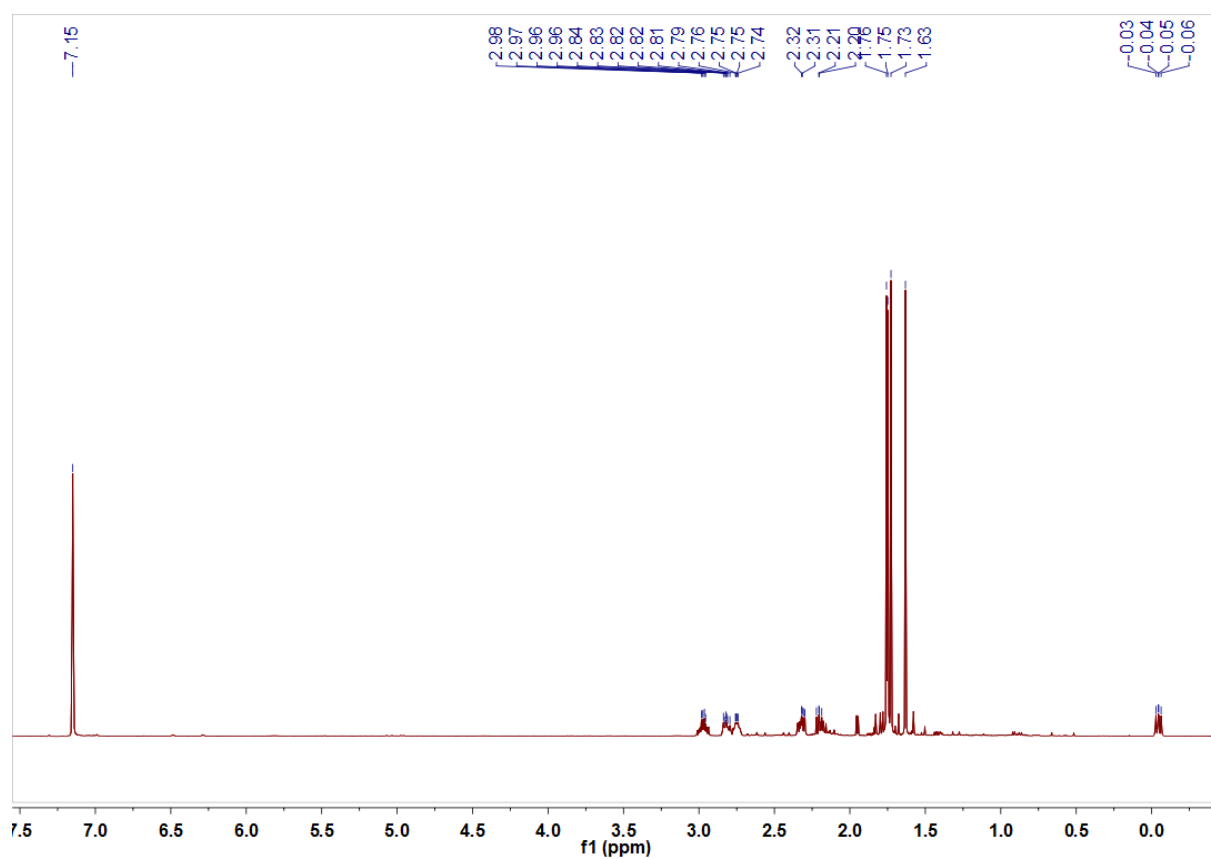
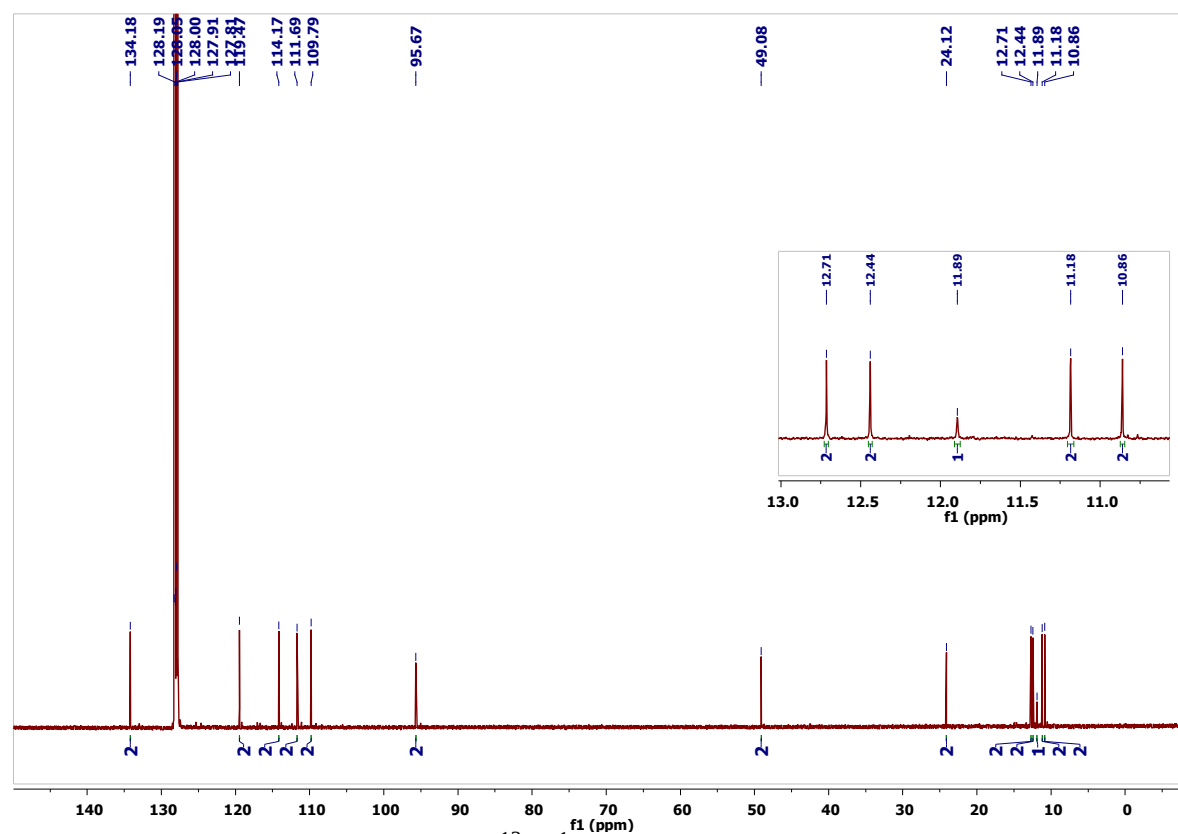


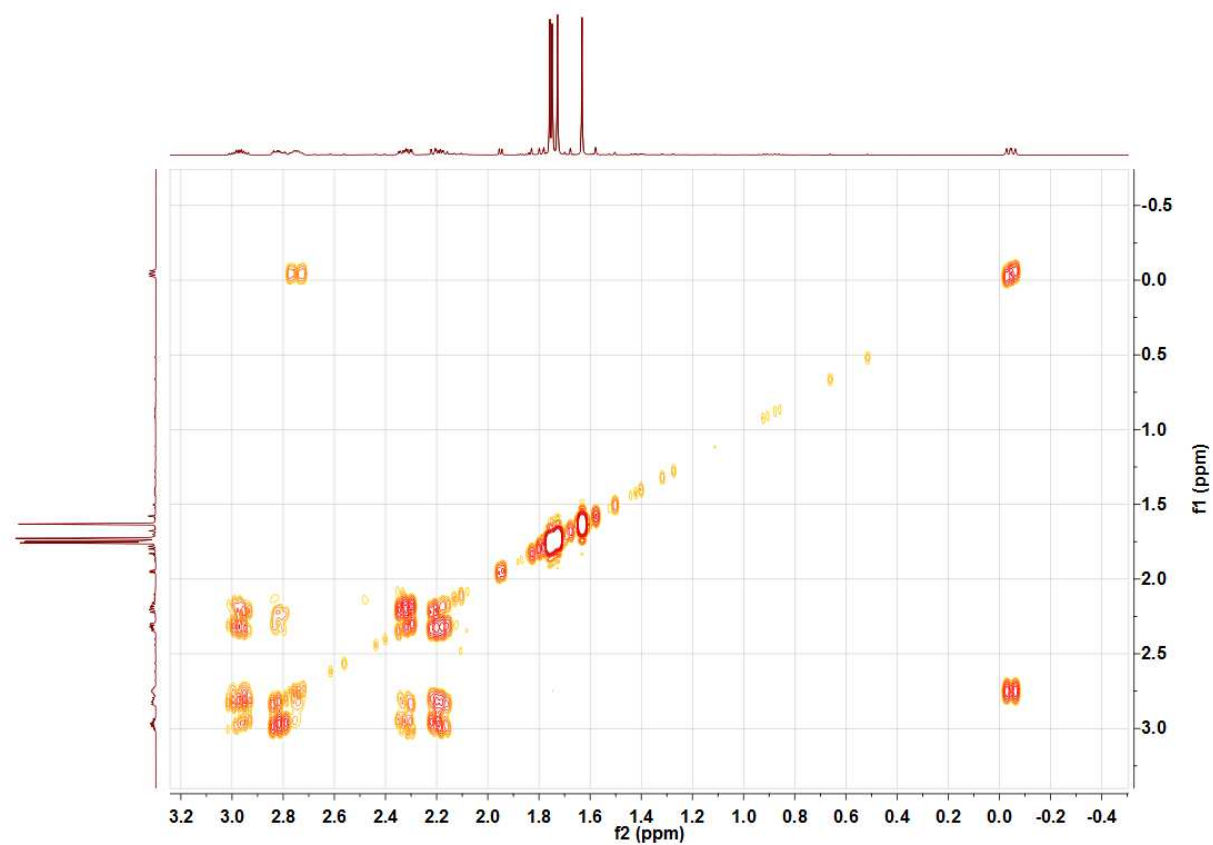
Supporting materials



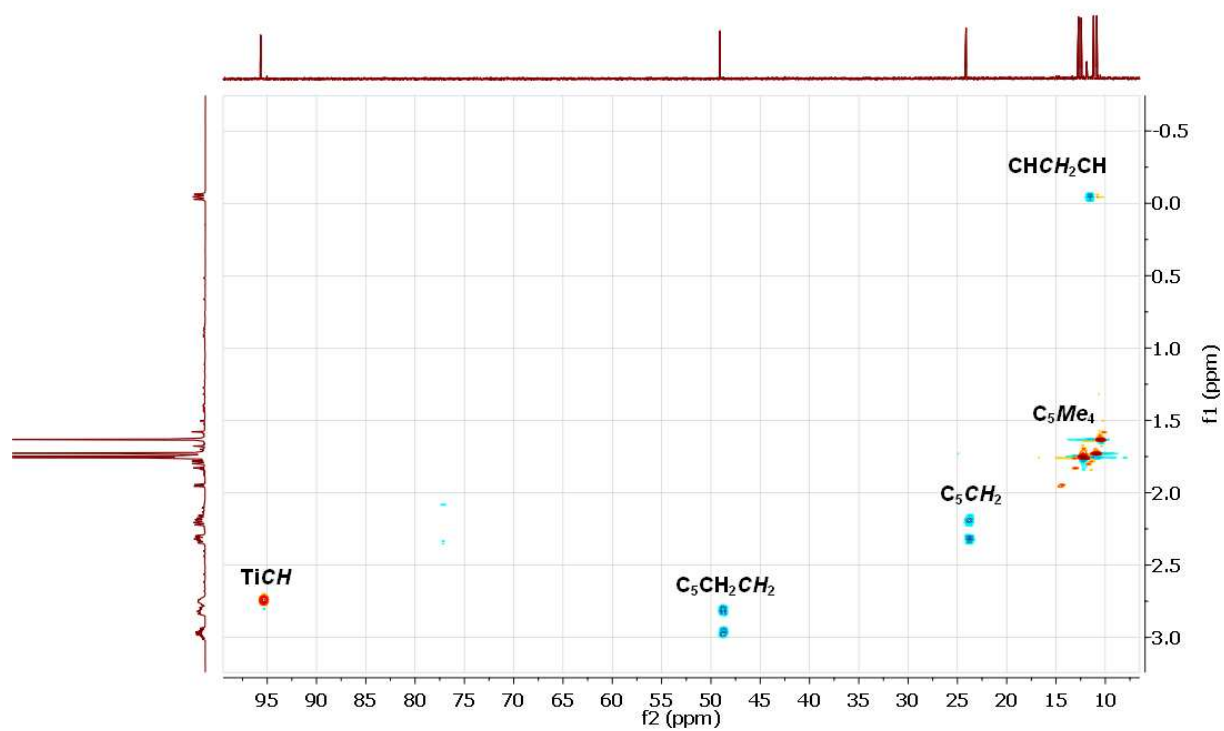
^1H NMR (500 MHz) spectrum of 2.



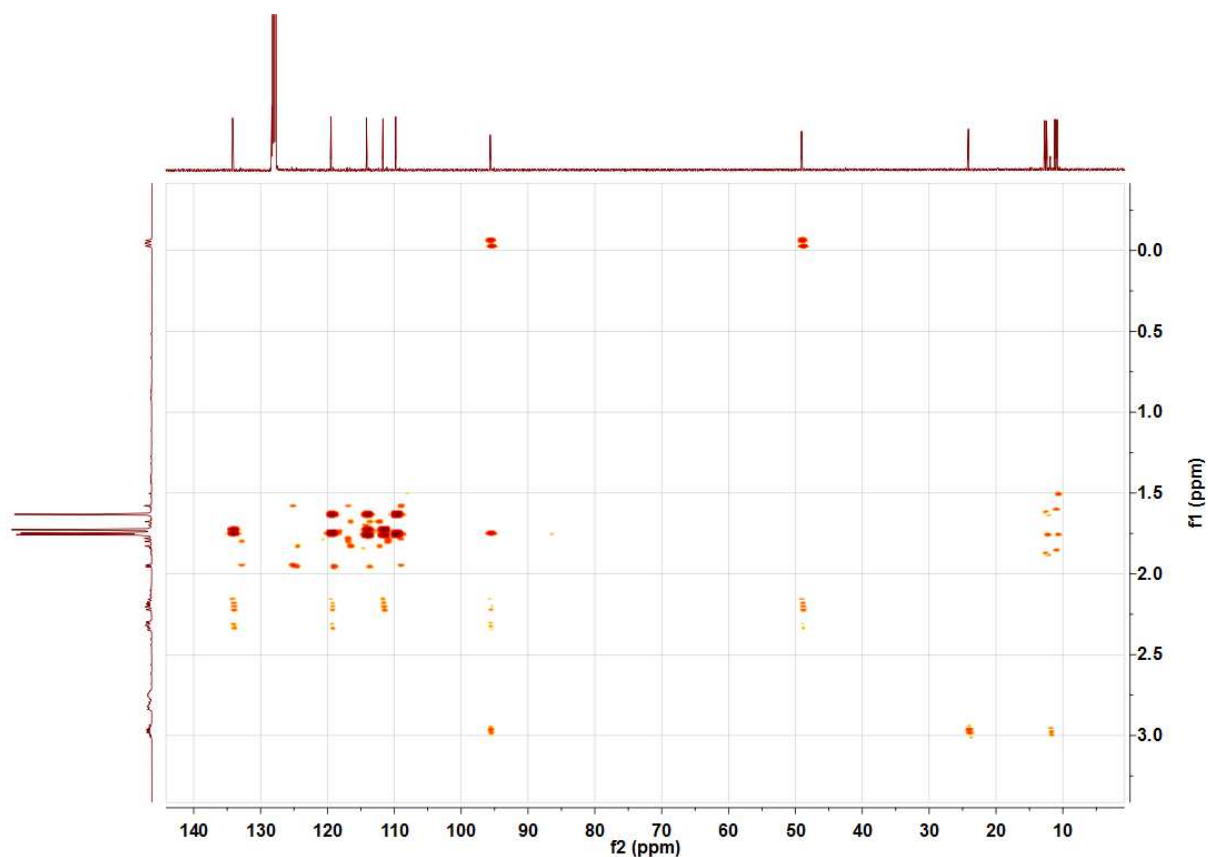
"Quantitative" (relaxation delay 58 s) $^{13}\text{C}\{^1\text{H}\}$ NMR (125 MHz) spectrum of 2.



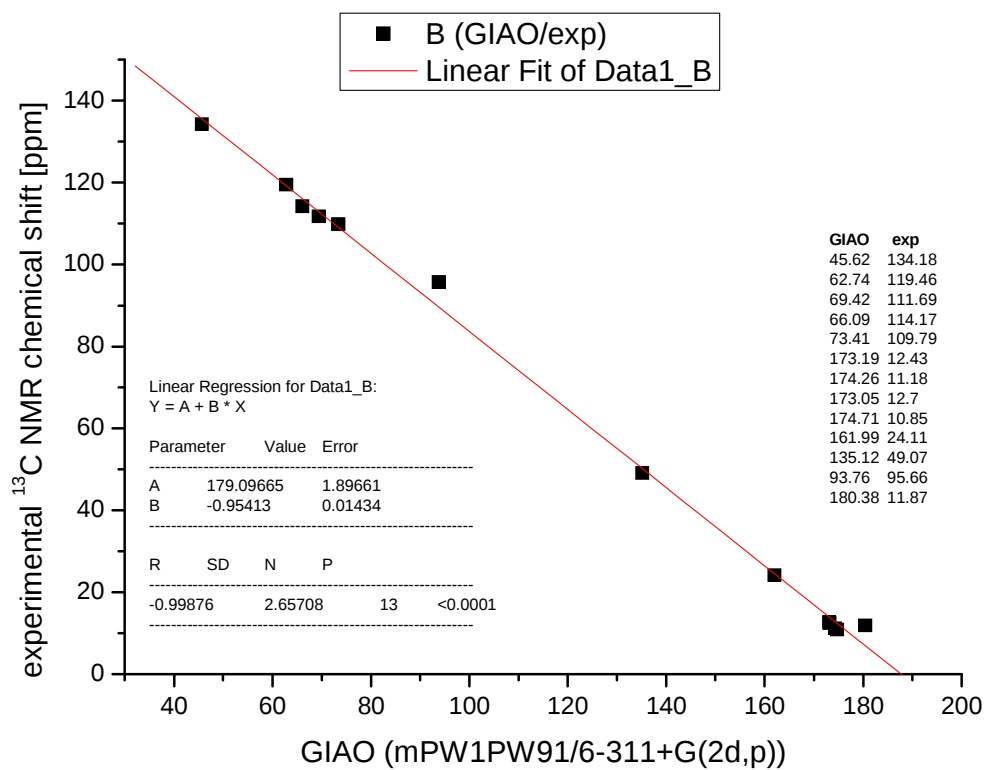
gCOSY spectrum of 2 (an expanded region).



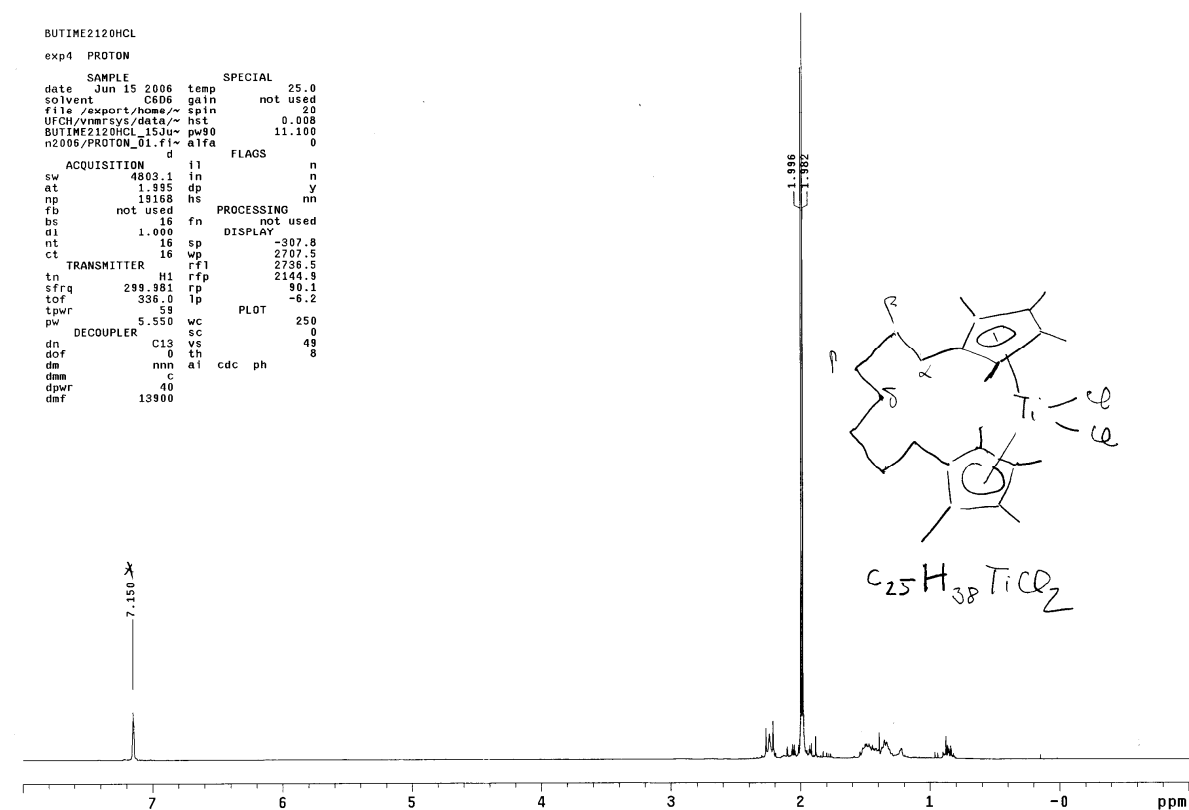
gHSQC spectrum of 2 (an expanded region).



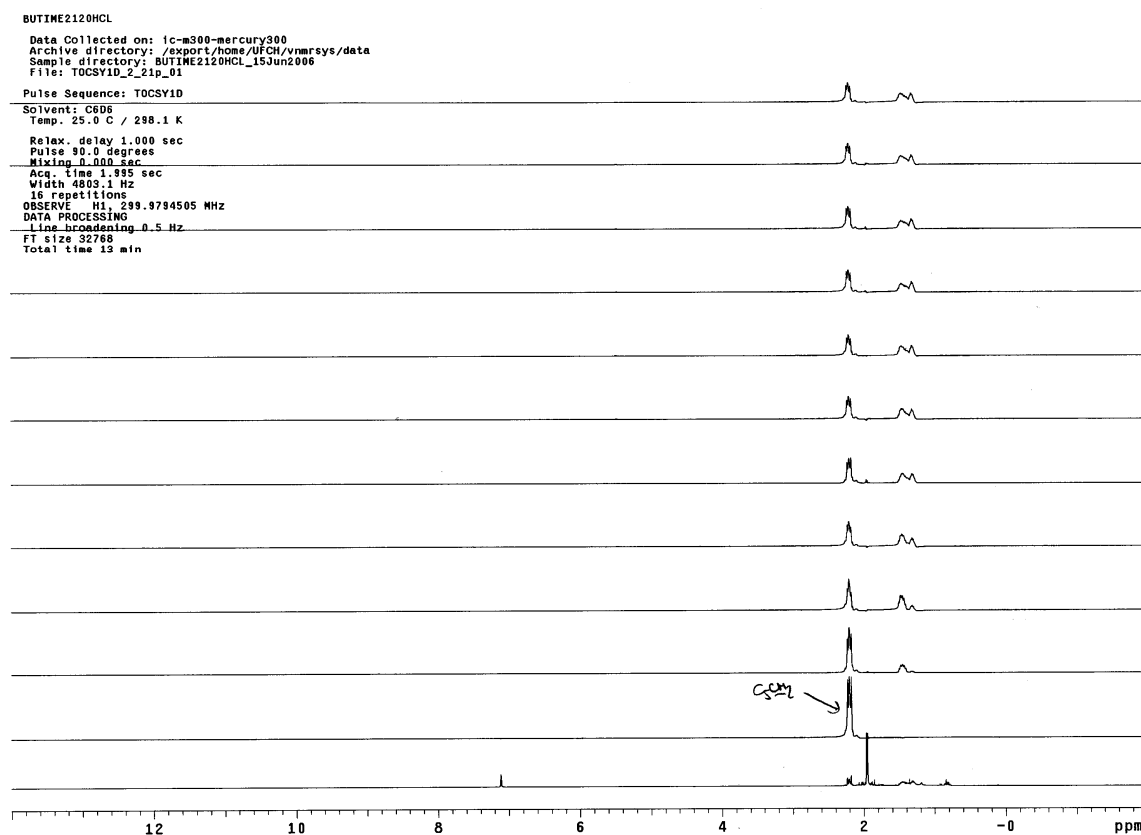
gHMBC spectrum of **2**.



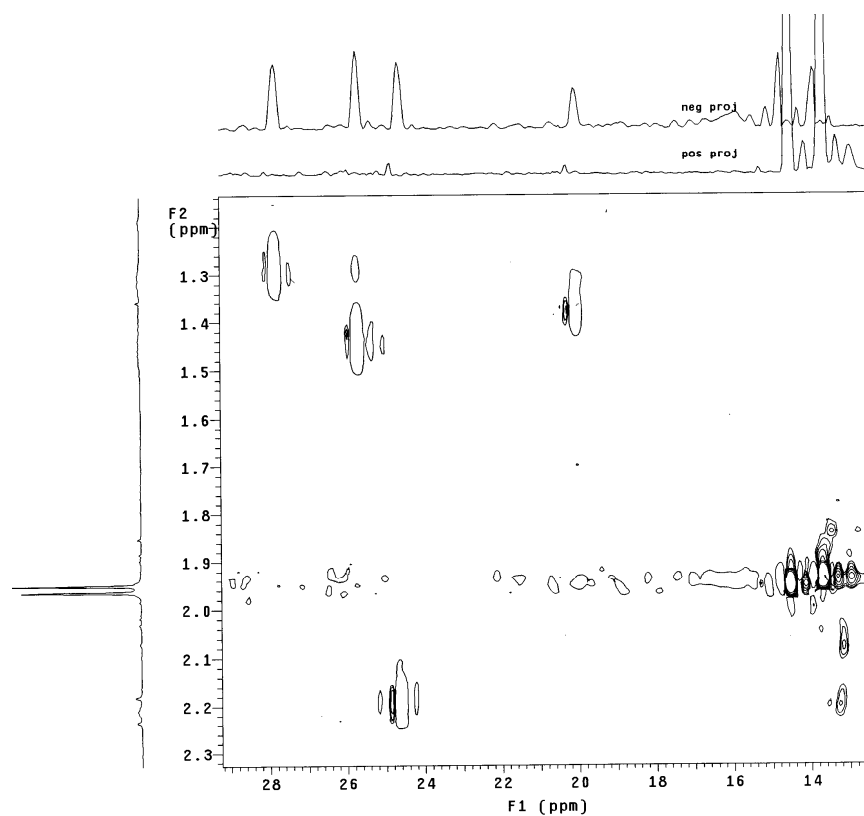
Correlation of observed ^{13}C NMR chemical shifts with calculated ones for **2**.



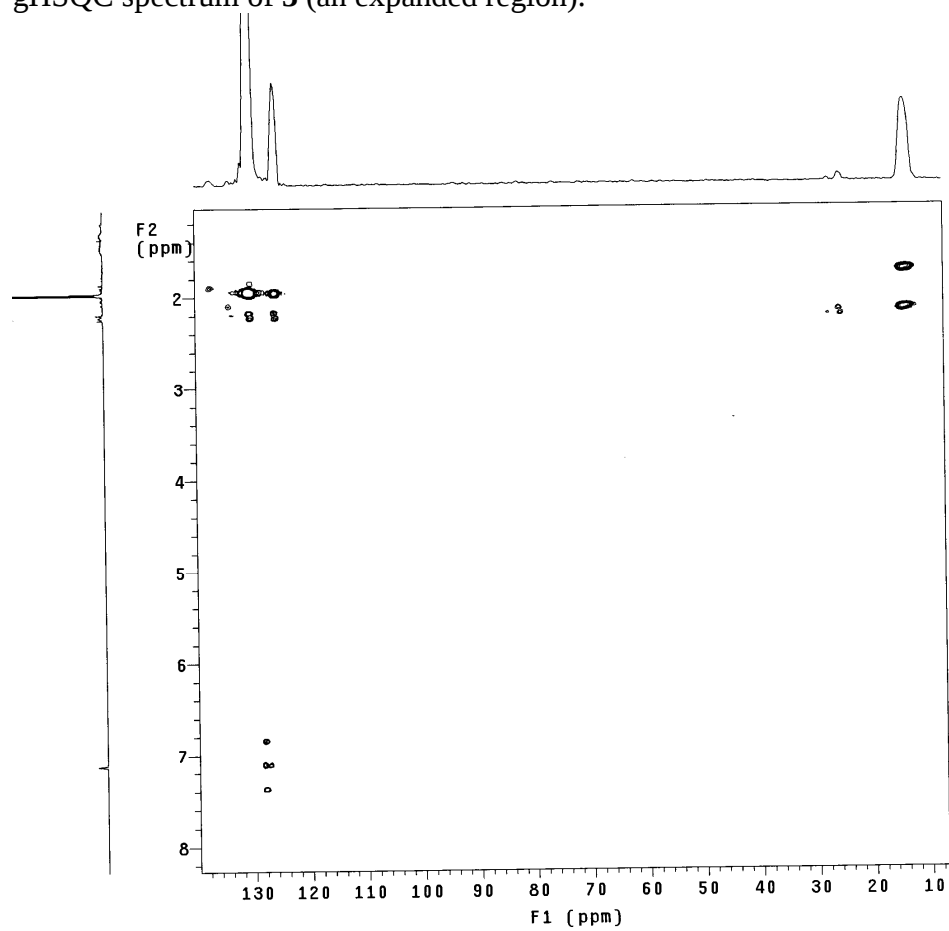
1H NMR (300 MHz) spectrum of 3.



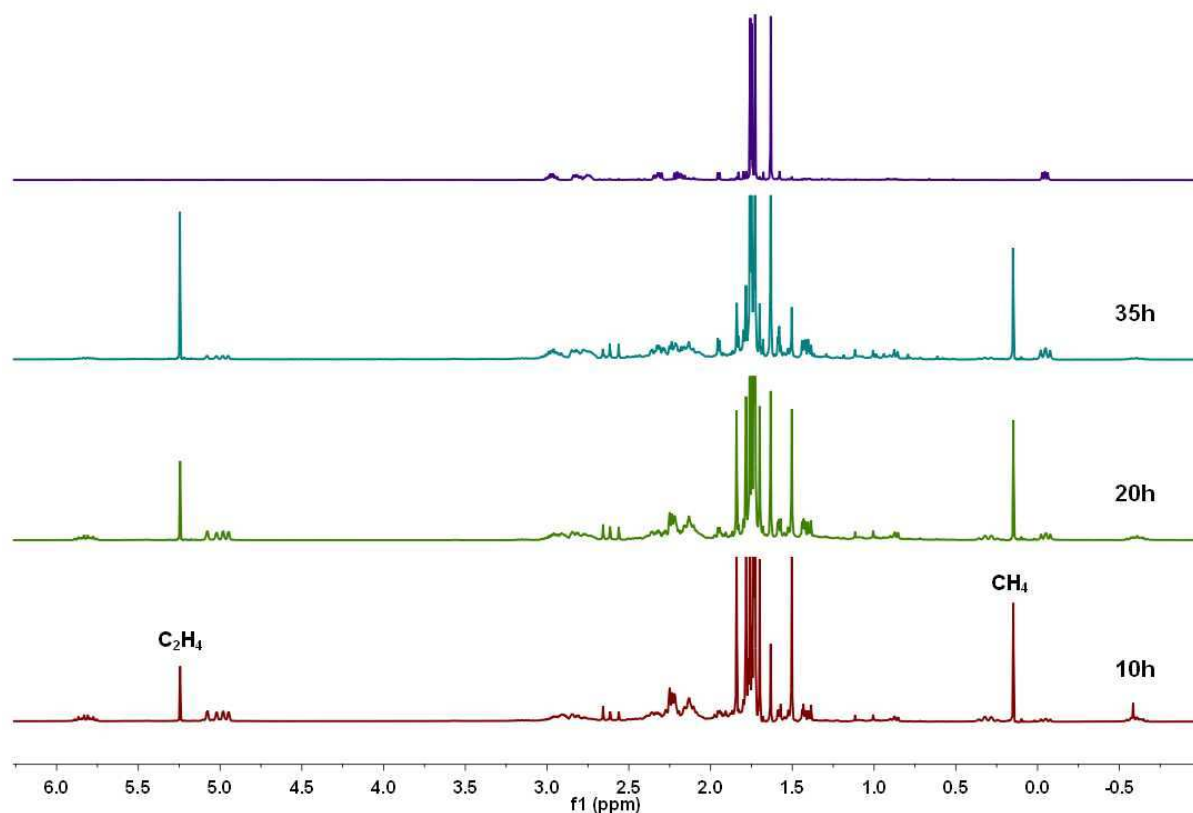
1D TOCSY spectra (arrayed mode; irradiation of signal at 2.20-2.29 ppm (α -CH₂)) of 3.



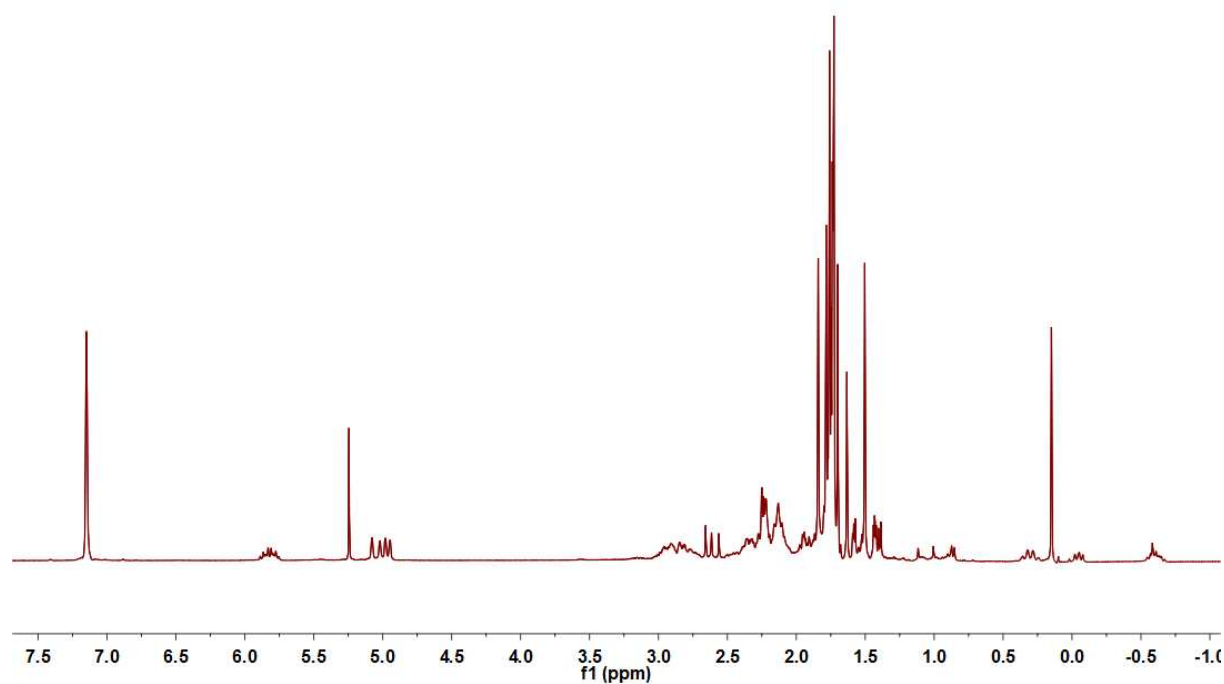
gHSQC spectrum of **3** (an expanded region).



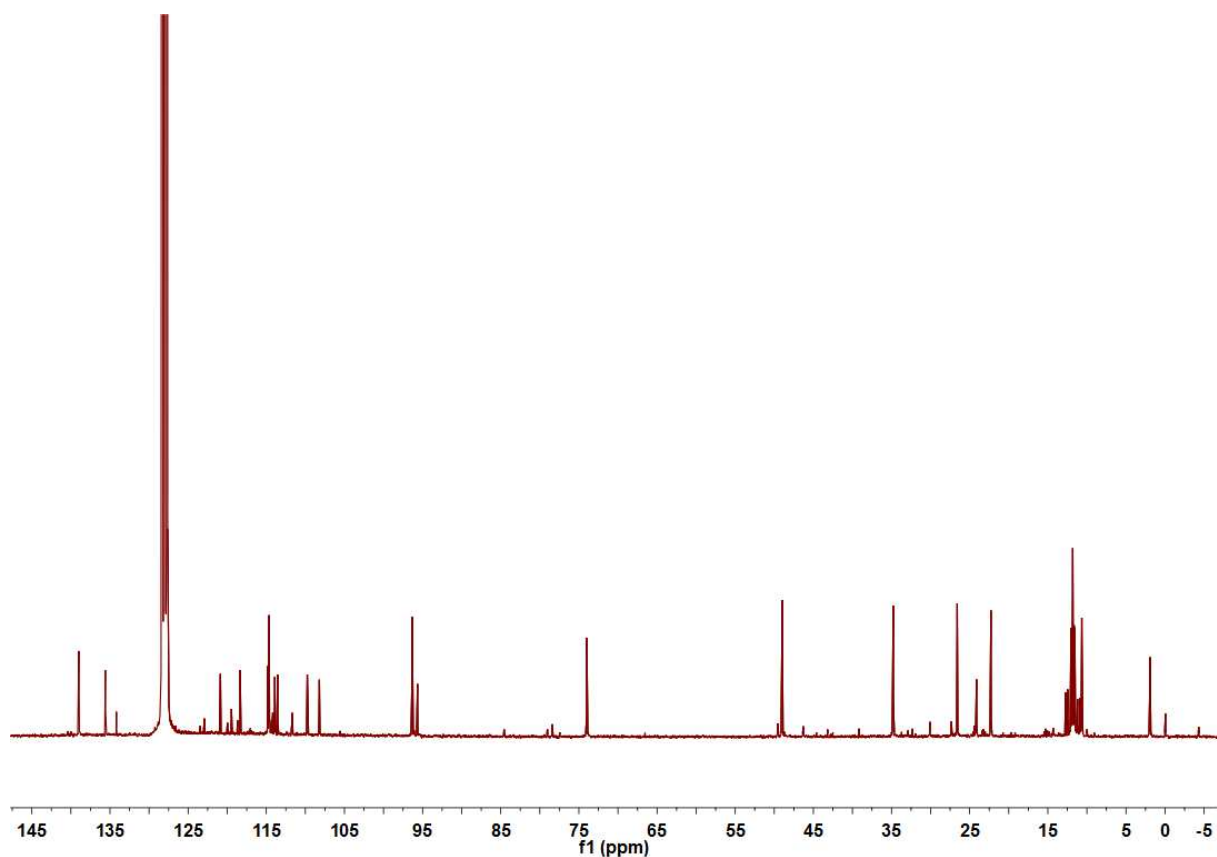
gHMBC spectrum of **3**.



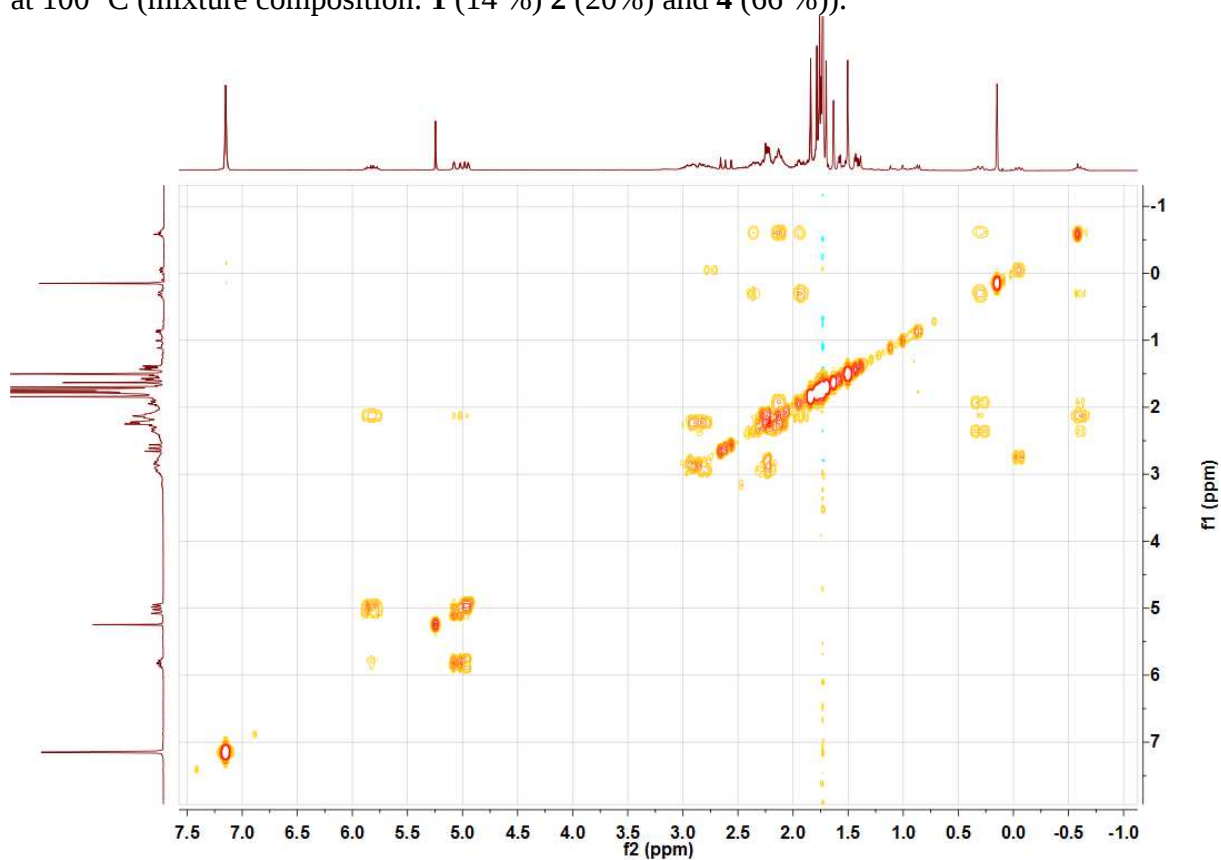
^1H NMR spectra (relaxation delay 1 s) of thermolyzed **1** in C_6D_6 in a sealed NMR tube at 100°C (pure **2** is the upper record).



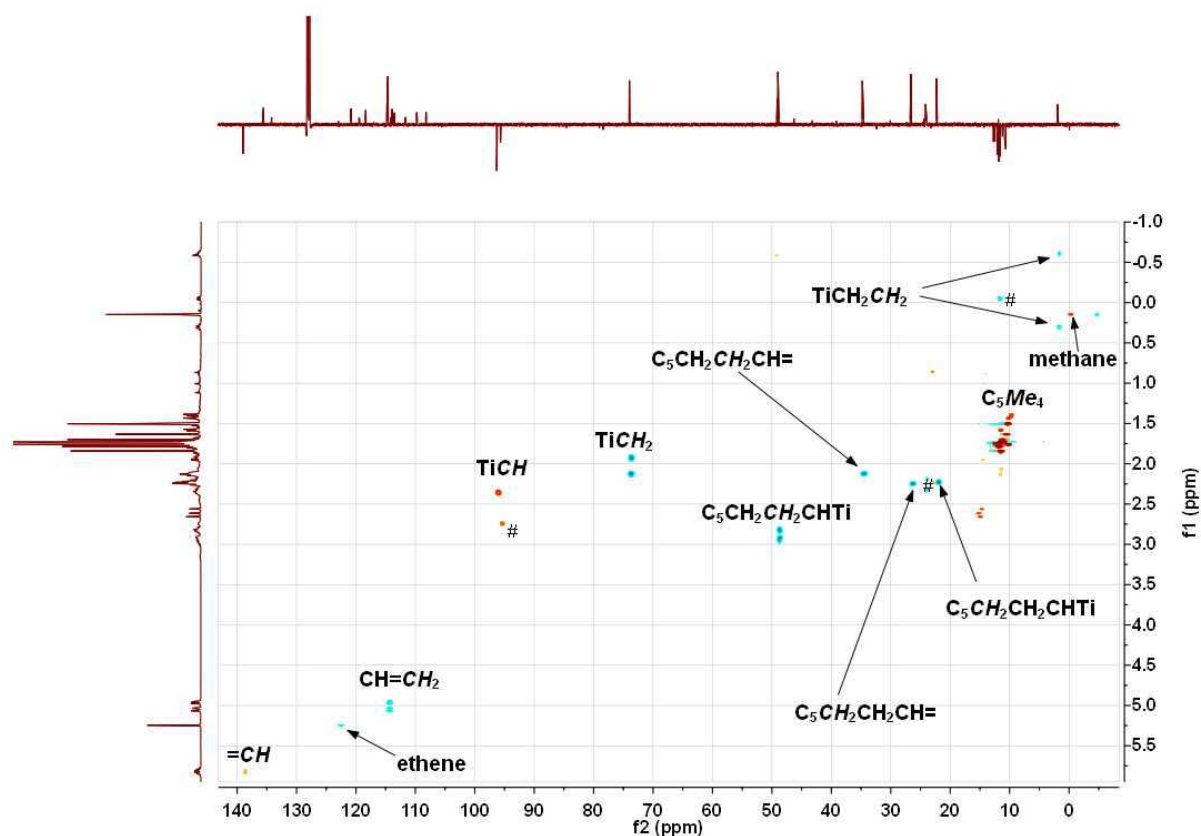
^1H NMR (300 MHz) spectrum of the mixture obtained after heating of **1** in C_6D_6 for 10 h at 100°C (mixture composition: **1** (14 %) **2** (20%) and **4** (66 %)).



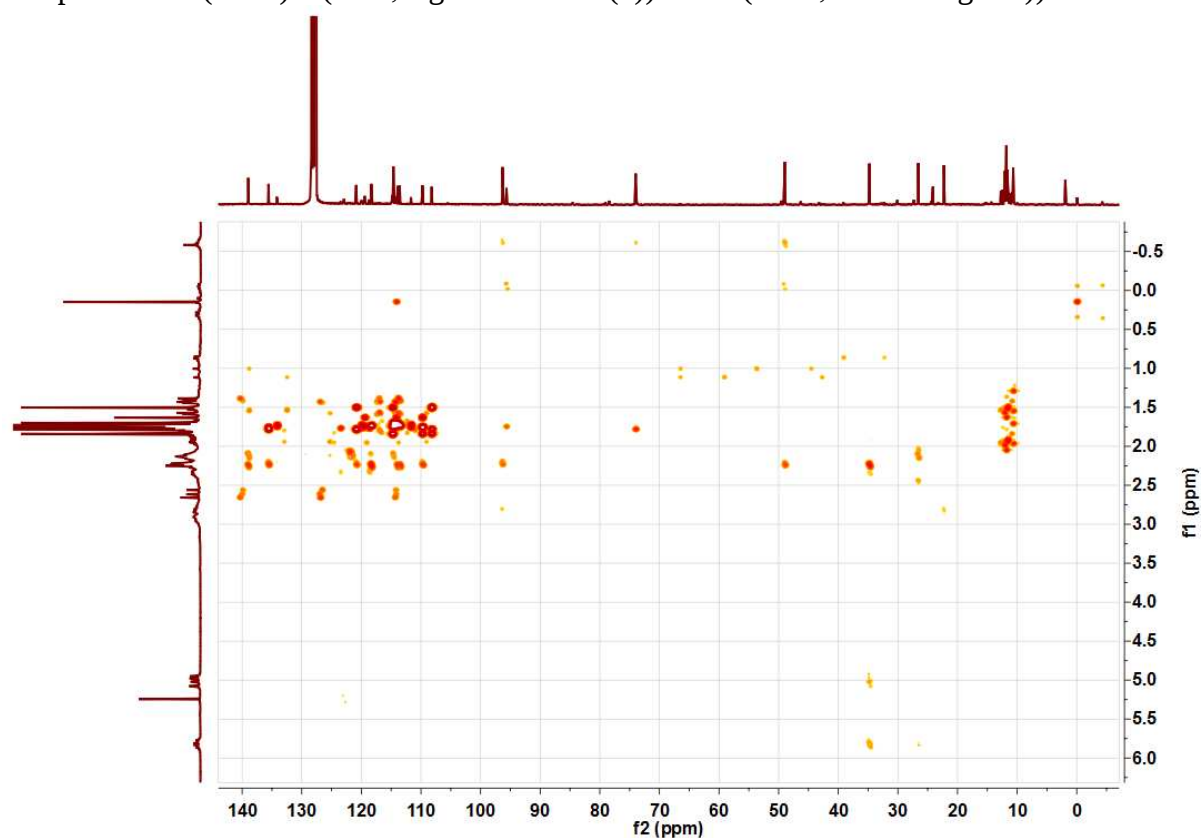
$^{13}\text{C}\{^1\text{H}\}$ NMR (75 MHz) spectrum of the mixture obtained after heating of **1** in C_6D_6 for 10 h at 100 °C (mixture composition: **1** (14 %) **2** (20%) and **4** (66 %)).



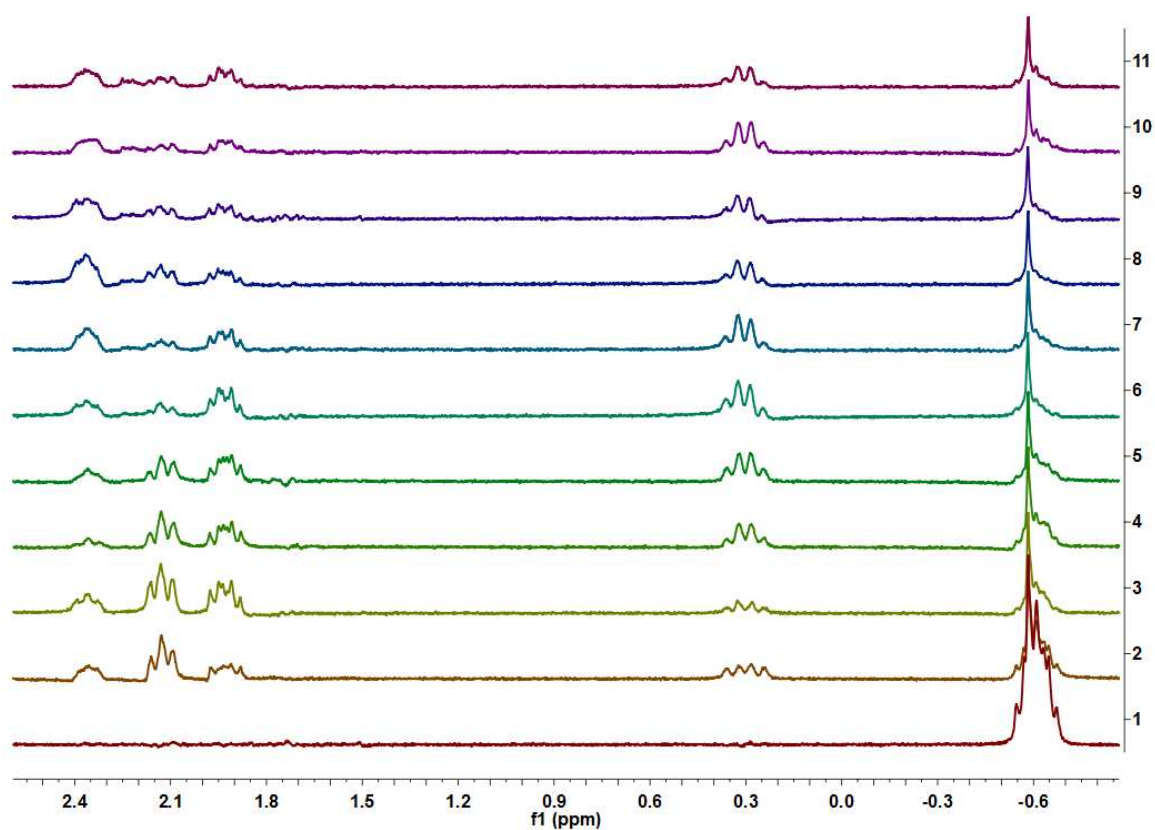
gCOSY spectrum of mixture obtained after heating of **1** in C_6D_6 for 10 h at 100 °C (mixture composition: **1** (14 %) **2** (20%) and **4** (66 %)).



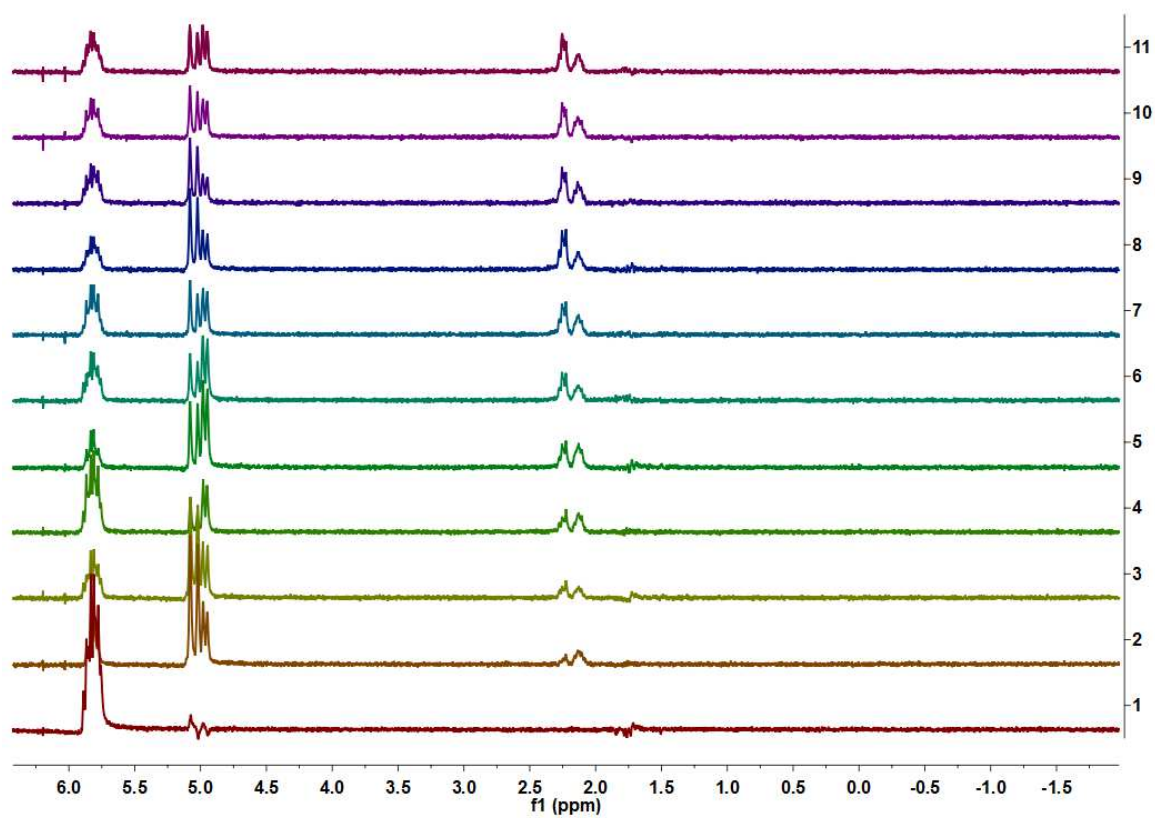
gHSQC spectrum of mixture obtained after heating of **1** in C_6D_6 for 10 h at 100 °C (mixture composition: **1** (14 %) **2** (20%, signals marked (#)) and **4** (66 %, labeled signals)).



gHMBC spectrum of mixture obtained after heating of **1** in C_6D_6 for 10 h at 100 °C (mixture composition: **1** (14 %) **2** (20%) and **4** (66 %)).



1D TOCSY spectra (arrayed mode; irradiation of signal at -0.68 – -0.52 ppm (TiCH_2CH_2)) of **4**.



1D TOCSY spectra (arrayed mode; irradiation of signal at 5.82 ppm (CH=)) of **4**.