Supplementary Information

Isolation and structural determination of natural products bearing tetrahydrogenated isoprenoid side-chains at their ω-termini

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Table of Contents

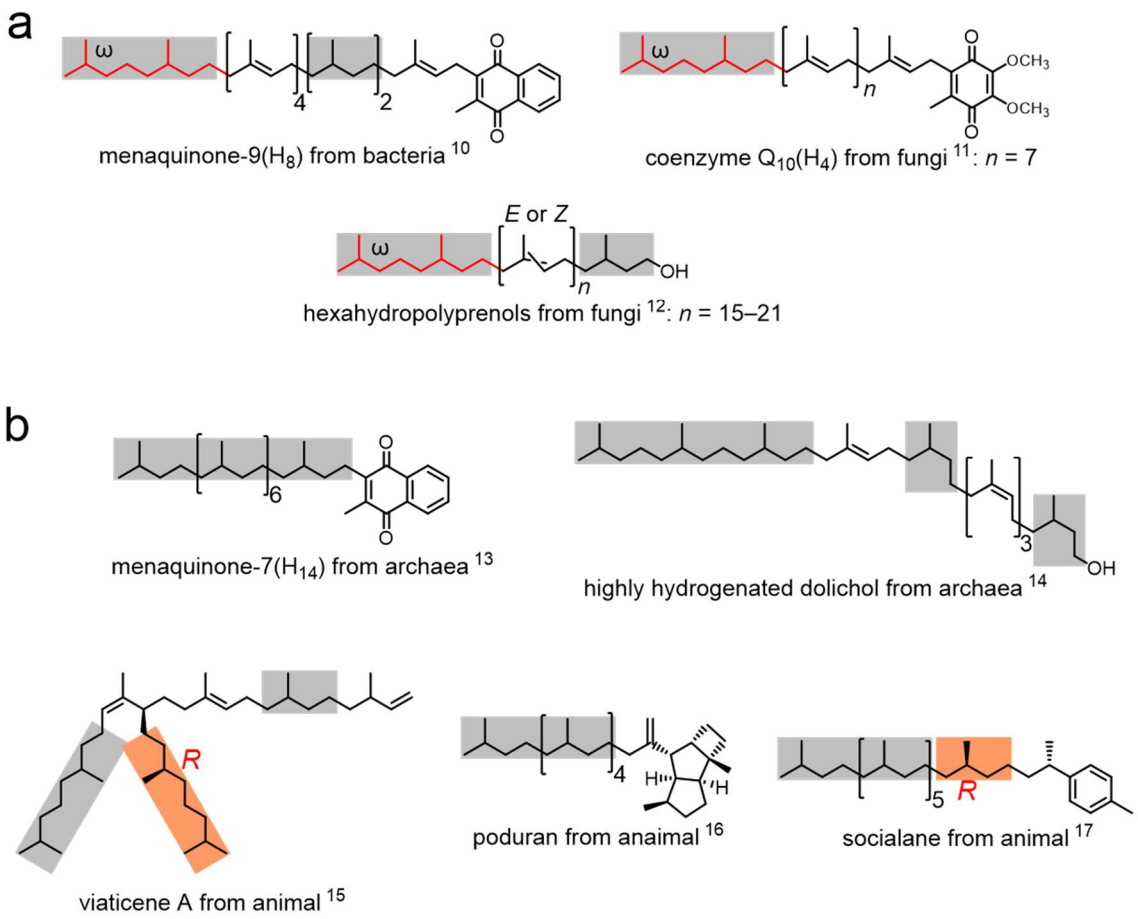

Figure S1. Examples of natural products with HIs, whose stereochemistries have never been determined.

a: Natural products with THIs whose stereochemistries may be determined by the method developed in this study. b: Natural products with HIs other than a.

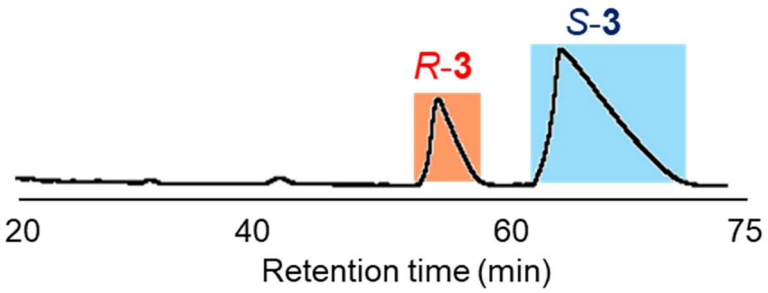

Figure S2. Chiral HPLC chromatogram of **3** synthesised from *S*-**7**. The analysis was conducted by the following condition: CHIRALPAK AD-RH, 4.6 × 150 mm; Daicel; flow = 0.5 mL/min; 274 nm with MeOH/water (75:25).

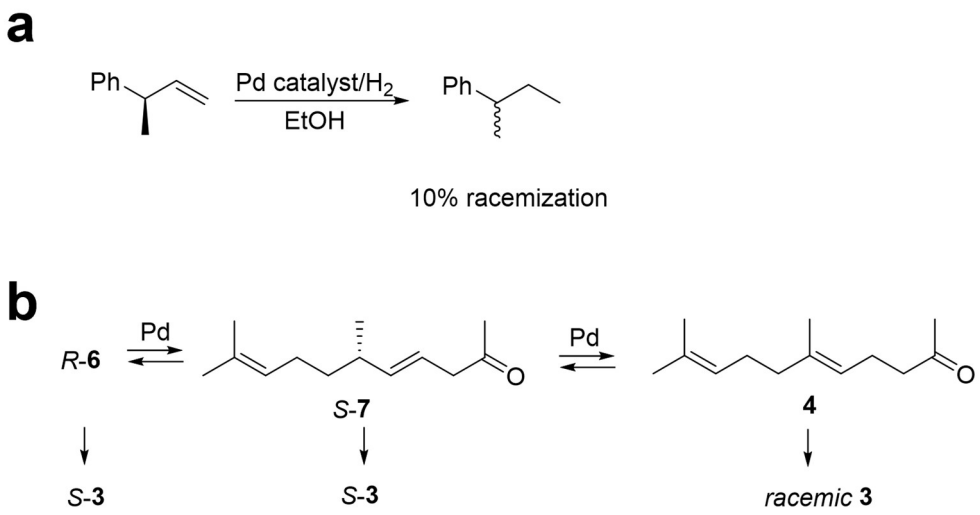

Figure S3. Pd-catalysed olefin isomerization.

(a) The reaction reported by Cram.[26] (b) Hypothesis on the conversion pathway of *S*-**7** to the racemic **3**.

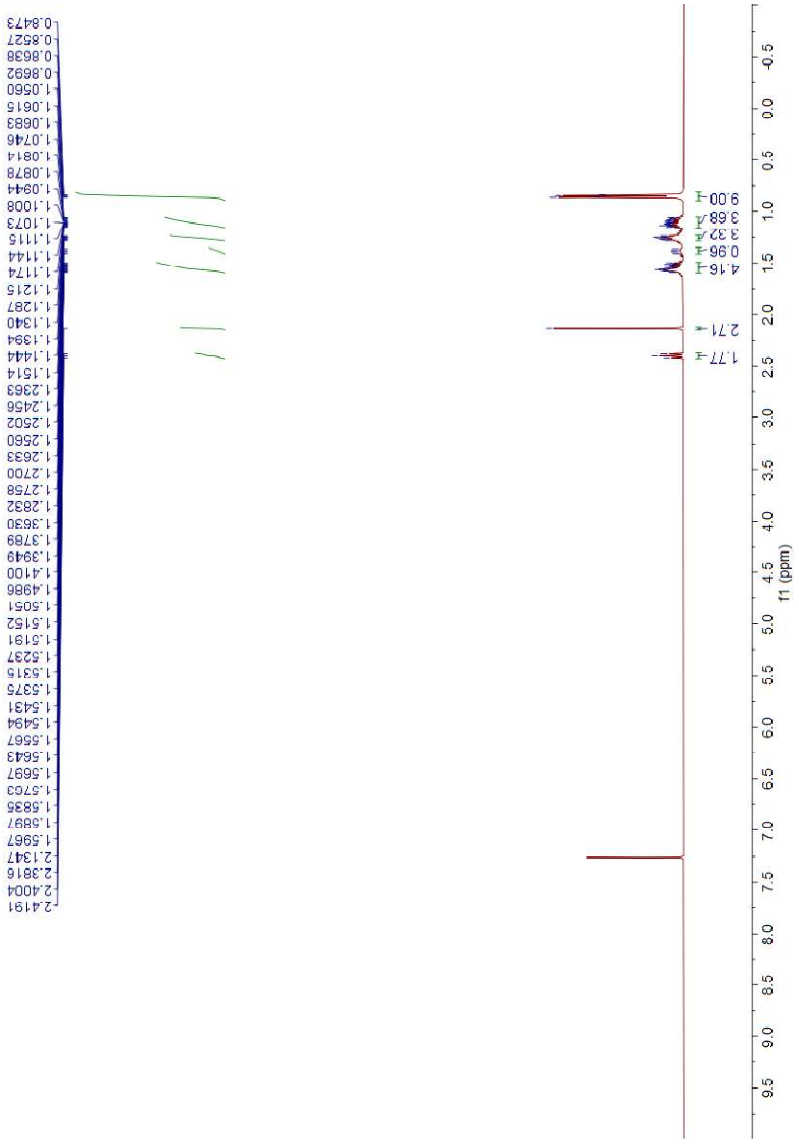

Figure S4. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of (*S*)-6,10-dimethylundecan-2-one (*S*-**3**)

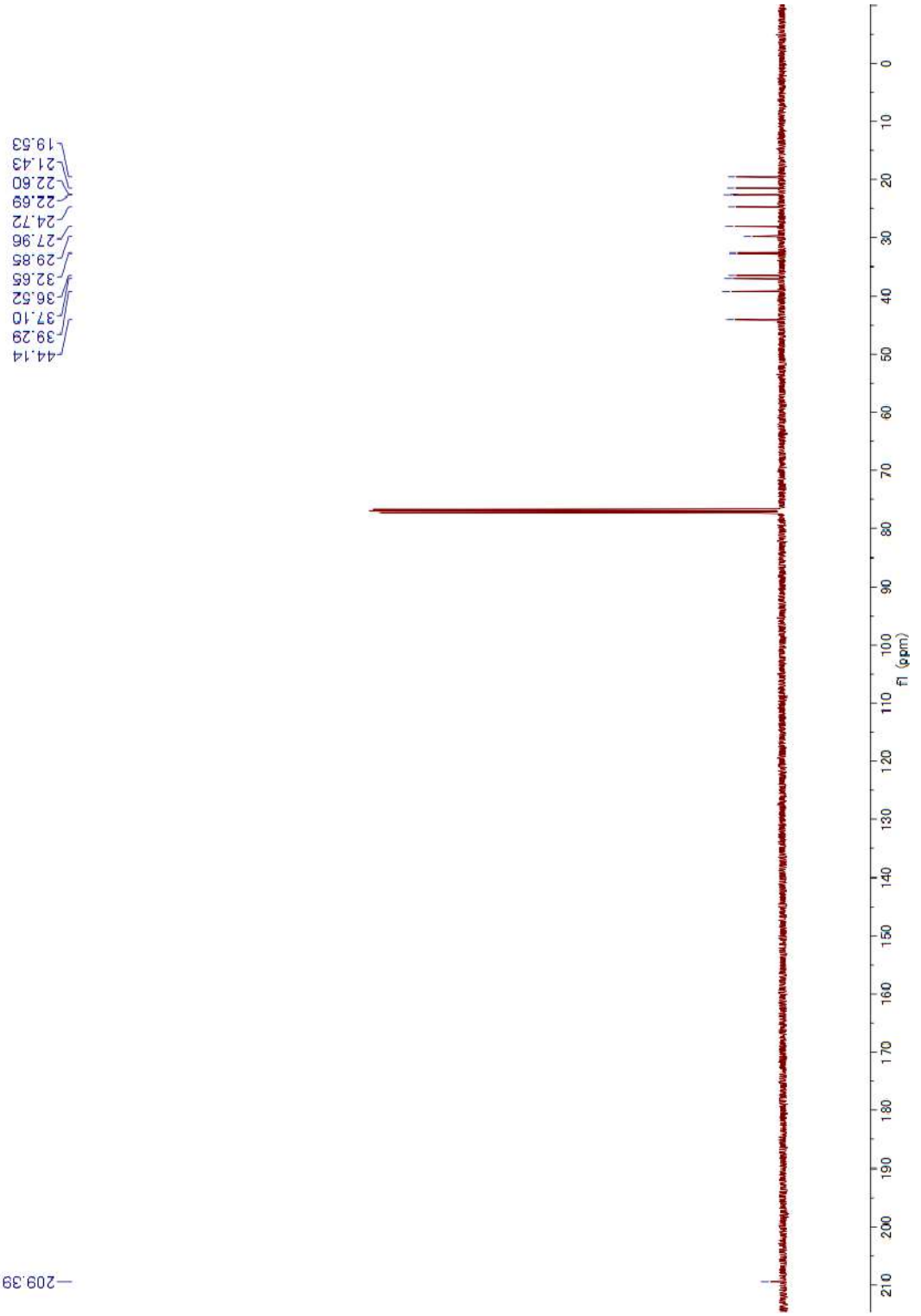

Figure S5. ^{13}C NMR (101 MHz, $CDCl_3$) spectrum of (*S*)-6,10-dimethylundecan-2-one (*S*-**3**)

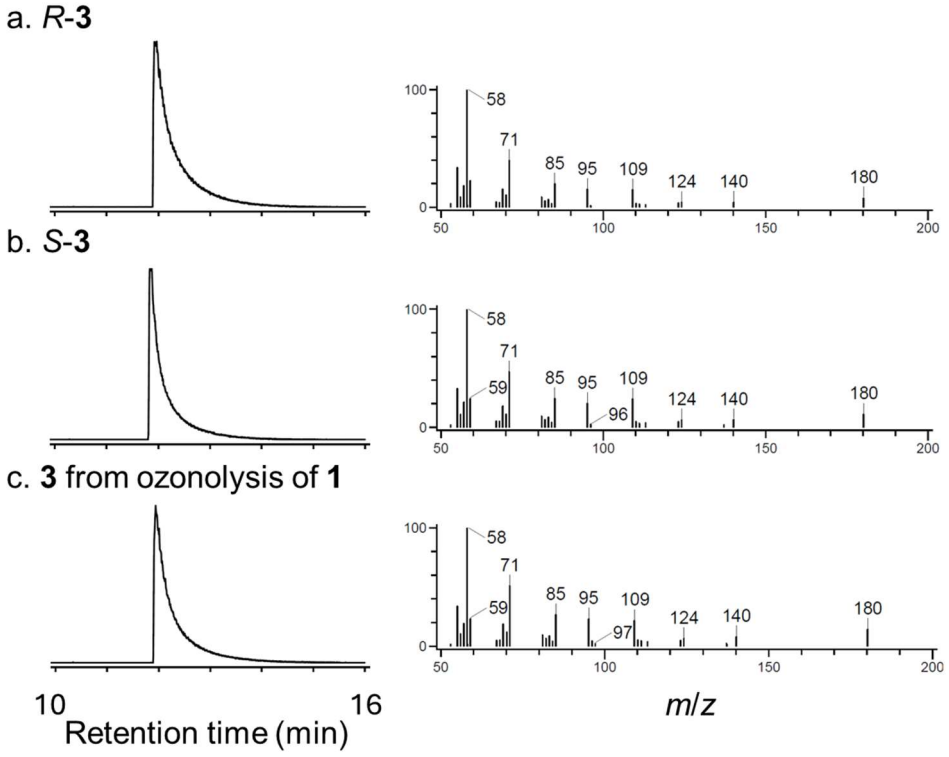

Figure S6. GC-MS chromatograms and mass-spectra of **3**.

Conditions: injection temperature, 300 °C; oven temperature, 30–300 °C; heating rate, 10 °C min^{-1}.

a: Authentic *R*-**3** fractionated by chiral HPLC.

b: Authentic *S*-**3**.

c: **3** fractionated by chiral HPLC of the ozonolysis products of **1**.

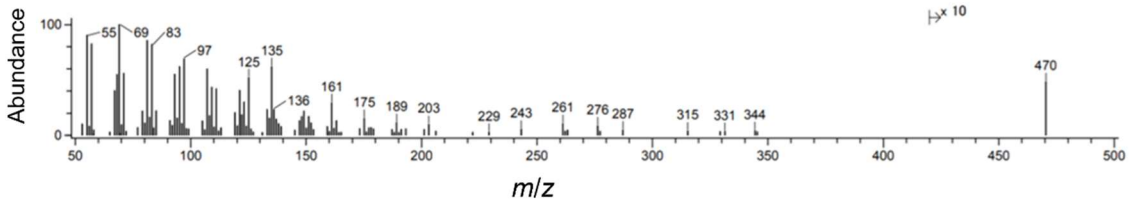

Figure S7. Mass spectrum (EI) of **2**. Molecular weight of **2**: 470.

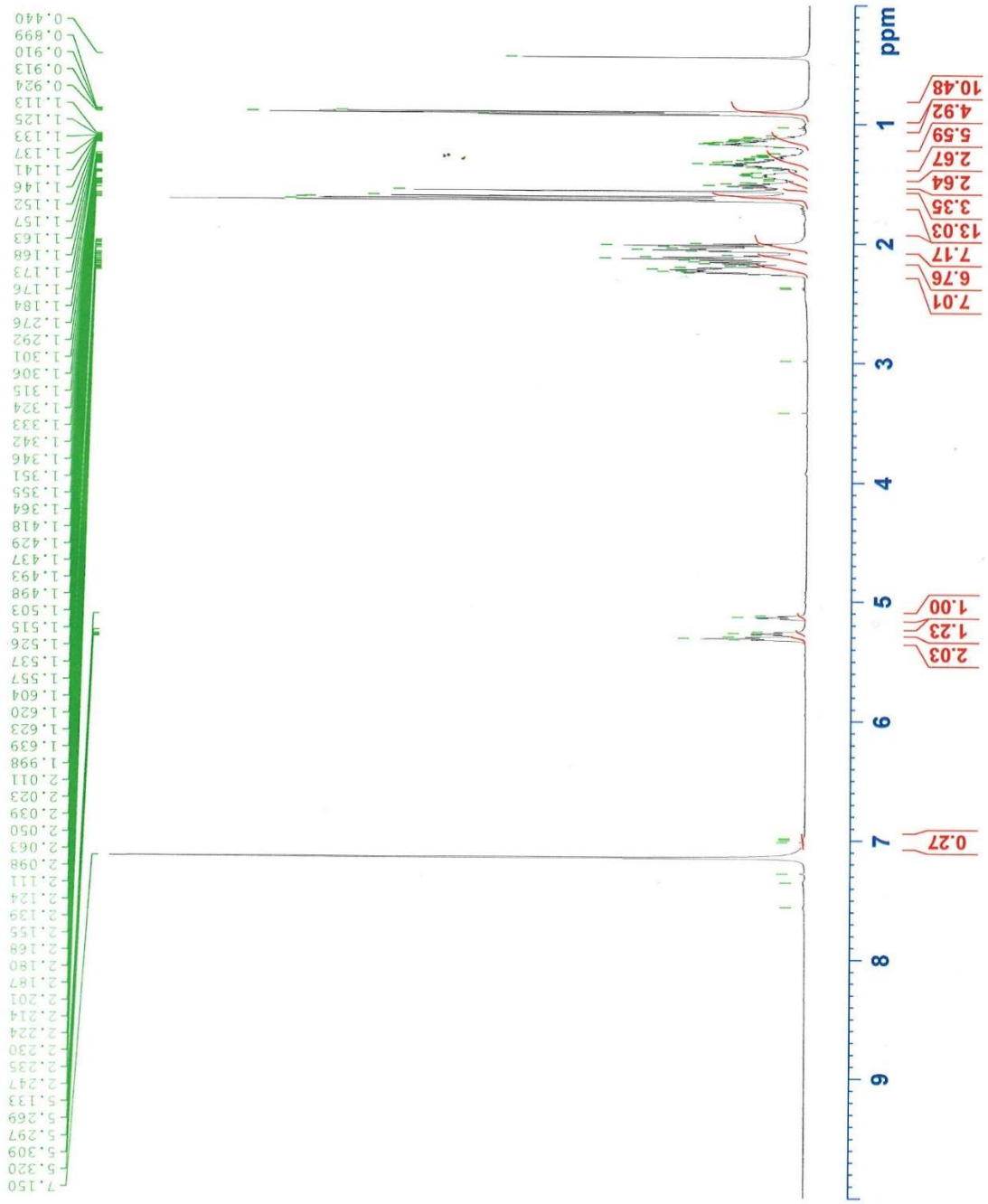

Figure S8. ^{1}H NMR spectrum of **2** measured in C_6D_6

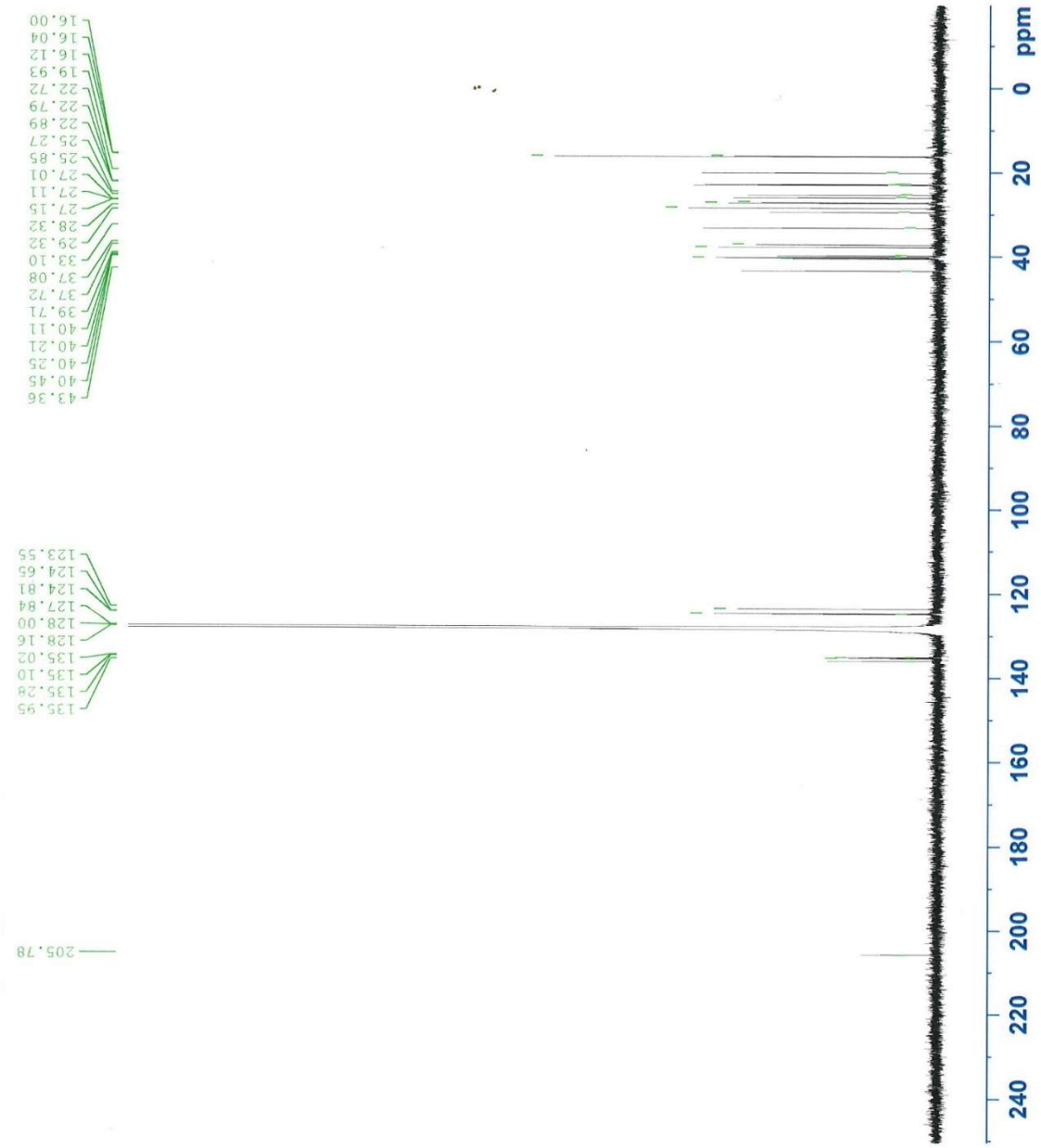

Figure S9. ^{13}C NMR spectrum of **2** measured in C_6D_6

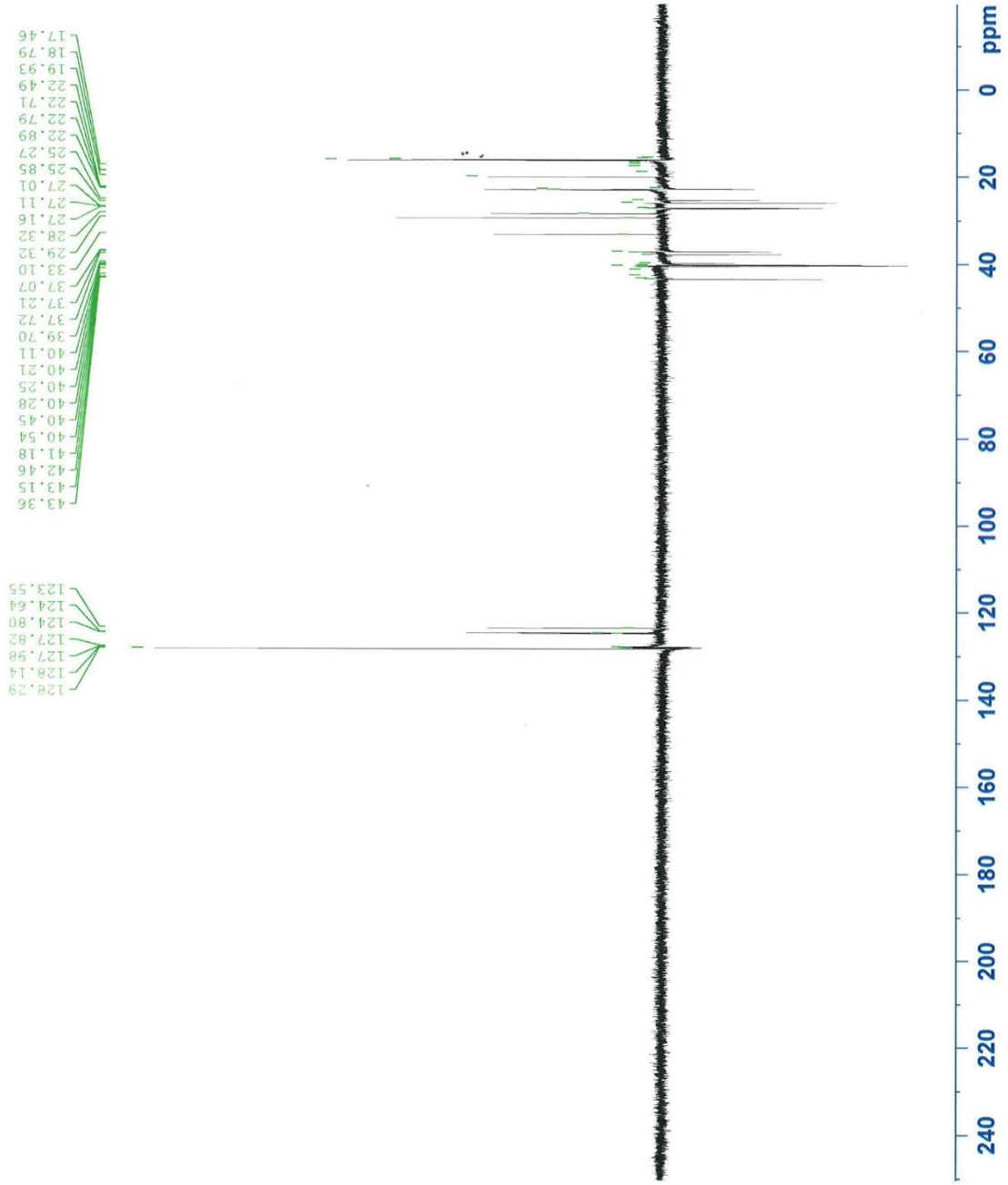

Figure S10. DEPT135 spectrum of **2** measured in C_6D_6

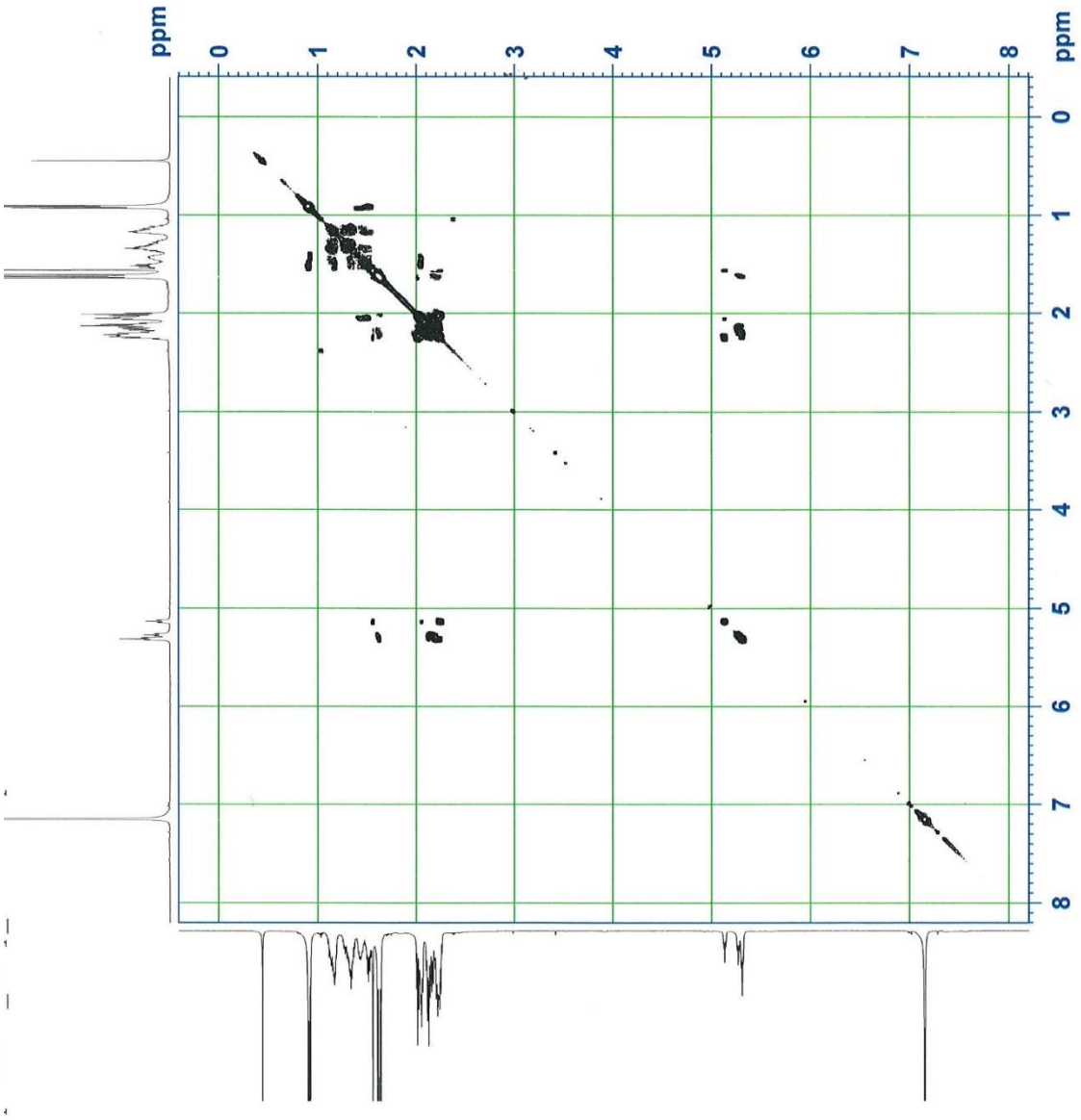

Figure S11. ^{1}H-^{1}H COSY spectrum of **2** measured in C_6D_6

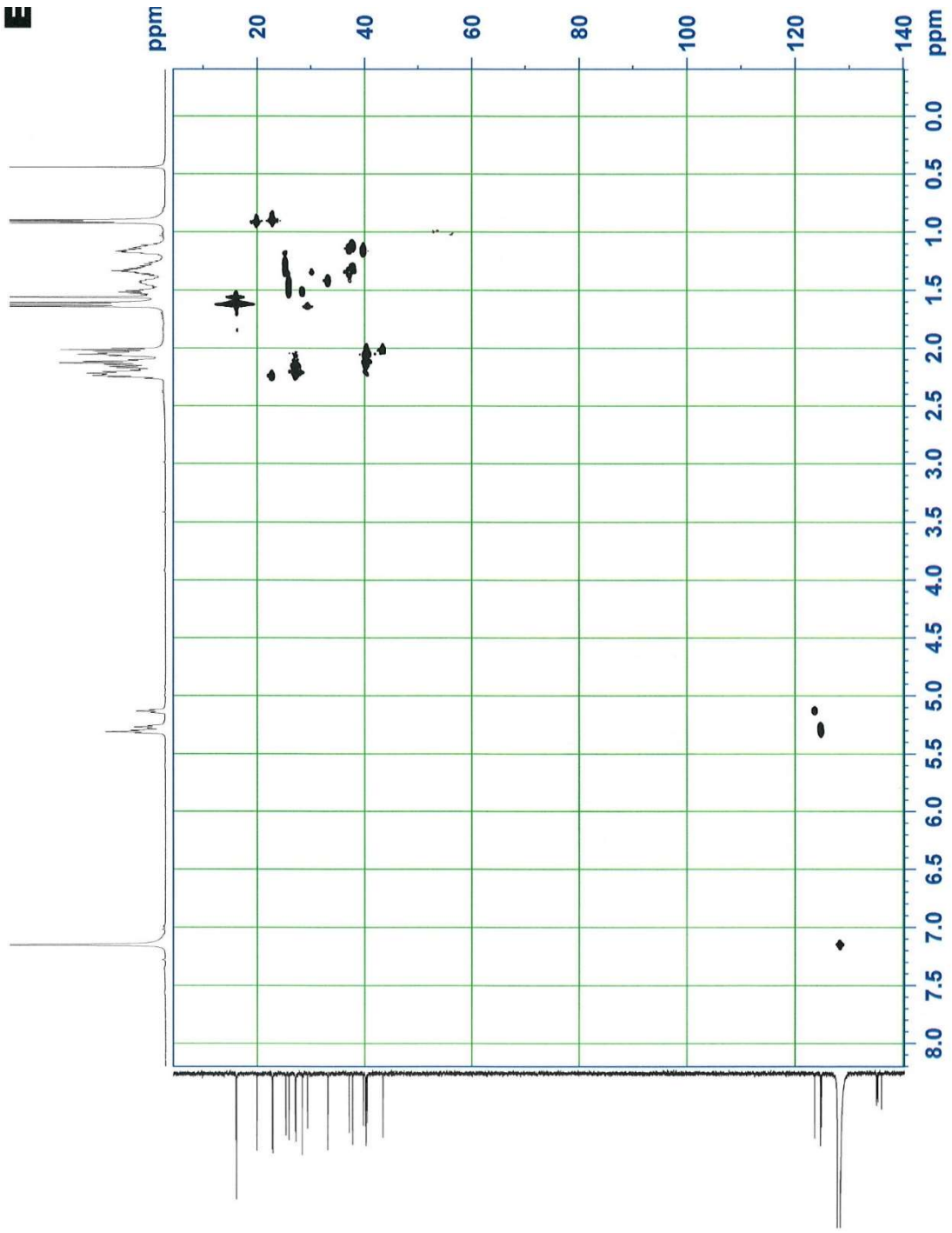

Figure S12. HSQC spectrum of **2** measured in C_6D_6

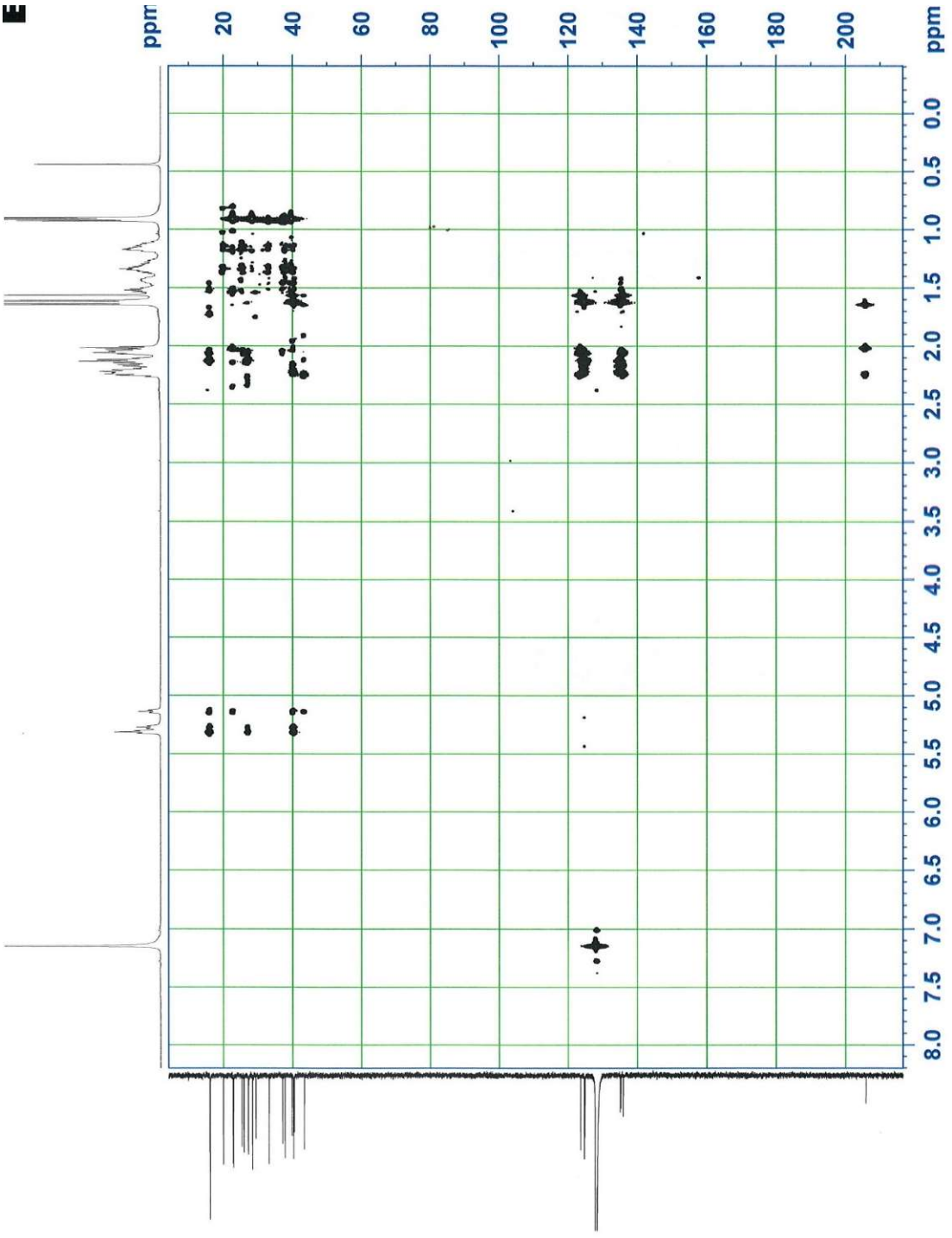

Figure S13. HMBC spectrum of **2** measured in C_6D_6