

# Supporting Information

## Mild electrophilic trifluoromethylthiolation of ketones with trifluoromethanesulfanamide

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\*Corresponding author. Tel: +86-21-64253452; fax: +86-21-64252603,

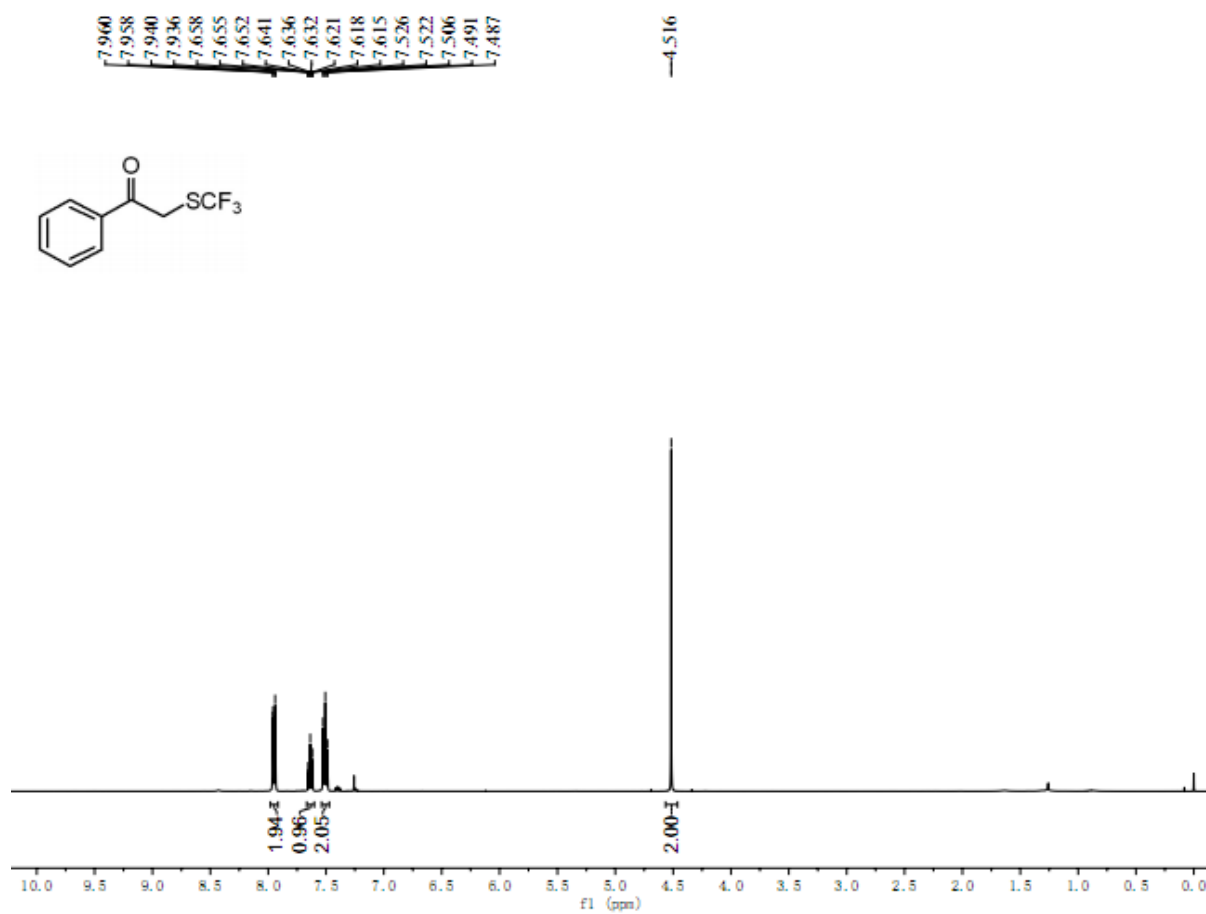
E-mail address: [scao@ecust.edu.cn](mailto:scao@ecust.edu.cn)

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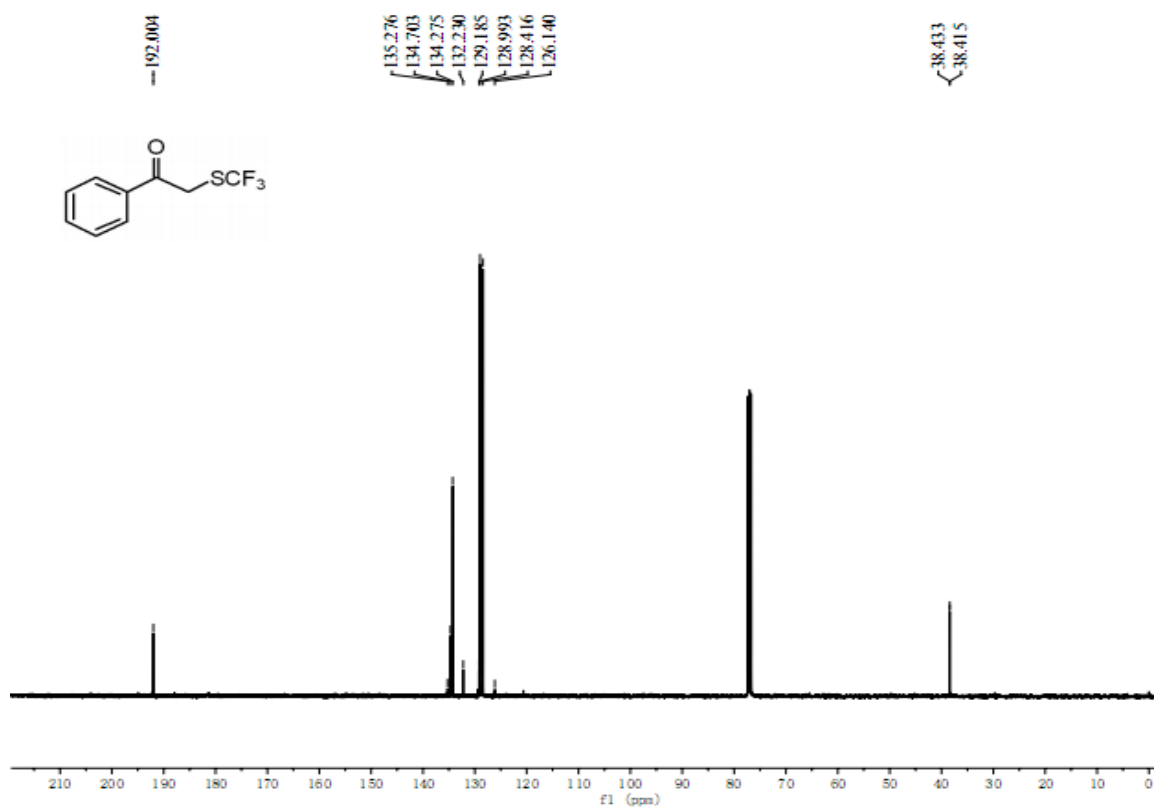
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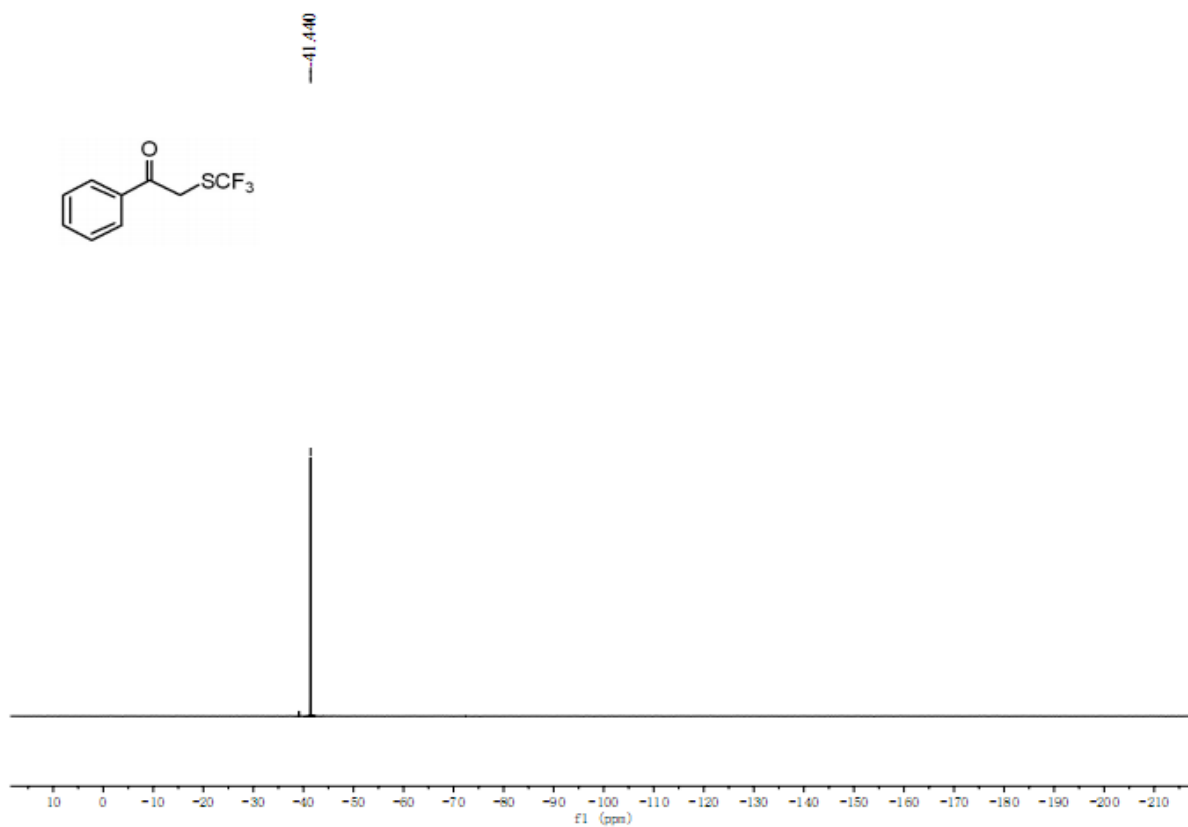
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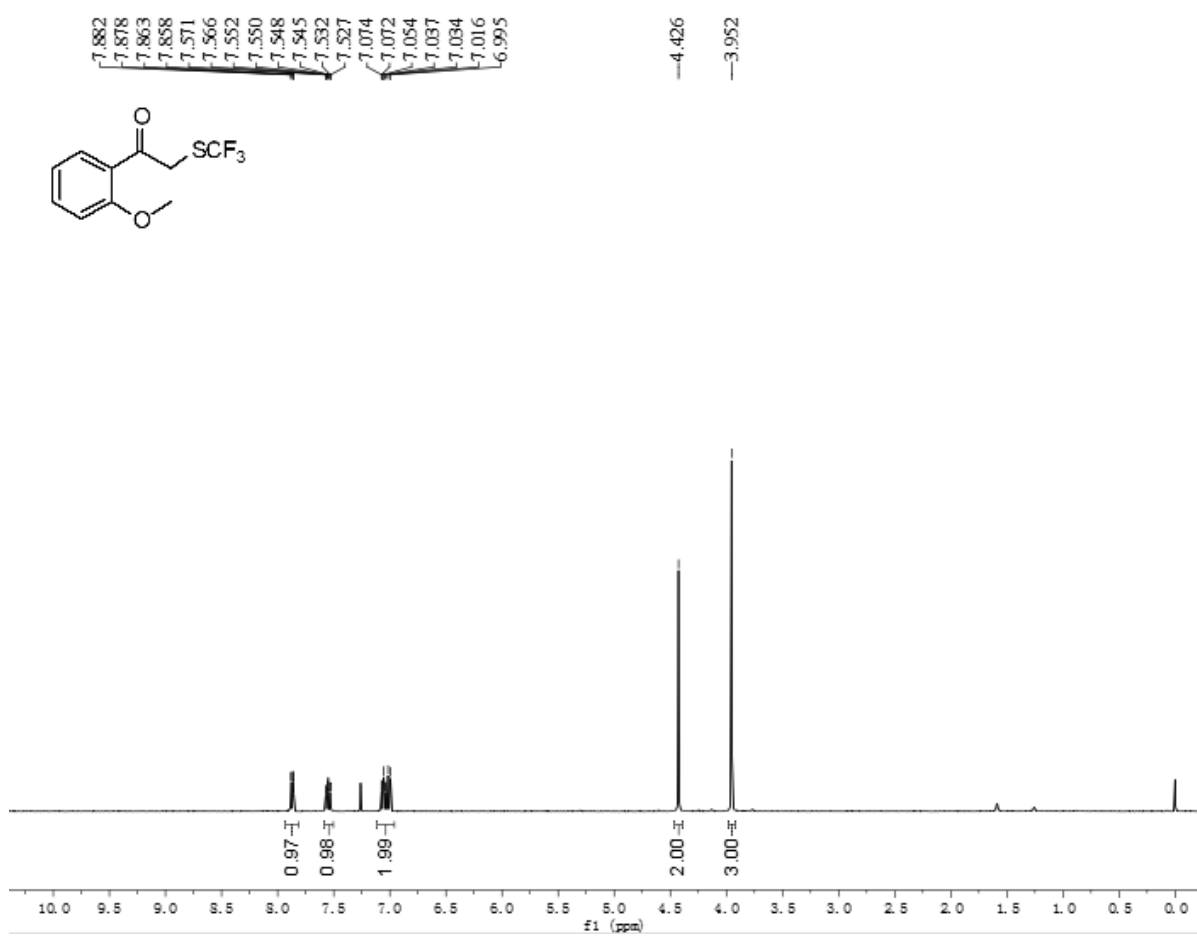
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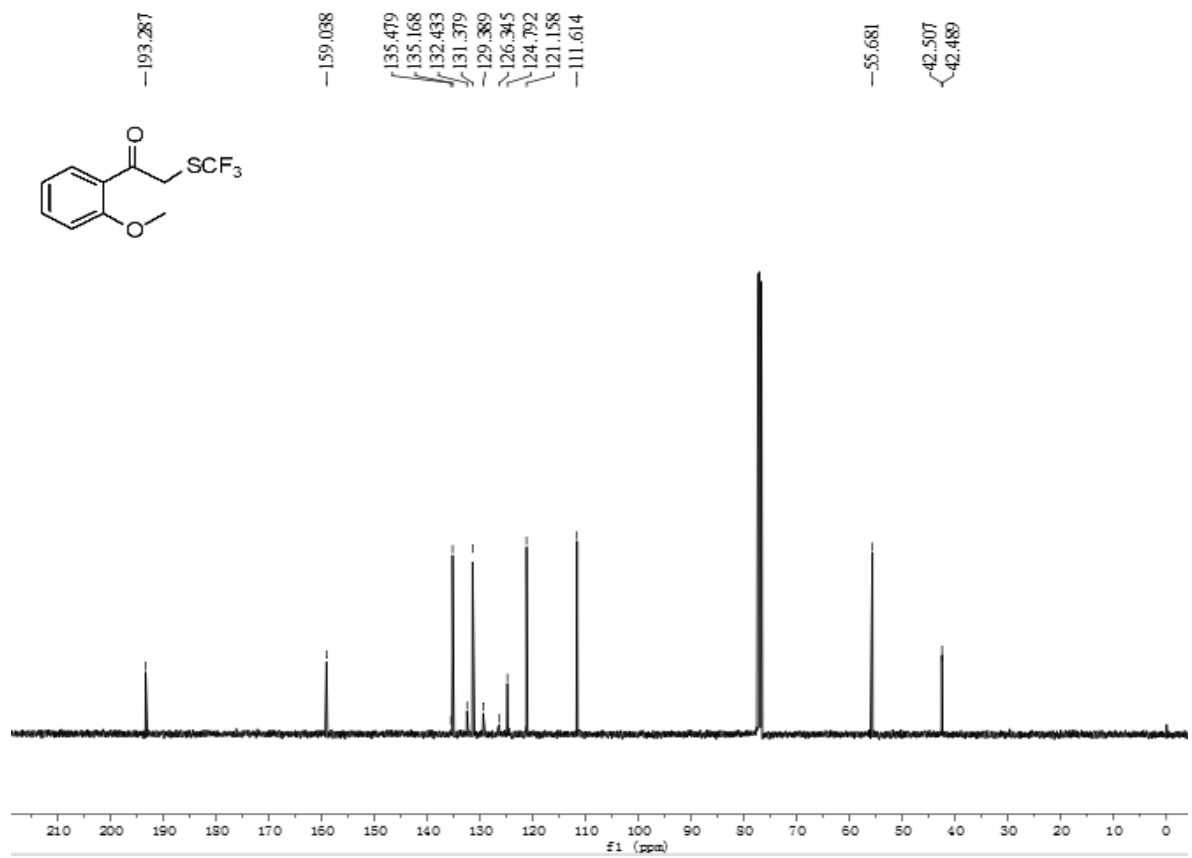
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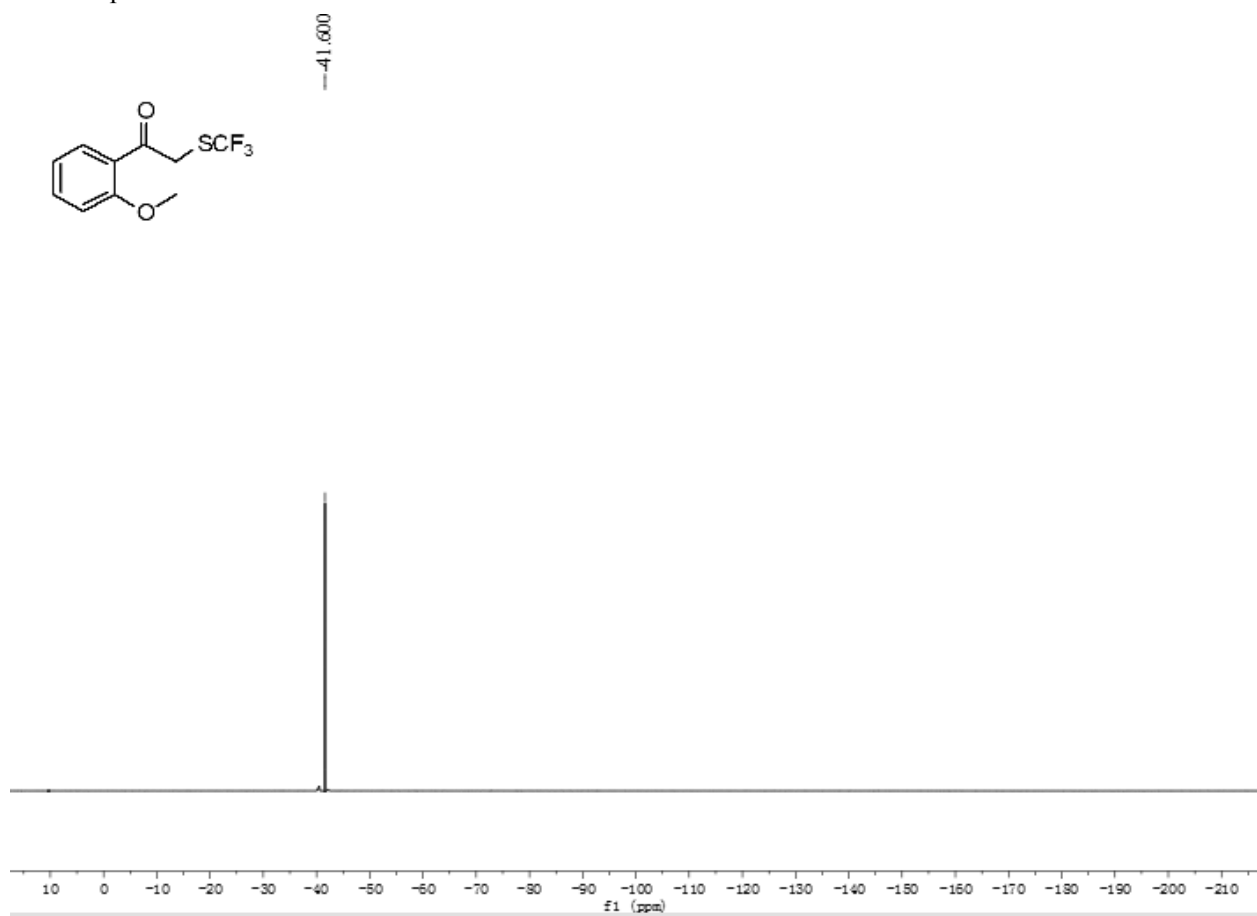
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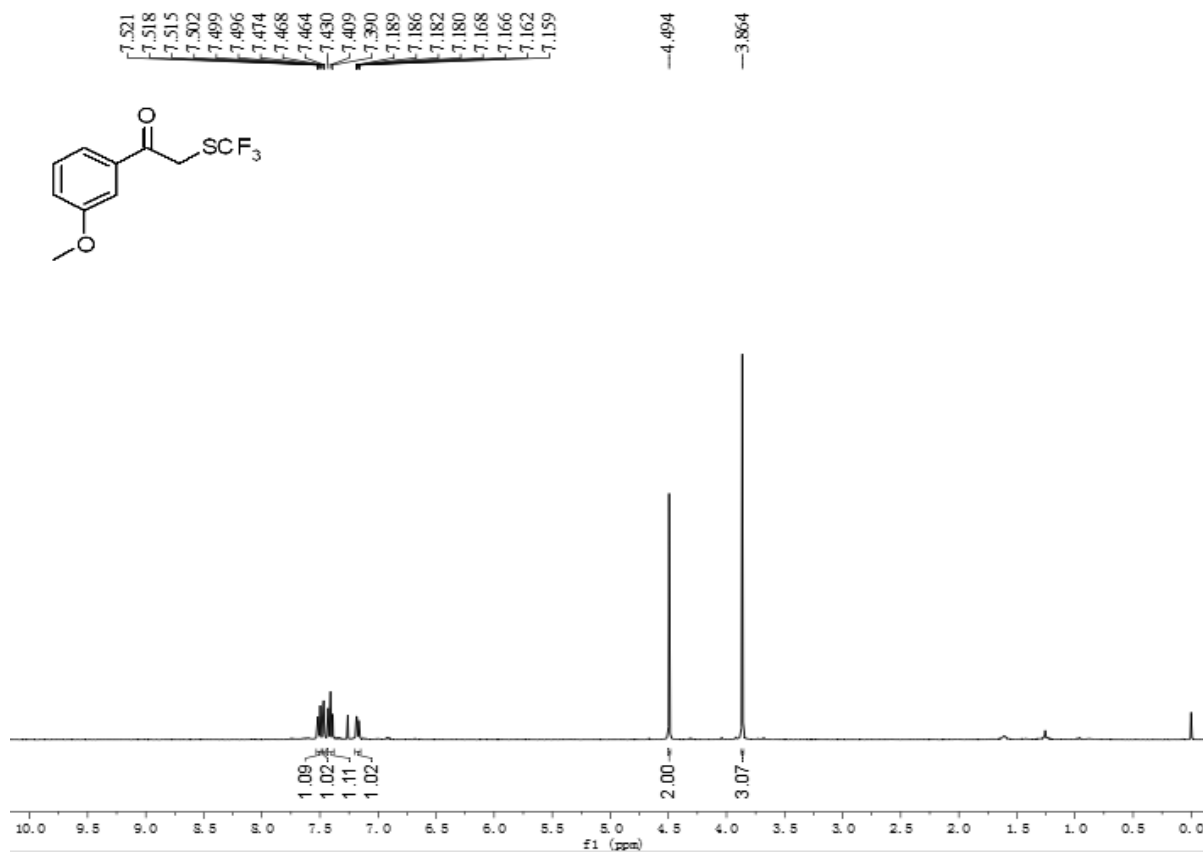
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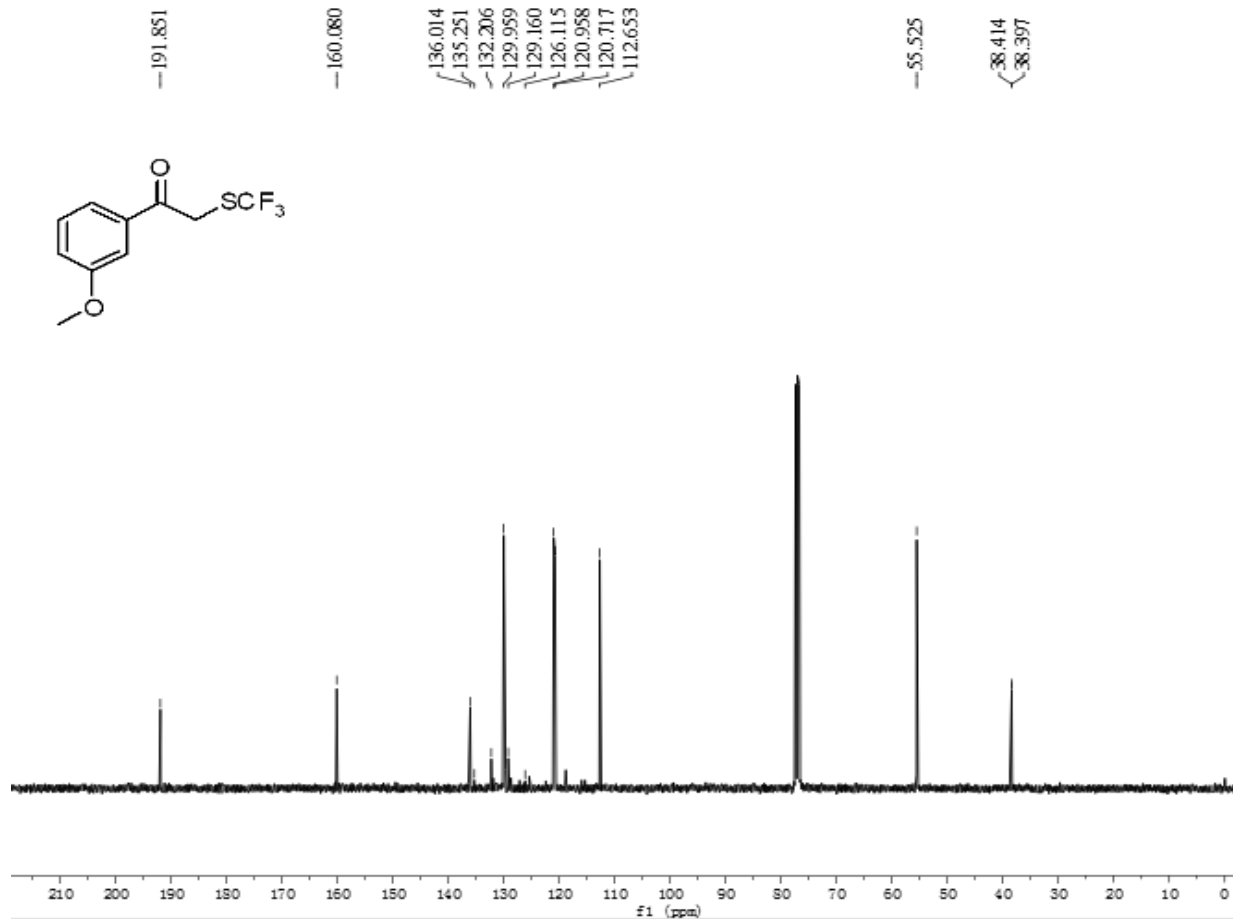
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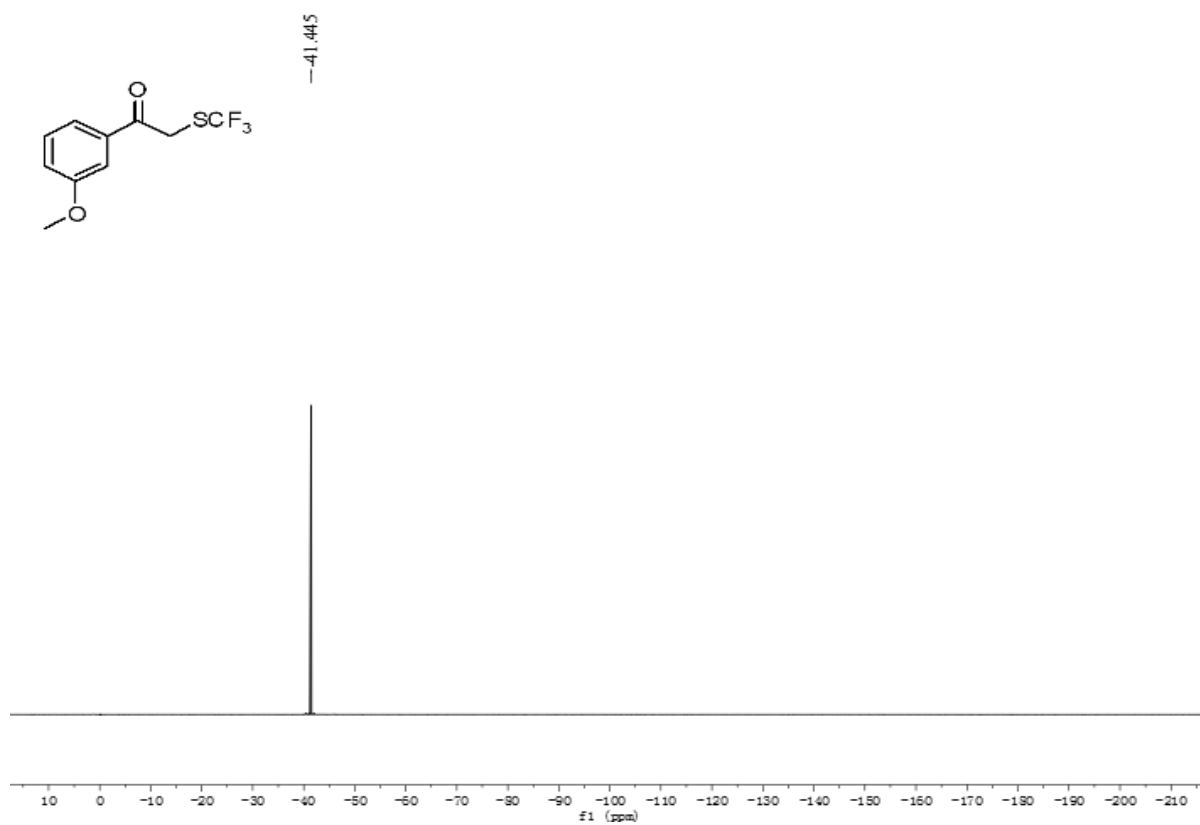
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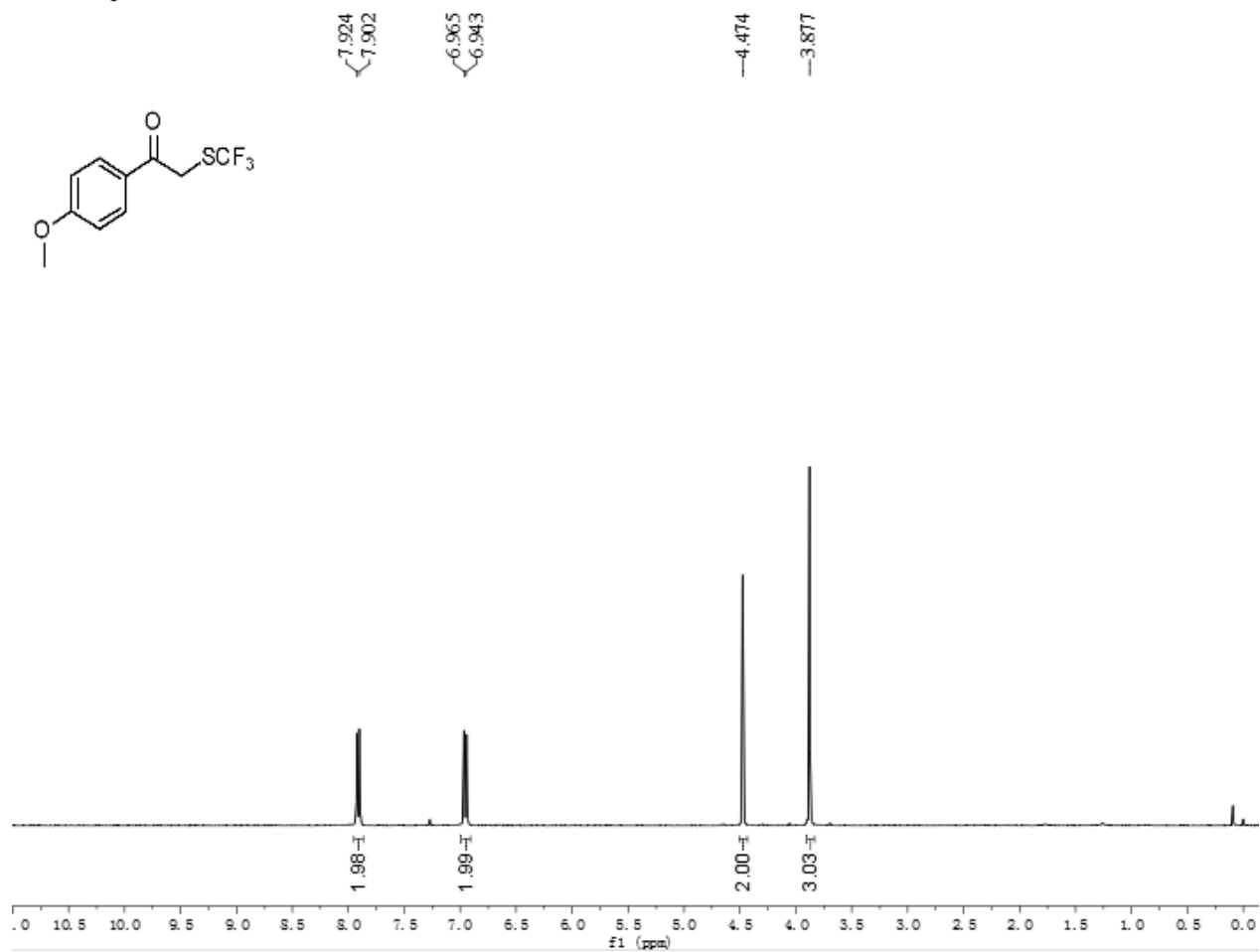
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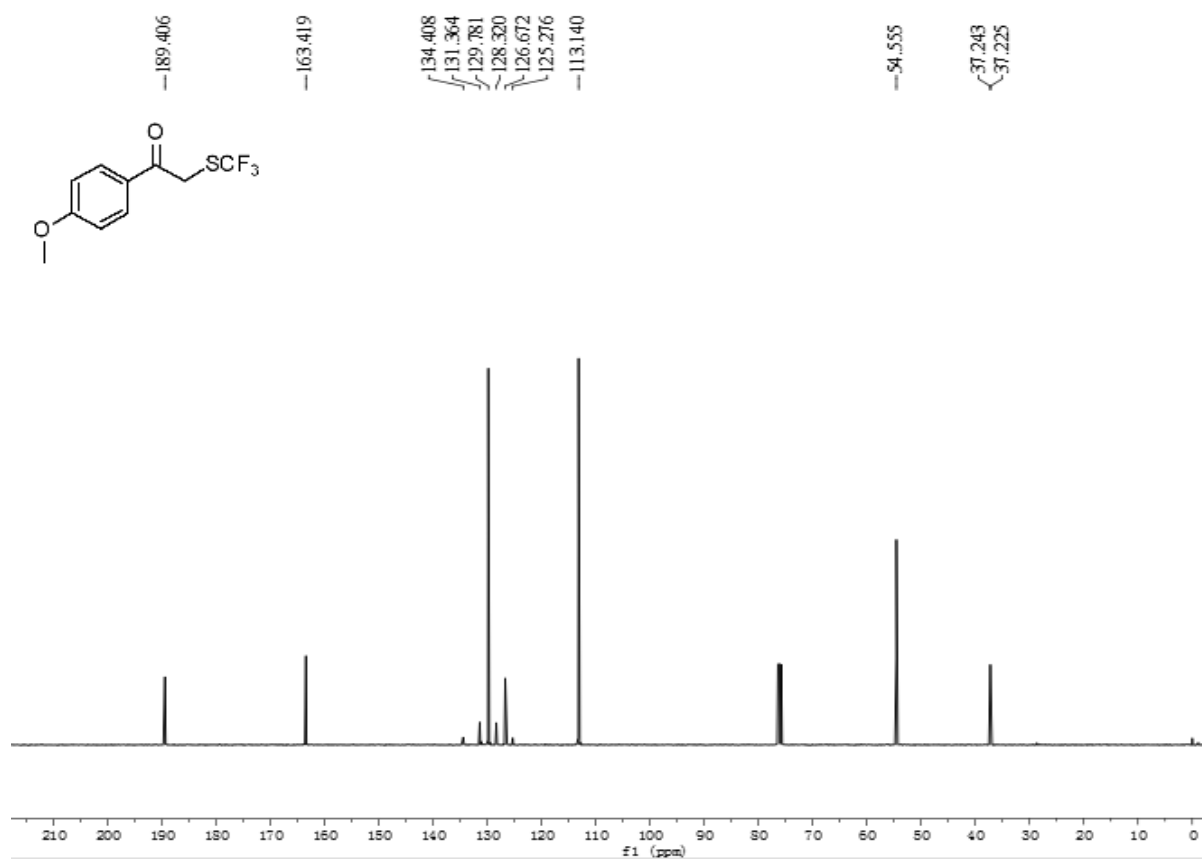
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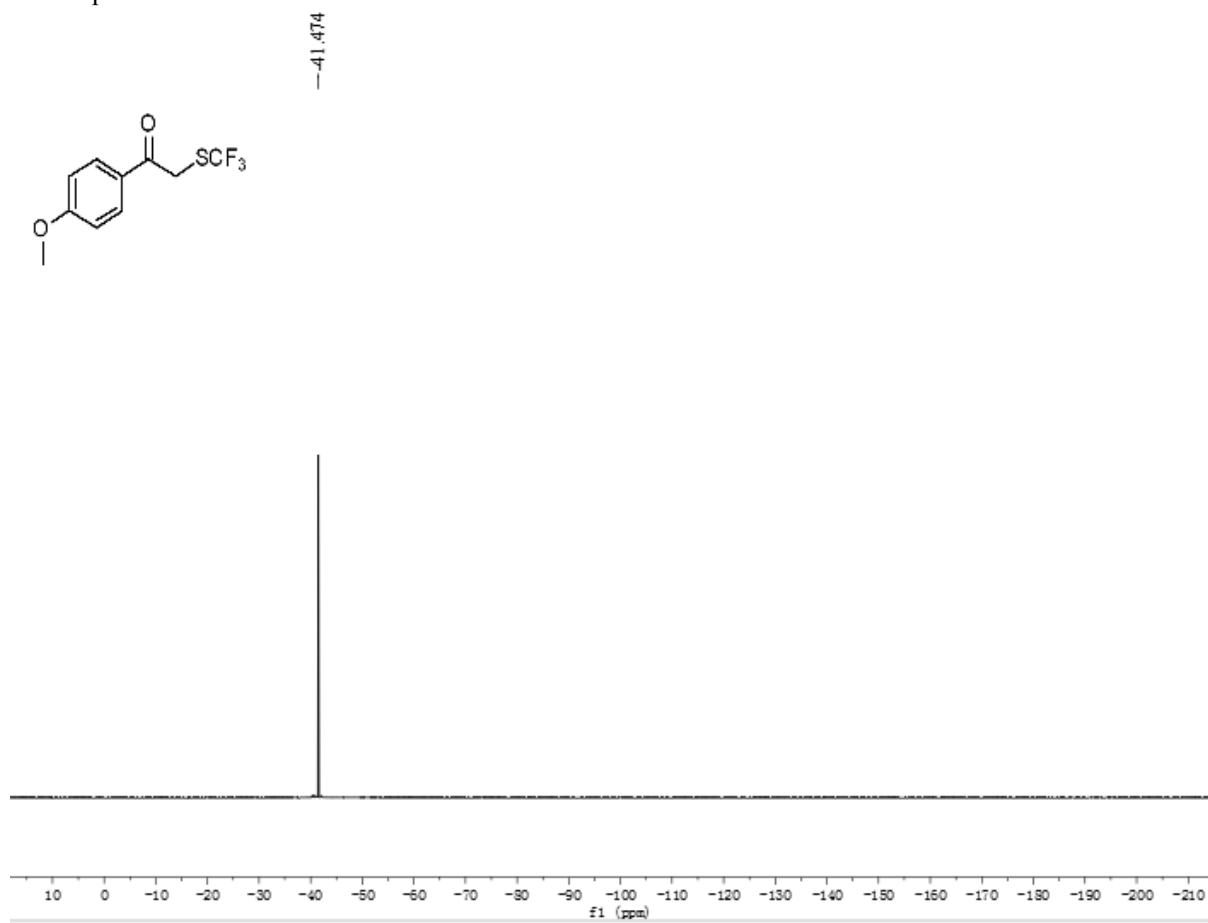
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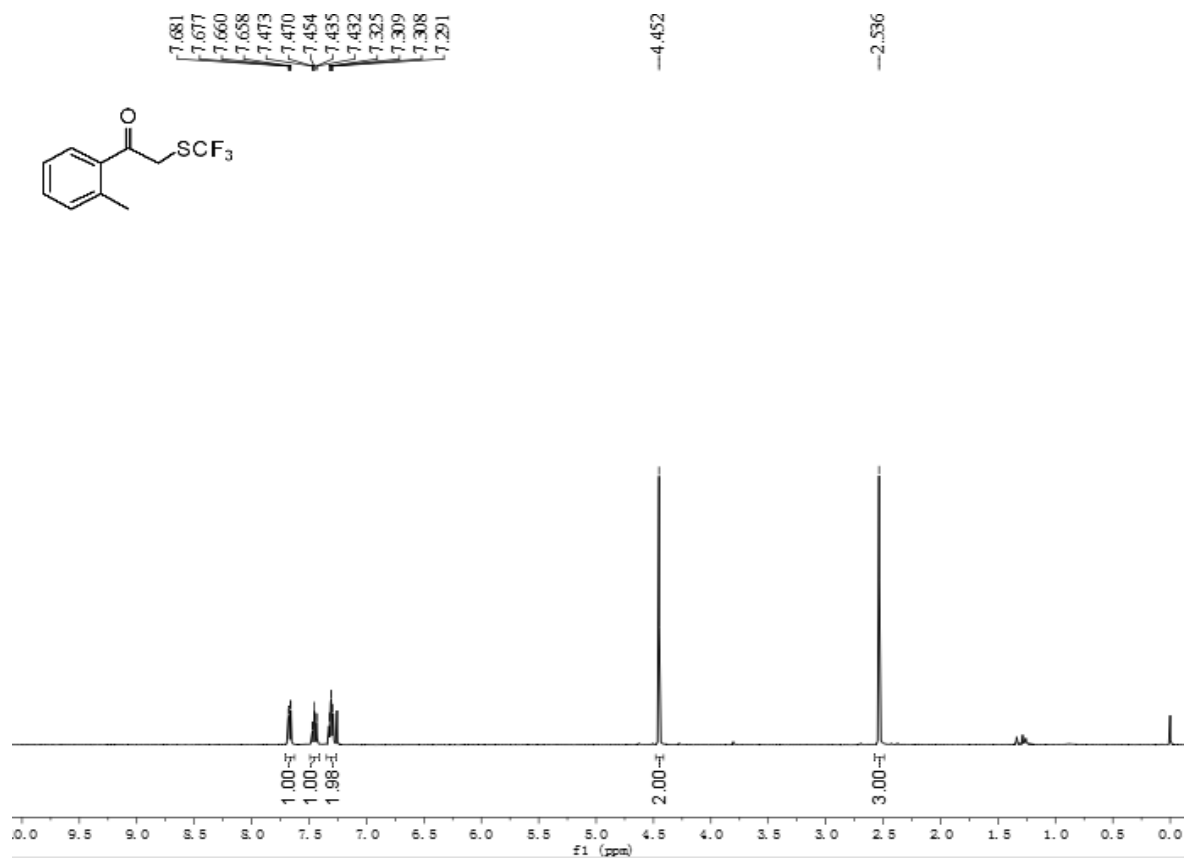
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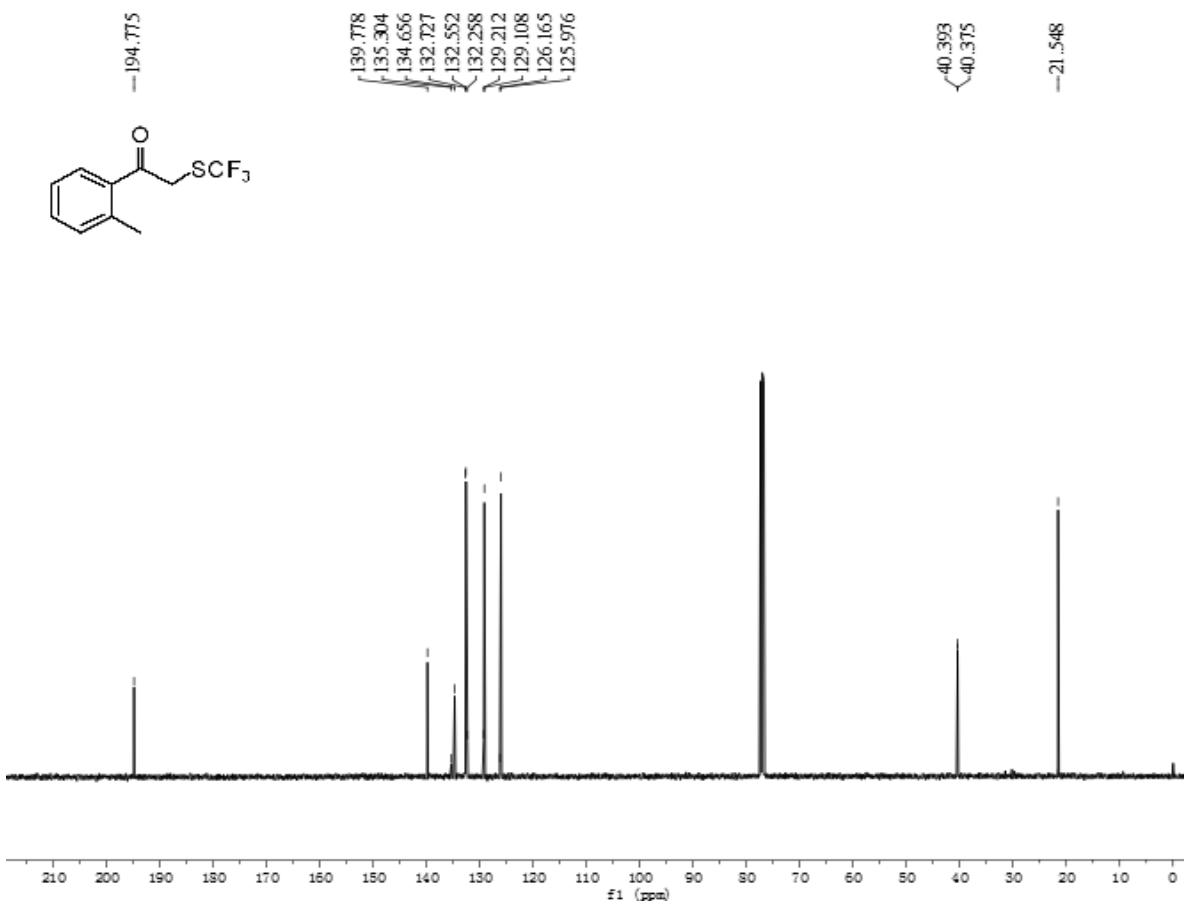
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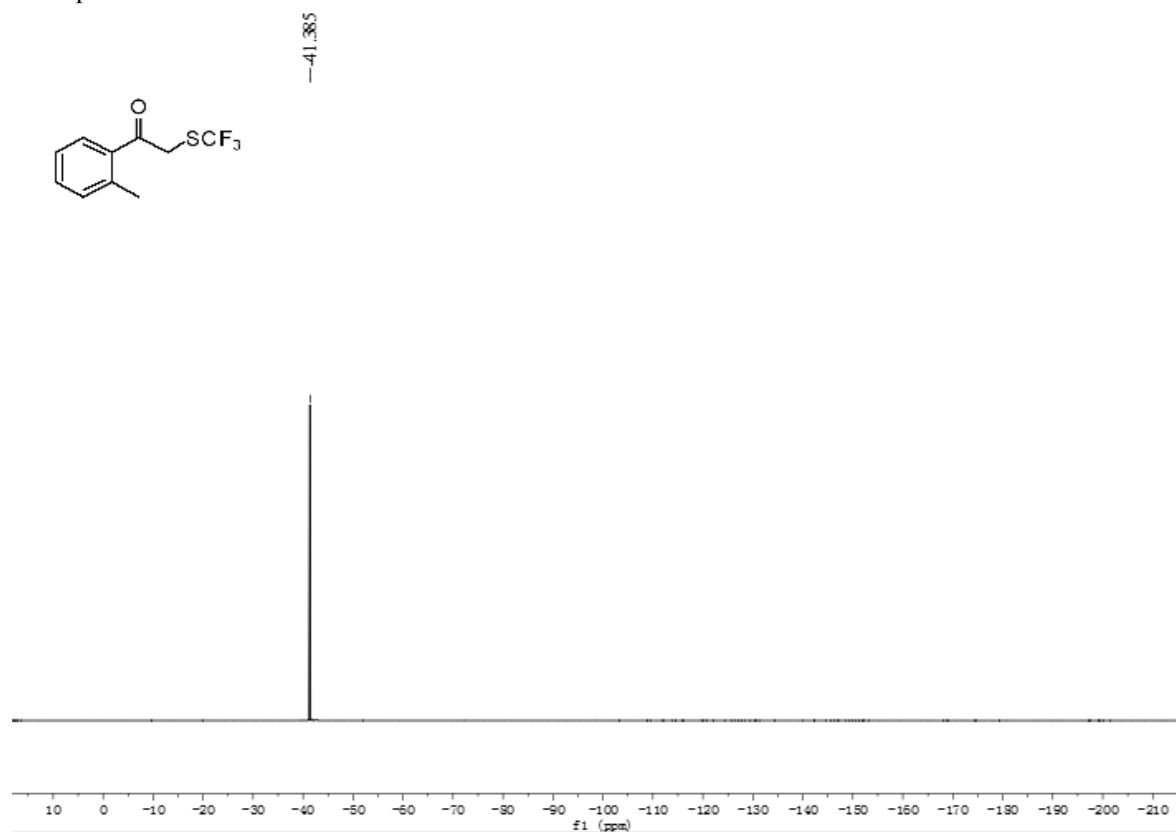


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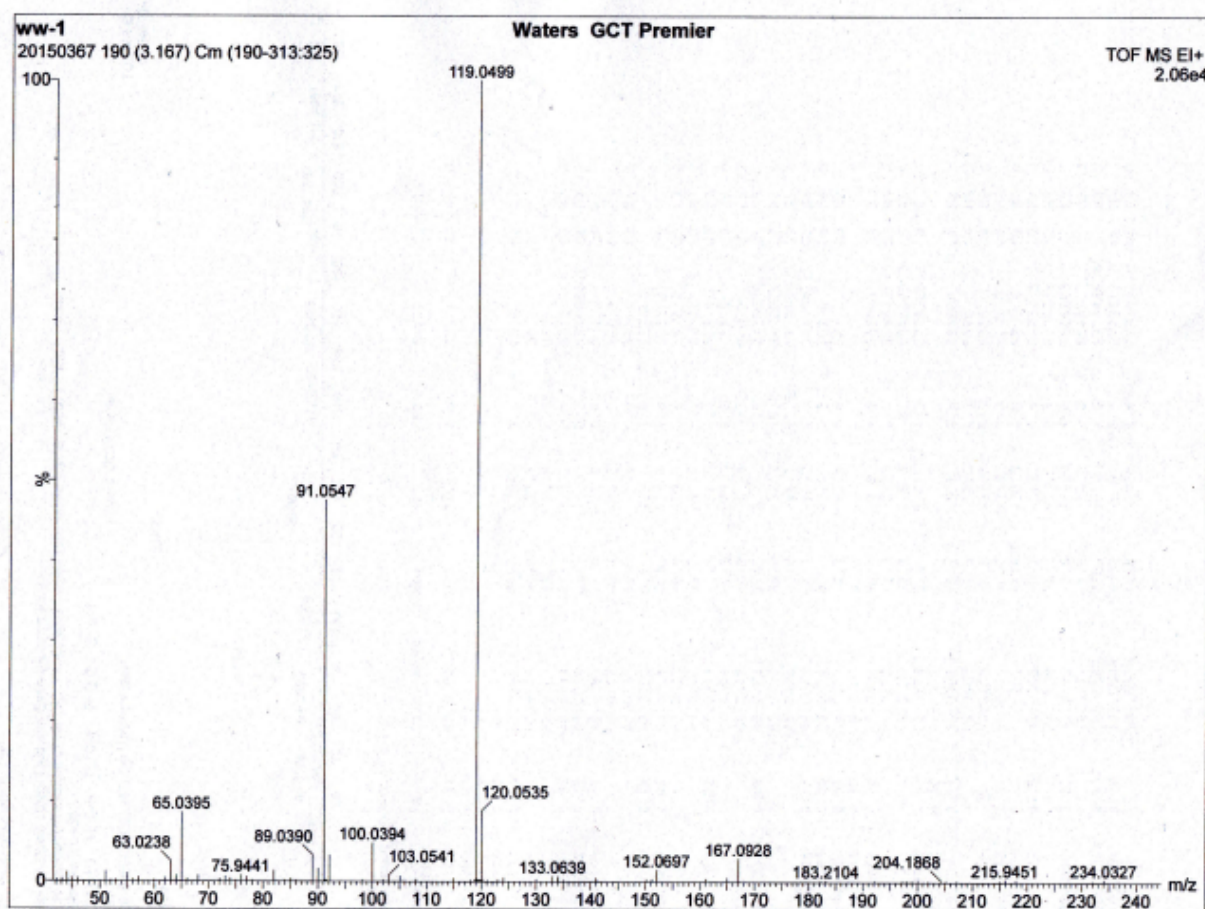




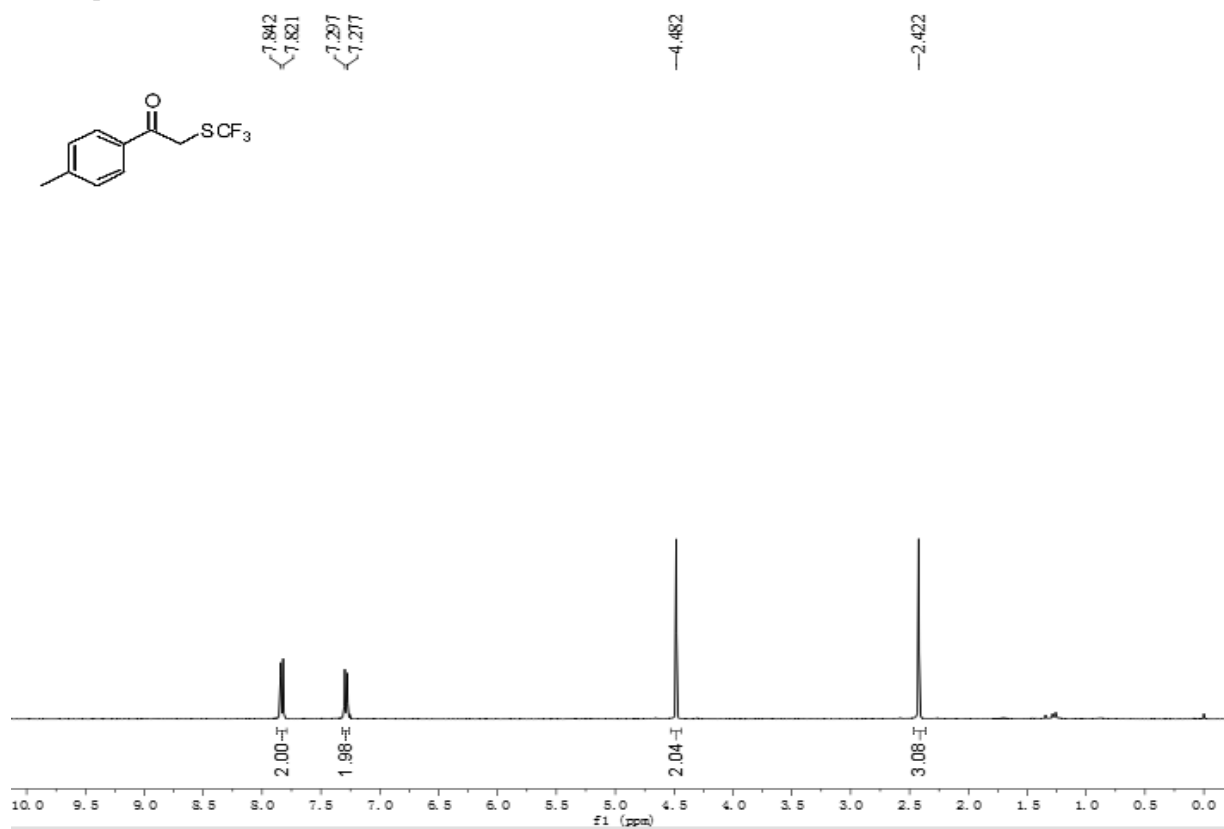
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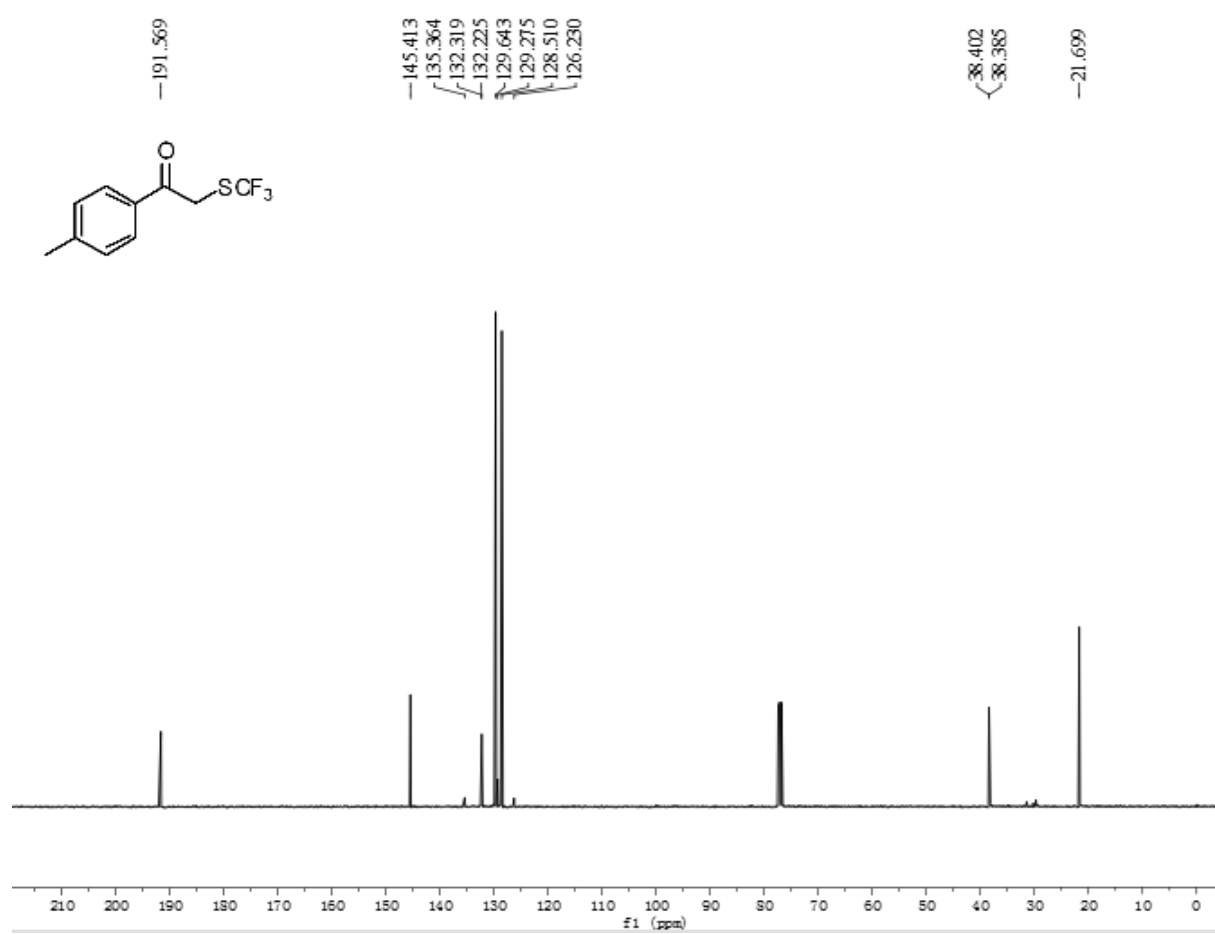
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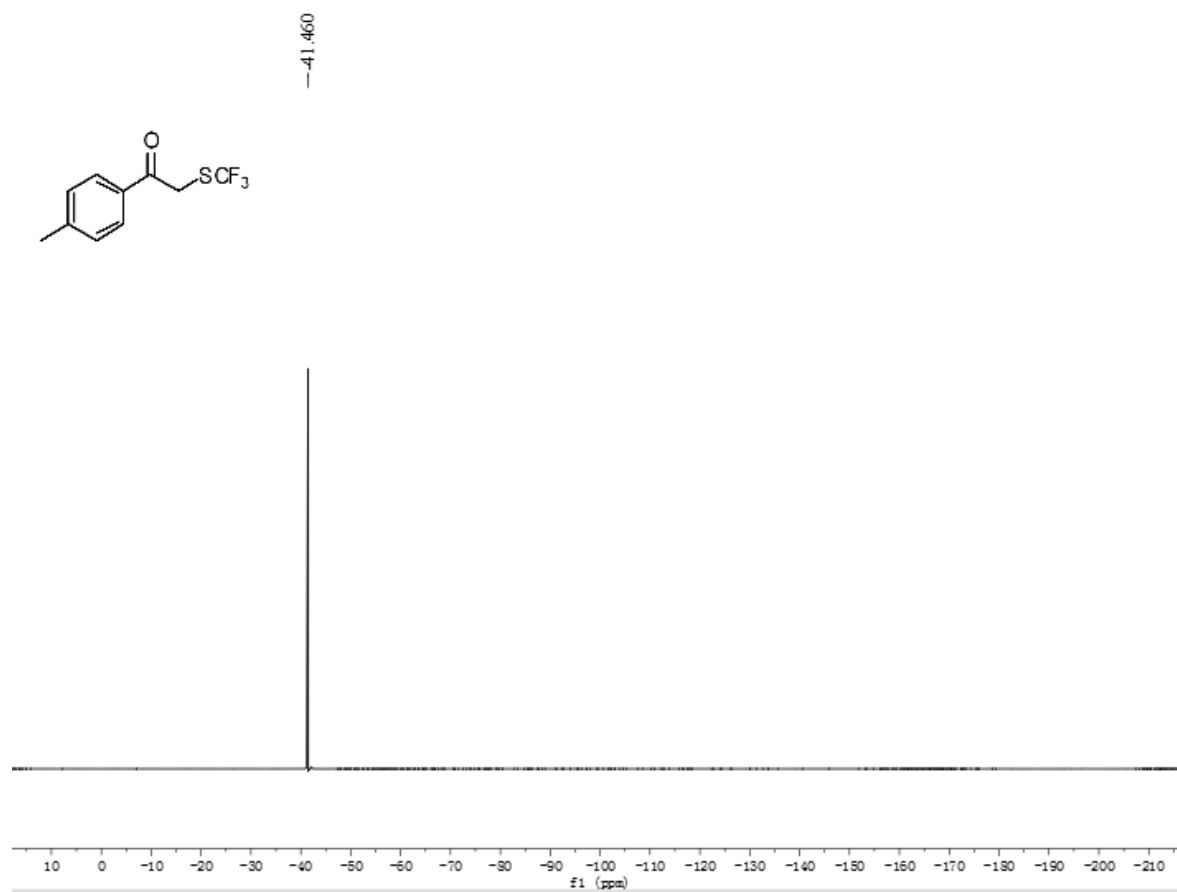
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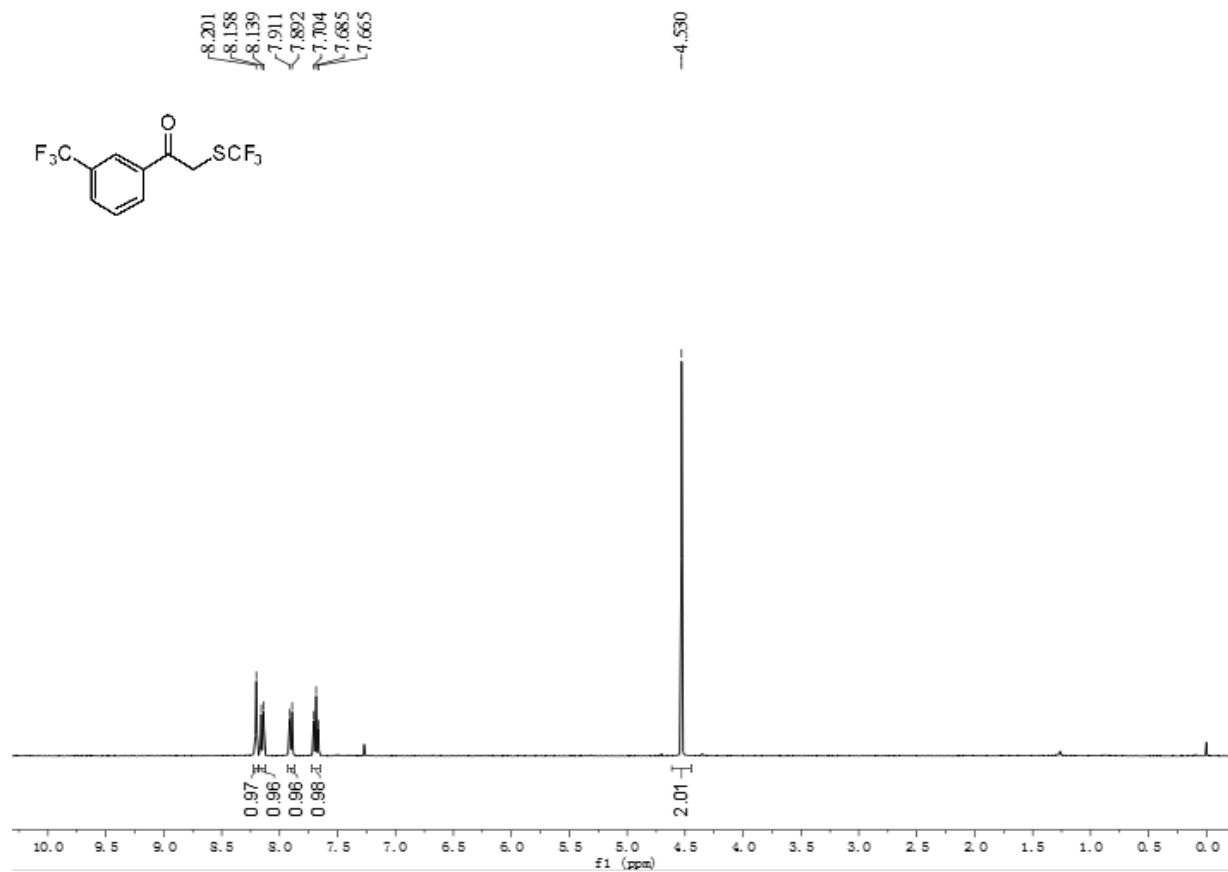
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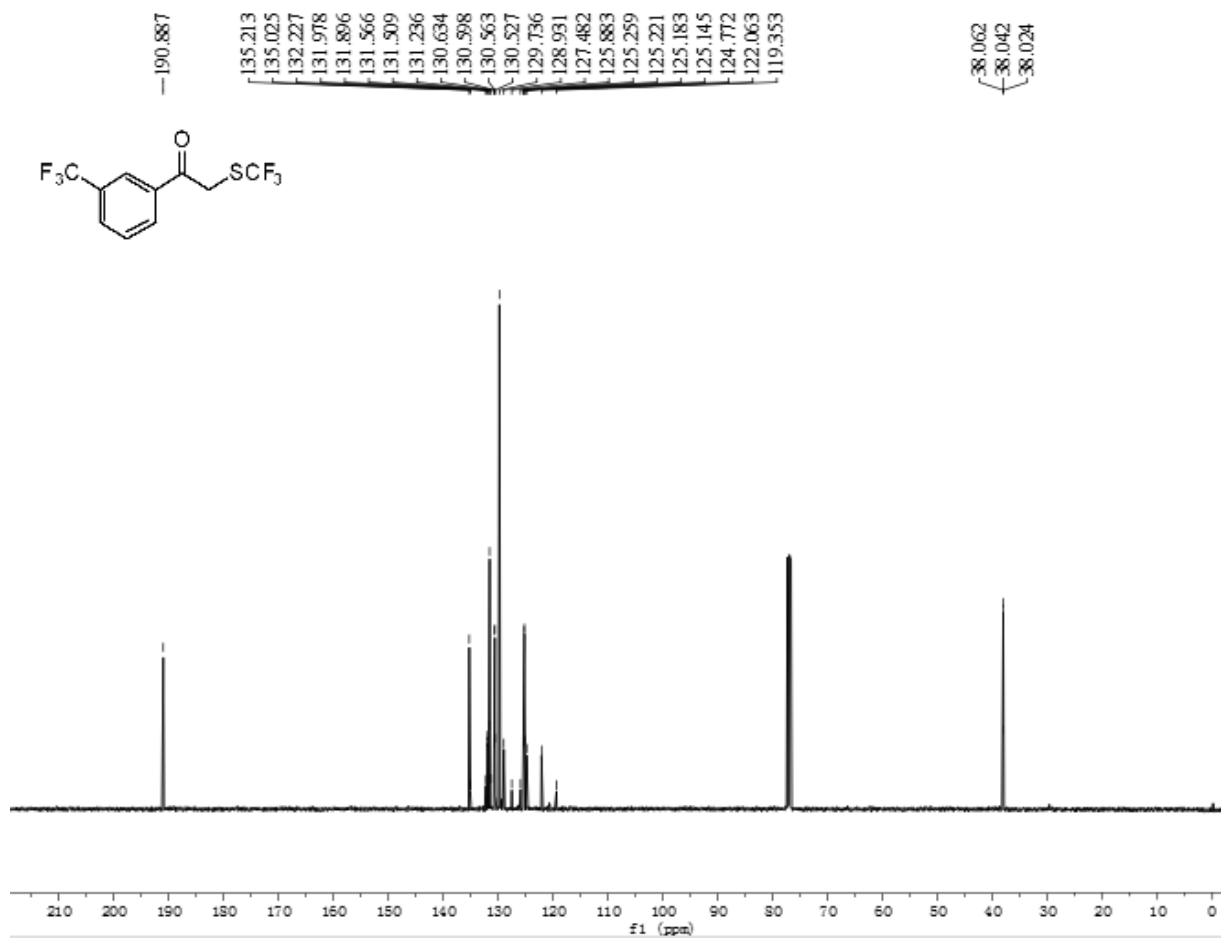
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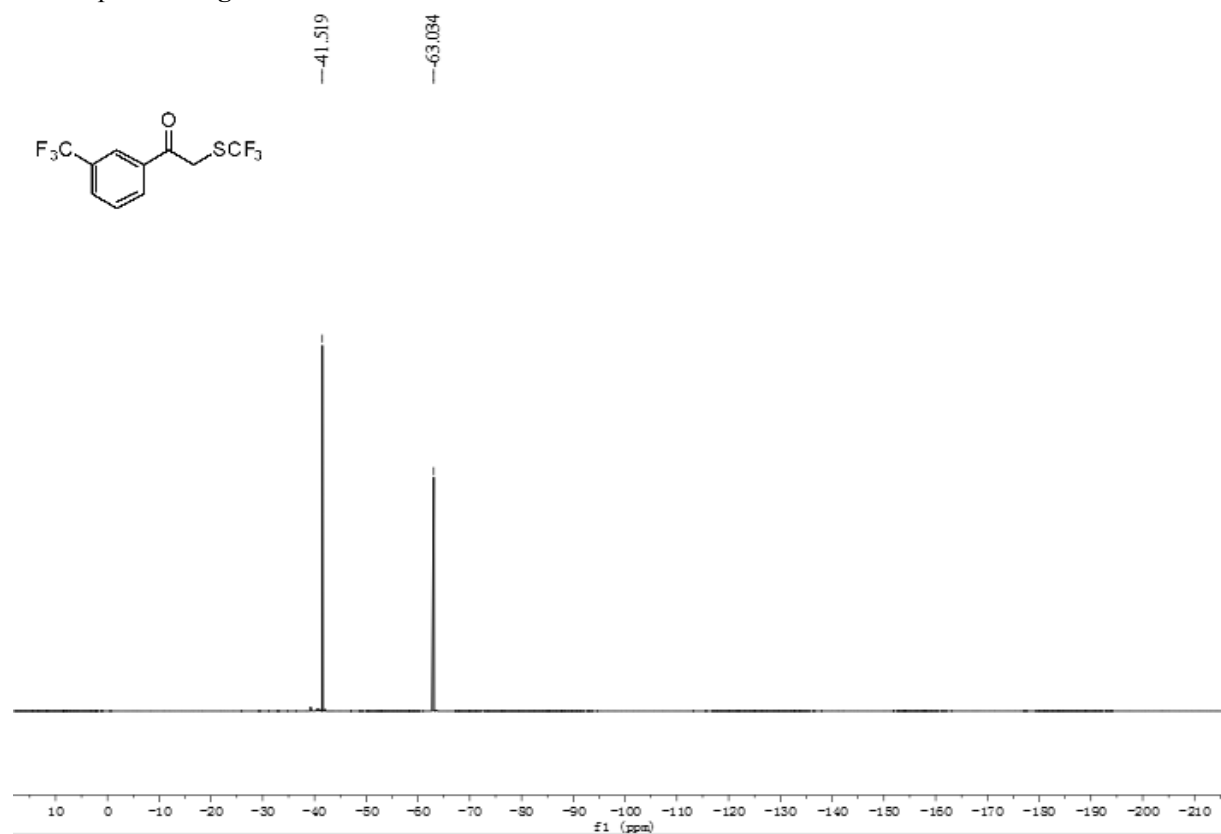
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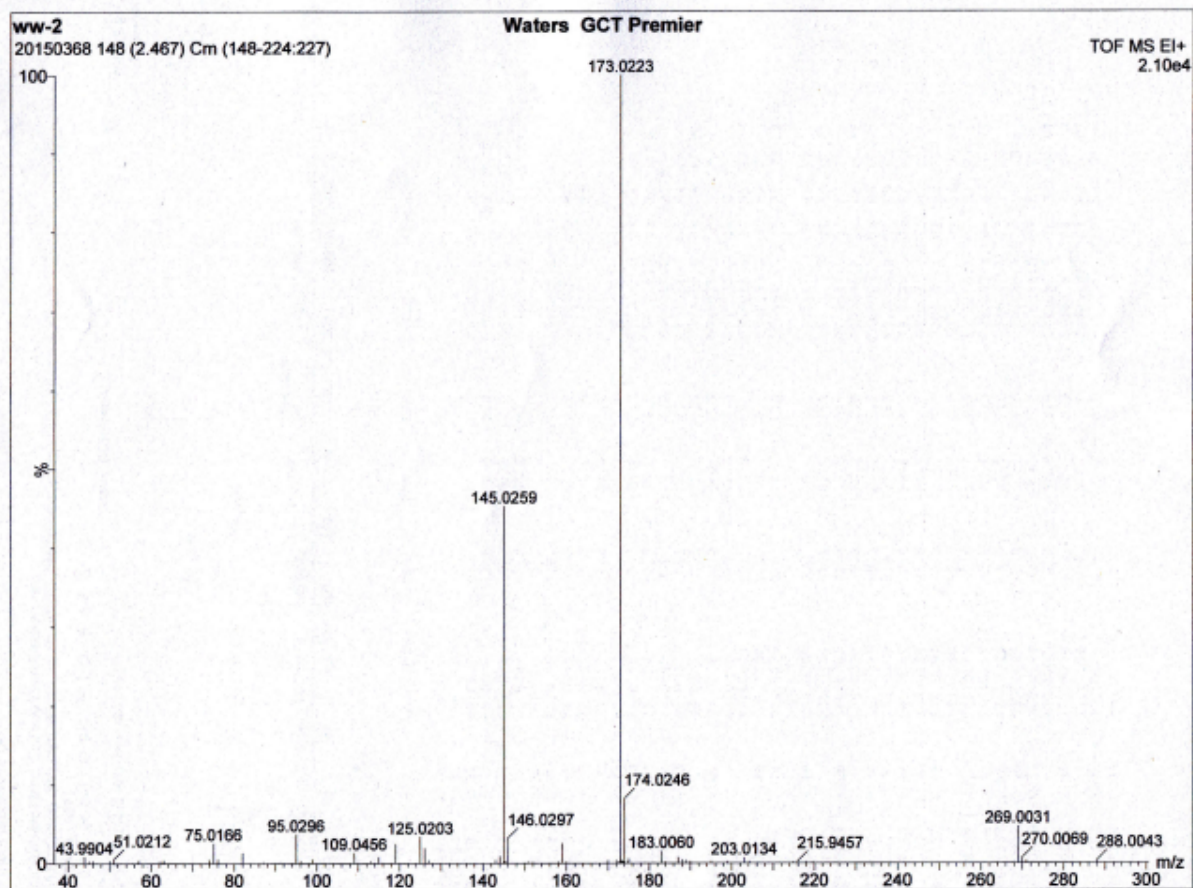
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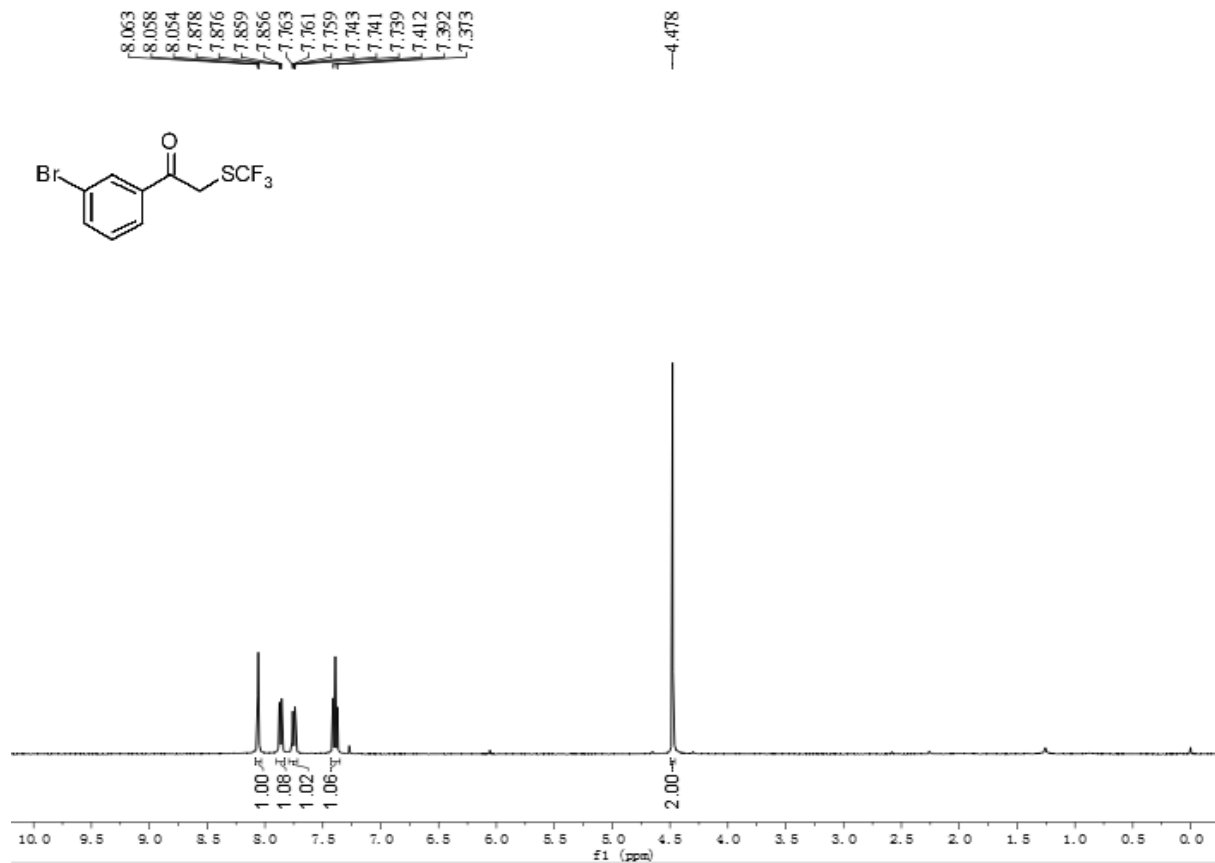
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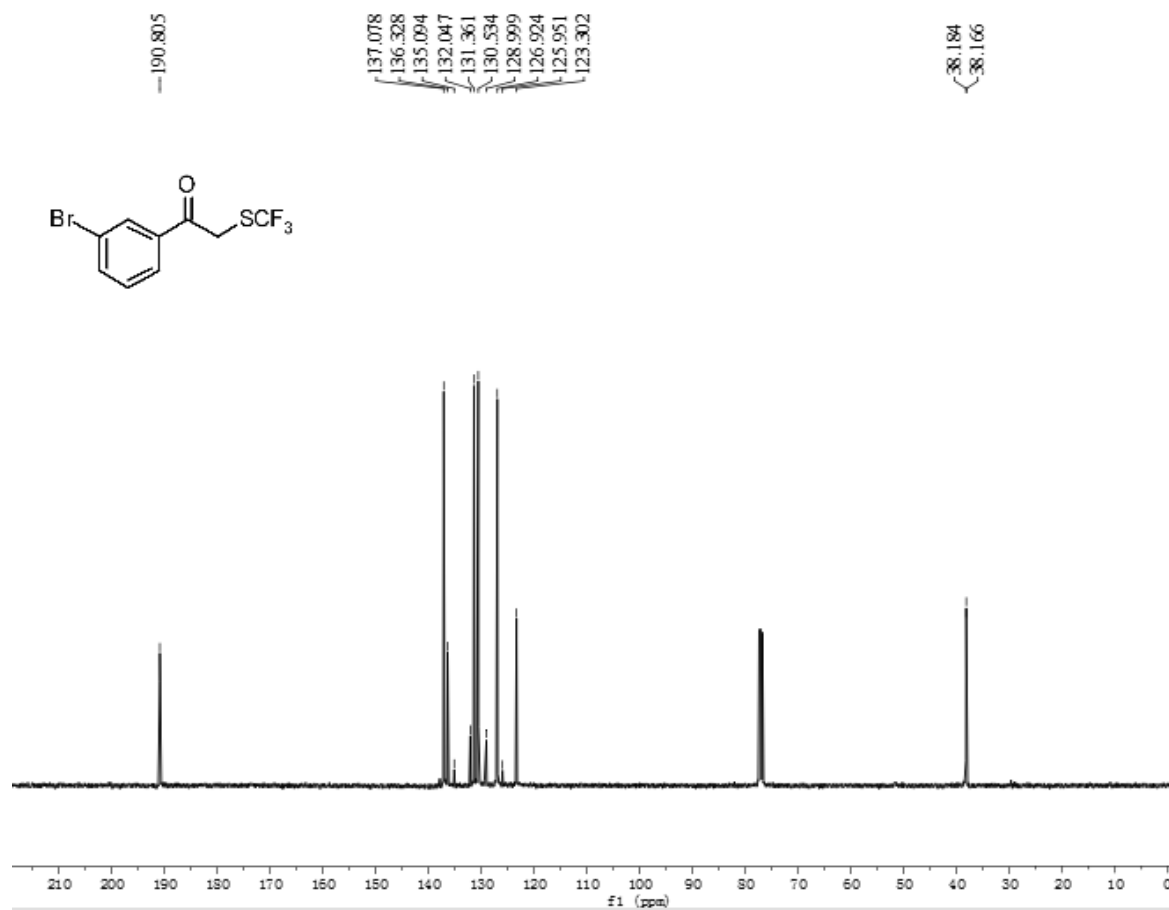
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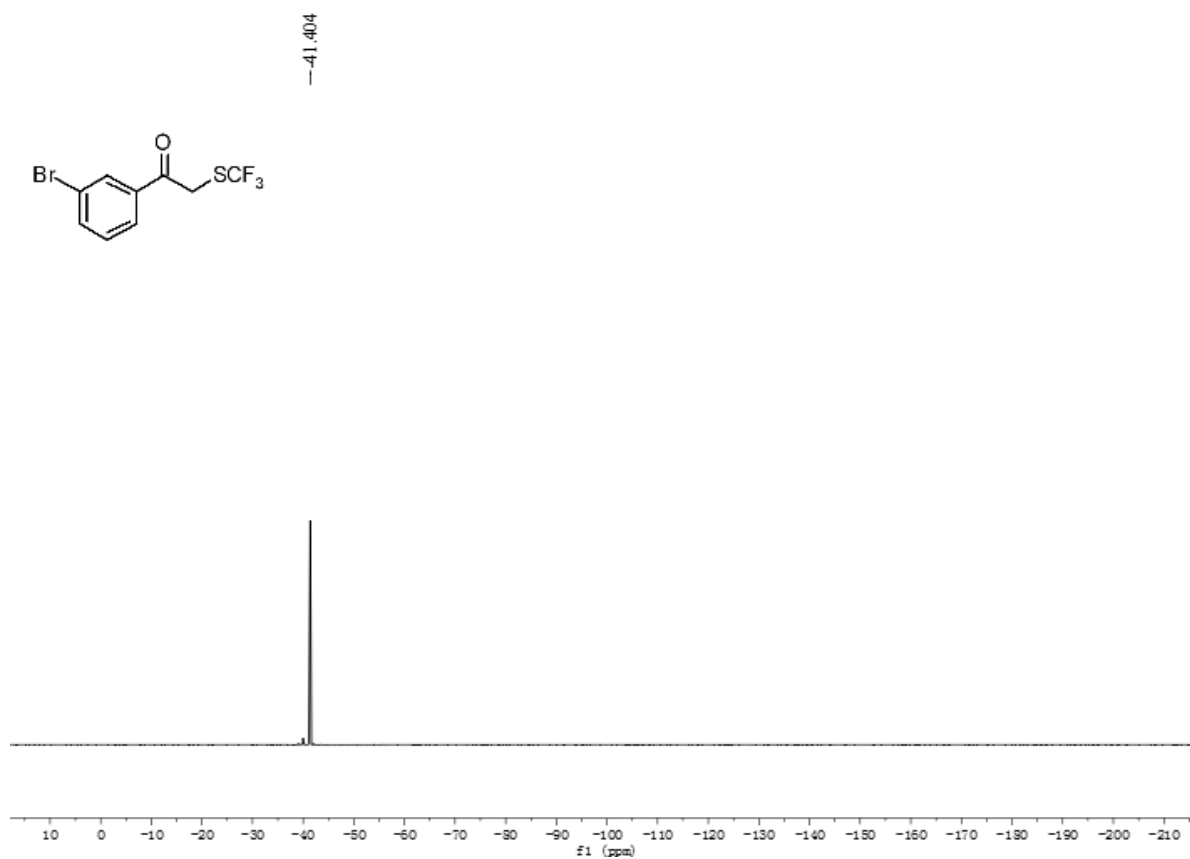
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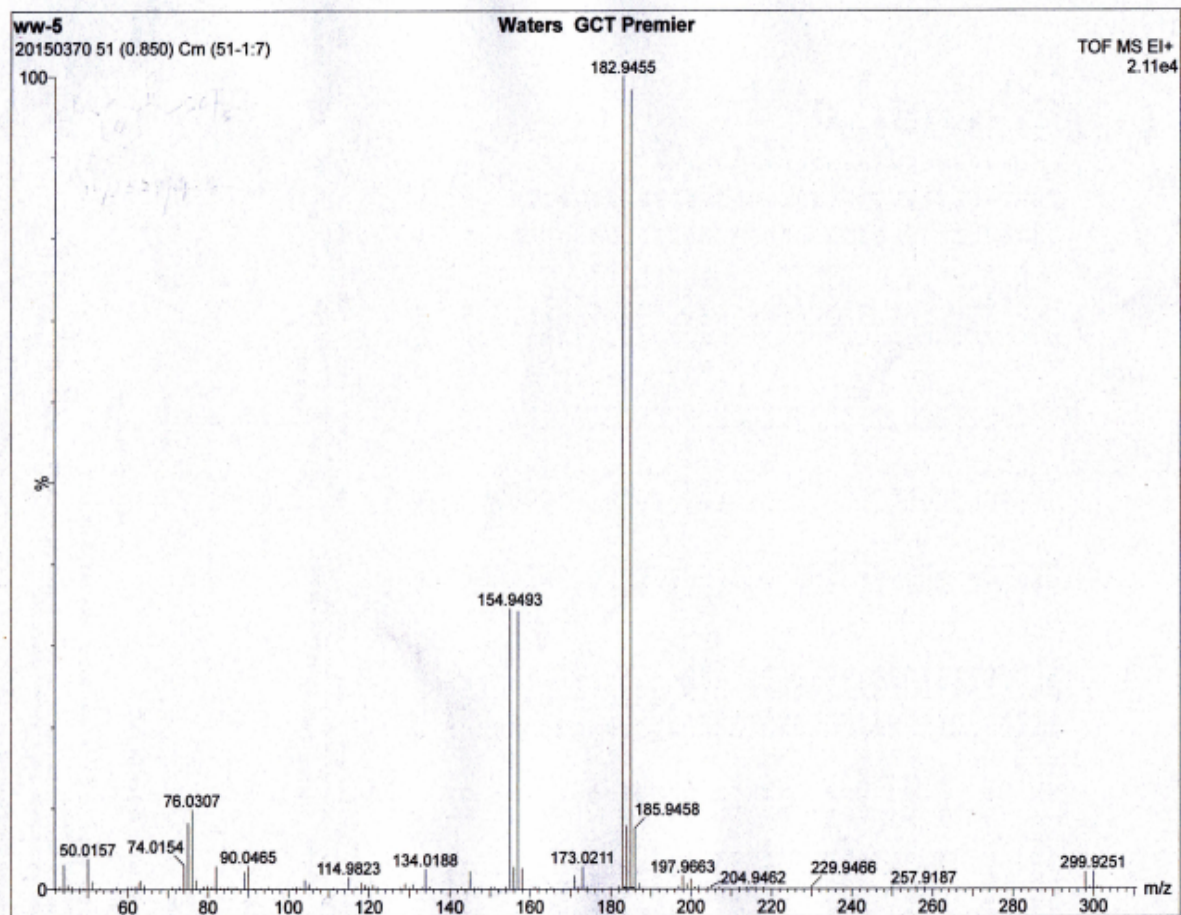
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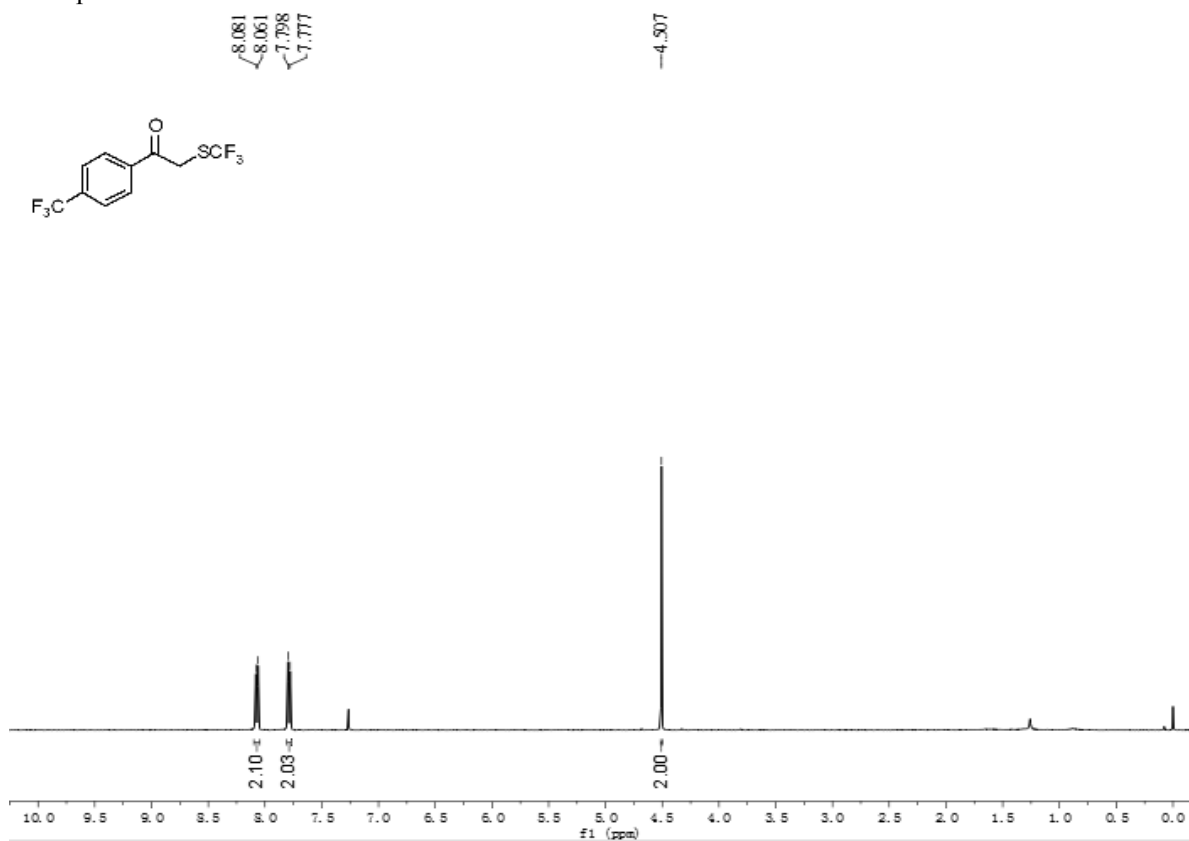
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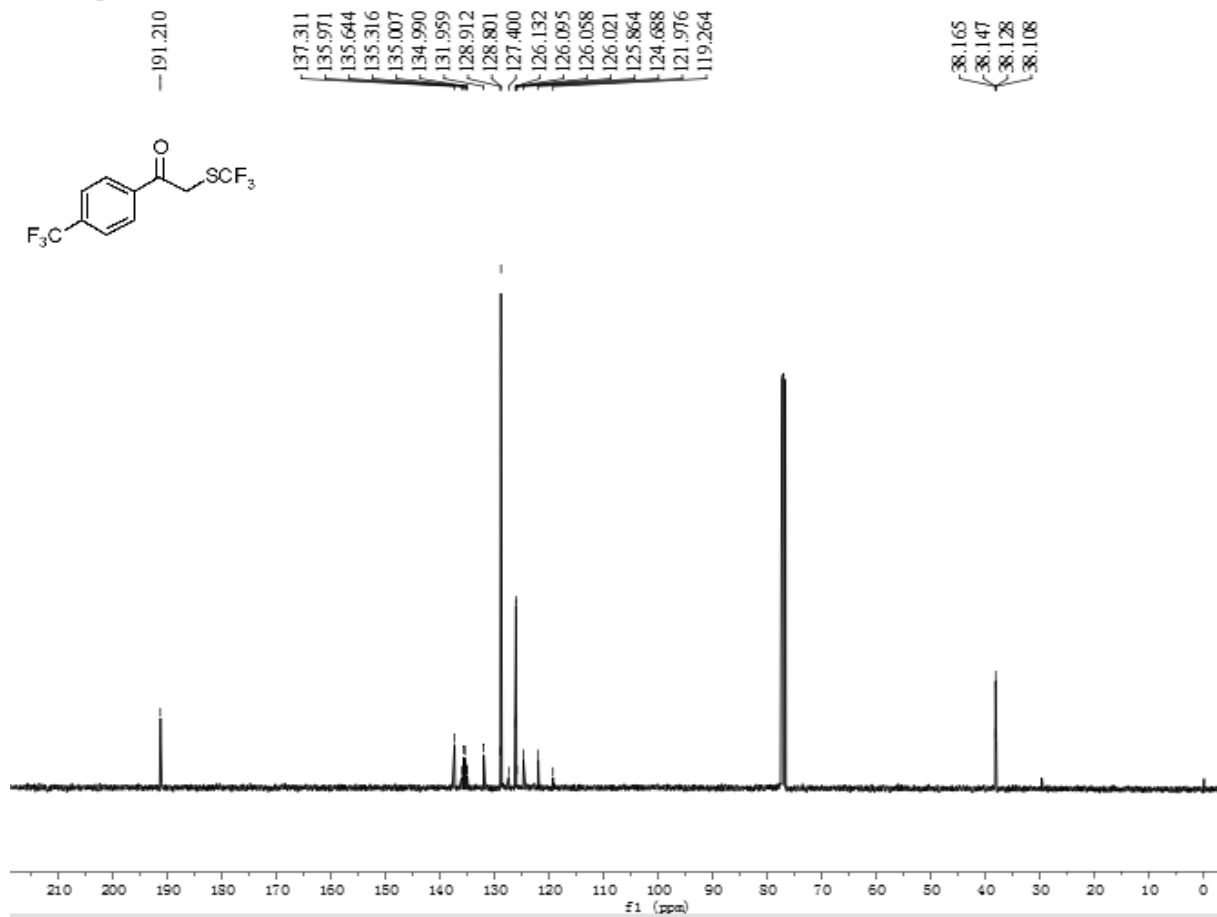
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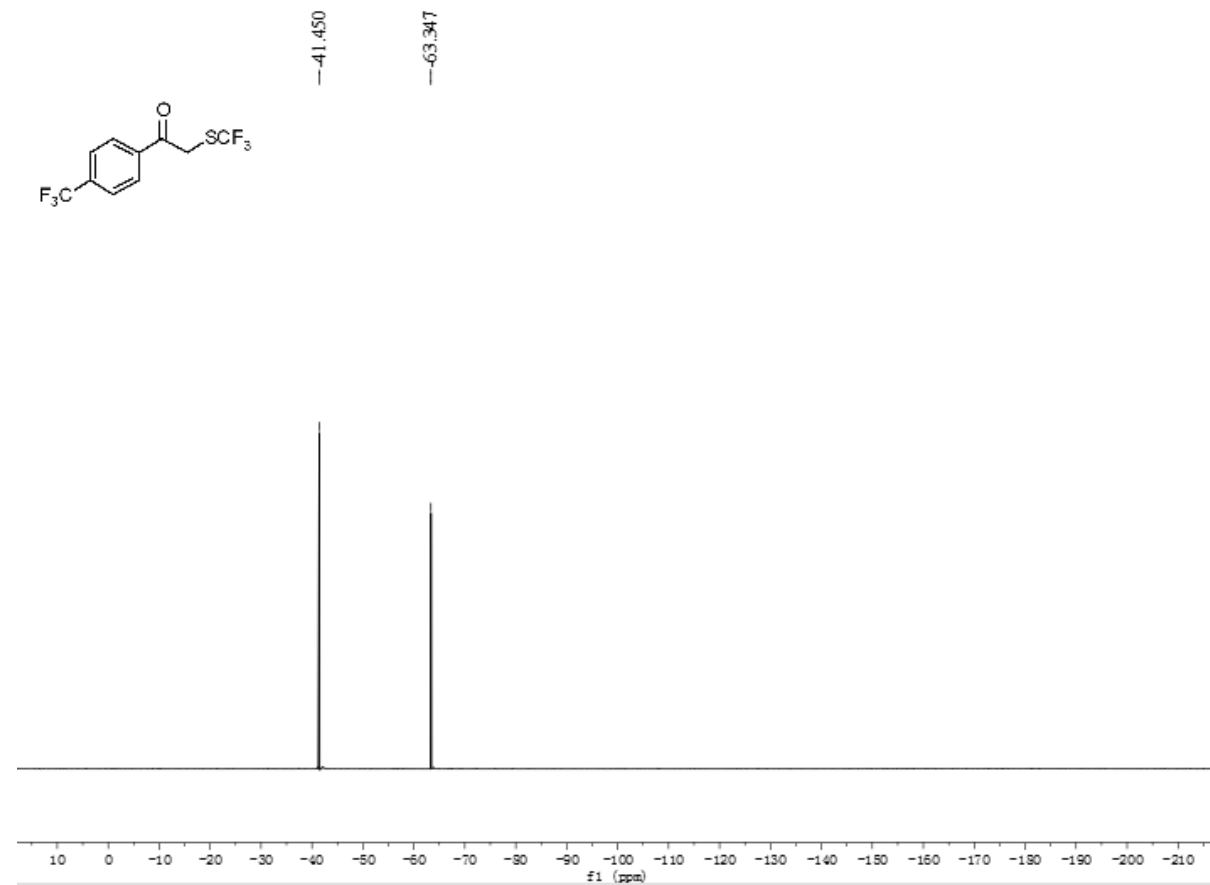
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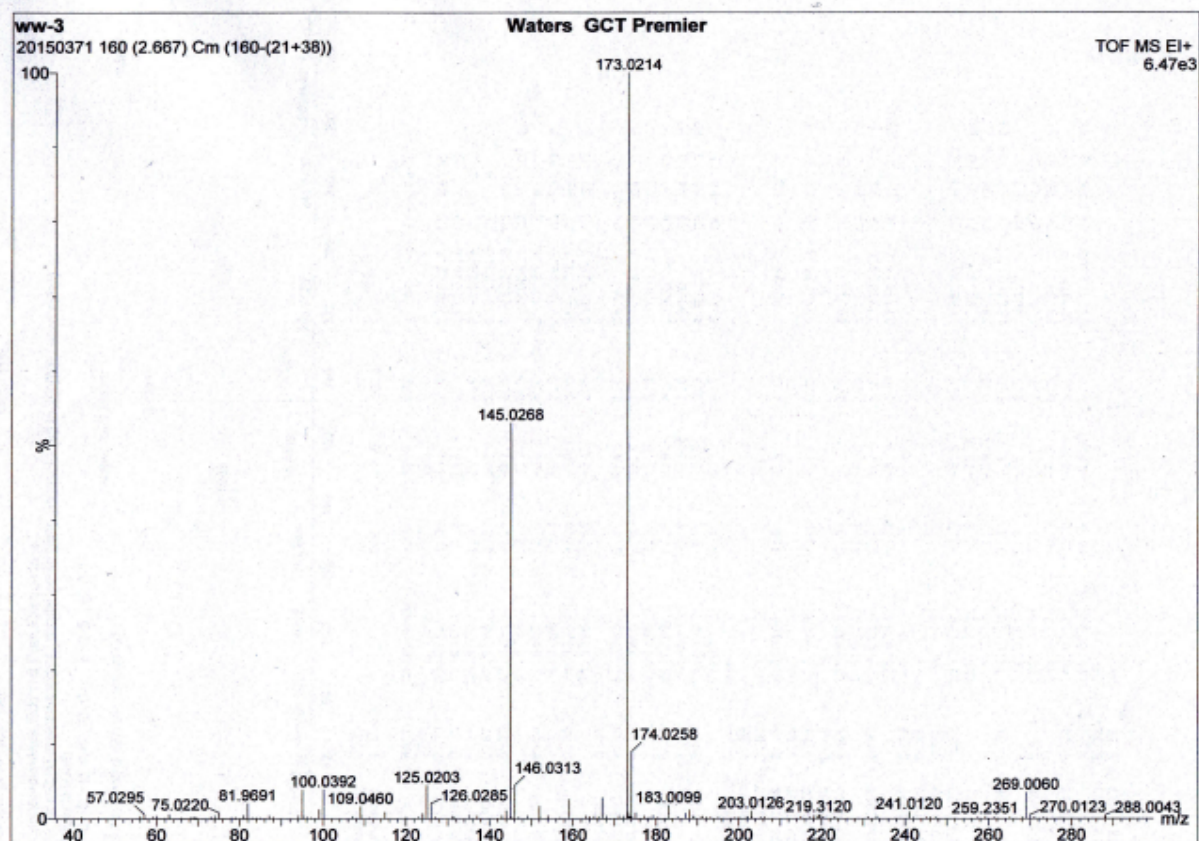


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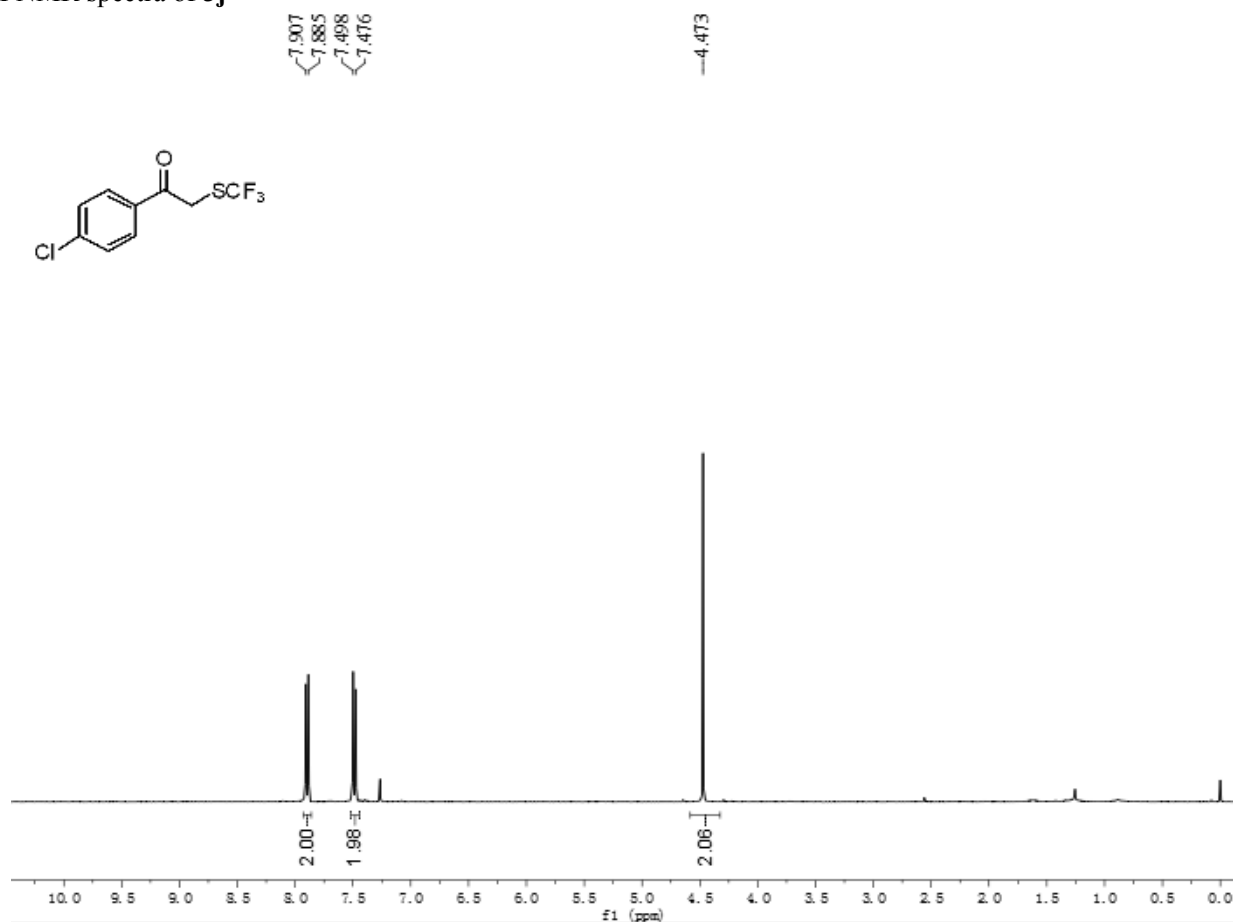




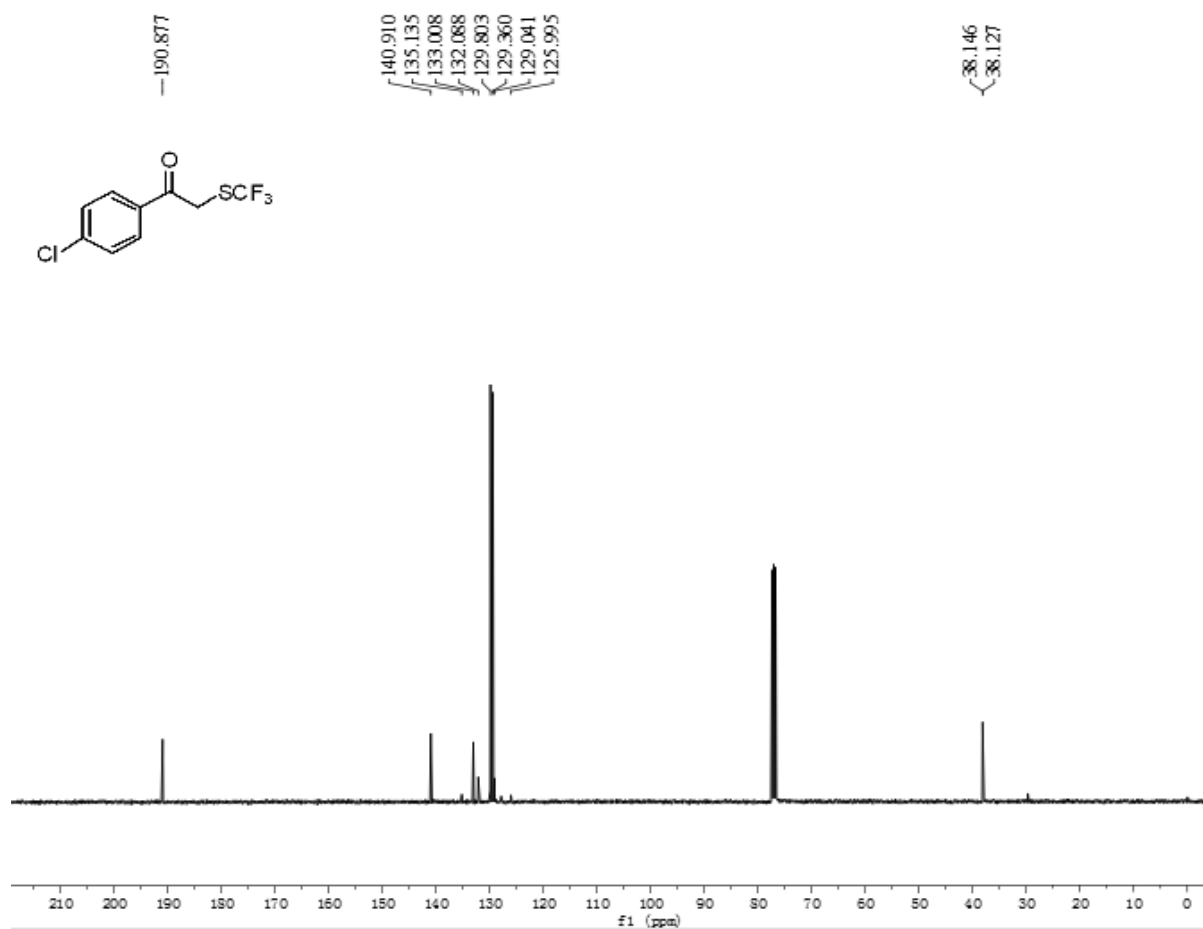
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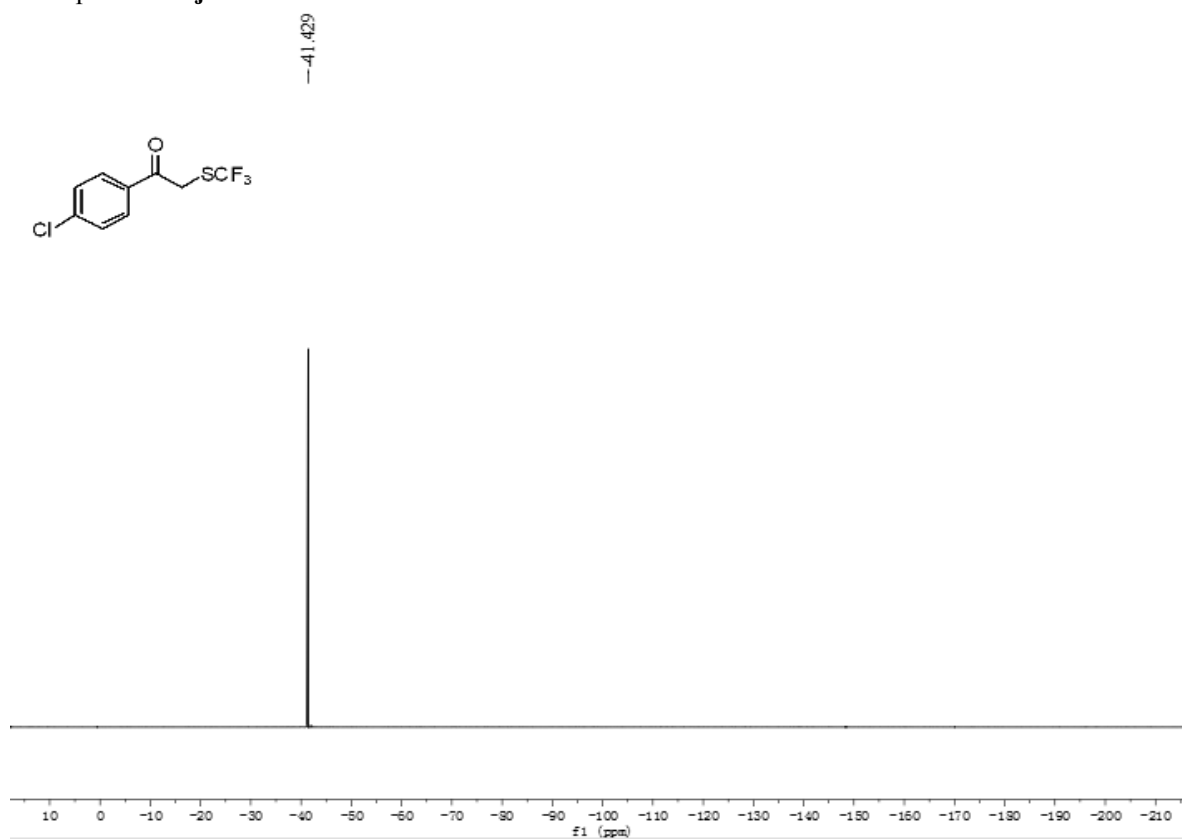
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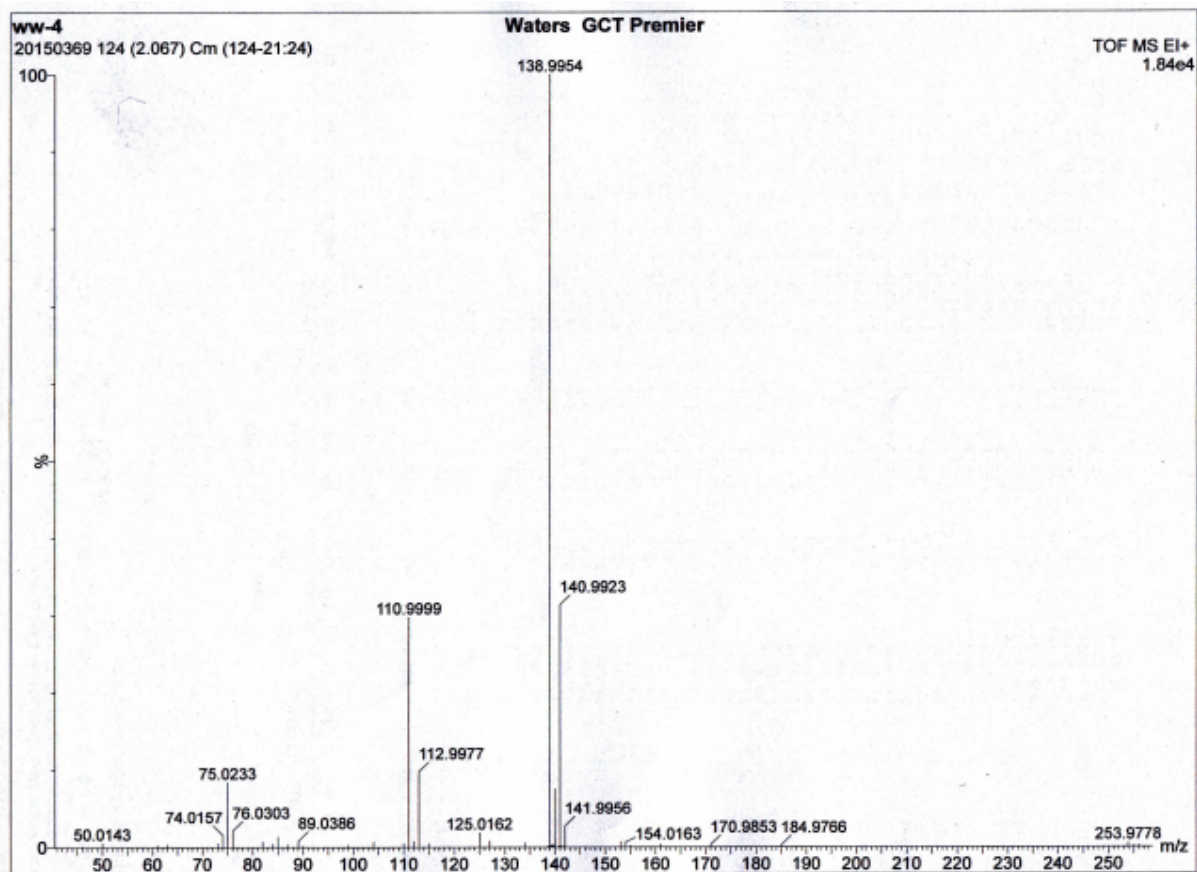
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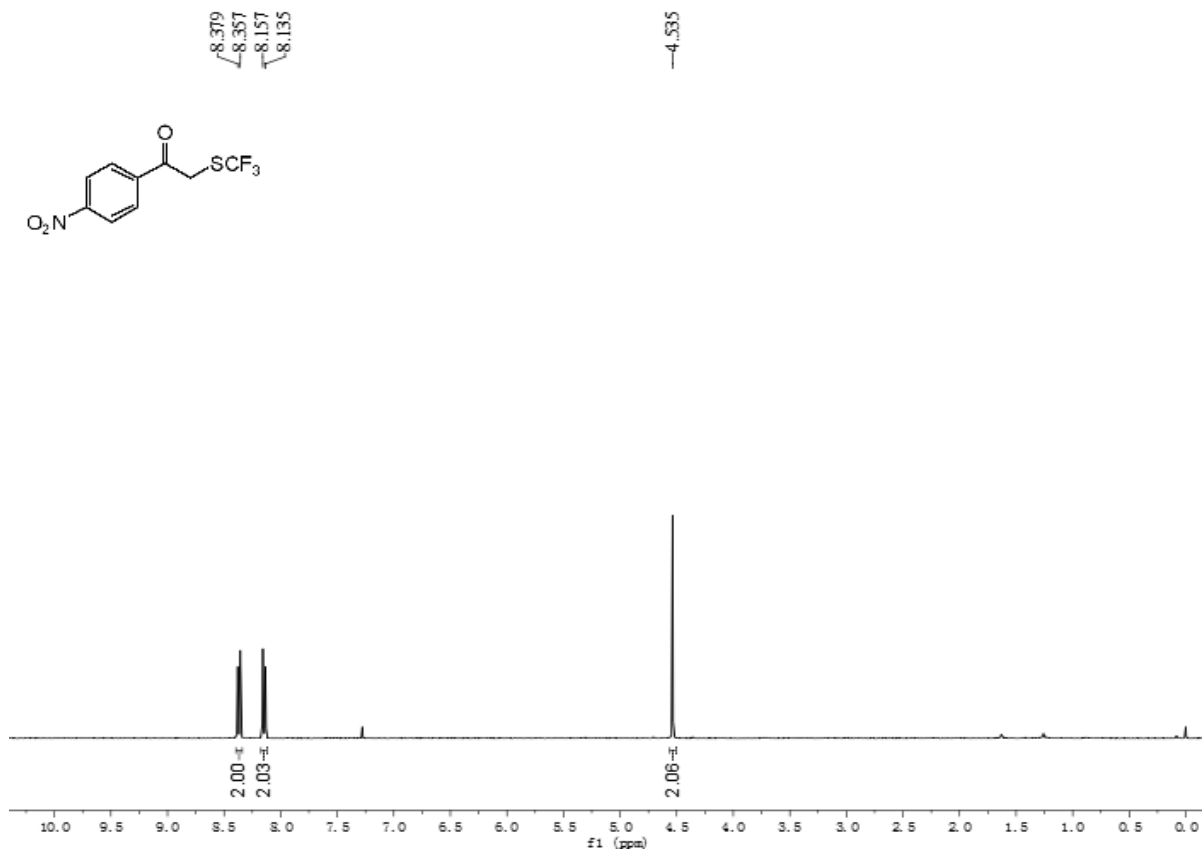
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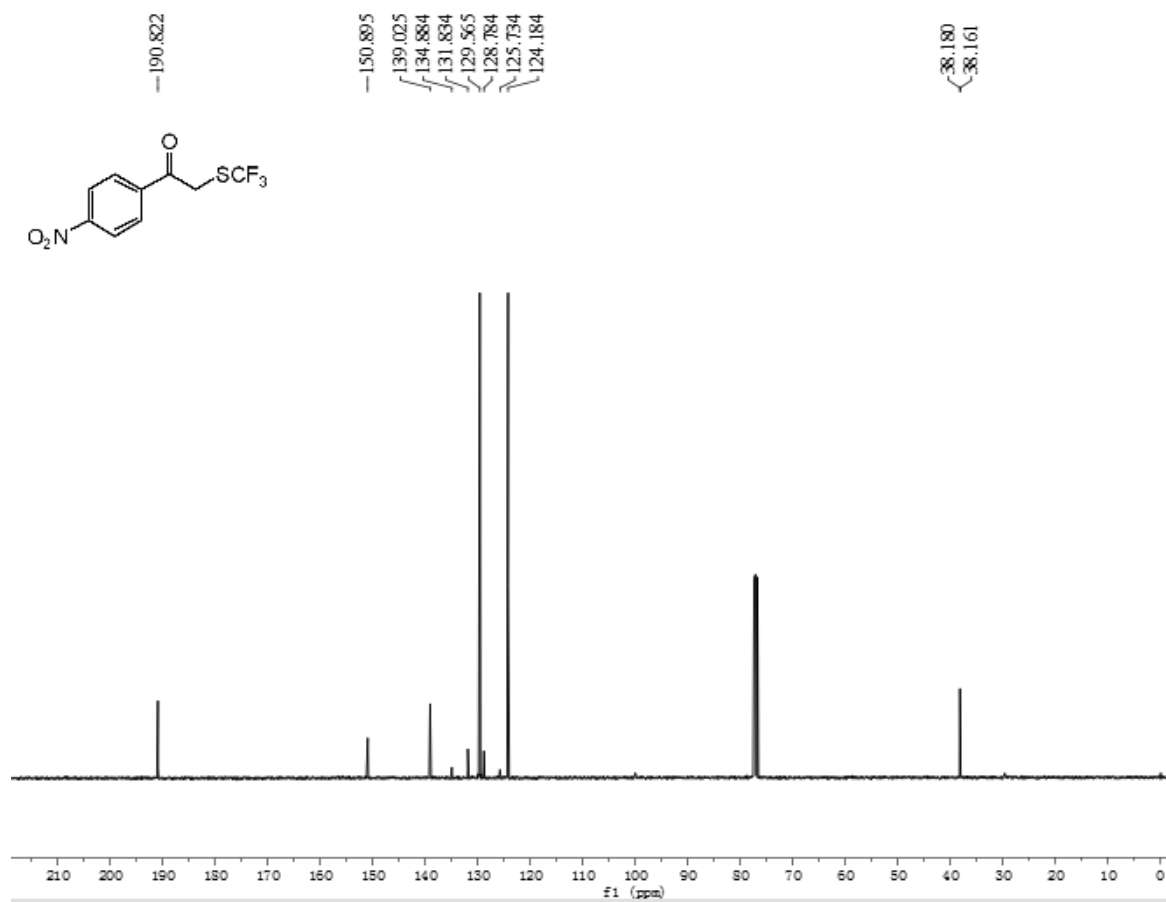
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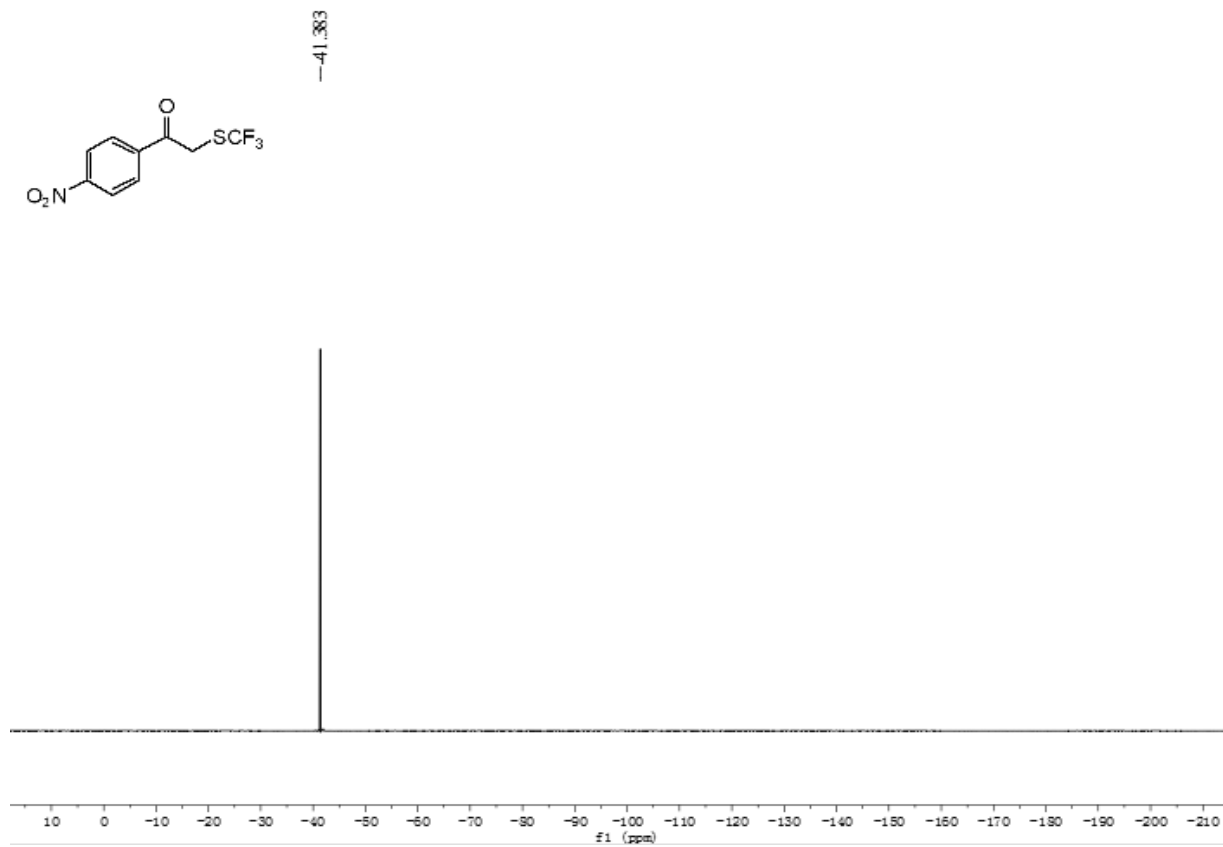
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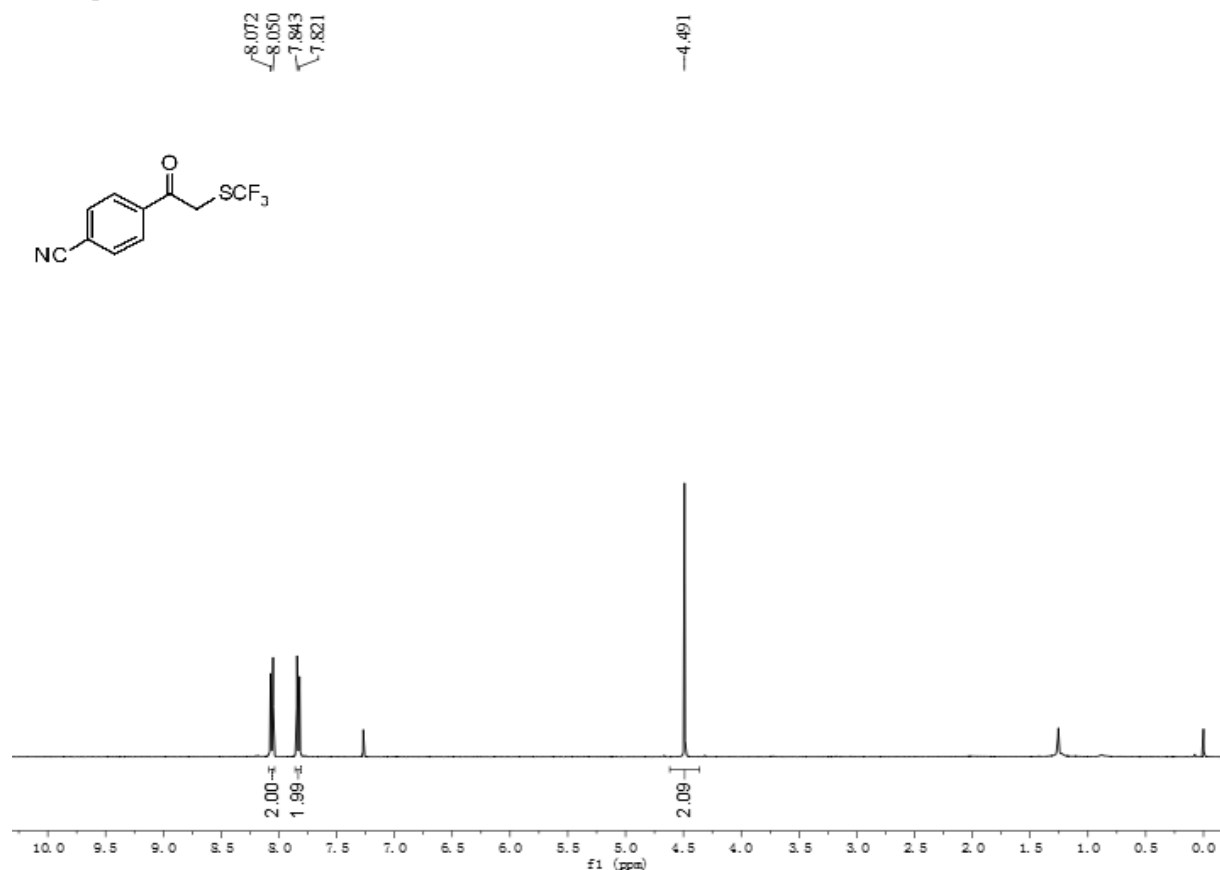
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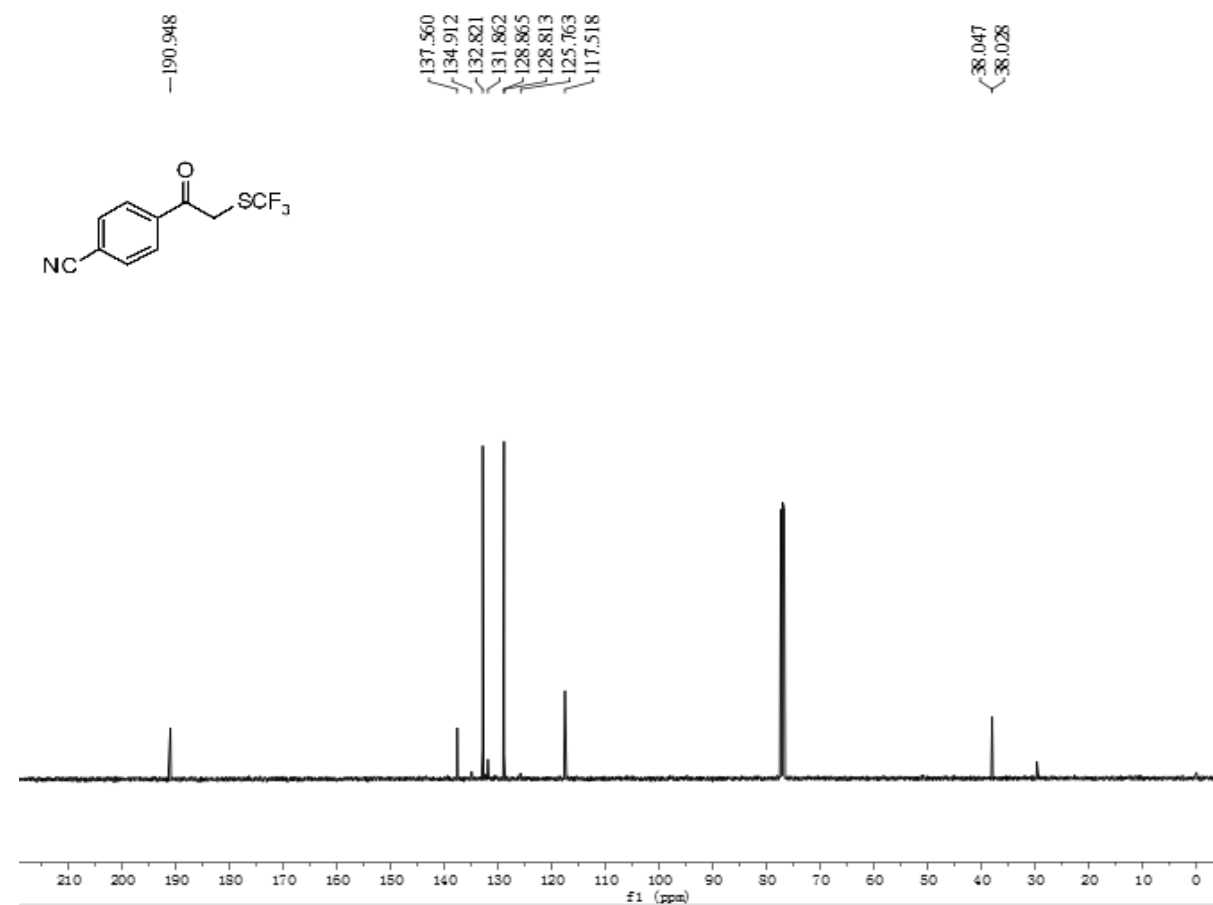
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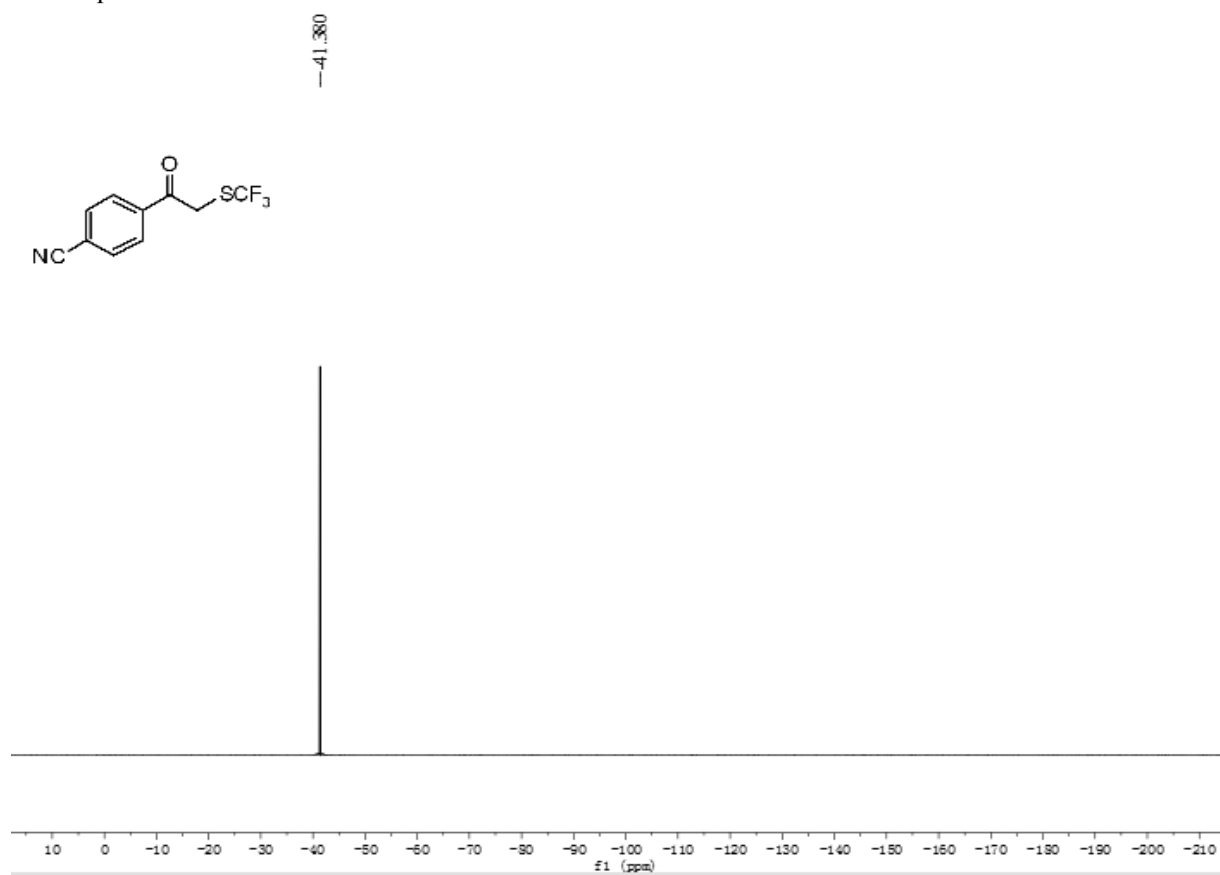
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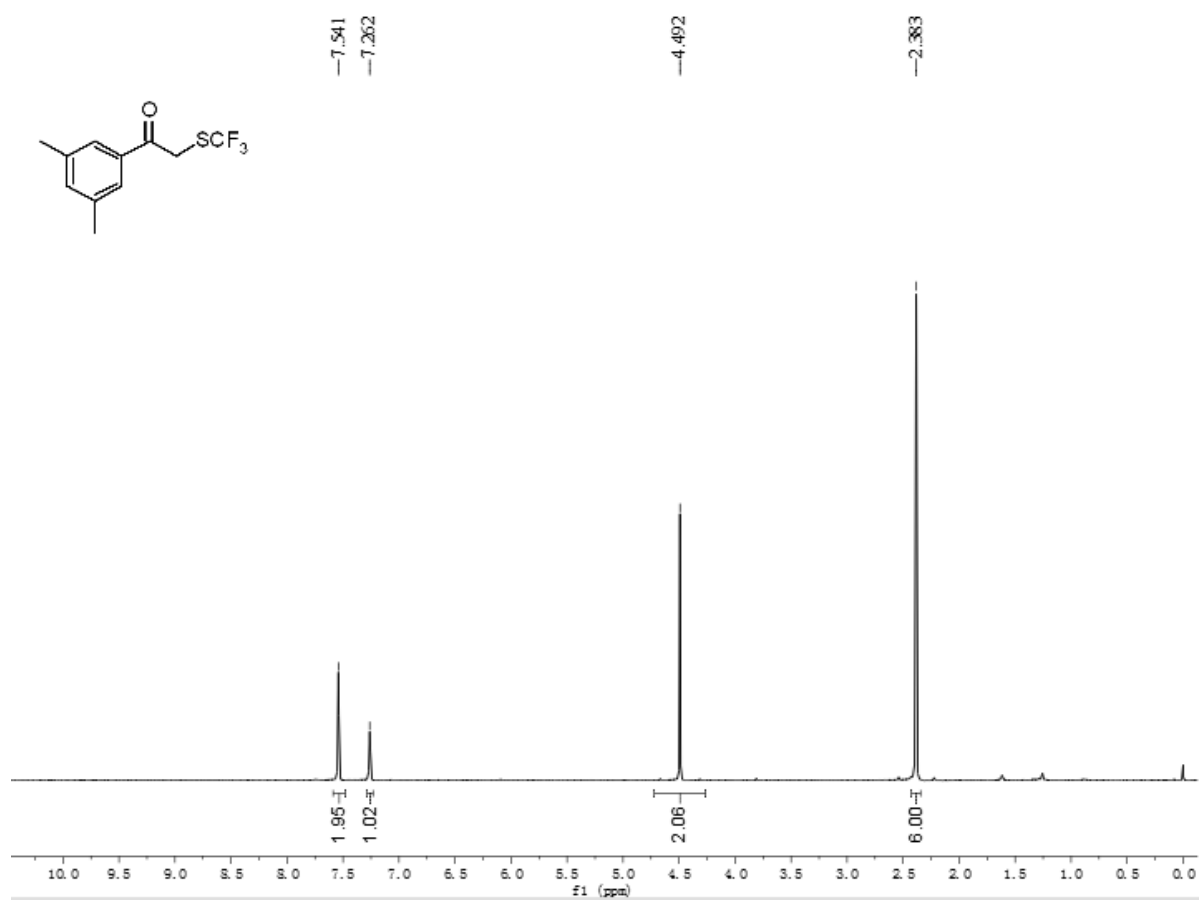
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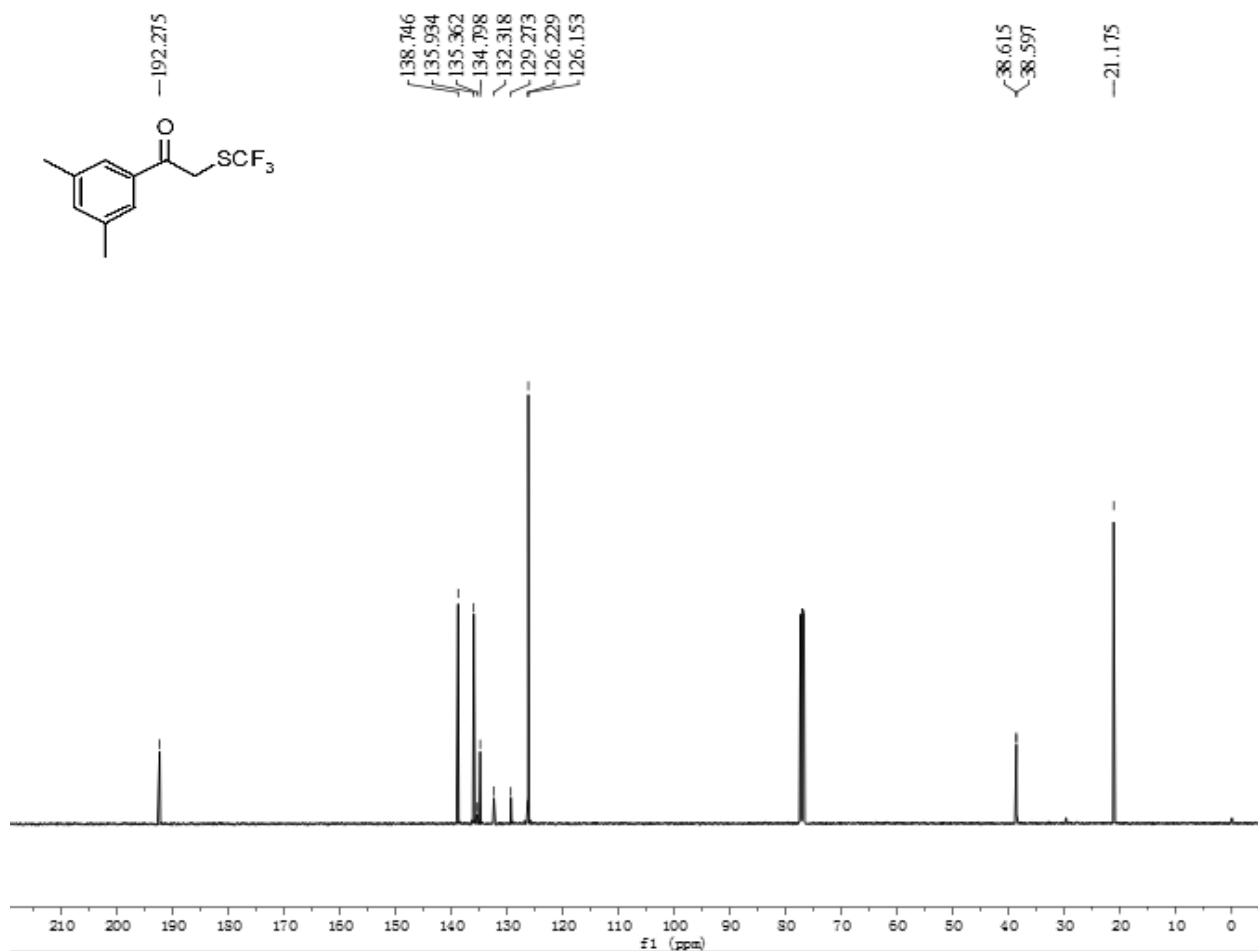
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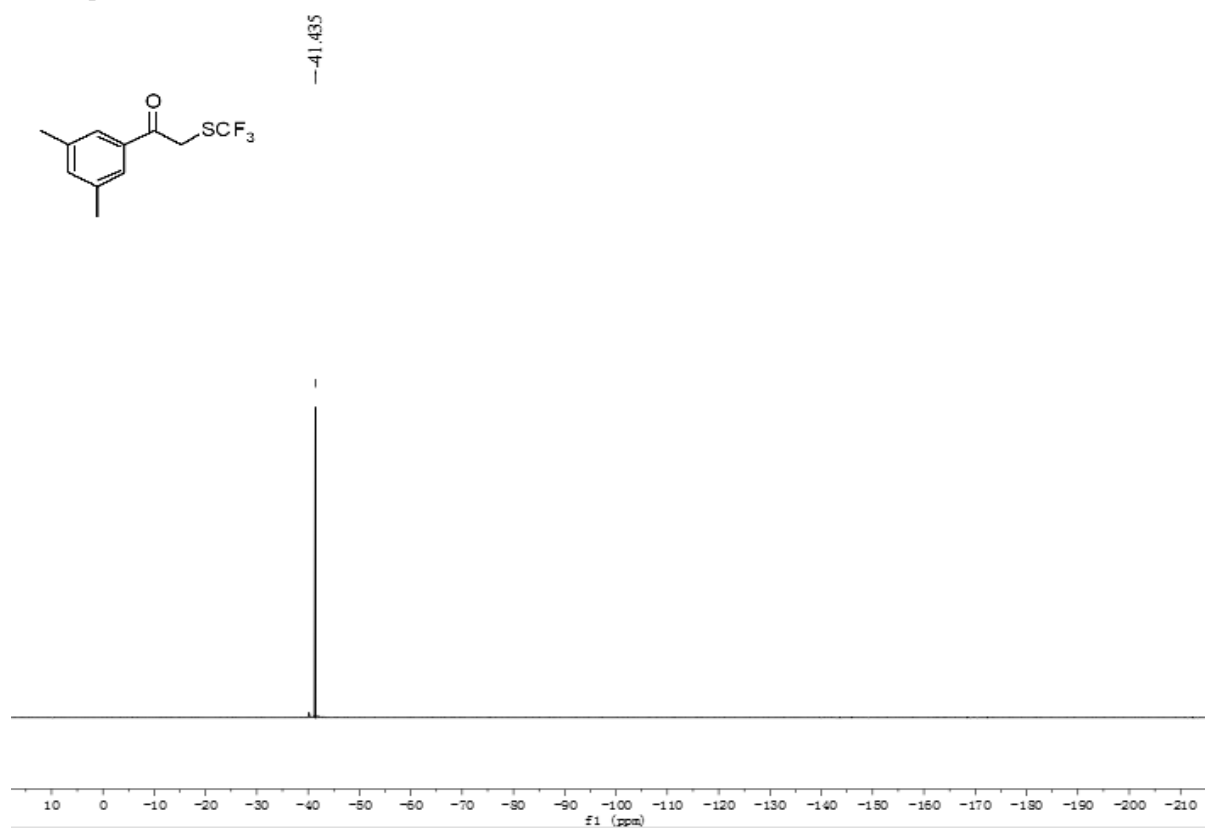
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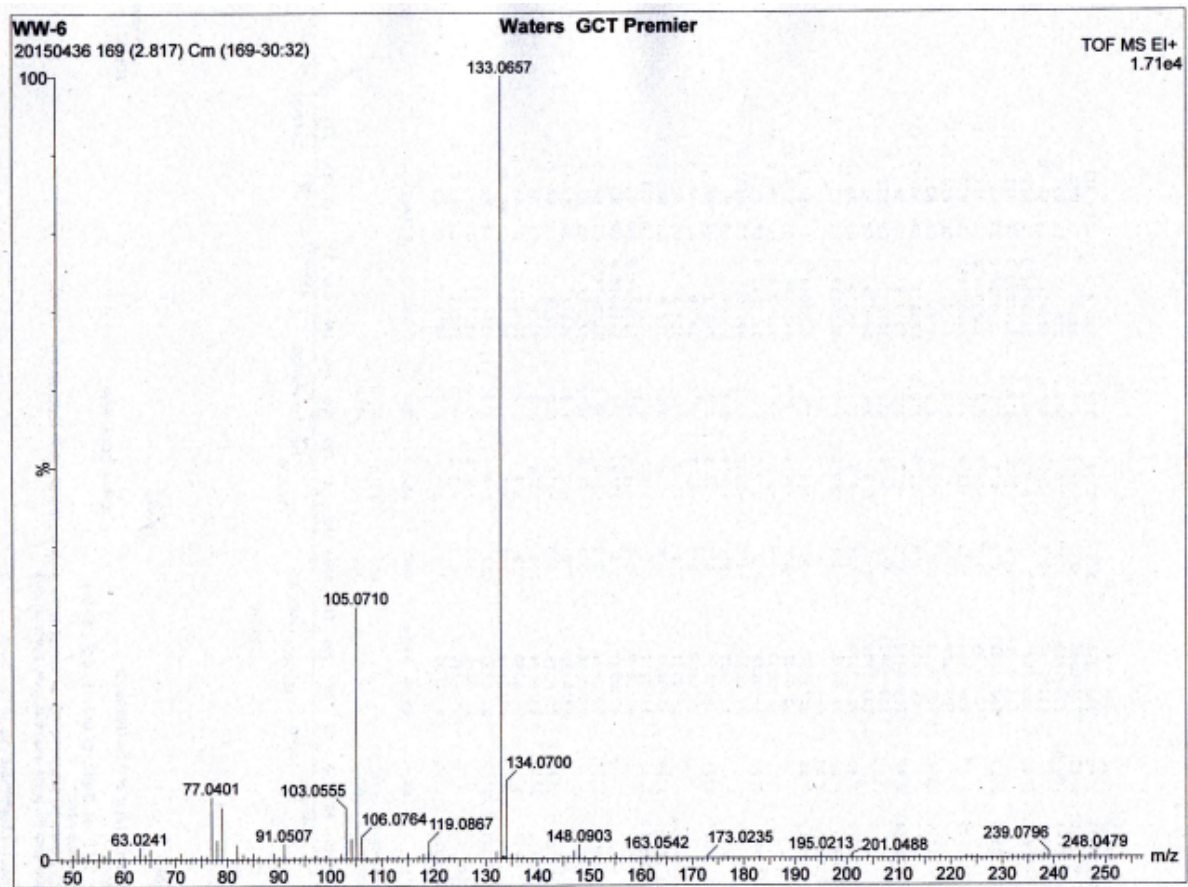
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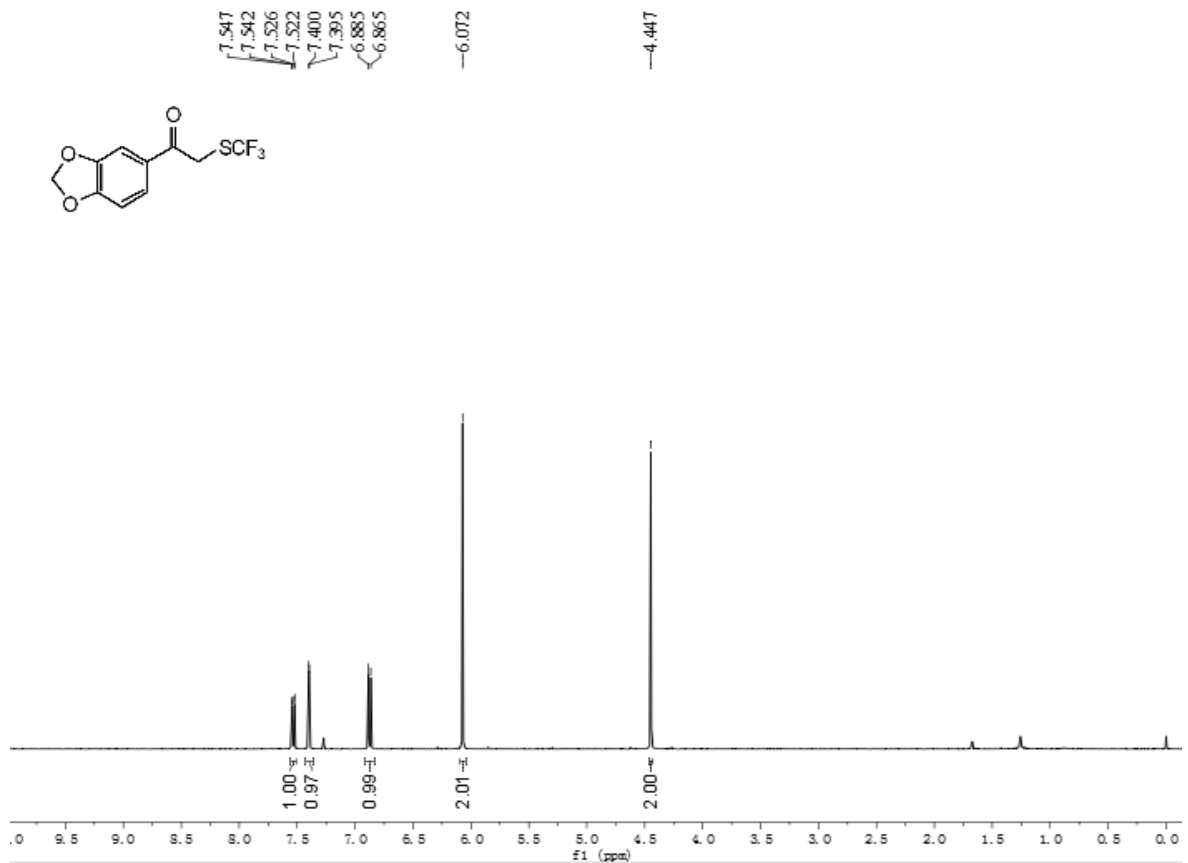
<sup>19</sup>F NMR spectra of **3m**



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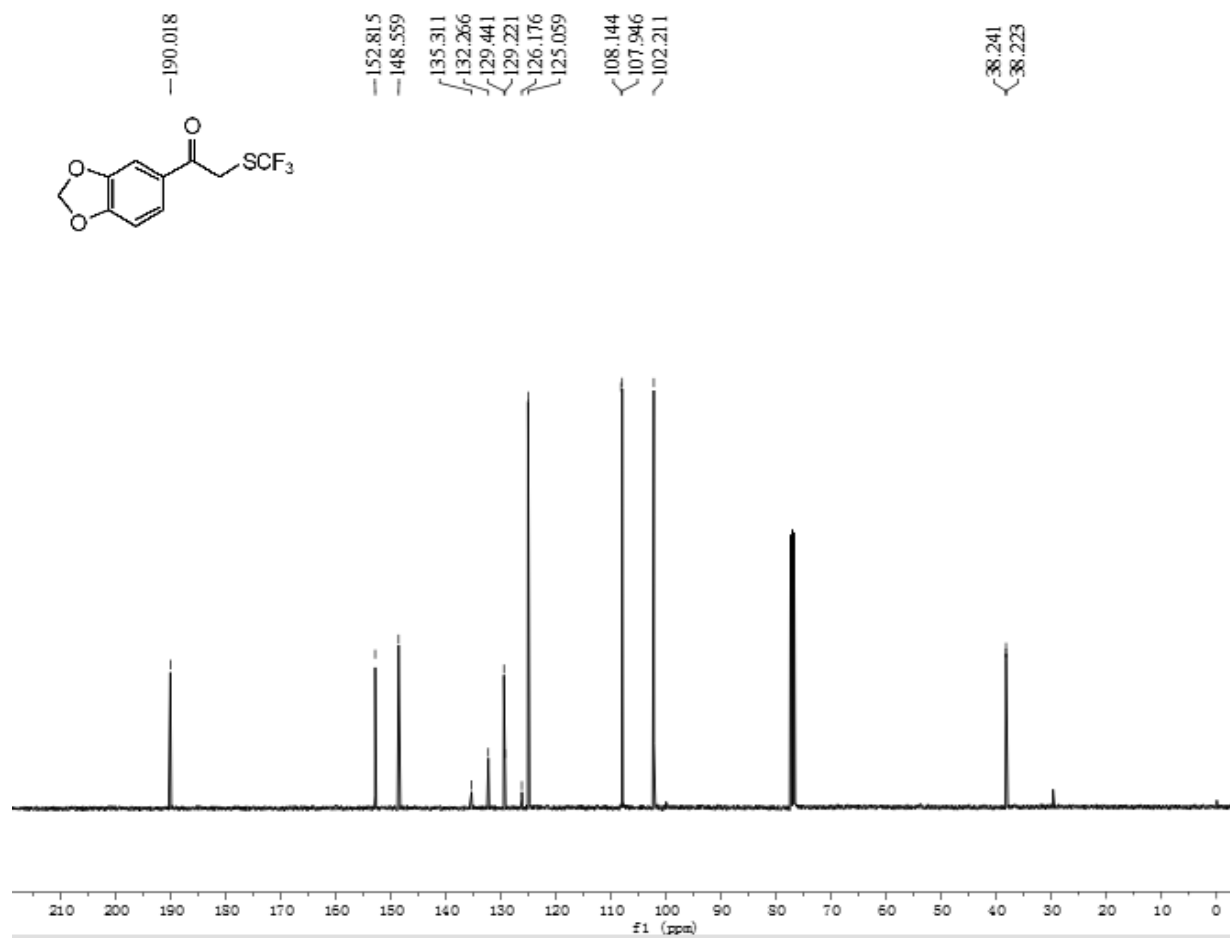


<sup>1</sup>H NMR spectra of **3n**

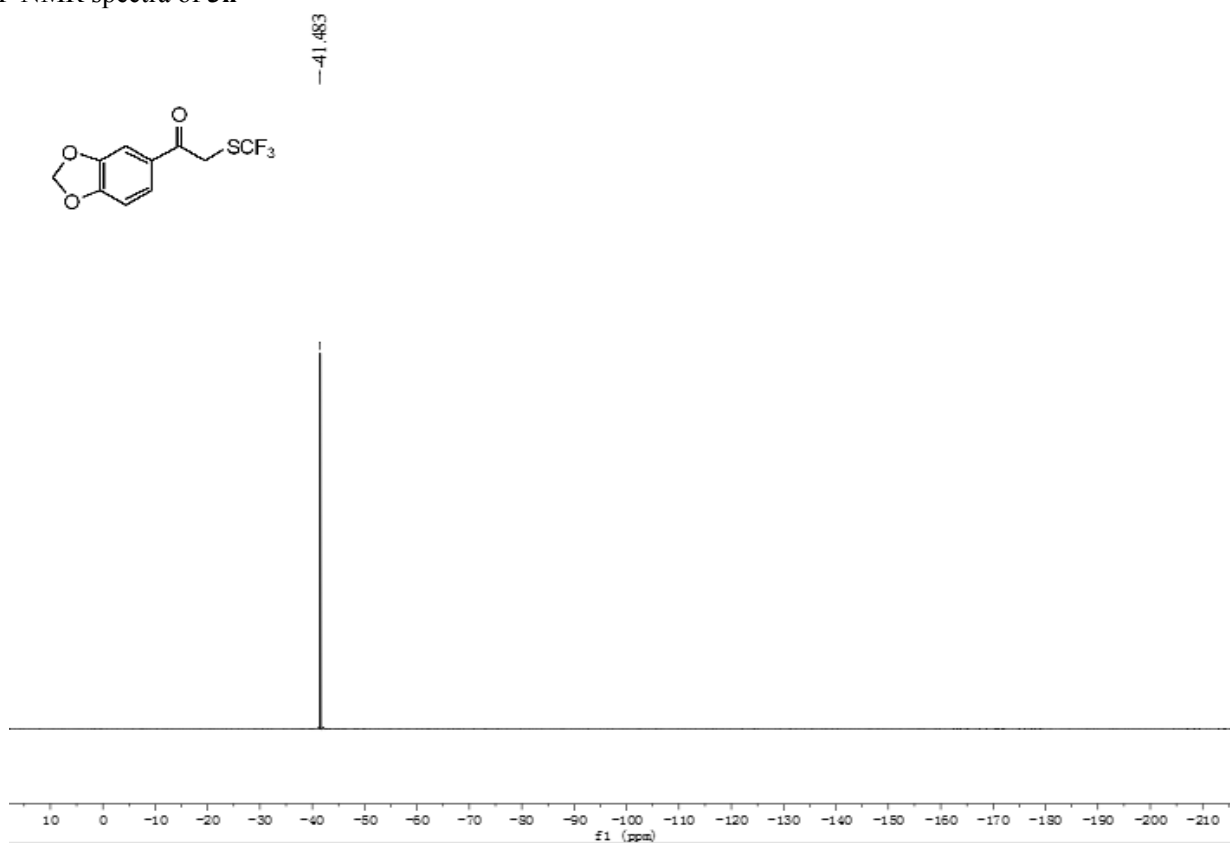




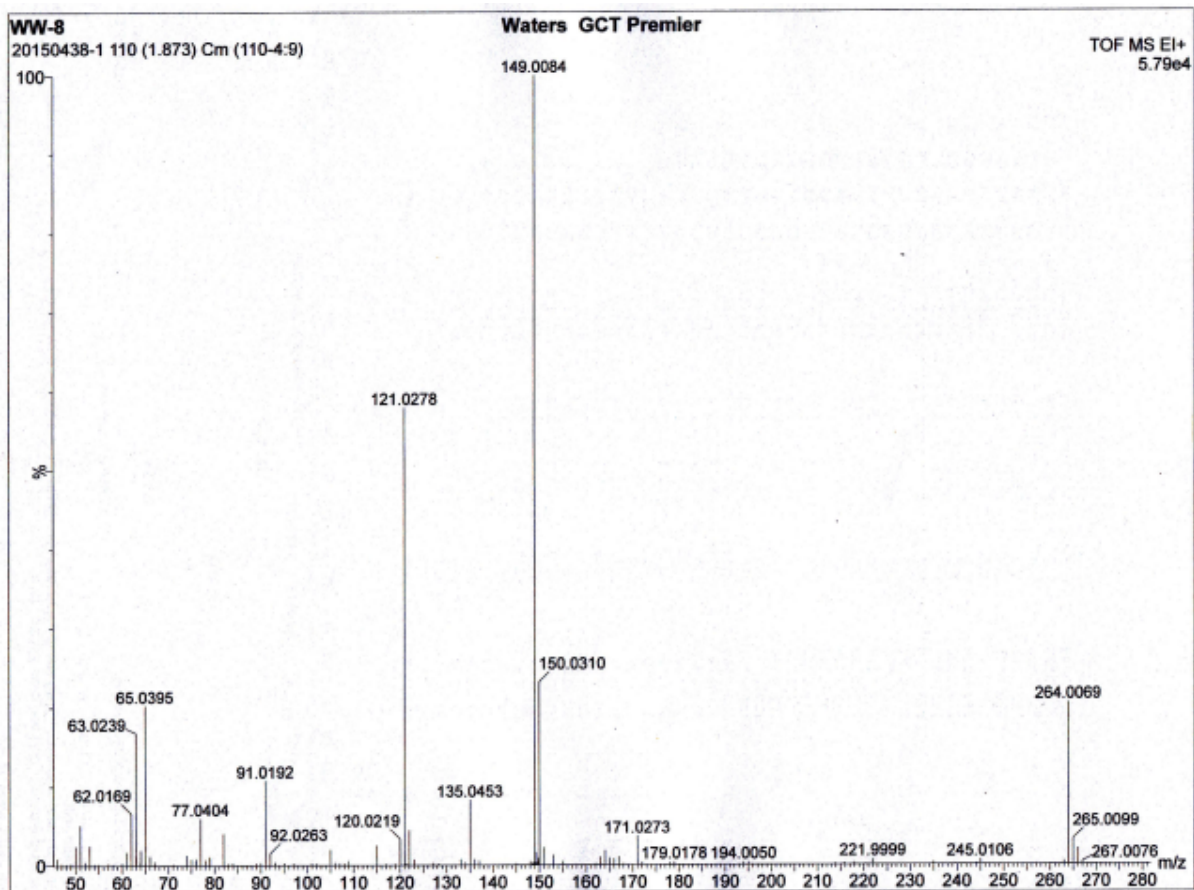
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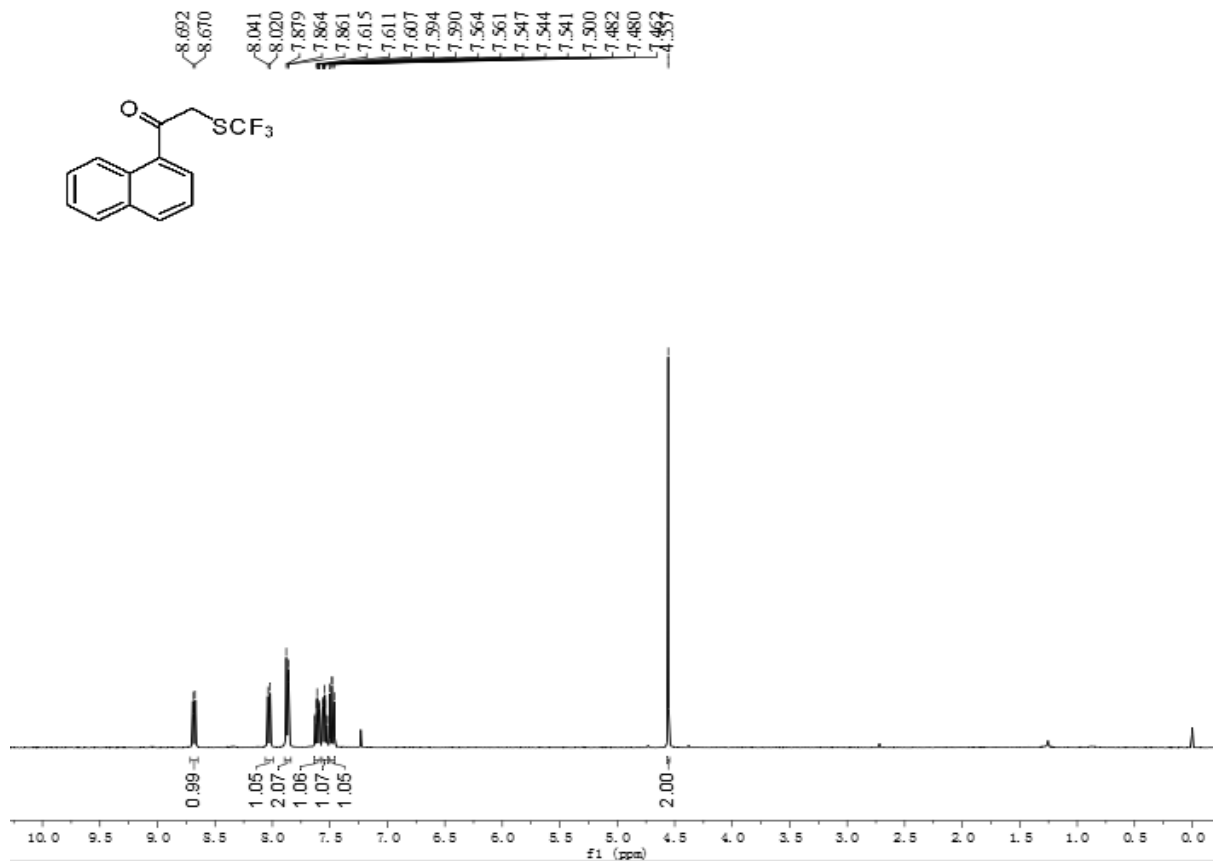
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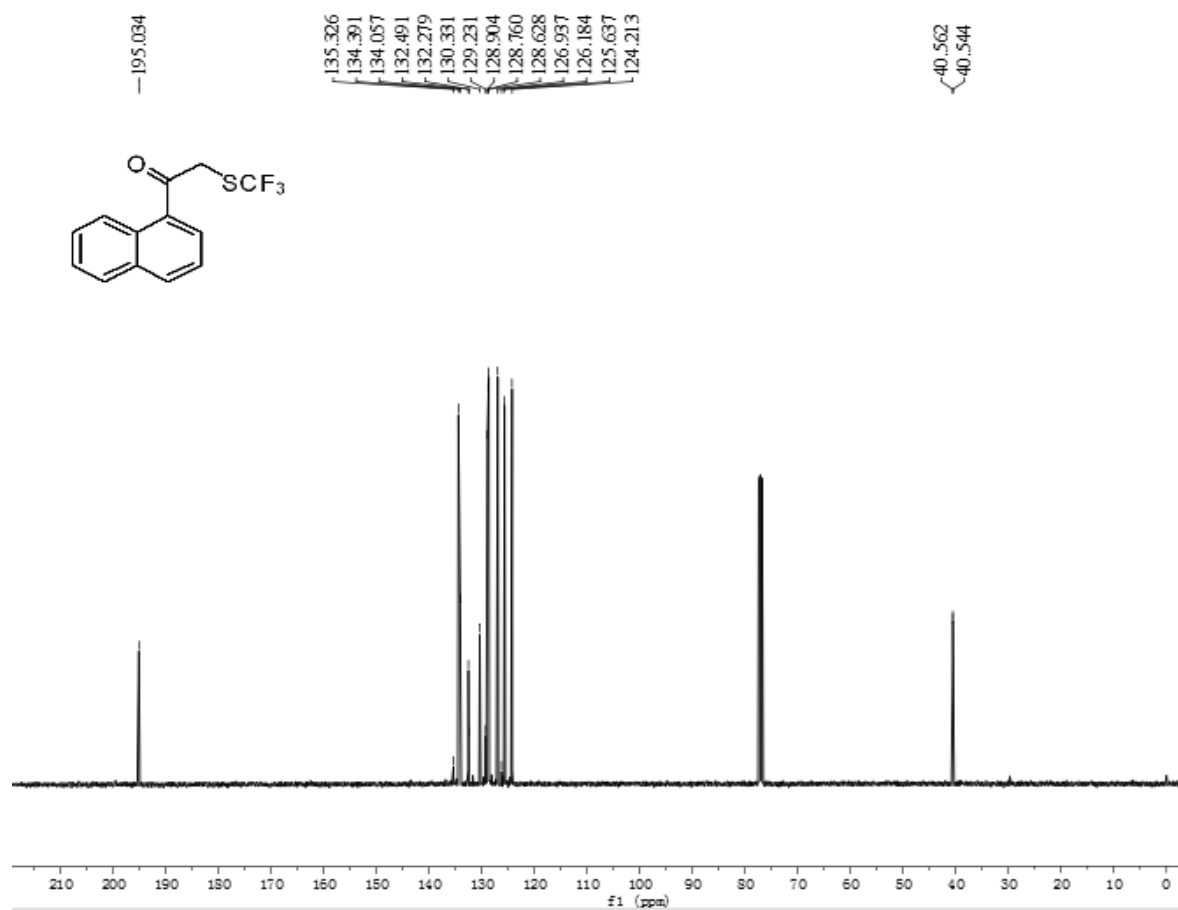
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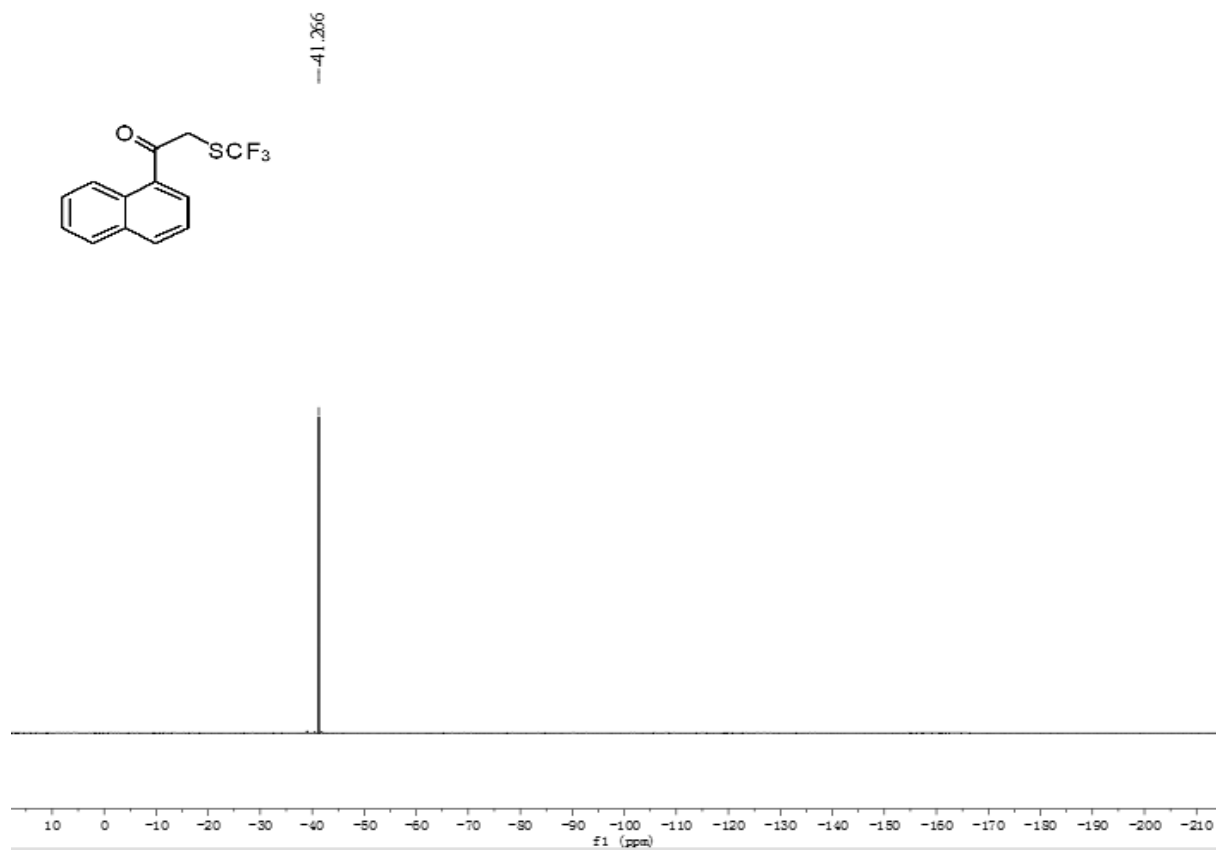
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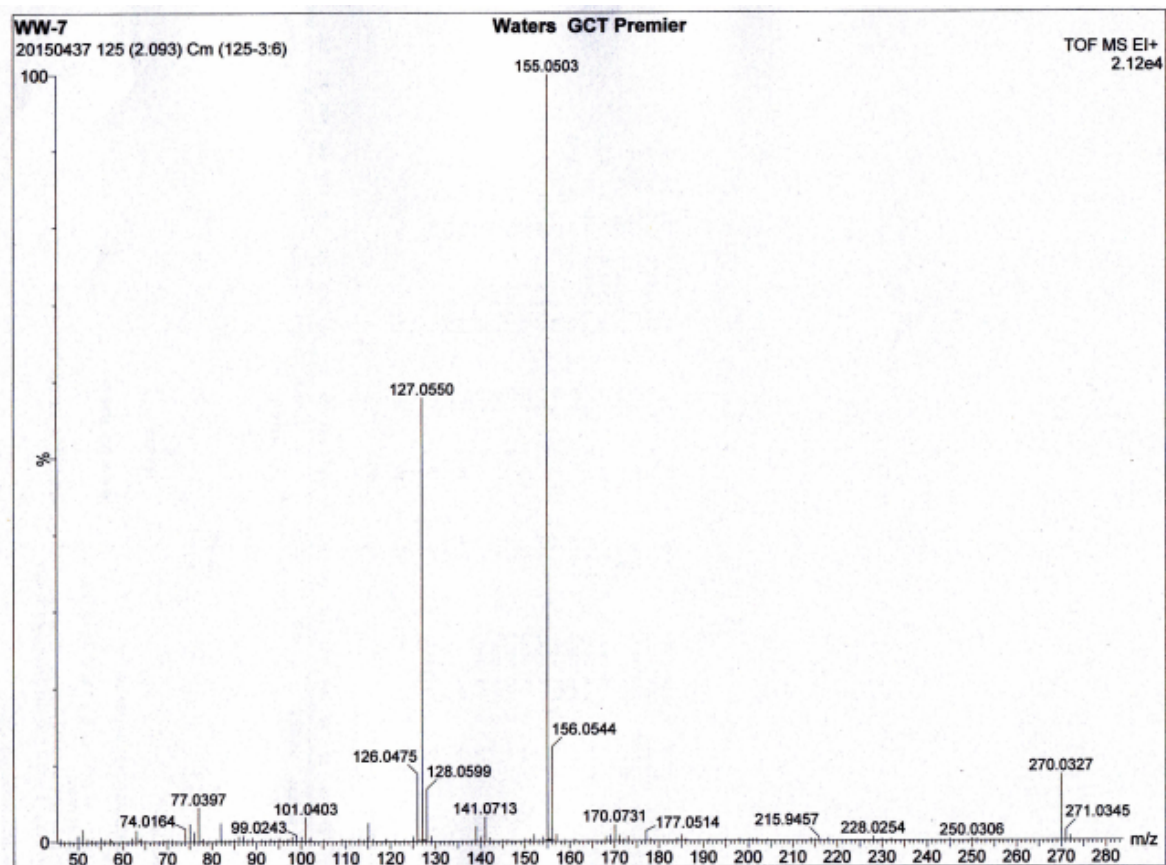
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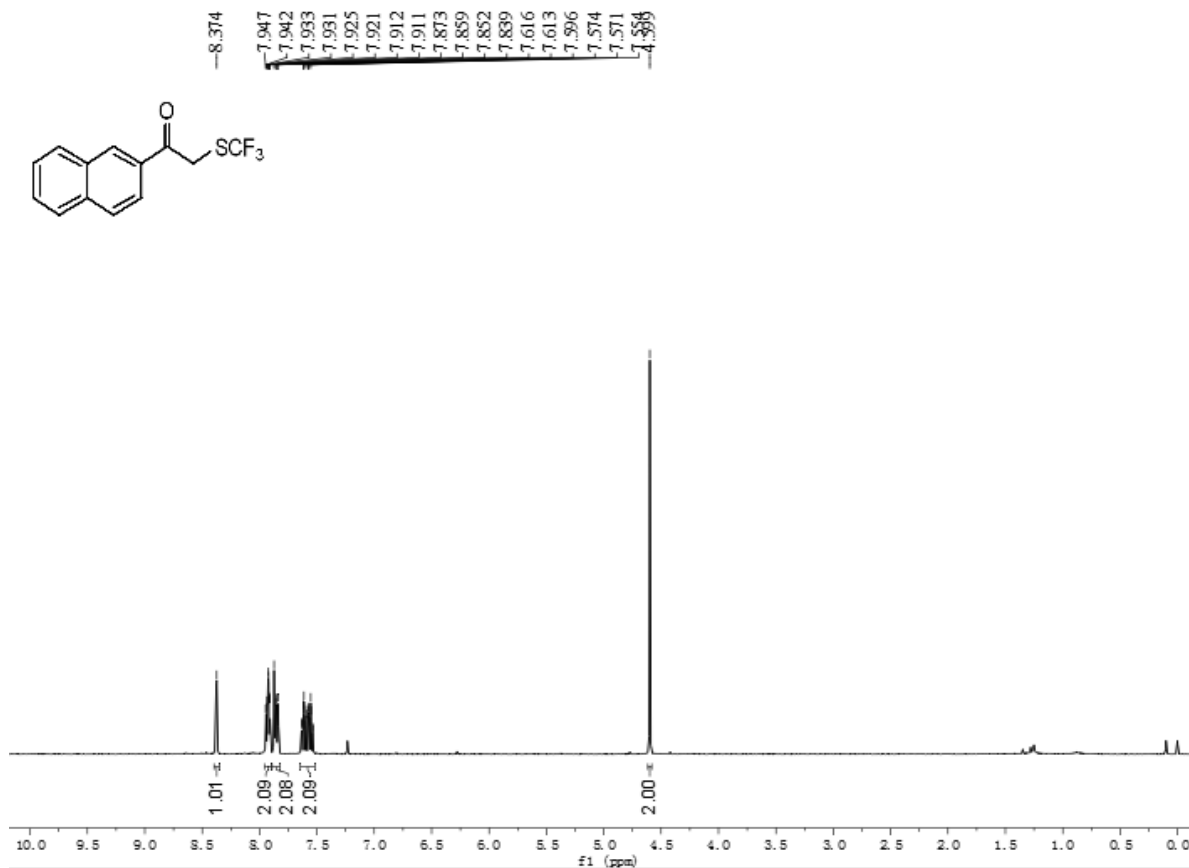
<sup>19</sup>F NMR spectra of **3o**



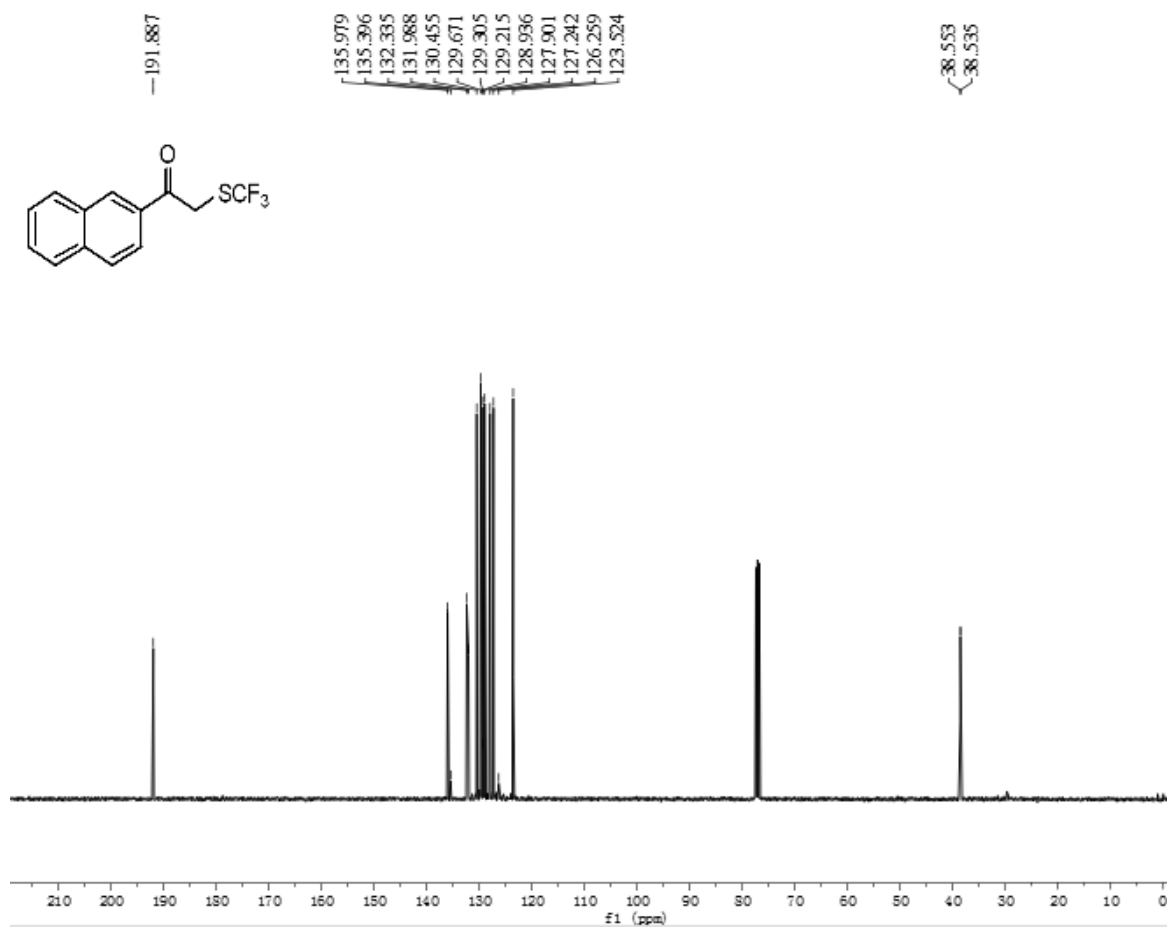
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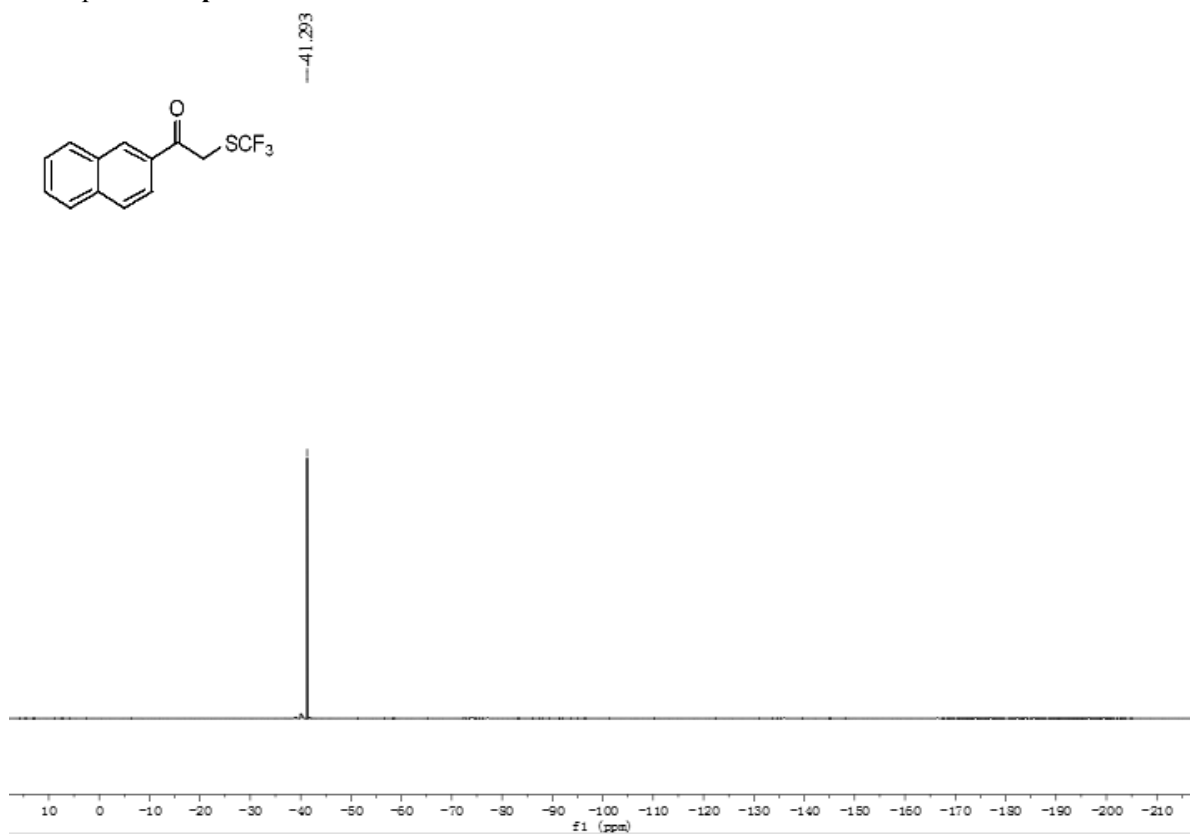
<sup>1</sup>H NMR spectra of **3p**



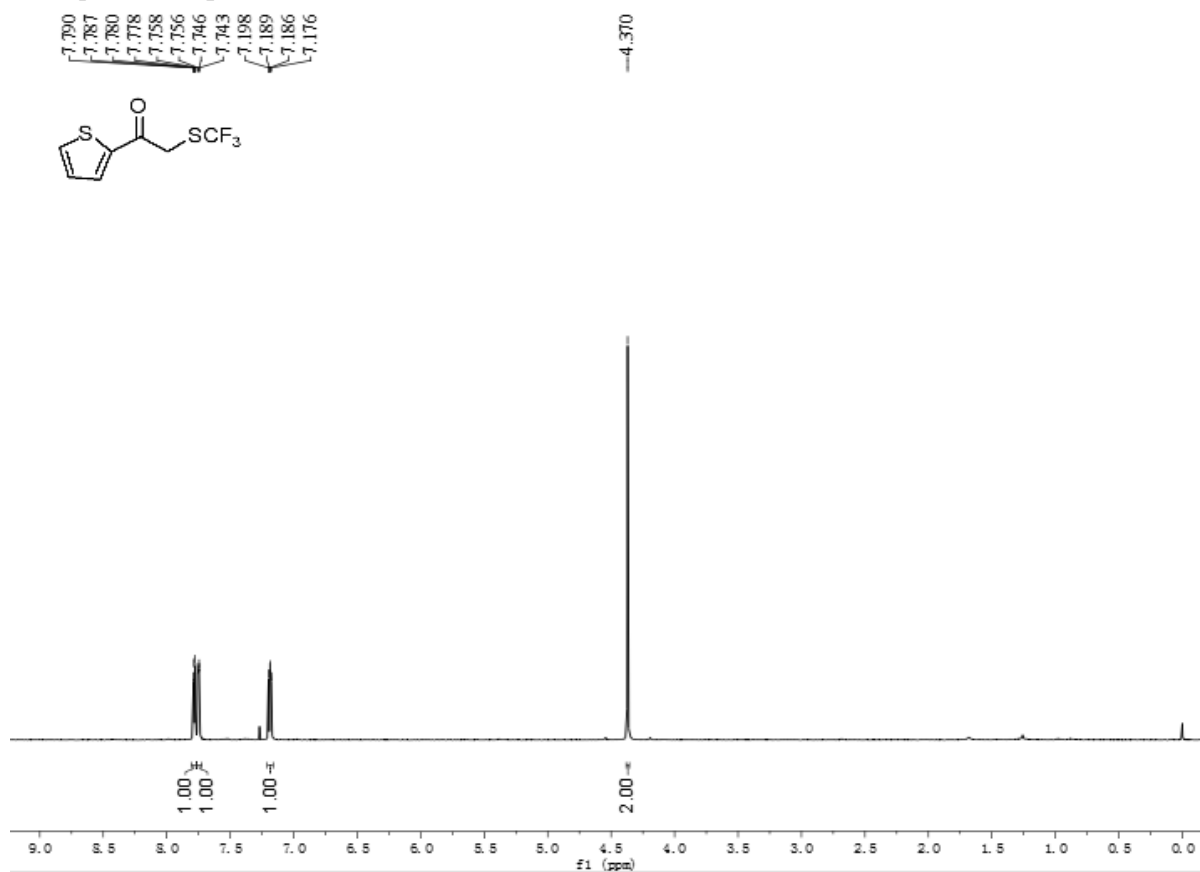
<sup>13</sup>C NMR spectra of **3p**



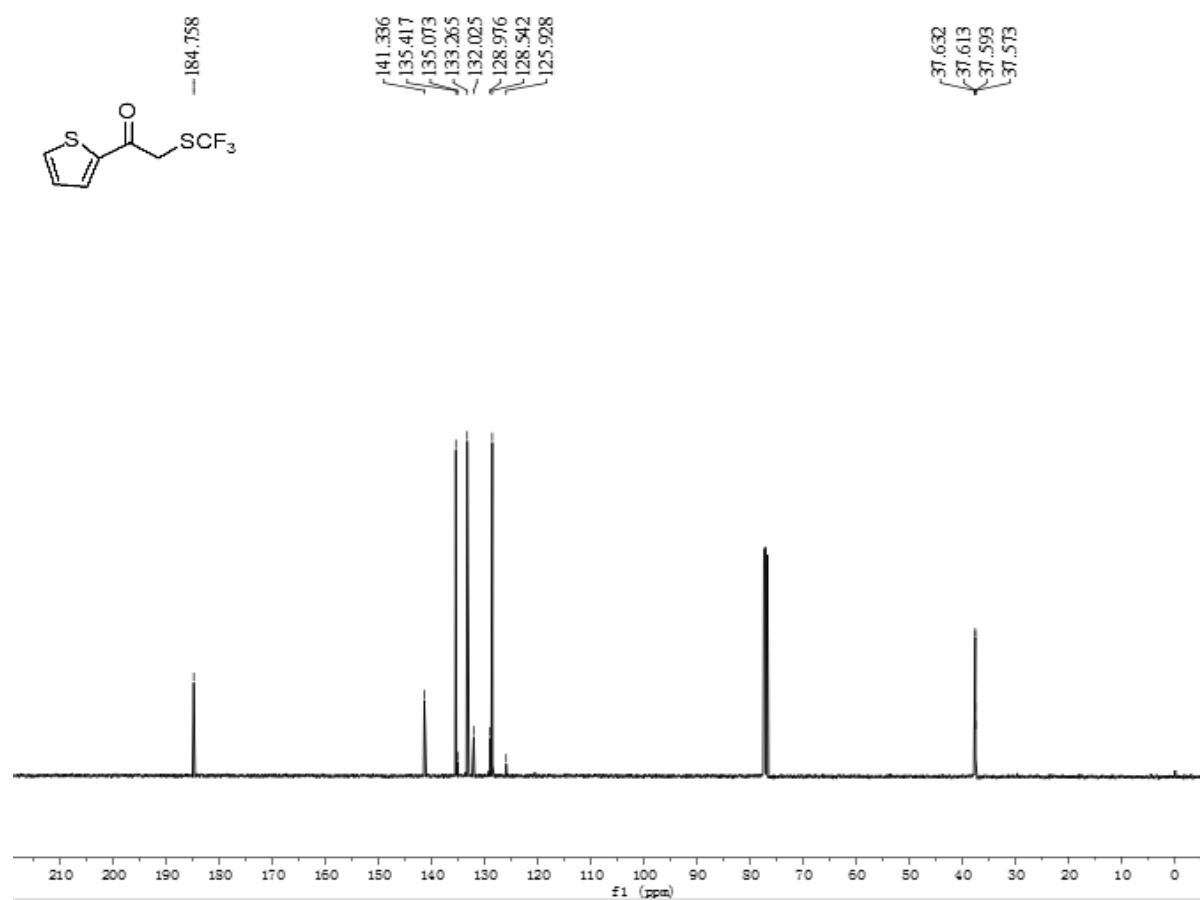
<sup>19</sup>F NMR spectra of **3p**



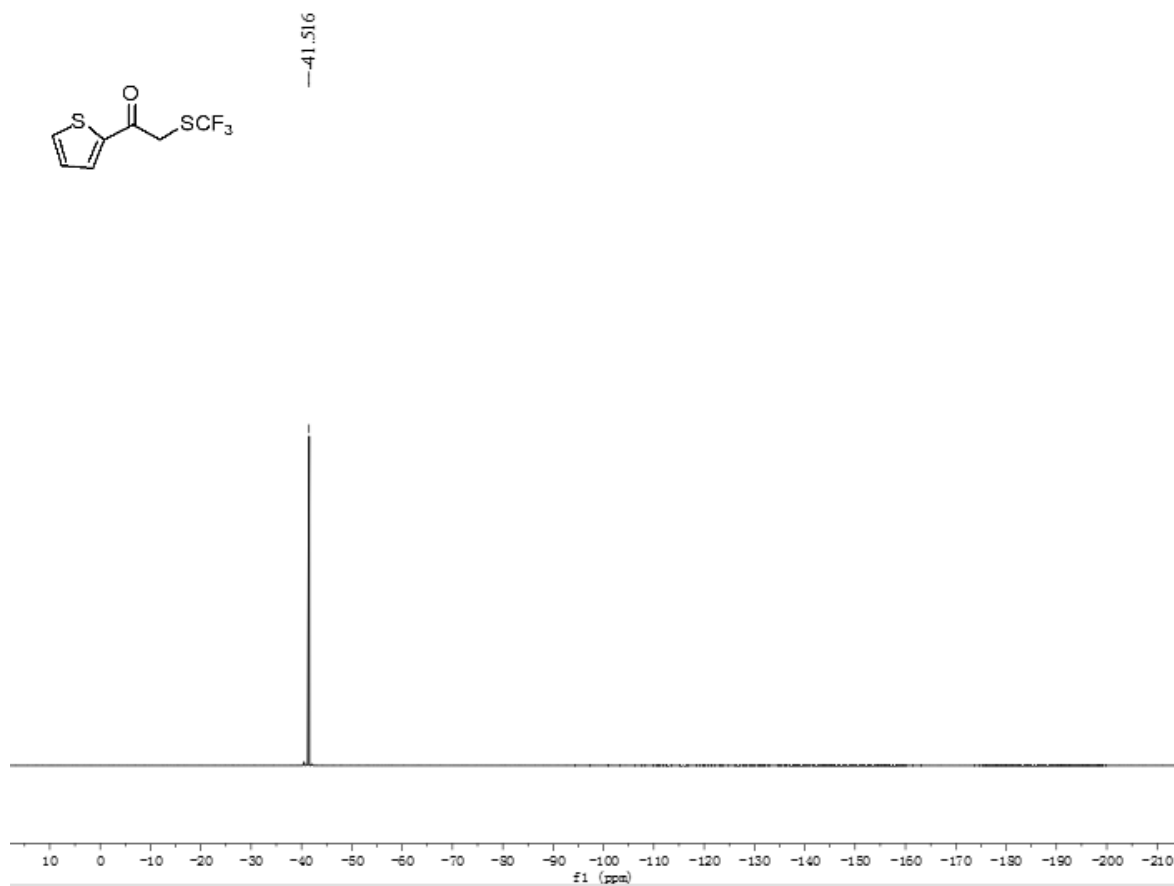
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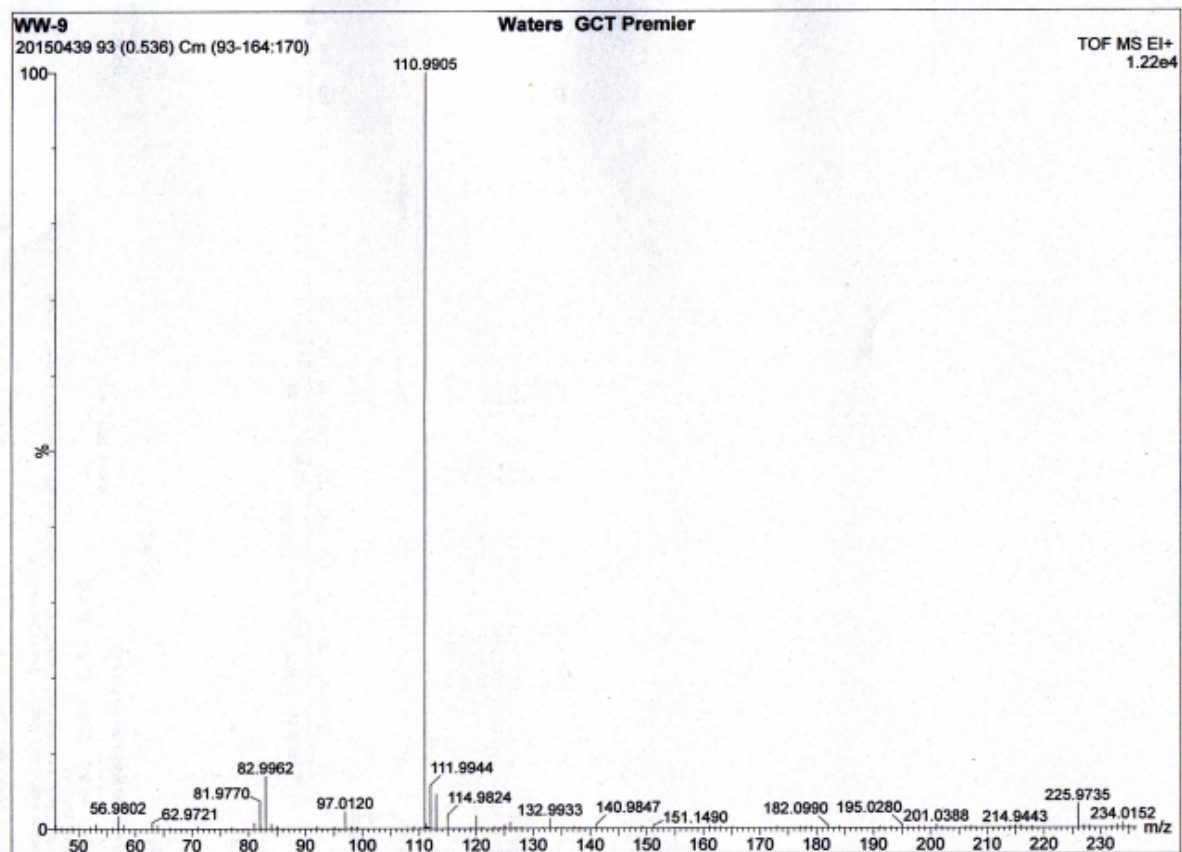
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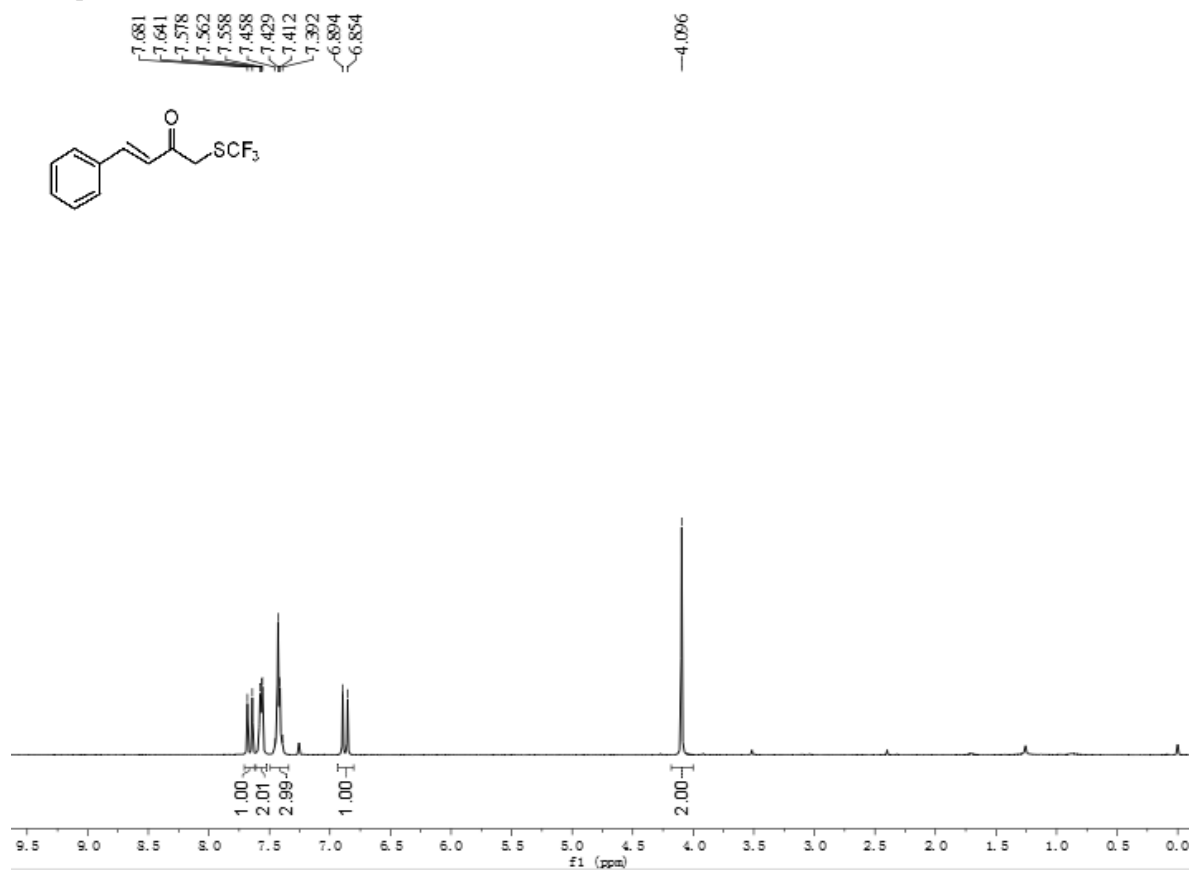
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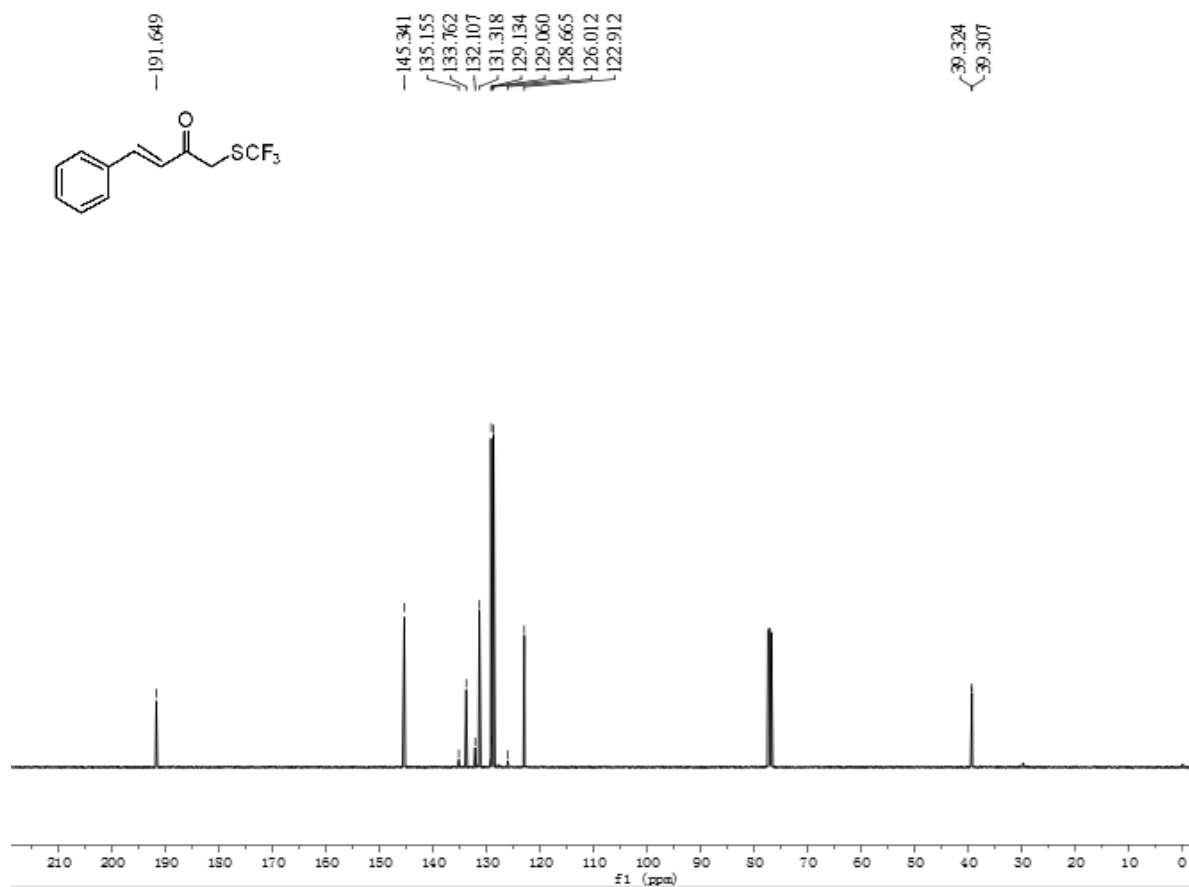
HRMS(EI) spectra of **3q**



<sup>1</sup>H NMR spectra of **3r**

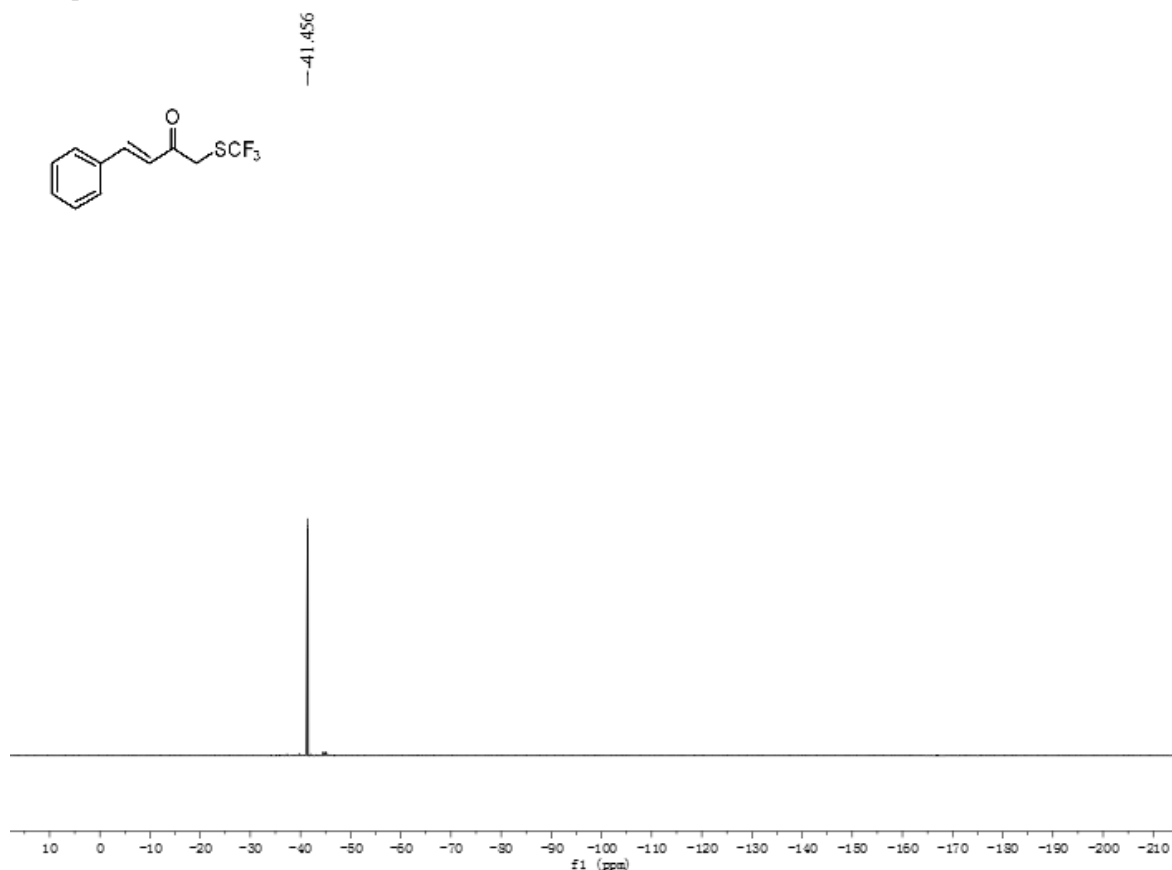


<sup>13</sup>C NMR spectra of **3r**

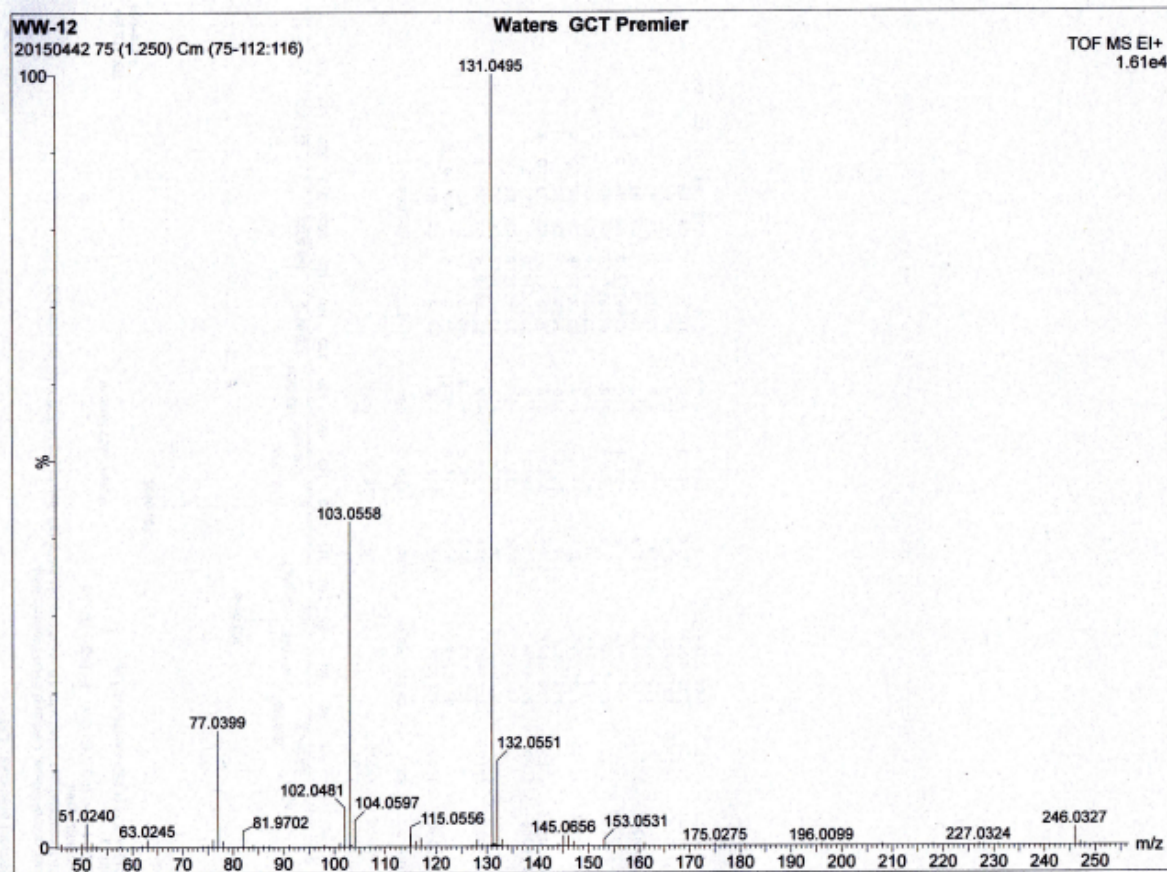




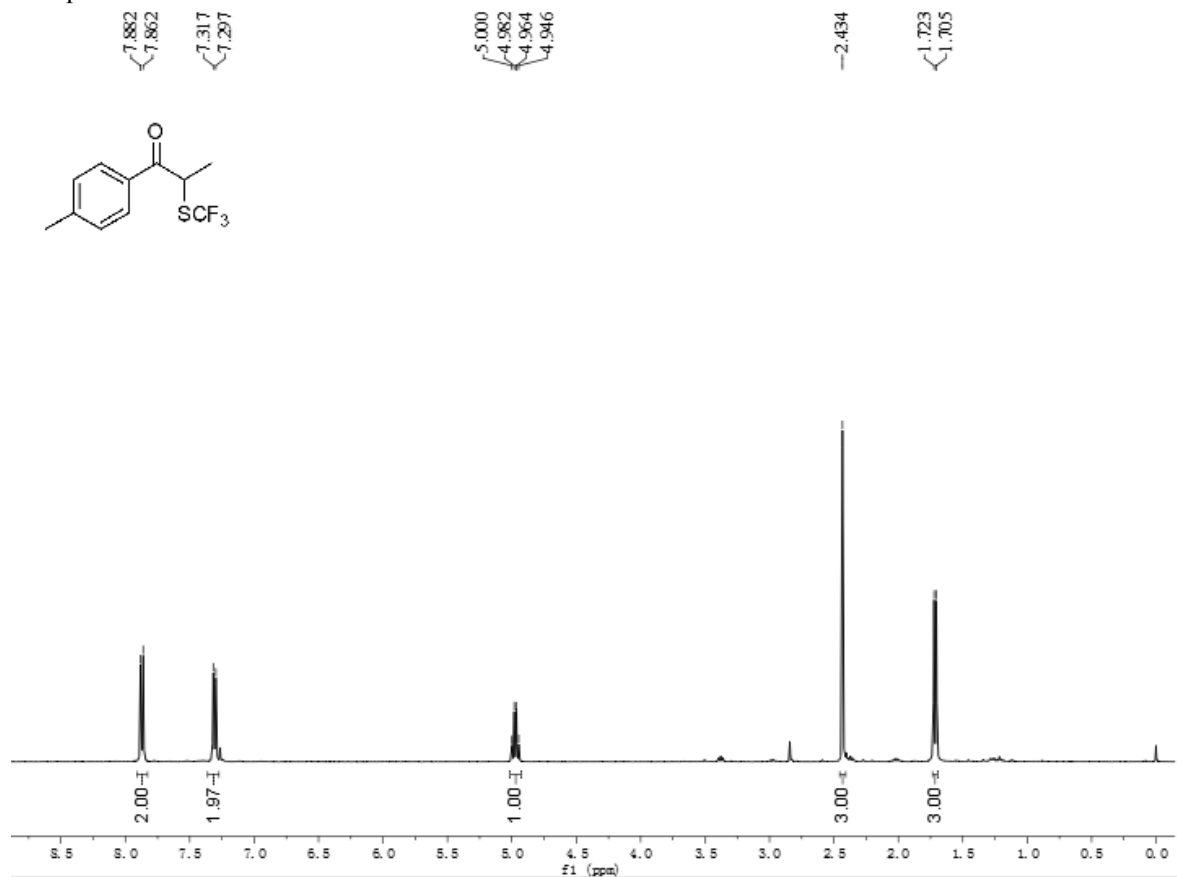
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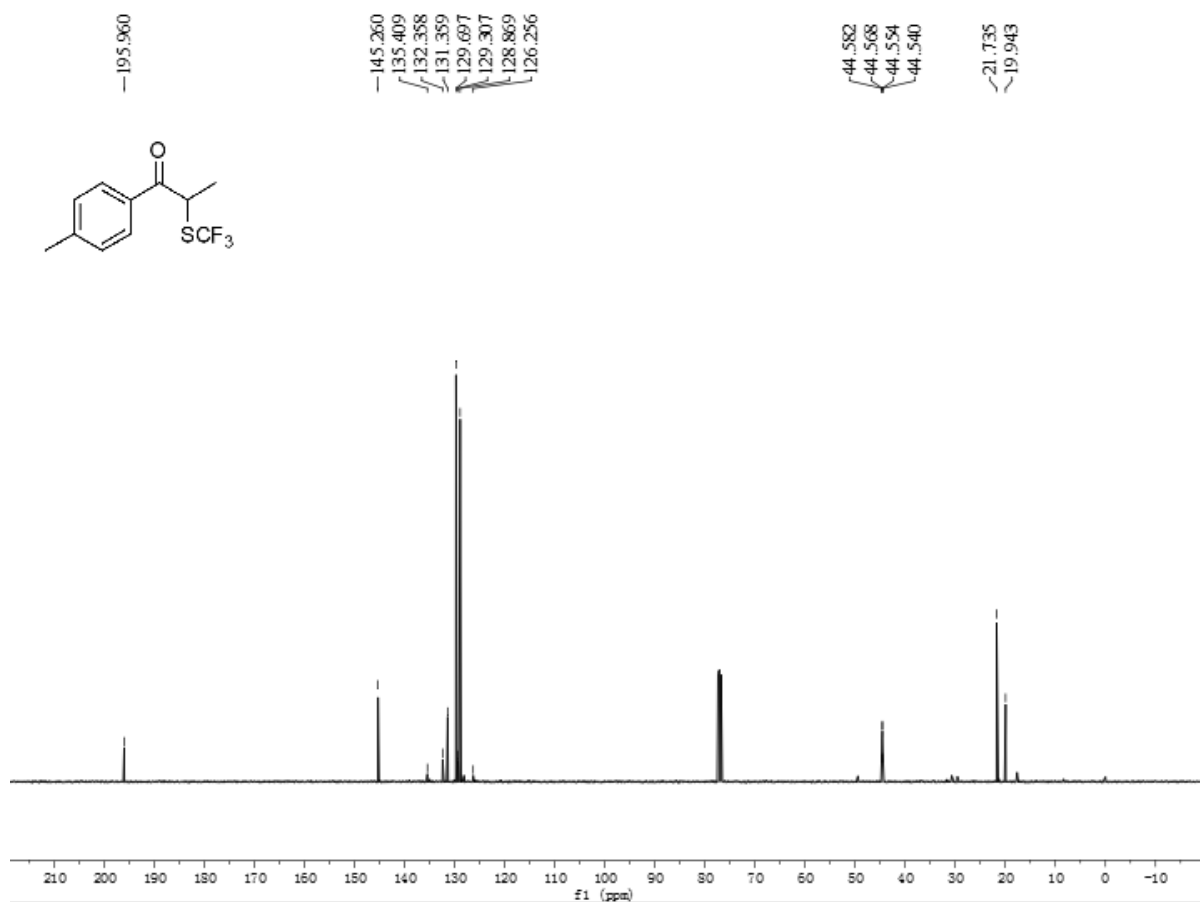
HRMS(EI) spectra of **3r**



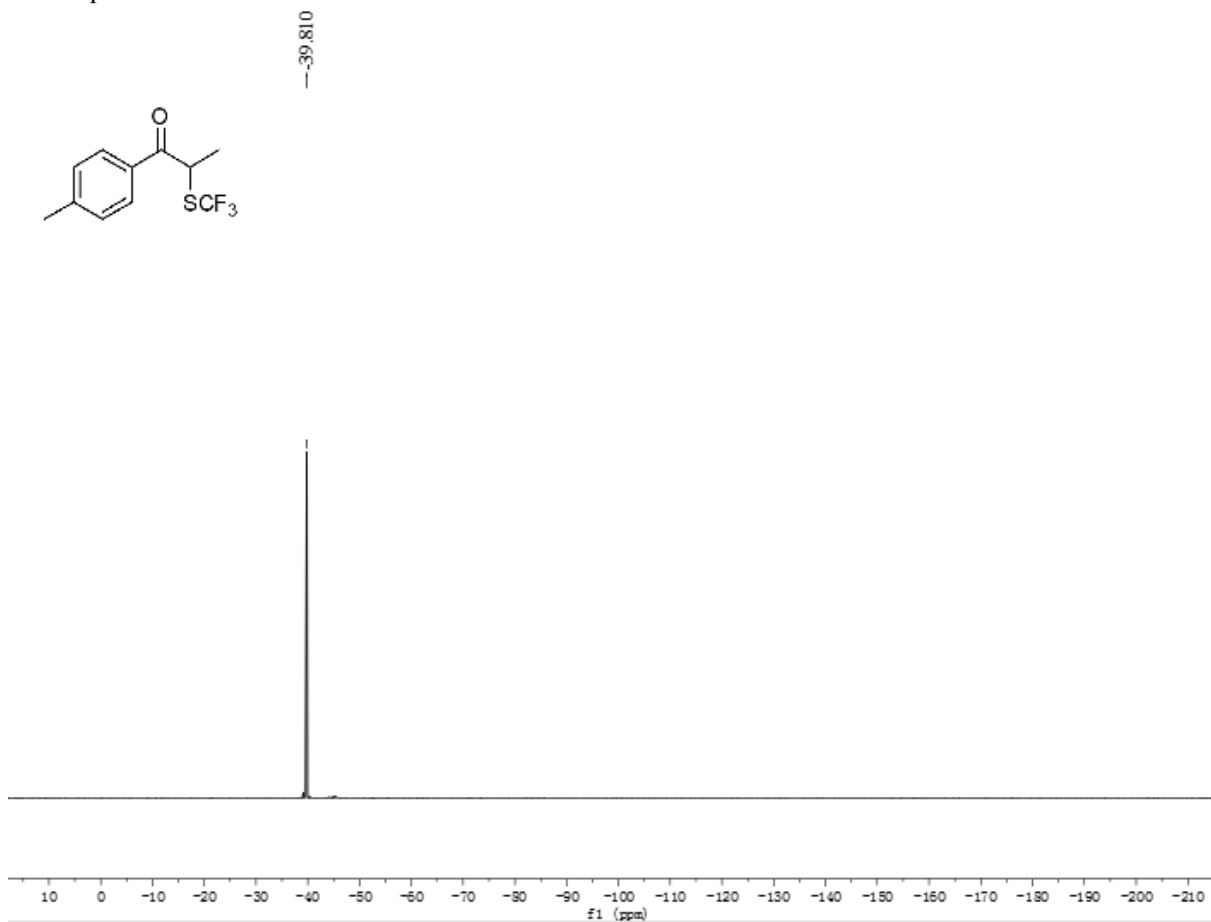
<sup>1</sup>H NMR spectra of **3s**



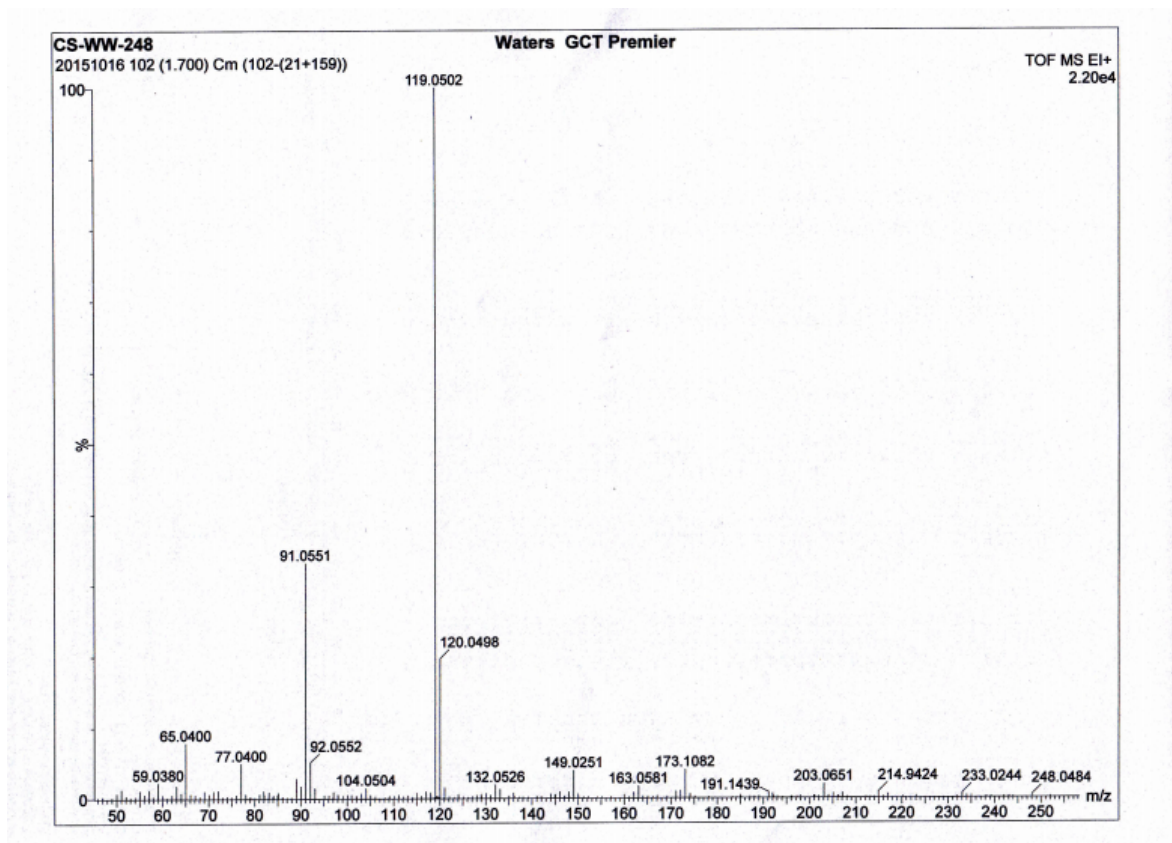
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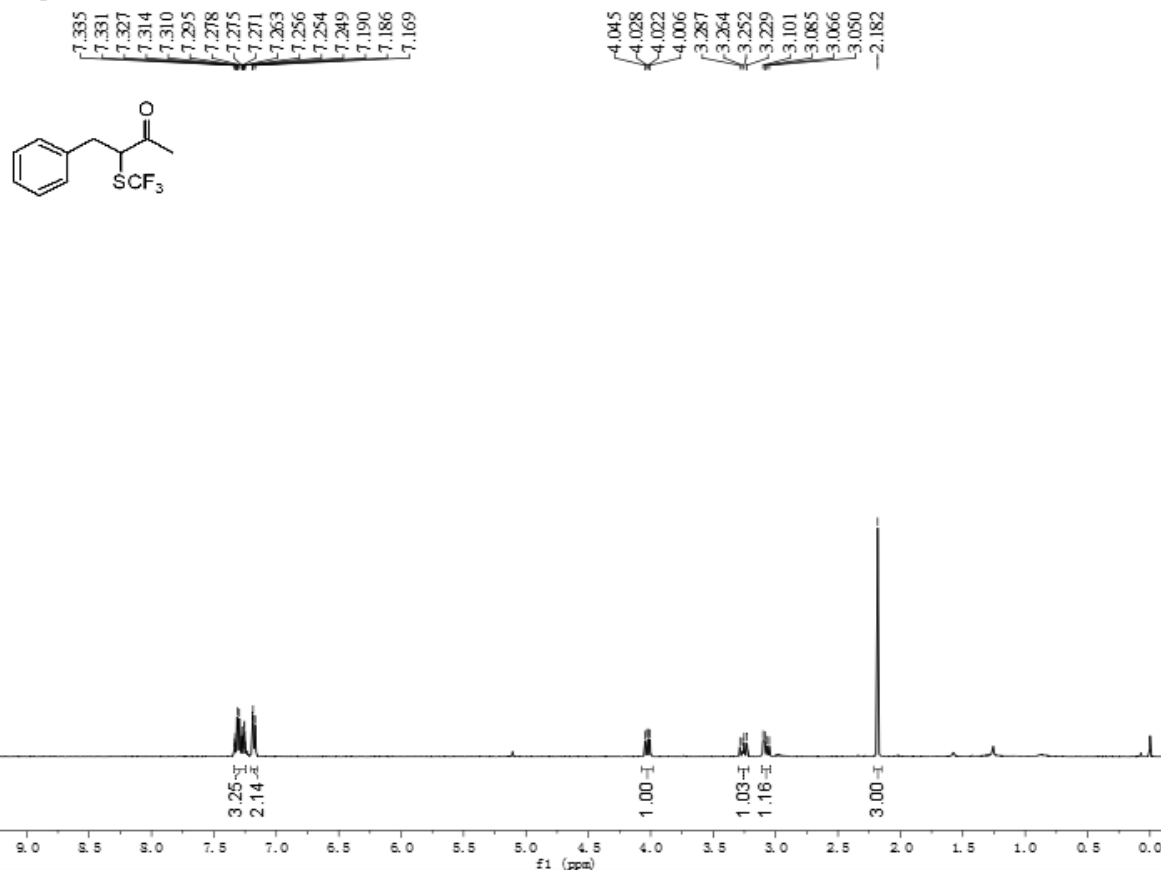
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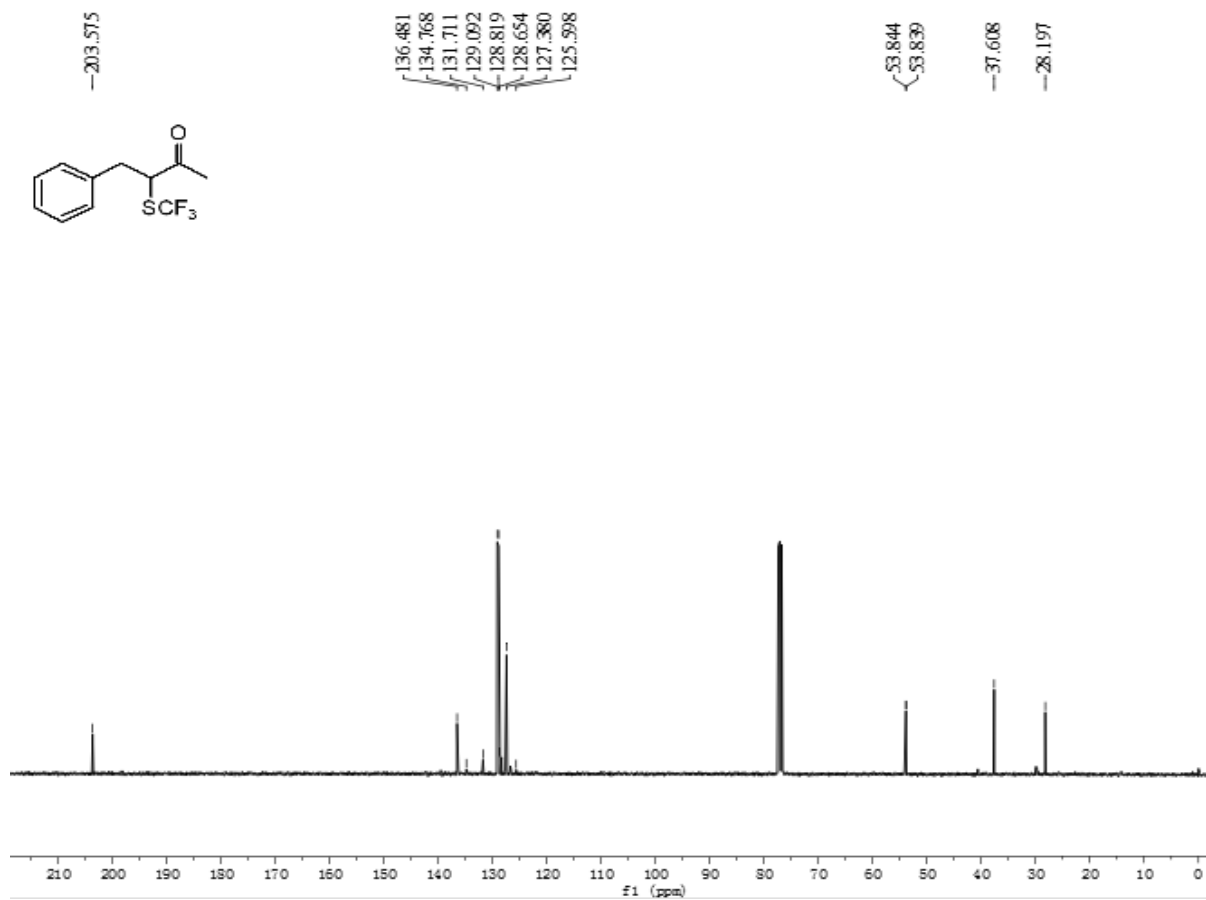
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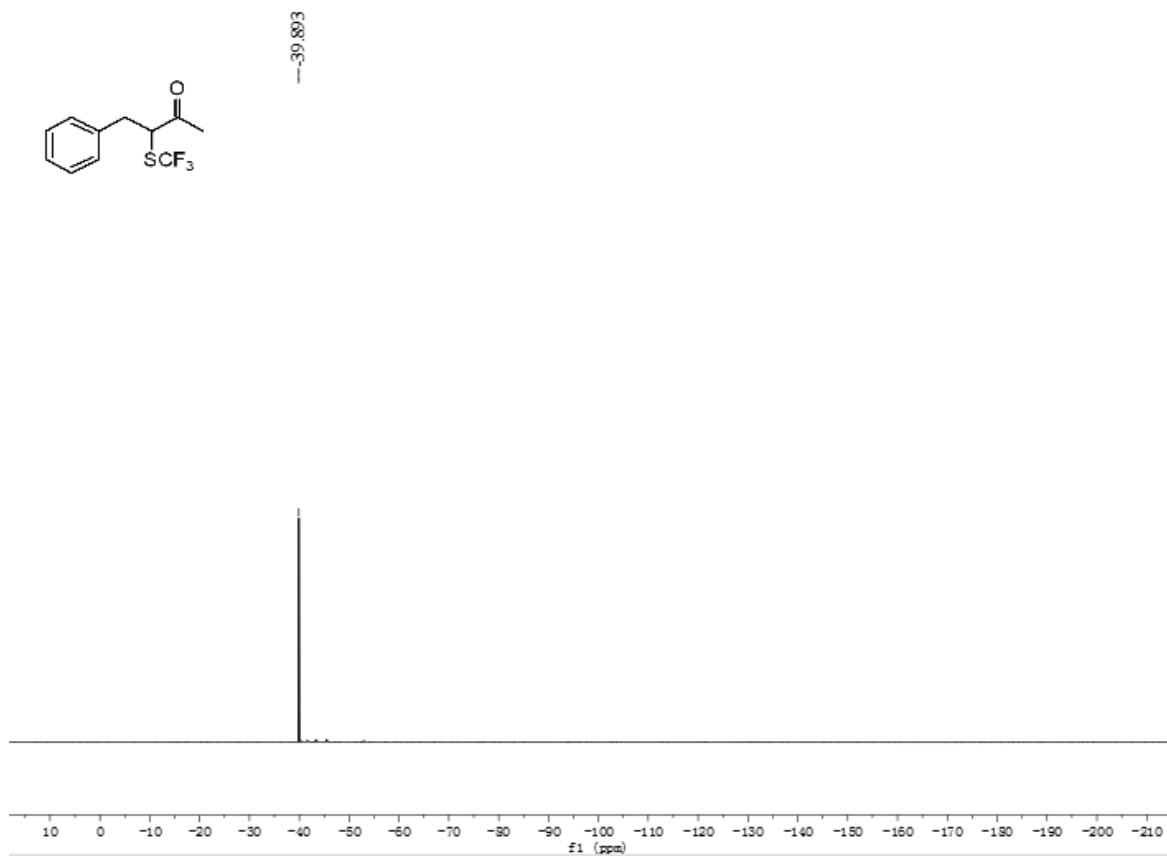
<sup>1</sup>H NMR spectra of **3t**



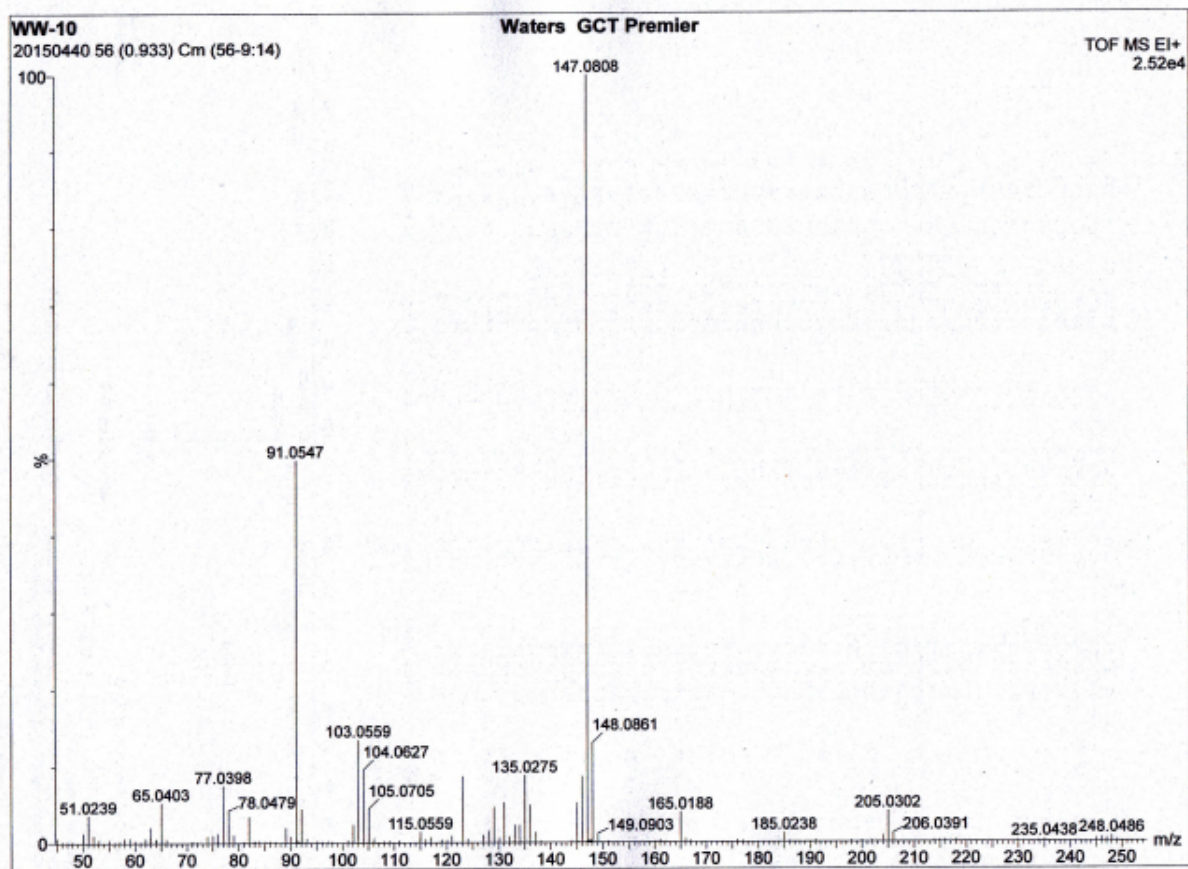
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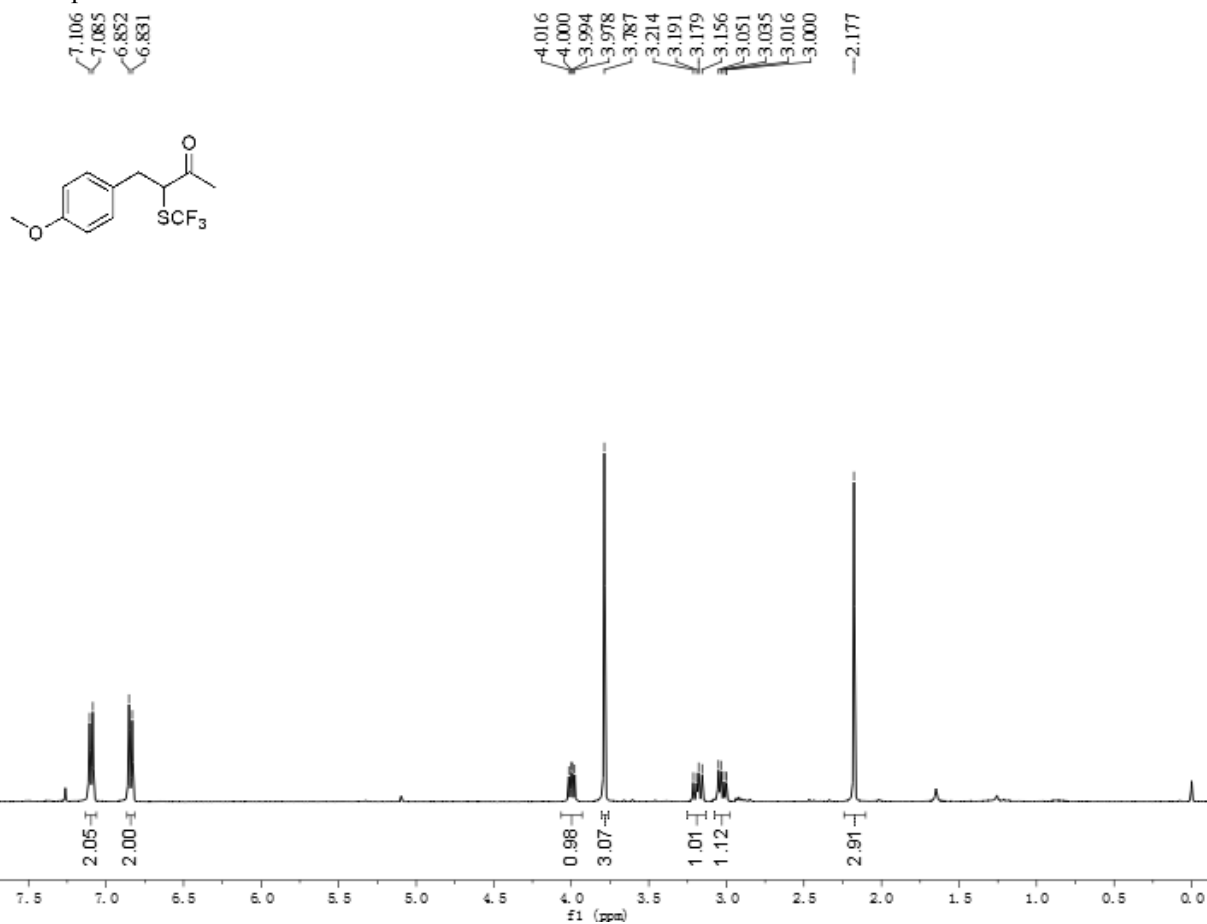
<sup>19</sup>F NMR spectra of **3t**



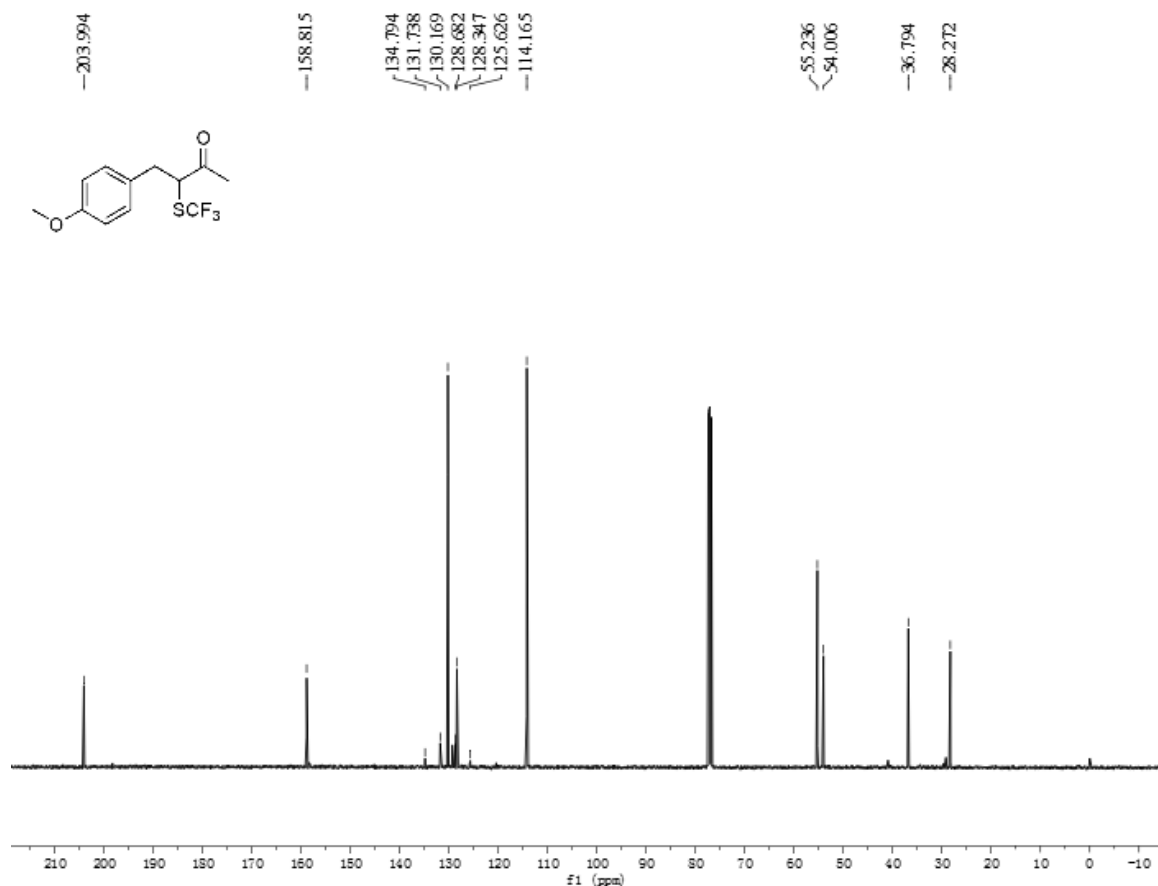
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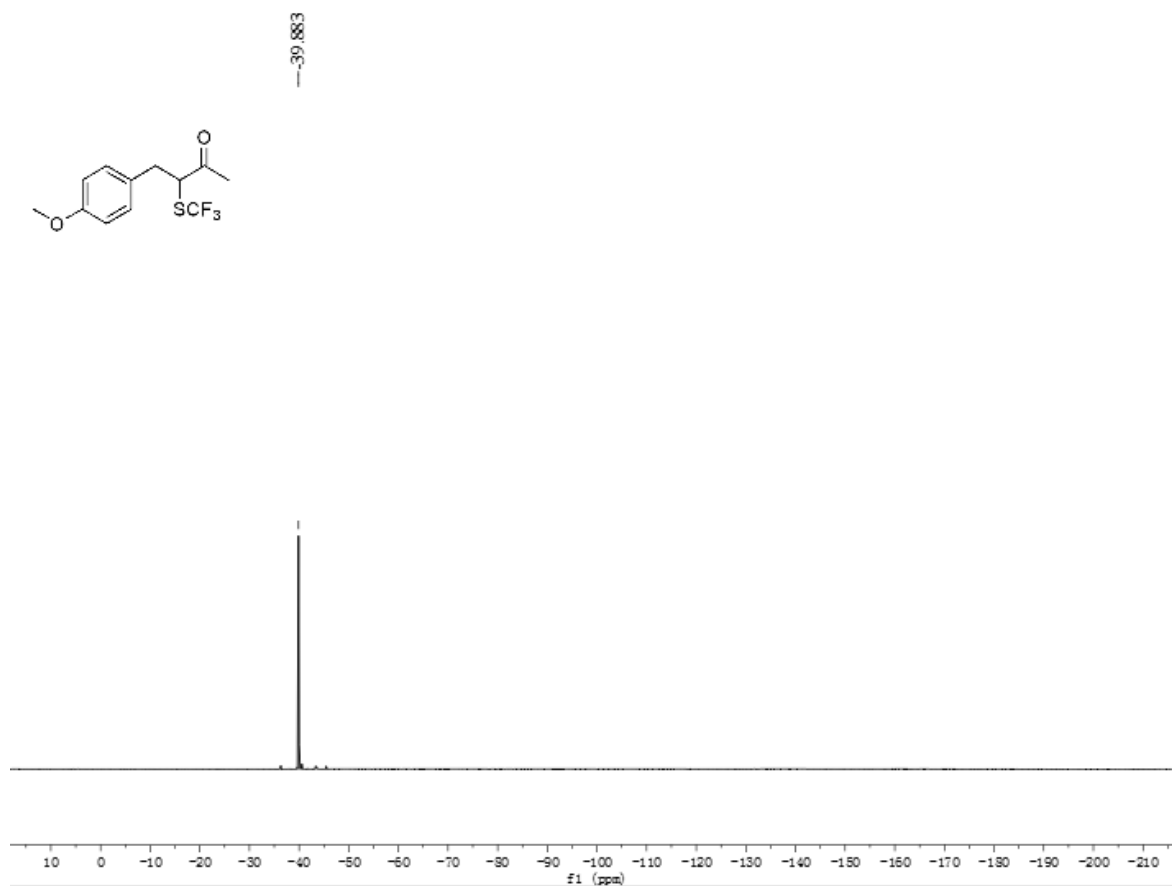
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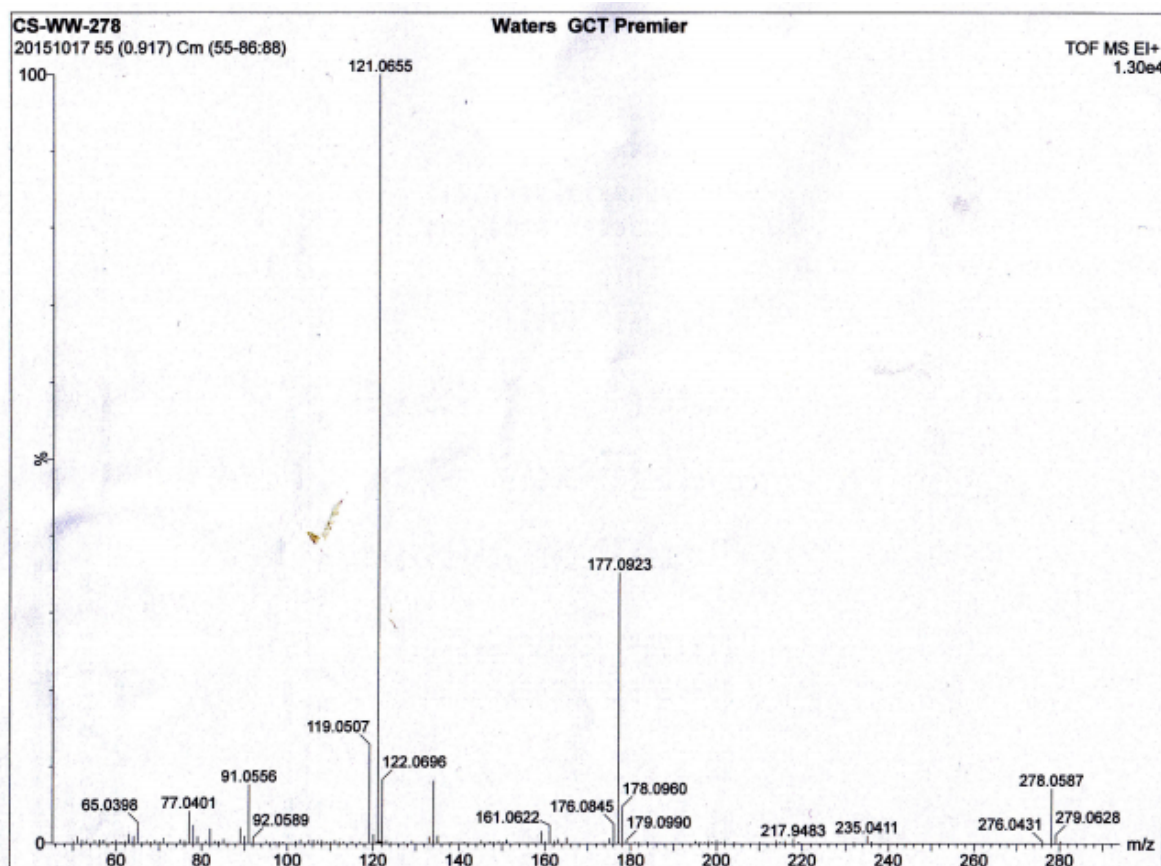
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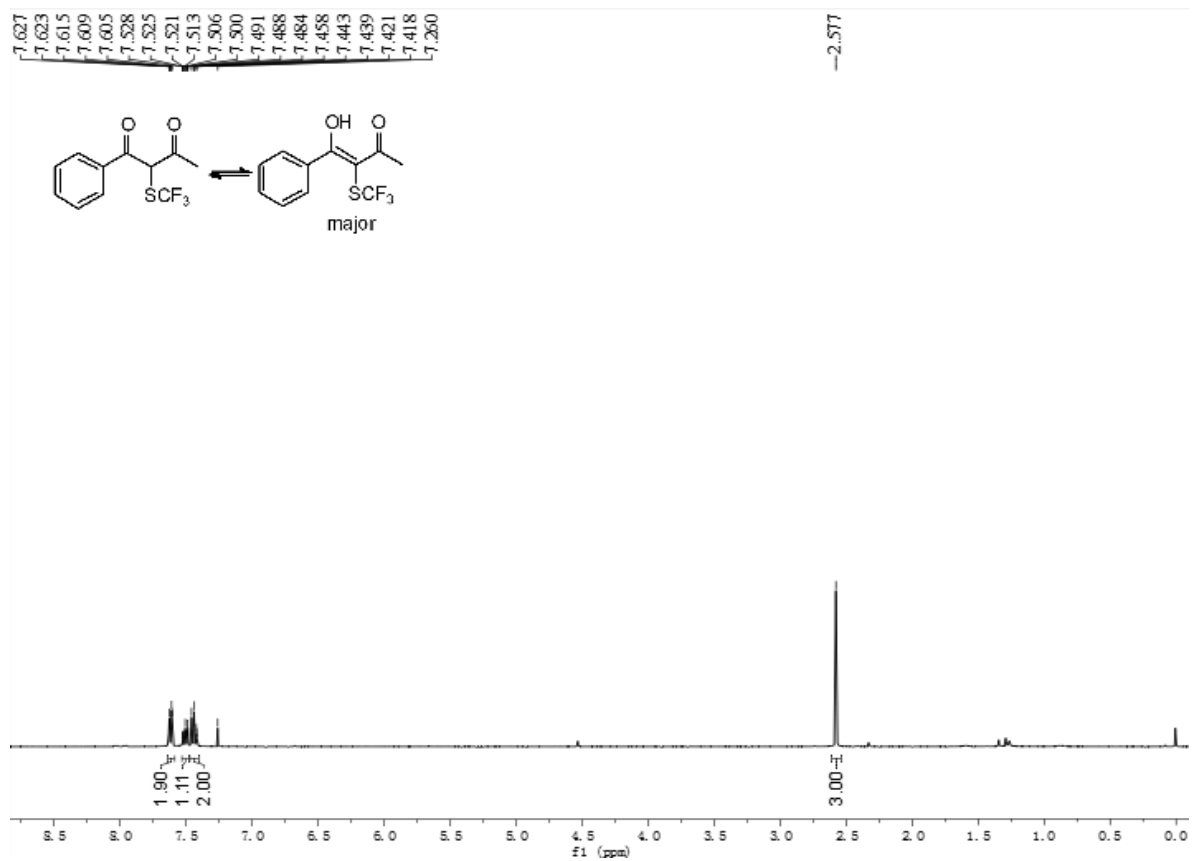
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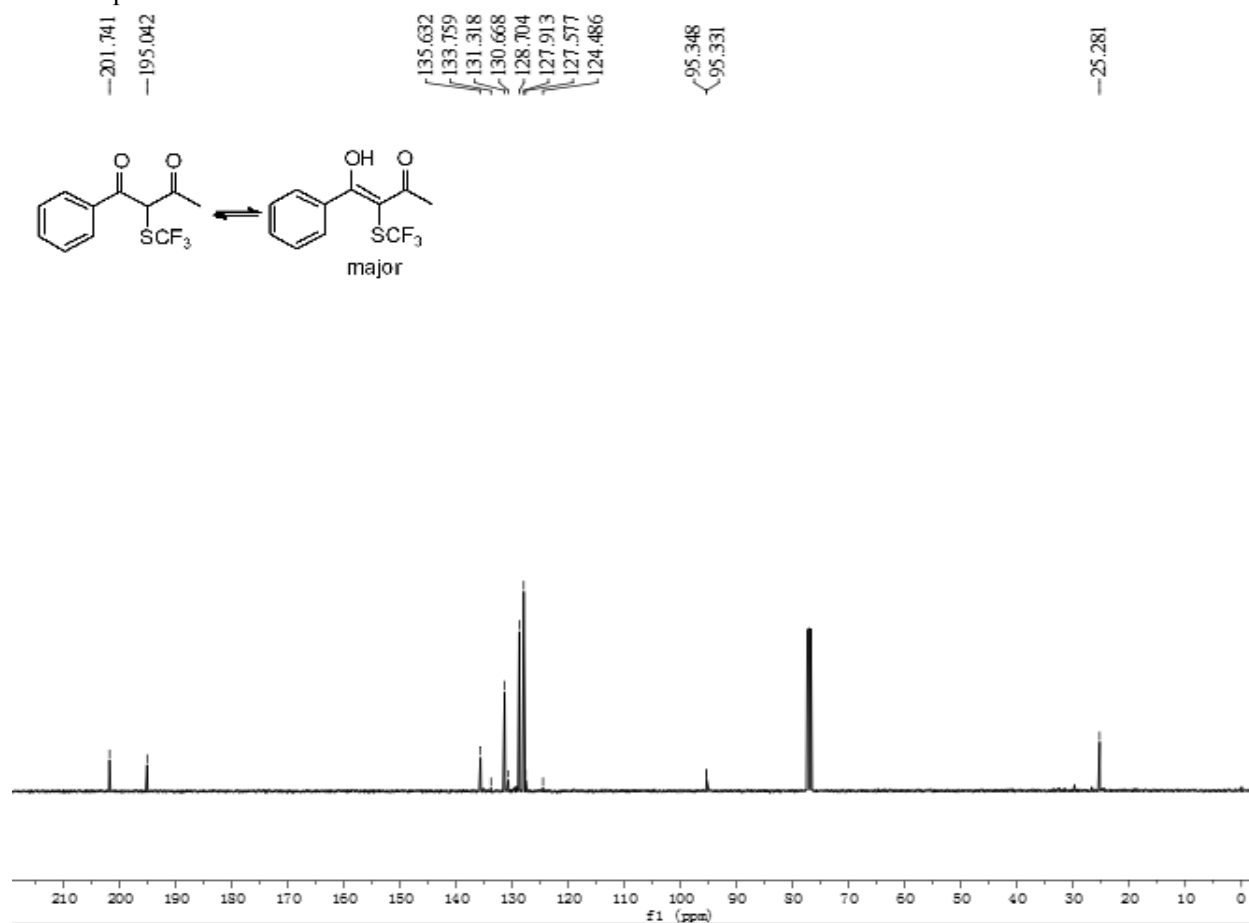
HRMS(EI) spectra of **3u**



<sup>1</sup>H NMR spectra of **3v**

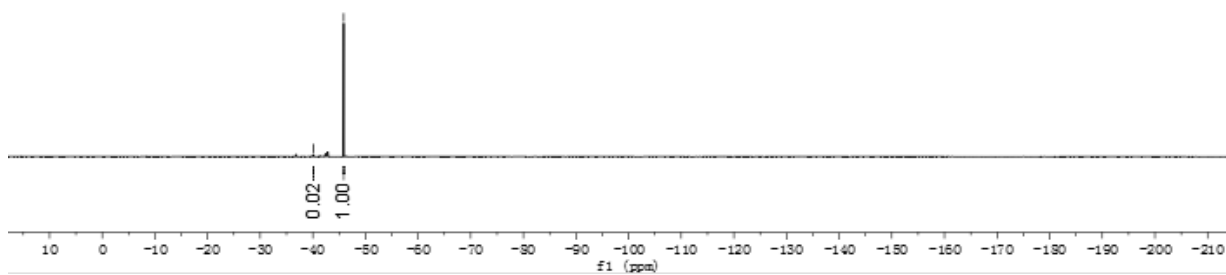
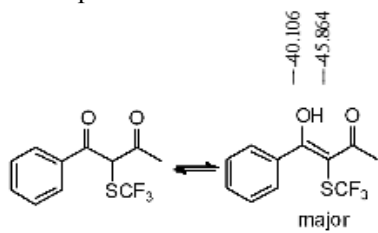


<sup>13</sup>C NMR spectra of **3v**

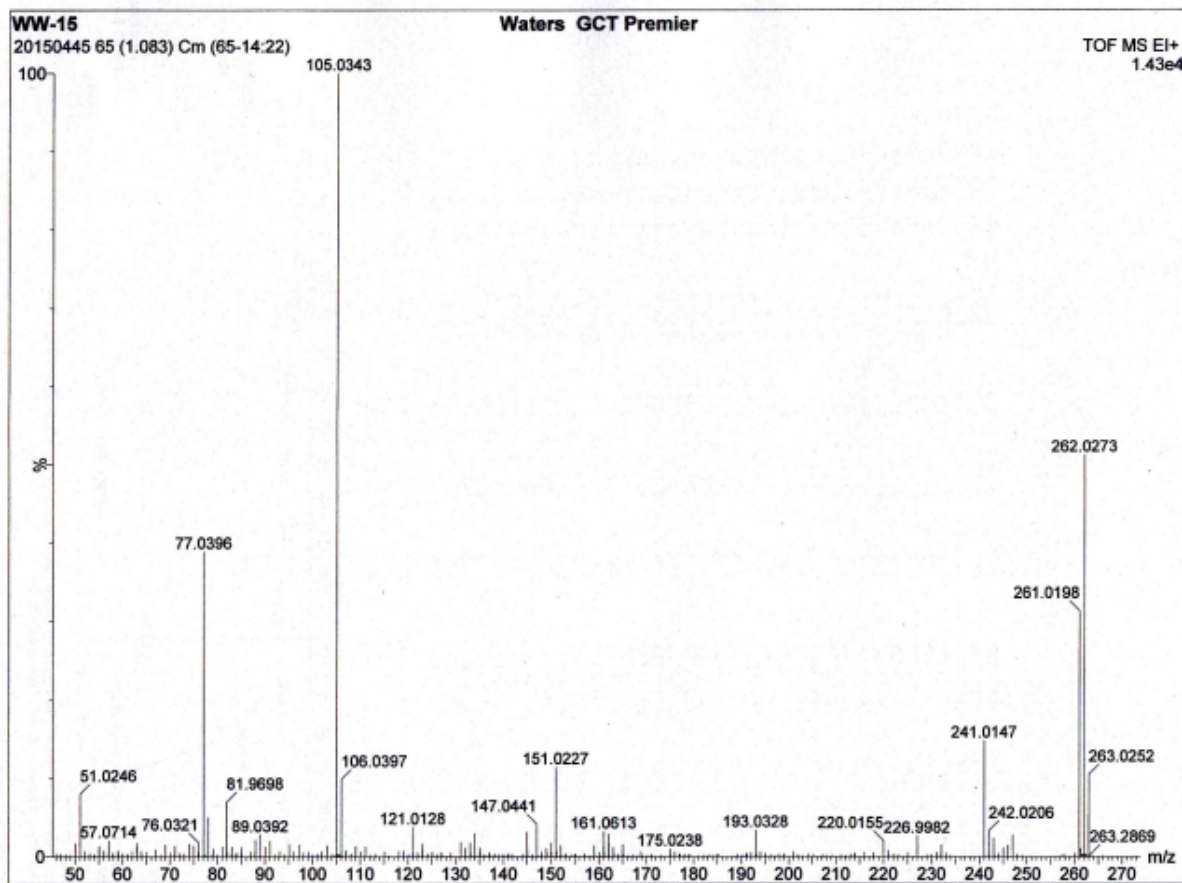




$^{19}\text{F}$  NMR spectra of **3v**



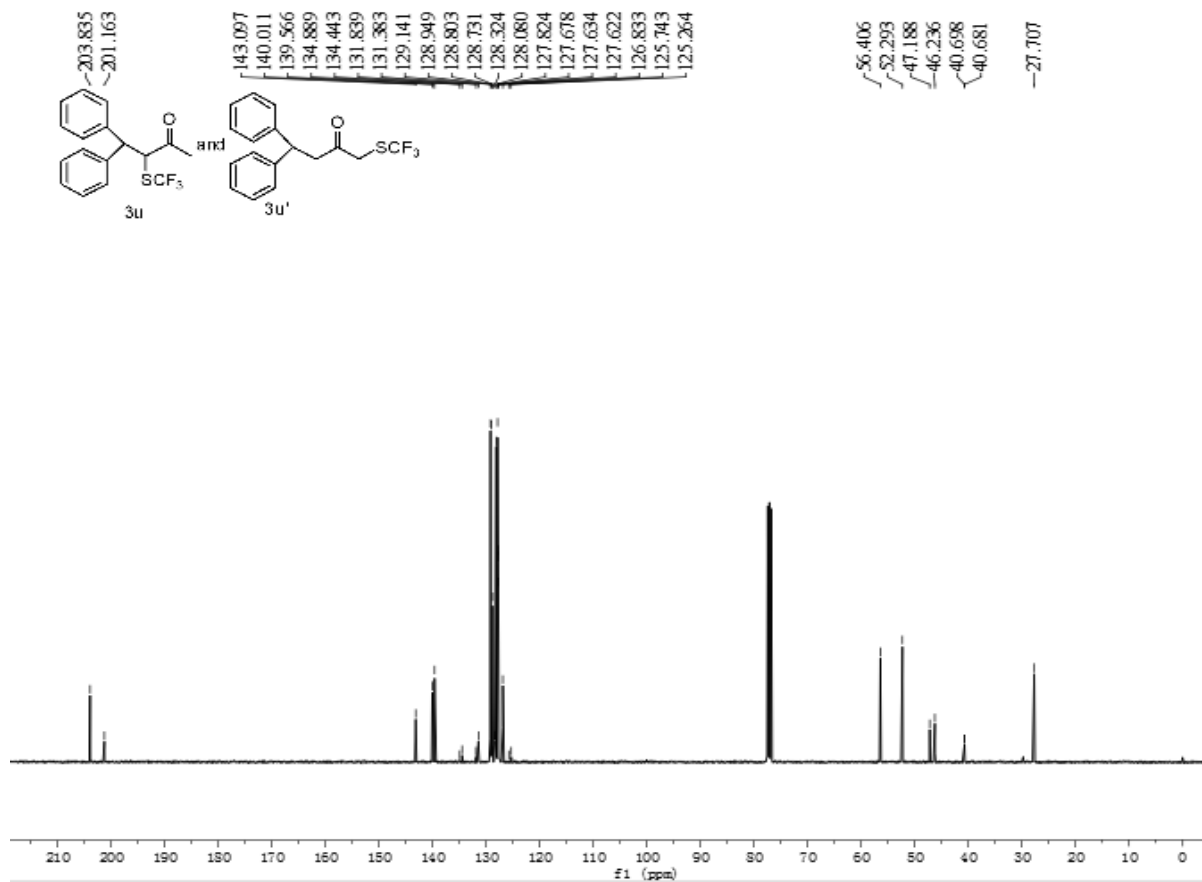
HRMS(EI) spectra of **3v**



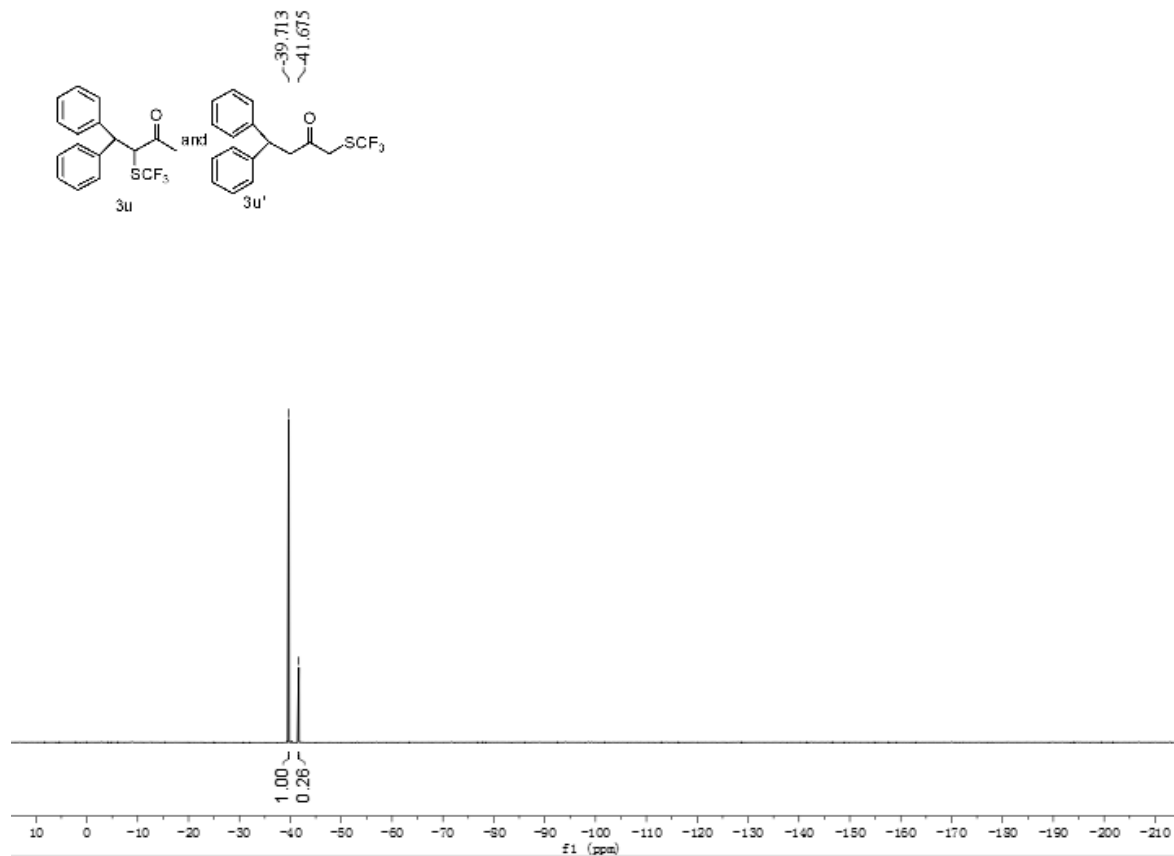
<sup>1</sup>H NMR spectra of **3w** and **3w'**



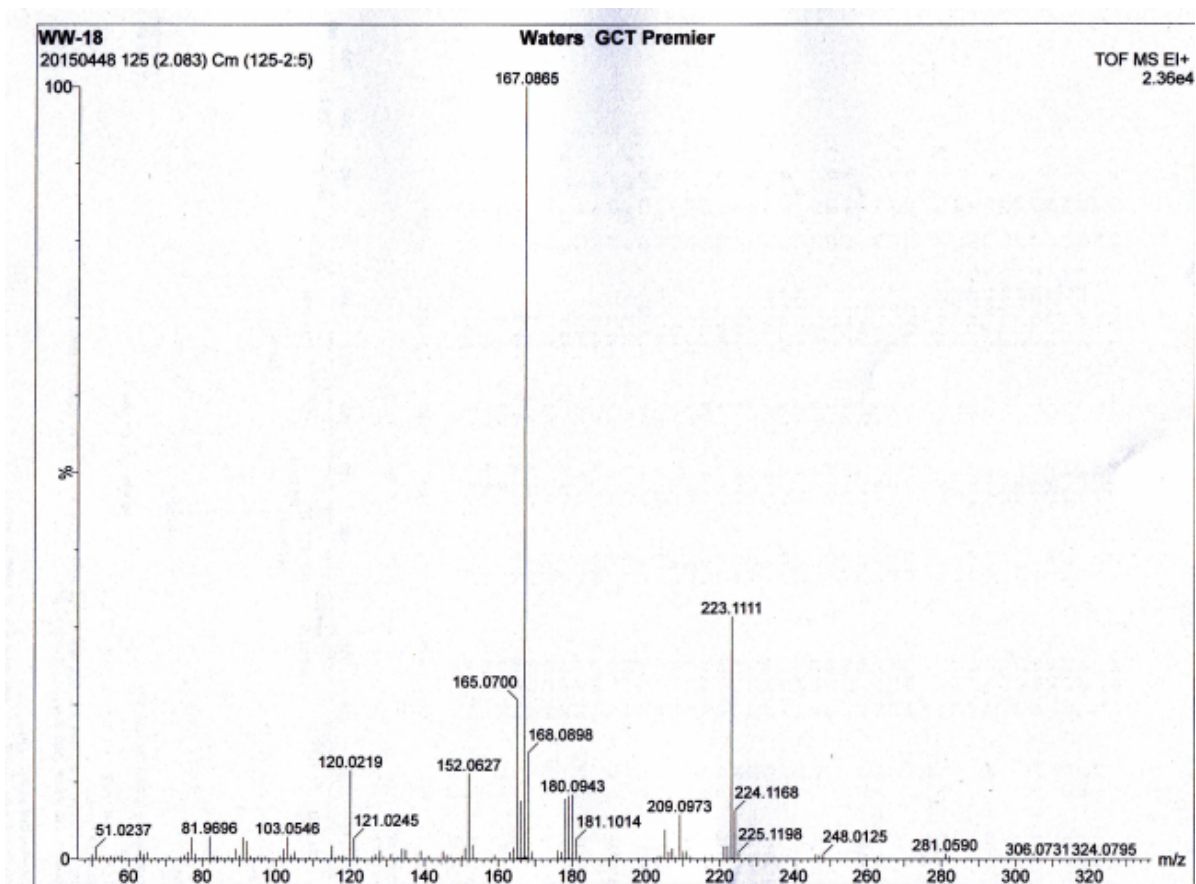
<sup>13</sup>C NMR spectra of **3w** and **3w'**



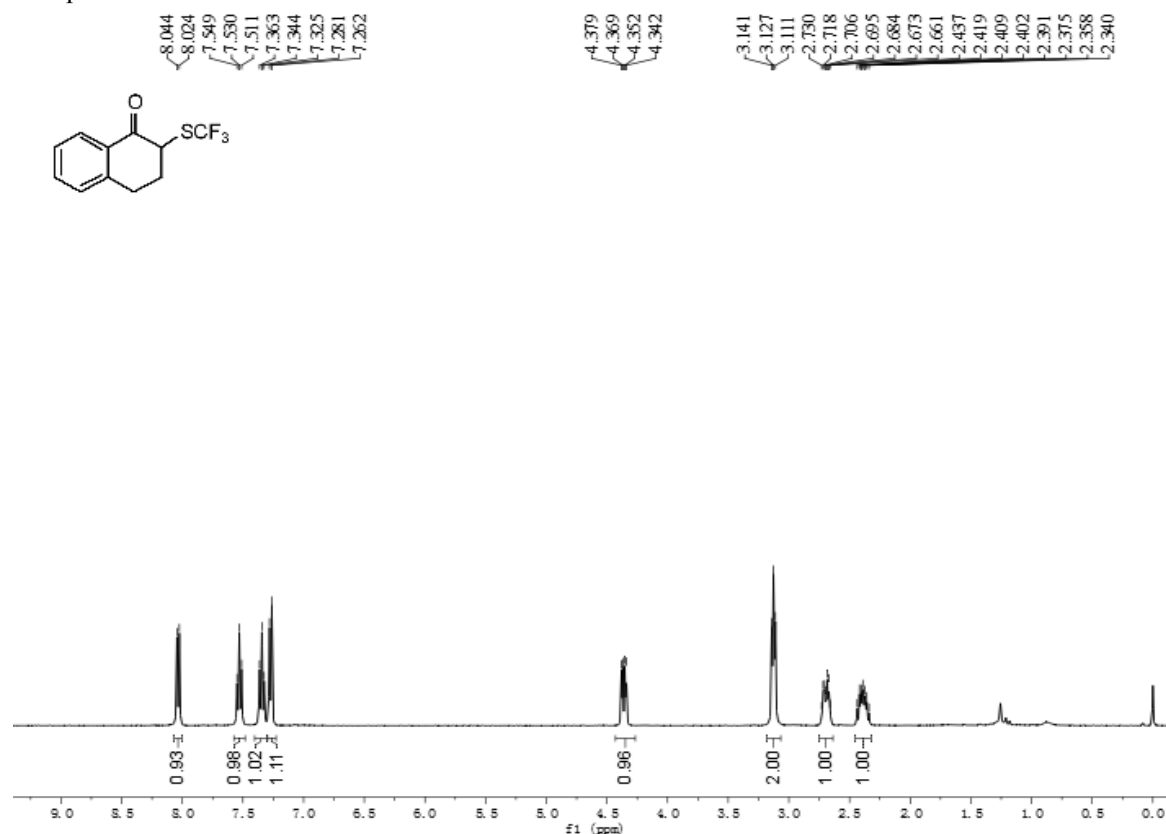
<sup>19</sup>F NMR spectra of **3w** and **3w'**



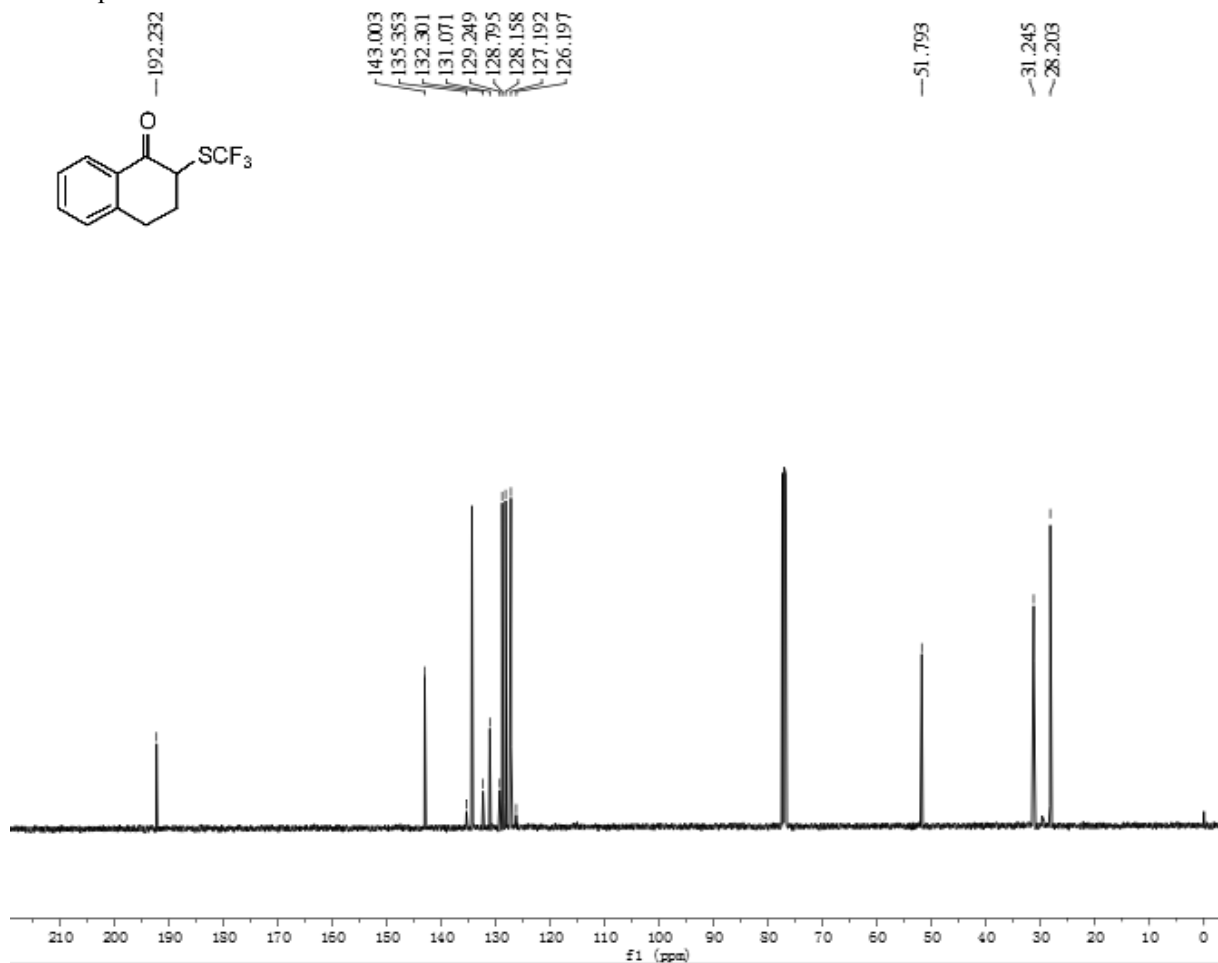
HRMS(EI) spectra of **3w** and **3w'**



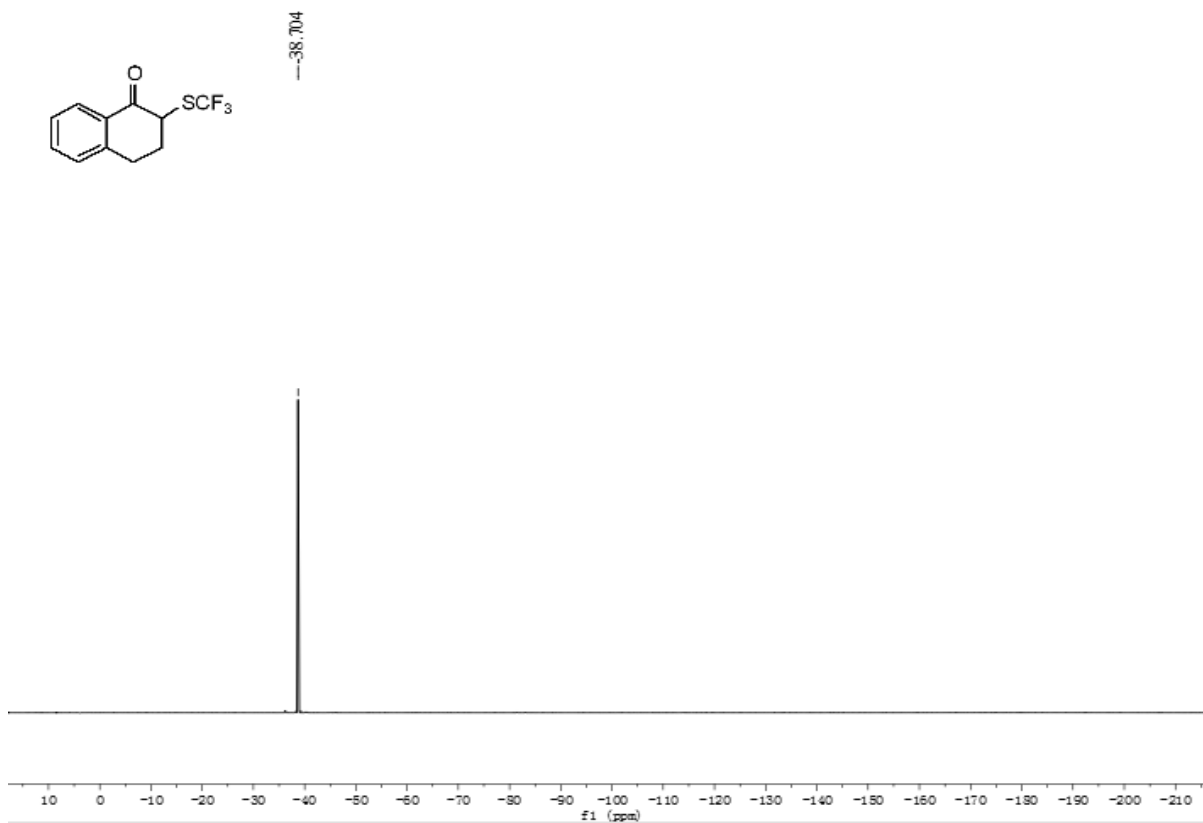
<sup>1</sup>H NMR spectra of **3x**



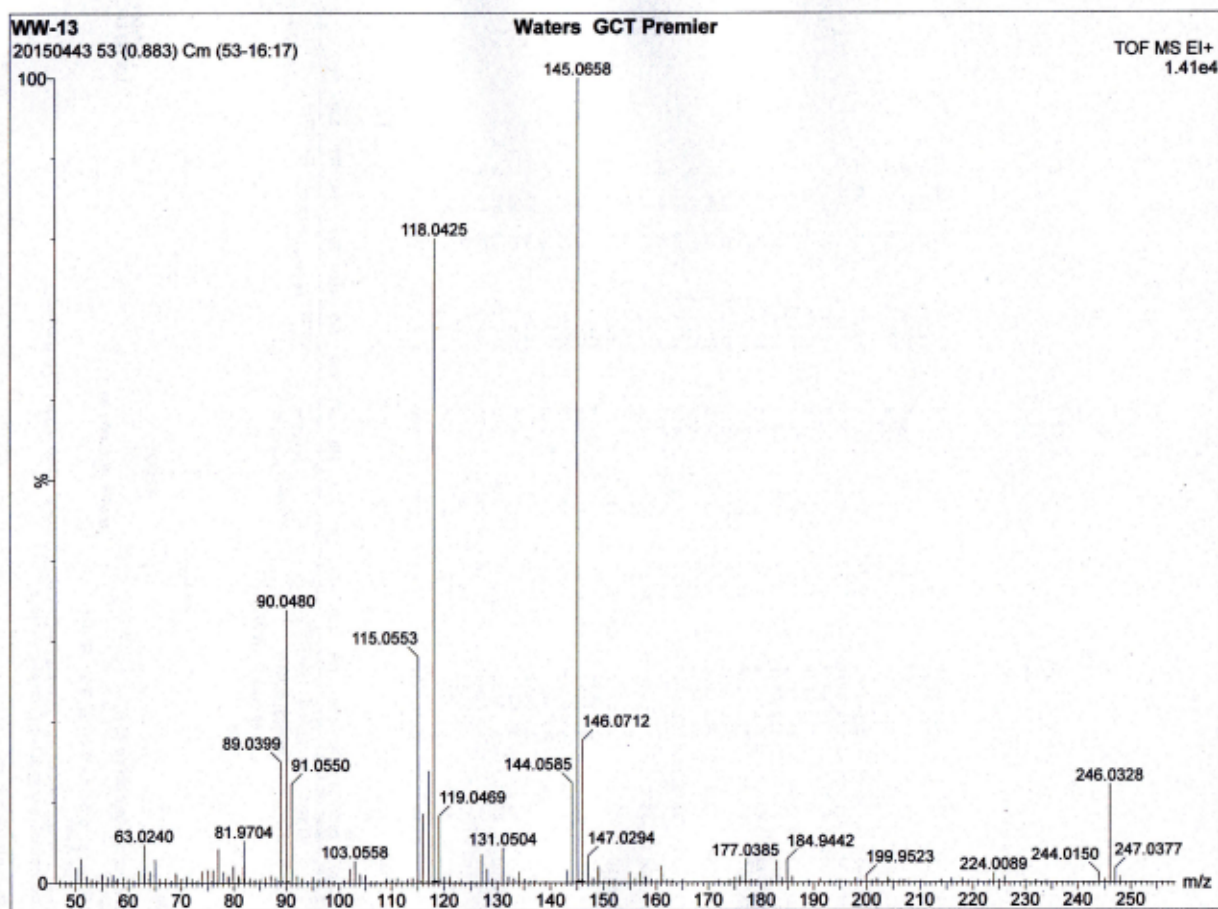
<sup>13</sup>C NMR spectra of **3x**



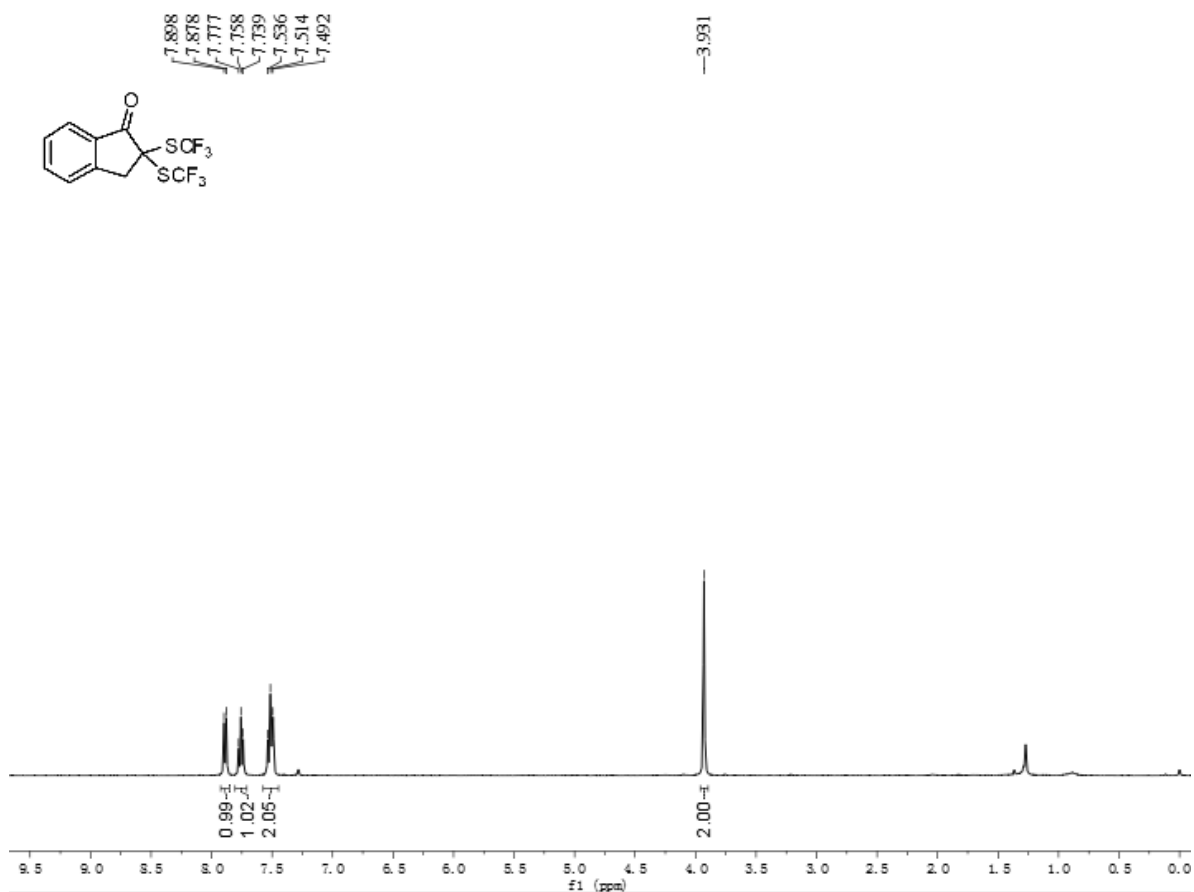
$^{19}\text{F}$  NMR spectra of **3x**



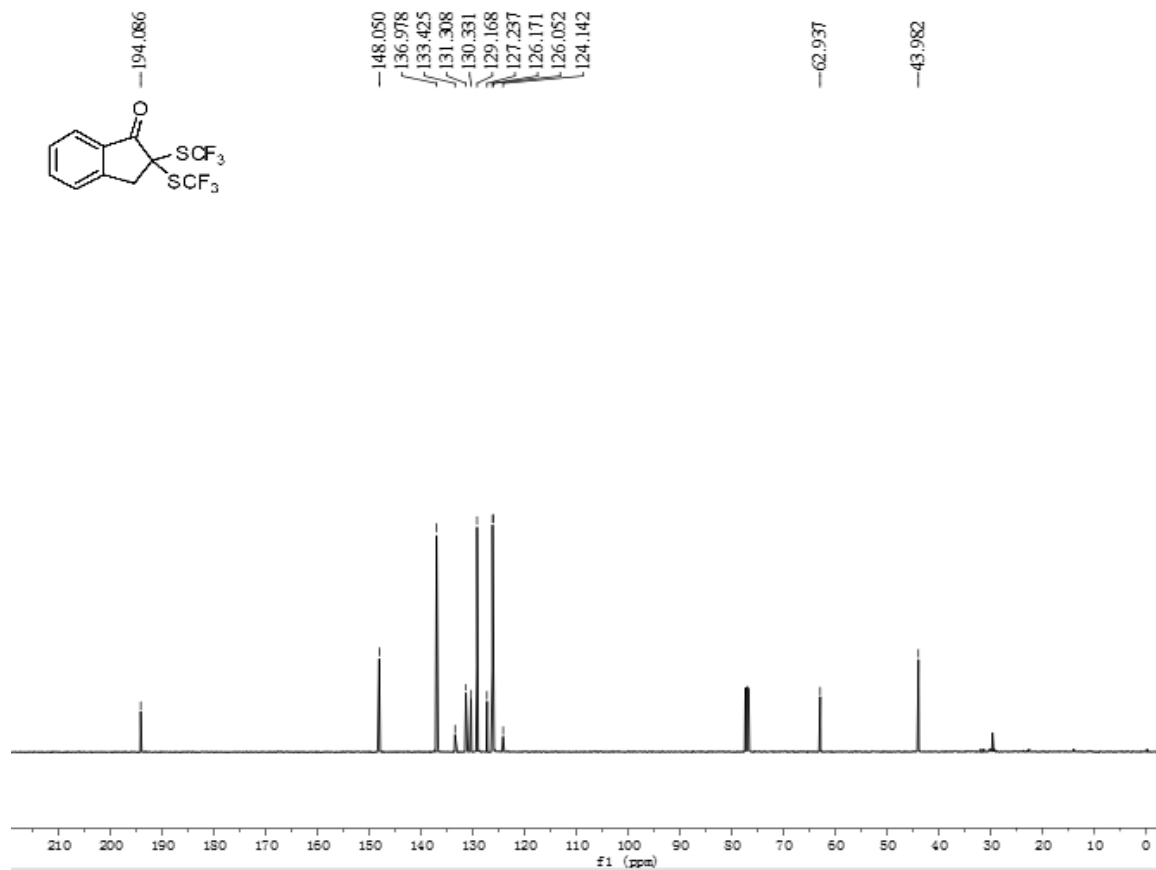
HRMS(EI) spectra of **3x**



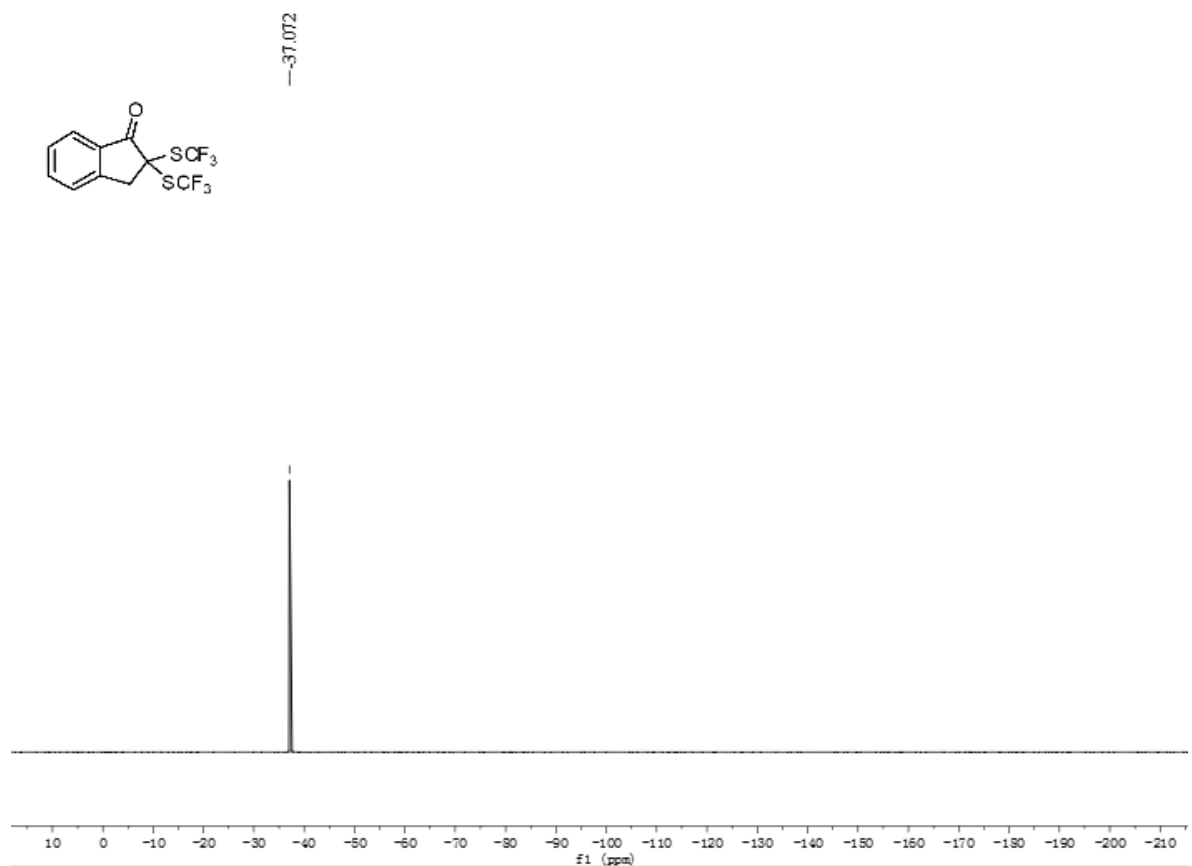
<sup>1</sup>H NMR spectra of **3y**



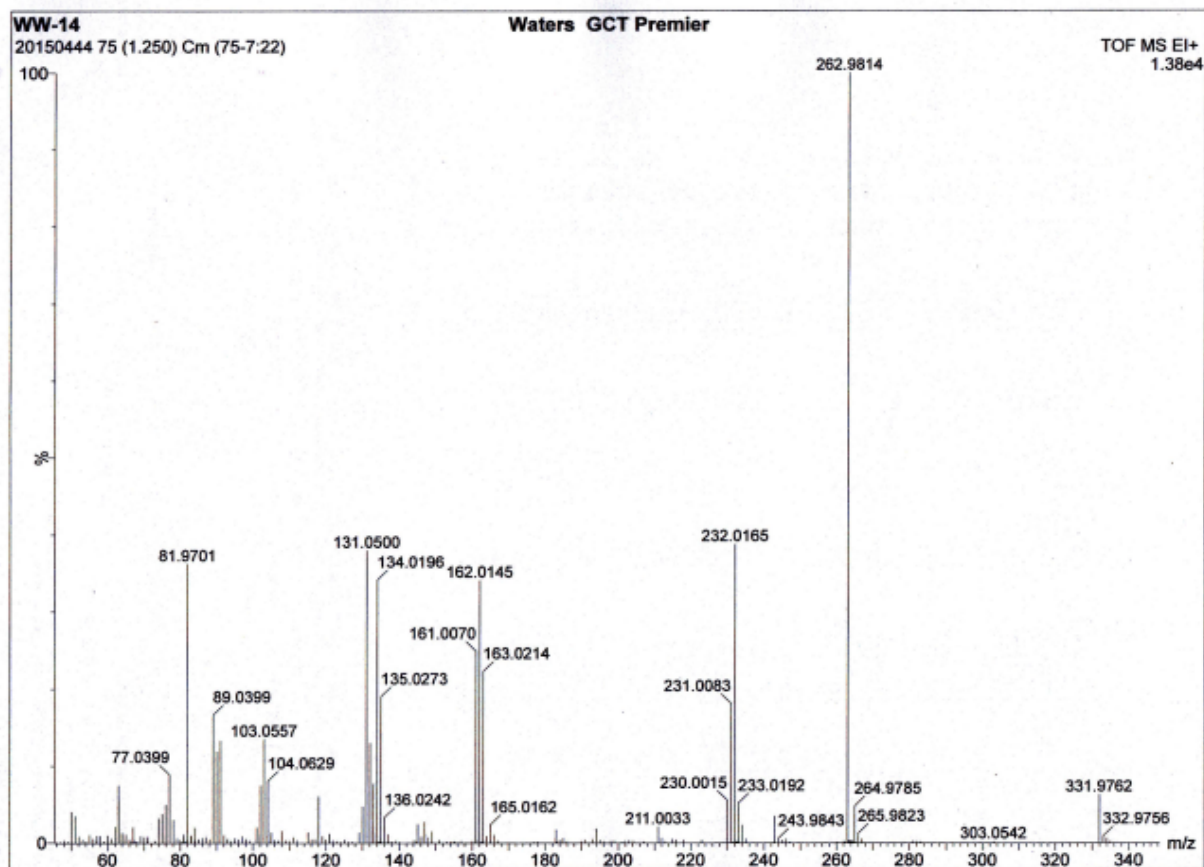
<sup>13</sup>C NMR spectra of **3y**



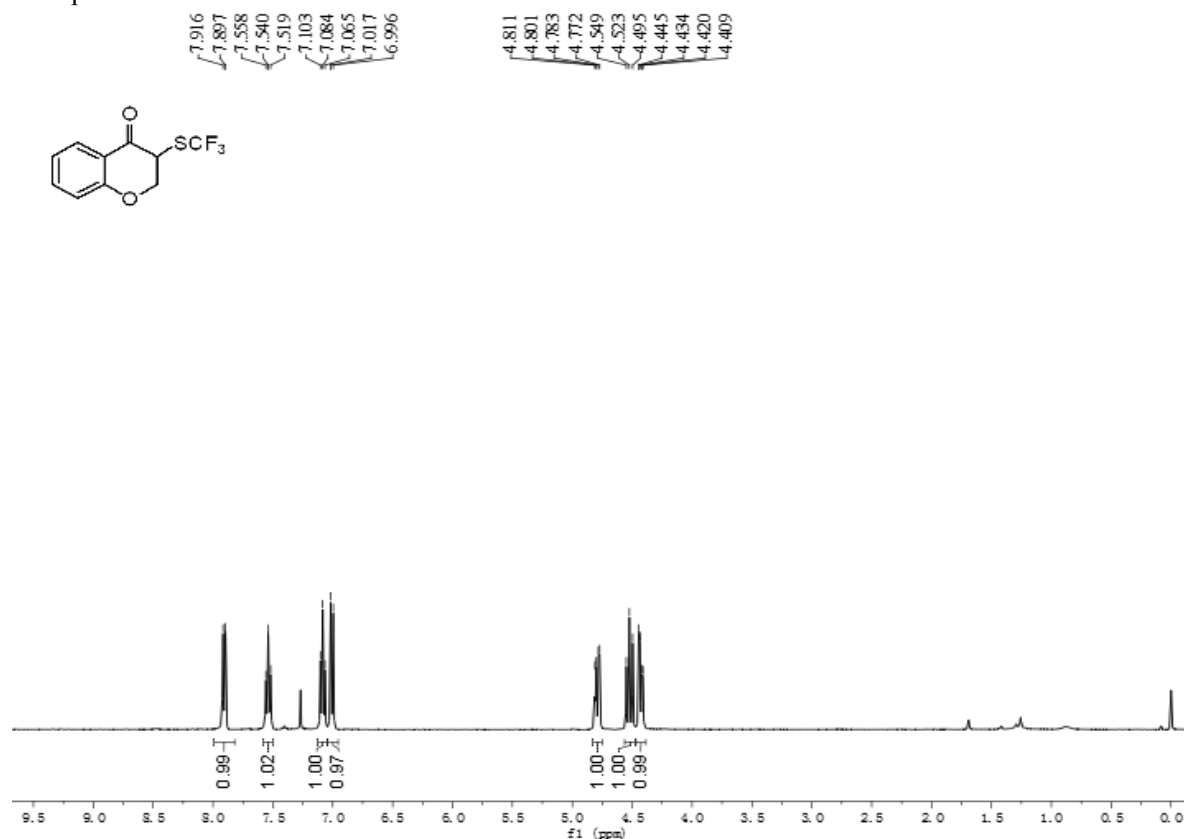
<sup>19</sup>F NMR spectra of **3y**



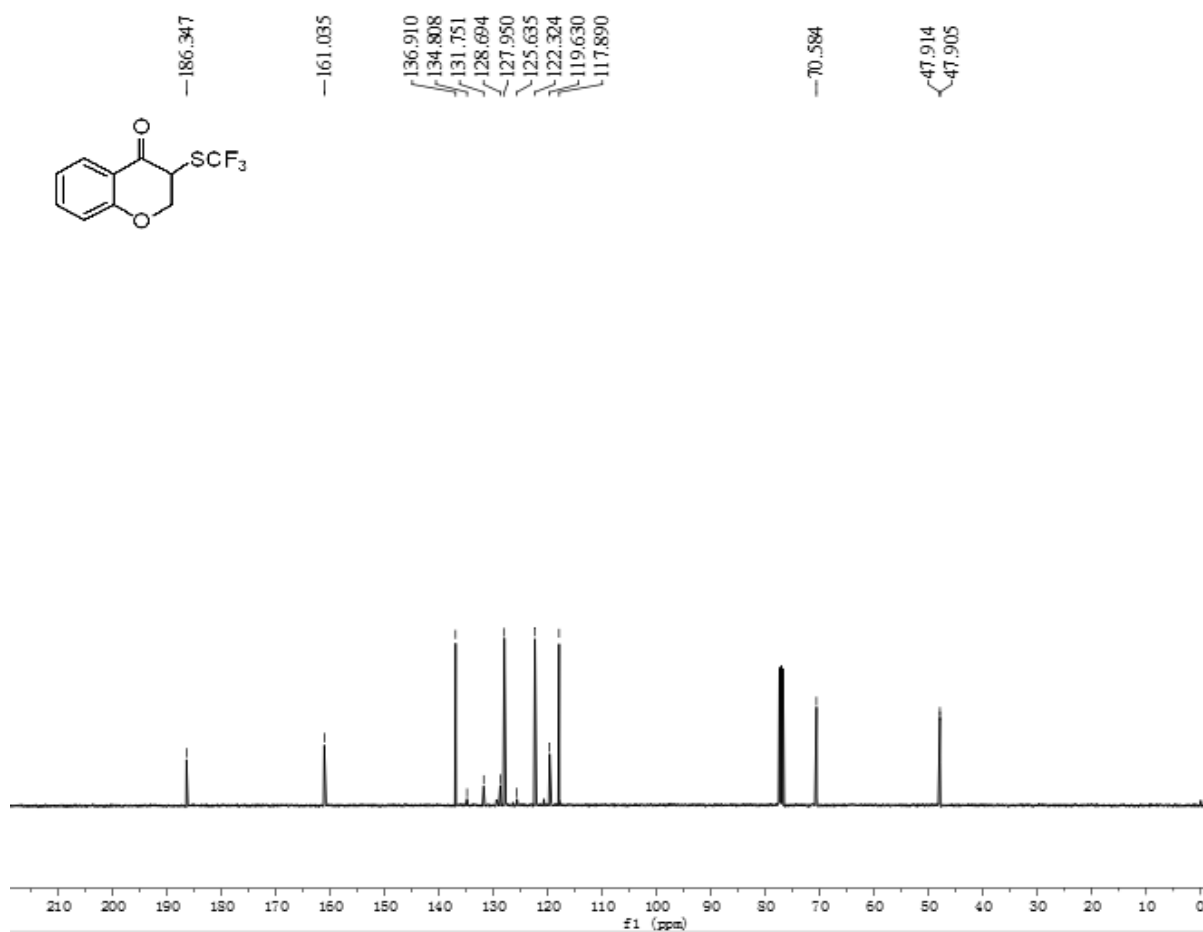
HRMS(EI) spectra of **3y**



<sup>1</sup>H NMR spectra of **3z**

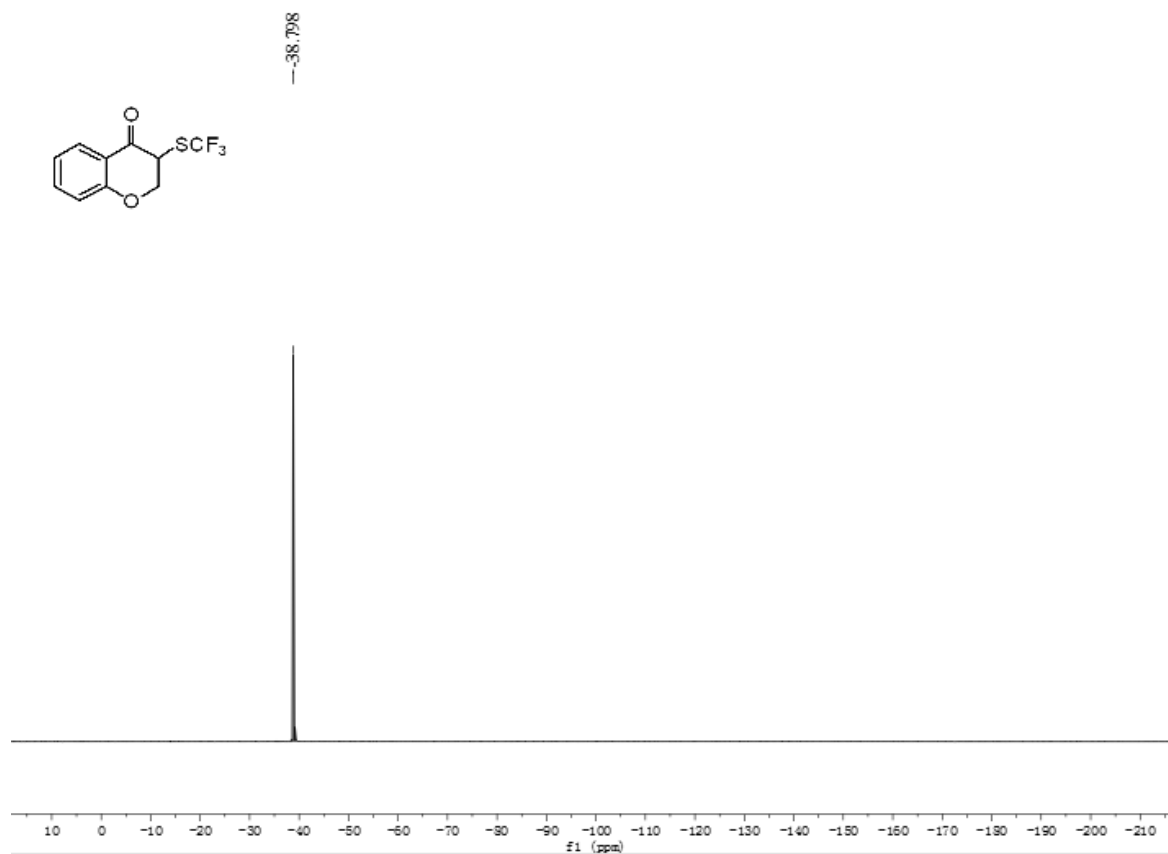


<sup>13</sup>C NMR spectra of **3z**

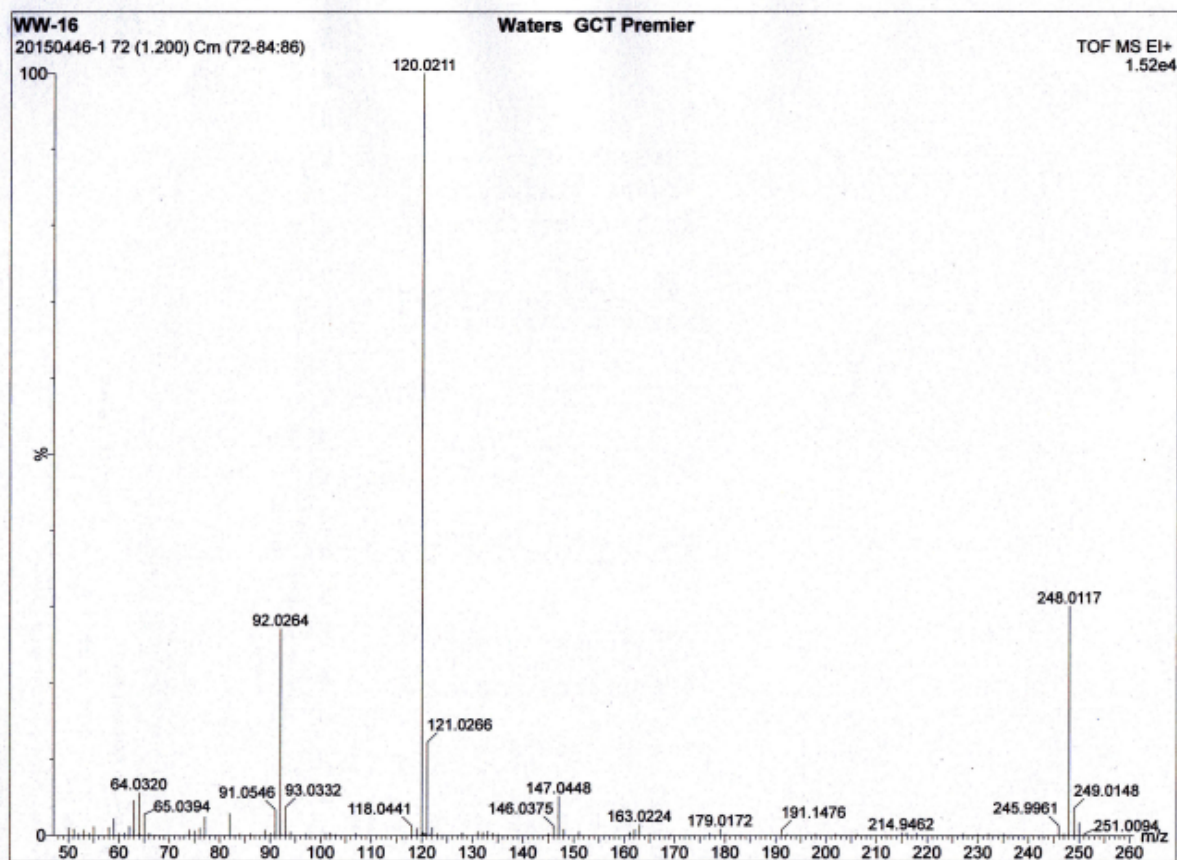




<sup>19</sup>F NMR spectra of **3z**



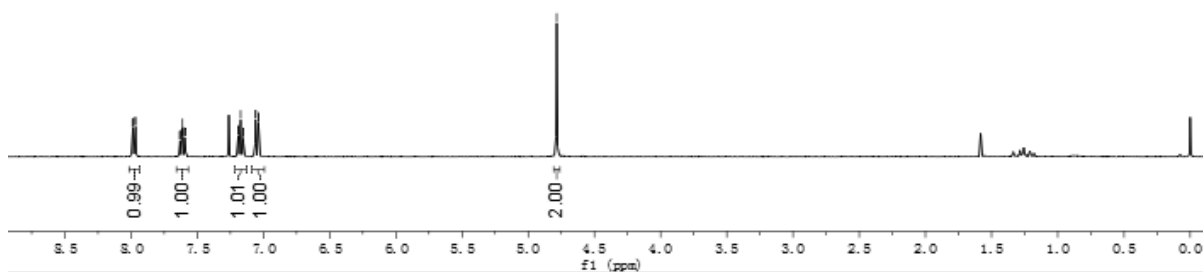
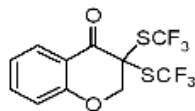
HRMS(EI) spectra of **3z**



<sup>1</sup>H NMR spectra of **3z'**

7.990  
7.986  
7.970  
7.966  
7.615  
7.611  
7.608  
7.594  
7.590  
7.192  
7.190  
7.172  
7.154  
7.152  
7.059  
7.058  
7.058  
7.037

4.785



<sup>13</sup>C NMR spectra of **3z'**

182.944

159.383

137.403

133.382

130.290

128.982

127.198

124.105

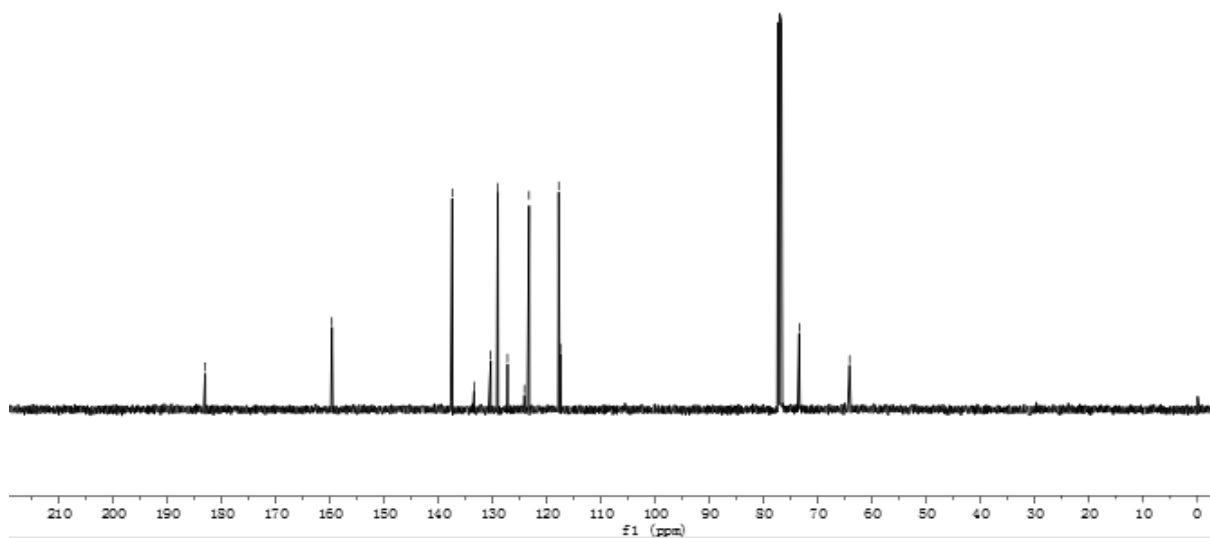
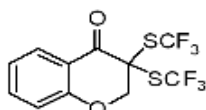
123.235

117.765

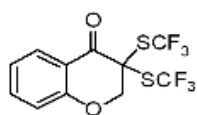
117.447

73.433

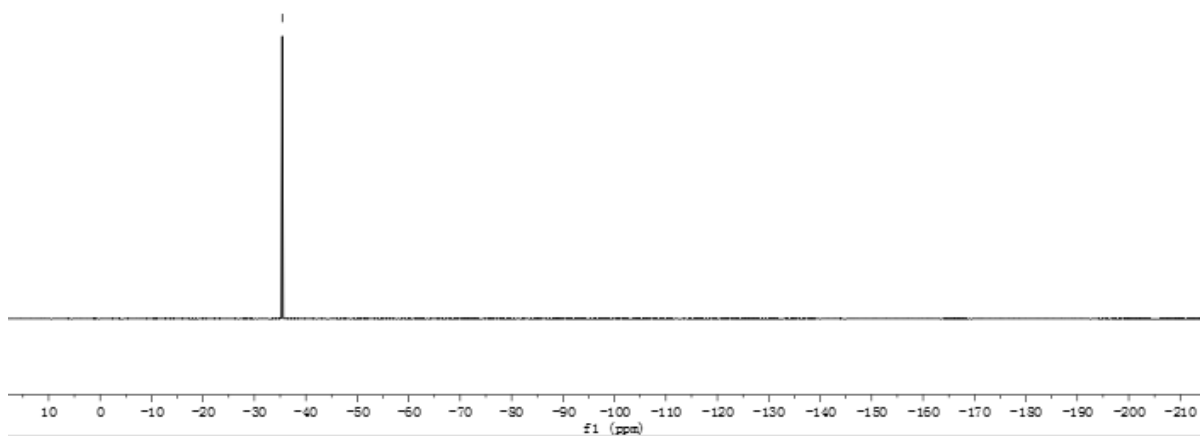
64.148



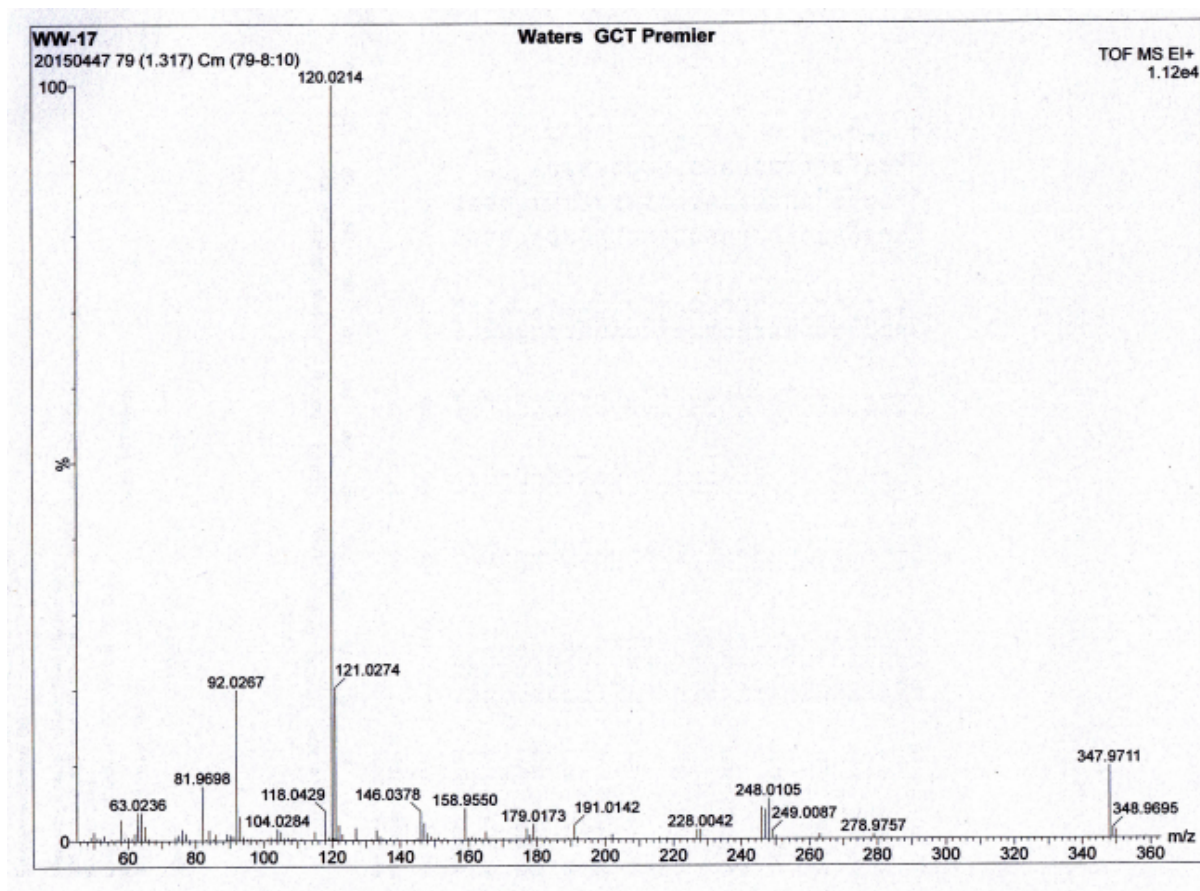
$^{19}\text{F}$  NMR spectra of **3z'**



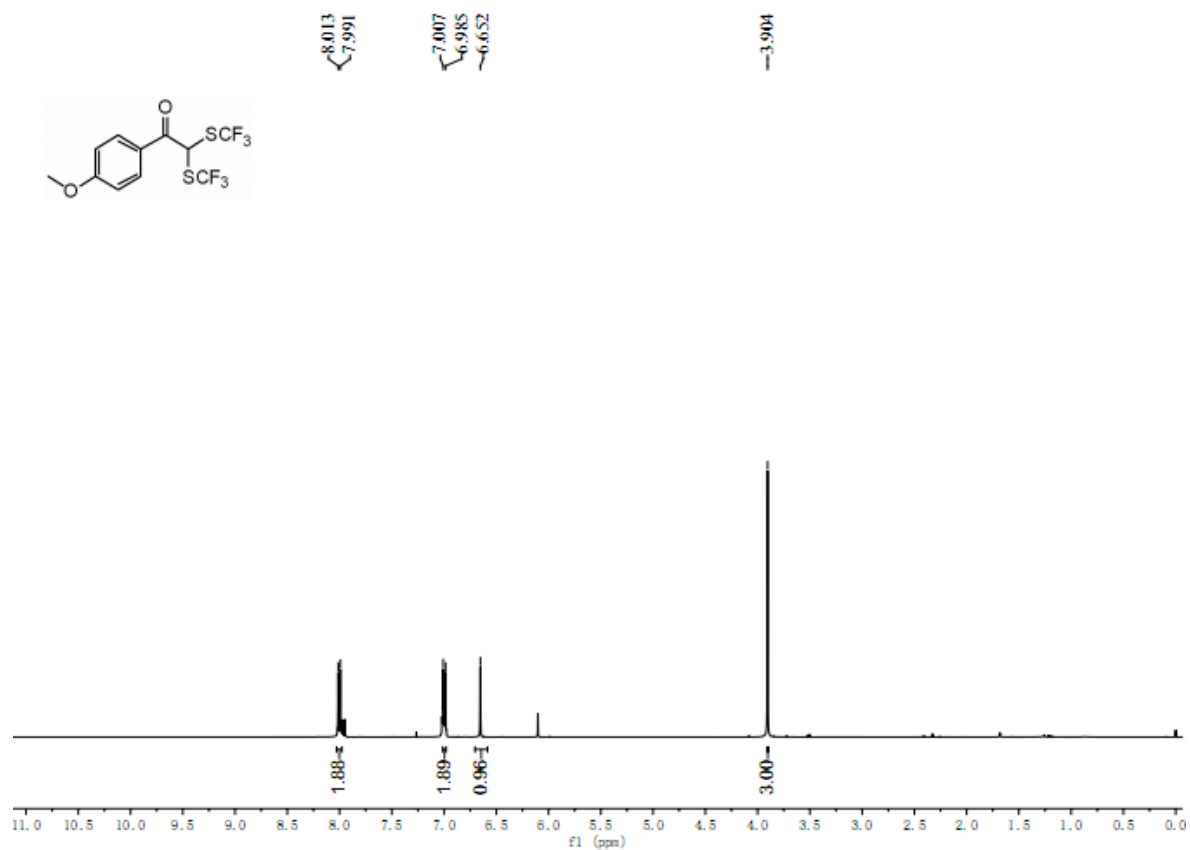
-35.417



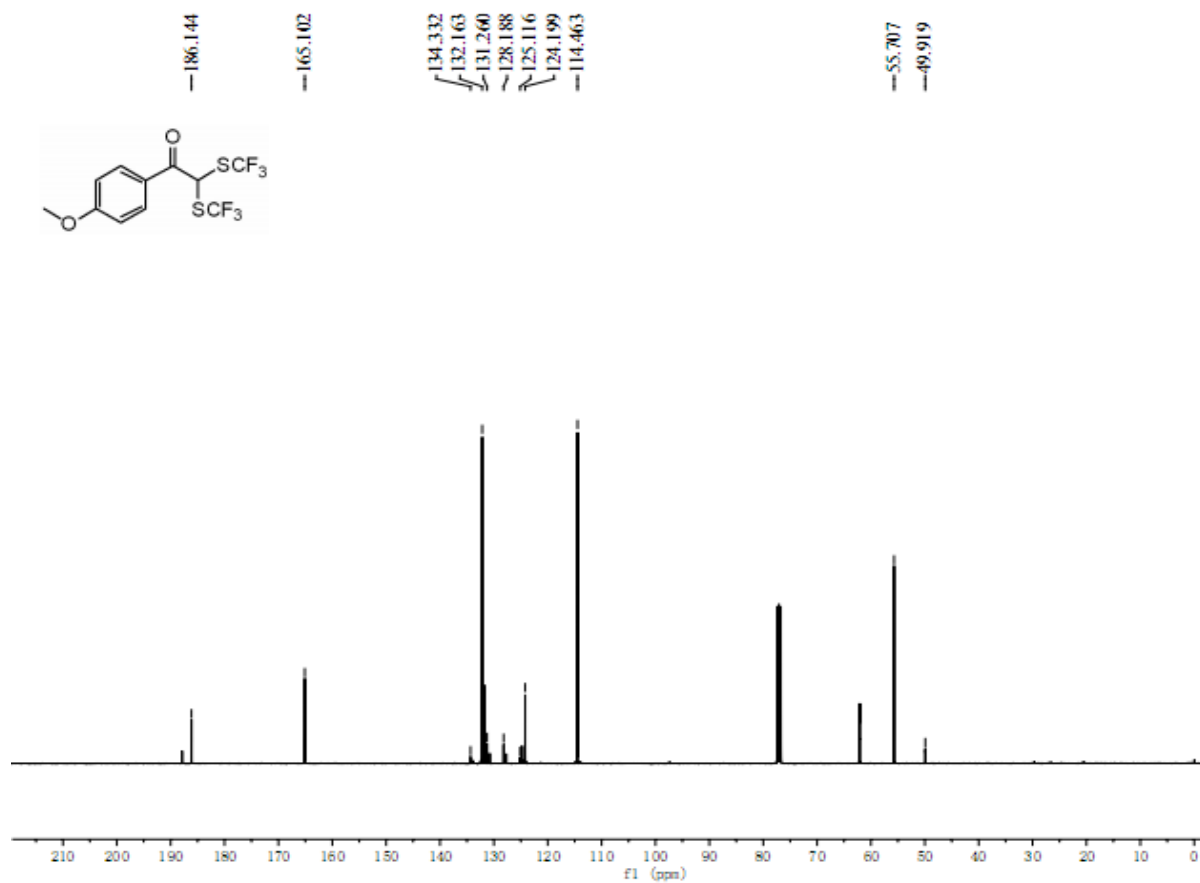
HRMS(EI) spectra of **3z'**



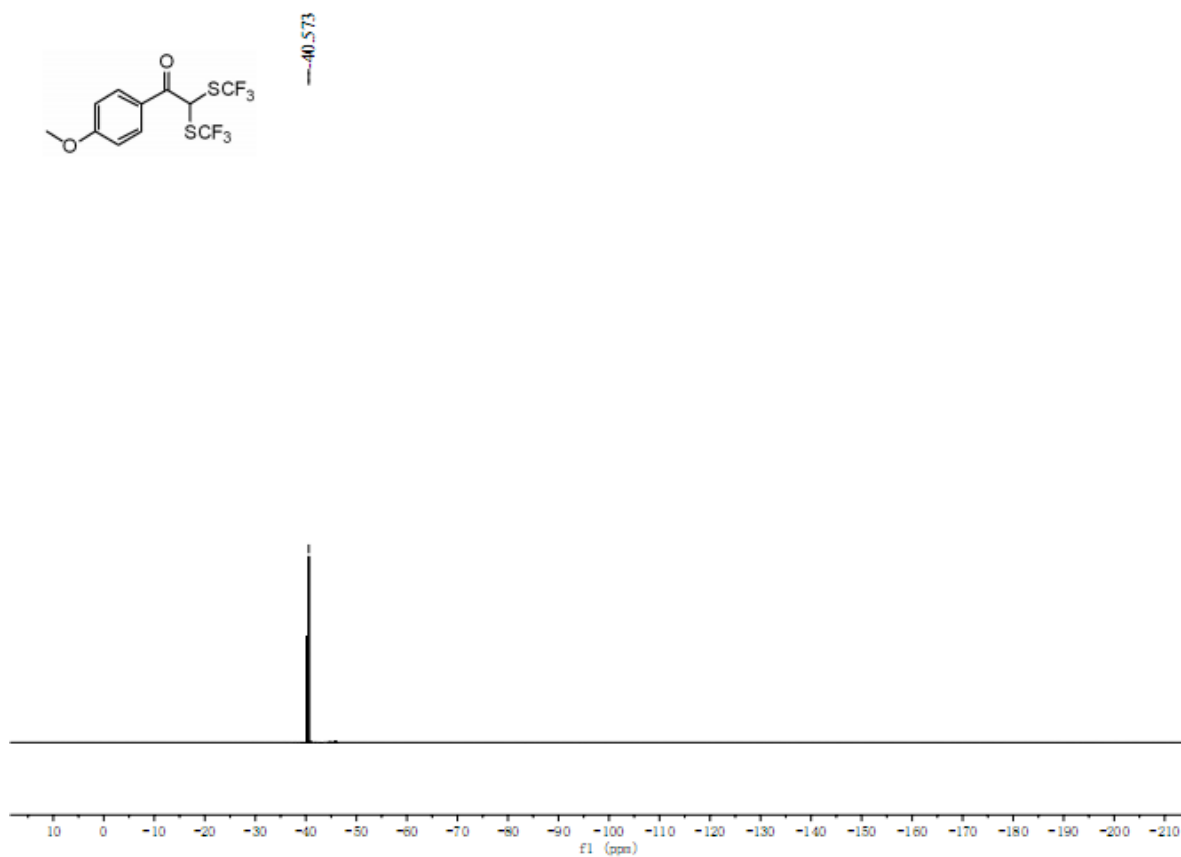
<sup>1</sup>H NMR spectra of **3d'**



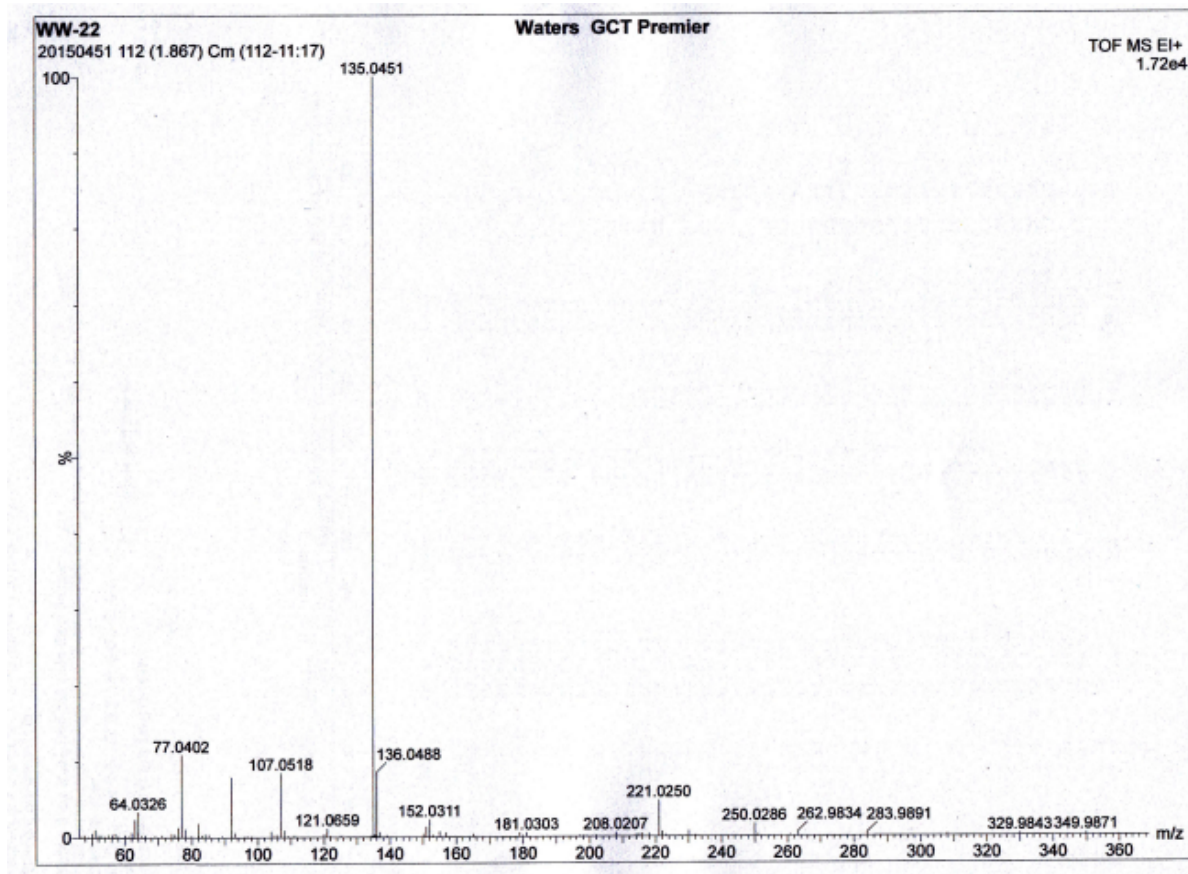
<sup>13</sup>C NMR spectra of **3d'**



$^{19}\text{F}$  NMR spectra of **3d'**

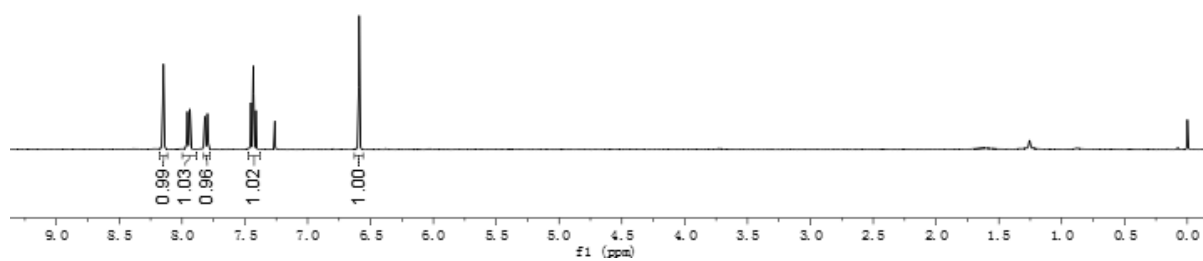
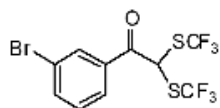


HRMS(EI) spectra of **3d'**



<sup>1</sup>H NMR spectra of **3h'**

8.153  
8.148  
8.144  
7.958  
7.956  
7.940  
7.938  
7.937  
7.818  
7.800  
7.798  
7.795  
7.452  
7.432  
7.412  
6.990

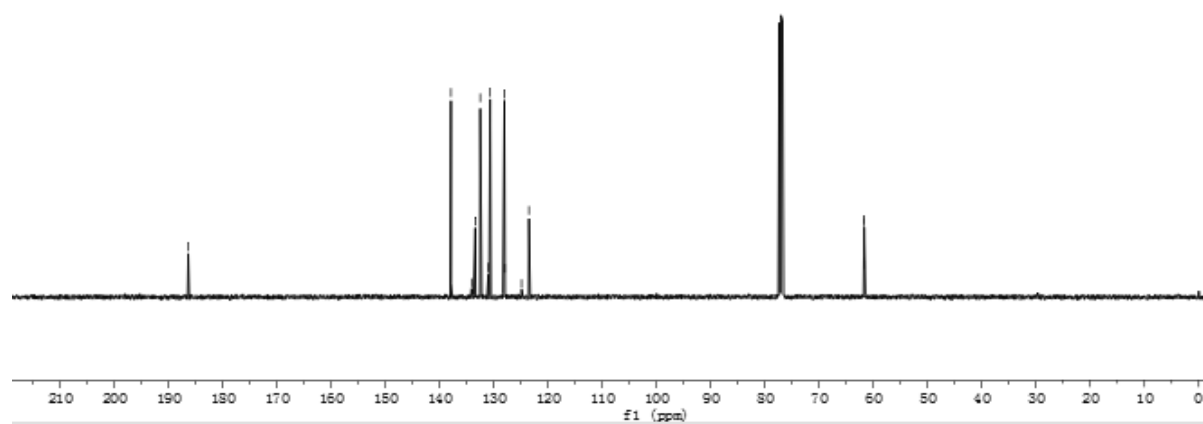
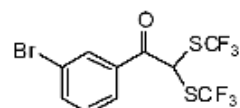


<sup>13</sup>C NMR spectra of **3h'**

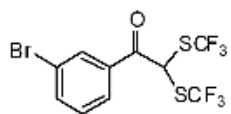
186.290

137.863  
134.060  
133.393  
132.461  
130.985  
130.633  
128.016  
127.910  
124.834  
123.475

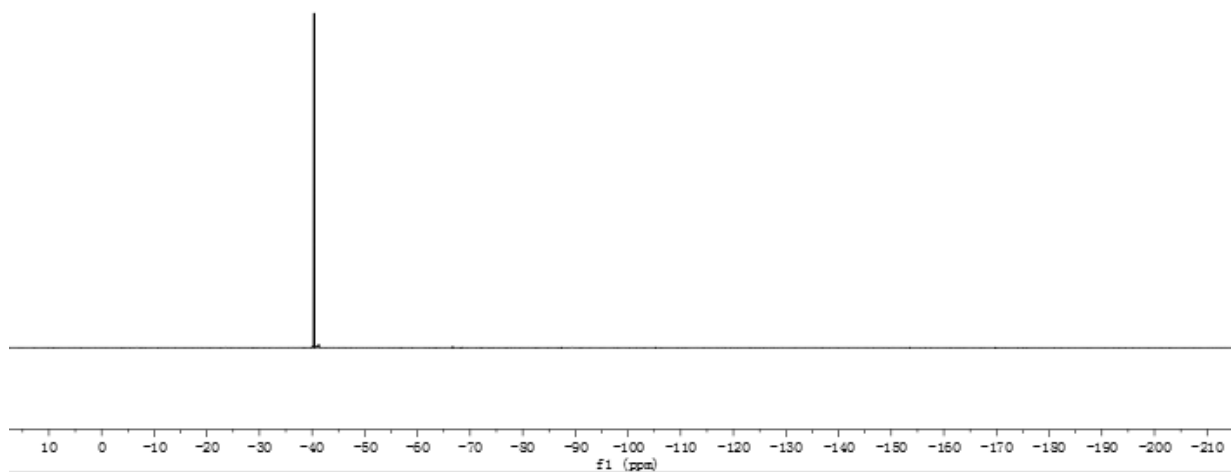
61.715  
61.693  
61.669  
61.646



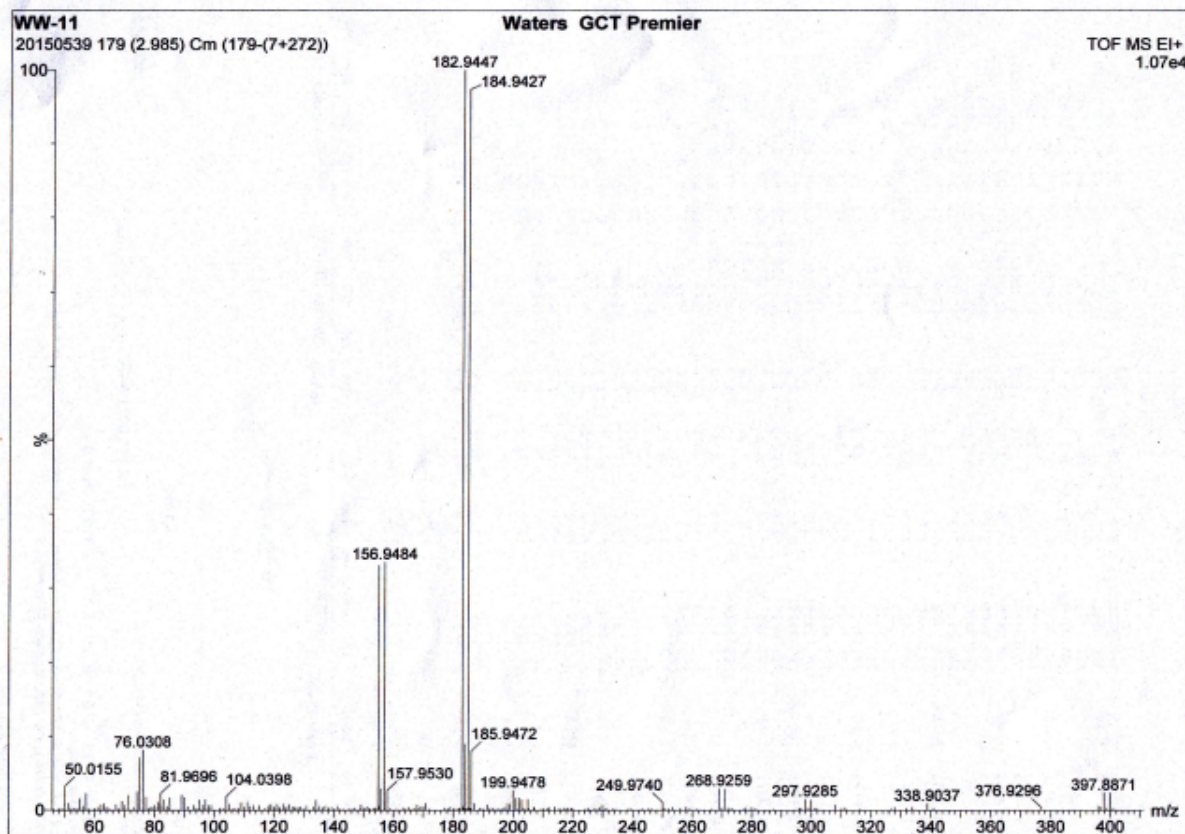
$^{19}\text{F}$  NMR spectra of **3h'**



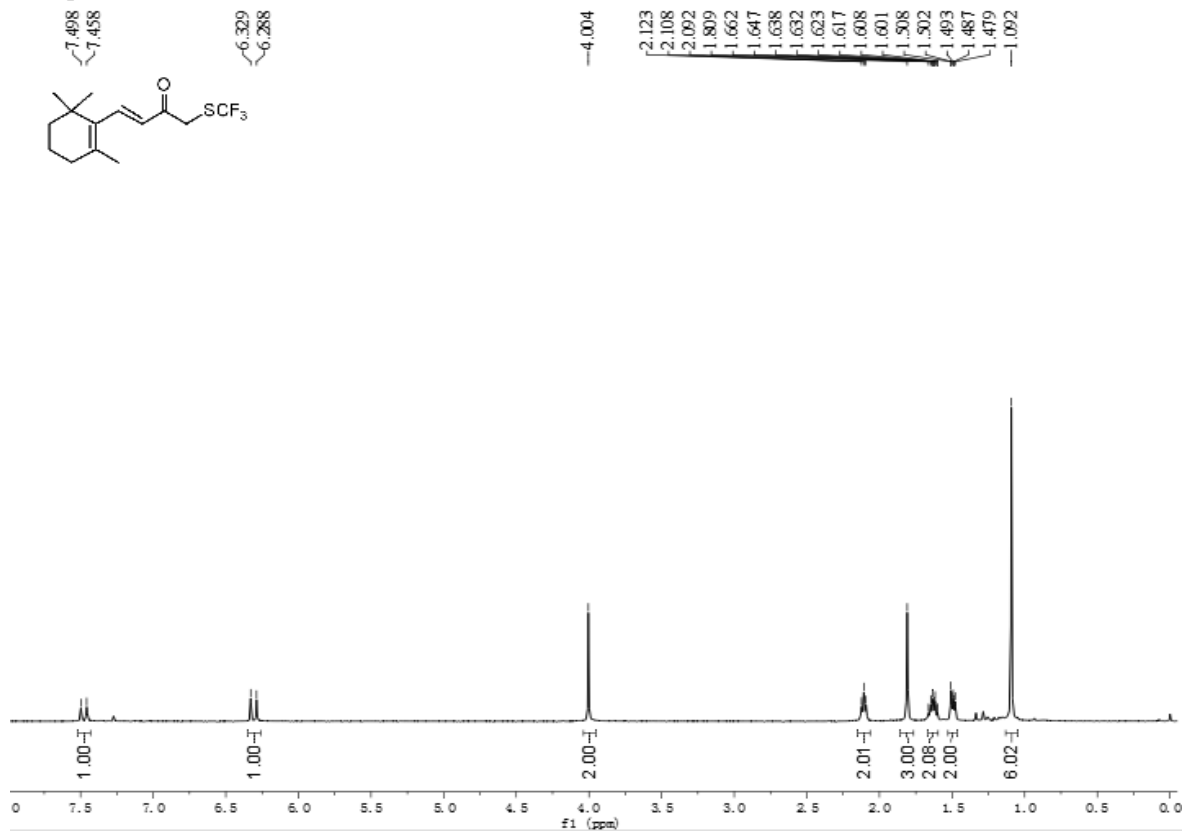
-40.405



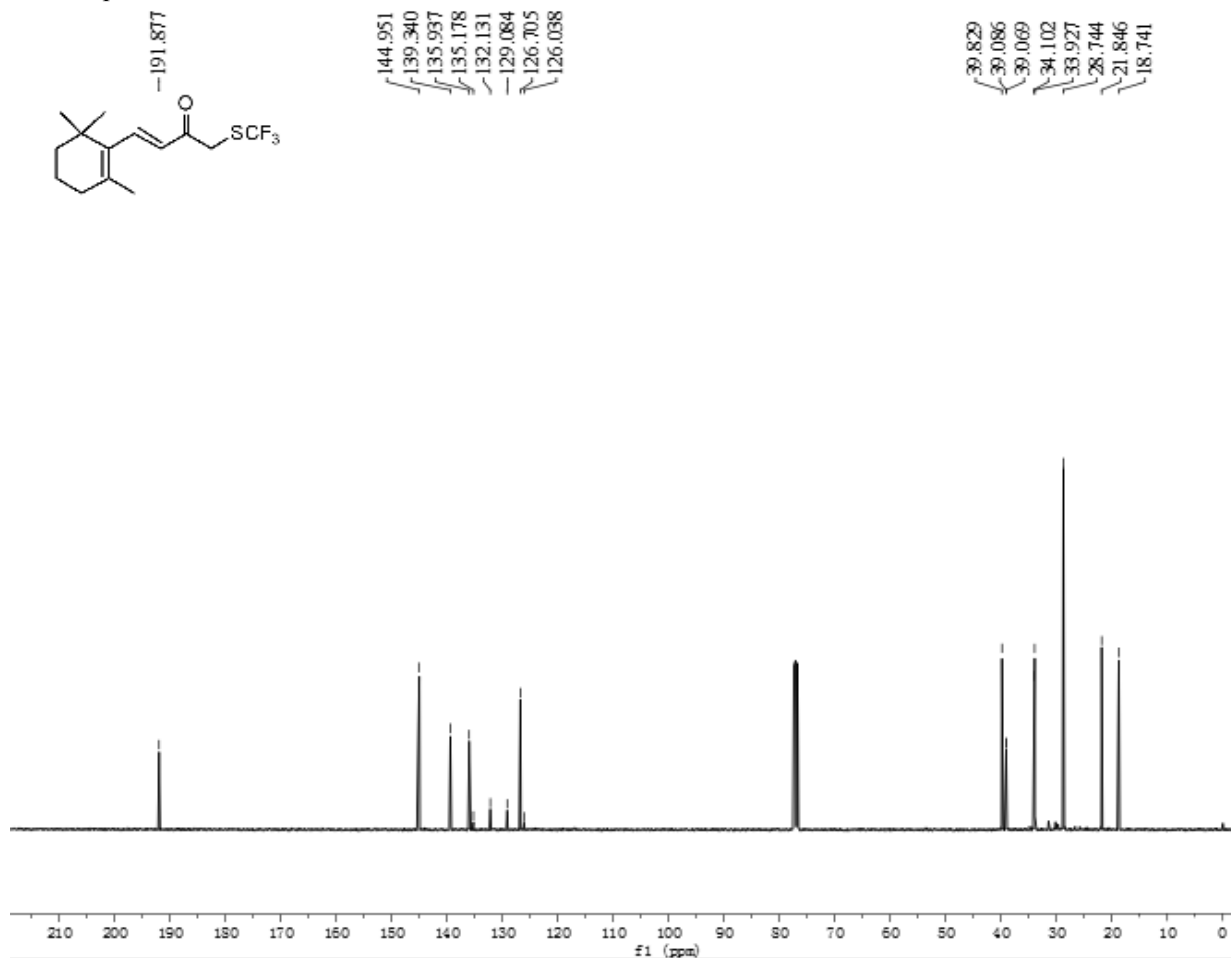
HRMS(EI) spectra of **3h'**



<sup>1</sup>H NMR spectra of 4

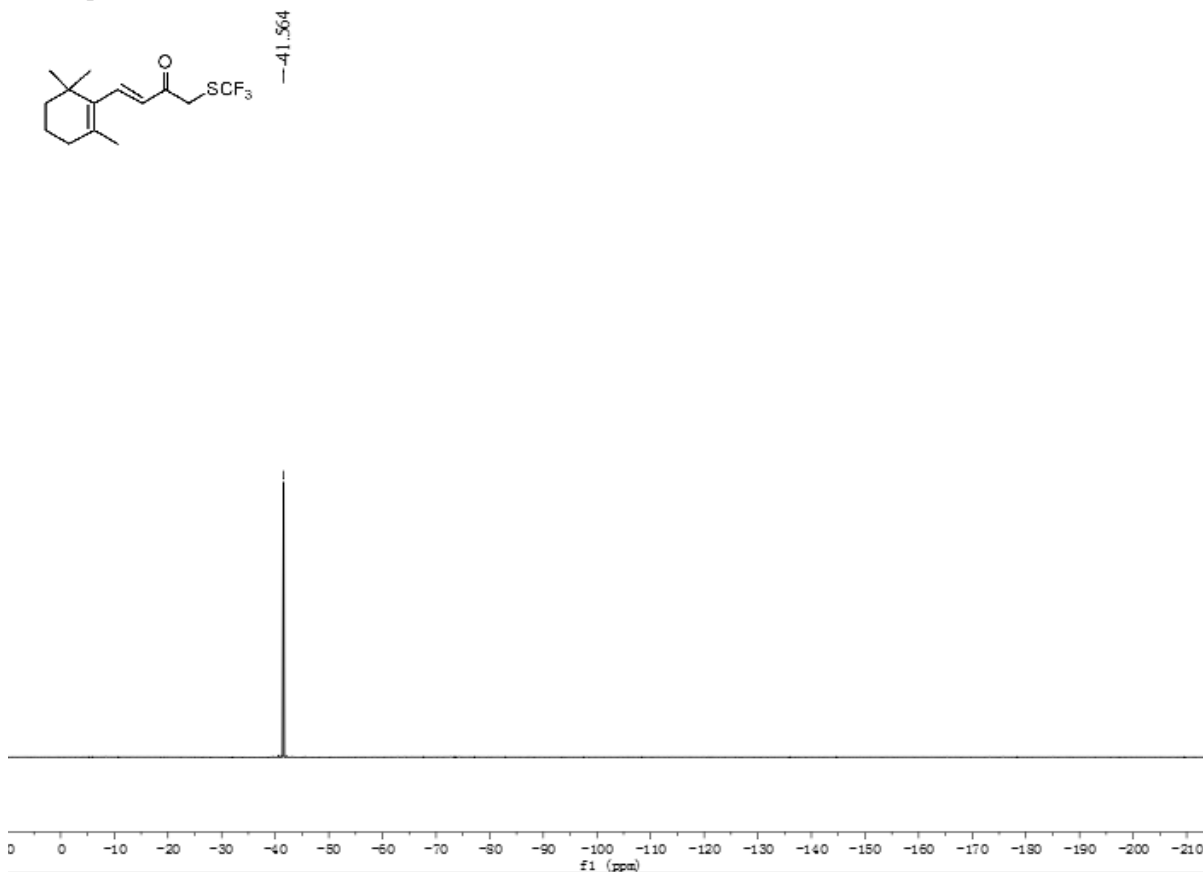


<sup>13</sup>C NMR spectra of 4

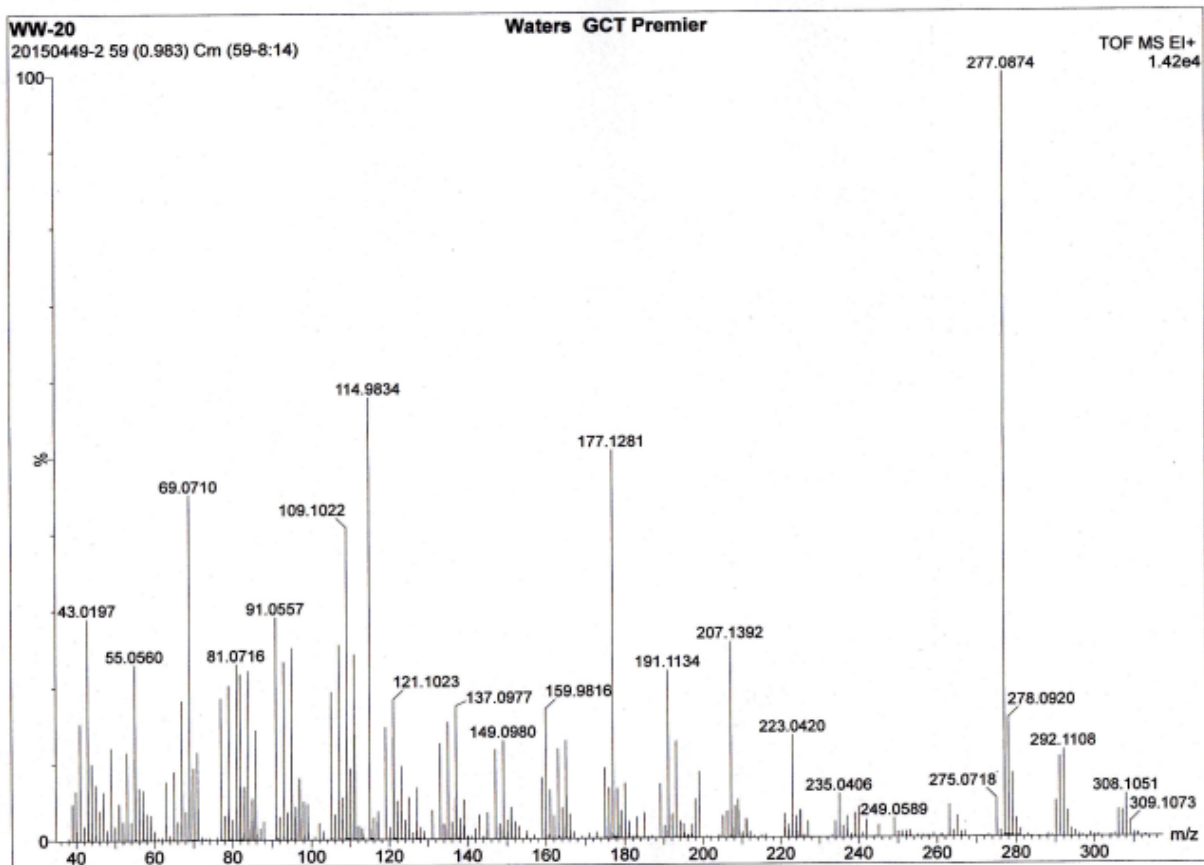




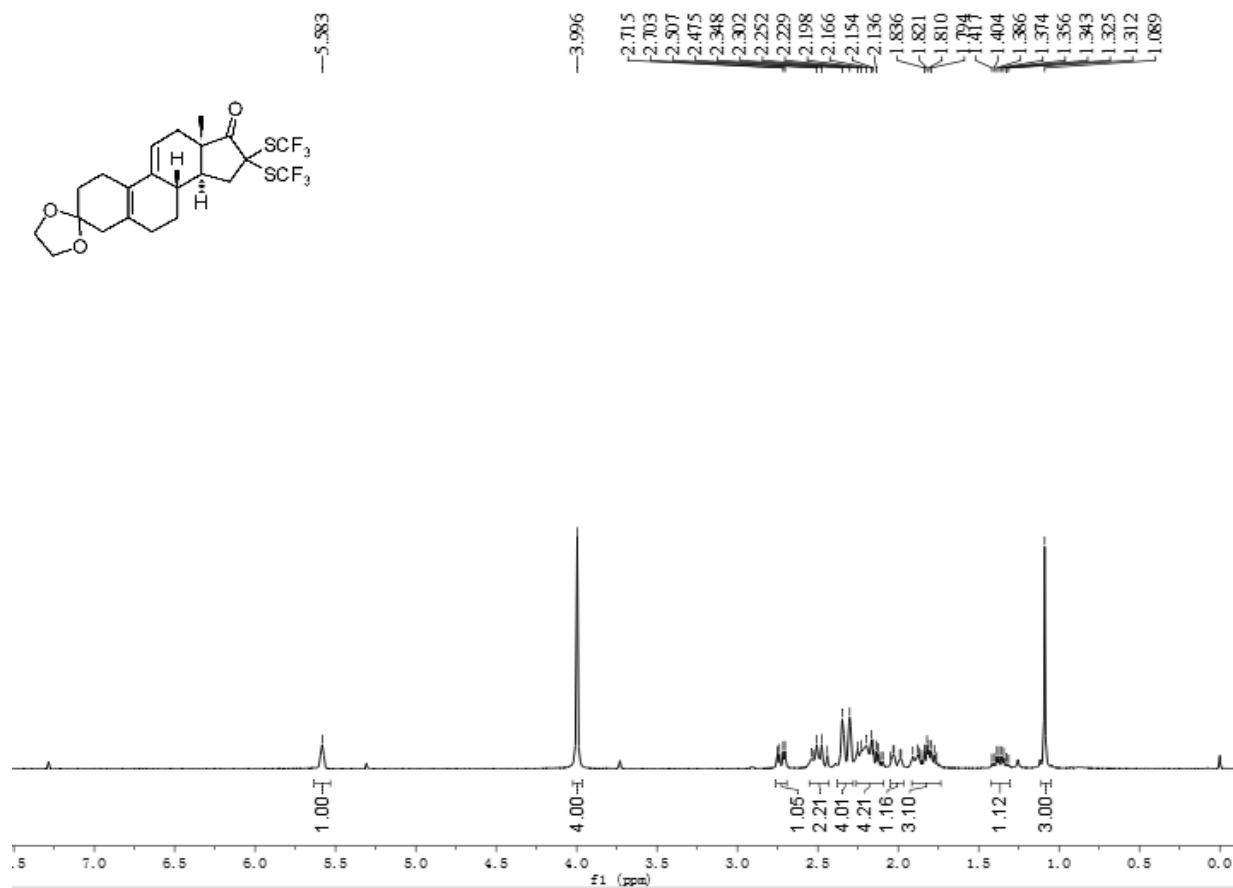
<sup>19</sup>F NMR spectra of **4**



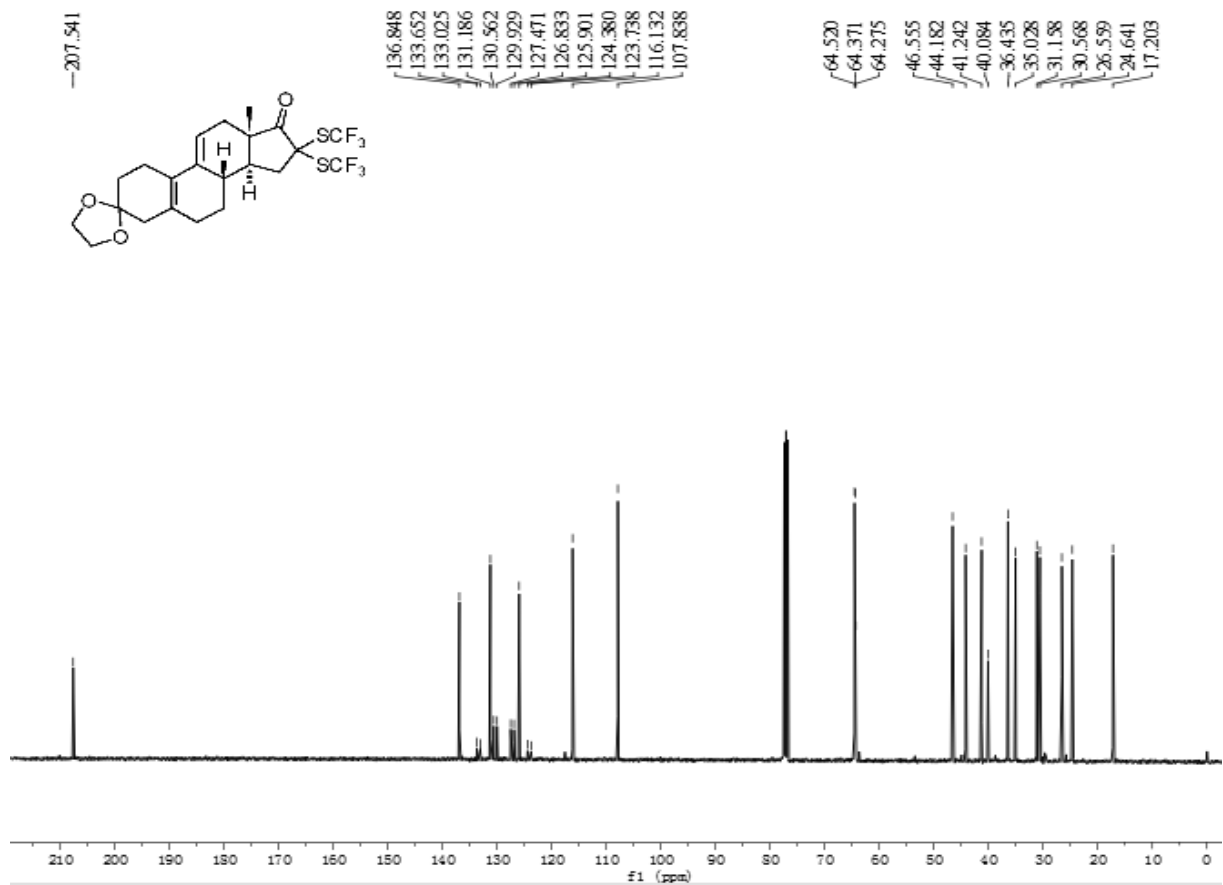
HRMS(EI) spectra of **4**



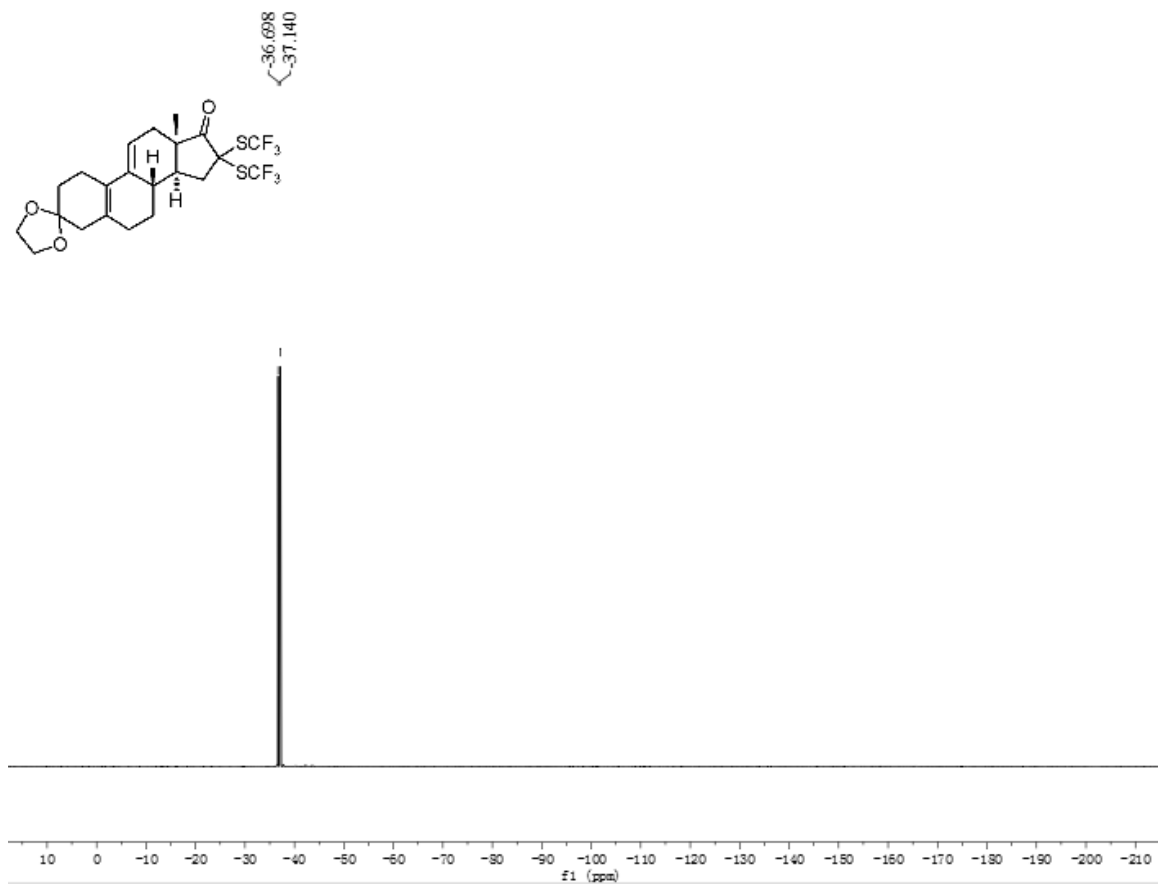
<sup>1</sup>H NMR spectra of **5**



<sup>13</sup>C NMR spectra of **5**



<sup>19</sup>F NMR spectra of **5**



HRMS(EI) spectra of **5**

