

## Supporting Information

### Synthesis and Antitumor Activity of Fluorouracil - Oleanolic acid/Ursolic acid/Glycyrrhetic acid Conjugates

Chun-Mei Liu,<sup>a</sup> Jia-Yan Huang,<sup>a</sup> Li-Xin Sheng,<sup>a</sup> Xiao-An Wen<sup>b</sup> and Ke-Guang Cheng\*<sup>a</sup>

<sup>a</sup> State Key Laboratory for the Chemistry and Molecular Engineering of Medicinal Resources,  
School of Chemistry and Pharmacy of Guangxi Normal University, 541004, Guilin, P. R. China

<sup>b</sup> Jiangsu Key Laboratory of Drug Discovery for Metabolic Diseases and State Key Laboratory of  
Natural Medicines, Center of Drug Discovery, China Pharmaceutical University, 24 Tongjia  
Xiang, Nanjing 210009, China

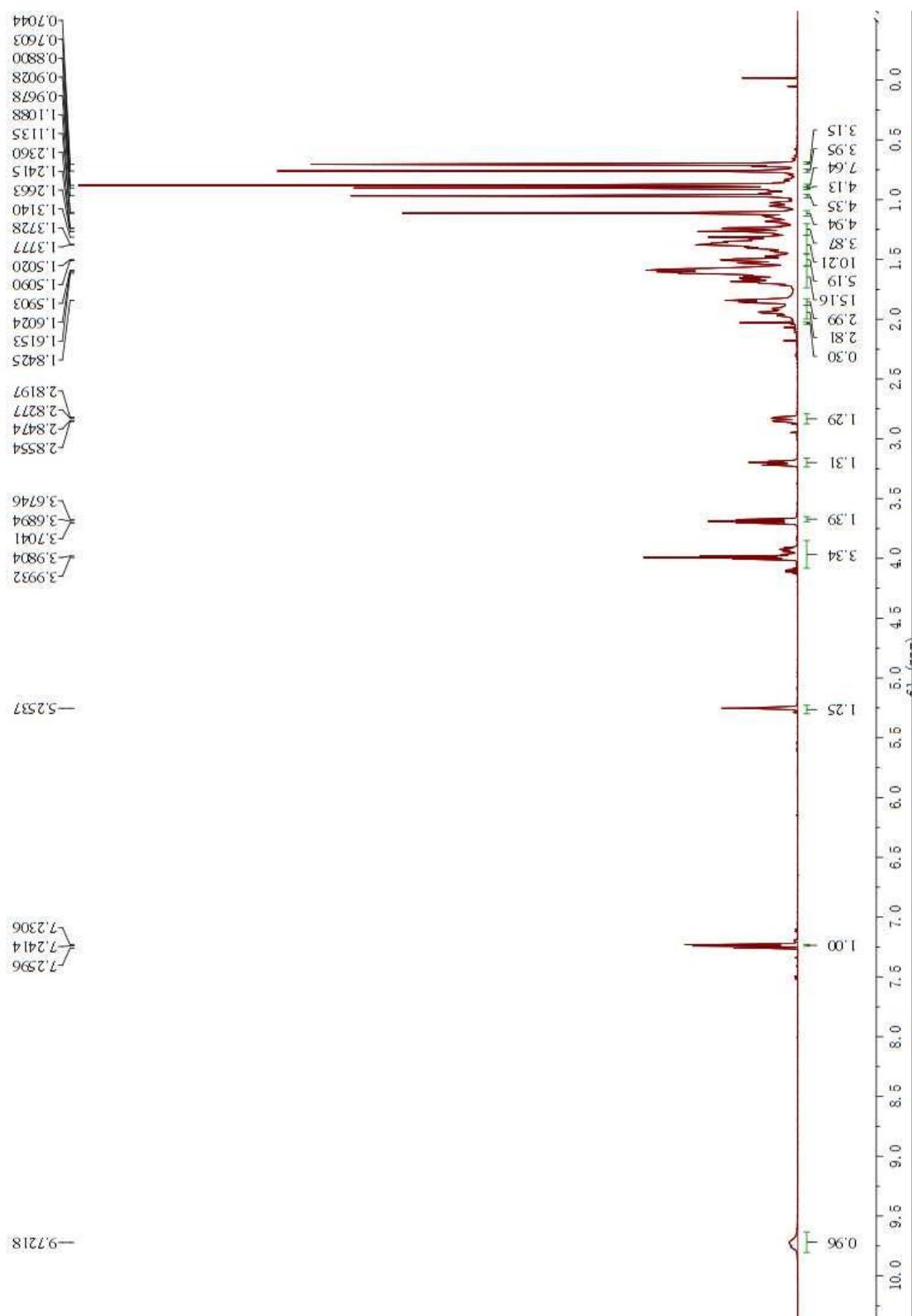
\*Corresponding author. Tel/Fax: +86-0773-2120958. E-mail address: [kgcheng2008@gmail.com](mailto:kgcheng2008@gmail.com)

## **Table of Contents**

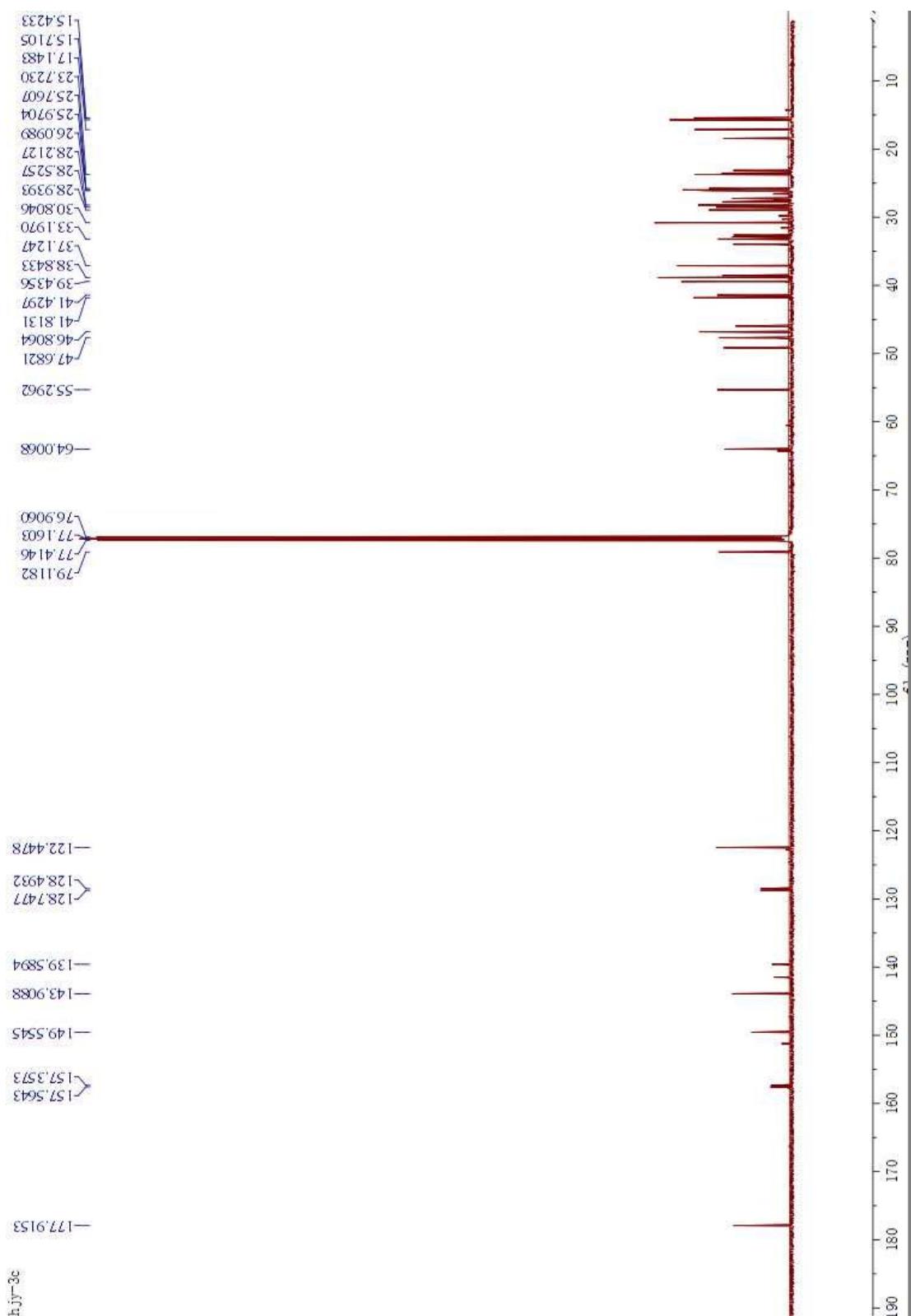
<sup>1</sup> H NMR spectrum of <b>7a</b> .....	1
<sup>13</sup> C NMR spectrum of <b>7a</b> .....	2
HRMS spectrum of <b>7a</b> .....	3
<sup>1</sup> H NMR spectrum of <b>7b</b> .....	4
<sup>13</sup> C NMR spectrum of <b>7b</b> .....	5
HRMS spectrum of <b>7b</b> .....	6
<sup>1</sup> H NMR spectrum of <b>8a</b> .....	7
<sup>13</sup> C NMR spectrum of <b>8a</b> .....	8
HRMS spectrum of <b>8a</b> .....	9
<sup>1</sup> H NMR spectrum of <b>8b</b> .....	10
<sup>13</sup> C NMR spectrum of <b>8b</b> .....	11
HRMS spectrum of <b>8b</b> .....	12
<sup>1</sup> H NMR spectrum of <b>9a</b> .....	13
<sup>13</sup> C NMR spectrum of <b>9a</b> .....	14
HRMS spectrum of <b>9a</b> .....	15
<sup>1</sup> H NMR spectrum of <b>9b</b> .....	16
<sup>13</sup> C NMR spectrum of <b>9b</b> .....	17
HRMS spectrum of <b>9b</b> .....	18
<sup>1</sup> H NMR spectrum of <b>10a</b> .....	19
<sup>13</sup> C NMR spectrum of <b>10a</b> .....	20
HRMS spectrum of <b>10a</b> .....	21

<sup>1</sup> H NMR spectrum of <b>10b</b> .....	22
<sup>13</sup> C NMR spectrum of <b>10b</b> .....	23
HRMS spectrum of <b>10b</b> .....	24
<sup>1</sup> H NMR spectrum of <b>11a</b> .....	25
<sup>13</sup> C NMR spectrum of <b>11a</b> .....	26
HRMS spectrum of <b>11a</b> .....	27
<sup>1</sup> H NMR spectrum of <b>11b</b> .....	28
<sup>13</sup> C NMR spectrum of <b>11b</b> .....	29
HRMS spectrum of <b>11b</b> .....	30
<sup>1</sup> H NMR spectrum of <b>12a</b> .....	31
<sup>13</sup> C NMR spectrum of <b>12a</b> .....	32
HRMS spectrum of <b>12a</b> .....	33
<sup>1</sup> H NMR spectrum of <b>12b</b> .....	34
<sup>13</sup> C NMR spectrum of <b>12b</b> .....	35
HRMS spectrum of <b>12b</b> .....	36

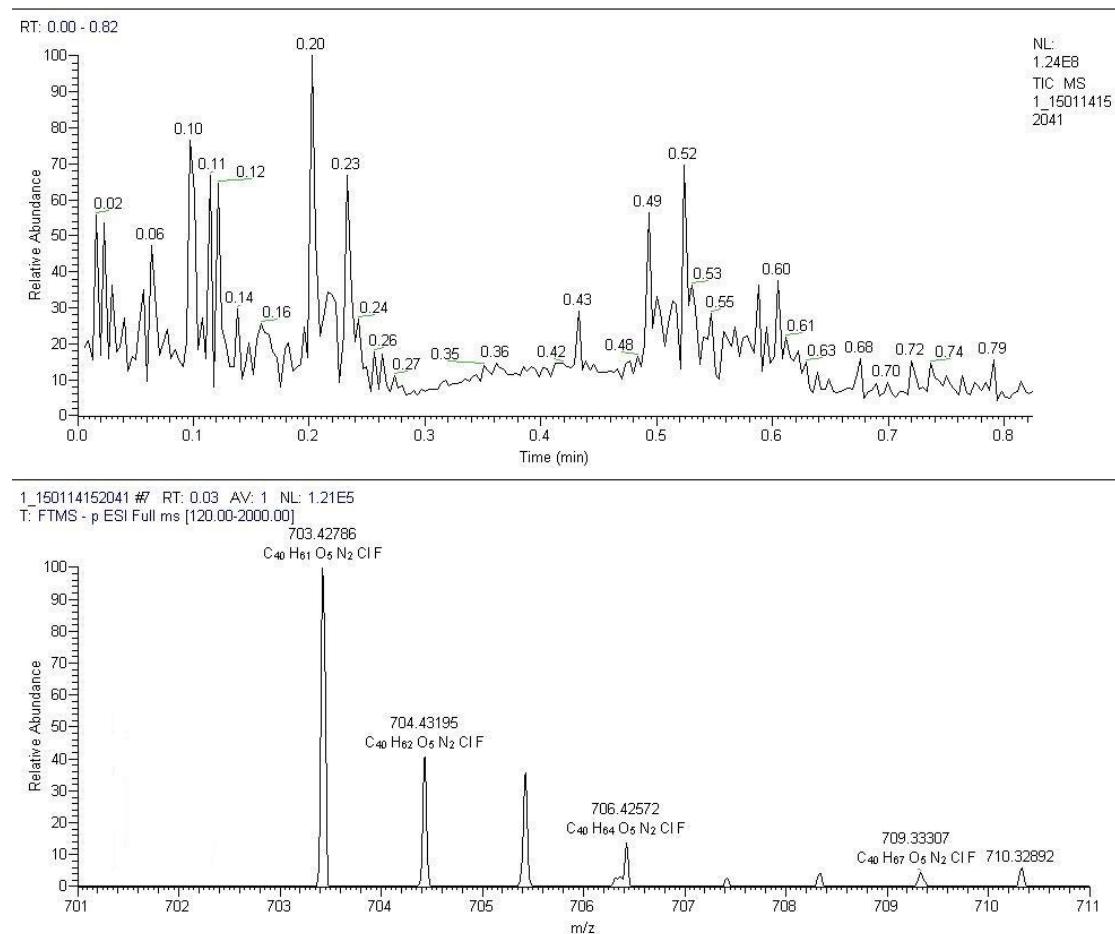
<sup>1</sup>H NMR spectrum of 7a



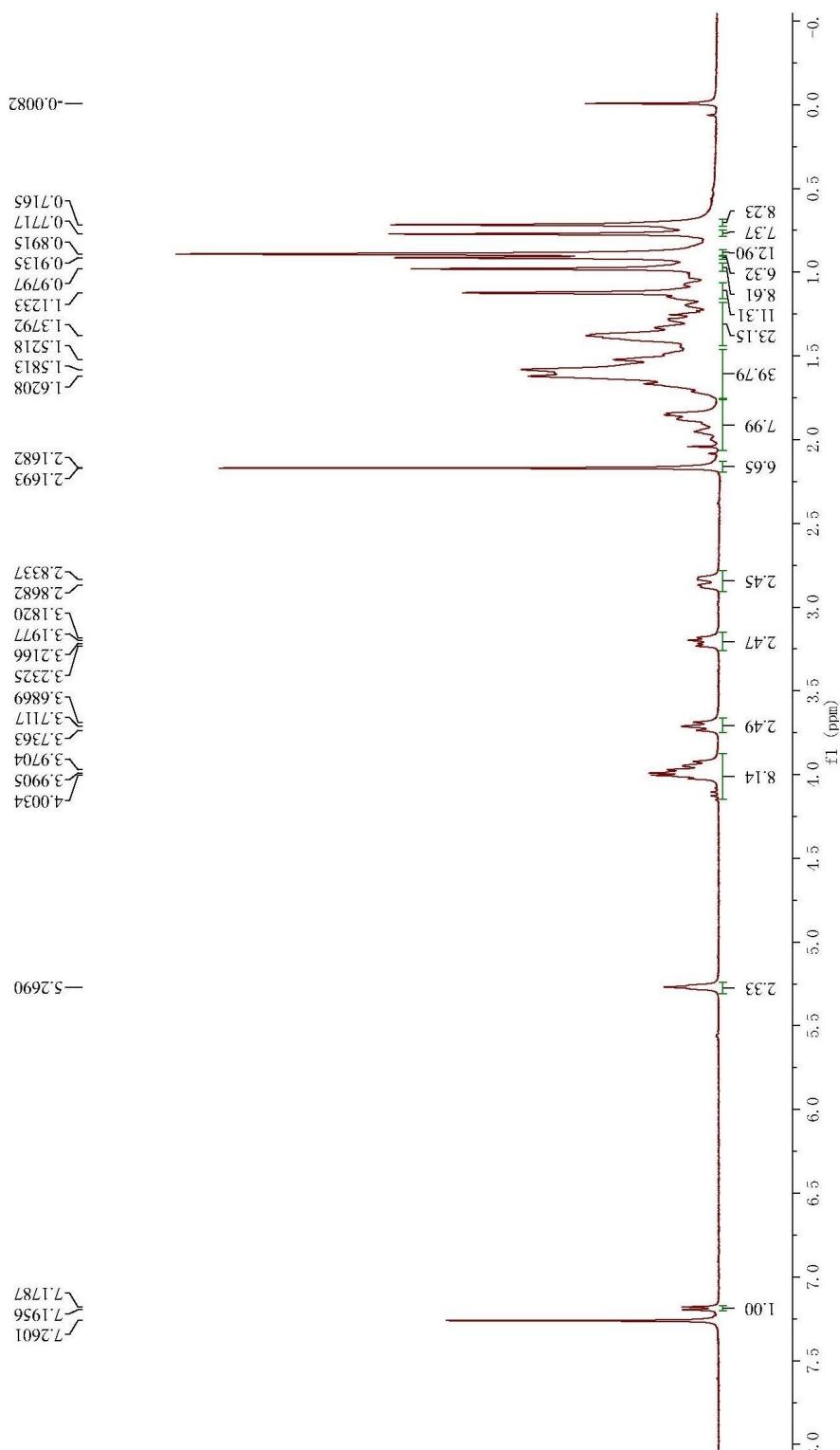
<sup>13</sup>C NMR spectrum of 7a



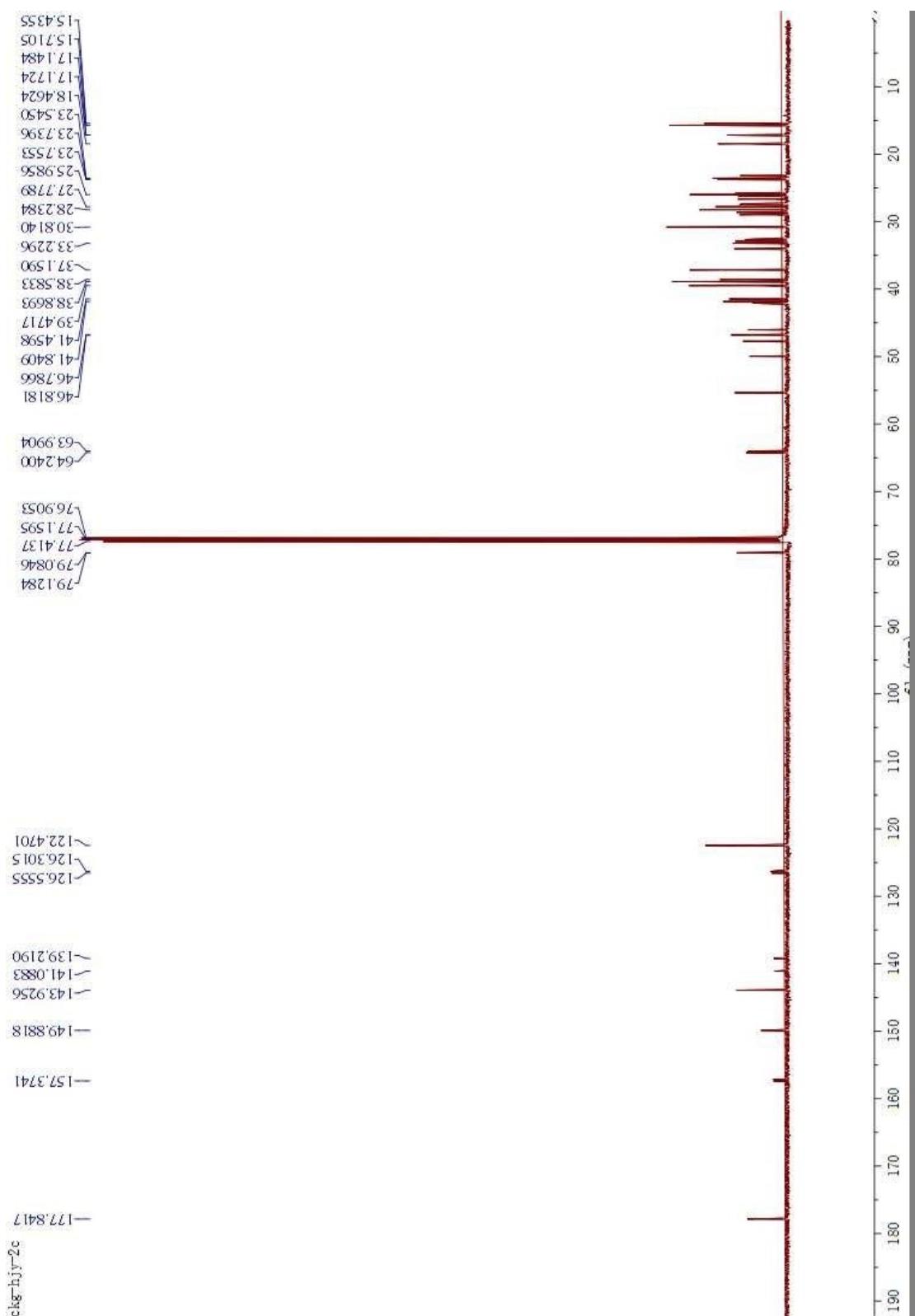
### HRMS spectrum of 7a



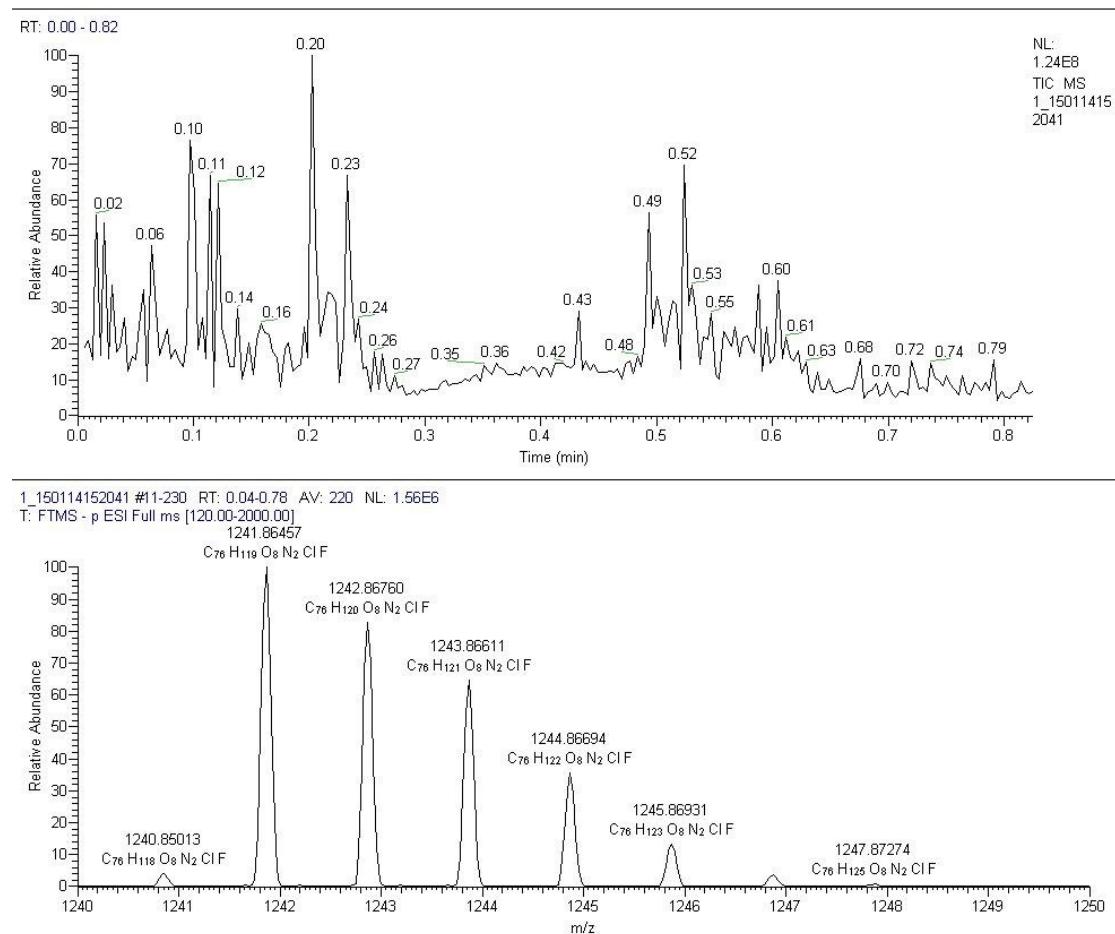
<sup>1</sup>H NMR spectrum of **7b**



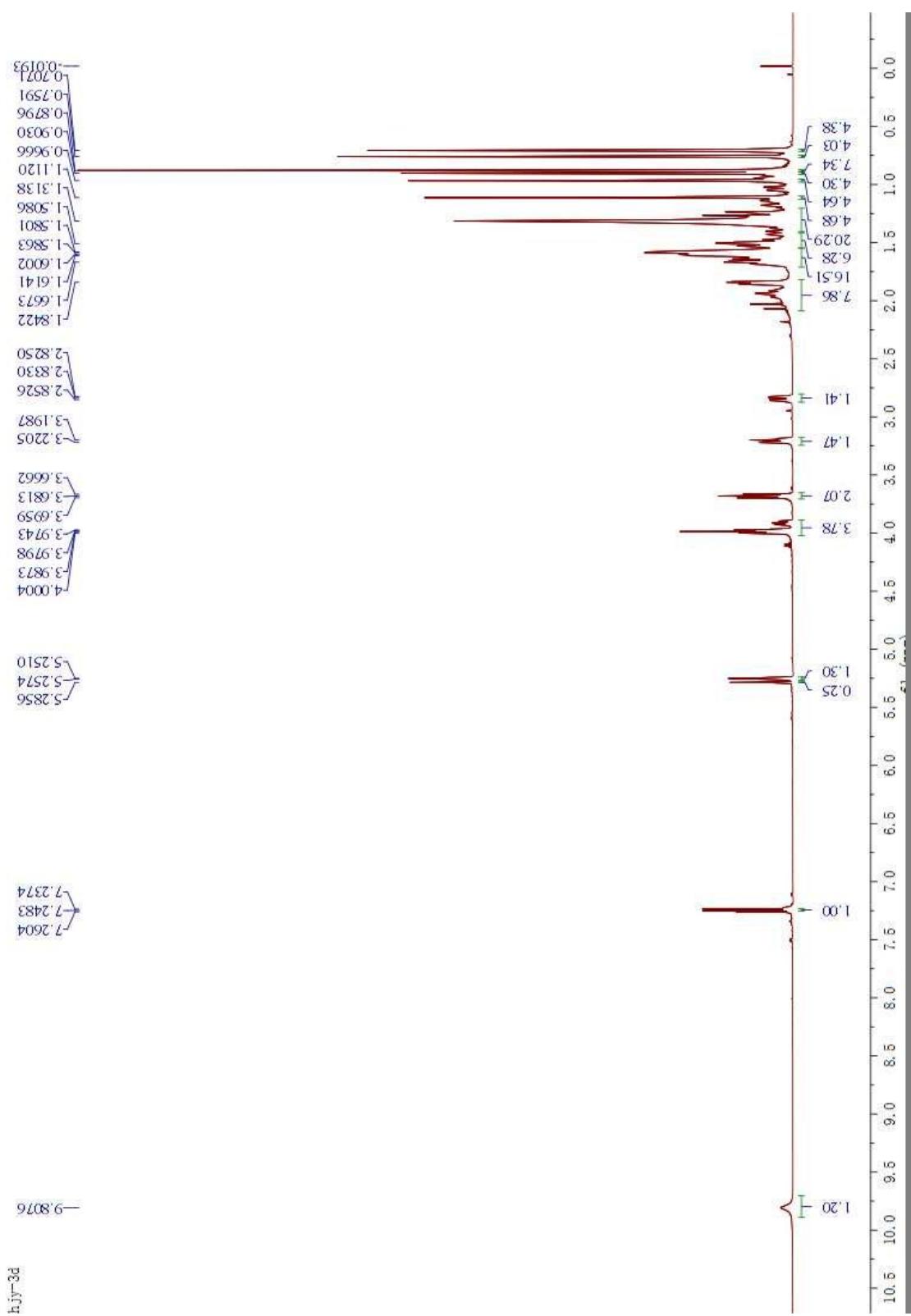
<sup>13</sup>C NMR spectrum of **7b**



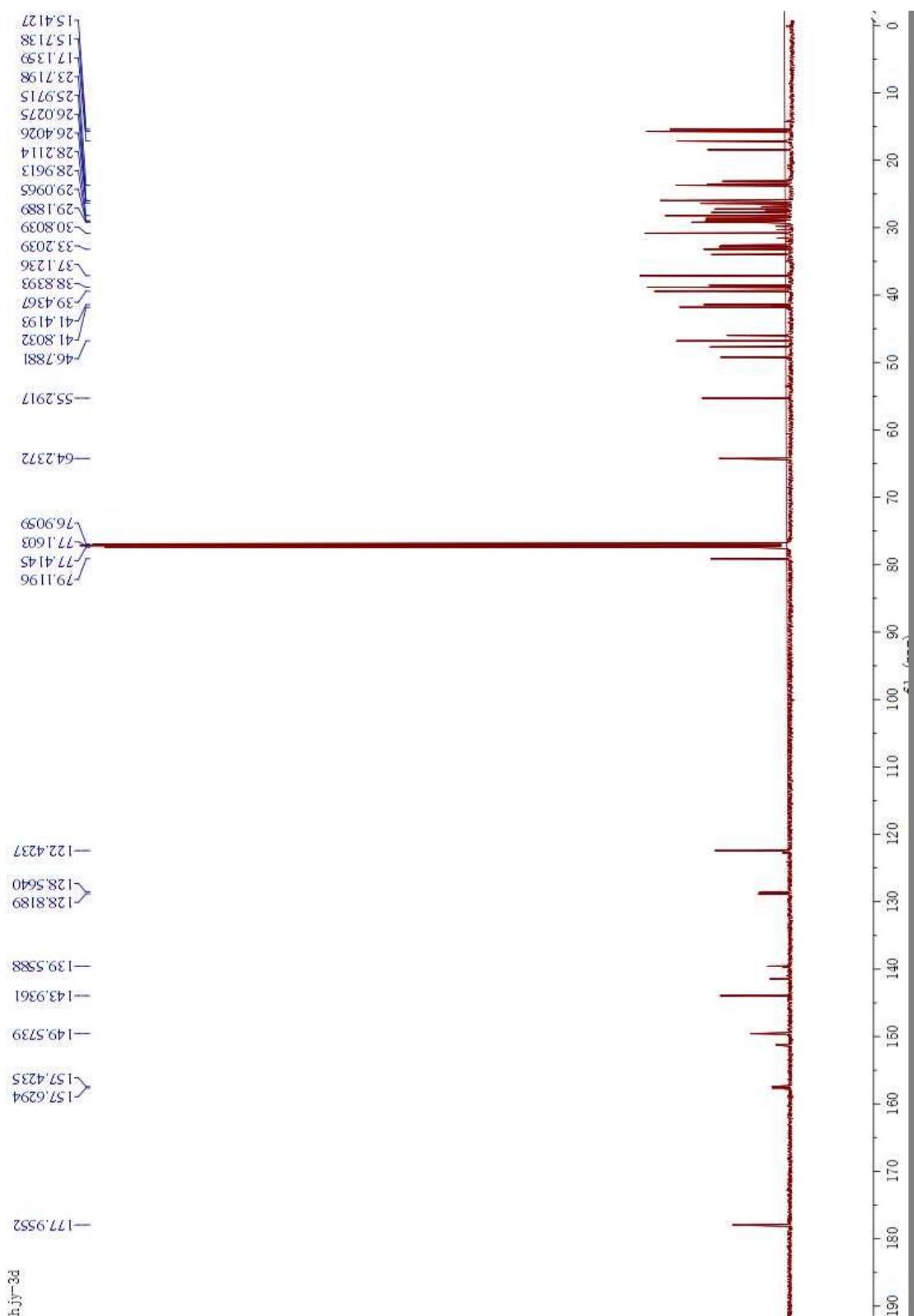
### HRMS spectrum of 7b



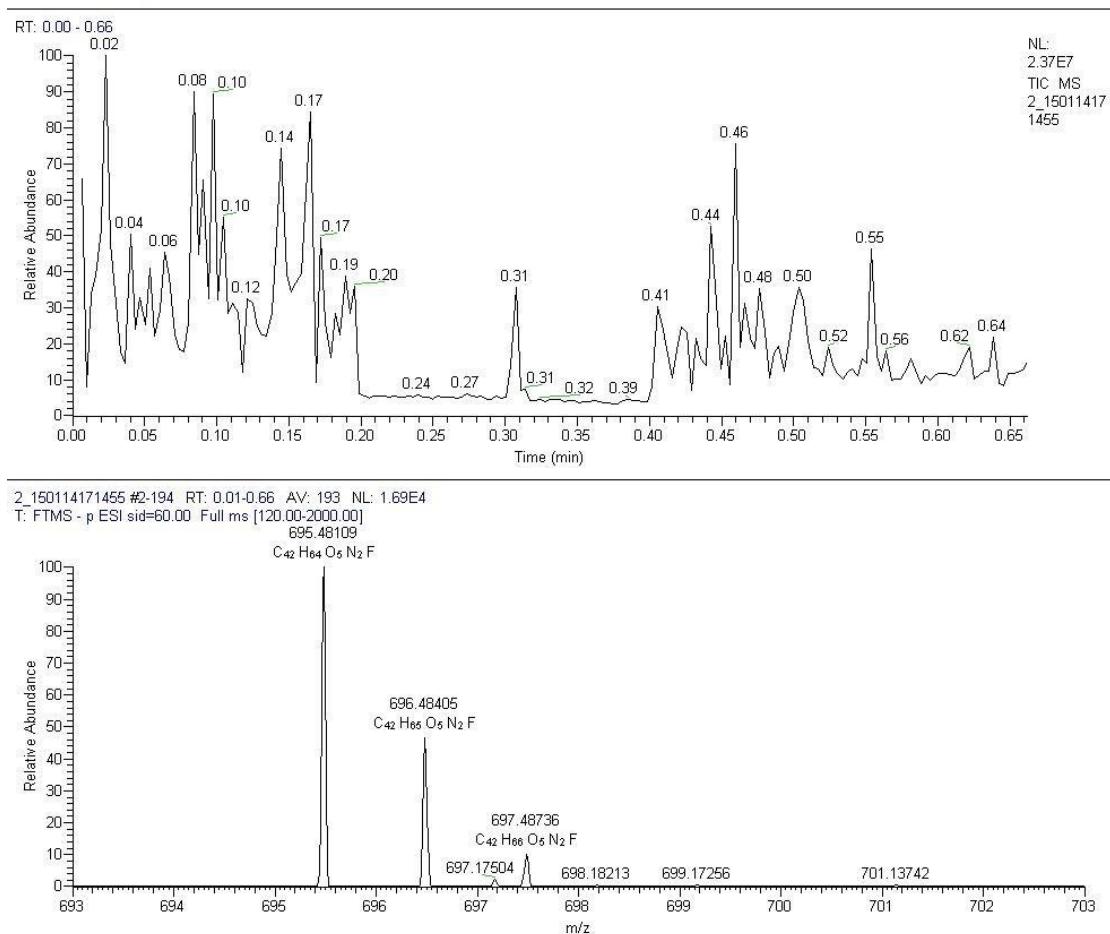
<sup>1</sup>H NMR spectrum of **8a**



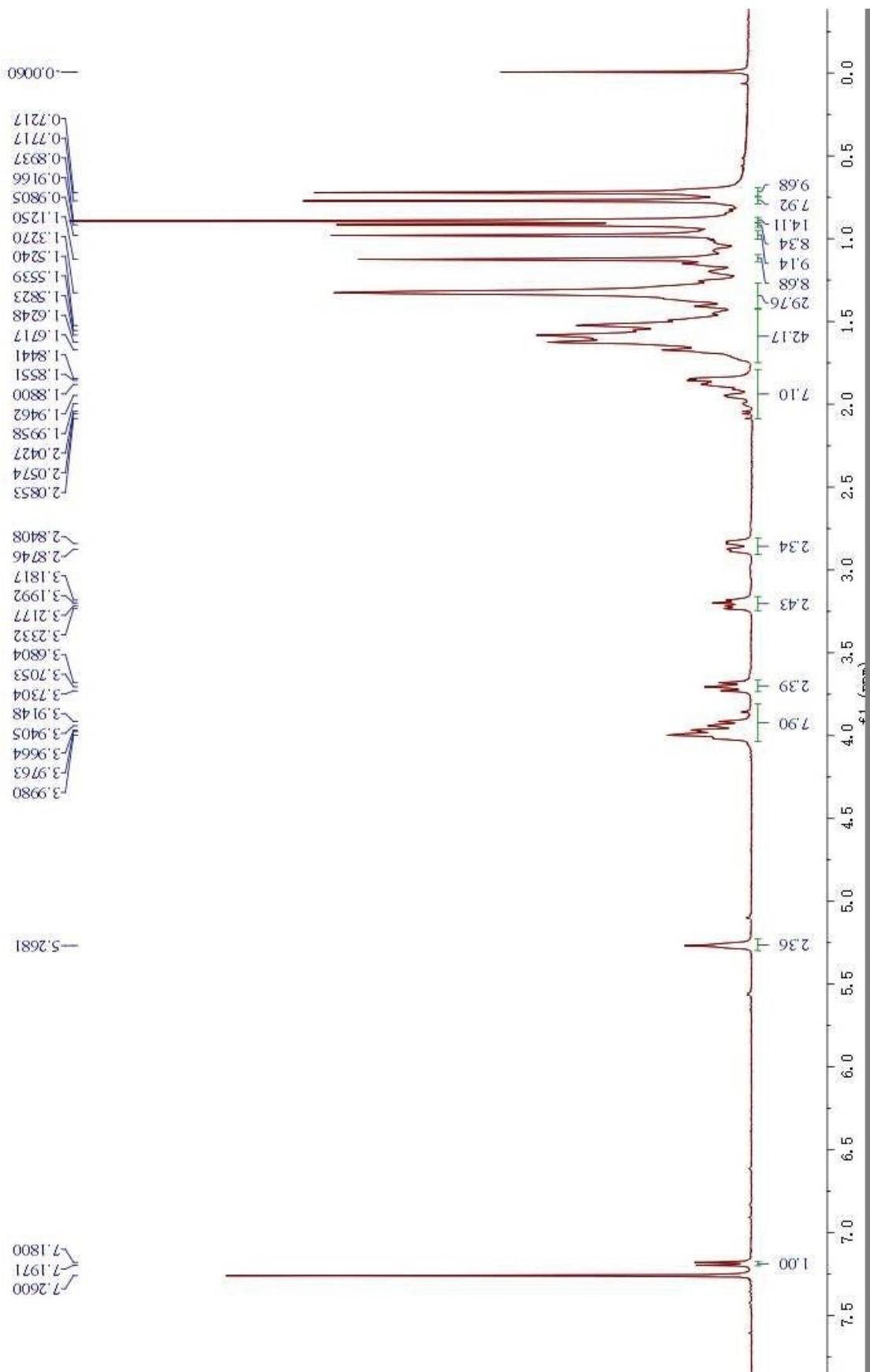
<sup>13</sup>C NMR spectrum of **8a**



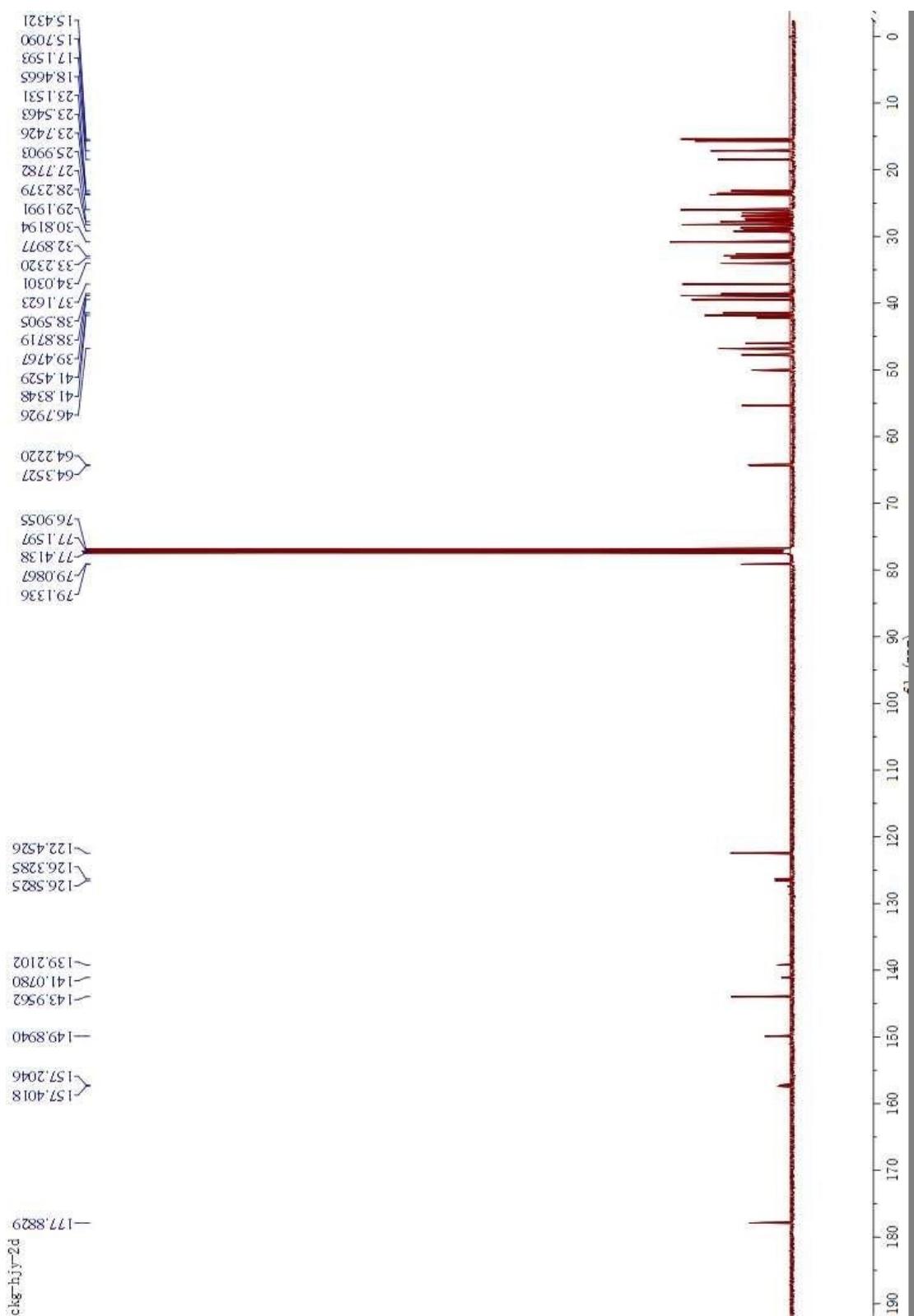
### HRMS spectrum of 8a



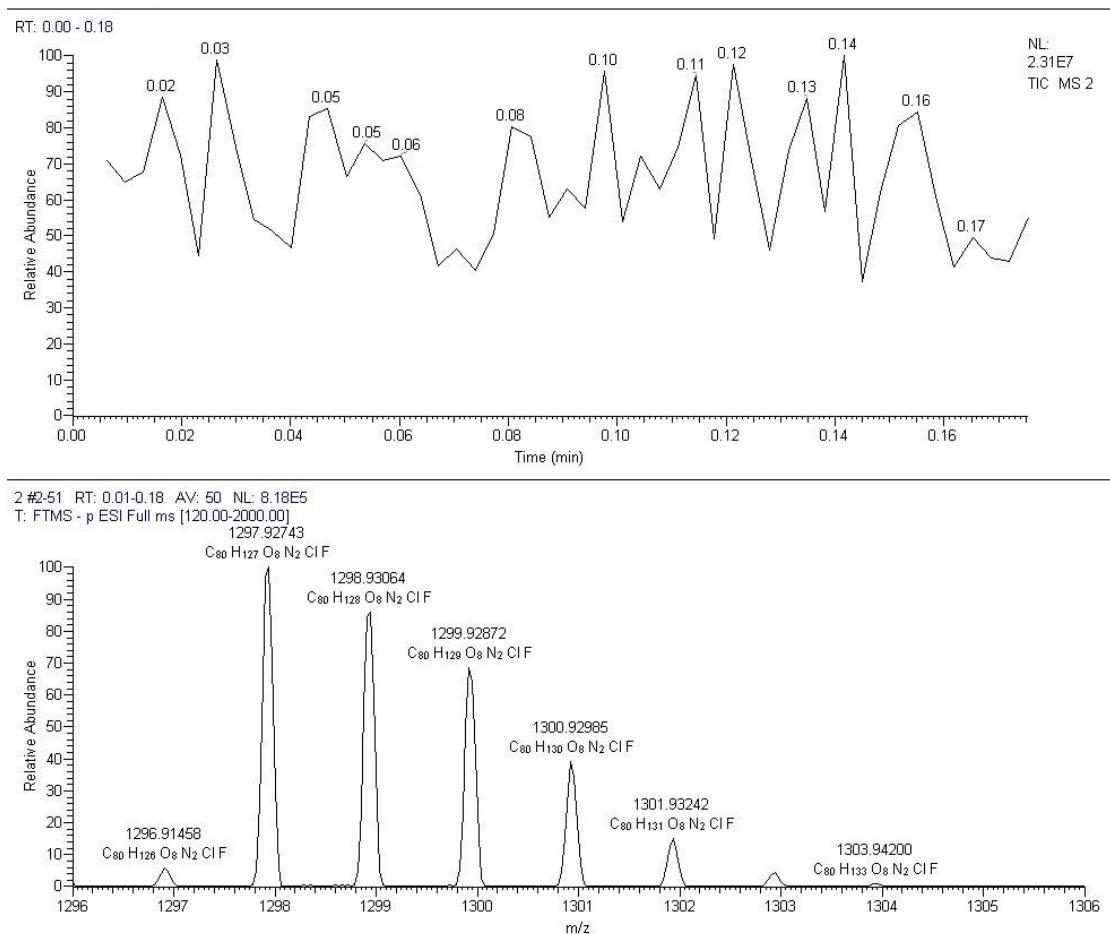
<sup>1</sup>H NMR spectrum of **8b**



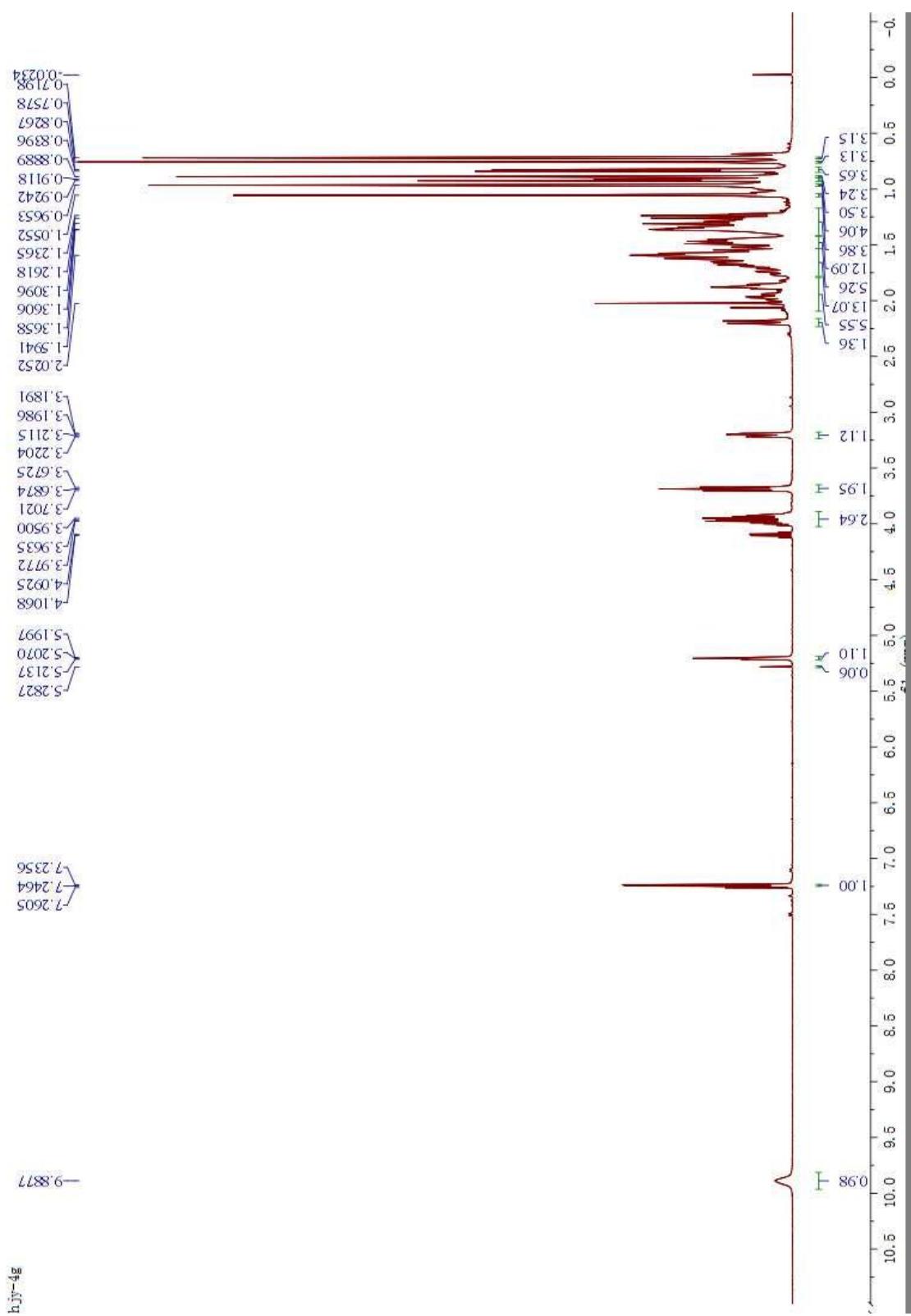
<sup>13</sup>C NMR spectrum of **8b**



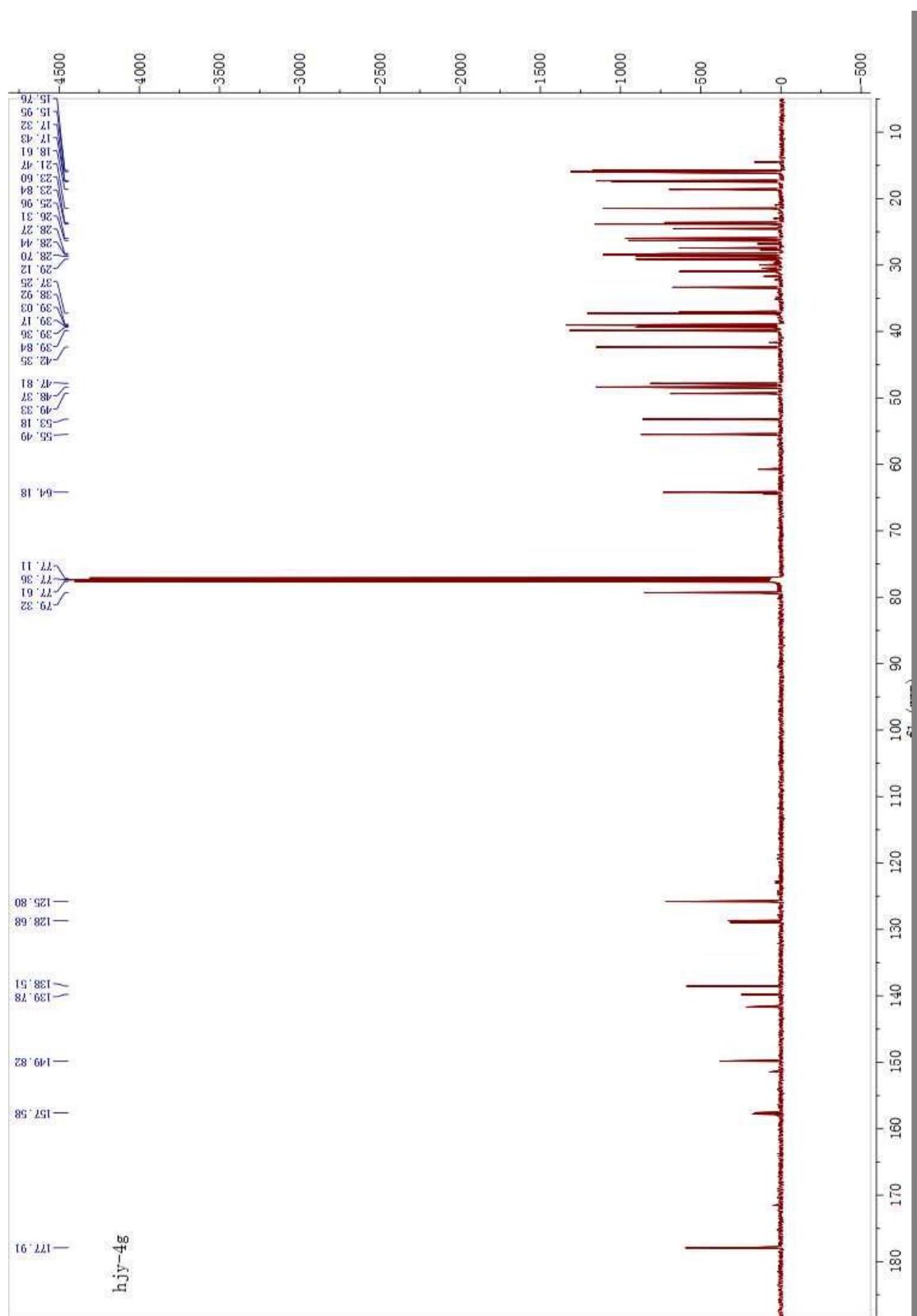
### HRMS spectrum of **8b**



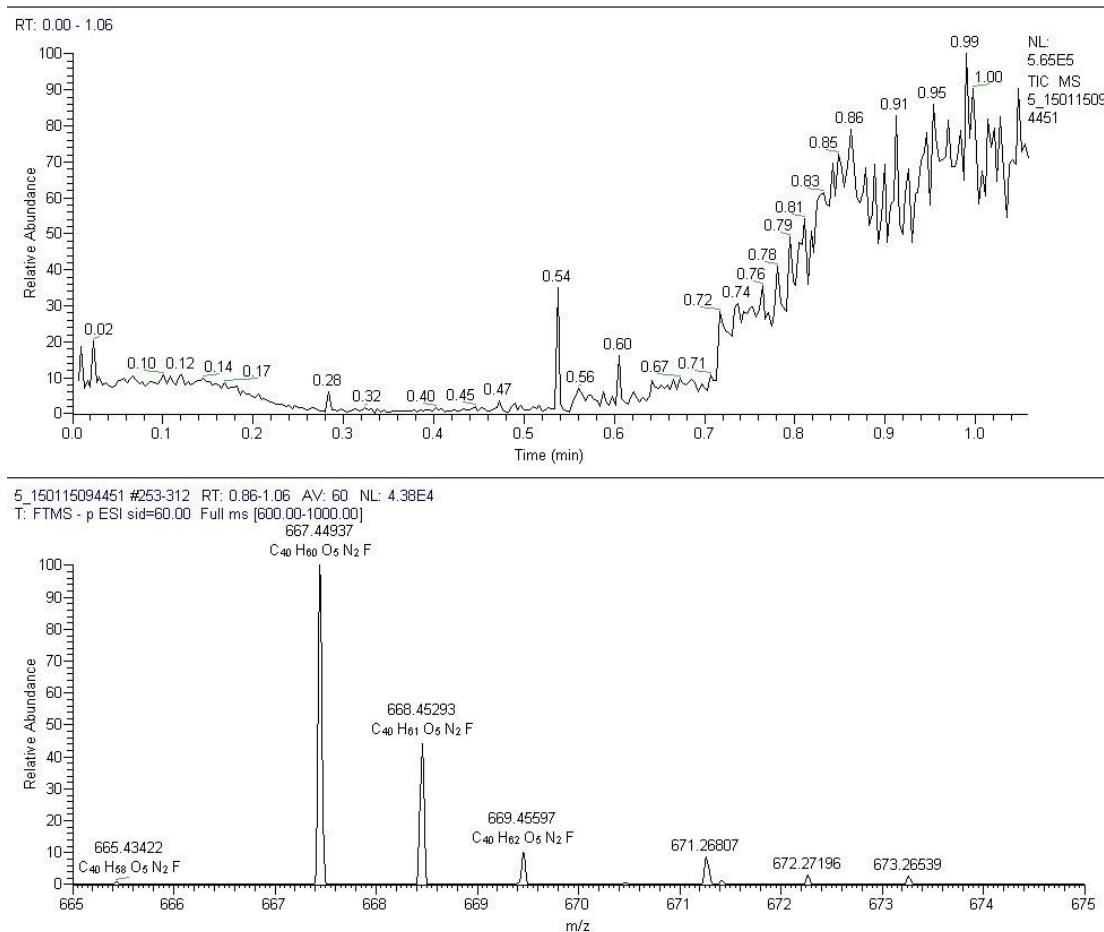
<sup>1</sup>H NMR spectrum of **9a**



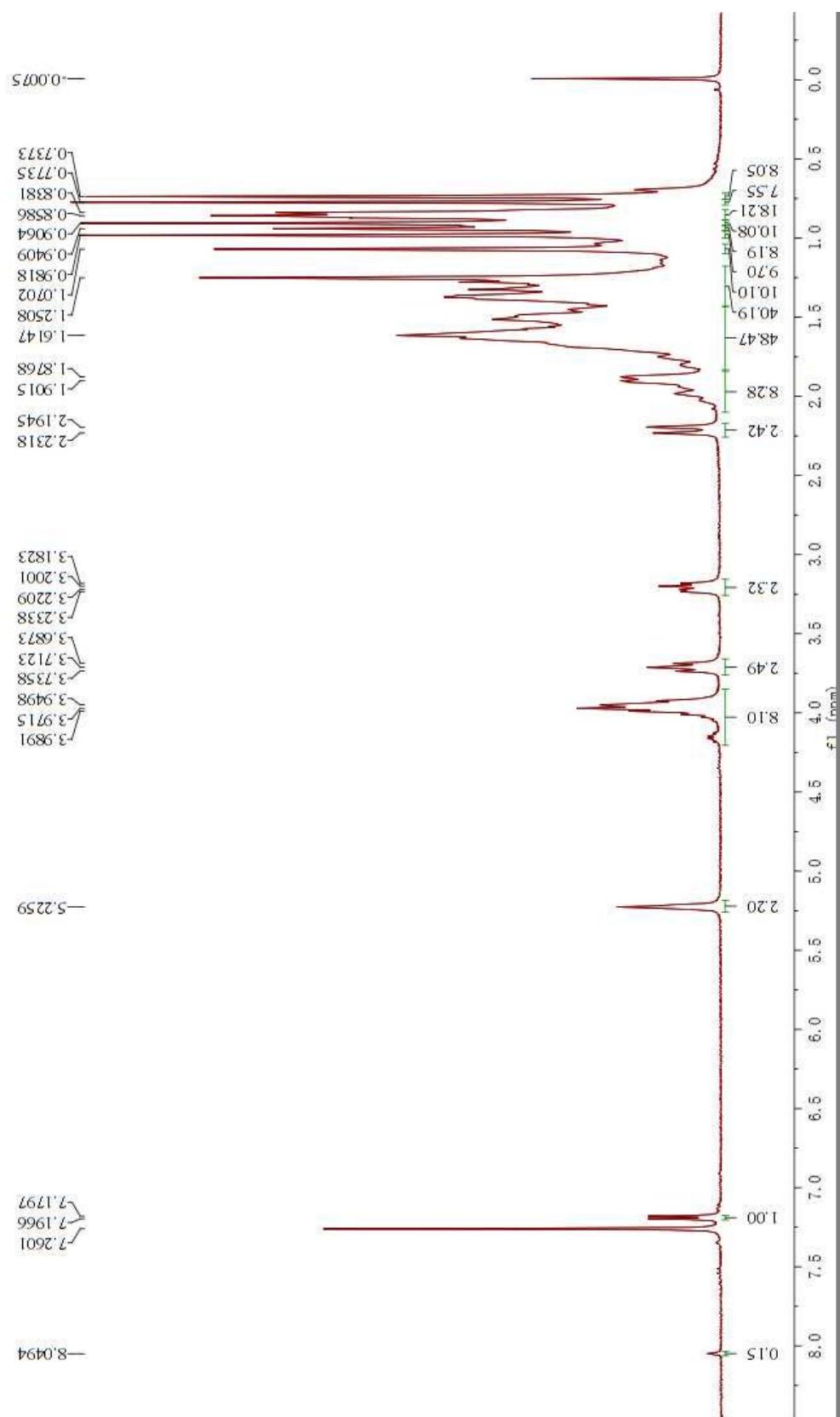
<sup>13</sup>C NMR spectrum of **9a**



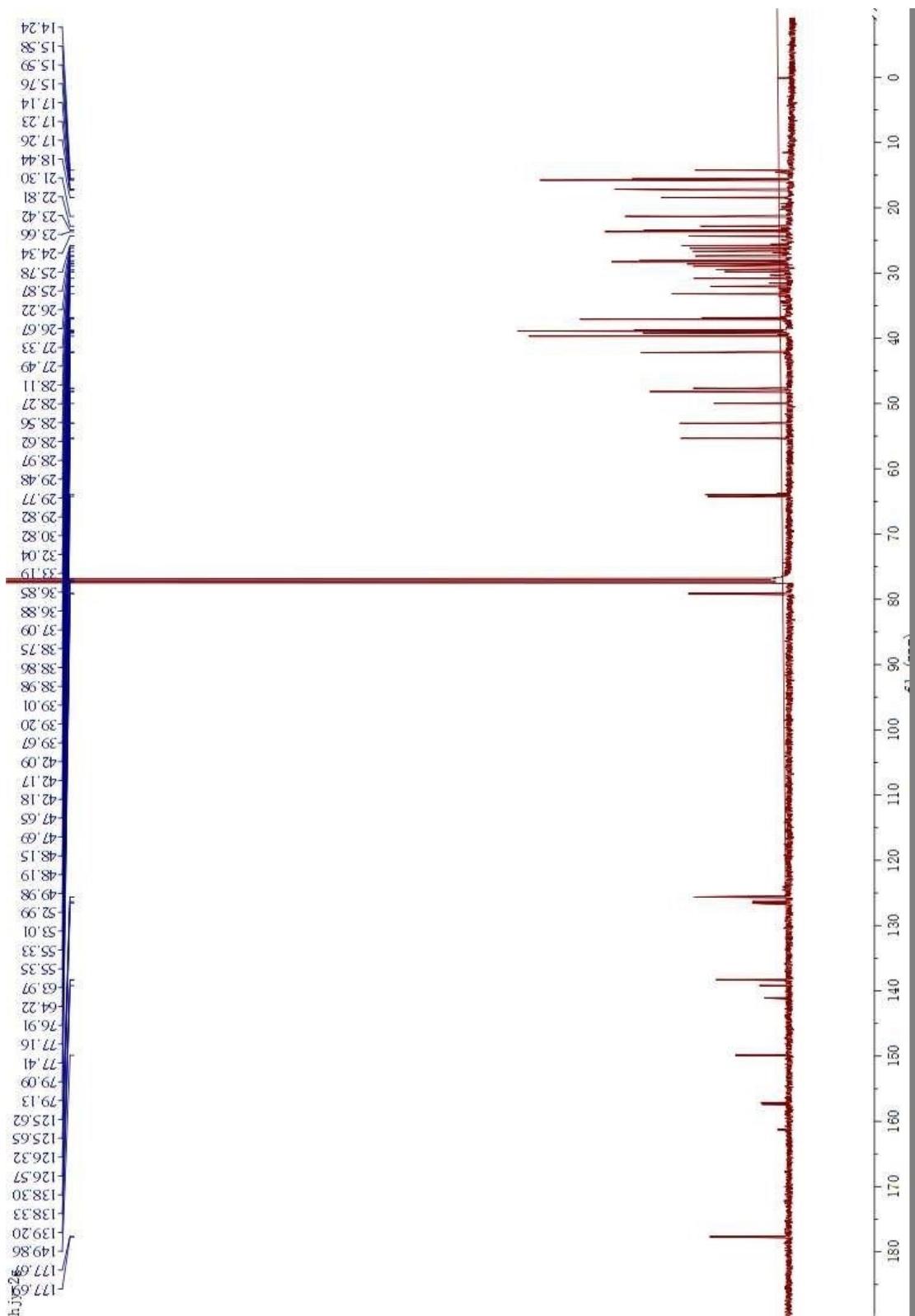
### HRMS spectrum of 9a



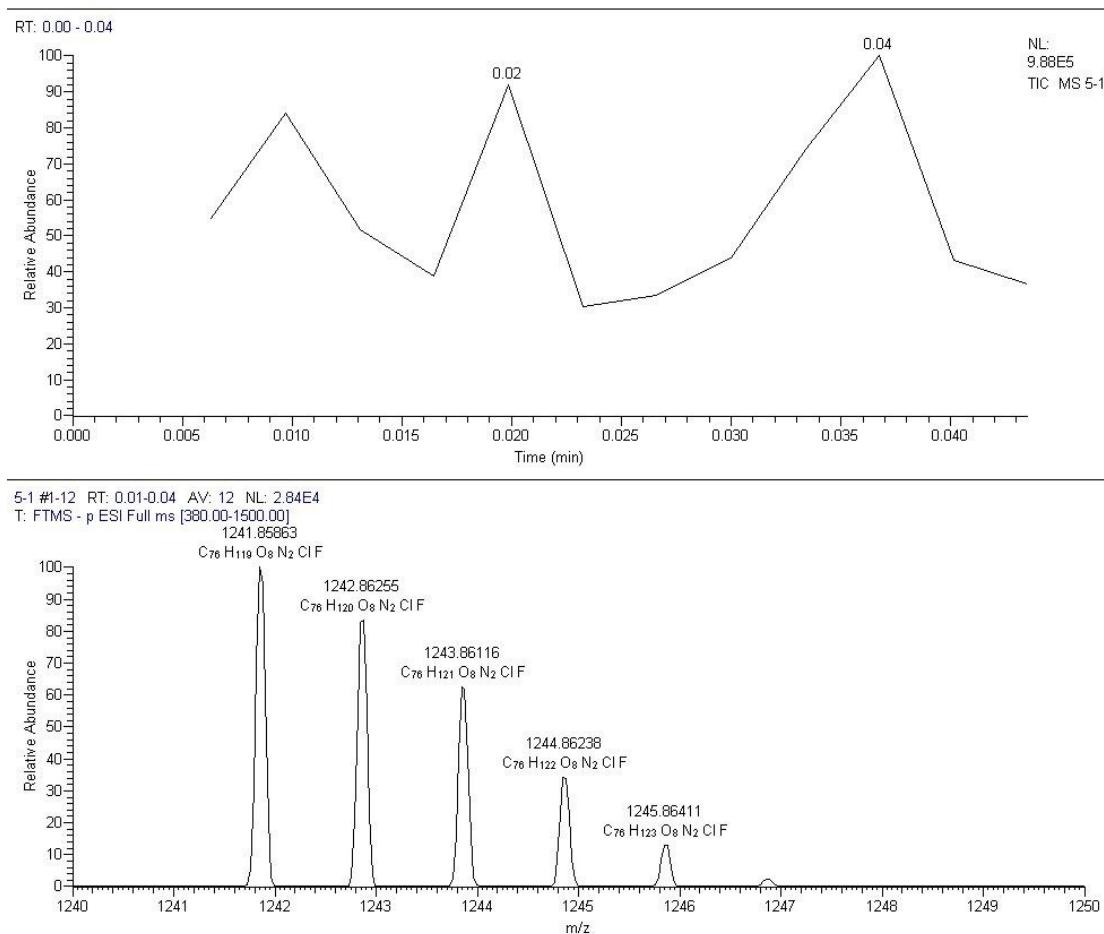
<sup>1</sup>H NMR spectrum of **9b**



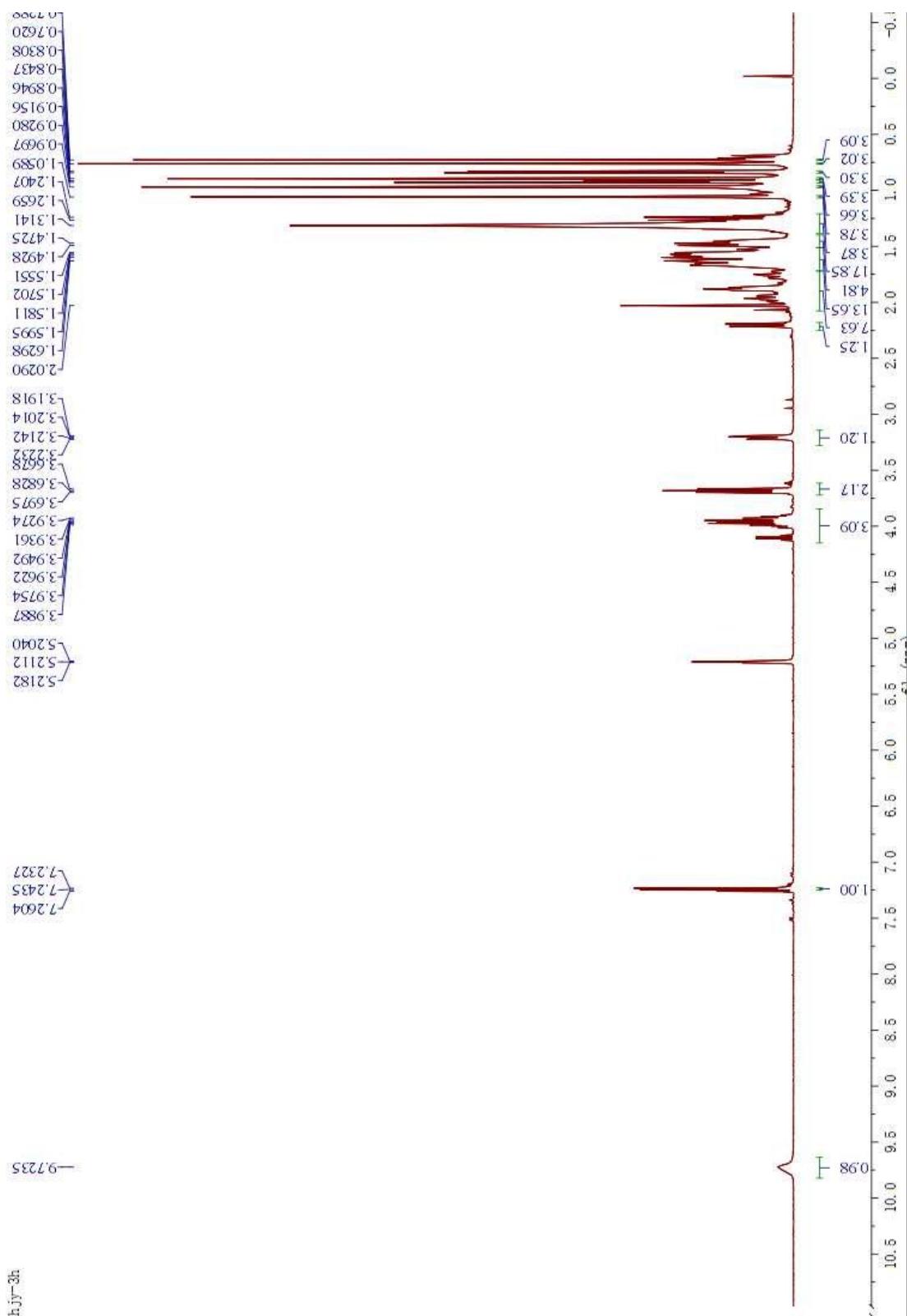
<sup>13</sup>C NMR spectrum of **9b**



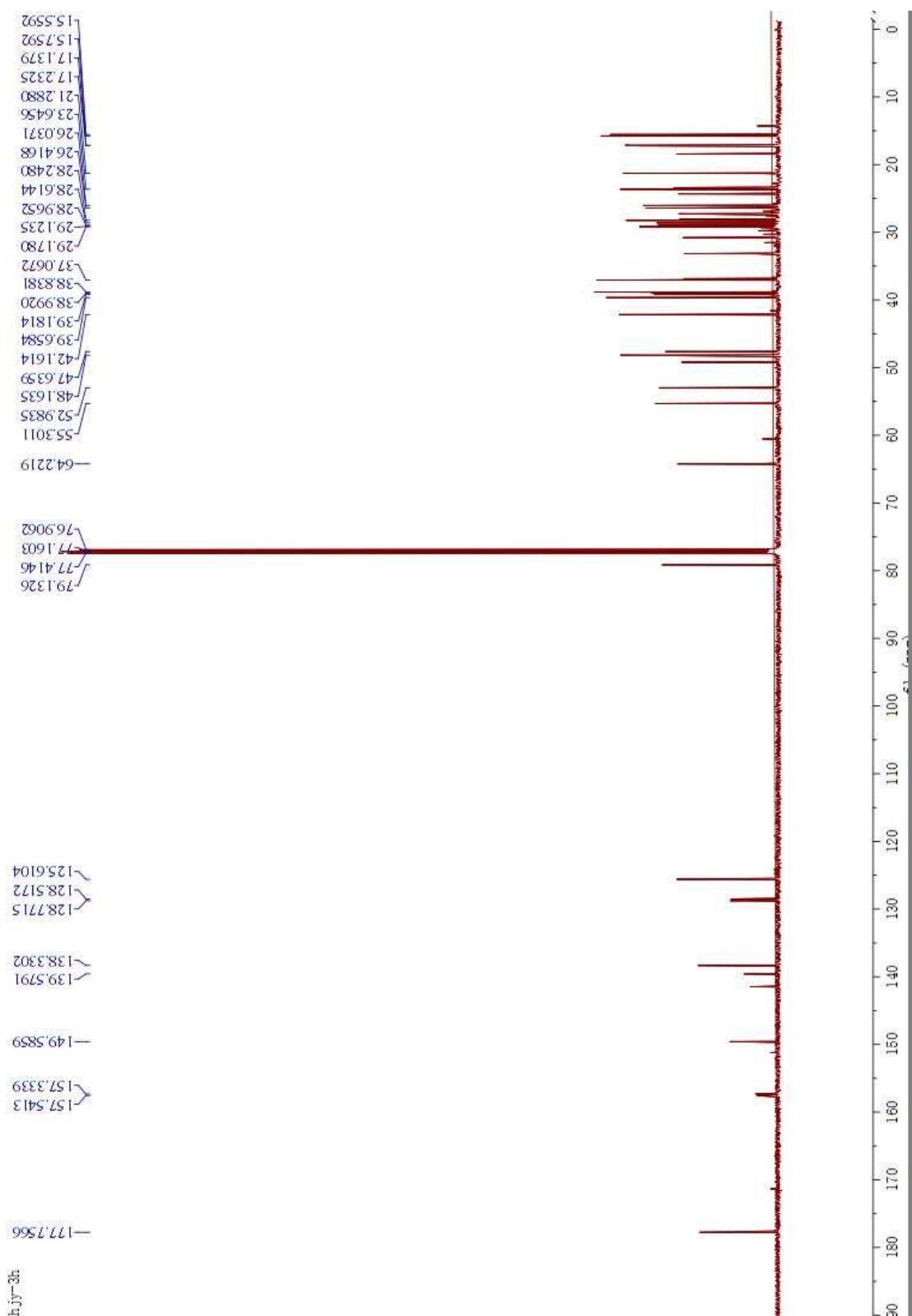
### HRMS spectrum of **9b**



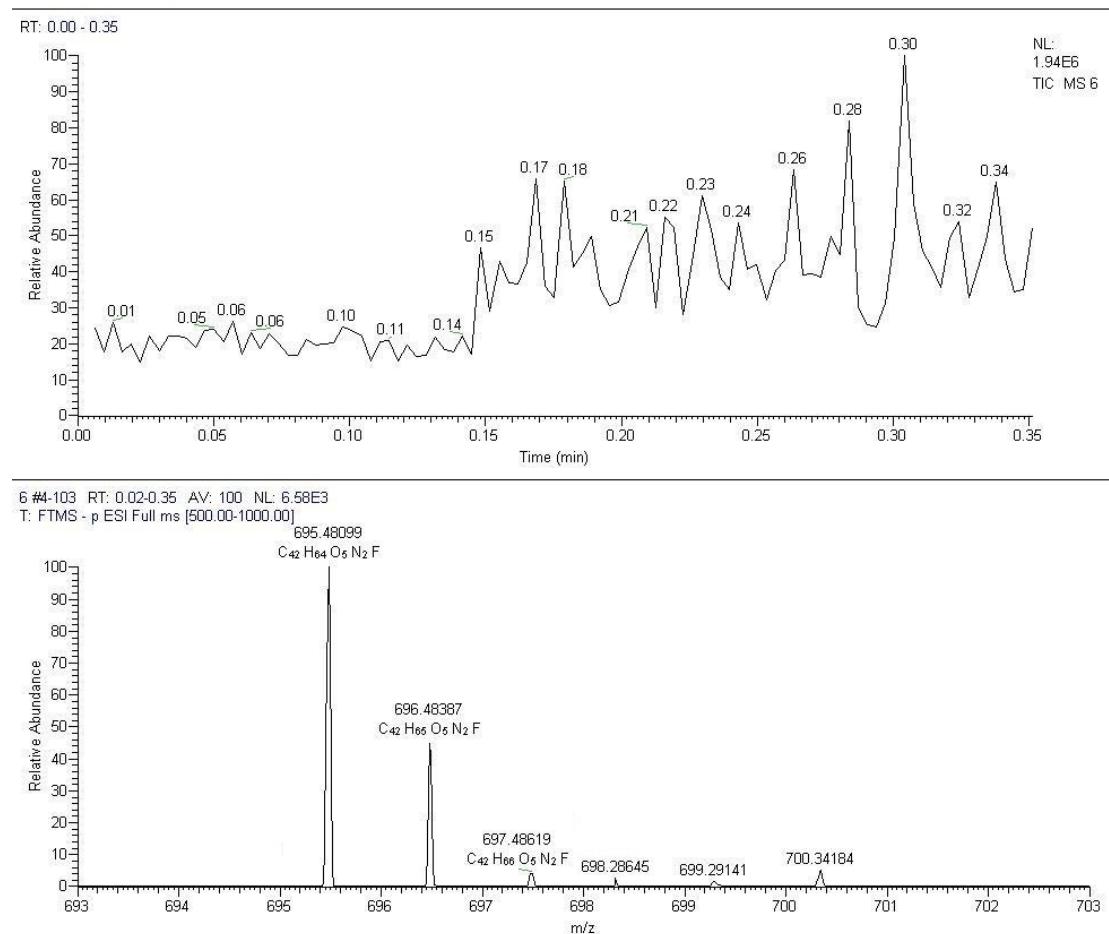
<sup>1</sup>H NMR spectrum of **10a**



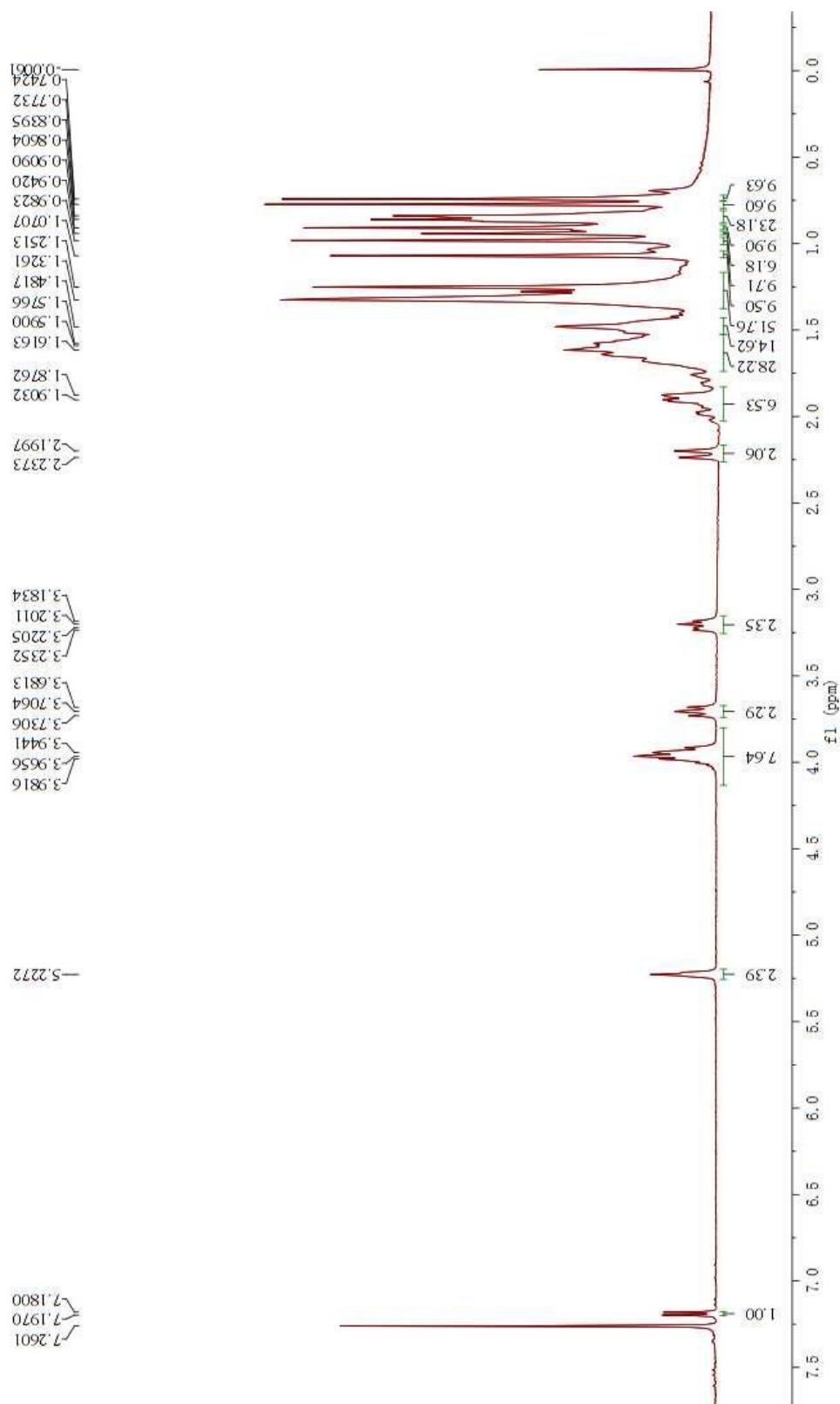
<sup>13</sup>C NMR spectrum of **10a**



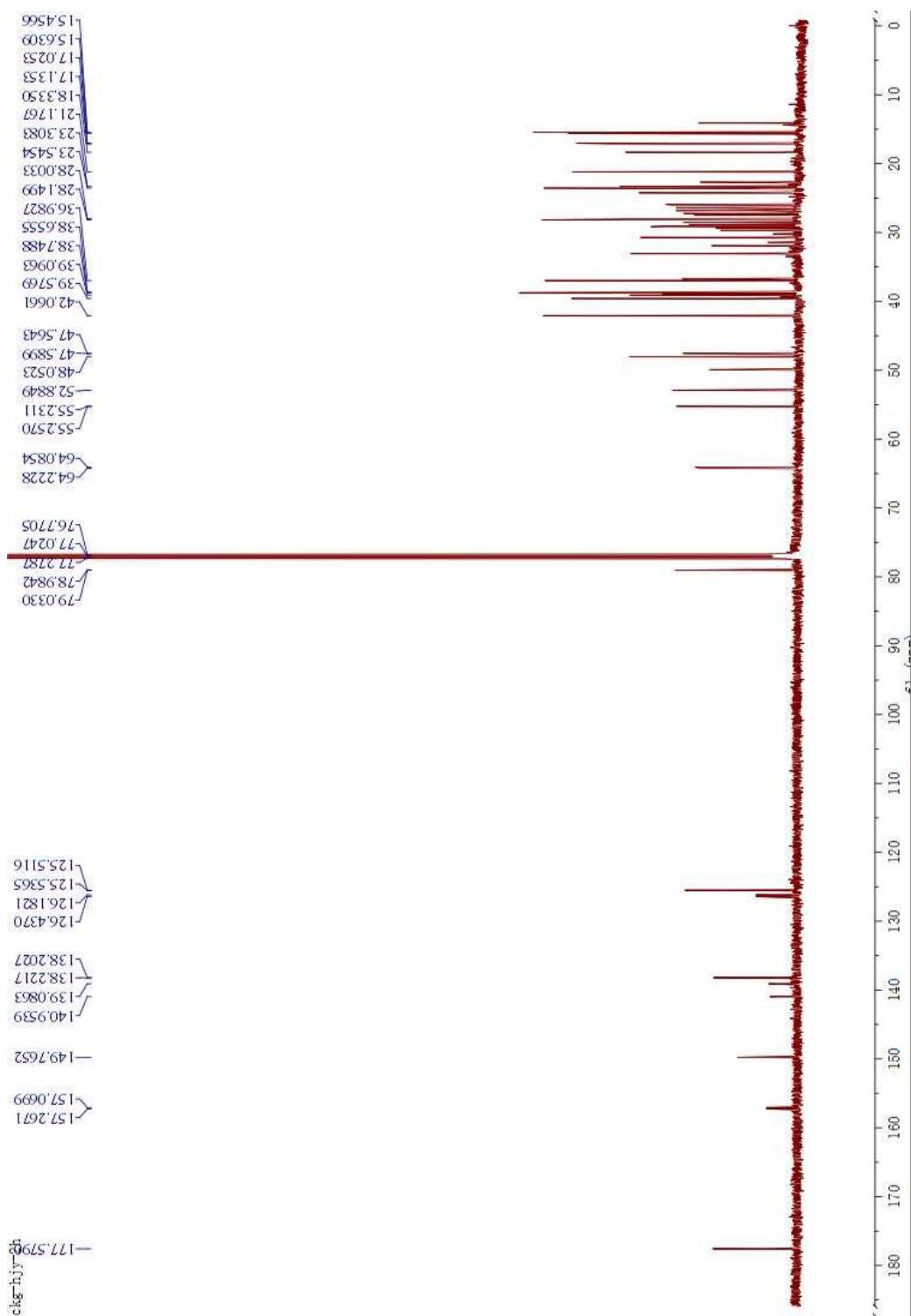
### HRMS spectrum of **10a**



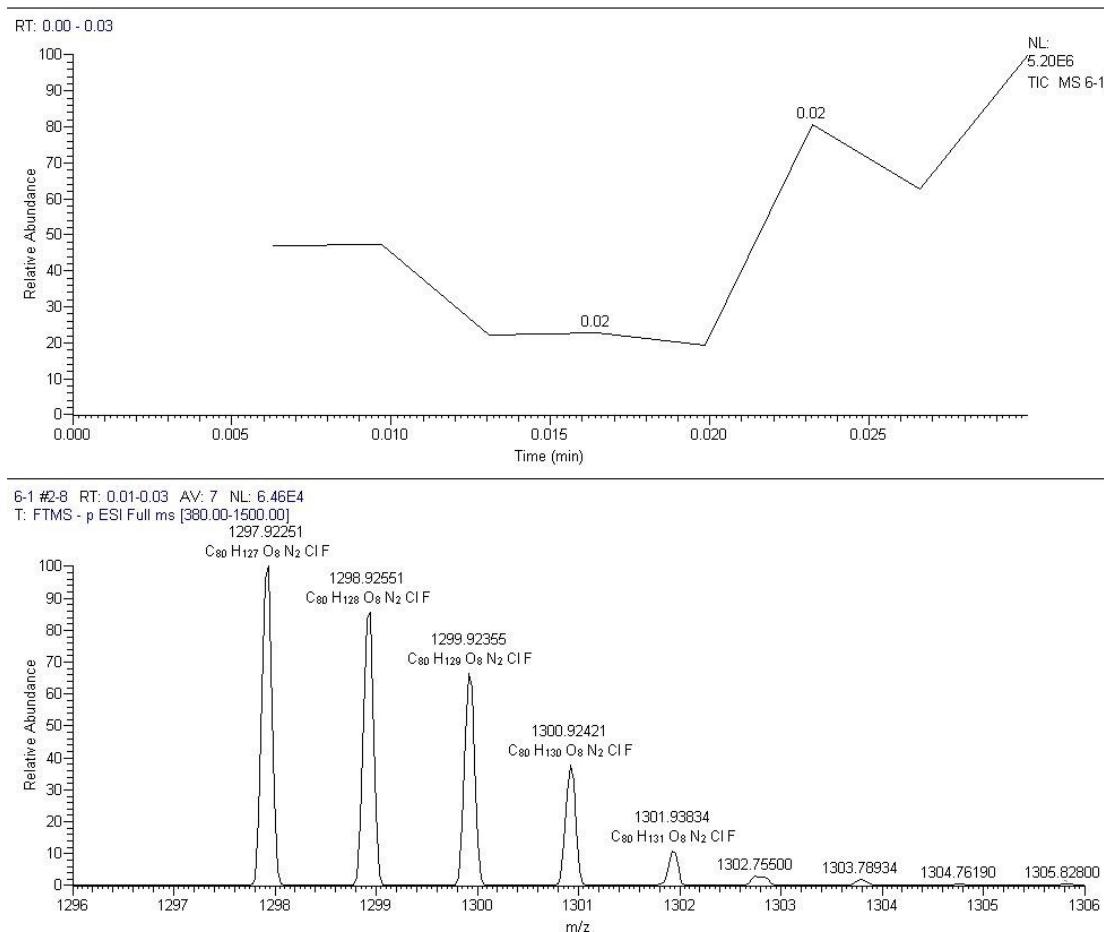
<sup>1</sup>H NMR spectrum of **10b**



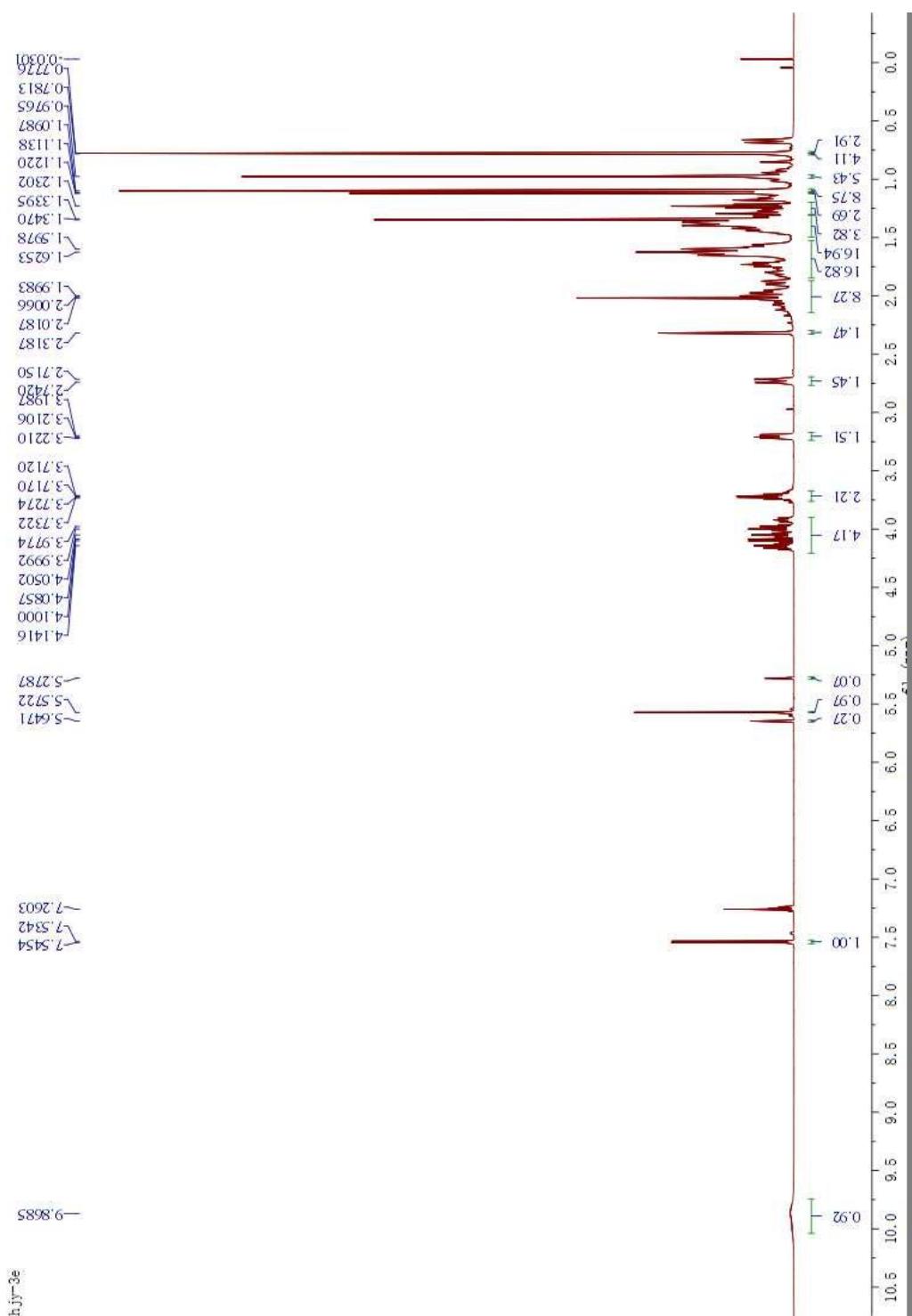
<sup>13</sup>C NMR spectrum of **10b**



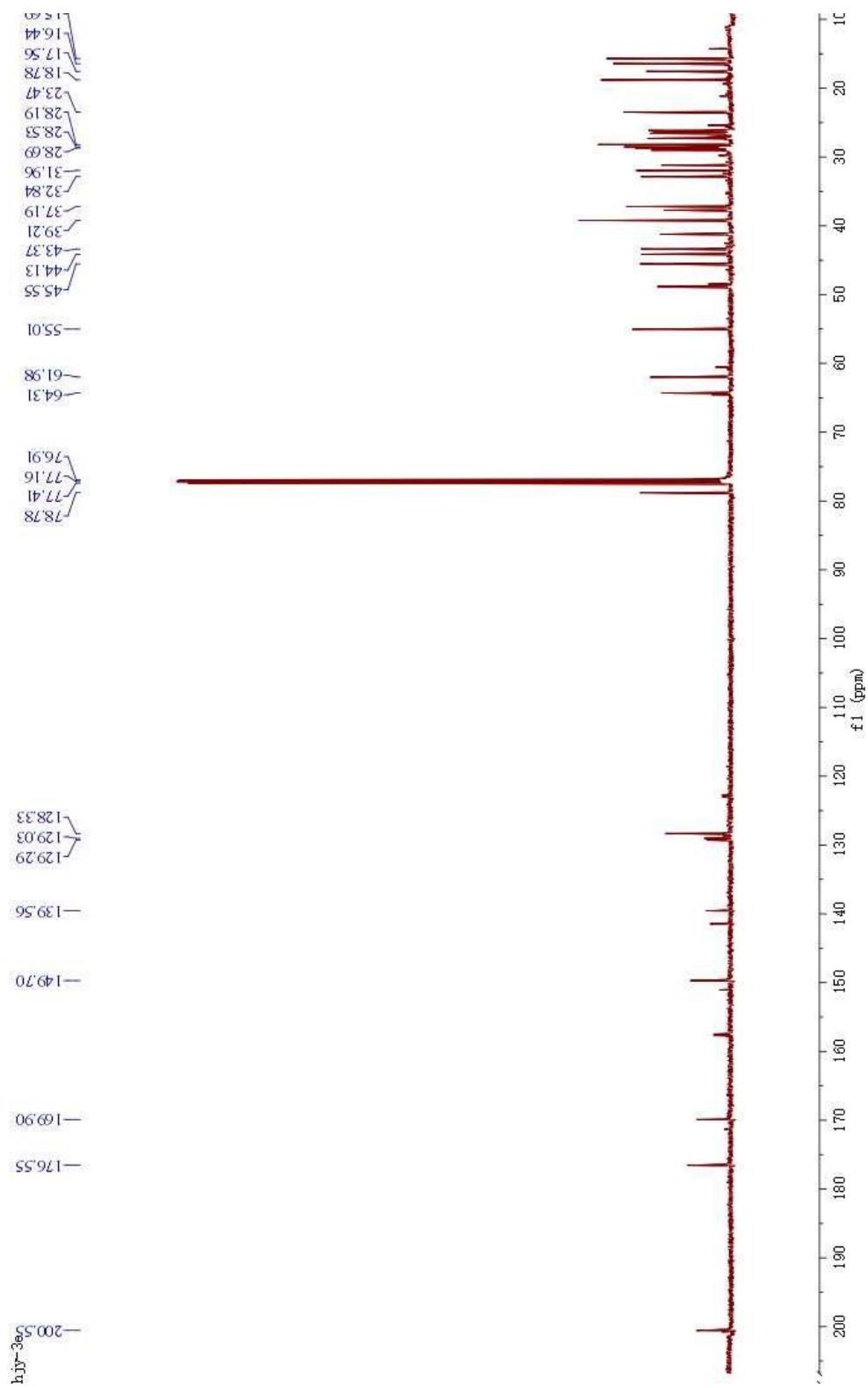
### HRMS spectrum of **10b**



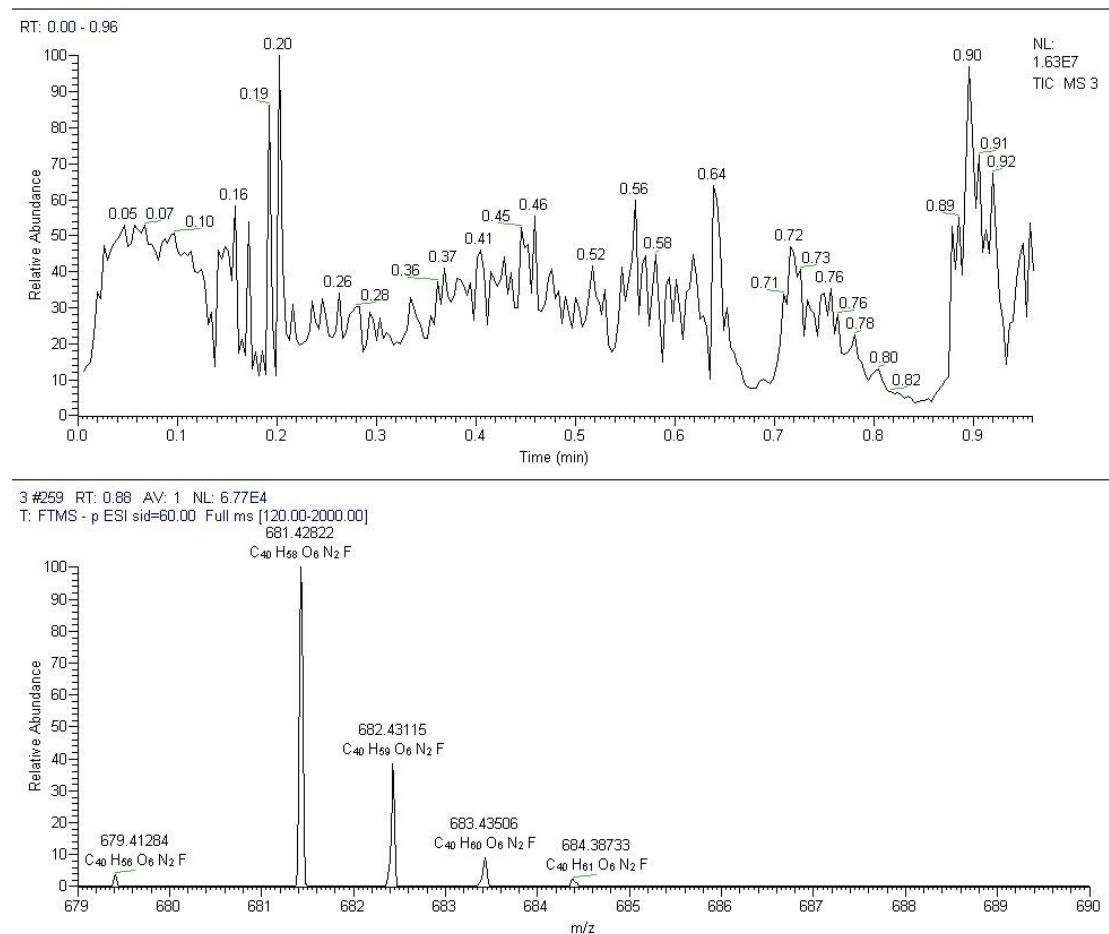
<sup>1</sup>H NMR spectrum of **11a**



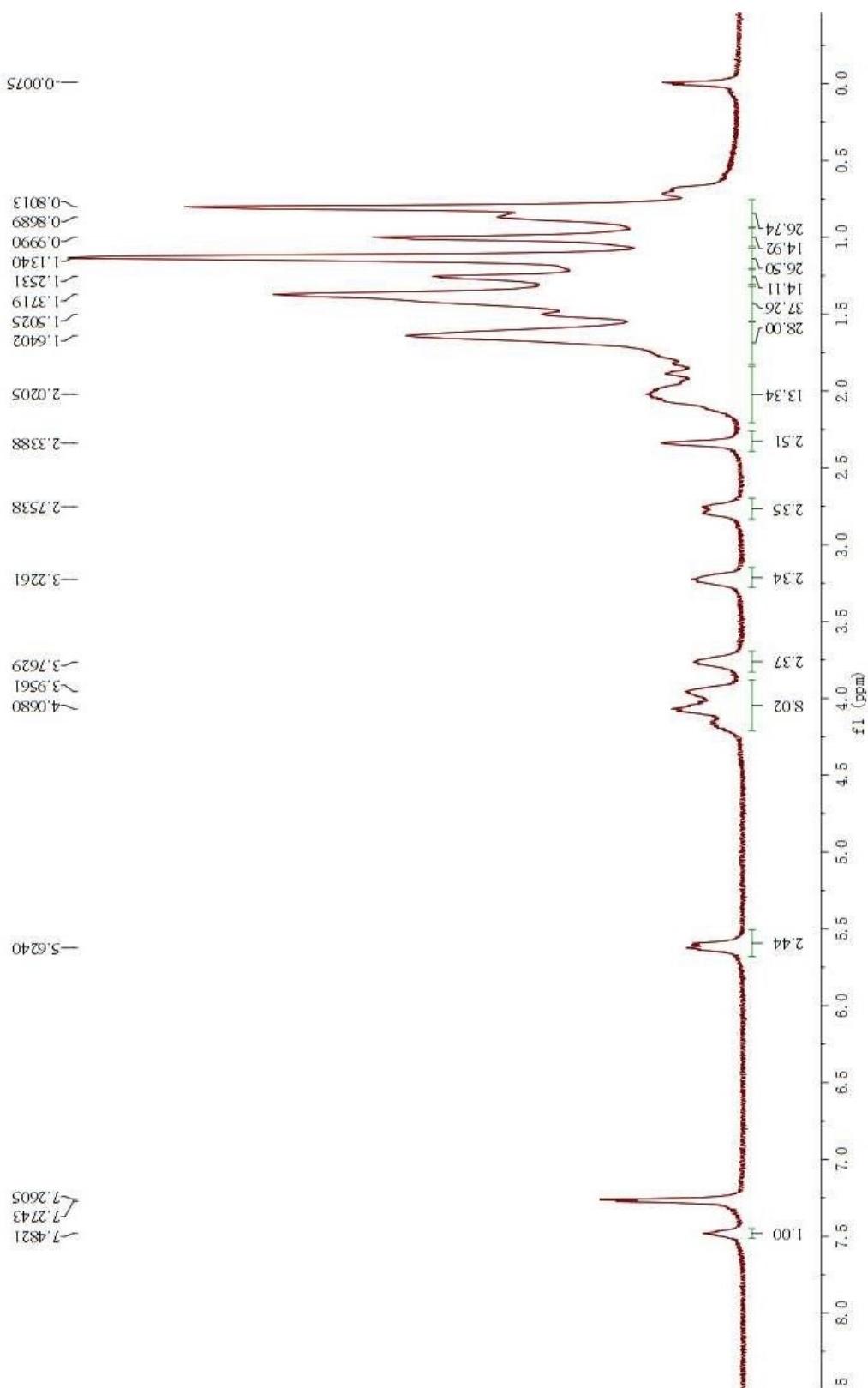
<sup>13</sup>C NMR spectrum of **11a**



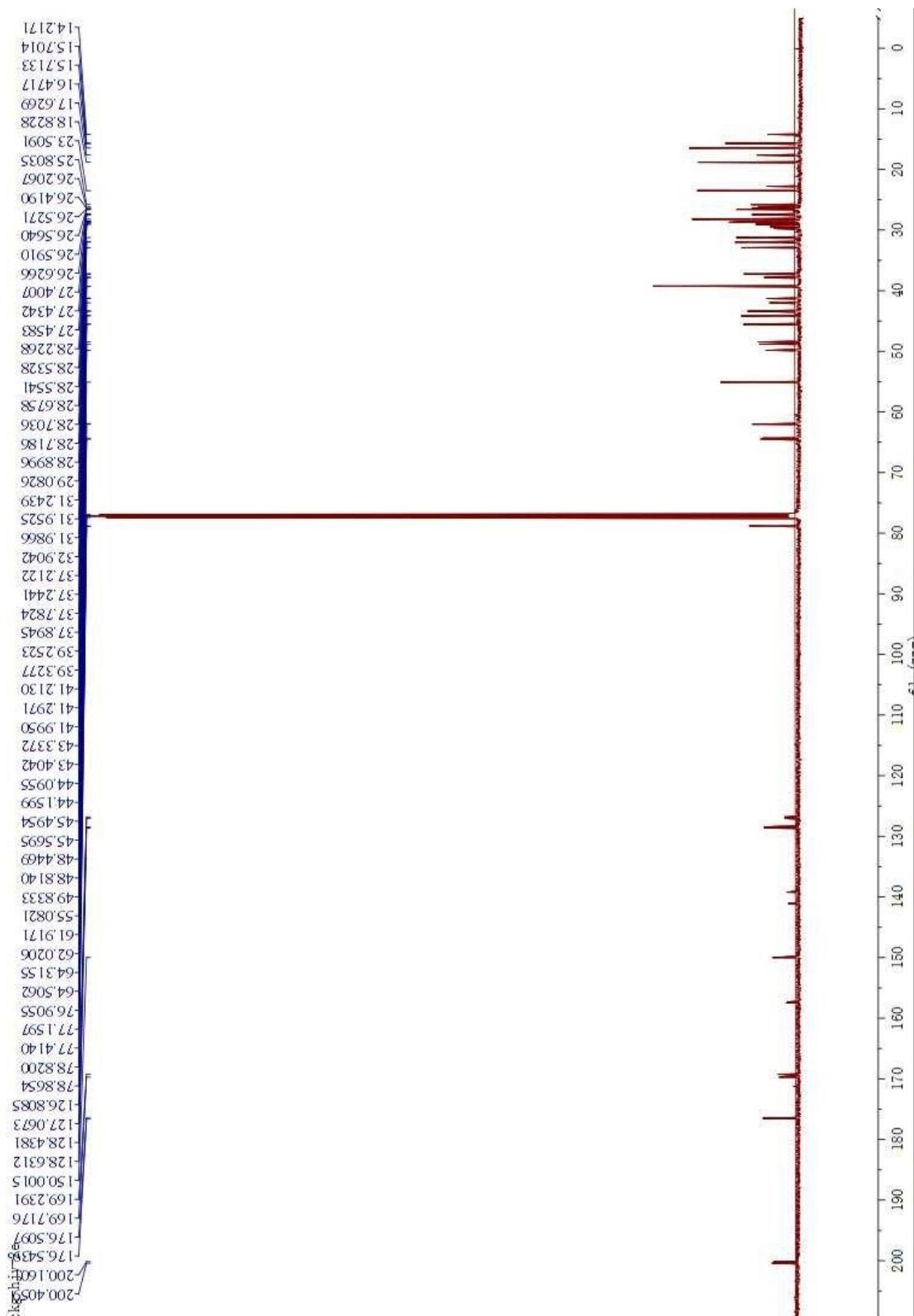
### HRMS spectrum of **11a**



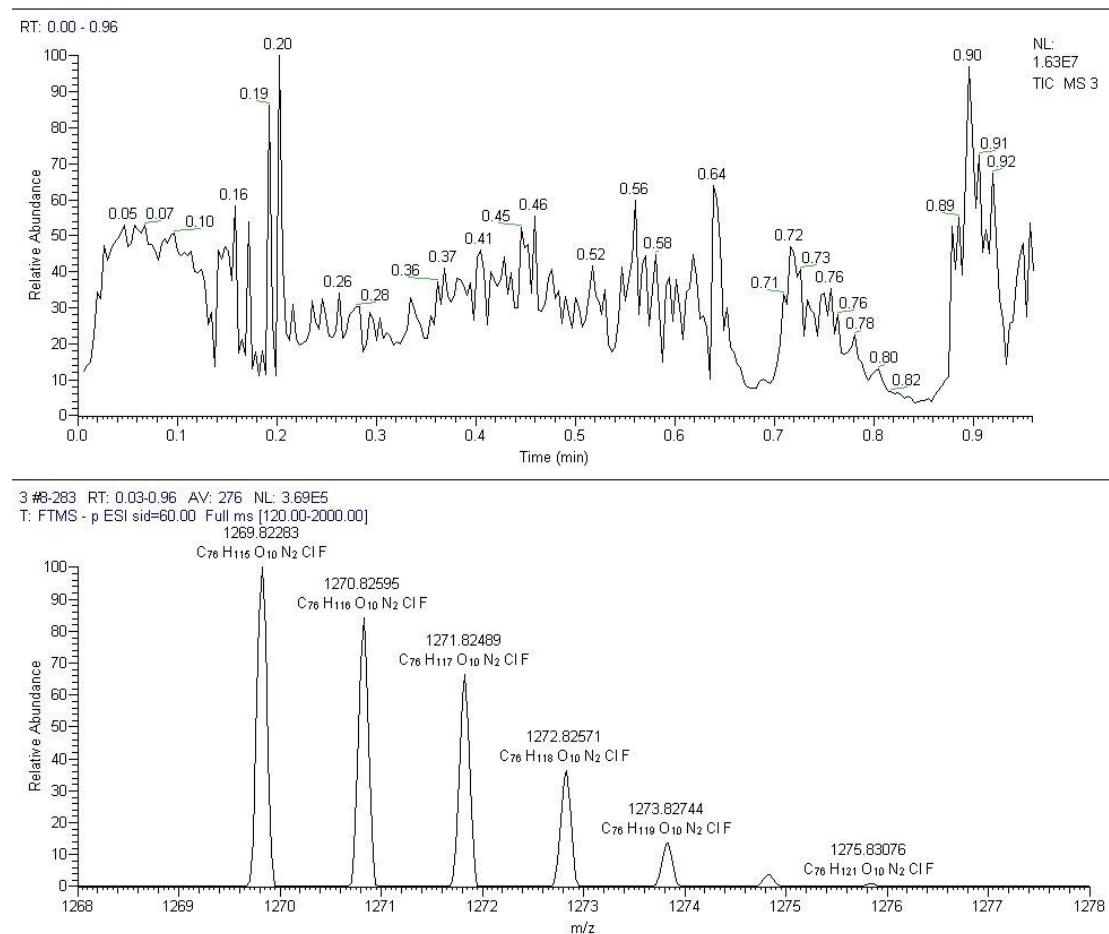
<sup>1</sup>H NMR spectrum of **11b**



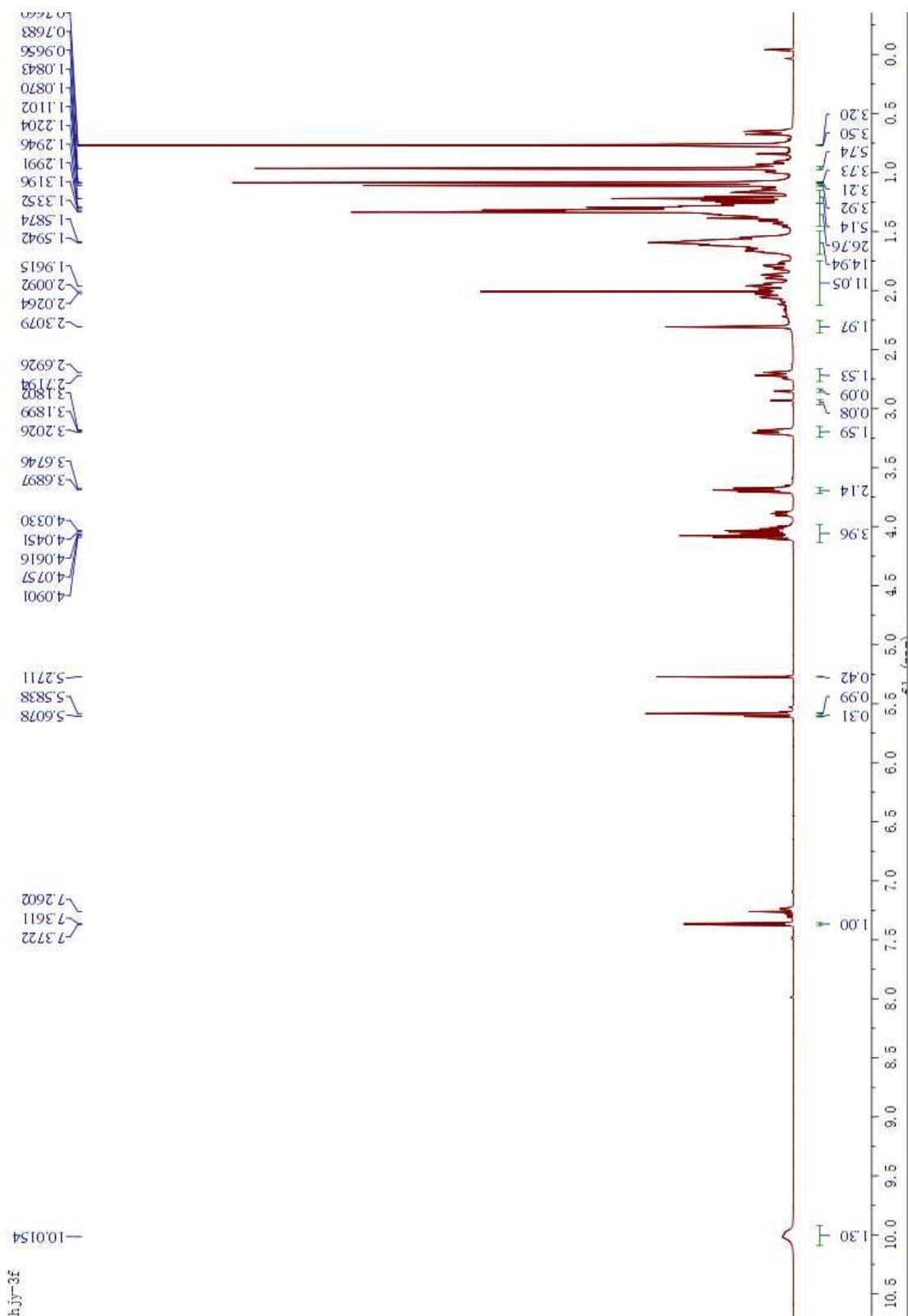
<sup>13</sup>C NMR spectrum of **11b**



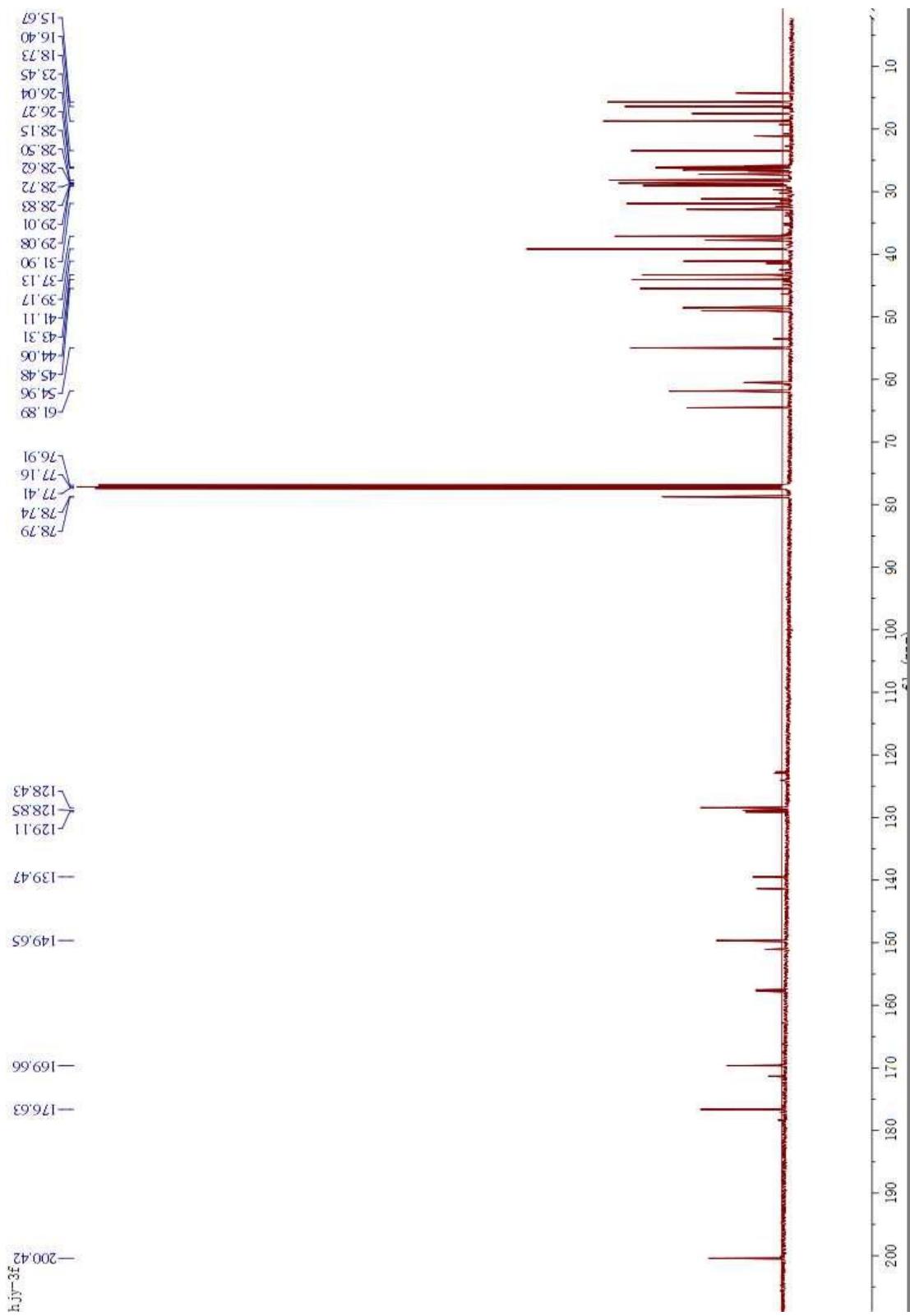
### HRMS spectrum of **11b**



<sup>1</sup>H NMR spectrum of **12a**



<sup>13</sup>C NMR spectrum of **12a**



## HRMS spectrum of **12a**

Sample Group

Stream Name

LC 1

Info.

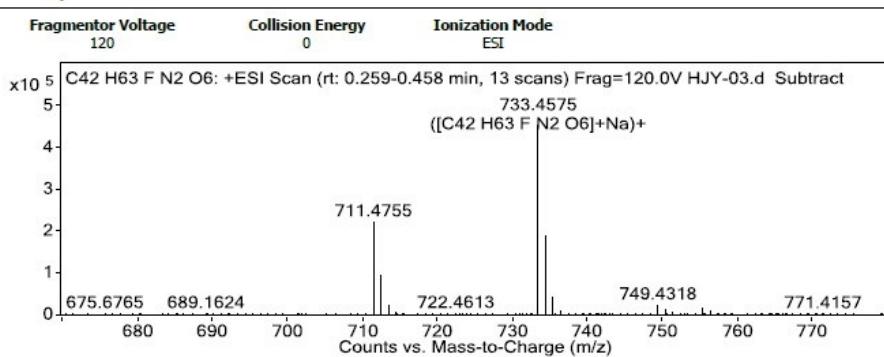
Acquisition SW

Version

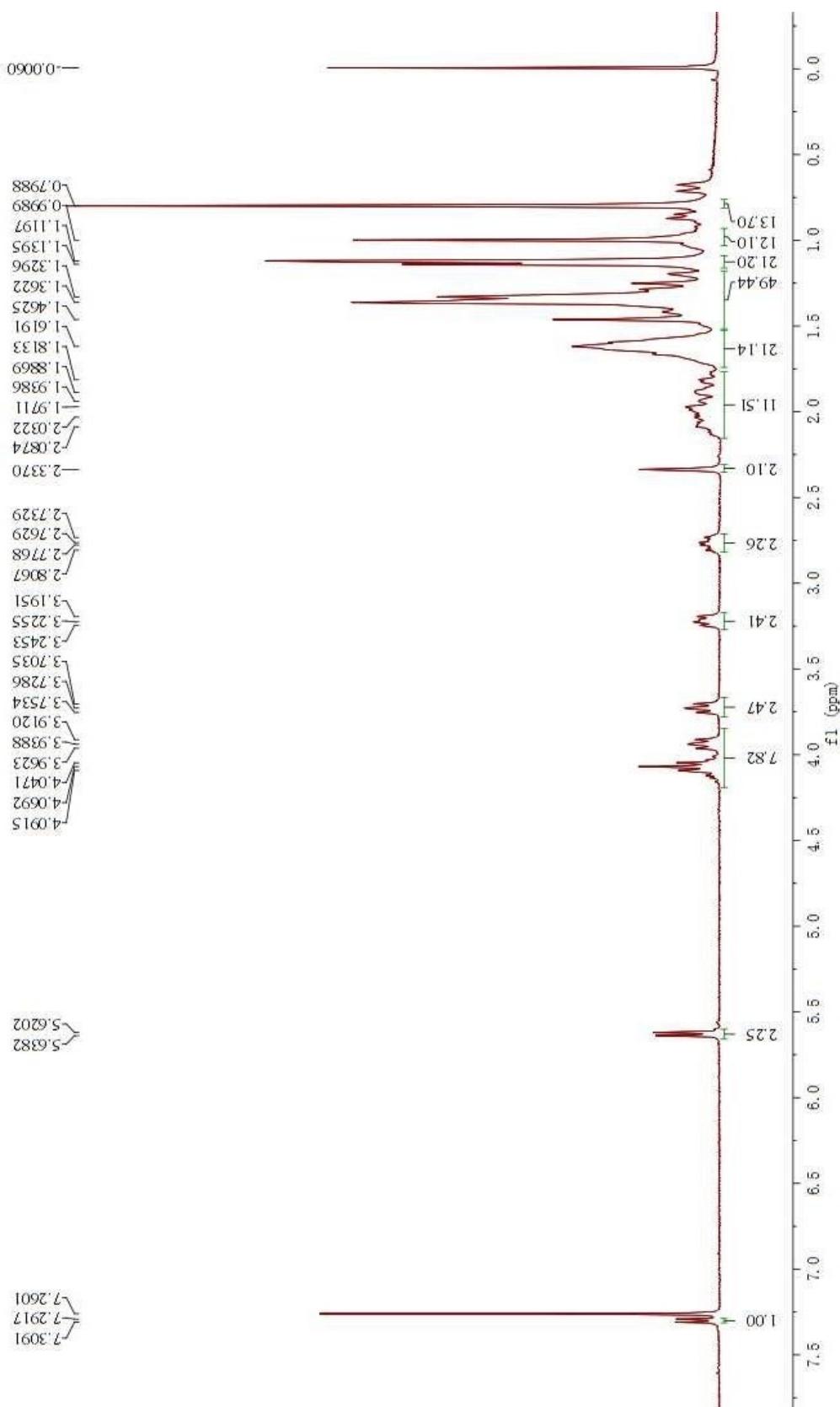
6200 series TOF/6500 series

Q-TOF B.06.01 (B6157)

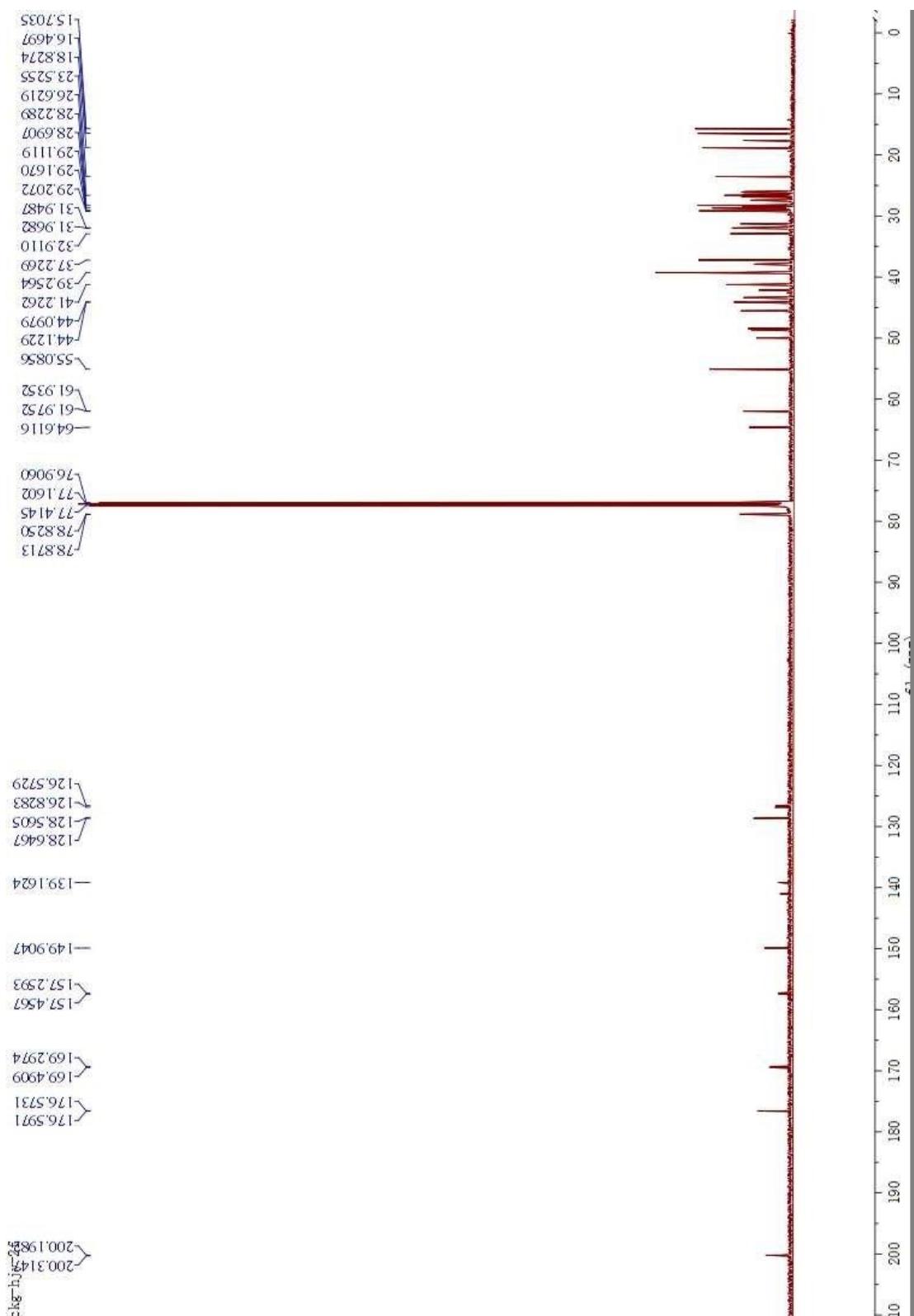
### User Spectra



<sup>1</sup>H NMR spectrum of **12b**



<sup>13</sup>C NMR spectrum of **12b**



### HRMS spectrum of 12b

