

# 支持信息

## 蒟子的化学成分研究

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\*通讯作者 Tel: 0871-65223318; E-mail: 2758502919@ qq.com; wangyuehu@mail.kib.ac.cn

**Figure S27.** HSQC spectrum of **4**.

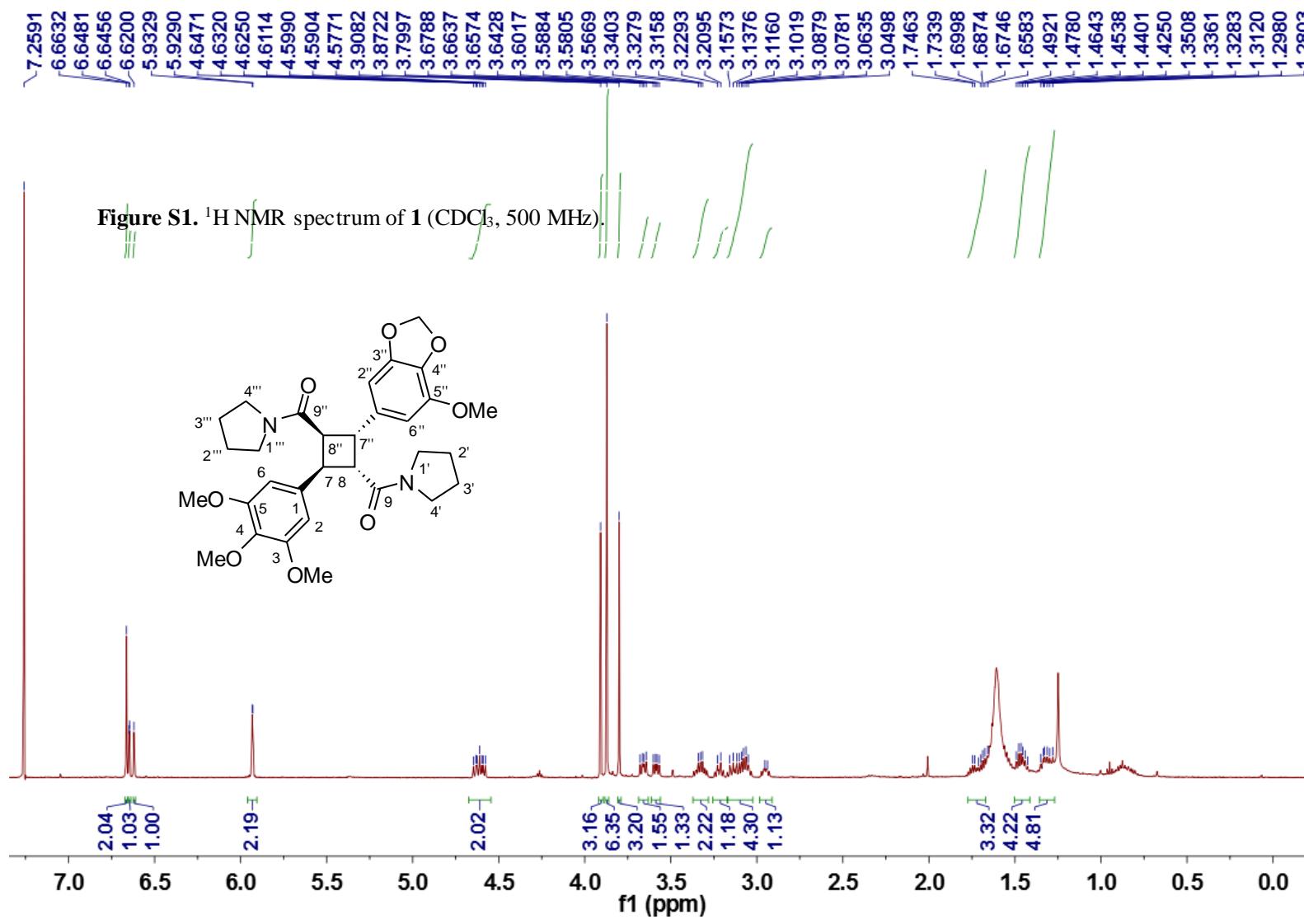
**Figure S28.**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of **4**.

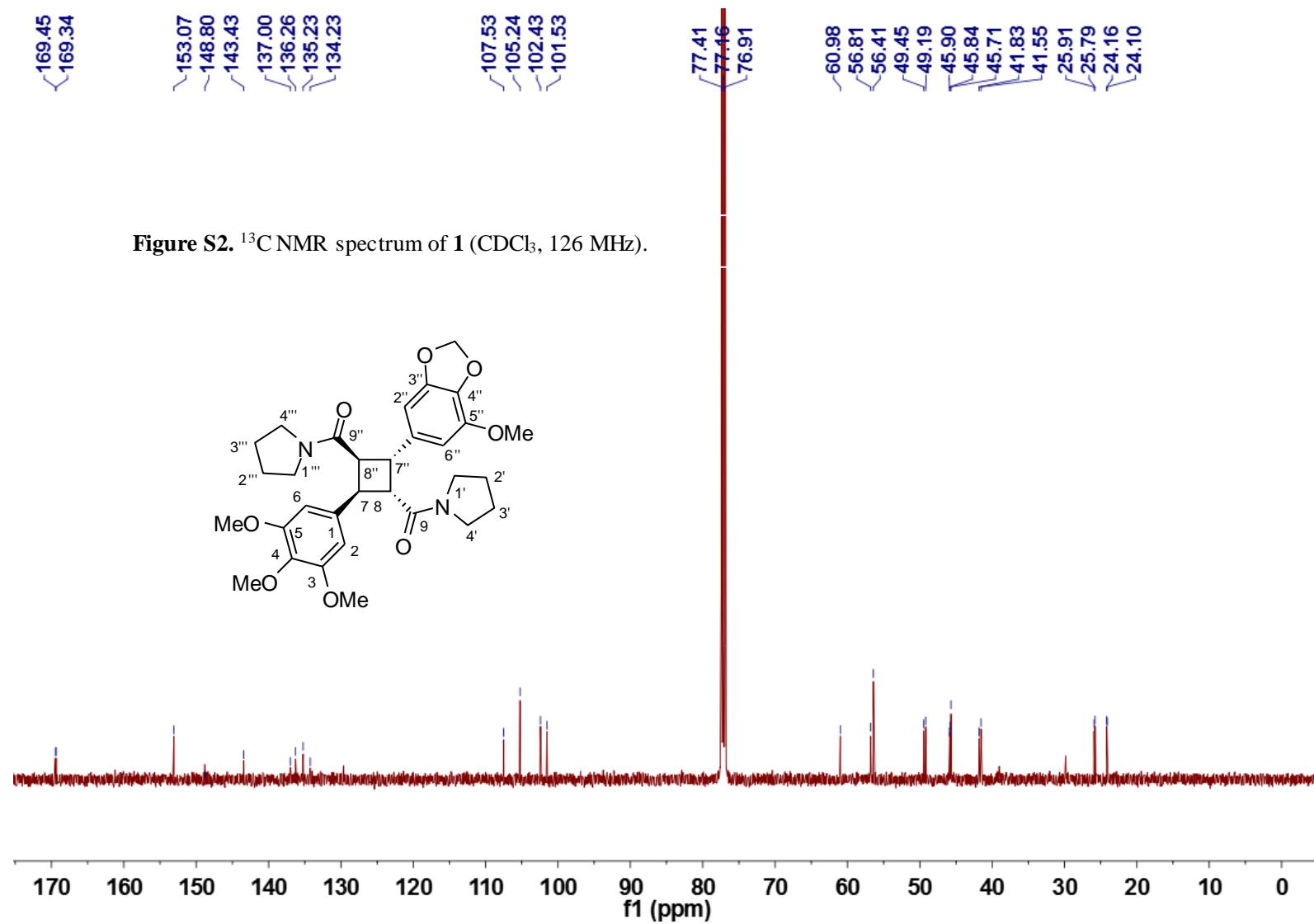
**Figure S29.** HMBC spectrum of **4**.

**Figure S30.** ROESY spectrum of **4**.

**Figure S31.** EI-MS spectrum of **4**.

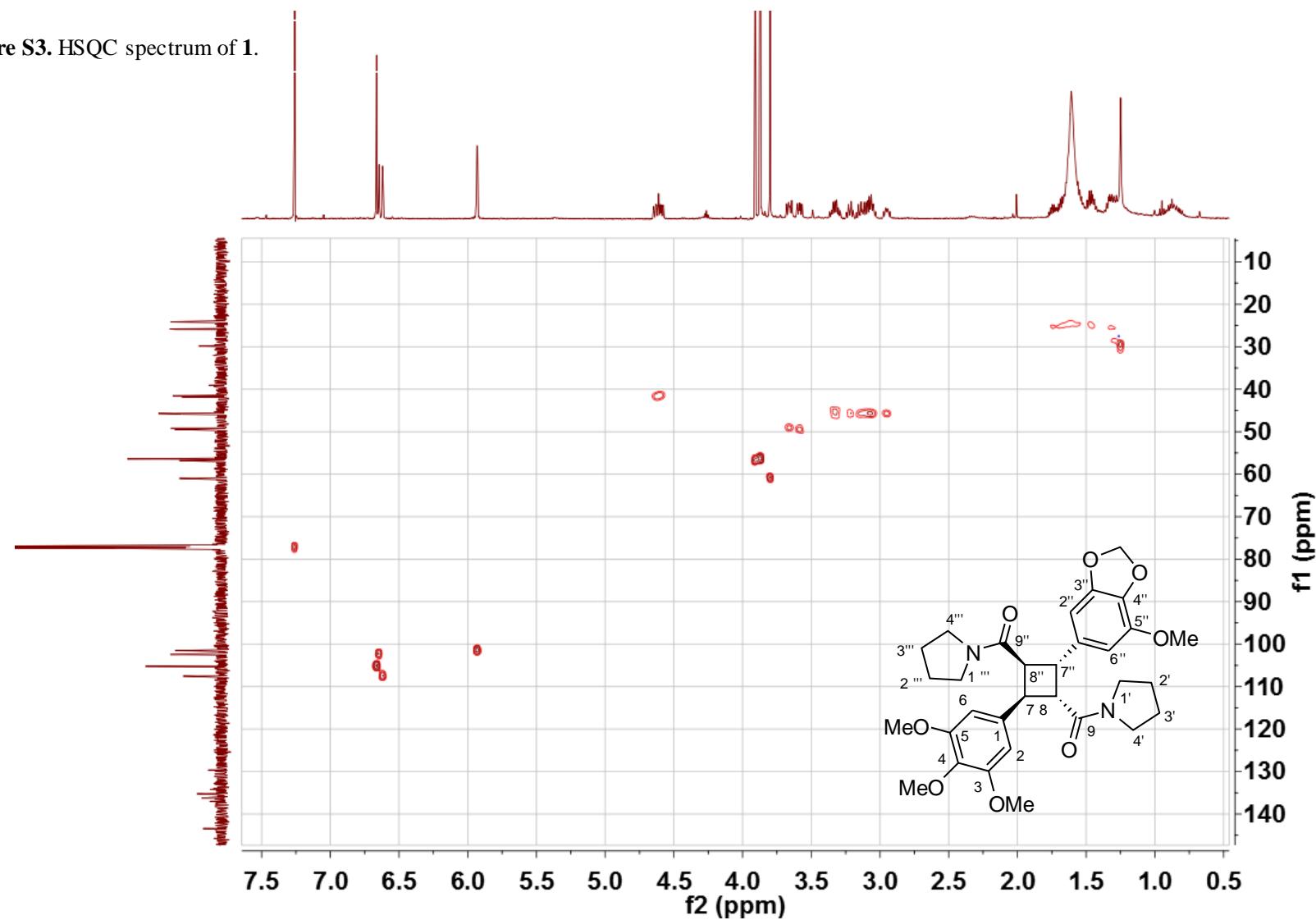
**Figure S32.** HR-EI-MS spectrum of **4**.



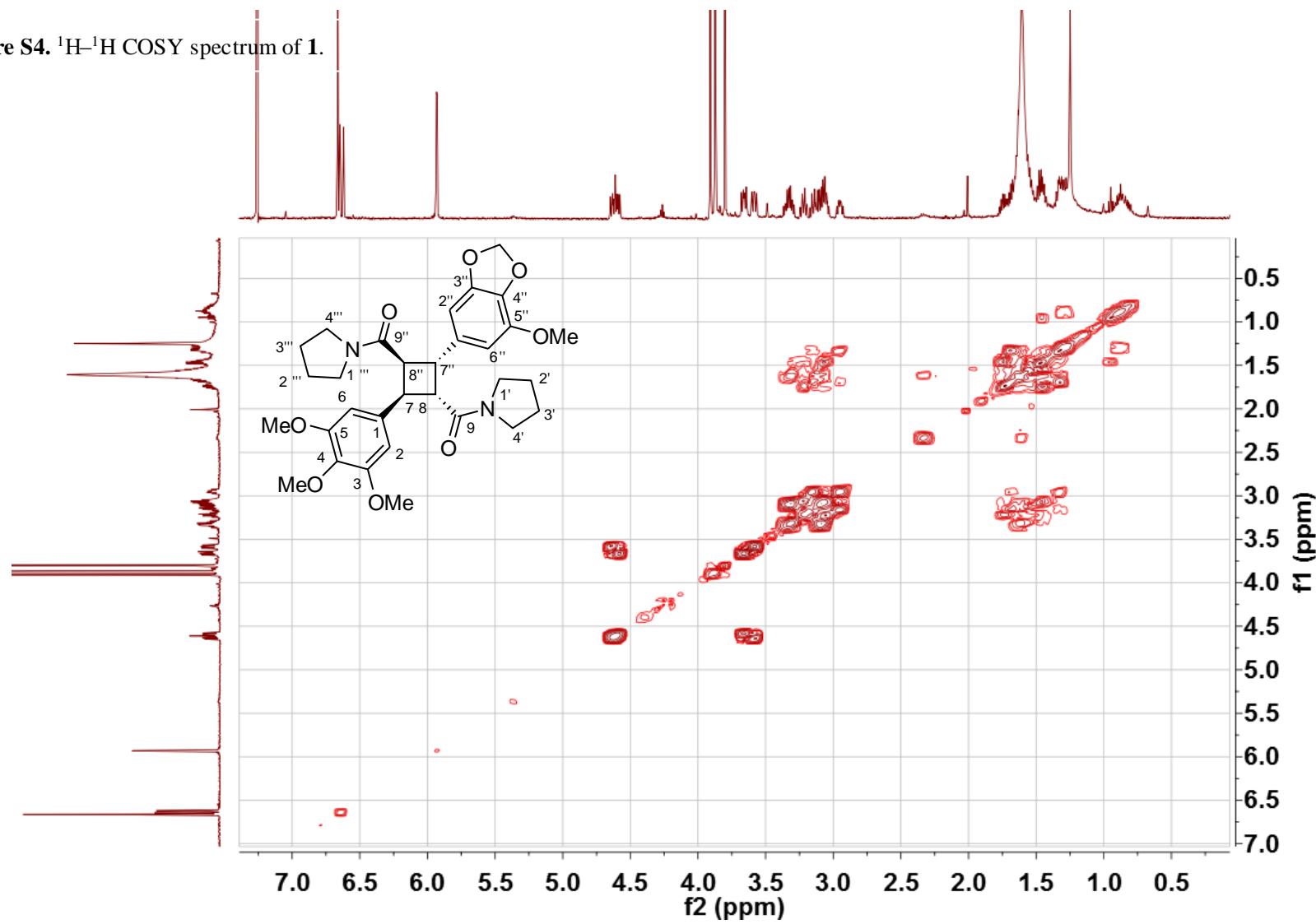


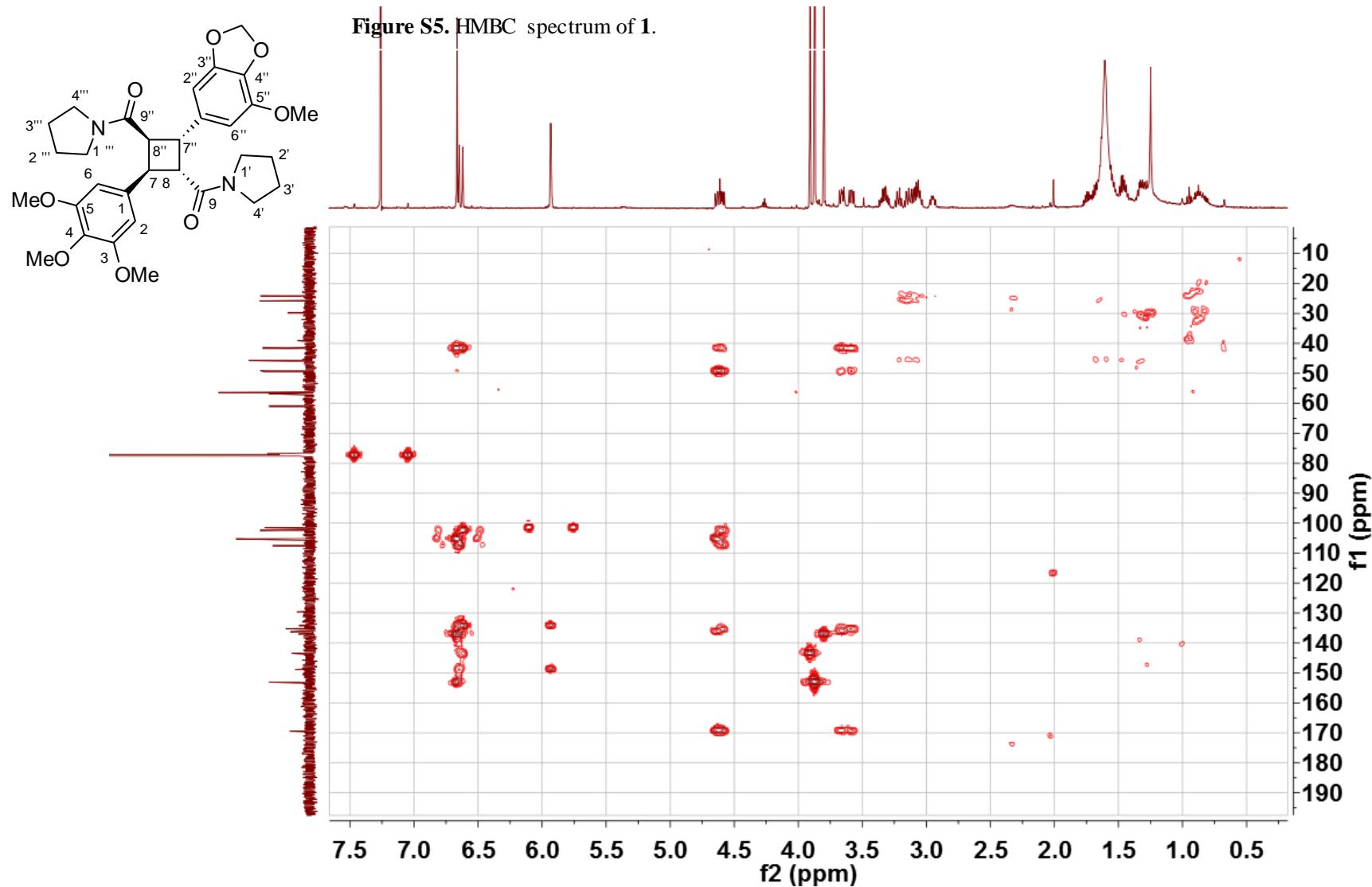
**Figure S2.**  $^{13}\text{C}$  NMR spectrum of **1** ( $\text{CDCl}_3$ , 126 MHz).

**Figure S3.** HSQC spectrum of **1**.



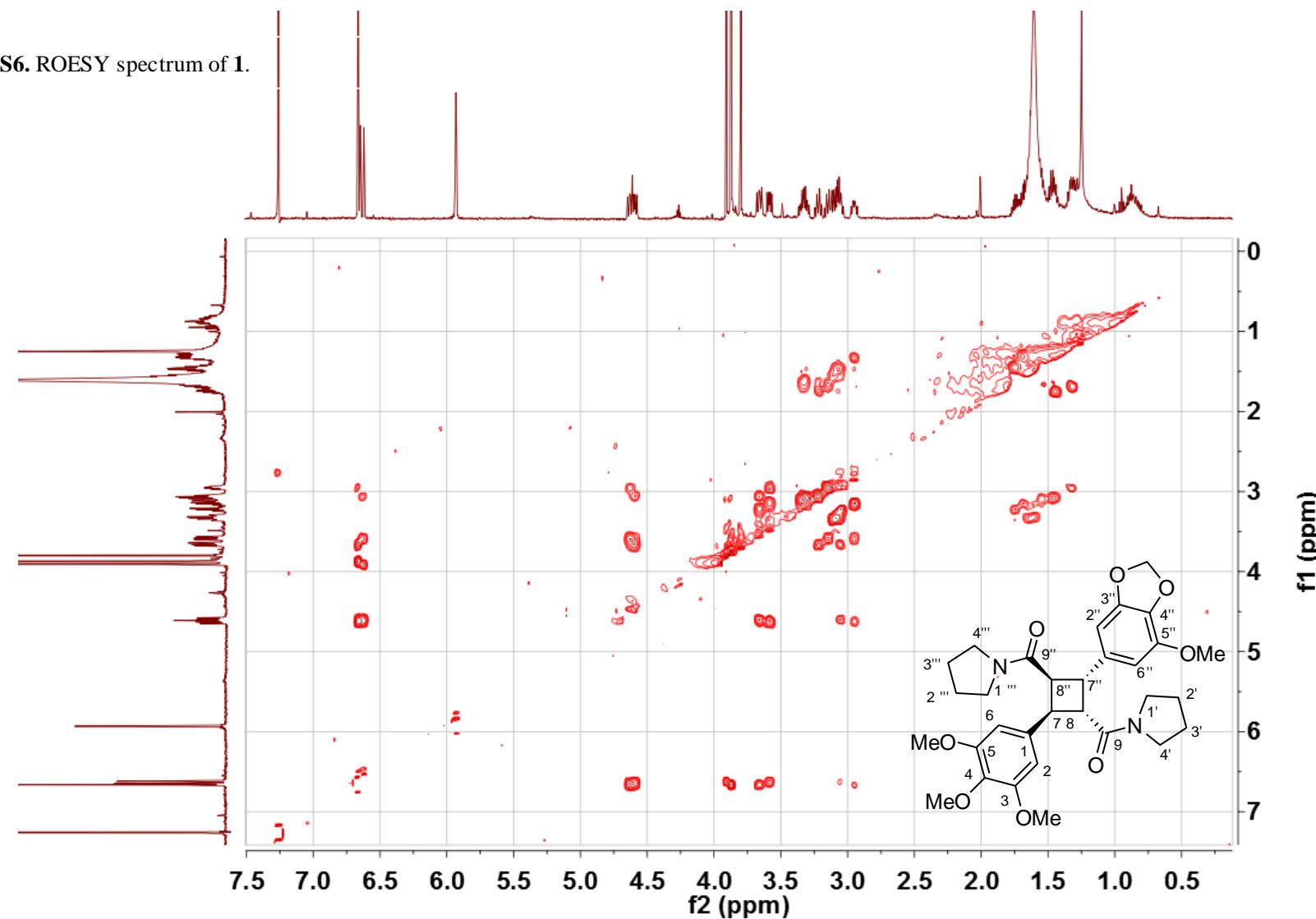
**Figure S4.**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of **1**.

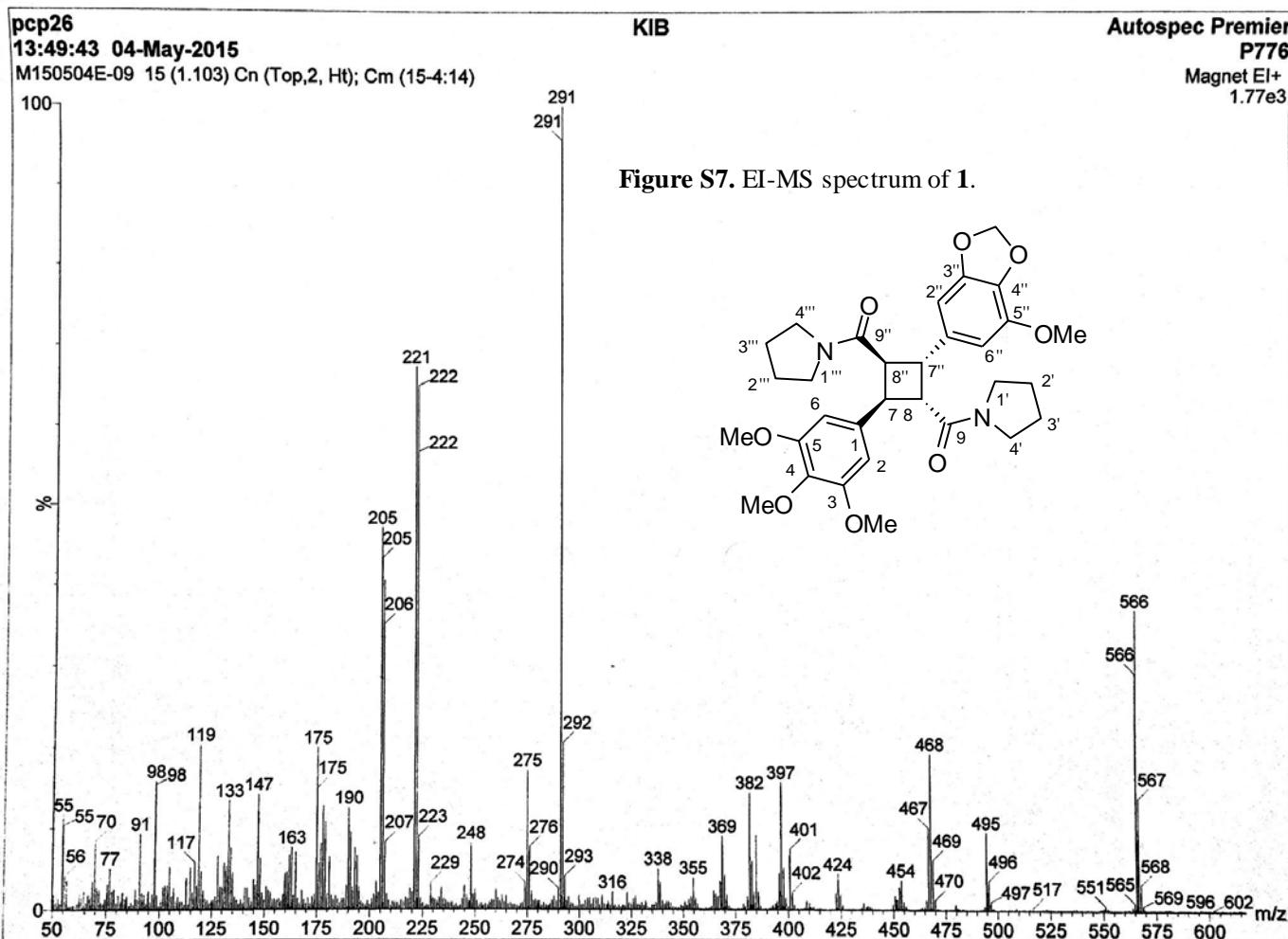


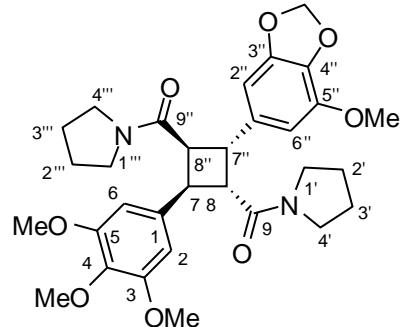


**Figure S5.** HMBC spectrum of **1**.

**Figure S6.** ROESY spectrum of **1**.







## Elemental Composition Report

### Single Mass Analysis

Tolerance = 10.0 PPM / DBE: min = -10.0, max = 120.0  
Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions

21 formula(e) evaluated with 1 results within limits (up to 51 closest results for each mass)  
Elements Used:

C: 0-200 H: 0-400 N: 2-2 O: 7-9

pcp26

16:28:30 29-Apr-2015

Voltage EI+

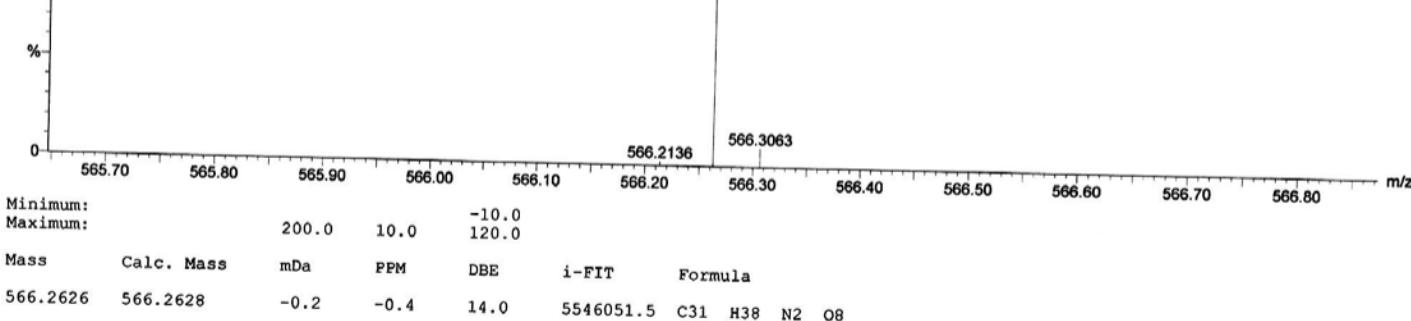
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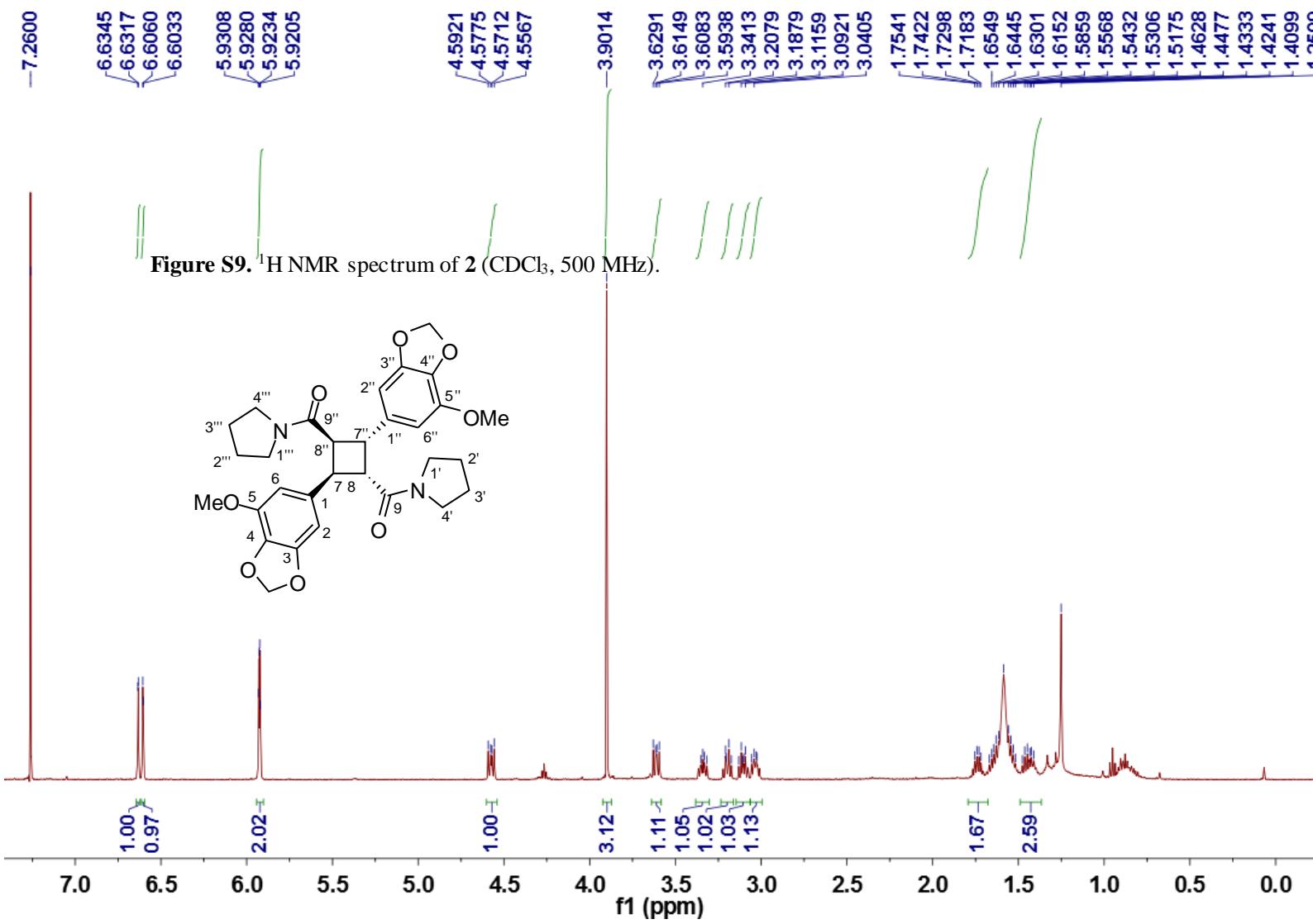
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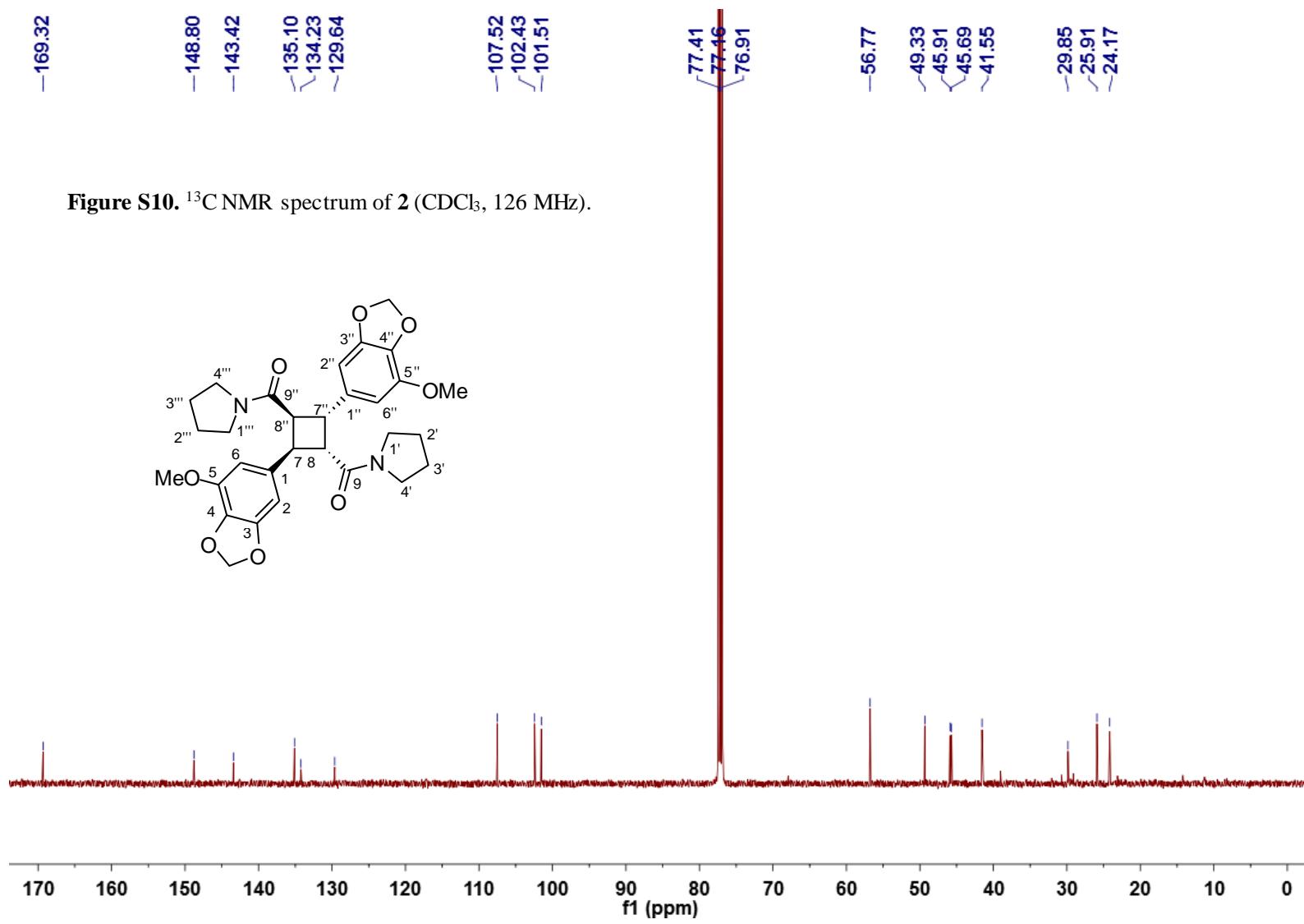
Autospec Premier  
P776  
64.7



**Figure S8.** HR-EI-MS spectrum of **1**.

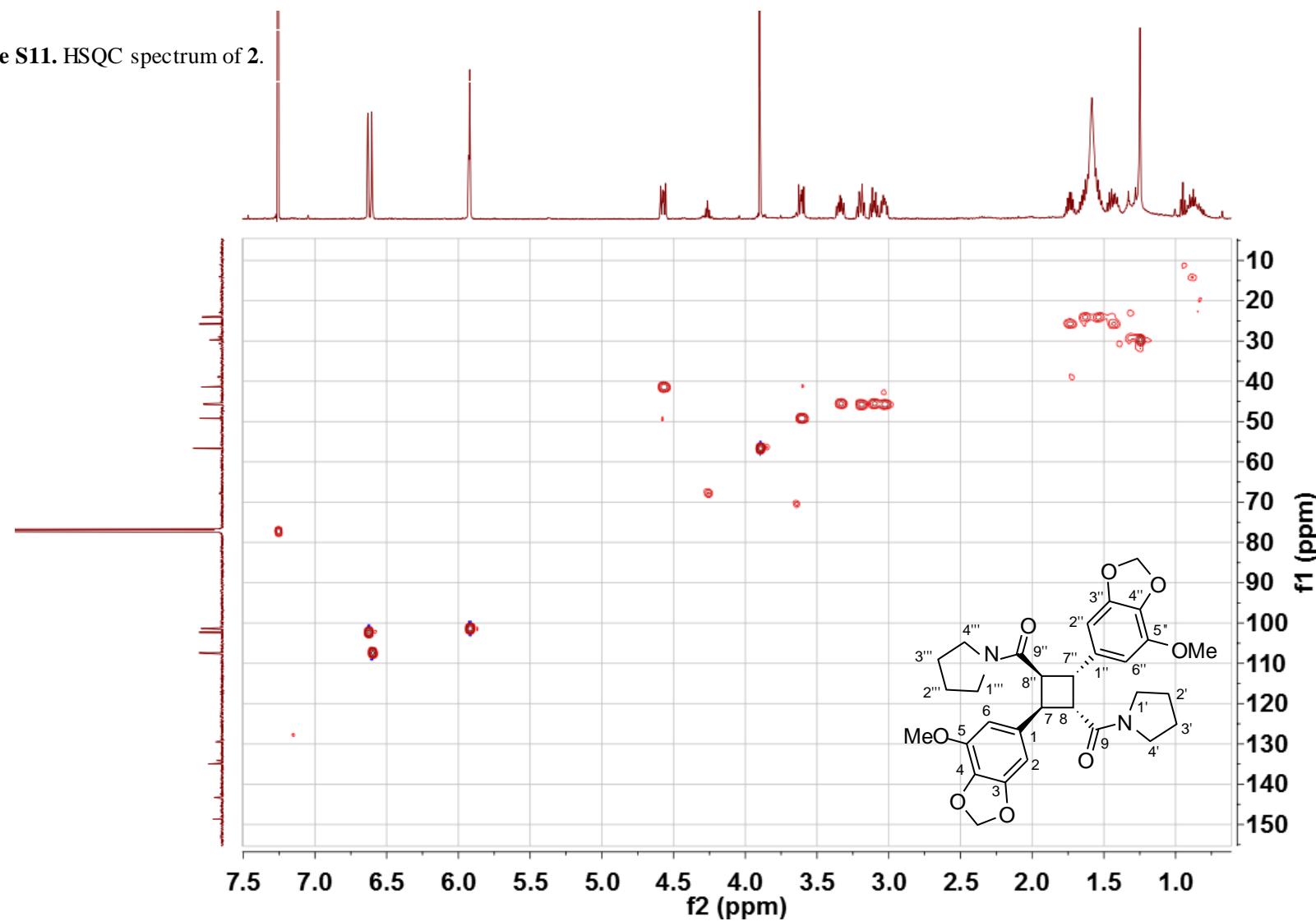


**Figure S9.**  $^1\text{H}$  NMR spectrum of **2** ( $\text{CDCl}_3$ , 500 MHz).

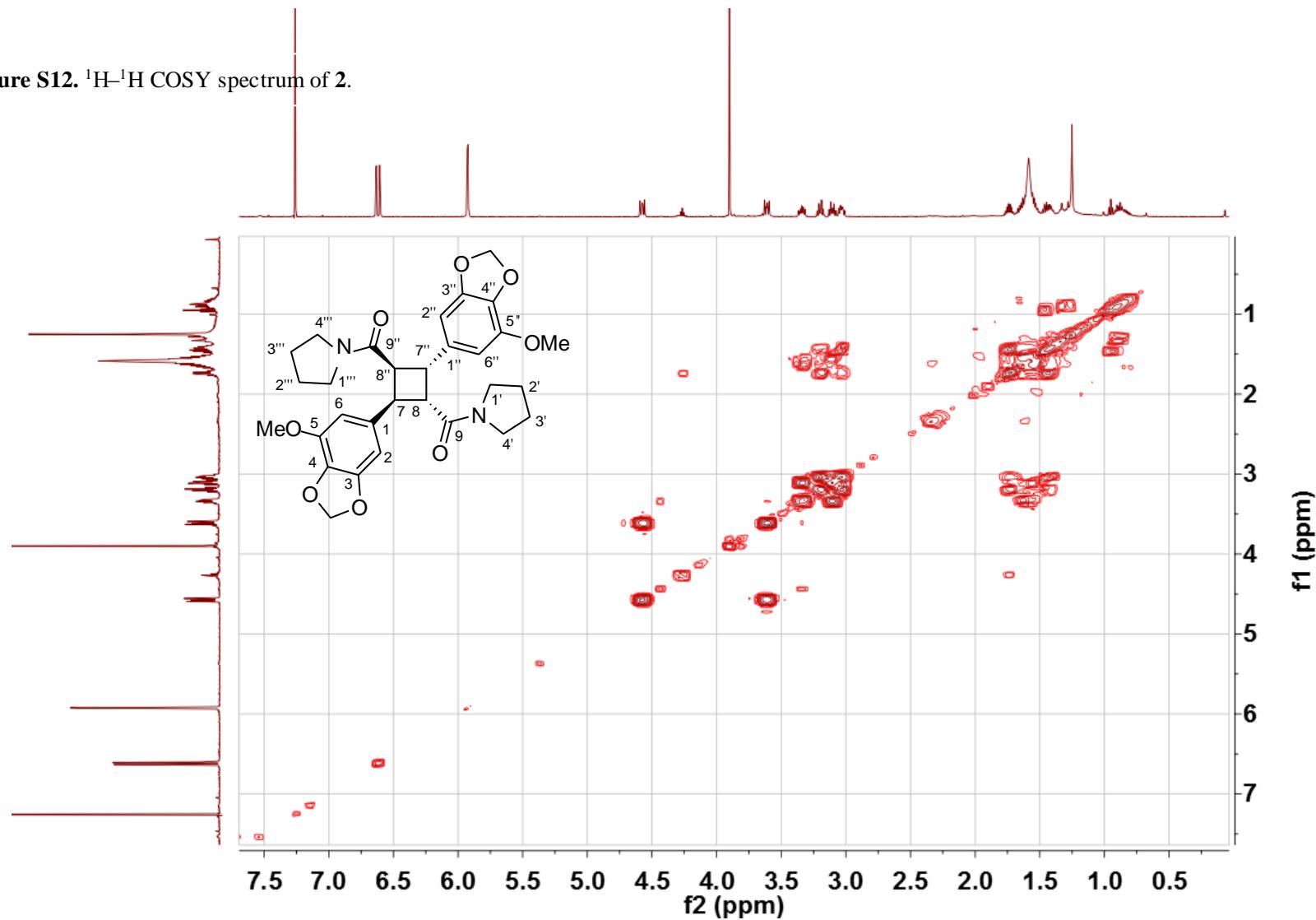


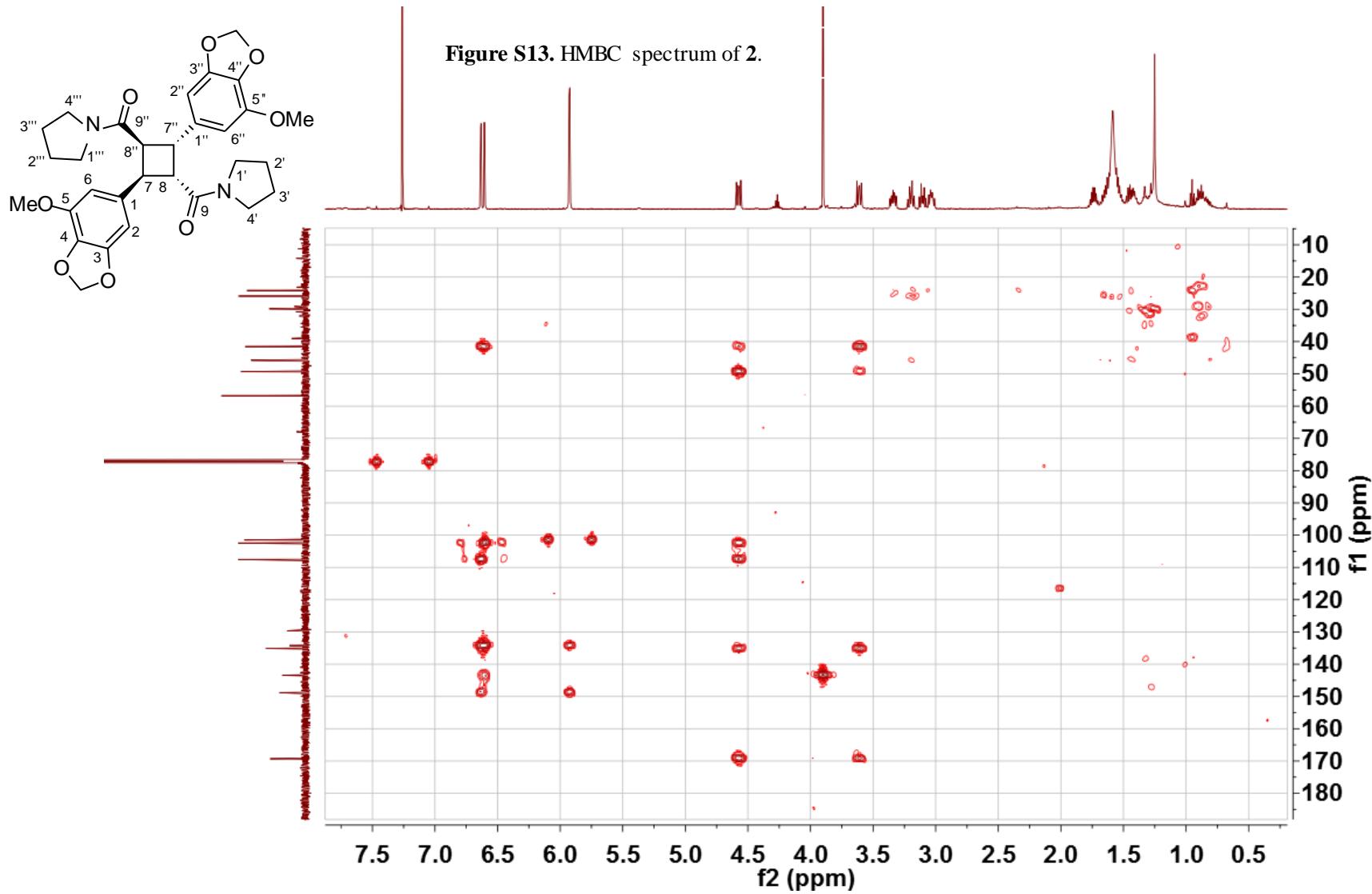
**Figure S10.**  $^{13}\text{C}$  NMR spectrum of **2** ( $\text{CDCl}_3$ , 126 MHz).

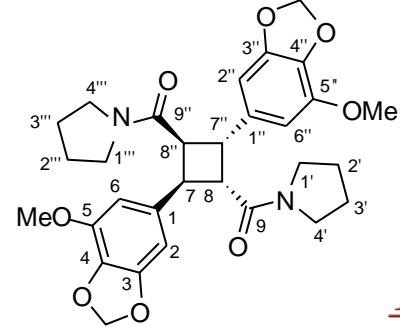
**Figure S11.** HSQC spectrum of **2**.



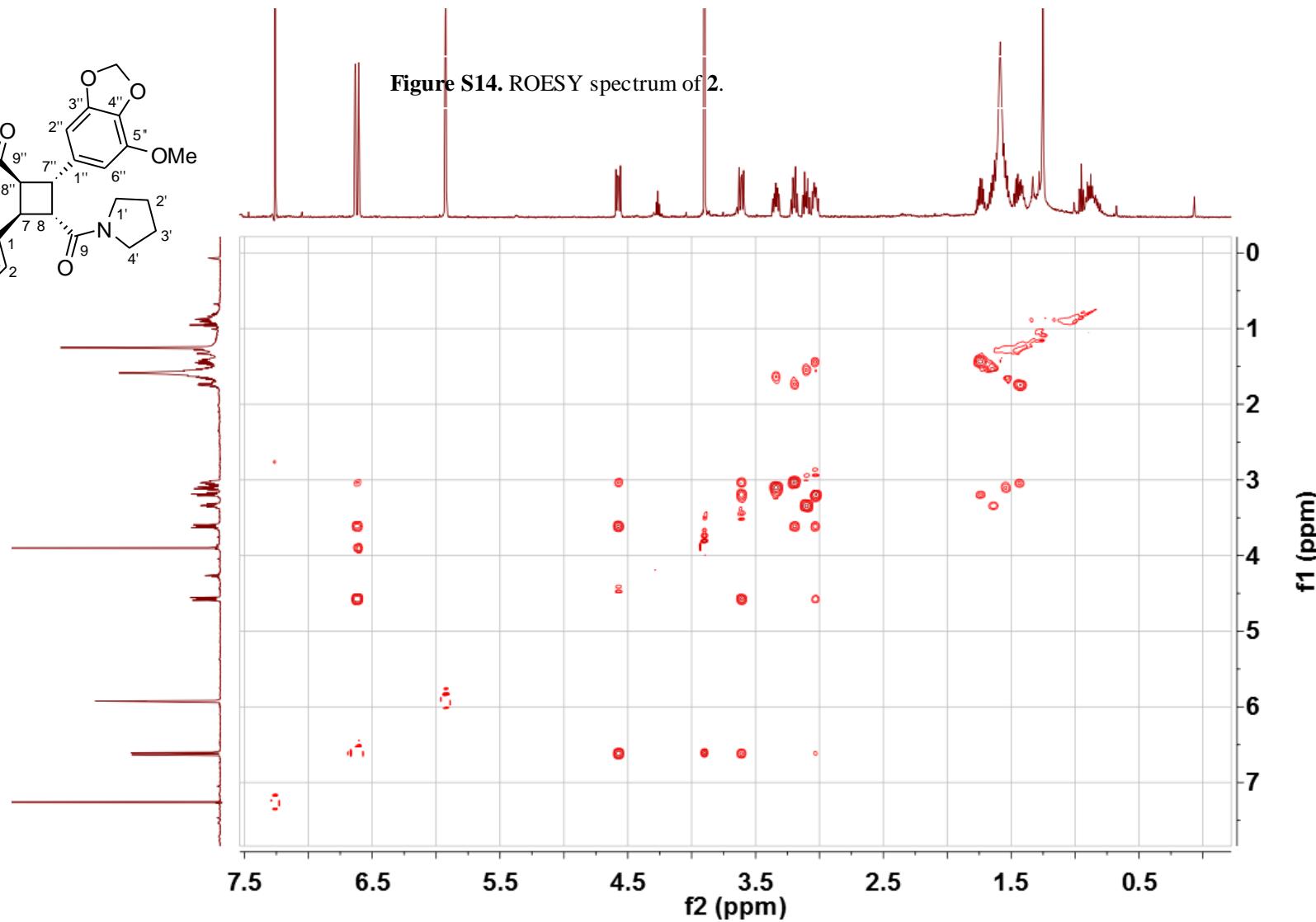
**Figure S12.**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of **2**.







**Figure S14.** ROESY spectrum of **2**.



pcp27

11:00:10 07-May-2015

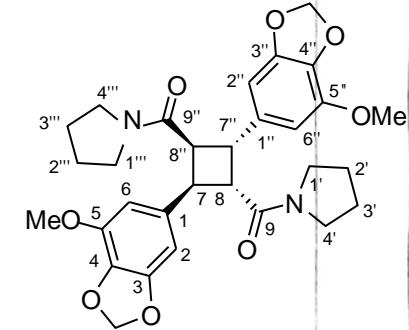
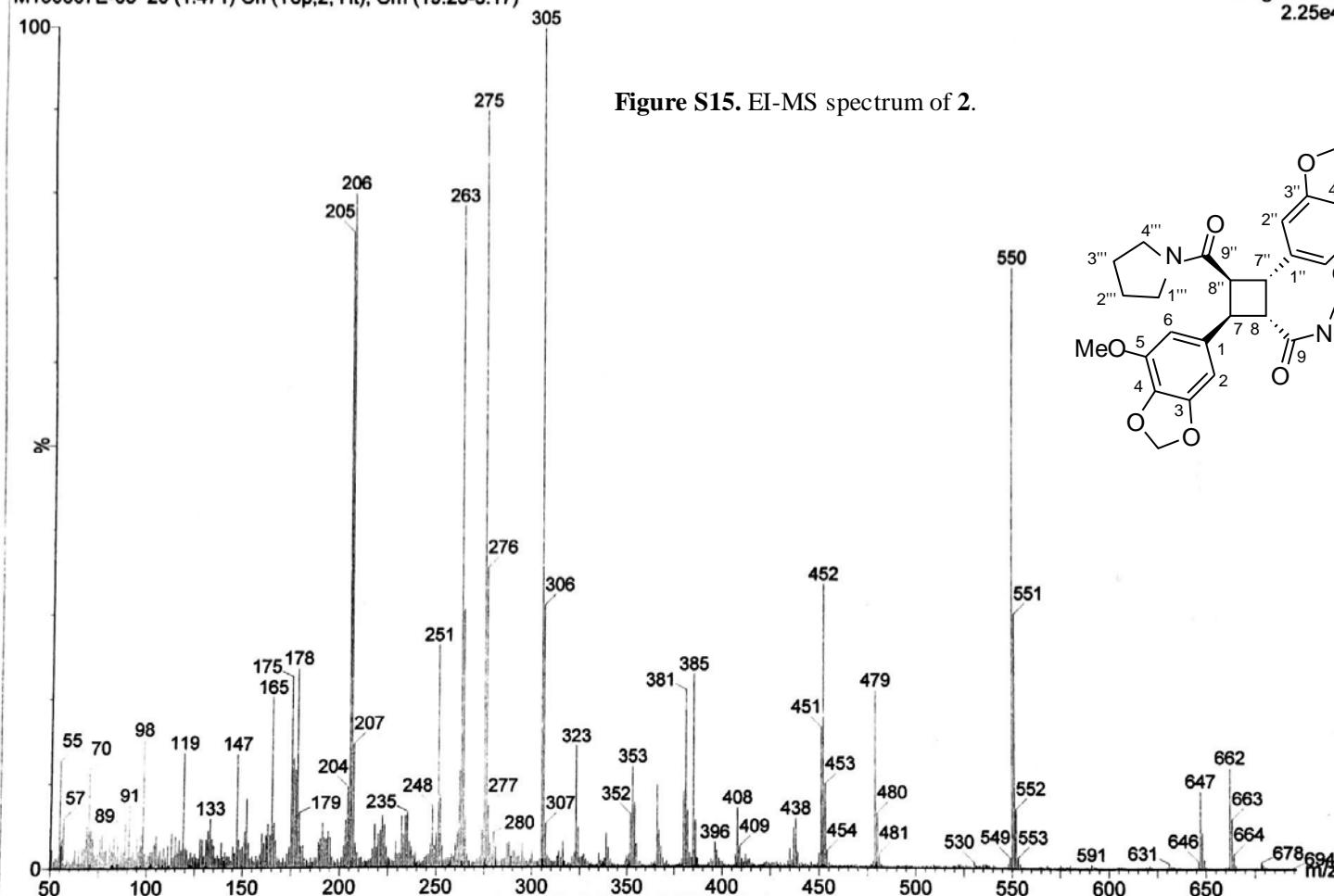
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KIB

Autospec Premier

P776

Magnet EI+  
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## Elemental Composition Report

Page 1

### Single Mass Analysis

Tolerance = 10.0 PPM / DBE: min = -10.0, max = 120.0  
Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions  
21 formula(e) evaluated with 1 results within limits (up to 51 closest results for each mass)  
Elements Used:

C: 0-200 H: 0-400 N: 2-2 O: 7-9

pap27

16:32:27 29-Apr-2015

Voltage El+

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Autospec Premier  
P776  
25.3

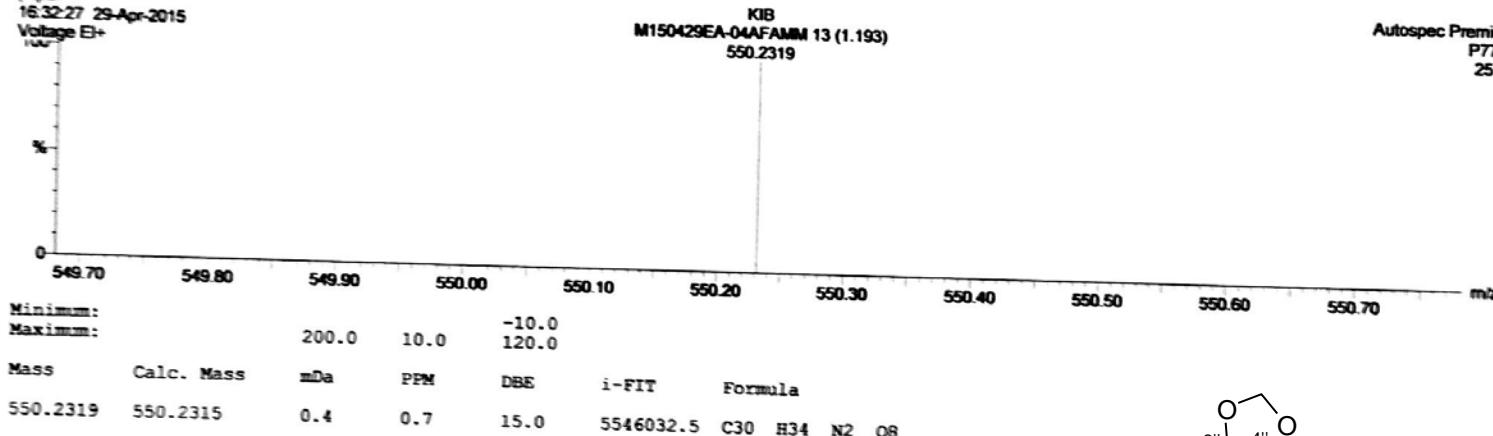
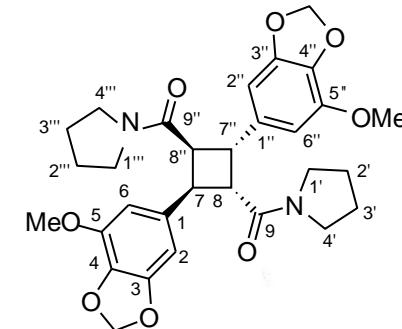
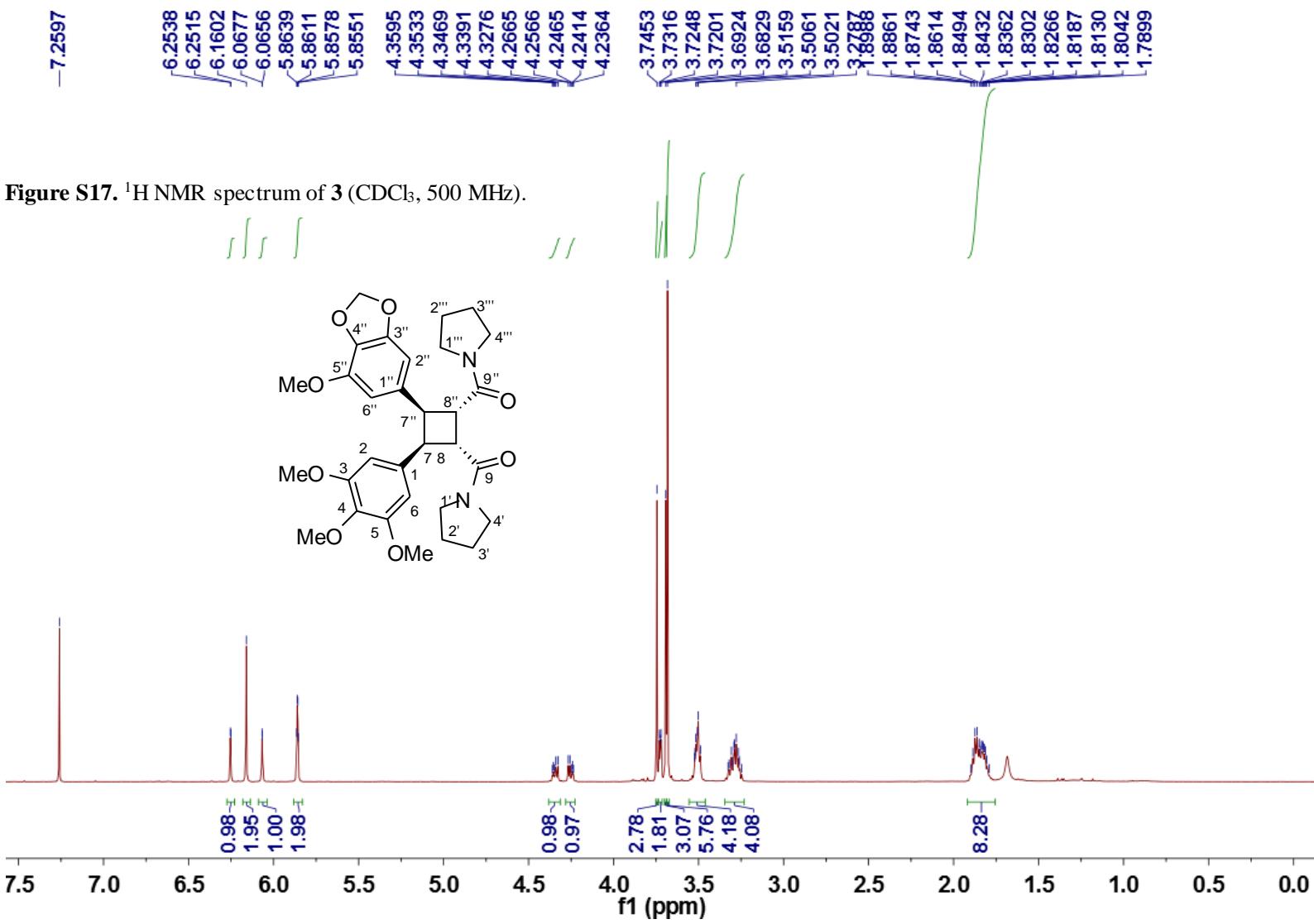
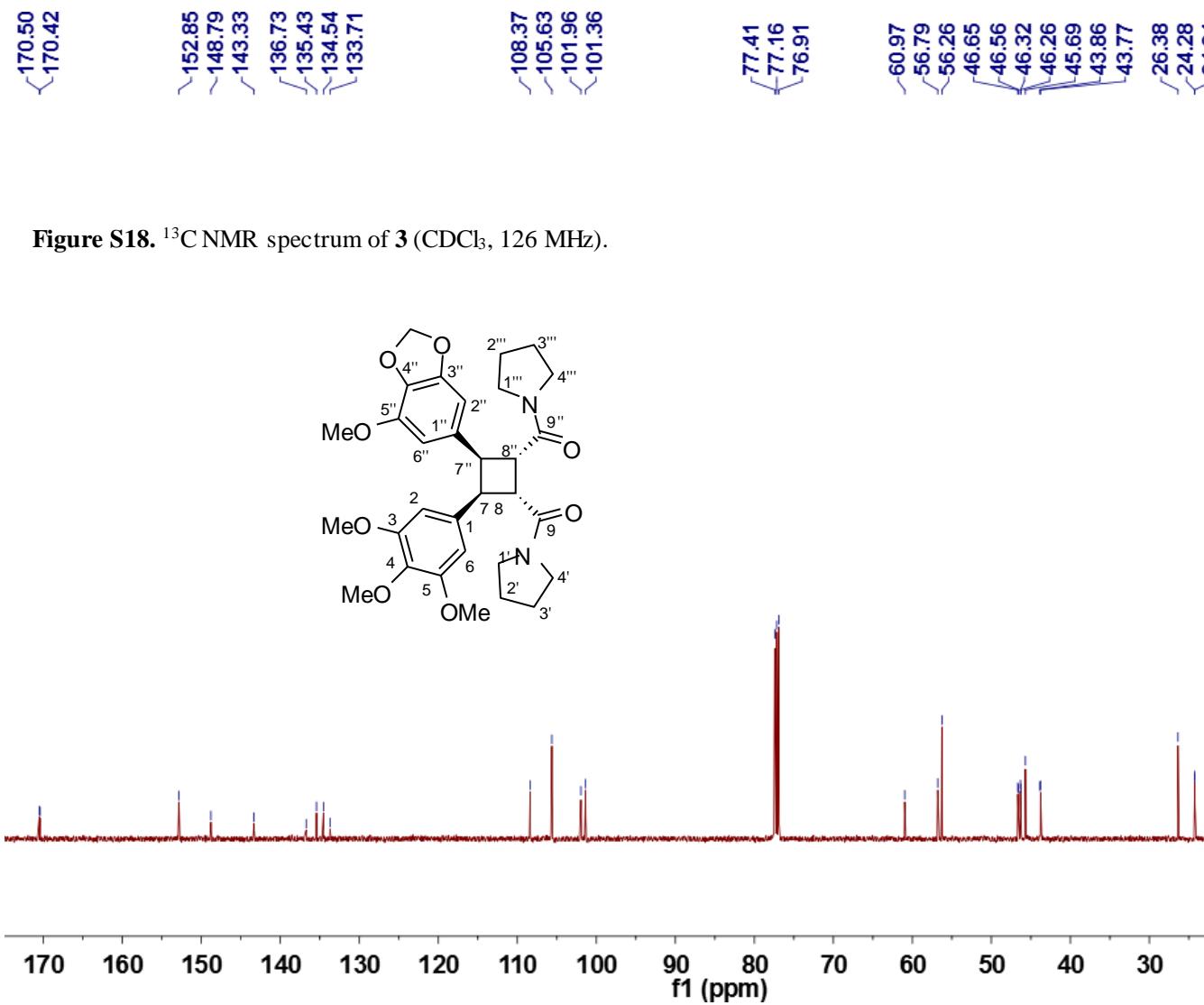


Figure S16. HR-EI-MS spectrum of 2.

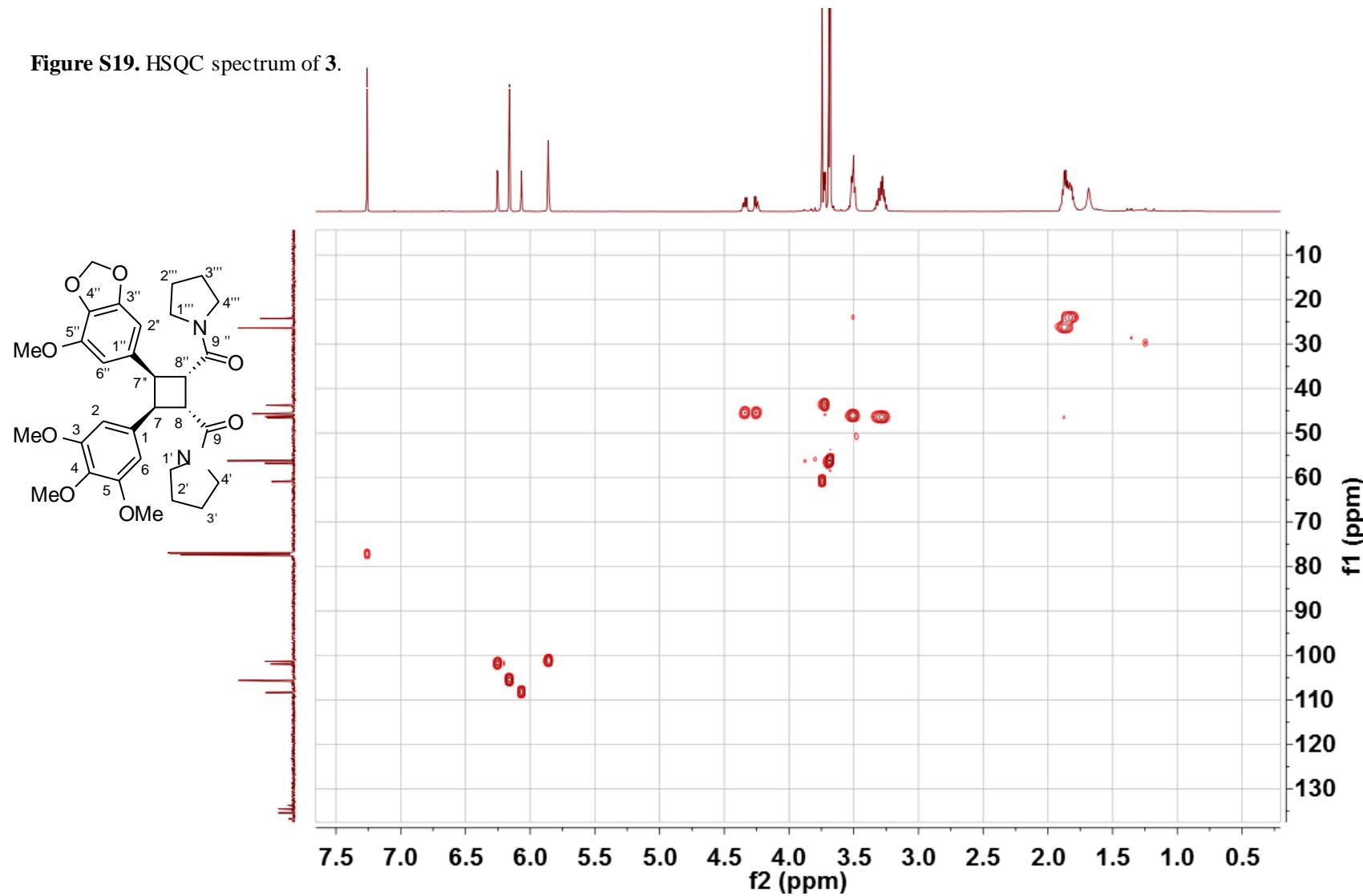




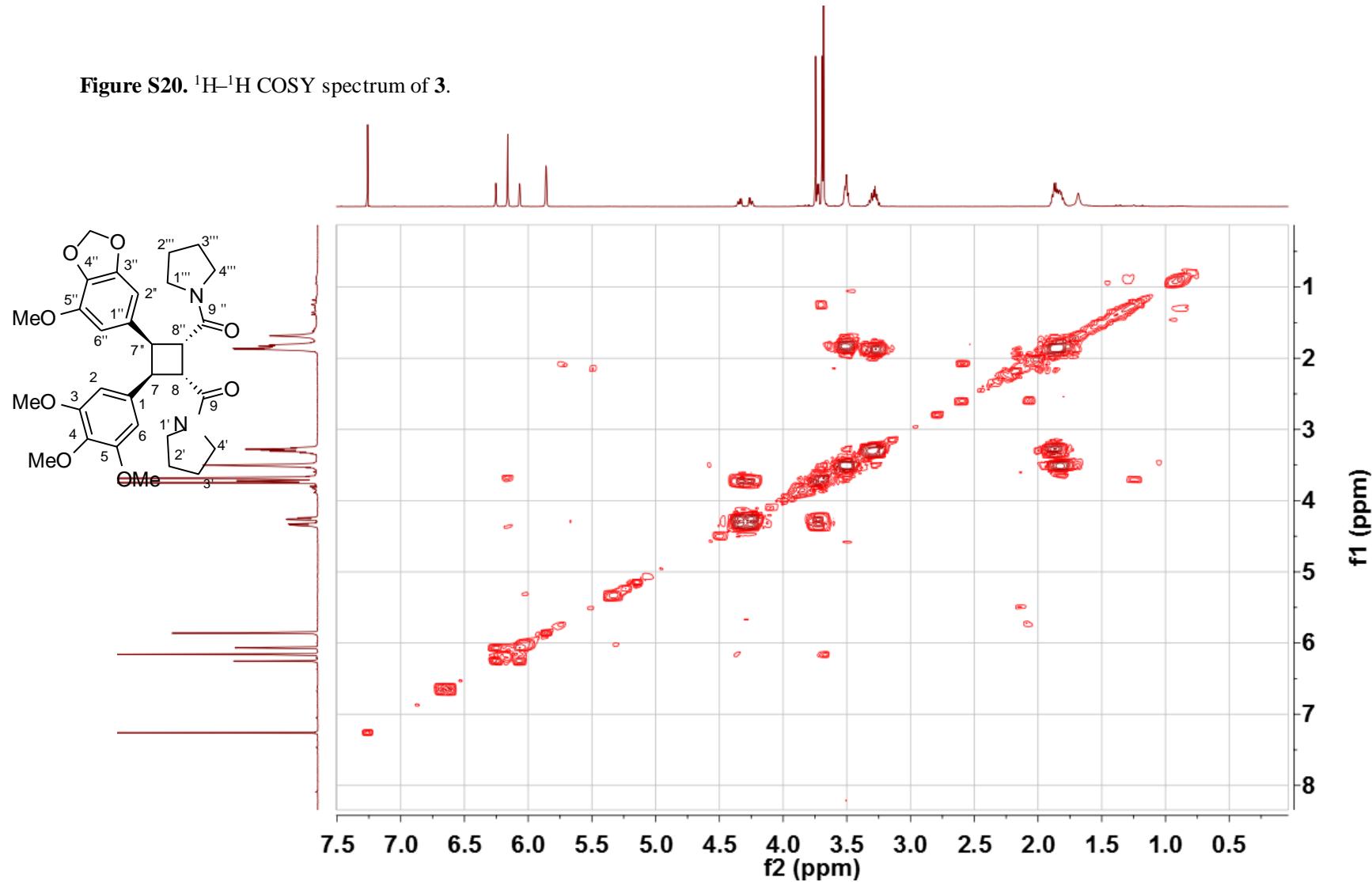


**Figure S18.**  $^{13}\text{C}$  NMR spectrum of **3** ( $\text{CDCl}_3$ , 126 MHz).

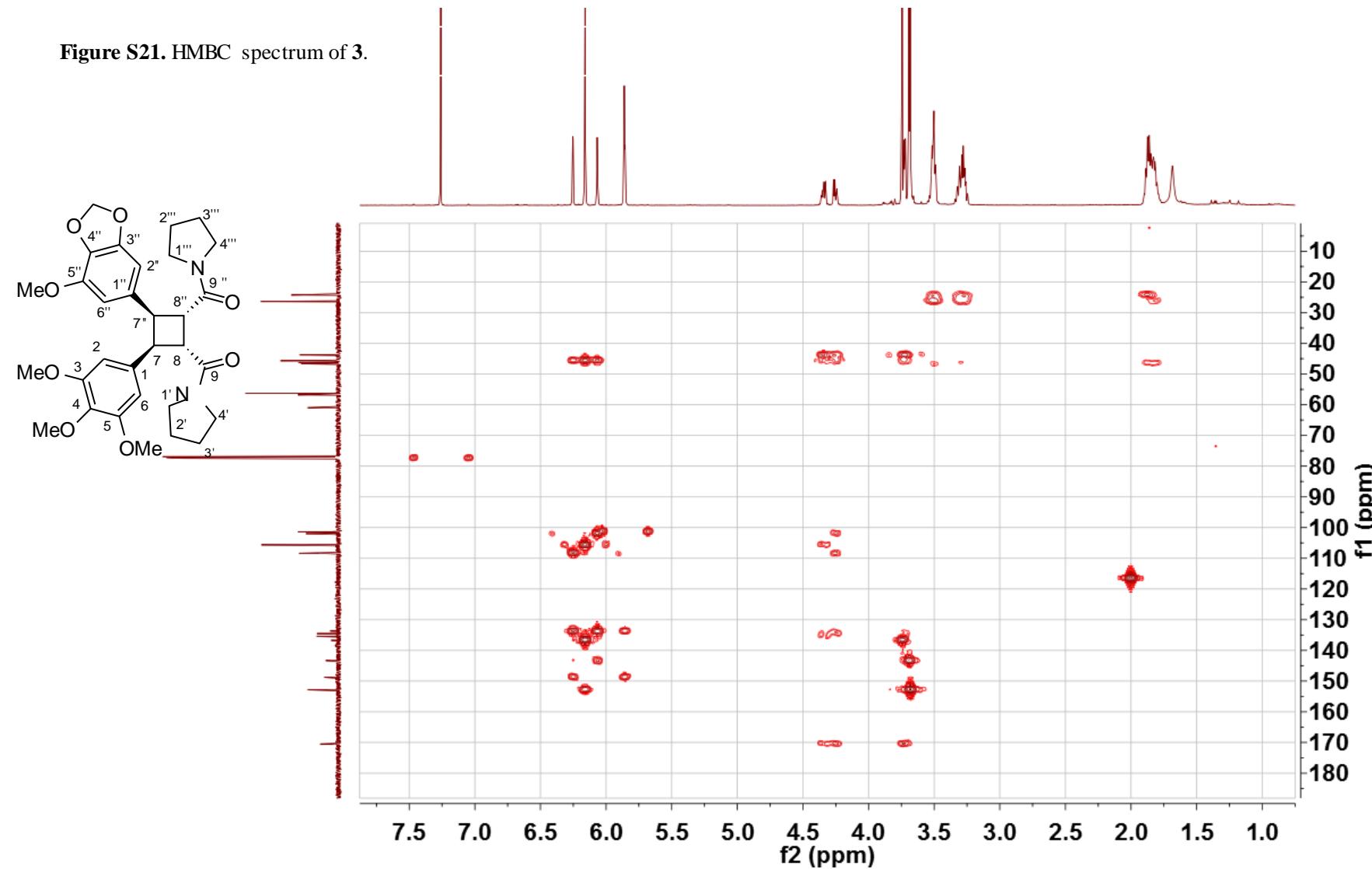
**Figure S19.** HSQC spectrum of **3**.



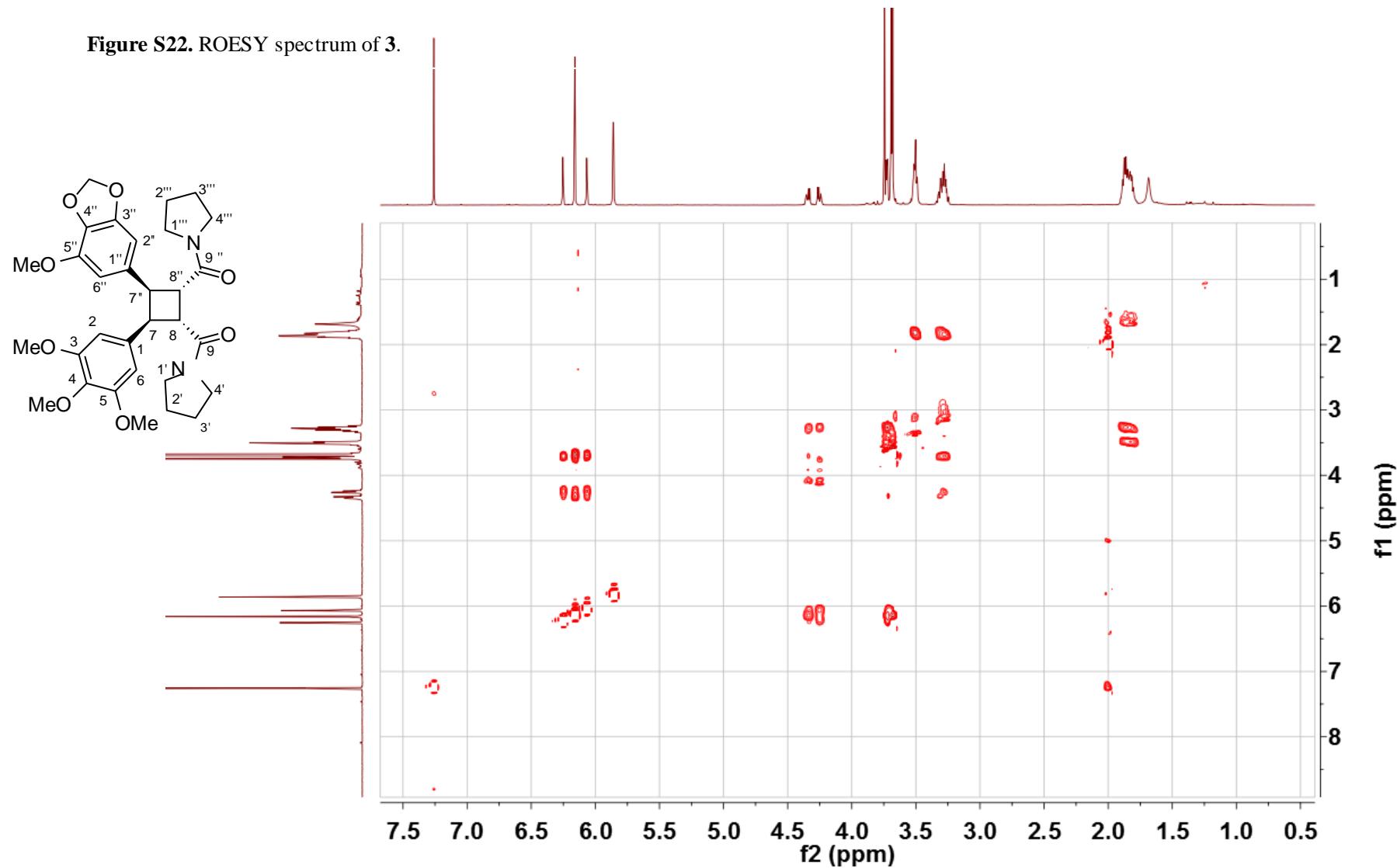
**Figure S20.**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of **3**.



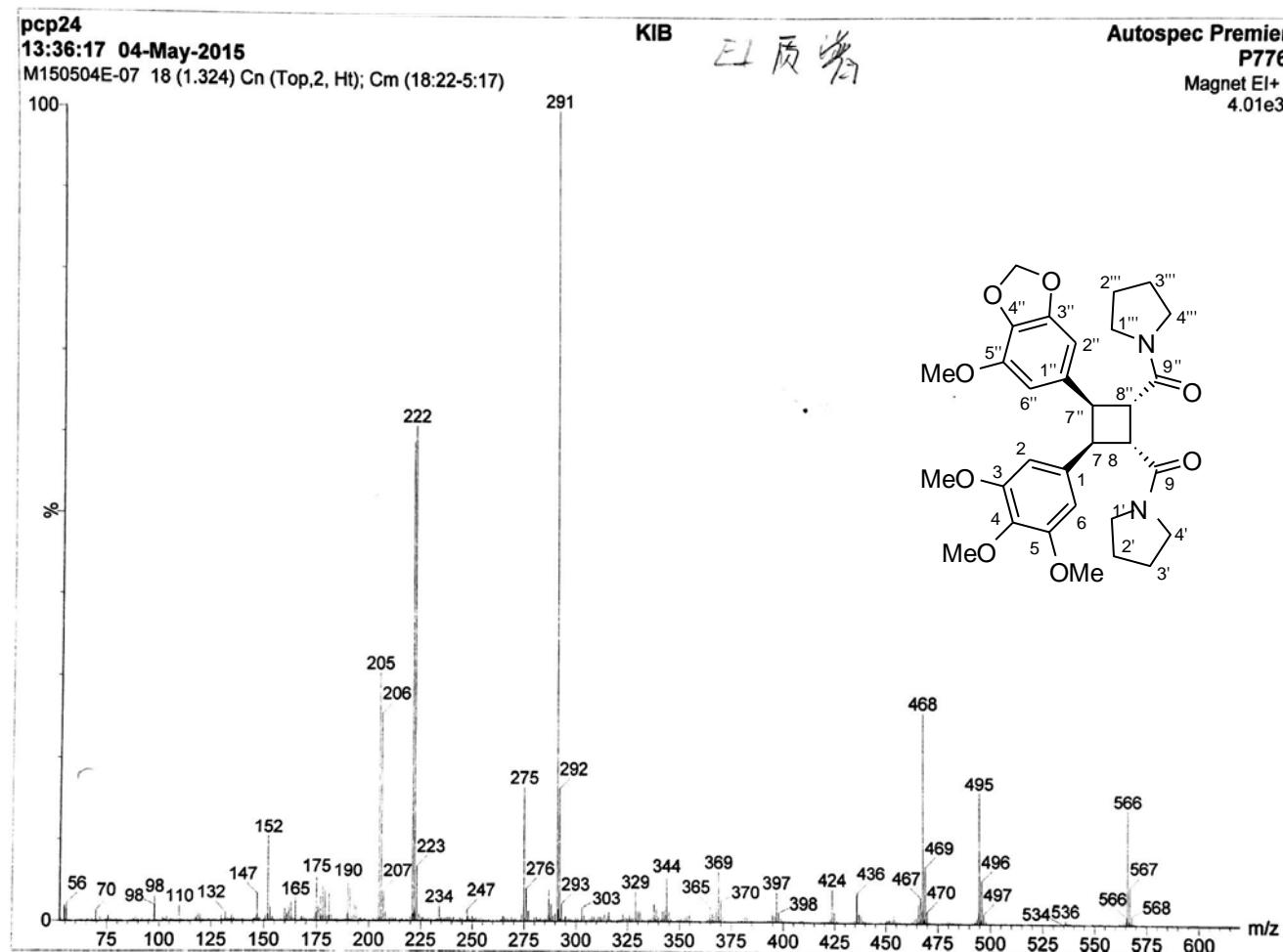
**Figure S21.** HMBC spectrum of **3**.



**Figure S22.** ROESY spectrum of **3**.



**Figure S23.** EI-MS spectrum of 3.



## Elemental Composition Report

Page 1

### Single Mass Analysis

Tolerance = 10.0 PPM / DBE: min = -10.0, max = 120.0  
Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions  
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Elements Used:

C: 0-200 H: 0-400 N: 2-2 O: 7-9

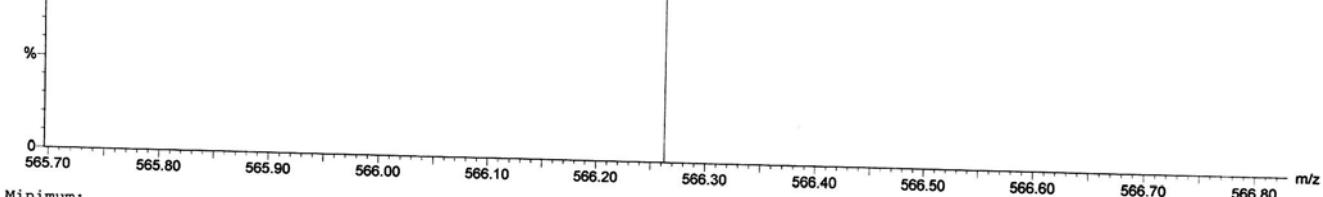
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Voltage EI+

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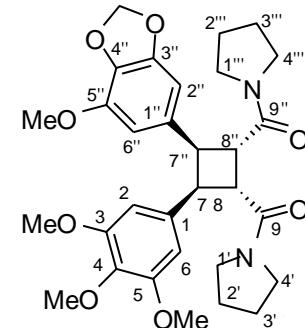
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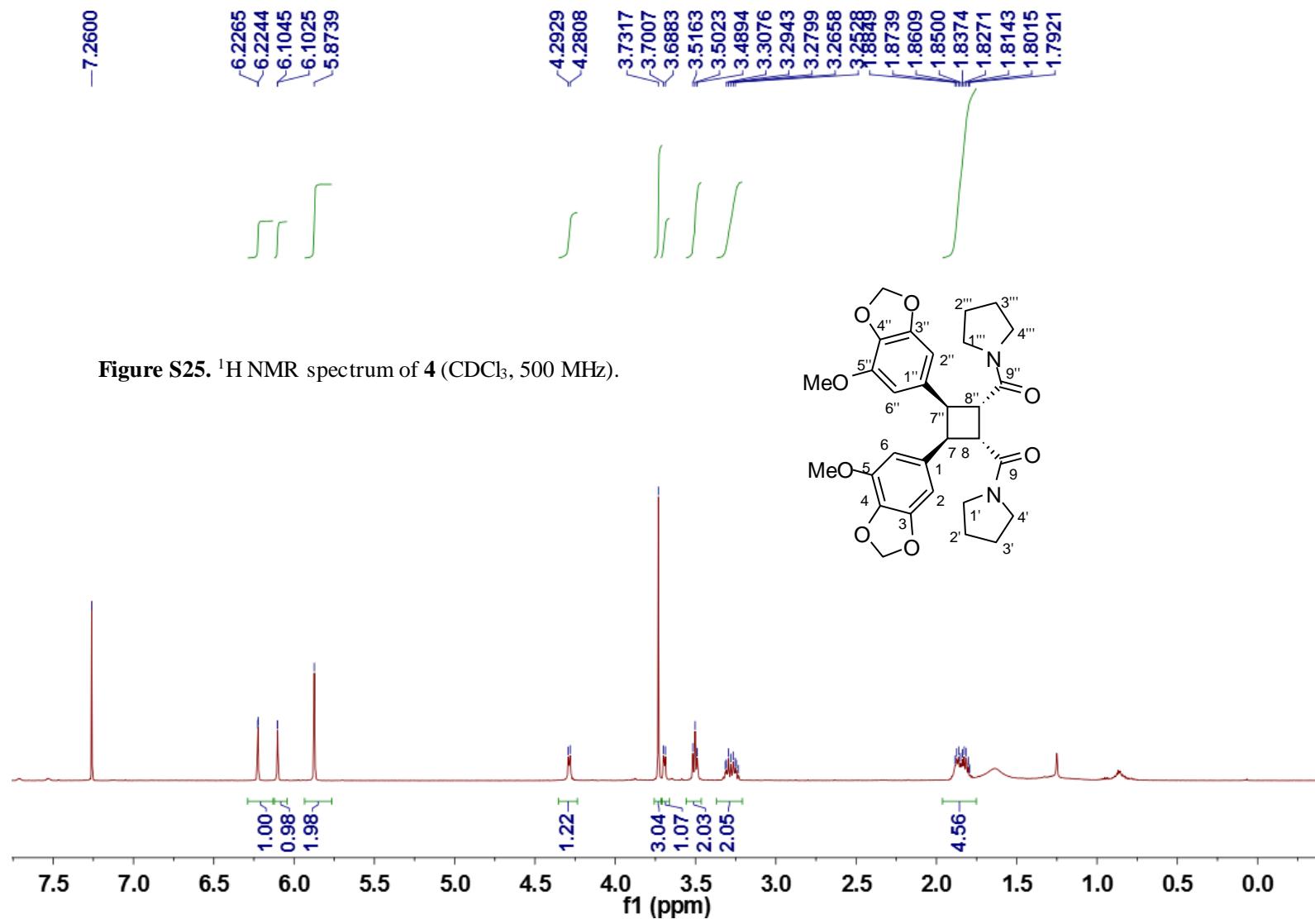
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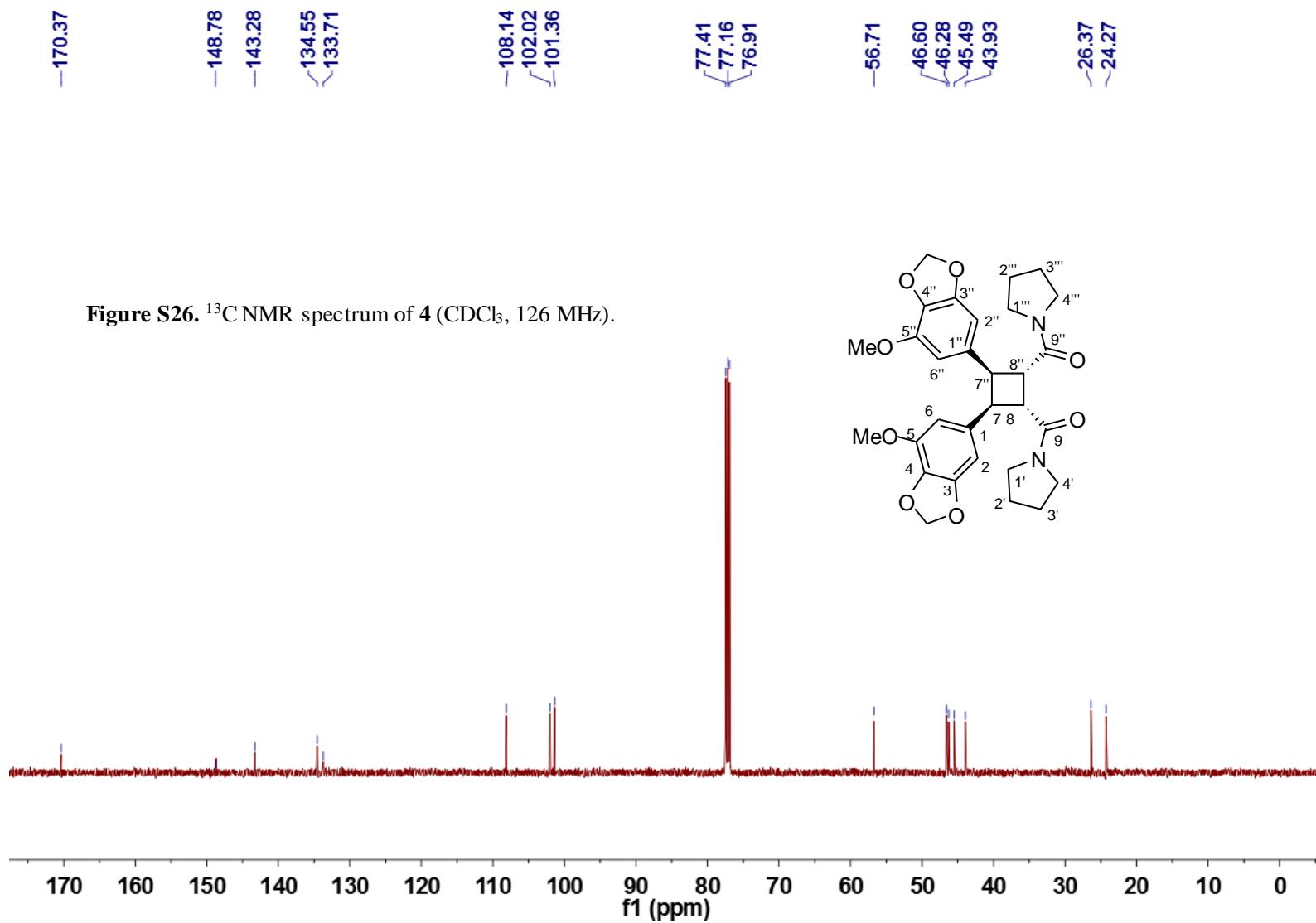


Minimum:			
Maximum:	200.0	10.0	-10.0
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			14.0
			5546025.5
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Figure S24. HR-EI-MS spectrum of 3.

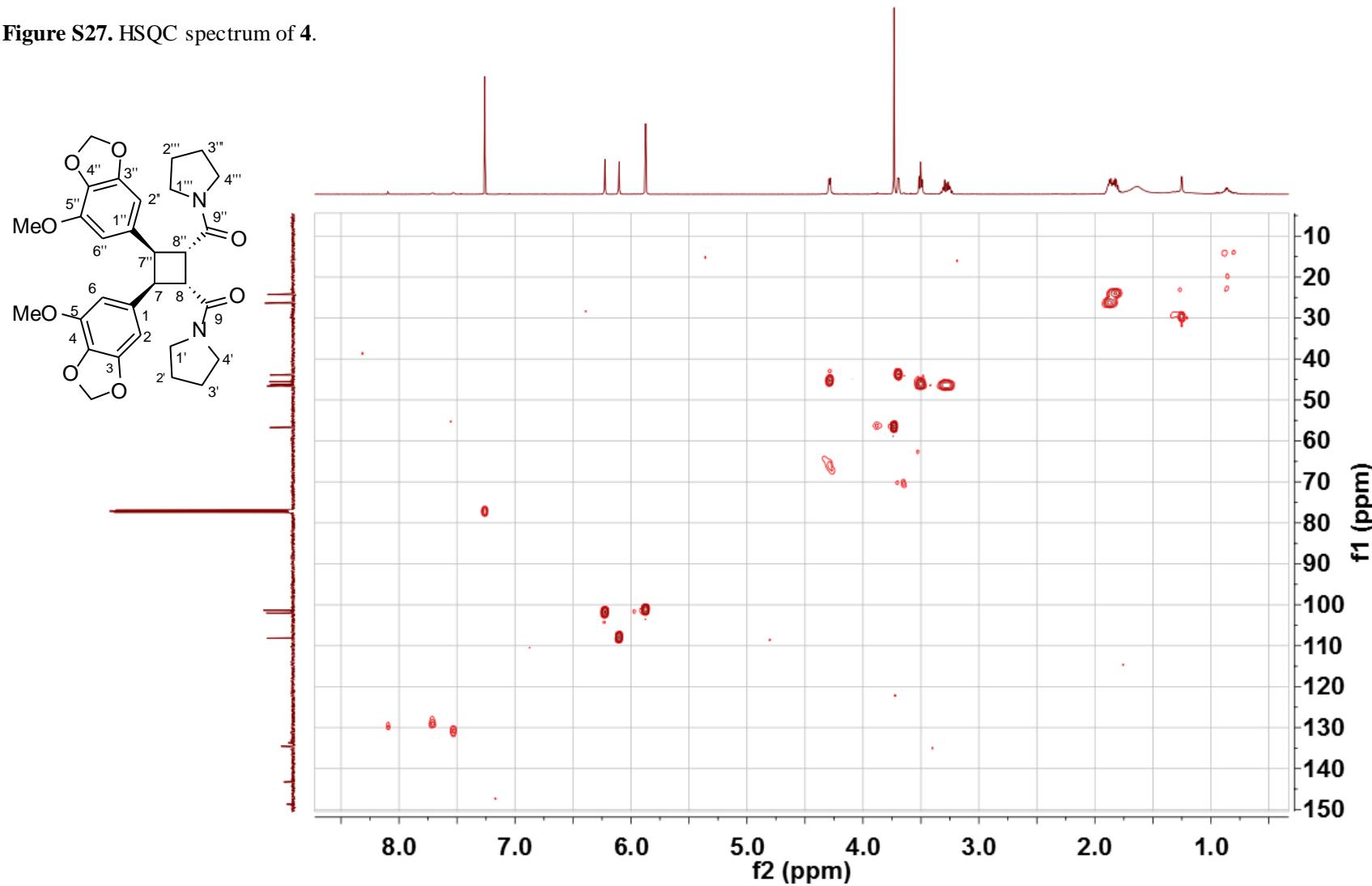




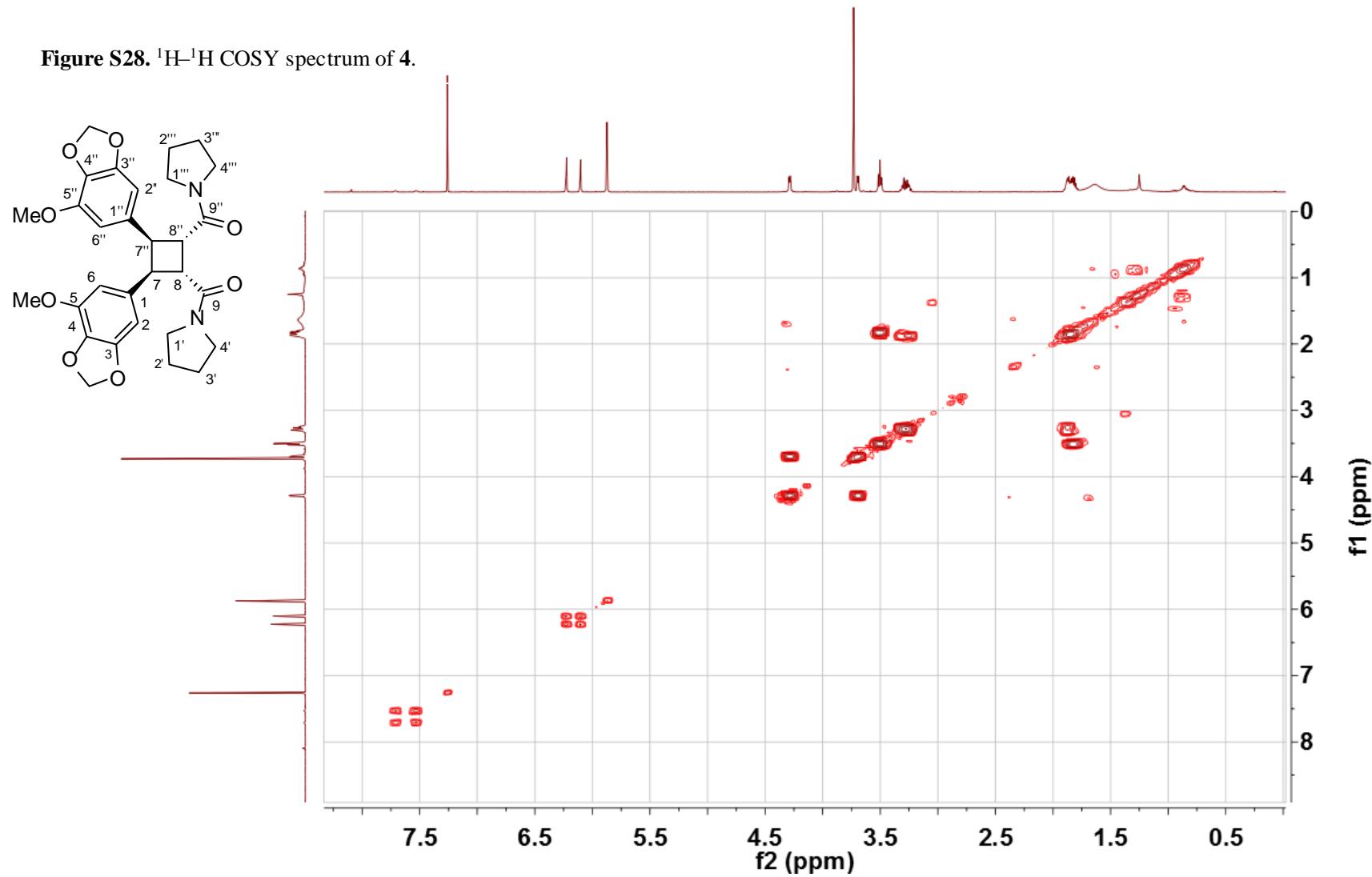


**Figure S26.**  $^{13}\text{C}$  NMR spectrum of **4** ( $\text{CDCl}_3$ , 126 MHz).

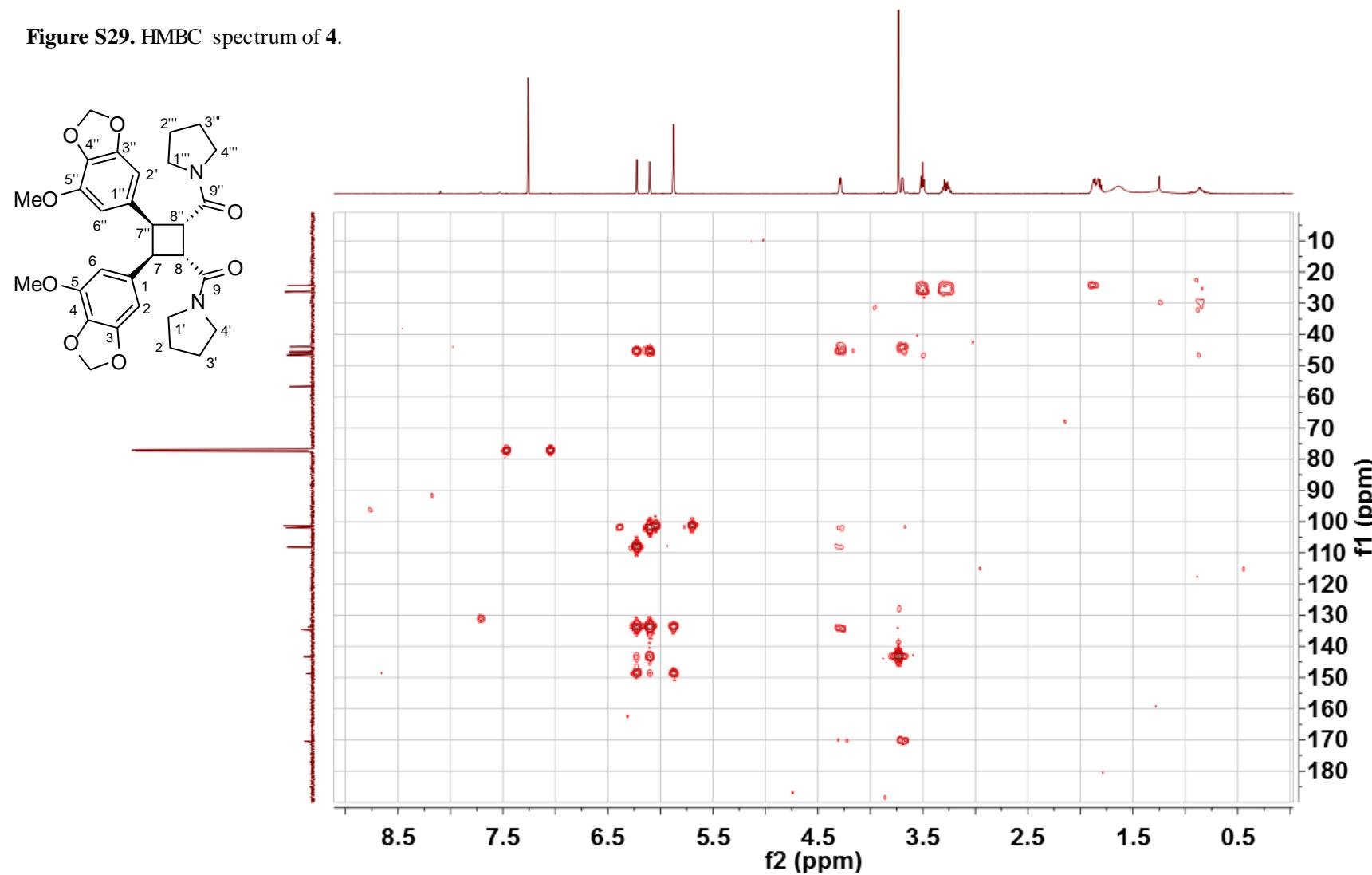
**Figure S27.** HSQC spectrum of **4**.



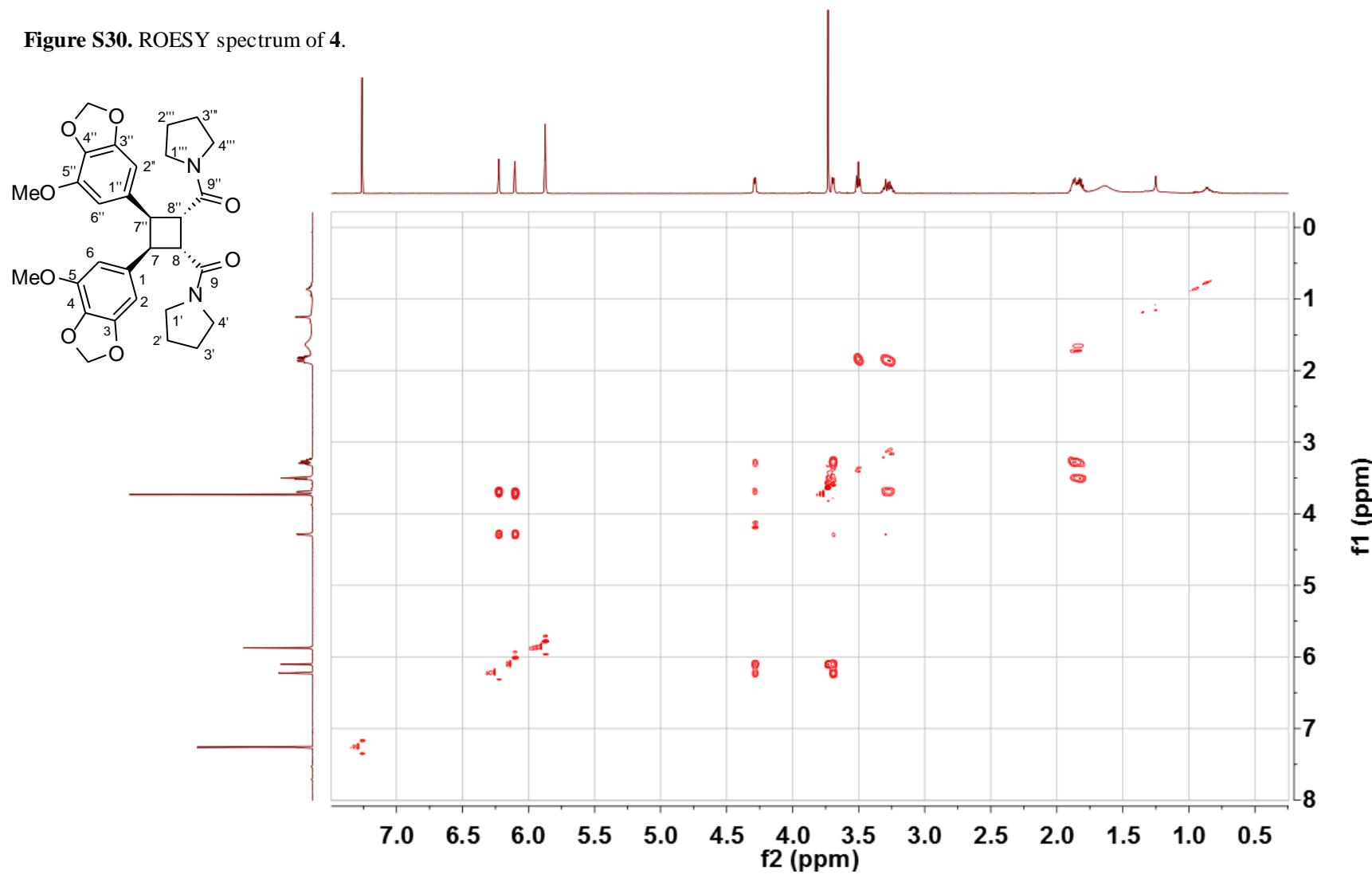
**Figure S28.**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of 4.

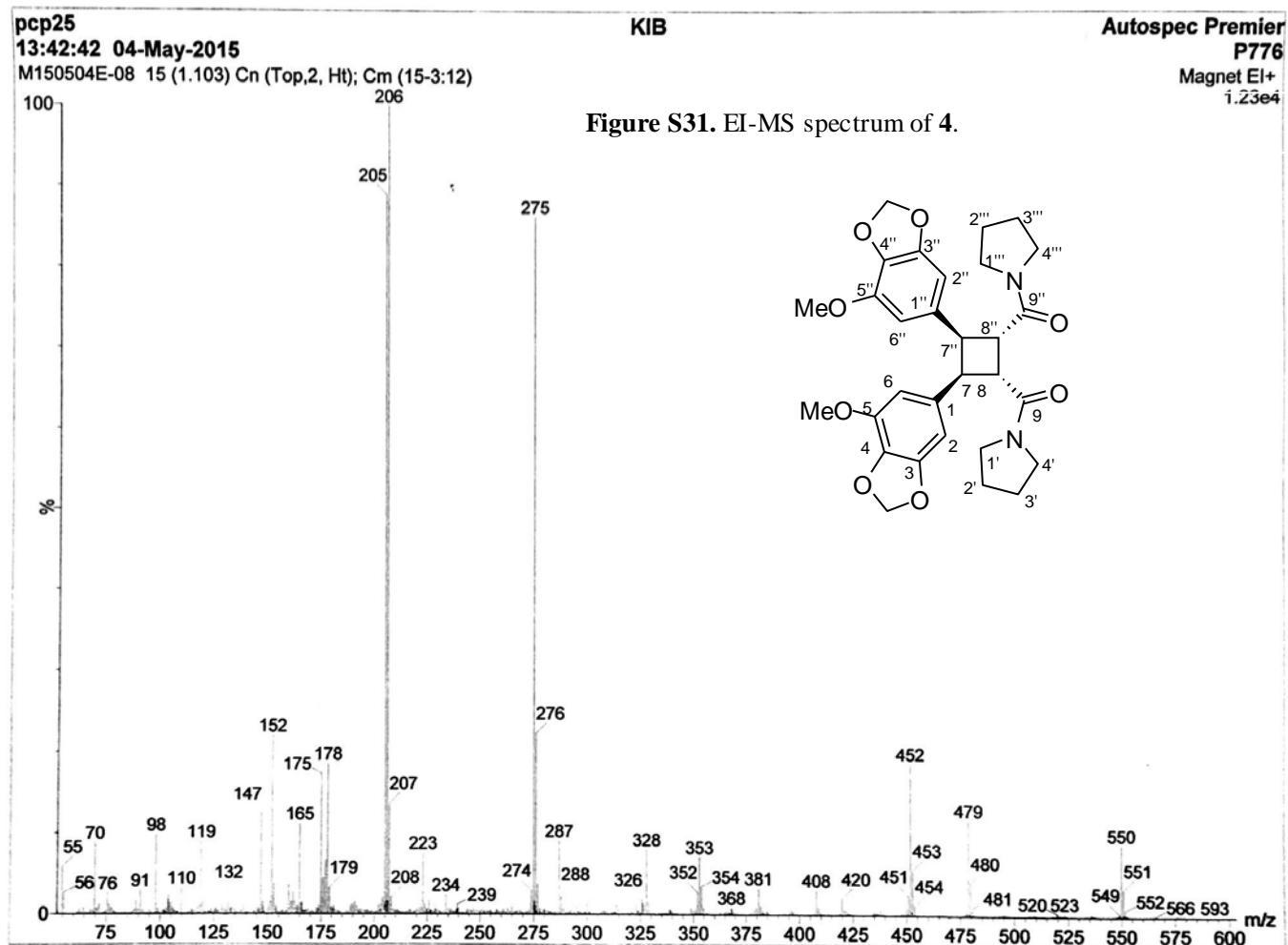


**Figure S29.** HMBC spectrum of 4.



**Figure S30.** ROESY spectrum of **4**.





**Figure S31.** EI-MS spectrum of 4.

## Elemental Composition Report

Page 1

### Single Mass Analysis

Tolerance = 10.0 PPM / DBE: min = -10.0, max = 120.0  
Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions  
21 formula(e) evaluated with 1 results within limits (up to 51 closest results for each mass)  
Elements Used:

C: 0-200 H: 0-400 N: 2-2 O: 7-9

pcp25

16:16:22 29-Apr-2015

Voltage EI+

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550.2298

Autospec Premier  
P776  
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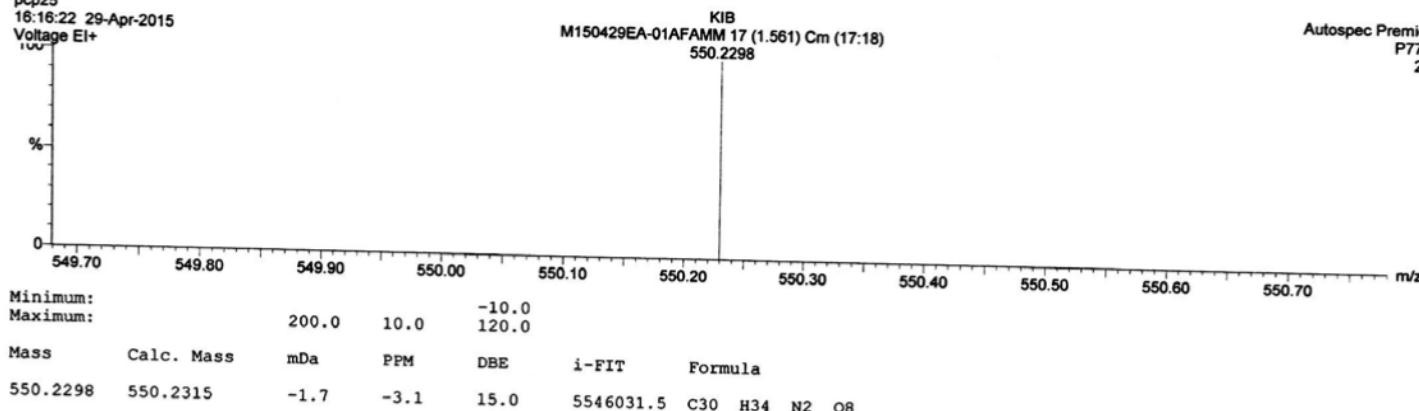


Figure S32. HR-EI-MS spectrum of 4.

