

## Supplemental Material

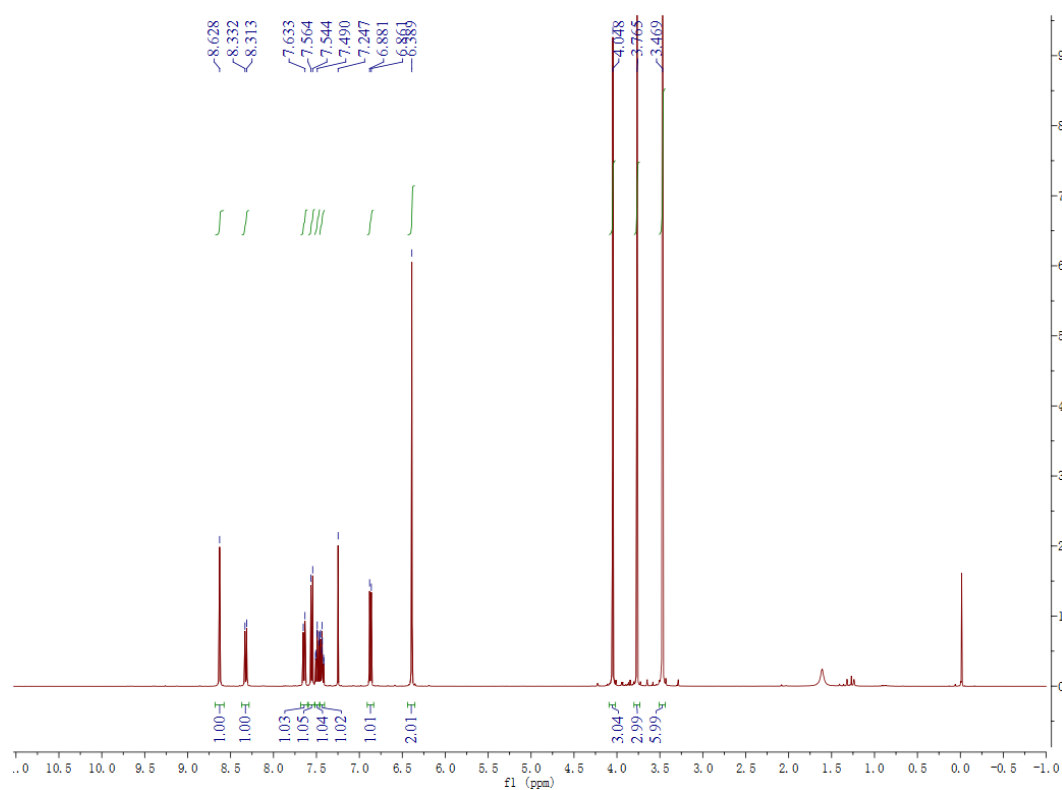


Figure S1: <sup>1</sup>H NMR of compound 5a

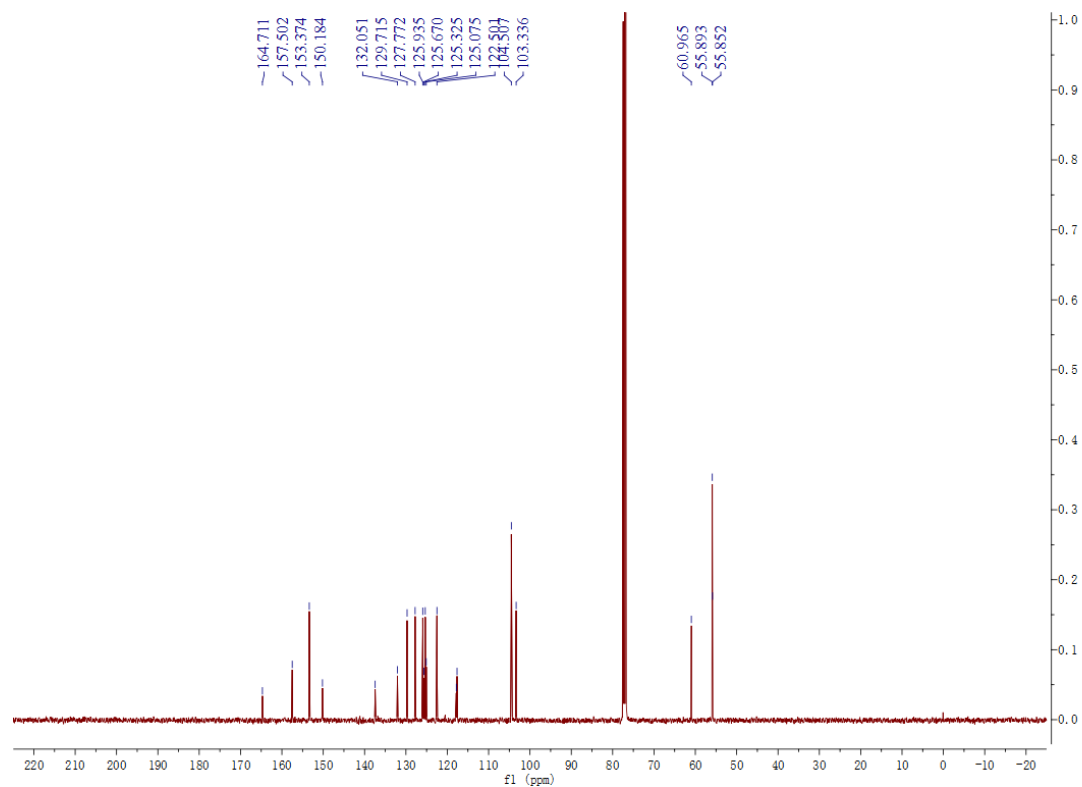


Figure S2: <sup>13</sup>C NMR of compound 5a

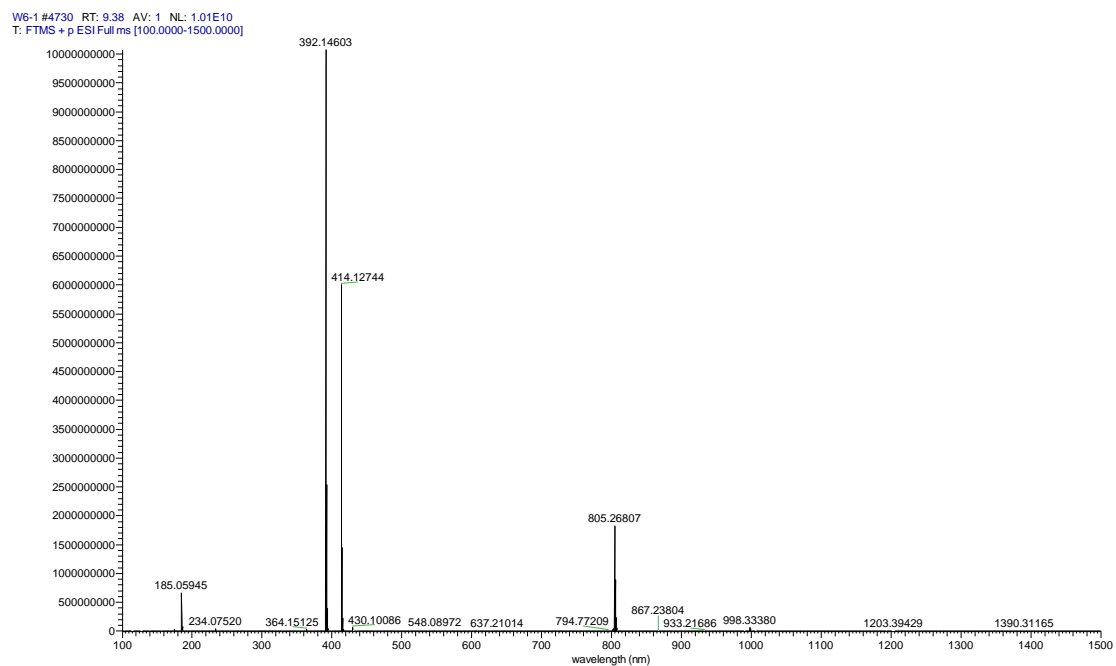


Figure S3: HRMS of compound 5a

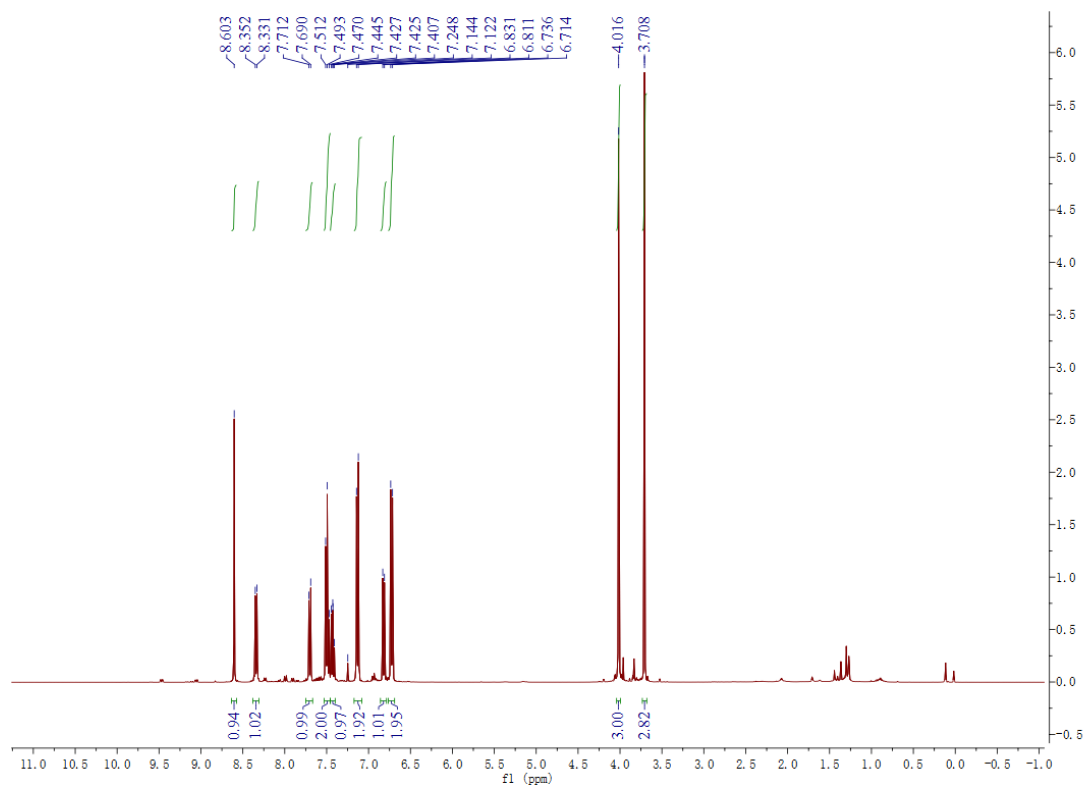
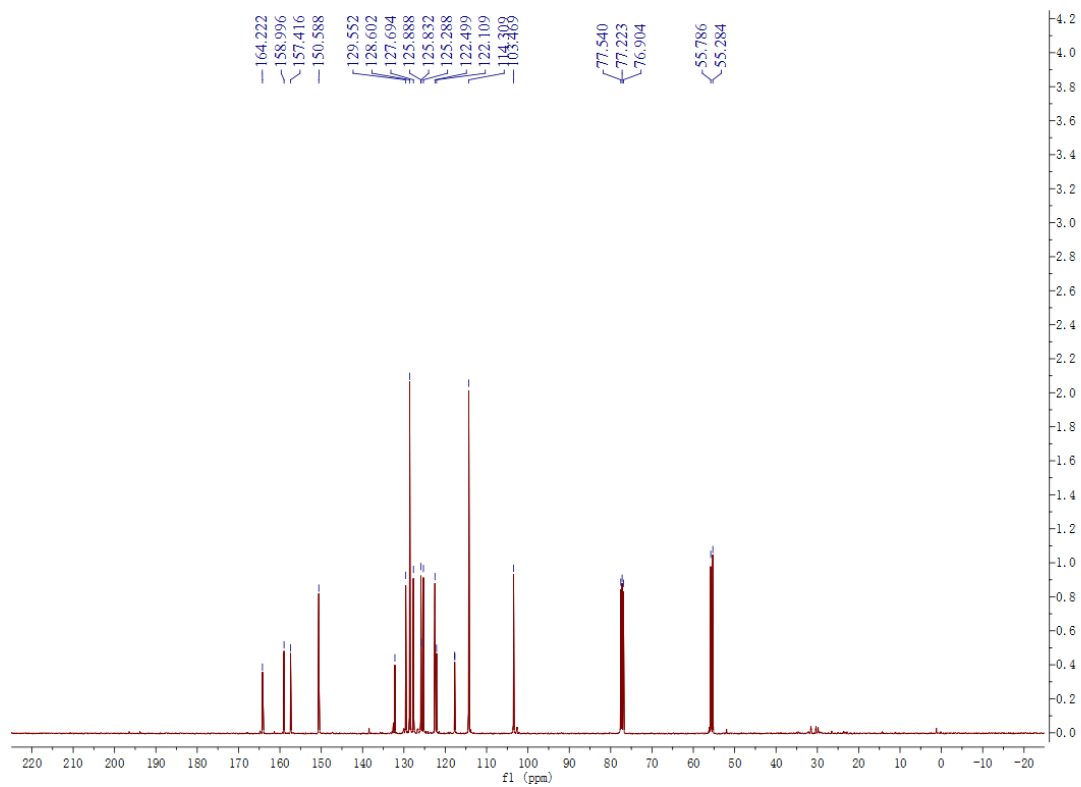
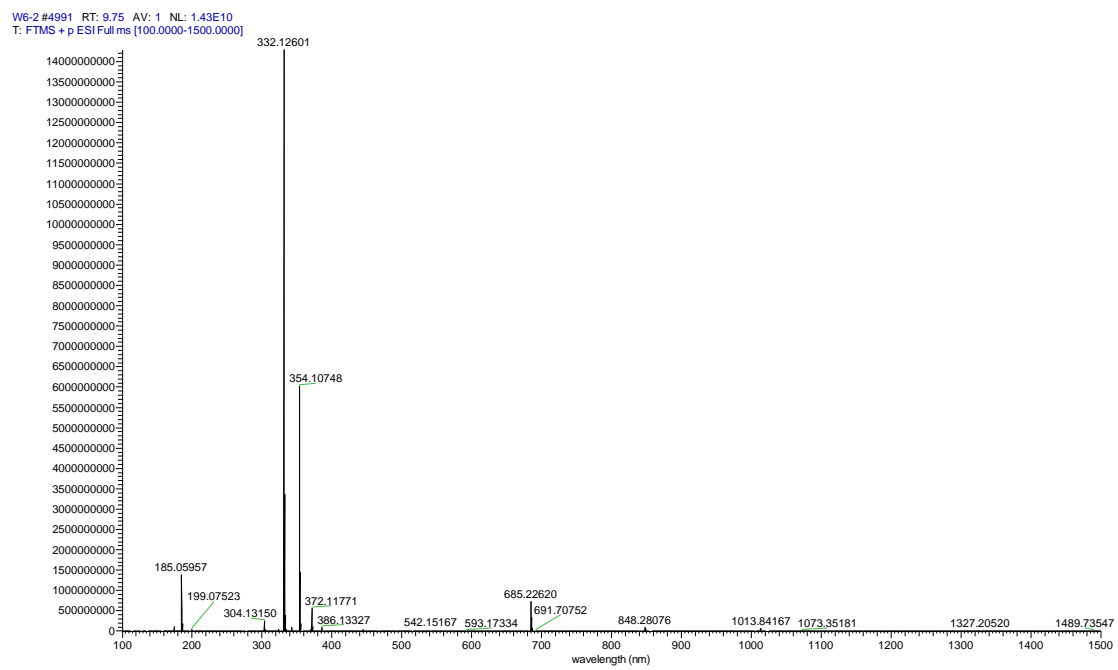


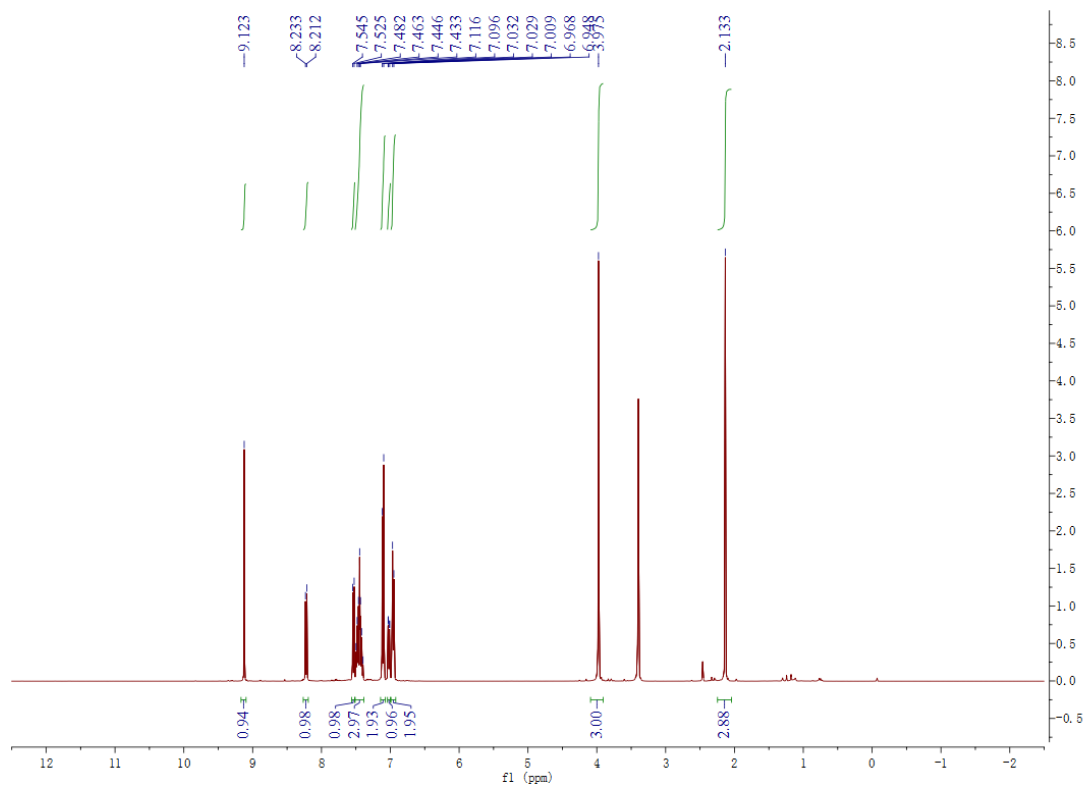
Figure S4:  $^1\text{H}$  NMR of compound 5b



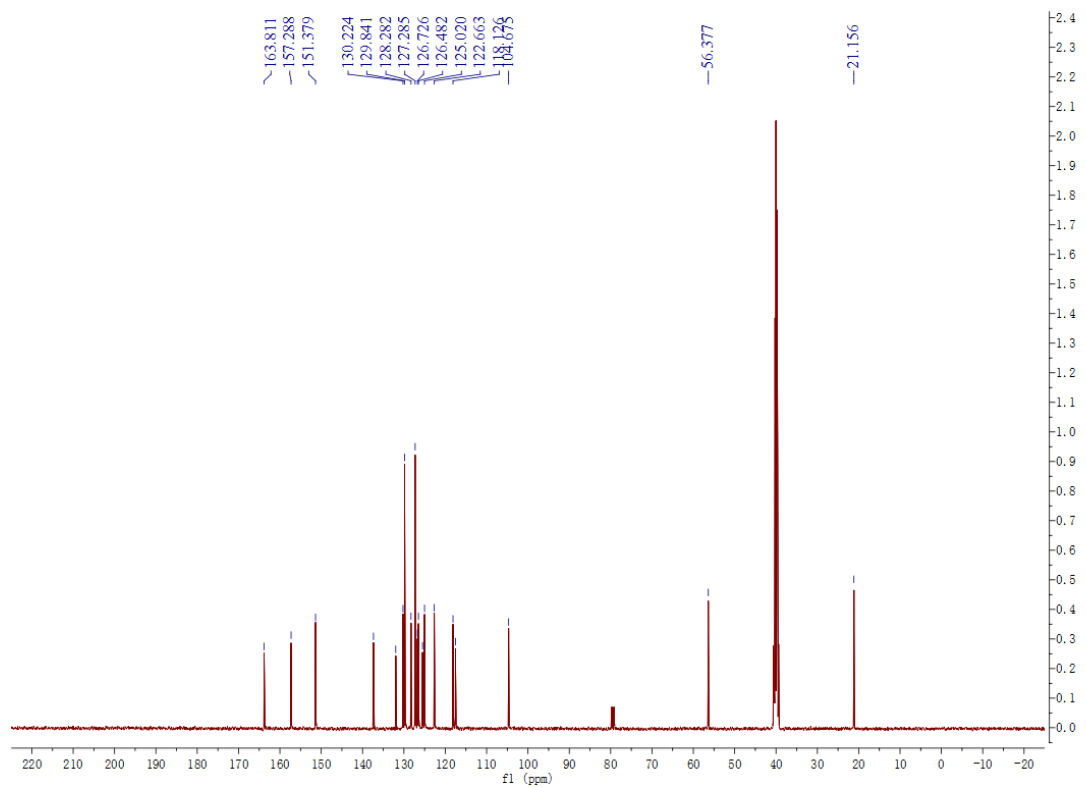
**Figure S5:**  $^{13}\text{C}$  NMR of compound **5b**



**Figure S6:** HRMS of compound **5b**



**Figure S7:**  $^1\text{H}$  NMR of compound **5c**



**Figure S8:**  $^{13}\text{C}$  NMR of compound **5c**

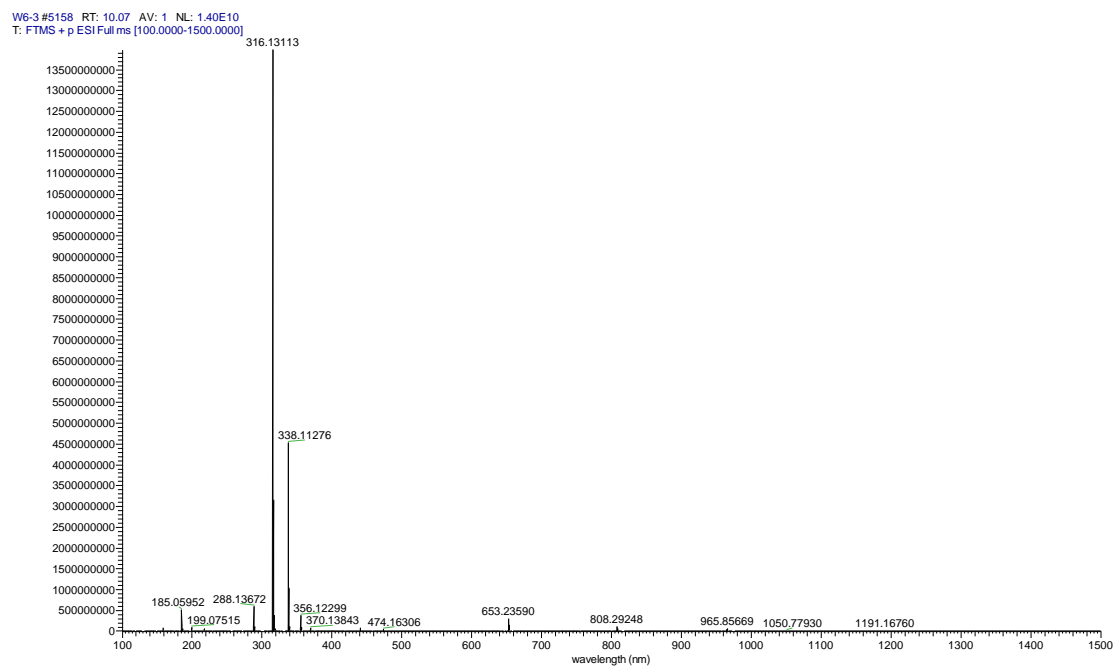


Figure S9: HRMS of compound 5c

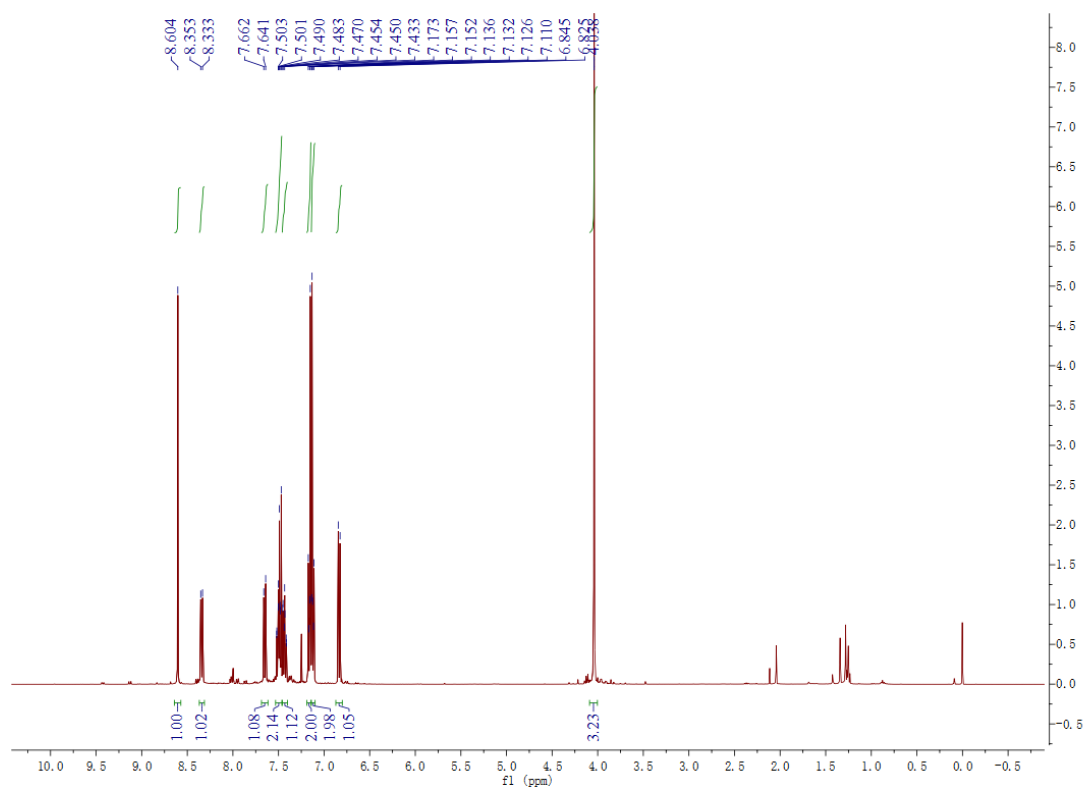
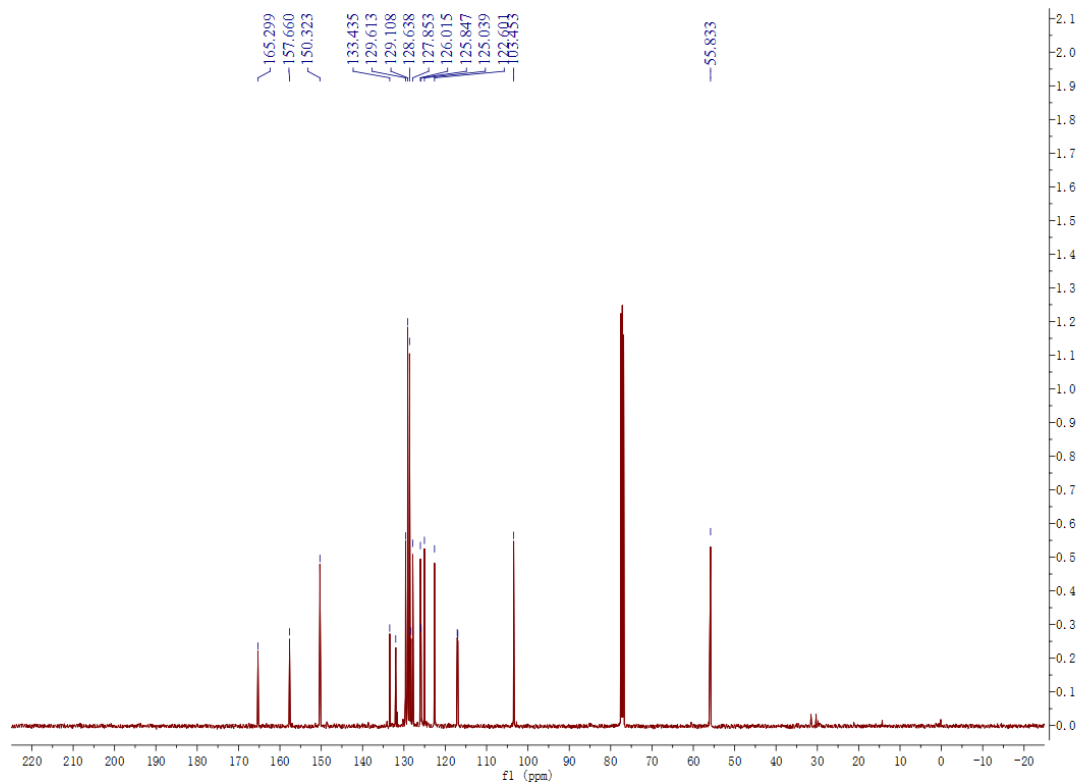
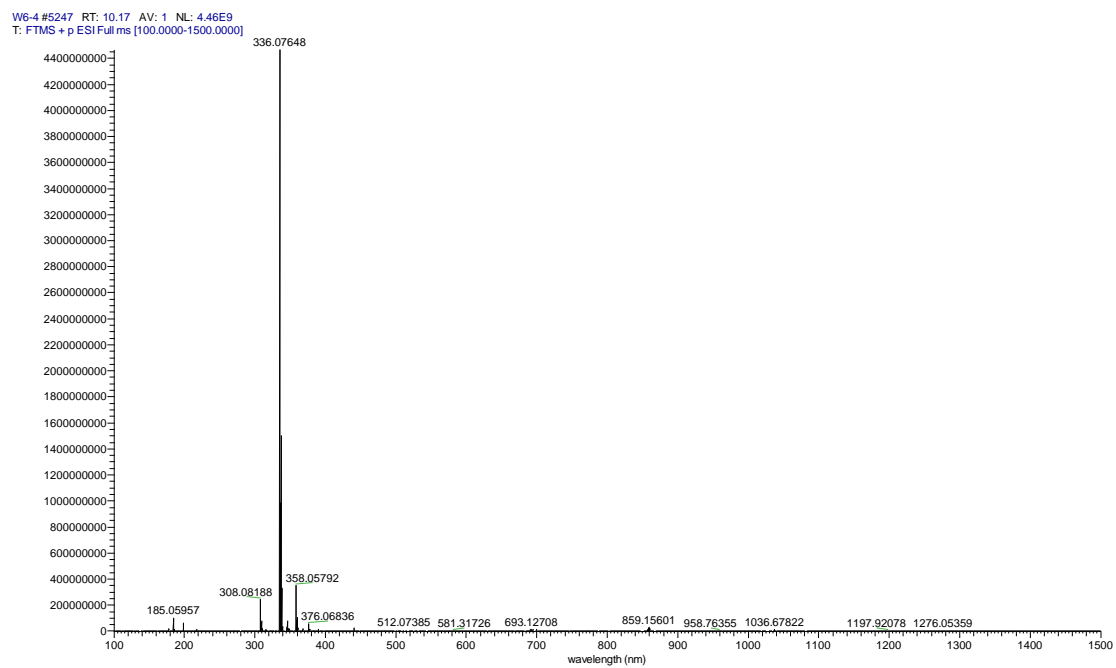


Figure S10:  $^1\text{H}$  NMR of compound 5d



**Figure S11:**  $^{13}\text{C}$  NMR of compound **5d**



**Figure S12:** HRMS of compound **5d**

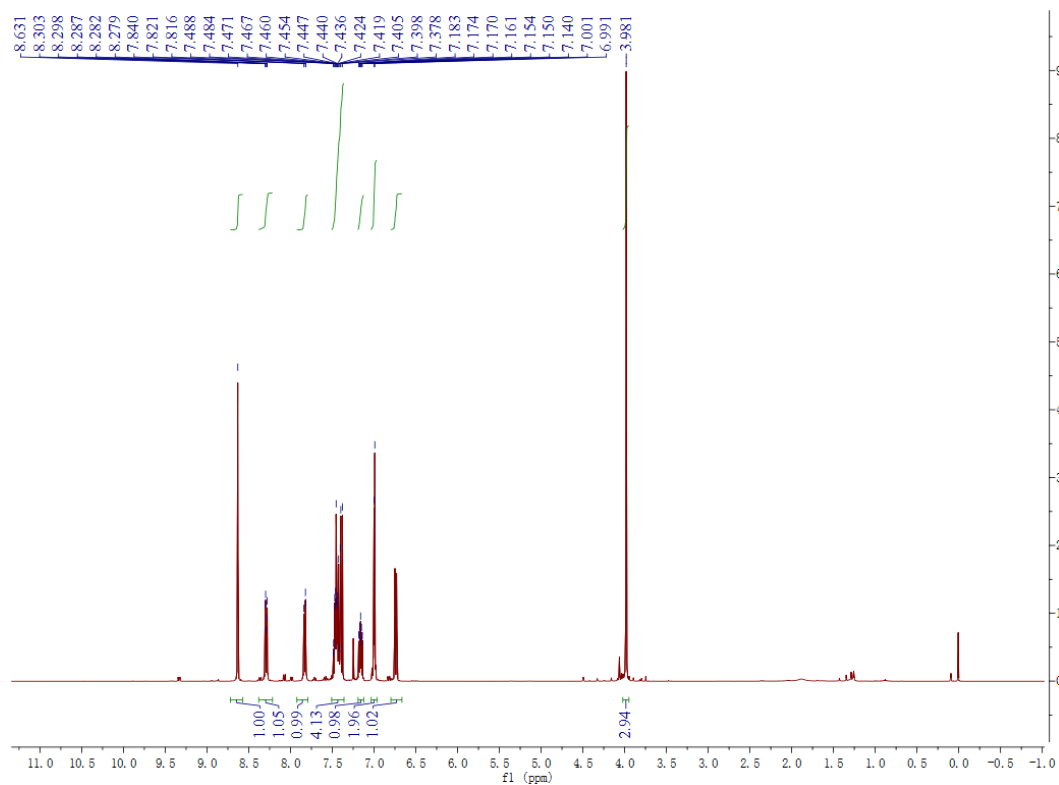


Figure S13:  $^1\text{H}$  NMR of compound **5e**

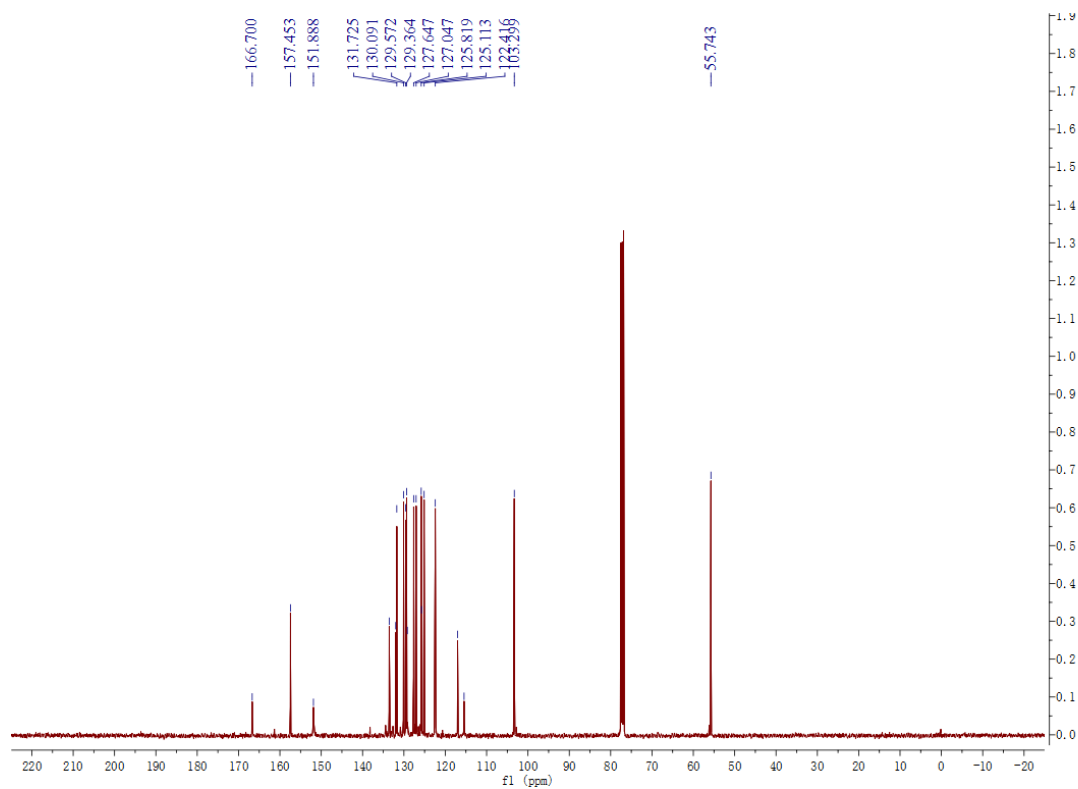


Figure S14:  $^{13}\text{C}$  NMR of compound **5e**

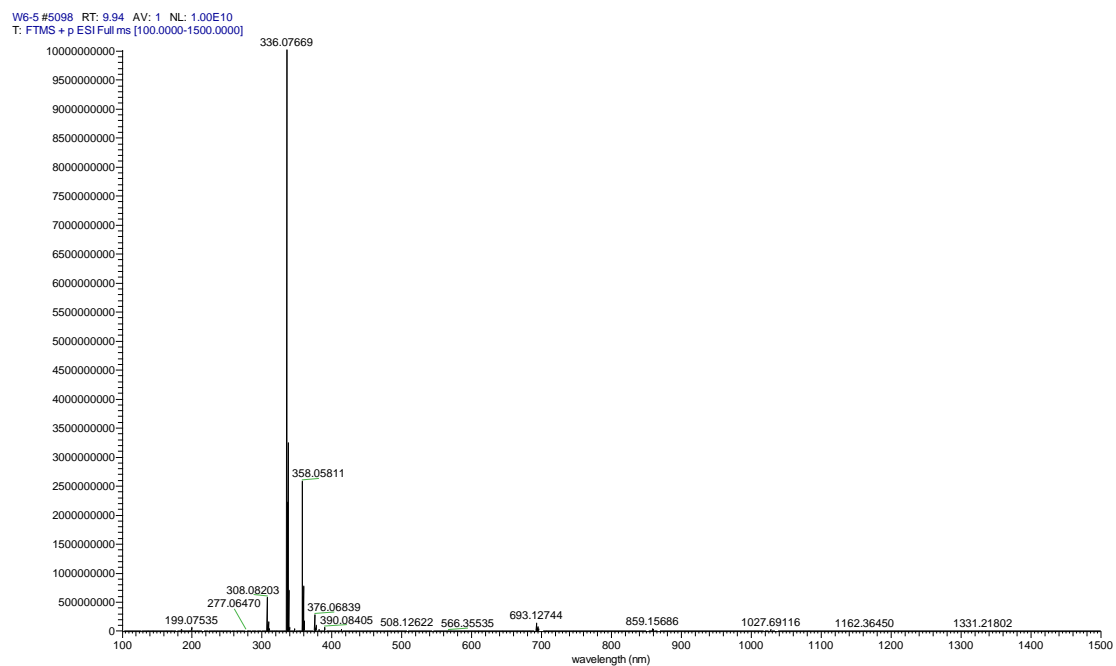


Figure S15: HRMS of compound **5e**

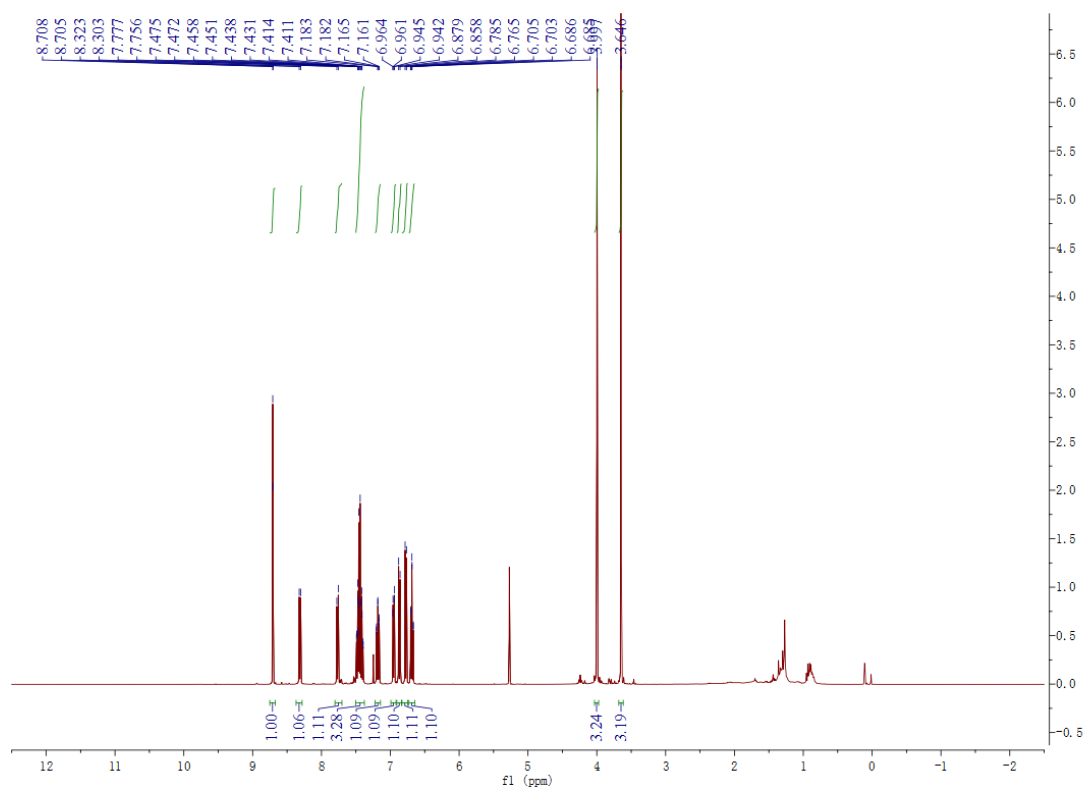
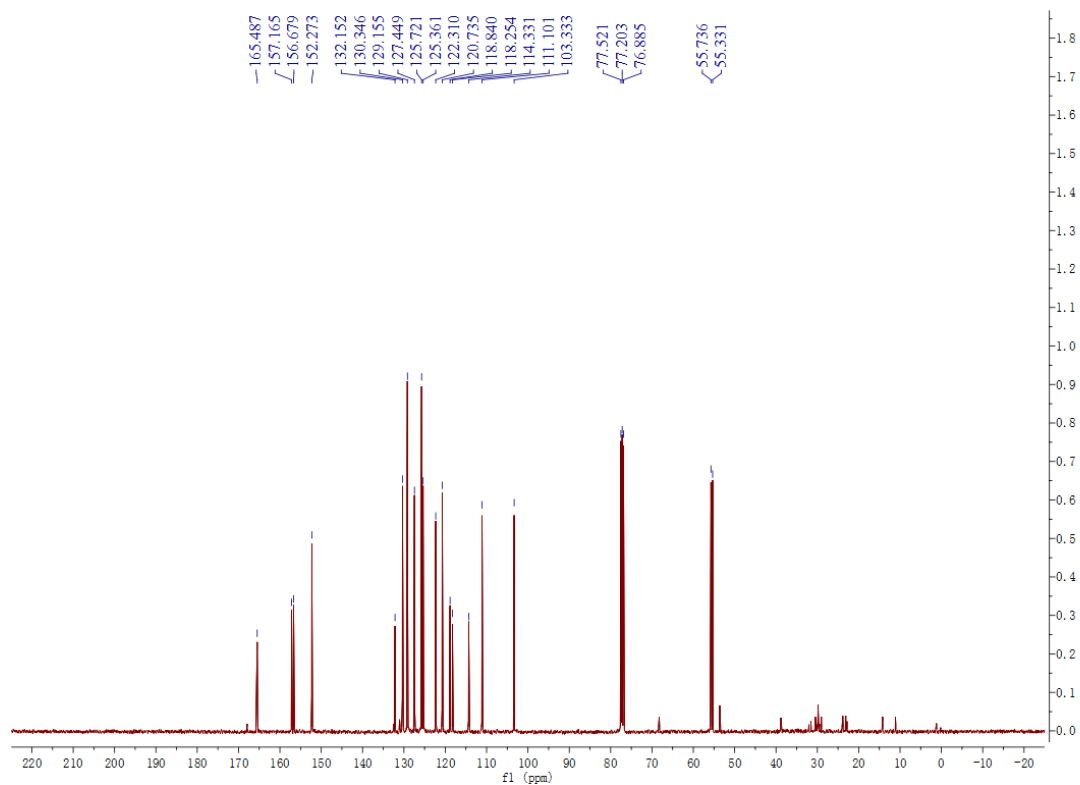
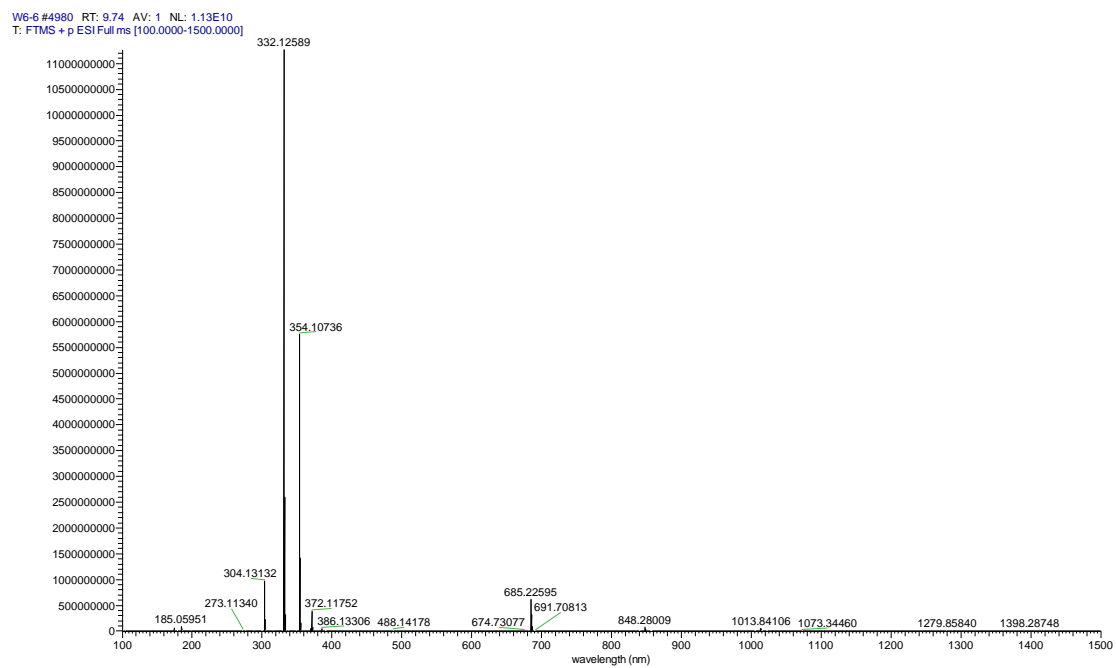


Figure S16:  $^1\text{H}$  NMR of compound **5f**





**Figure S17:**  $^{13}\text{C}$  NMR of compound **5f**



**Figure S18:** HRMS of compound **5f**

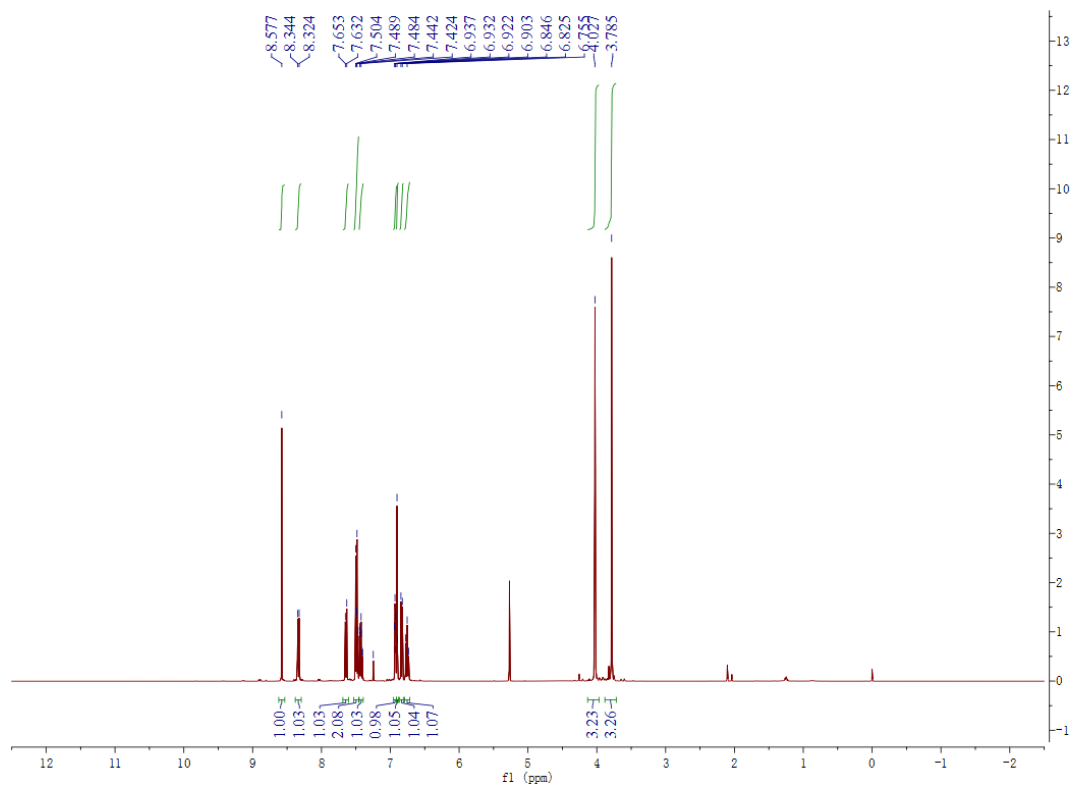


Figure S19:  $^1\text{H}$  NMR of compound **5g**

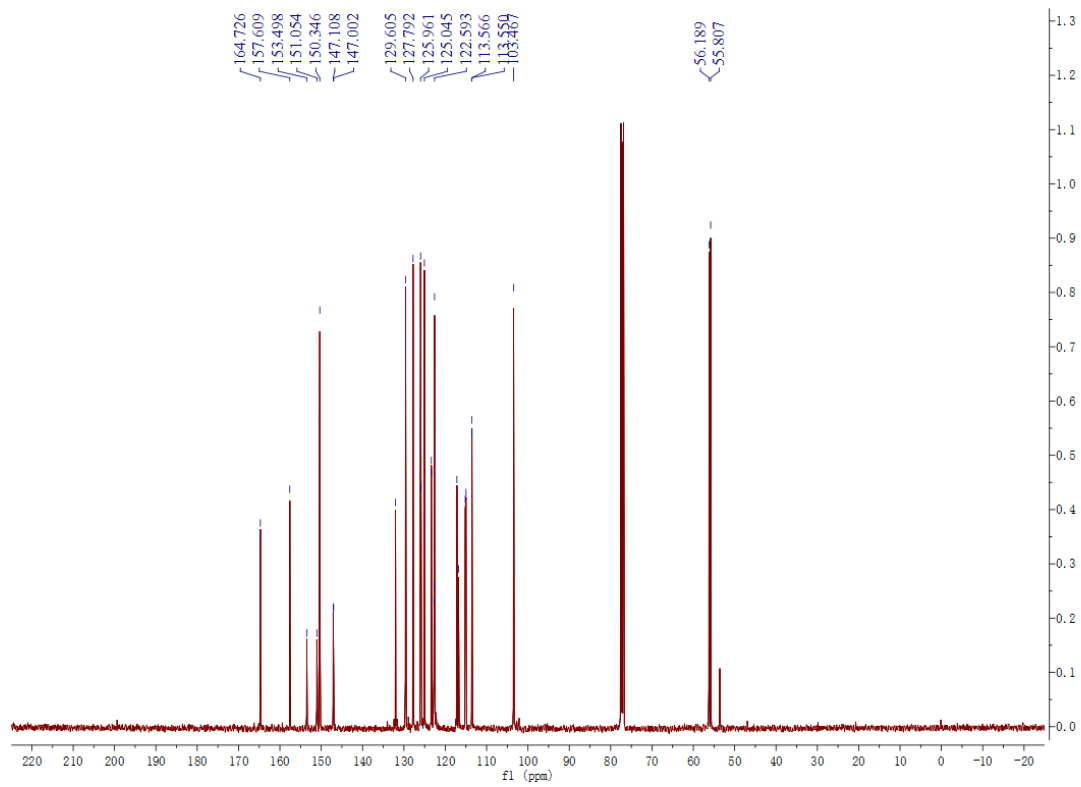


Figure S20:  $^{13}\text{C}$  NMR of compound **5g**

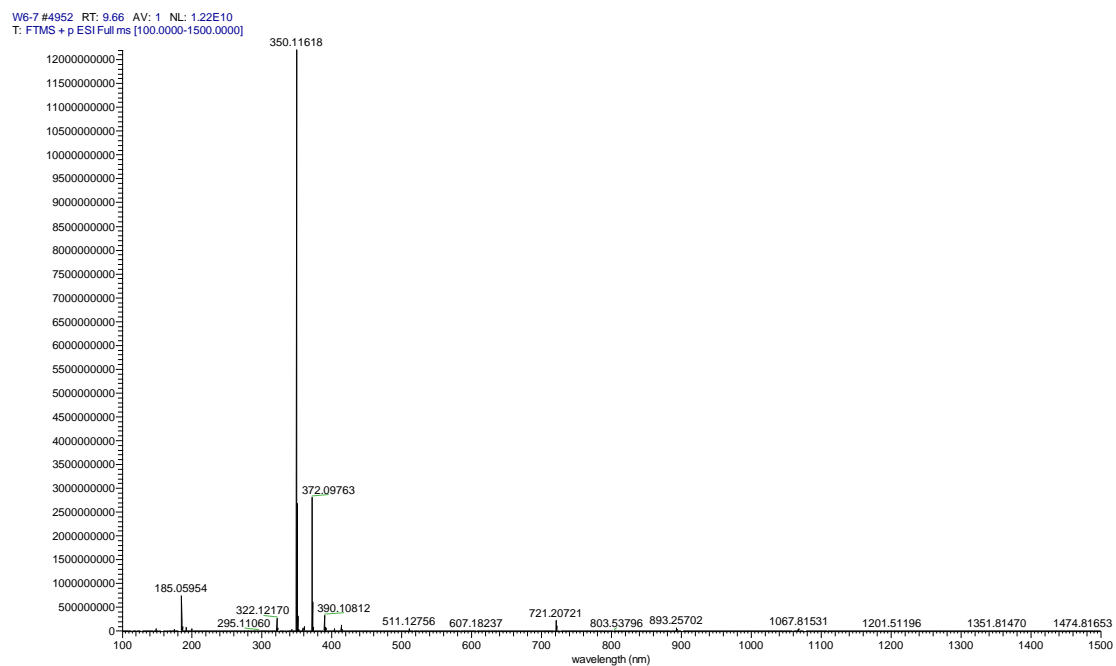


Figure S21: HRMS of compound 5g

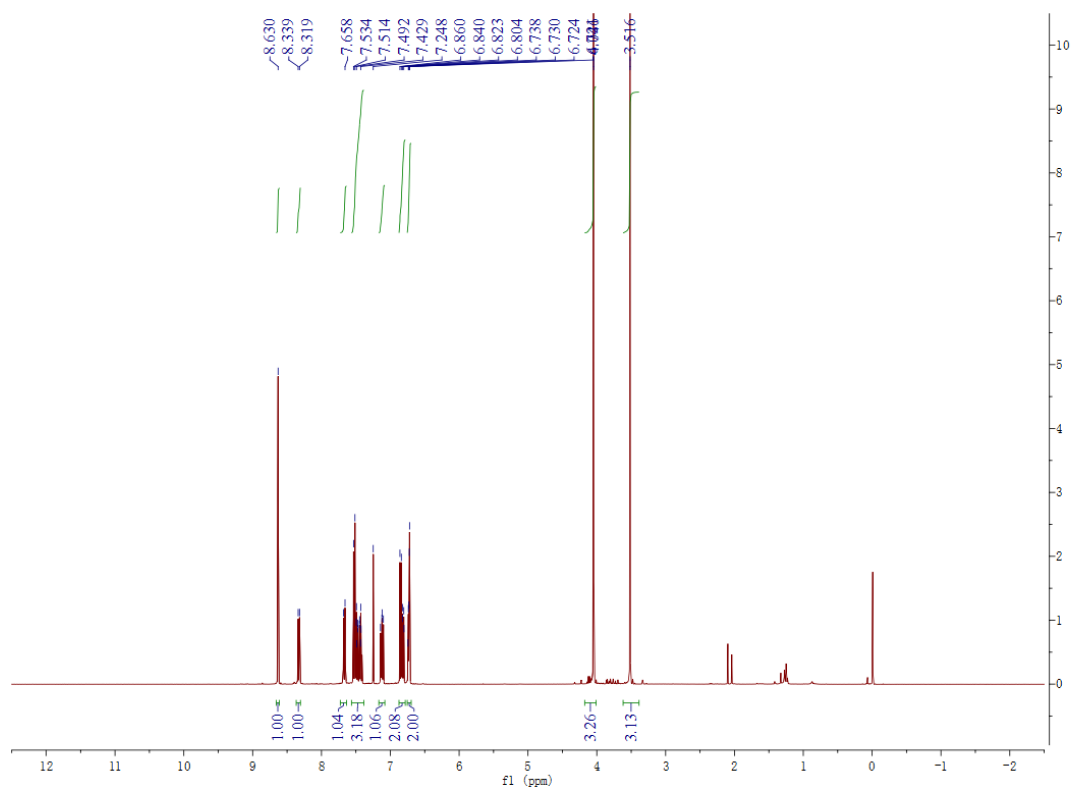


Figure S22:  $^1\text{H}$  NMR of compound 5h

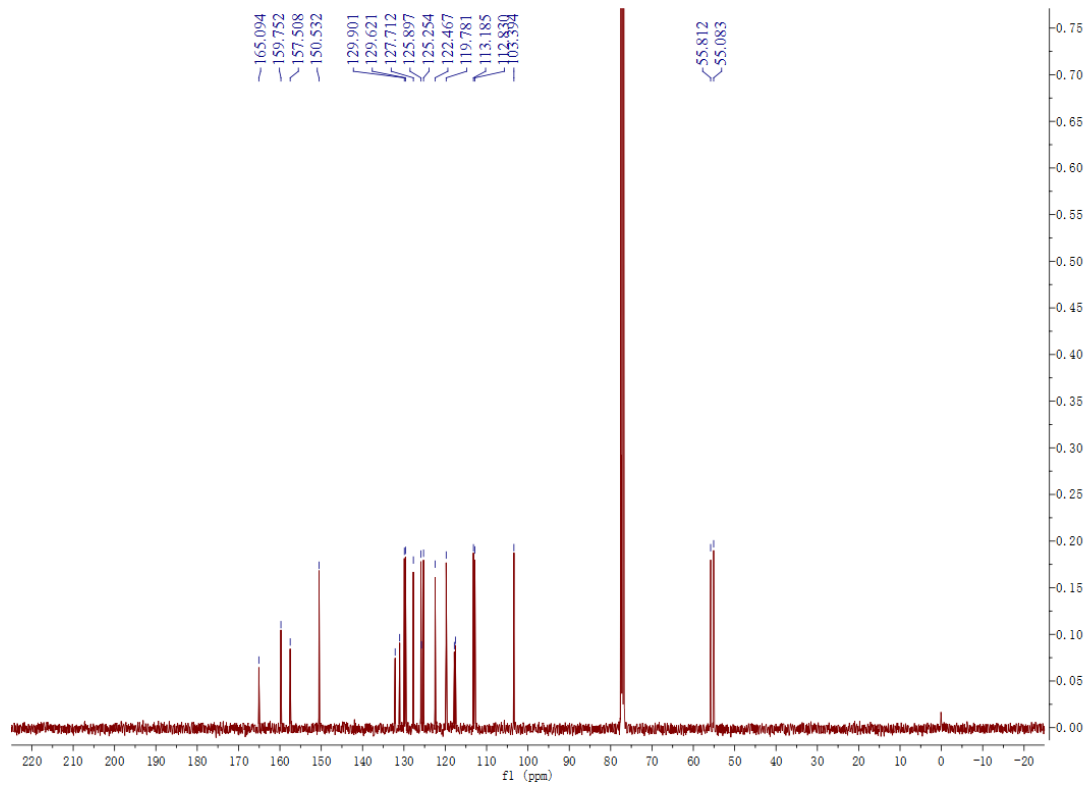


Figure S23:  $^{13}\text{C}$  NMR of compound **5h**

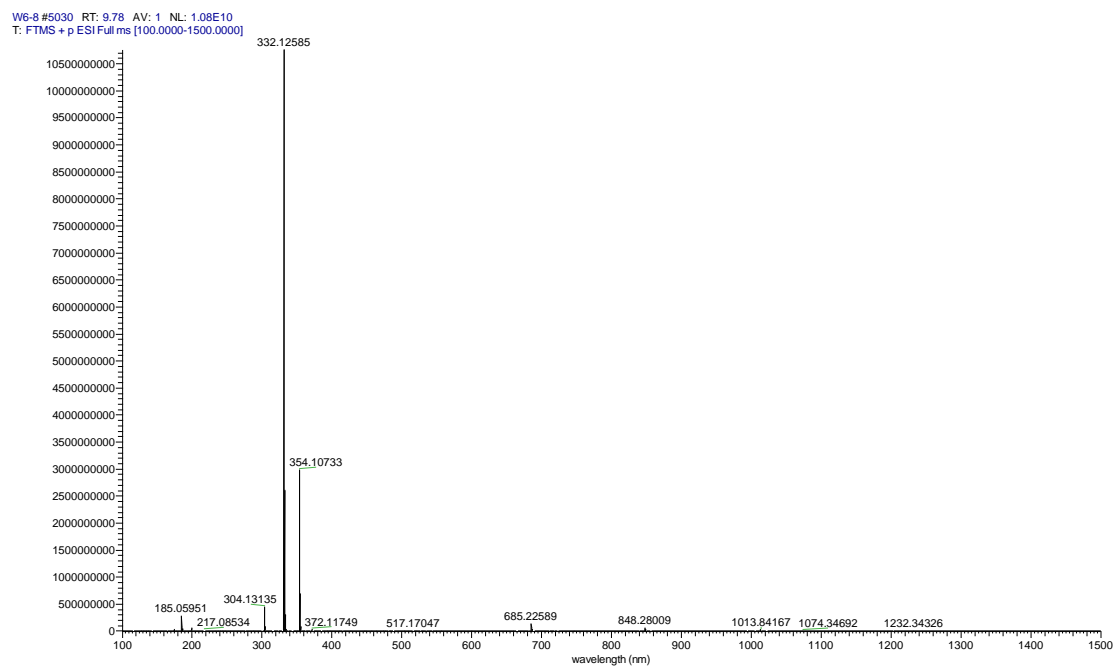


Figure S24: HRMS of compound **5h**

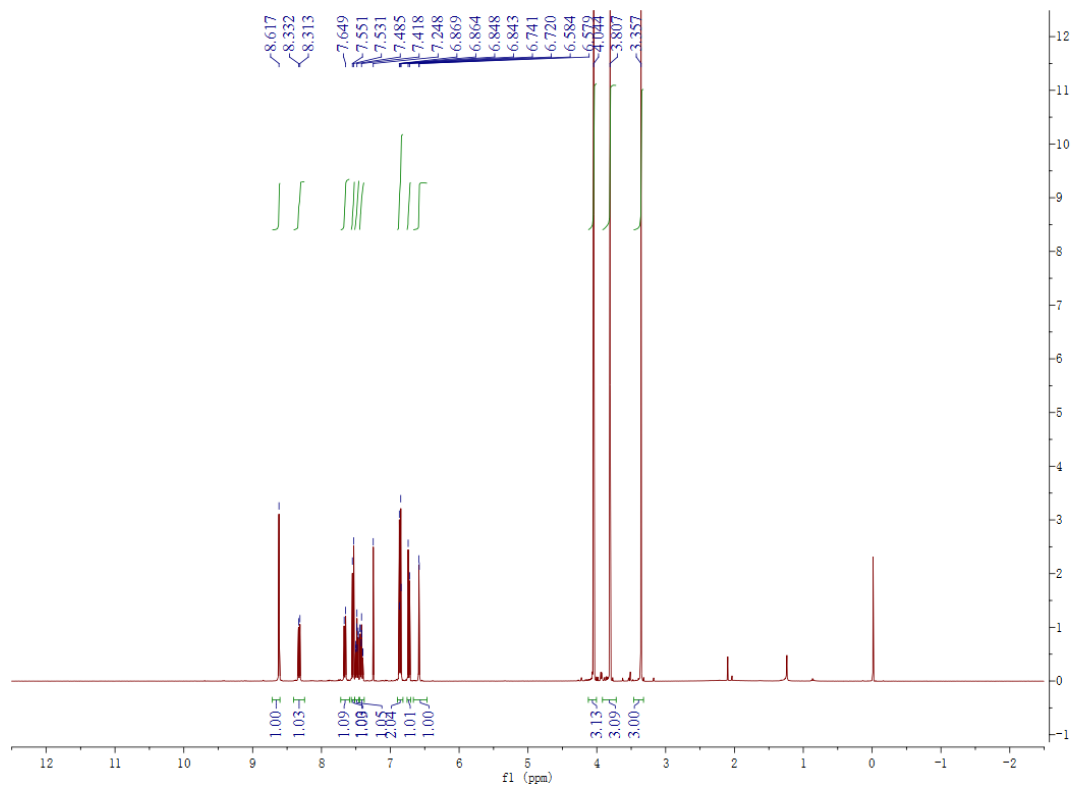


Figure S25: <sup>1</sup>H NMR of compound **5i**

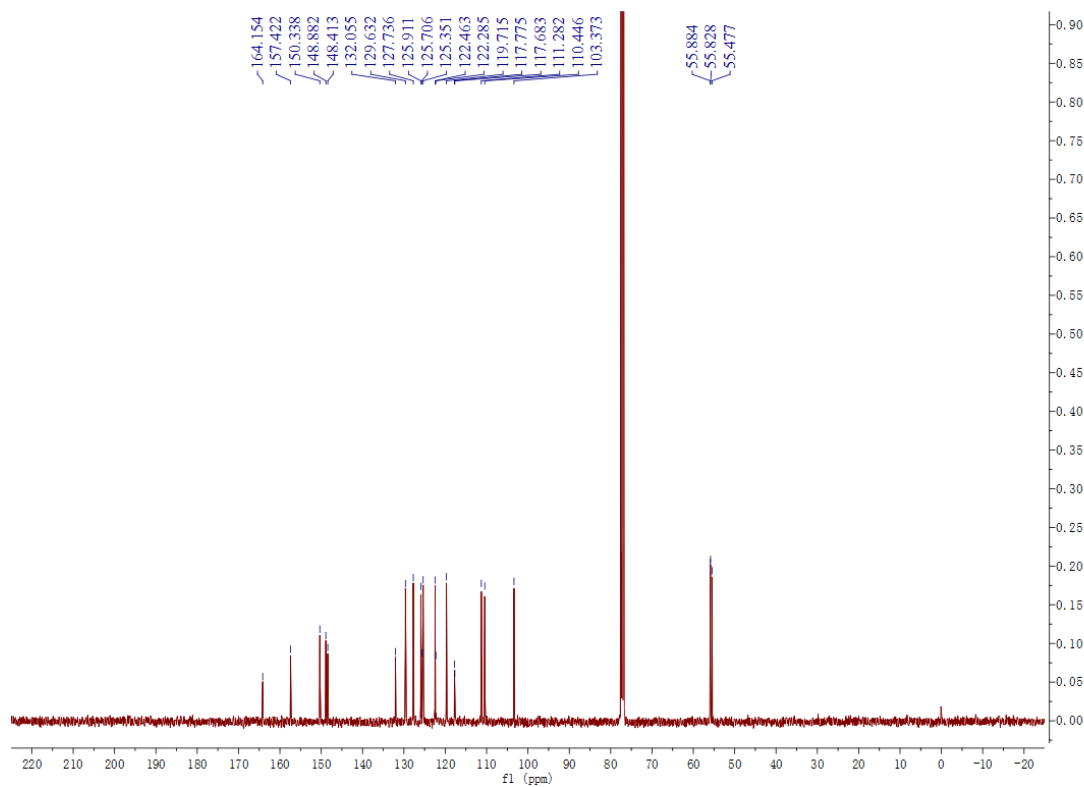


Figure S26: <sup>13</sup>C NMR of compound **5i**

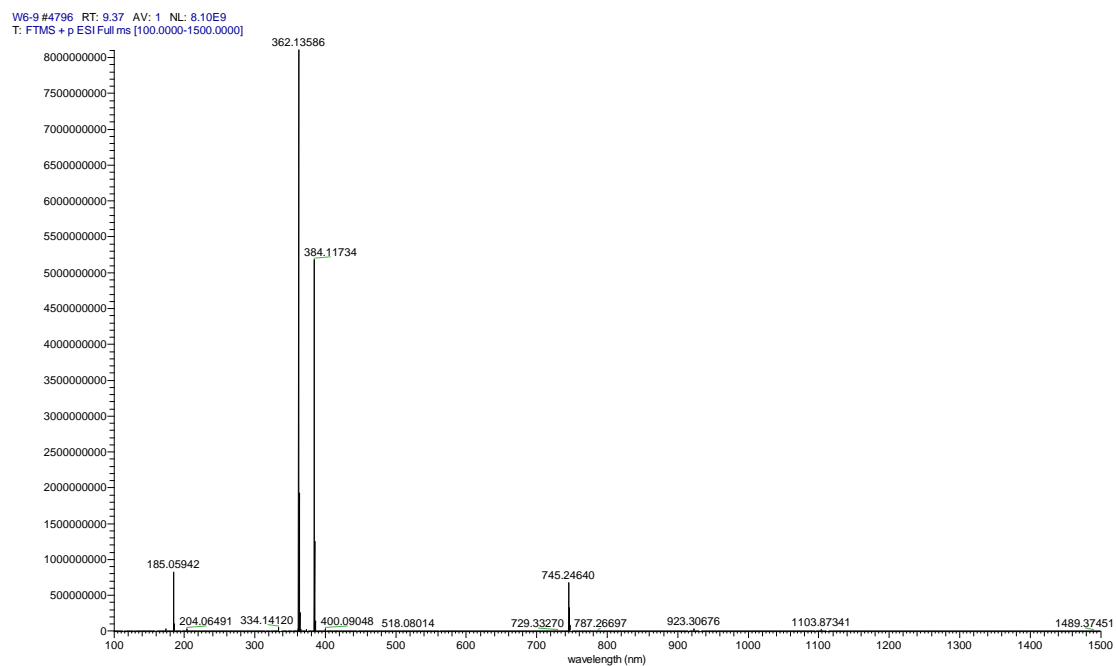


Figure S27: HRMS of compound **5i**

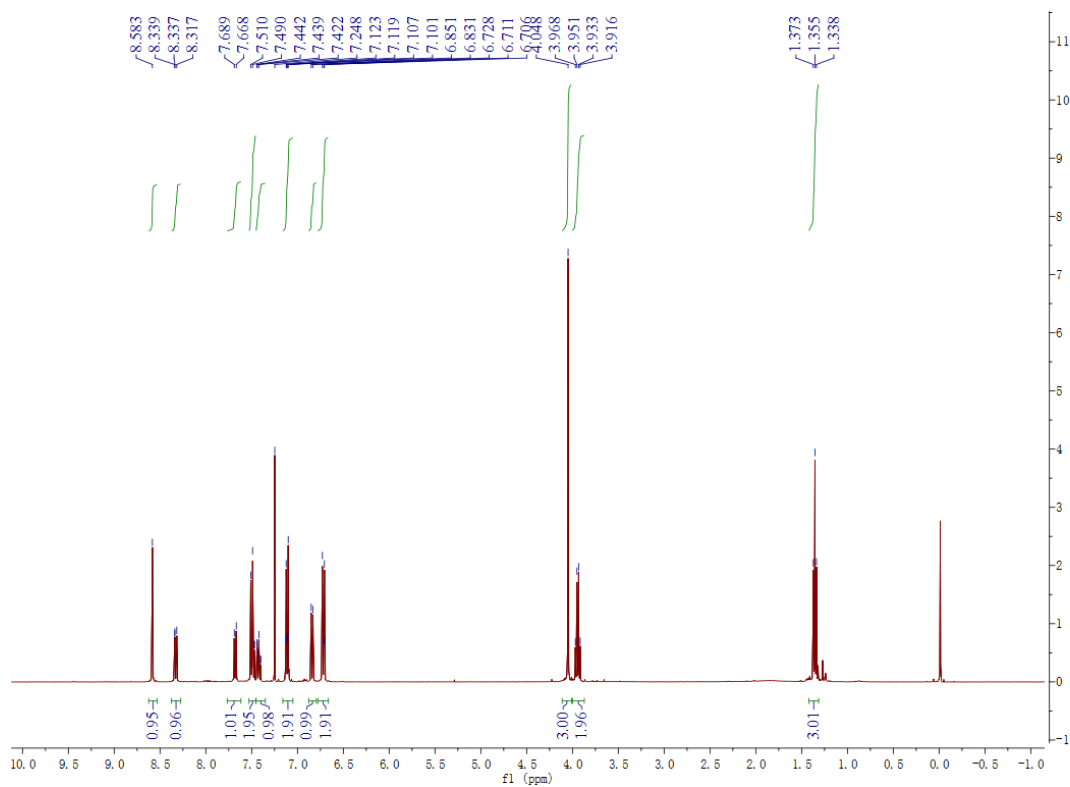
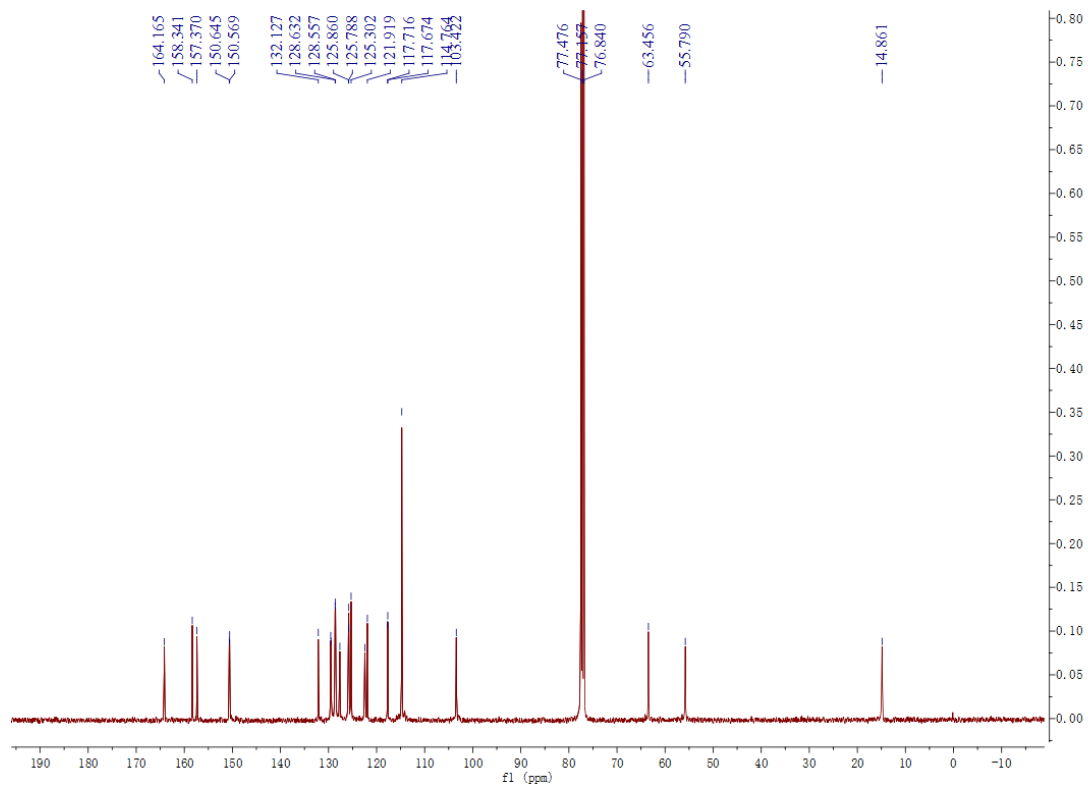
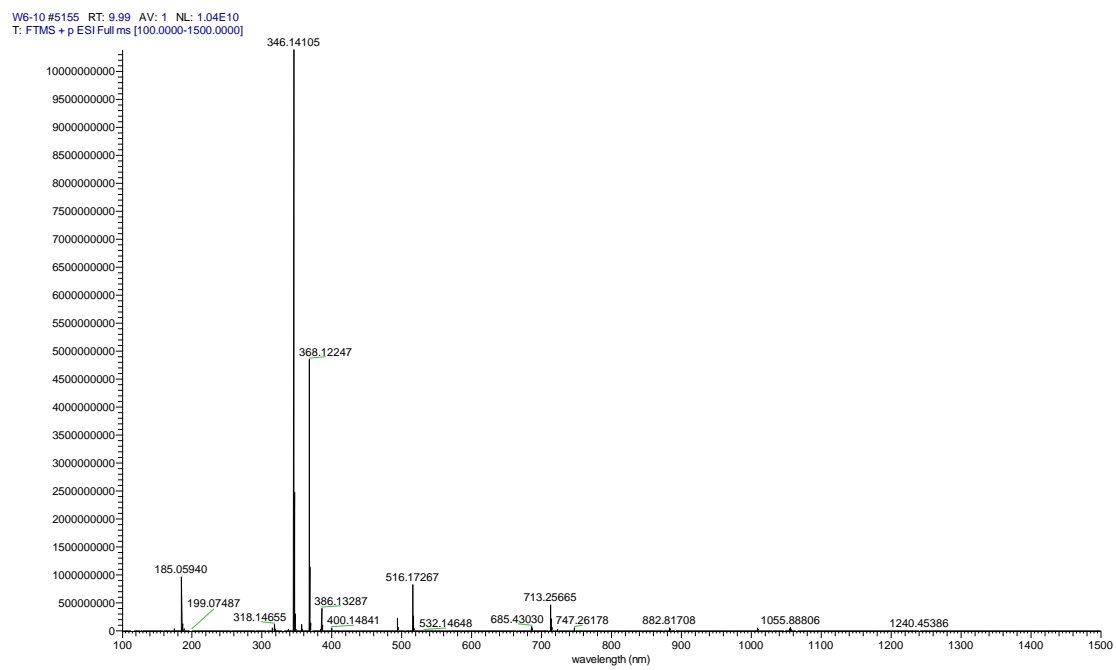


Figure S28:  $^1\text{H}$  NMR of compound **5j**



**Figure S29:**  $^{13}\text{C}$  NMR of compound **5j**



**Figure S30:** HRMS of compound **5j**

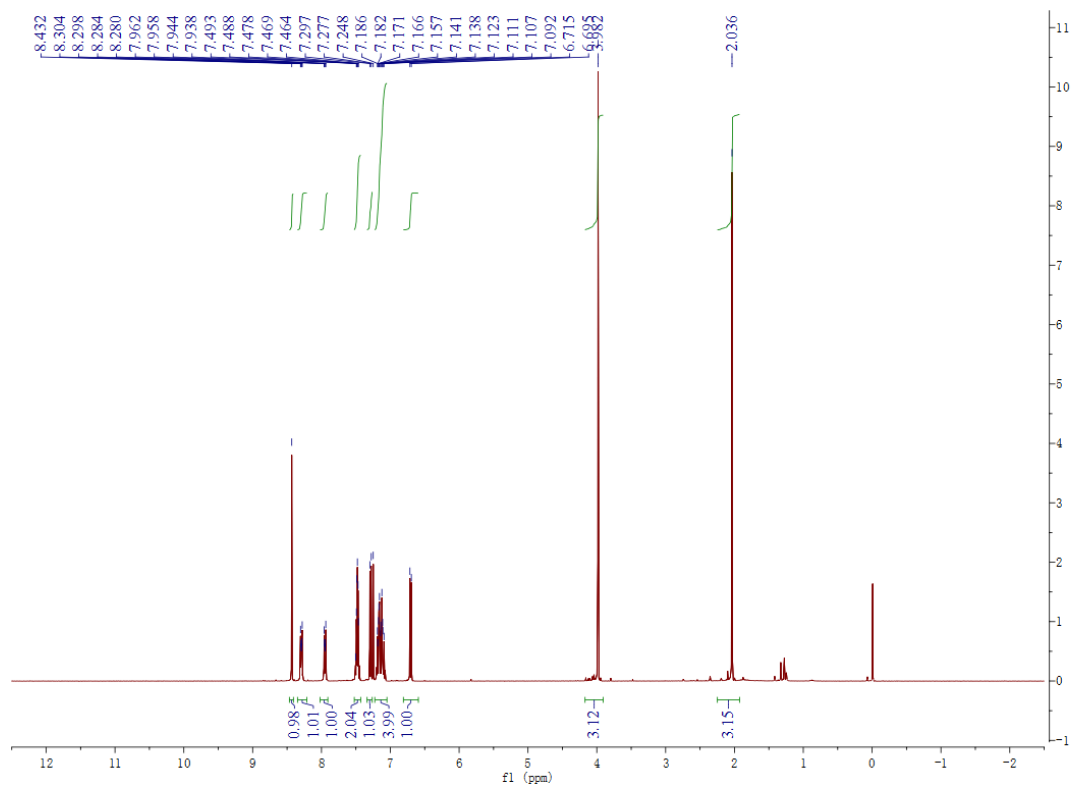


Figure S31:  $^1\text{H}$  NMR of compound **5k**

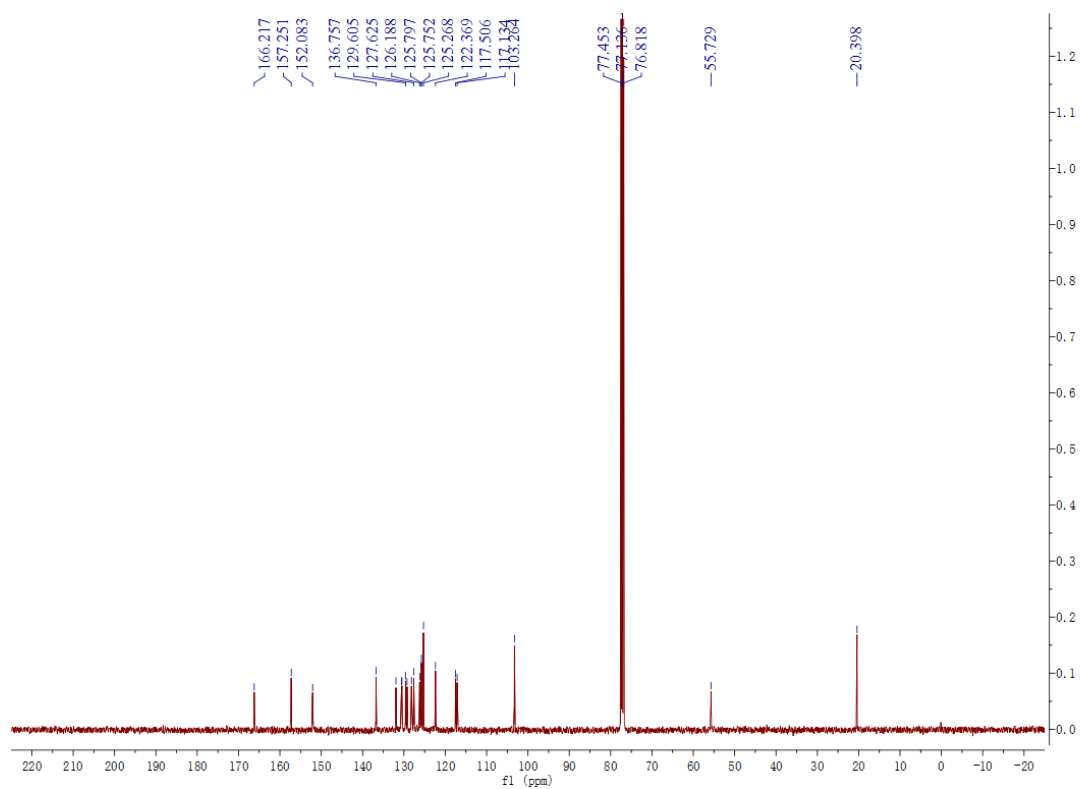


Figure S32:  $^{13}\text{C}$  NMR of compound **5k**



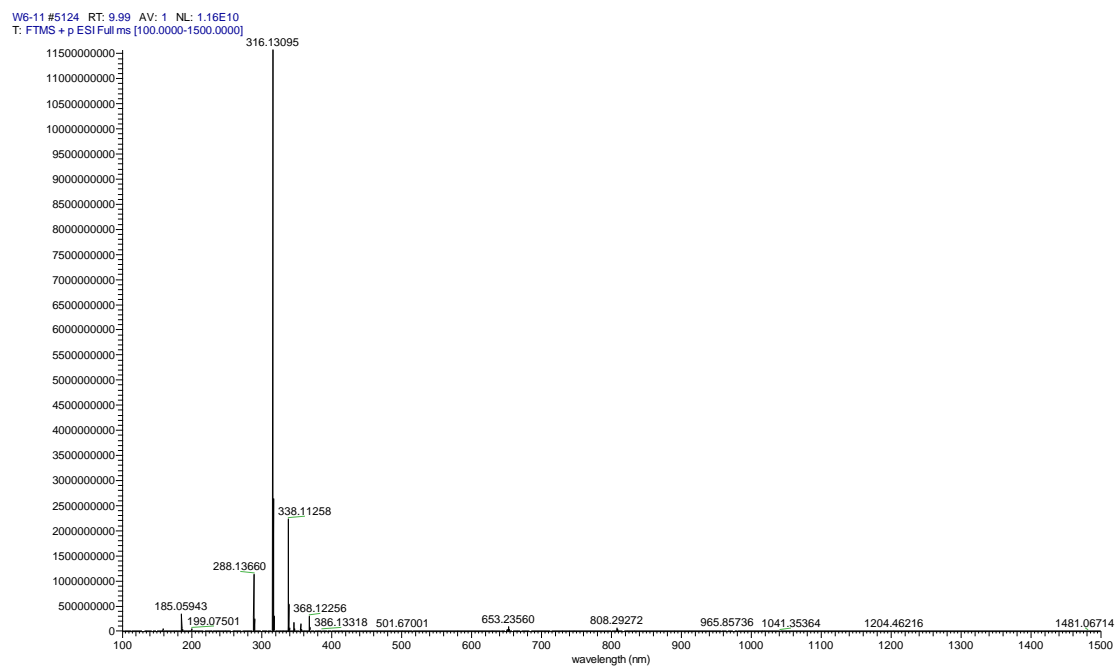


Figure S33: HRMS of compound 5k

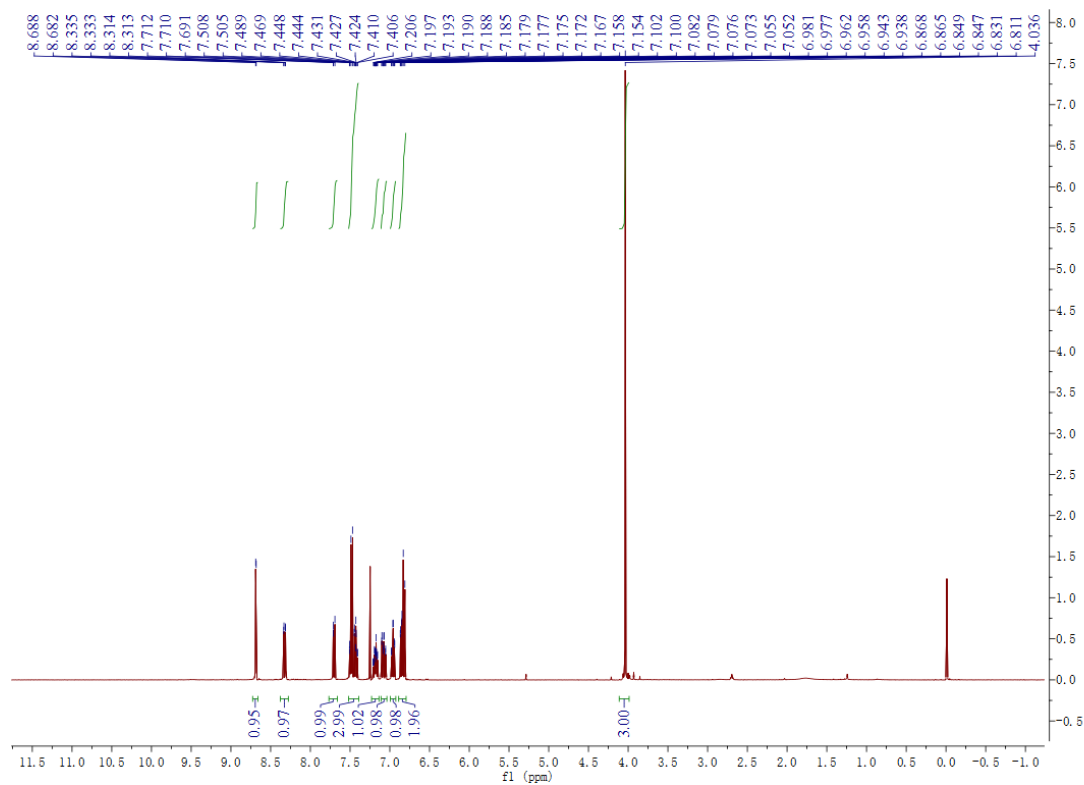


Figure S34:  $^1\text{H}$  NMR of compound 5l

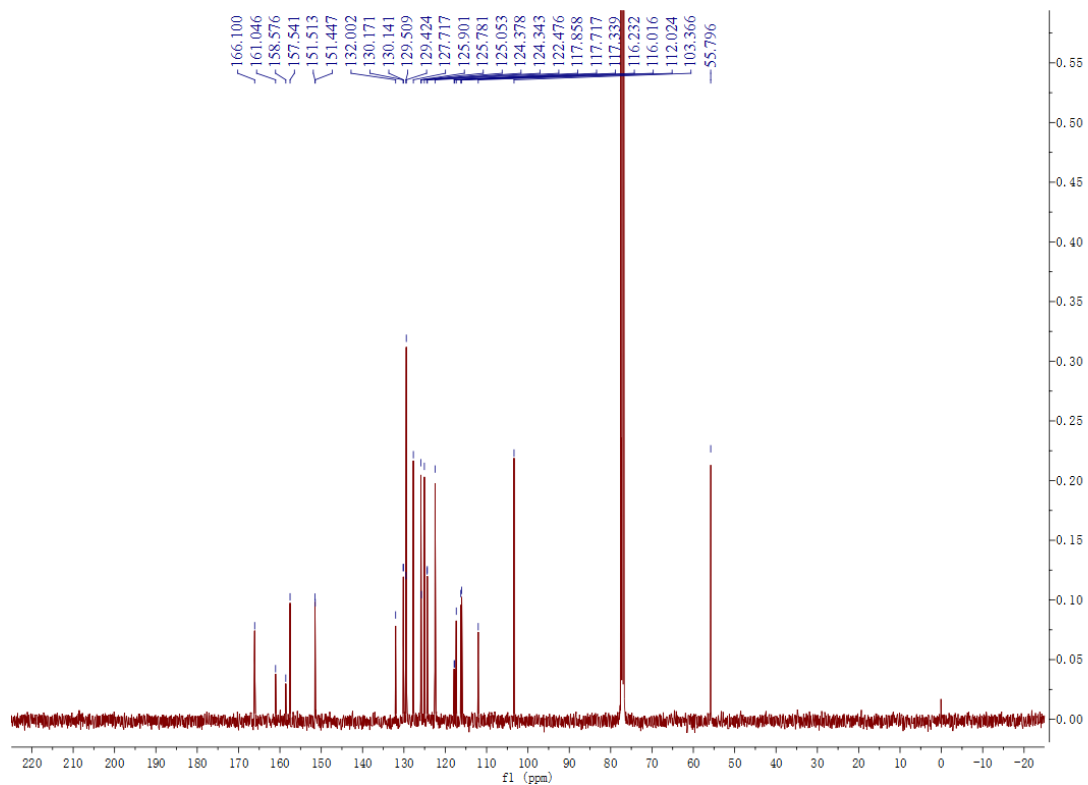


Figure S35:  $^{13}\text{C}$  NMR of compound **5I**

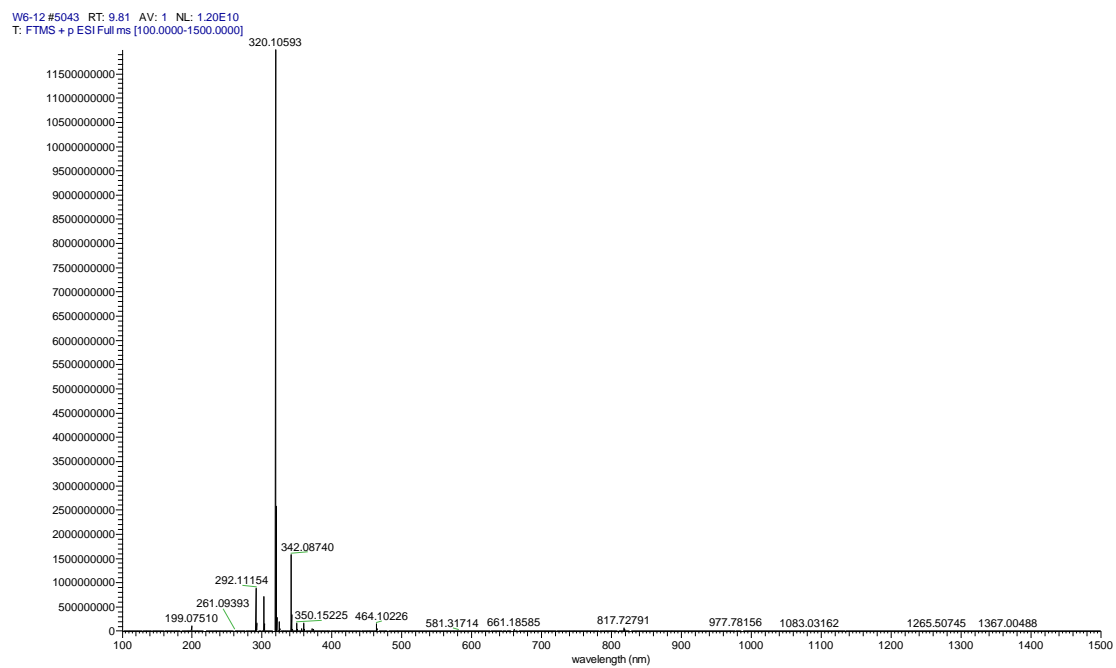


Figure S36: HRMS of compound **5I**

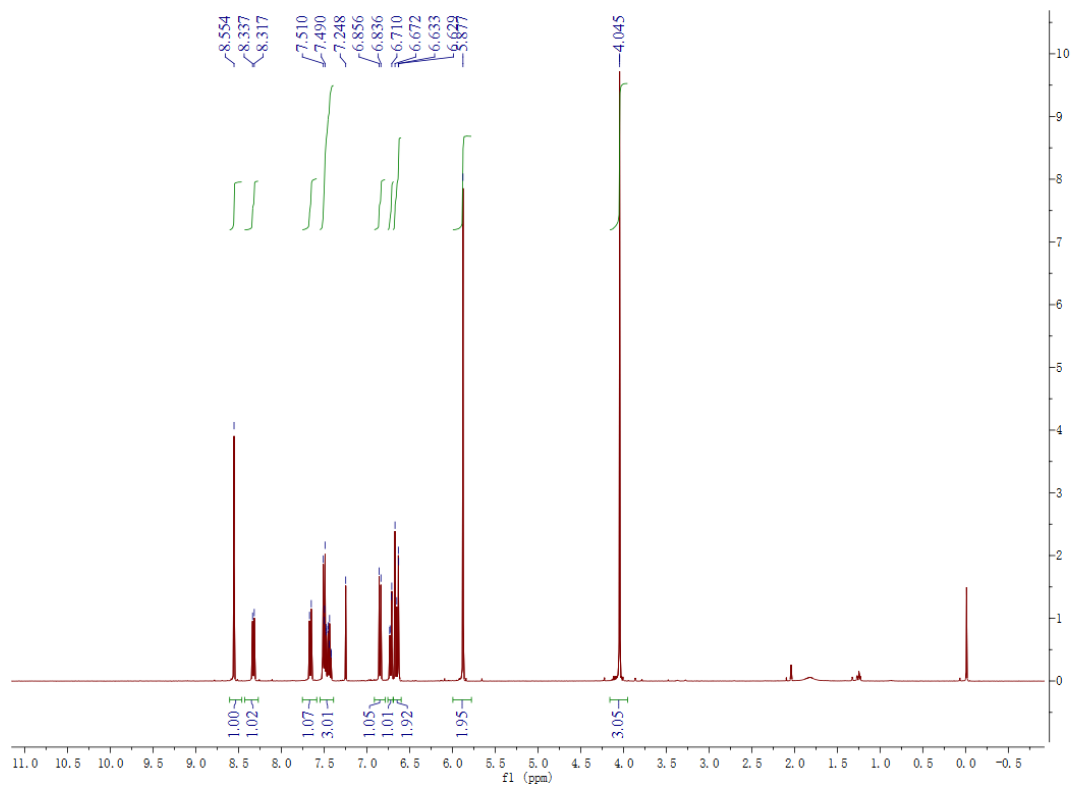


Figure S37:  $^1\text{H}$  NMR of compound **5m**

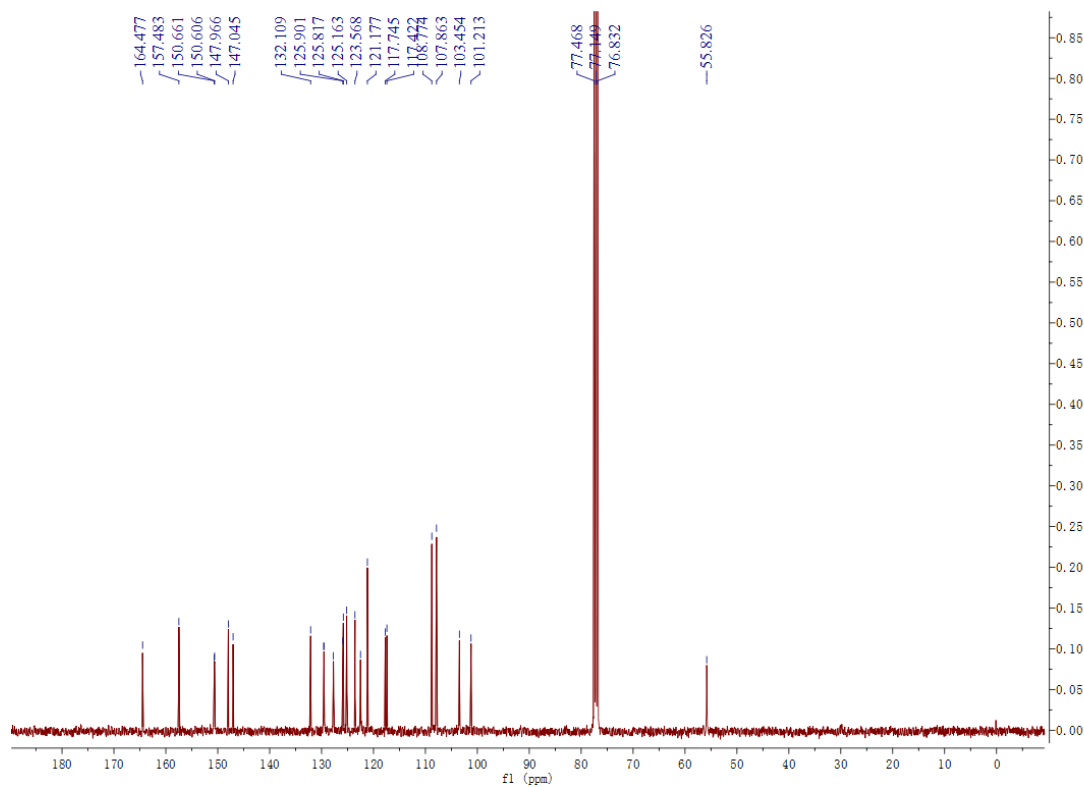


Figure S38:  $^{13}\text{C}$  NMR of compound **5m**

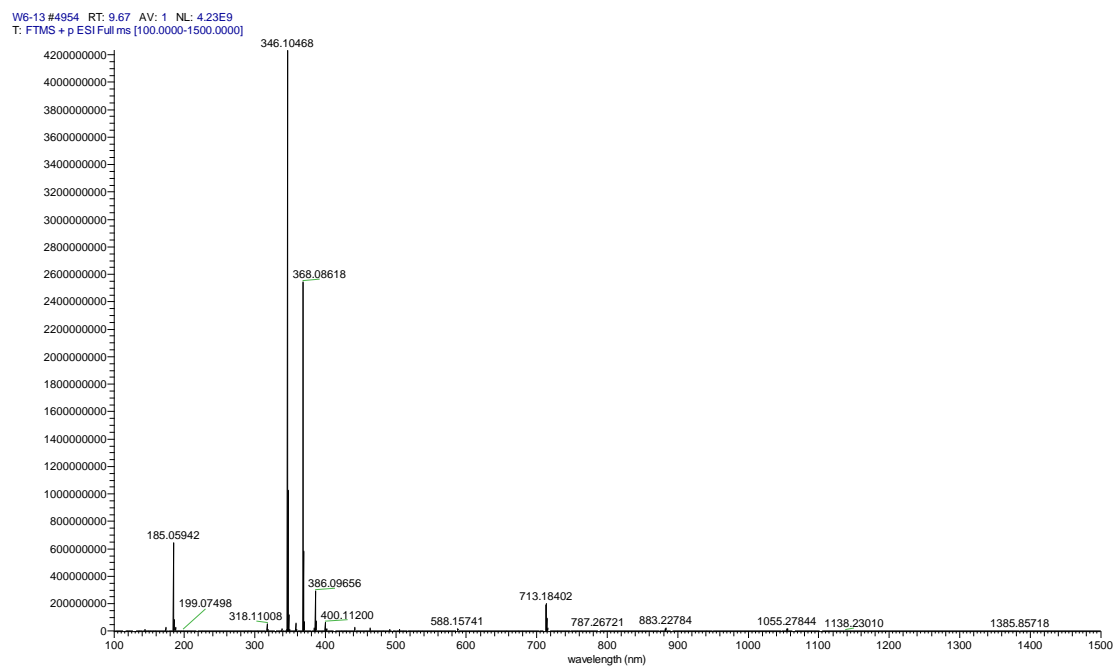


Figure S39: HRMS of compound 5m

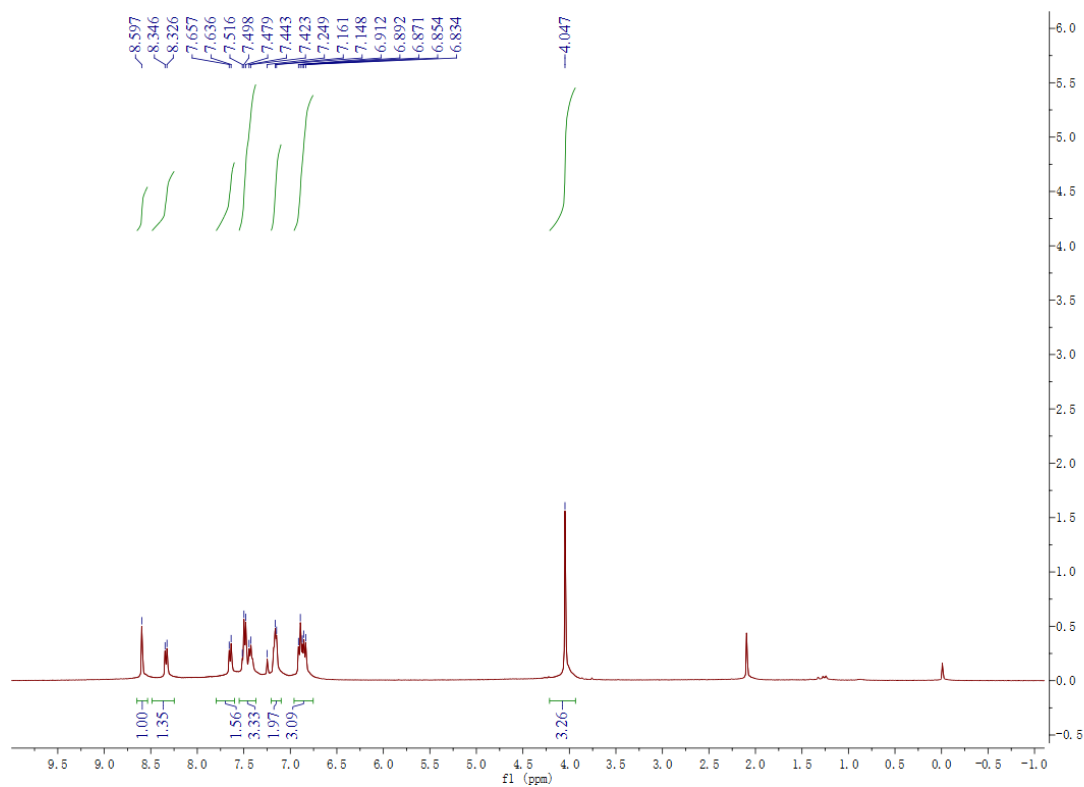
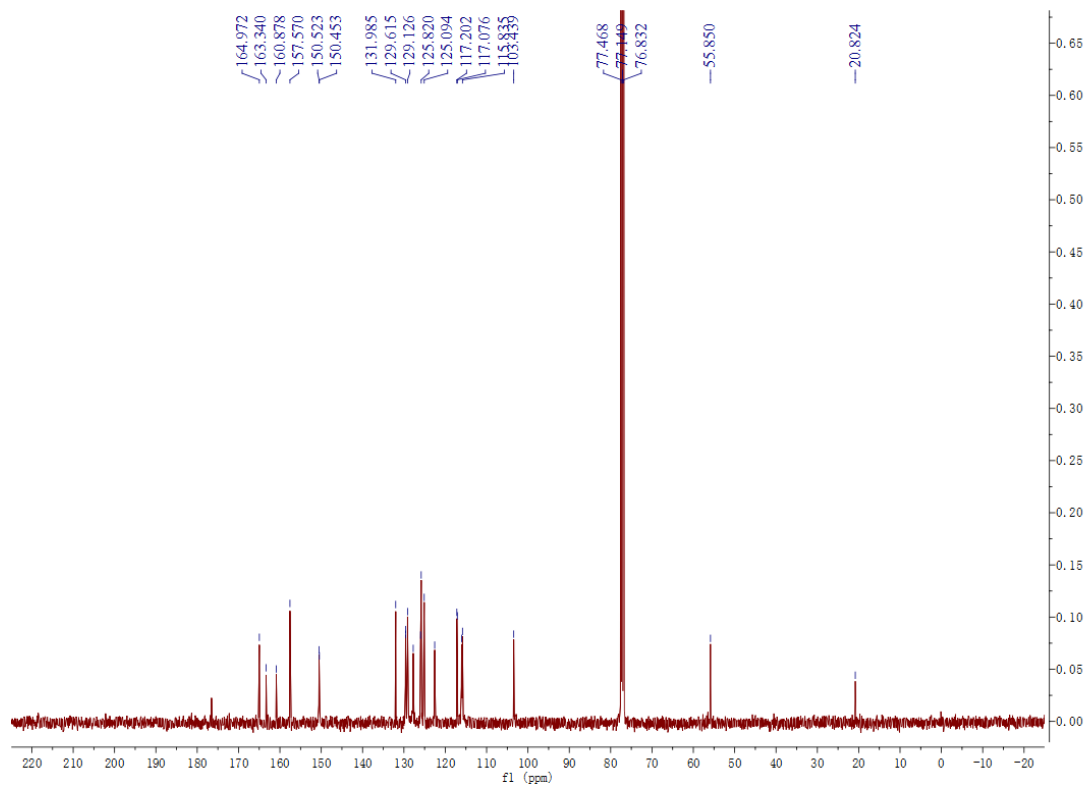
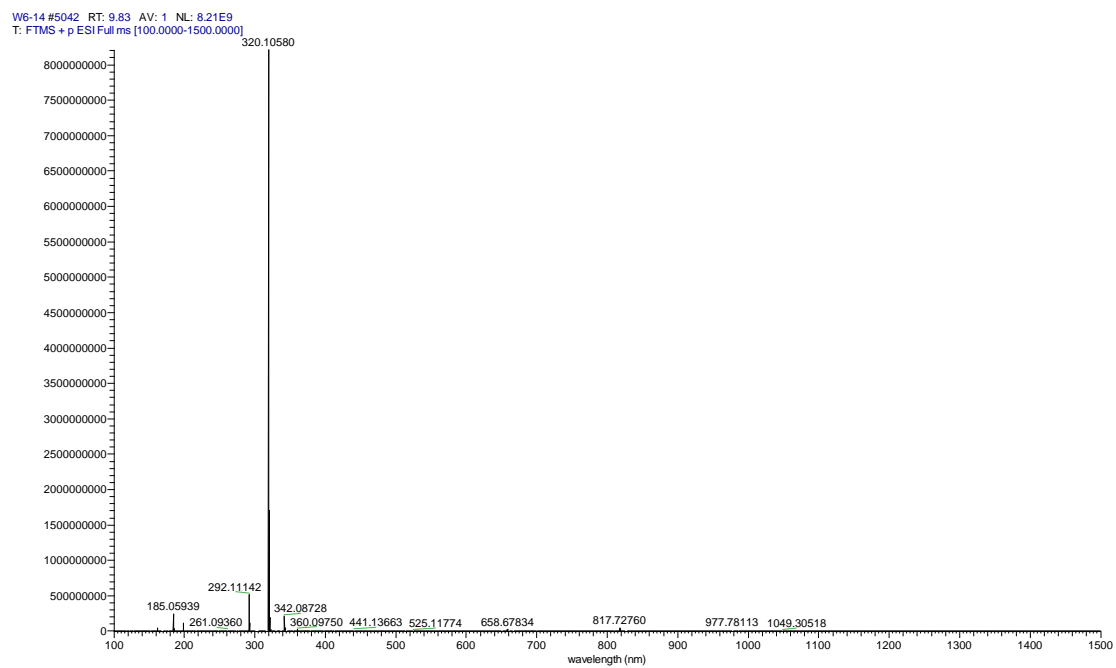


Figure S40:  $^1\text{H}$  NMR of compound 5n



**Figure S41:**  $^{13}\text{C}$  NMR of compound **5n**



**Figure S42:** HRMS of compound **5n**

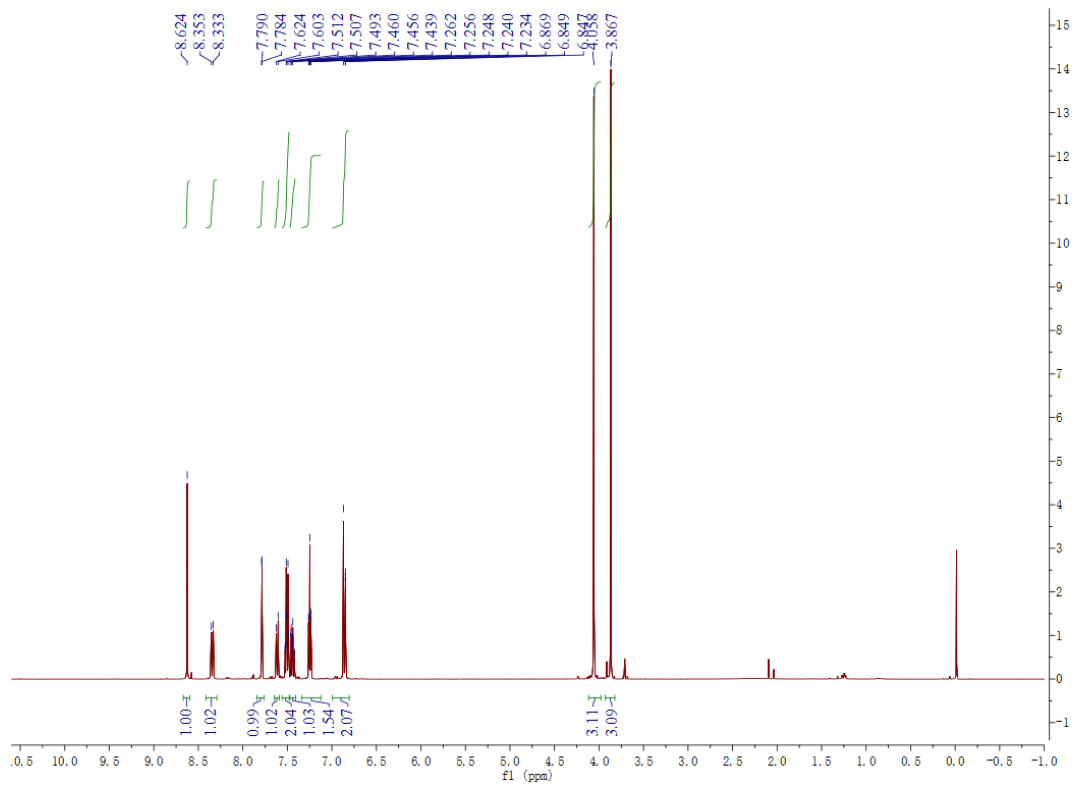


Figure S43:  $^1\text{H}$  NMR of compound **5o**

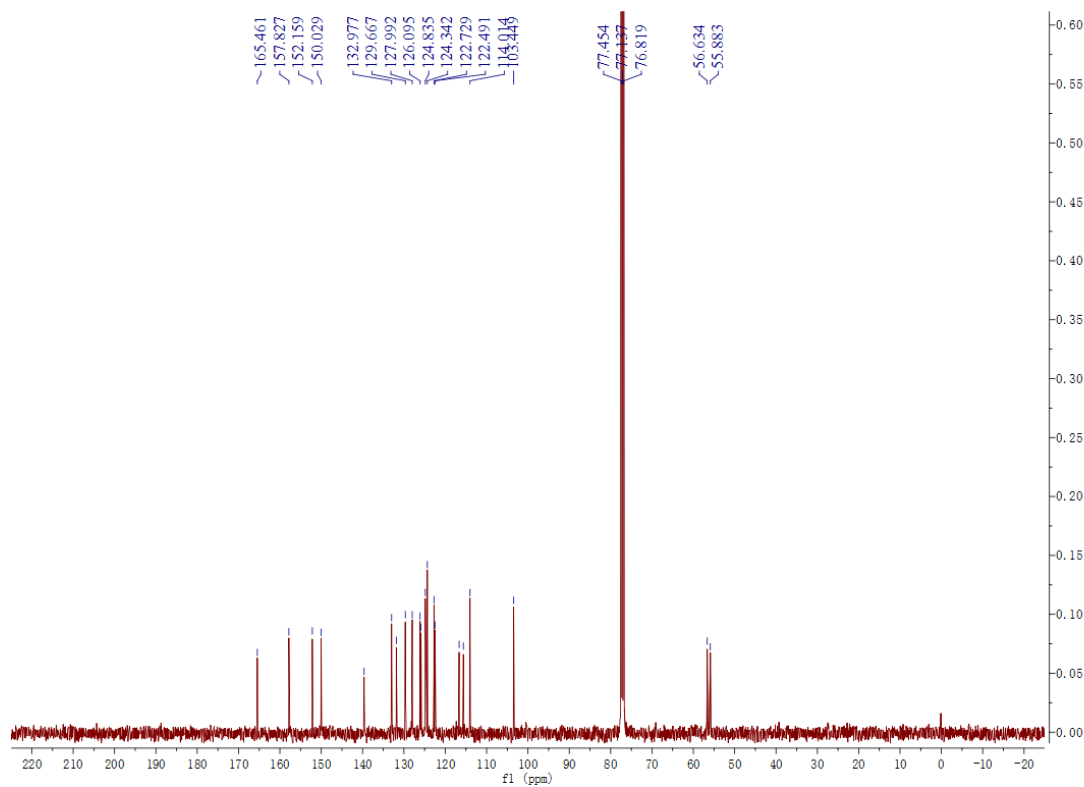
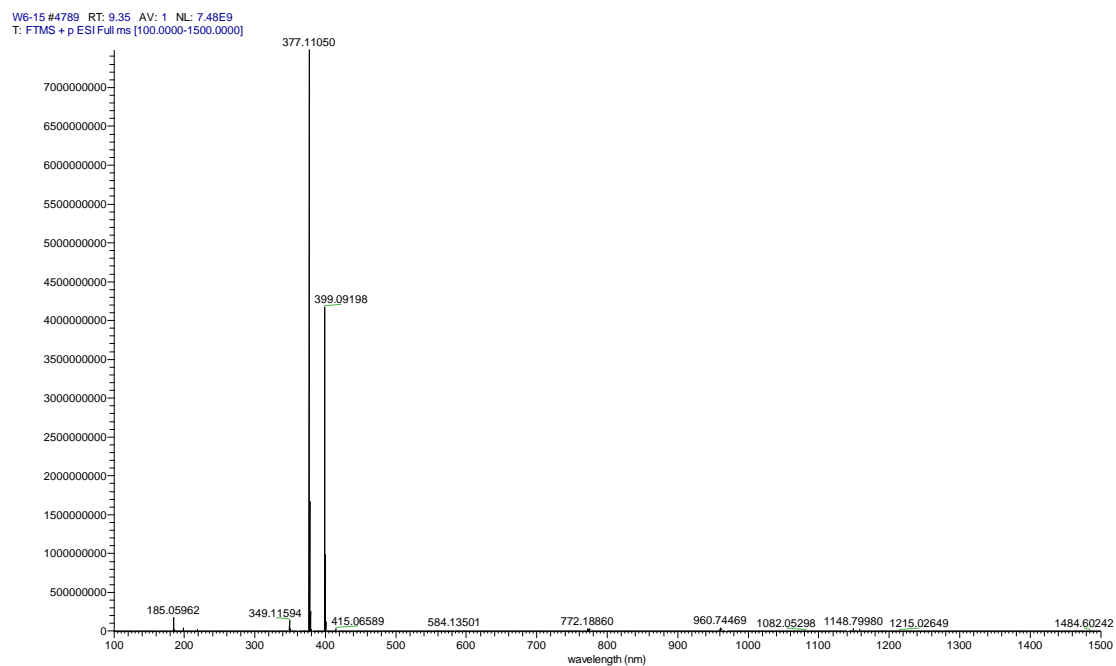
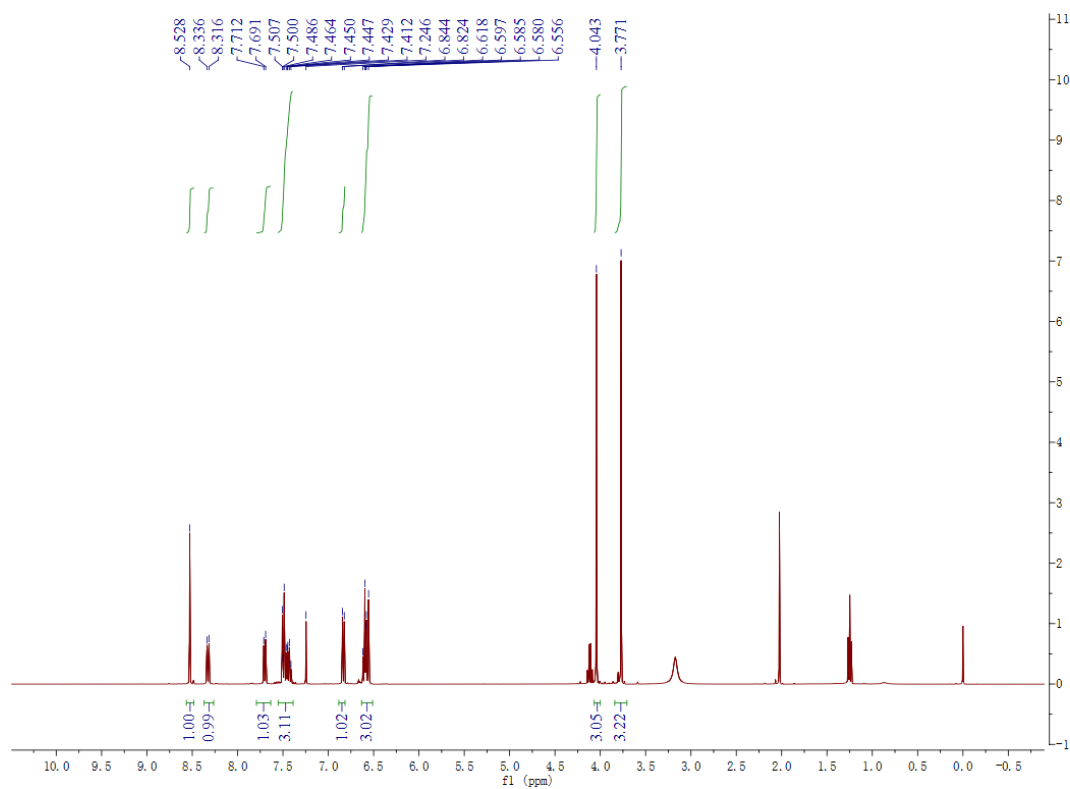


Figure S44:  $^{13}\text{C}$  NMR of compound **5o**



**Figure S45: HRMS of compound 5o**



**Figure S46: <sup>1</sup>H NMR of compound 5p**

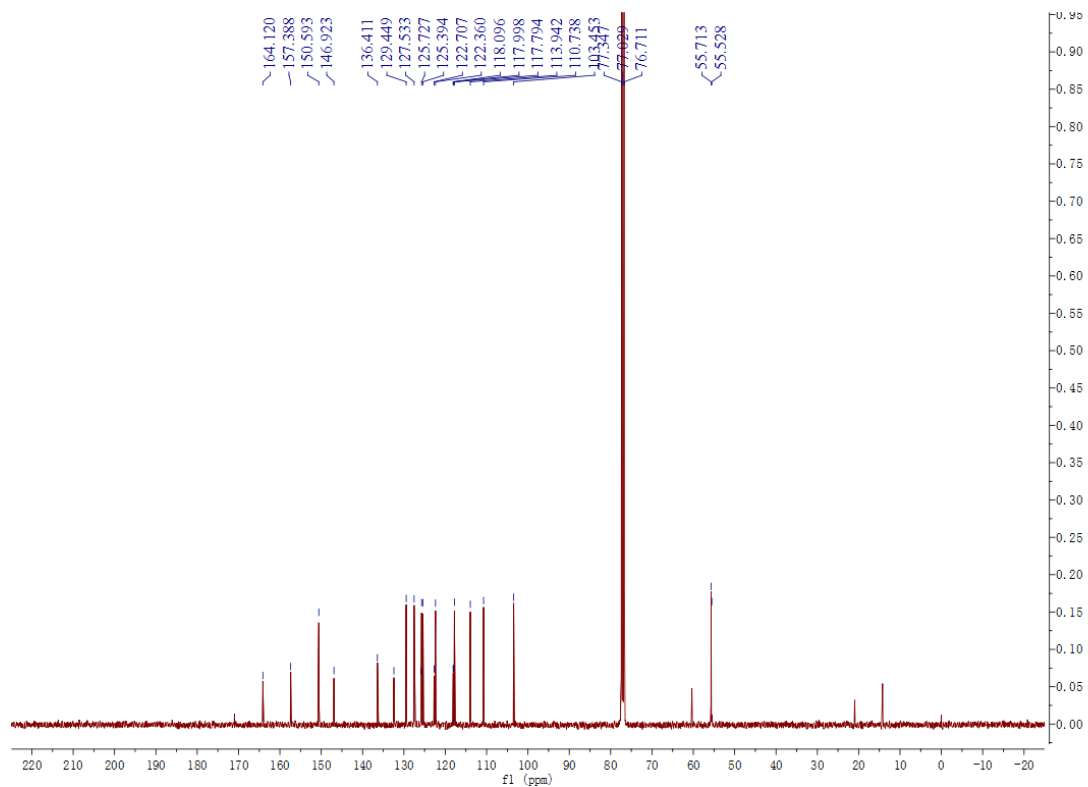


Figure S47:  $^{13}\text{C}$  NMR of compound **5p**

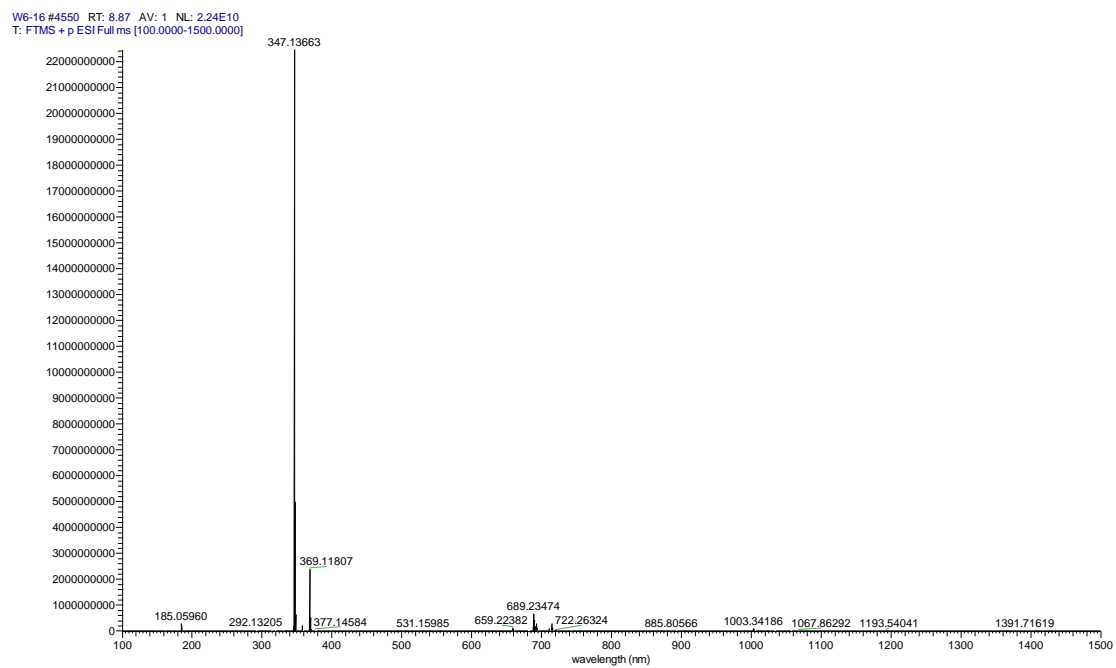


Figure S48: HRMS of compound **5p**



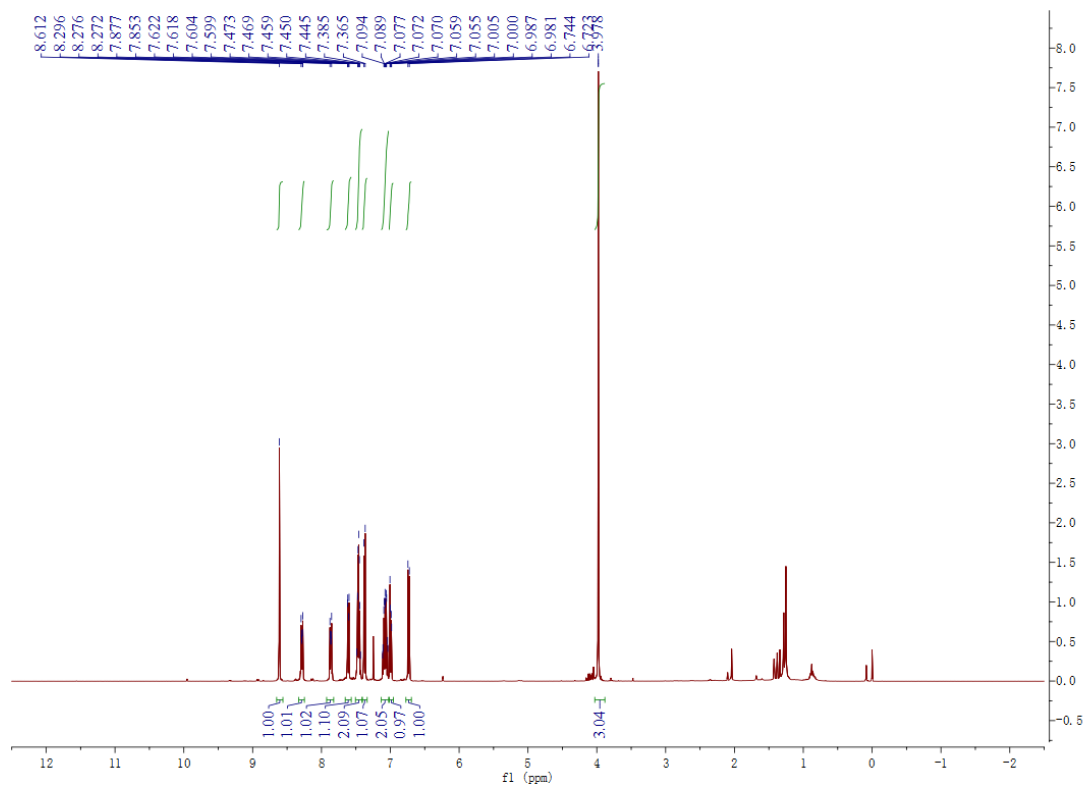


Figure S49:  $^1\text{H}$  NMR of compound **5q**

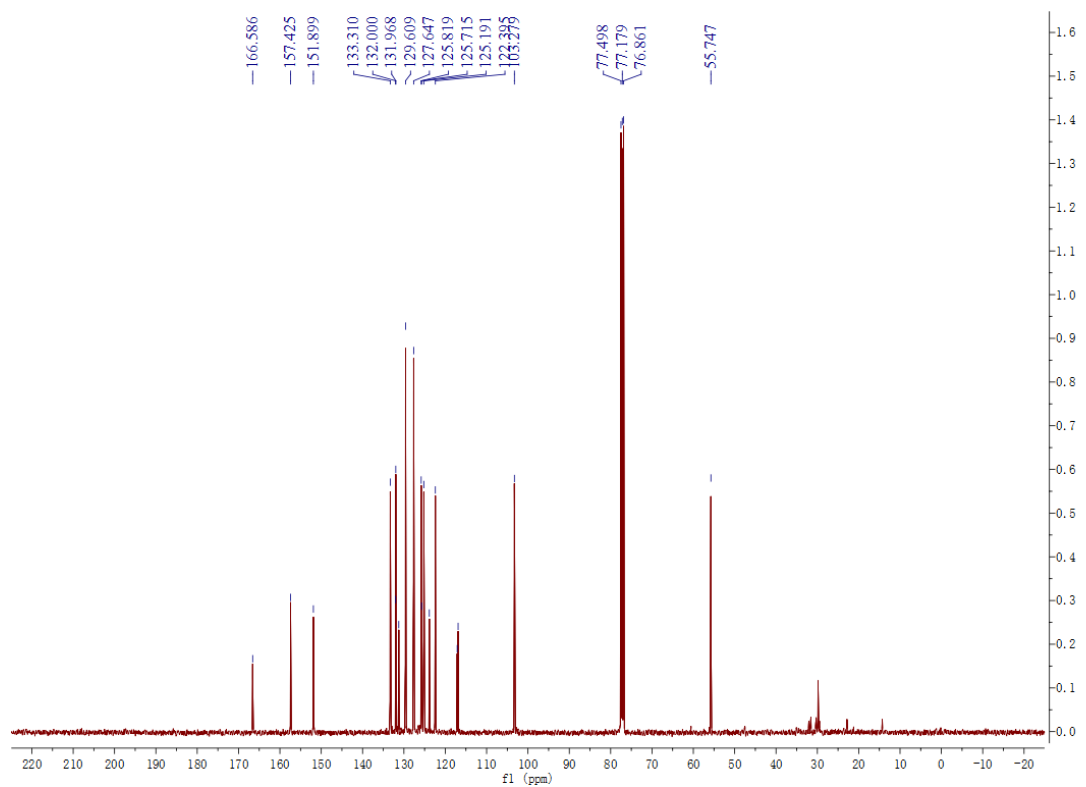


Figure S50:  $^{13}\text{C}$  NMR of compound **5q**

W6-17 #5140 RT: 9.99 AV: 1 NL: 4.29E9  
T: FTMS + p ESI Full ms [100.0000-1500.0000]

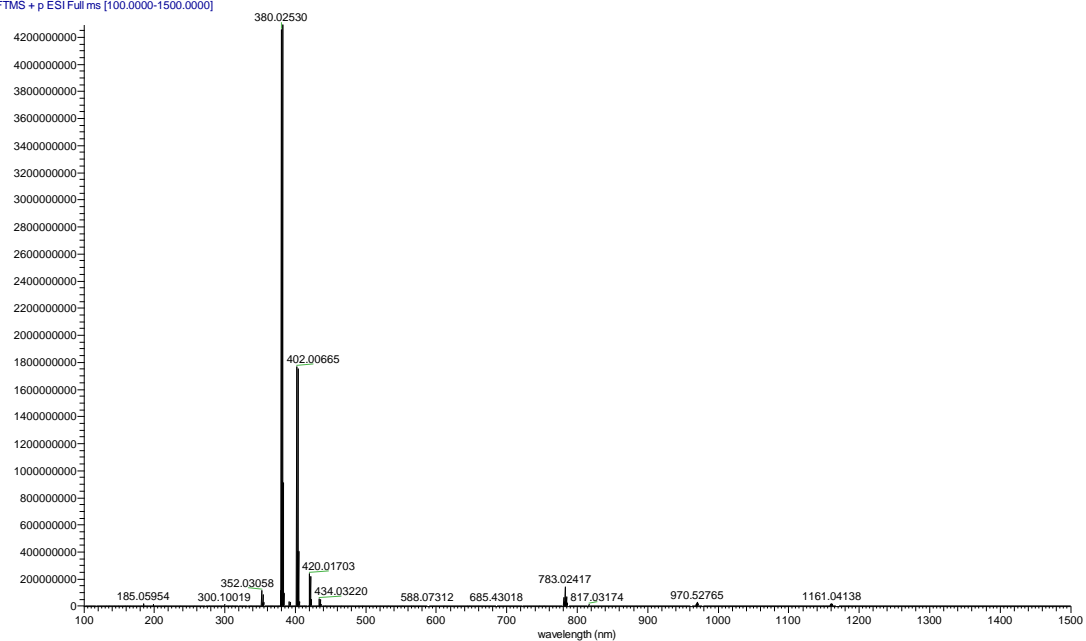


Figure S51: HRMS of compound 5q

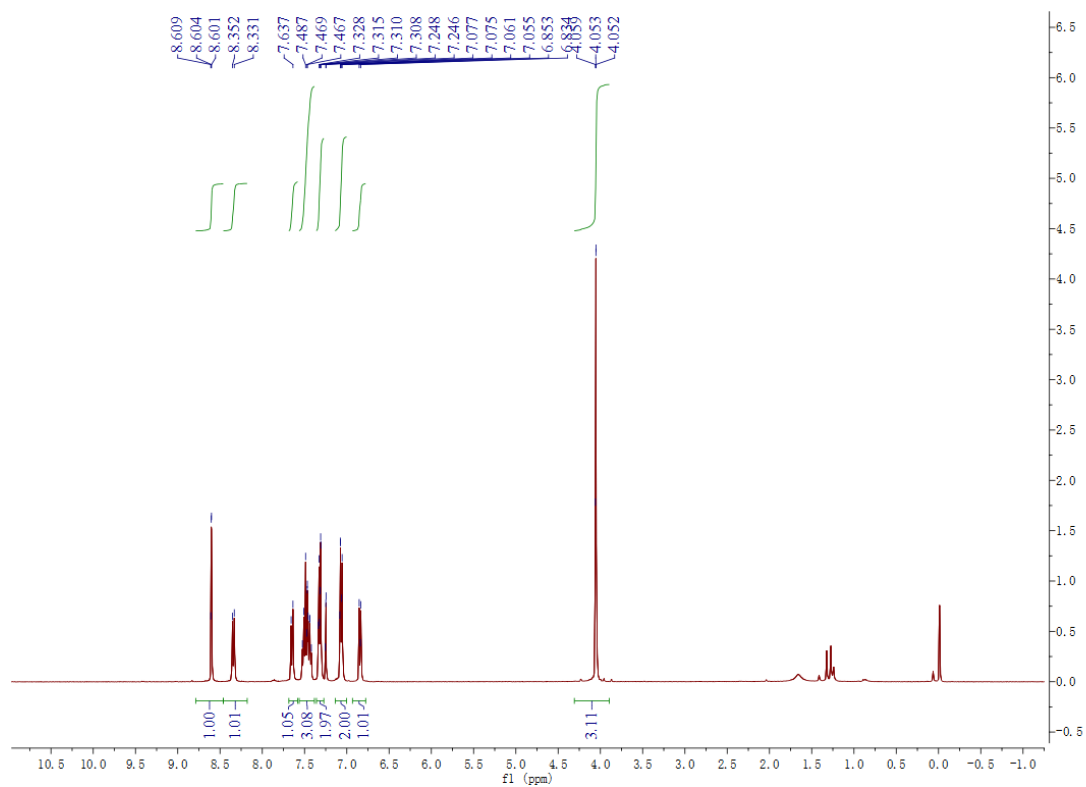


Figure S52: <sup>1</sup>H NMR of compound 5r

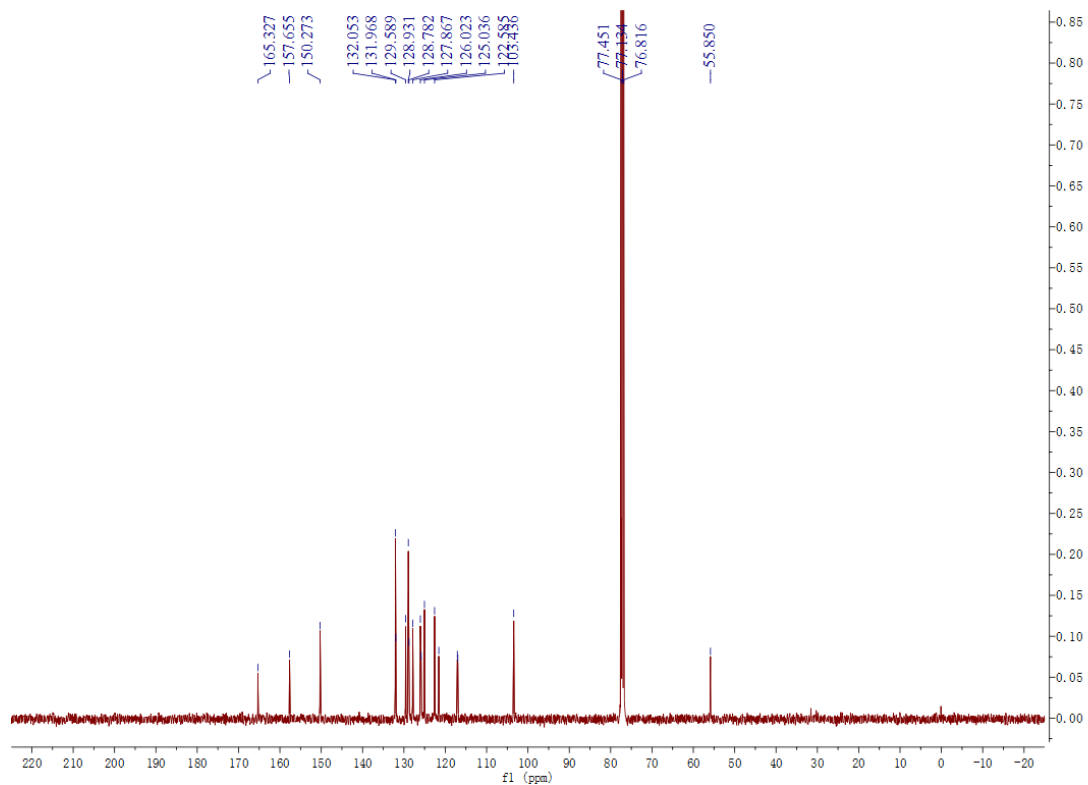


Figure S53:  $^{13}\text{C}$  NMR of compound **5r**

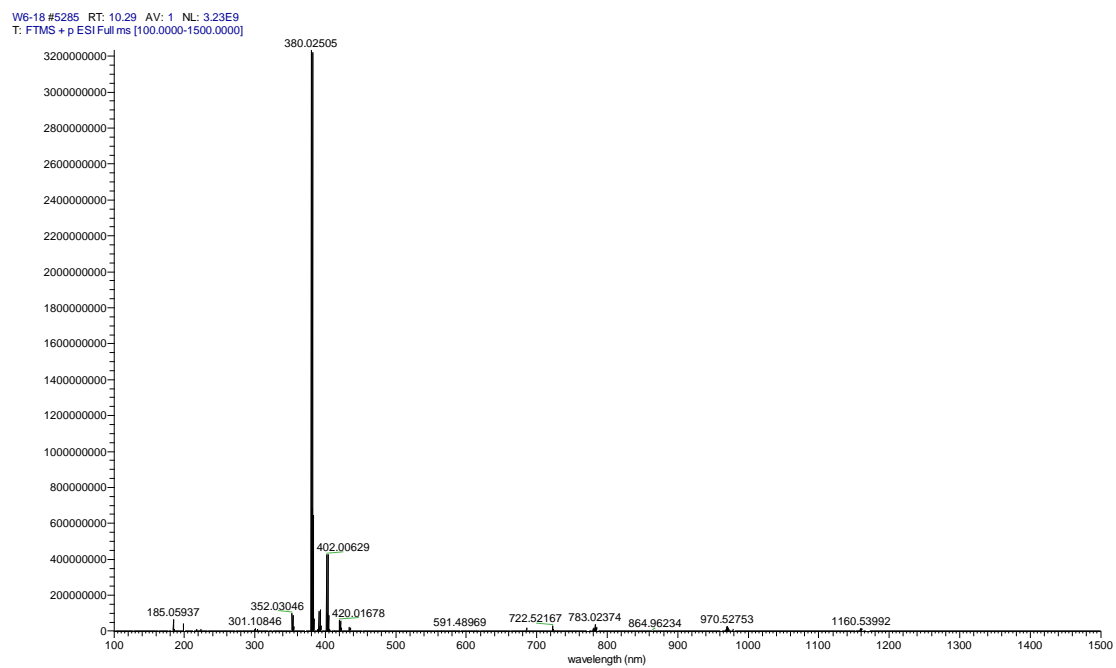


Figure S54: HRMS of compound **5r**

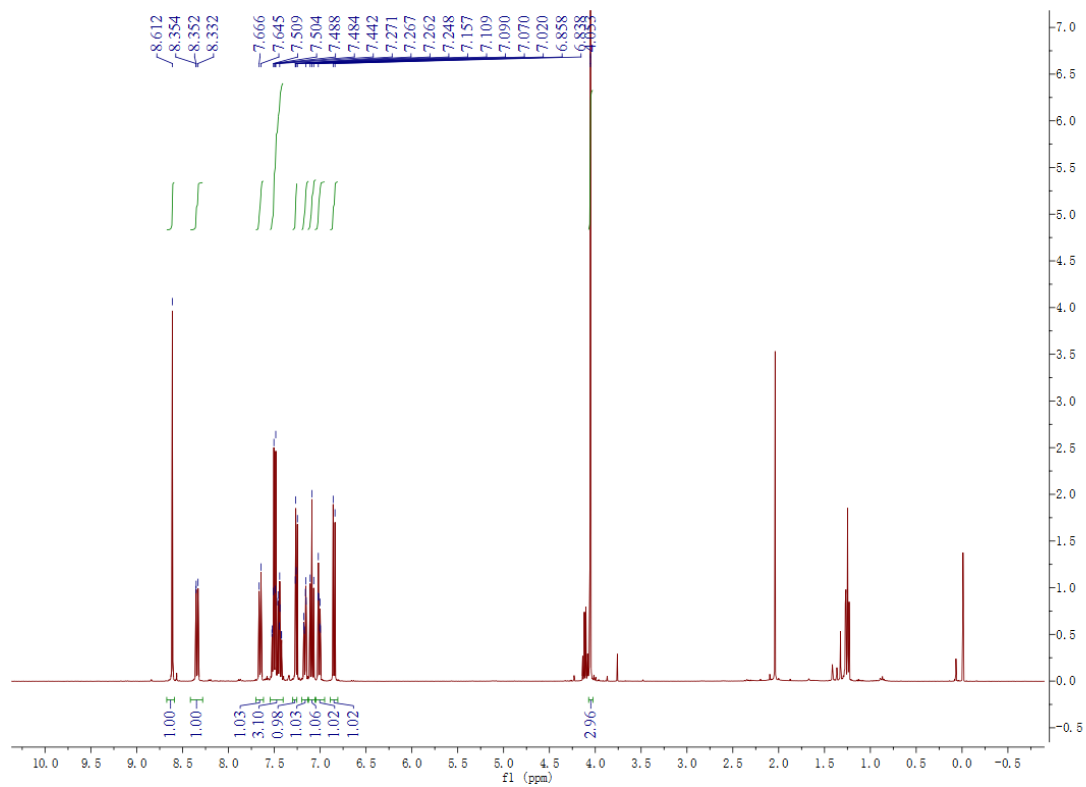


Figure S55:  $^1\text{H}$  NMR of compound **5s**

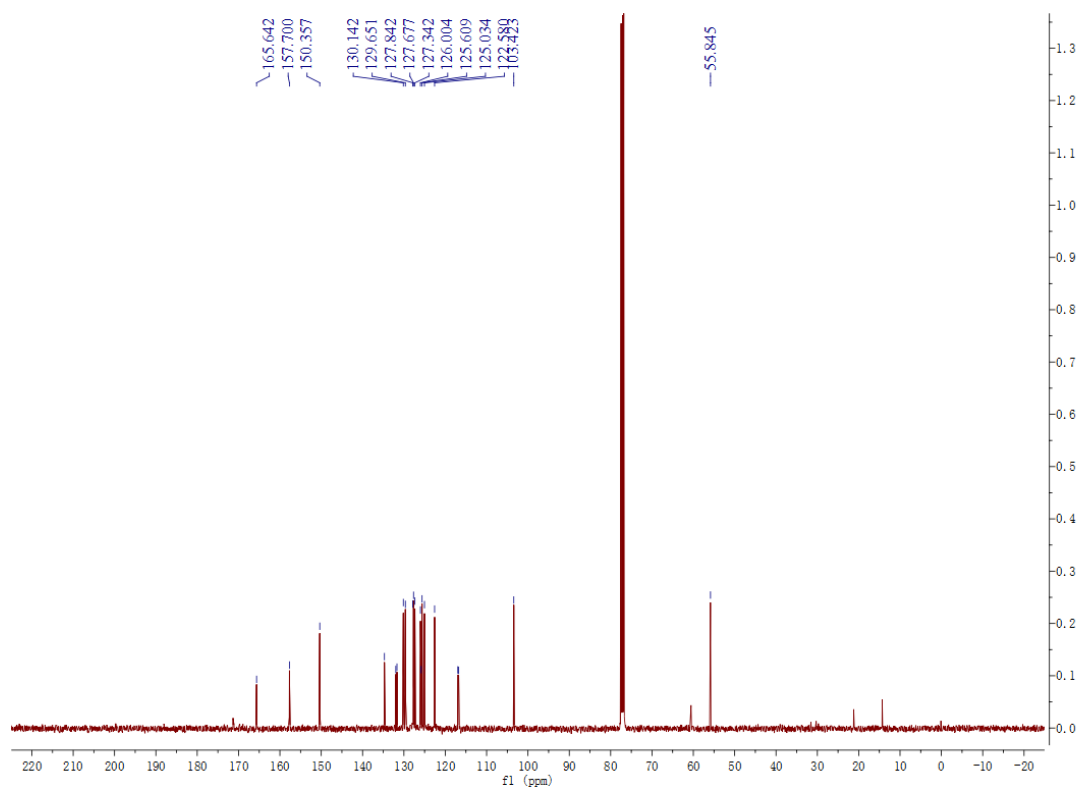


Figure S56:  $^{13}\text{C}$  NMR of compound **5s**

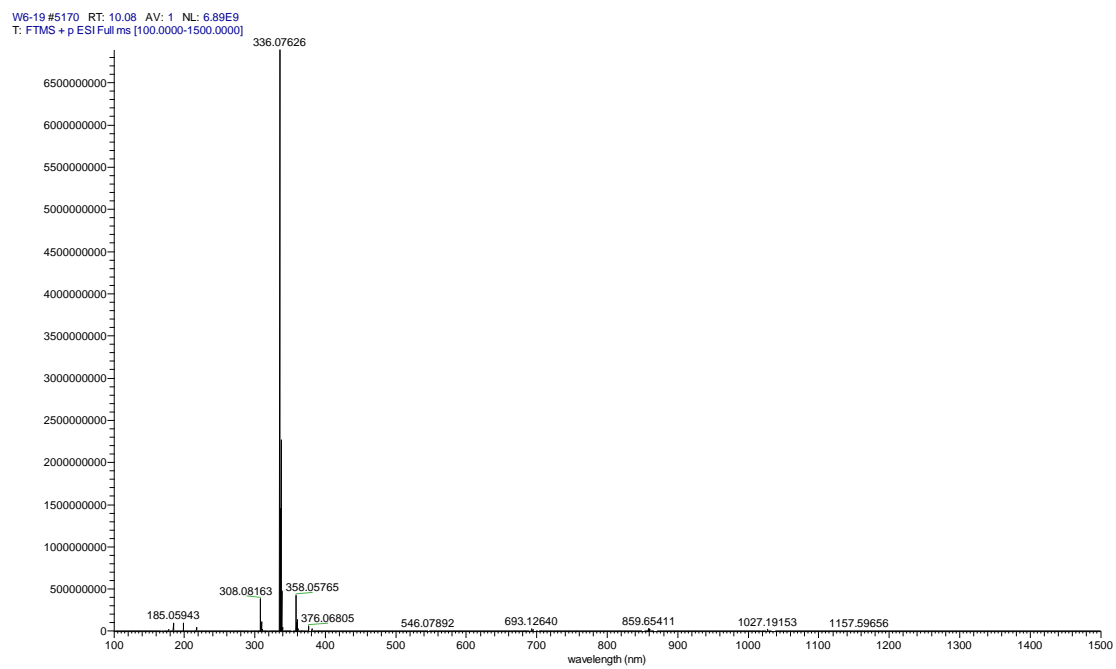


Figure S57: HRMS of compound 5s

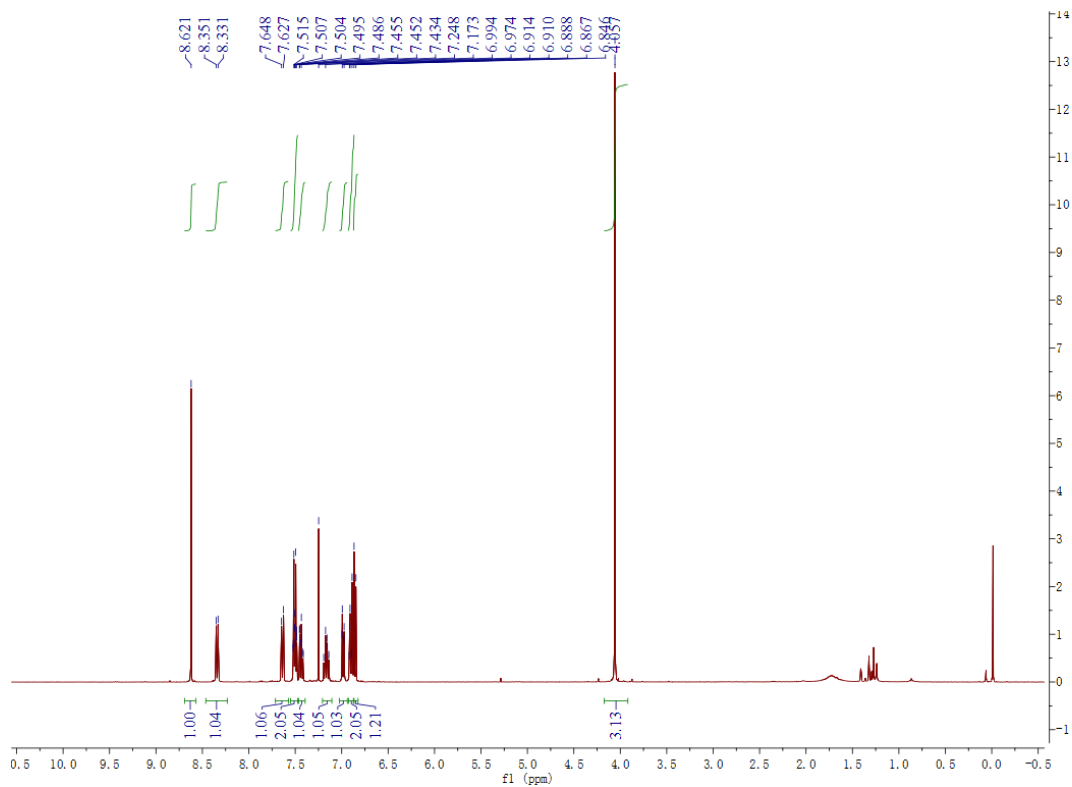
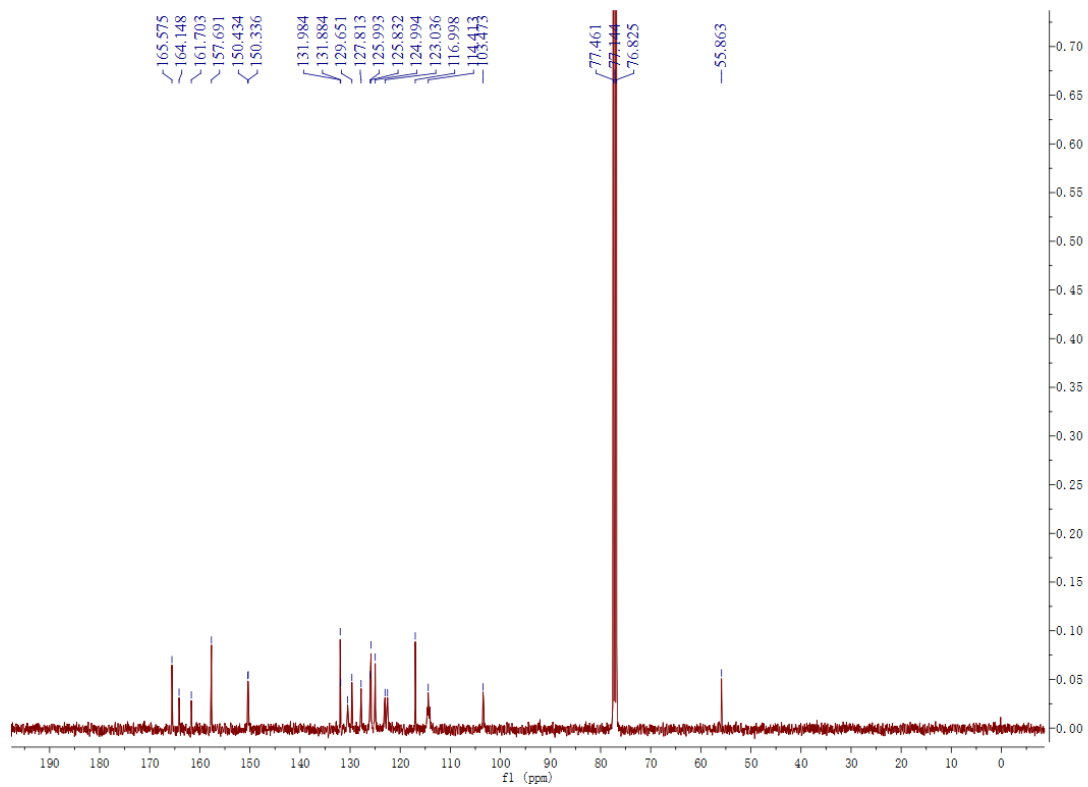
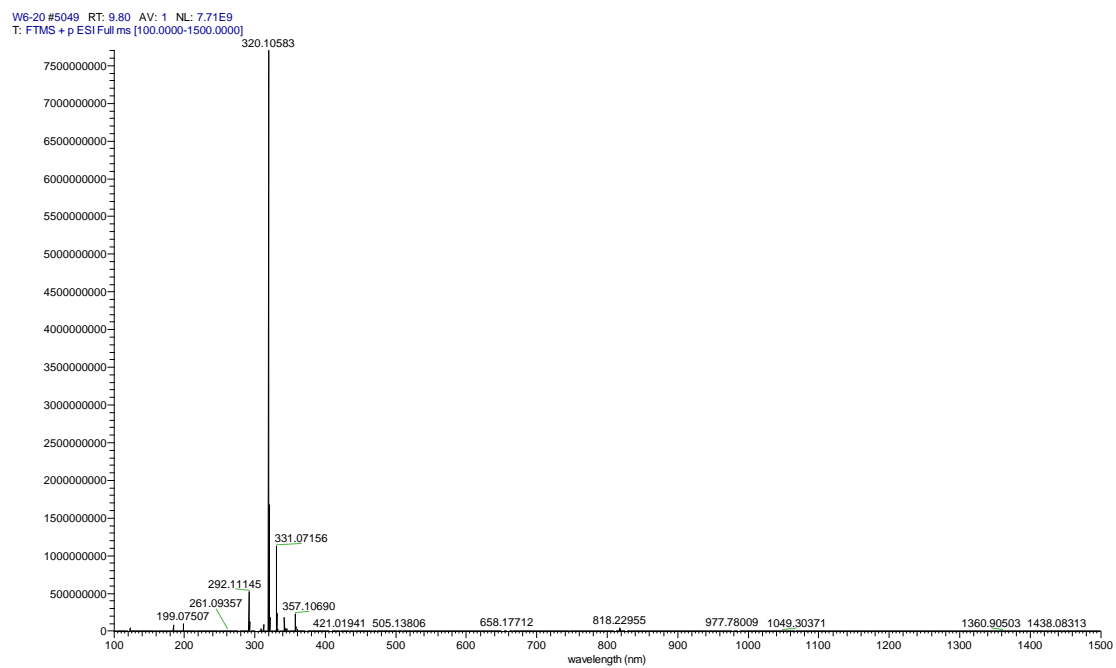


Figure S58:  $^1\text{H}$  NMR of compound 5t



**Figure S59:**  $^{13}\text{C}$  NMR of compound **5t**



**Figure S60:** HRMS of compound **5t**

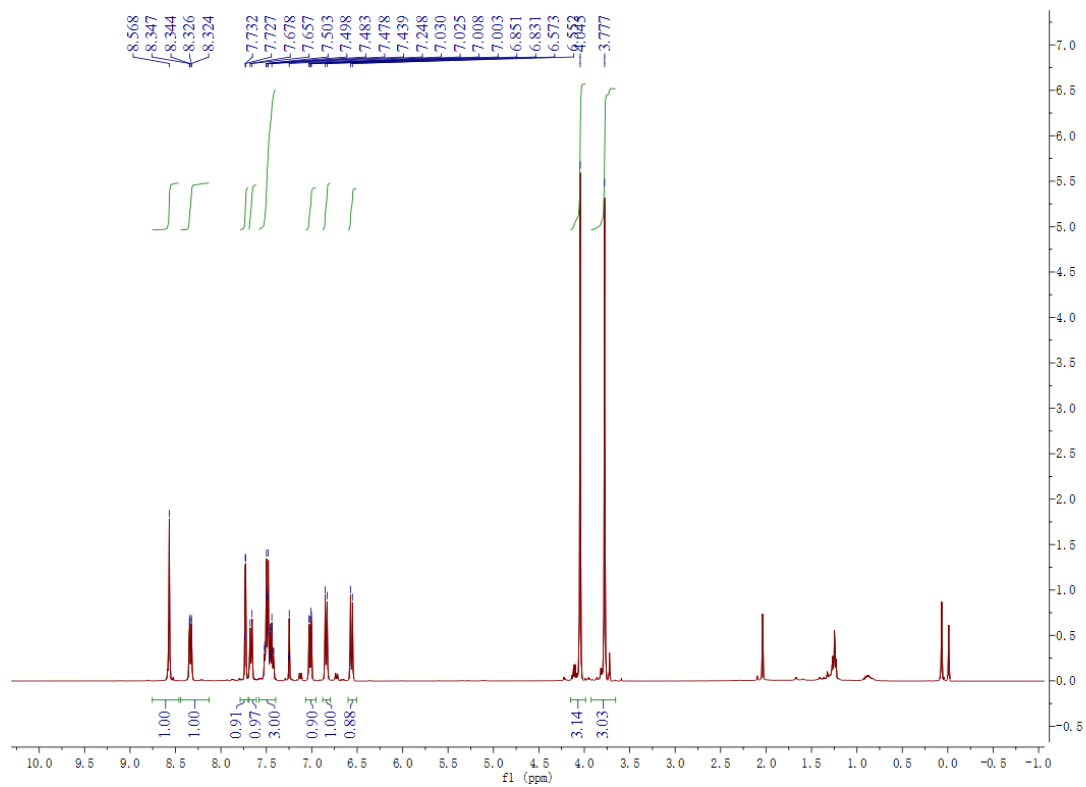


Figure S61:  $^1\text{H}$  NMR of compound **5u**

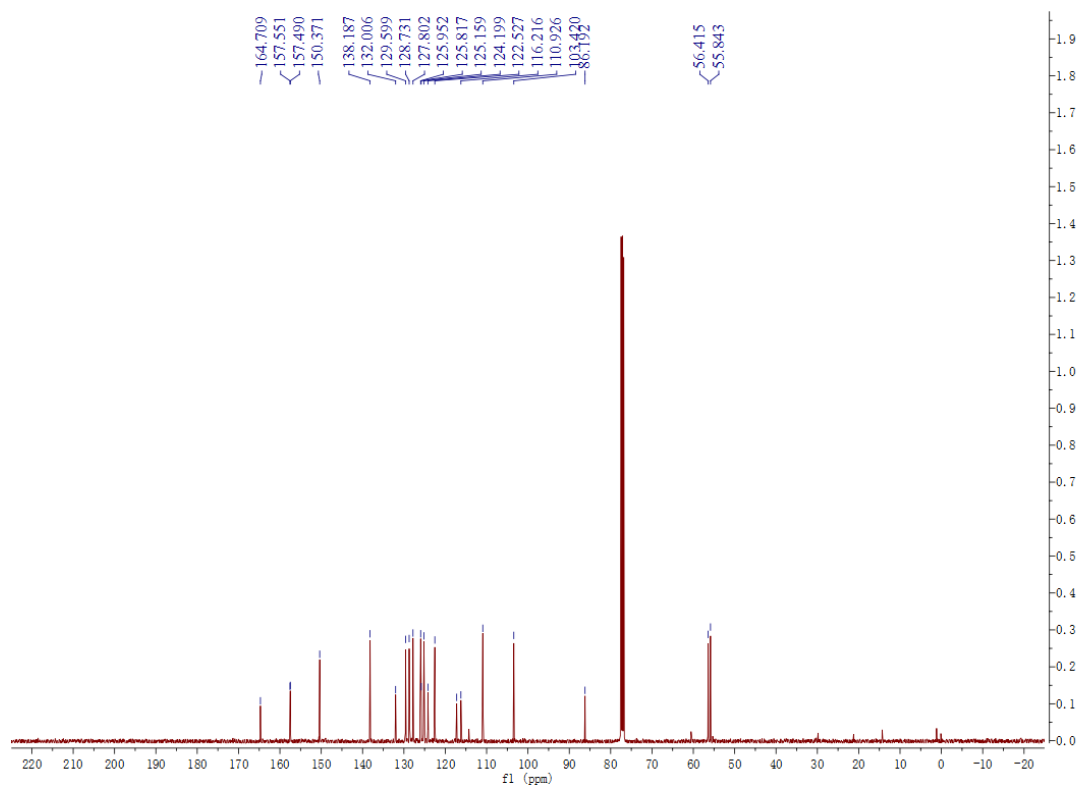
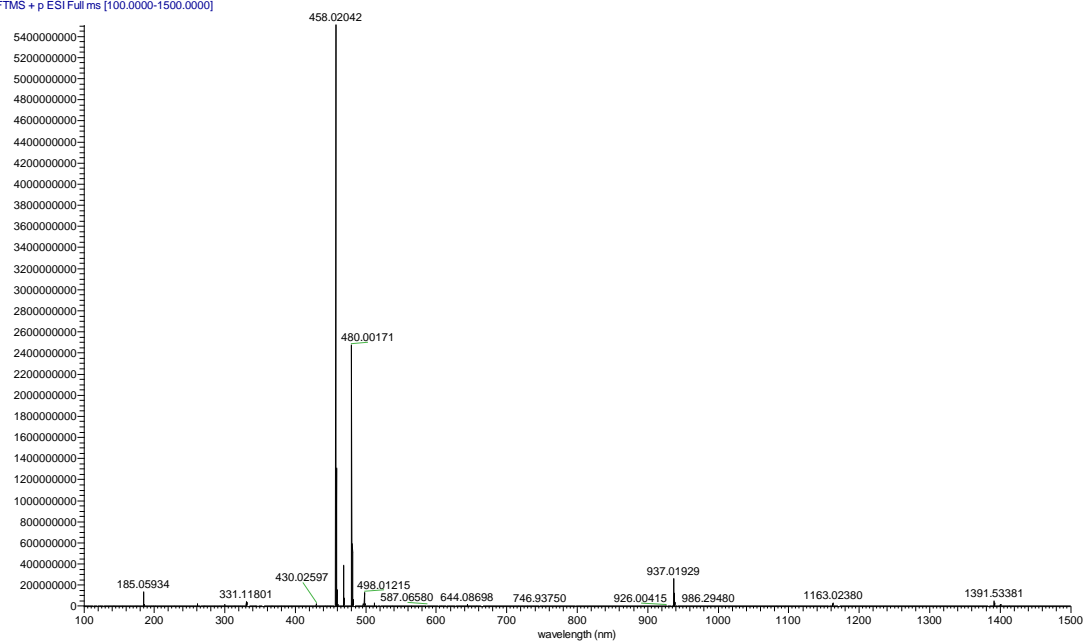


Figure S62:  $^{13}\text{C}$  NMR of compound **5u**

W3-21 #5134 RT: 10.00 AV: 1 NL: 5.51E9  
T: FTMS + p ESI Full ms [100.0000-1500.0000]



**Figure S63: HRMS of compound 5u**