

# SUPPORTING INFORMATION

## Bioactive Cembranoids from the Soft Coral *Sinularia crassa*

**Chih-Hua Chao<sup>1,2</sup>, Kuei-Ju Chou<sup>1</sup>, Chiung-Yao Huang<sup>1</sup>, Zhi-Hong Wen<sup>1,3</sup>, Chi-Hsin Hsu<sup>1,3</sup>, Yang-Chang Wu<sup>4</sup>, Chang-Feng Dai<sup>5</sup>, and Jyh-Horng Sheu<sup>1,3,\*</sup>**

<sup>1</sup> Department of Marine Biotechnology and Resources, National Sun Yat-Sen University, Kaohsiung 804, Taiwan; E-Mails: chaochihhua@hotmail.com (C.-H.C.); jzusmile@hotmail.com (K.-J.C.); betty8575@yahoo.com.tw (C.-Y.H.)

<sup>2</sup> Chinese Medicinal Research and Development Center, China Medical University and Hospital, Taichung 404, Taiwan, ROC

<sup>3</sup> Asian Pacific Ocean Research Center, National Sun Yat-sen University, Kaohsiung 804, Taiwan  
E-Mails: wzh@mail.nsysu.edu.tw (Z.-H.W.); hsuch@mail.nsysu.edu.tw (C.-H.H.)

<sup>4</sup> College of Chinese Medicine, China Medical University, Taichung 404, Taiwan  
E-Mail: yachwu@mail.cmu.edu.tw (Y.-C.W.)

<sup>5</sup> Institute of Oceanography, National Taiwan University, Taipei, Taiwan;

E-Mail: corallab@ntu.edu.tw (C.-F.D.)

**For compound 1:**

- S1-1.  $^1\text{H}$  NMR spectrum (400 MHz) of compound **1** in  $\text{CDCl}_3$ .  
S1-2.  $^{13}\text{C}$  NMR spectrum (100 MHz) of compound **1** in  $\text{CDCl}_3$ .  
S1-3.  $^1\text{H}$  NMR spectrum (400 MHz) of compound **1** in  $\text{C}_5\text{D}_5\text{N}$ .  
S1-4.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound **1** in  $\text{C}_5\text{D}_5\text{N}$ .

**For compound 2:**

- S2-1.  $^1\text{H}$  NMR spectrum (500 MHz) of compound **2** in  $\text{CDCl}_3$ .  
S2-2.  $^{13}\text{C}$  NMR spectrum (125 MHz) of compound **2** in  $\text{CDCl}_3$ .  
S2-3.  $^1\text{H}$  NMR spectrum (300 MHz) of compound **2** in  $\text{CDCl}_3$ .  
S2-4.  $^1\text{H}$  NMR spectrum (300 MHz) of acetate **1a** in  $\text{CDCl}_3$ .

**For compound 3:**

- S3-1.  $^1\text{H}$  NMR spectrum (400 MHz) of compound **3** in  $\text{CDCl}_3$ .  
S3-2.  $^{13}\text{C}$  NMR spectrum (100 MHz) of compound **3** in  $\text{CDCl}_3$ .

**For compound 4:**

- S4-1.  $^1\text{H}$  NMR spectrum (400 MHz) of compound **4** in  $\text{CDCl}_3$ .  
S4-2.  $^{13}\text{C}$  NMR spectrum (100 MHz) of compound **4** in  $\text{CDCl}_3$ .

**For compound 5:**

**S5-1.**  $^1\text{H}$  NMR spectrum (400 MHz) of compound **5** in  $\text{CDCl}_3$ .

**S5-2.**  $^{13}\text{C}$  NMR spectrum (100 MHz) of compound **5** in  $\text{CDCl}_3$ .

**For compound 6:**

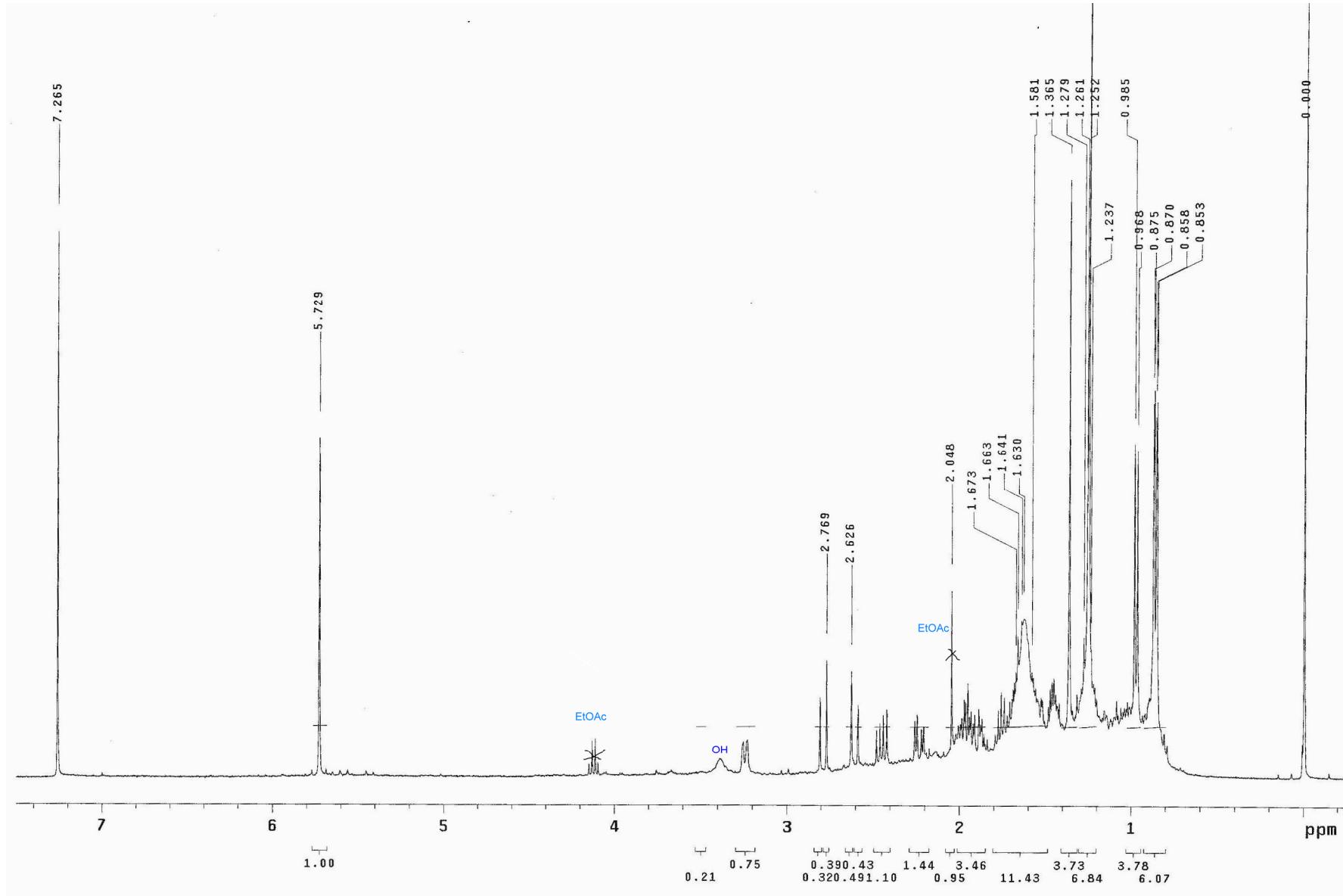
- S6-1.**  $^1\text{H}$  NMR spectrum (400 MHz) of compound **6** in  $\text{C}_6\text{D}_6$ .  
**S6-2.**  $^{13}\text{C}$  NMR spectrum (100 MHz) of compound **6** in  $\text{C}_6\text{D}_6$ .

**For compound 7:**

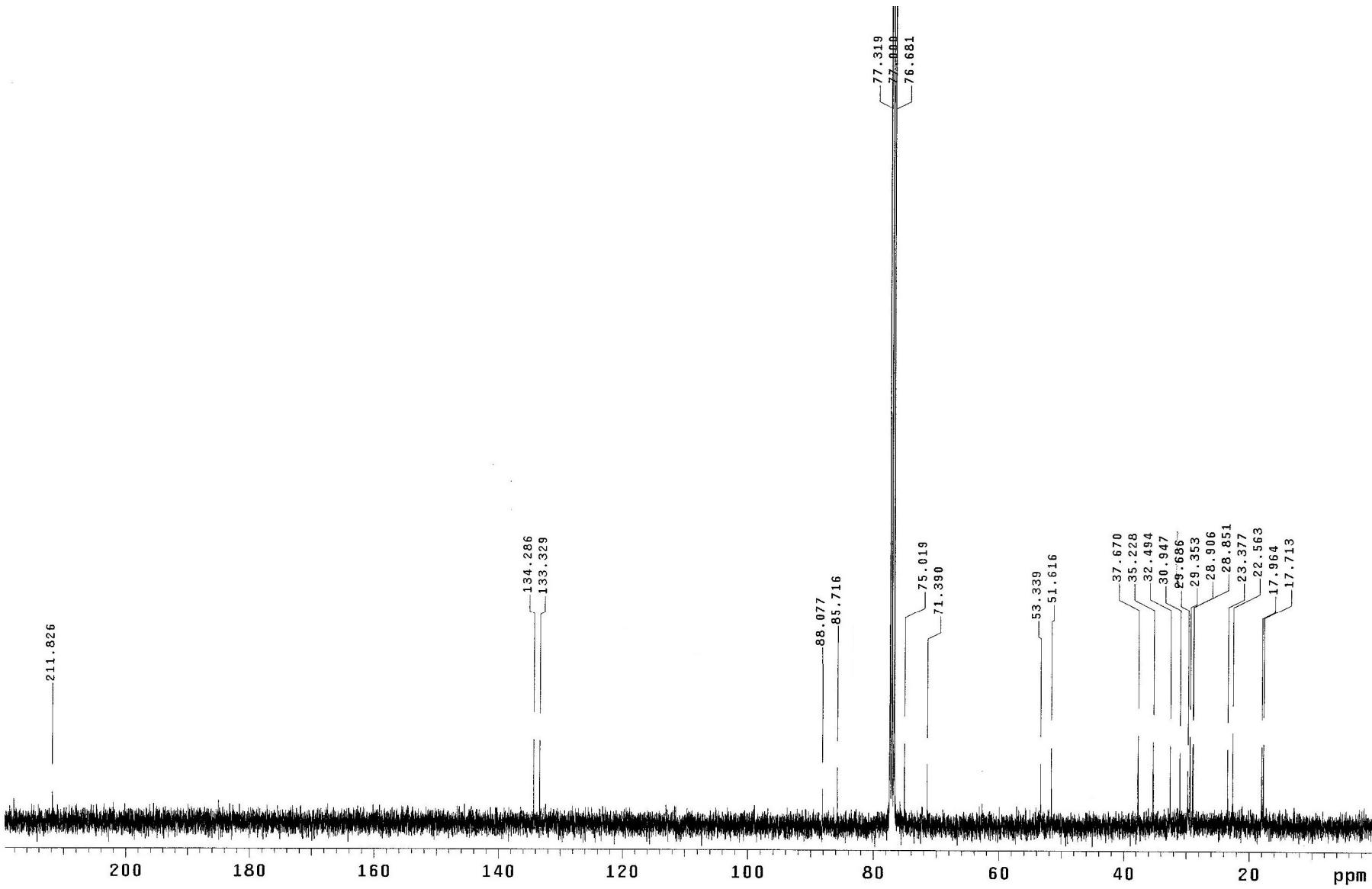
- S7-1.**  $^1\text{H}$  NMR spectrum (400 MHz) of compound **7** in  $\text{C}_6\text{D}_6$ .  
**S7-2.**  $^{13}\text{C}$  NMR spectrum (100 MHz) of compound **7** in  $\text{C}_6\text{D}_6$ .

**For compound 8:**

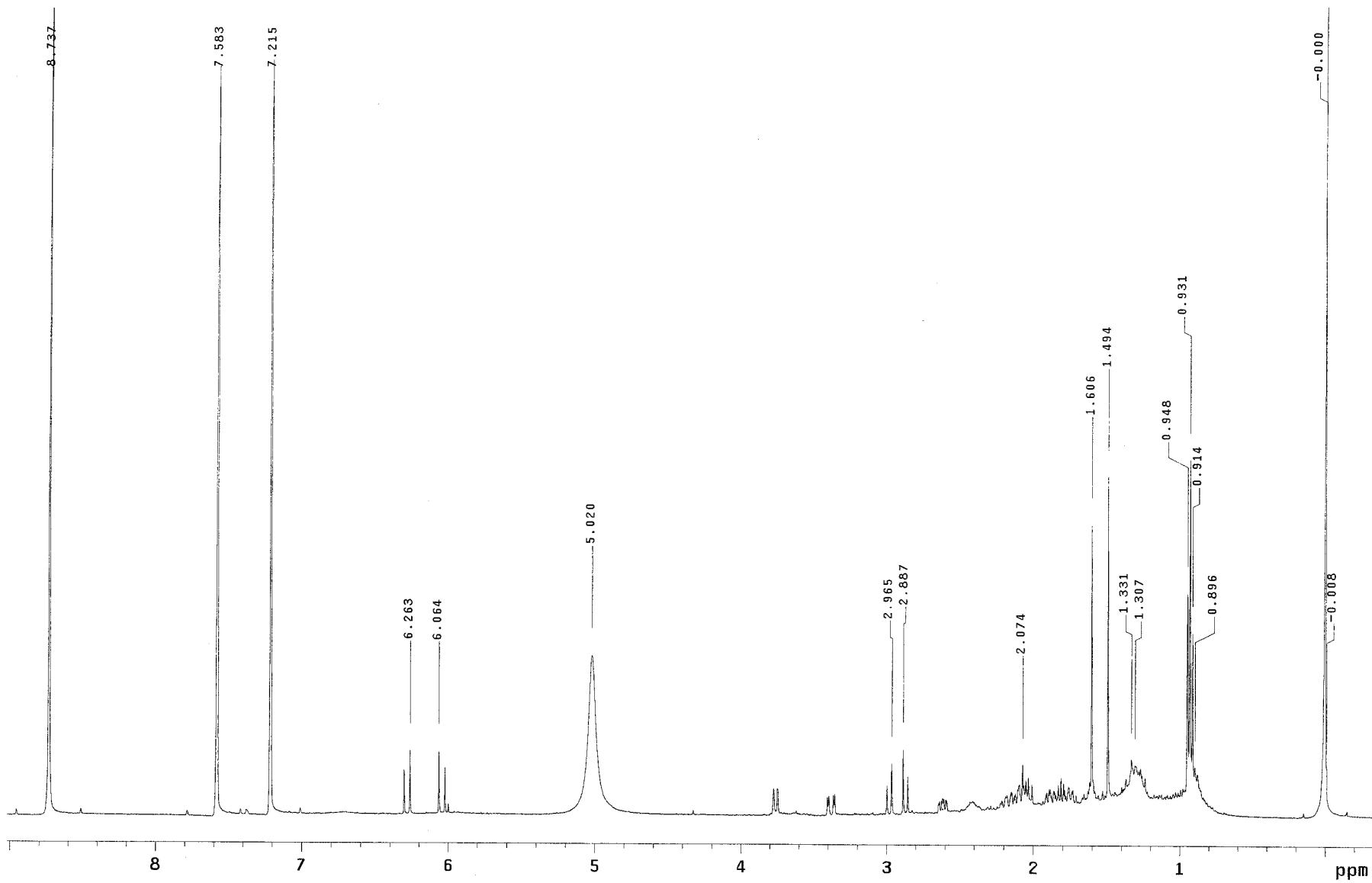
- S8-1.**  $^1\text{H}$  NMR spectrum (400 MHz) of compound **8** in  $\text{C}_6\text{D}_6$ .  
**S8-2.**  $^{13}\text{C}$  NMR spectrum (100 MHz) of compound **8** in  $\text{C}_6\text{D}_6$ .



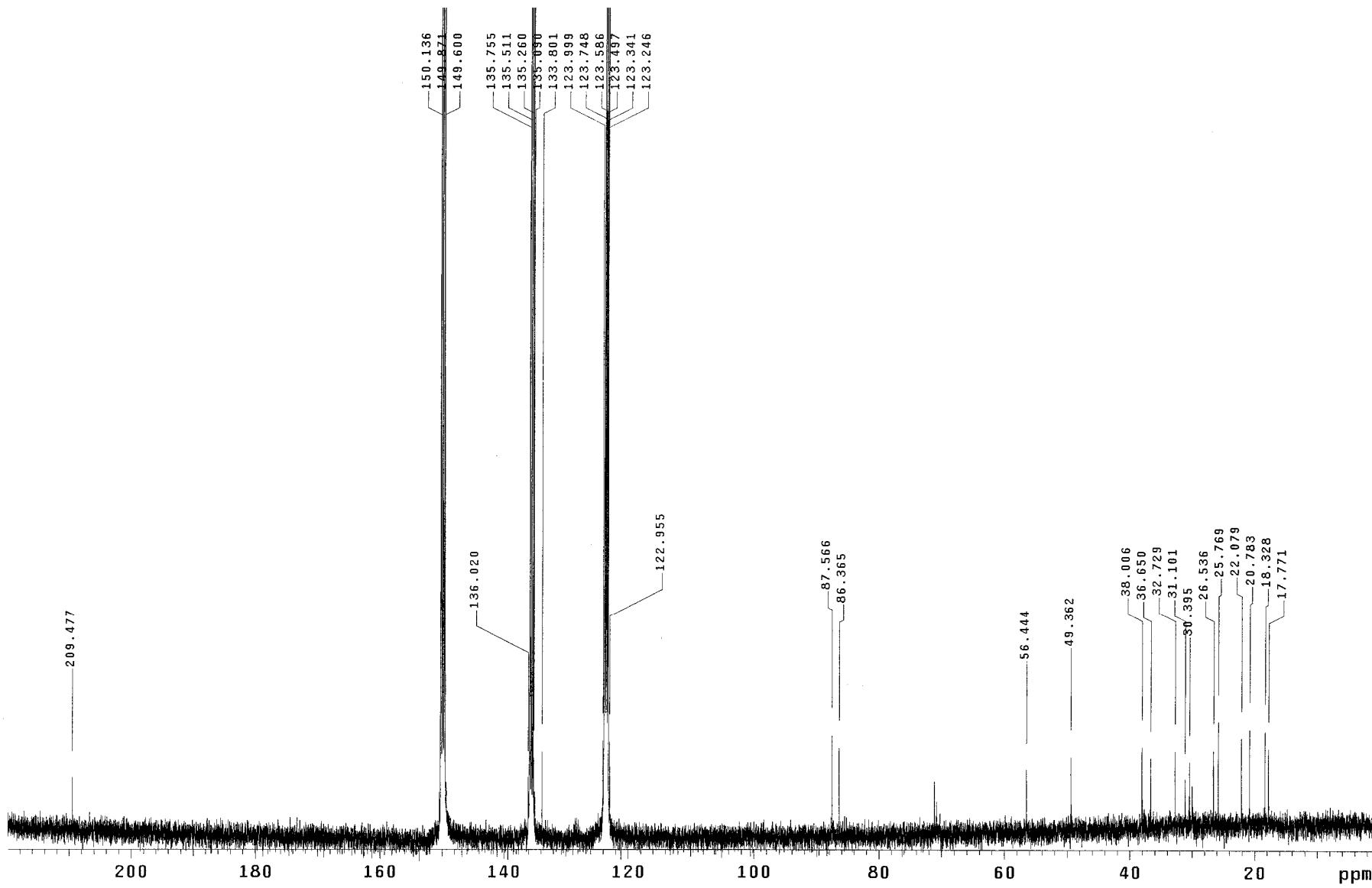
S1-1.  $^1\text{H}$  NMR spectrum (400 MHz) of compound 1 in  $\text{CDCl}_3$ .



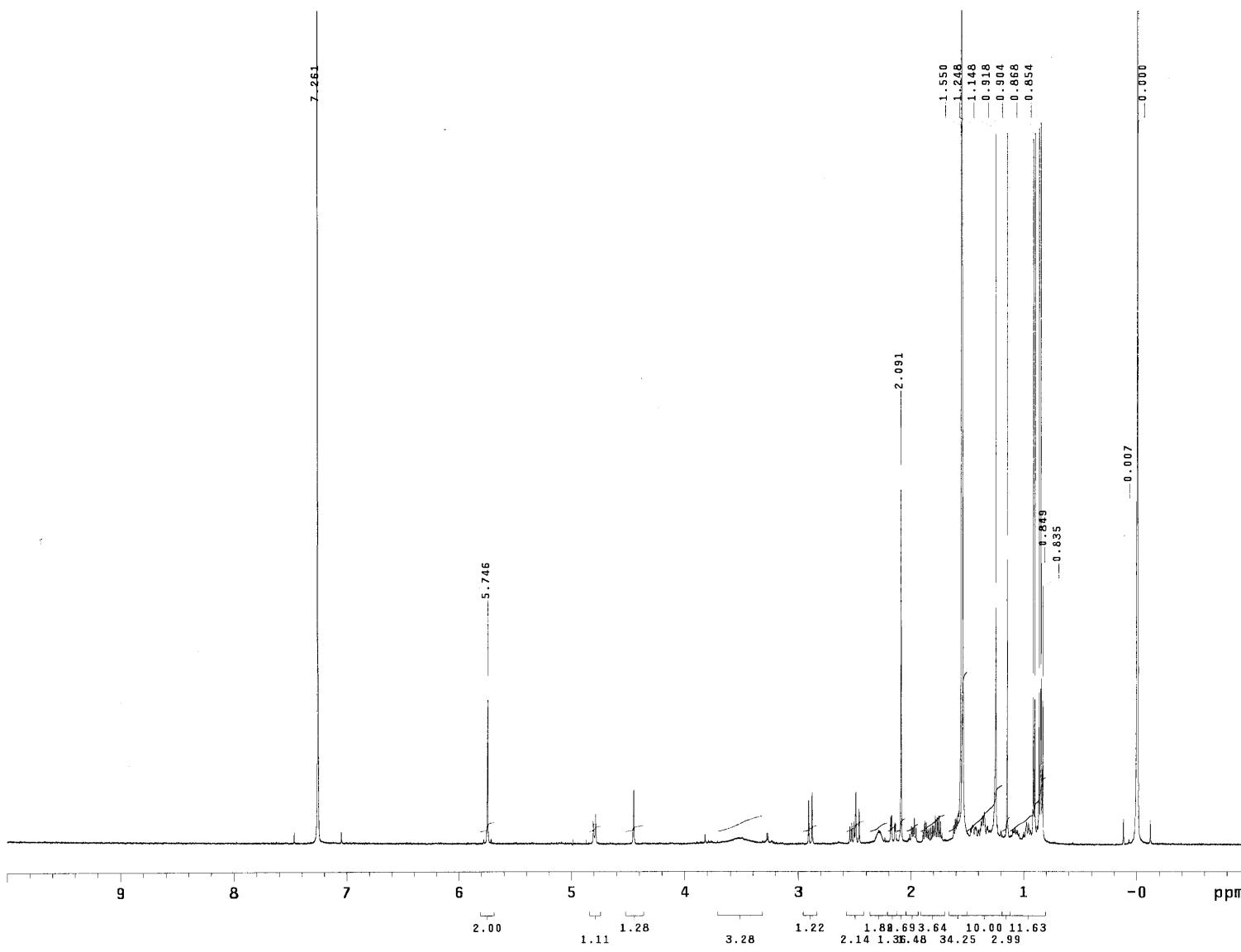
S1-2.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound 1 in  $\text{CDCl}_3$ .



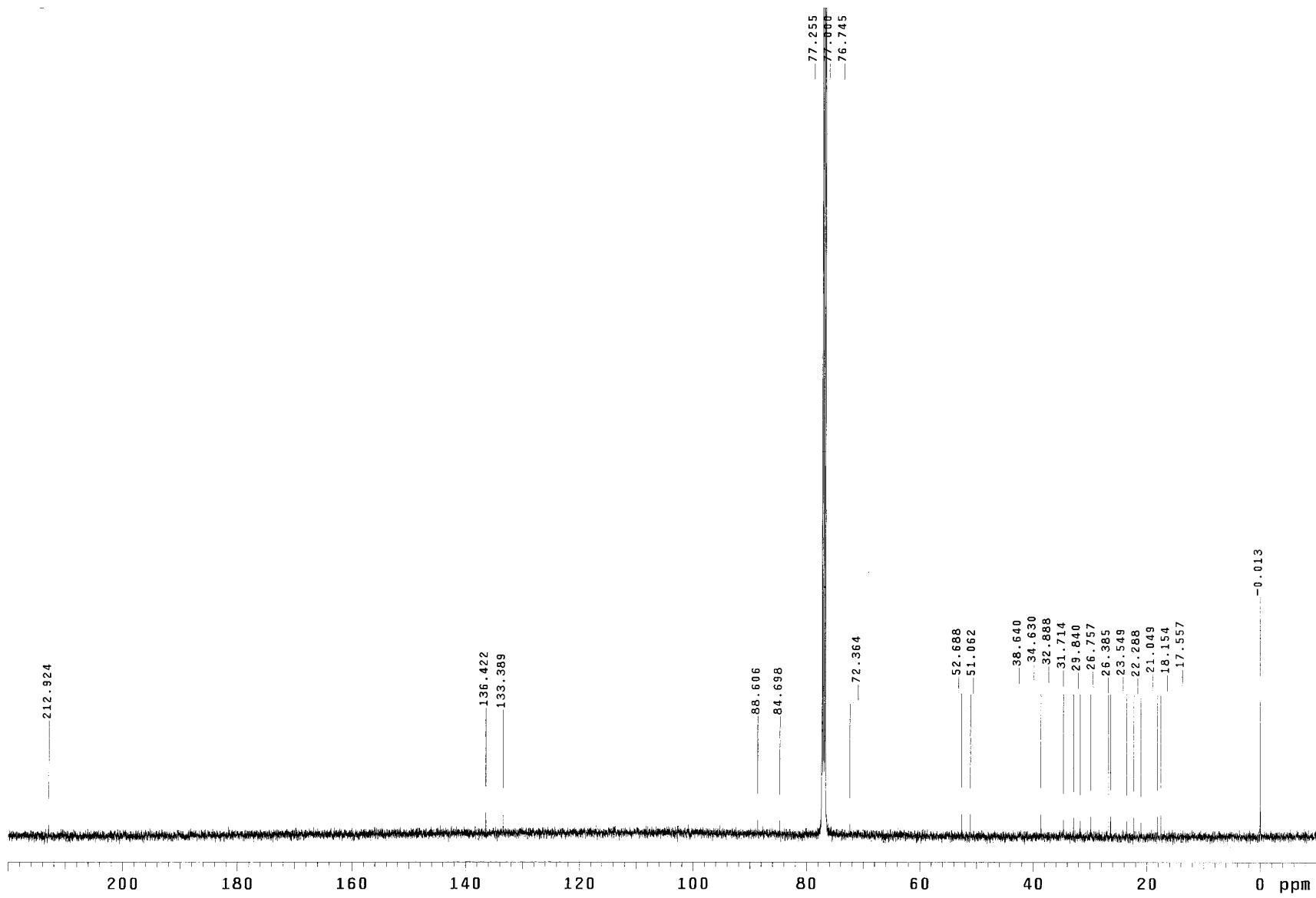
**S1-3.**  $^1\text{H}$  NMR spectrum (400 MHz) of compound **1** in  $\text{C}_5\text{D}_5\text{N}$ .



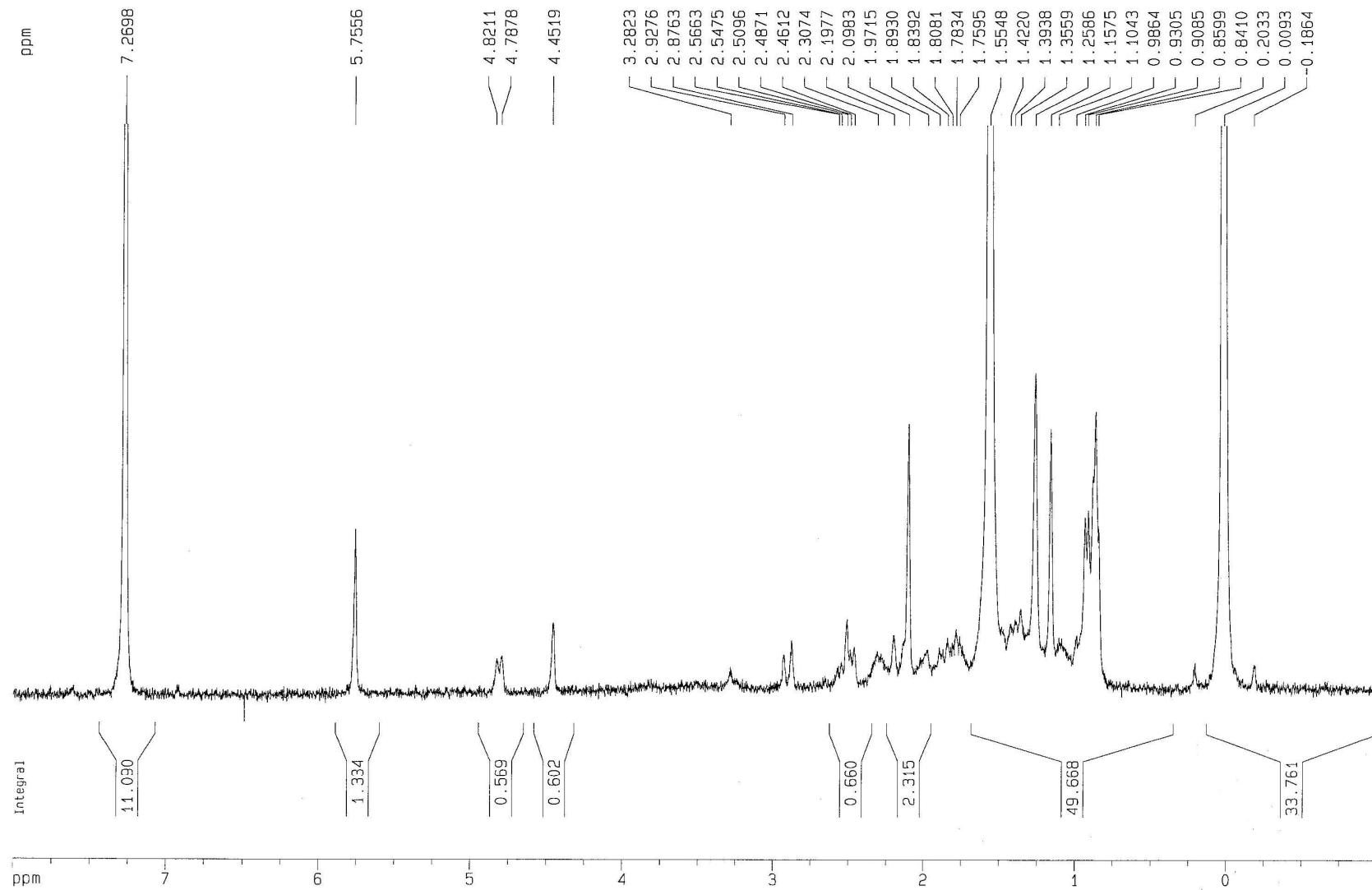
S1-4.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound **1** in  $\text{C}_5\text{D}_5\text{N}$ .



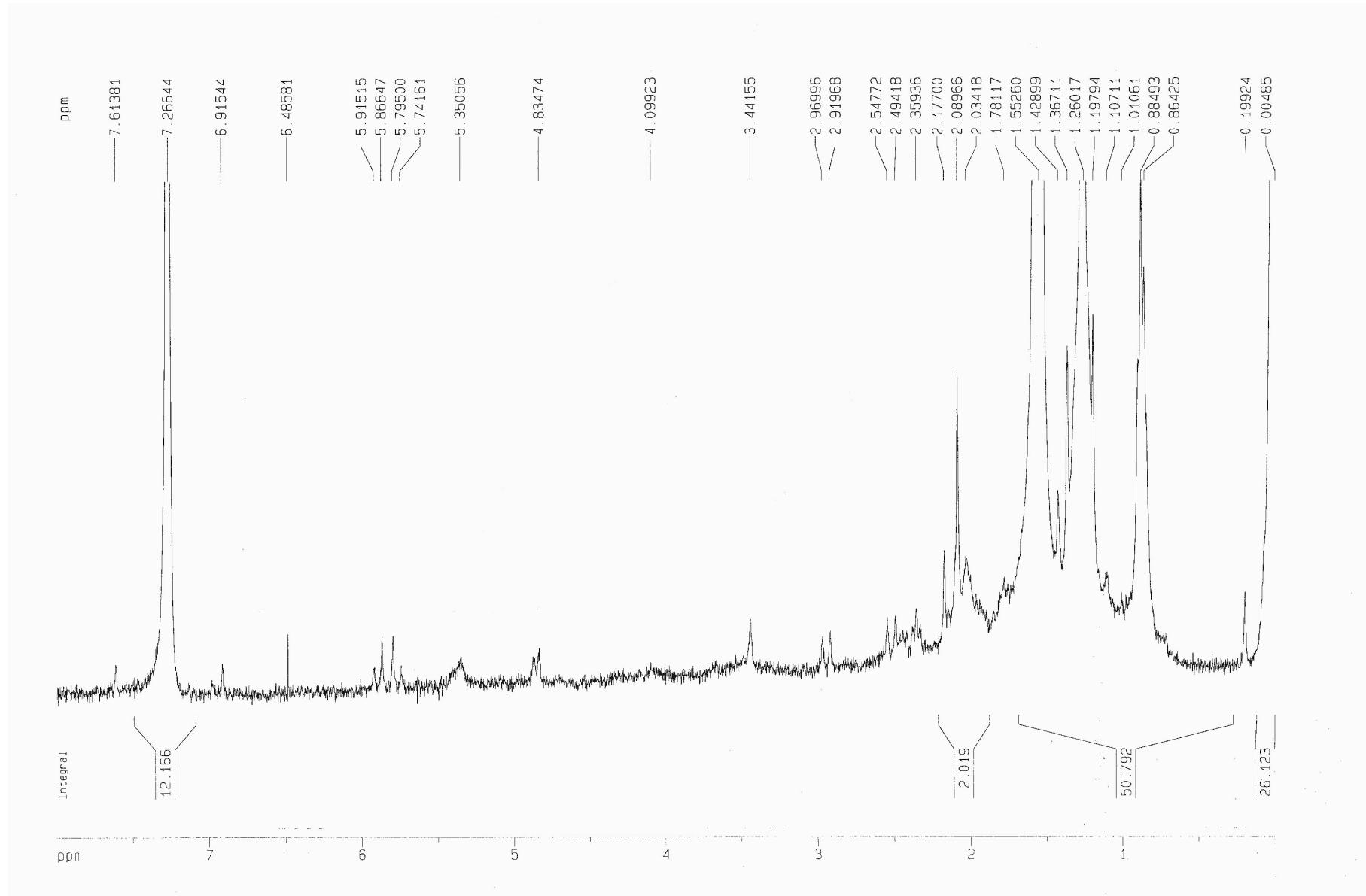
S2-1.  $^1\text{H}$  NMR spectrum (500 MHz) of compound **2** in  $\text{CDCl}_3$ .



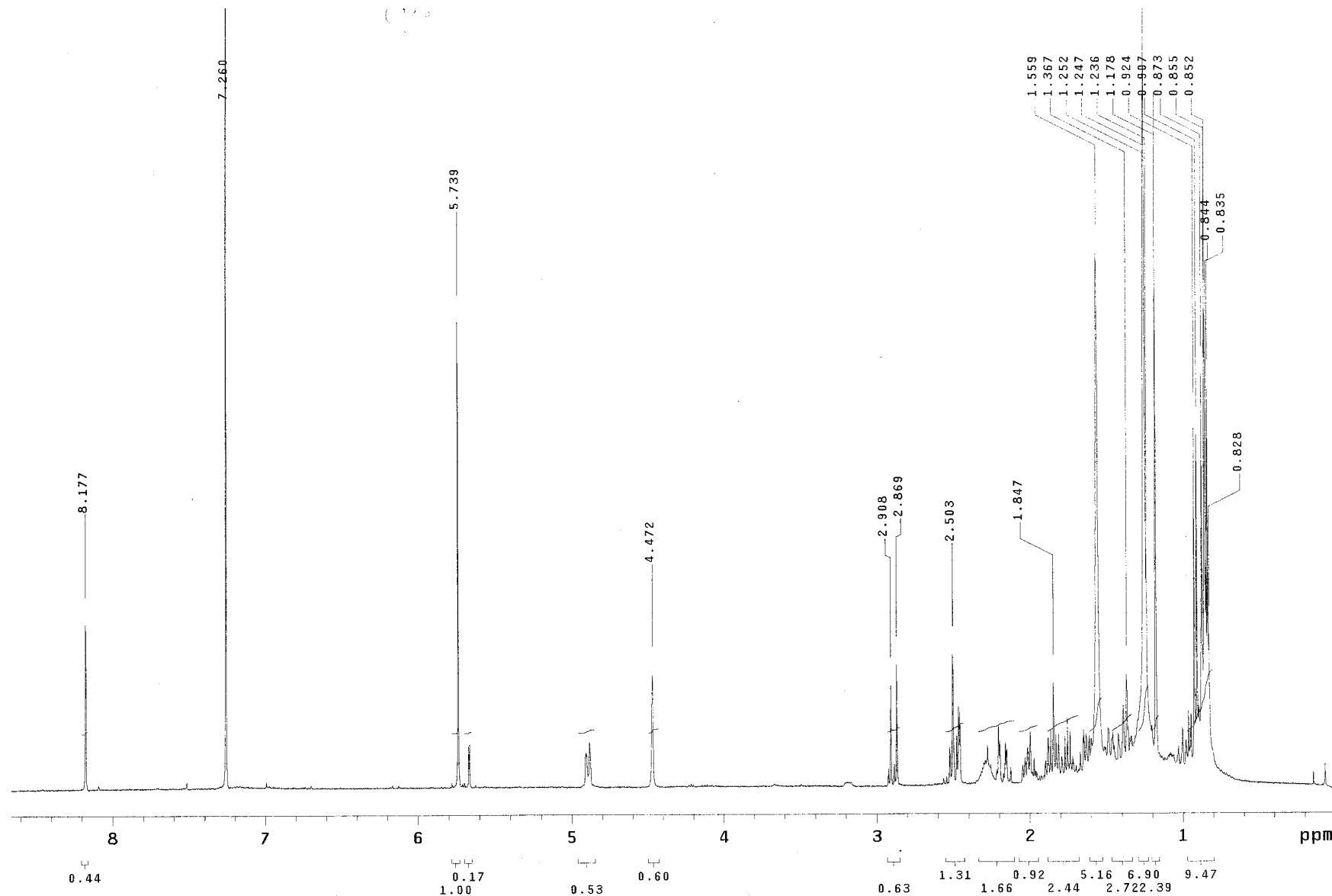
S2-2.  $^{13}\text{C}$  NMR spectrum (500 MHz) of compound 2 in  $\text{CDCl}_3$ .



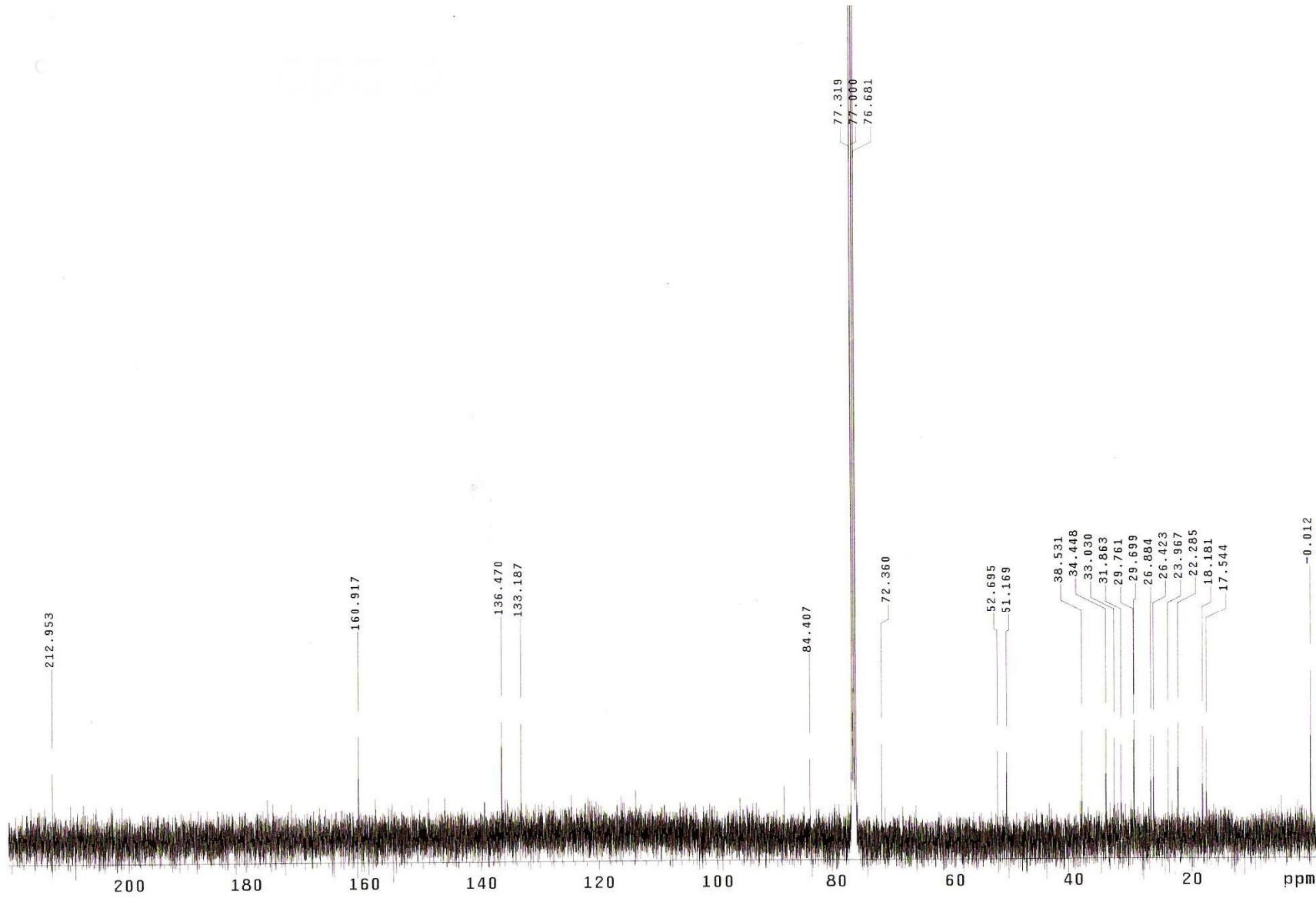
S2-3.  $^1\text{H}$  NMR spectrum (300 MHz) of compound **2** in  $\text{CDCl}_3$ .



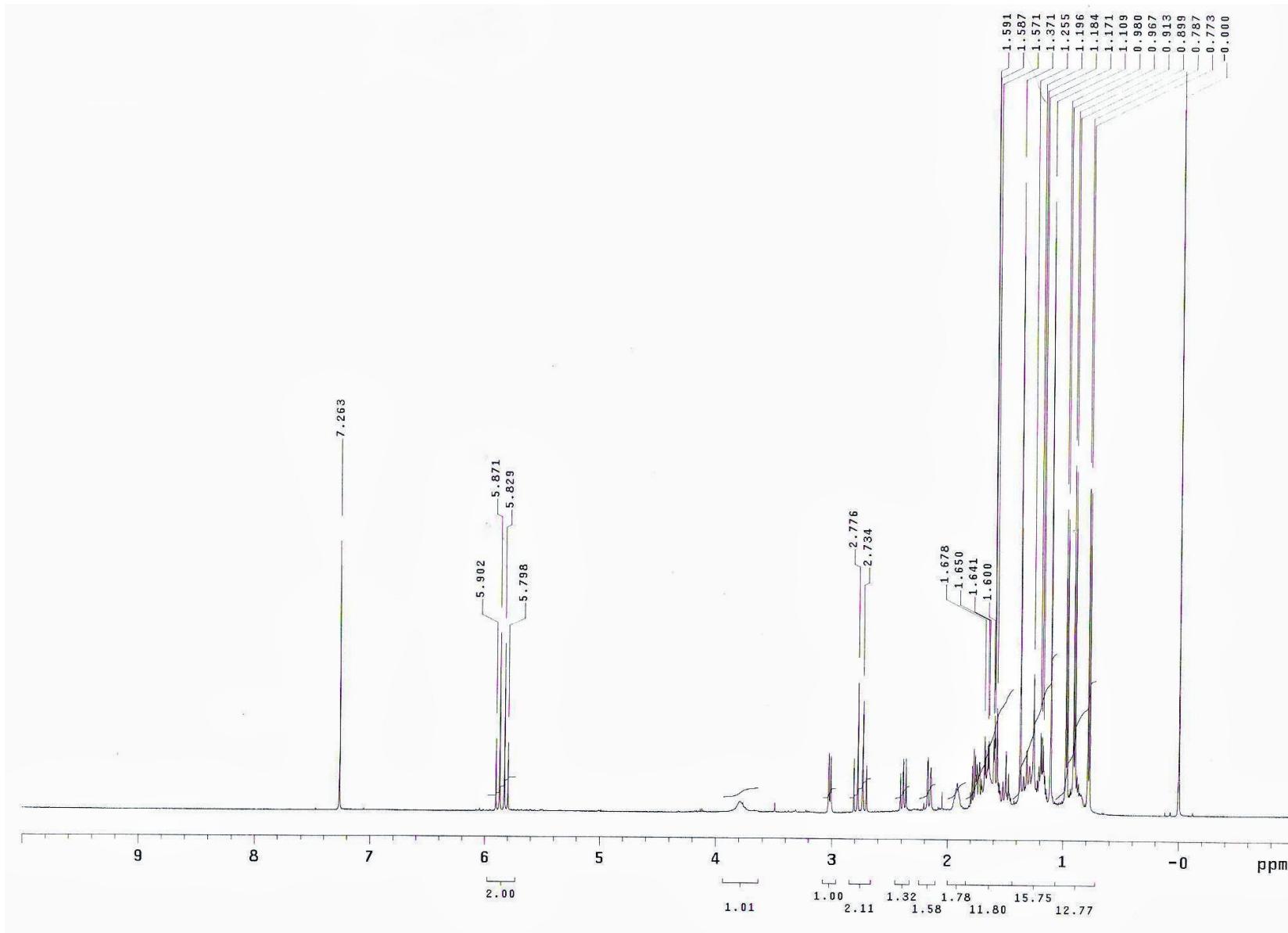
S2-4.  $^1\text{H}$  NMR spectrum (300 MHz) of acetate **1a** in  $\text{CDCl}_3$ .



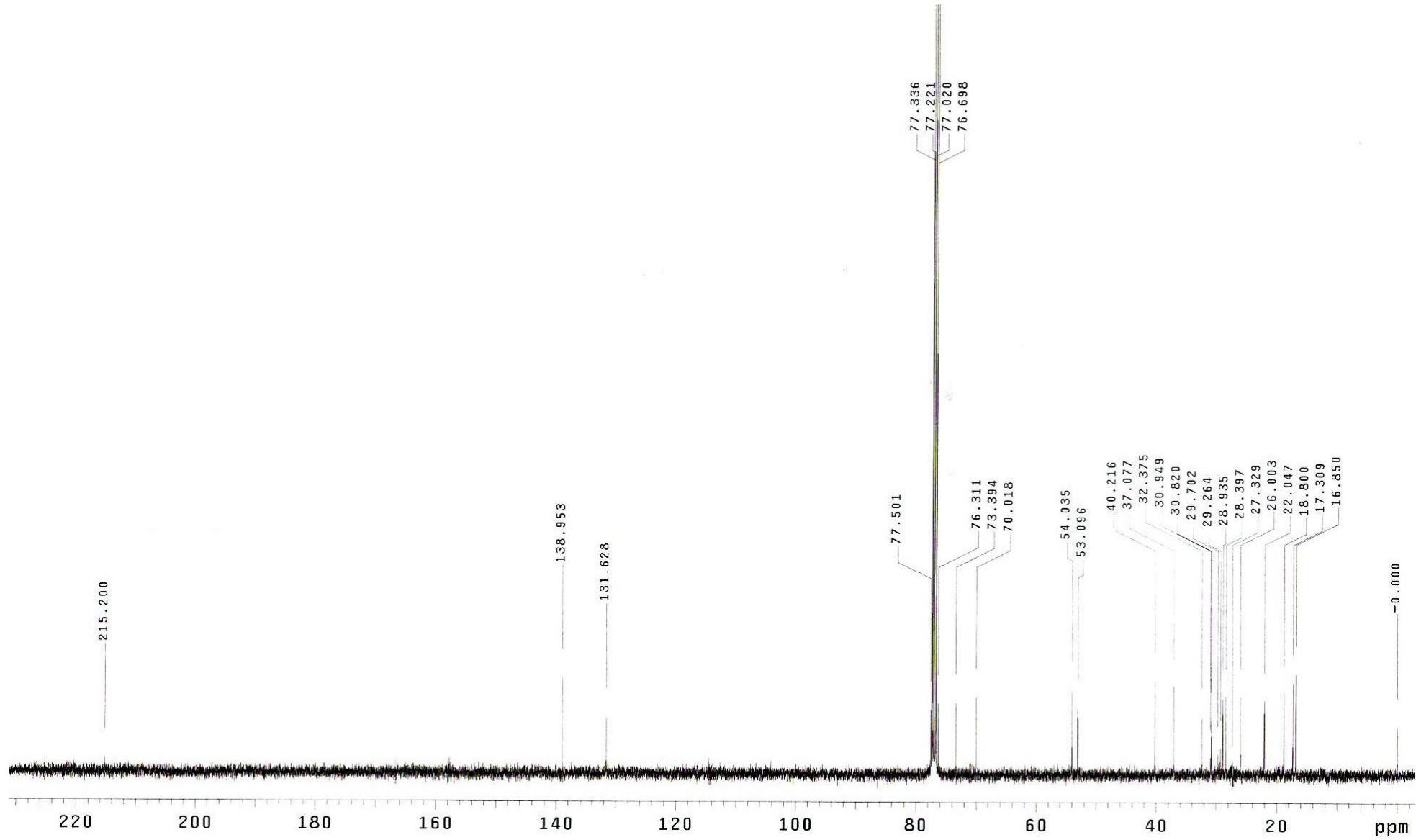
S3-1.  $^1\text{H}$  NMR spectrum (400 MHz) of compound 3 in  $\text{CDCl}_3$ .



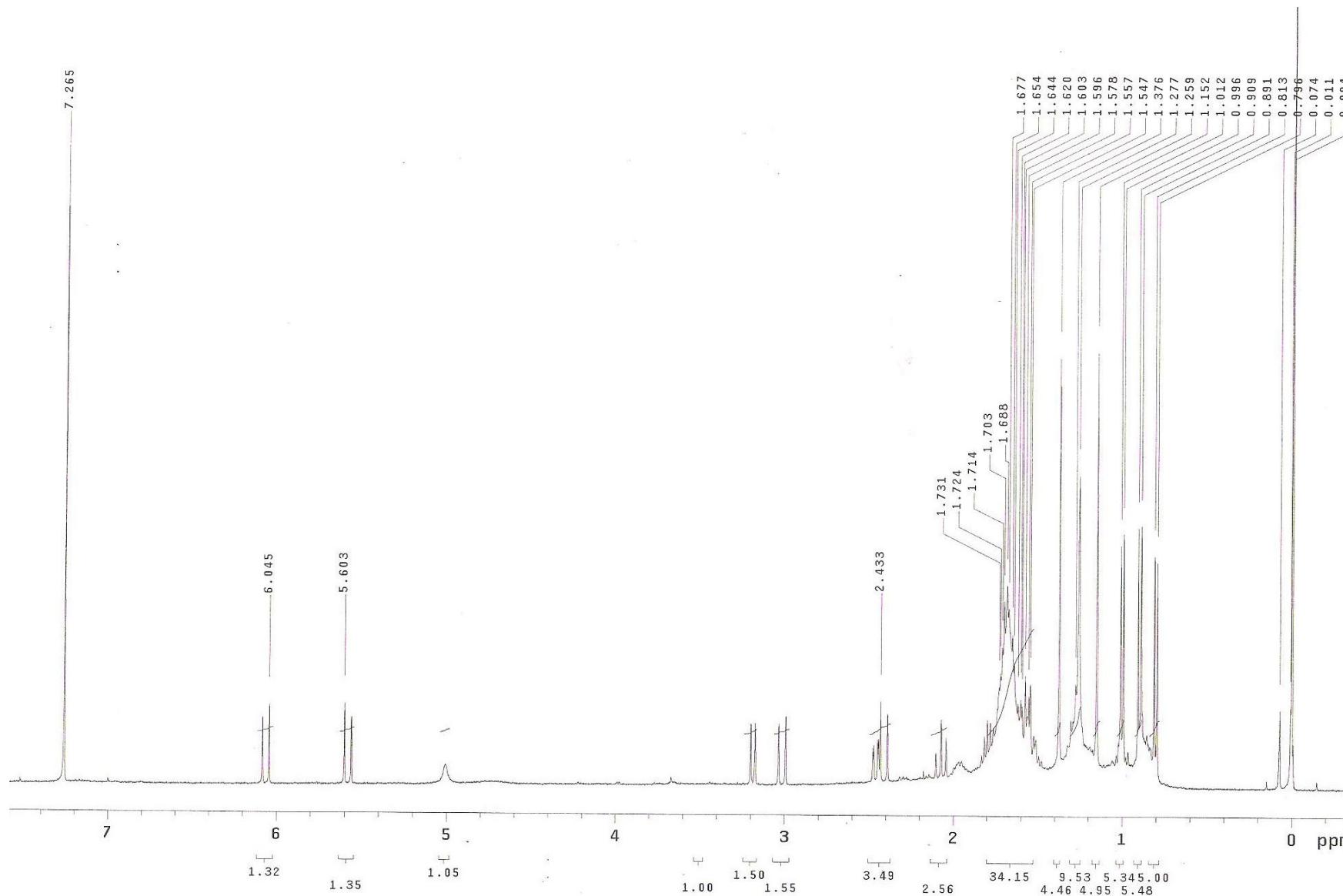
S3-2.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound 3 in  $\text{CDCl}_3$ .



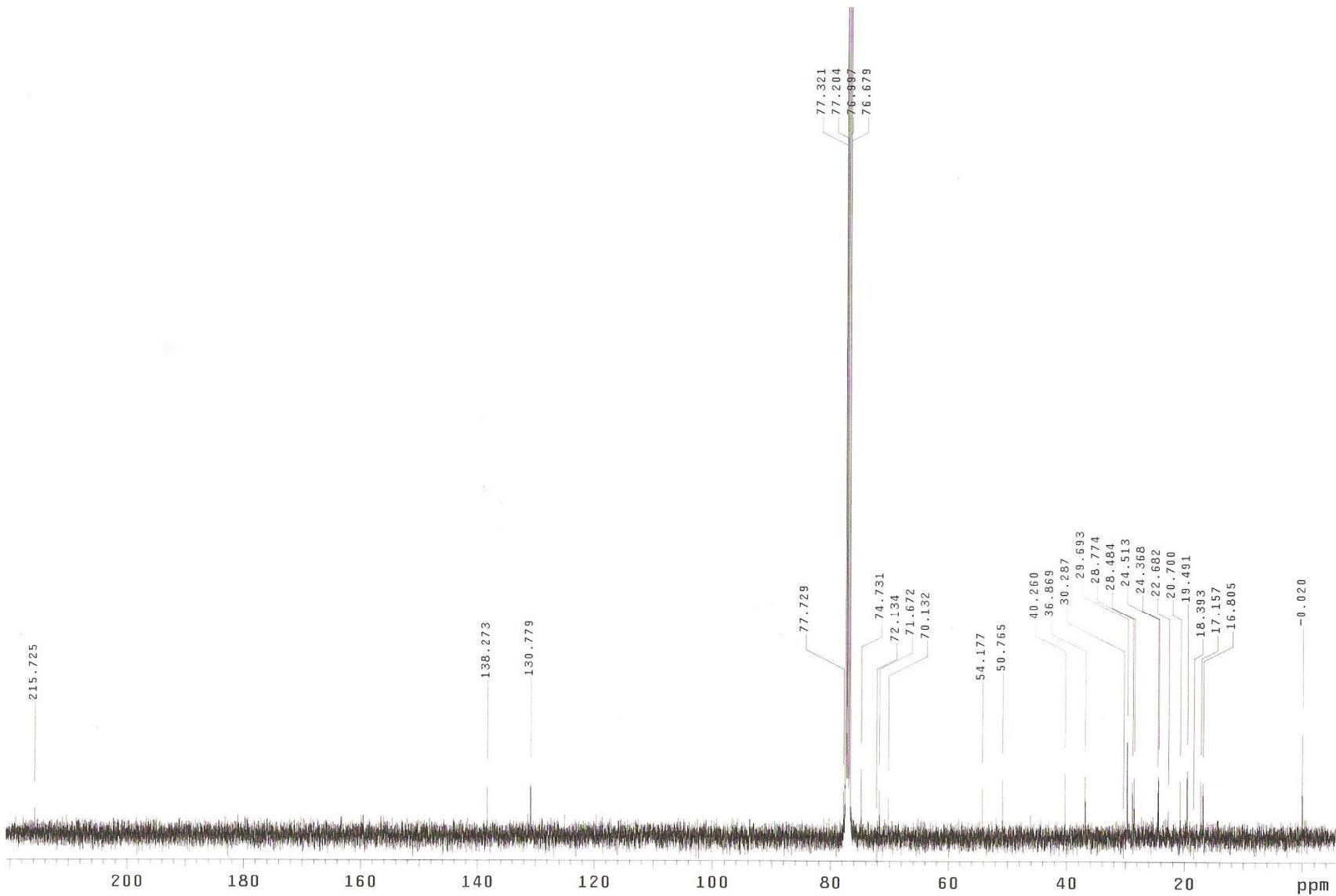
S4-1.  $^1\text{H}$  NMR spectrum (400 MHz) of compound 4 in  $\text{CDCl}_3$ .



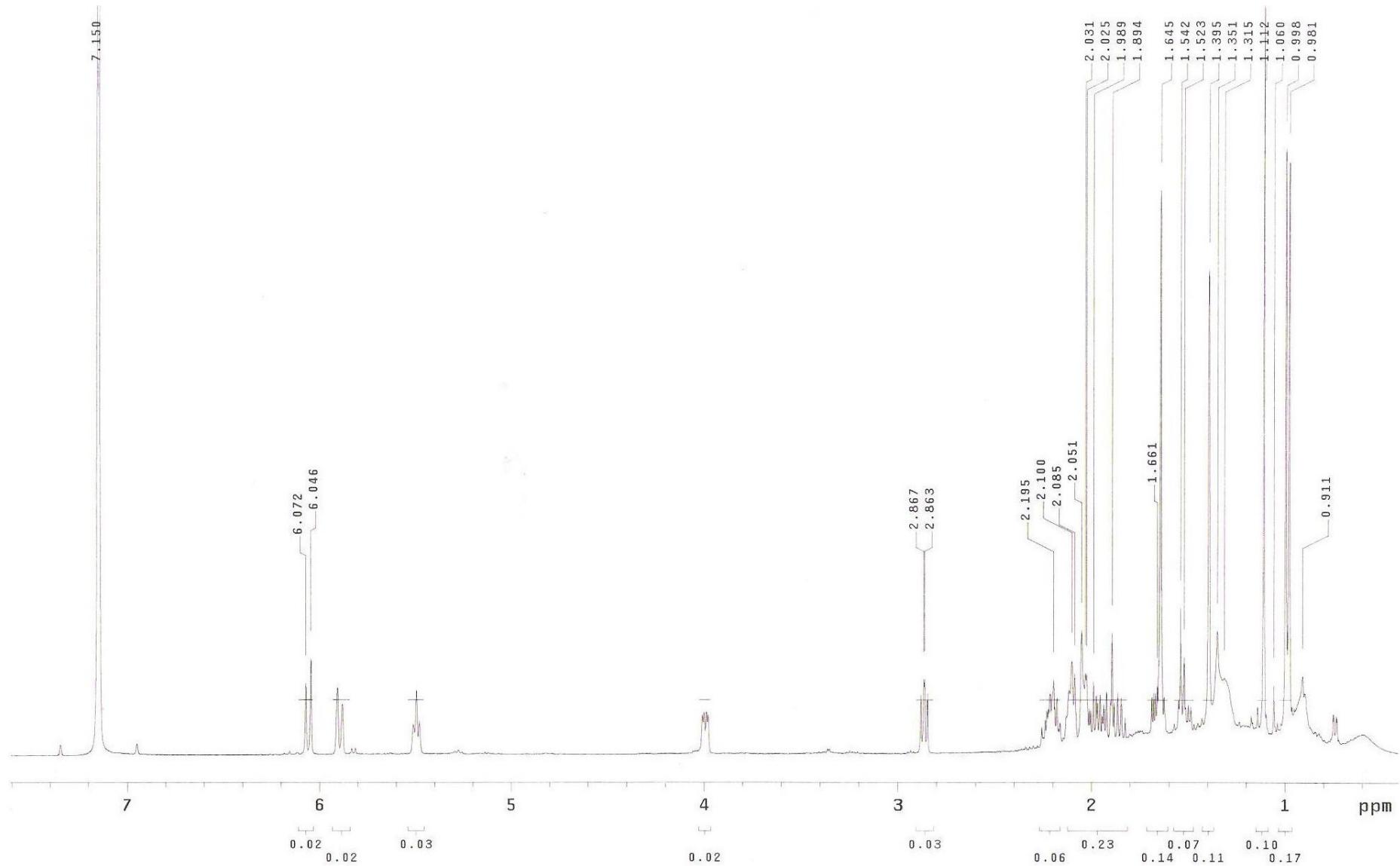
S4-2.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound 4 in  $\text{CDCl}_3$ .



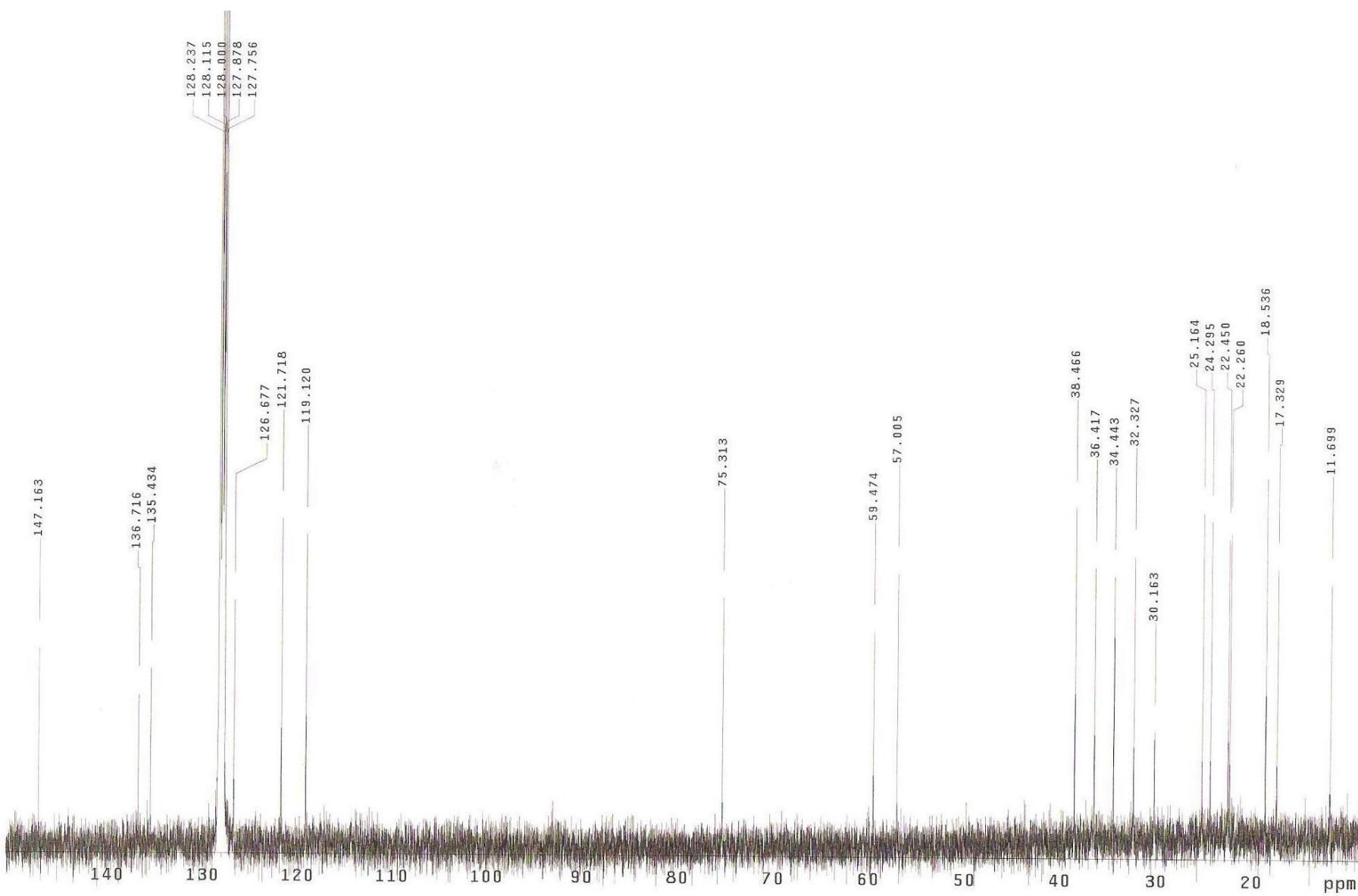
**S5-1.**  $^1\text{H}$  NMR spectrum (400 MHz) of compound 5 in  $\text{CDCl}_3$ .



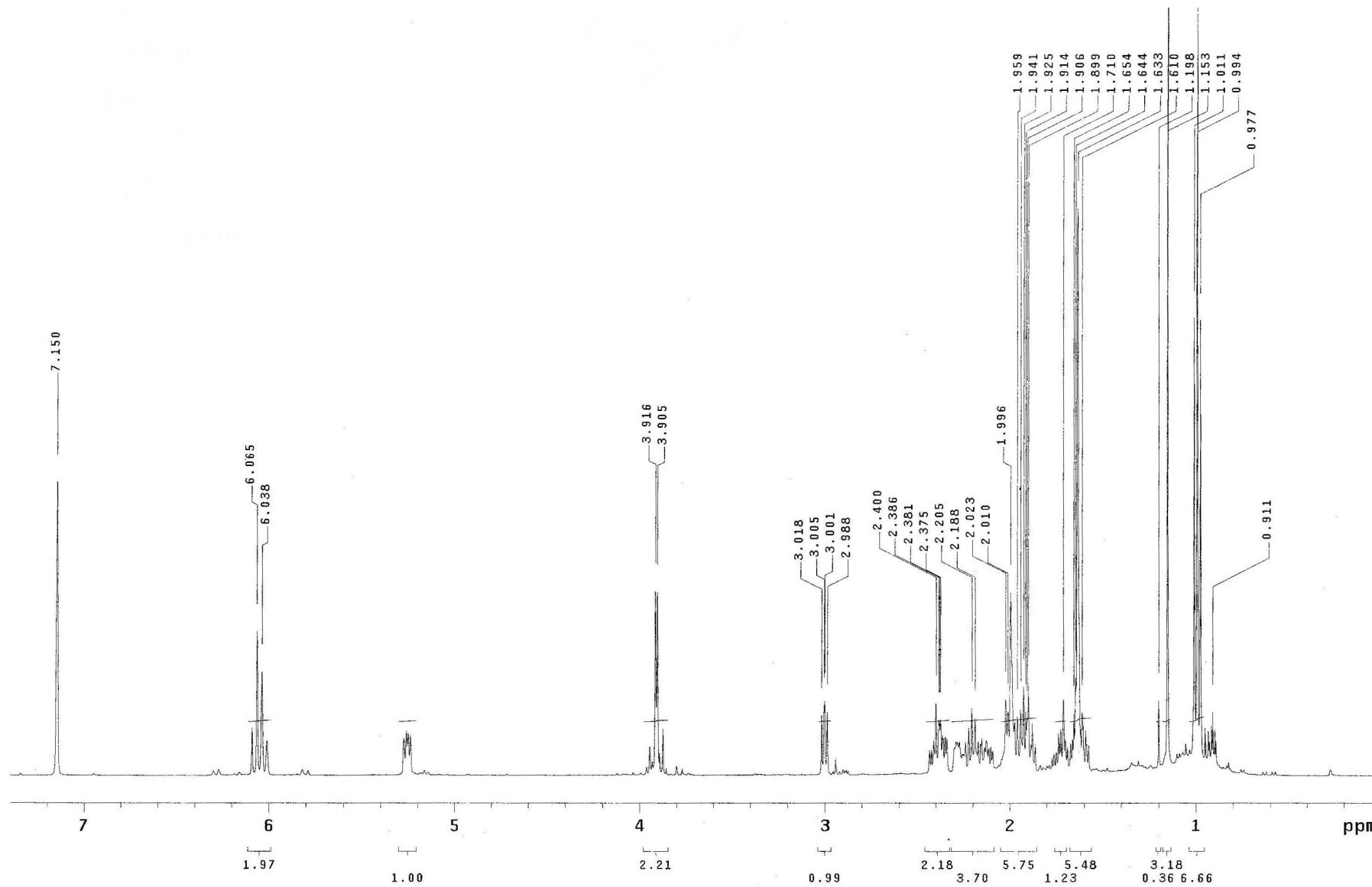
S5-2.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound 5 in  $\text{CDCl}_3$ .



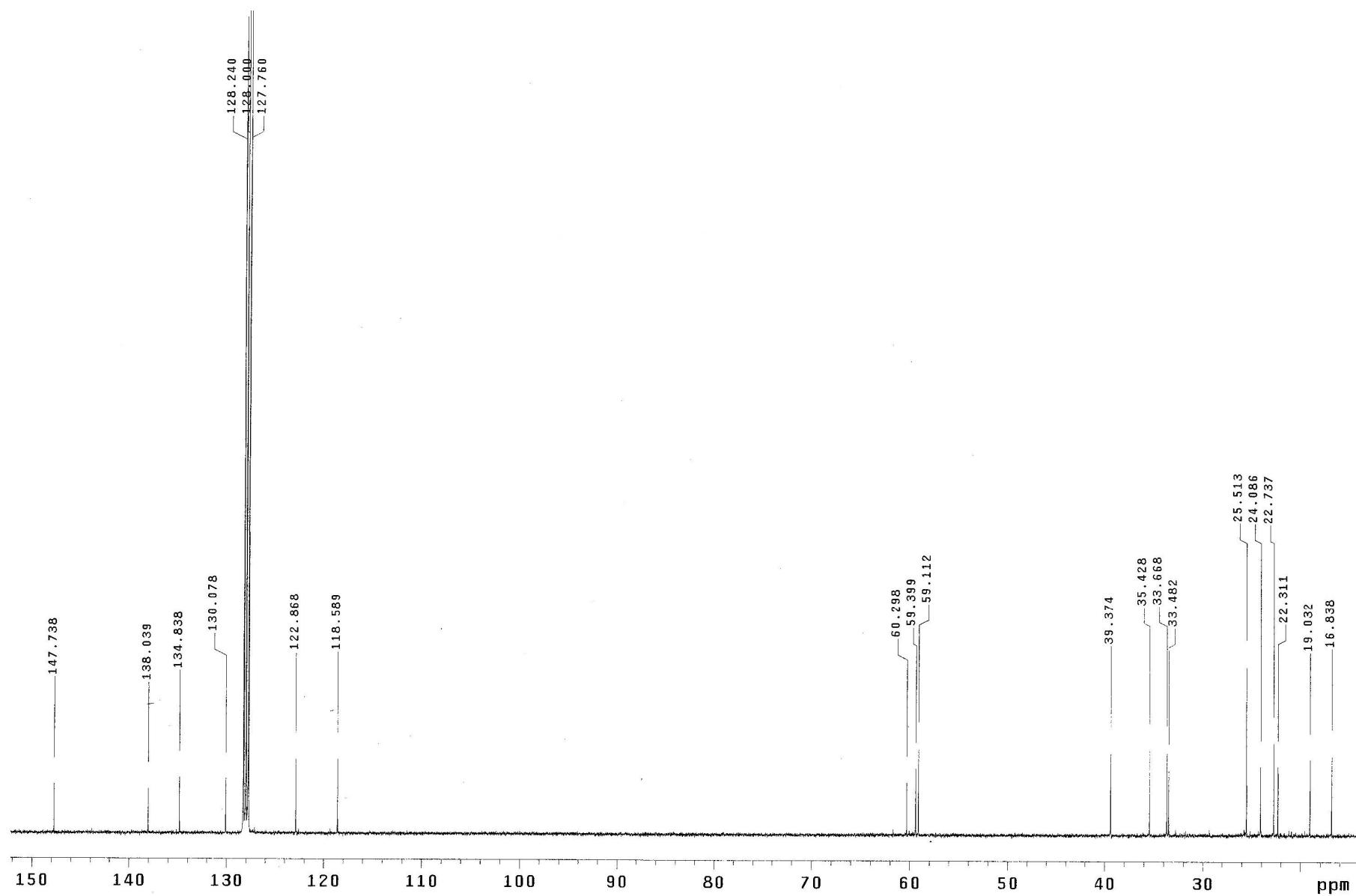
**S6-1.**  $^1\text{H}$  NMR spectrum (400 MHz) of compound **6** in  $\text{C}_6\text{D}_6$ .



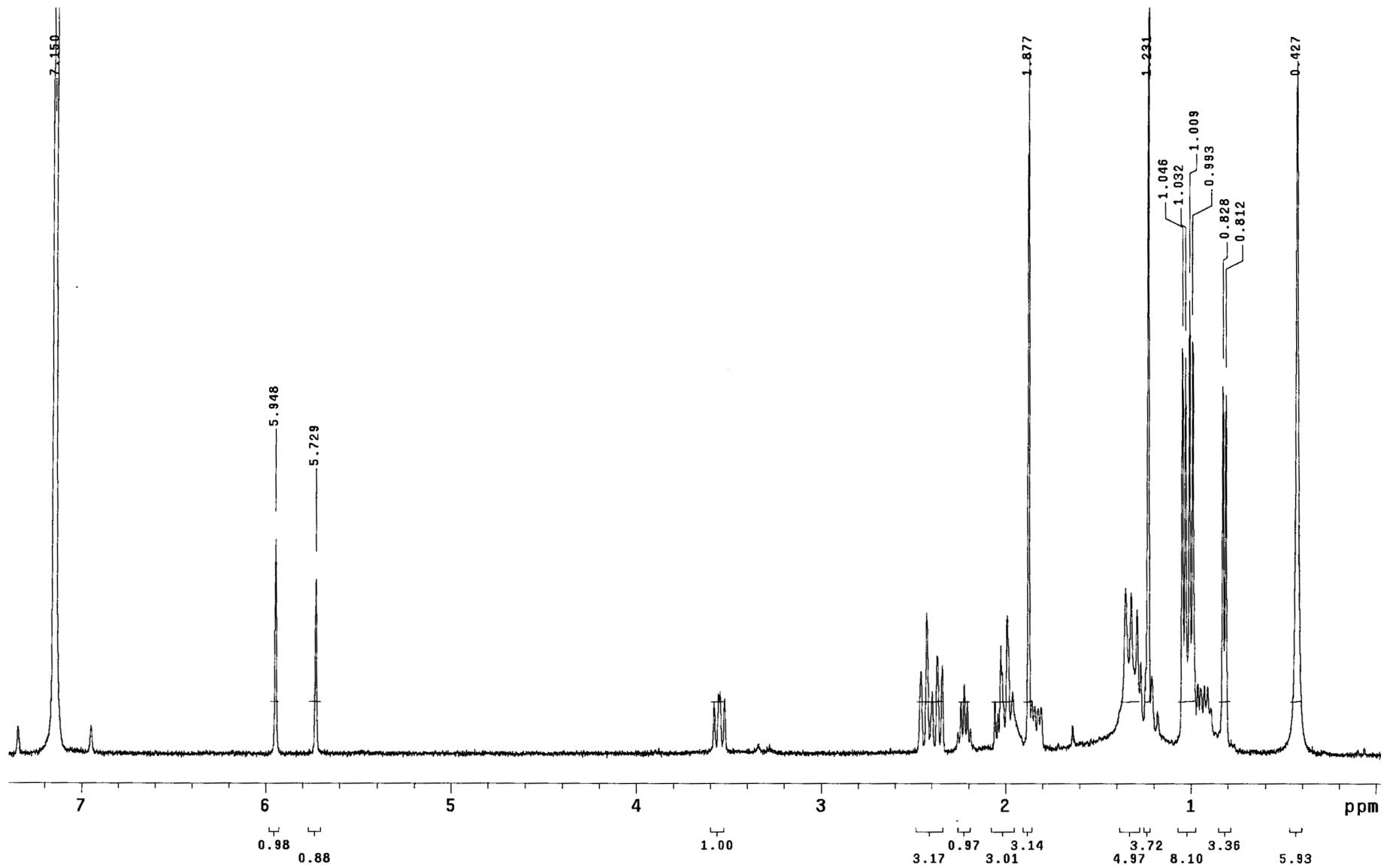
S6-2.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound **6** in  $\text{C}_6\text{D}_6$ .



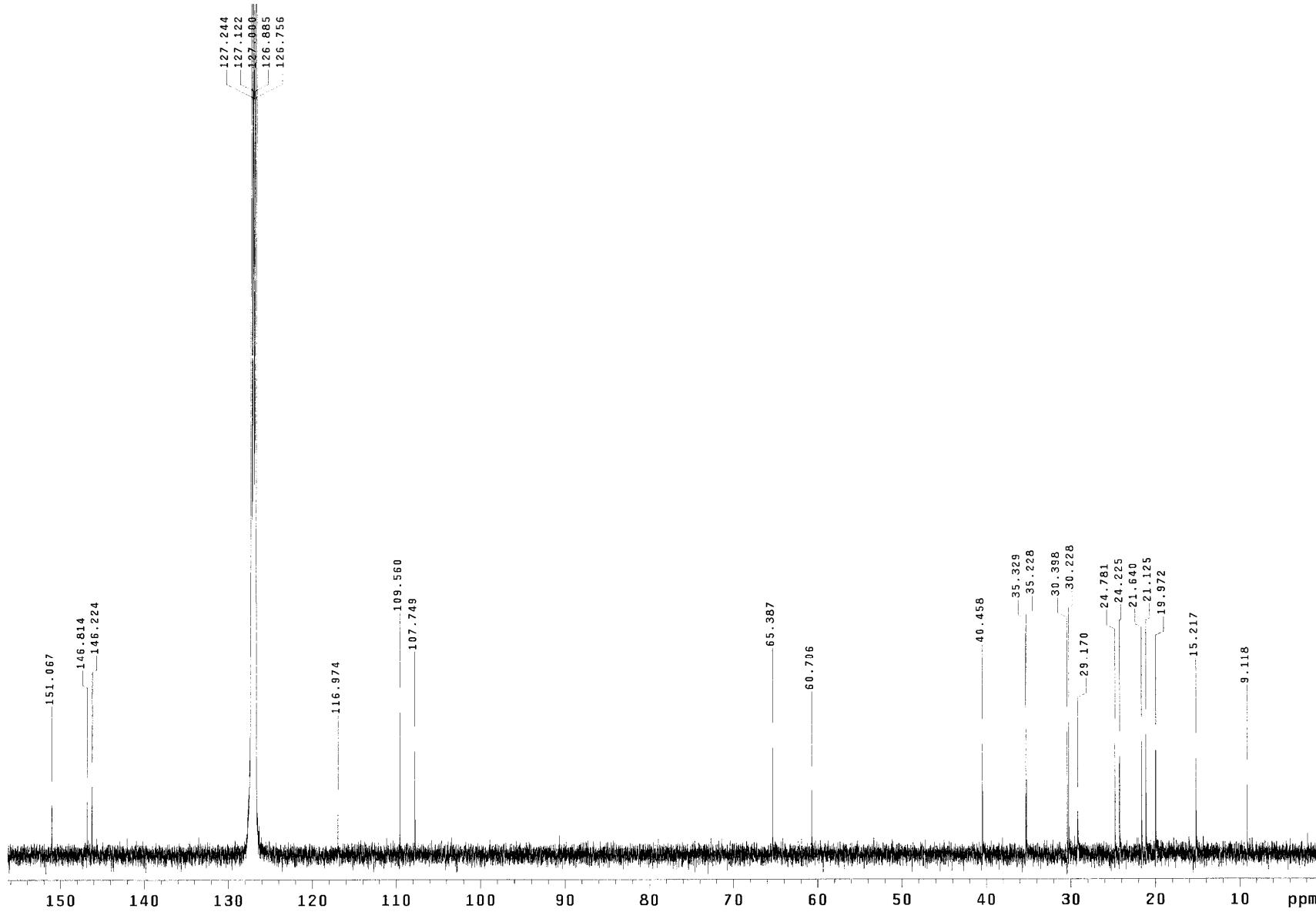
S7-1.  $^1\text{H}$  NMR spectrum (400 MHz) of compound 7 in  $\text{C}_6\text{D}_6$ .



S7-2.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound 7 in  $\text{C}_6\text{D}_6$ .



S8-1.  $^1\text{H}$  NMR spectrum (400 MHz) of compound **8** in  $\text{C}_6\text{D}_6$ .



S8-2.  $^{13}\text{C}$  NMR spectrum (400 MHz) of compound **8** in  $\text{C}_6\text{D}_6$ .