



## Supporting Information

for

### **New $\alpha$ - and $\beta$ -cyclodextrin derivatives with cinchona alkaloids used in asymmetric organocatalytic reactions**

Iveta Chena Tichá, Simona Hybelbauerová and Jindřich Jindřich

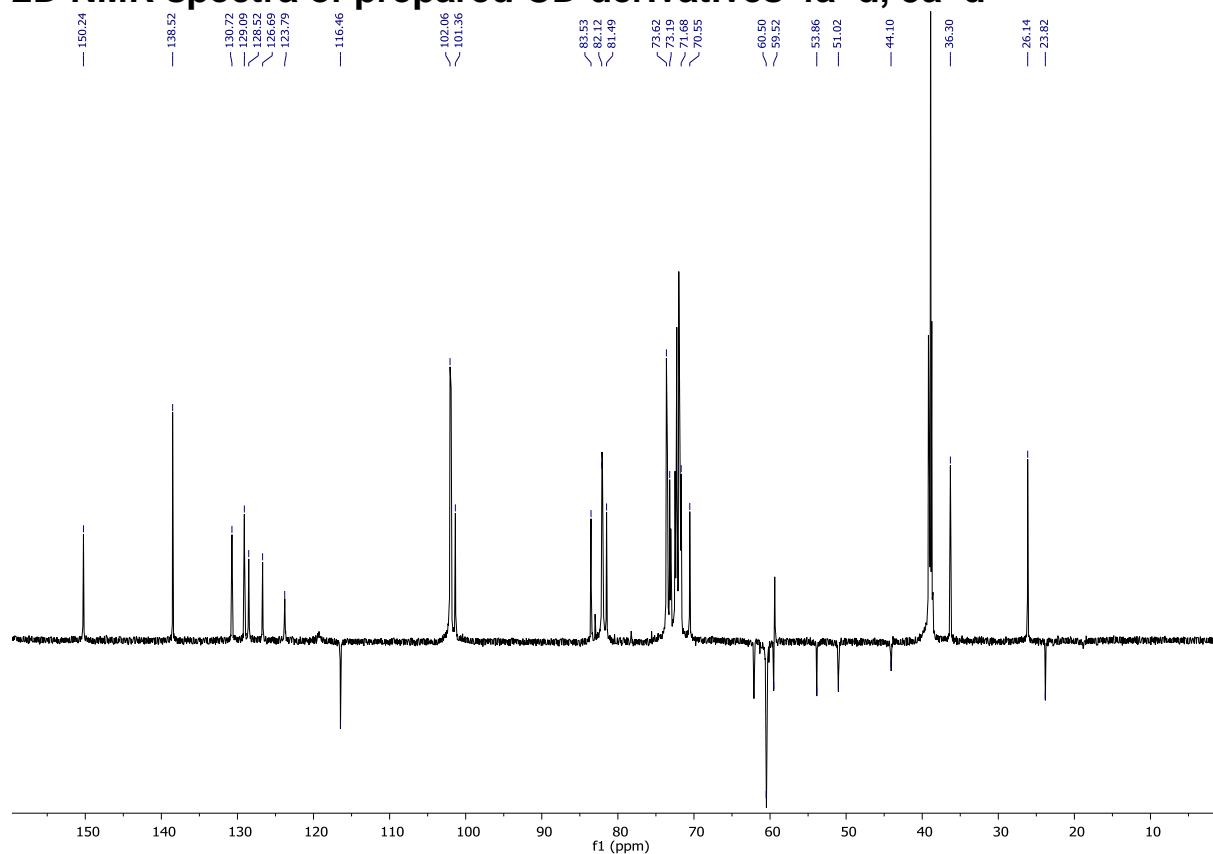
*Beilstein J. Org. Chem.* **2019**, *15*, 830–839. doi:10.3762/bjoc.15.80

### **2D NMR spectra of compounds 4a–d and 5a–d**

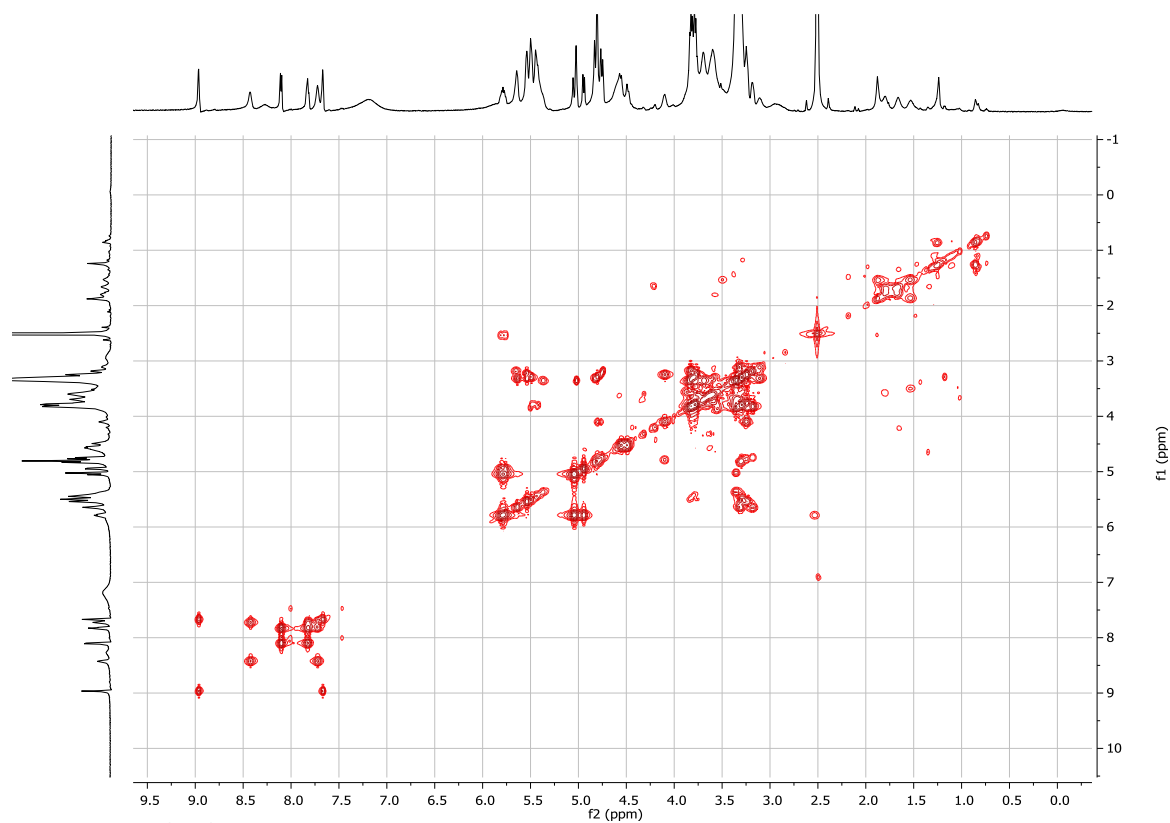
## Table of contents

2D NMR spectra of prepared CD derivatives <b>4a–d</b> , <b>5a–d</b> .....	S2
---	----

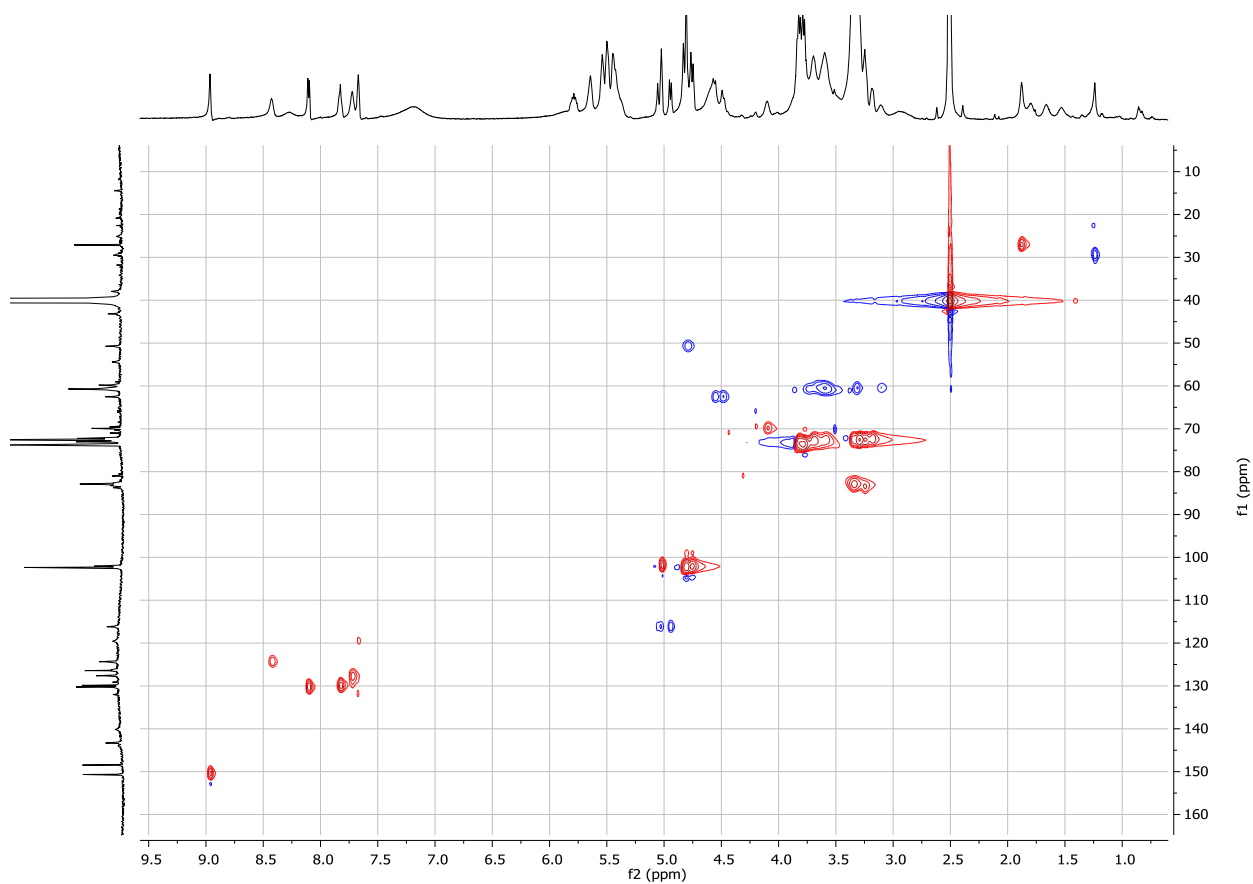
## 2D NMR spectra of prepared CD derivatives 4a–d, 5a–d



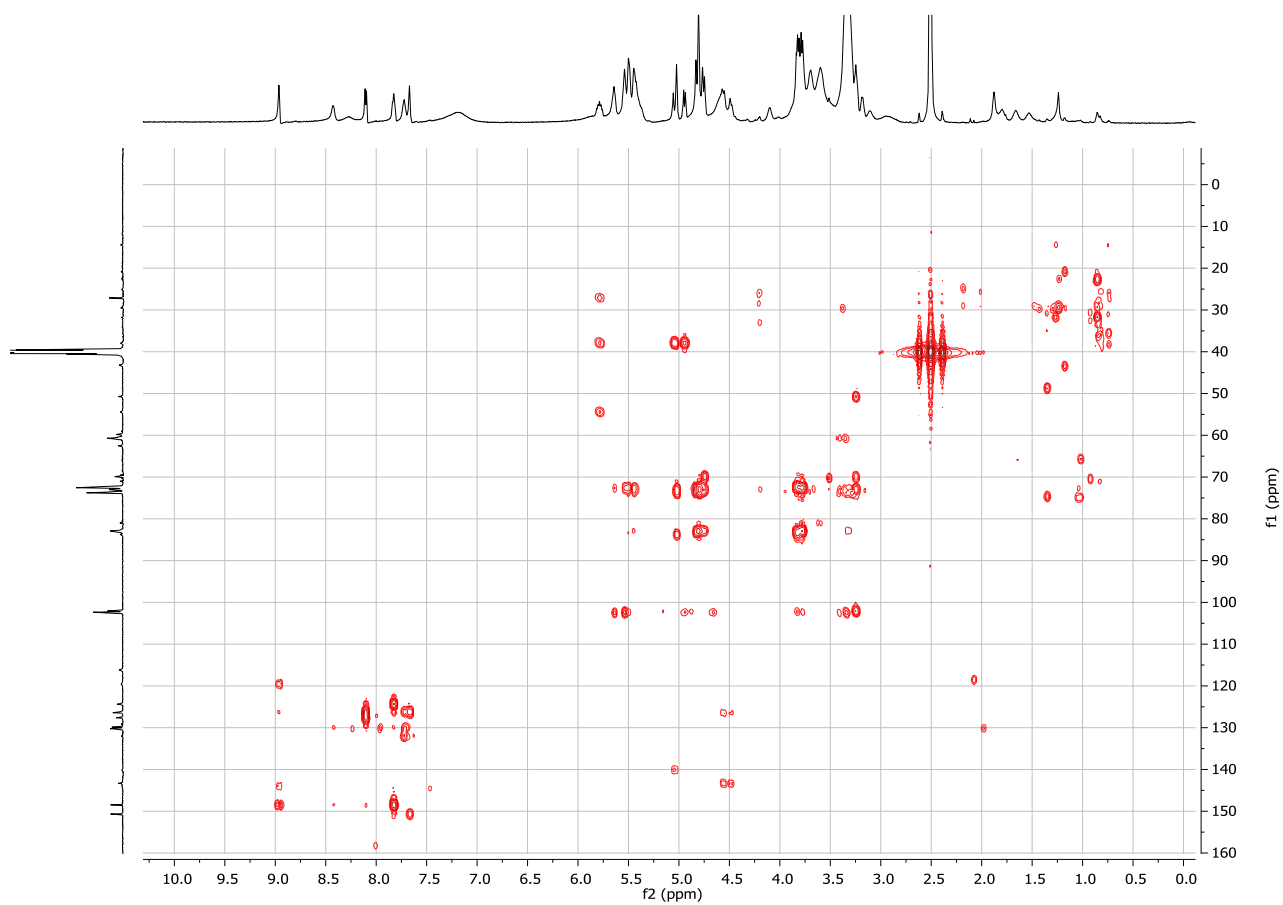
**Figure S1:**  $^{13}\text{C}$  DEPT spectrum of compound **4a**.



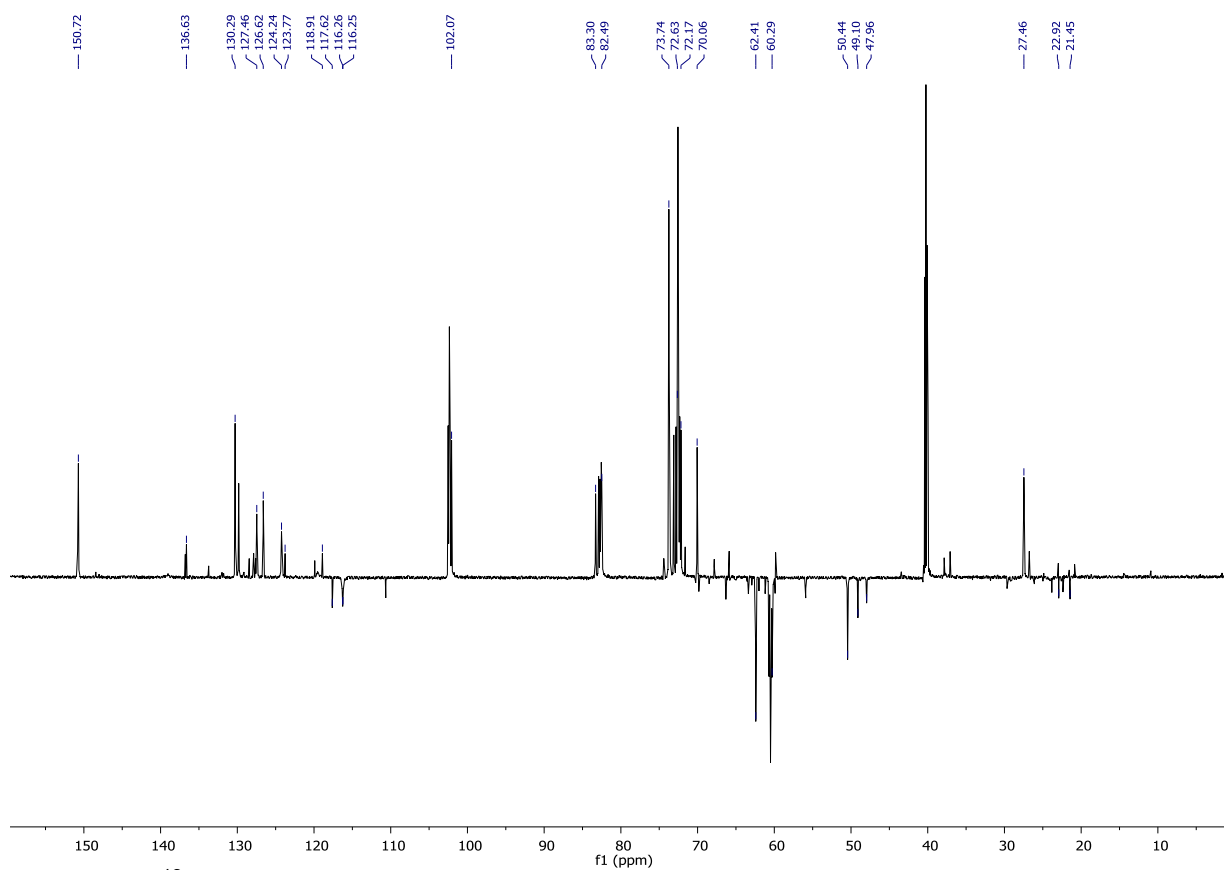
**Figure S2:**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound **4a**.



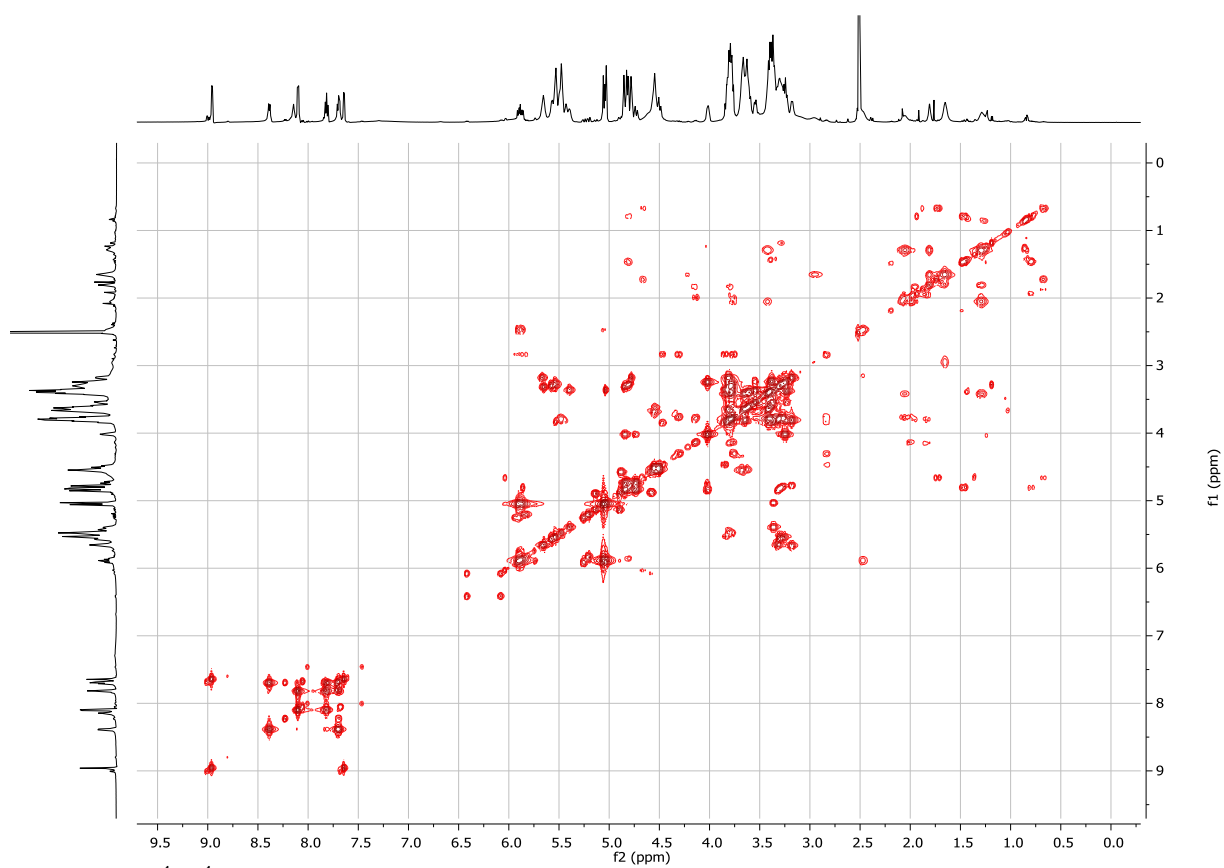
**Figure S3:** HSQC spectrum of compound **4a**.



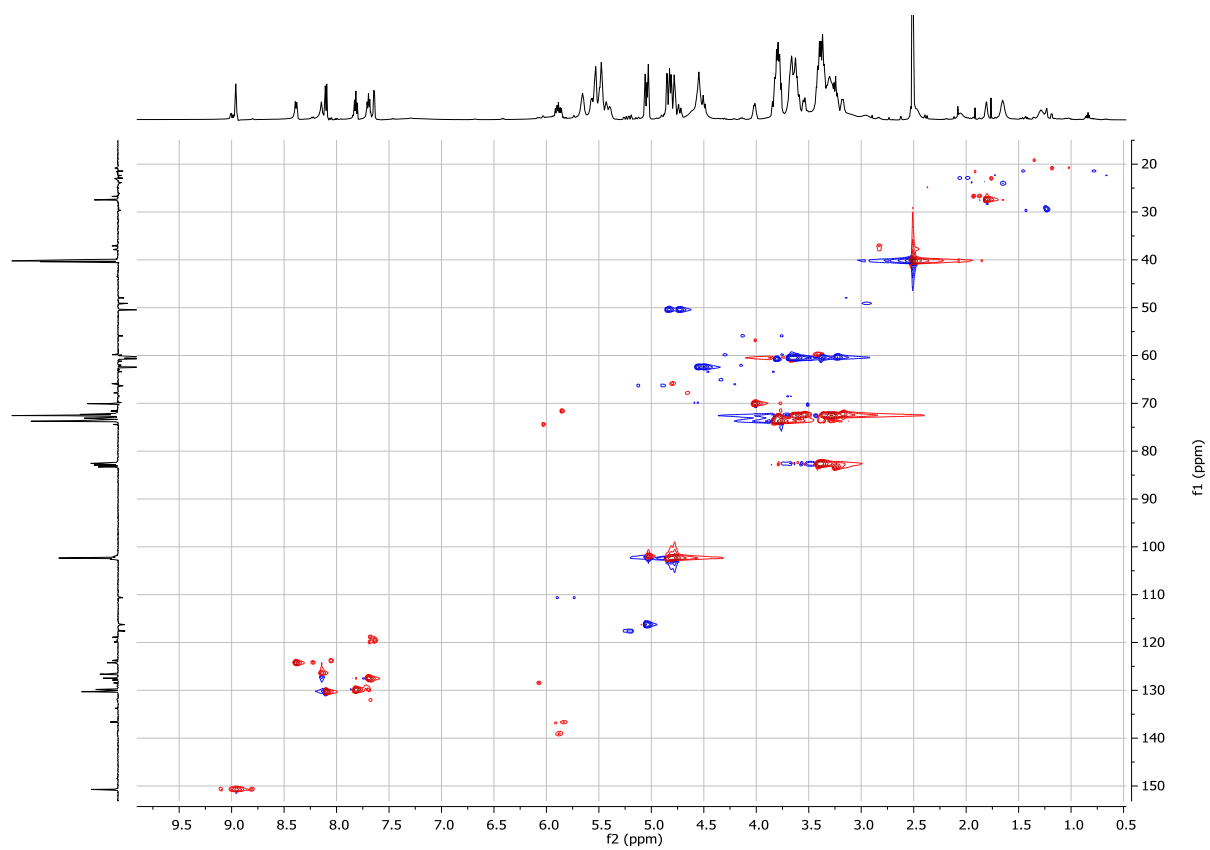
**Figure S4:** HMBC spectrum of compound **4a**.



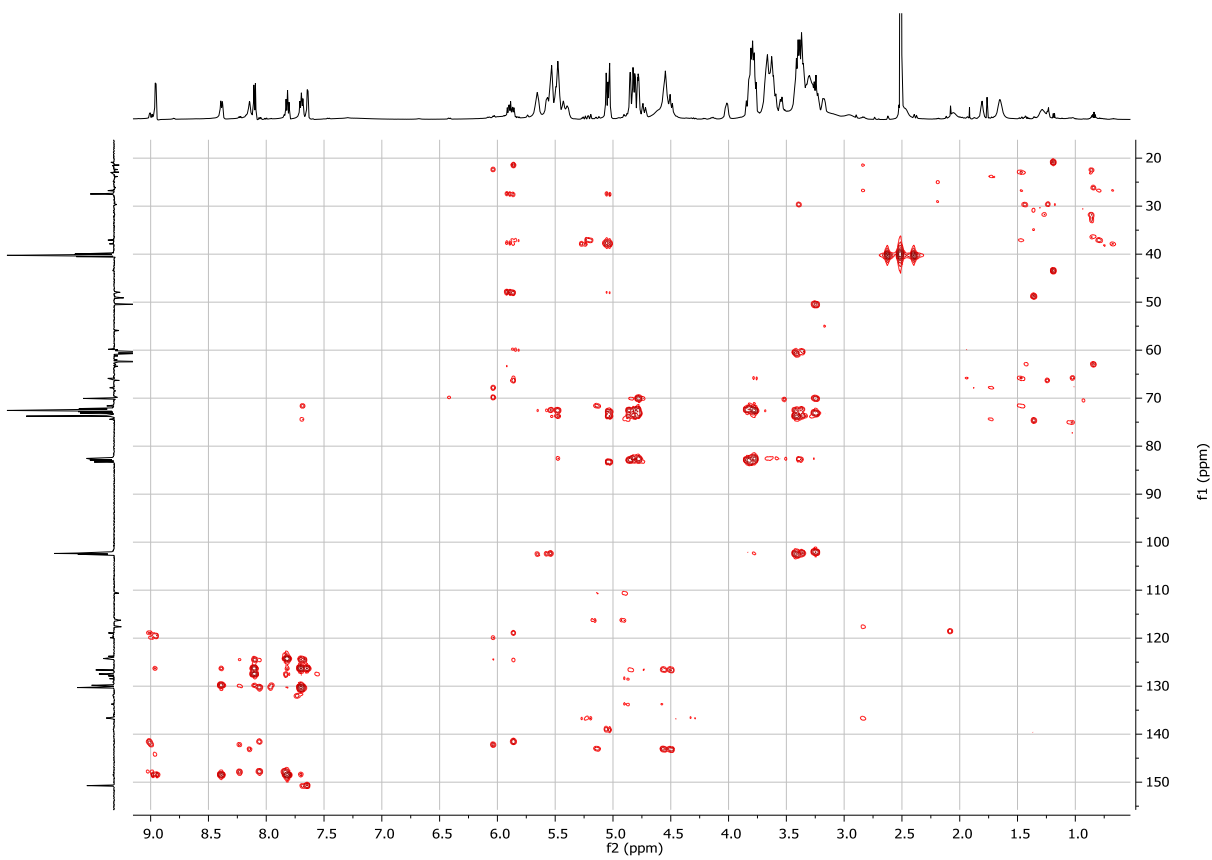
**Figure S5:**  $^{13}\text{C}$  DEPT spectrum of compound **4b**.



**Figure S6:**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound **4b**.



**Figure S7:** HSQC spectrum of compound **4b**.



**Figure S8:** HMBC spectrum of compound **4b**.

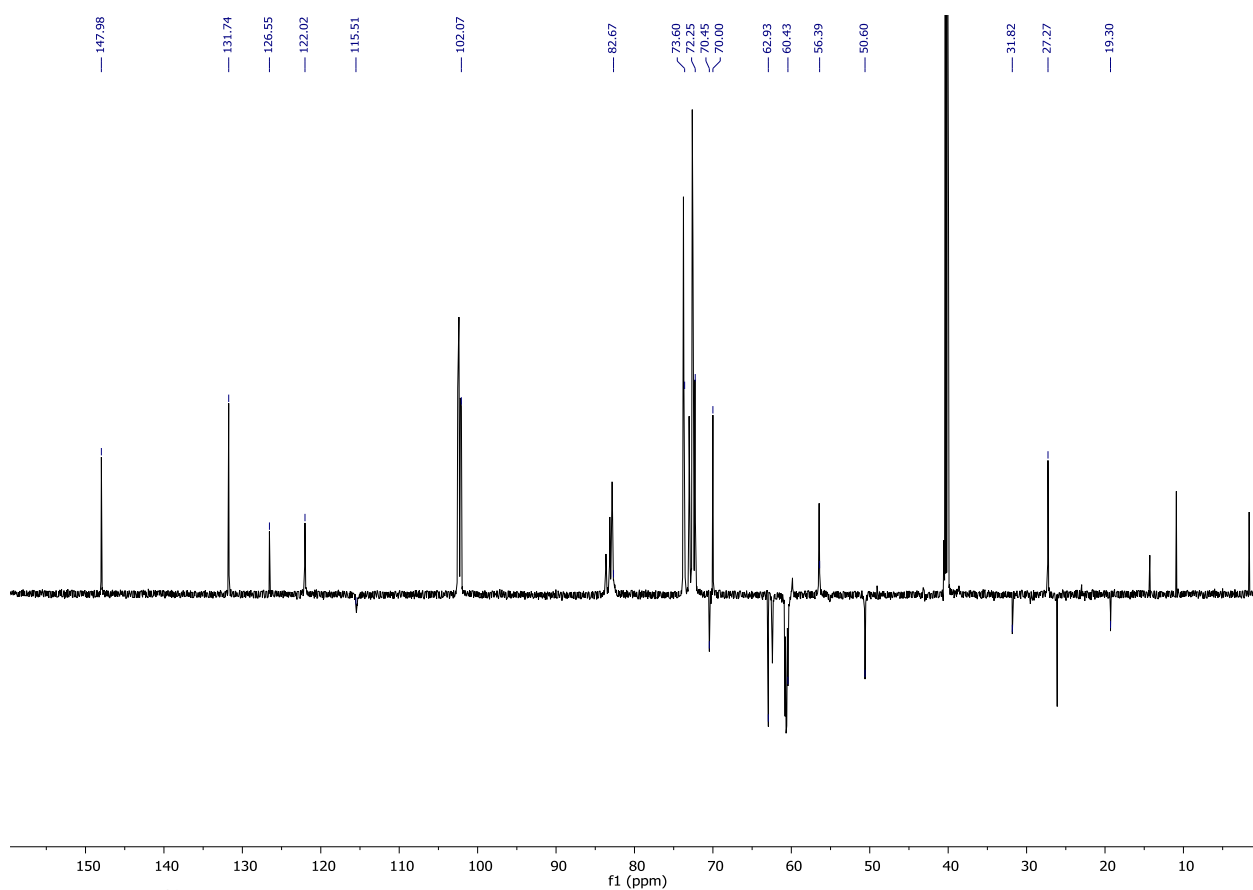


Figure S9:  $^{13}\text{C}$  DEPT spectrum of compound **4c**.

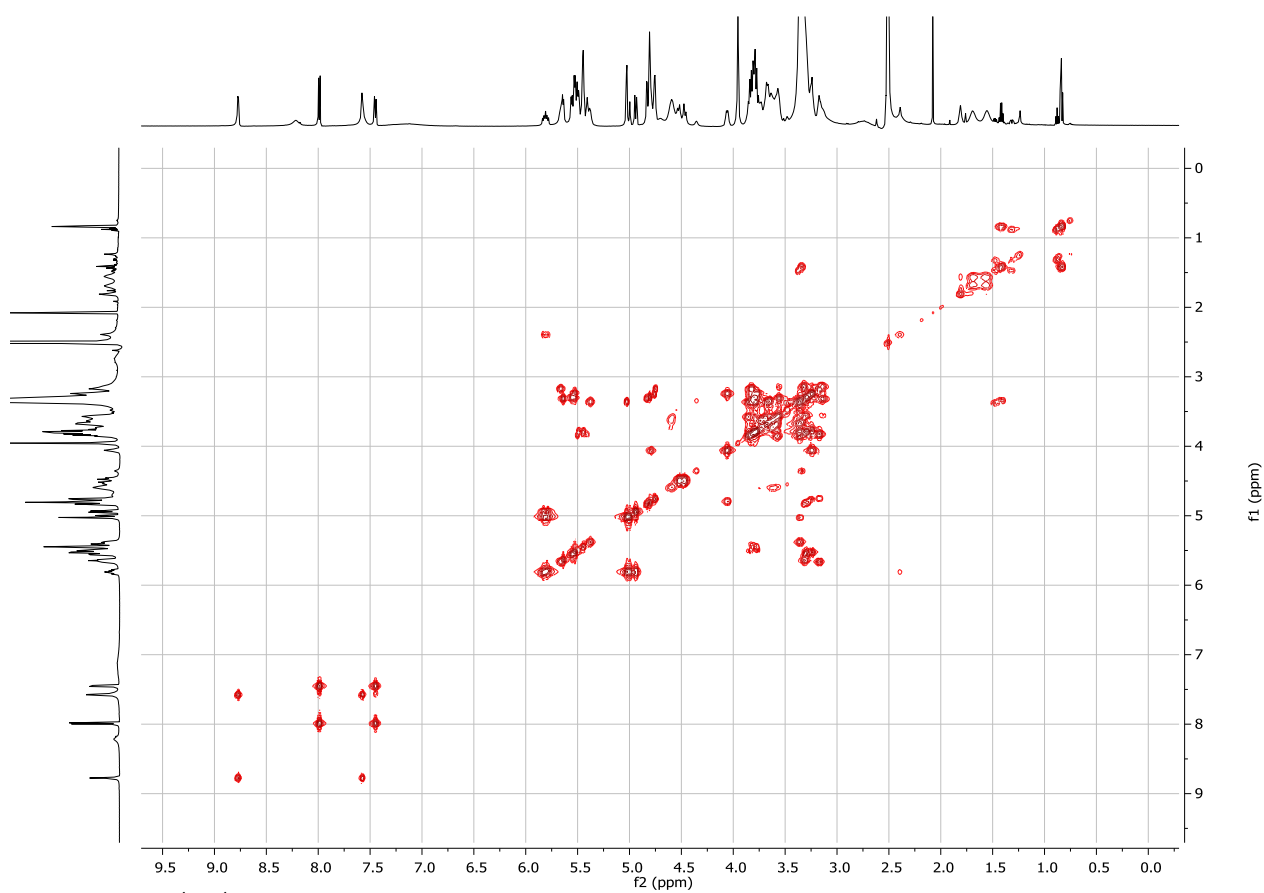
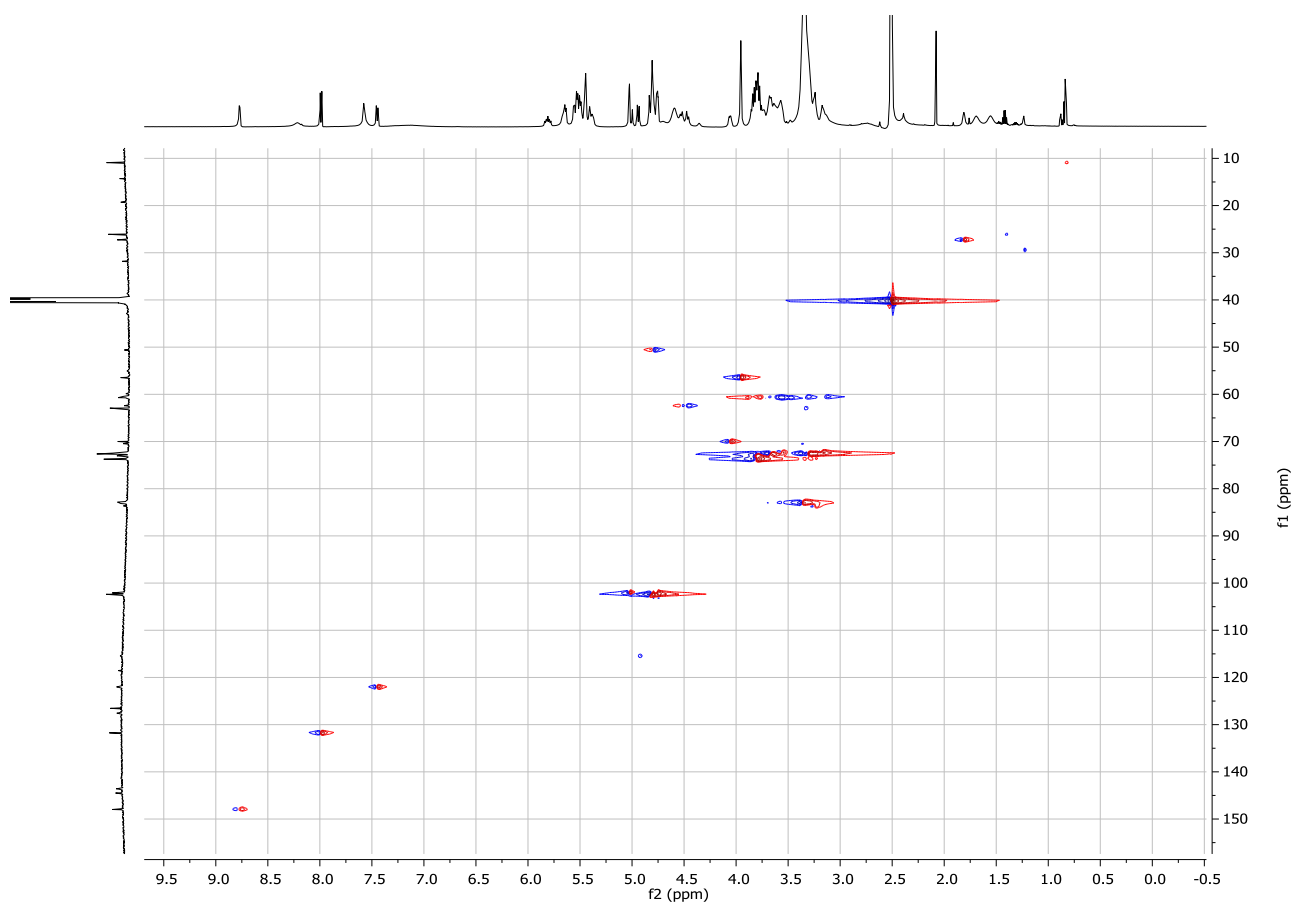
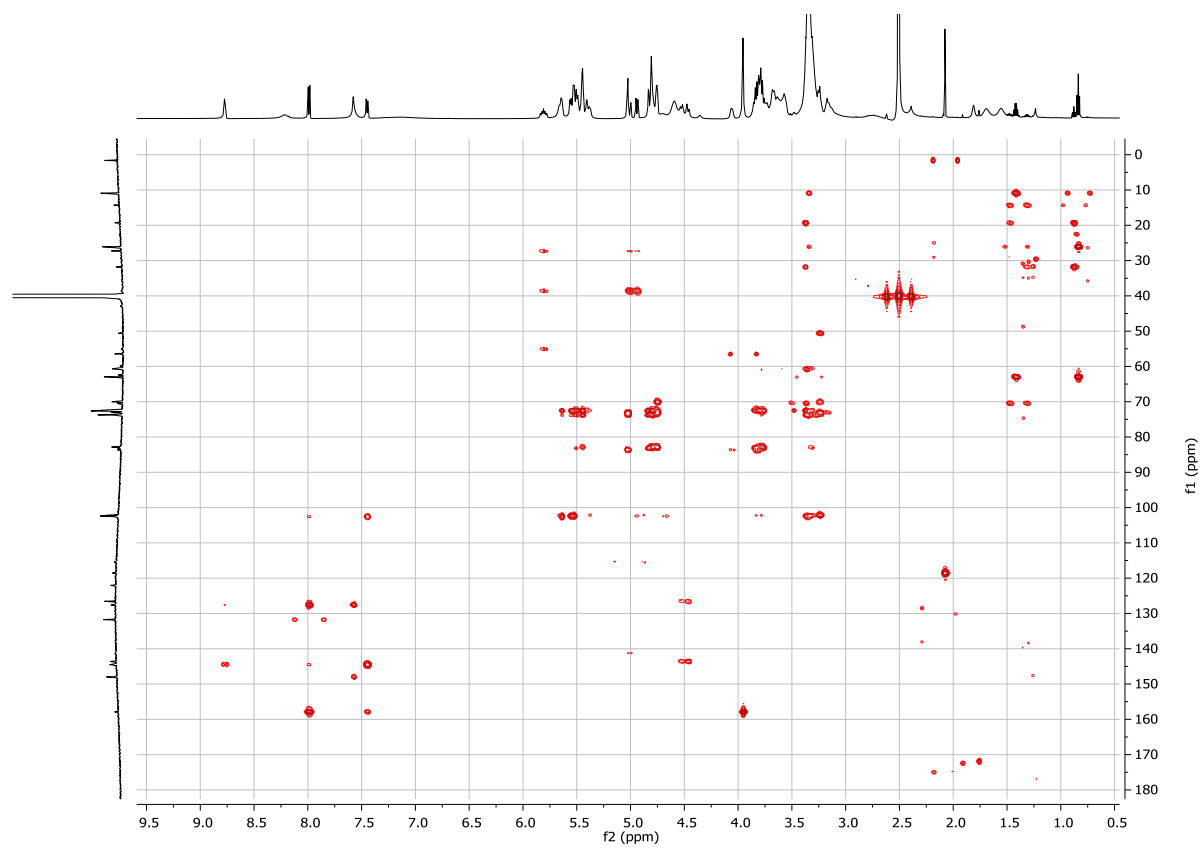


Figure S10:  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound **4c**.

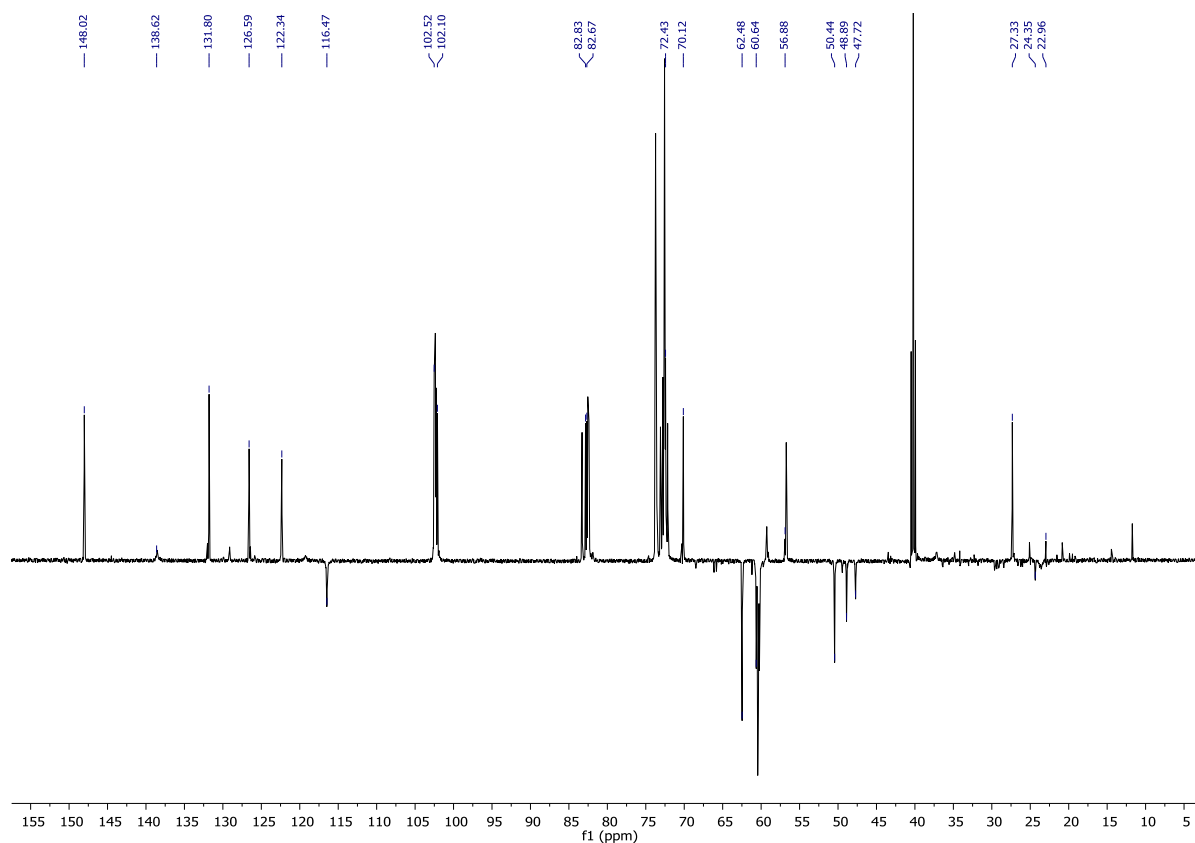


**Figure S11:** HSQC spectrum of compound **4c**.

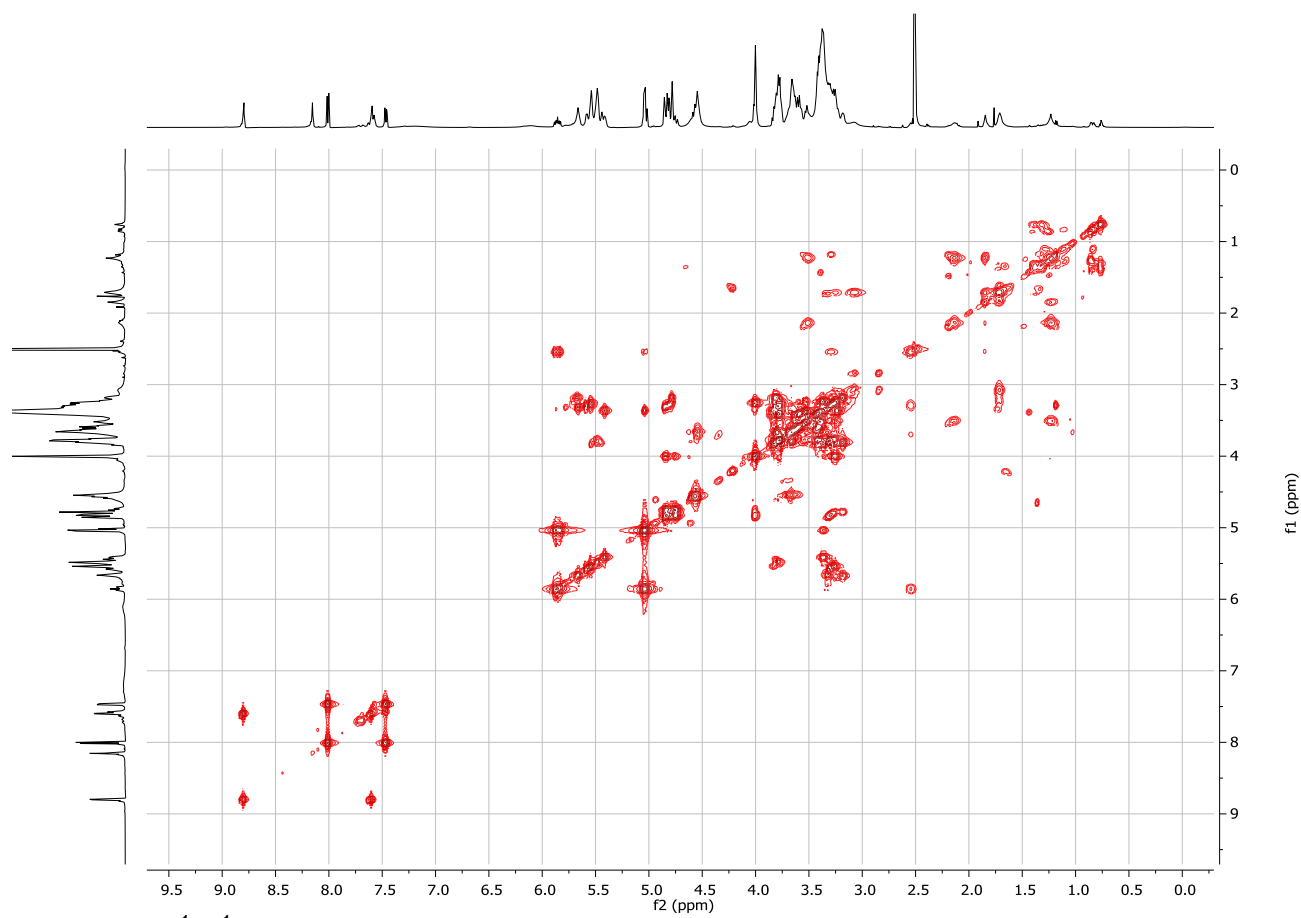


**Figure S12:** HMBC spectrum of compound **4c**.

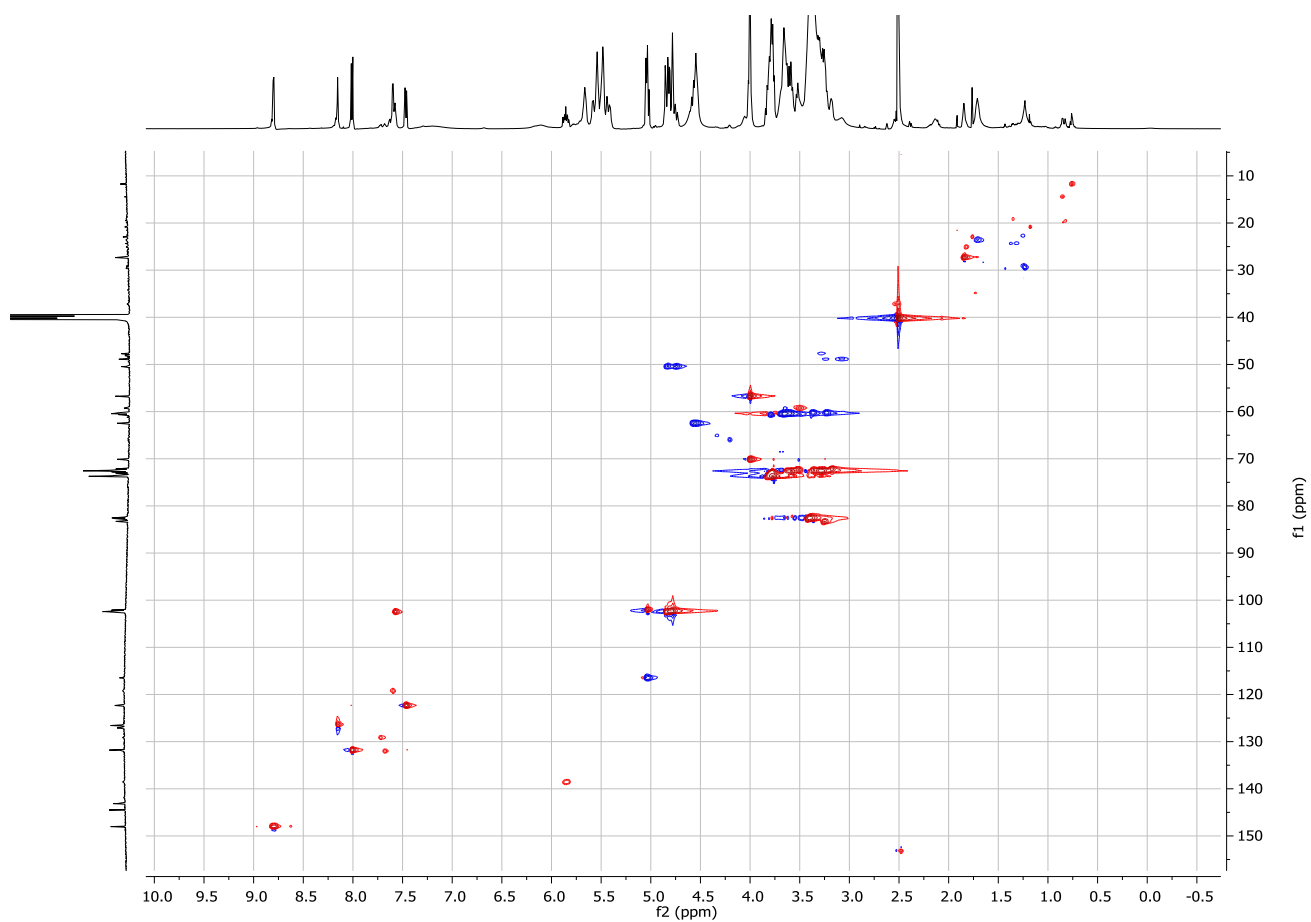




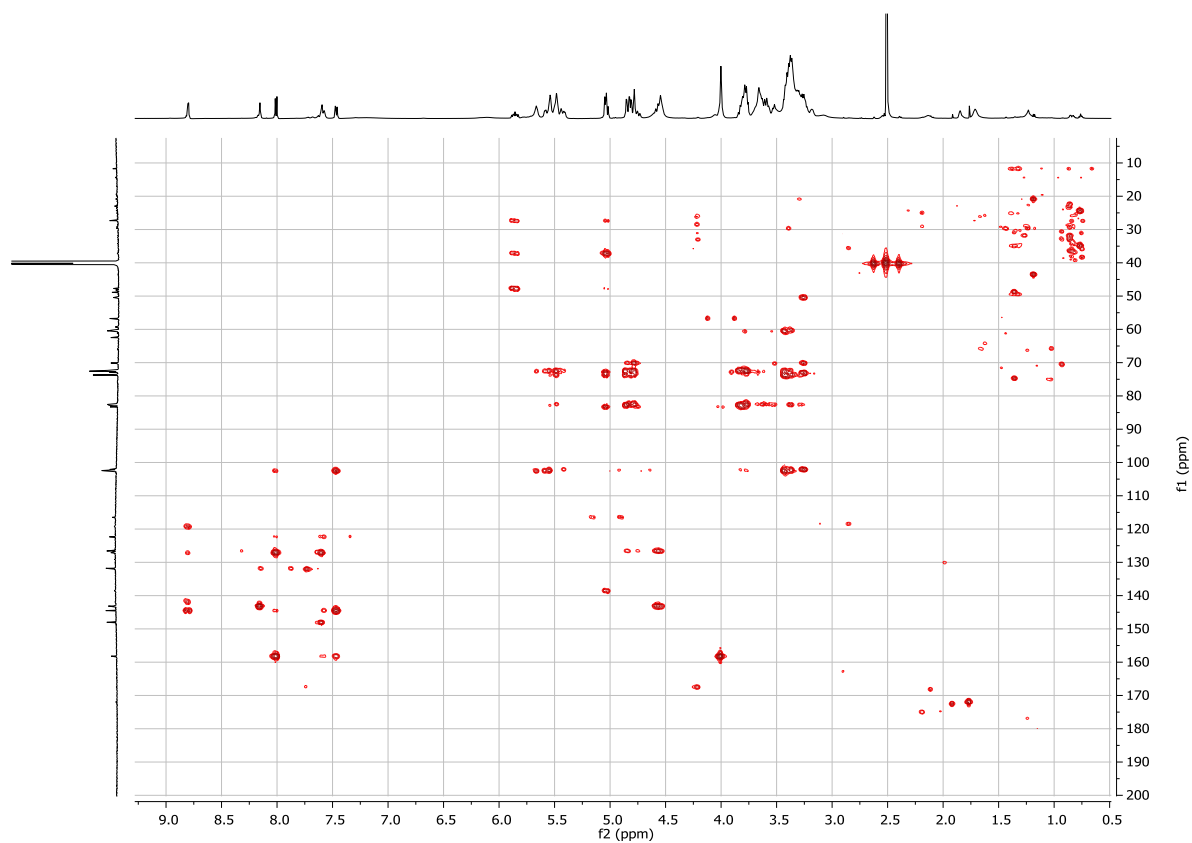
**Figure S13:**  $^{13}\text{C}$  DEPT spectrum of compound **4d**.



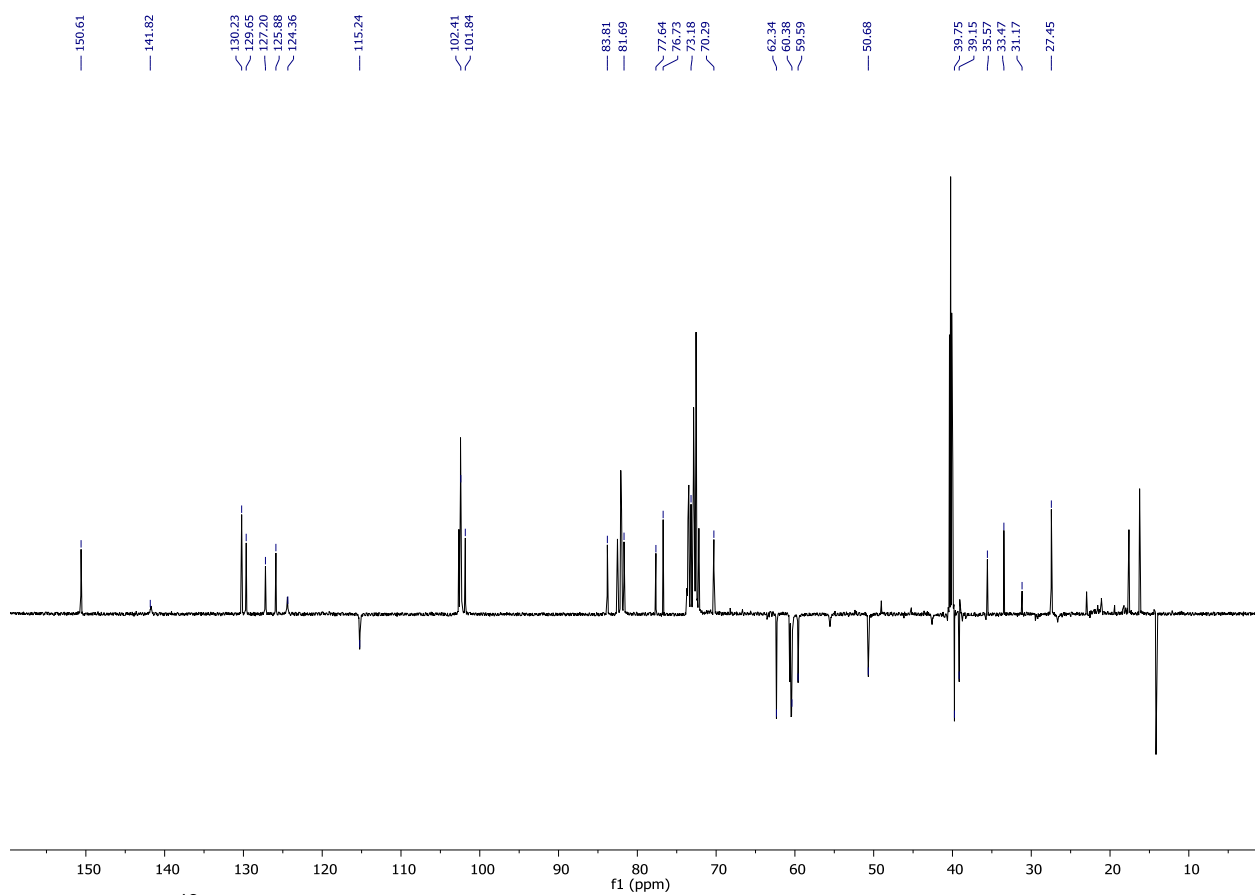
**Figure S14:**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound **4d**.



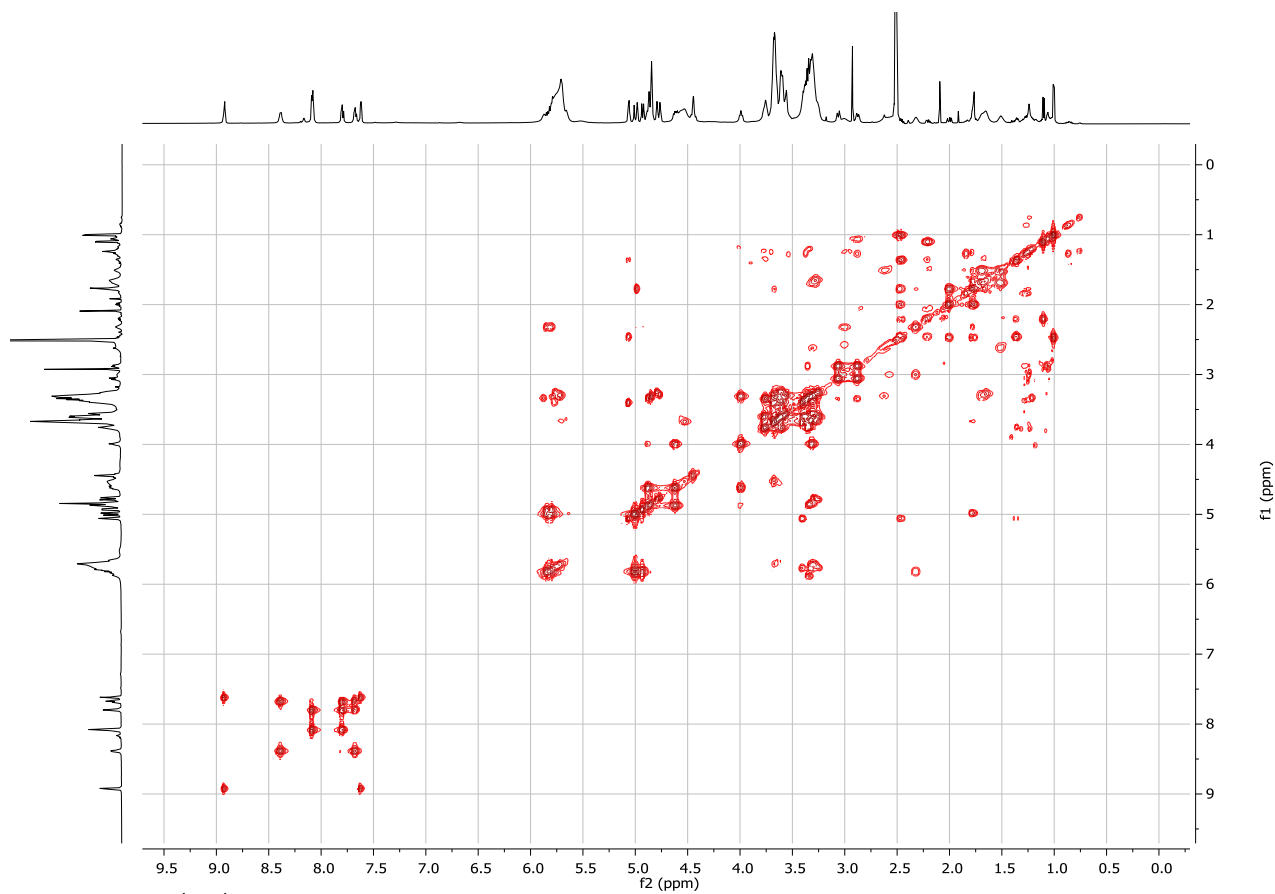
**Figure S15:** HSQC spectrum of compound **4d**.



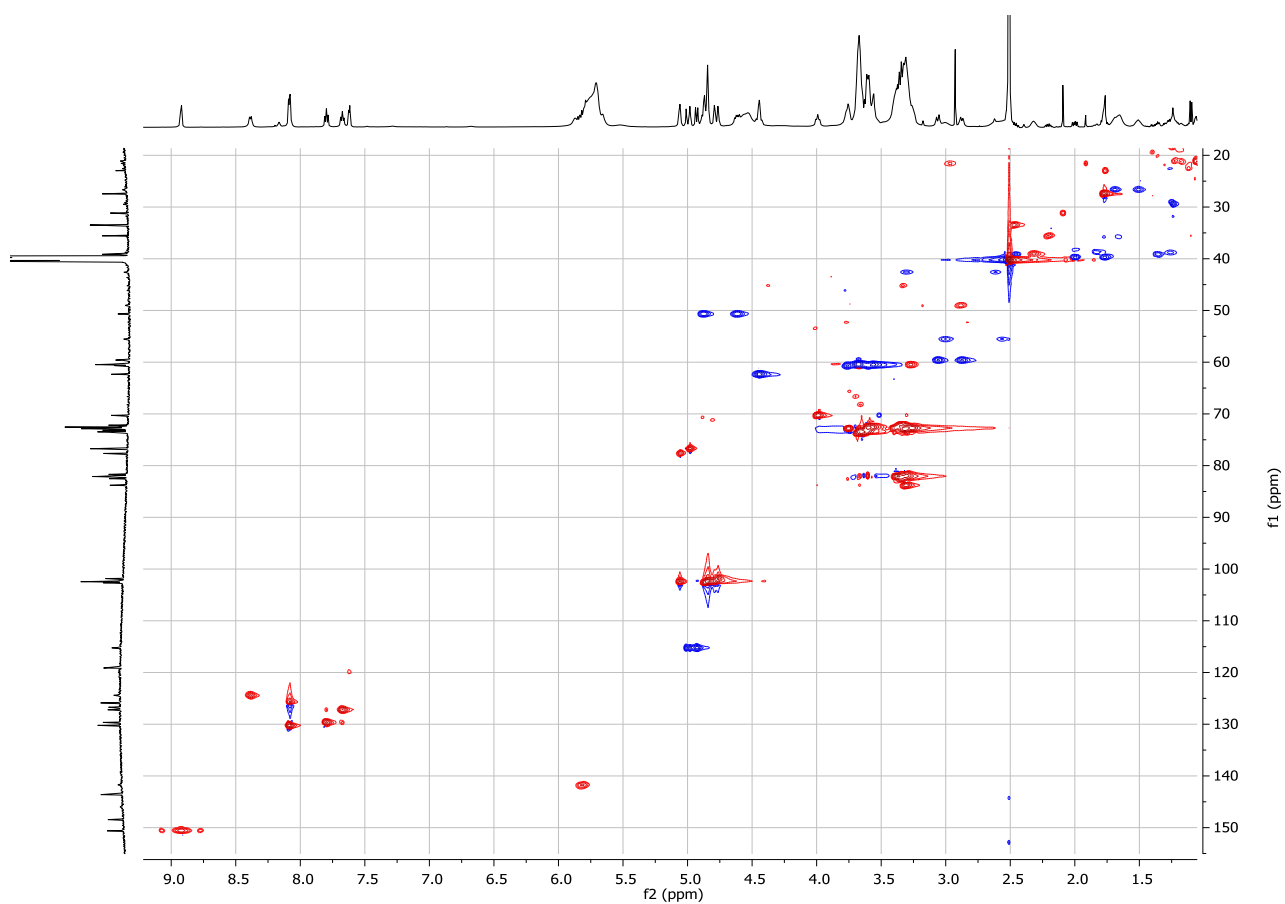
**Figure S16:** HMBC spectrum of compound **4d**.



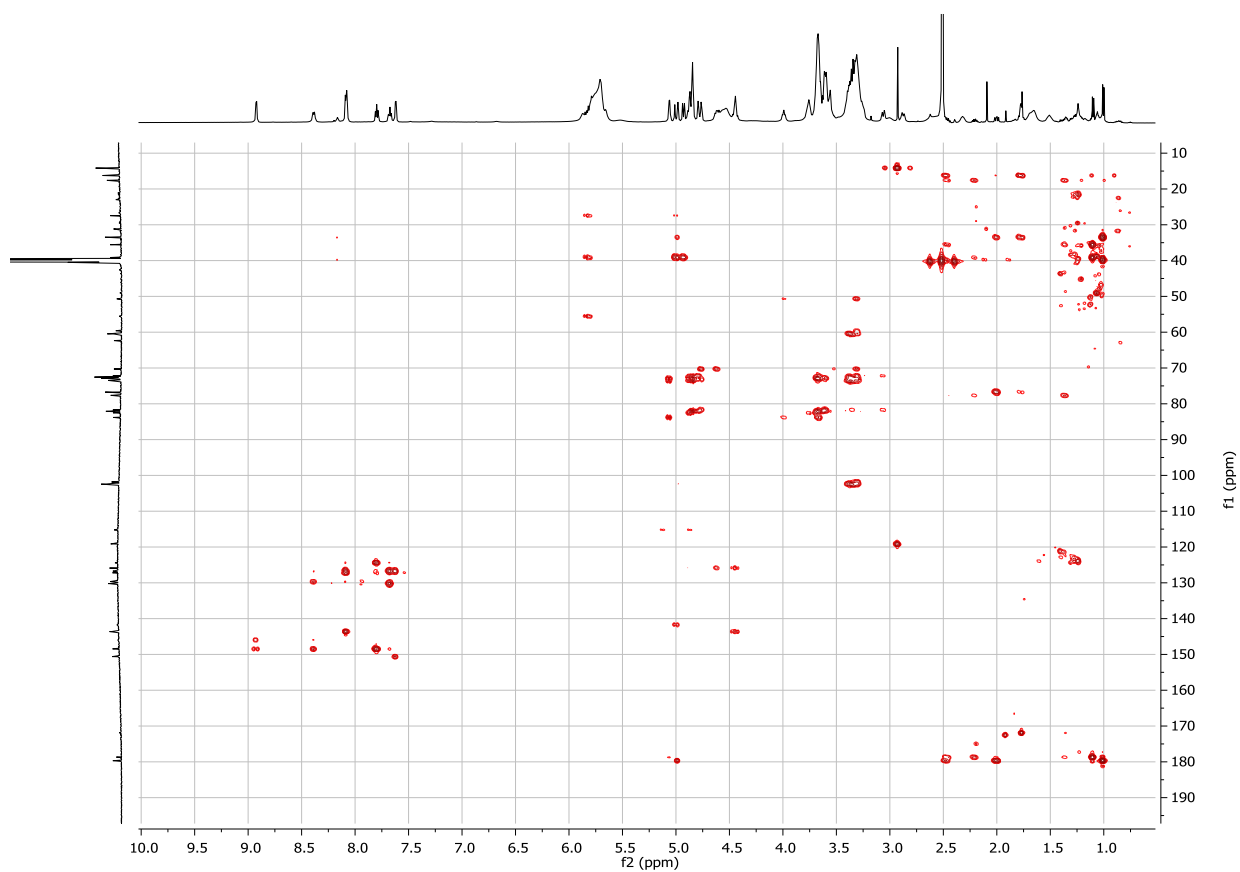
**Figure S17:**  $^{13}\text{C}$  DEPT spectrum of compound **5a**.



**Figure S18:**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound **5a**.



**Figure S19:** HSQC spectrum of compound **5a**.



**Figure S20:** HMBC spectrum of compound **5a**.

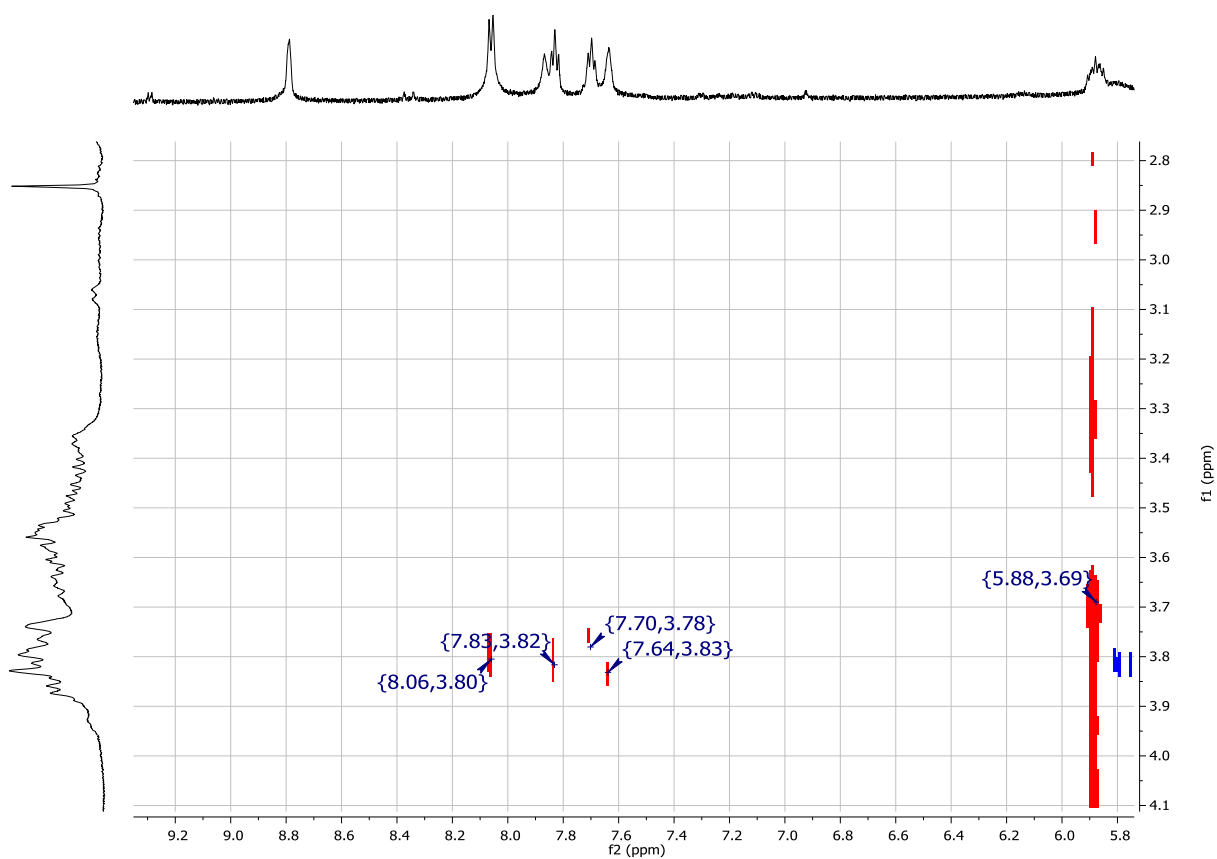


Figure **S21**: The part of 2D ROESY spectrum of compound **5a**.

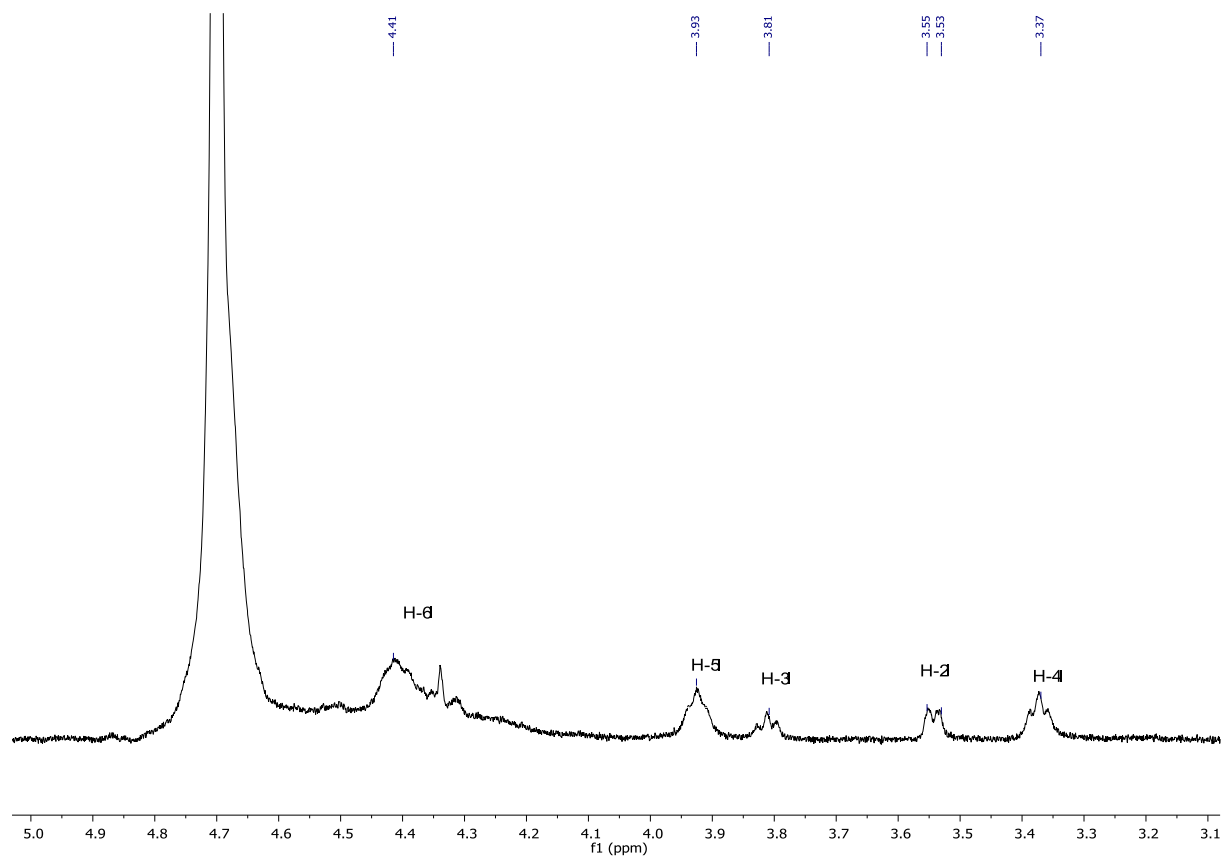
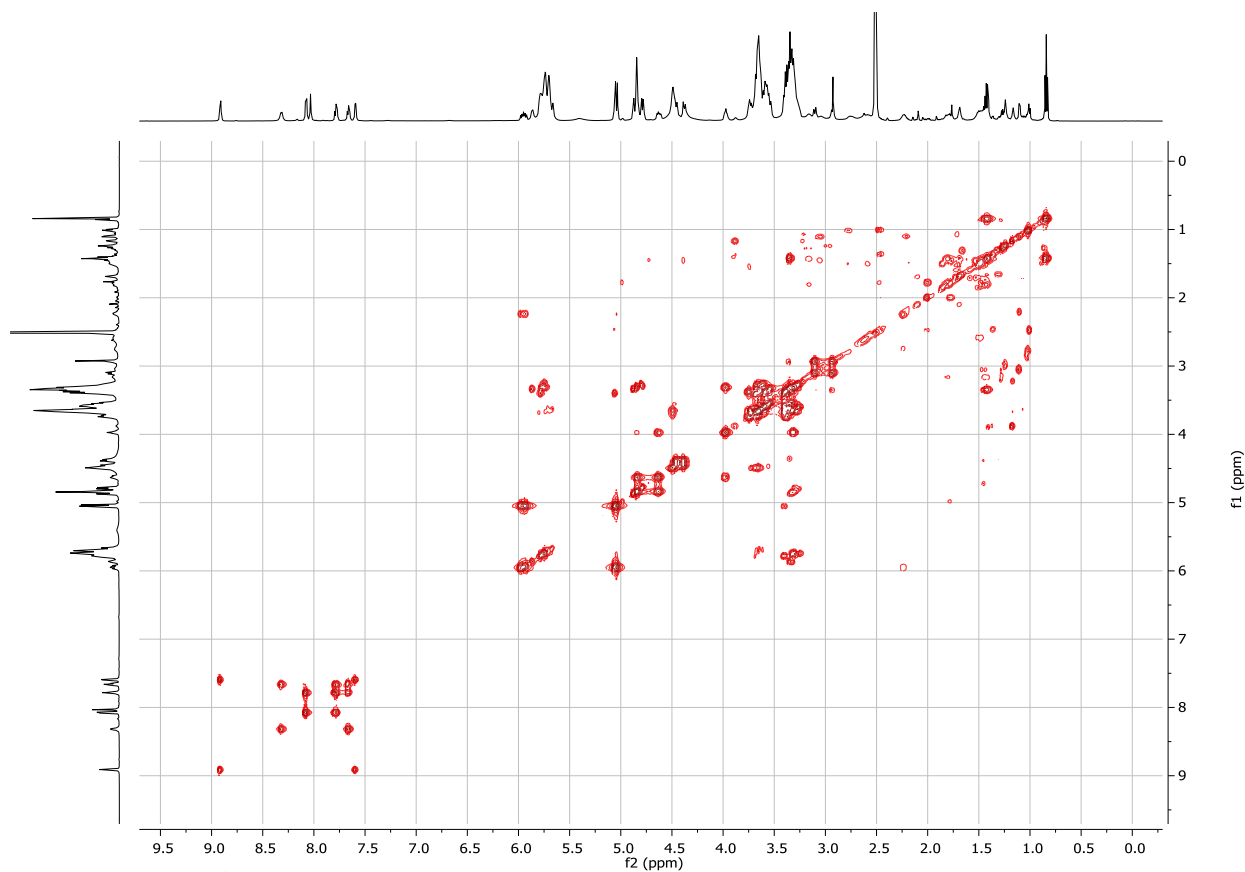
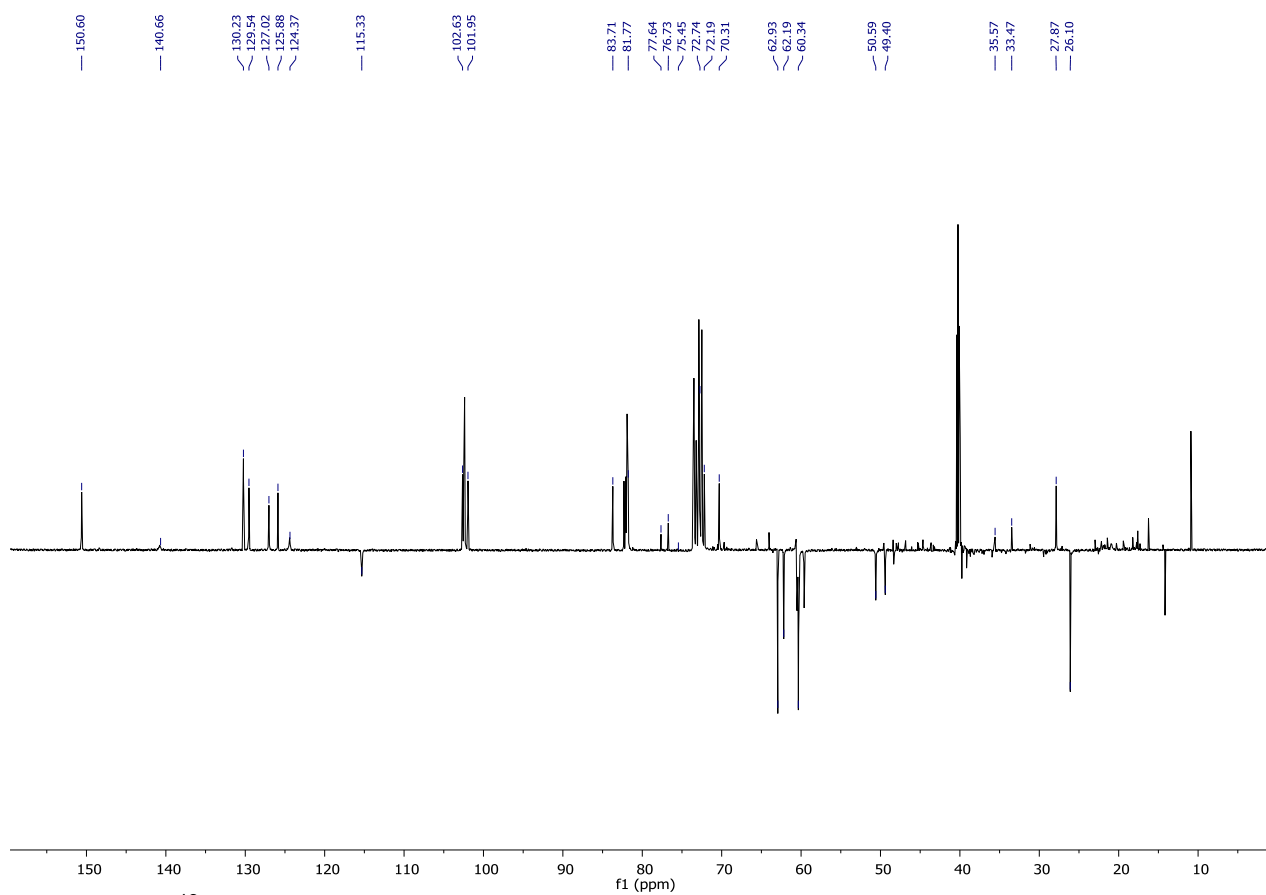


Figure **S22**: 1D TOCSY spectrum of compound **5a**.



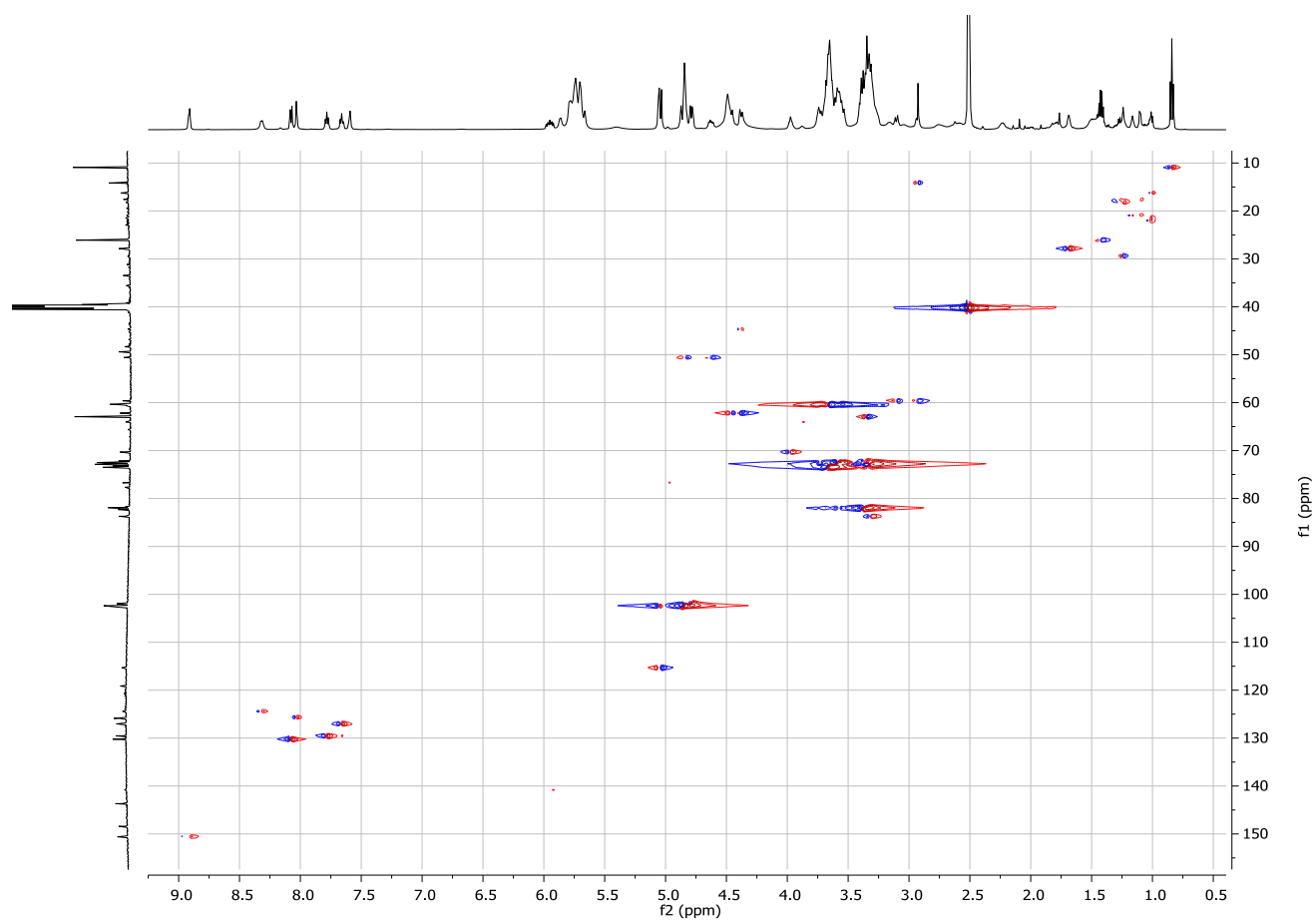


Figure S25: HSQC spectrum of compound 5b.

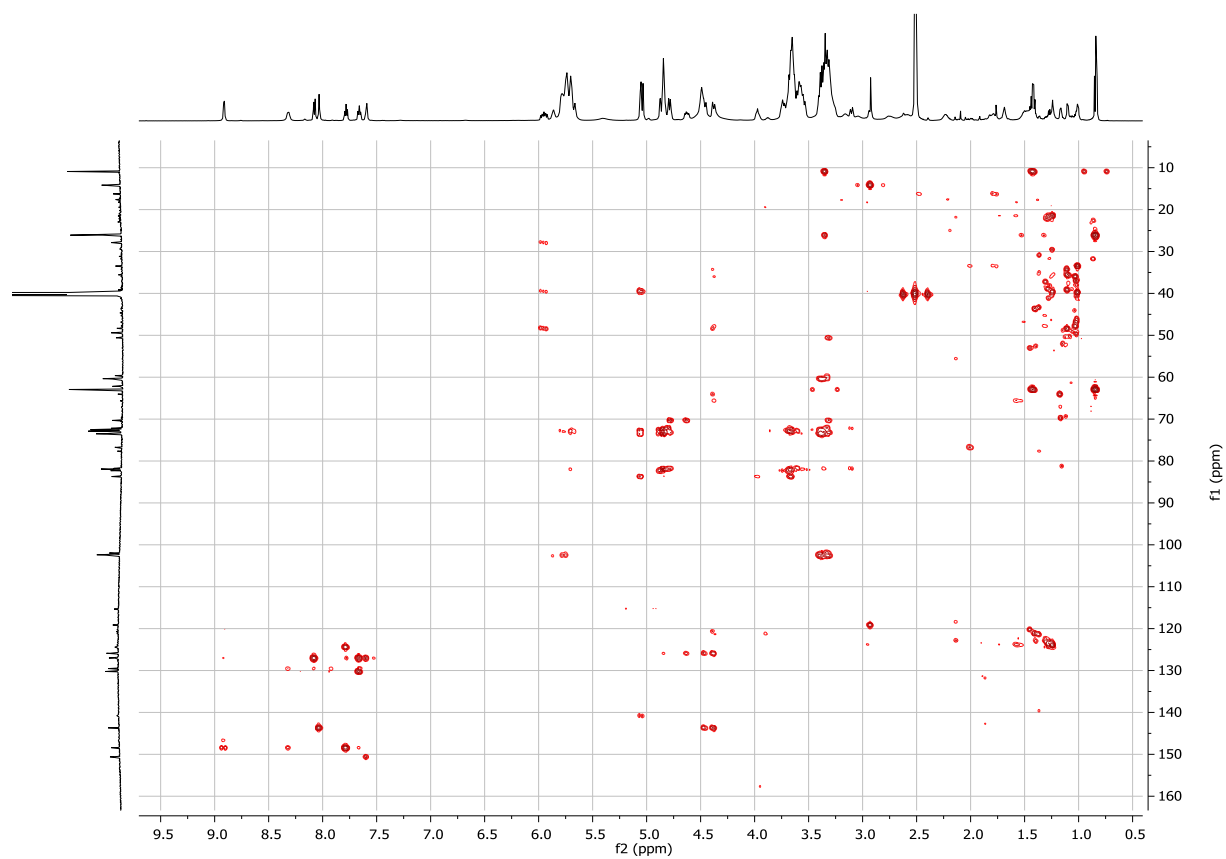
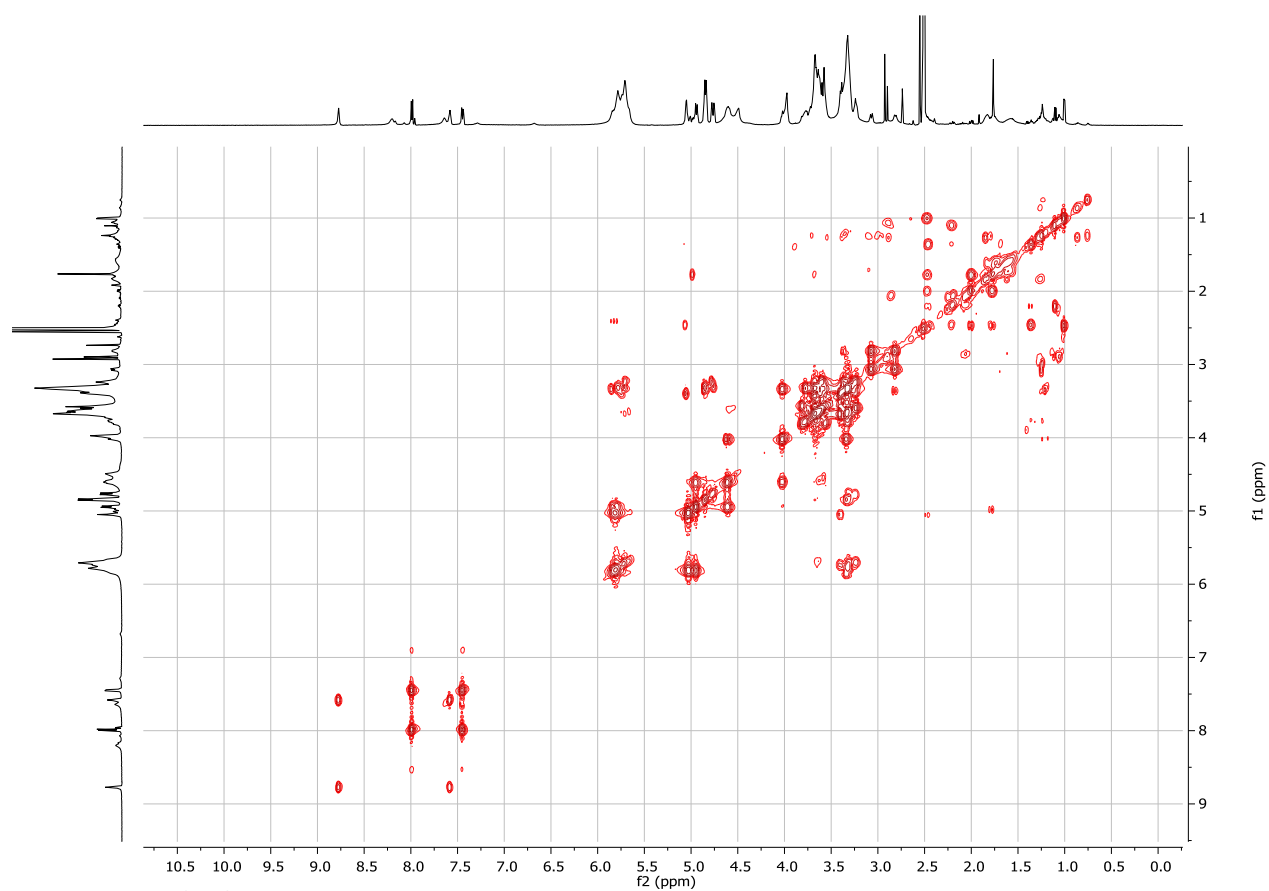
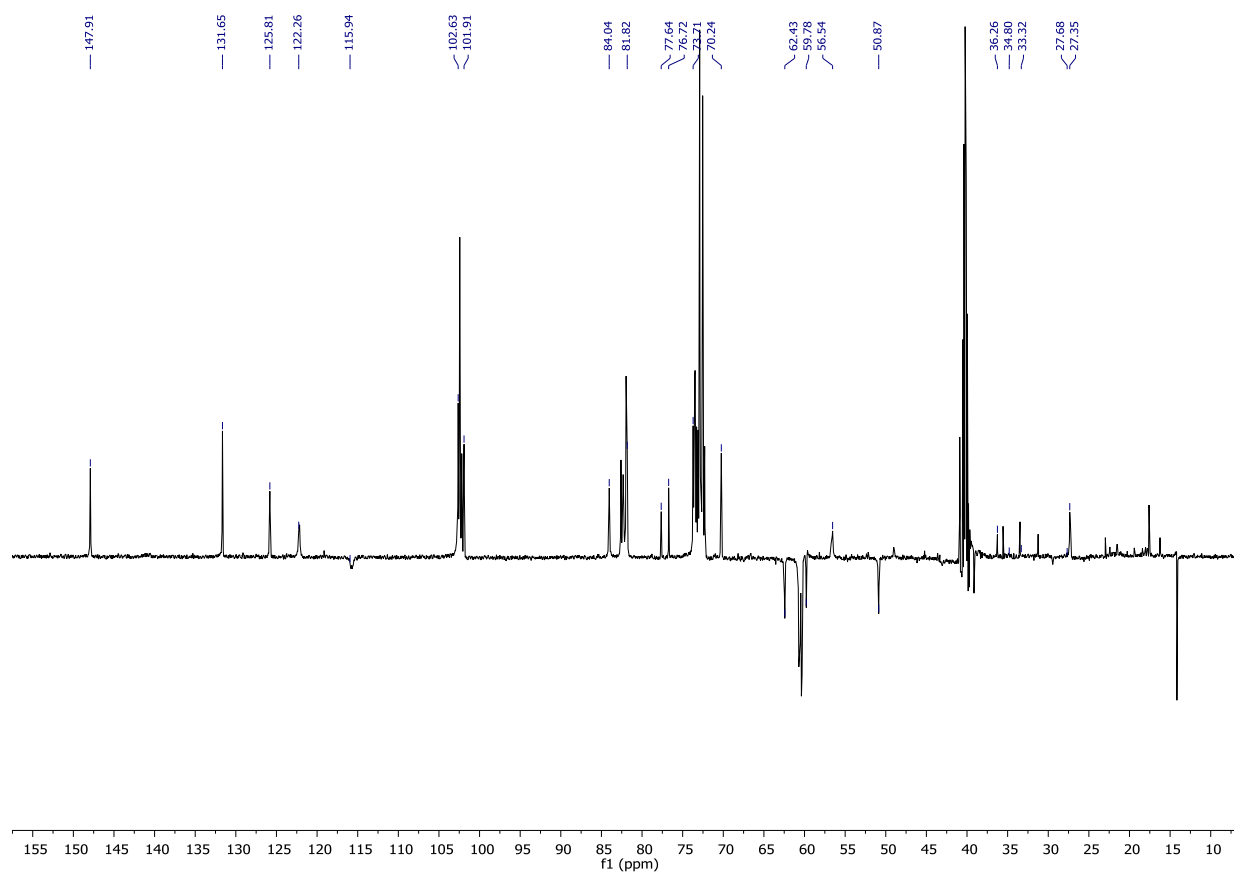
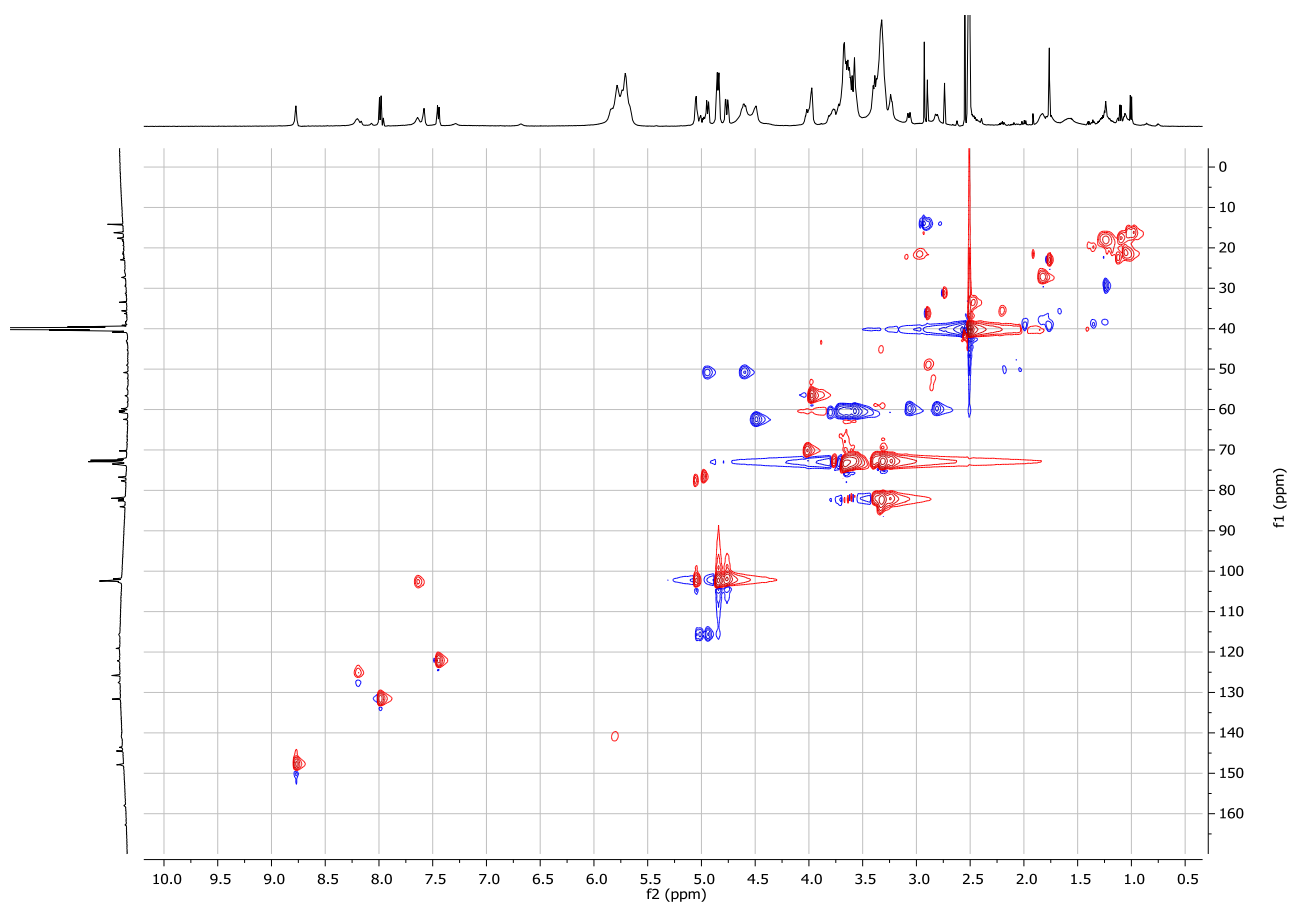


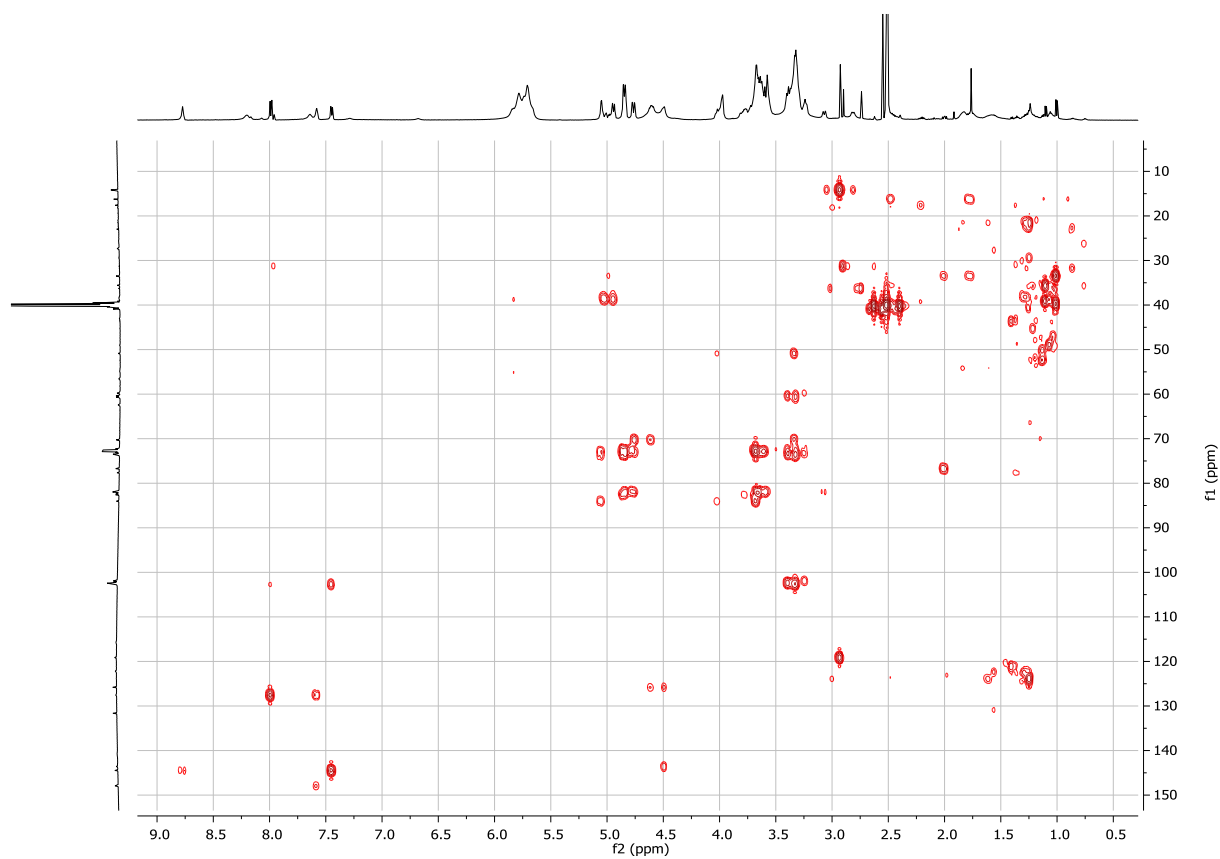
Figure S26: HMBC spectrum of compound 5b.



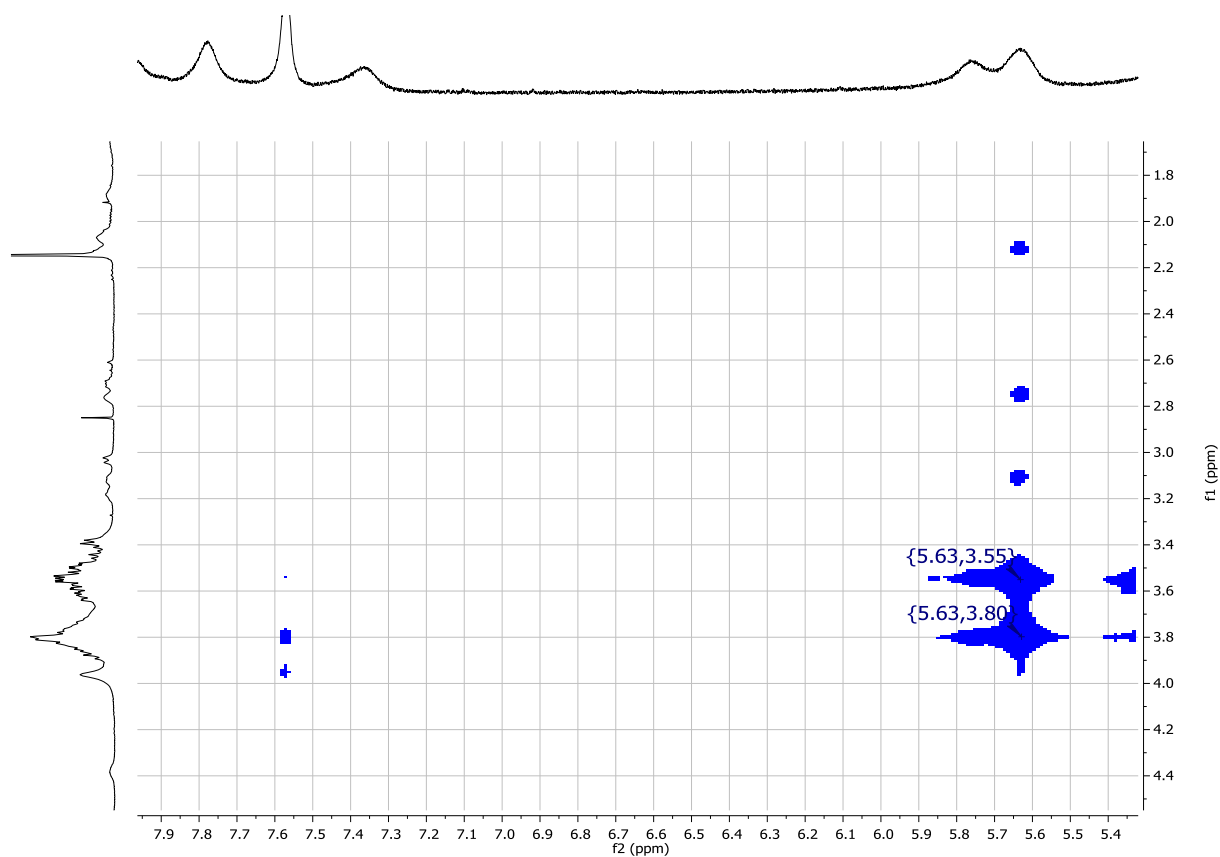




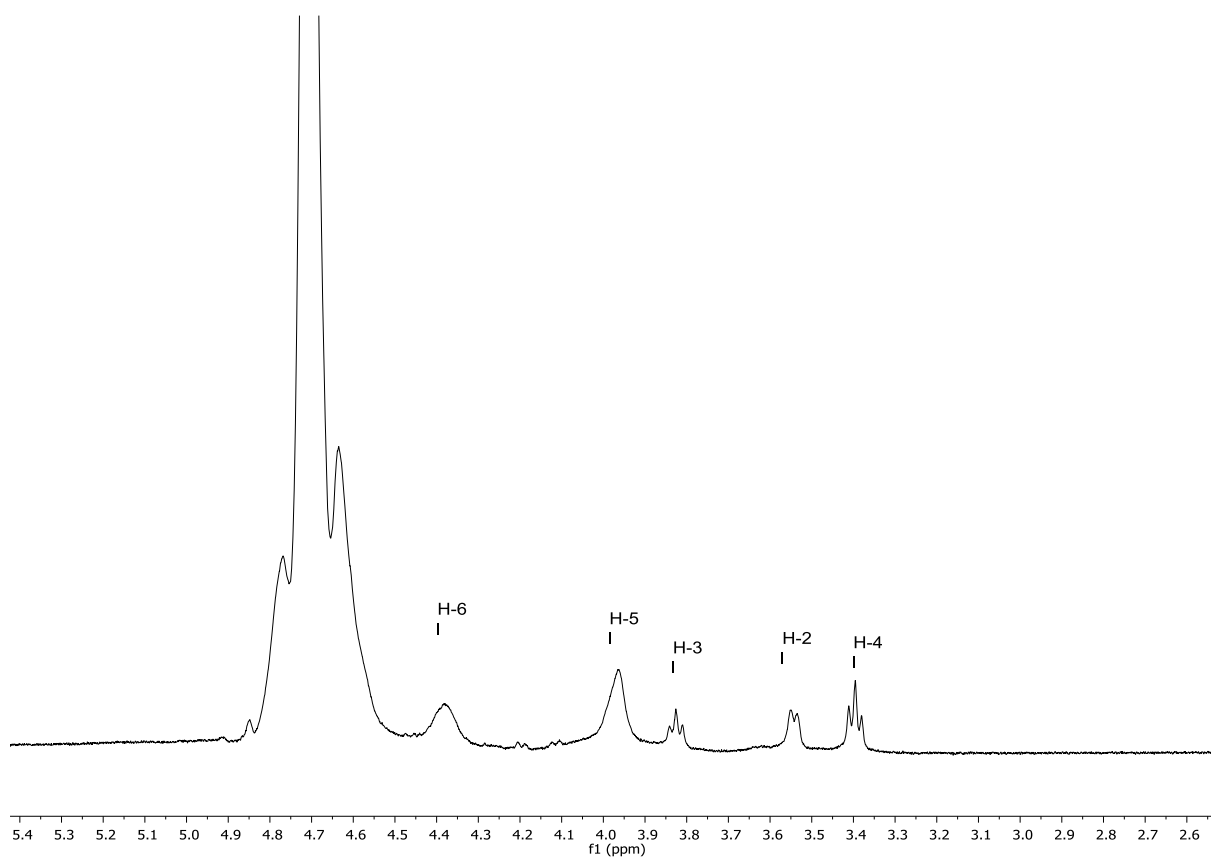
**Figure S29:** HSQC spectrum of compound **5c**.



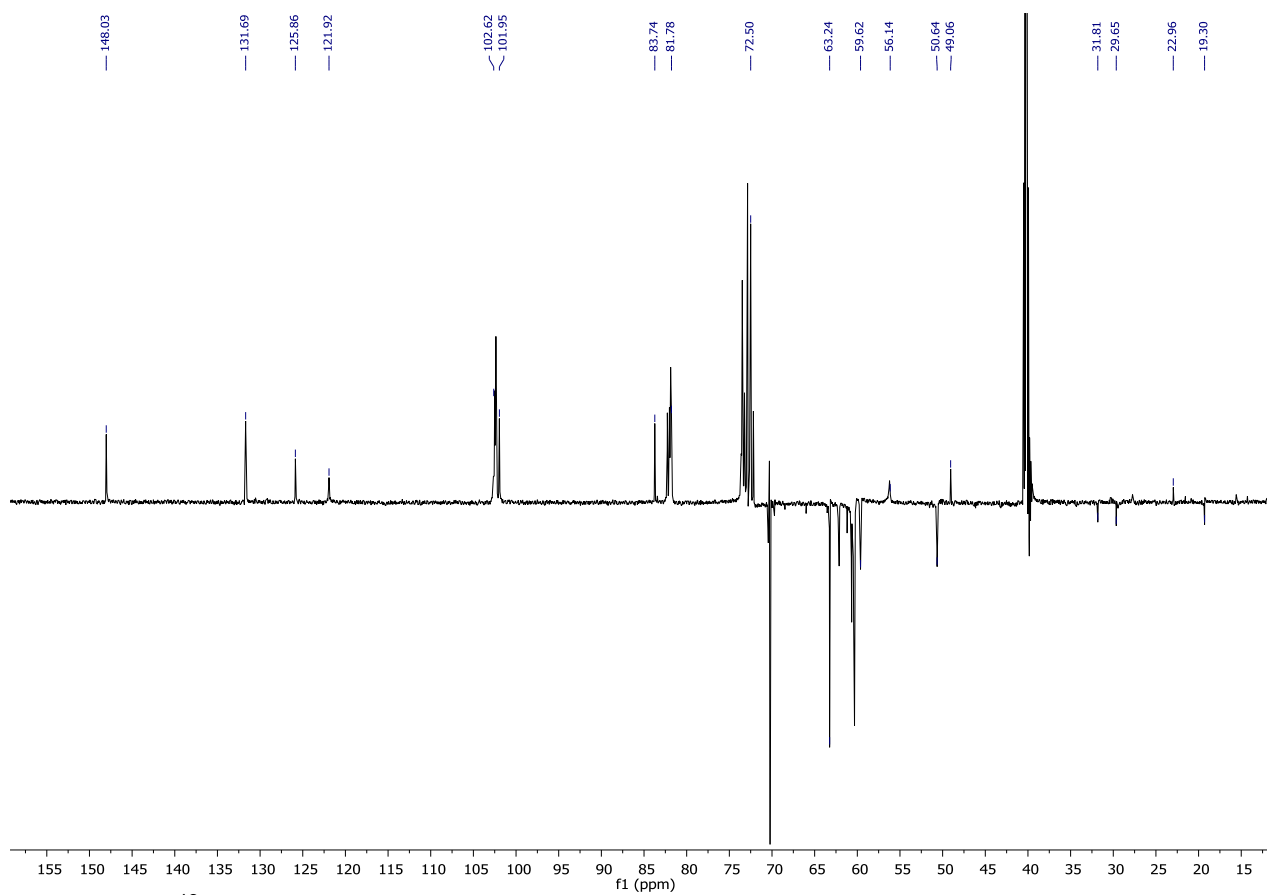
**Figure S30:** HMBC spectrum of compound **5c**.



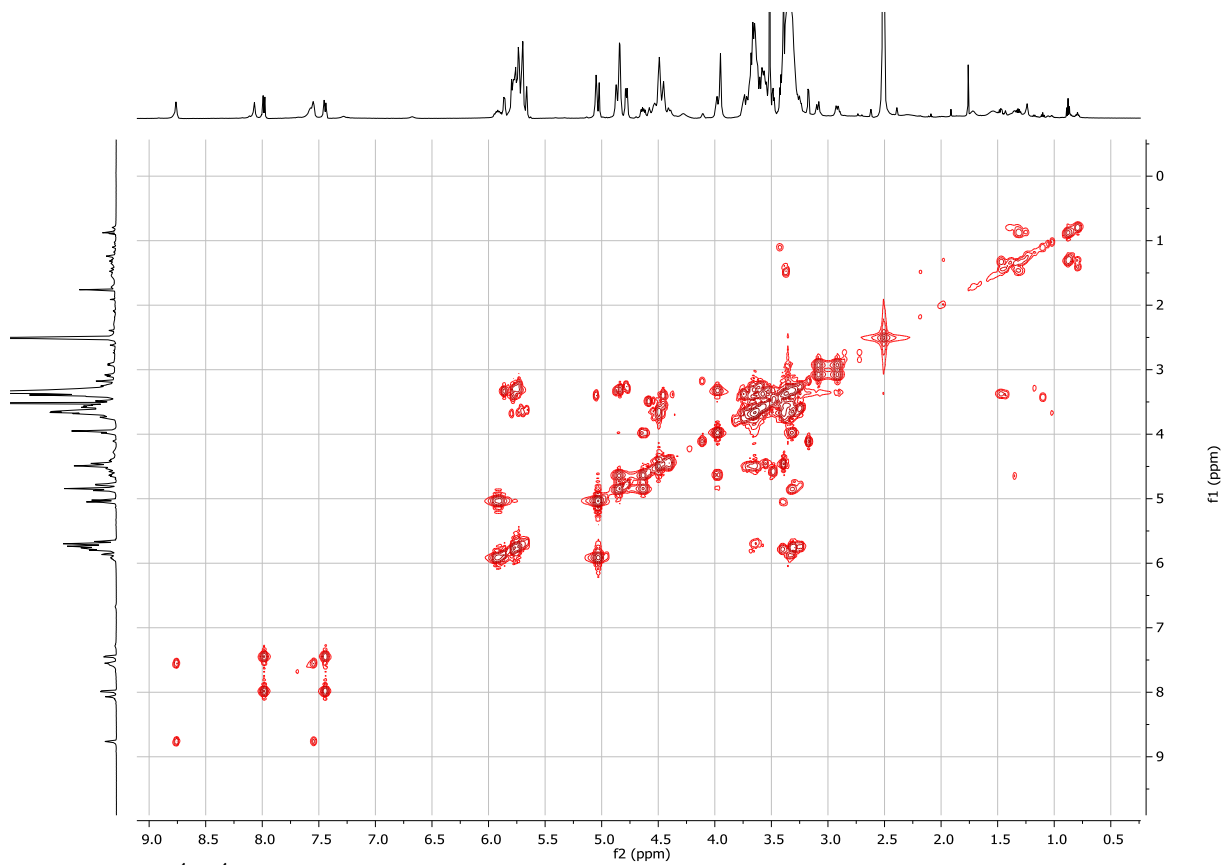
**Figure S31:** The part of 2D ROESY spectrum of compound **5c**.



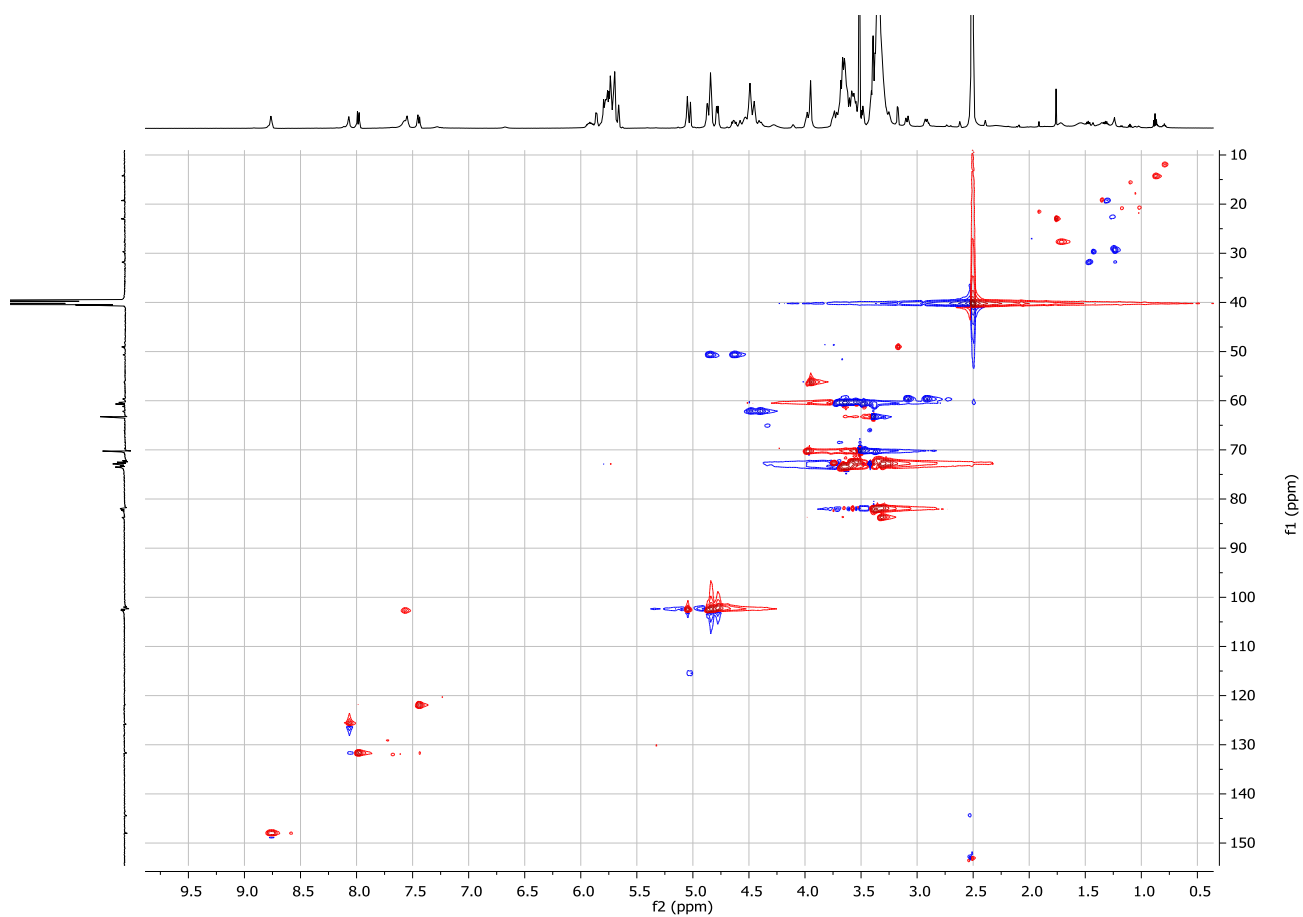
**Figure S32:** 1D TOCSY spectrum of compound **5c**.



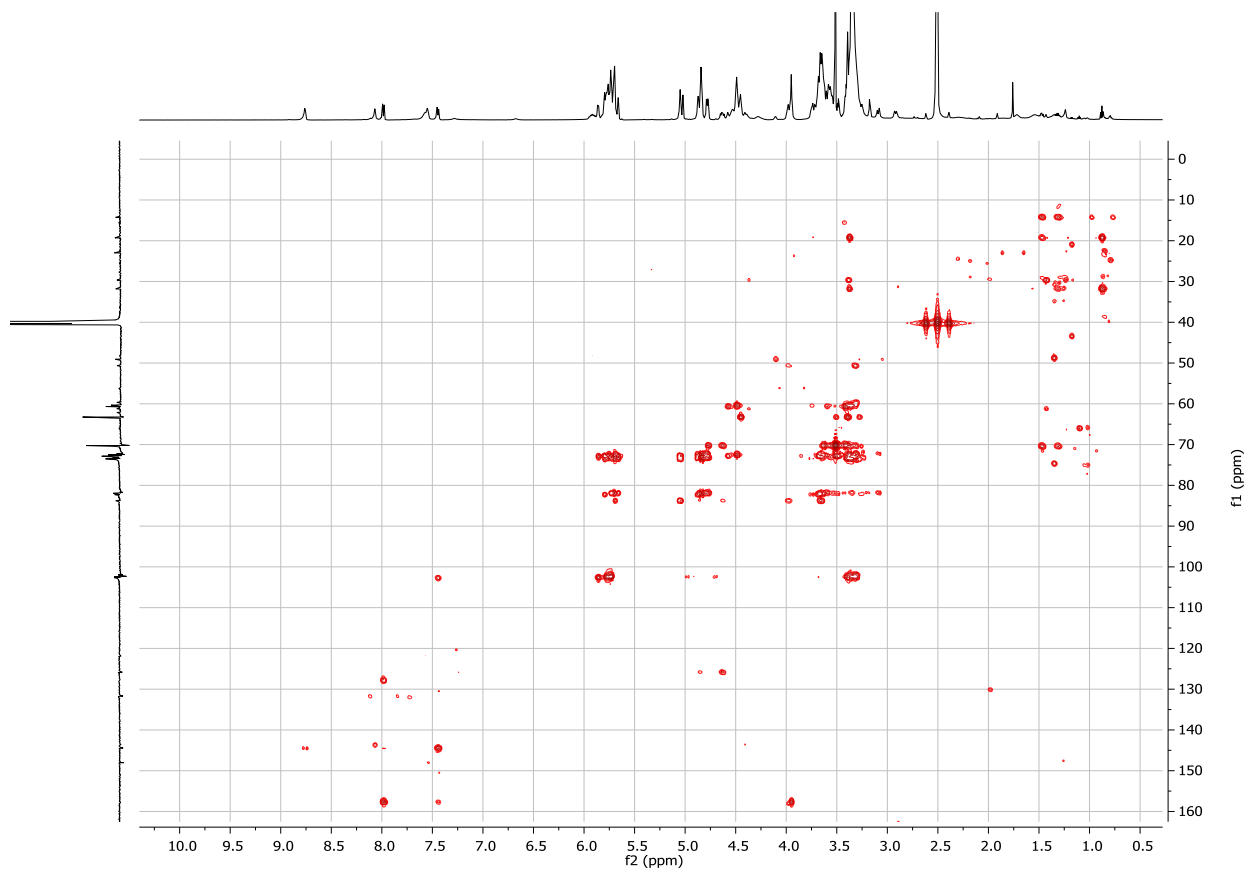
**Figure S33:**  $^{13}\text{C}$  DEPT spectrum of compound **5d**.



**Figure S34:**  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound **5d**.



**Figure S35:** HSQC spectrum of compound **5d**.



**Figure S36:** HMBC spectrum of compound **5d**.