

Supplementary Information

Single-Component, Low Molecular Weight Organic Supergelators based on Chiral Barbiturate Scaffolds

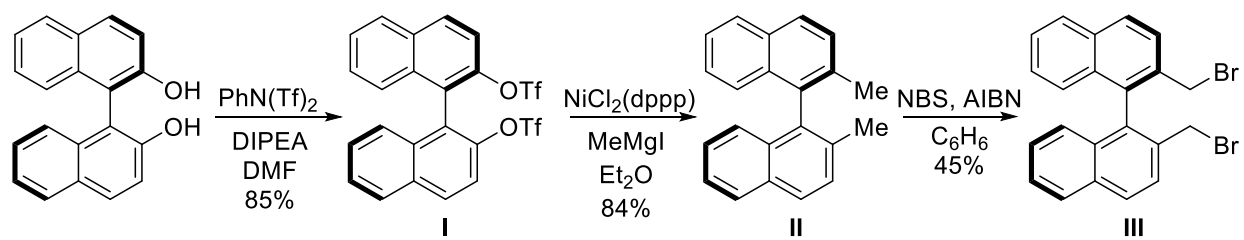
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Scheme S1. Synthesis of dibromomethylbinaphthalene with (*R*)-stereochemistry shown.

NMR Spectra of Compounds 1-3

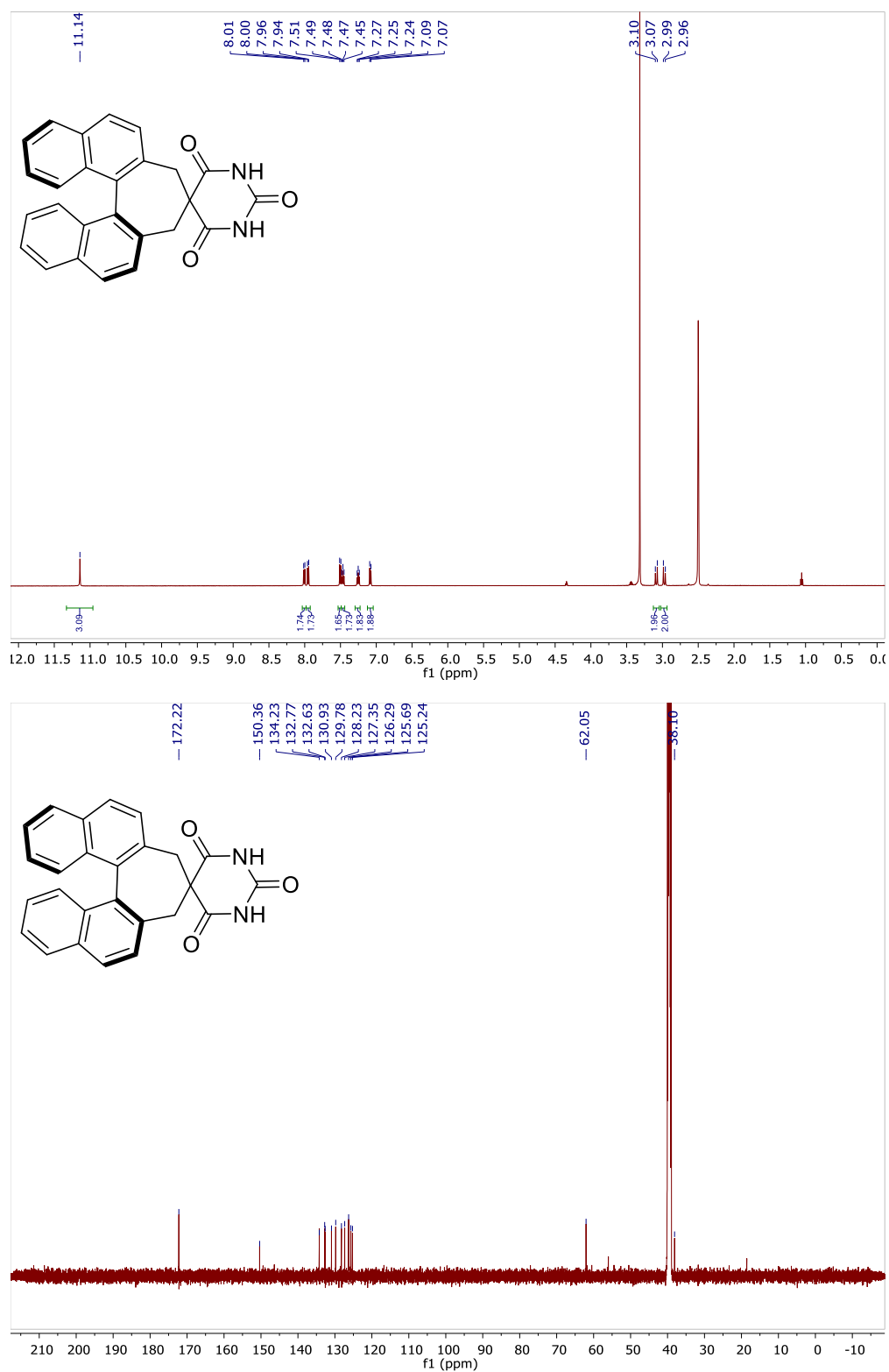


Figure S1. ^1H (500 MHz) and $^{13}\text{C}\{^1\text{H}\}$ (126 MHz) NMR spectra of **1a** in d_6 -DMSO.

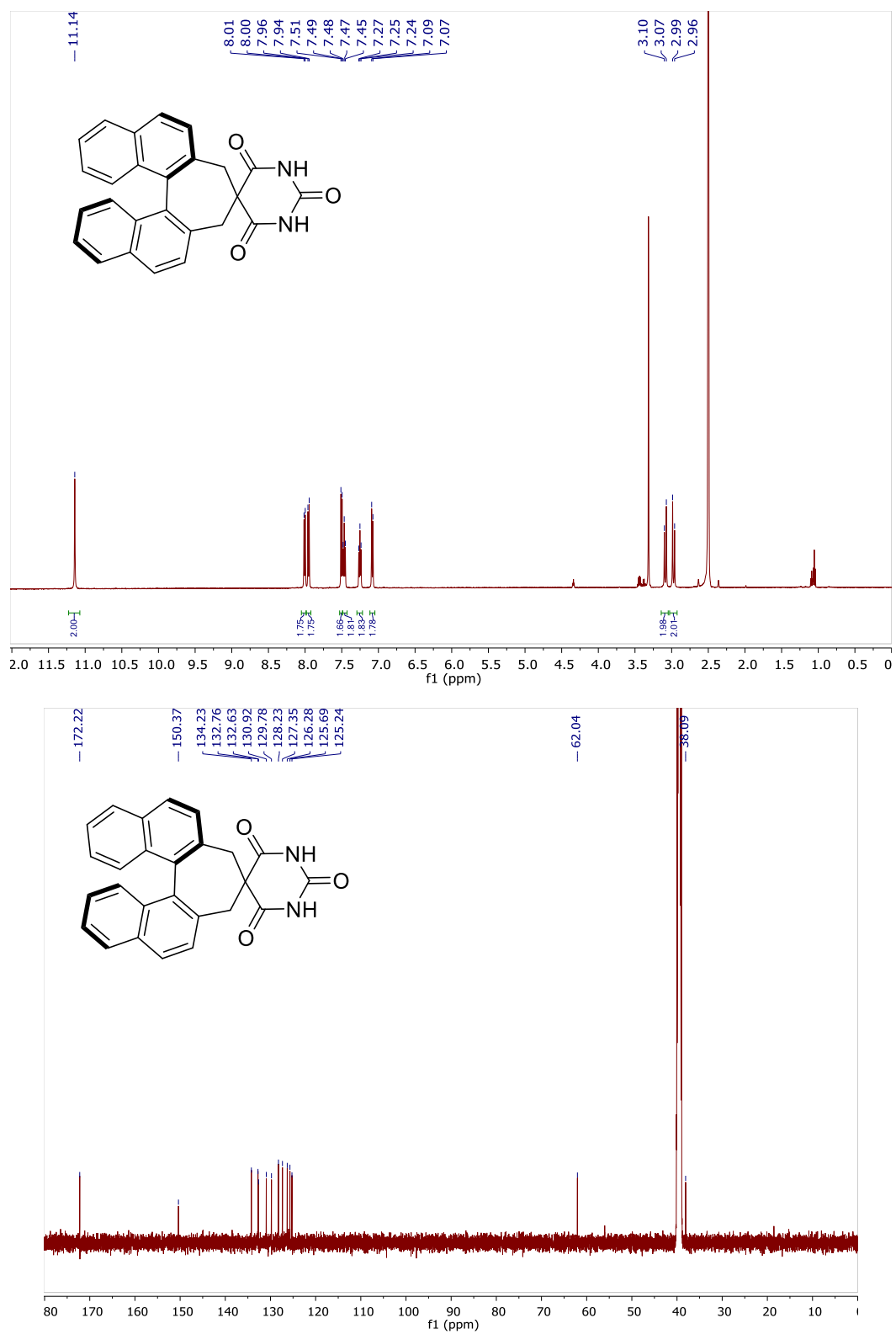


Figure S2. ¹H (500 MHz) and ¹³C{¹H} (126 MHz) NMR spectra of **1b** in d₆-DMSO.

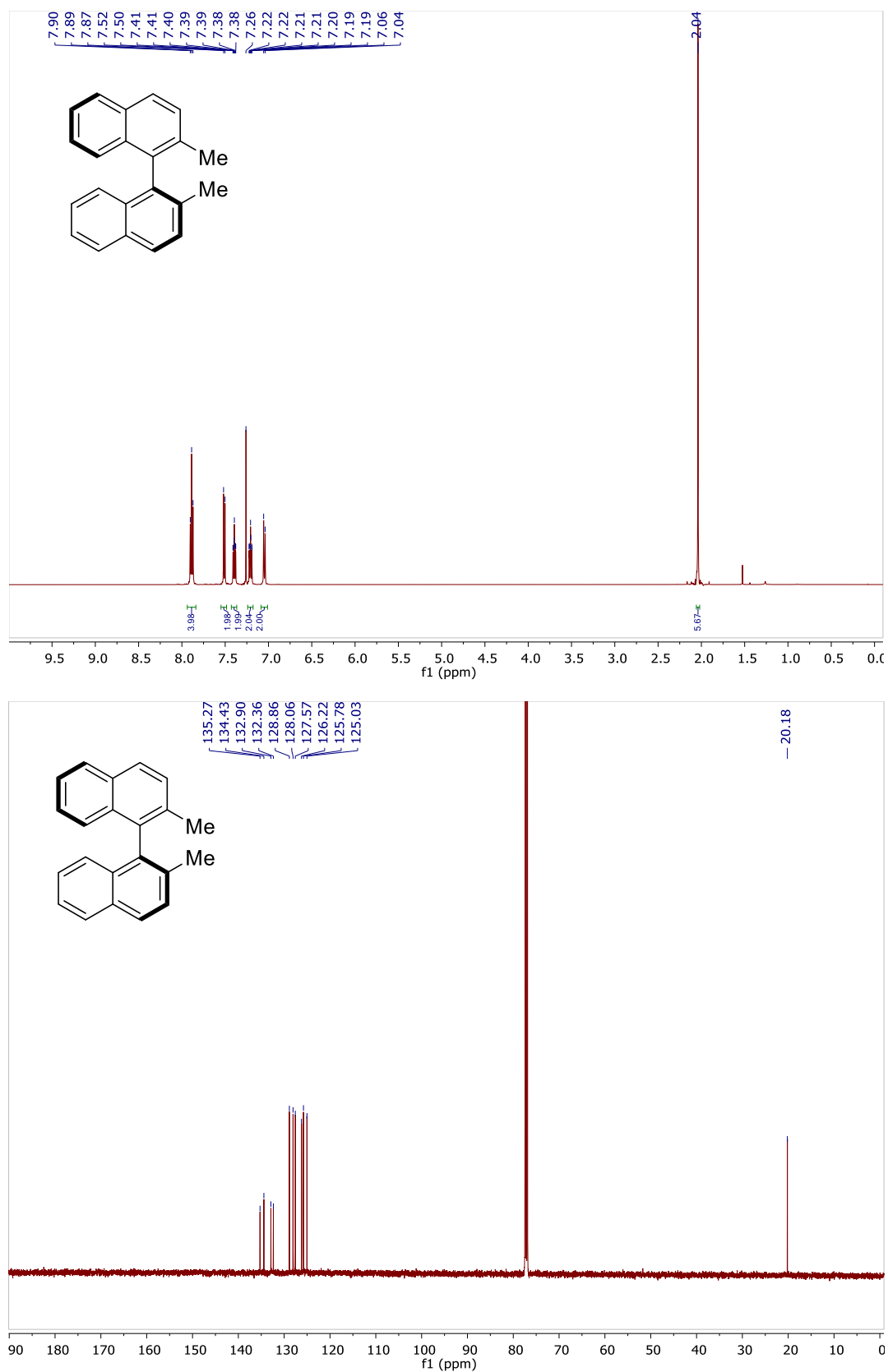


Figure S3. ^1H (500 MHz) and $^{13}\text{C}\{^1\text{H}\}$ (126 MHz) NMR spectra of **2** in CDCl_3 .

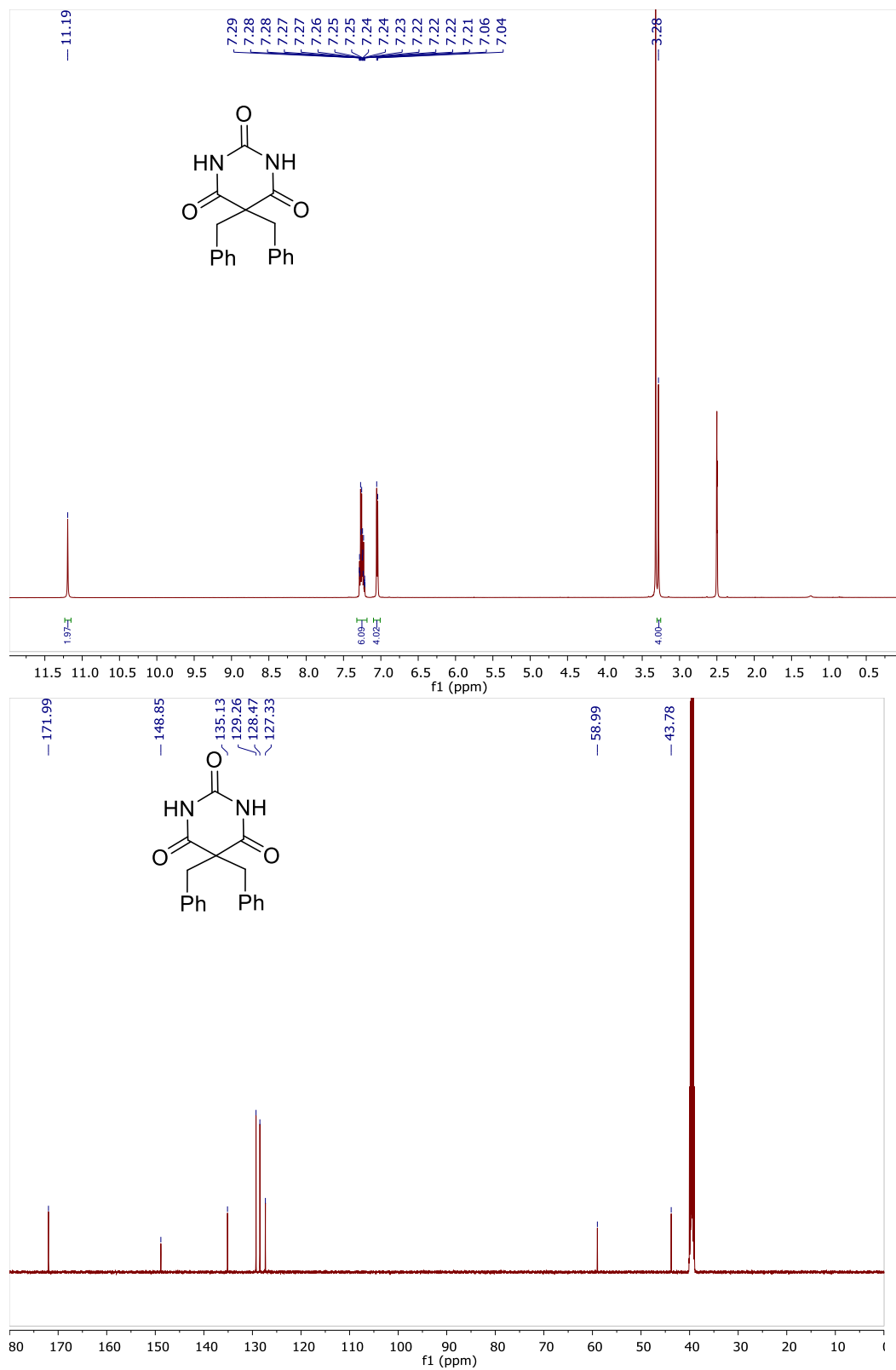


Figure S4. ^1H (500 MHz) and $^{13}\text{C}\{^1\text{H}\}$ (126 MHz) NMR spectra of **3** in d_6 -DMSO.

Representative DOSY Plots and Fitting

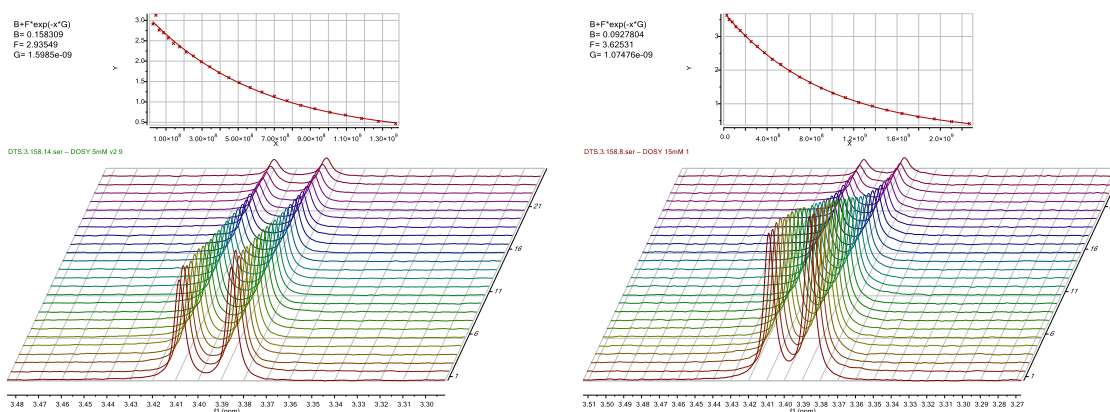


Figure S5: Representative exponential decay plots from DOSY experiments of **1a** at 5 mM (left) and 15 mM (right) showing doublet at 3.40 ppm and the corresponding exponential decay fits.

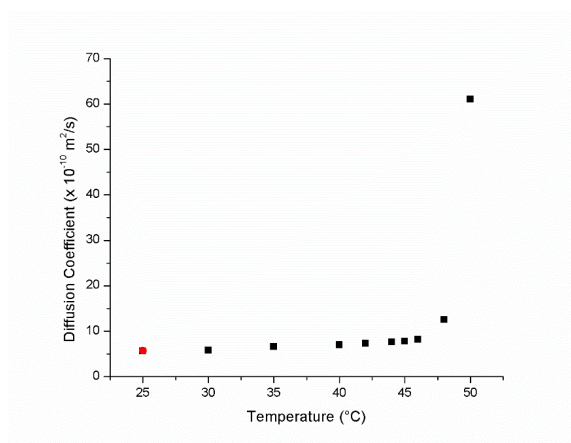


Figure S6. Variable temperature DOSY of a 20 mM gel sample of **1a** in CDCl_3 . The black squares represent a sequential increase in temperature until the T_{gel} was reached. The red circle represents the diffusion coefficient after cooling the sample back to 25 $^\circ\text{C}$ from 50 $^\circ\text{C}$.

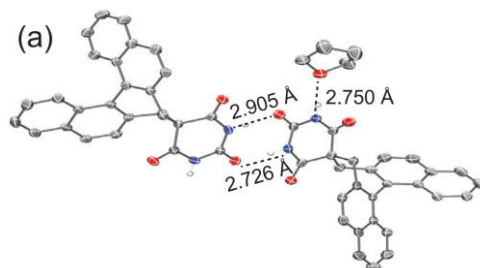


Figure S7. ORTEP representation of smallest repeat unit of **1b**. Thermal ellipsoids shown at 50% probability. Non-H bonding hydrogens omitted for clarity.

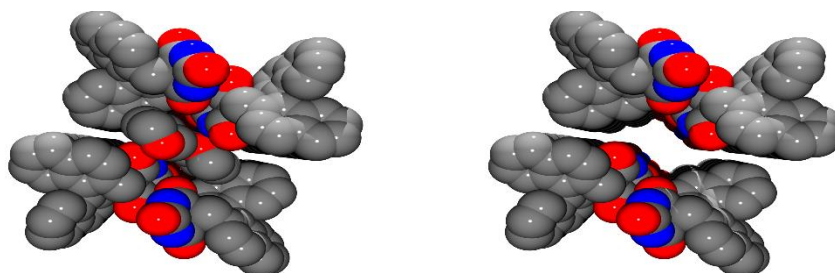


Figure S8. Space-filling representation of columnar stack of **1b** viewed down screw axis with (left) and without (right) THF co-solvent. H bonds omitted for clarity.