

***N*-Arylations of Trifluoromethylated *N*-Acylhydrazones with
Diaryliodonium Salts as Arylation Reagent**

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Lanzhou 730070, P. R. China

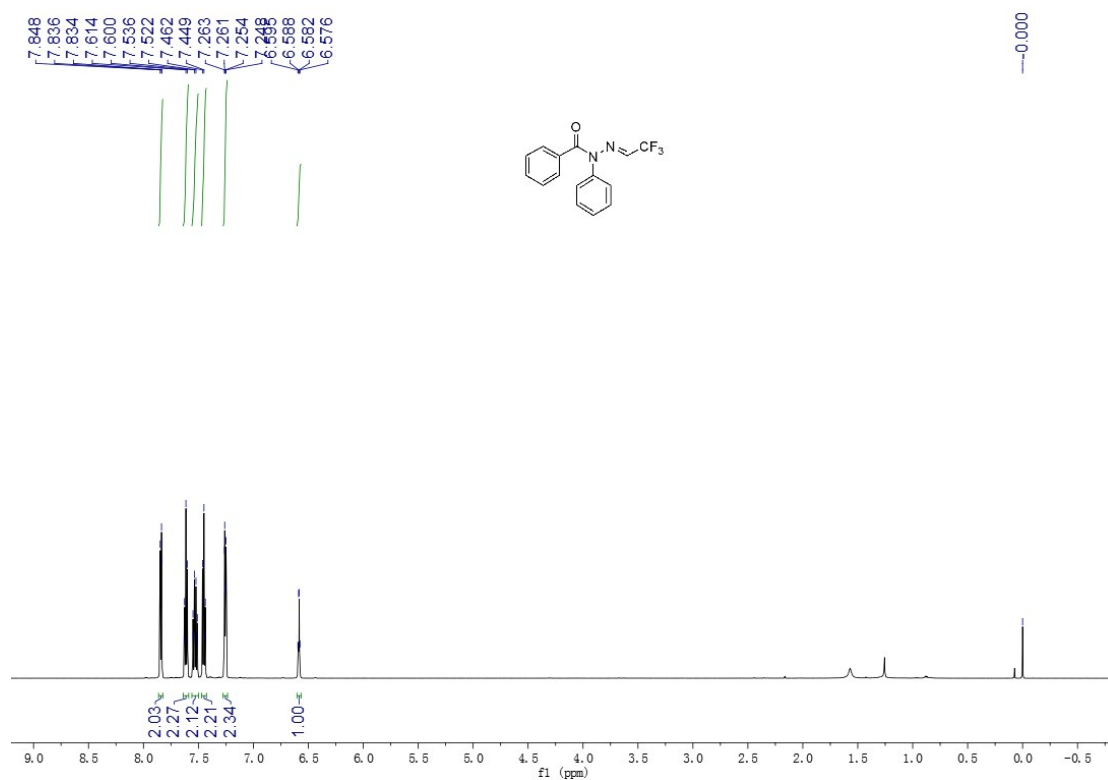
E-mail: huy1@nwnu.edu.cn

Supporting Information

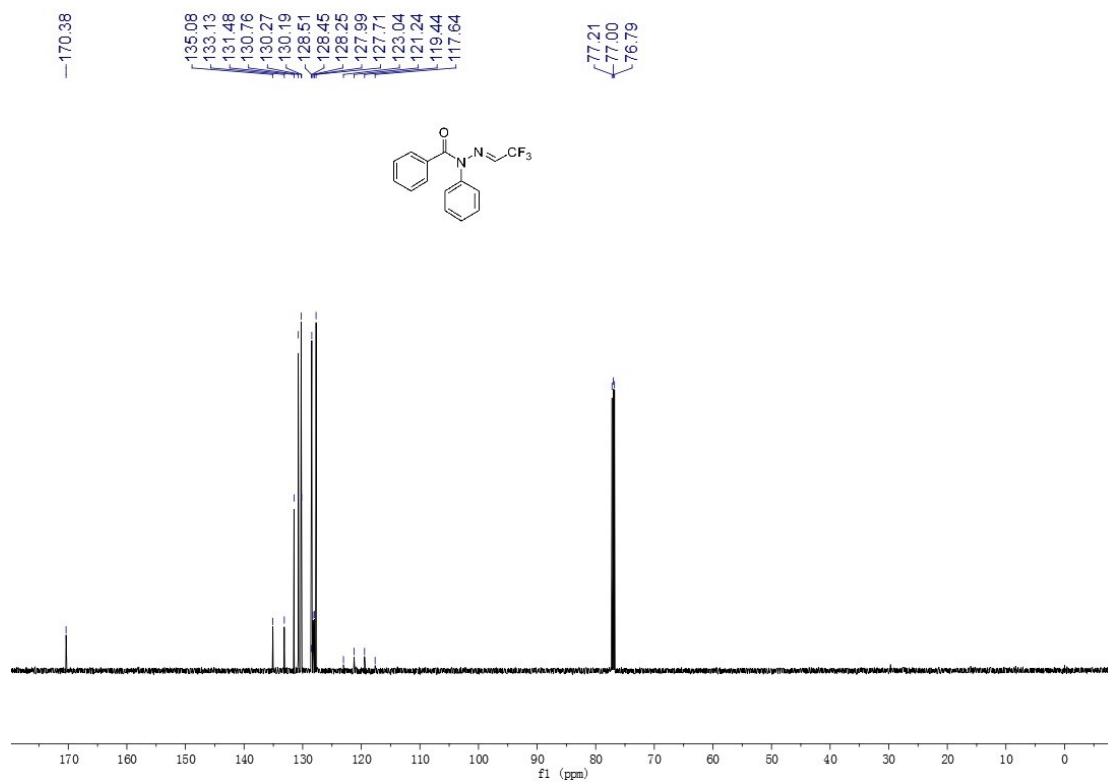
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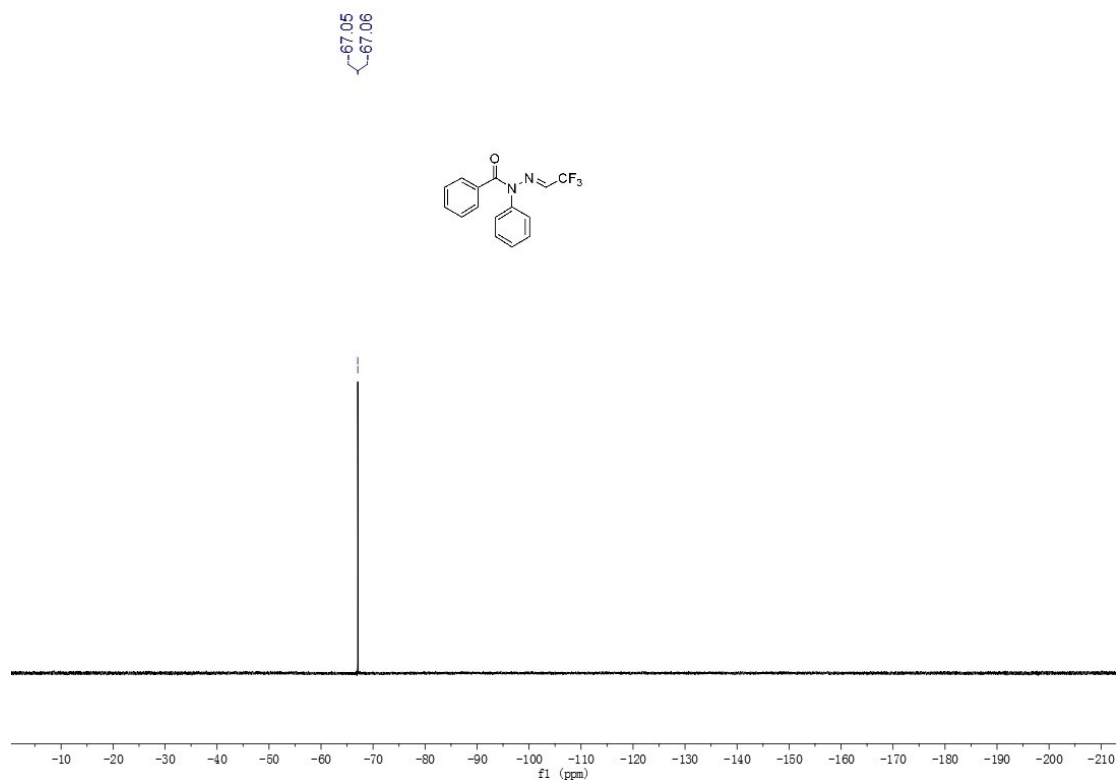
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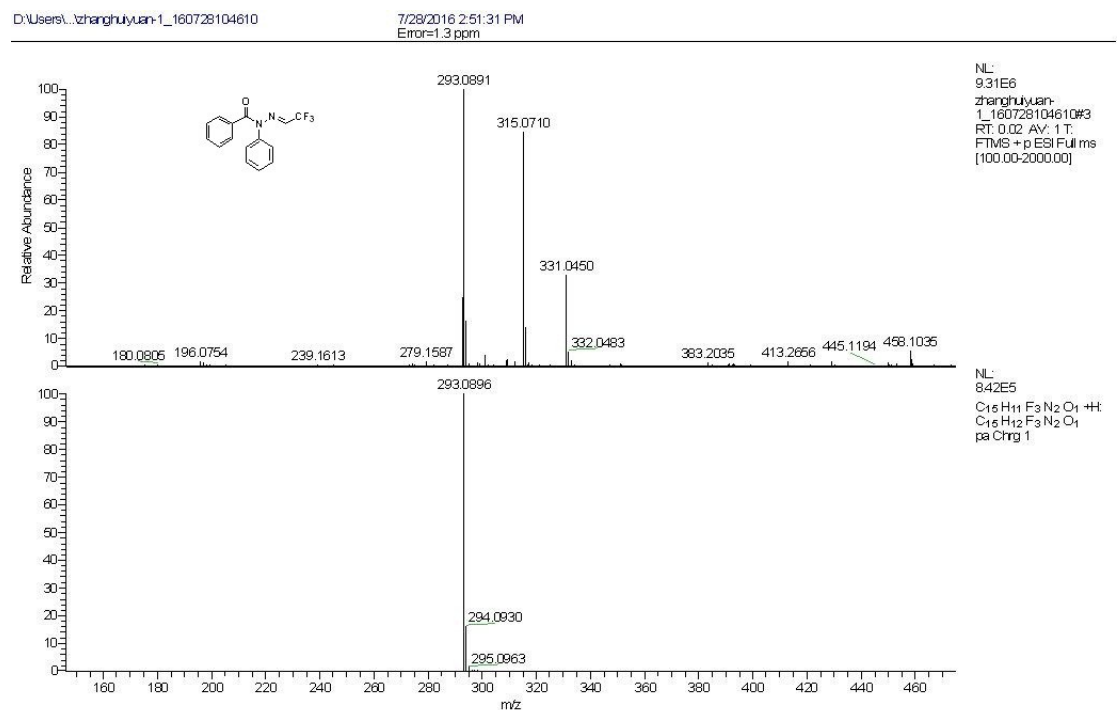
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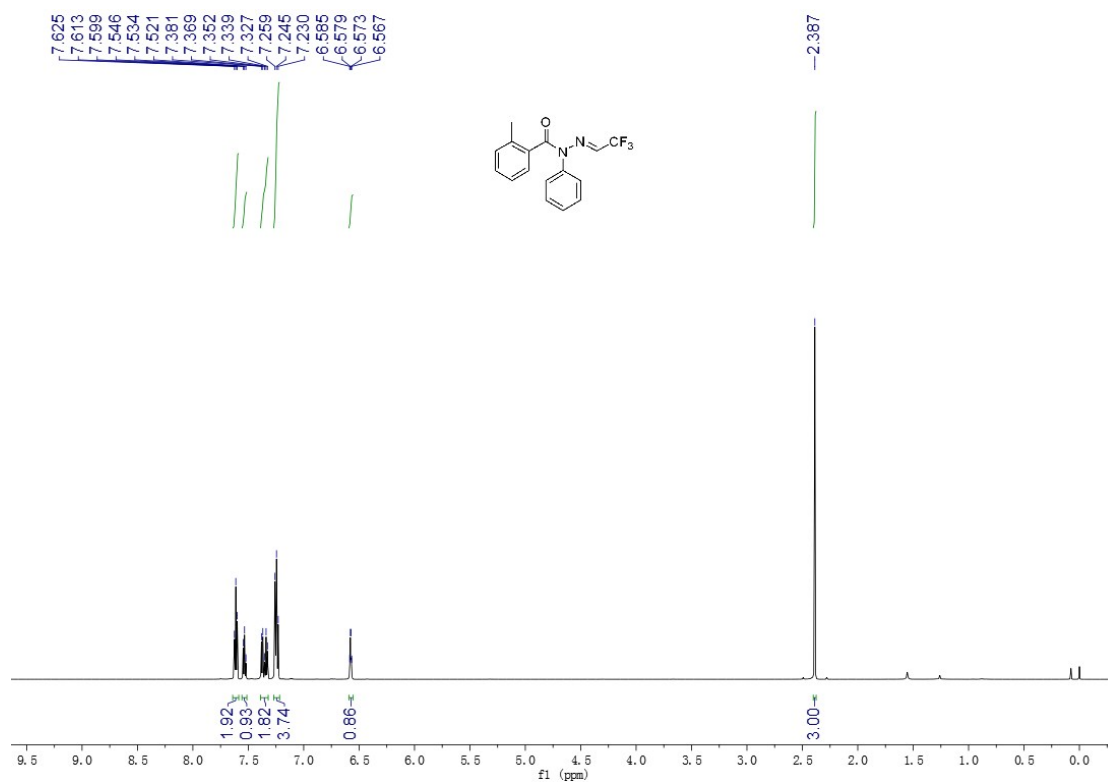
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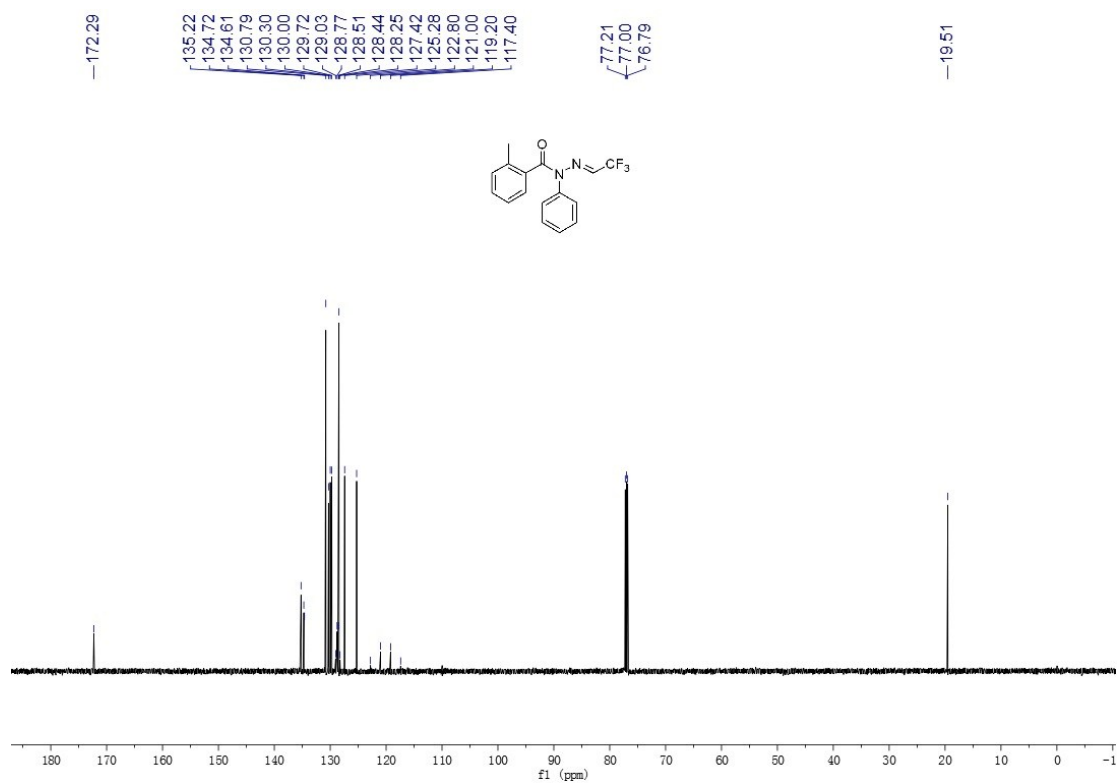
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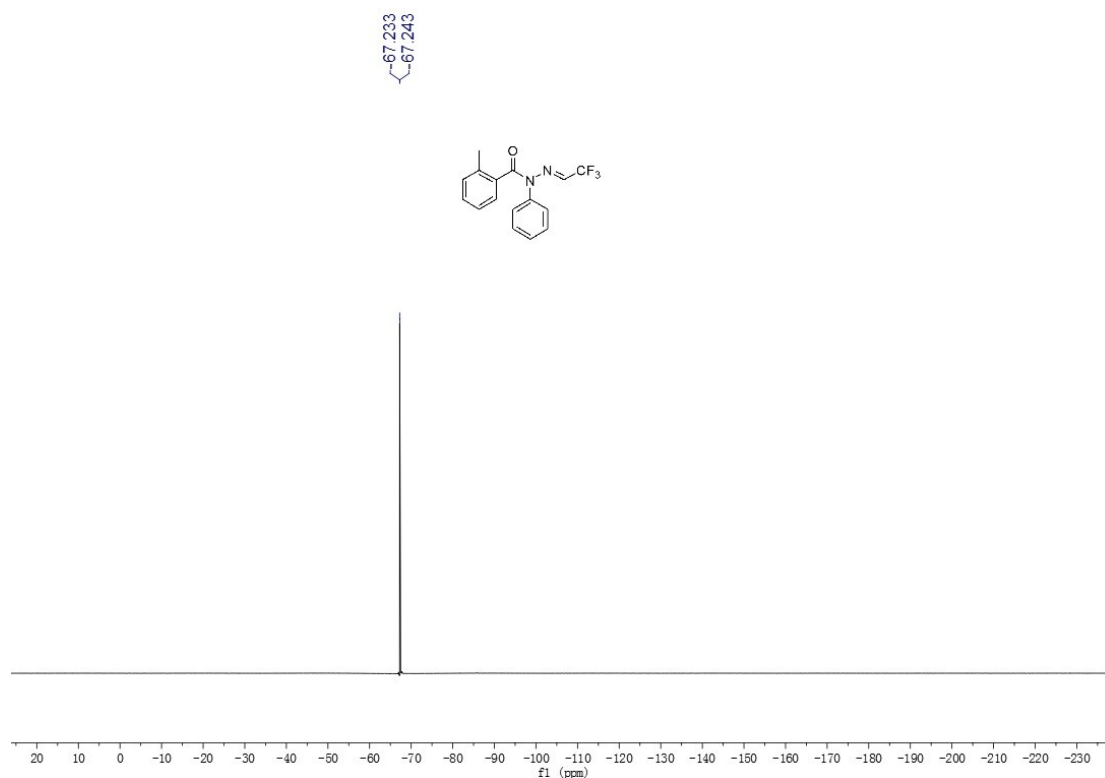
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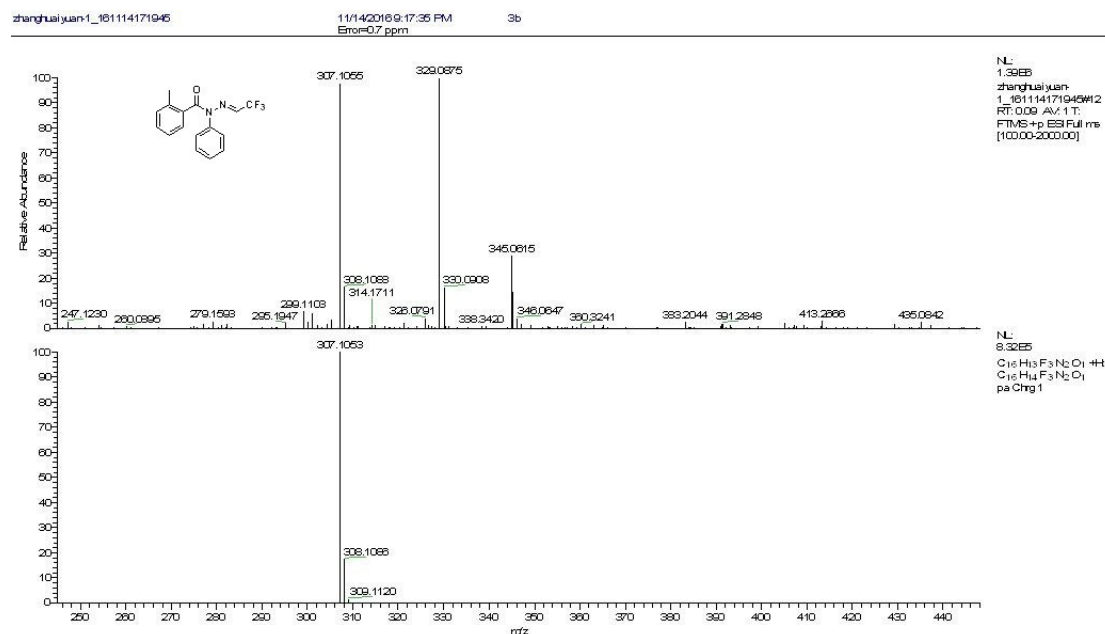
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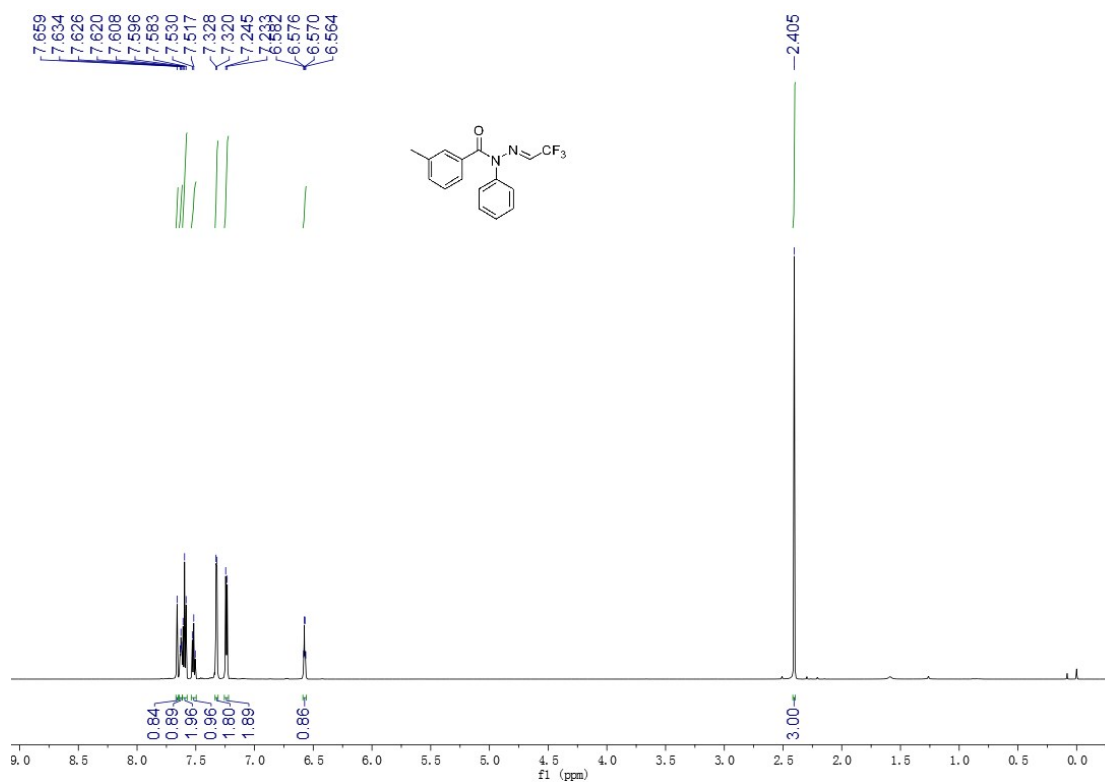
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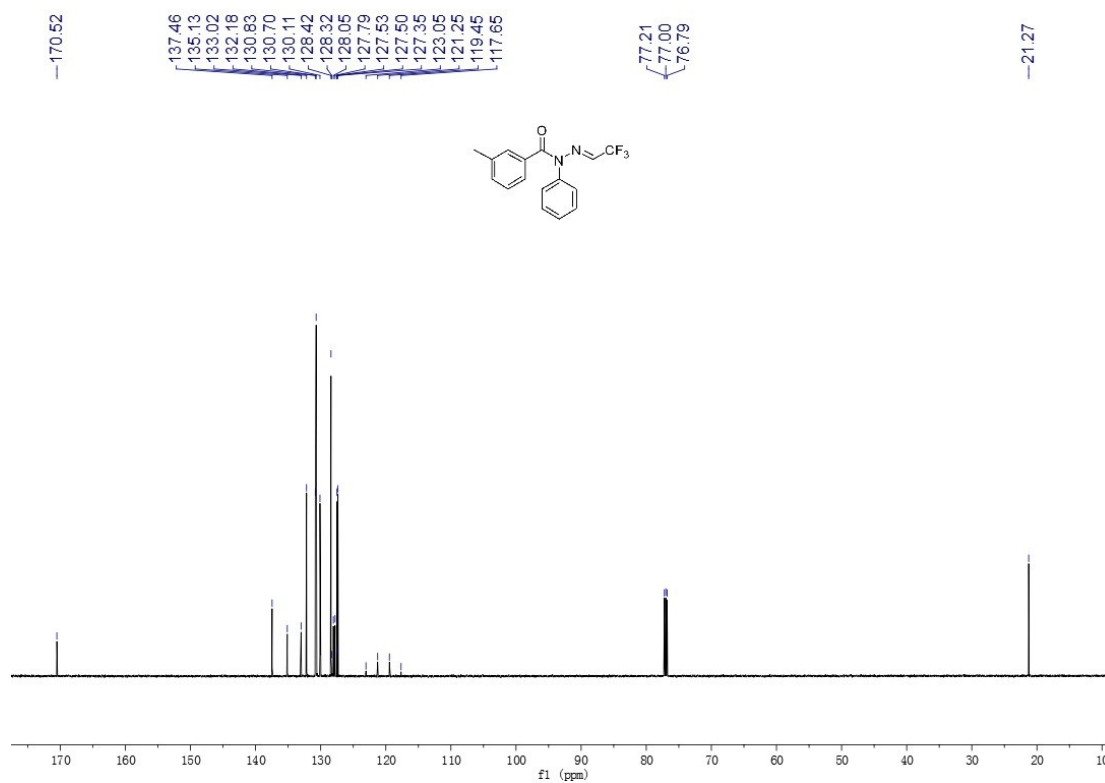
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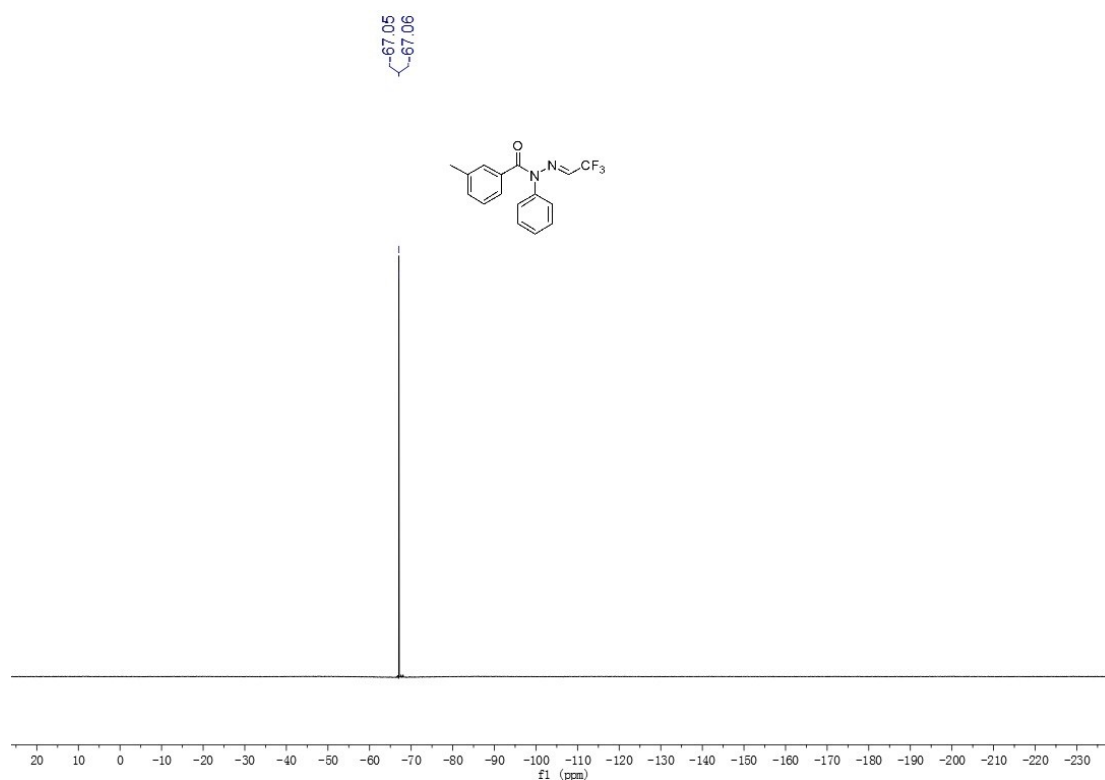
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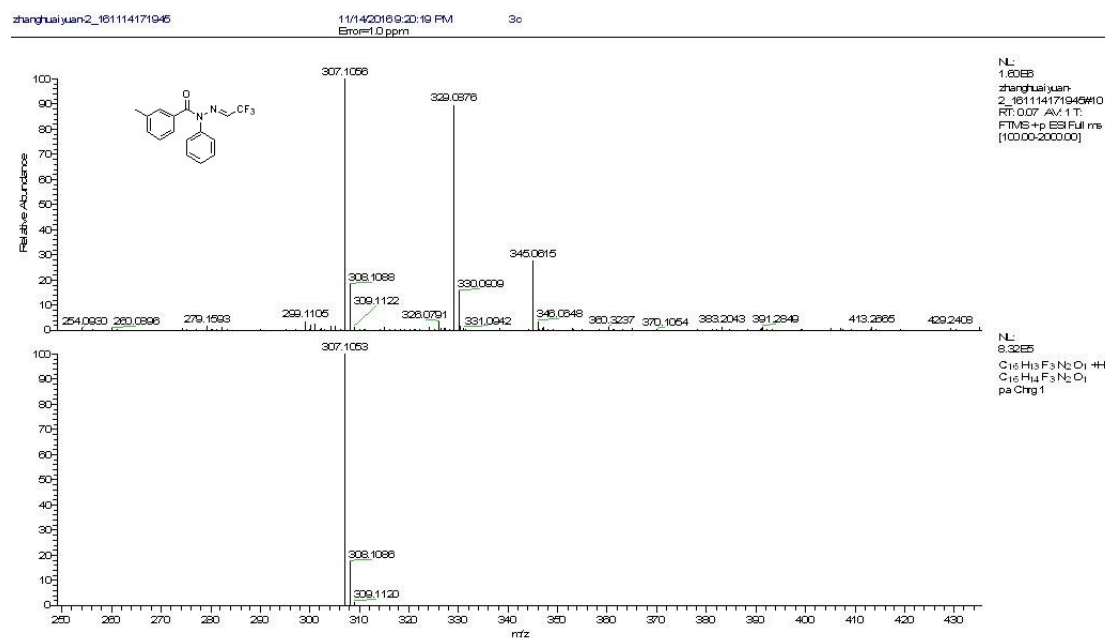
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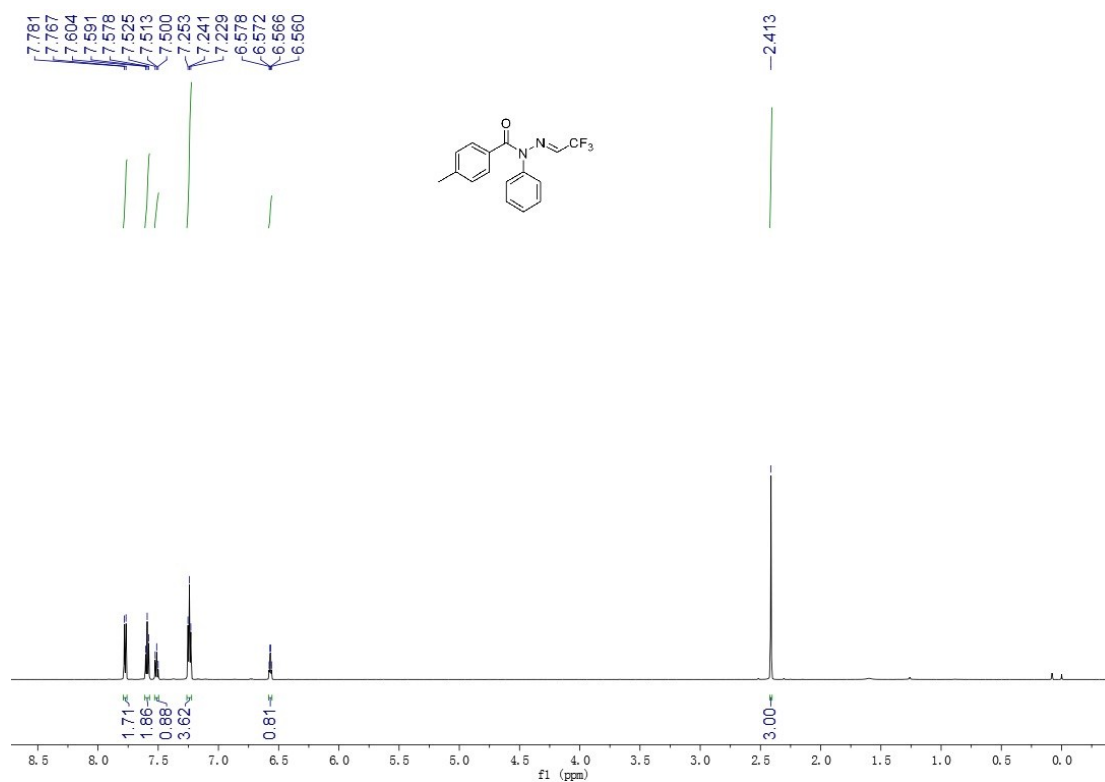
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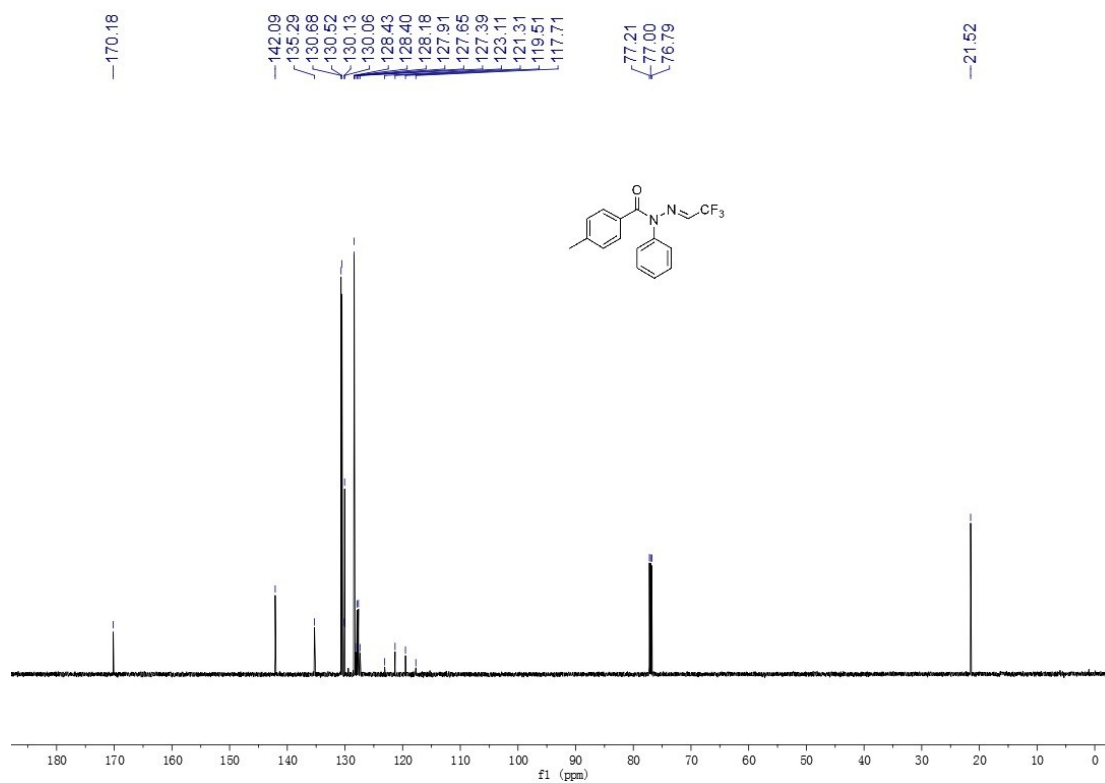
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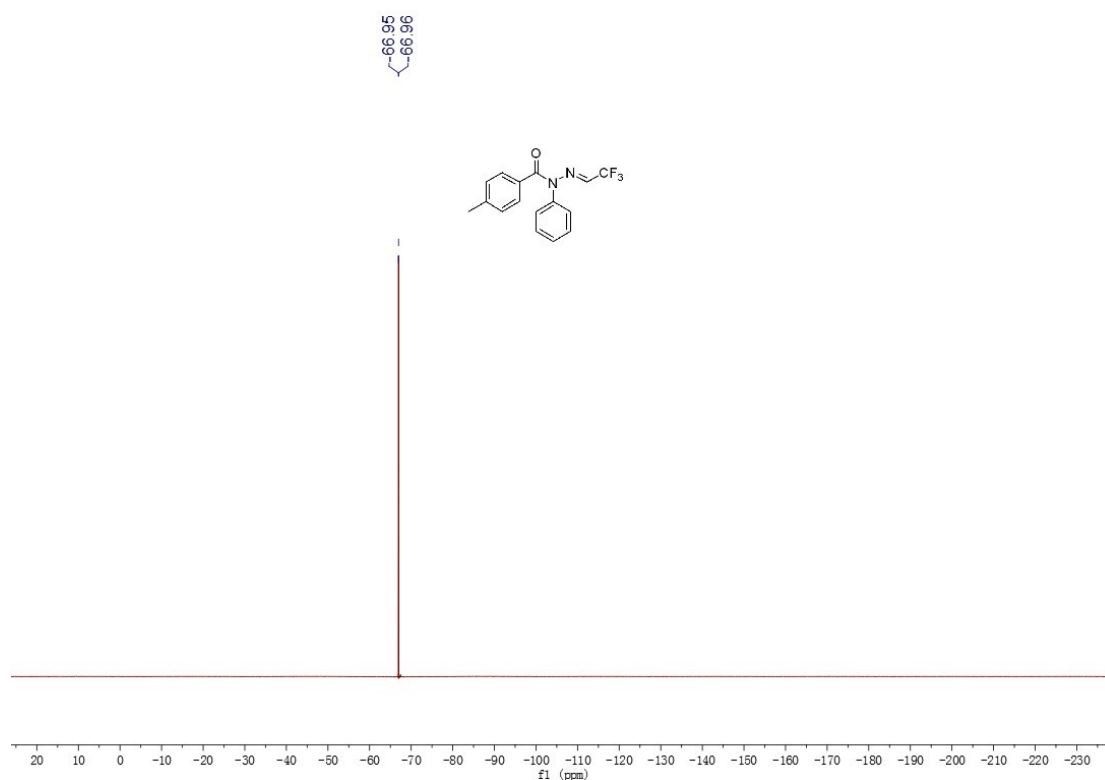
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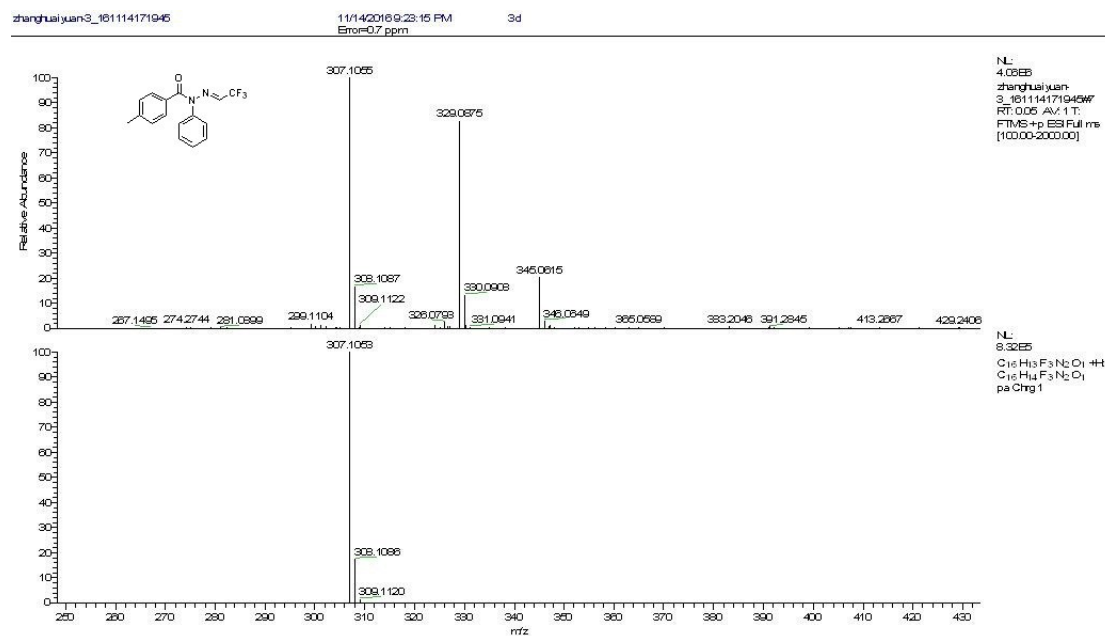
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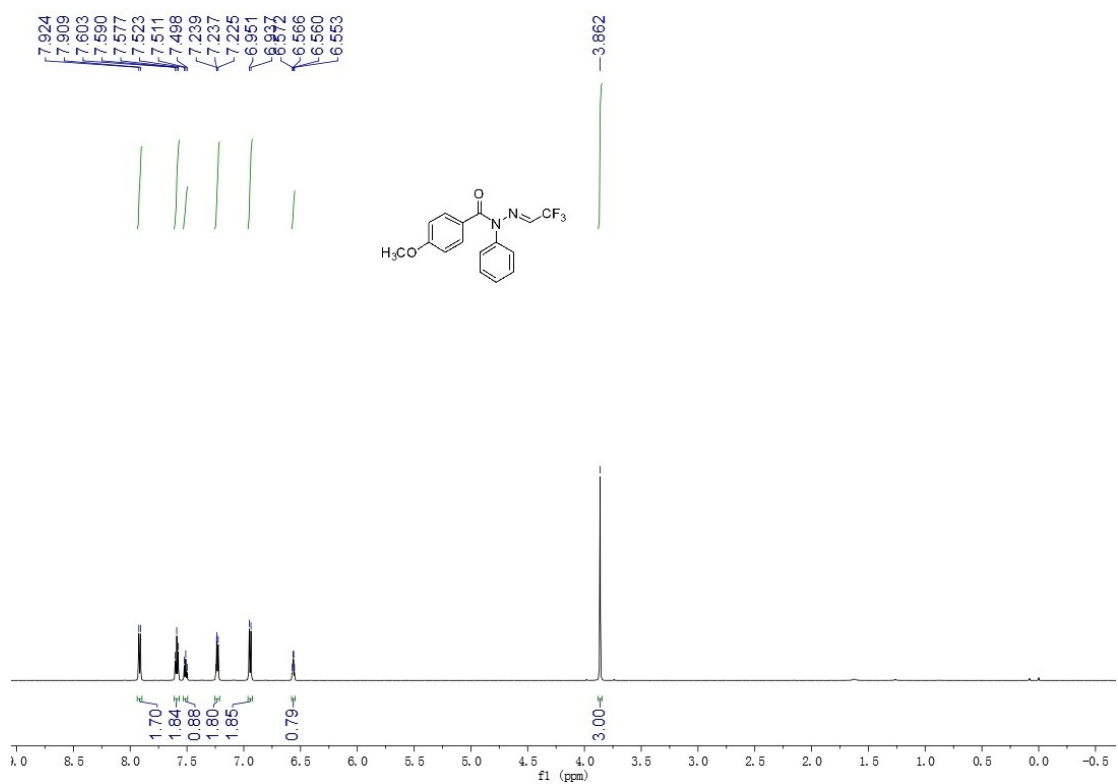
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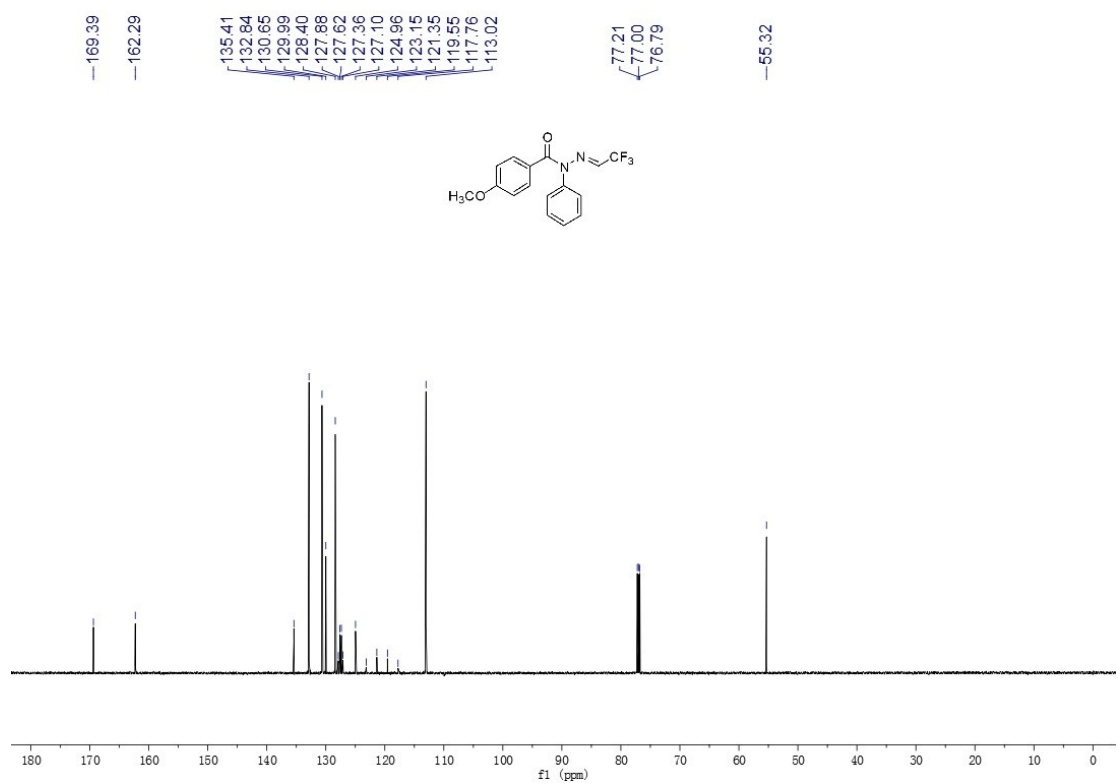
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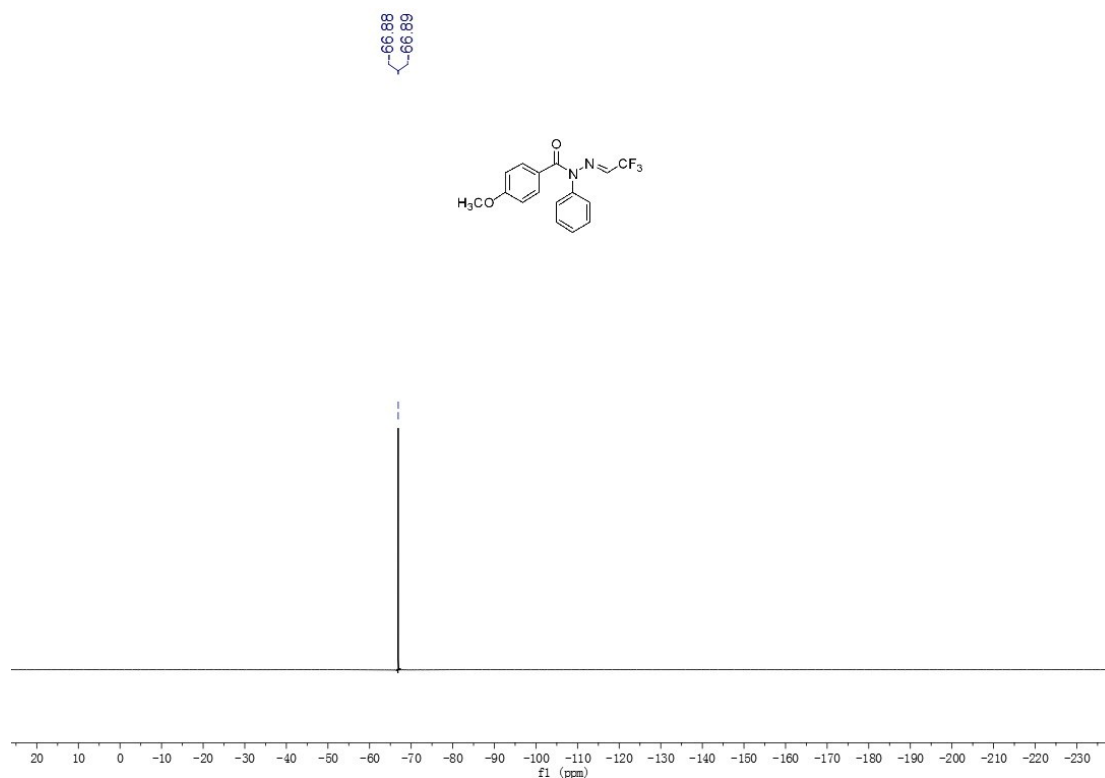
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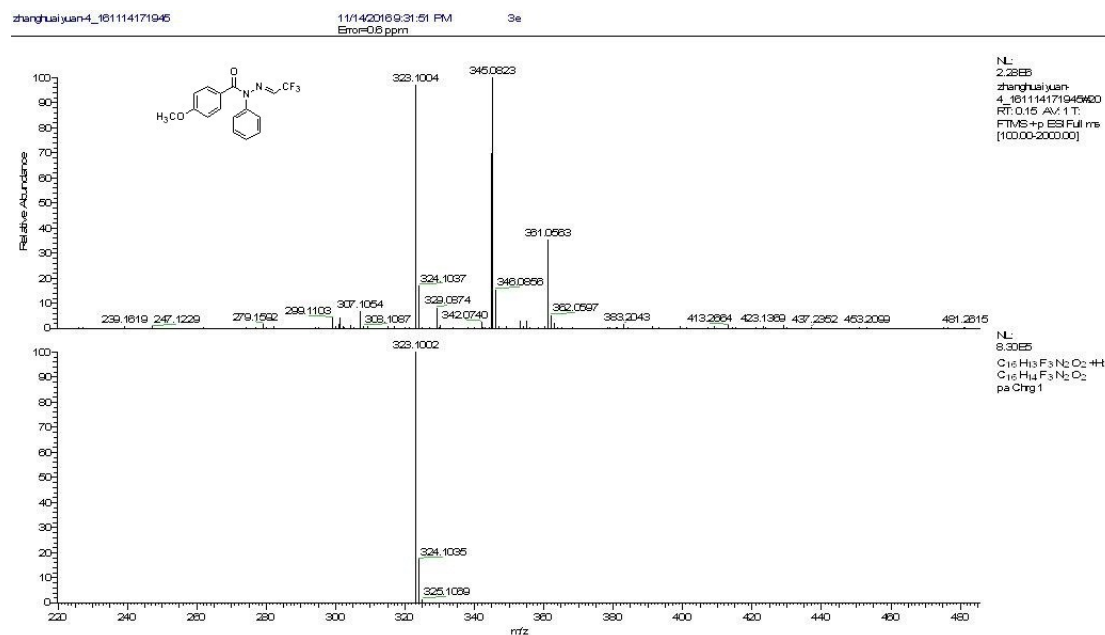
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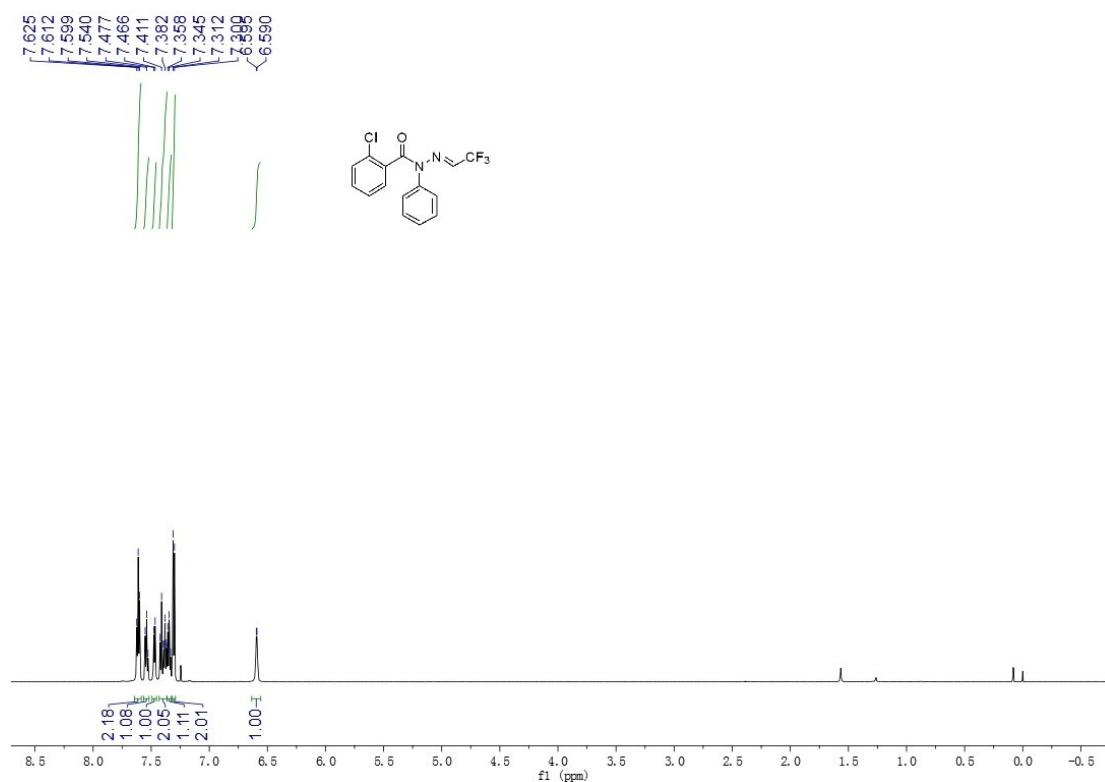
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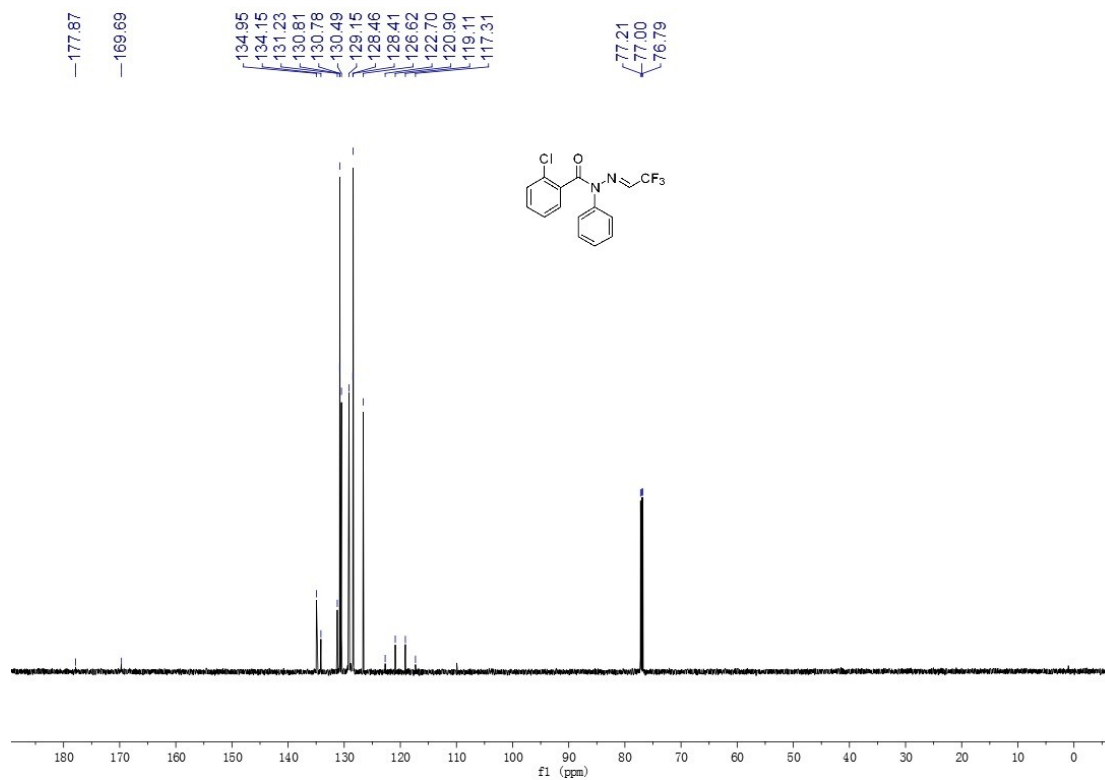
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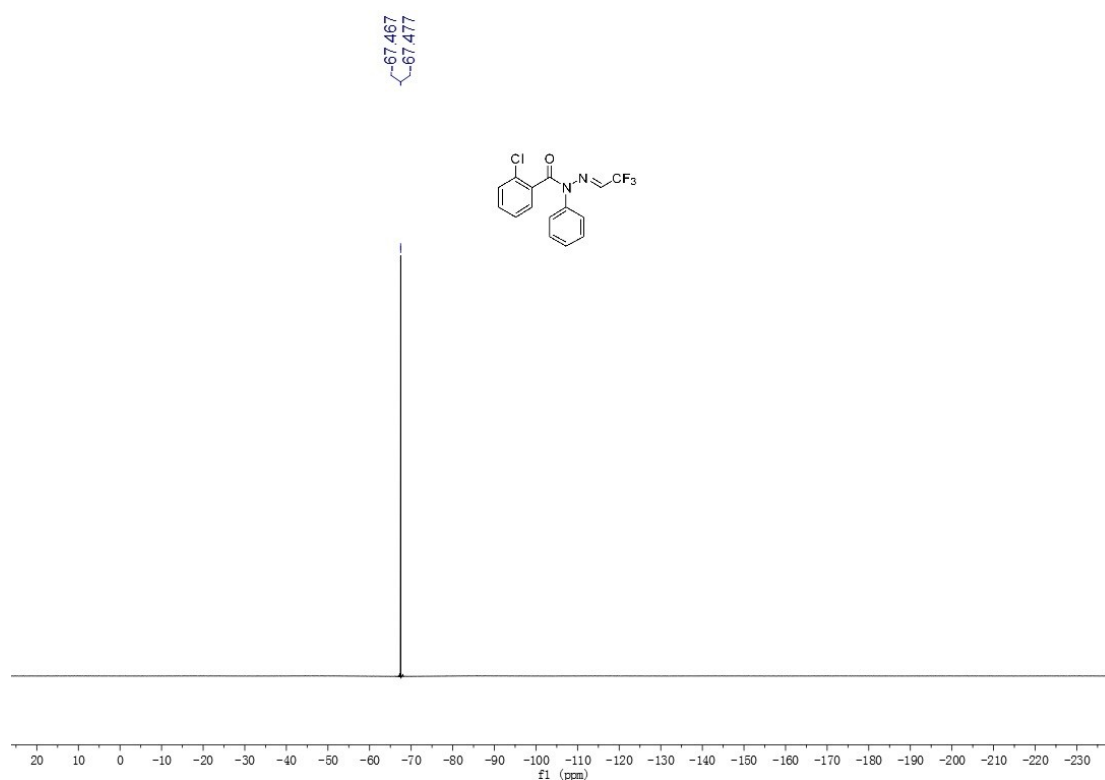
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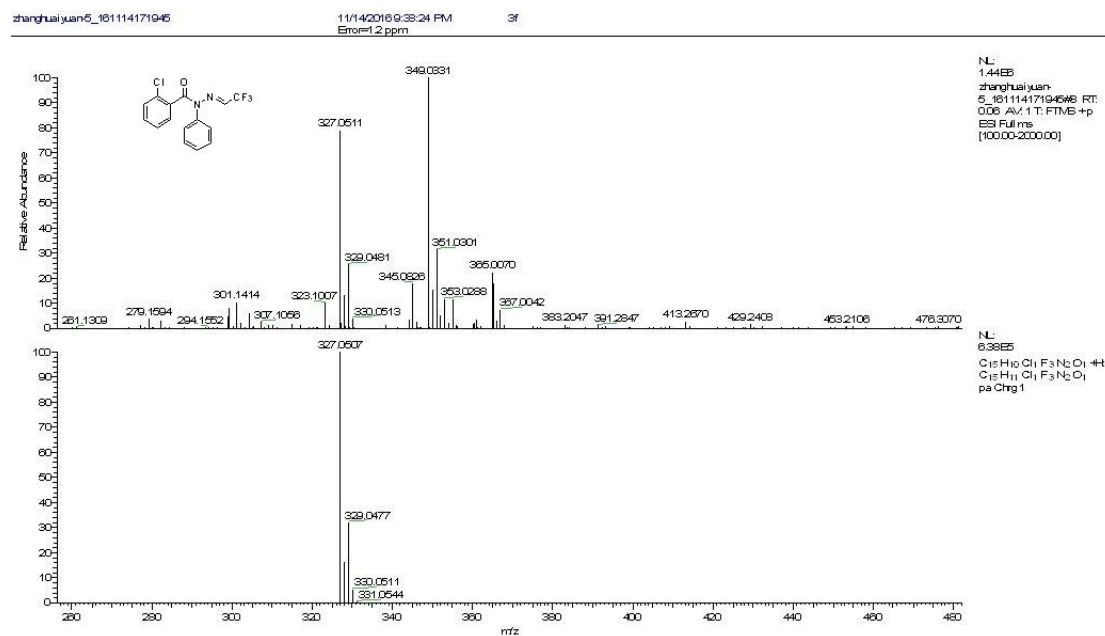
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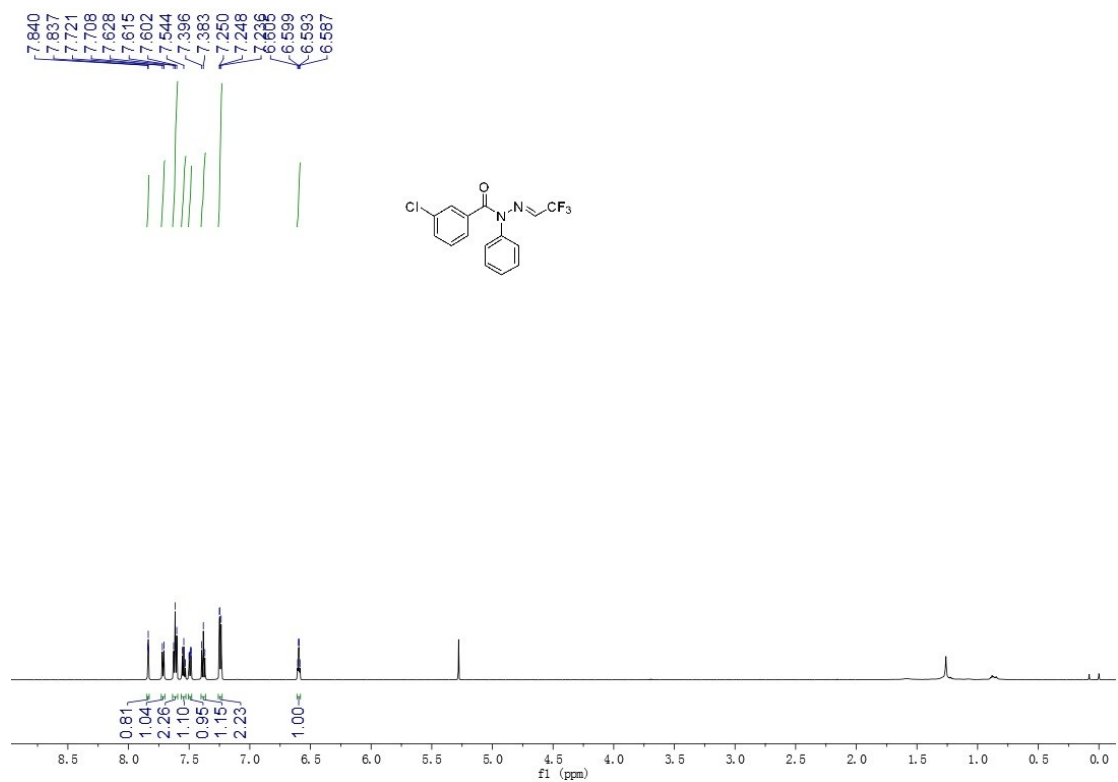
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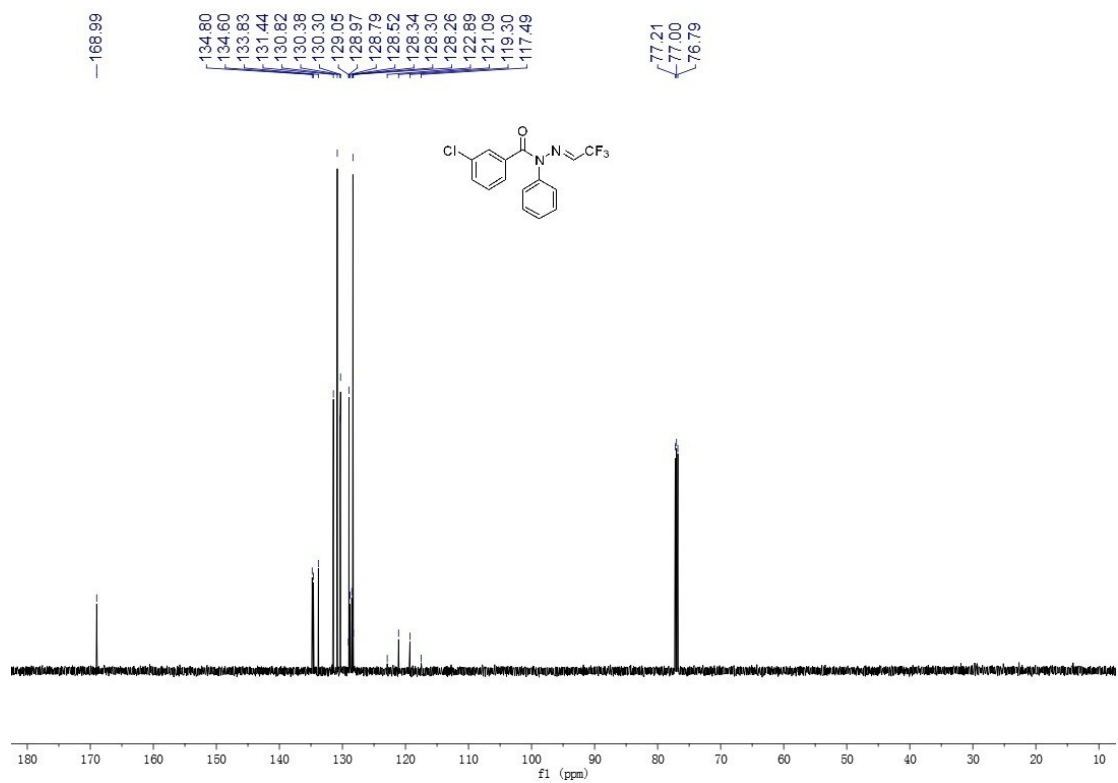
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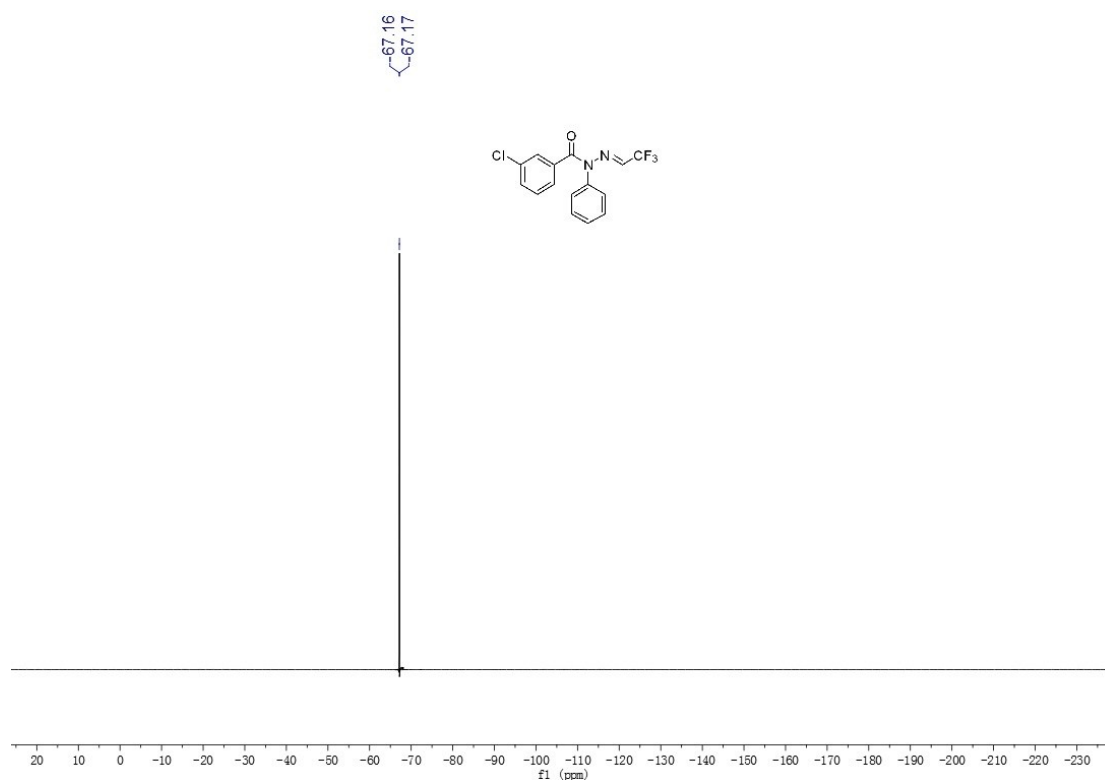
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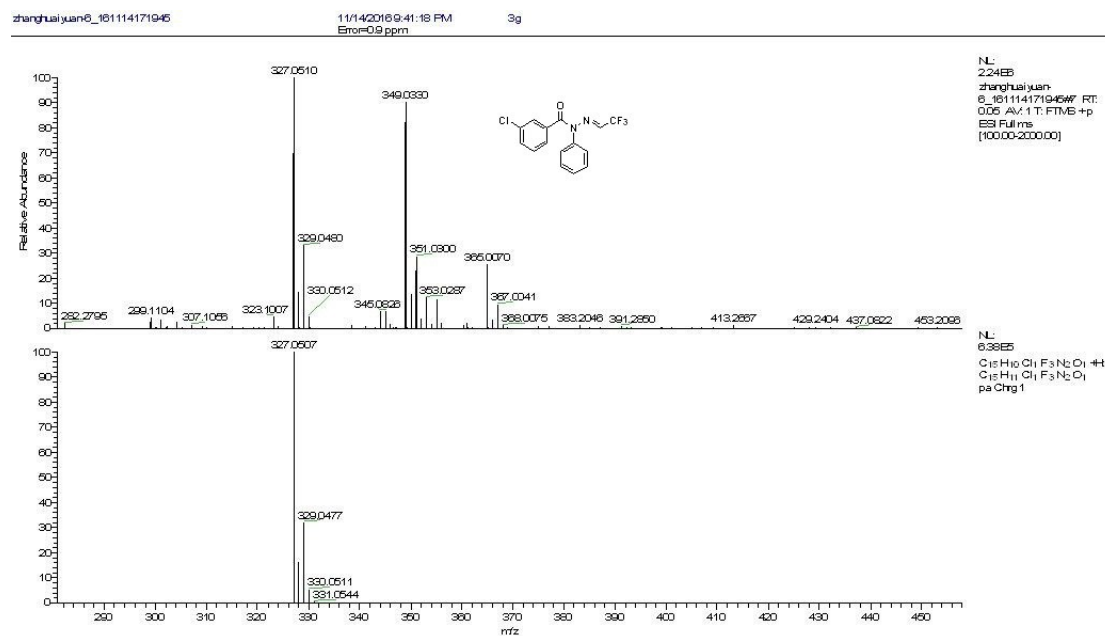
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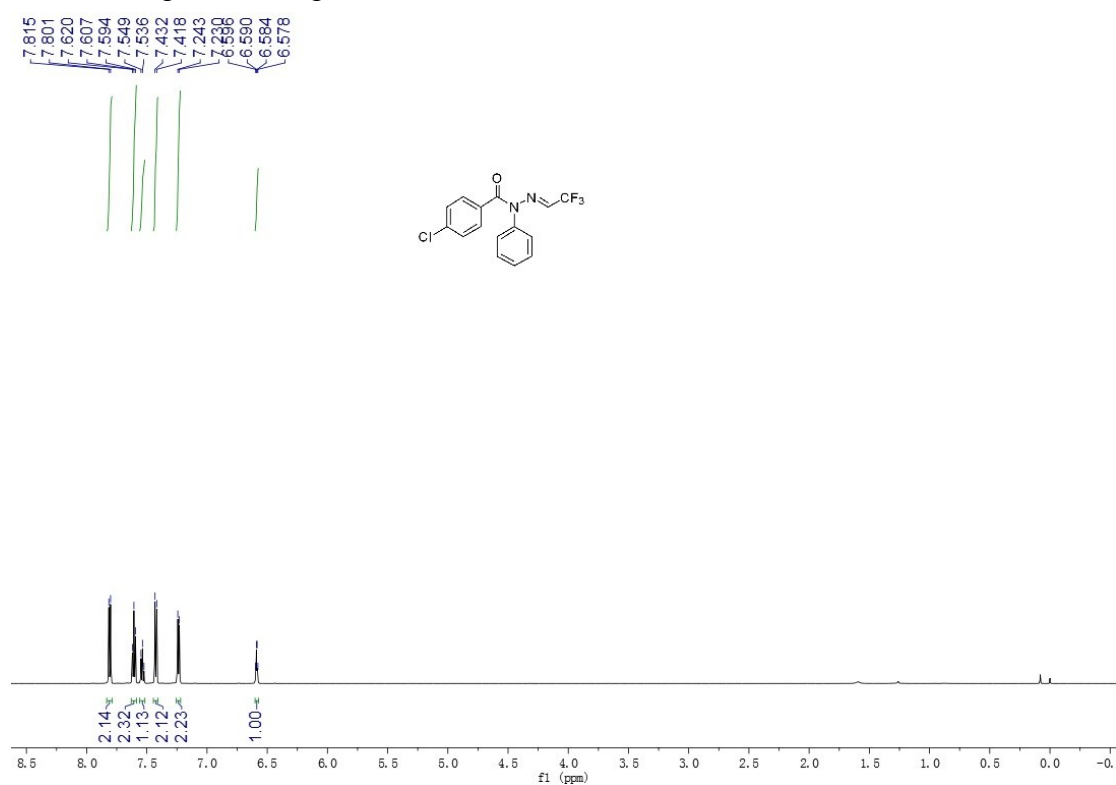
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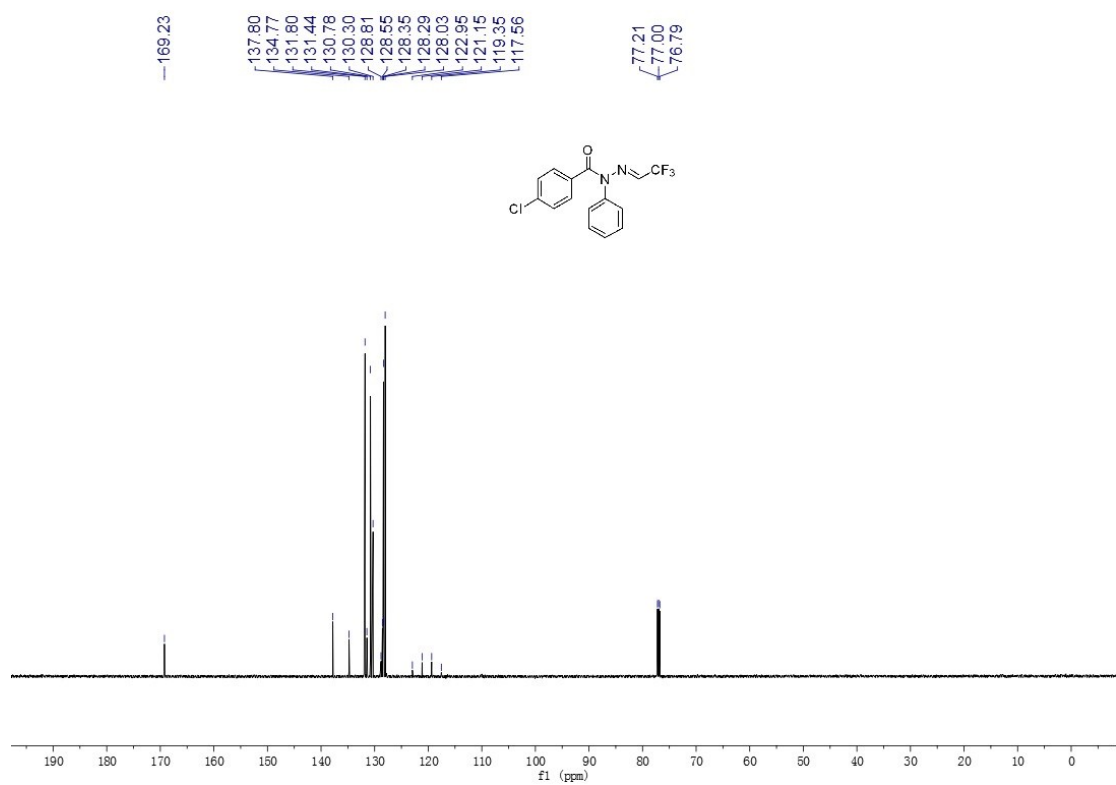
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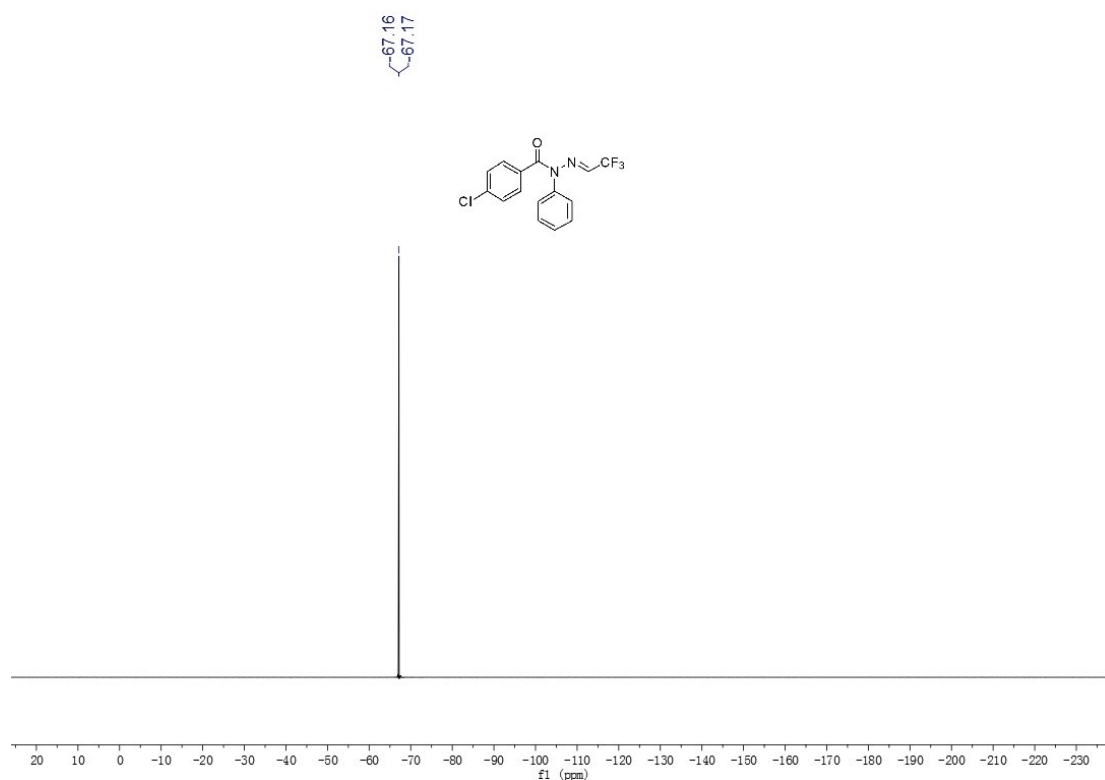
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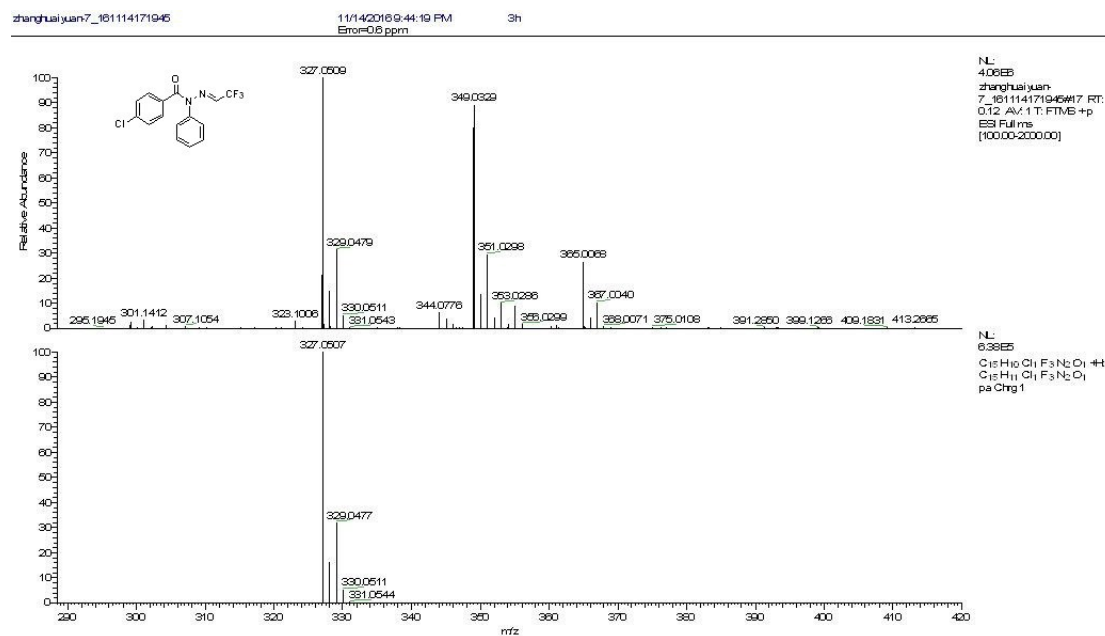
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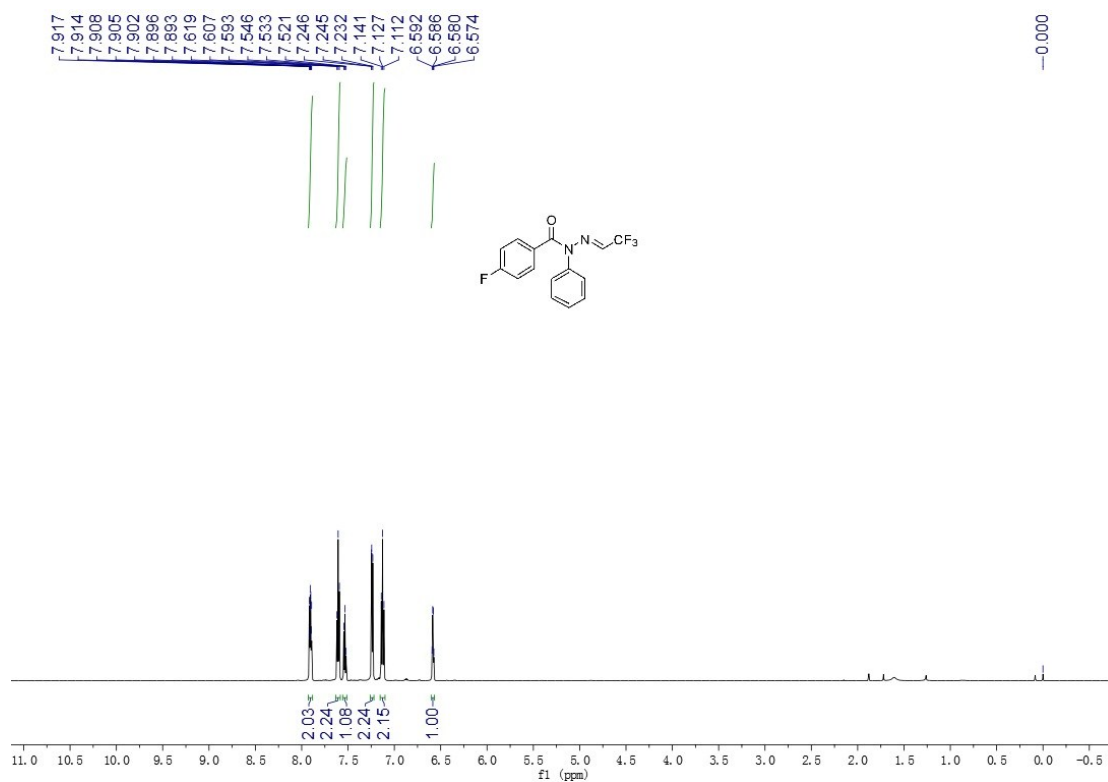
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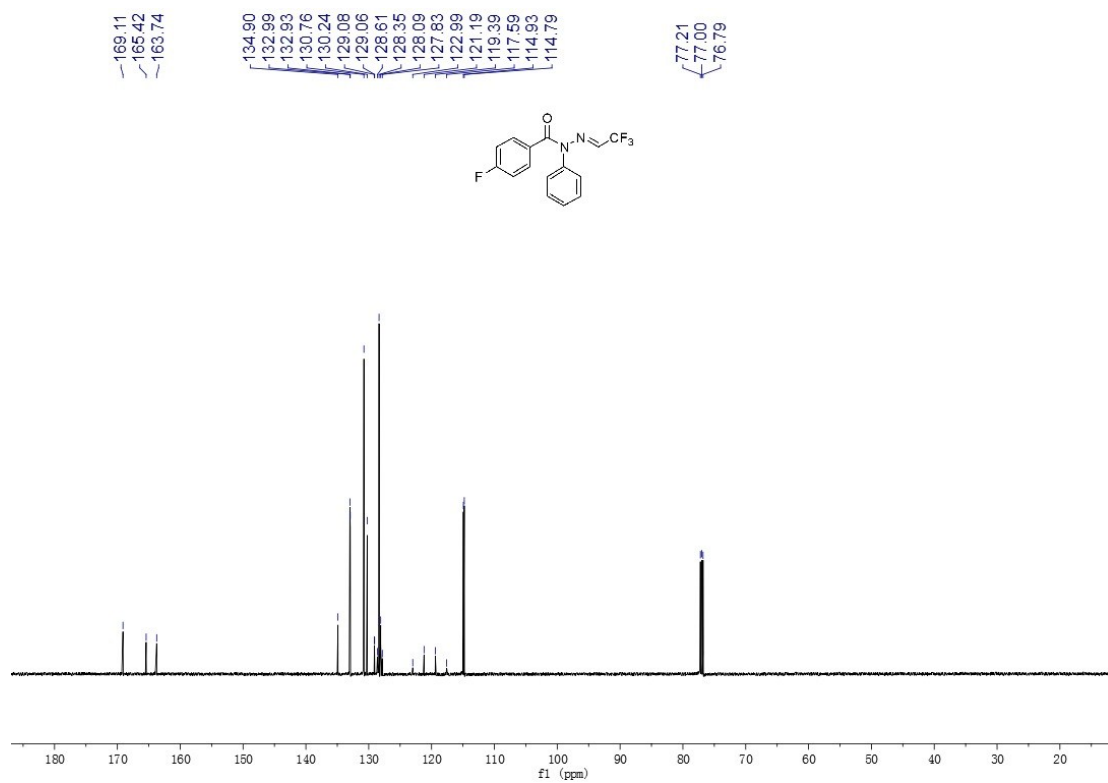
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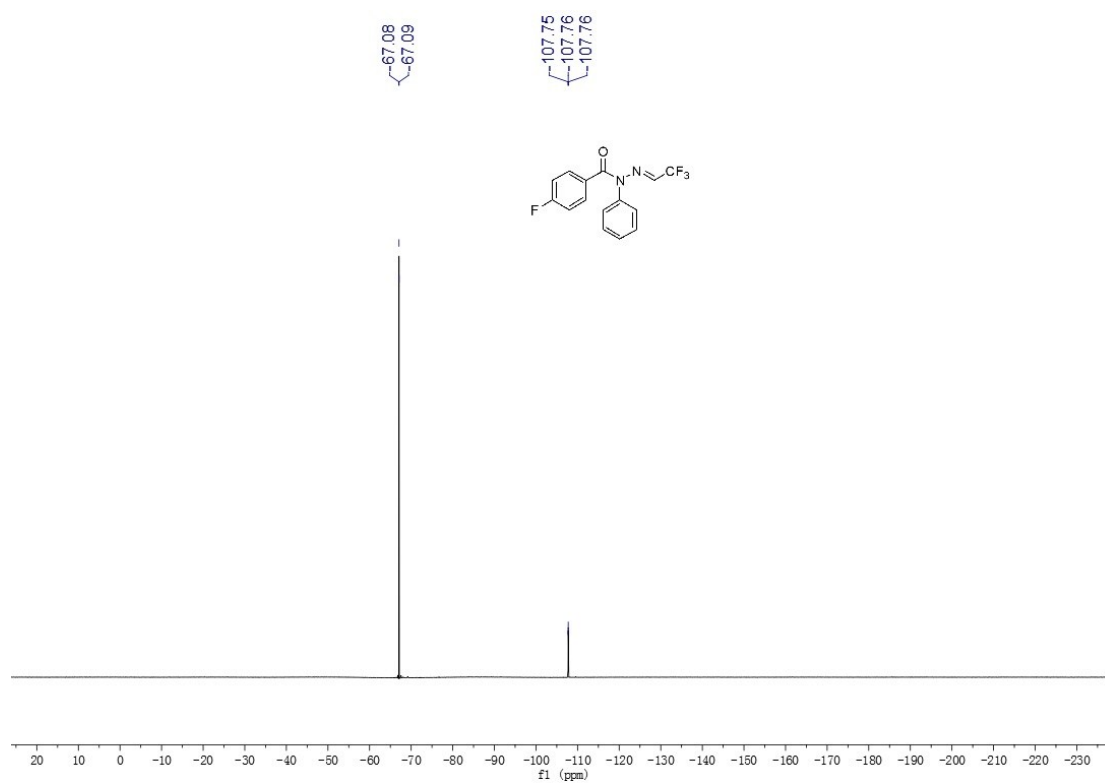
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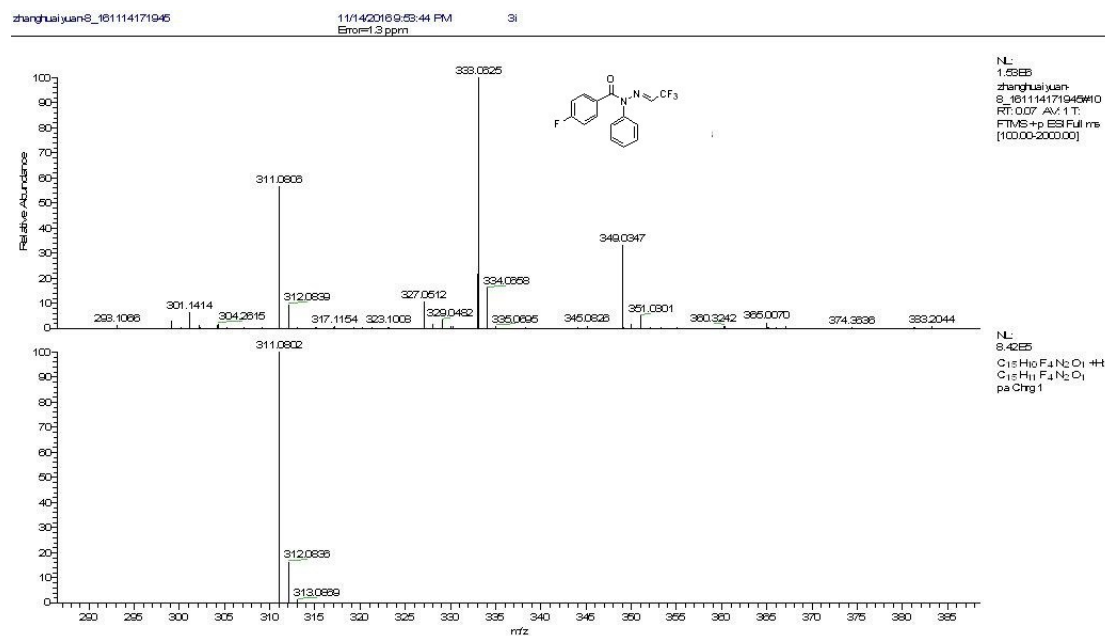
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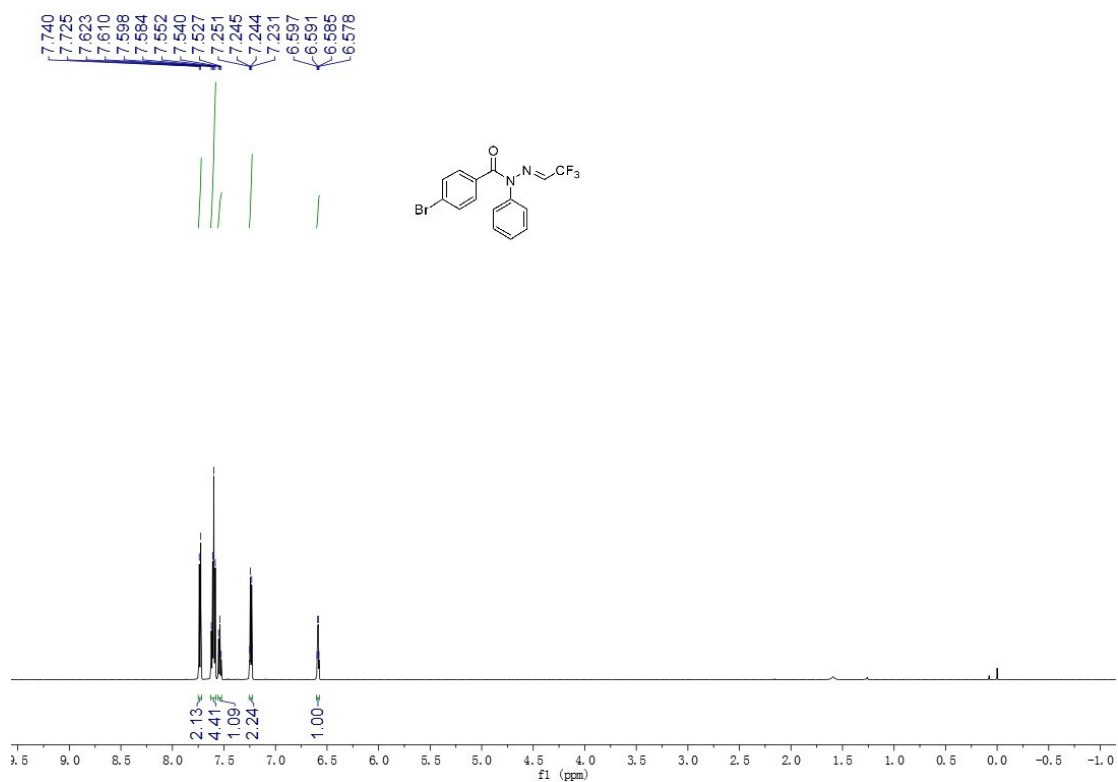
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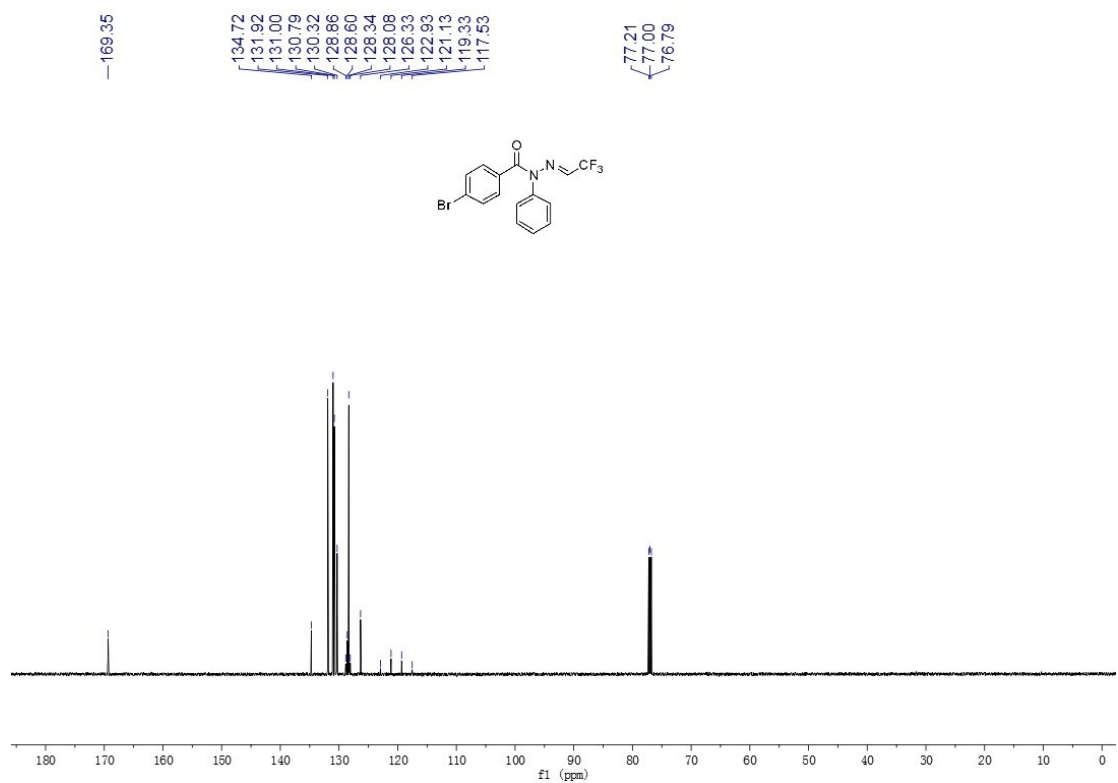
HRMS (ESI) of compound **6i**:



^1H NMR copies of compound **6j**:



^{13}C NMR copies of compound **6j**:



Chemical structure of 4-bromo-N-((E)-2-(trifluoromethyl)vinyl)-2-phenylbenzamide is shown above the spectrum. The structure features a benzamide core with a bromine atom at the 4-position and a phenyl group at the 2-position. The amide nitrogen is substituted with an (E)-2-(trifluoromethyl)vinyl group.

zhanghuiyuan9_181114171945
11/14/2018 10:01:52 PM
Error=1.8 ppm

3)

Chemical structure: BrC1=CC=C(C=C1)C(=O)N(C2=CC=CC=C2)N=C(F)F

Mass spectrum (Top):

- Y-axis: Relative Abundance (0 to 100)
- X-axis: m/z (355 to 430)
- Major peaks: 371.0007, 372.9986, 392.9827, 394.9804, 408.9565, 410.9544

Mass spectrum (Bottom):

- Y-axis: Relative Abundance (0 to 100)
- X-axis: m/z (355 to 430)
- Major peaks: 371.0001, 372.9981, 374.0014, 375.0048, 376.0124

Calculated mass: 427.05

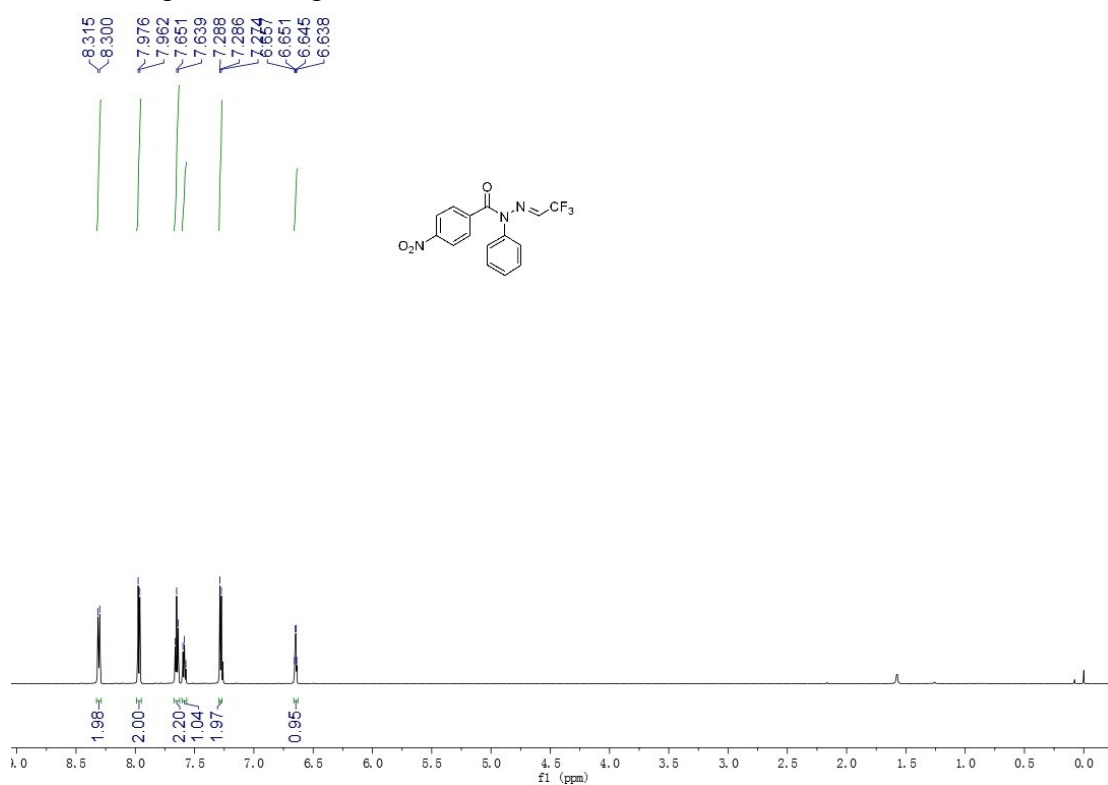
Formula: $C_{15}H_{10}BrF_3N_2O_1 + H$

Calculated mass: 427.05

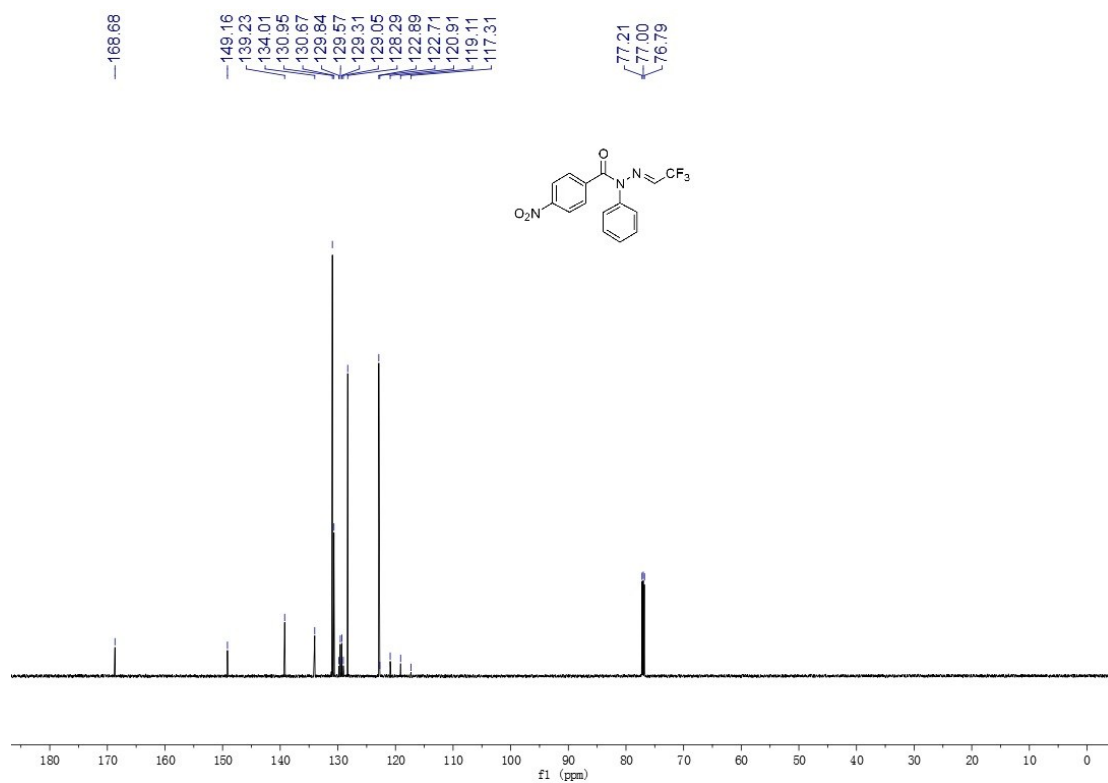
Formula: $C_{15}H_{10}BrF_3N_2O_1$

pa Chng 1

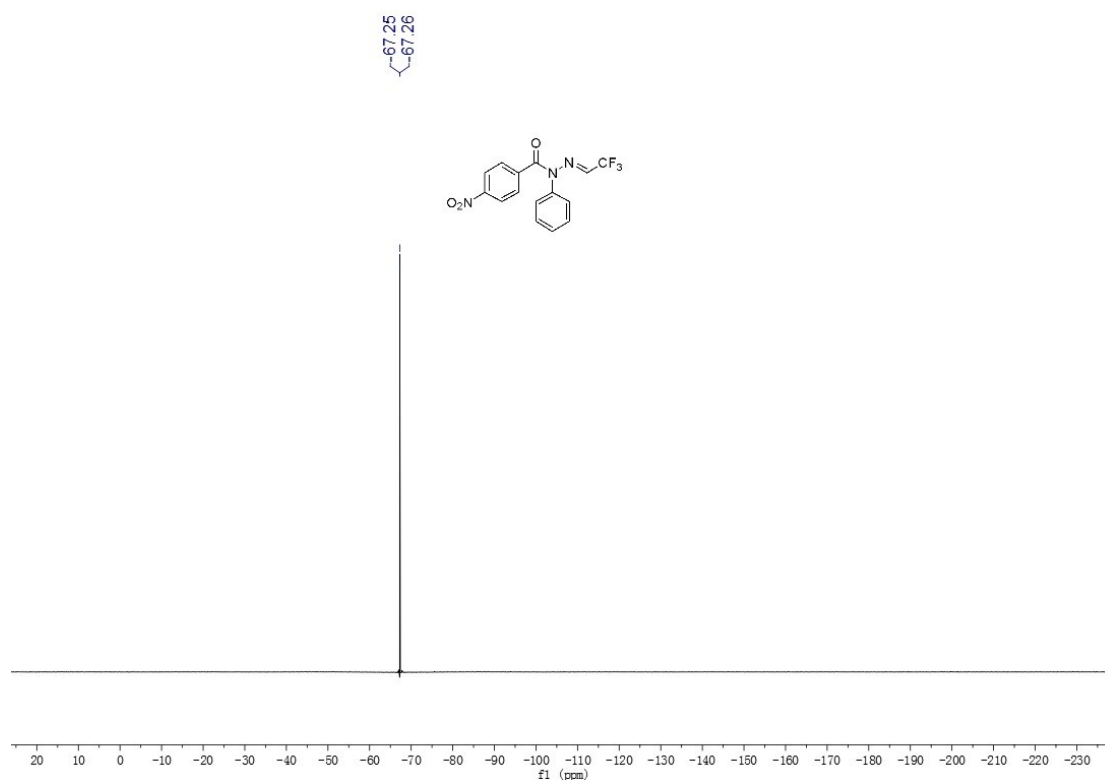
¹H NMR copies of compound **6k**:



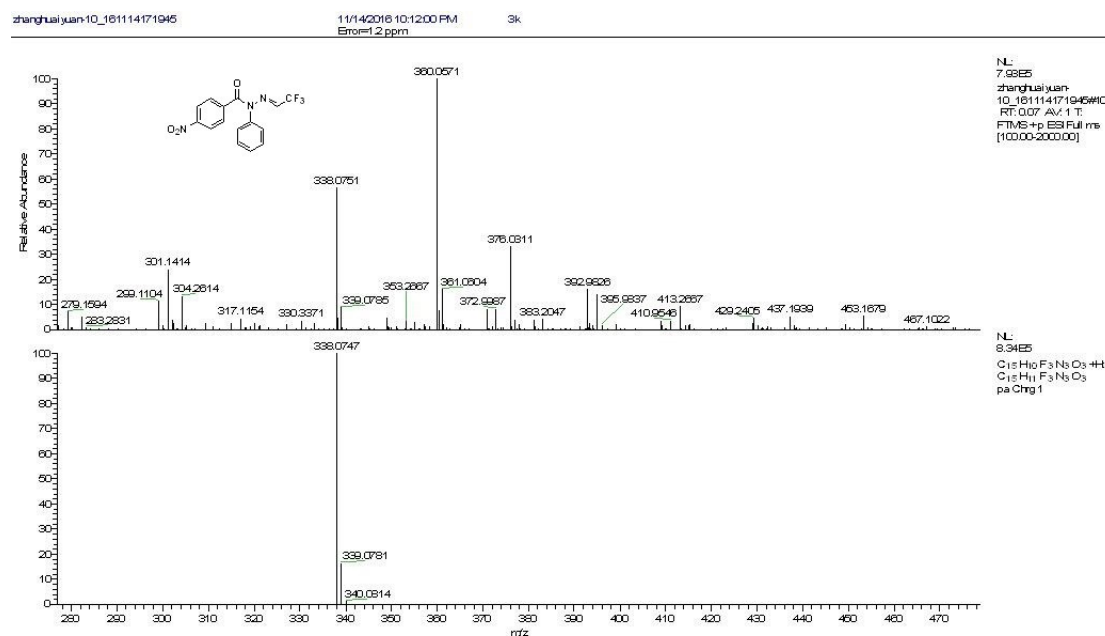
¹³C NMR copies of compound **6k**:



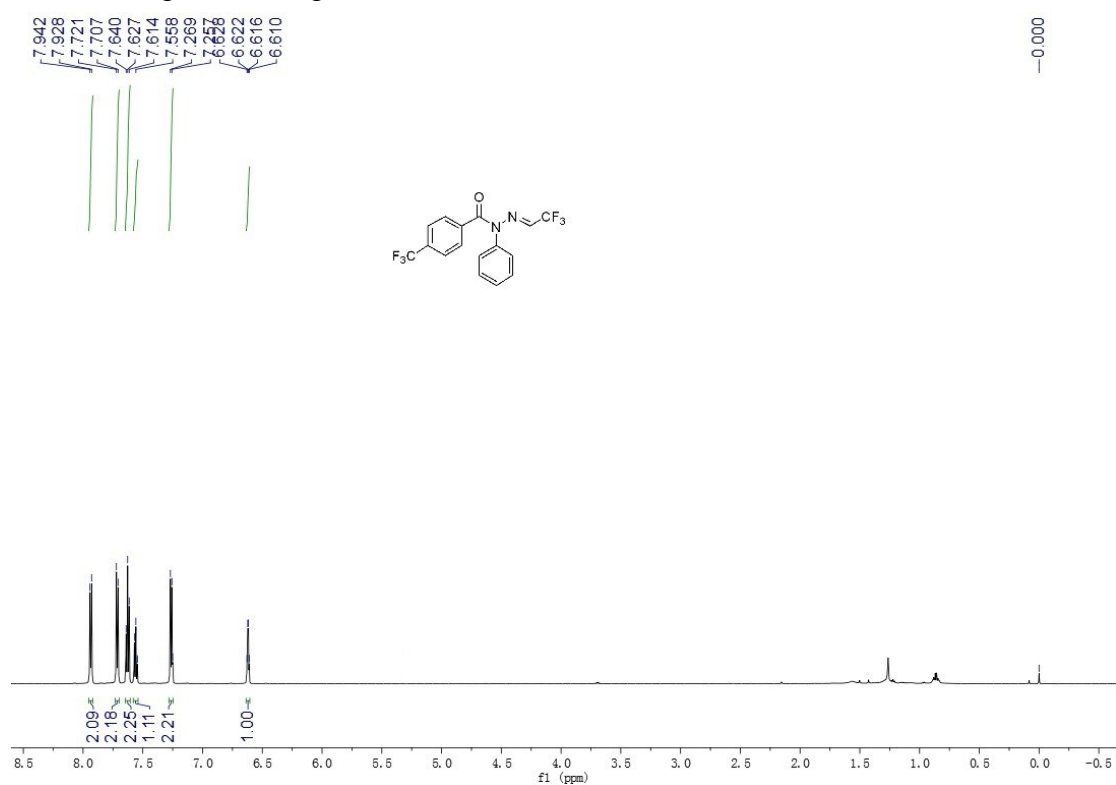
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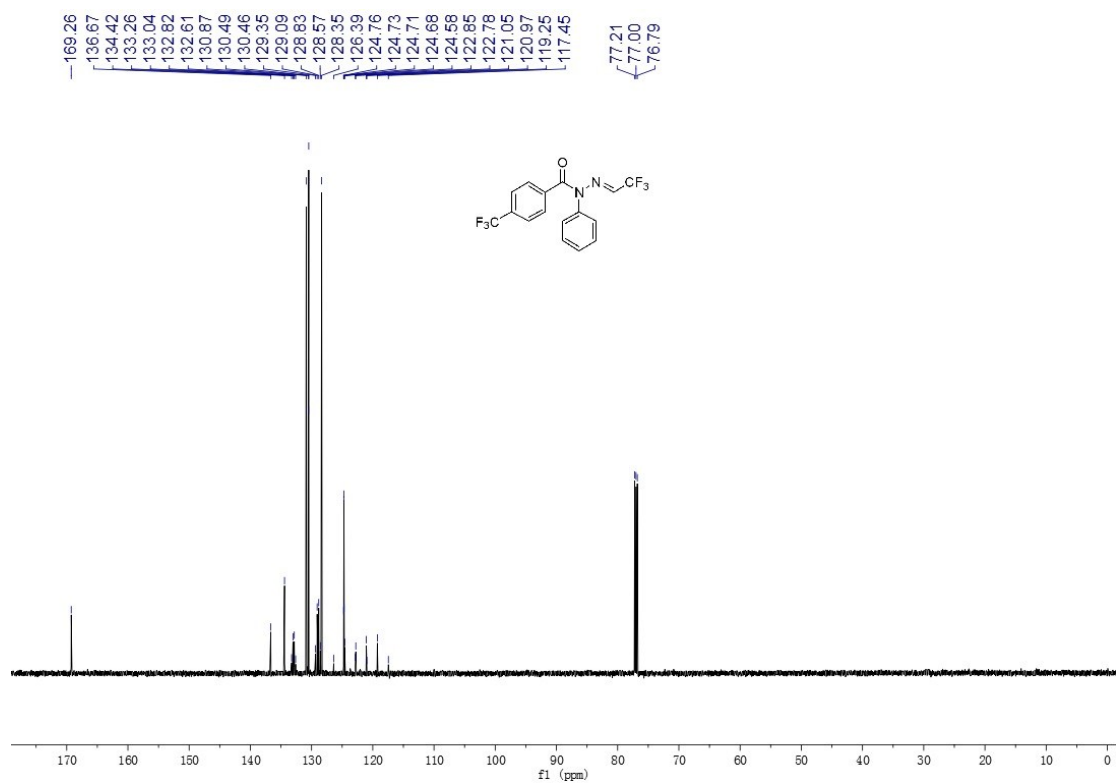
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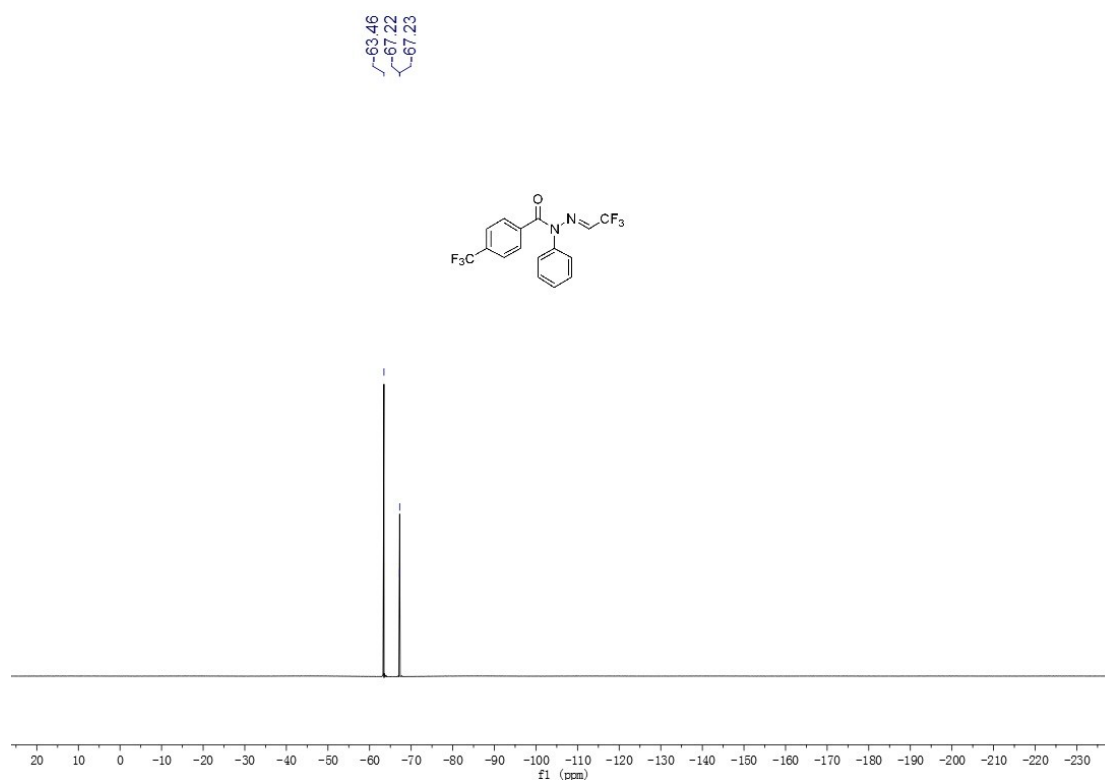
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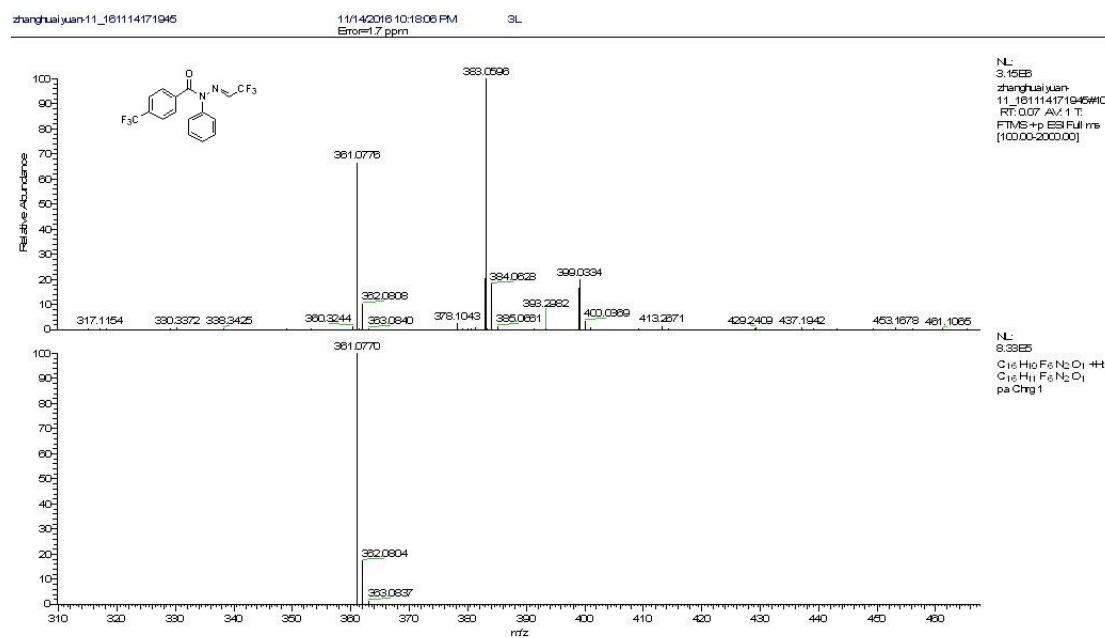
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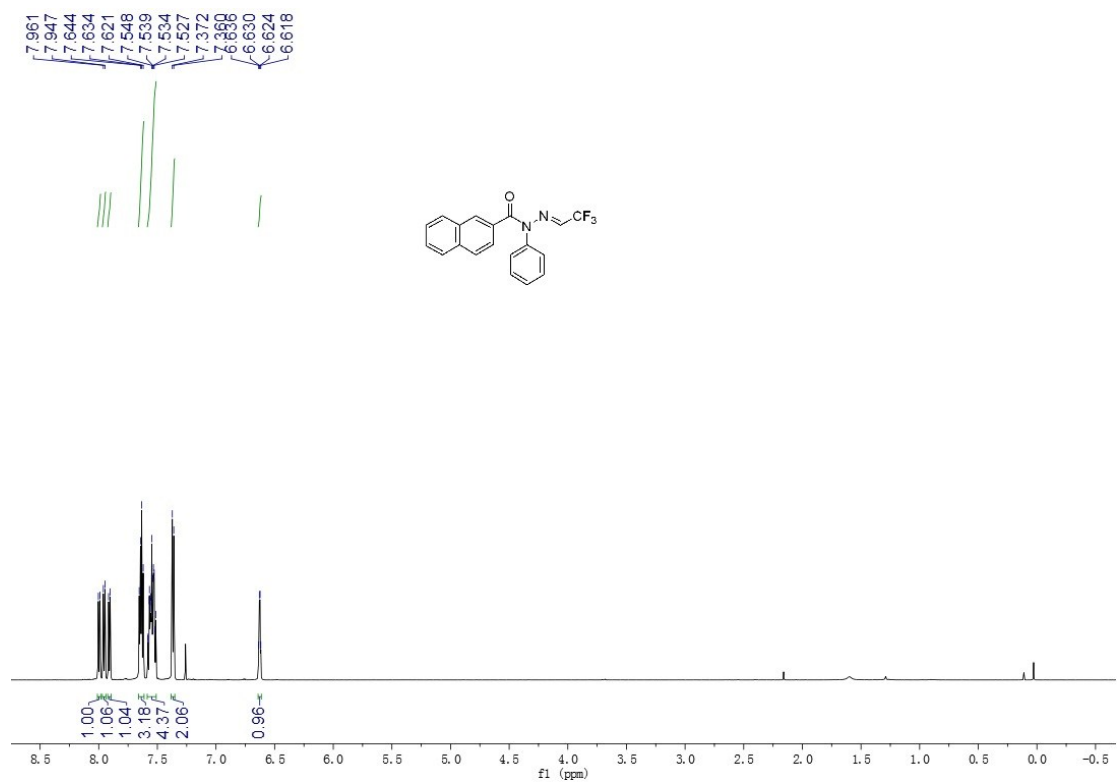
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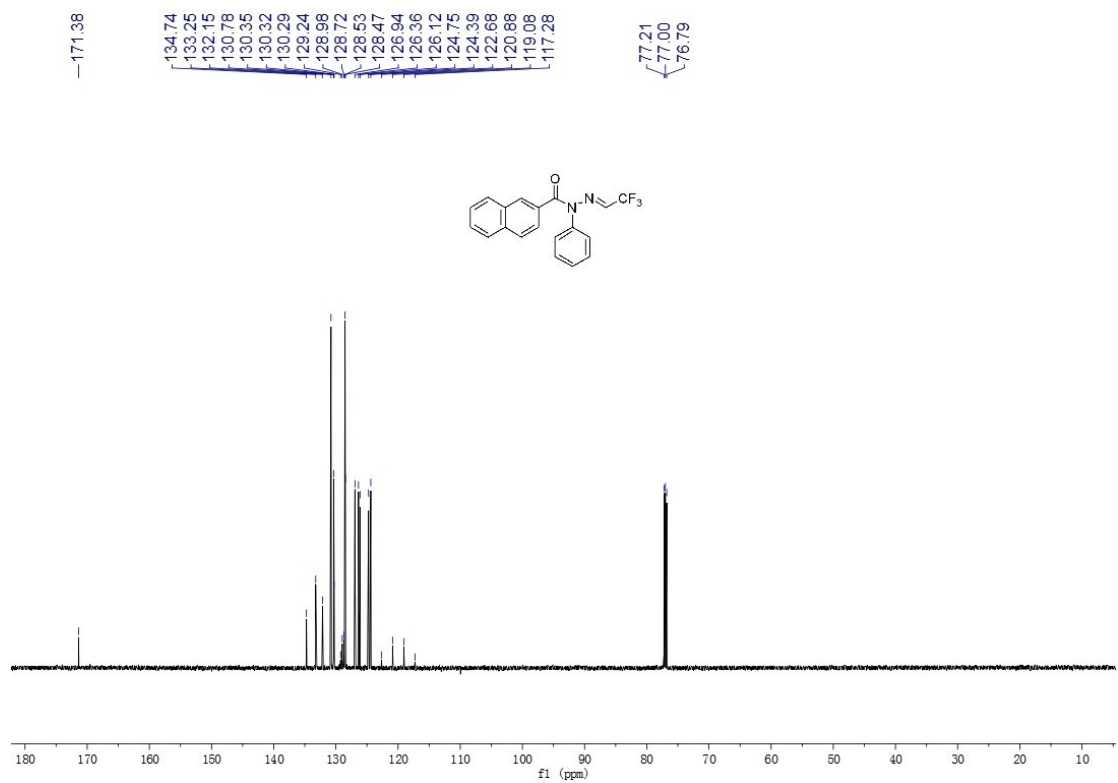
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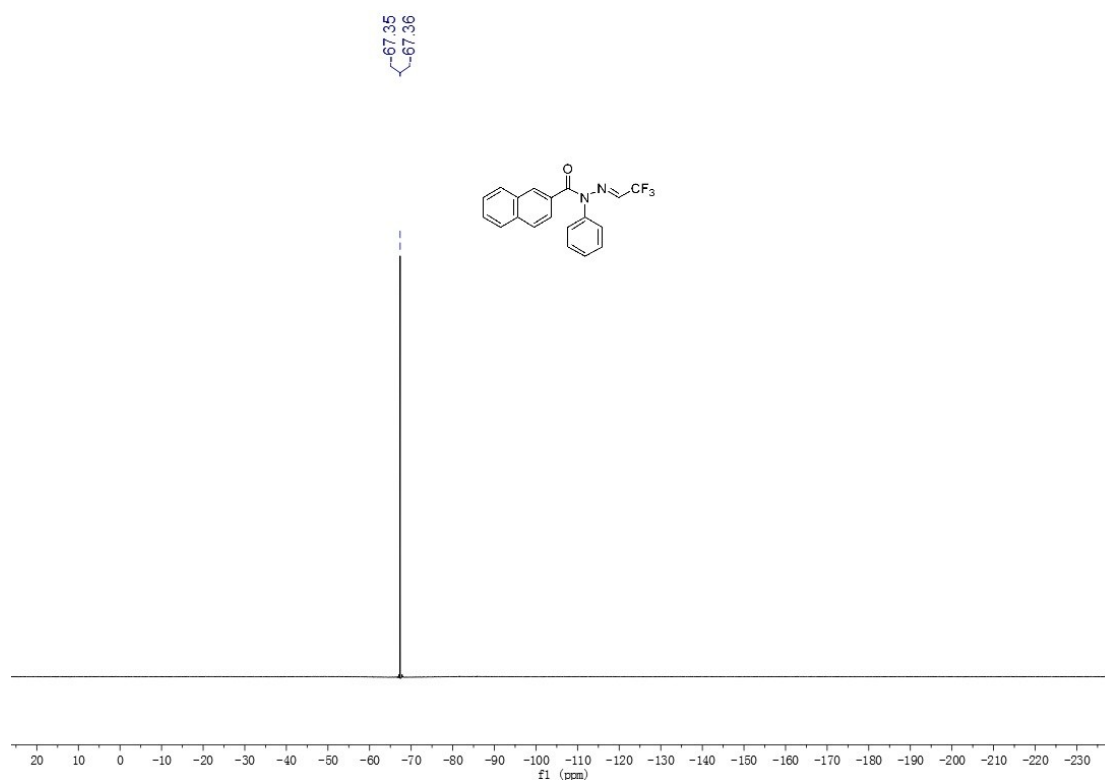
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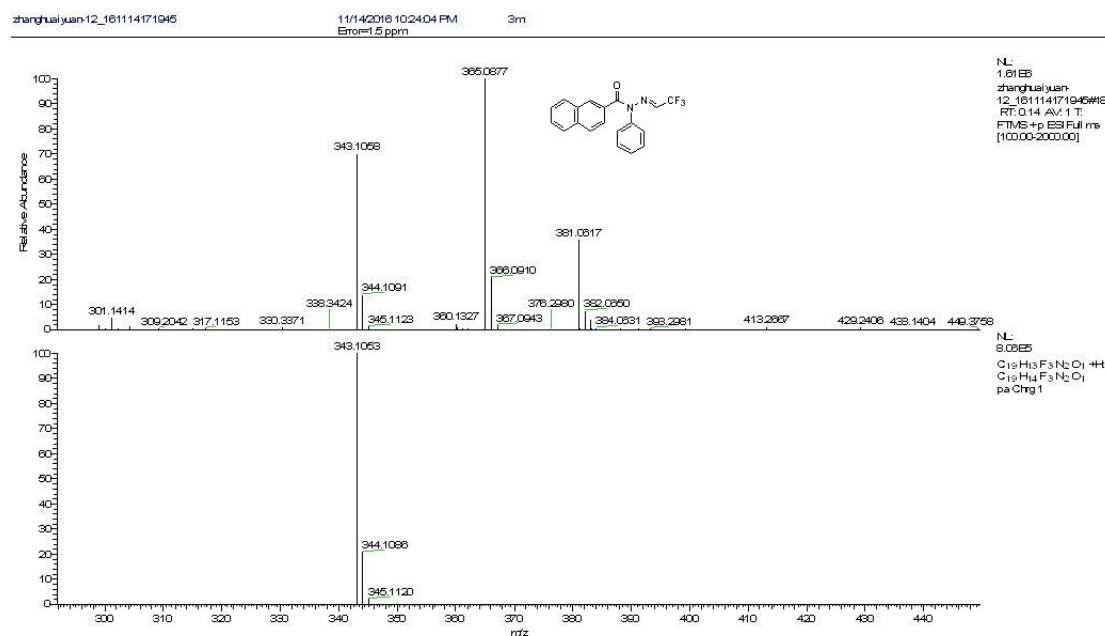
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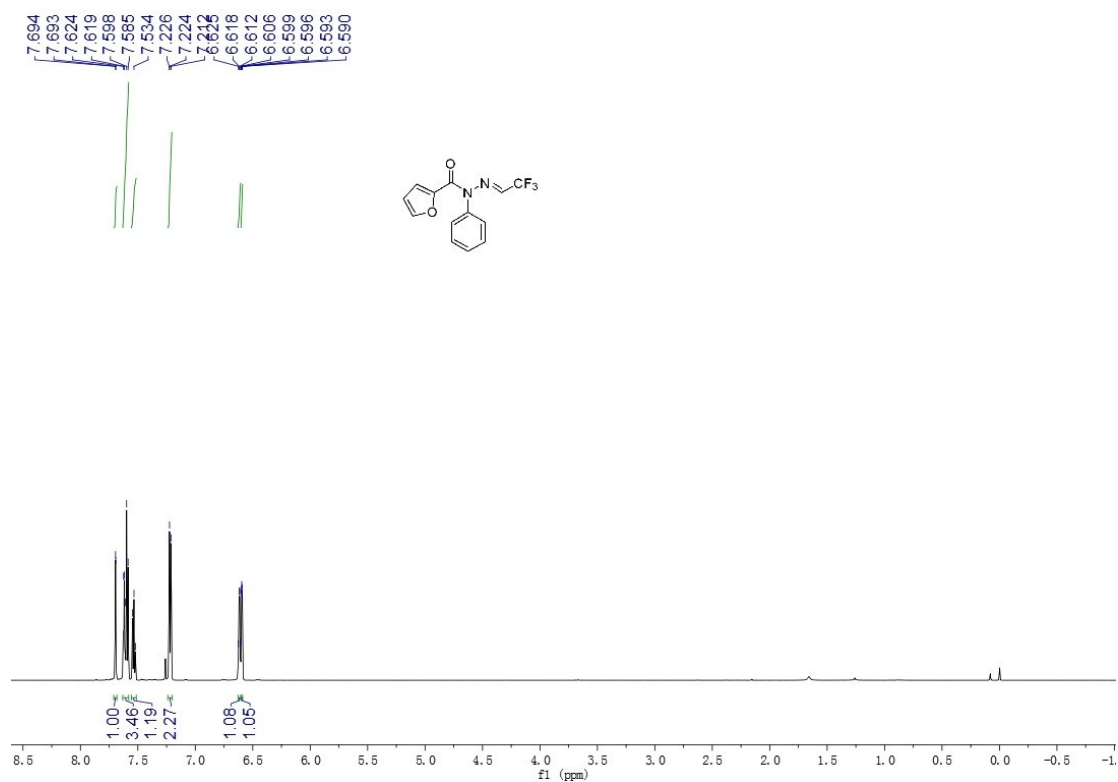
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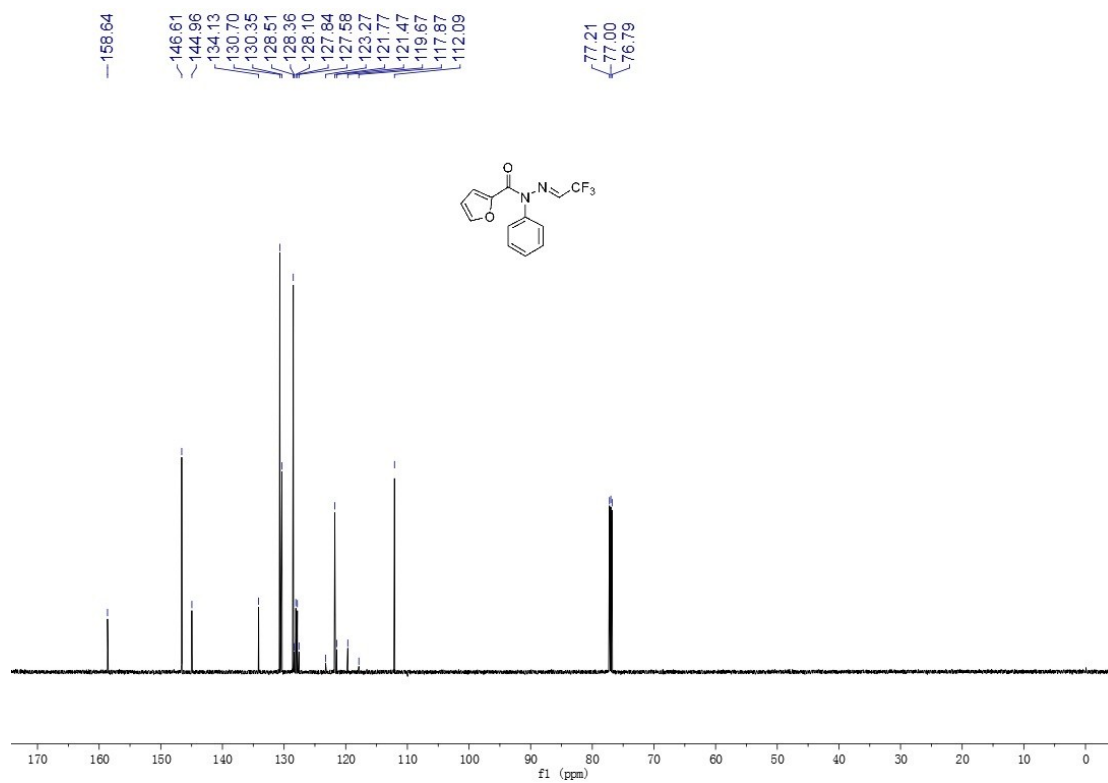
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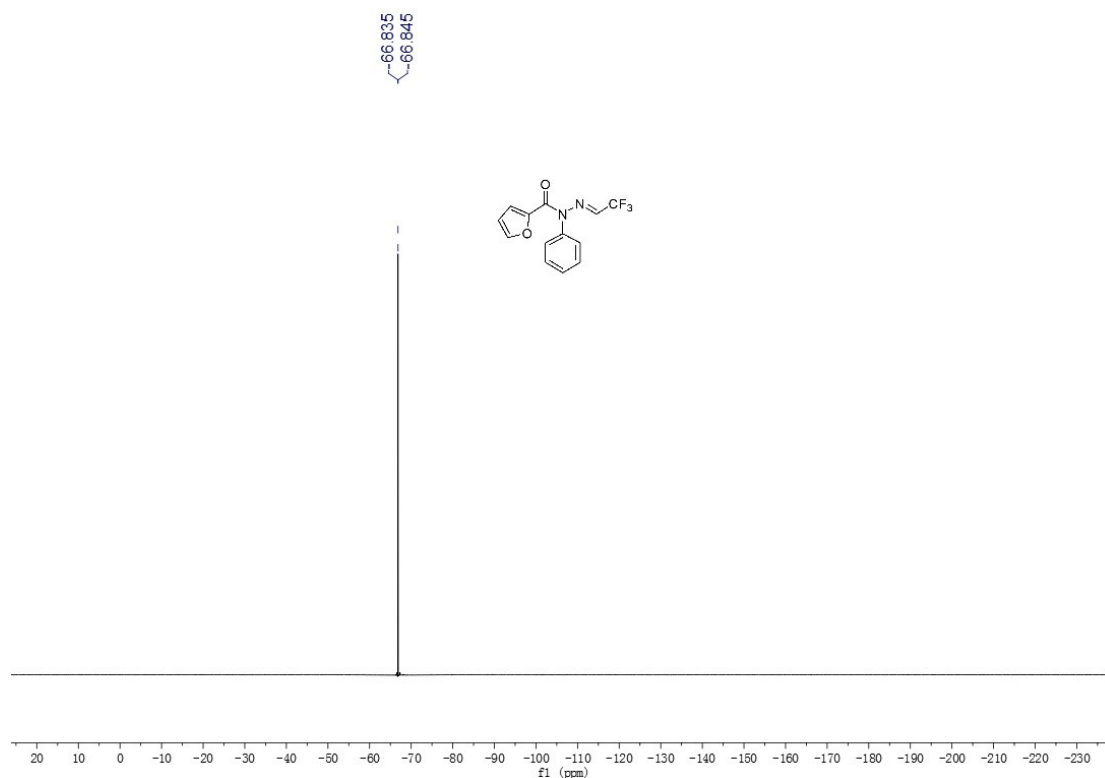
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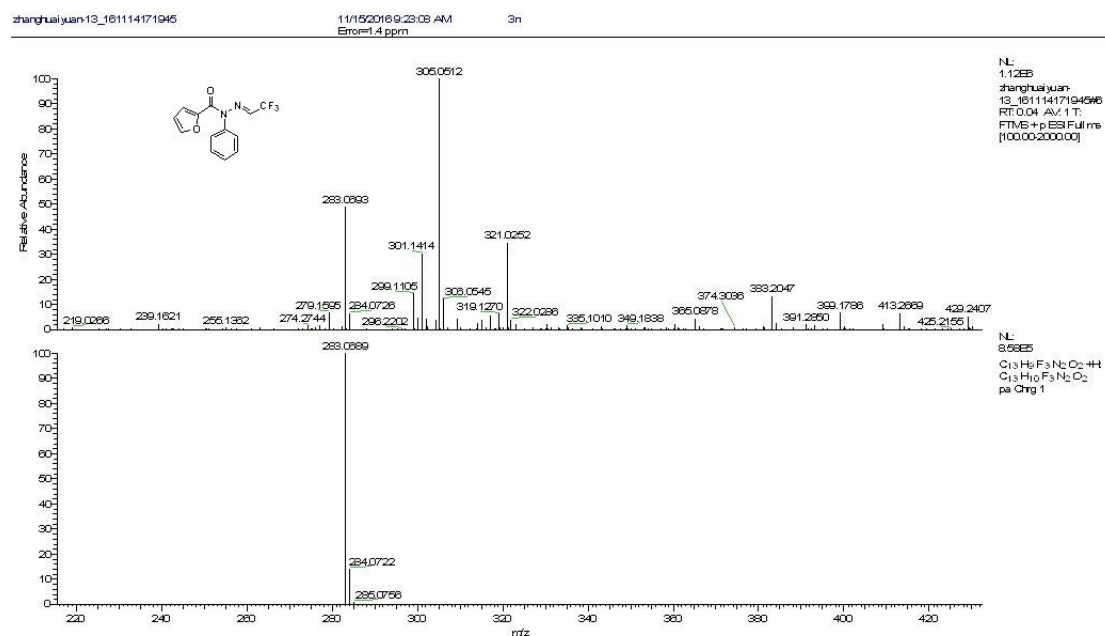
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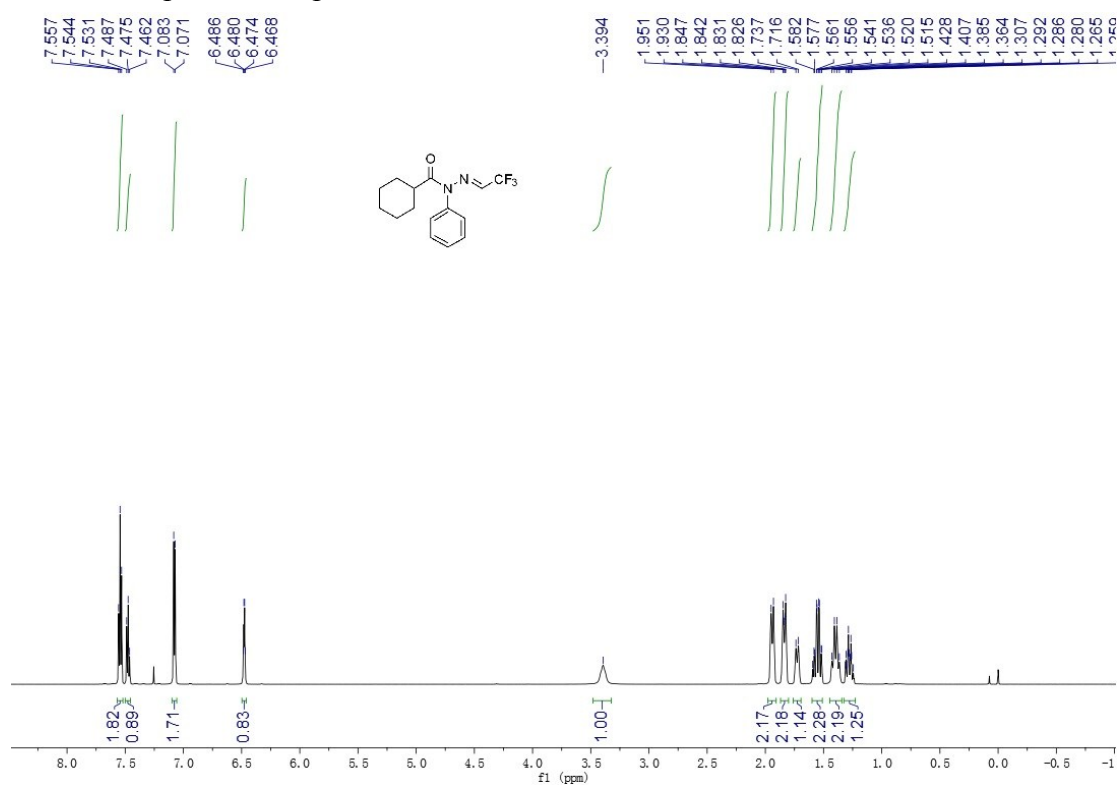
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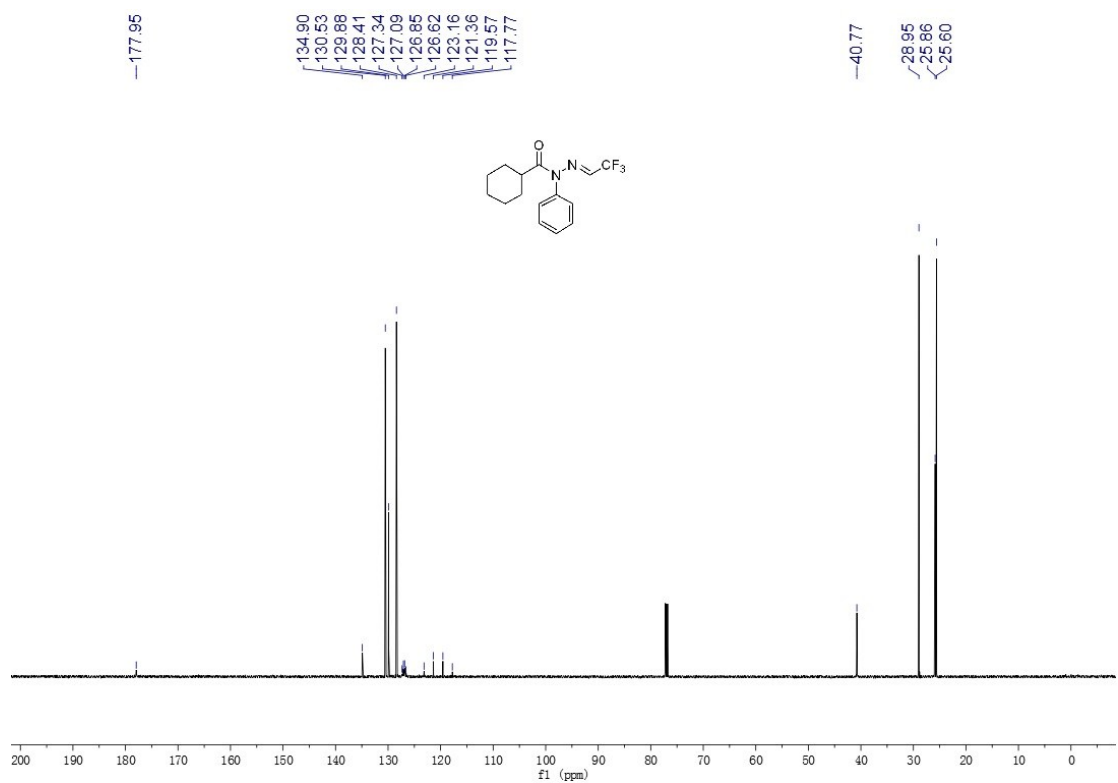
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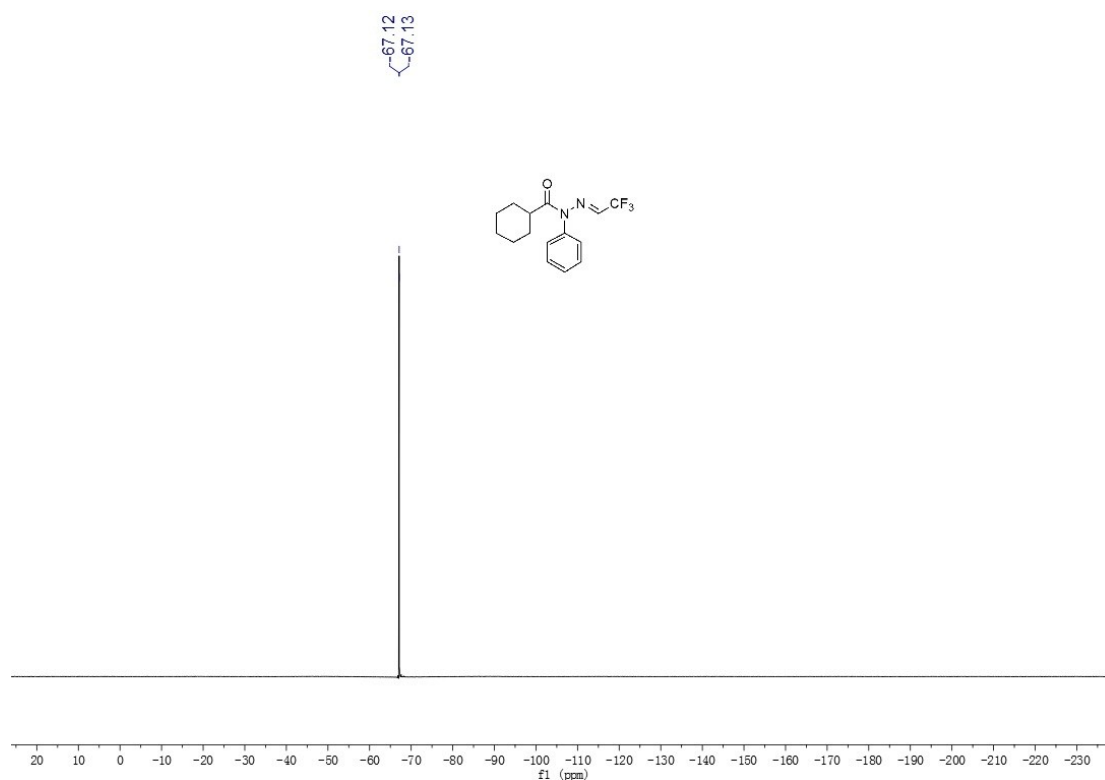
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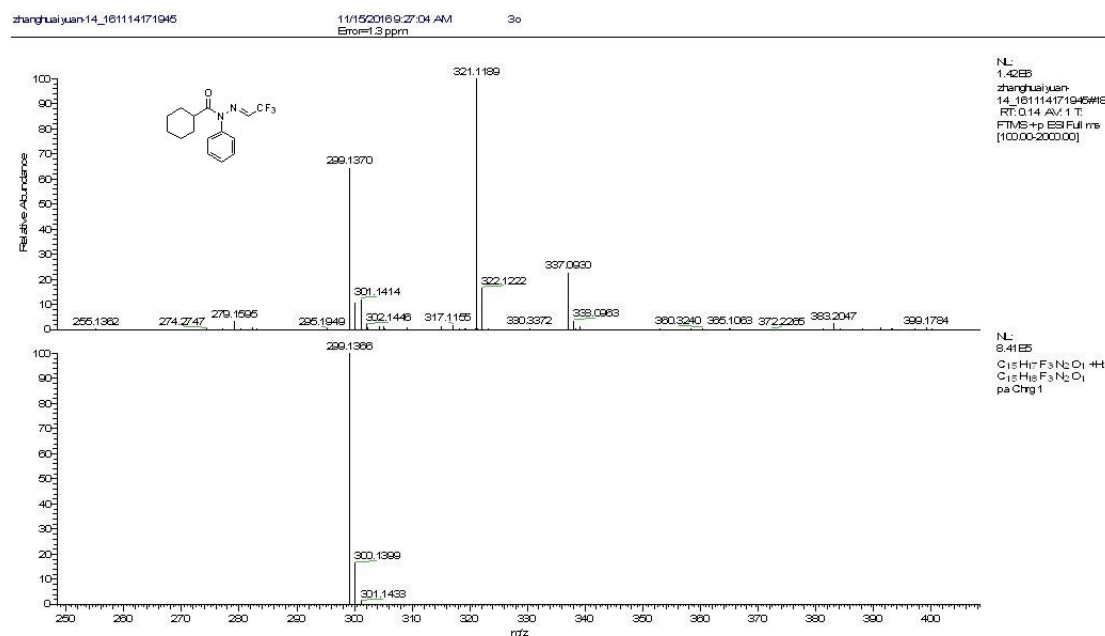
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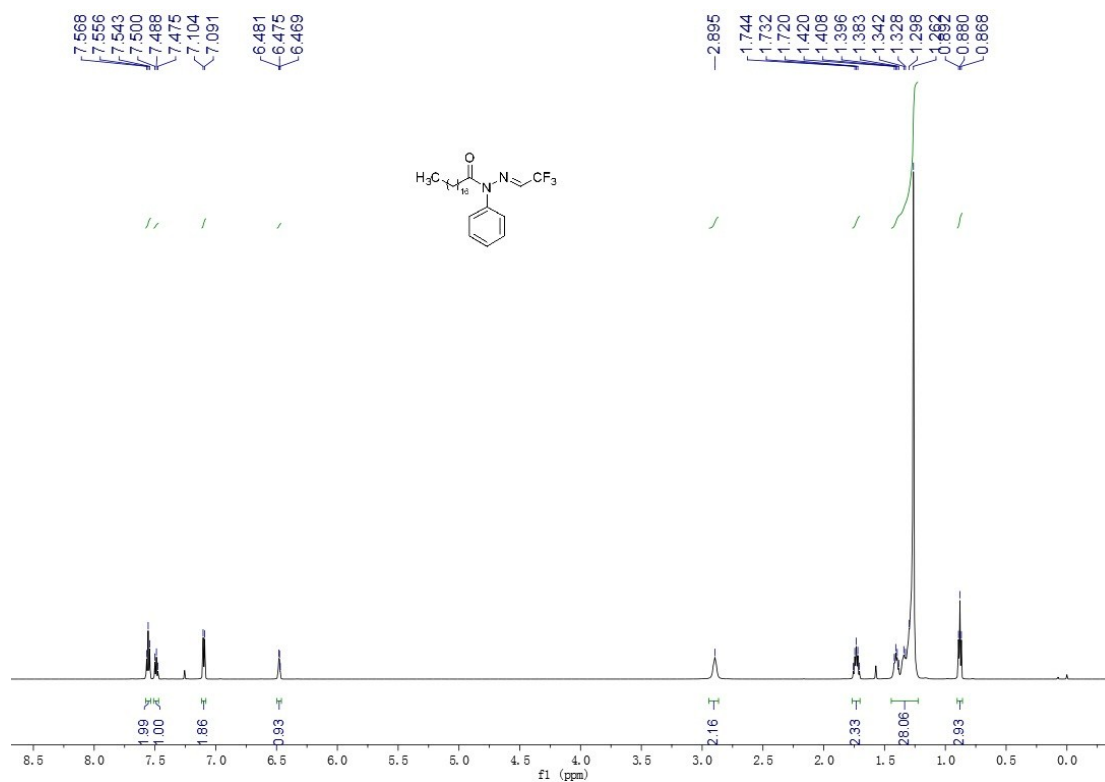
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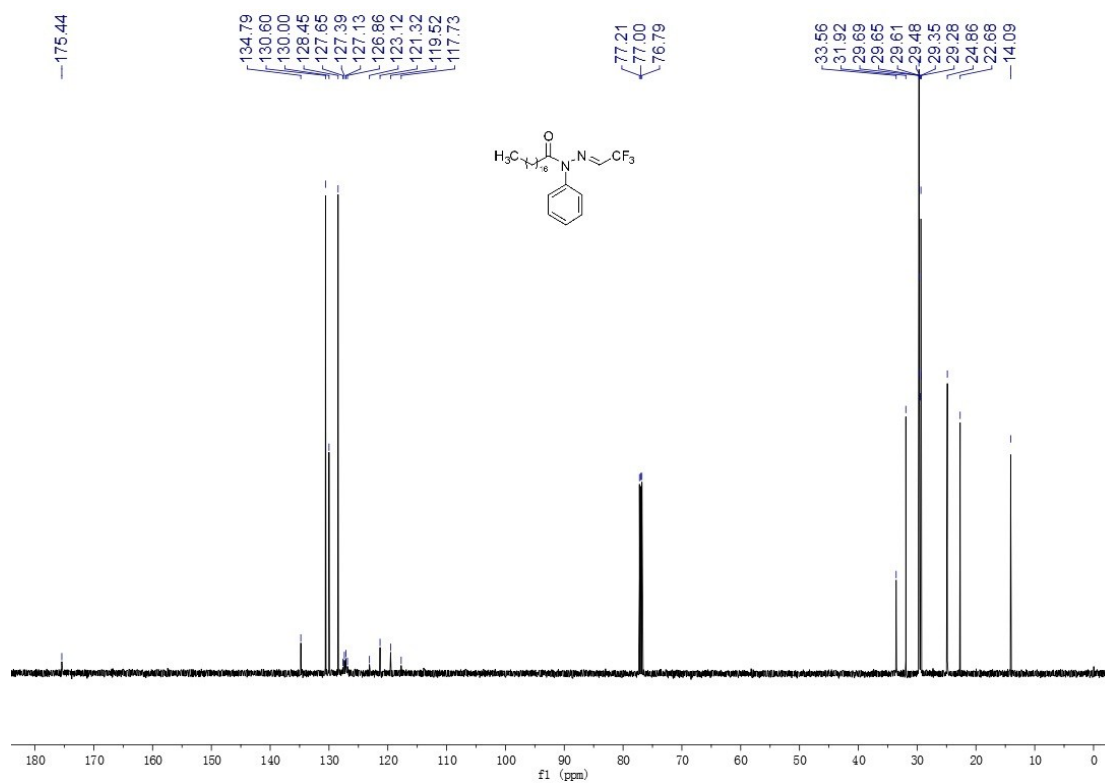
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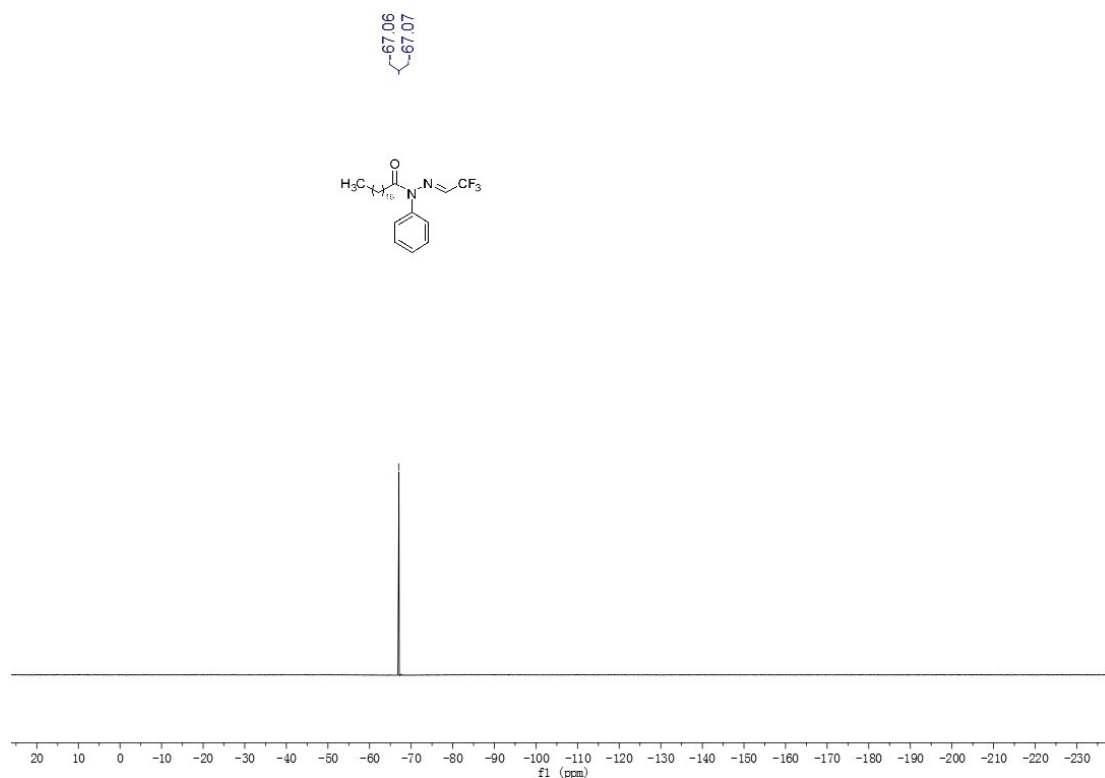
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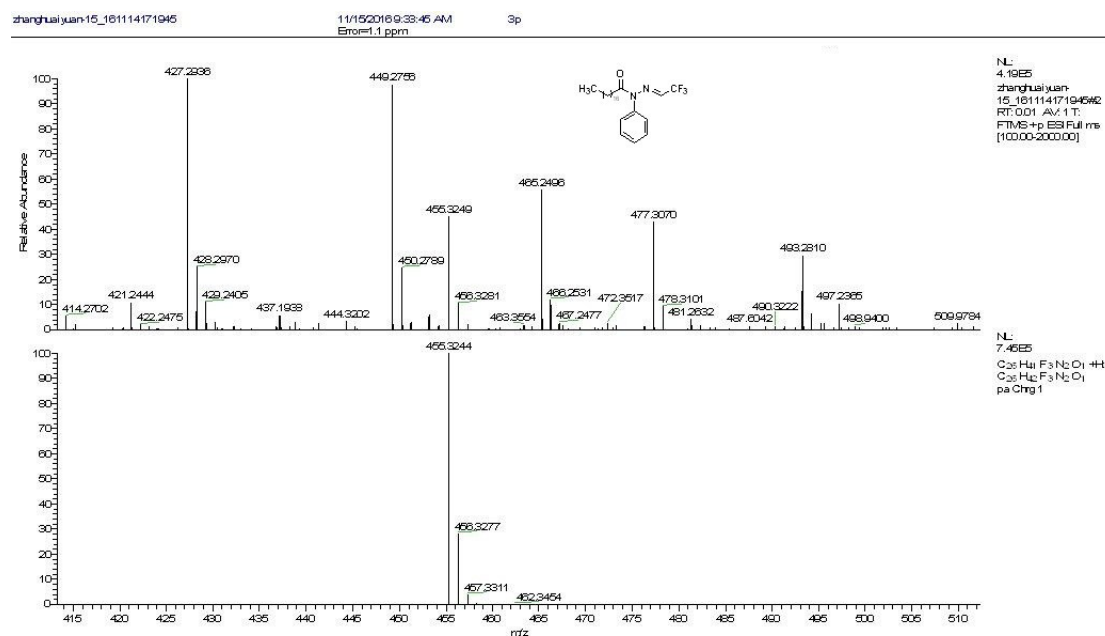
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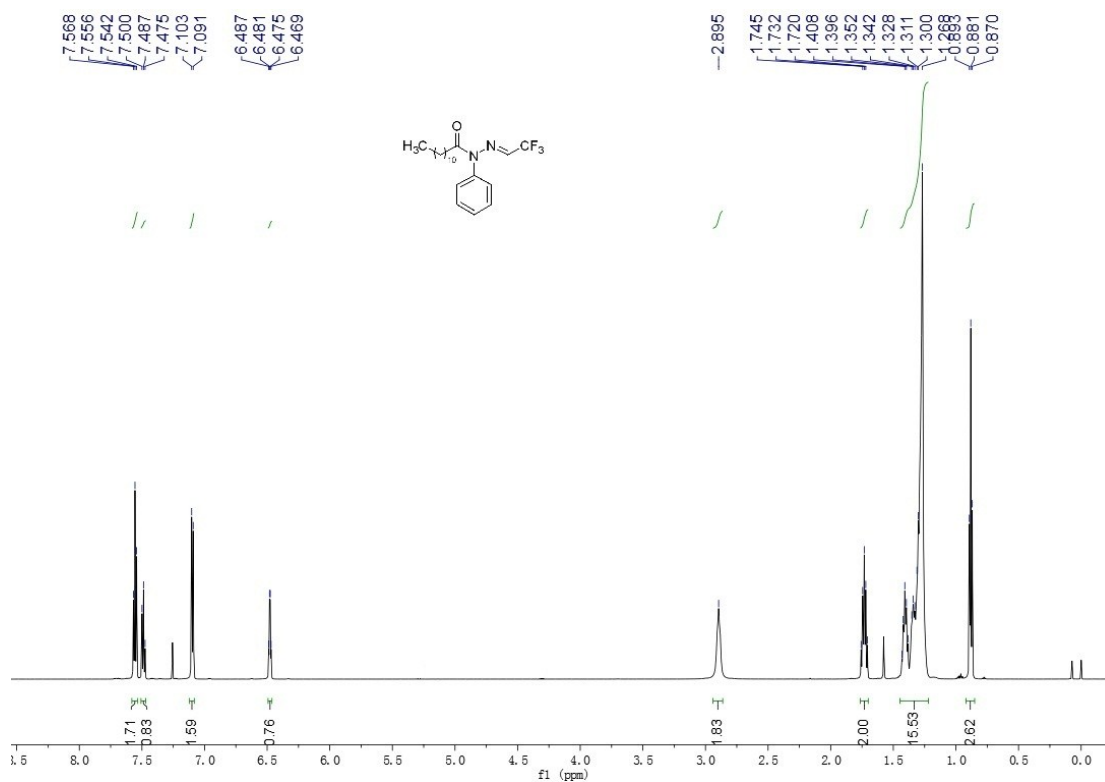
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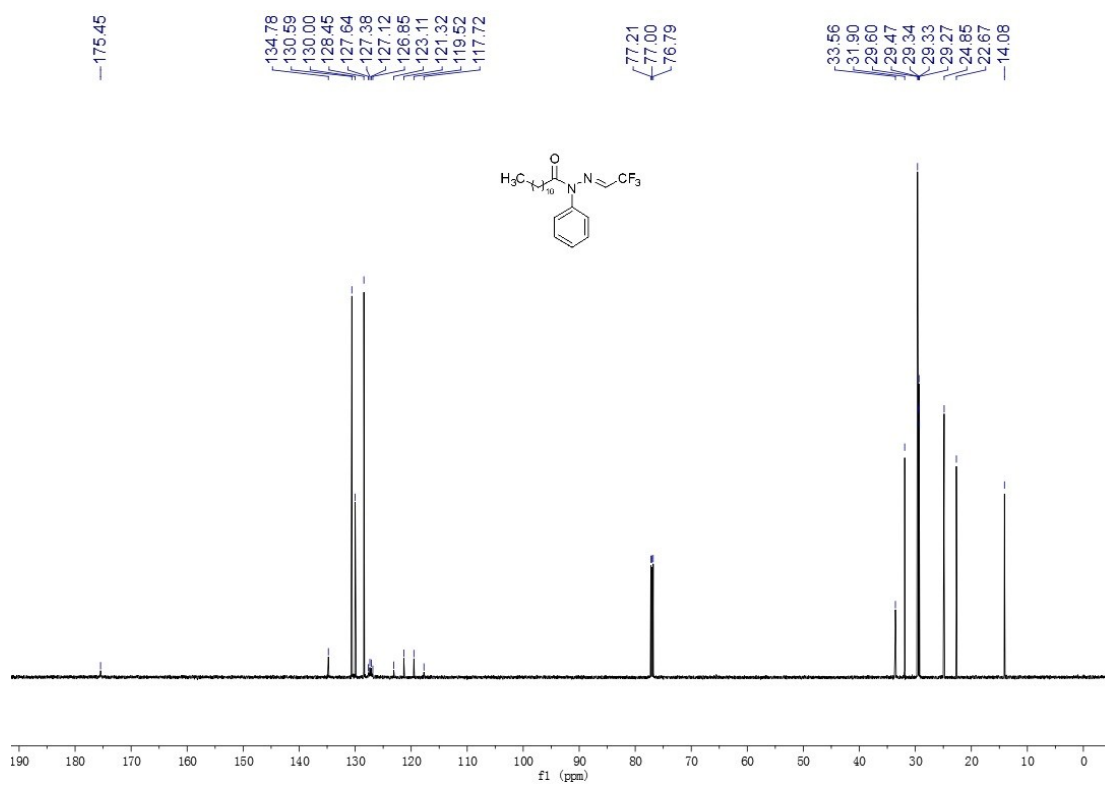
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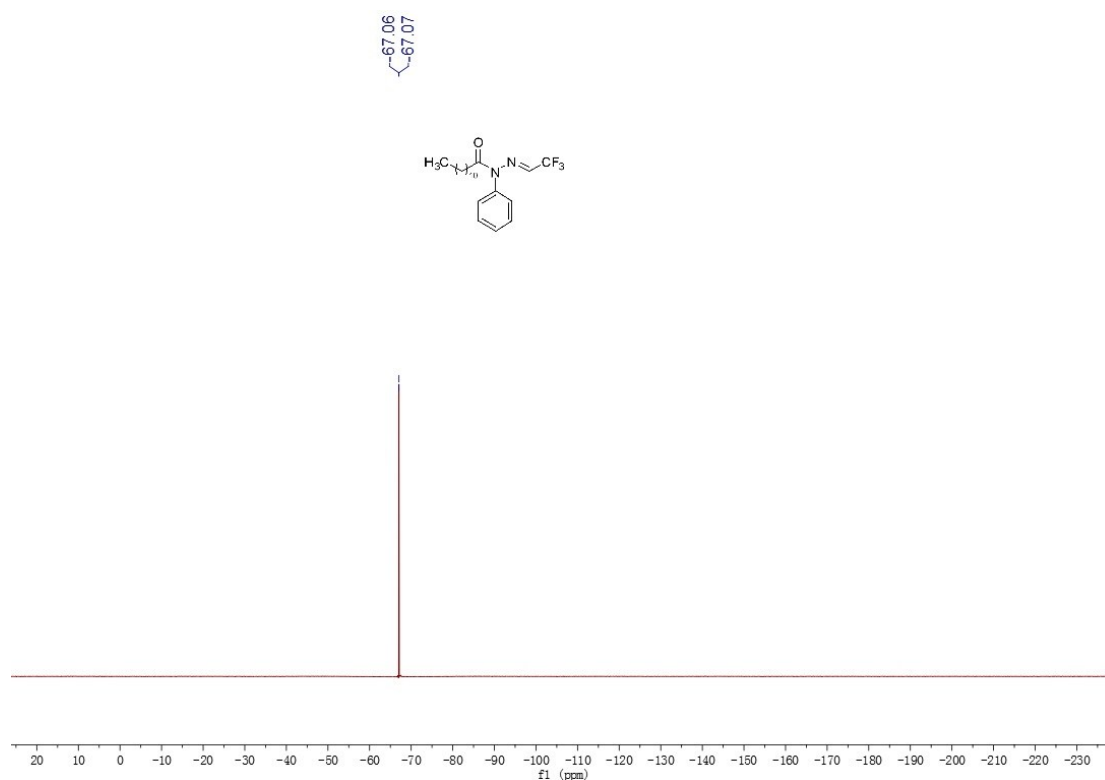
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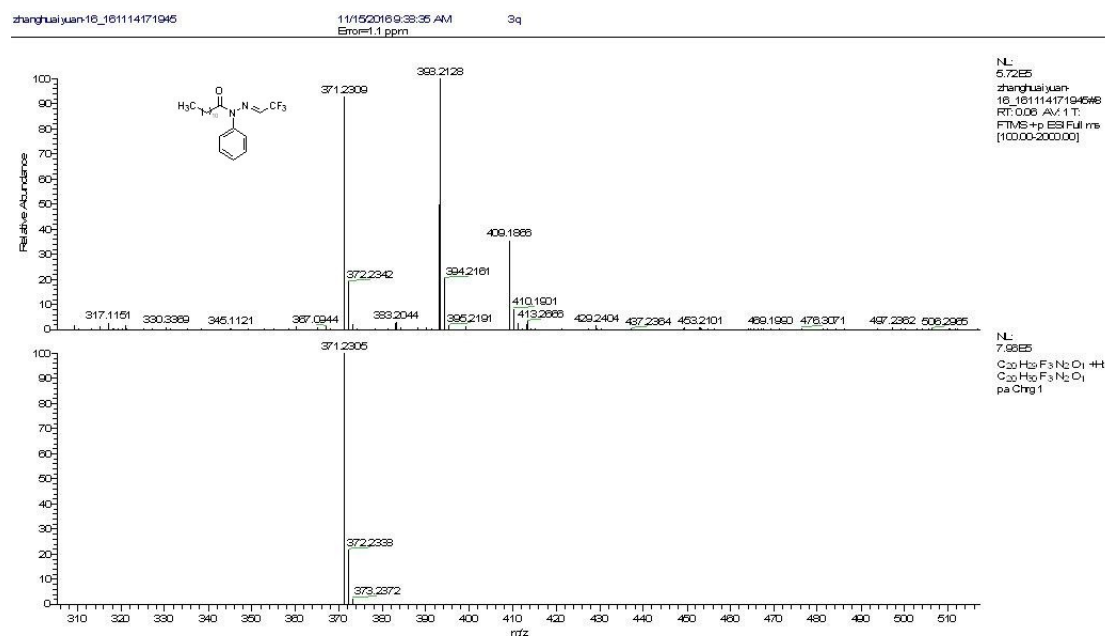
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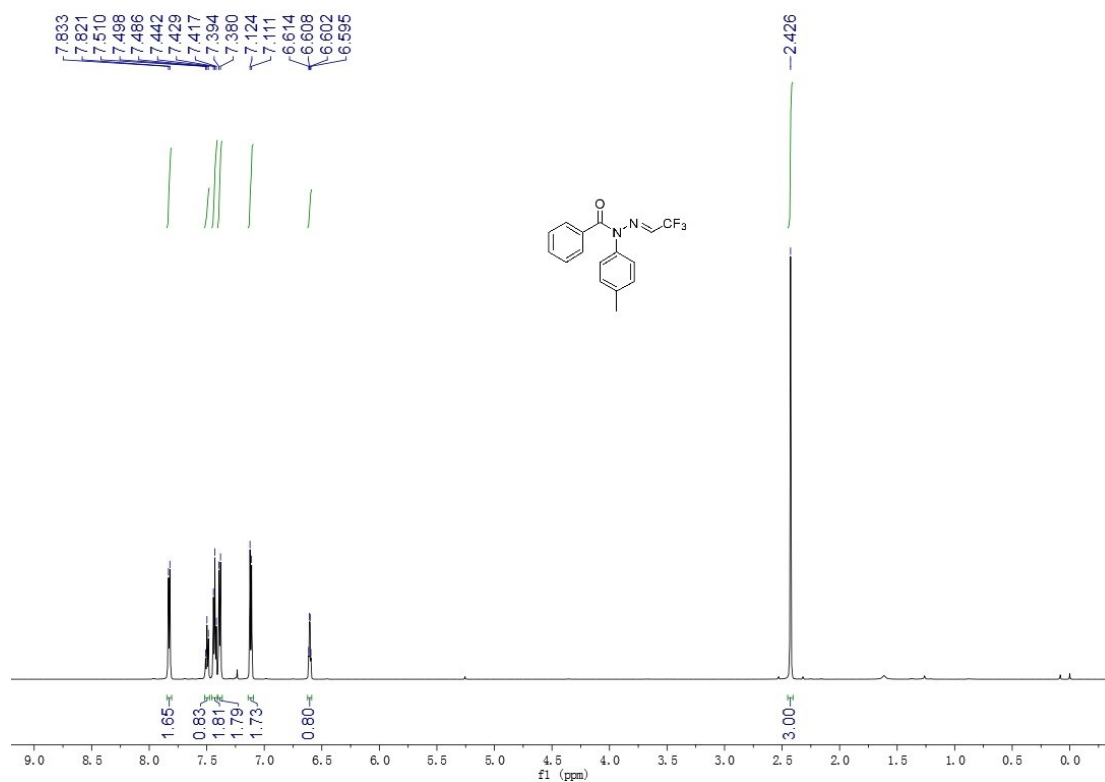
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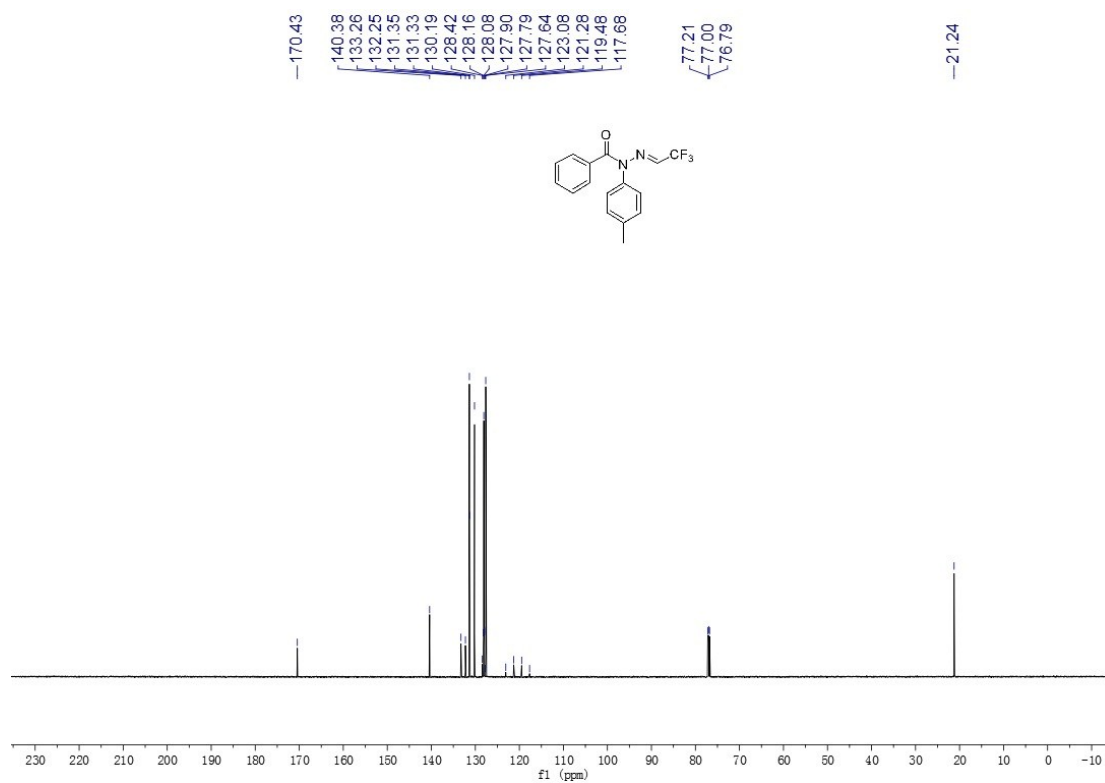
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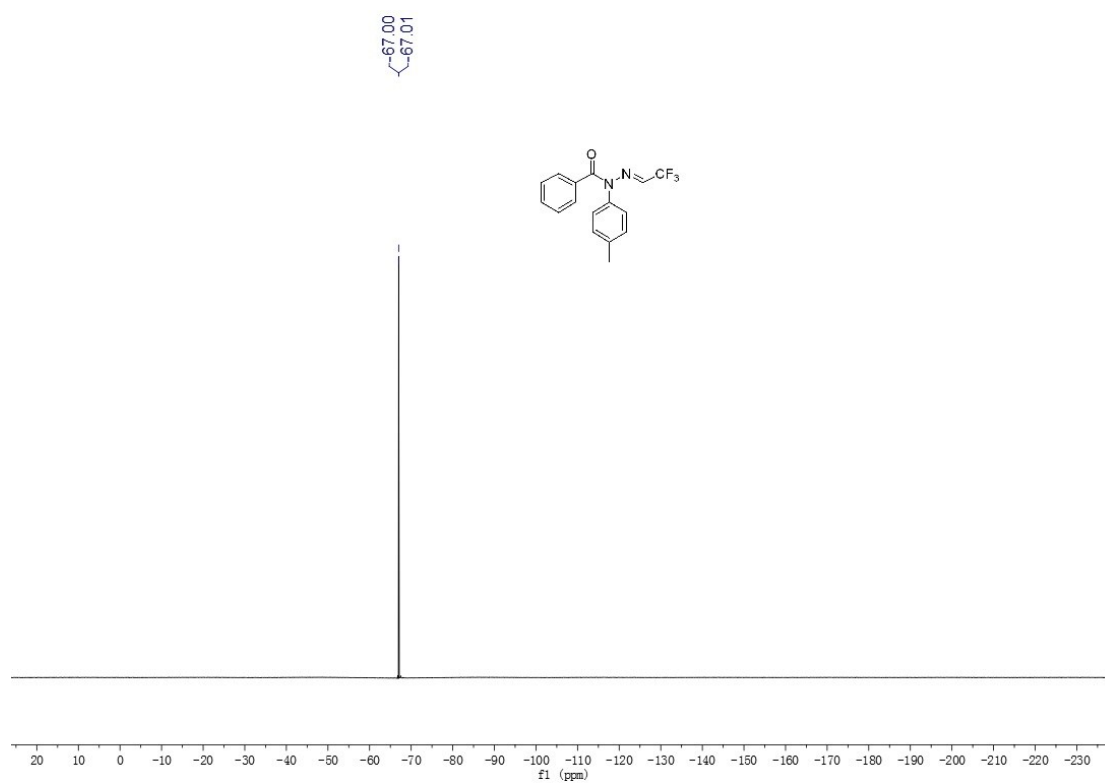
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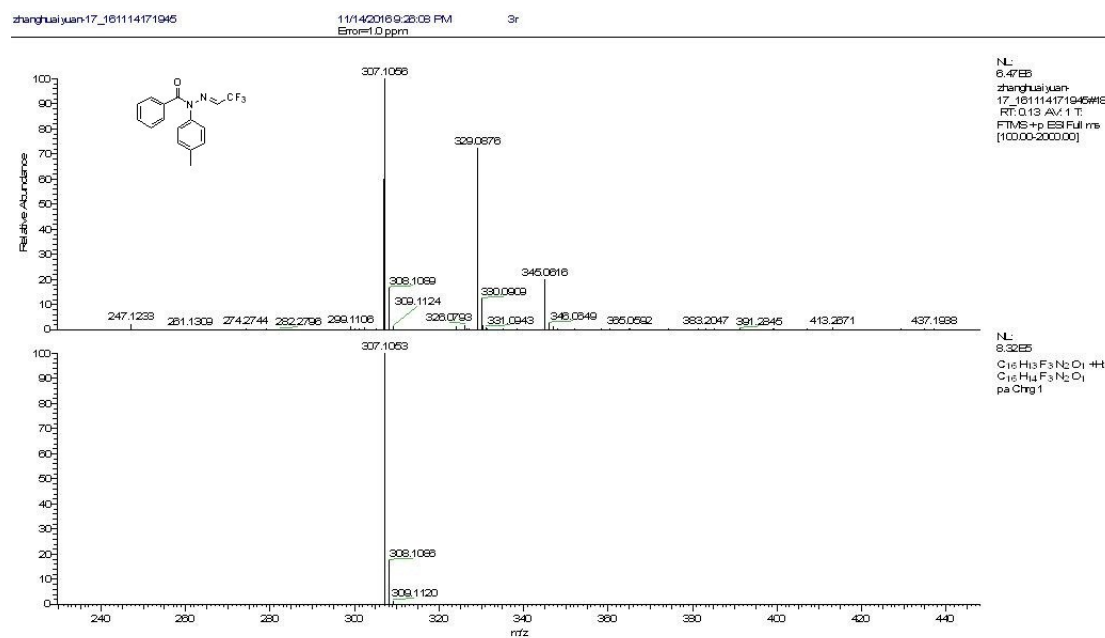
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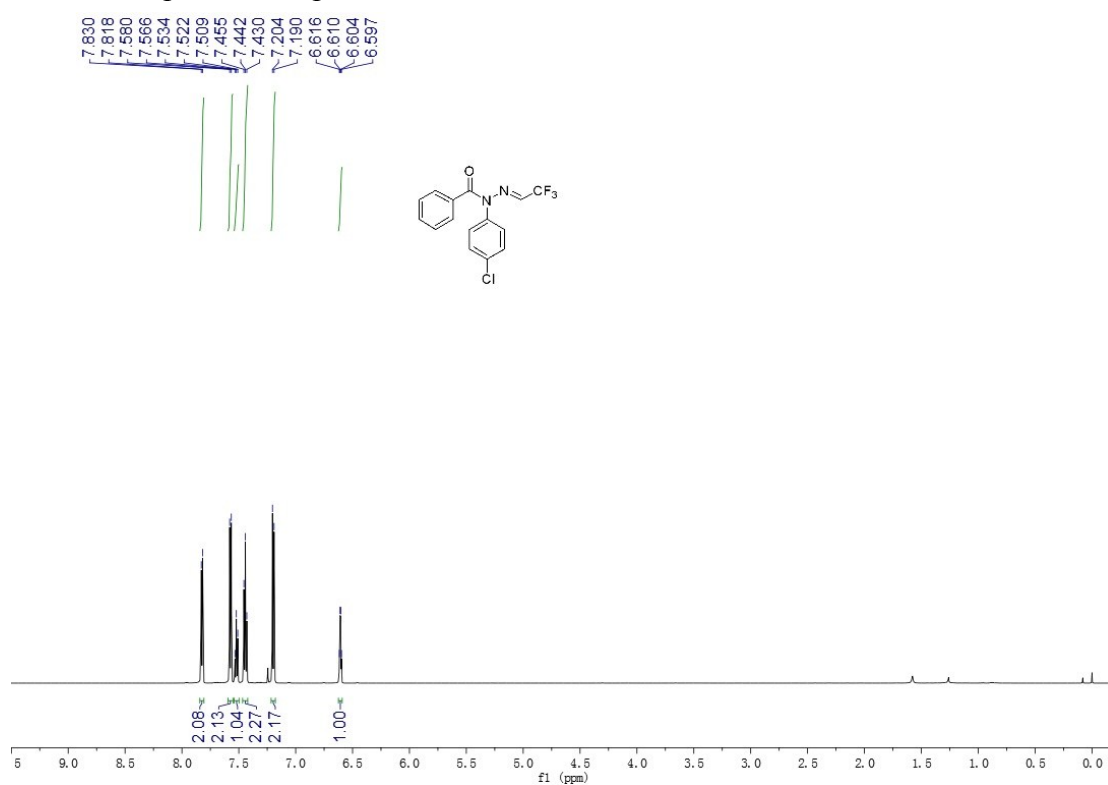
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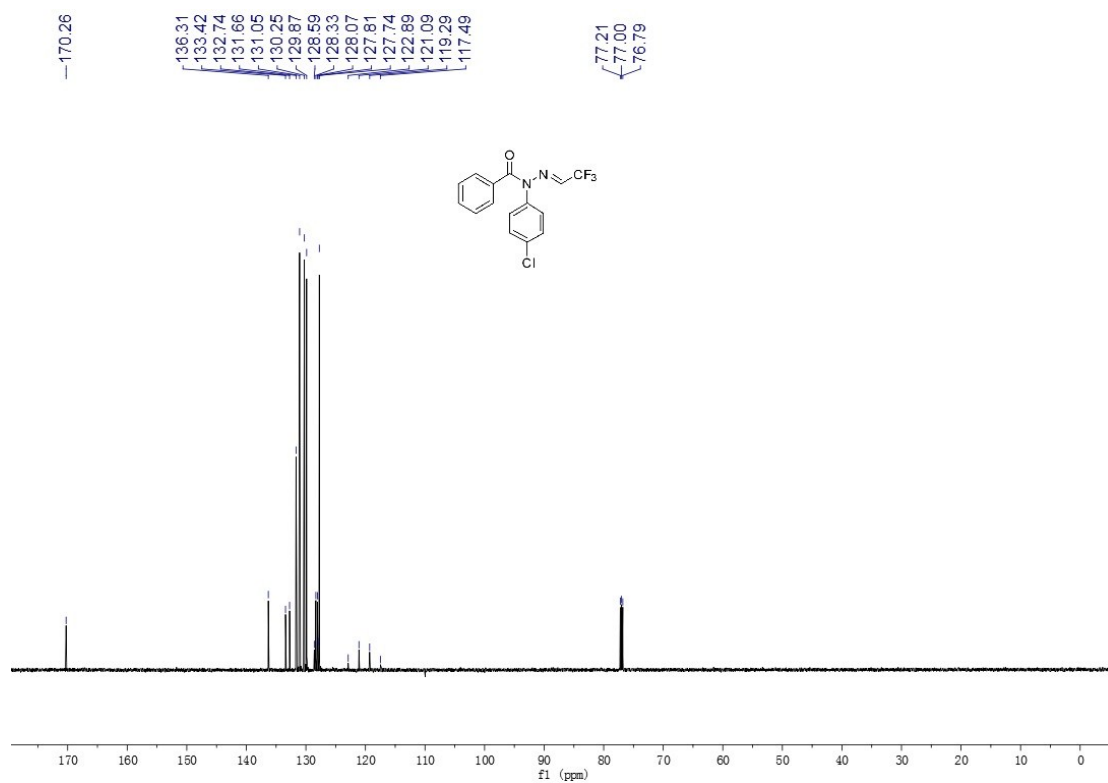
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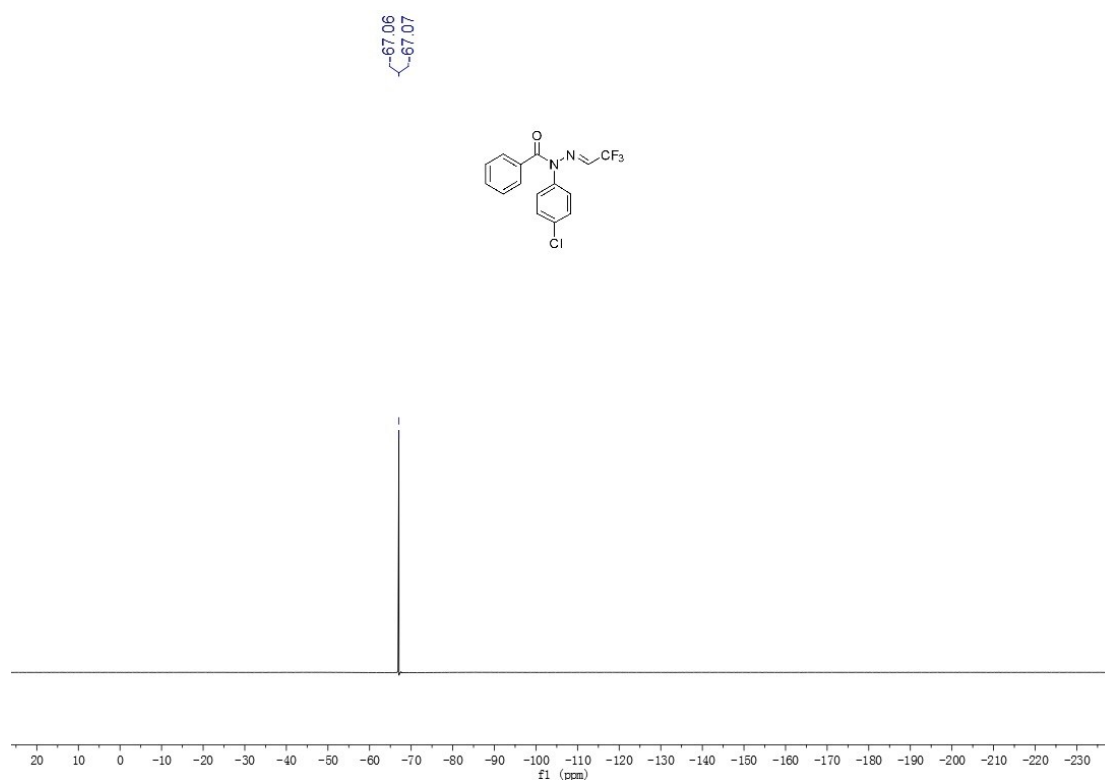
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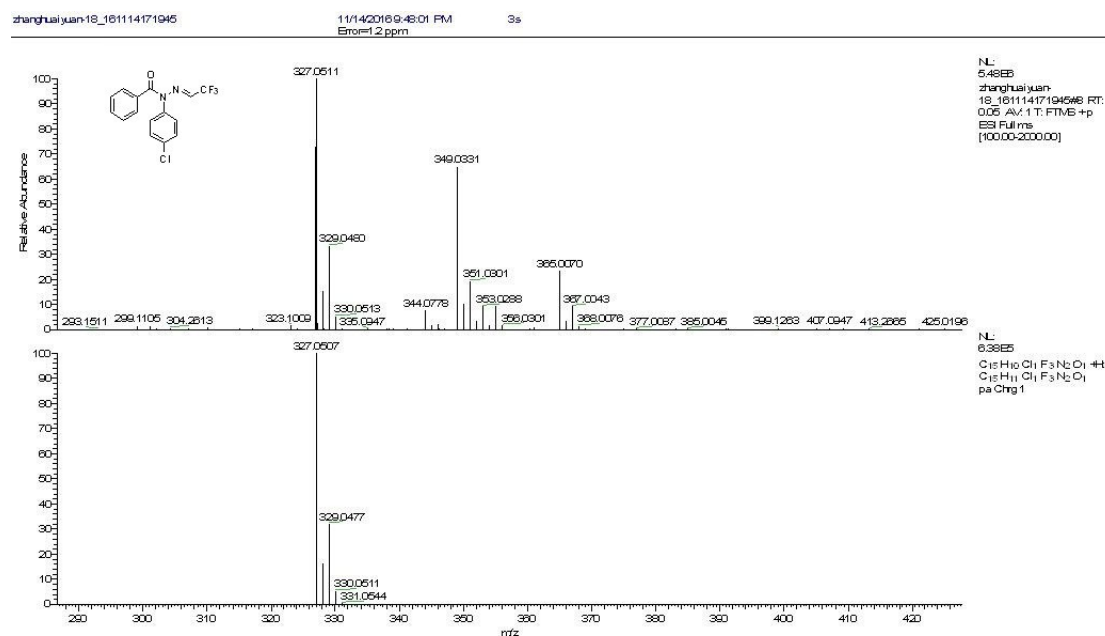
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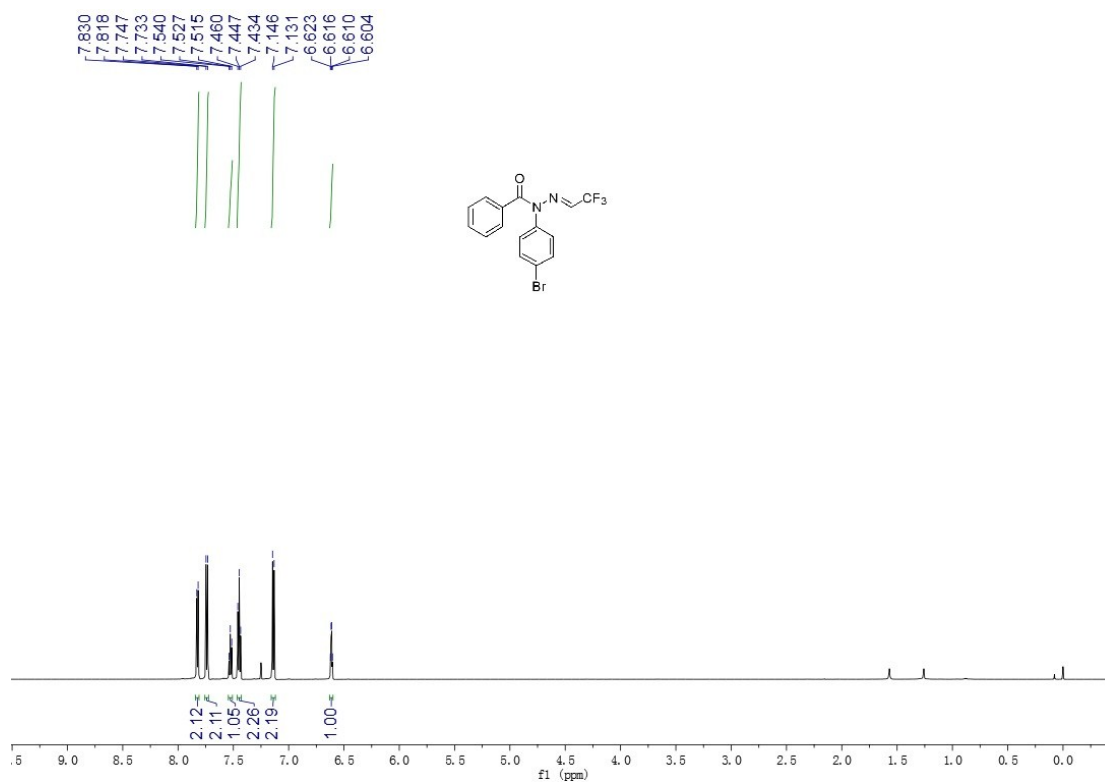
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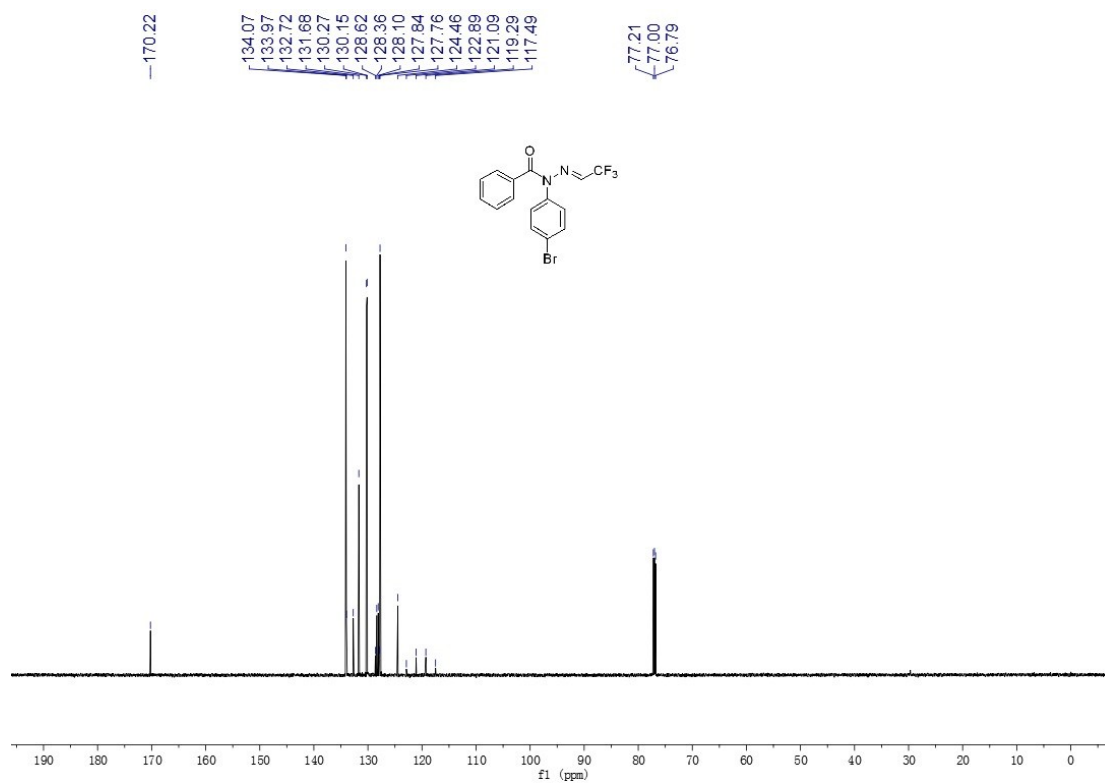
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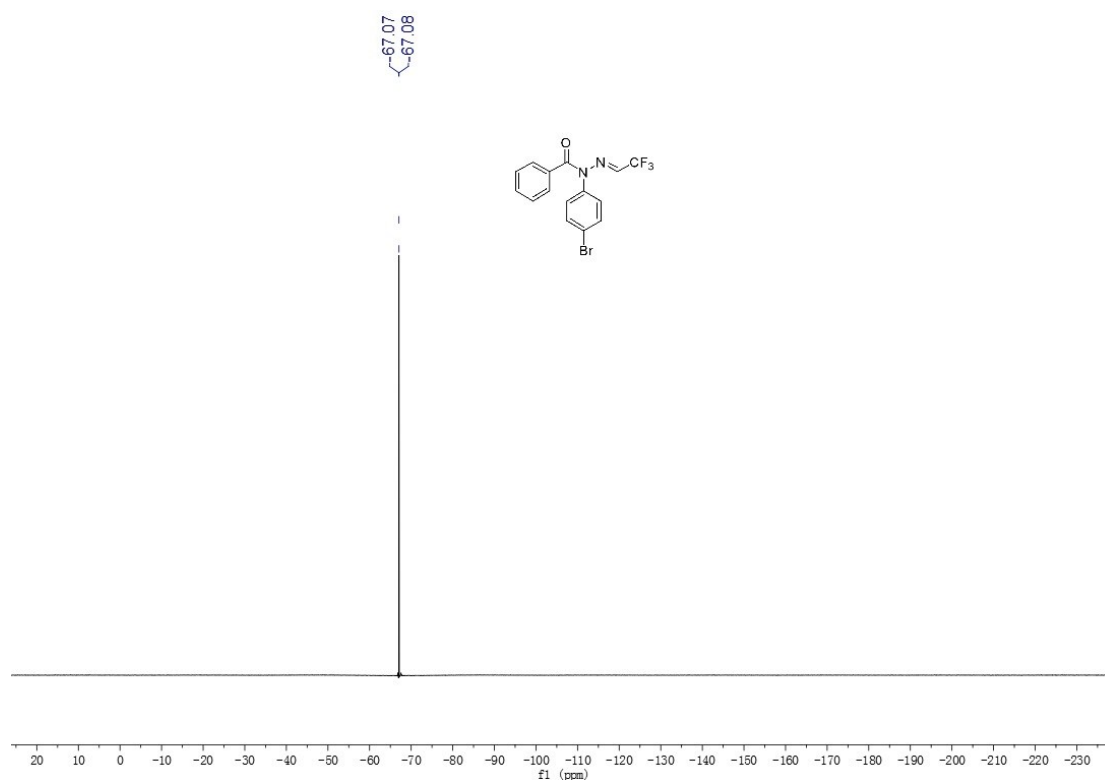
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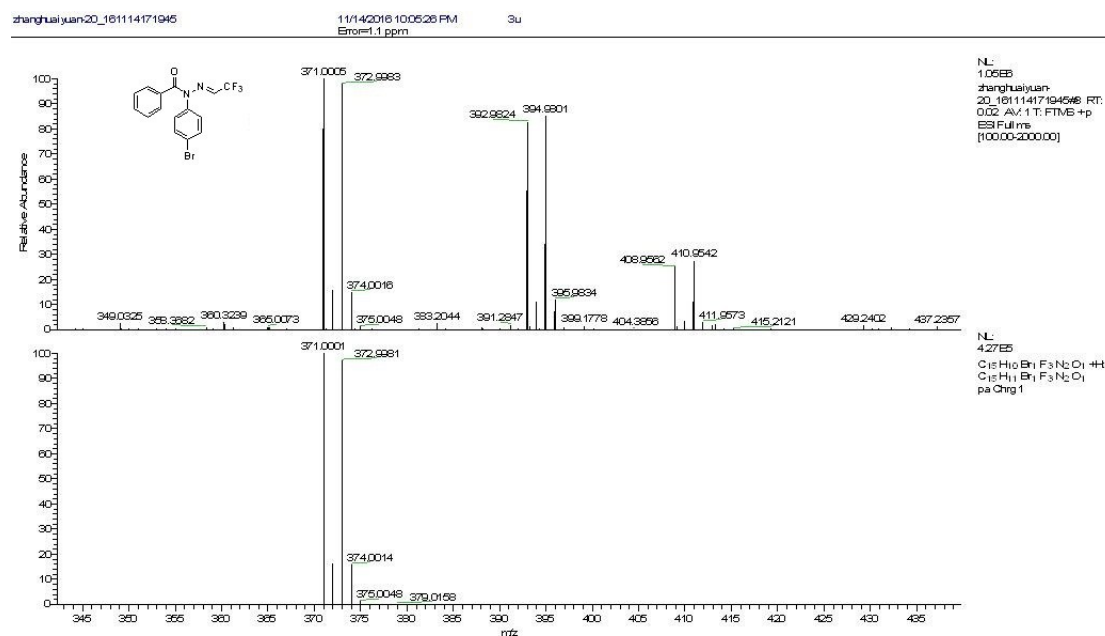
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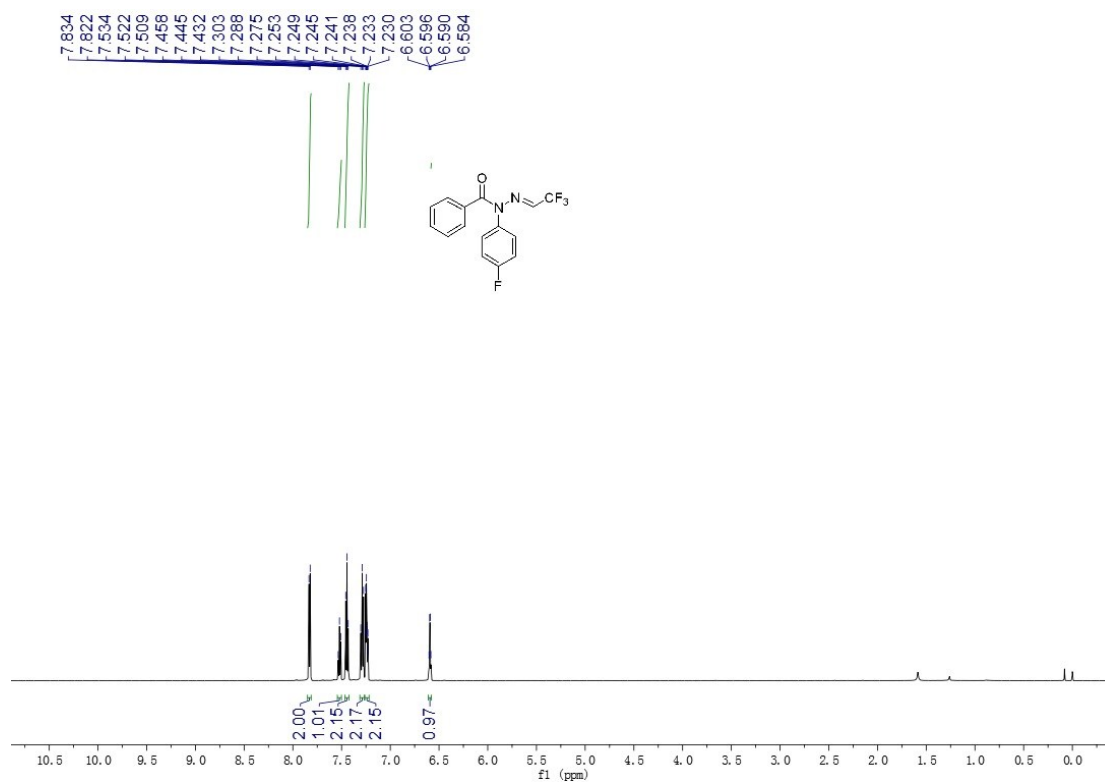
^{19}F NMR copies of compound **6t**:



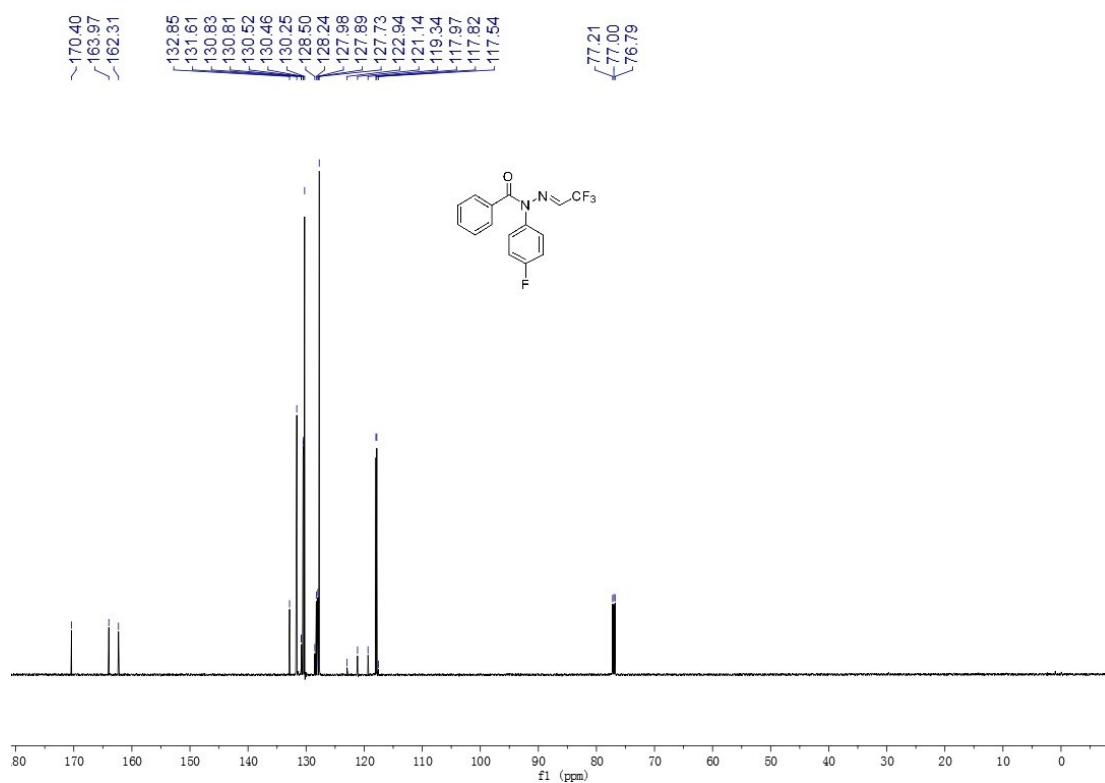
HRMS (ESI) of compound **6t**:



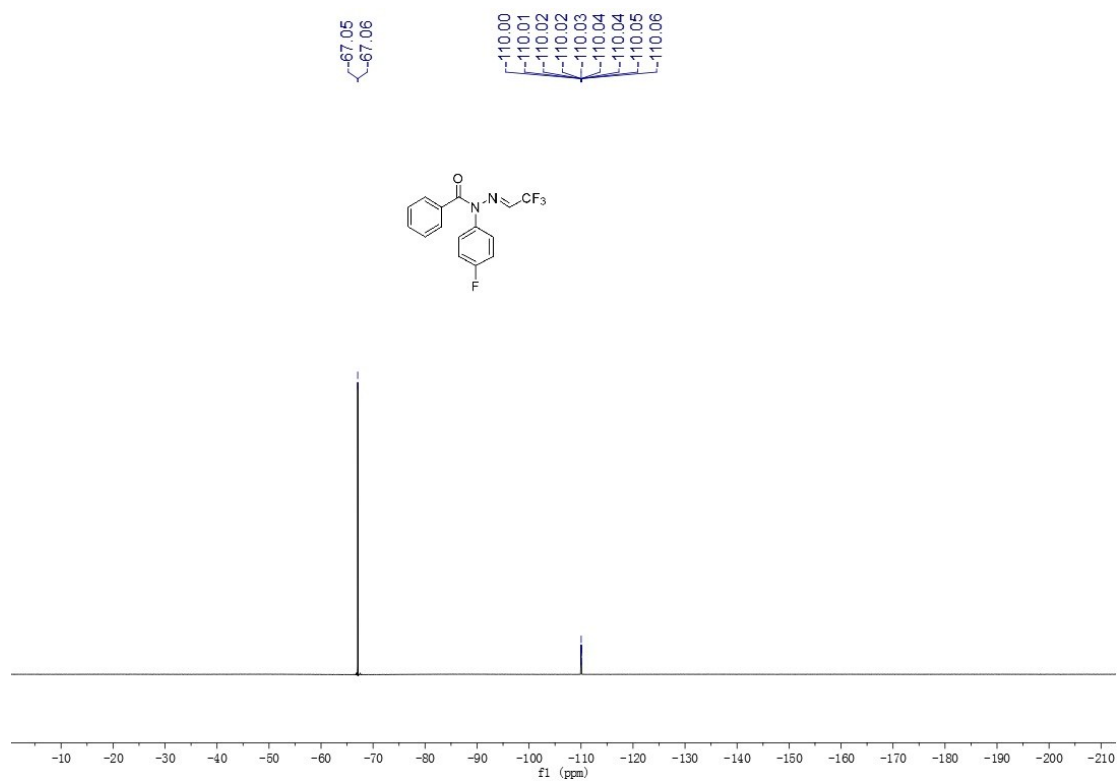
^1H NMR copies of compound **6u**:



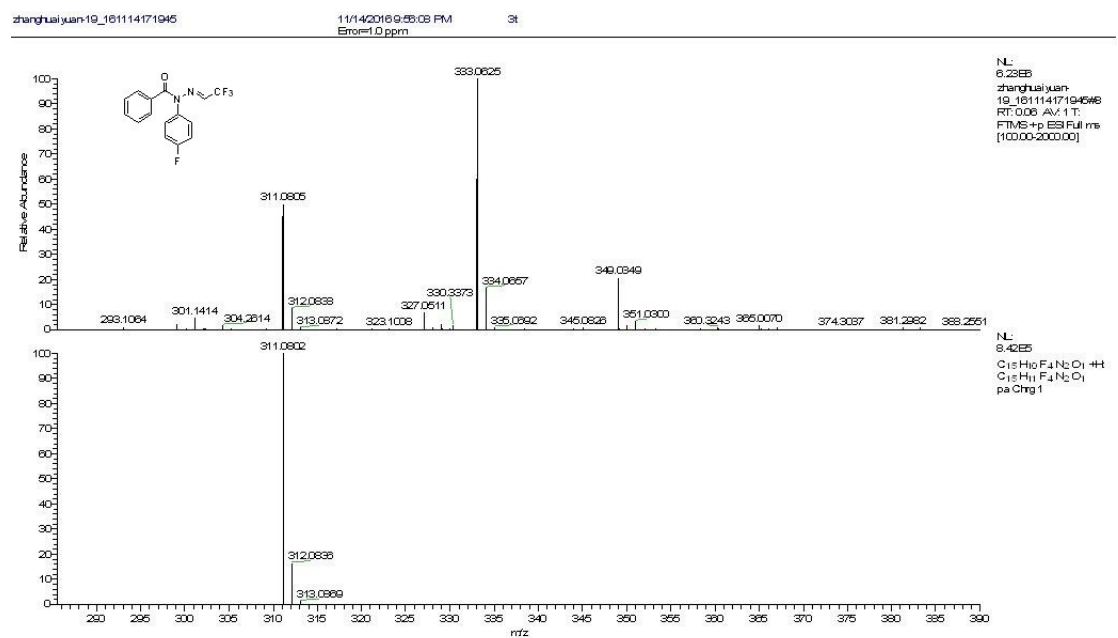
^{13}C NMR copies of compound **6u**:



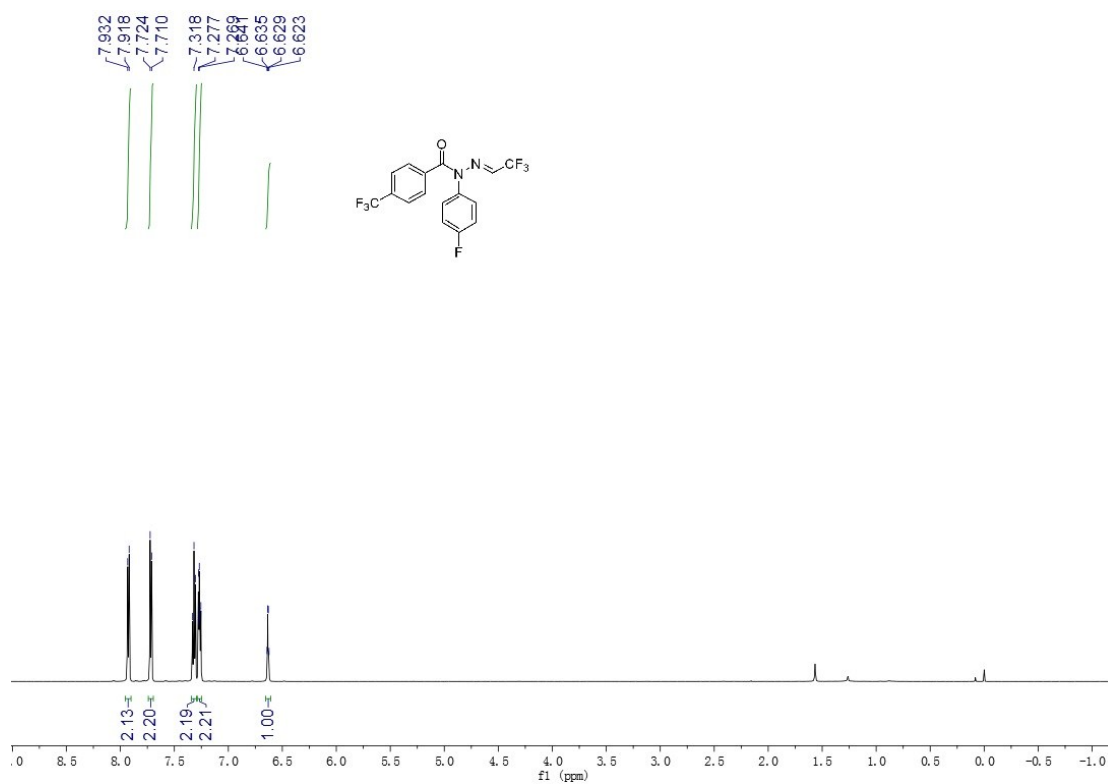
^{19}F NMR copies of compound **6u**:



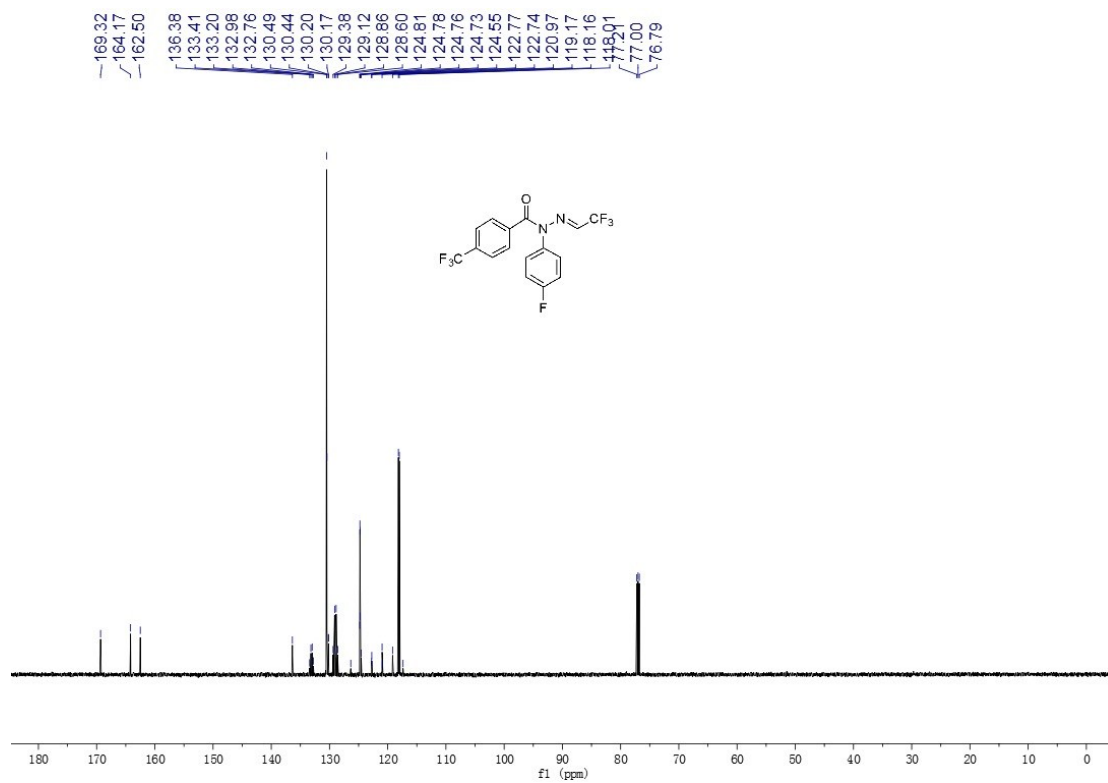
HRMS (ESI) of compound **6u**:



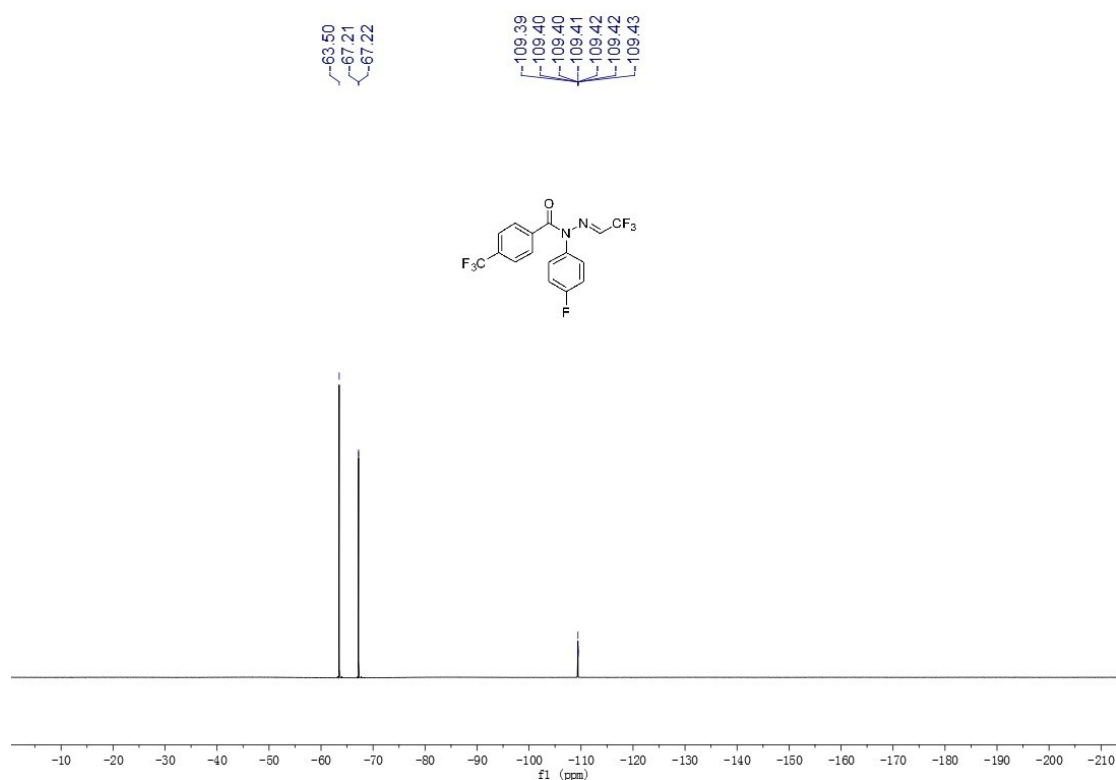
^1H NMR copies of compound **6v**:



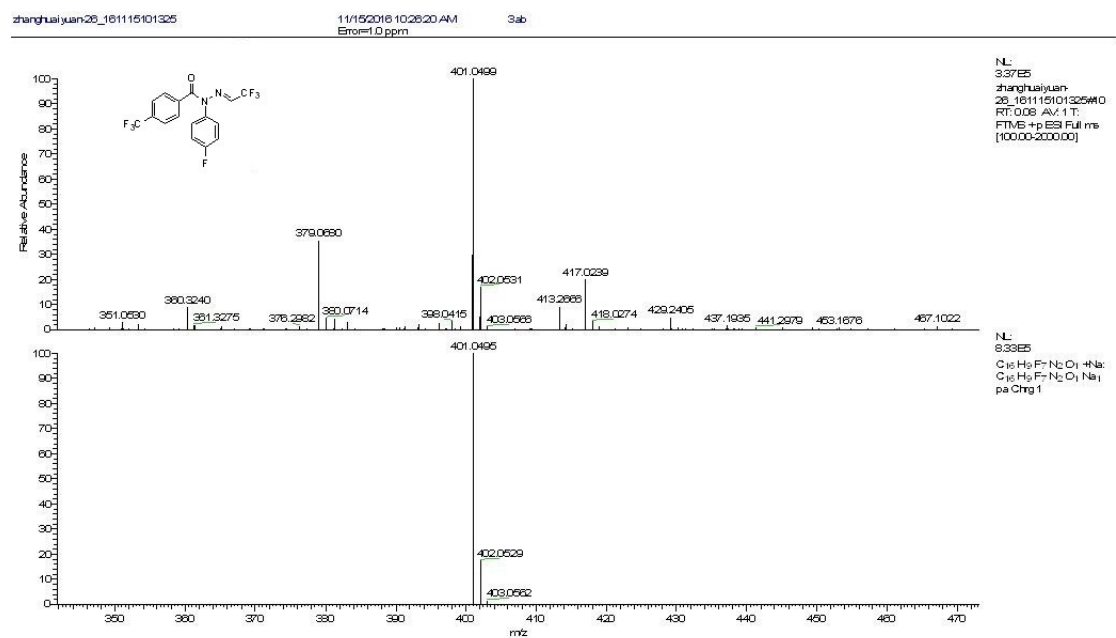
^{13}C NMR copies of compound **6v**:



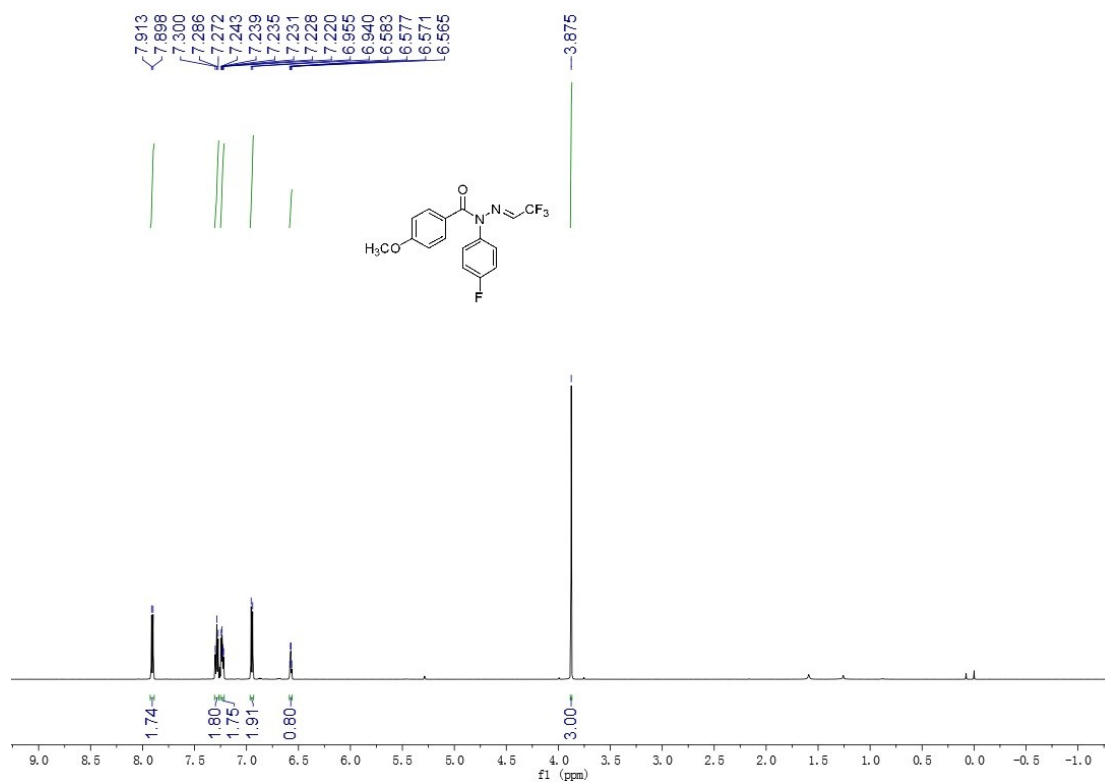
^{19}F NMR copies of compound **6v**:



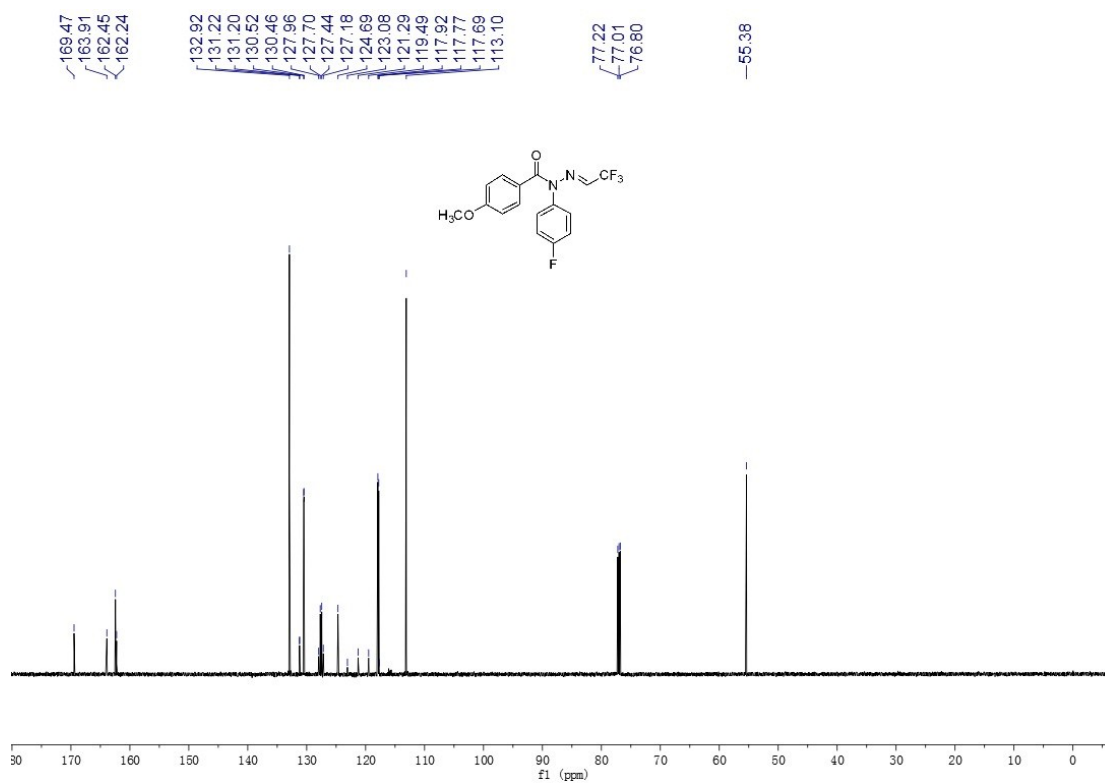
HRMS (ESI) of compound **6v**:



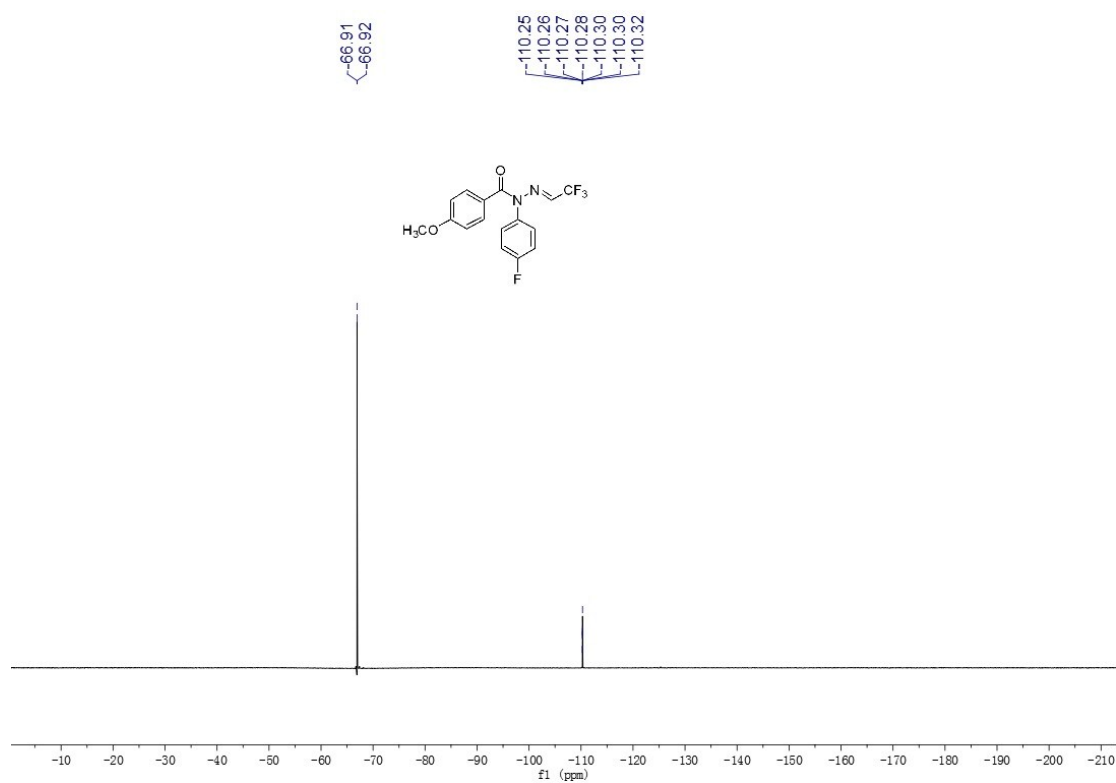
^1H NMR copies of compound **6w**:



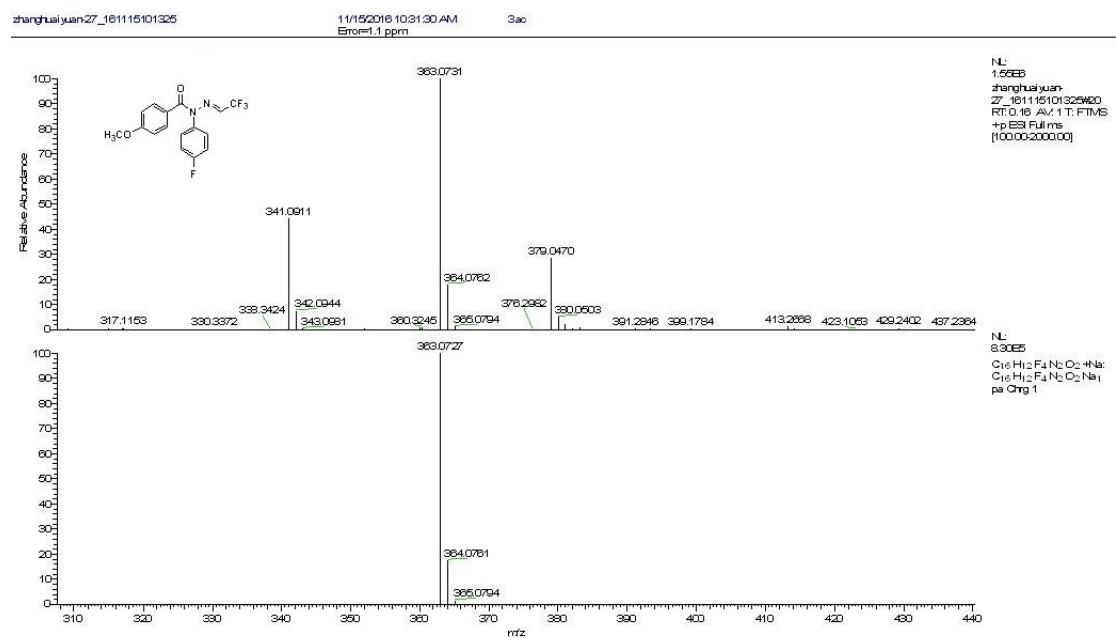
^{13}C NMR copies of compound **6w**:



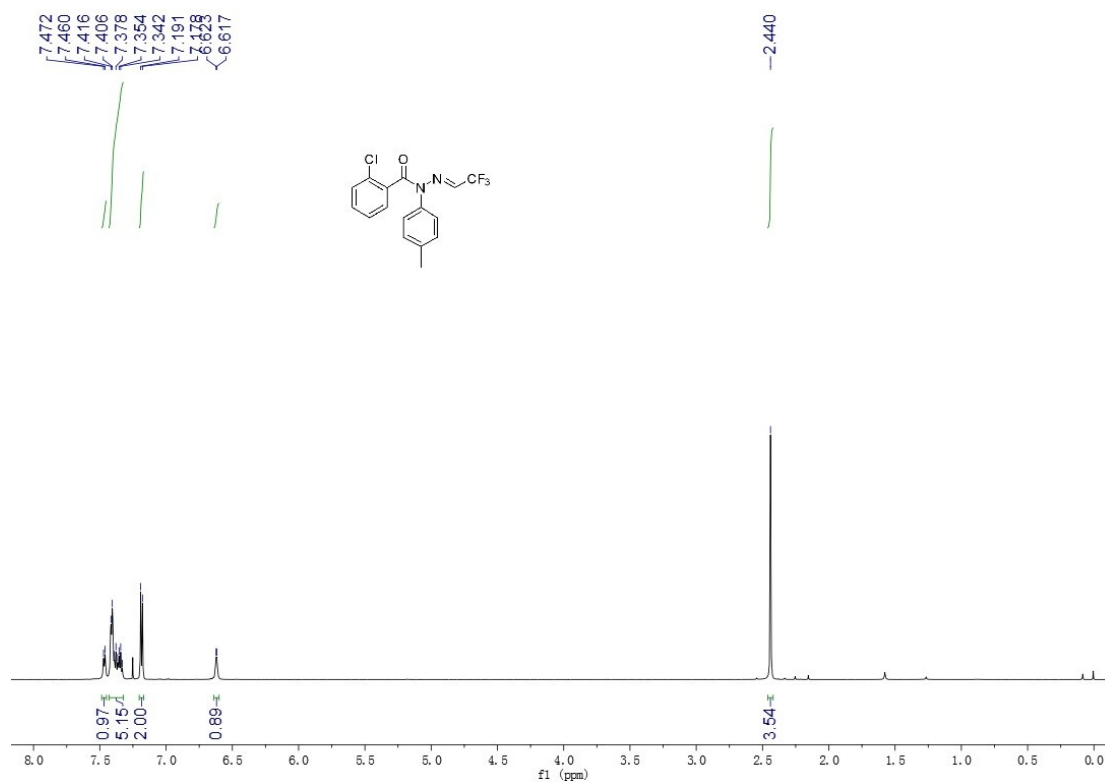
^{19}F NMR copies of compound **6w**:



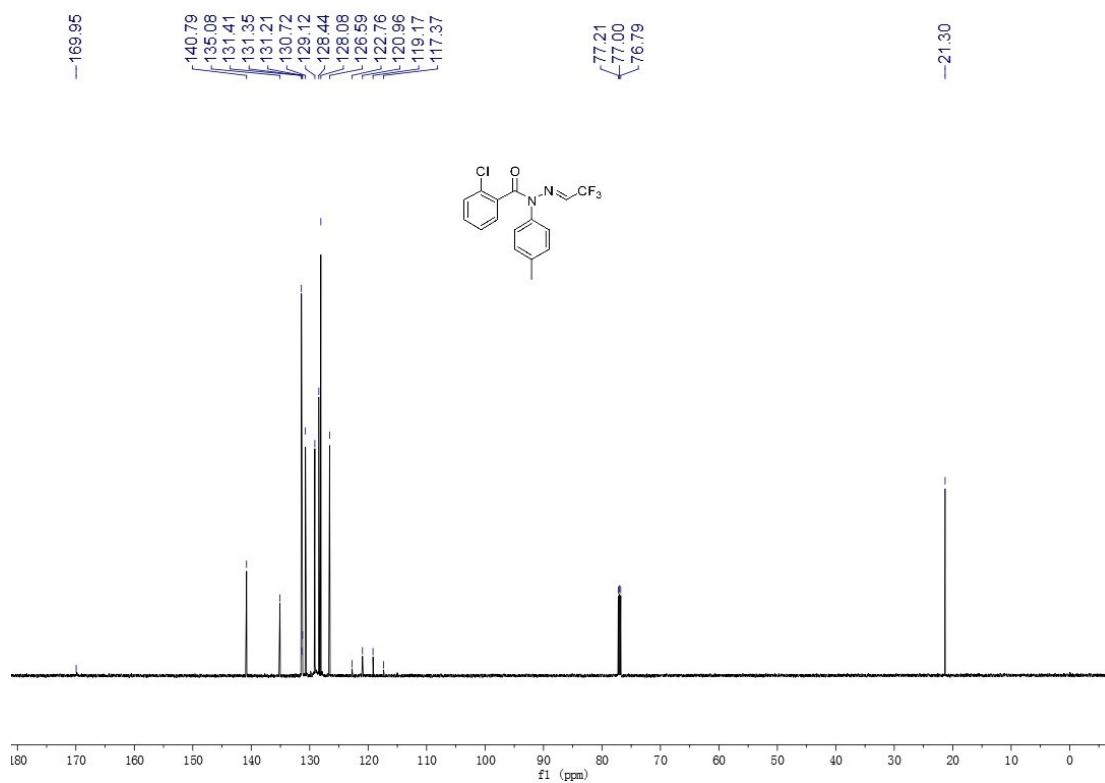
HRMS (ESI) of compound **6w**:



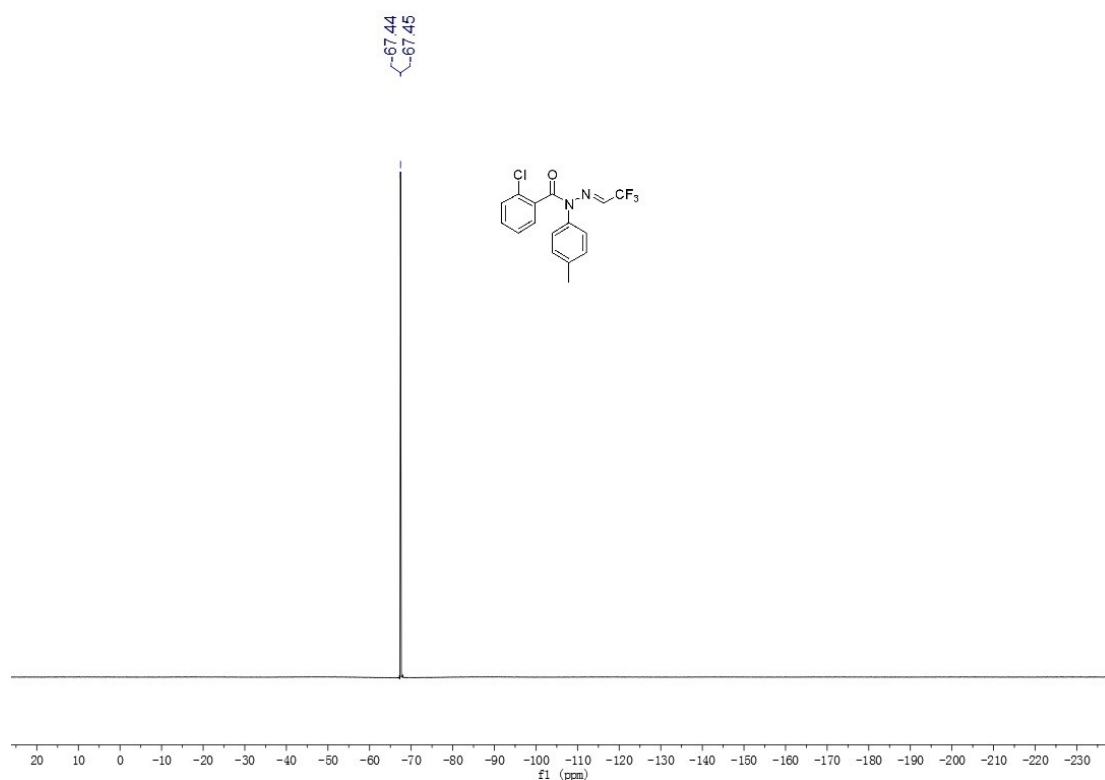
^1H NMR copies of compound **6x**:



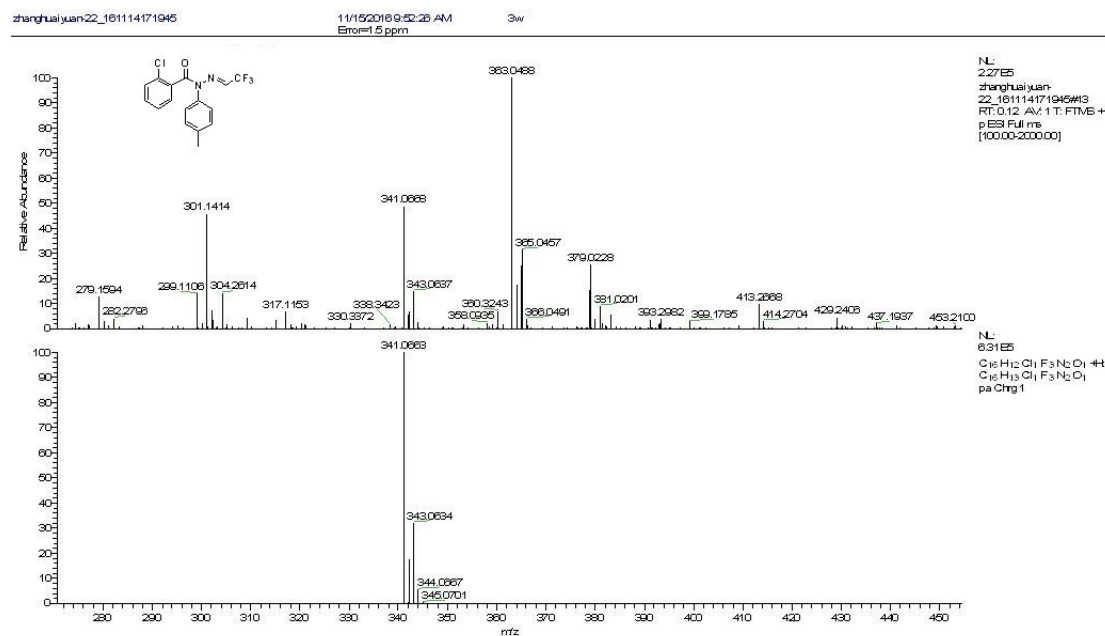
^{13}C NMR copies of compound **6x**:



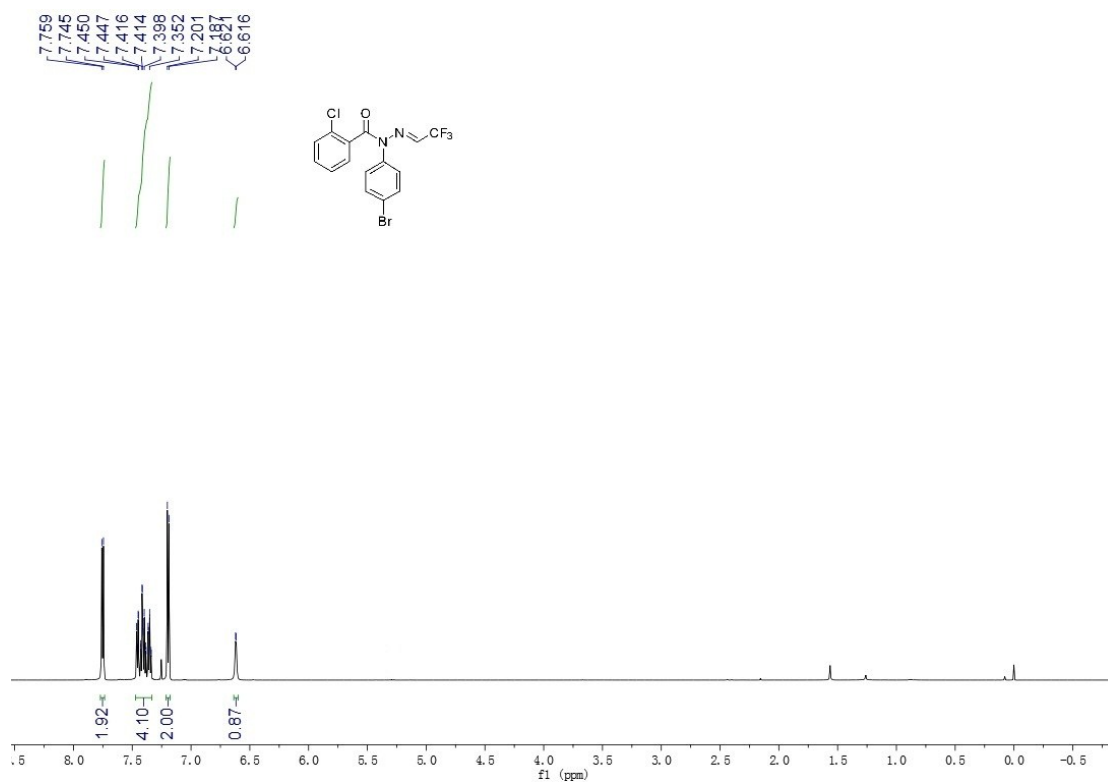
^{19}F NMR copies of compound **6x**:



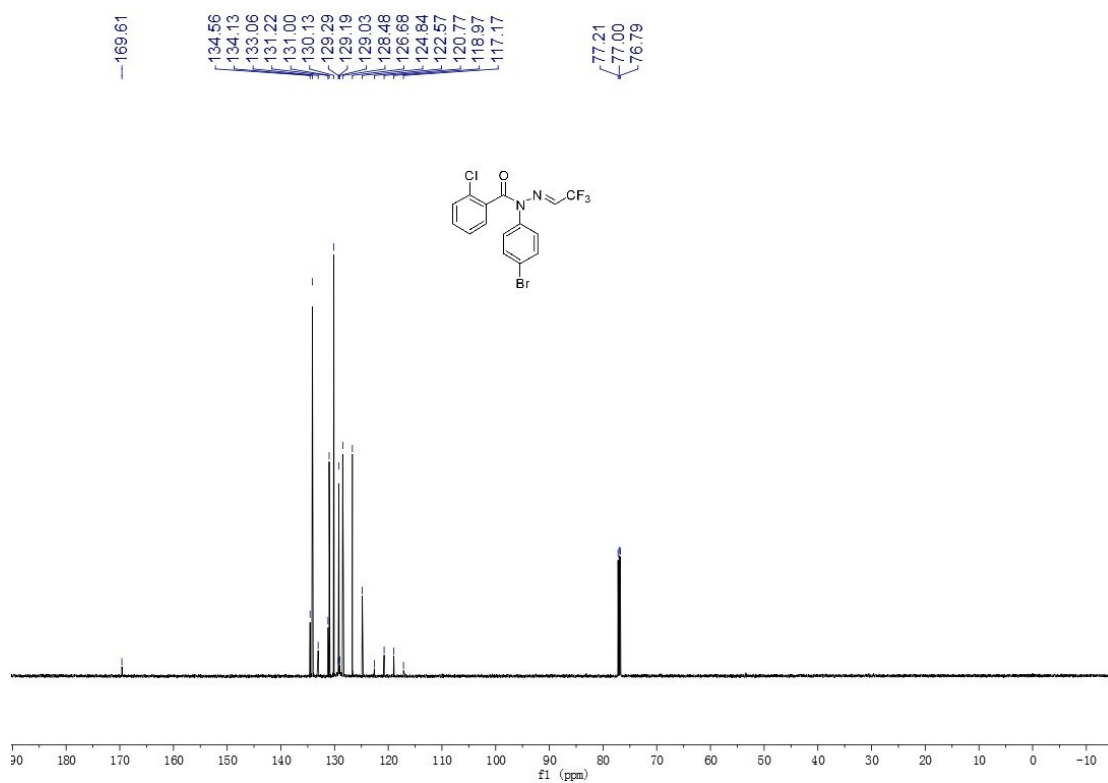
HRMS (ESI) of compound **6x**:



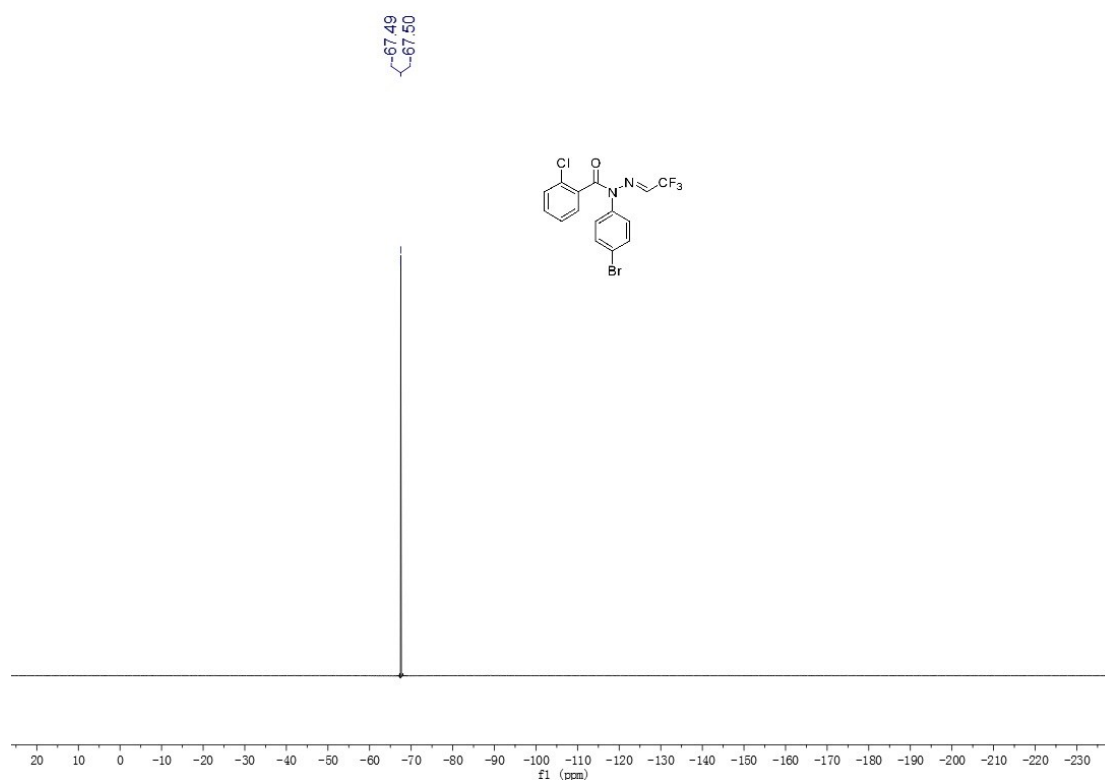
^1H NMR copies of compound **6y**:



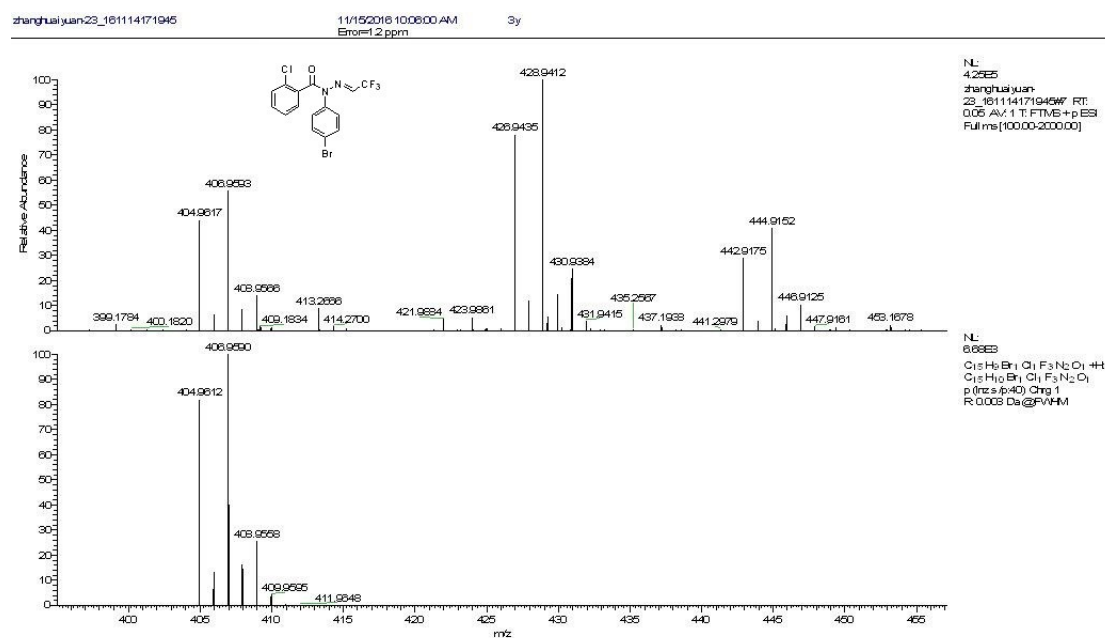
^{13}C NMR copies of compound **6y**:



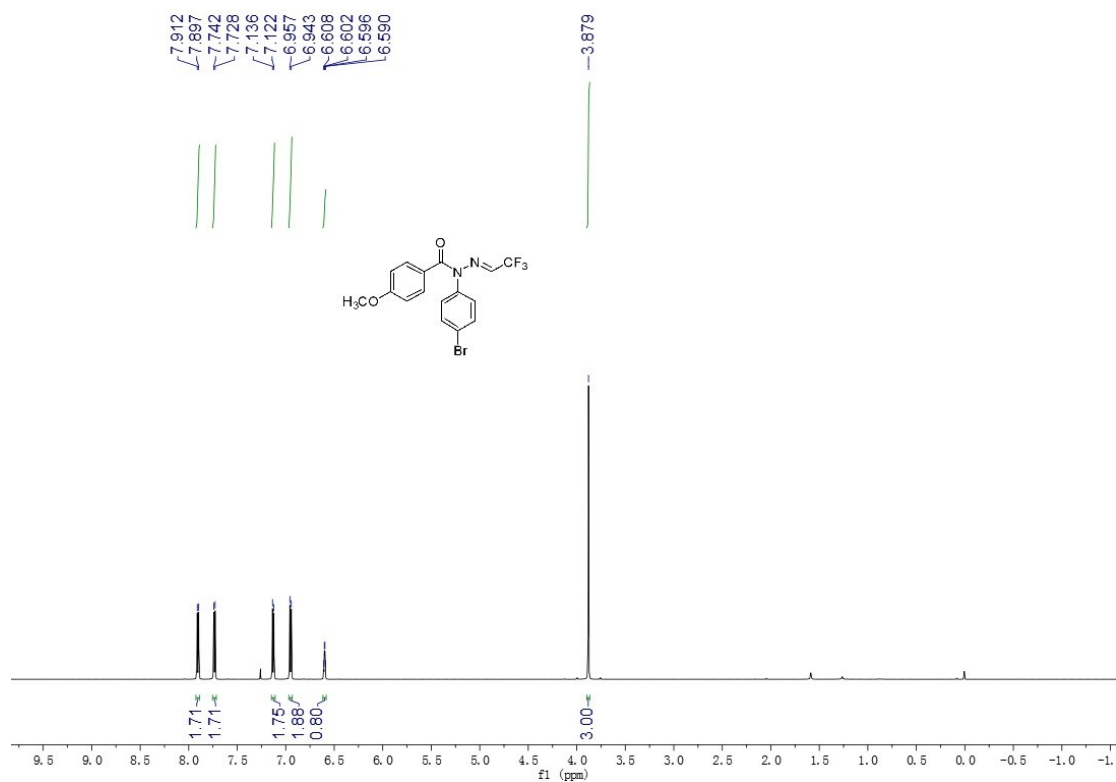
^{19}F NMR copies of compound **6y**:



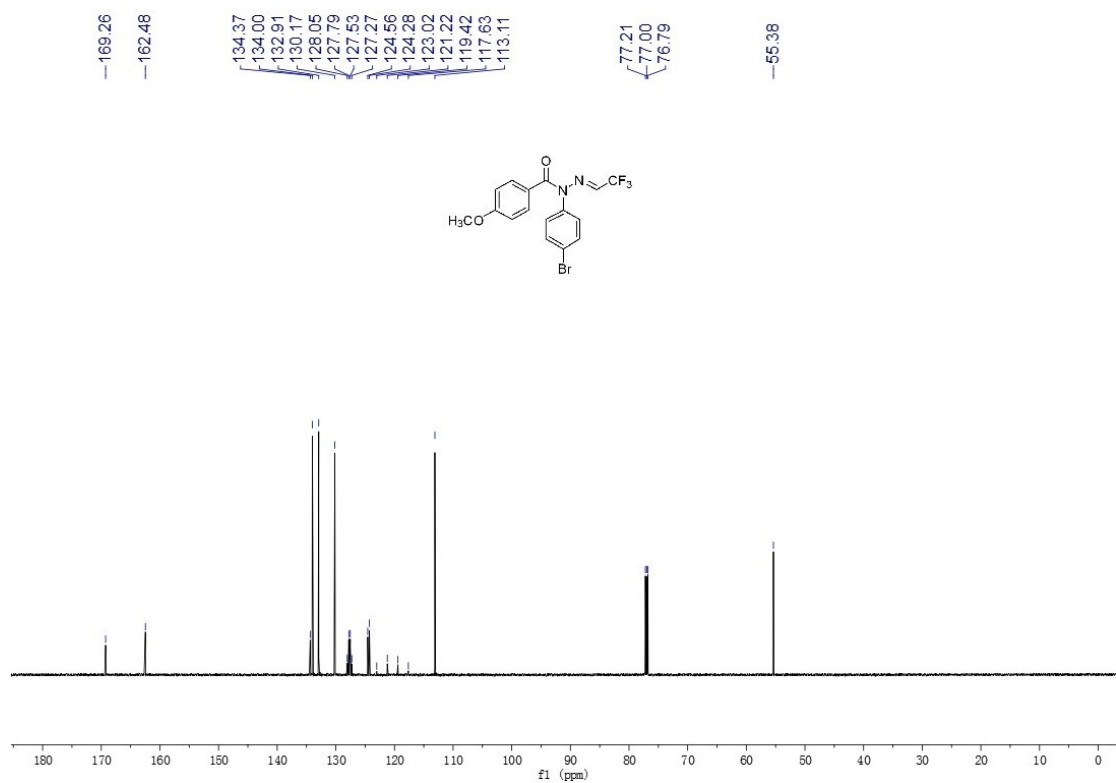
HRMS (ESI) of compound **6y**:



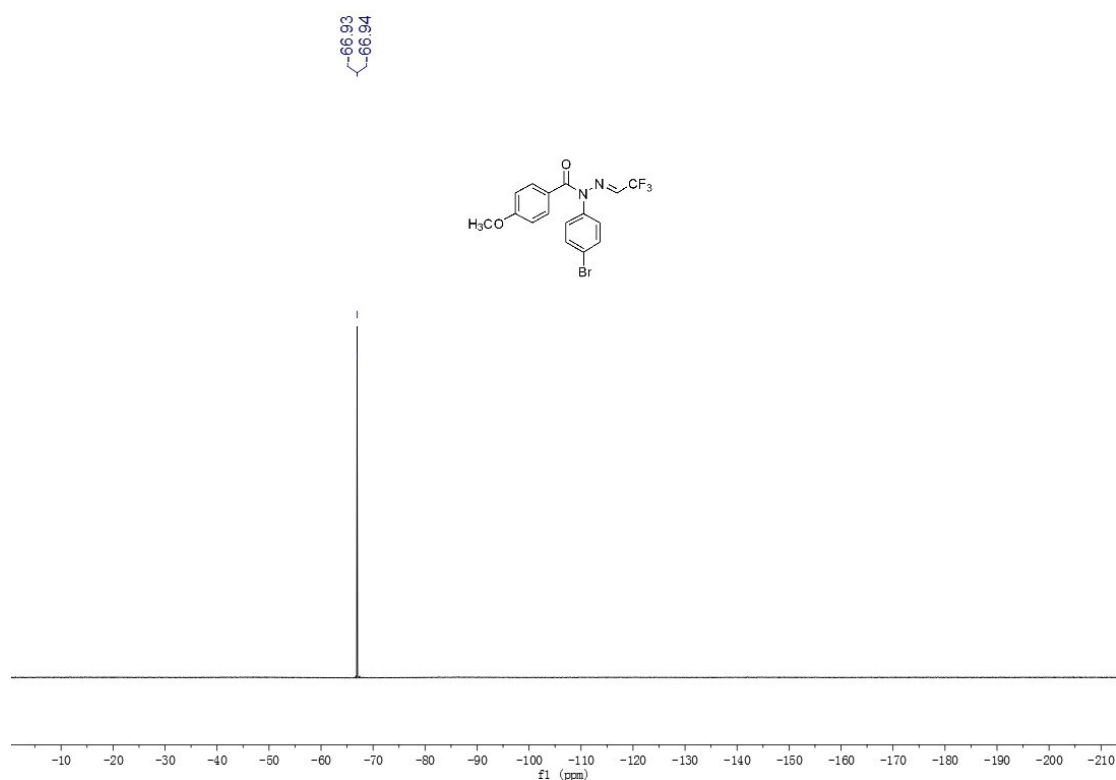
¹H NMR copies of compound **6z**:



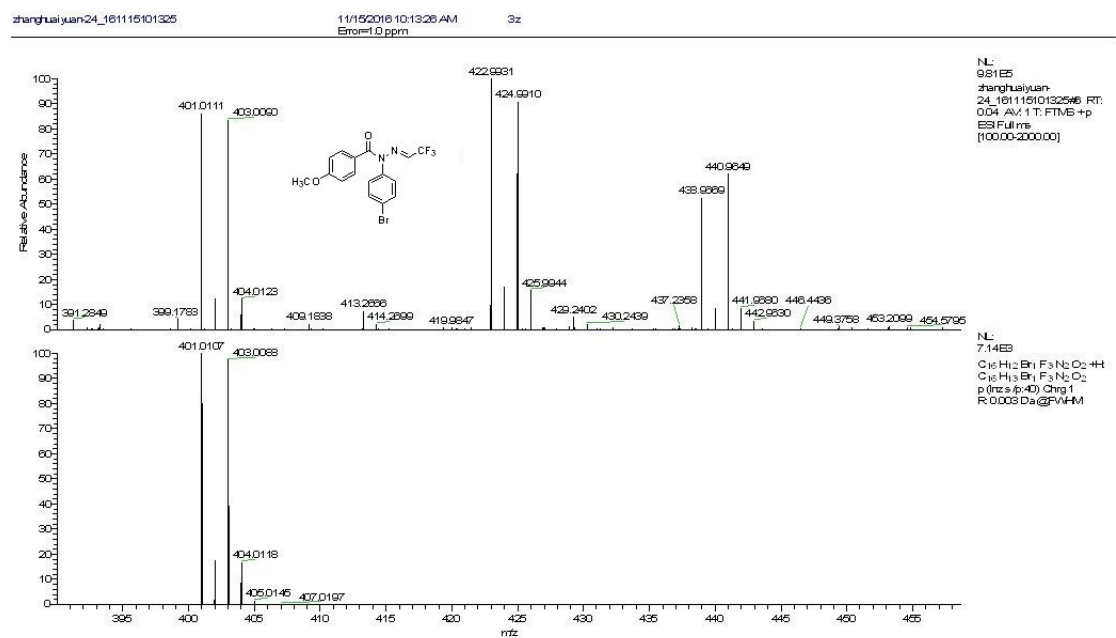
¹³C NMR copies of compound **6z**:



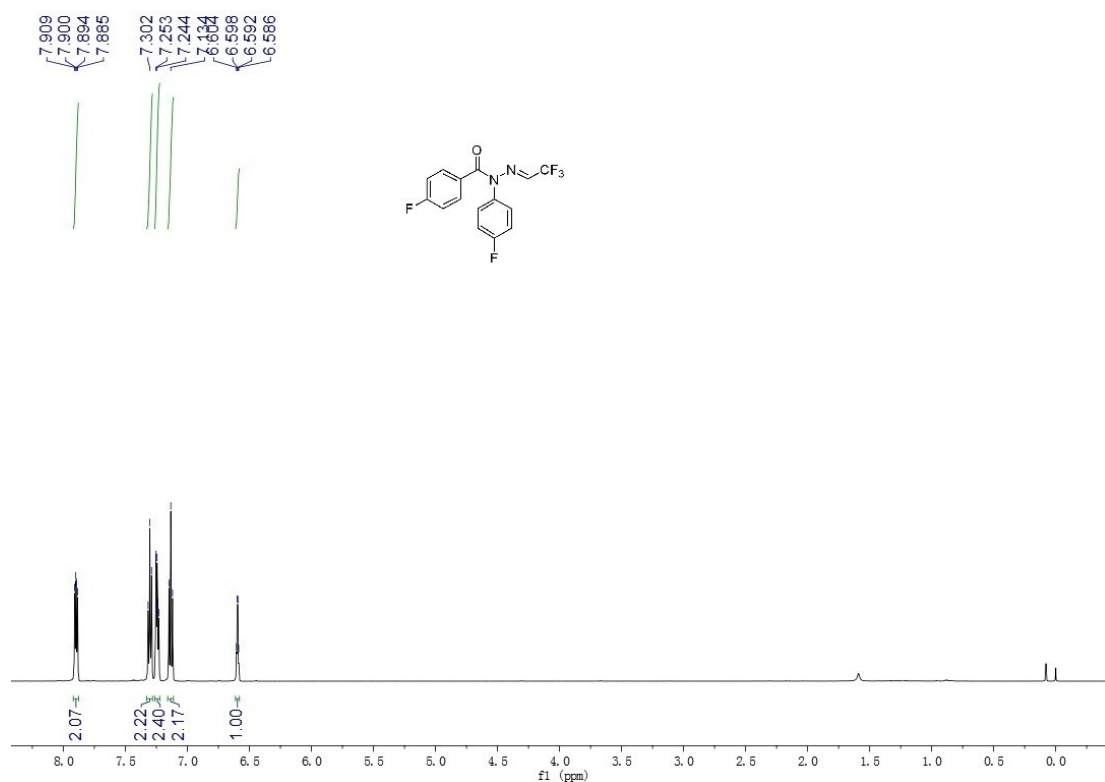
^{19}F NMR copies of compound **6z**:



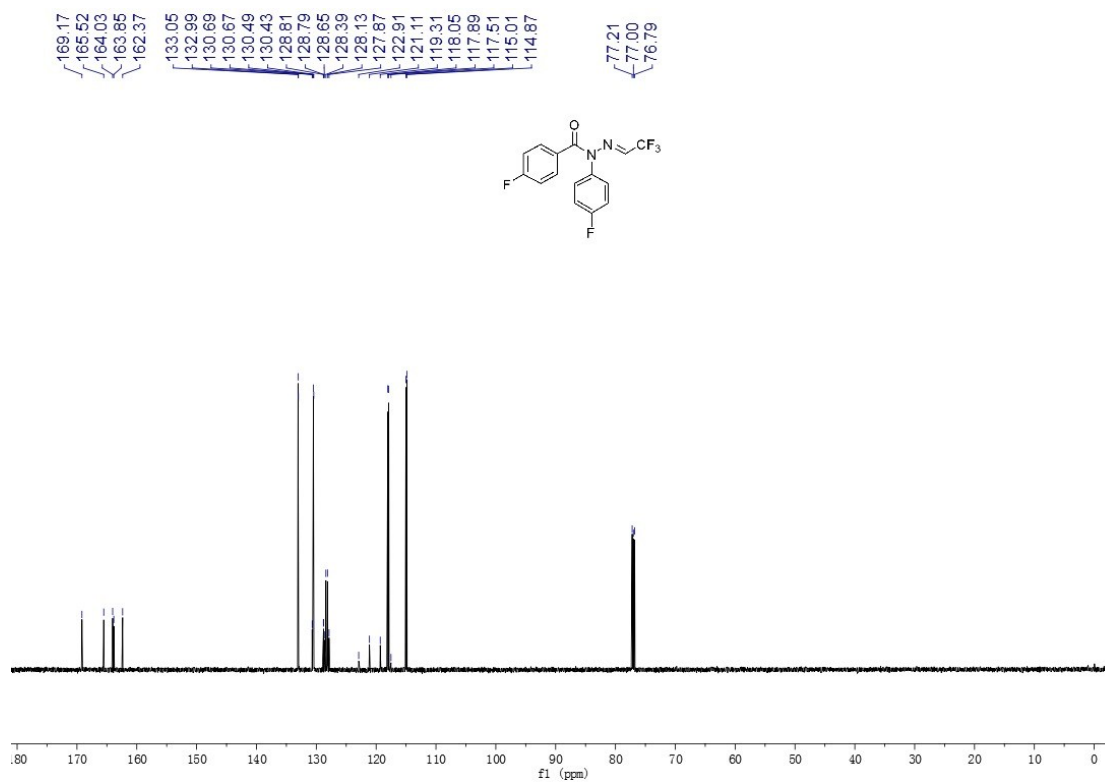
HRMS (ESI) of compound **6z**:



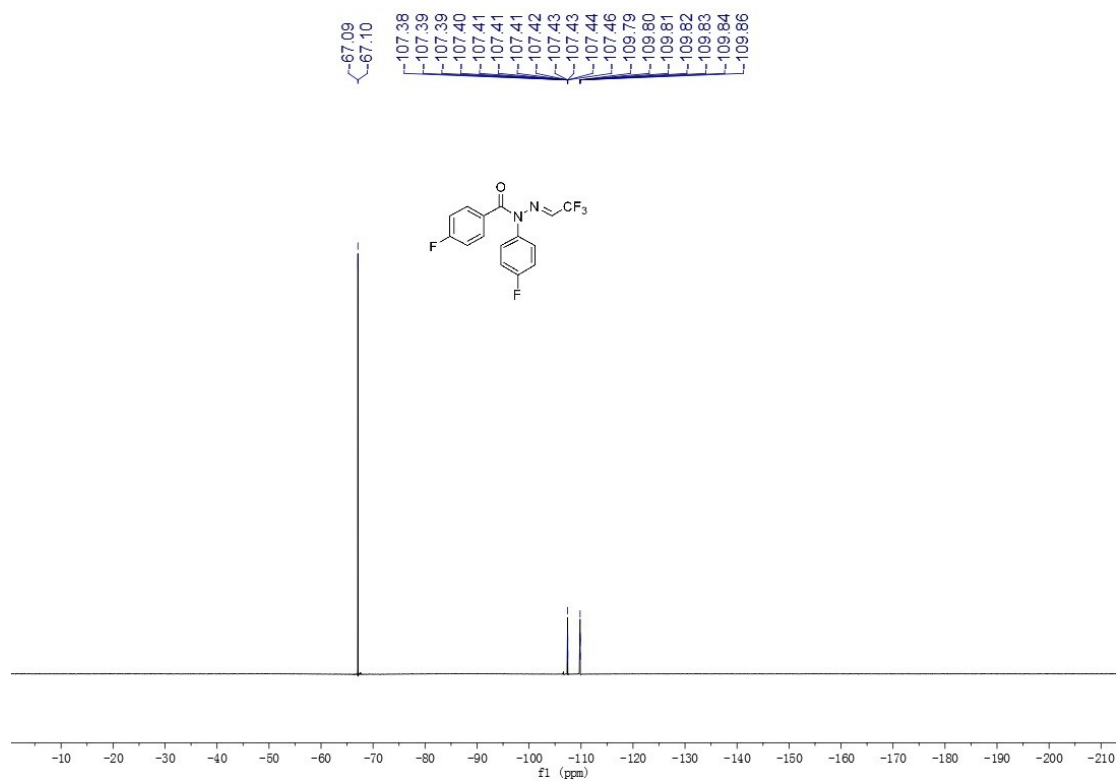
^1H NMR copies of compound **6aa**:



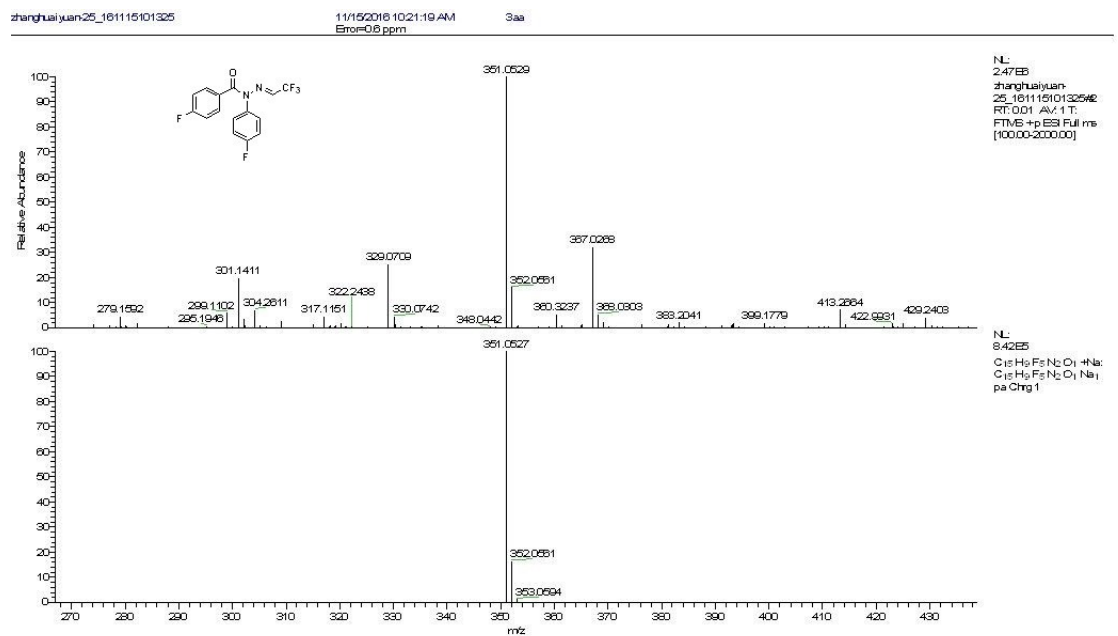
^{13}C NMR copies of compound **6aa**:



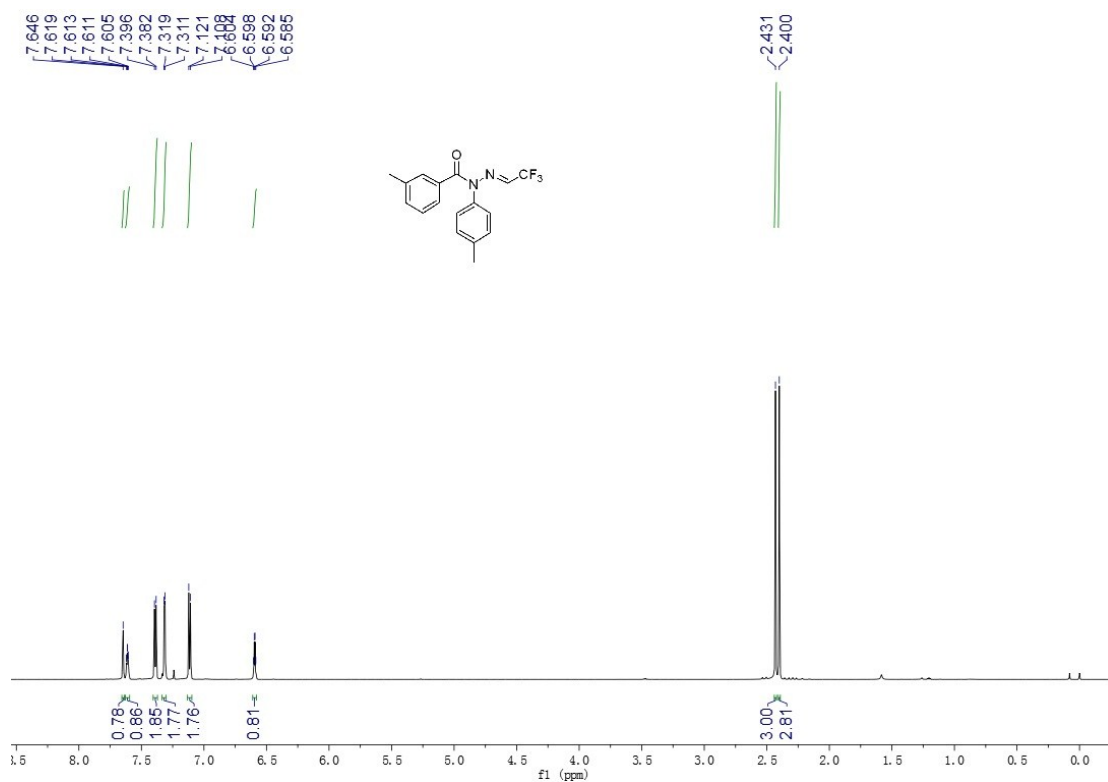
^{19}F NMR copies of compound **6aa**:



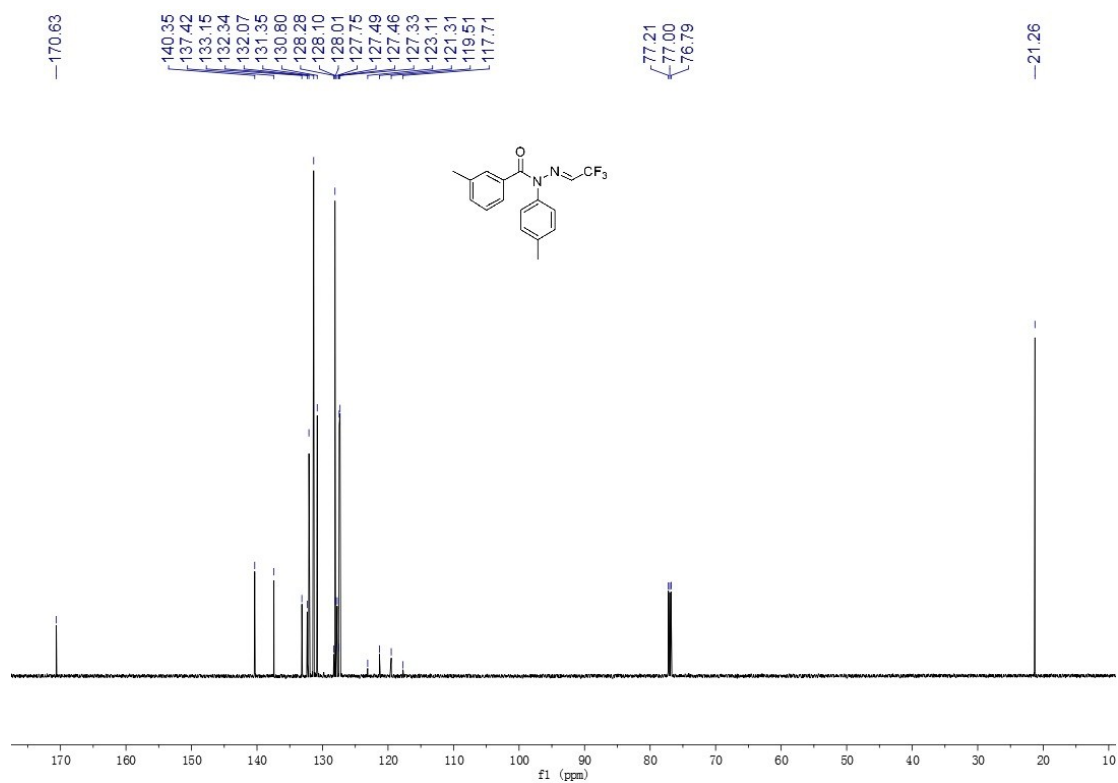
HRMS (ESI) of compound **6aa**:



^1H NMR copies of compound **6ab**:



^{13}C NMR copies of compound **6ab**:



Chemical structure: Cc1ccc(cc1)C(=O)N(C#N)Cc2ccc(C)cc2

Chemical shift (ppm): -67.02, -67.03

13C NMR spectrum (CDCl₃) showing a single peak at approximately -67.0 ppm, corresponding to the solvent.

zhenghuiyuan-21_161114171945

11/15/2018 9:44:52 AM

3v

Error=1.2 ppm

Relative Abundance

321.1213

343.1034

359.0774

322.1246

344.1006

350.0606

321.1209

322.1243

323.1276

321.1213

343.1034

359.0774

322.1246

344.1006

350.0606

321.1209

322.1243

323.1276

287.2222

298.1106

301.1415

304.2615

317.1156

323.1280

338.3427

345.1101

355.0270

371.2311

383.2048

393.2132

398.1788

290

300

310

320

330

340

350

360

370

380

390

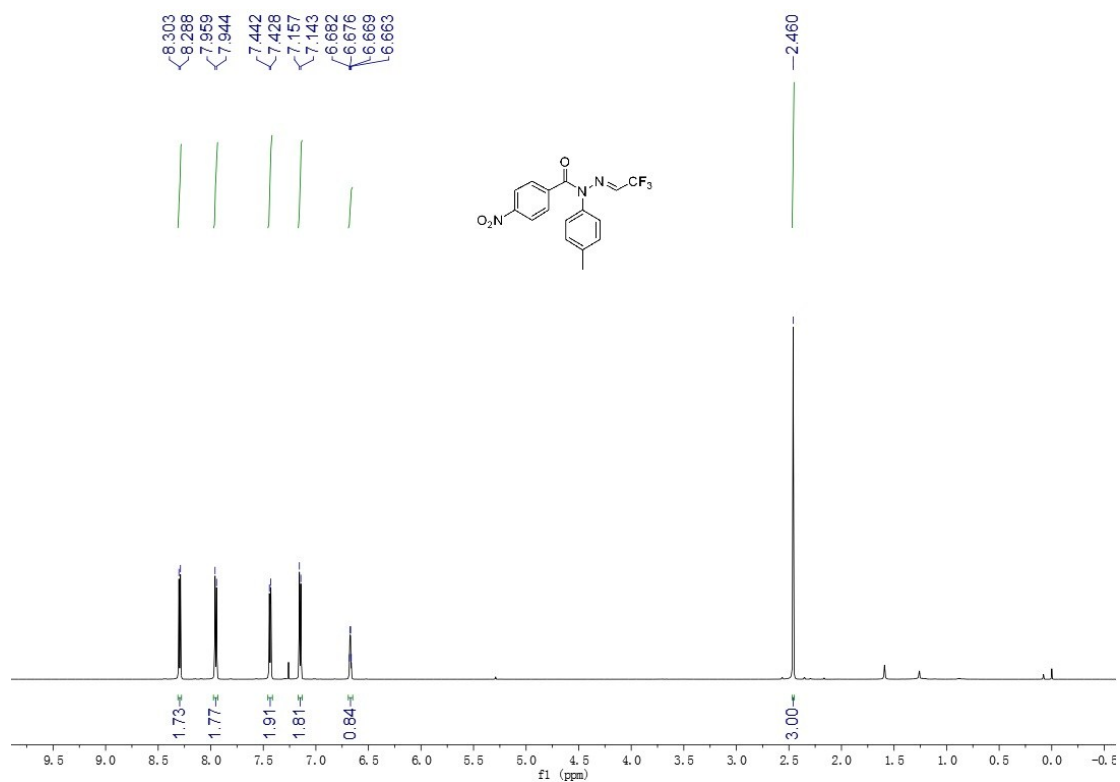
400

m/z

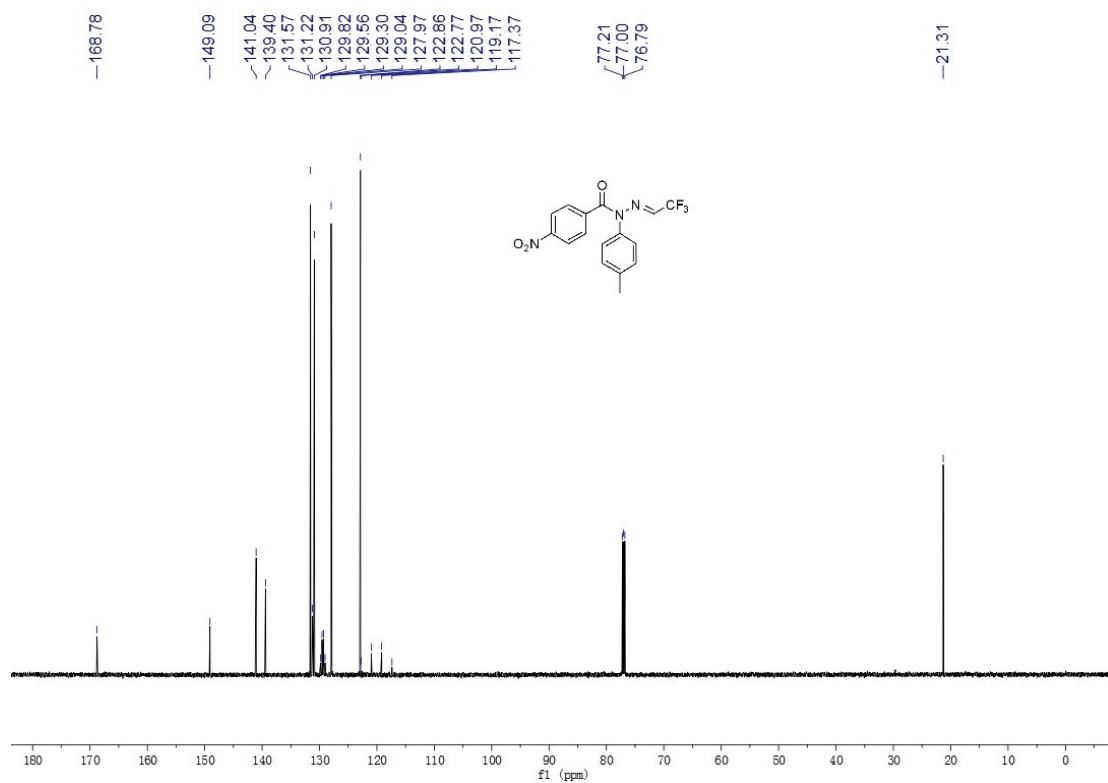
NI:
7.02E5
zhenghuiyuan-
21_161114171945#4
RT: 0.03 AU: 17
FT/MS+p ES Full ms
[100.00-2000.00]

NI:
8.23E5
C17H15F3N2O1 +H
C17H15F3N2O1
pe Chrg 1

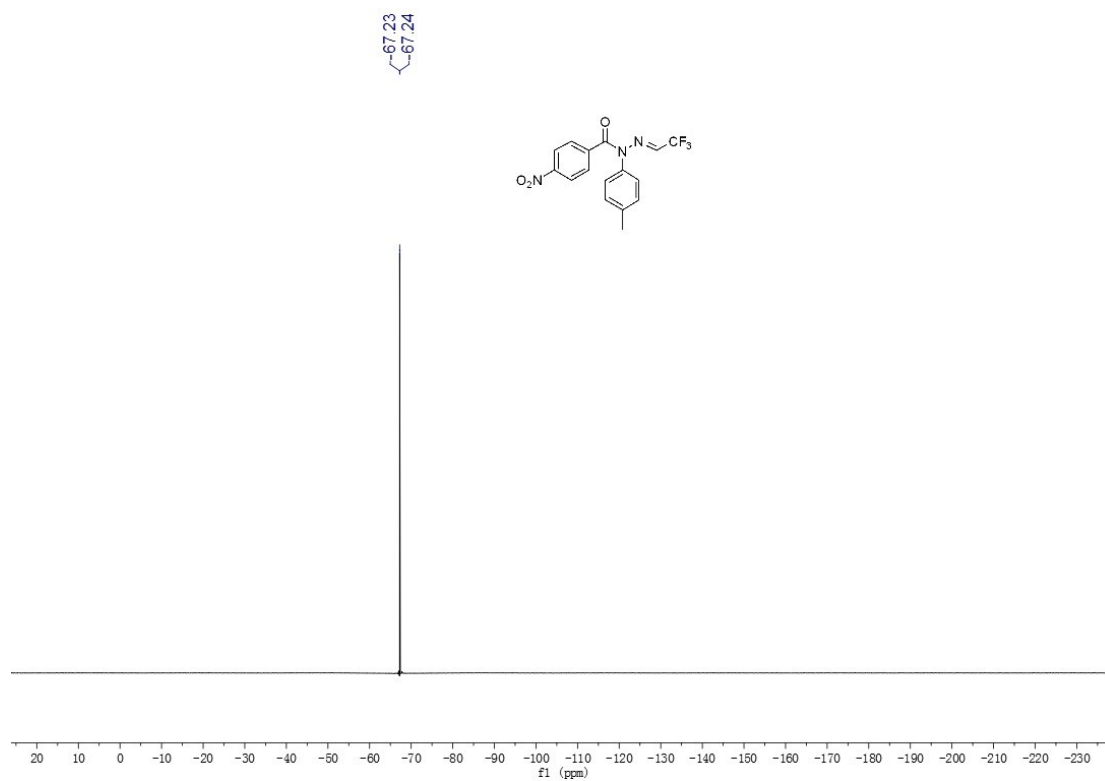
¹H NMR copies of compound **6ac**:



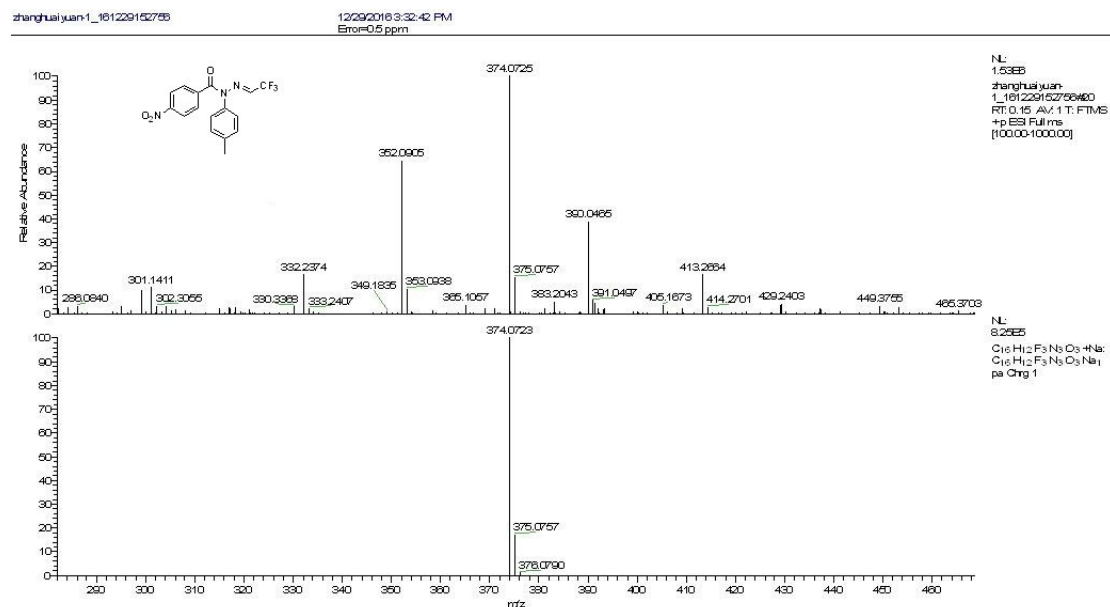
¹³C NMR copies of compound **6ac**:



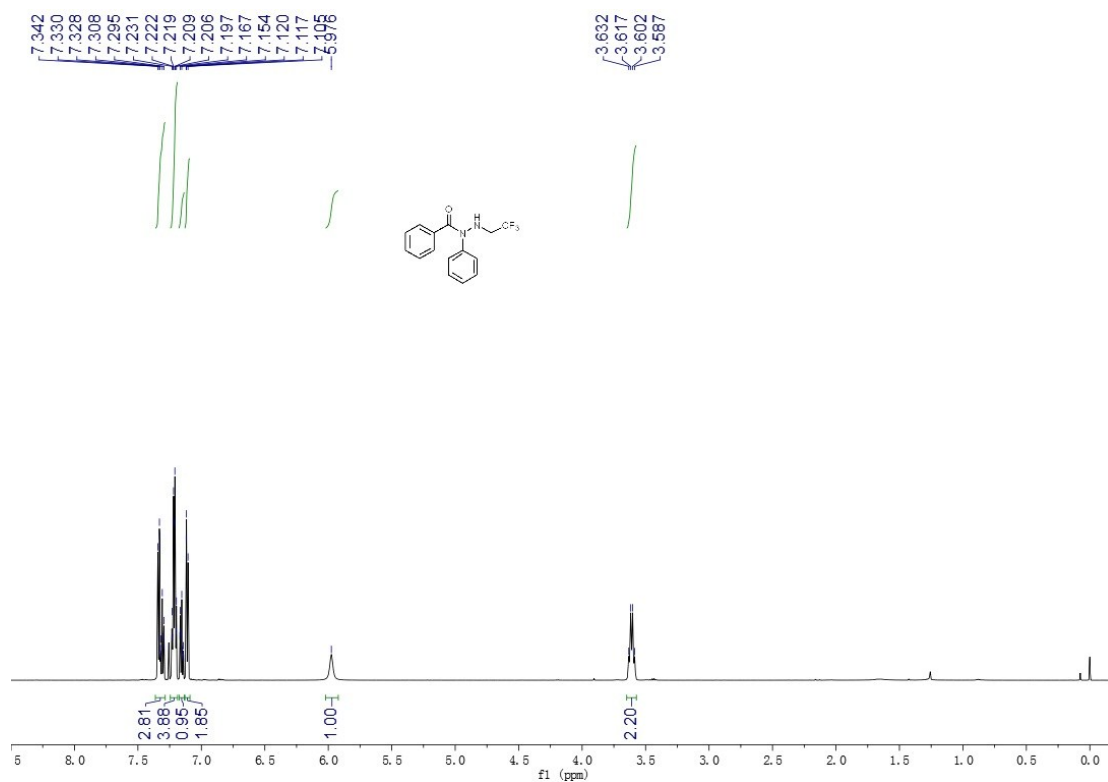
^{19}F NMR copies of compound **6ac**:



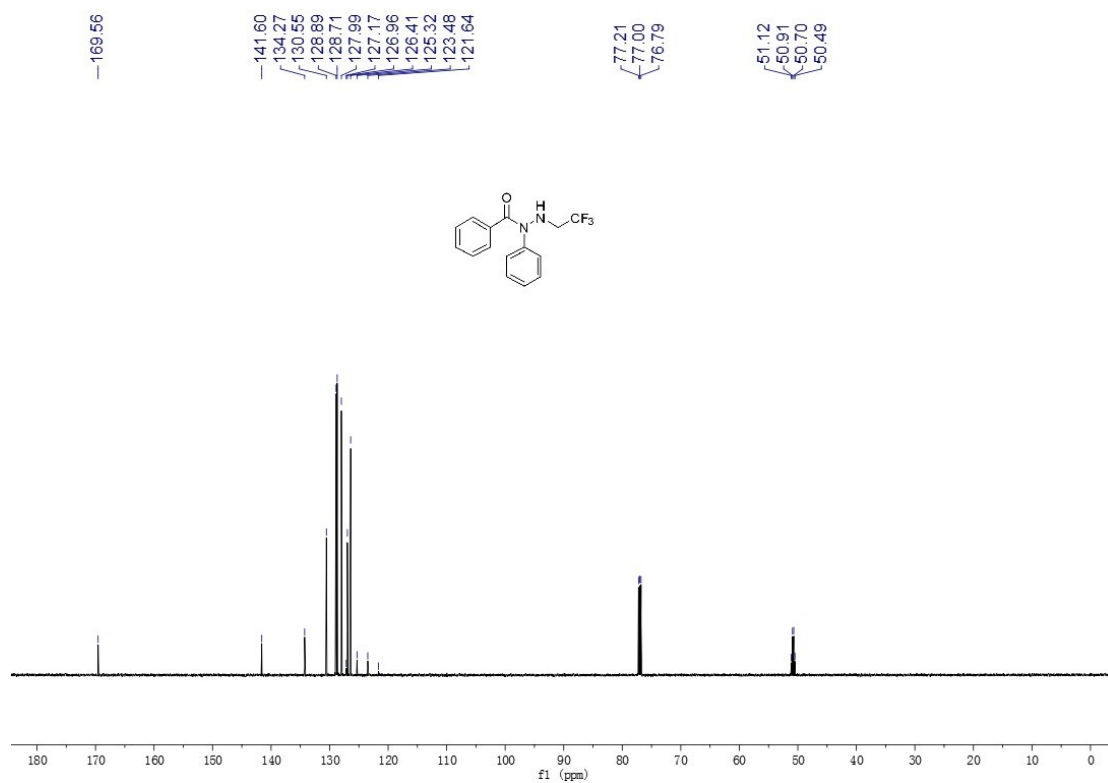
HRMS (ESI) of compound **6ac**:



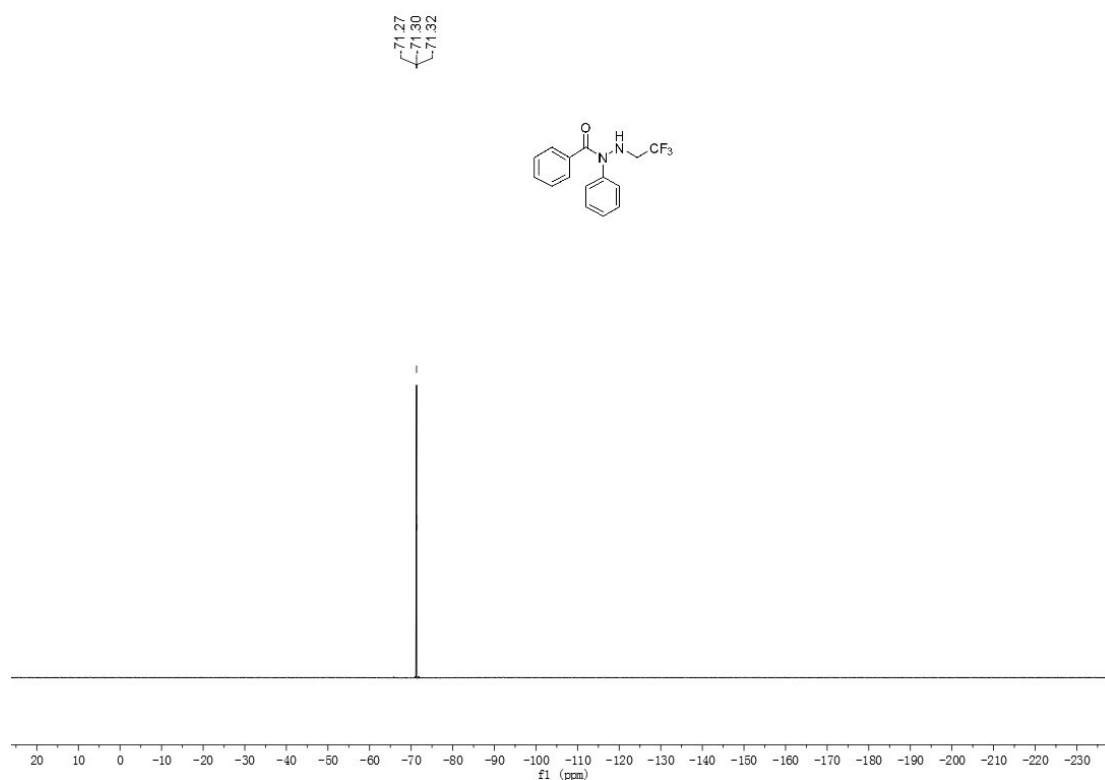
^1H NMR copies of compound 7:



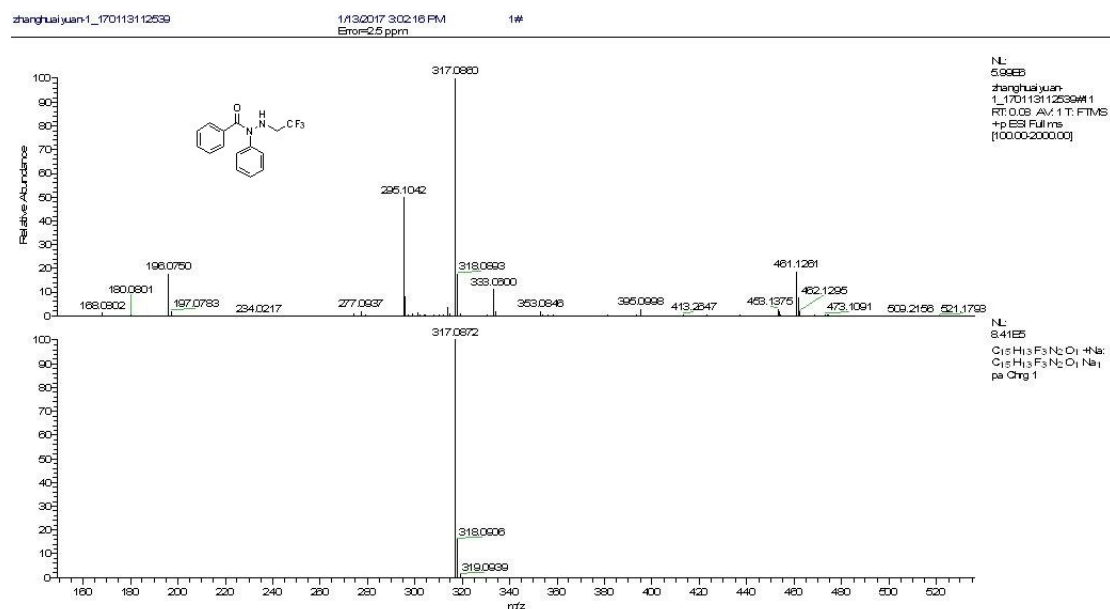
^{13}C NMR copies of compound 7:



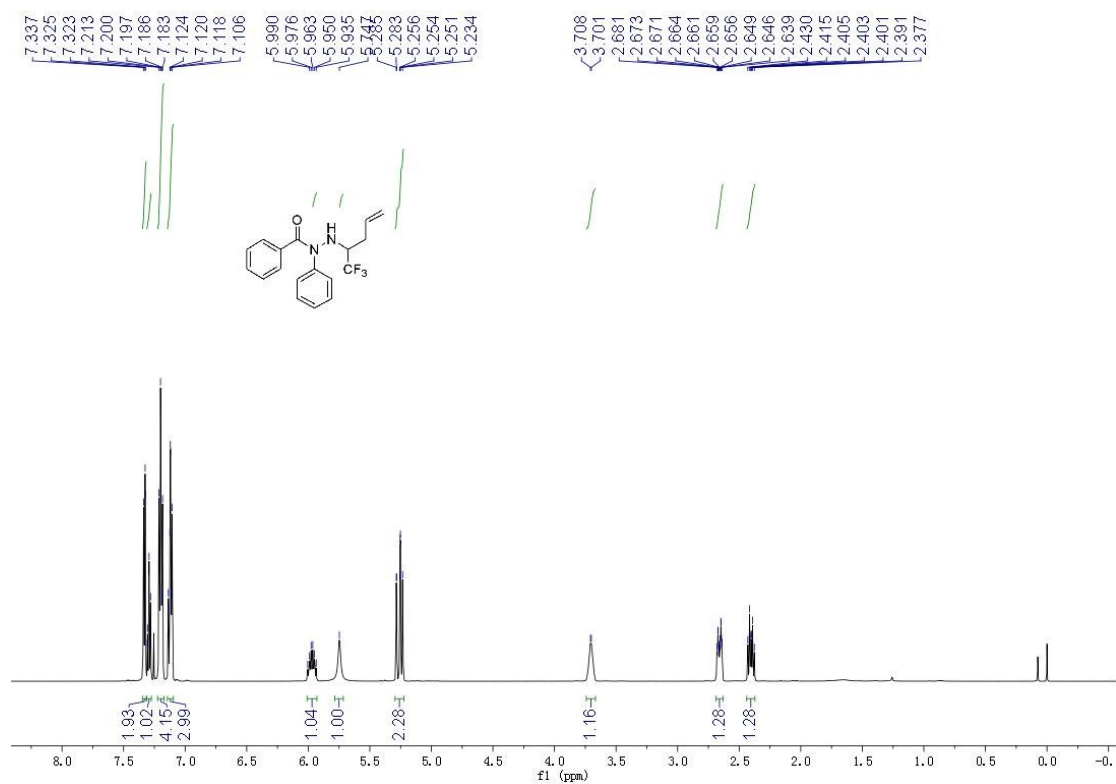
^{19}F NMR copies of compound **7**:



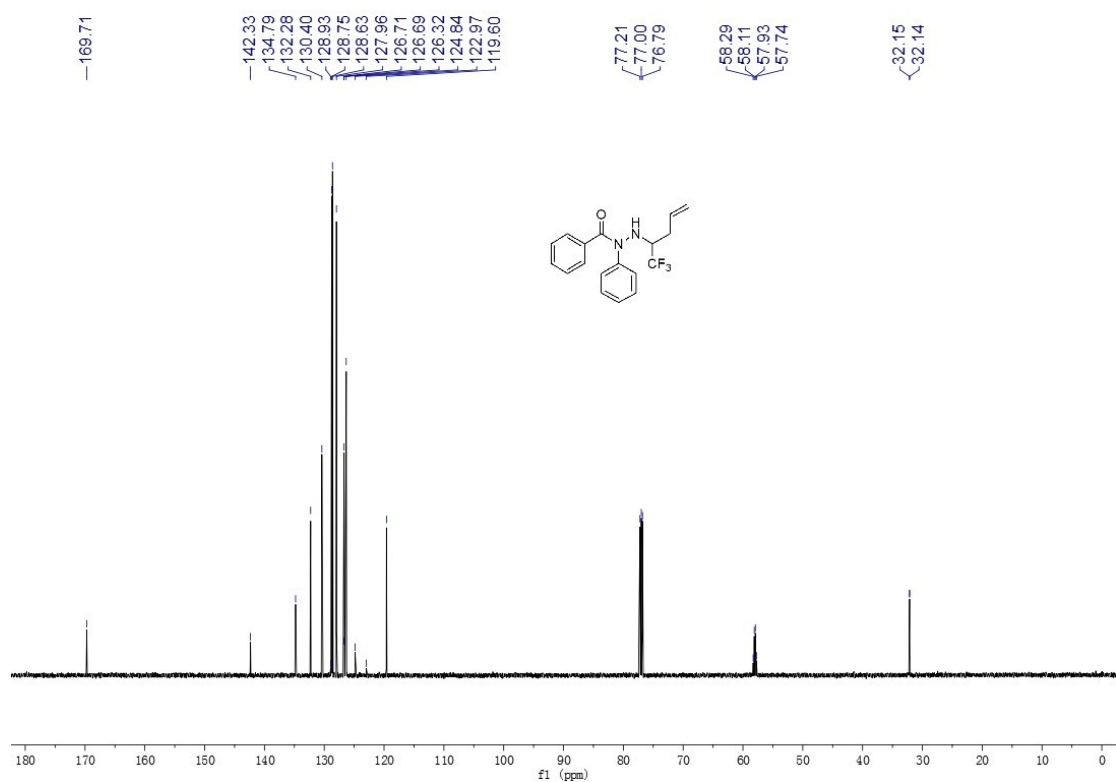
HRMS (ESI) of compound **7**:



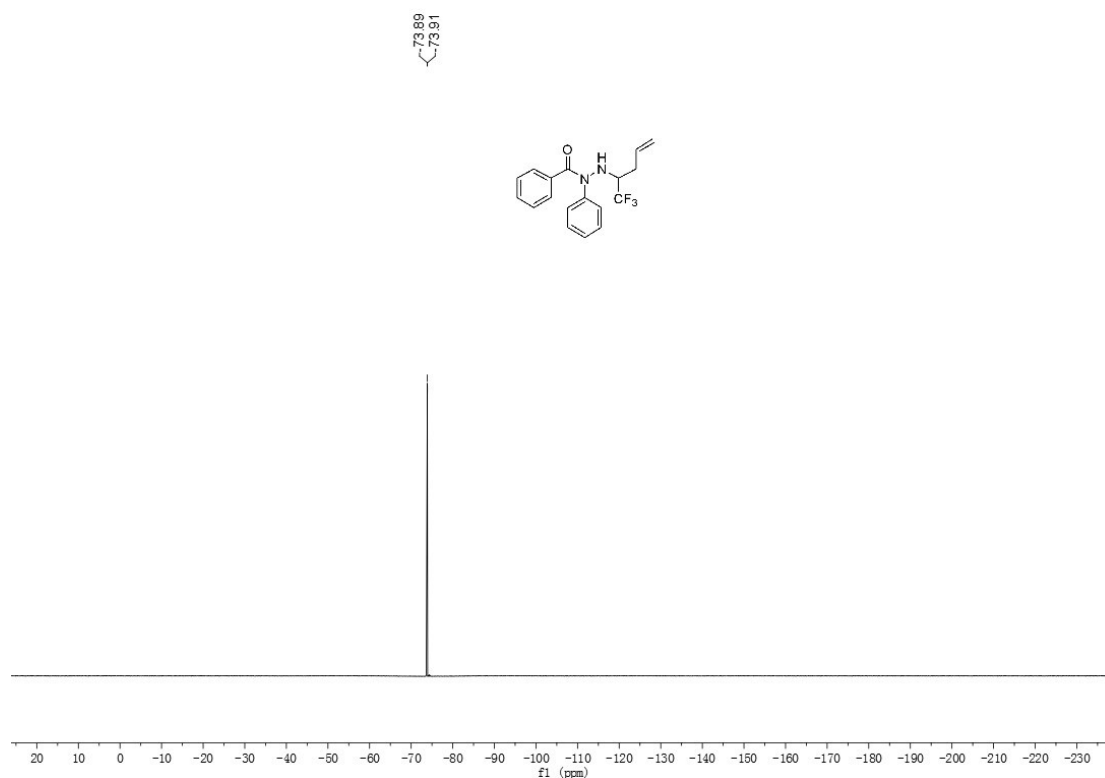
^1H NMR copies of compound **8**:



^{13}C NMR copies of compound **8**:



^{19}F NMR copies of compound **8**:



HRMS (ESI) of compound **8**:

