

## Supporting Information

### Synthesis of oxazoles by silver catalysed oxidative decarboxylation-cyclization of $\alpha$ -oxocarboxylates and isocyanides

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### Contents:

General Considerations .....	2
Experimental Procedures .....	3
Mechanism Study .....	3
1. <i>operando</i> IR .....	3
2. EPR experiments.....	6
3. Radical inhibiting experiments .....	6
Characterization of Products.....	6
References.....	10
NMR and HRMS Spectra of Products .....	11

## General Considerations

All manipulations were carried out using standard Schlenk techniques. Unless otherwise stated, analytical grade solvents and commercially available reagents were used to conduct the reactions. Thin layer chromatography (TLC) employed glass 0.25 mm silica gel plates. Flash chromatography columns were packed with 200-300 mesh silica gel in petroleum ether (bp. 60-90 °C). Gradient flash chromatography was conducted eluting with a continuous gradient from petroleum ether to the ethyl acetate. All new compounds were characterized by  $^1\text{H}$  NMR,  $^{13}\text{C}$  NMR and HRMS. The known compounds were characterized by  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR. The  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra were recorded on a Bruker 400 MHz NMR spectrometer. The chemical shifts ( $\delta$ ) were given in part per million relative to internal tetramethyl silane (TMS, 0 ppm for  $^1\text{H}$ ),  $\text{CDCl}_3$  (77.3 ppm for  $^{13}\text{C}$ ). High resolution mass spectra (HRMS) were measured with a Waters Micromass GCT instrument and accurate masses were reported for the molecular ion + Hydrogen (M+H).

## Experimental Procedures

### 1. Preparation of substituted $\alpha$ -oxocarboxylic acids:

All kinds of substituted  $\alpha$ -oxocarboxylic acids were prepared from oxidation of corresponding methyl ketones with  $\text{SeO}_2$  according to the reported procedure.<sup>1</sup>

### 2. Preparation of substituted $\alpha$ -oxocarboxylates:

All the substituted  $\alpha$ -oxocarboxylic acids were reacted with KOH (1:1) in *i*PrOH for 3h, and the desired  $\alpha$ -oxocarboxylates was obtained by removing the *i*PrOH.<sup>2</sup>

### 3. General procedure for oxazoles synthesis:

A mixture of  $\alpha$ -oxocarboxylates **1a** (0.25 mmol, 47.1 mg), ethyl 2-isocyanoacetate **2a** (0.50 mmol, 56.6 mg),  $\text{Ag}_2\text{CO}_3$  (0.025 mmol, 6.9 mg), 1,10-phen (0.125 mmol, 22.5 mg) and  $\text{K}_2\text{S}_2\text{O}_8$  (0.75 mmol, 202.7mg) in DMF (1.0 mL) was stirred under an  $\text{N}_2$  atmosphere at 80 °C for 12 h. After completion of the reaction, as indicated by TLC and GC-MS, the solid was filtered off and washed with ethyl acetate. After removal of the solvent of the filtrate, the pure product was obtained by flash column chromatography on silica gel (eluent: petroleum ether/ethyl acetate= 10:1) to afford **3a** in 88% yield.

## Mechanism Study

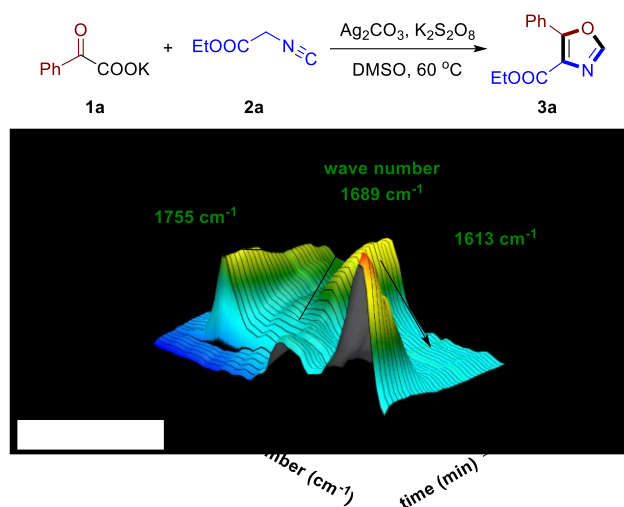
### 1. *operando* IR

Procedure for the stepwise reaction between **1a**,  $\text{Ag}_2\text{CO}_3$ ,  $\text{K}_2\text{S}_2\text{O}_8$  and **2a**:

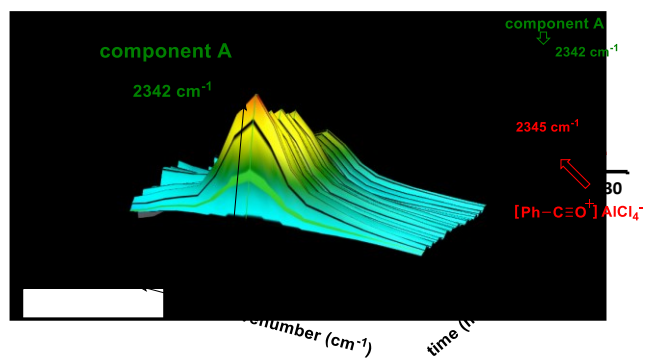
An oven-dried three necked reaction vessel was fitted with a magnetic stirring bar. The IR probe was inserted through an adapter into the middle neck; the other two necks were capped by septa for injections and a nitrogen line. The reaction vessel was kept at 60 °C and was allowed to be vacuumed and purged with nitrogen for three times. Then 4.0 mL DMSO and oxophenylacetate **1a** (0.50 mmol, 94.1 mg),  $\text{Ag}_2\text{CO}_3$  (0.05 mmol, 13.8 mg),  $\text{K}_2\text{S}_2\text{O}_8$  (1.5 mmol, 405.5 mg) were added in via syringes. The data collection was started. After 10 min, ethyl 2-isocyanoacetate **2a** (1.0 mmol, 113 .1 mg) was also added. *Operando* IR spectra were recorded over the course of the reaction

(Figure S1 and Figure S2).

Figure S1

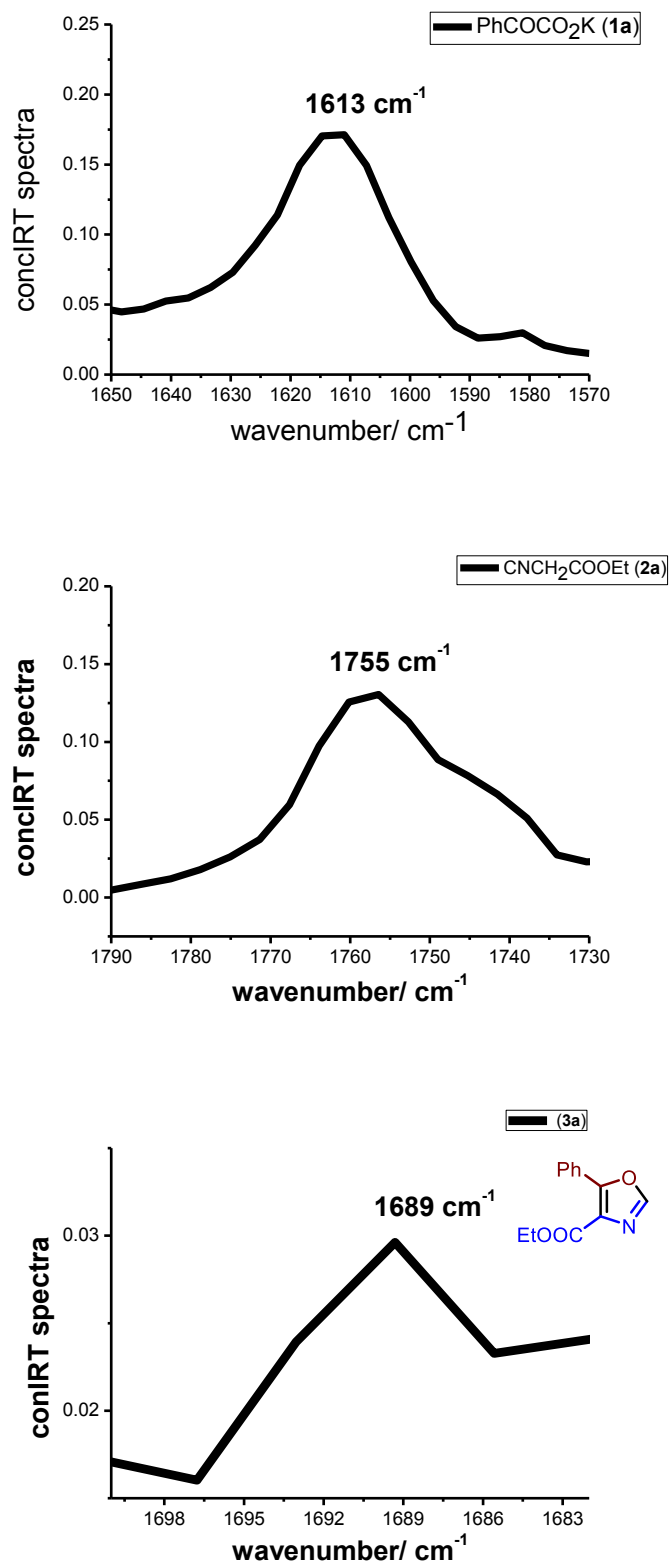


**Figure S1.** The 3D-Kinetic profile of the reaction of **1a** (1.0 mmol),  $\text{Ag}_2\text{CO}_3$  (0.1 mmol),  $\text{K}_2\text{S}_2\text{O}_8$  (3.0 mmol) and **2a** (2.0 mmol) in DMSO (4.0 mL) at  $60\text{ }^\circ\text{C}$ ; the reaction was monitored by *operando* IR.



**Figure S2.** (A) The absorbance of component A in 3D-Kinetic profile; (B) Spectra of the component A (green curve) and standard sample (benzoyl-acylium salt, red curve).

ConcIRT spectra of the authentic samples of oxophenylacetate **1a**, ethyl 2-isocynoacetate **2a** and product **3a**:



**Figure S3.** Standard IR spectra of oxophenylacetate **1a**, ethyl 2-isocyanoacetate **2a** and product

**3a.**

## 2. EPR experiments

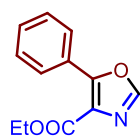
Procedure: X band, 9.4 GHz, at 160 K

1. Blank experiment: to a 25 mL schlenk tube equipped with a stir bar,  $\text{Ag}_2\text{CO}_3$  (0.025 mmol, 6.9 mg) was added under  $\text{N}_2$  atmosphere, then 1.0 mL DMF was injected to the tube. The reaction was conducted at 80 °C for 2 h. Then sample 0.5 mL from it and preserved in liquid nitrogen for EPR exam.
2. Experiment: to a 25 mL schlenk tube equipped with a stir bar, a mixture of  $\text{Ag}_2\text{CO}_3$  (0.025 mmol, 6.9 mg) and  $\text{K}_2\text{S}_2\text{O}_8$  (0.75 mmol, 202.7 mg) was added under  $\text{N}_2$  atmosphere, then 1.0 mL DMF was injected to the tube. The reaction was conducted at 80 °C for 2 h. Then sample 0.5 mL from it and preserved in liquid nitrogen for EPR exam.

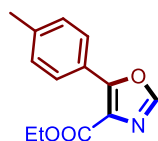
## 3. Radical inhibiting experiments

Procedure: to a 25 mL schlenk tube equipped with a stir bar, a mixture of potassium oxophenylacetate **1a** (0.25 mmol, 47.1 mg),  $\text{Ag}_2\text{CO}_3$  (0.025 mmol, 6.9 mg), 1,10-phen (0.0125 mmol, 22.5 mg),  $\text{K}_2\text{S}_2\text{O}_8$  (0.5 mmol, 135.2 mg) and radical trapping reagent (TEMPO or BHT 0.5 mmol, 78.1 mg or 110.2 mg) were under  $\text{N}_2$  atmosphere, then 2.0 mL DMF was injected to the tube. After 5 min, ethyl 2-isocyanoacetate **2a** (0.50 mmol, 56.6 mg) was added to the tube under  $\text{N}_2$ . Then the reaction was conducted at 80 °C for 20 h. After completion of the reaction, it was analysis by GC using biphenyl as the internal standard.

## Characterization of Products

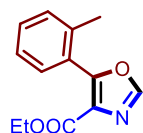


47.8 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.06-8.03 (m, 2H), 7.90 (s, 1H), 7.46-7.44 (m, 3H), 4.40 (q,  $J = 7.2$  Hz, 2H), 1.39 ppm (t,  $J = 7.0$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.1, 155.7, 149.3, 130.7, 128.7, 128.6, 126.9, 61.6, 14.4 ppm.<sup>3</sup>

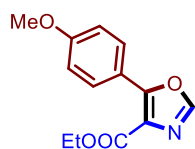


43.9 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 7.97-7.95 (m, 2H), 7.89 (s, 1H), 7.28-7.26 (m,

2H), 4.41 (q,  $J = 7.1$  Hz, 2H), 2.40 (s, 3H), 1.40 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.2, 156.0, 148.9, 141.0, 129.3, 128.6, 126.2, 124.0, 61.5, 21.7, 14.4 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 231.0895; found  $[\text{M}+\text{H}]^+$ : 232.0961.



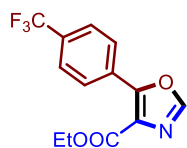
38.1 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 7.79 (s, 1H), 7.38-7.36 (m, 1H), 7.33-7.29 (m, 1H), 7.23-7.18 (m, 2H), 4.22 (q,  $J = 7.1$  Hz, 2H), 2.19 (s, 3H), 1.19 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 161.6, 150.1, 138.1, 131.0, 130.7, 130.5, 128.5, 126.7, 125.6, 61.3, 20.2, 14.2 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 231.0895; found  $[\text{M}+\text{H}]^+$ : 232.0959.



49.5 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.05-8.03 (m, 2H), 7.84 (s, 1H), 6.97-6.95 (m, 2H), 4.39 (q,  $J = 7.2$  Hz, 2H), 3.83 (s, 3H), 1.38 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.4, 161.4, 156.0, 148.6, 130.3, 125.5, 119.4, 114.0, 61.5, 55.6, 14.5 ppm.<sup>3</sup>

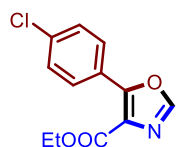


42.0 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 7.91 (s, 1H), 7.47-7.41 (m, 2H), 7.04-6.95 (m, 2H), 4.28 (q,  $J = 7.1$  Hz, 2H), 3.78 (s, 3H), 1.25 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 161.9, 157.6, 153.0, 150.0, 132.2, 131.6, 128.8, 120.4, 116.3, 111.3, 61.1, 55.7, 14.3 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 247.0845; found  $[\text{M}+\text{H}]^+$ : 248.0902.

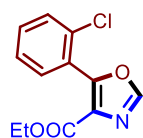


44.9 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.22-8.20 (m, 2H), 7.96 (s, 1H), 7.72-7.70 (m,

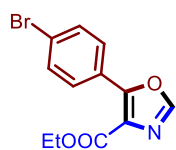
2H), 4.42 (q,  $J = 7.2$  Hz, 2H), 1.40 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 161.9, 154.1, 149.8, 132.2 (q,  $J_{\text{CF}} = 32.6$  Hz), 130.6, 130.2, 129.0, 128.2, 125.7 (q,  $J_{\text{CF}} = 3.7$  Hz), 124.0 (q,  $J_{\text{CF}} = 270.7$  Hz), 62.0, 14.4 ppm.  $^{19}\text{F}$  NMR (400 M, in  $\text{CDCl}_3$ ): -63.1 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 285.0613; found  $[\text{M}+\text{H}]^+$ : 286.0674.



42.8 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.06-8.03 (m, 2H), 7.92 (s, 1H), 7.45-7.42 (m, 2H), 4.41 (q,  $J = 6.8$  Hz, 2H), 1.40 ppm (t,  $J = 6.8$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.1, 154.7, 149.3, 136.9, 130.0, 129.0, 127.1, 125.4, 61.9, 14.5 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 251.0349; found  $[\text{M}+\text{H}]^+$ : 252.0412.

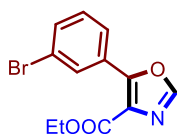


40.9 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.01 (s, 1H), 7.51-7.48 (m, 2H), 7.45-7.40 (m, 1H), 7.37-7.34 (m, 1H), 4.28 (q,  $J = 7.1$  Hz, 2H), 1.23 ppm (t,  $J = 6.8$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 161.1, 150.4, 134.3, 132.2, 131.7, 129.9, 126.5 (2C), 61.3, 14.0 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 251.0349; found  $[\text{M}+\text{H}]^+$ : 252.0416.

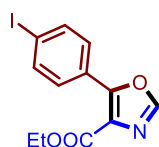


52.6 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 7.99-7.95 (m, 2H), 7.92 (s, 1H), 7.61-7.58 (m, 2H), 4.41 (q,  $J = 7.2$  Hz, 2H), 1.40 ppm (t,  $J = 6.8$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 161.8, 154.4, 149.1, 131.7, 129.8, 126.9, 125.5, 125.0, 61.6, 14.2 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 294.9844; found  $[\text{M}+\text{H}]^+$ : 295.9904.

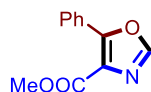




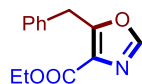
51.8 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.22-8.21 (m, 1H), 8.02-8.00 (m, 1H), 7.92 (s, 1H), 7.56-7.54 (m, 1H), 7.34-7.29 (m, 1H), 4.39 (q,  $J = 7.2$  Hz, 2H), 1.38 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 161.8, 153.8, 149.5, 133.5, 131.4, 130.1, 128.7, 127.5, 127.2, 122.6, 61.8, 14.4 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 294.9844; found  $[\text{M}+\text{H}]^+$ : 295.9903.



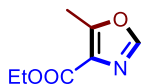
51.5 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 7.92 (s, 1H), 7.85-7.80 (m, 4H), 4.41 (q,  $J = 6.8$  Hz, 2H), 1.41 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.1, 154.9, 149.4, 138.0, 130.1, 127.3, 126.4, 97.5, 61.9, 14.5 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 342.9705; found  $[\text{M}+\text{H}]^+$ : 343.9767.



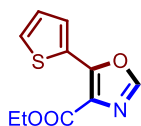
42.7 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.06-8.04 (m, 2H), 7.89 (s, 1H), 7.45-7.26 (m, 2H), 3.91 ppm (s, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.5, 155.8, 149.2, 130.7, 128.6, 128.5, 126.7, 126.4, 52.5 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 203.0582; found  $[\text{M}+\text{H}]^+$ : 204.0647.



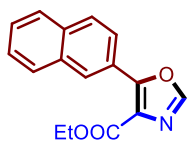
19.1 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 7.77 (s, 1H), 7.35-7.27 (m, 5H), 4.44 (q,  $J = 7.2$  Hz, 2H), 4.42 (s, 2H), 1.43 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 158.0, 149.6, 136.2, 129.0, 128.7, 127.5, 127.3, 61.4, 32.2, 14.5 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 231.0895; found  $[\text{M}+\text{H}]^+$ : 232.0952.



10.1 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 7.73 (s, 1H), 4.36 (q,  $J = 7.2$  Hz, 2H), 2.62 (s, 3H), 1.37 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.4, 156.7, 149.0, 127.5, 61.2, 14.5, 12.1 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 155.0582; found  $[\text{M}+\text{H}]^+$ : 156.0655.



30.1 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.07-8.06 (m, 1H), 7.81 (s, 1H), 7.52-7.51 (m, 1H), 7.15-7.12 (m, 1H), 4.44 (q,  $J = 7.2$  Hz, 2H), 1.42 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.0, 148.4, 130.7, 130.1, 128.3, 128.0, 124.7, 61.6, 14.5 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 223.0303; found  $[\text{M}+\text{H}]^+$ : 224.0369.

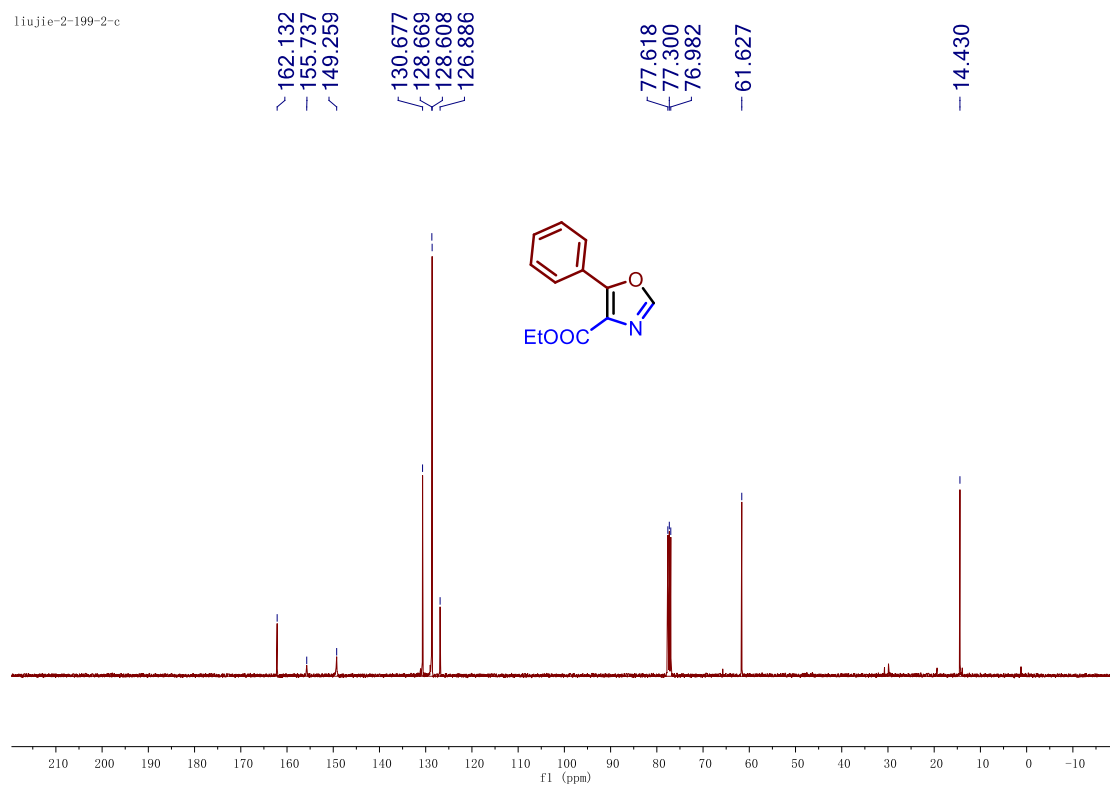
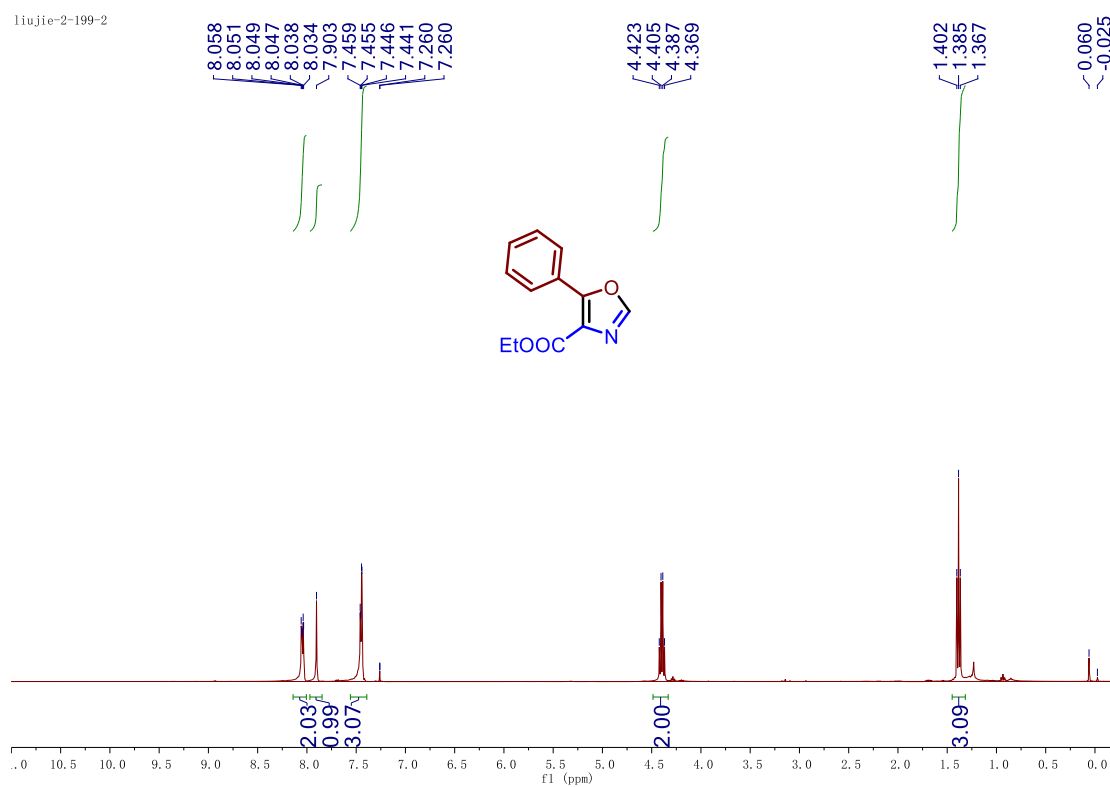


42.8 mg (0.25 mmol scale).  $^1\text{H}$  NMR (400 M, in  $\text{CDCl}_3$ ): 8.65 (s, 1H), 8.09-8.06 (m, 1H), 7.93-7.87 (m, 4H), 7.53-7.50 (m, 2H), 4.44 (q,  $J = 7.2$  Hz, 2H), 1.41 ppm (t,  $J = 7.2$  Hz, 3H);  $^{13}\text{C}$  NMR (100 M, in  $\text{CDCl}_3$ ): 162.2, 155.7, 149.2, 134.1, 132.9, 129.2, 129.1, 128.2, 127.8, 127.7, 127.0, 126.8, 125.0, 124.1, 61.6, 14.5 ppm. HRMS (ESI) calculated  $[\text{M}]^+$ : 267.0895; found  $[\text{M}+\text{H}]^+$ : 268.0955.

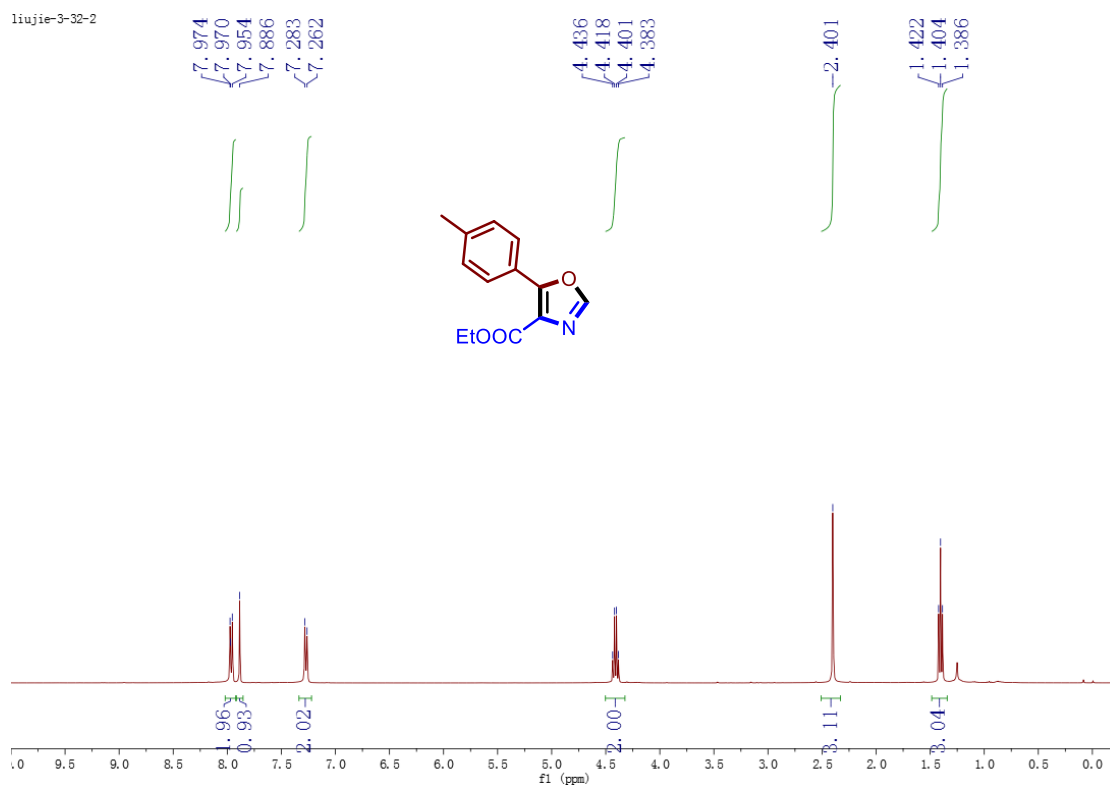
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- (3) Verrier, C.; Fiol-Petit, C.; Hoarau, C.; Marsais, F. *Organic & Biomolecular Chemistry* **2011**, *9*, 6215.

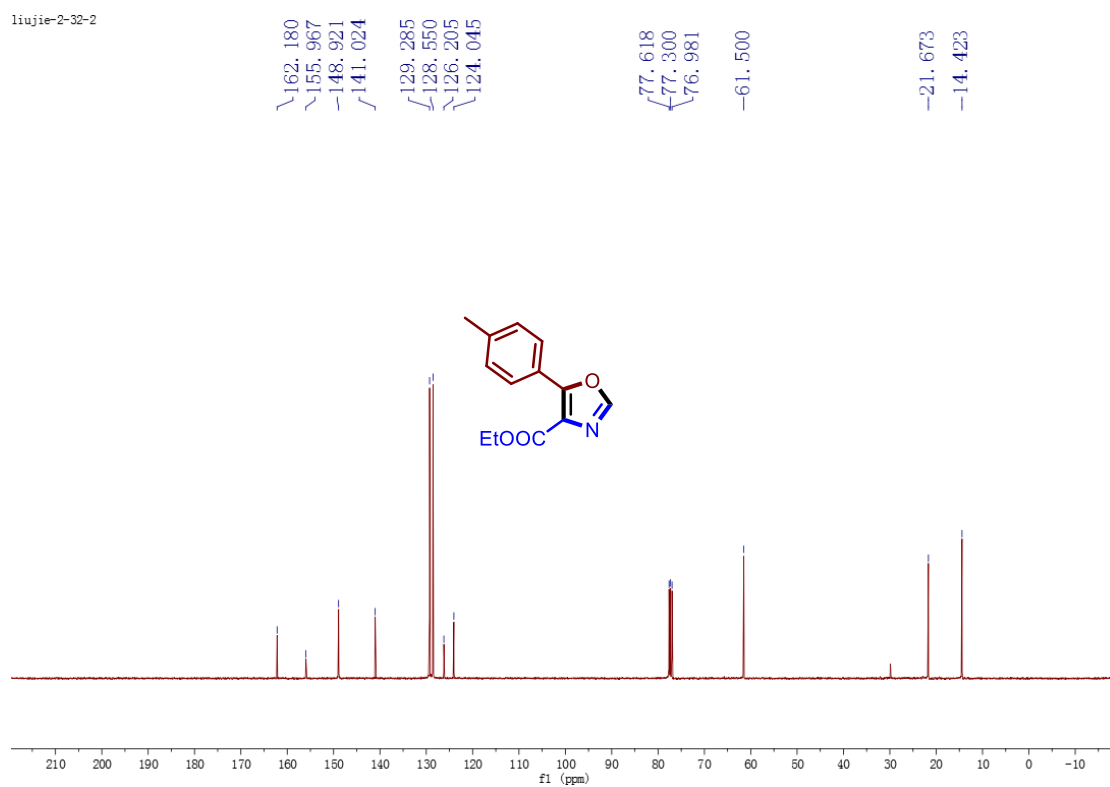
# NMR and HRMS Spectra of Products



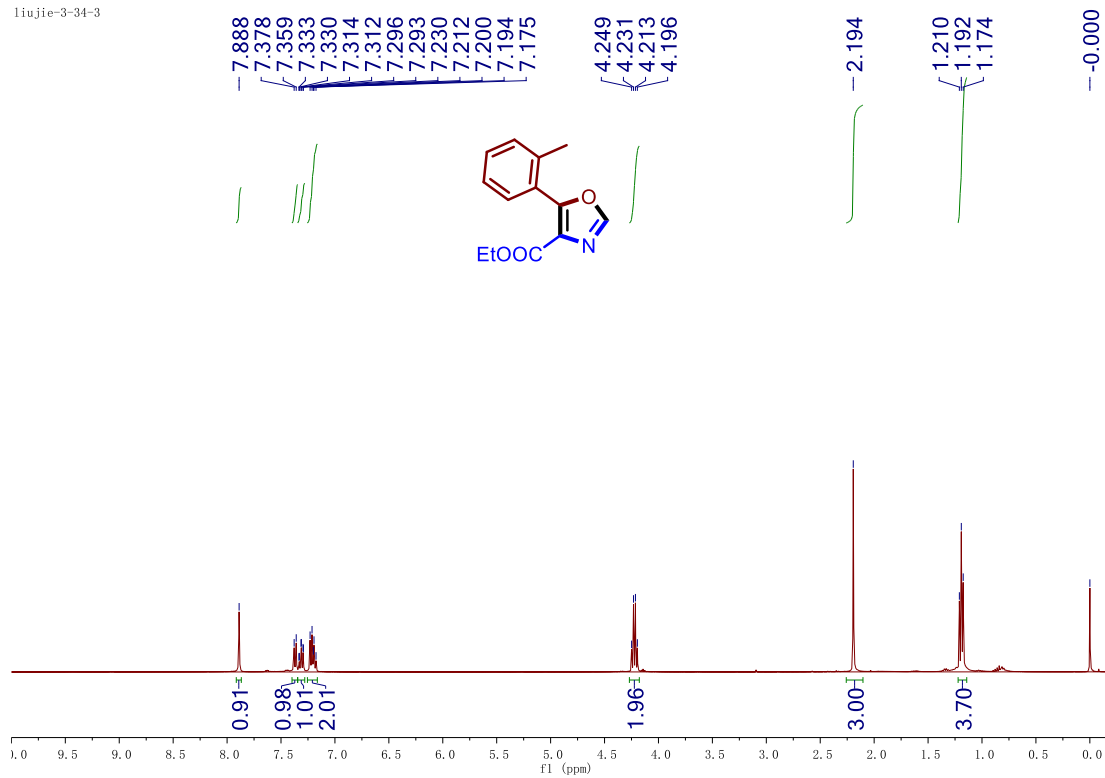
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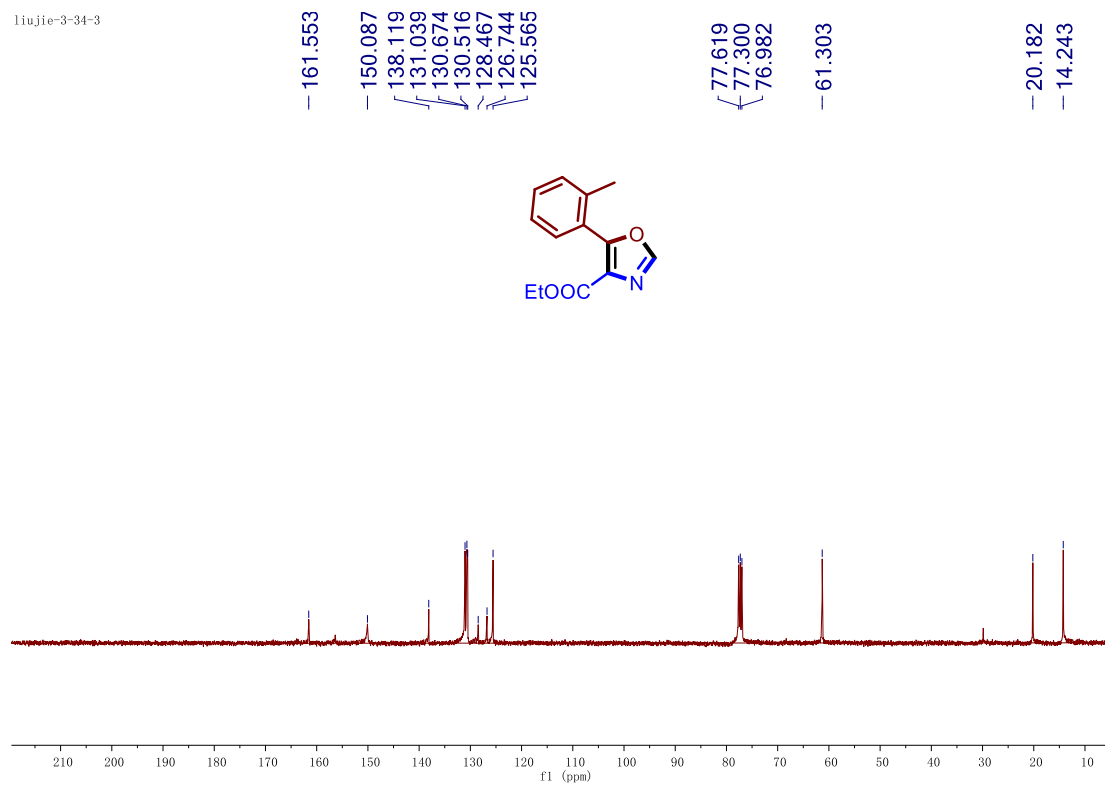
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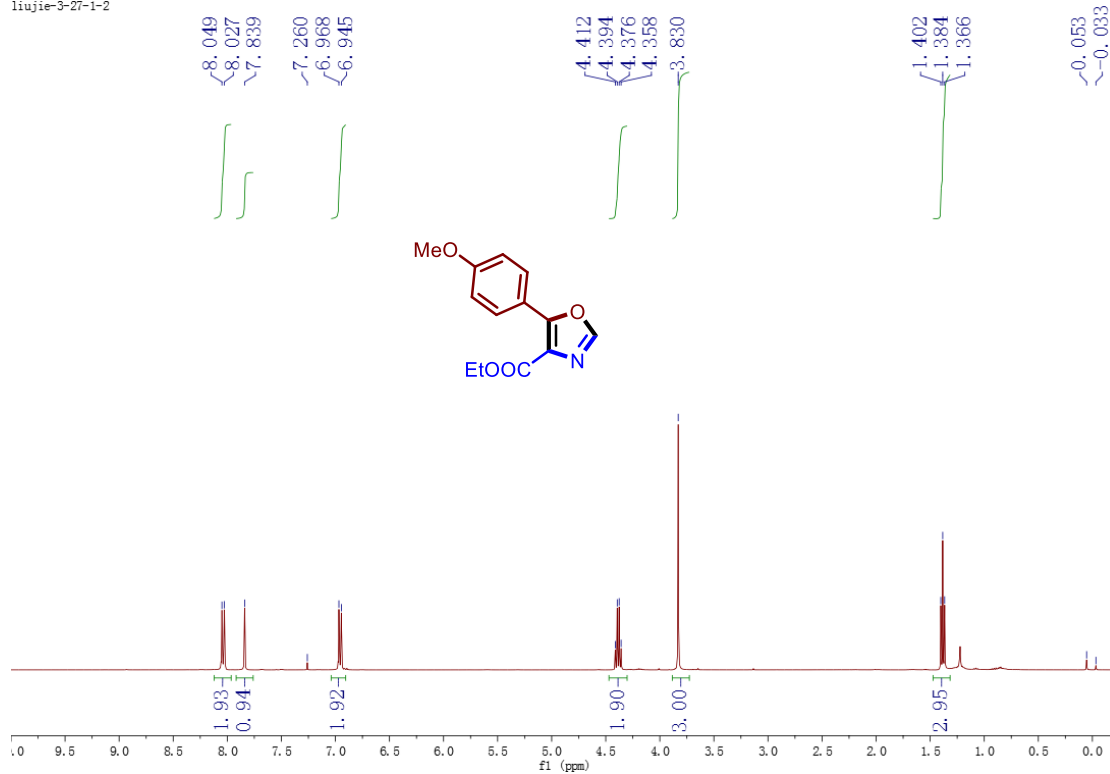
liujie-3-34-3



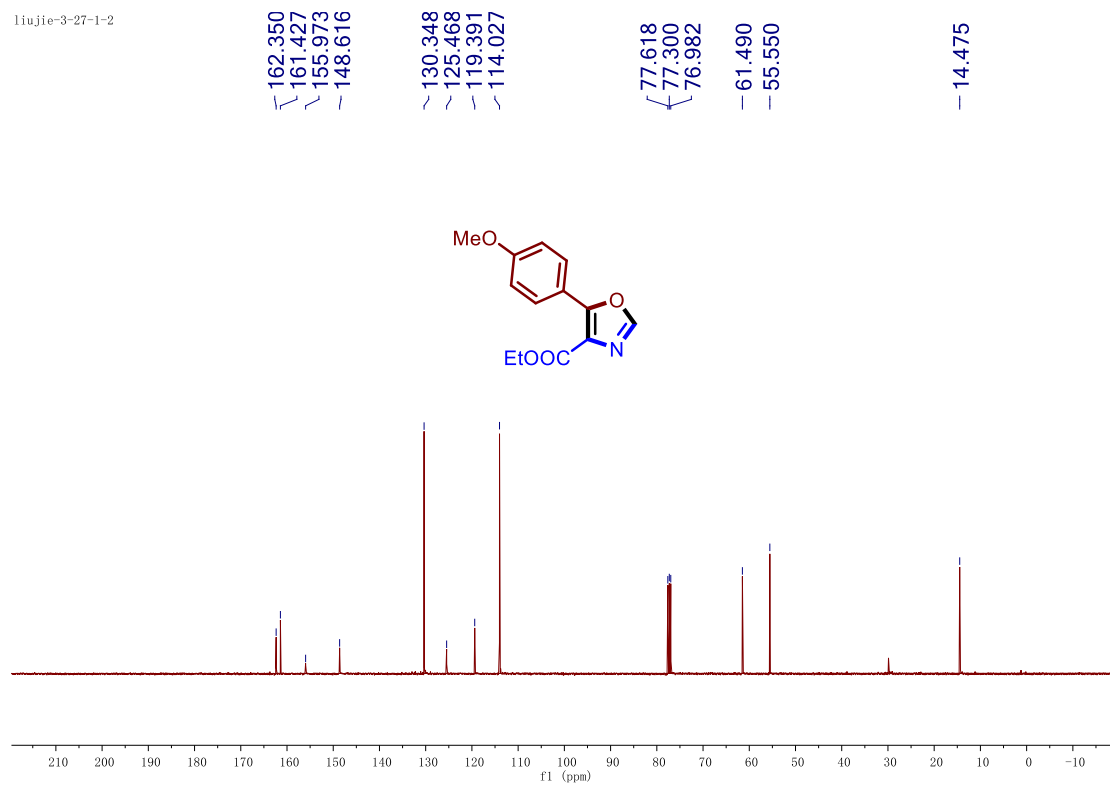
liujie-3-34-3



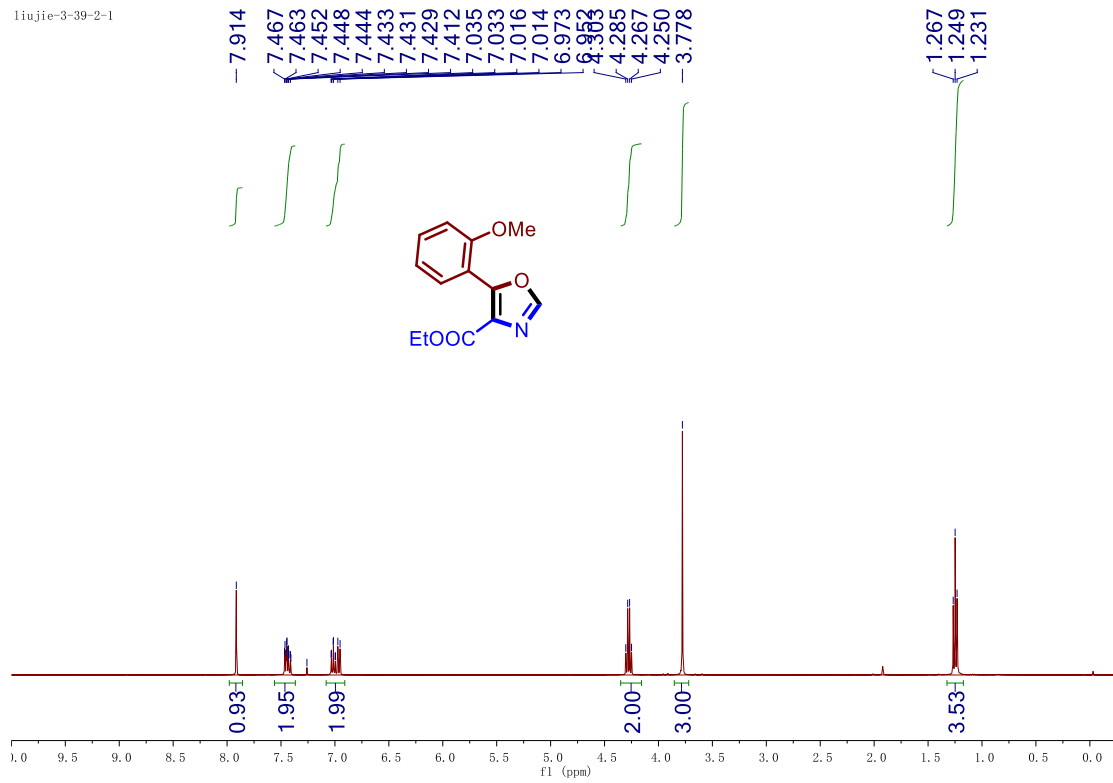
liujie-3-27-1-2



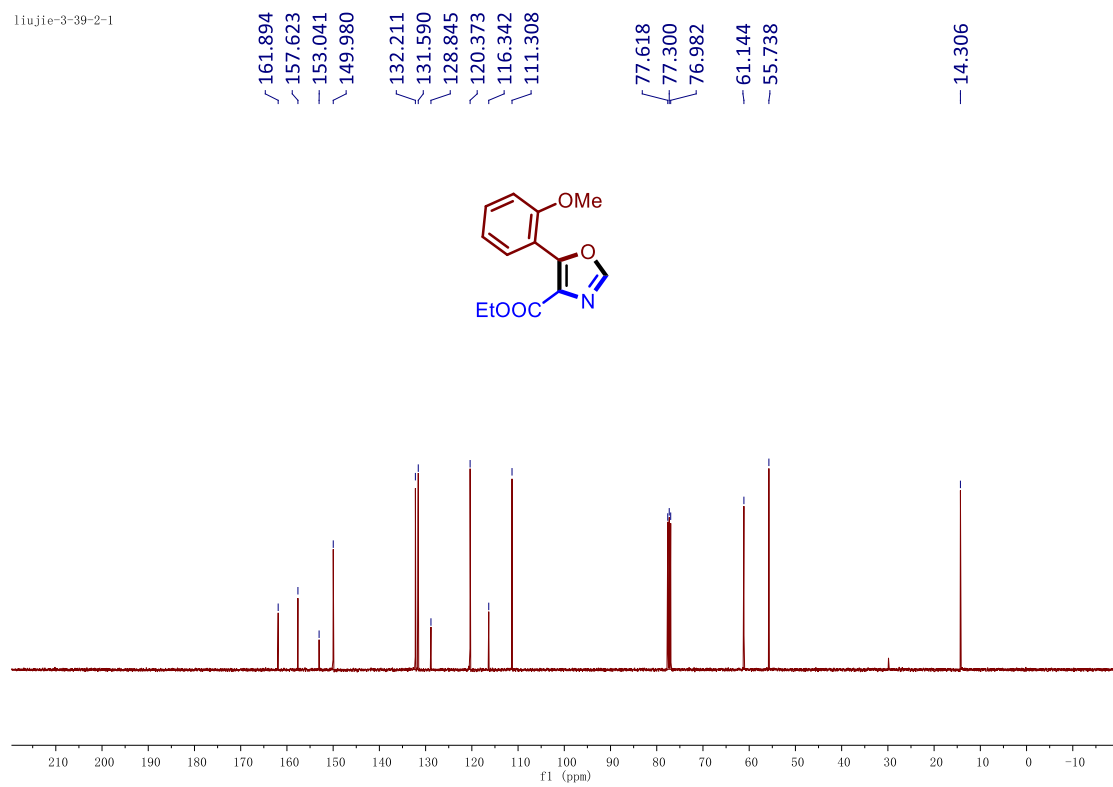
liujie-3-27-1-2



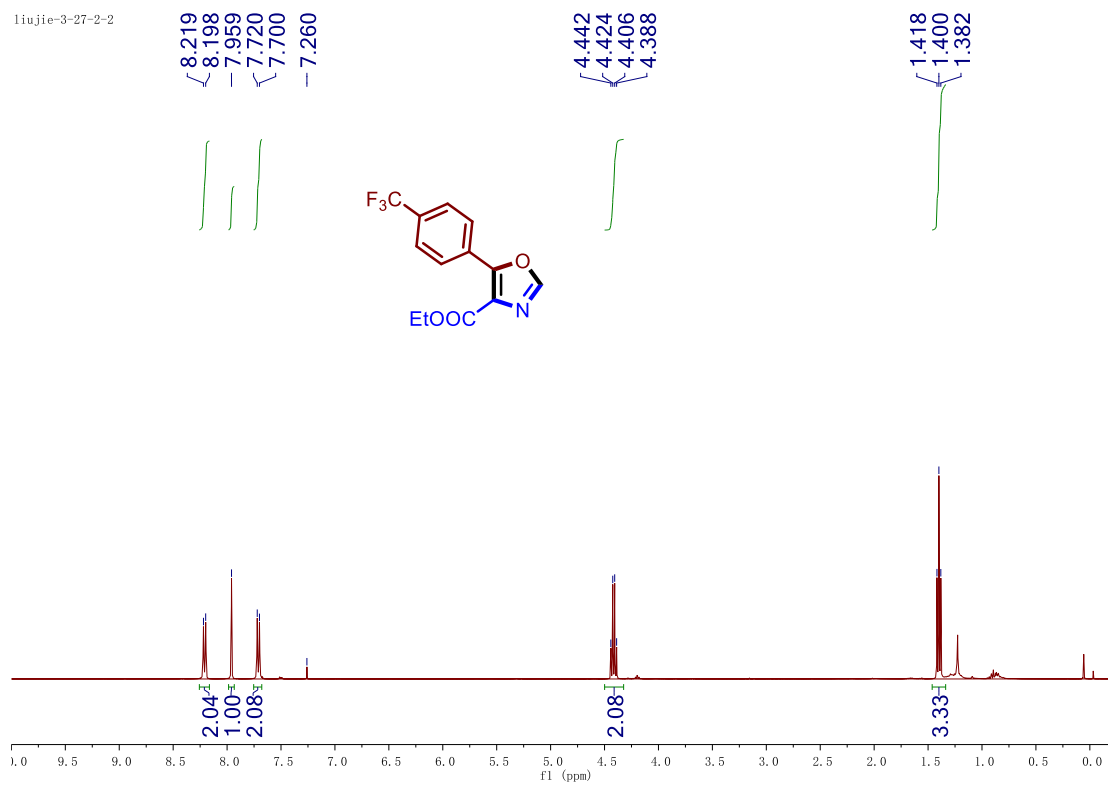
liujie-3-39-2-1



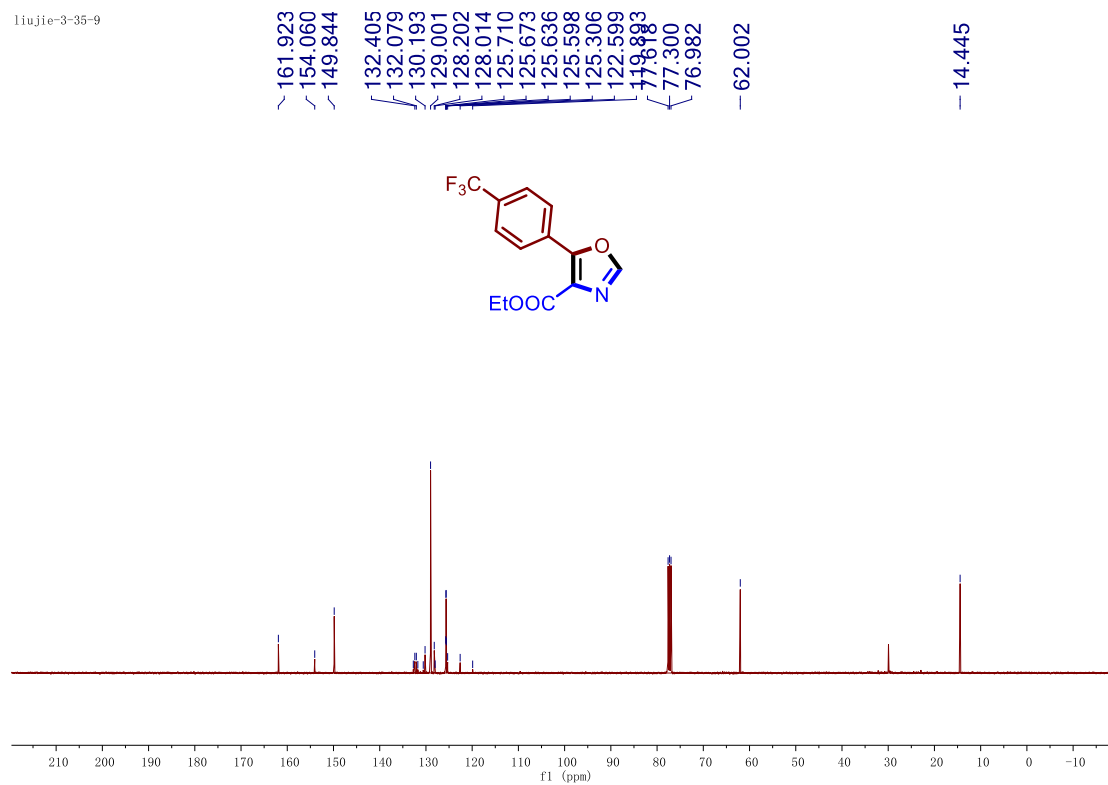
liujie-3-39-2-1



liujie-3-27-2-2

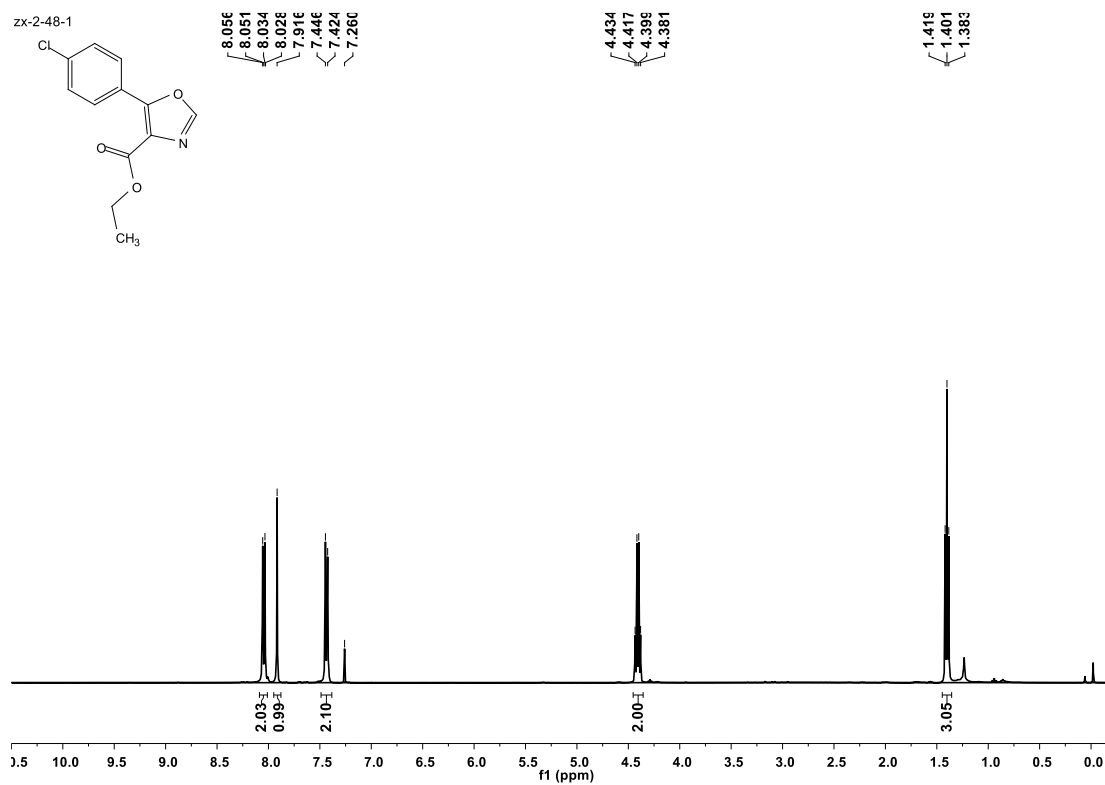
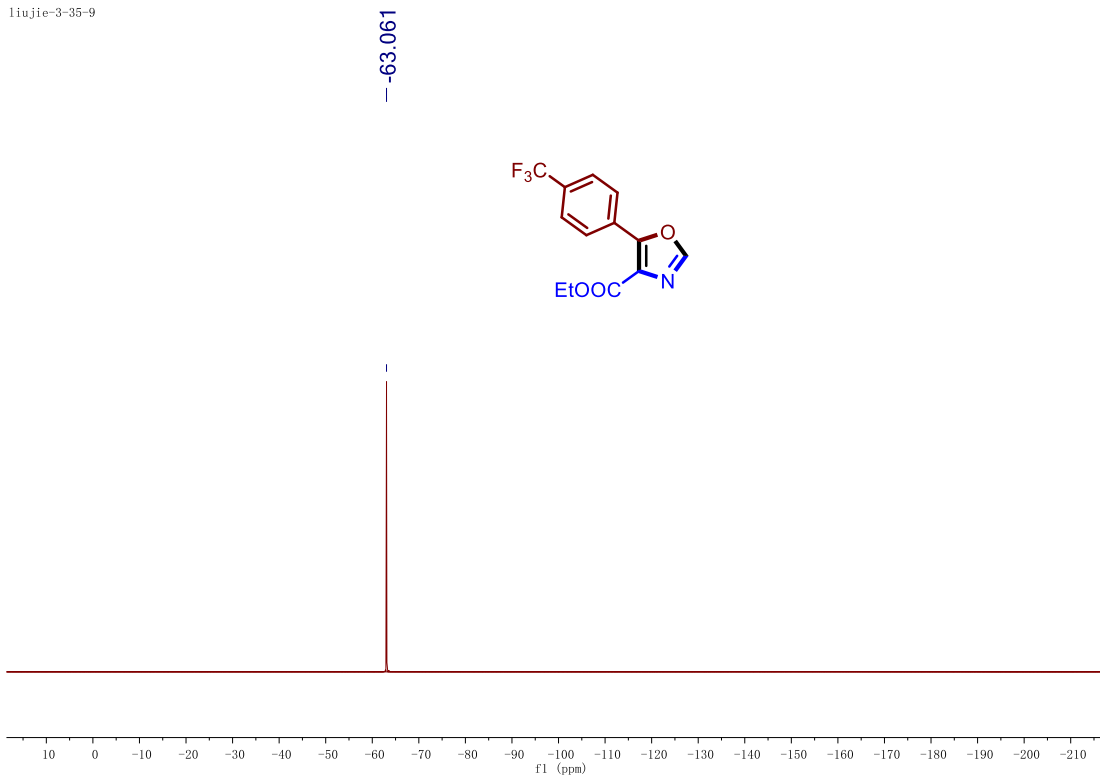


liujie-3-35-9

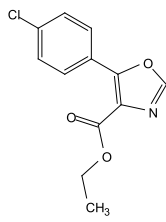




liujie-3-35-9



zx-2-48-1



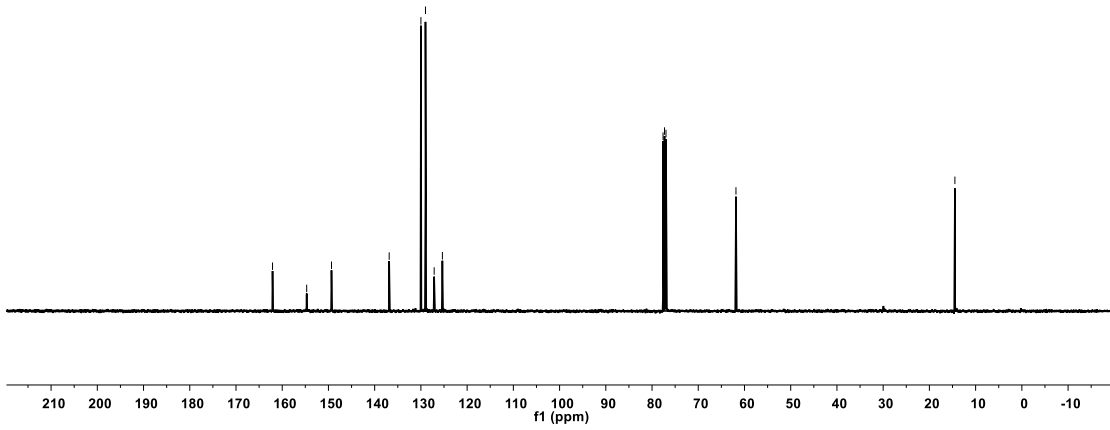
162.09  
154.71  
149.34

136.86  
129.99  
129.01  
127.13  
125.35

77.62  
77.30  
76.98

61.85

14.48



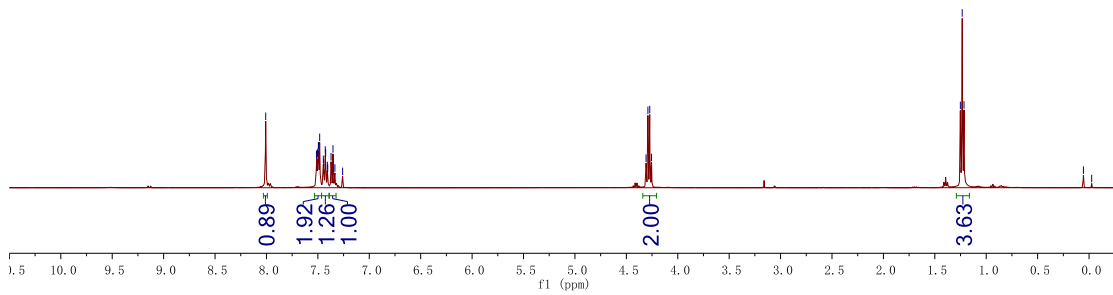
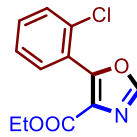
liujie-3-32-4

8.007

7.514  
7.510  
7.502  
7.500  
7.495  
7.491  
7.483  
7.447  
7.443  
7.428  
7.424  
7.408  
7.372  
4.358  
4.290  
4.272  
4.255

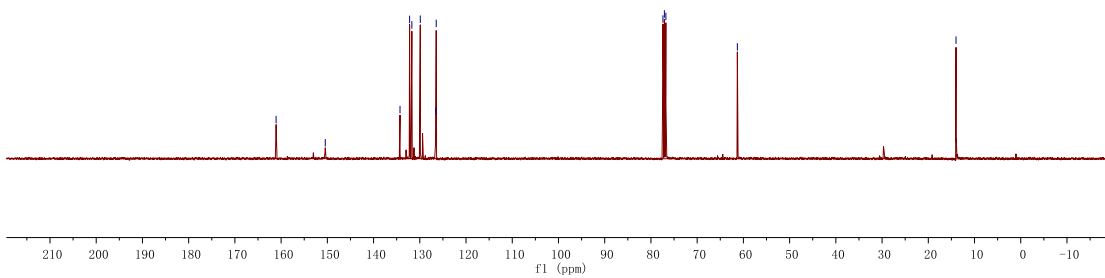
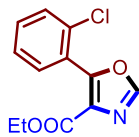
1.251  
1.234  
1.216

0.055  
-0.026

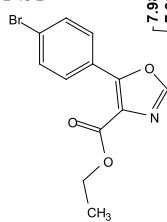


liujie-3-32-4

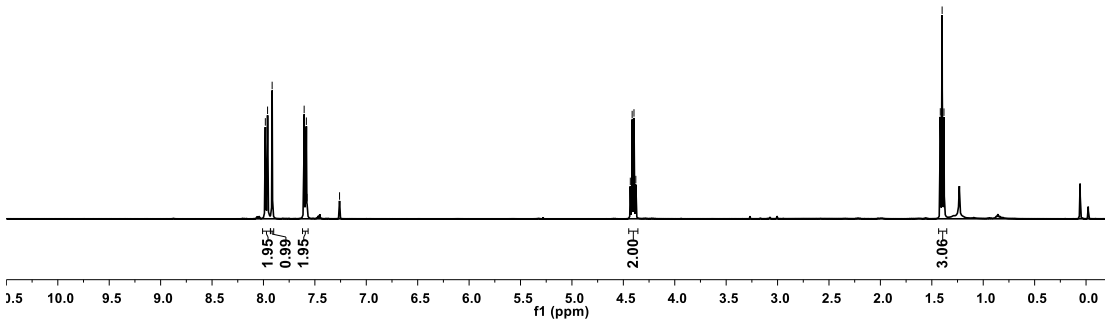
161.083  
150.448  
134.280  
132.205  
131.715  
129.898  
126.547  
126.450  
77.406  
77.088  
76.770  
61.304  
13.998



zx-2-48-2



7.988  
7.982  
7.977  
7.965  
7.960  
7.954  
7.915  
7.810  
7.604  
7.600  
7.593  
7.587  
7.583  
7.577  
7.260  
4.432  
4.414  
4.397  
4.379  
1.417  
1.400  
1.382



zx-2-48-2

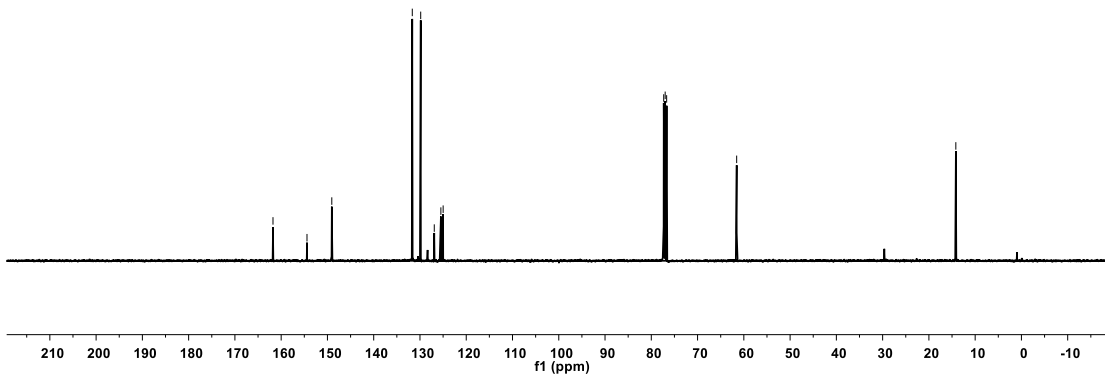
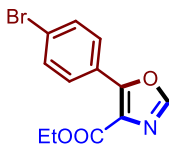
161.77  
154.42  
149.06

131.66  
129.84  
126.91  
125.48  
124.99

77.32  
77.00  
76.68

61.55

14.18

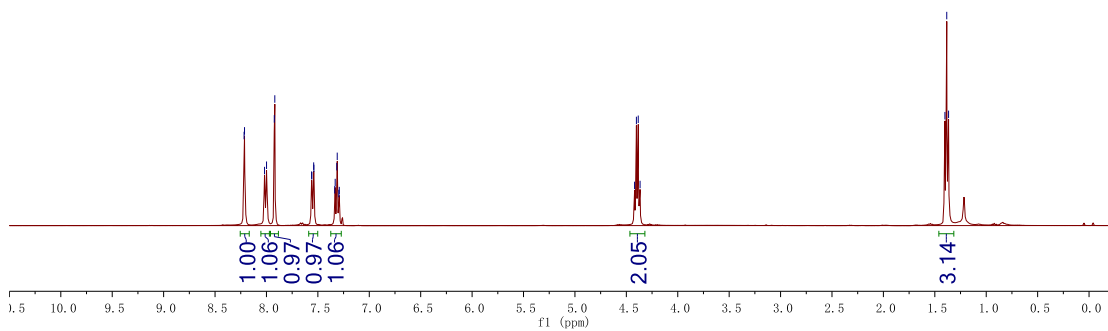
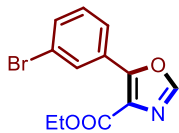


liujie-3-35-5

8.218  
8.213  
8.019  
7.999  
7.924  
7.919  
7.561  
7.559  
7.541  
7.539  
7.336  
7.332  
7.316  
7.312  
7.296  
7.292

4.420  
4.402  
4.384  
4.366

1.402  
1.384  
1.366

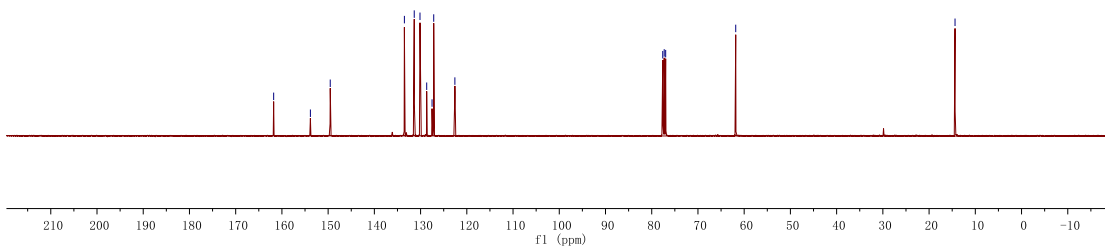
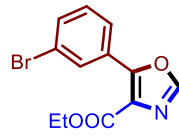


liujie-3-35-5

161.785  
153.839  
149.546  
133.504  
131.373  
130.129  
128.679  
127.522  
127.159  
122.581

77.618  
77.300  
76.982  
61.827

14.387

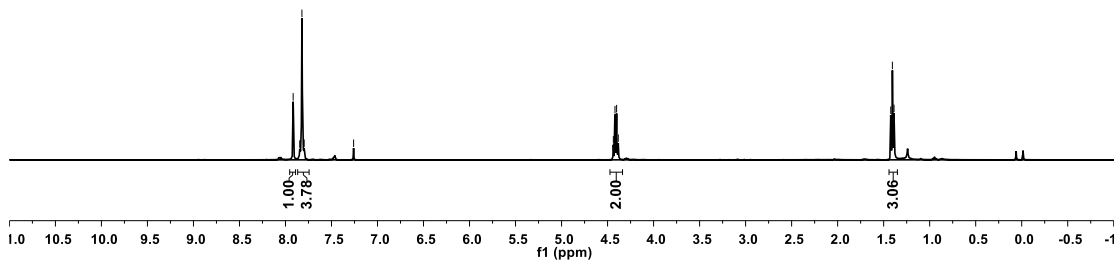
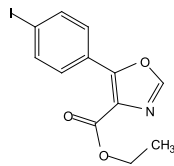


zx-248-3

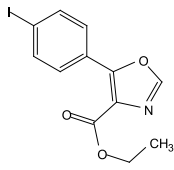
7.917  
7.845  
7.821  
7.797  
7.260

4.437  
4.420  
4.402  
4.384

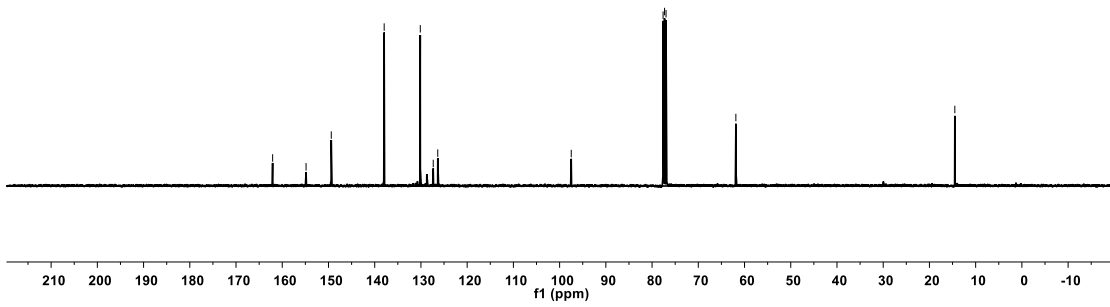
1.423  
1.405  
1.387



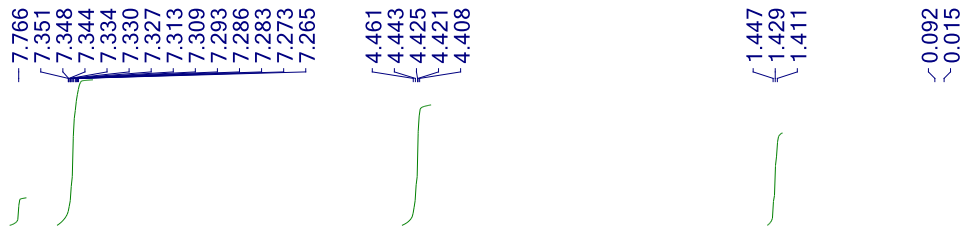
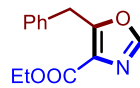
zx-2-48-3



162.08  
154.85  
149.40  
137.95  
130.14  
127.34  
126.36  
97.48  
77.62  
77.30  
76.98  
61.87  
14.51

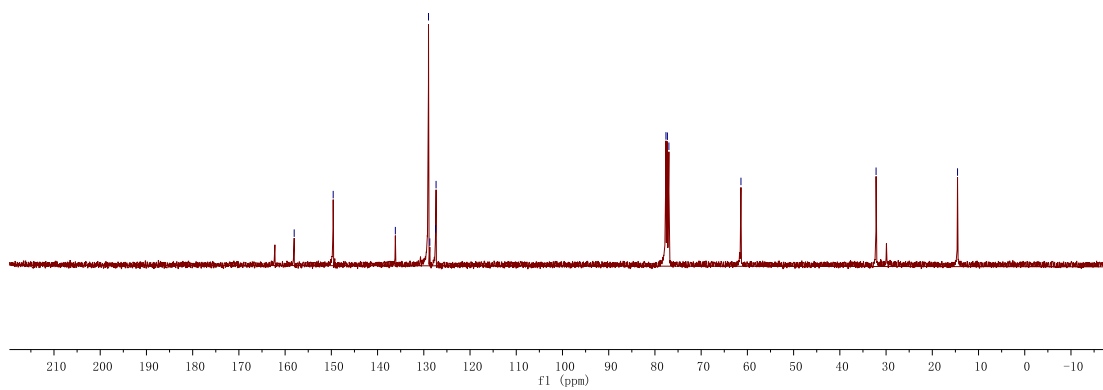
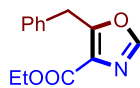


liujie-3-44-5-2



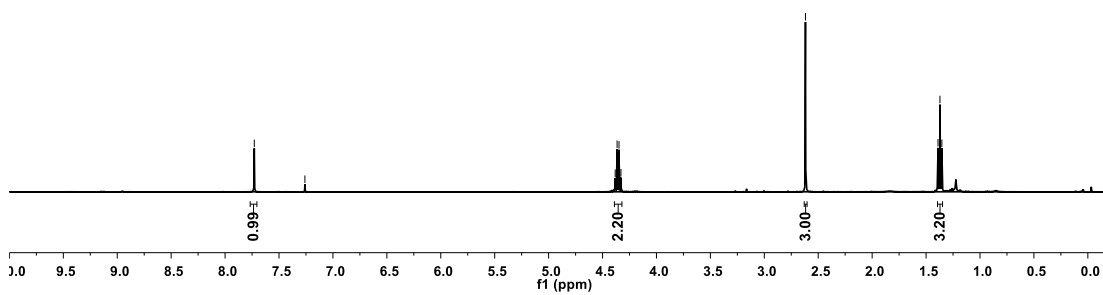
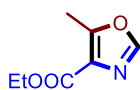
liujie-3-44-5-1

158.037  
149.599  
136.154  
128.983  
128.701  
127.453  
127.345  
77.619  
77.300  
76.982  
61.392  
32.163  
14.542



zx-liuji

7.729  
7.260  
4.383  
4.365  
4.347  
4.329  
2.618  
1.389  
1.371  
1.353



zx-liujie

162.38  
156.65  
149.04

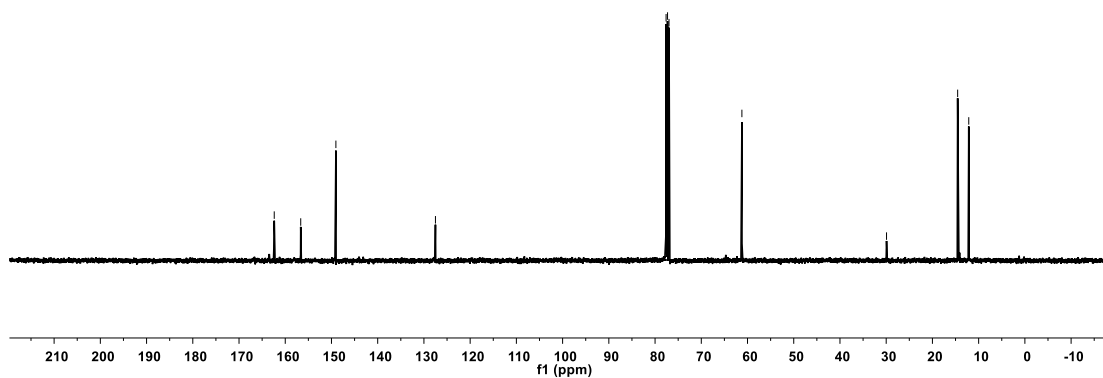
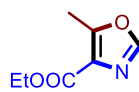
127.51

77.62  
77.30  
76.98

61.21

29.93

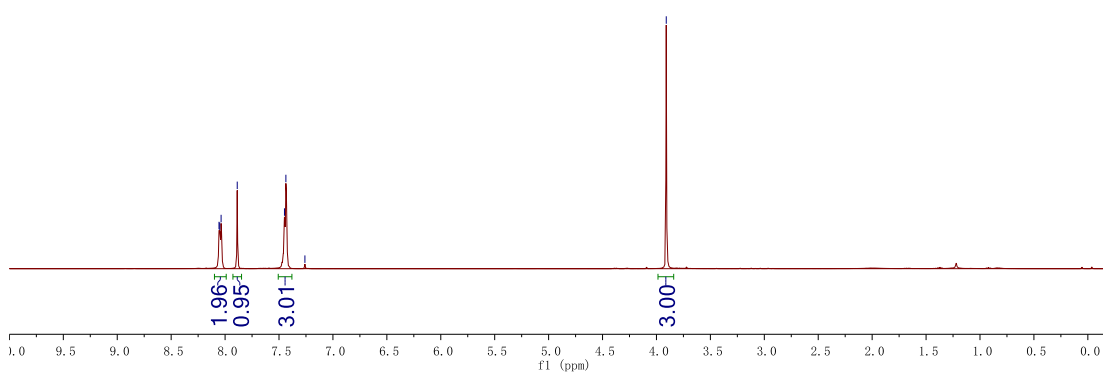
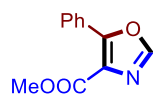
14.54  
12.14



liujie-3-13-1

8.056  
8.049  
8.037  
7.887  
7.449  
7.436  
7.260

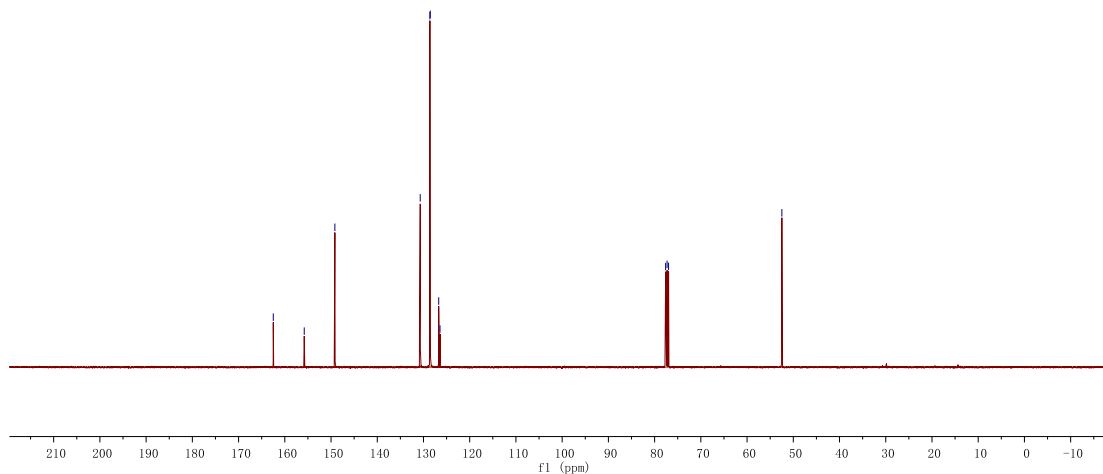
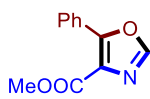
3.909





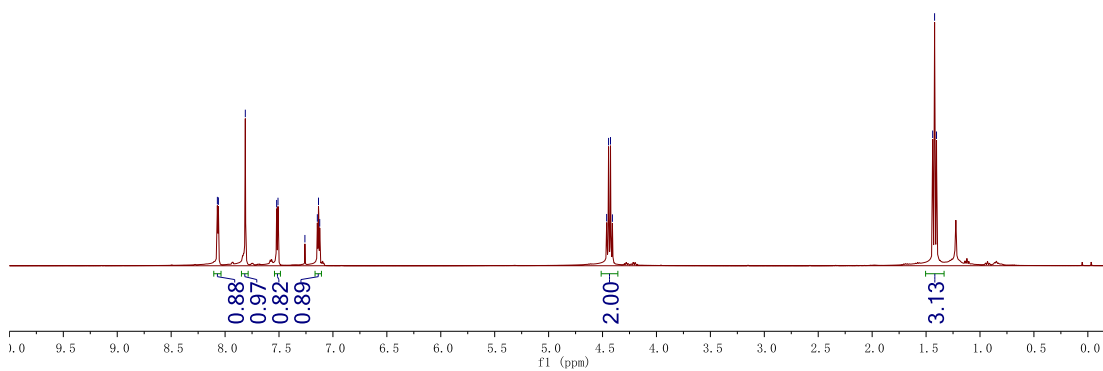
liujie-3-13-1-c

162.493  
155.796  
149.169  
130.702  
128.613  
128.535  
126.706  
126.426  
77.618  
77.300  
76.982  
52.474

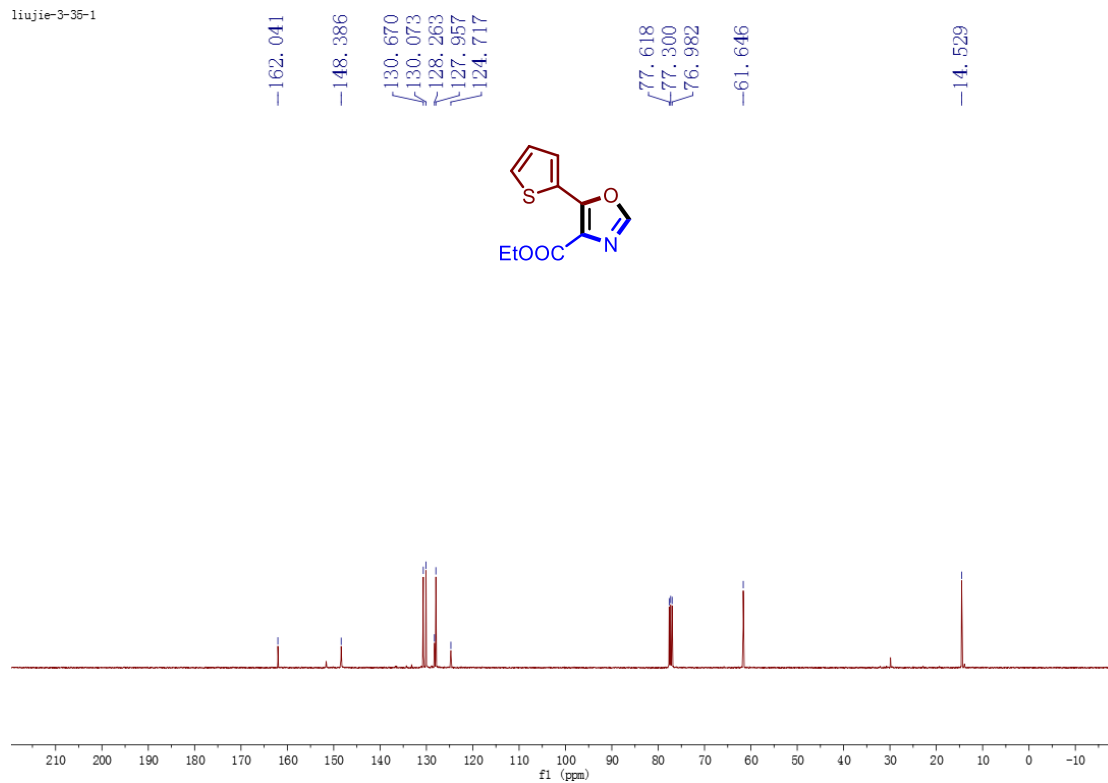


liujie-3-35-1

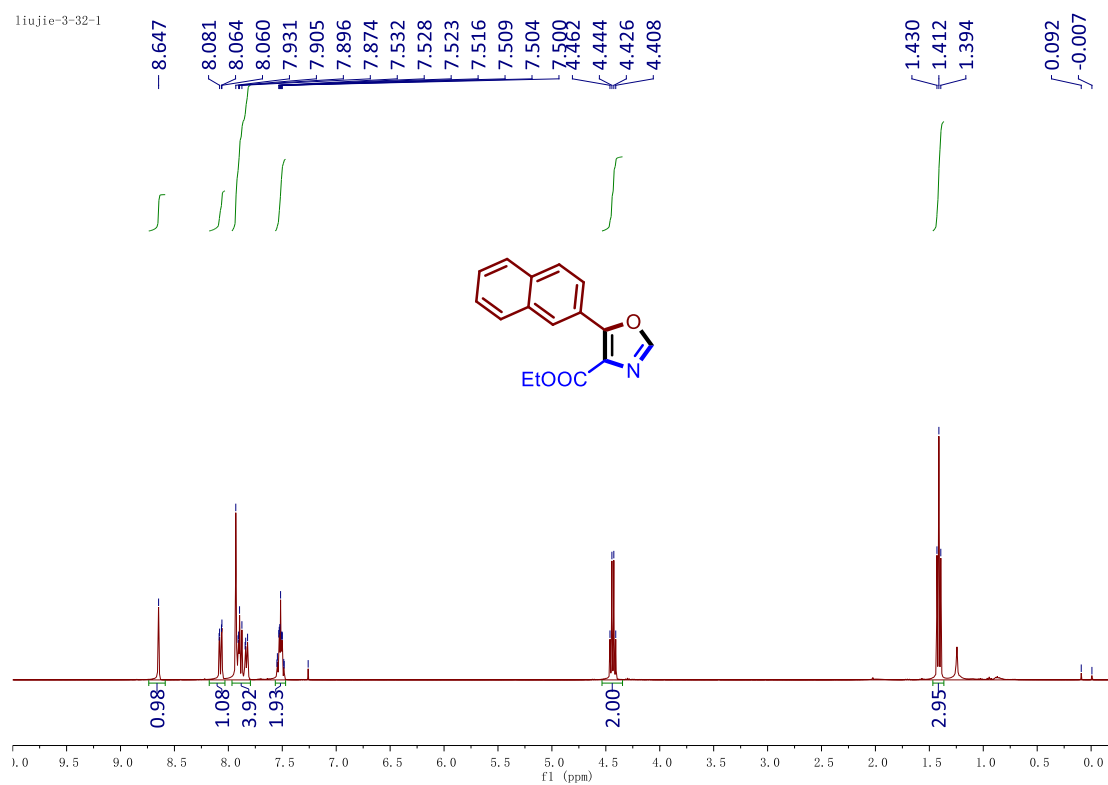
8.072  
8.062  
7.812  
7.522  
7.509  
7.260  
7.145  
7.134  
7.122  
4.462  
4.444  
4.426  
4.408  
1.439  
1.421  
1.403



liujie-3-35-1

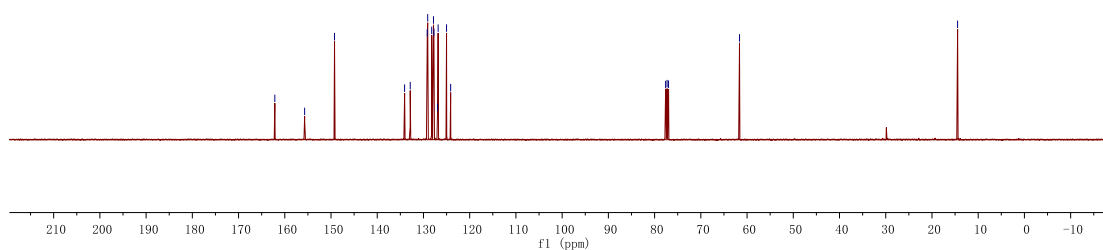
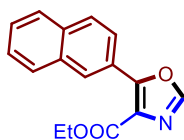


liujie-3-32-1

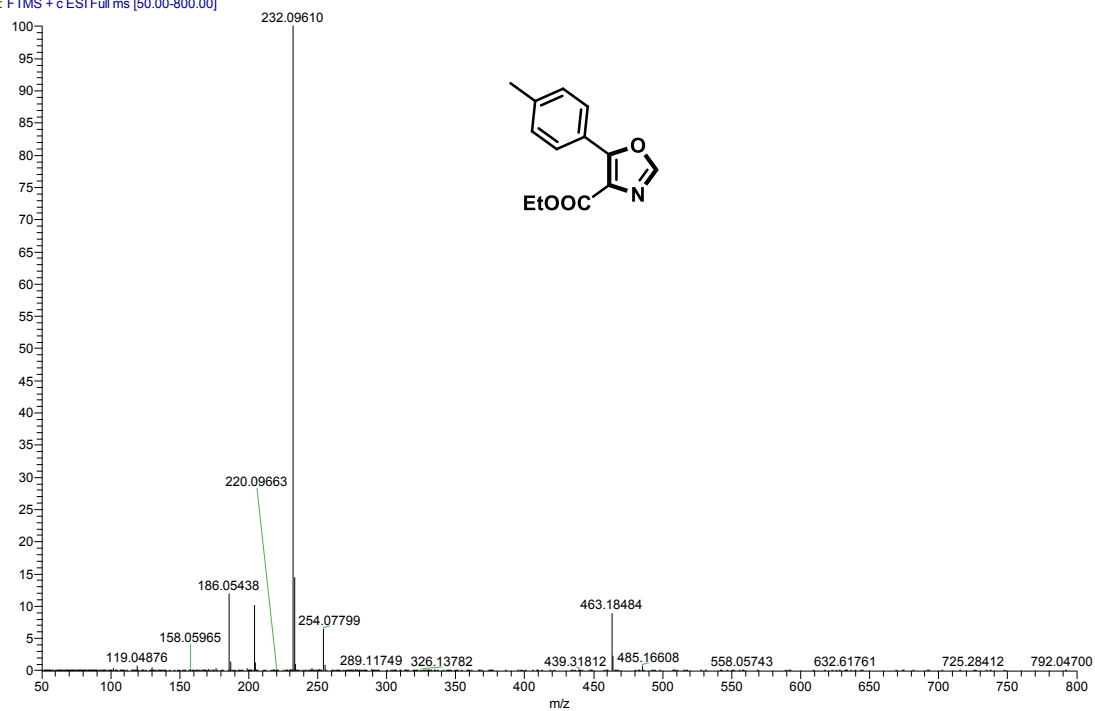


liujie-3-32-1

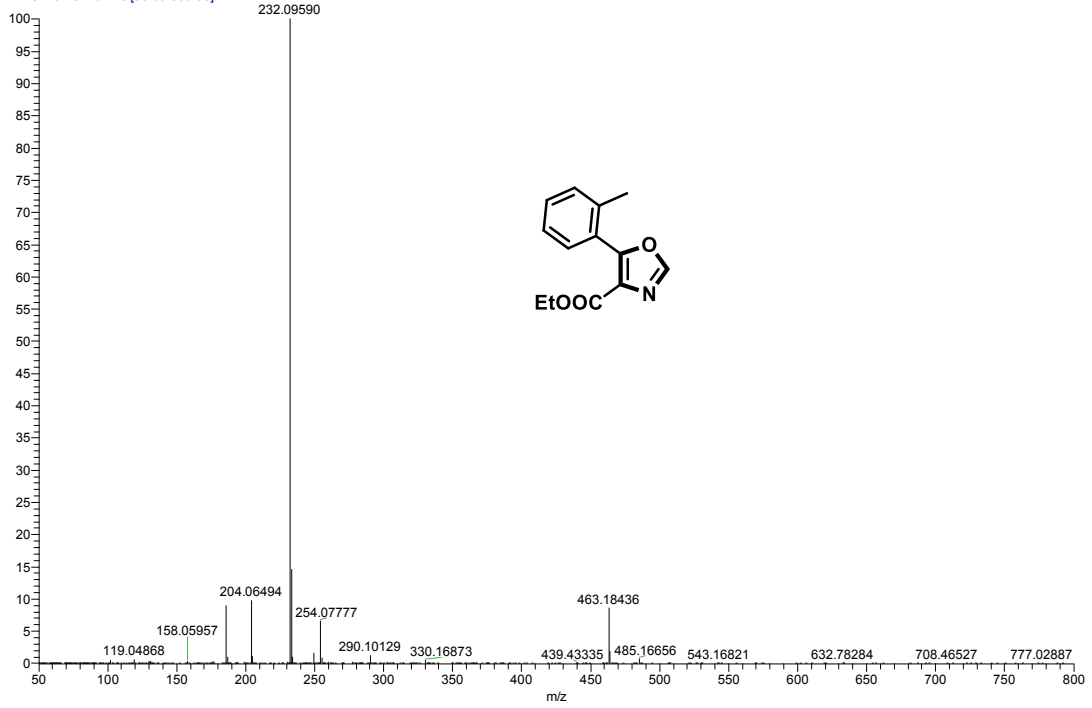
162.153  
155.705  
149.243  
134.079  
132.862  
129.180  
129.084  
128.218  
127.834  
127.743  
126.958  
126.826  
125.009  
124.119  
77.619  
77.300  
76.982  
61.631  
14.456



LJ-1 #511 RT: 9.08 AV: 1 NL: 3.55E8  
T: FTMS + c ESI Full ms [50.00-800.00]



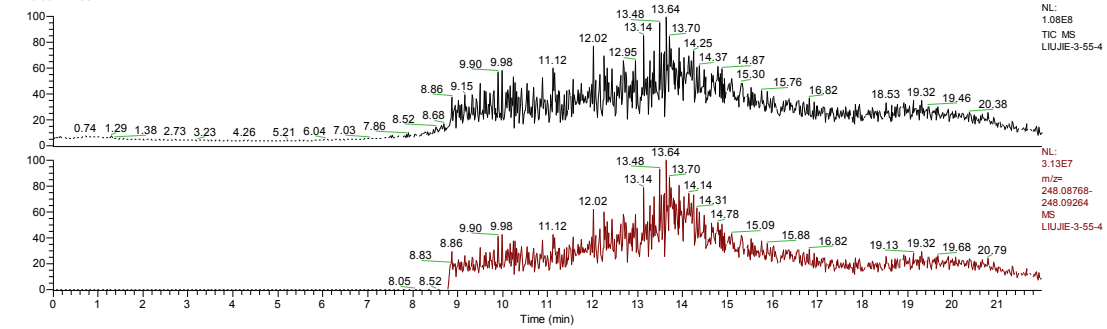
LJ-2 #499 RT: 8.97 AV: 1 NL: 1.21E8  
T: FTMS + c ESI Full ms [50.00-800.00]



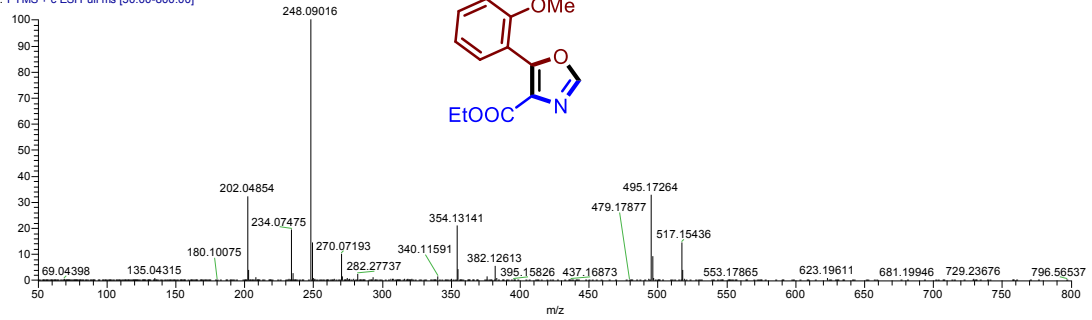
D:\Data\...Lijie\LIJIE-3-55-4

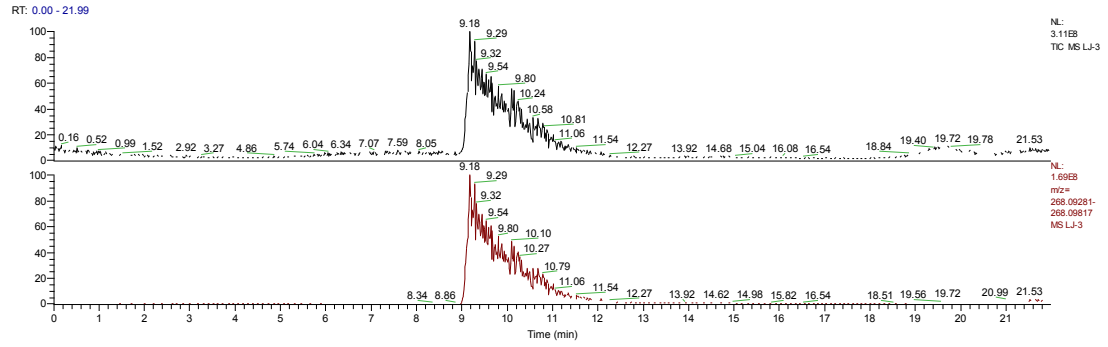
9/15/2013 7:07:23 PM

RT: 0.00 - 21.98

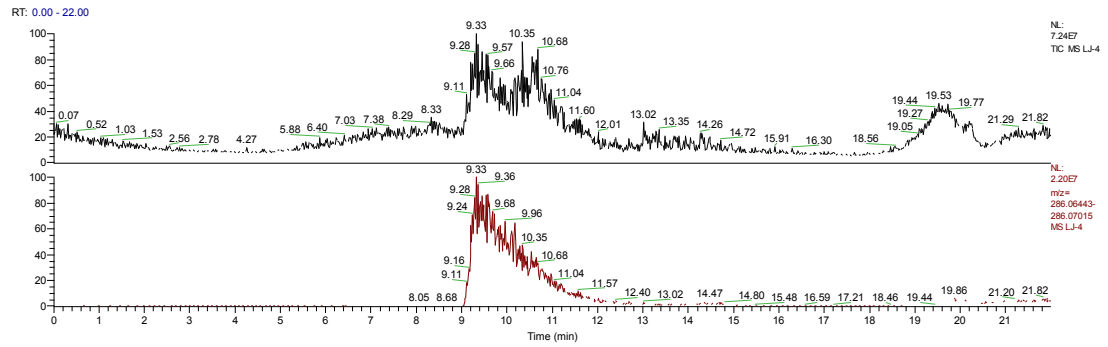
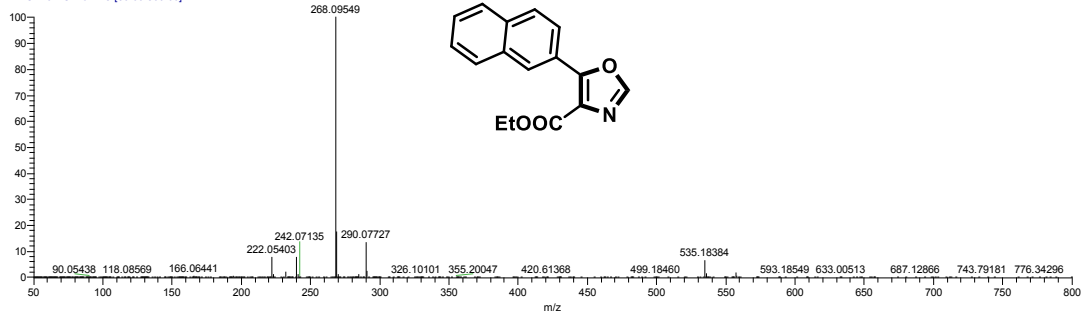


LIJIE-3-55-4 #704 RT: 13.70 AV: 1 NL: 2.73E7  
T: FTMS + c ESI Full ms [50.00-800.00]

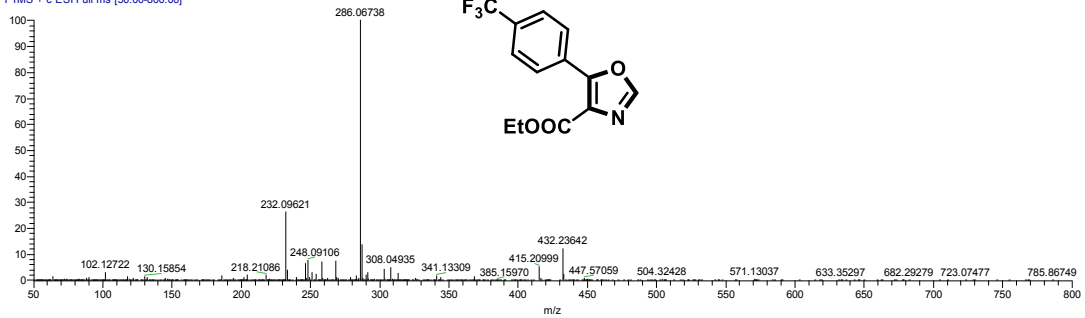


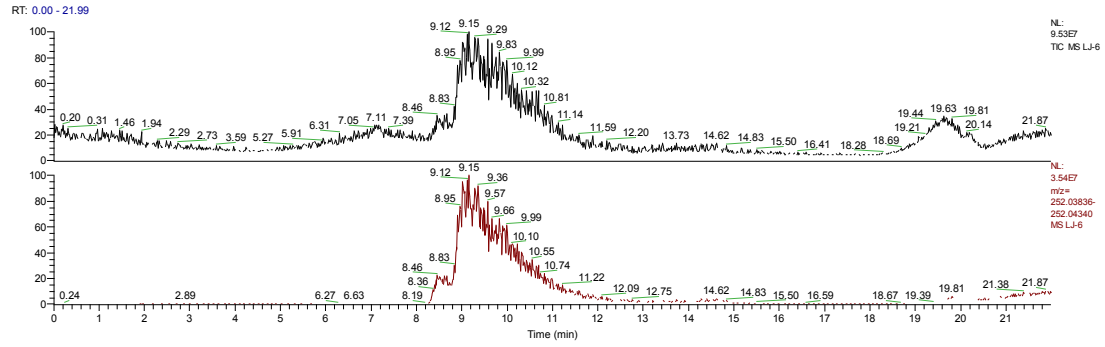


LJ-3 #506 RT: 9.42 AV: 1 NL: 9.66E7  
T: FTMS + c ESI Full ms [50.00-800.00]

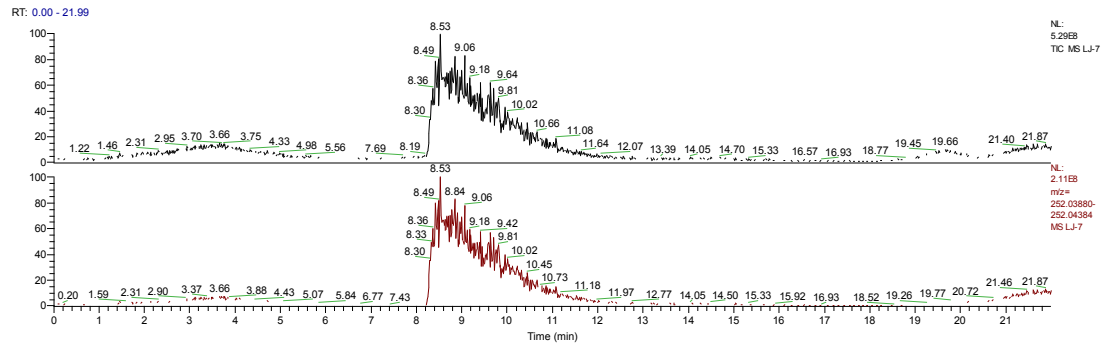
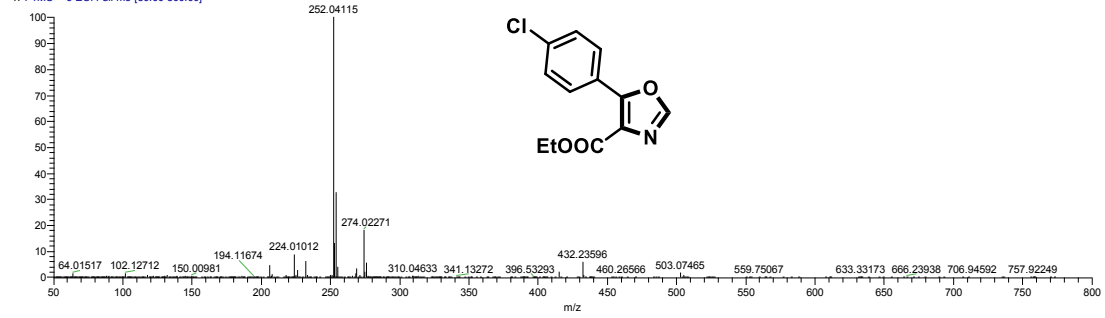


LJ-4 #495 RT: 9.53 AV: 1 NL: 1.28E7  
T: FTMS + c ESI Full ms [50.00-800.00]

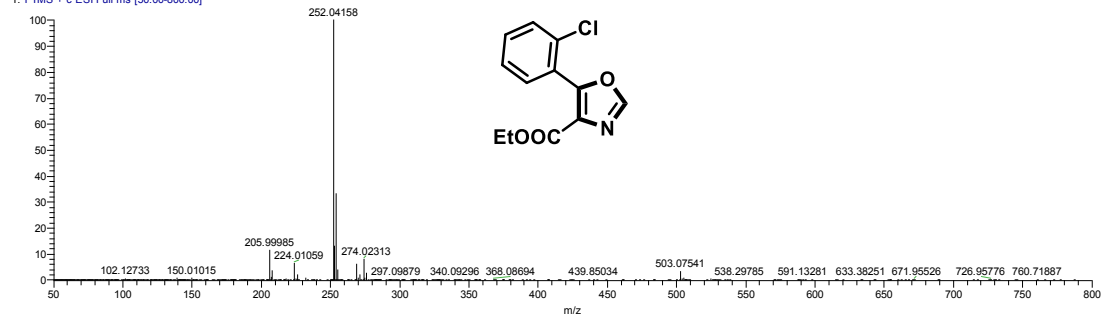


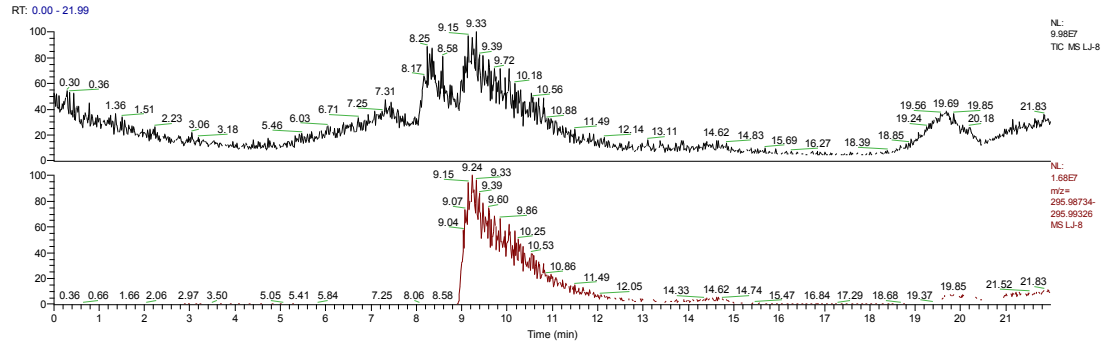


LJ-6 #500 RT: 9.24 AV: 1 NL: 2.74E7  
T: FTMS + c ESI Full ms [50.00-800.00]

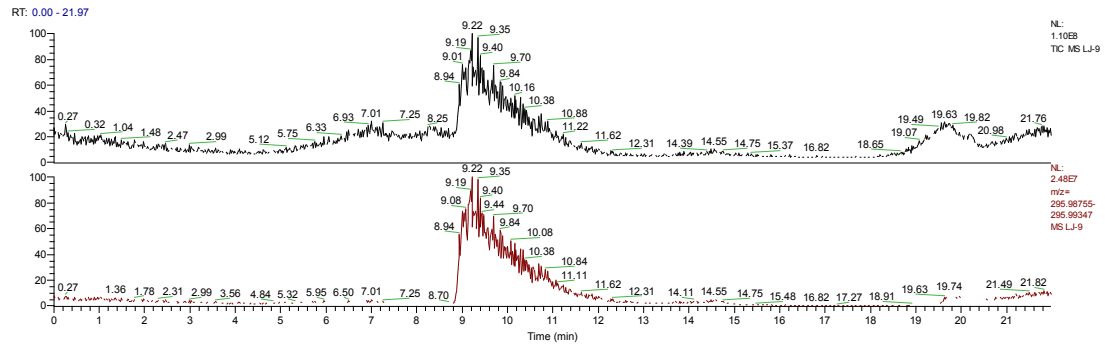
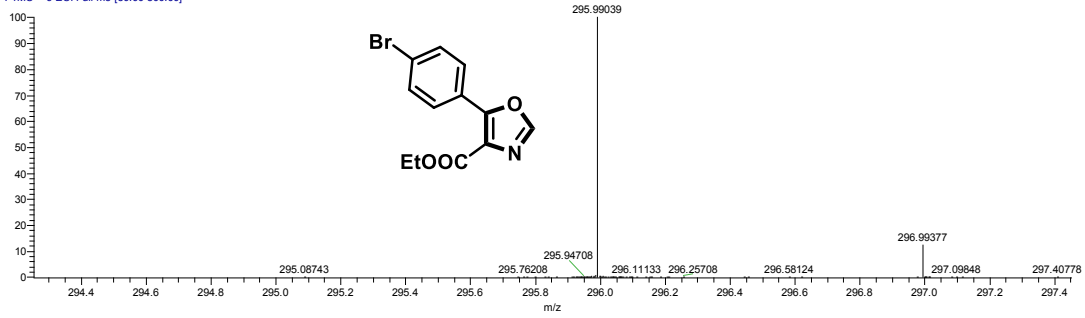


LJ-7 #508 RT: 8.31 AV: 1 NL: 7.50E7  
T: FTMS + c ESI Full ms [50.00-800.00]

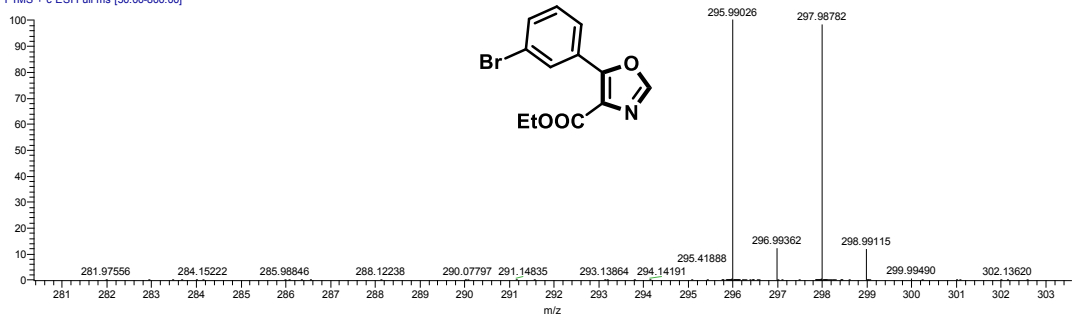


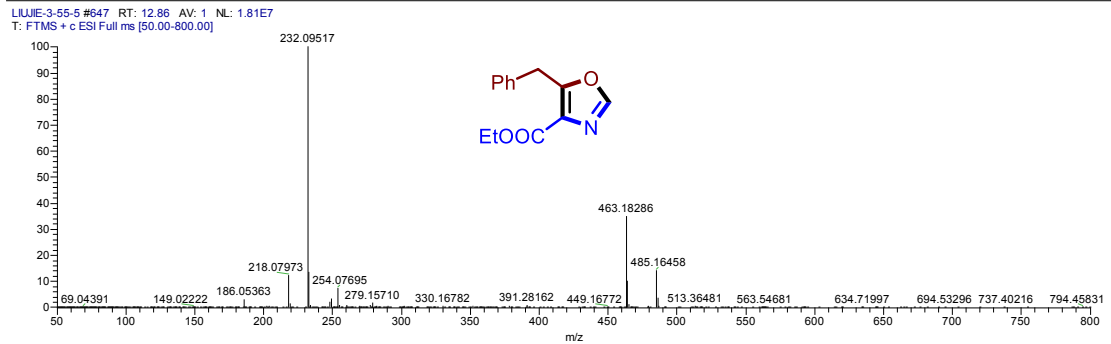
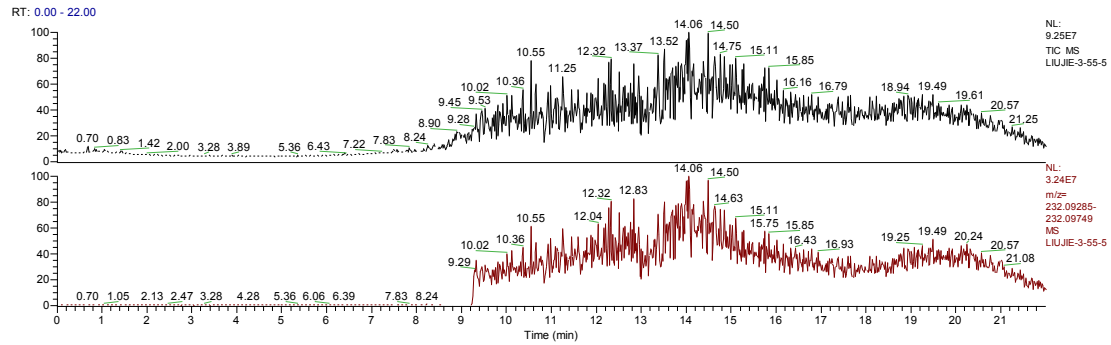
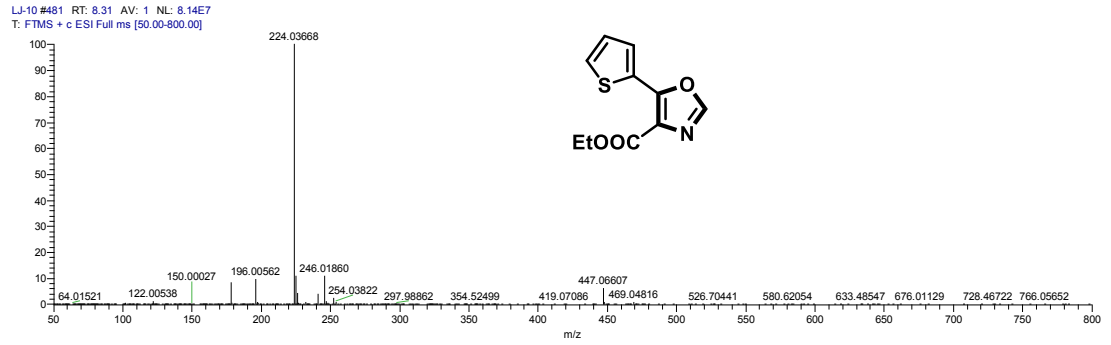
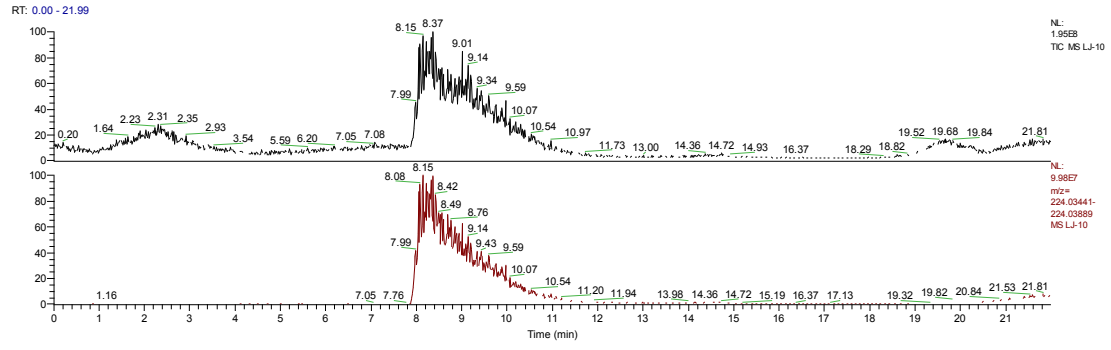


LJ-8 #535 RT: 9.13 AV: 1 NL: 1.04E7  
T: FTMS + c ESI Full ms [50.00-800.00]

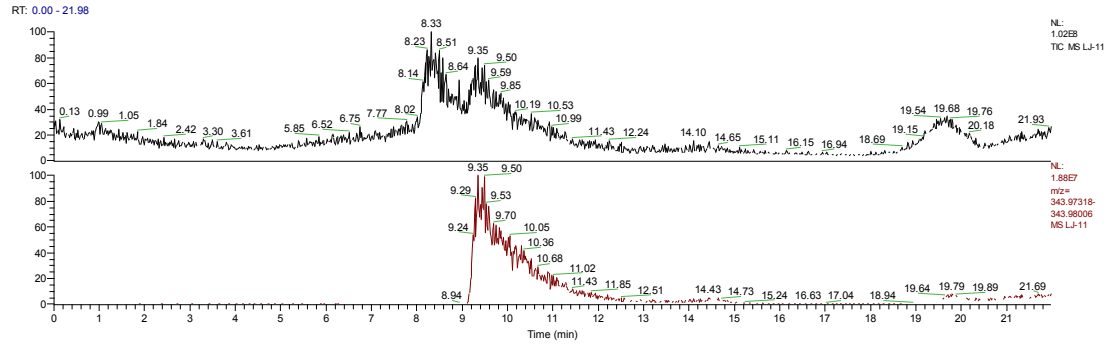


LJ-9 #513 RT: 9.28 AV: 1 NL: 1.78E7  
T: FTMS + c ESI Full ms [50.00-800.00]

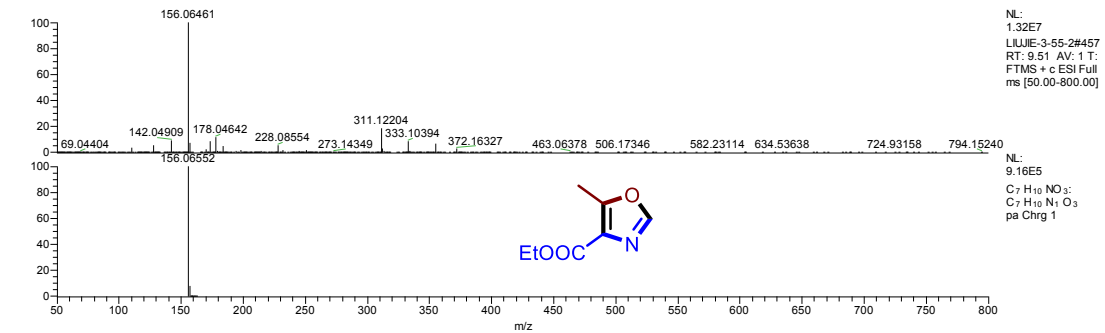
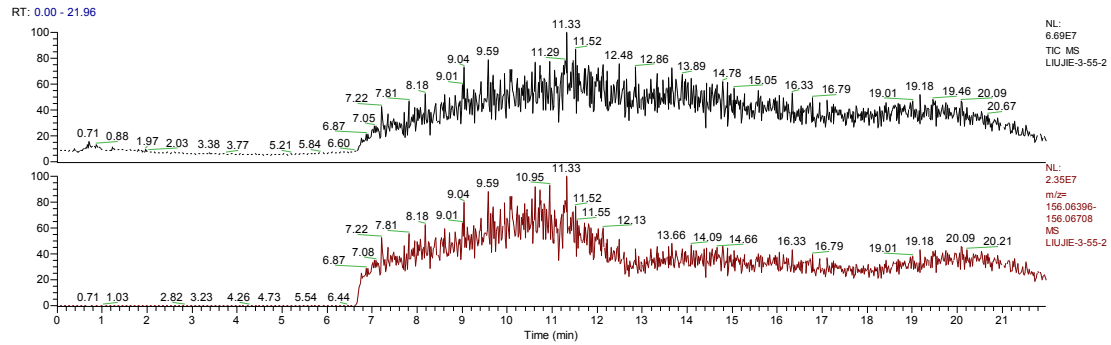
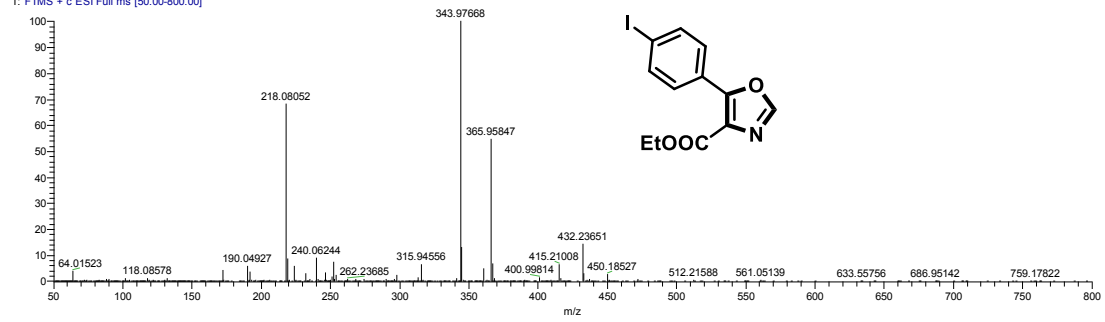


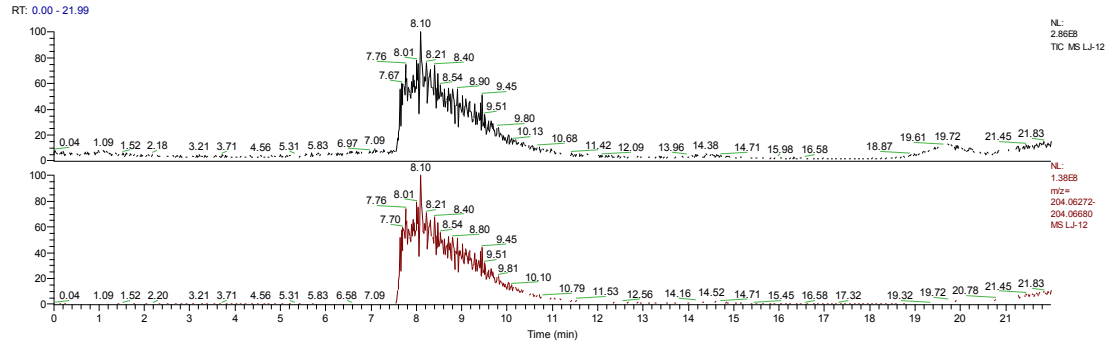






LJ-11 #531 RT: 9.44 AV: 1 NL: 1.71E7  
T: FTMS + c ESI Full ms [50.00-800.00]





LJ-12 #439 RT: 8.17 AV: 1 NL: 7.58E7  
T: FTMS + c ESI Full ms [50.00-800.00]

