Supplementary information

Fabrication of a novel graphene oxide based magnetic nanocomposite and its usage as a highly effectual catalyst for the construction of *N*,*N*′-alkylidene bisamides

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Materials and instruments

All reactants and solvents were purchased from Fluka or Sigma-Aldrich Chemical Companies. Progress of the reactions was monitored by TLC using silica gel SIL G/UV 254 plates. To measure the melting points, a Thermo Scientific 9200 apparatus was used. For recording the FT-IR spectra, a Thermo device (model AVATAR) was used. The NMR spectra were recorded on a Bruker Avance DPX FT-NMR spectrometer. EDX and elemental mapping analyses were done using a TESCAN device, model MIRA II. FE-SEM instrument TESCAN (model MIRA III) was utilized for determining sizes and morphologies of the particles. VSM analysis was performed using a MDK device (Meghnatis Daghigh Kavir, Iran) at room temperature. XRD analysis was carried out by a PHILIPS apparatus (Cu Kα radiation, λ=1.54056 Å, model PW1730). TGA was done using TA apparatus (model Q600), at 25-600 ºC, with temperature increase rate of 10 ºC.min^{-1} in argon atmosphere.

Selected original spectrums of the constructed bisamides

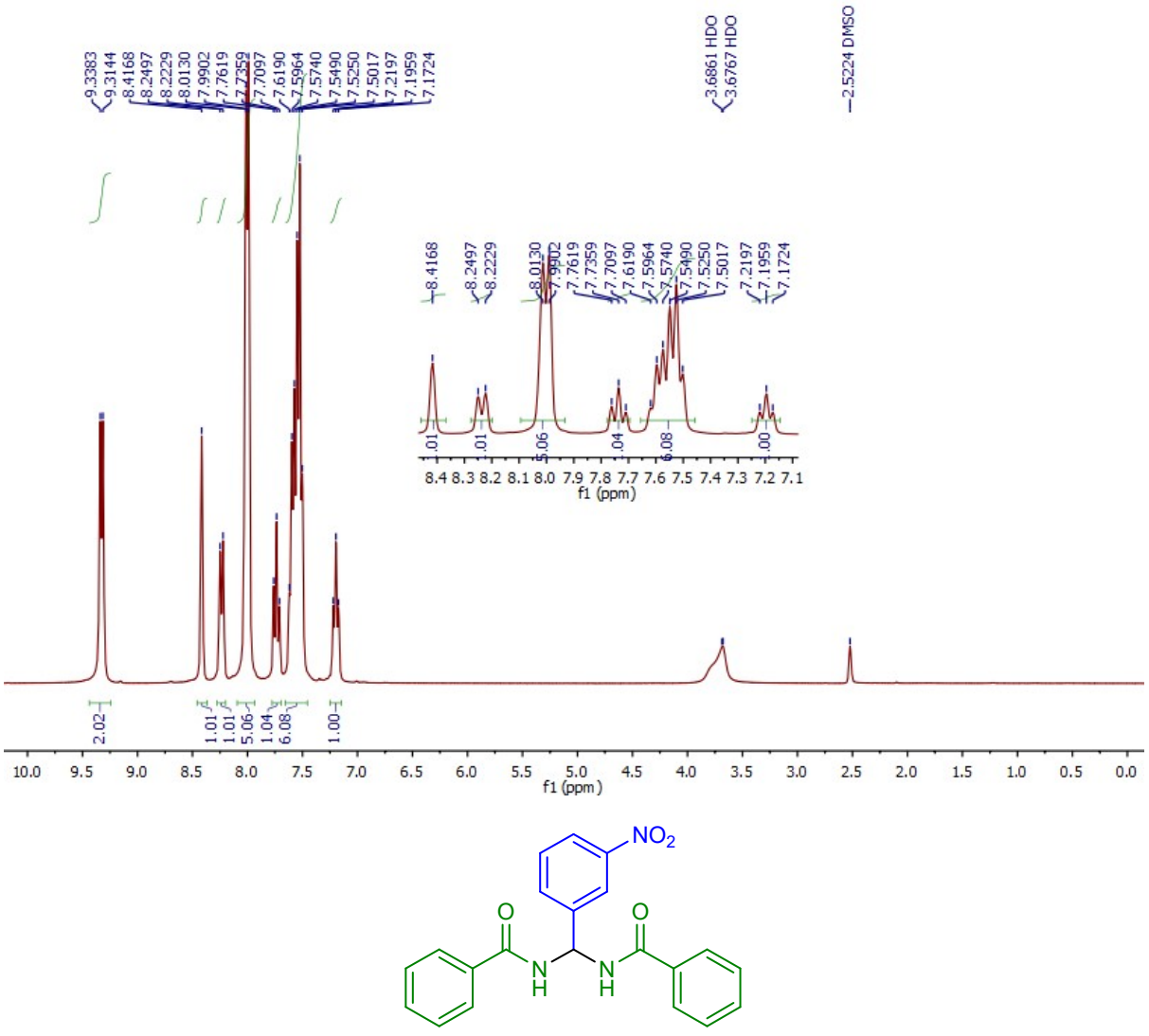


Figure S1. The ^{1}H NMR spectrum of bisamide **3**.

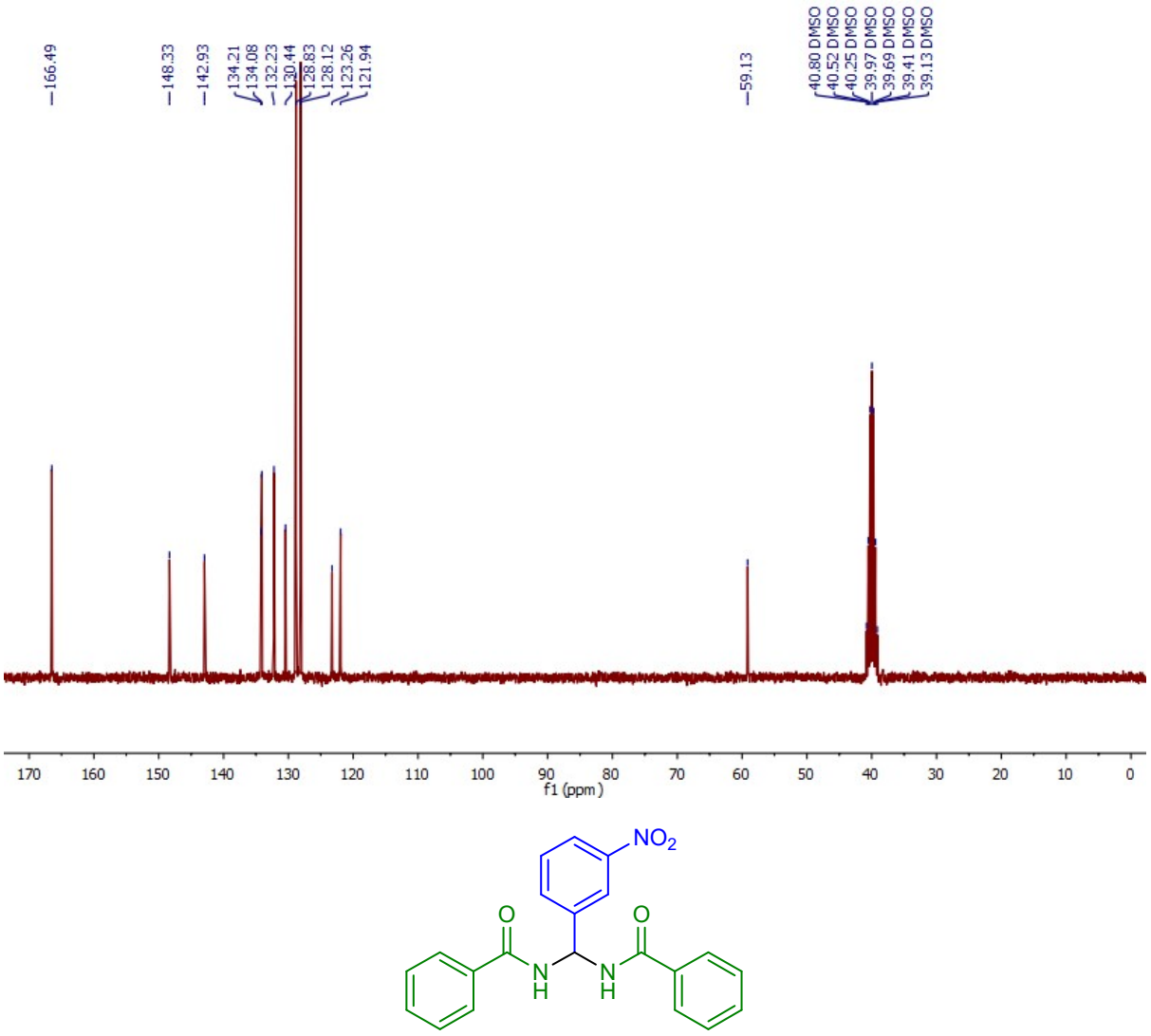


Figure S2. The ^{13}C NMR spectrum of bisamide **3**.

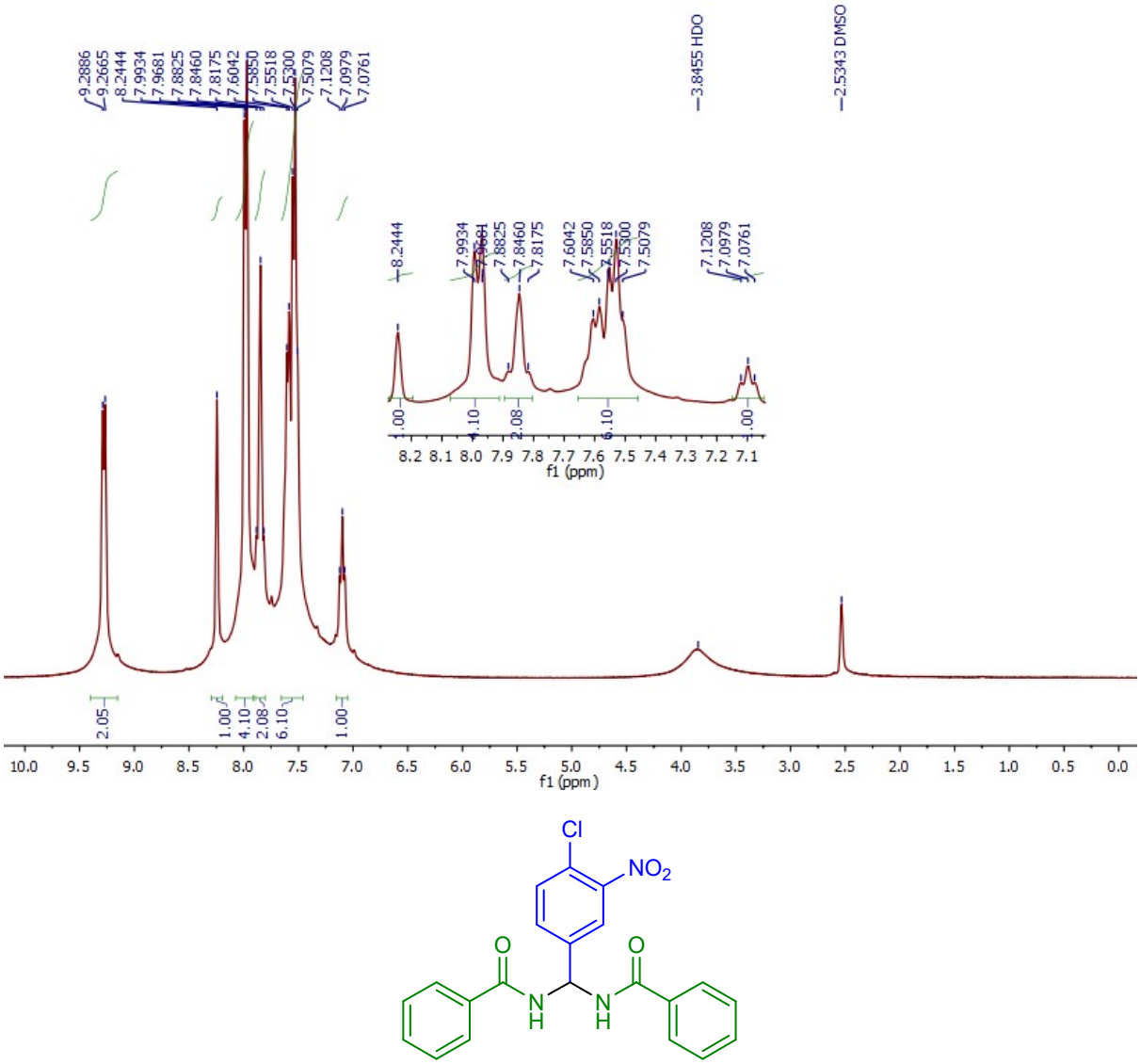


Figure S3. The ^{1}H NMR spectrum of bisamide **8**.

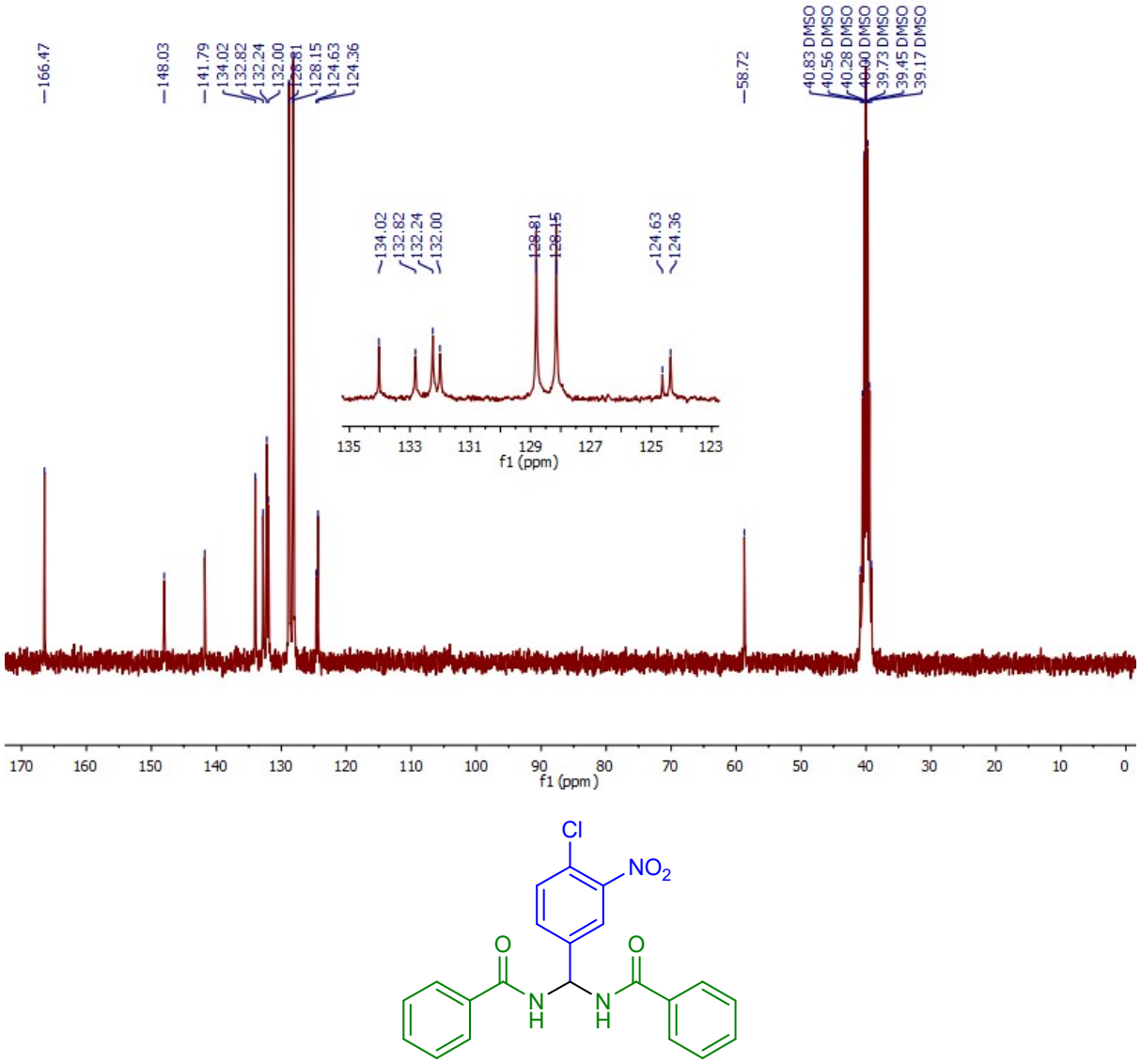
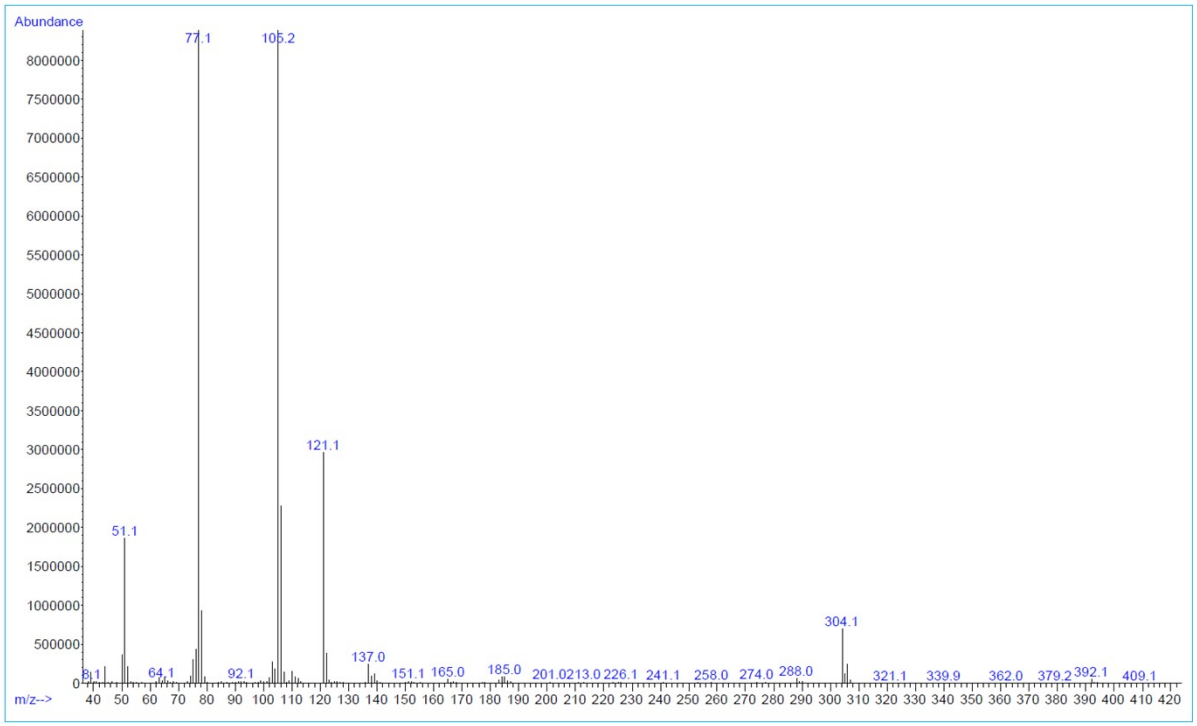


Figure S4. The ^{13}C NMR spectrum of bisamide **8**.



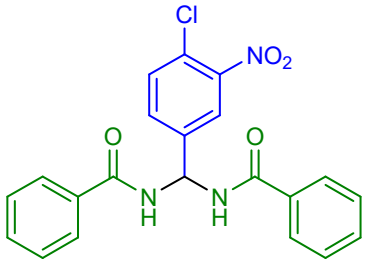


Figure S5. The mass spectrum of bisamide **8**.

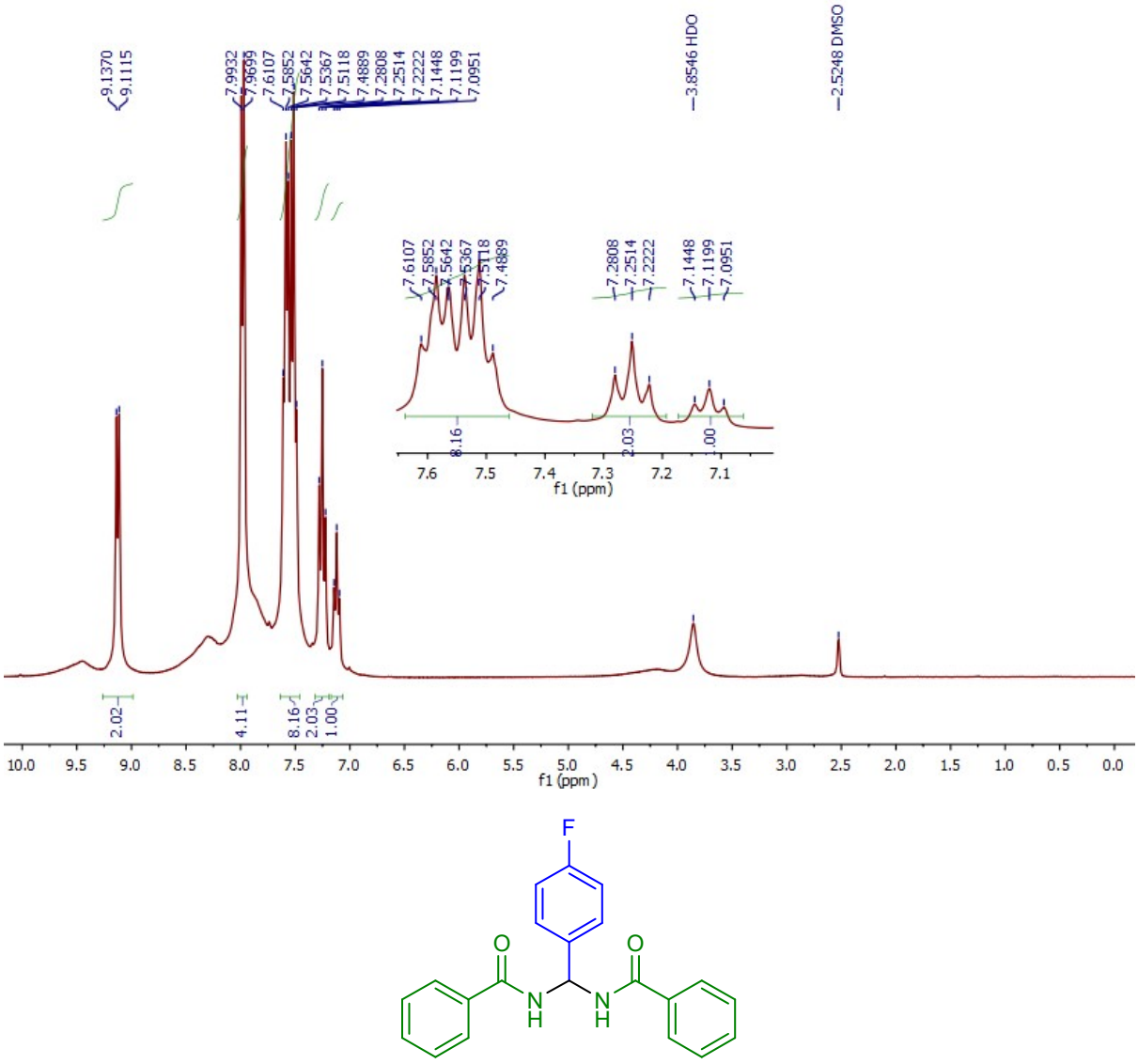


Figure S6. The ^{1}H NMR spectrum of bisamide **10**.

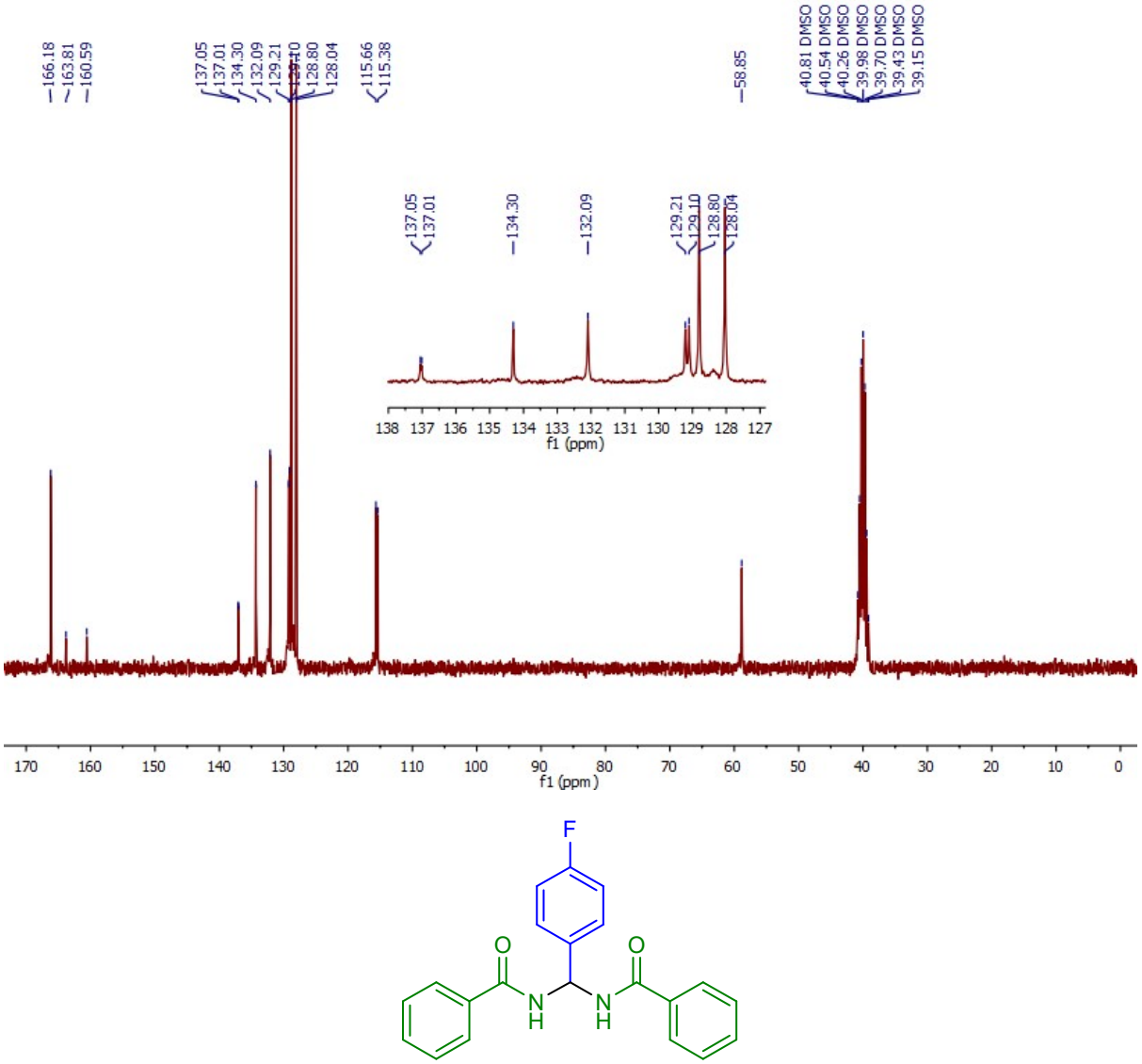


Figure S7. The ^{13}C NMR spectrum of bisamide **10**.