



Supporting Information

for

New α - and β -cyclodextrin derivatives with cinchona alkaloids used in asymmetric organocatalytic reactions

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

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

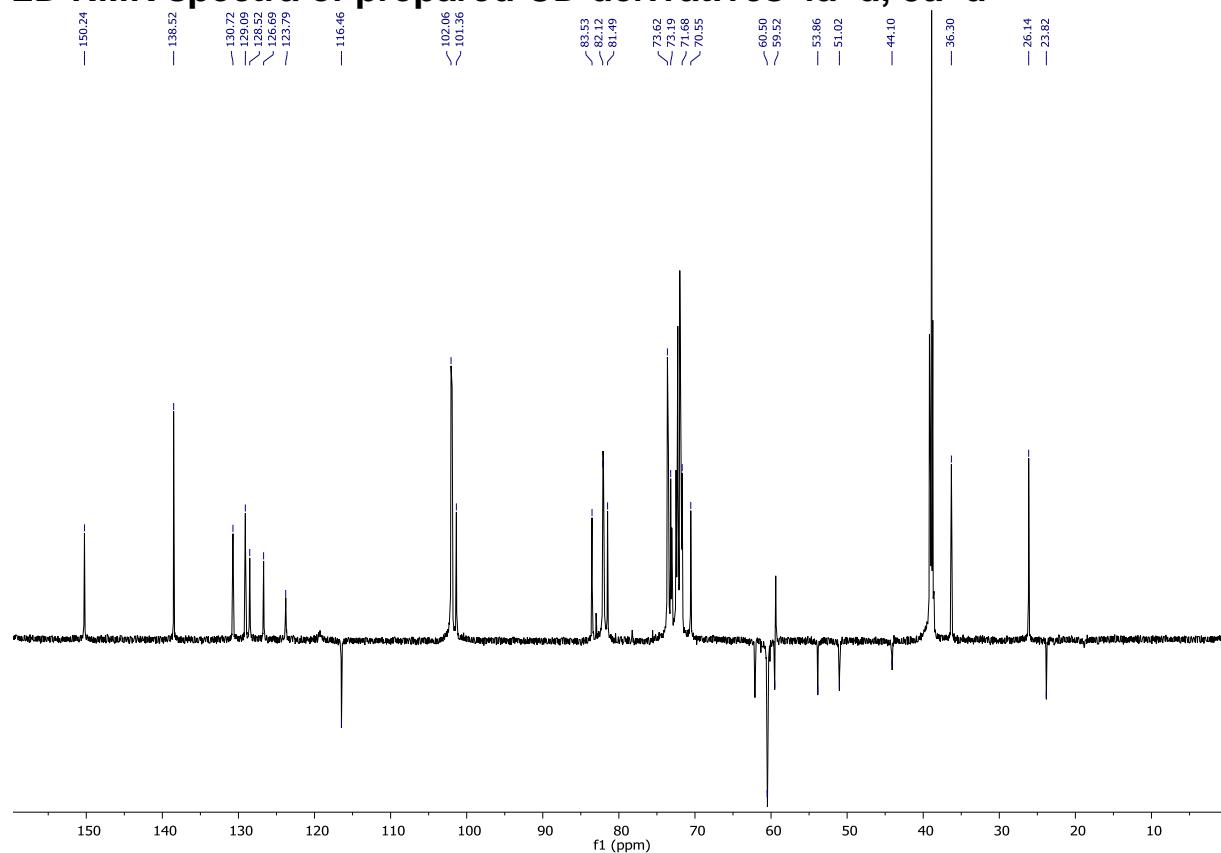


Figure S1: ¹³C DEPT spectrum of compound 4a.

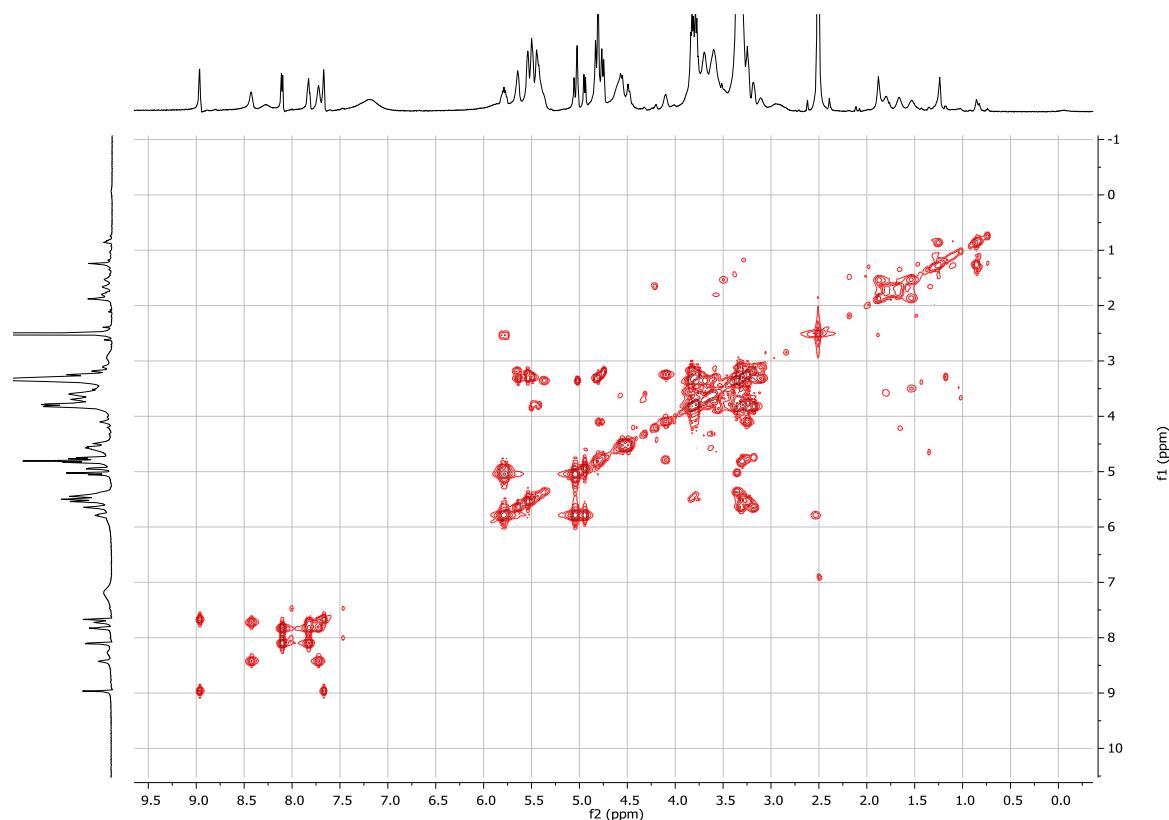


Figure S2: ¹H-¹H COSY spectrum of compound 4a.

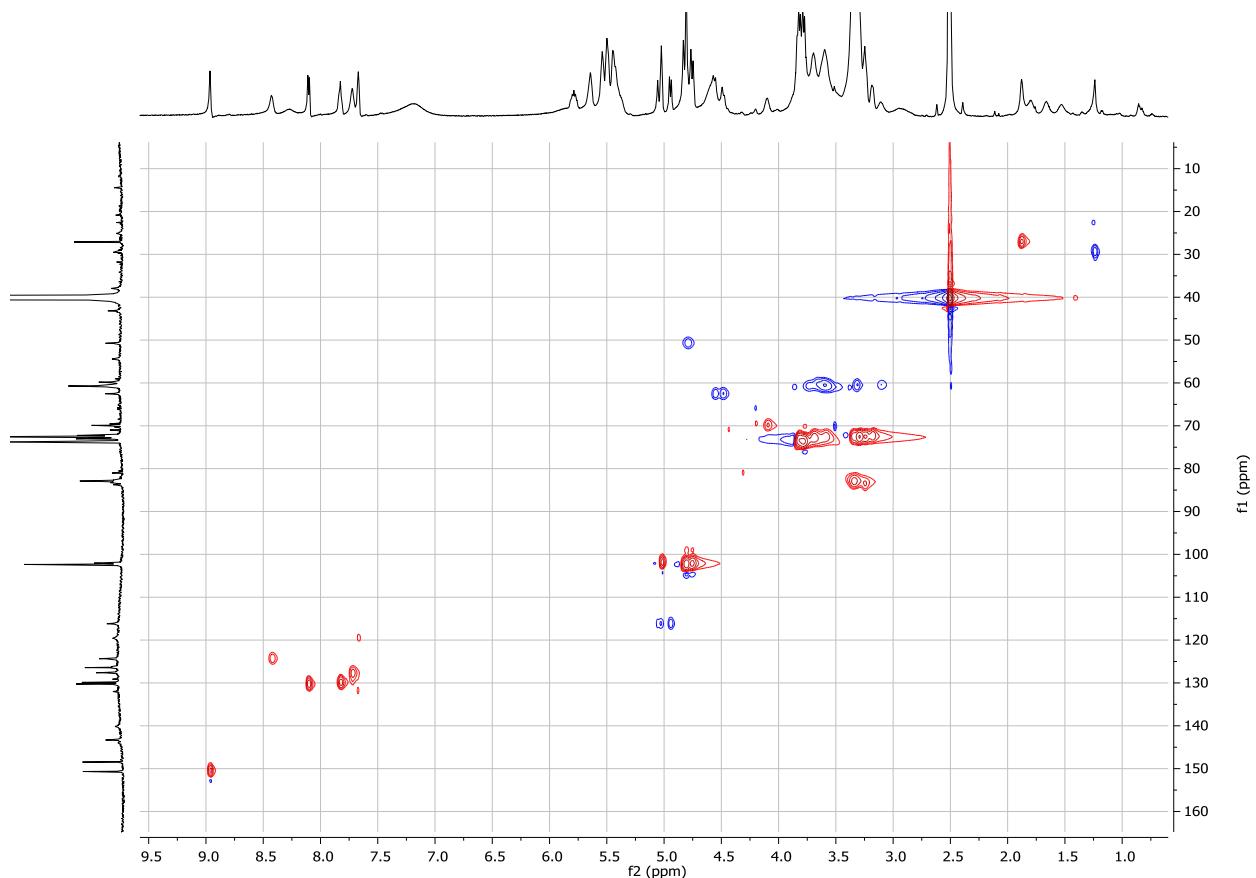


Figure S3: HSQC spectrum of compound **4a**.

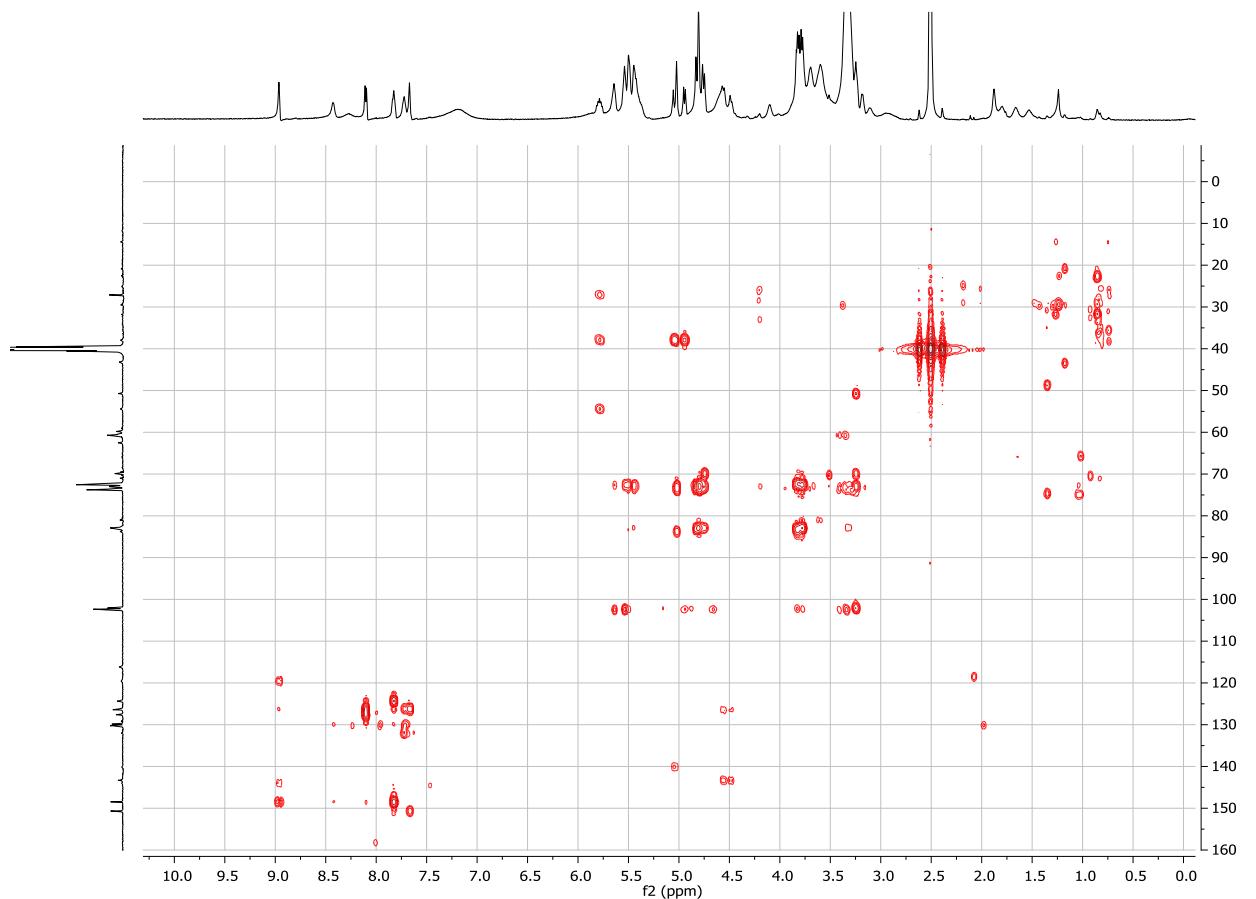


Figure S4: HMBC spectrum of compound **4a**.

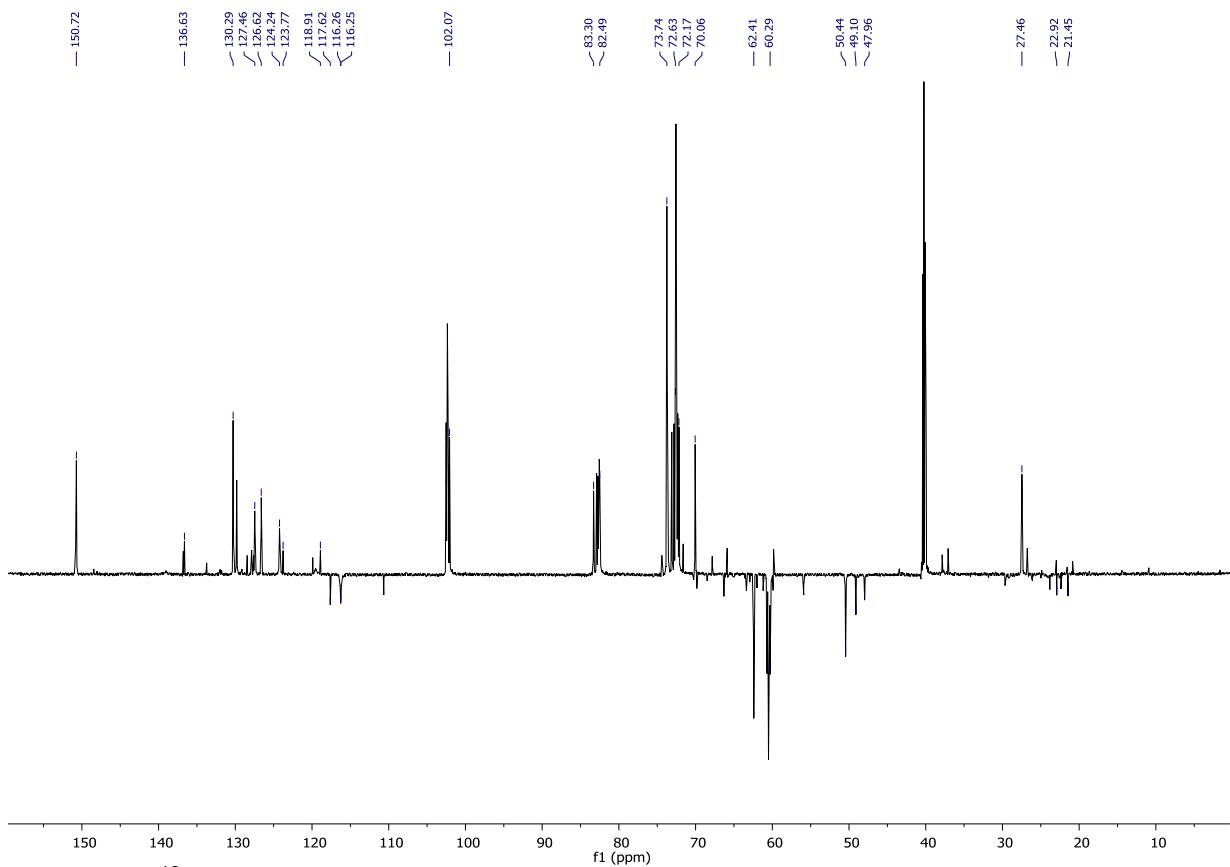


Figure S5: ^{13}C DEPT spectrum of compound **4b**.

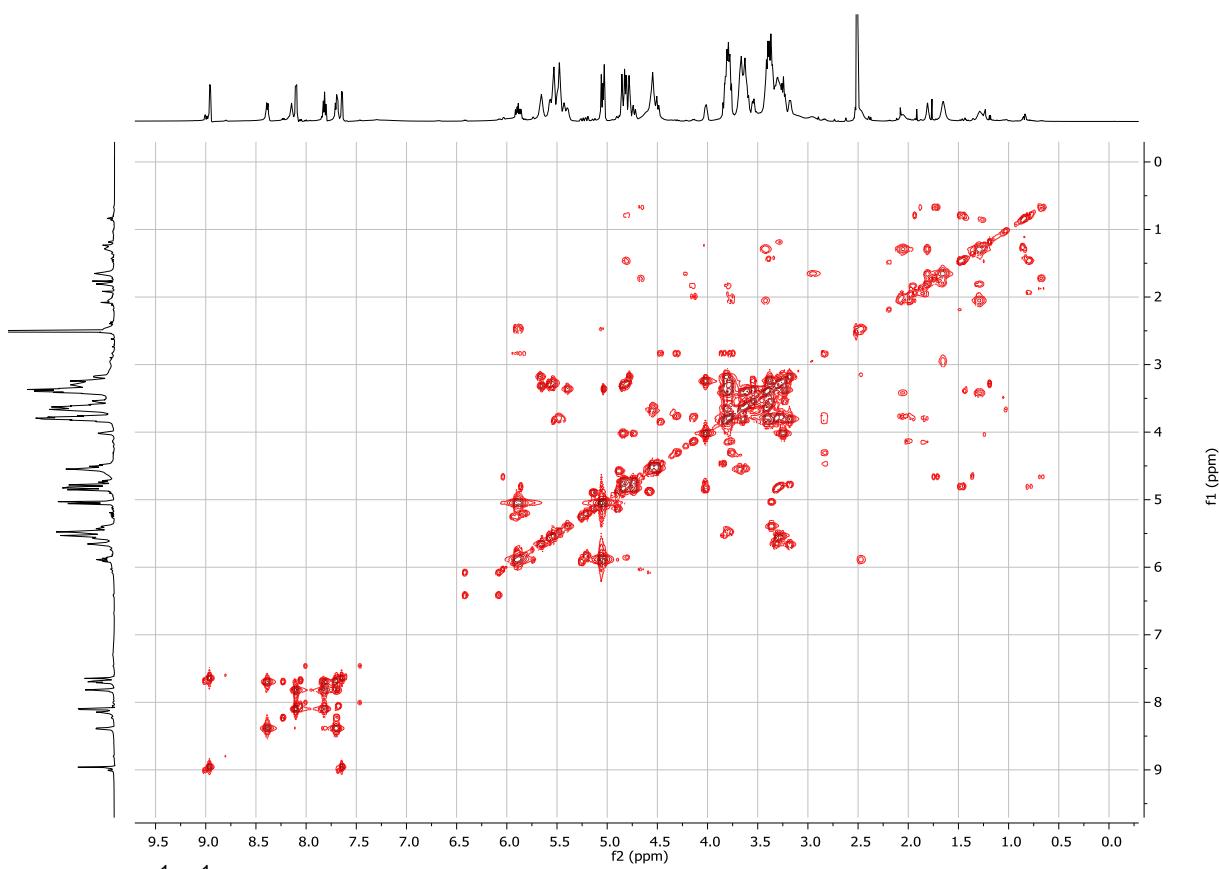


Figure S6: ^1H - ^1H COSY spectrum of compound **4b**.

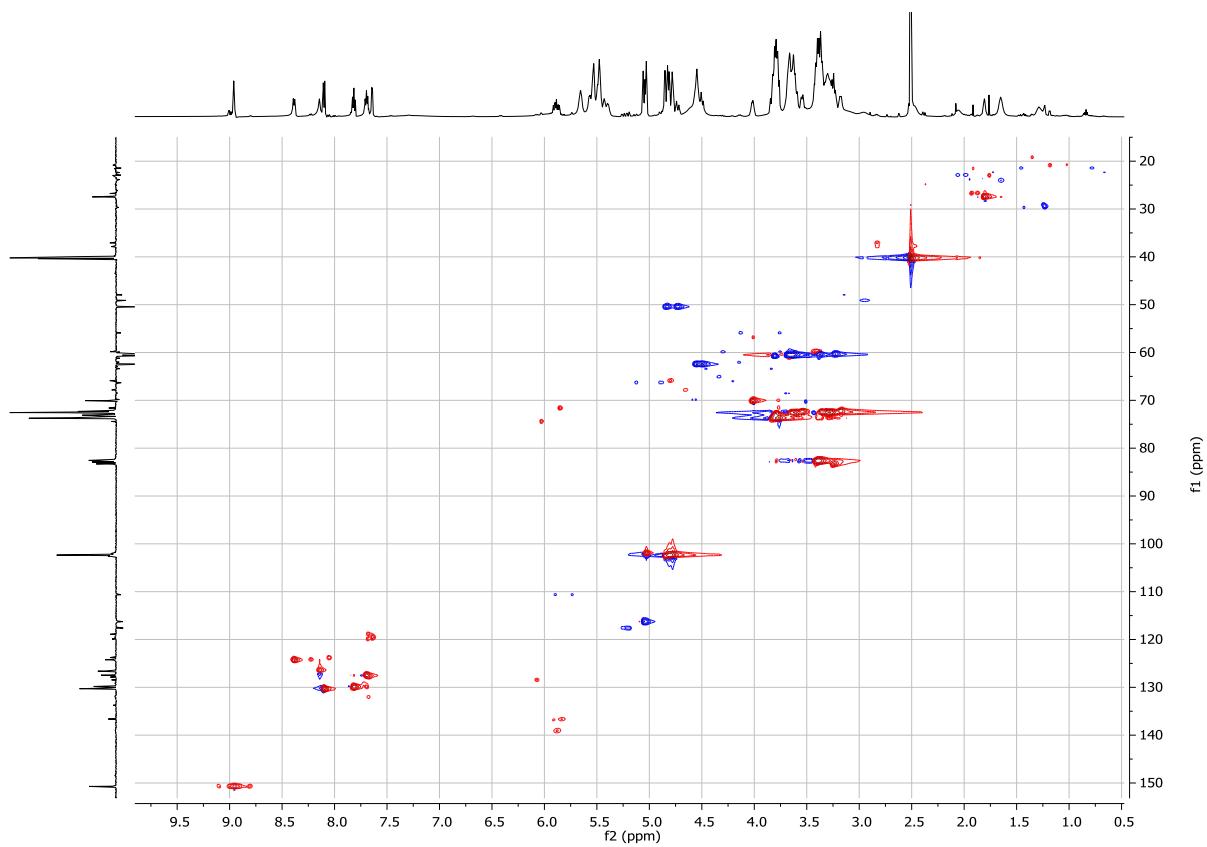


Figure S7: HSQC spectrum of compound **4b**.

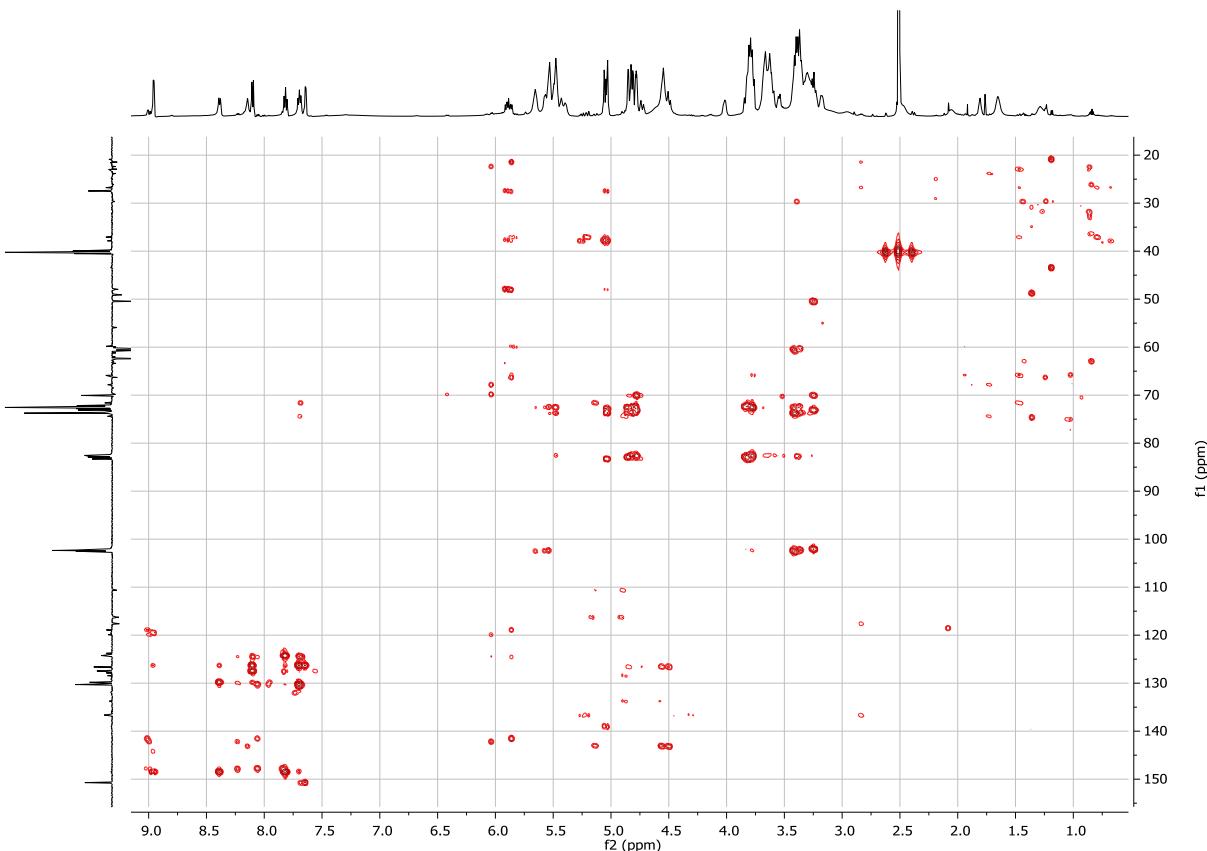


Figure S8: HMBC spectrum of compound **4b**.

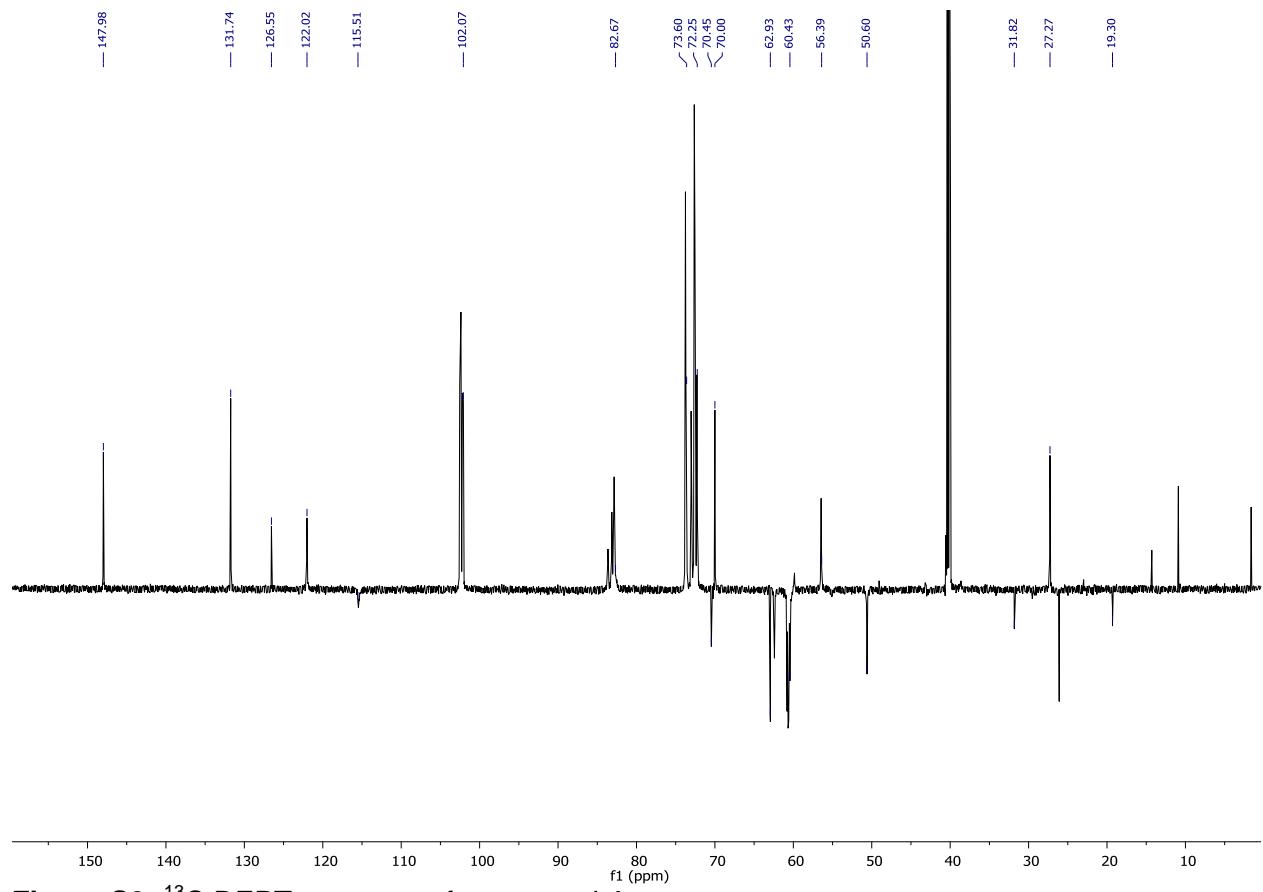


Figure S9: ^{13}C DEPT spectrum of compound **4c**.

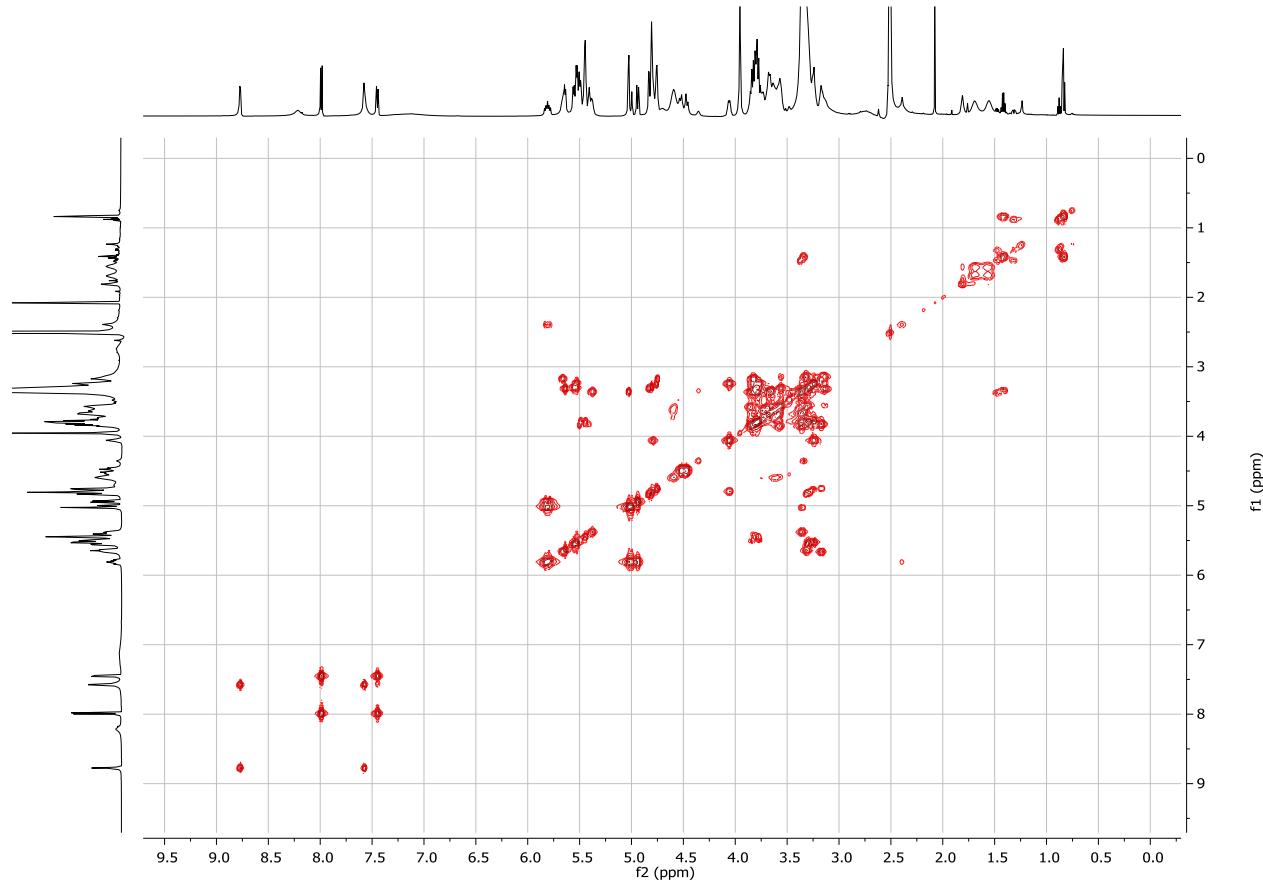


Figure S10: ^1H - ^1H COSY spectrum of compound **4c**.

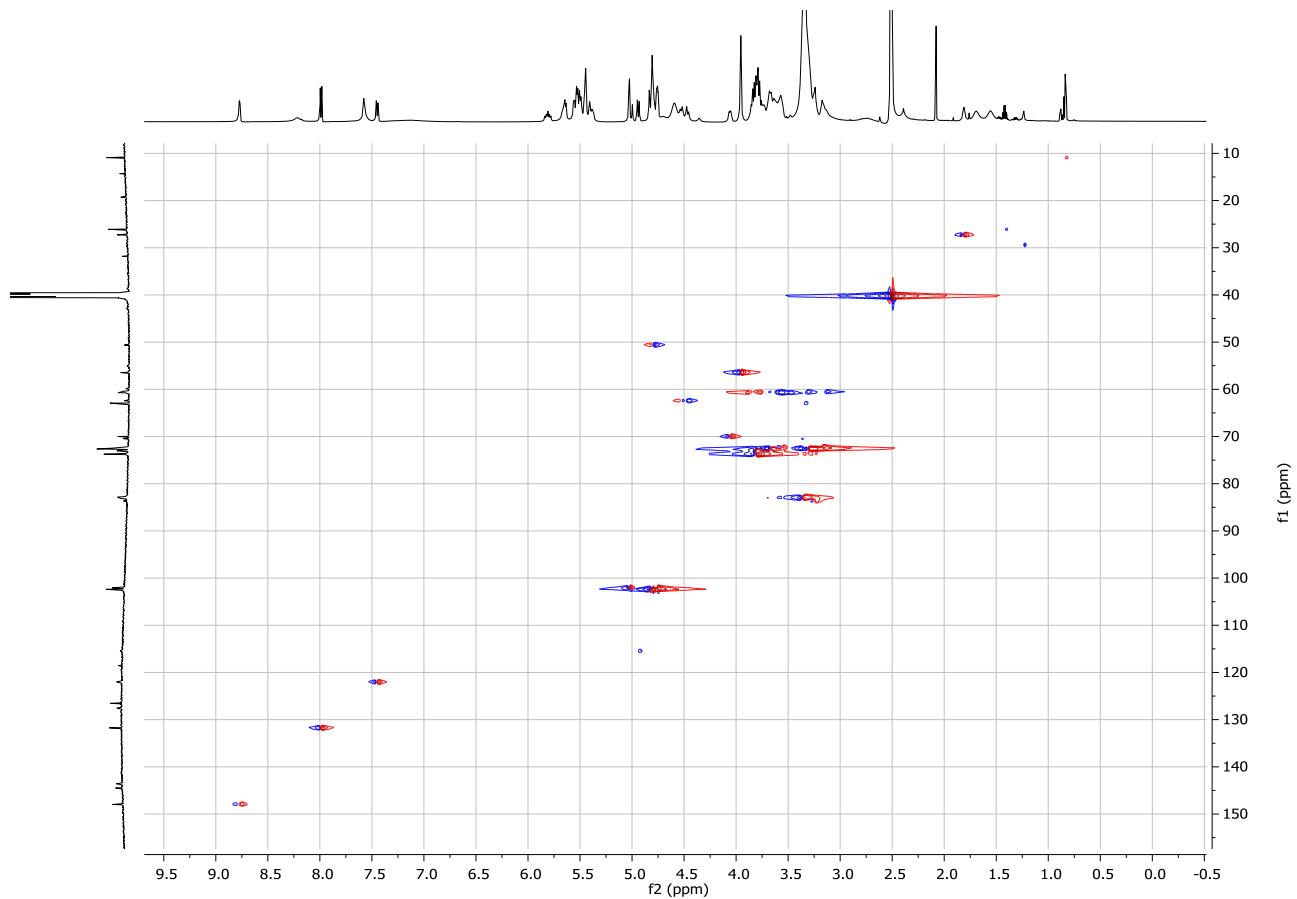


Figure S11: HSQC spectrum of compound **4c**.

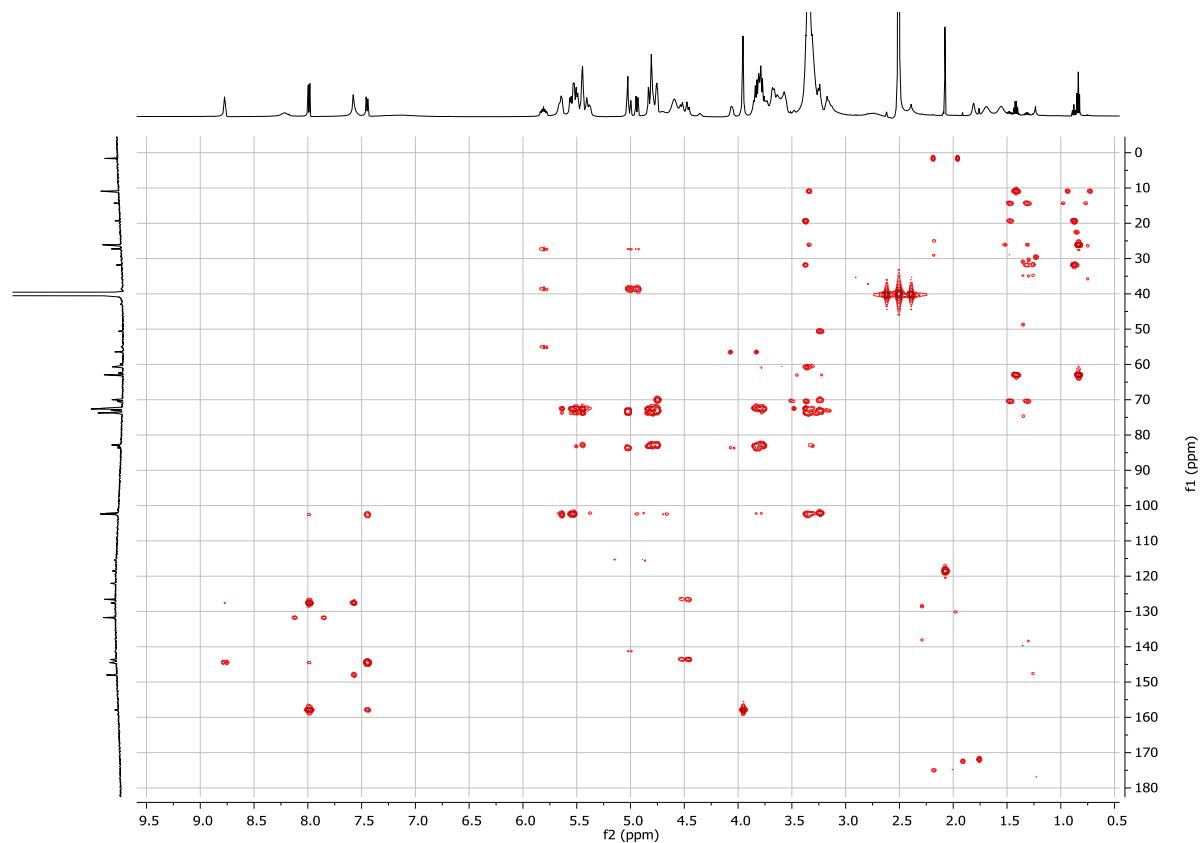


Figure S12: HMBC spectrum of compound **4c**.

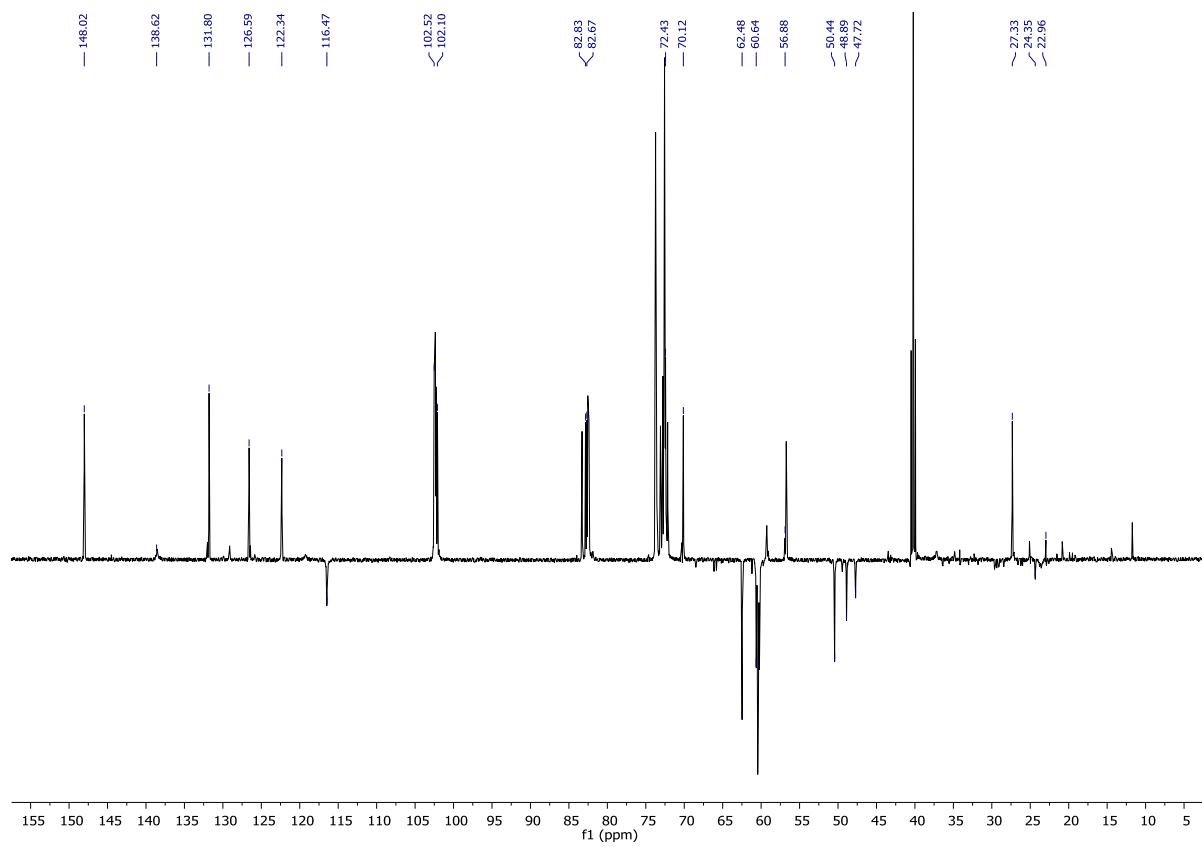


Figure S13: ^{13}C DEPT spectrum of compound **4d**.

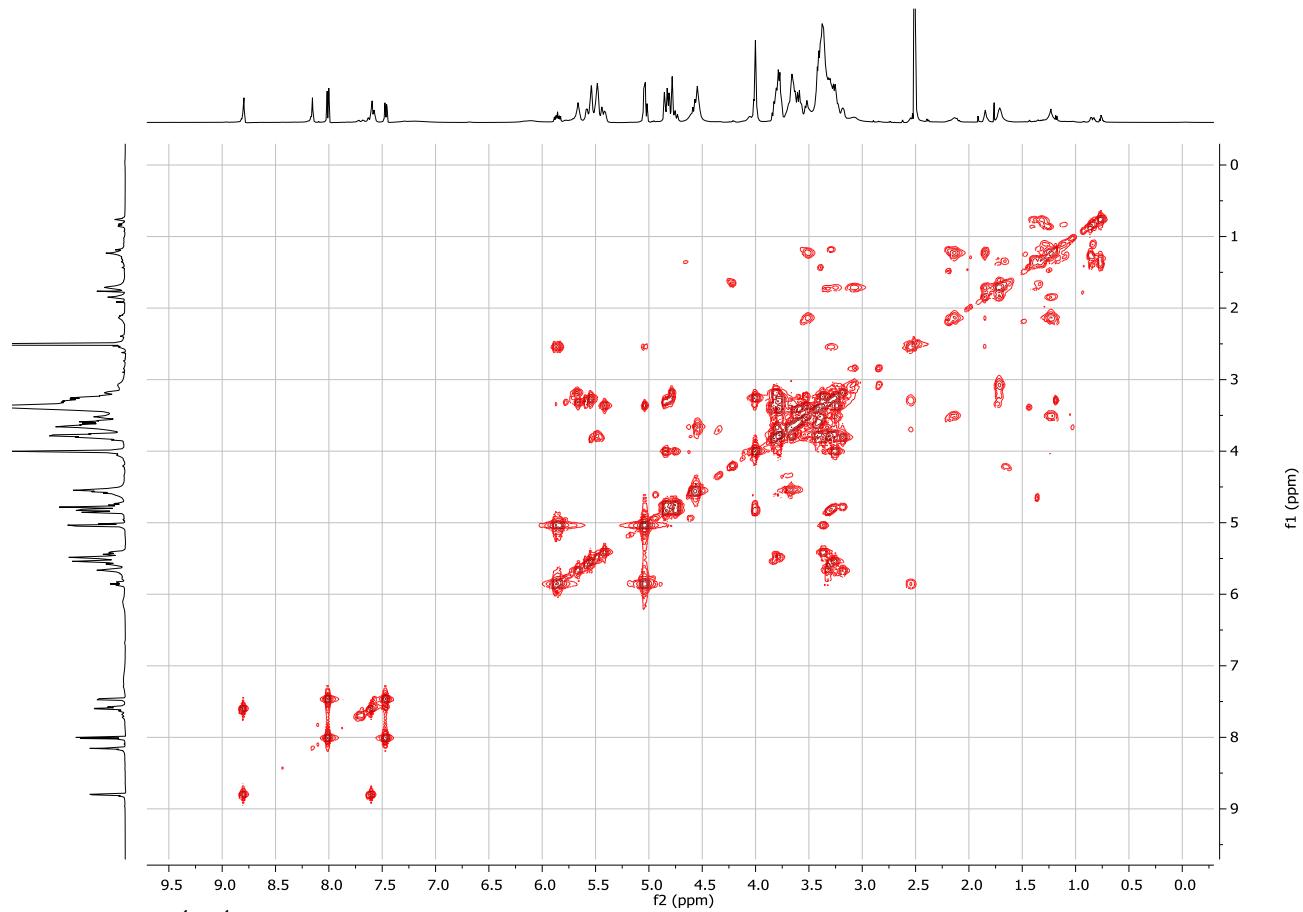


Figure S14: ^1H - ^1H COSY spectrum of compound **4d**.

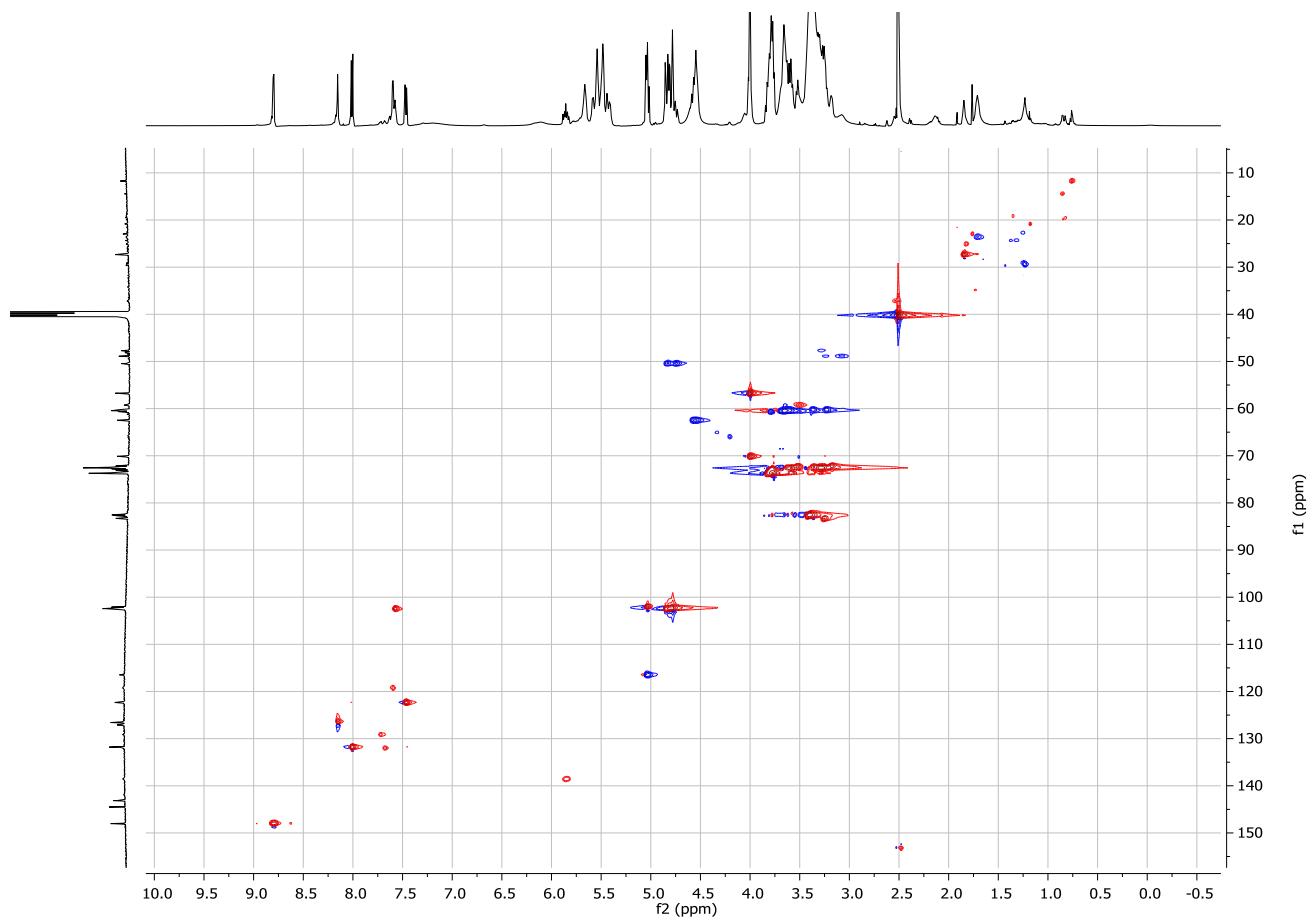


Figure S15: HSQC spectrum of compound **4d**.

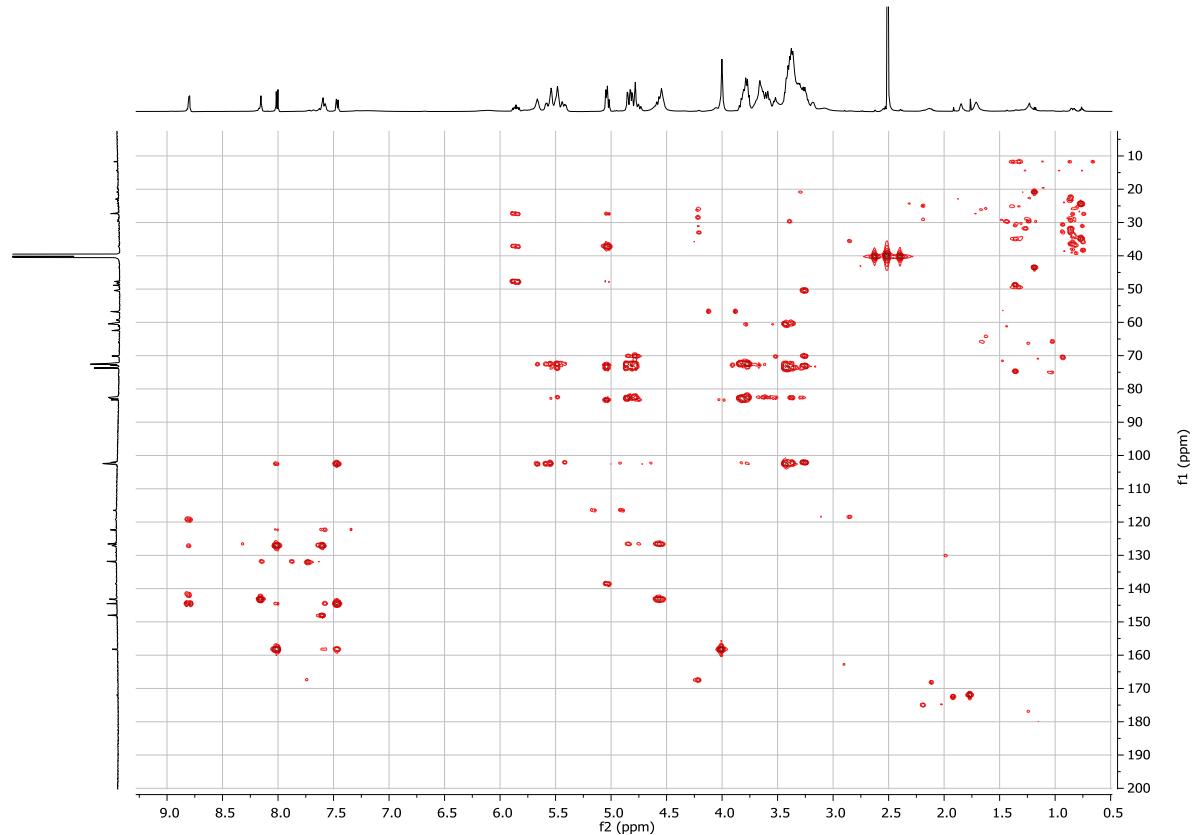


Figure S16: HMBC spectrum of compound **4d**.

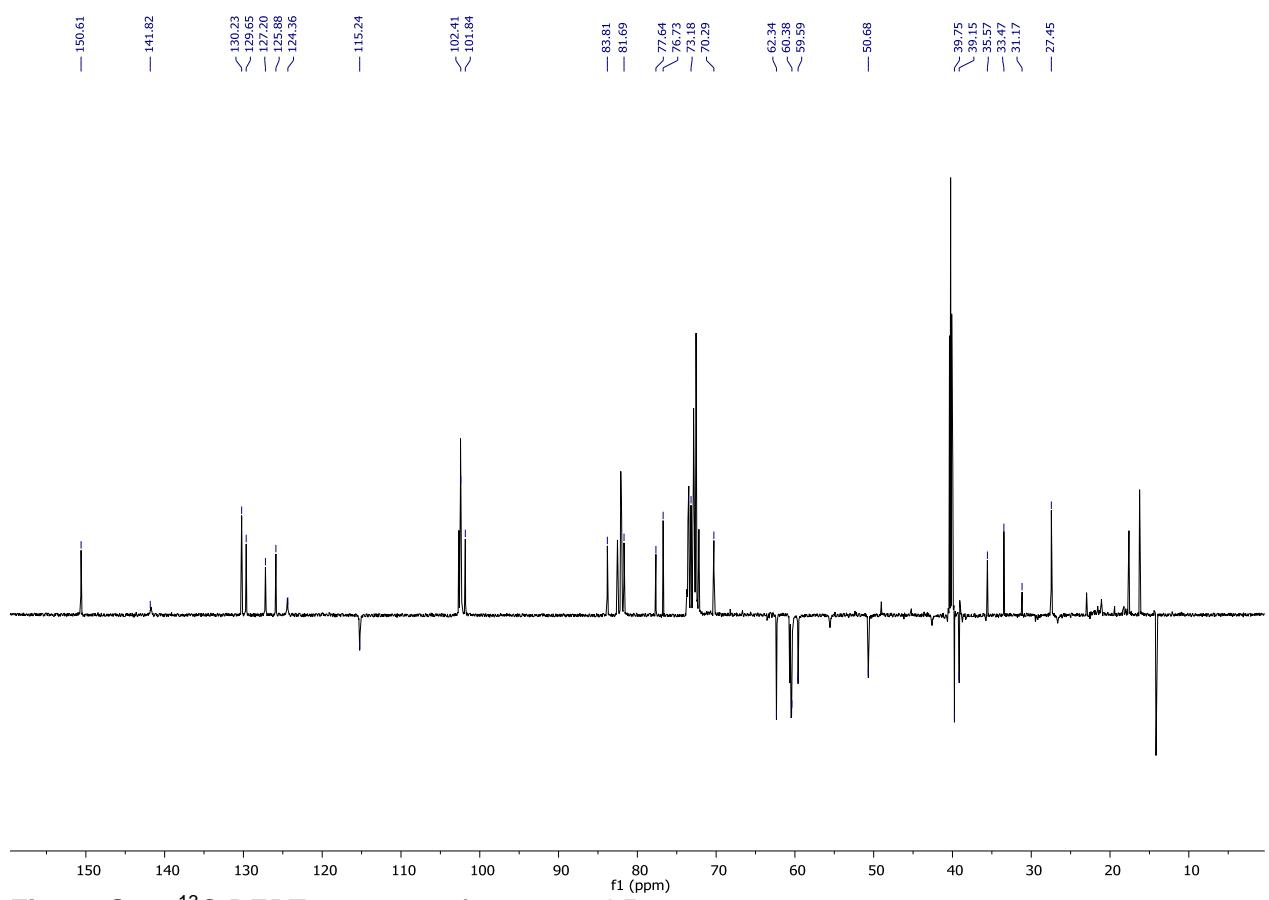


Figure S17: ^{13}C DEPT spectrum of compound **5a**.

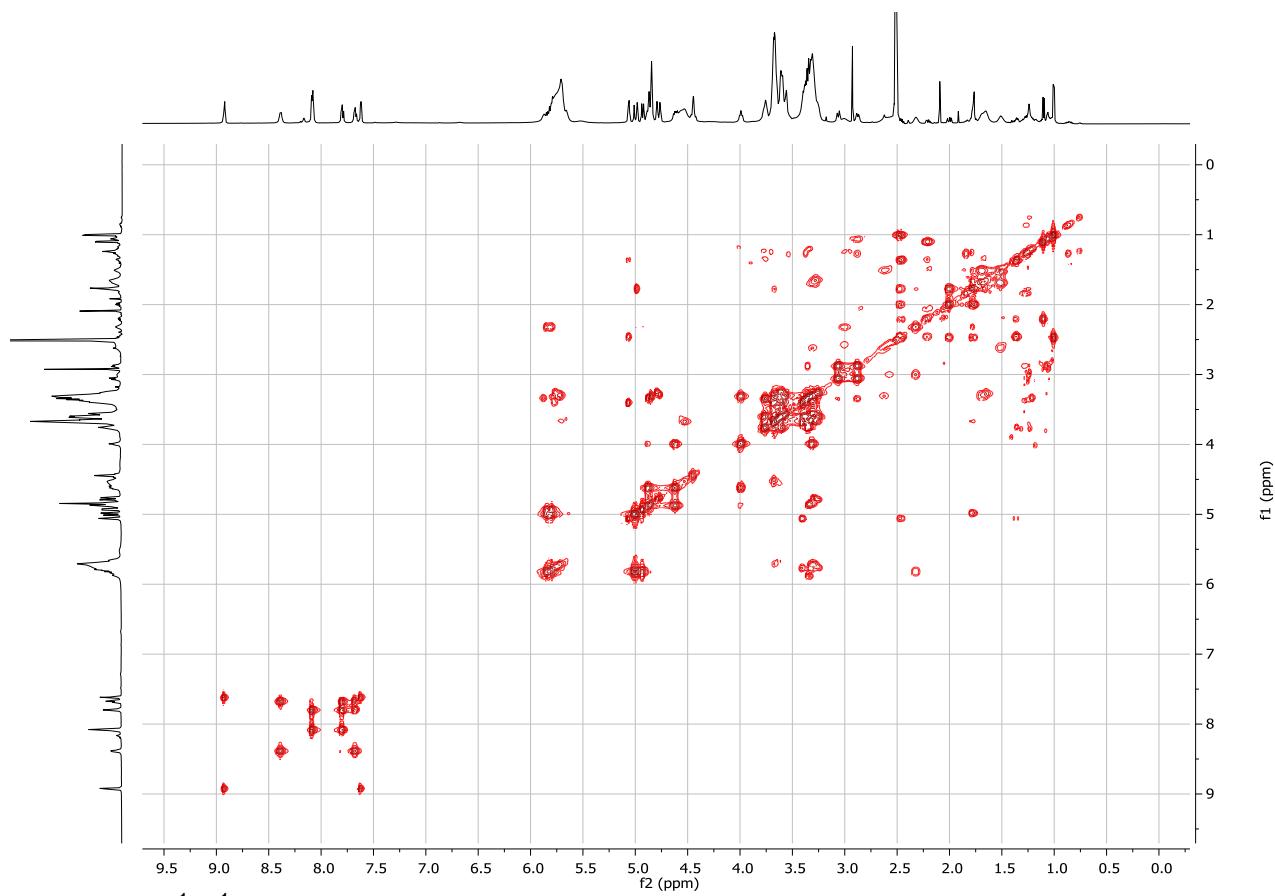


Figure S18: ^1H - ^1H COSY spectrum of compound **5a**.

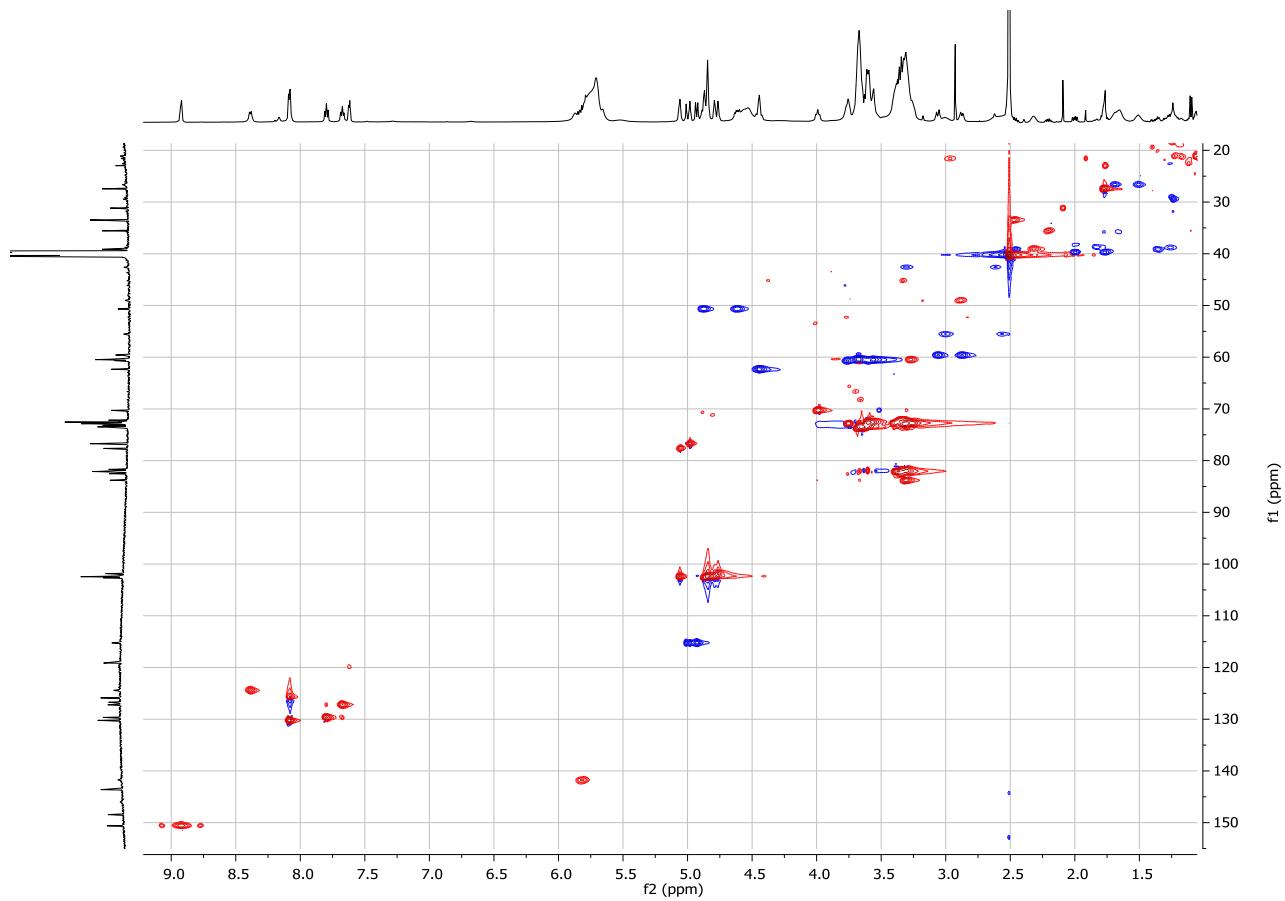


Figure S19: HSQC spectrum of compound **5a**.

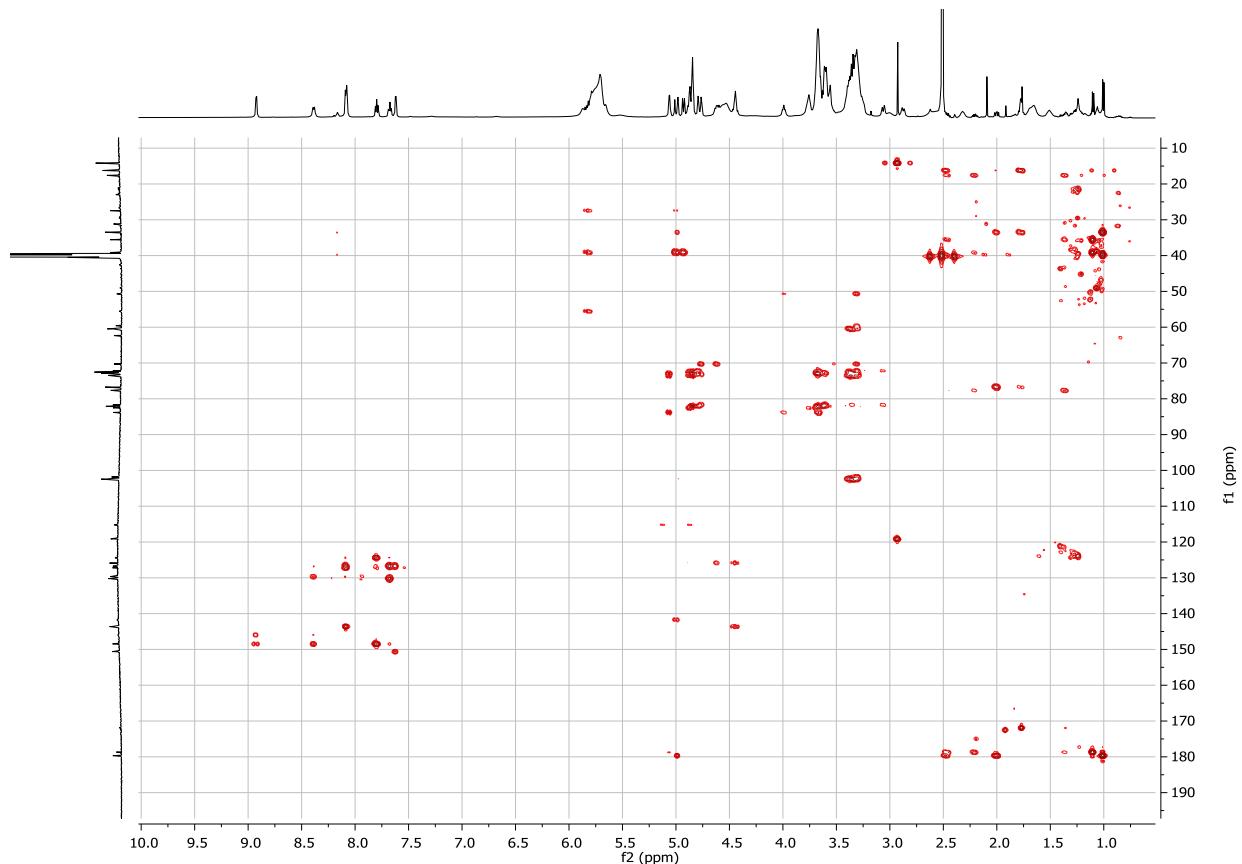


Figure S20: HMBC spectrum of compound **5a**.

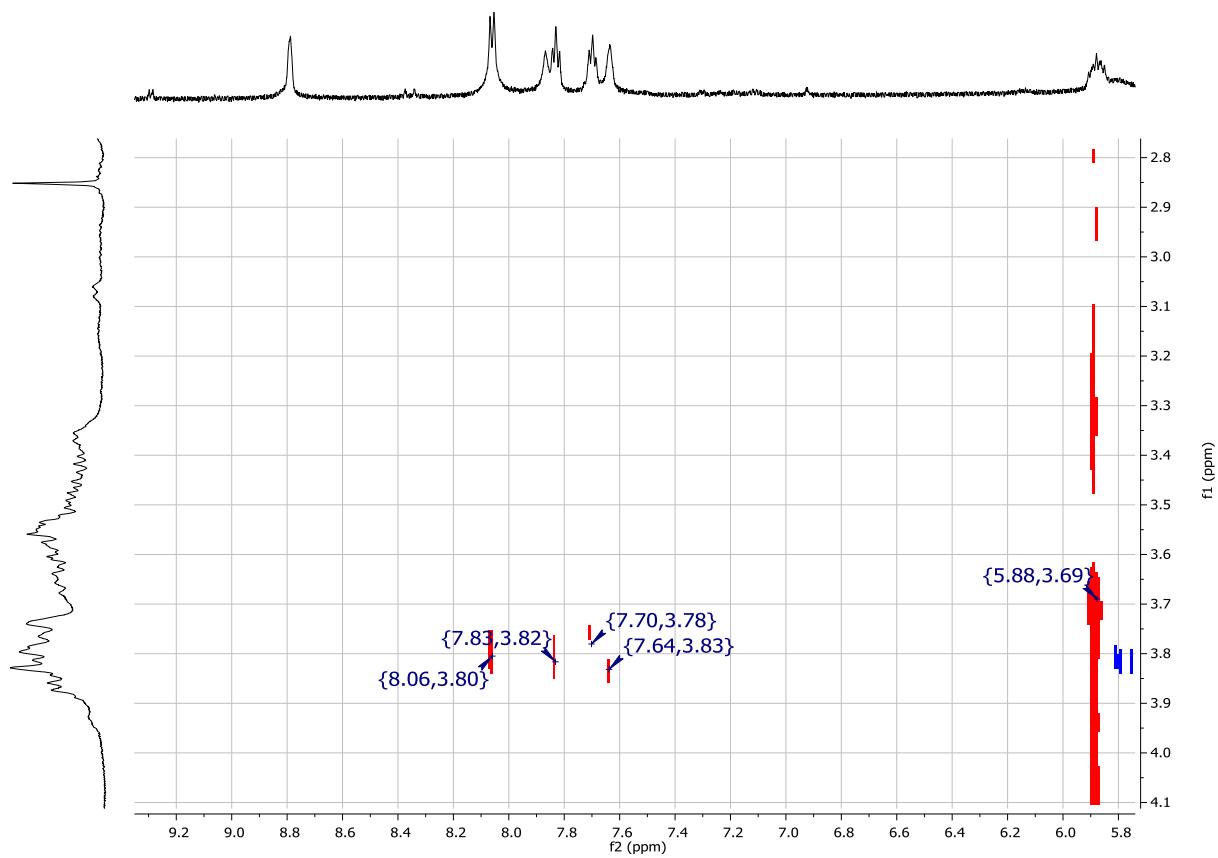


Figure S21: The part of 2D ROESY spectrum of compound **5a**.

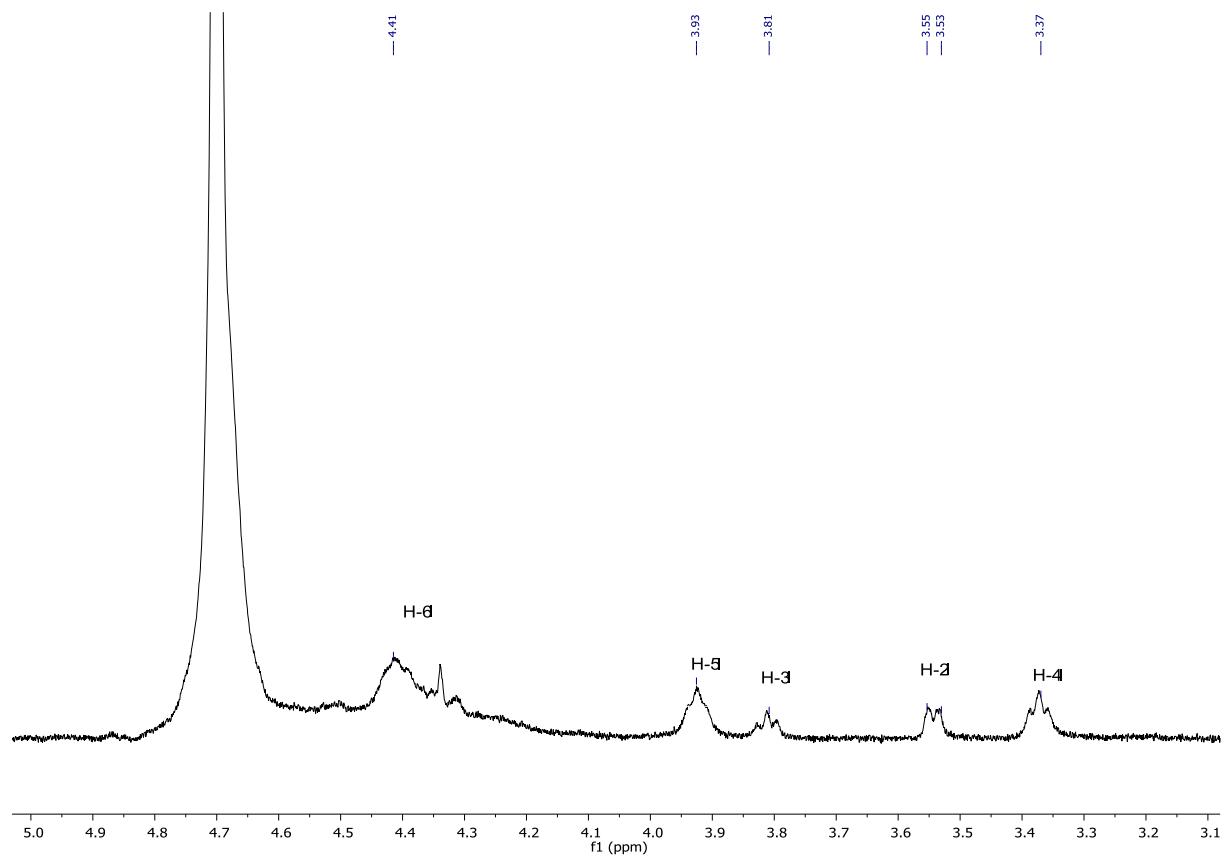


Figure S22: 1D TOCSY spectrum of compound **5a**.

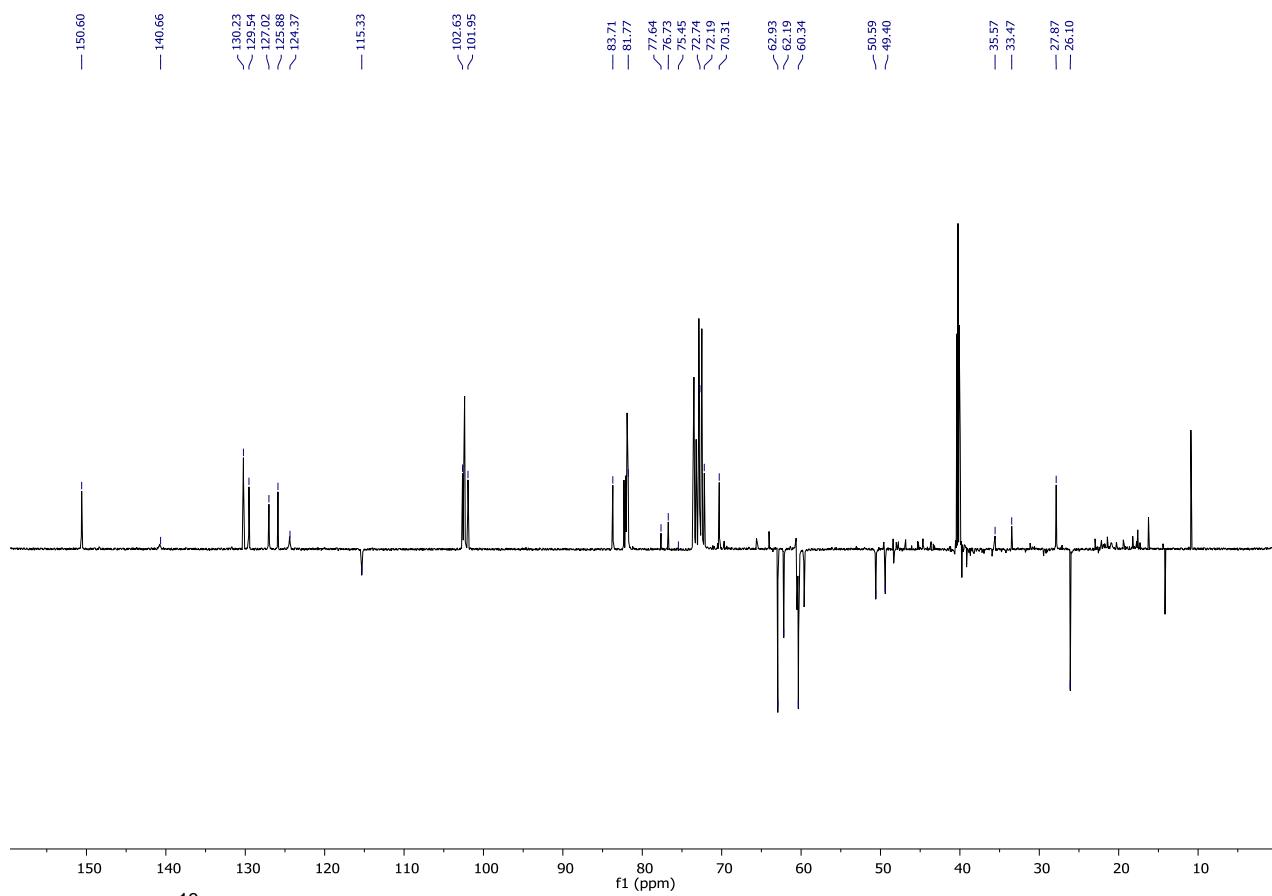


Figure S23: ^{13}C DEPT spectrum of compound **5b**.

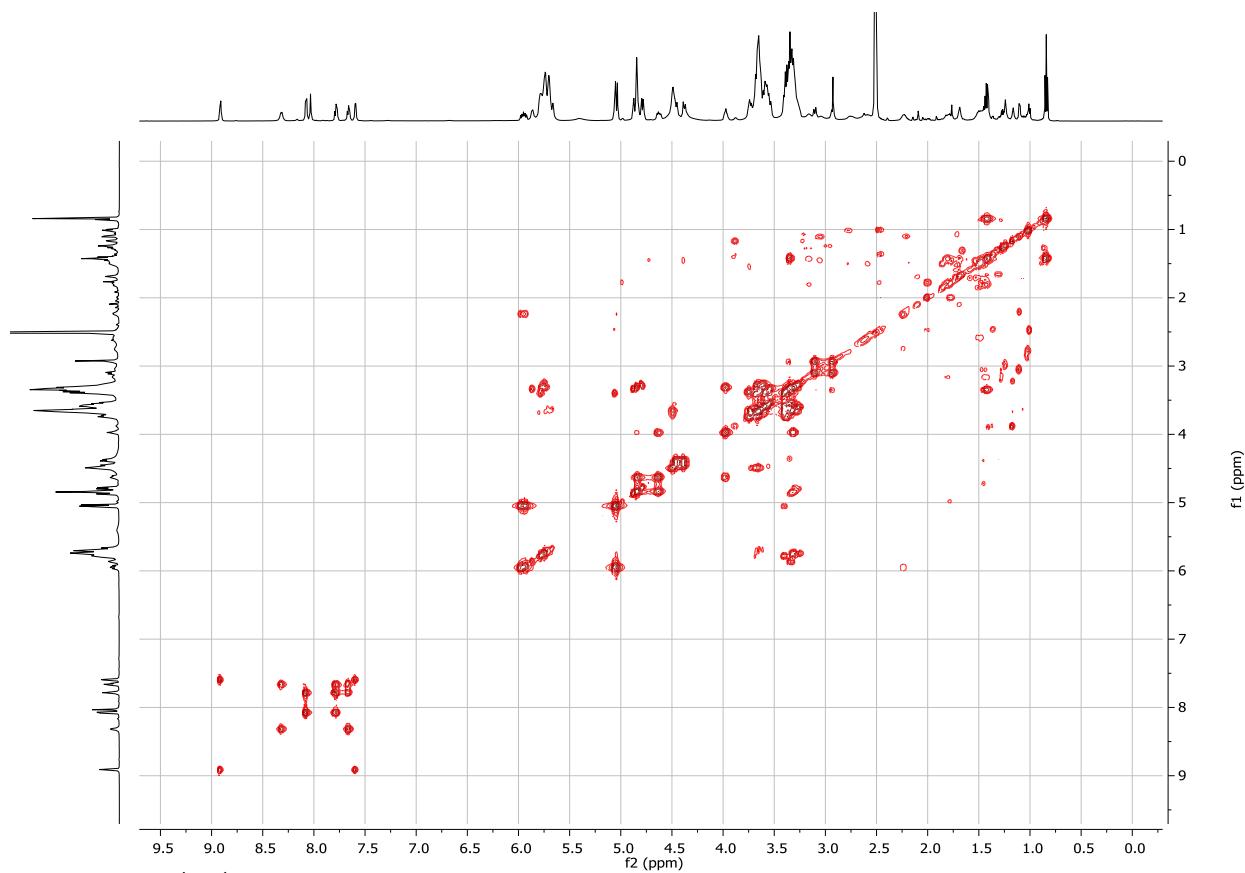


Figure S24: ^1H - ^1H COSY spectrum of compound **5b**.

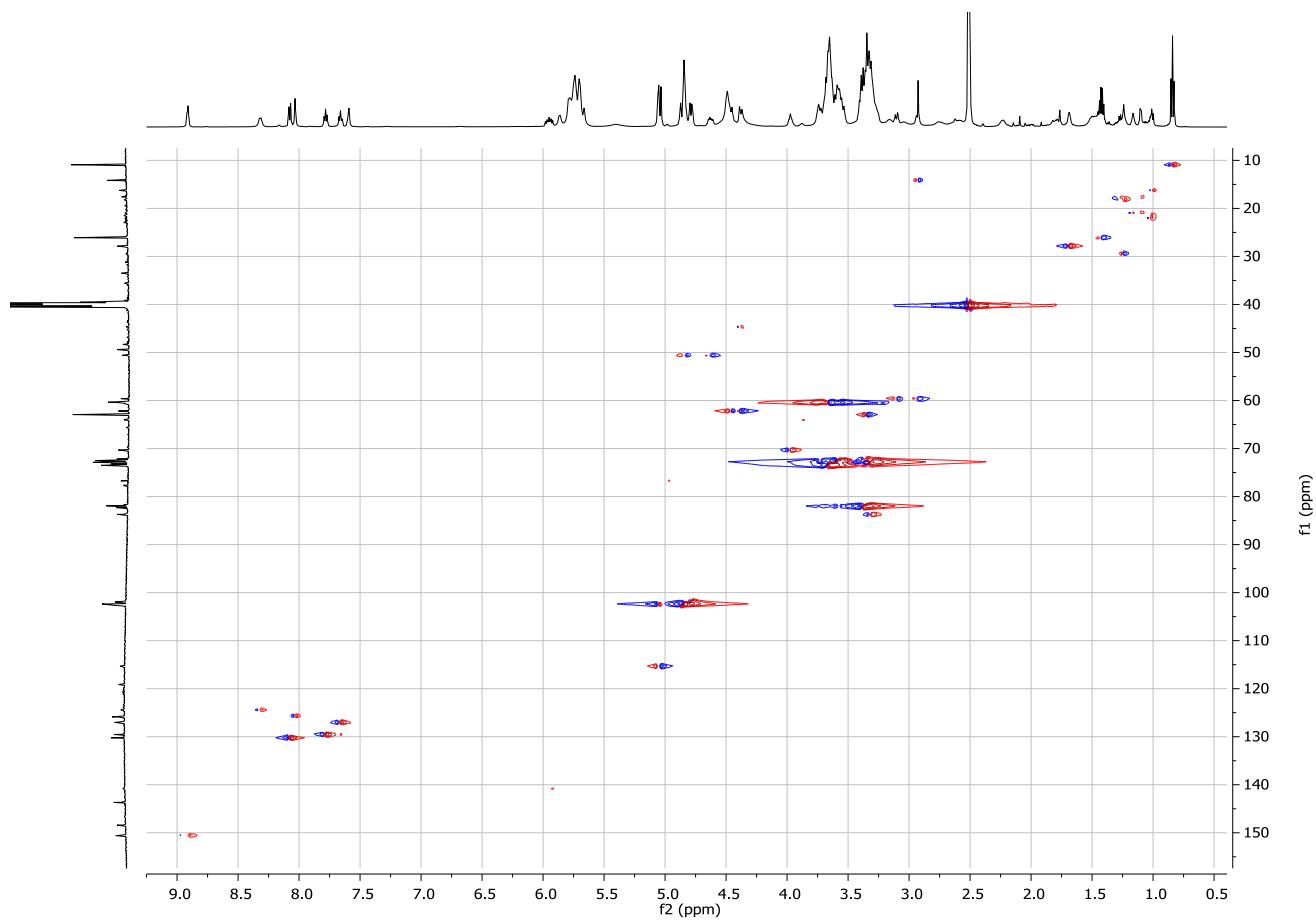


Figure S25: HSQC spectrum of compound **5b**.

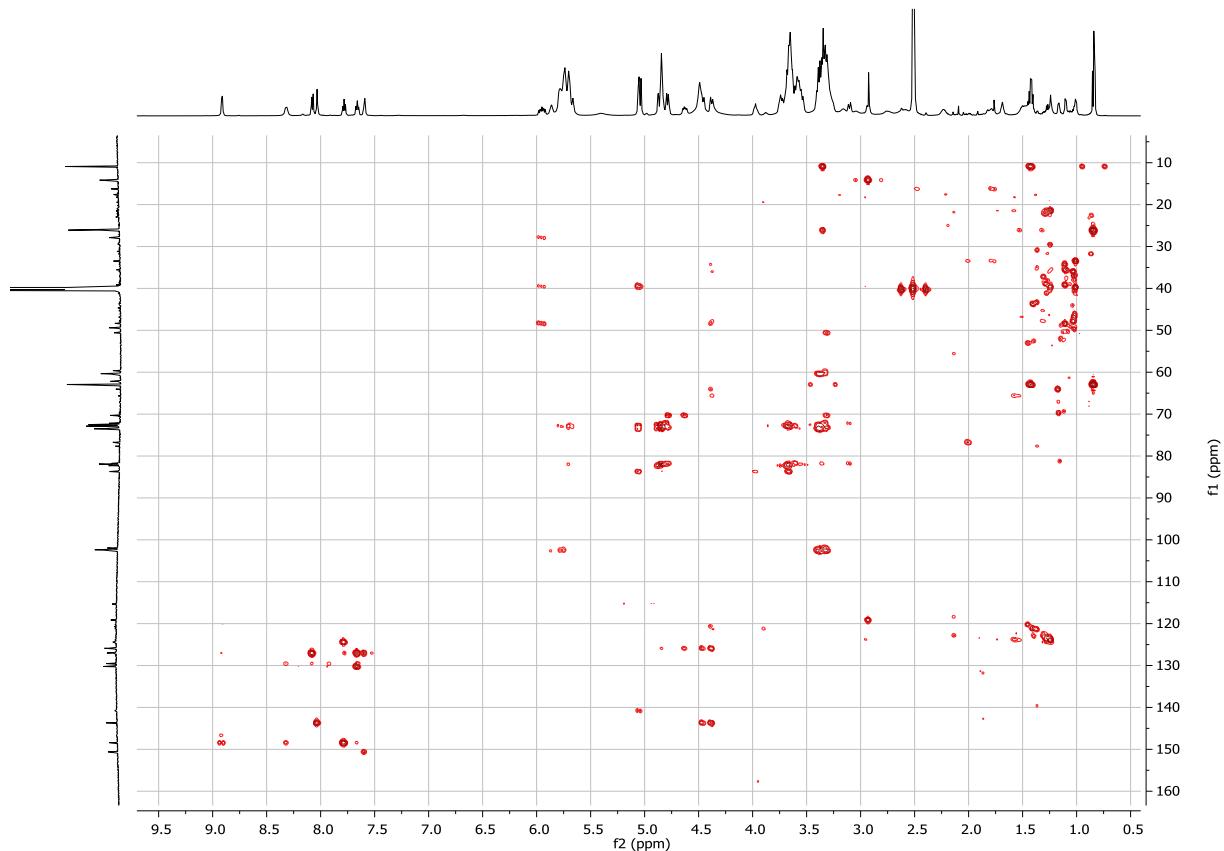


Figure S26: HMBC spectrum of compound **5b**.

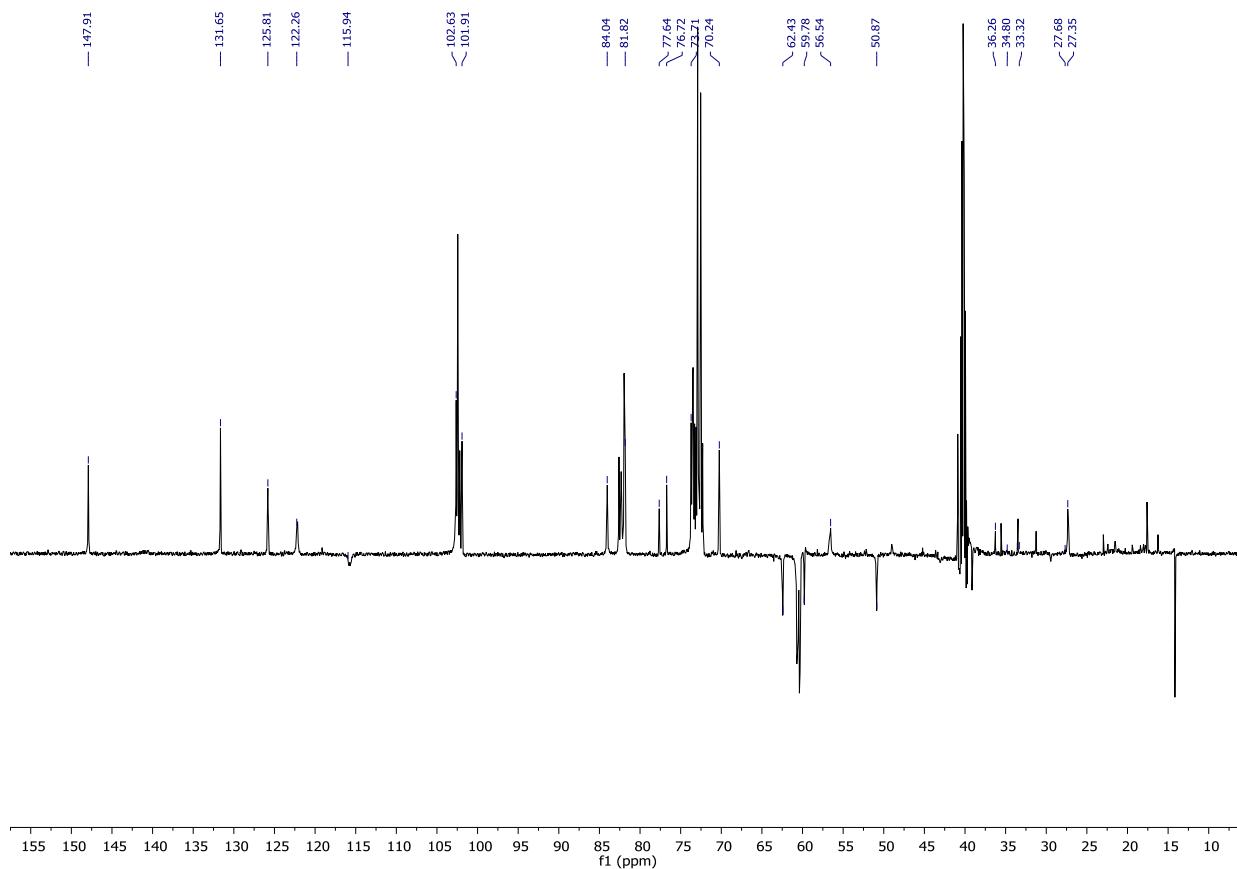


Figure S27: ^{13}C DEPT spectrum of compound **5c**.

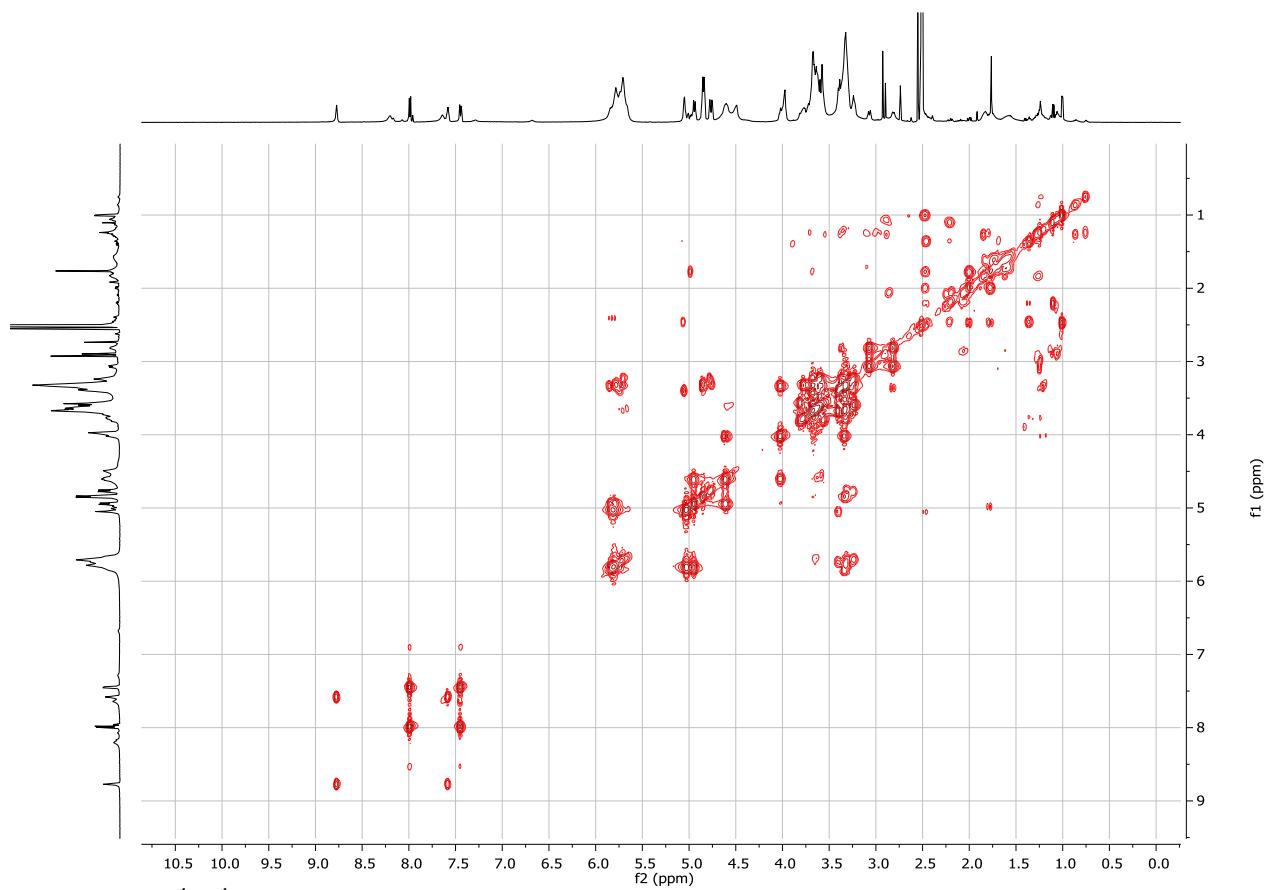


Figure S28: ^1H - ^1H COSY spectrum of compound **5c**.

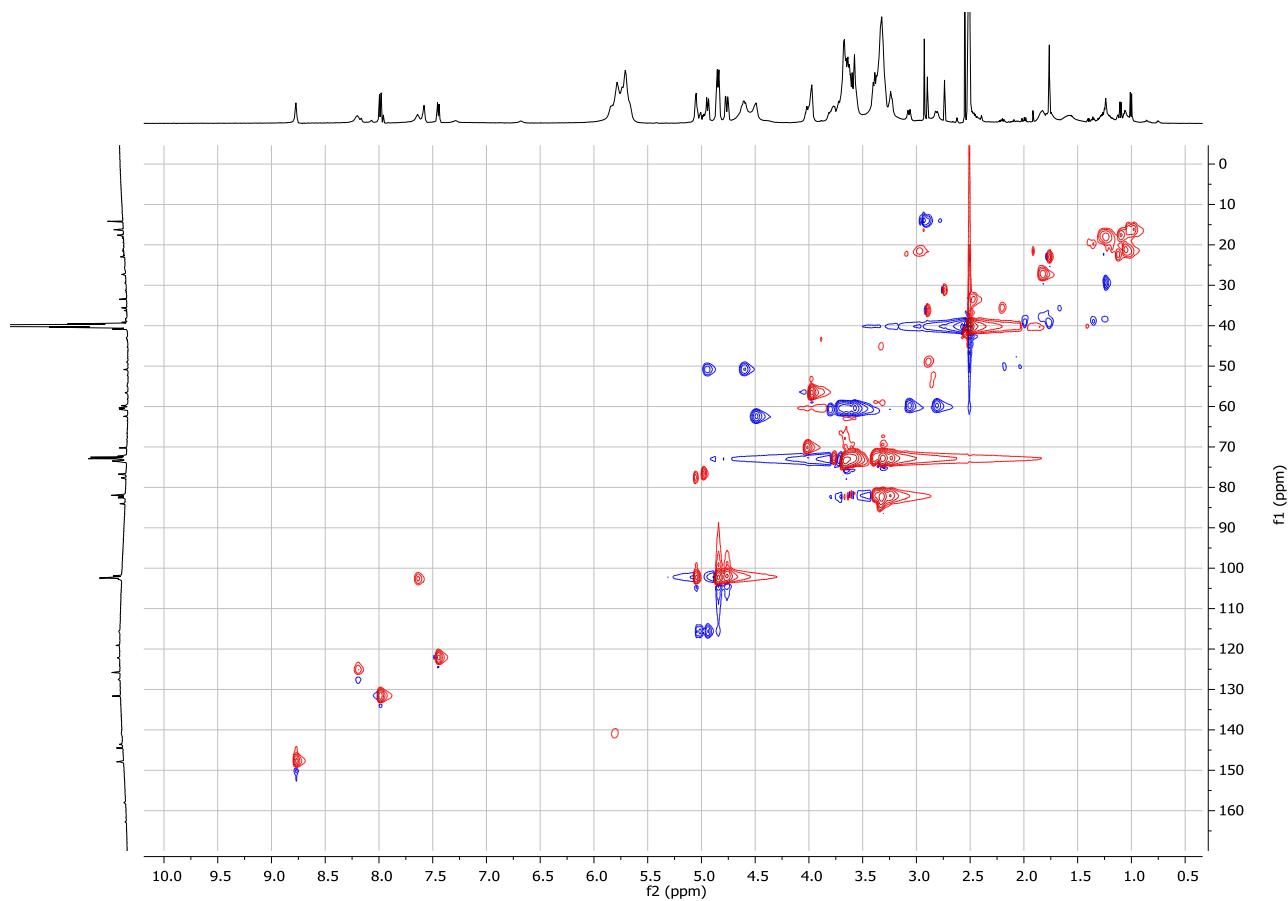


Figure S29: HSQC spectrum of compound **5c**.

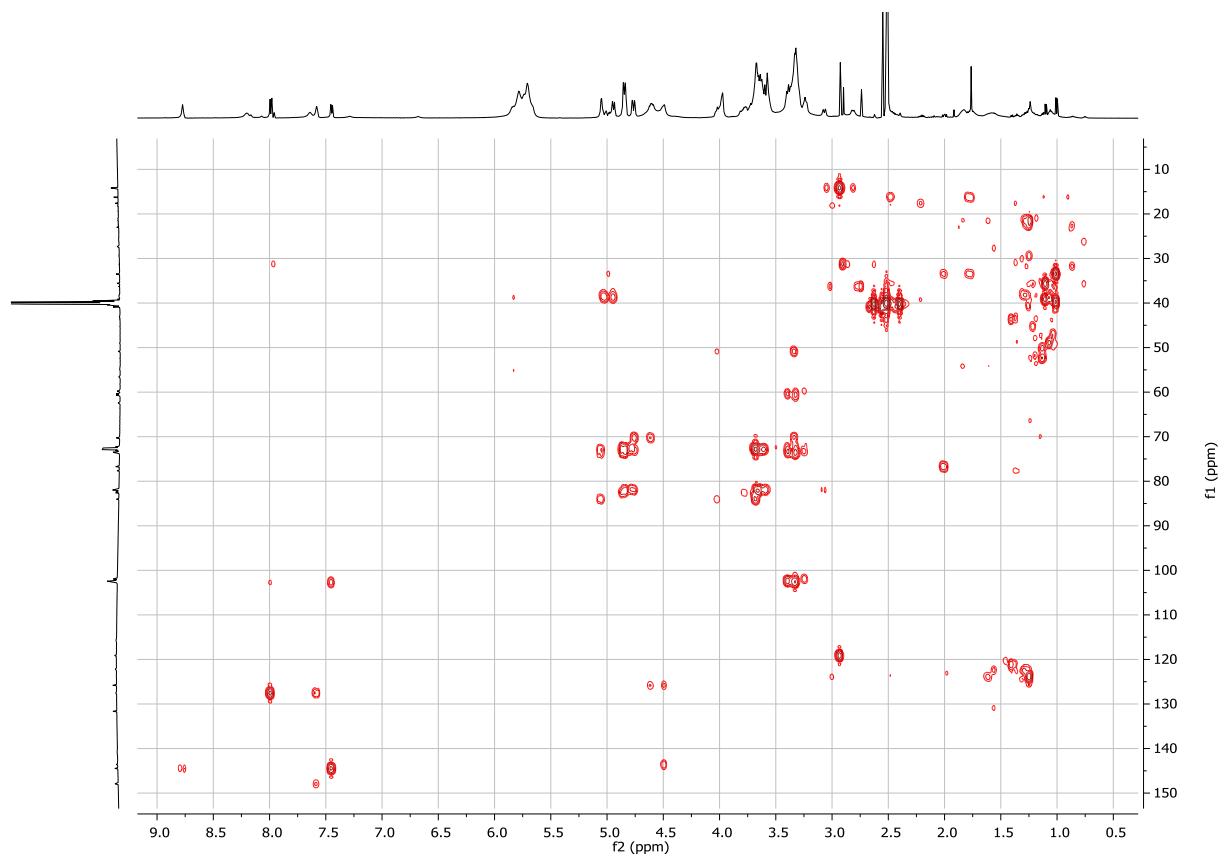


Figure S30: HMBC spectrum of compound **5c**.

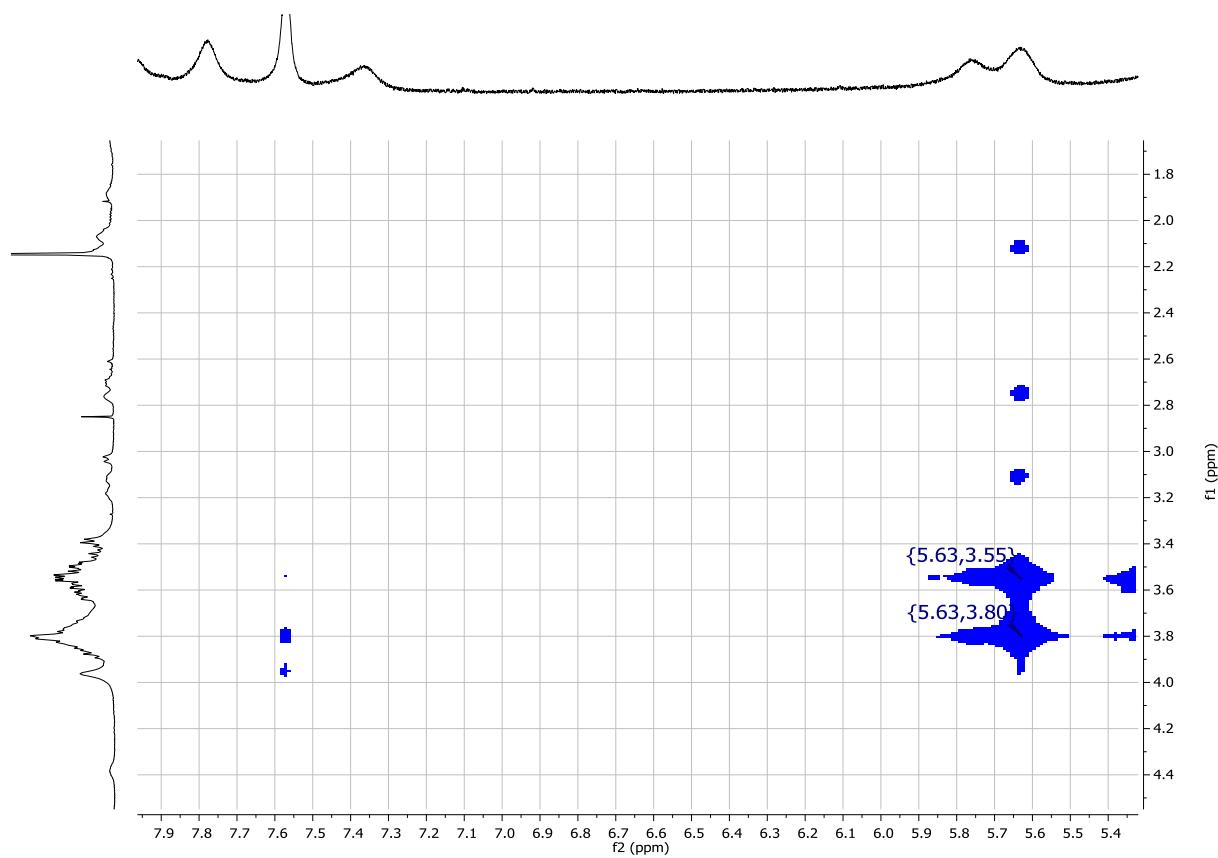


Figure S31: The part of 2D ROESY spectrum of compound **5c**.

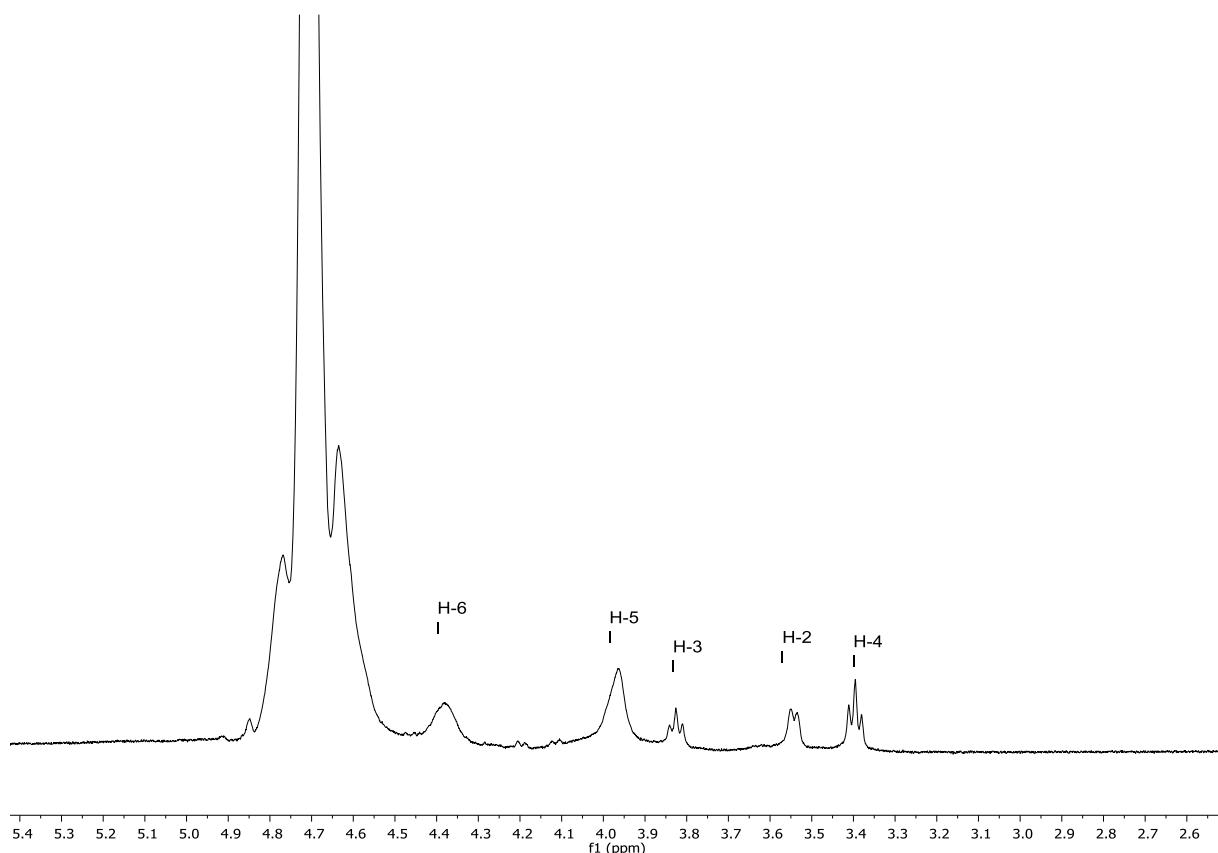


Figure S32: 1D TOCSY spectrum of compound **5c**.

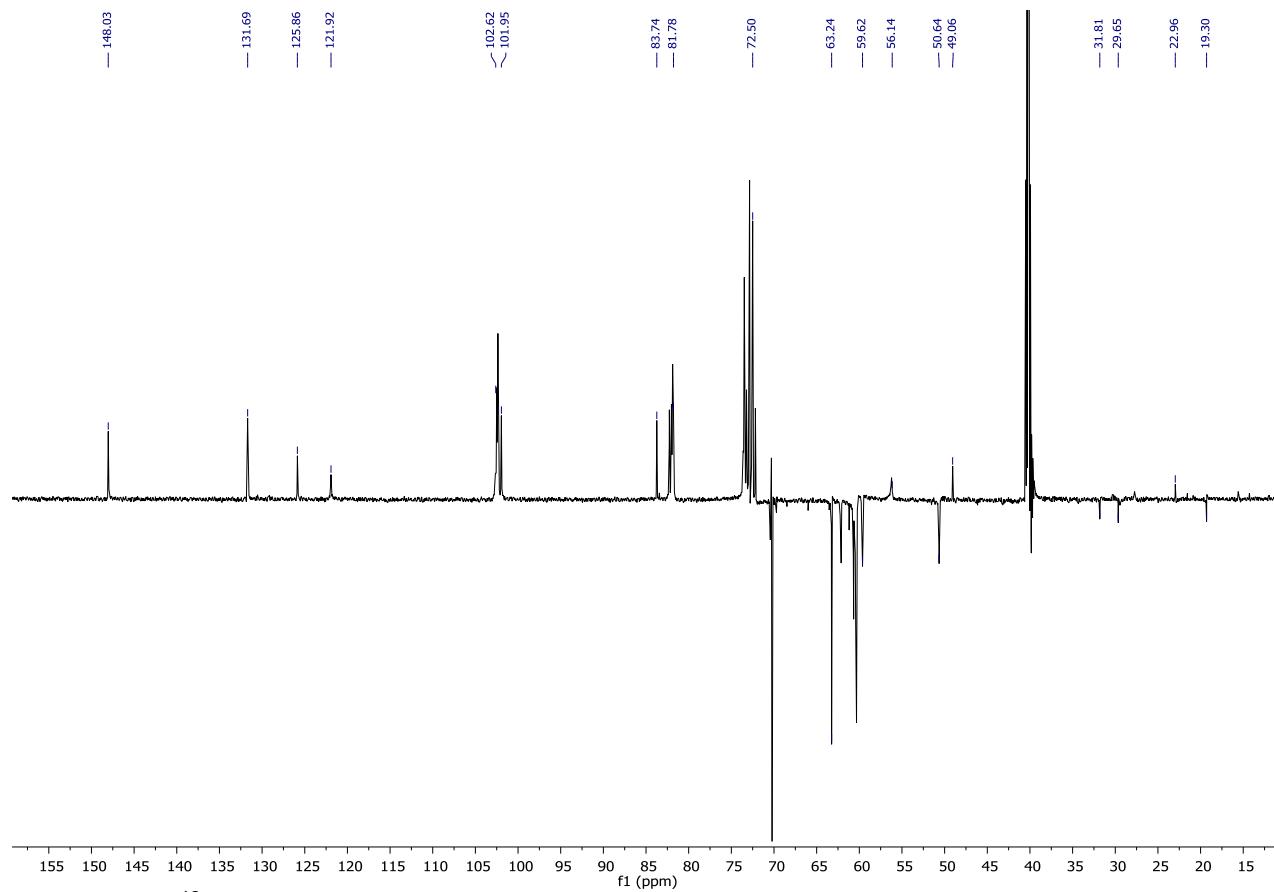


Figure S33: ^{13}C DEPT spectrum of compound **5d**.

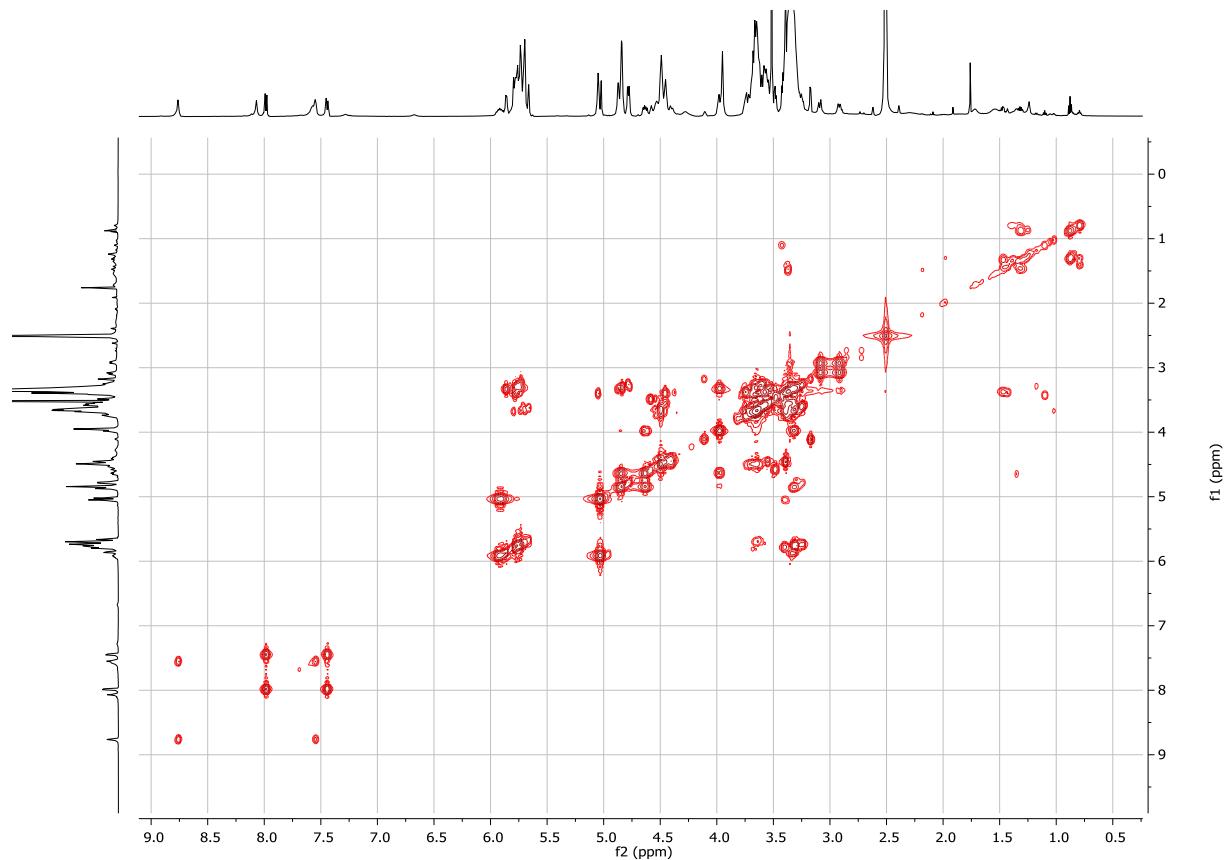


Figure S34: ^1H - ^1H COSY spectrum of compound **5d**.

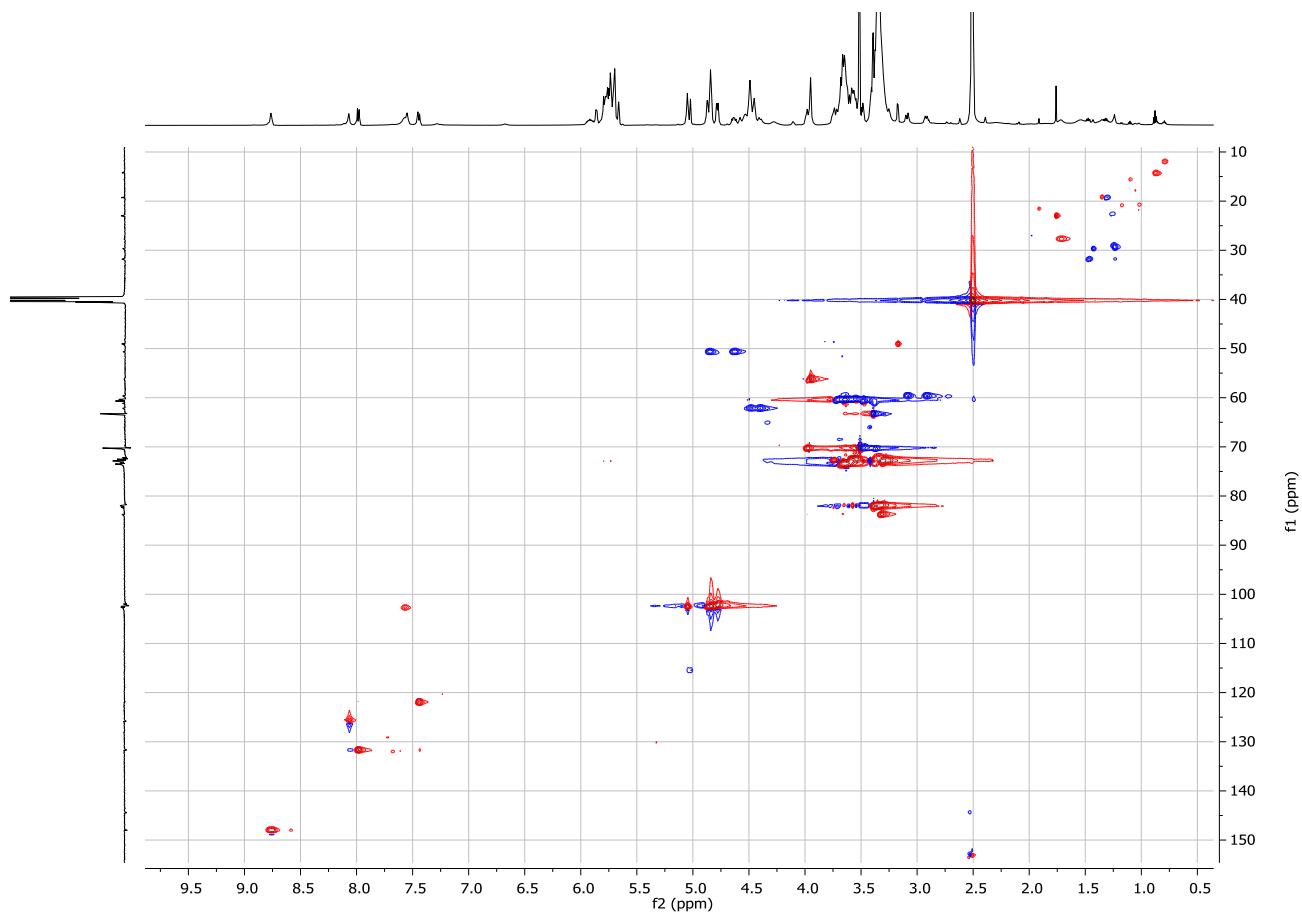


Figure S35: HSQC spectrum of compound 5d.

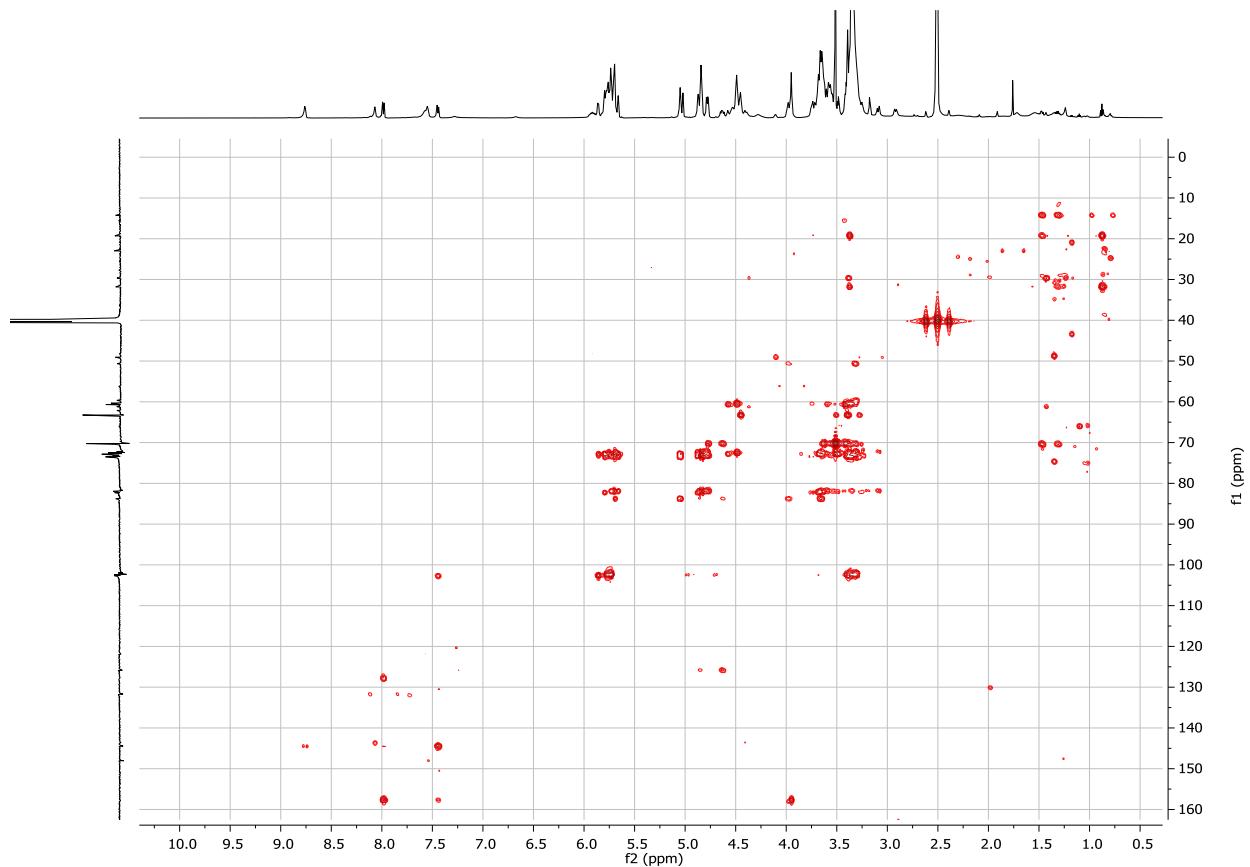


Figure S36: HMBC spectrum of compound 5d.