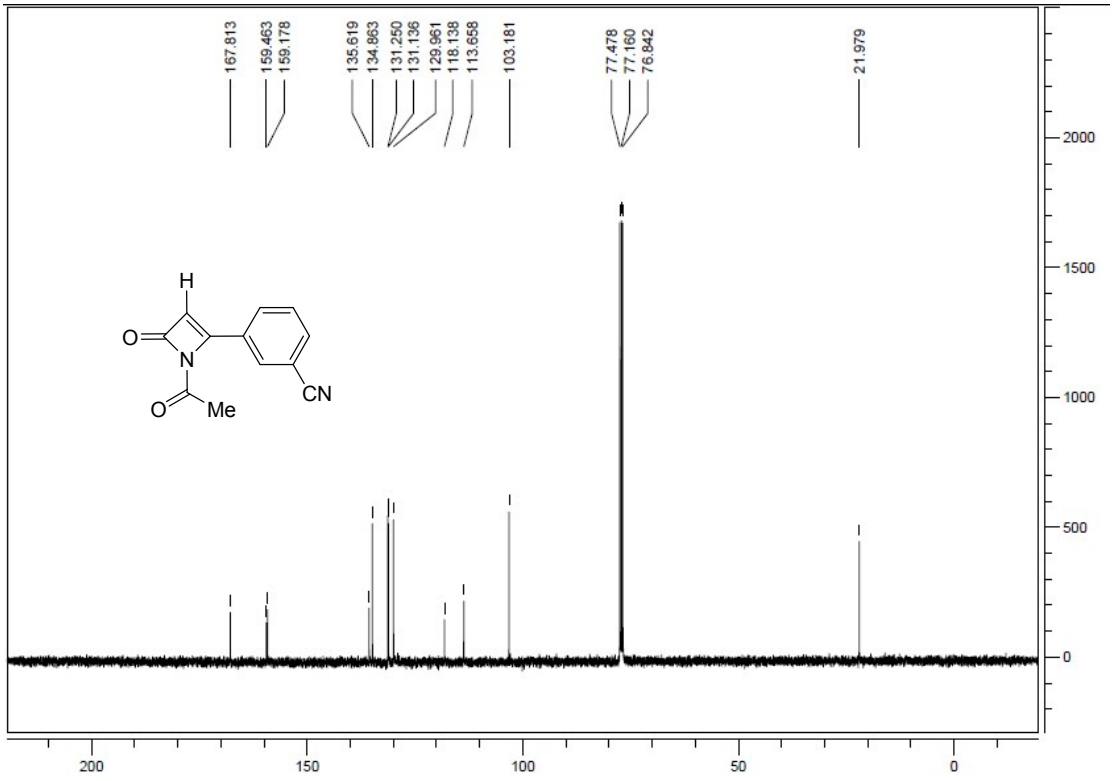




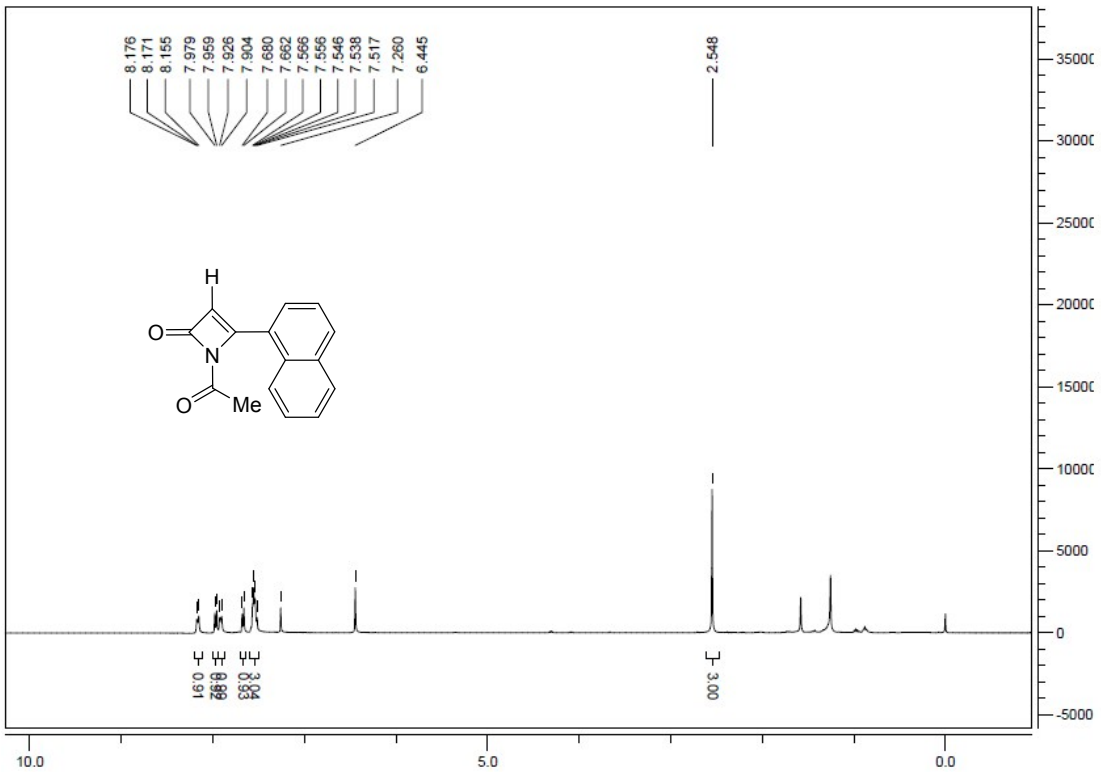


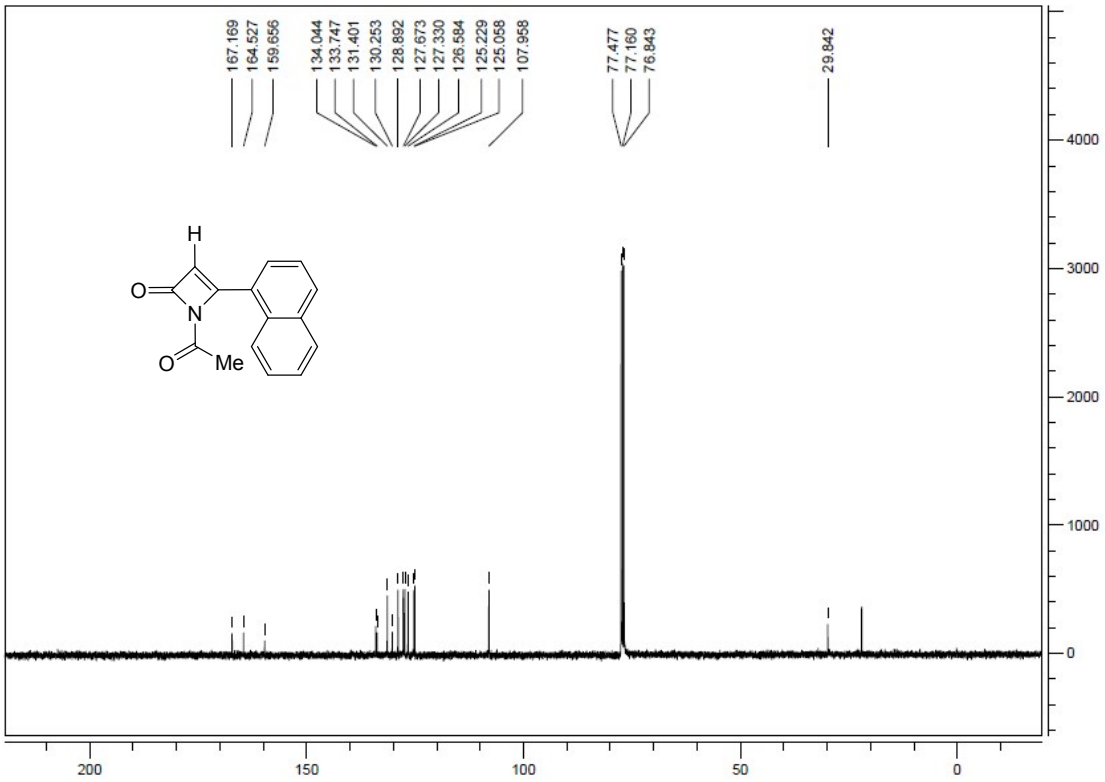
3-(1-Acetyl-4-oxo-1,4-dihydroazet-2-yl)benzonitrile (2p):



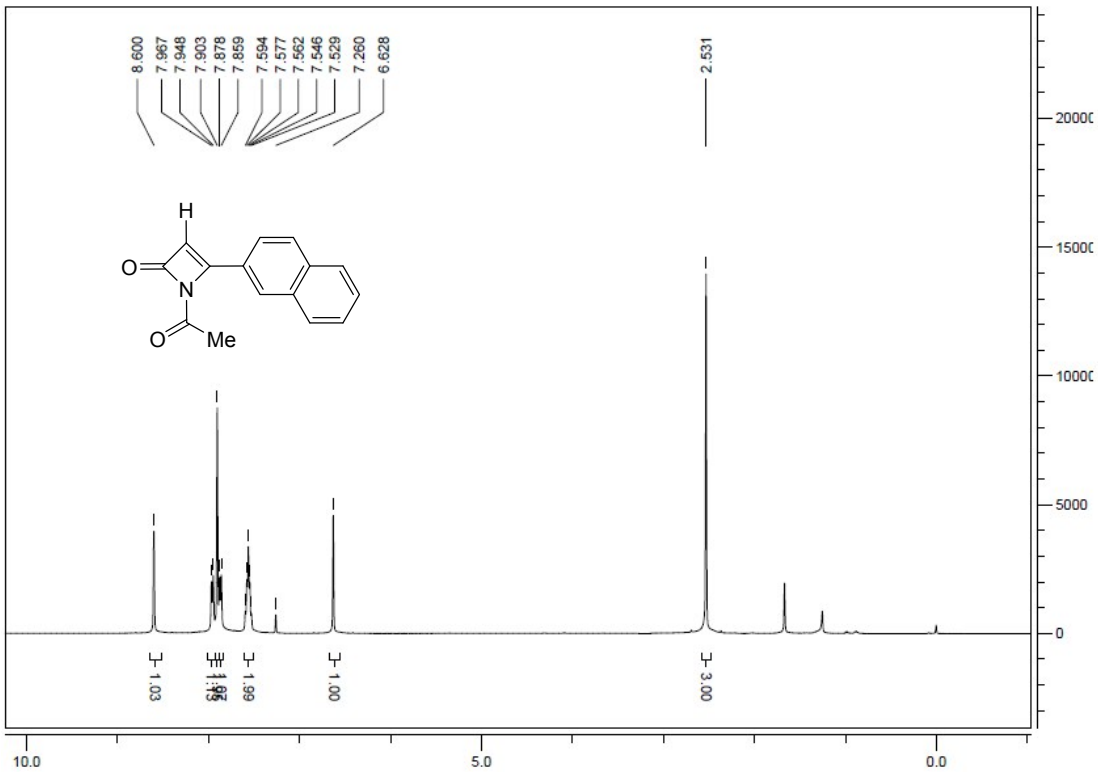


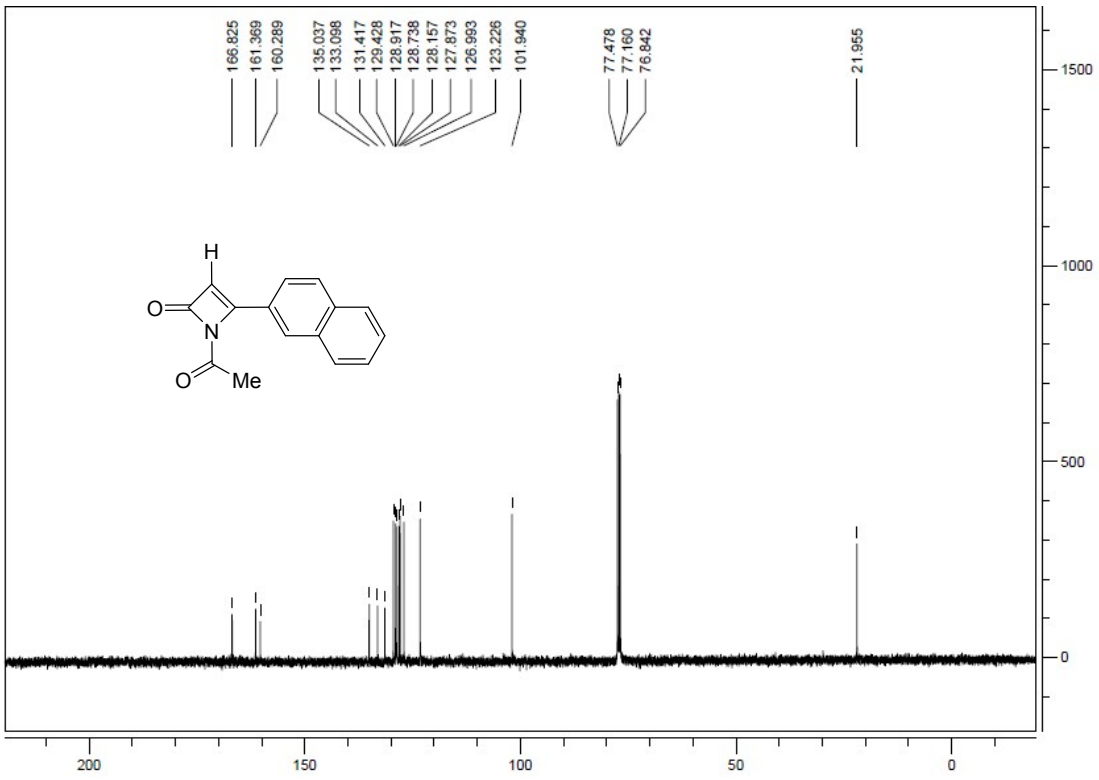
1-Acetyl-4-(naphthalen-1-yl)azet-2(1H)-one (2q)



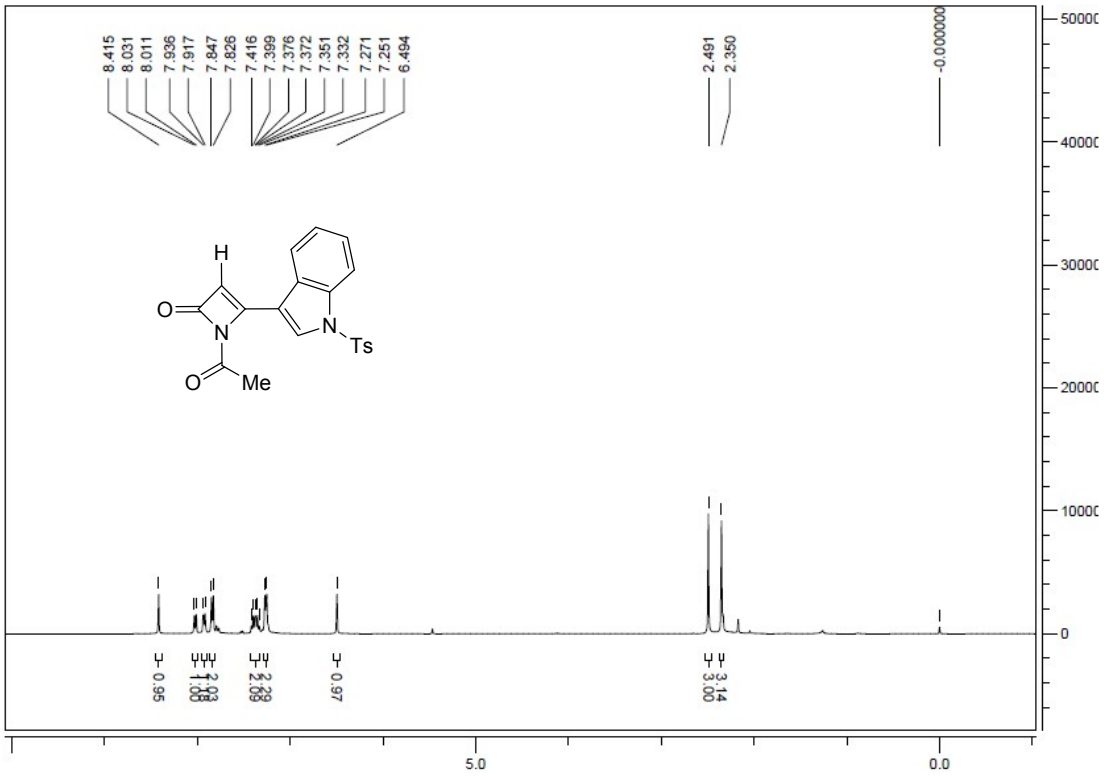


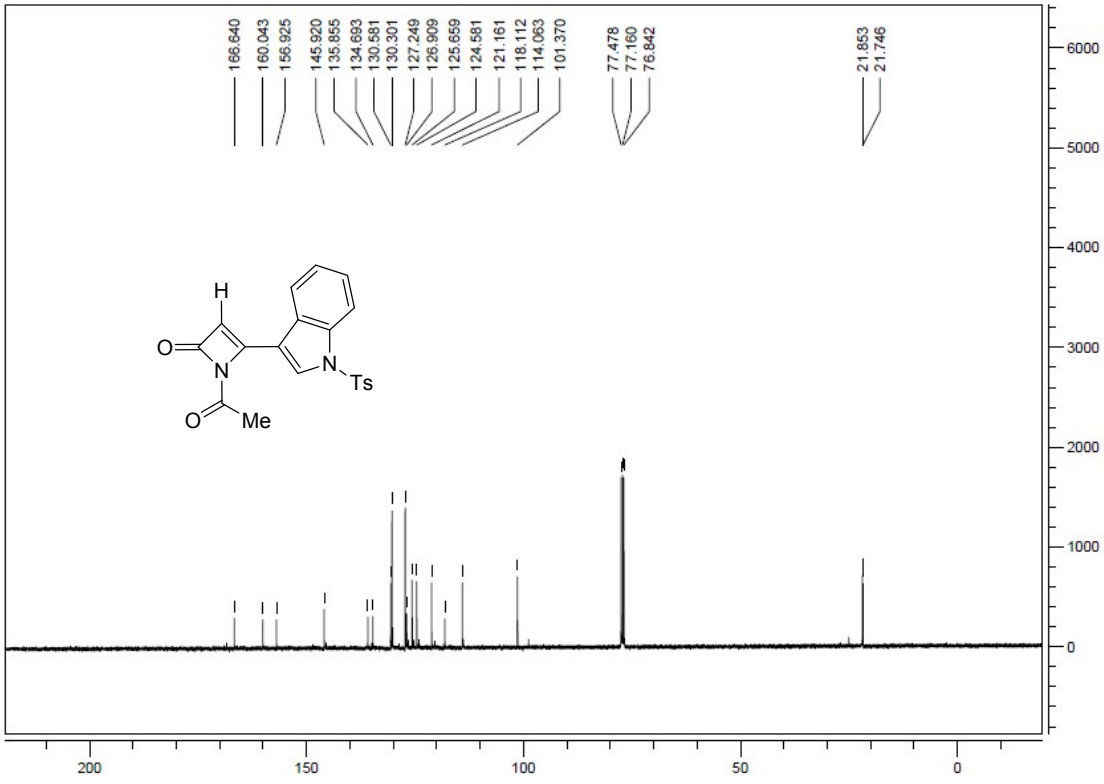
1-Acetyl-4-(naphthalen-2-yl)azet-2(1H)-one (2r)



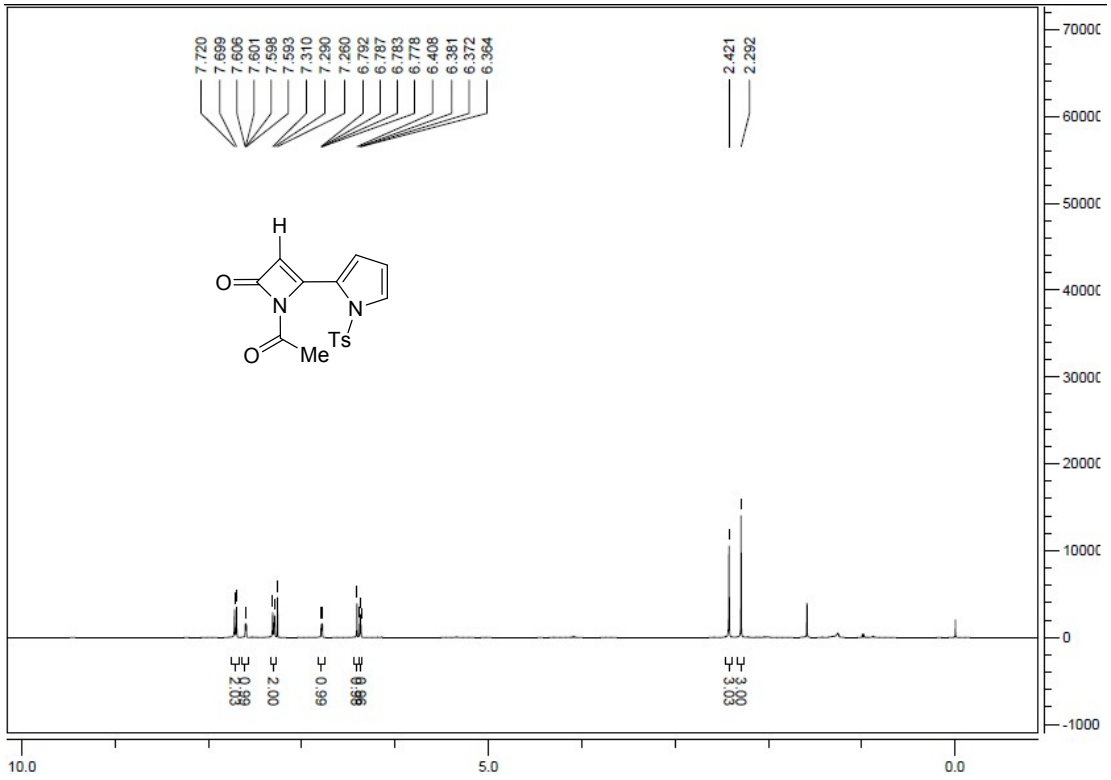


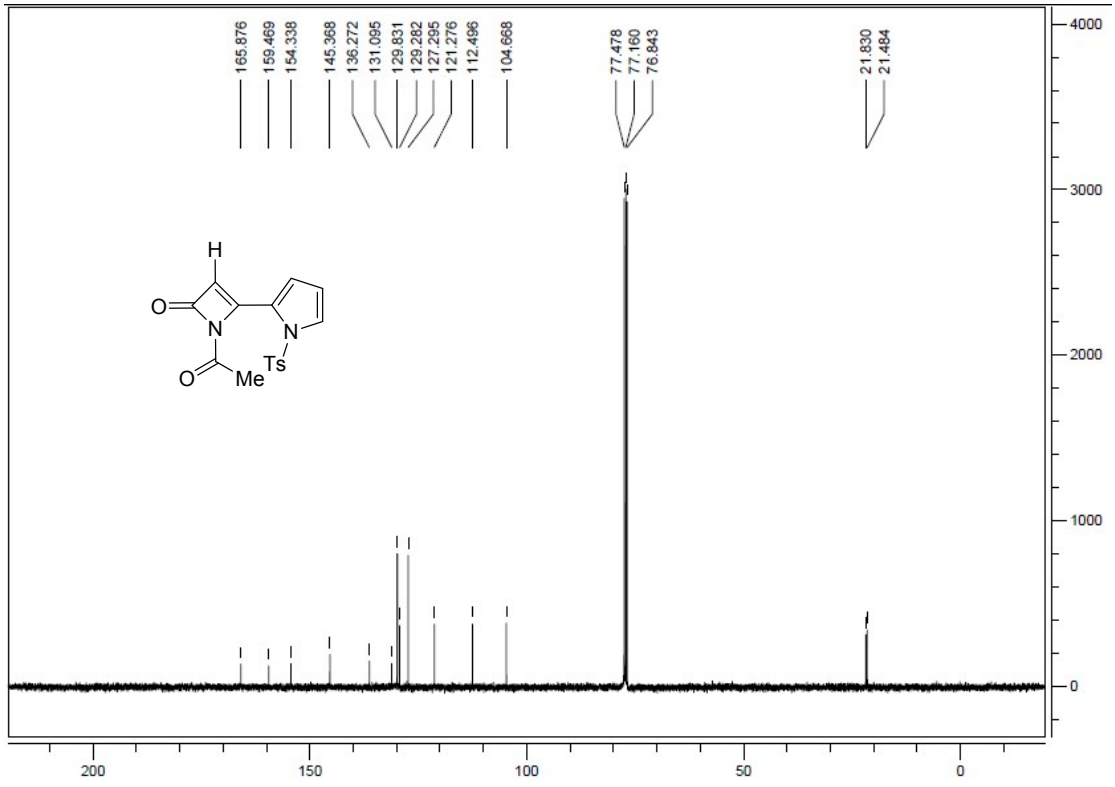
1-Acetyl-4-(1-tosyl-1H-indol-3-yl)azet-2(1H)-one (2s):



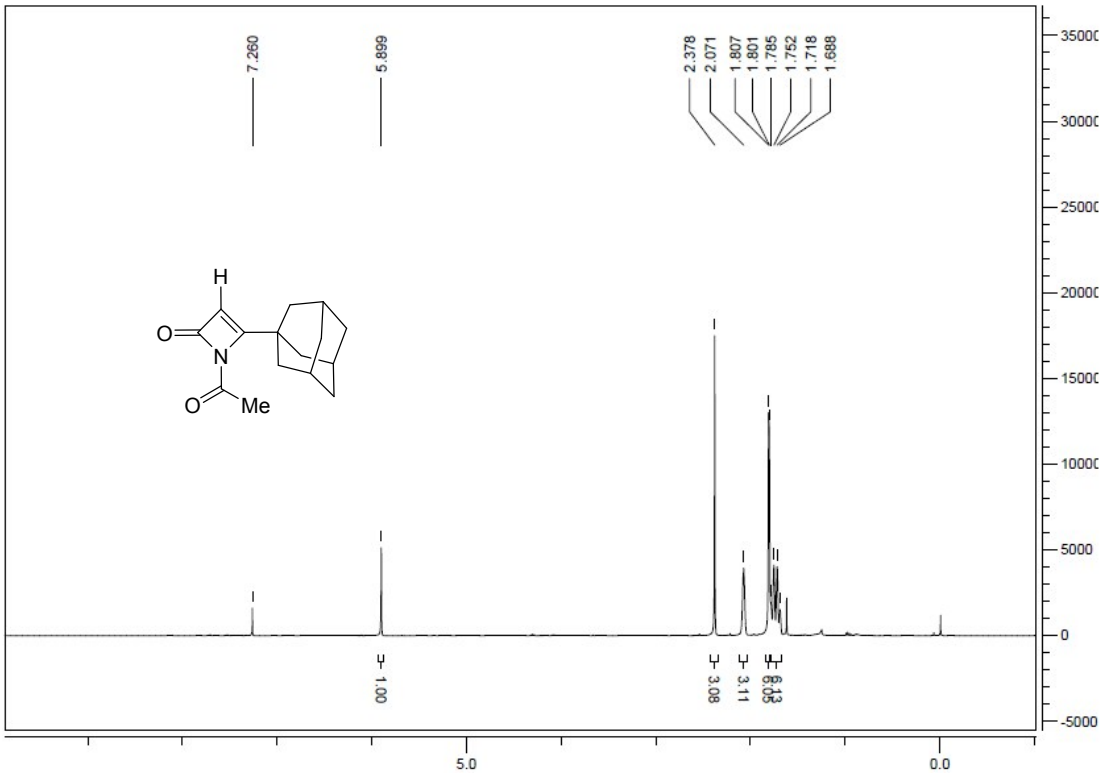


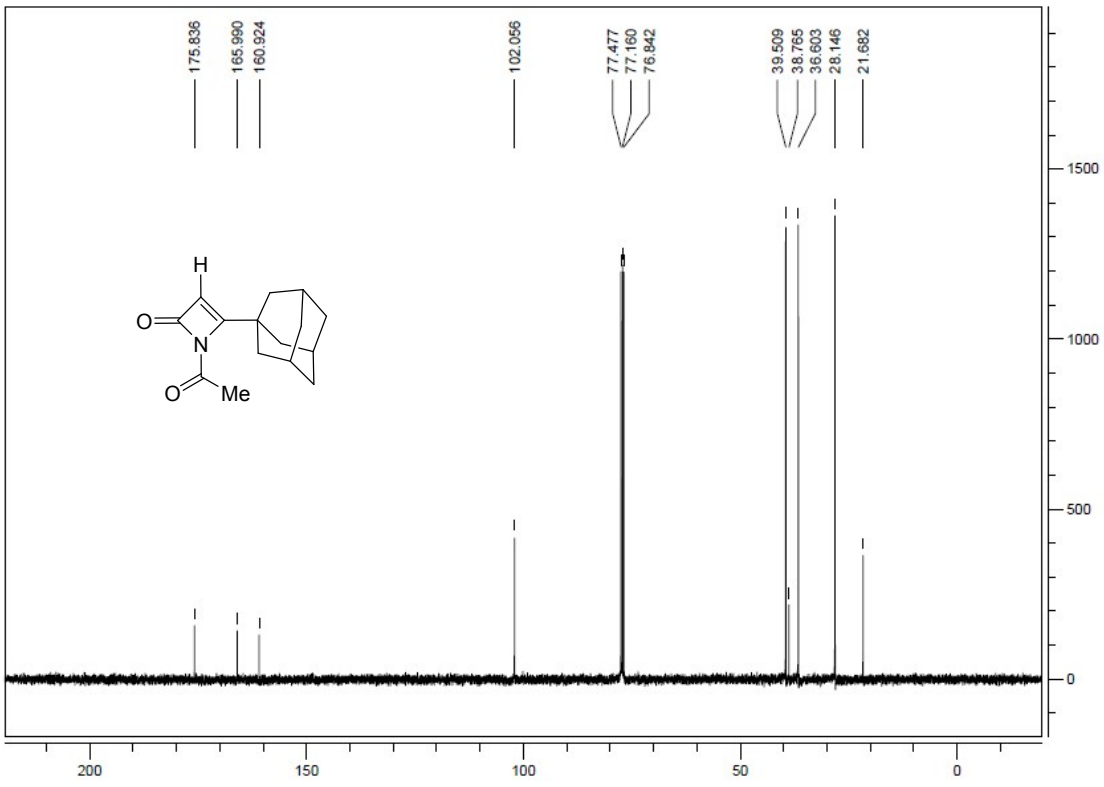
1-Acetyl-4-(1-tosyl-1H-pyrrol-2-yl)azet-2(1H)-one (2t):



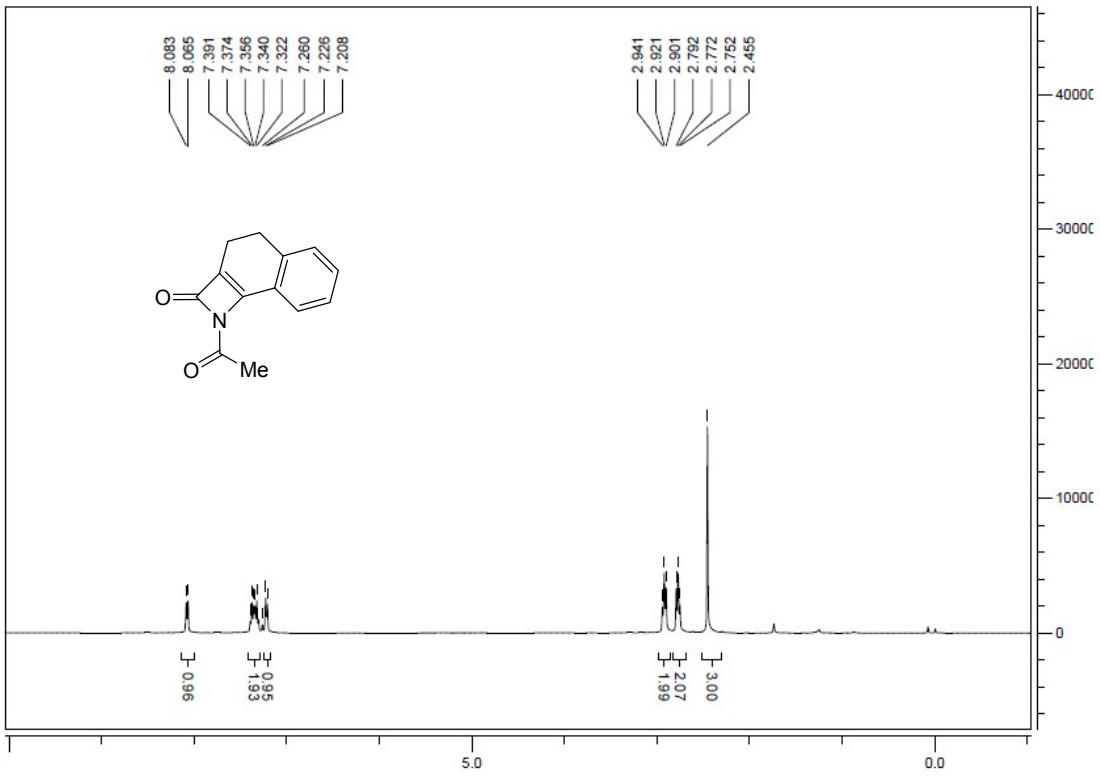


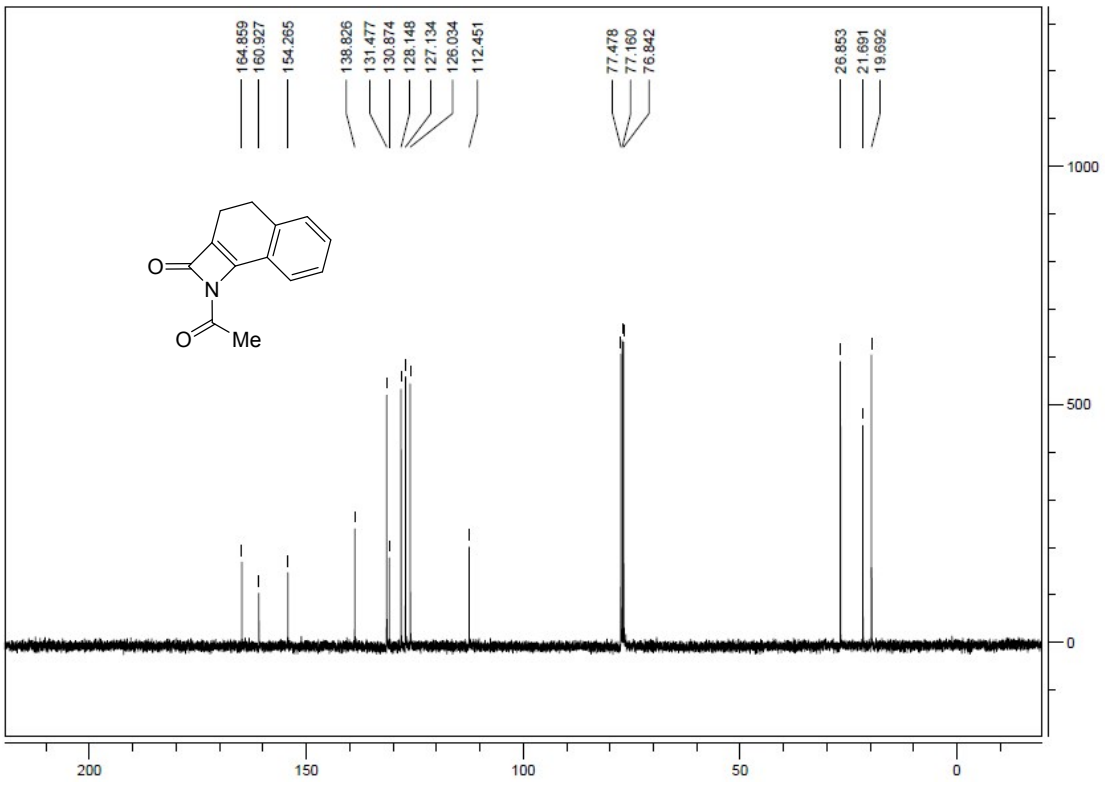
1-Acetyl-4-((1s,3s)-adamantan-1-yl)azet-2(1H)-one (2u)



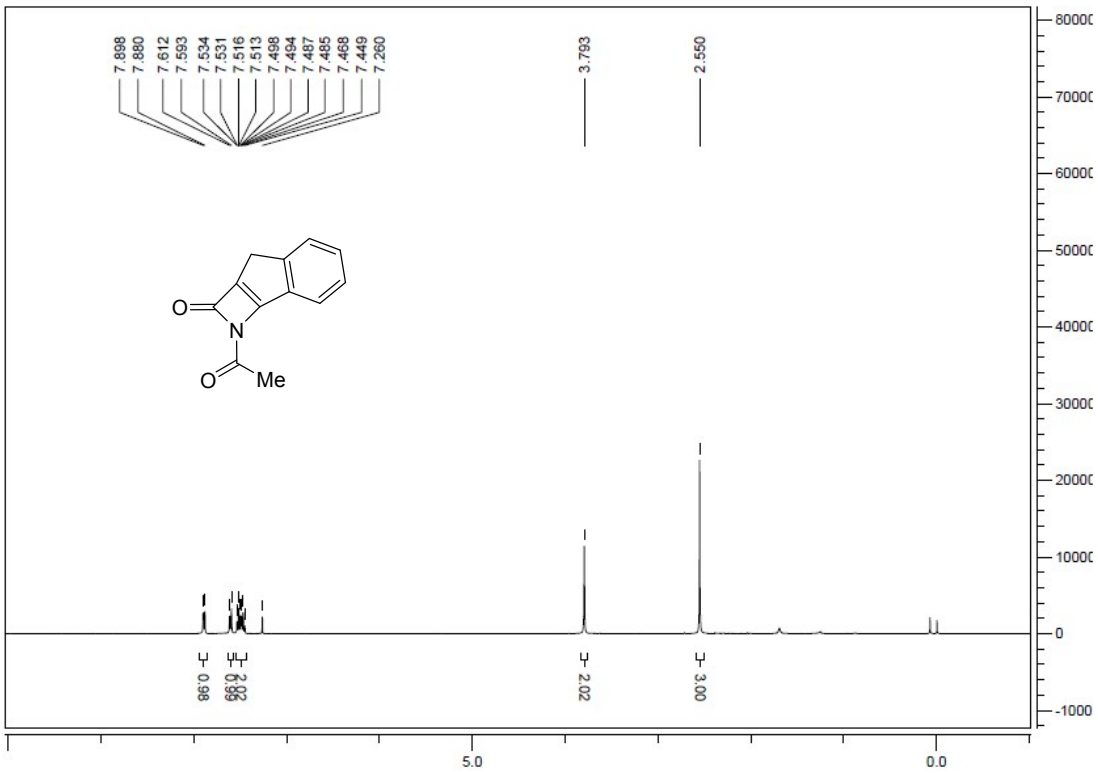


1-Acetyl-3,4-dihydronaphtho[1,2-b]azet-2(1H)-one (2v):





1-Acetyl-1H-indeno[1,2-b]azet-2(3H)-one (2w):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O
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5.0
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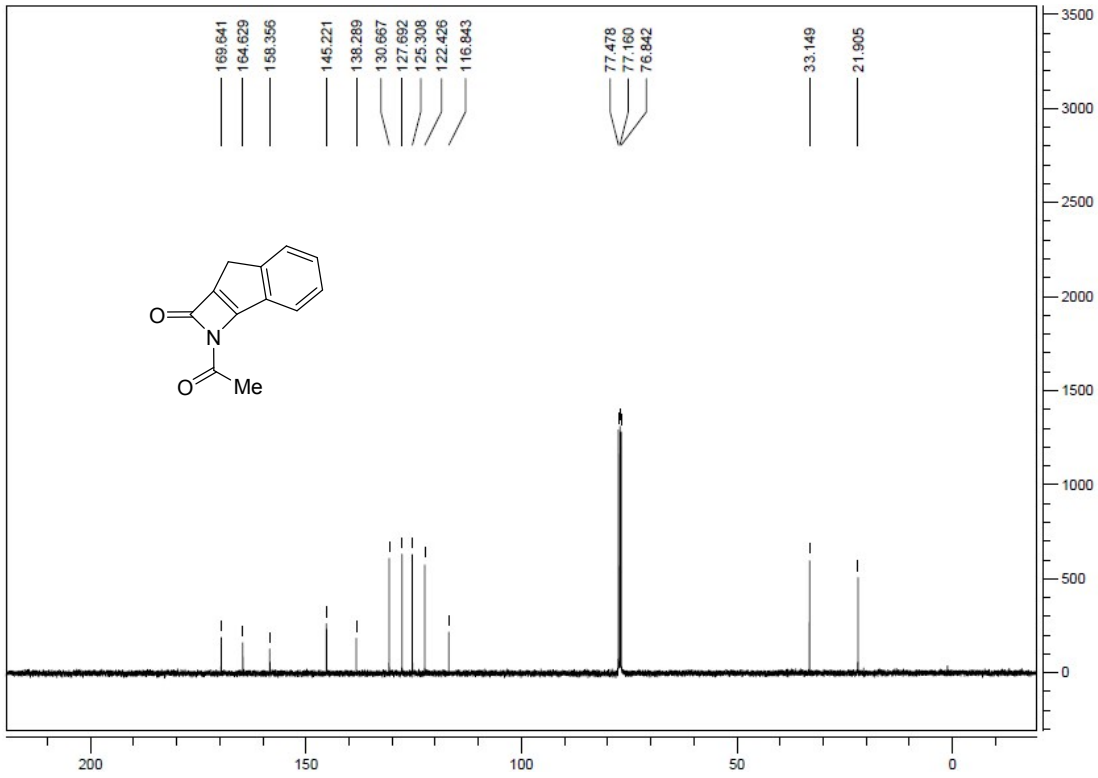
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O
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150
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