

One-pot Cascade Synthesis of Quinazolin-4(3H)-ones *via* Nickel-Catalyzed Dehydrogenative Coupling of o-Aminobenzamides with Alcohols

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1. NMR spectrum of the isolated products:

(I). NMR Spectrum for carbonyl compounds:

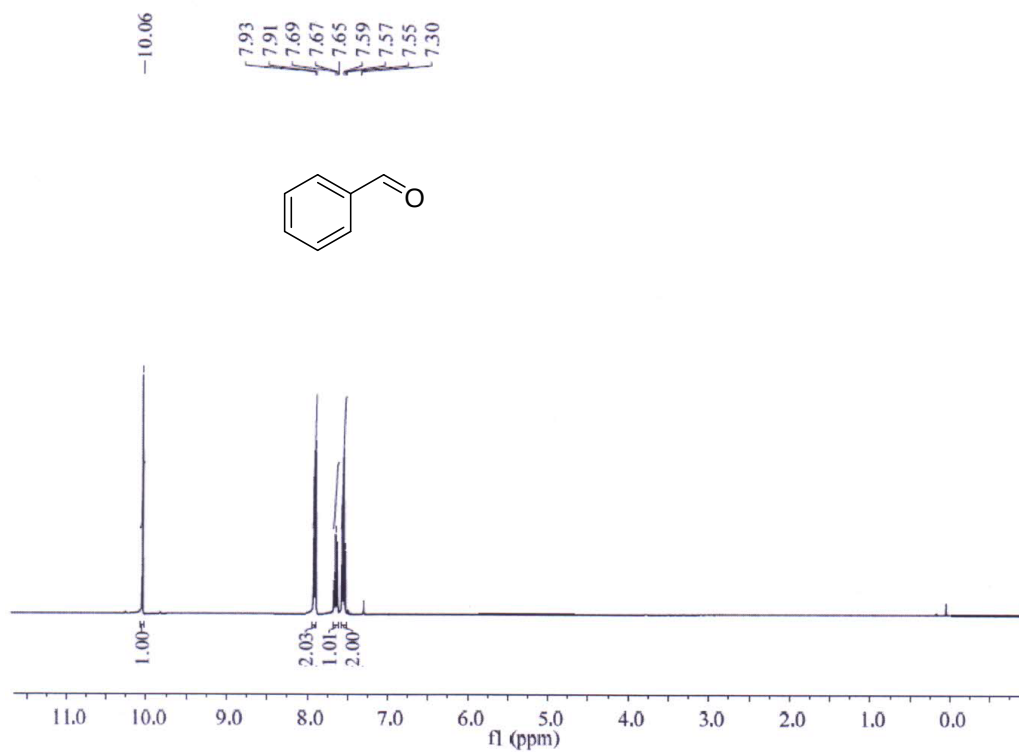


Fig S1 : ^1H NMR spectrum of compound **1aa** (400 MHz, CDCl_3).

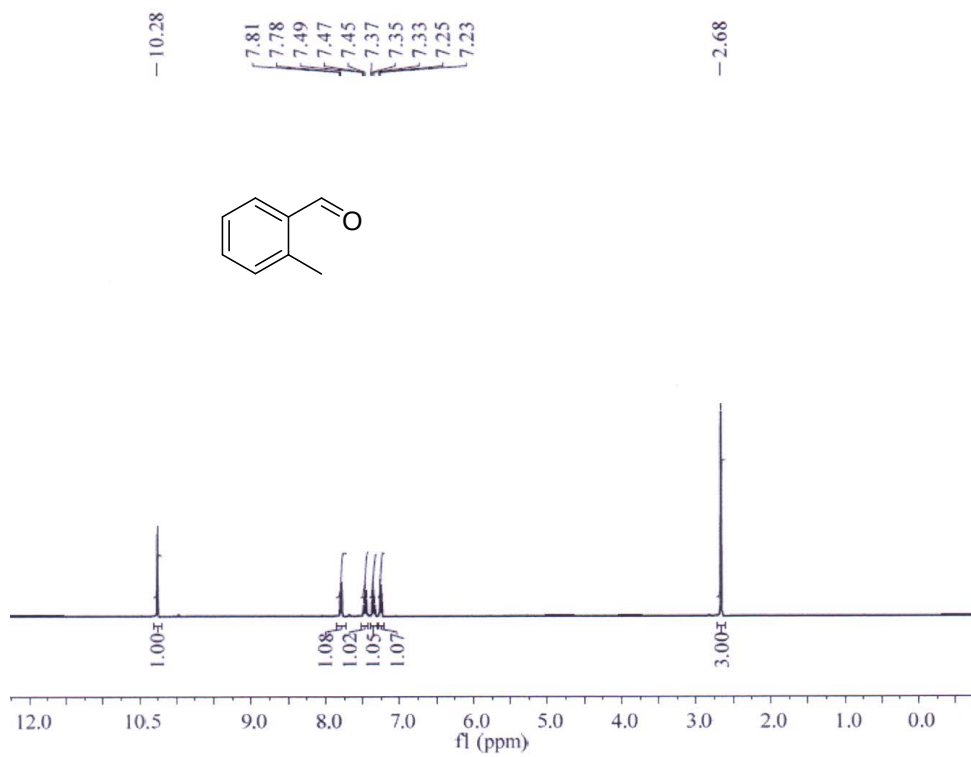


Fig S2 : ^1H NMR spectrum of compound **1bb** (400 MHz, CDCl_3).



Fig S3 : ^1H NMR spectrum of compound **1cc** (400 MHz, CDCl_3).

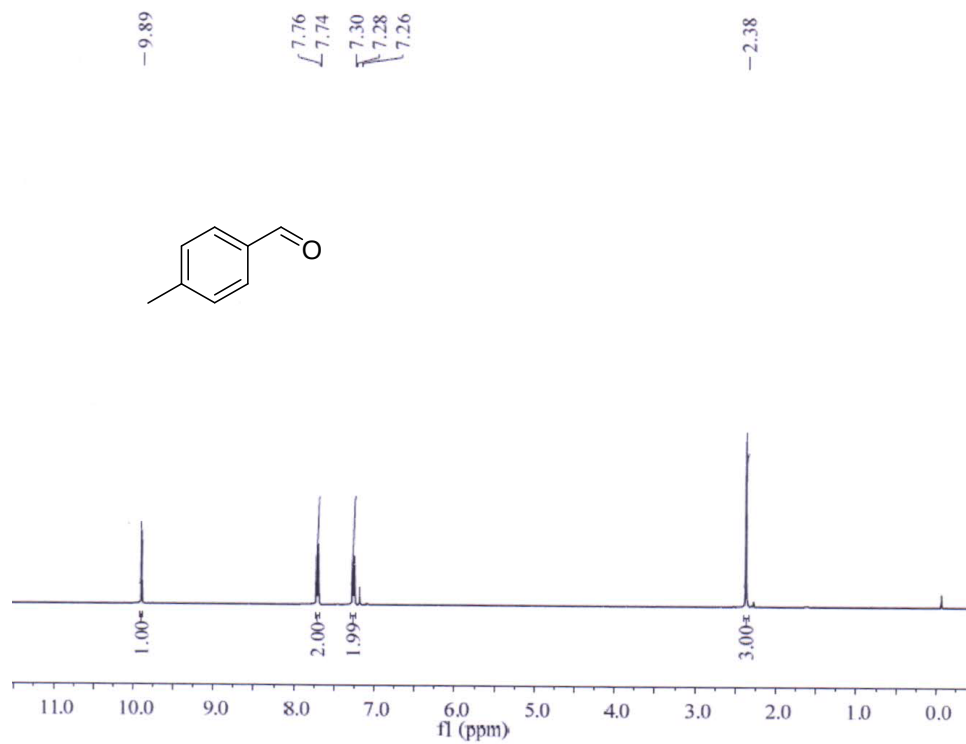


Fig S4 :¹H NMR spectrum of compound **1dd** 400 MHz, CDCl₃).

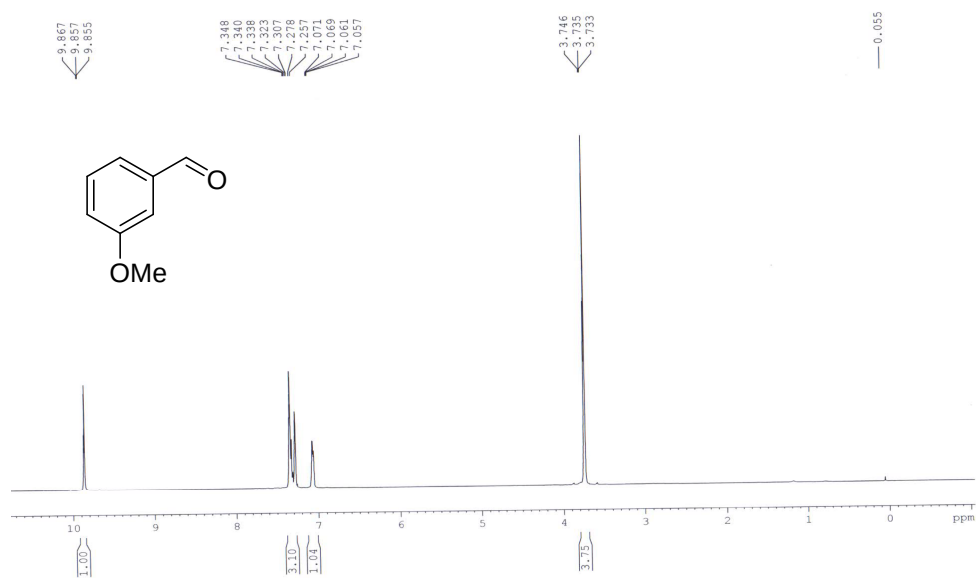


Fig S5 :¹H NMR spectrum of compound **1ee**(300 MHz, CDCl₃).

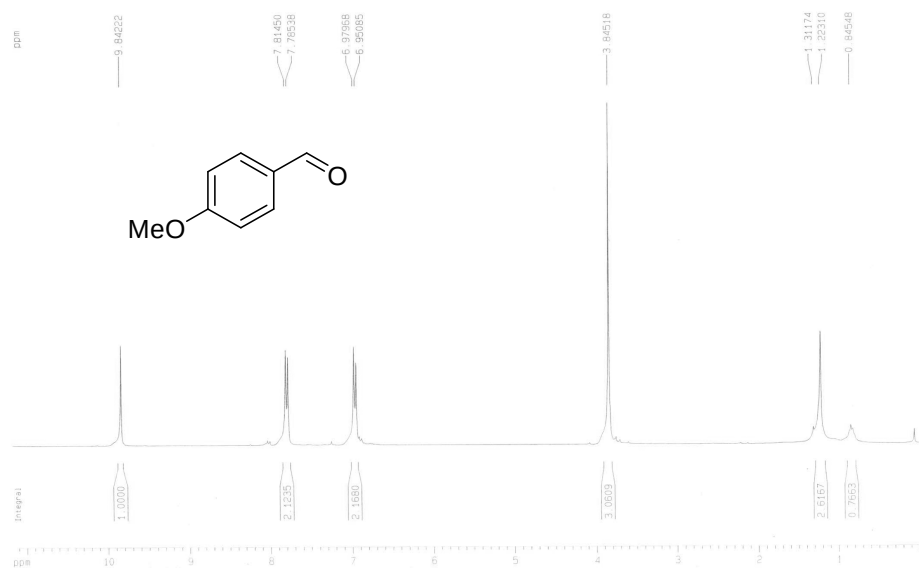


Fig S6 :¹H NMR spectrum of compound **1ff** (300 MHz, CDCl₃).

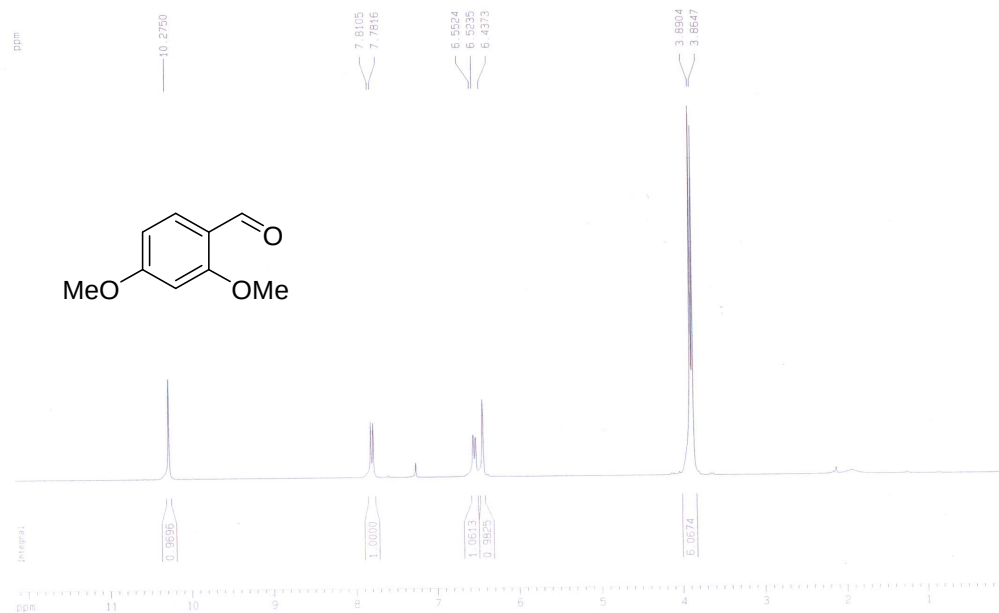


Fig S7 :¹H NMR spectrum of compound **1gg** (300 MHz, CDCl₃).

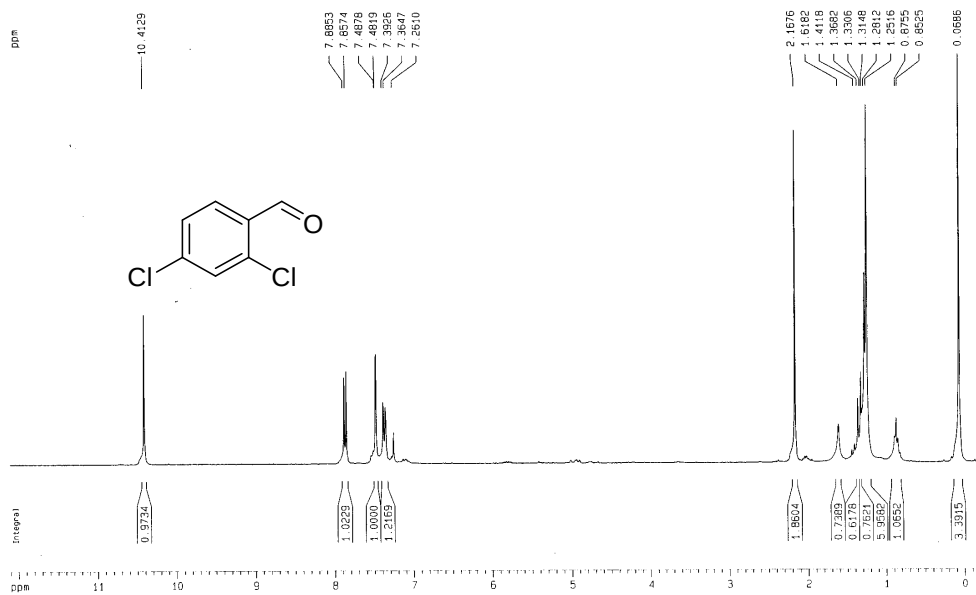


Fig S8 :¹H NMR spectrum of compound **1ii** (300 MHz, CDCl₃).

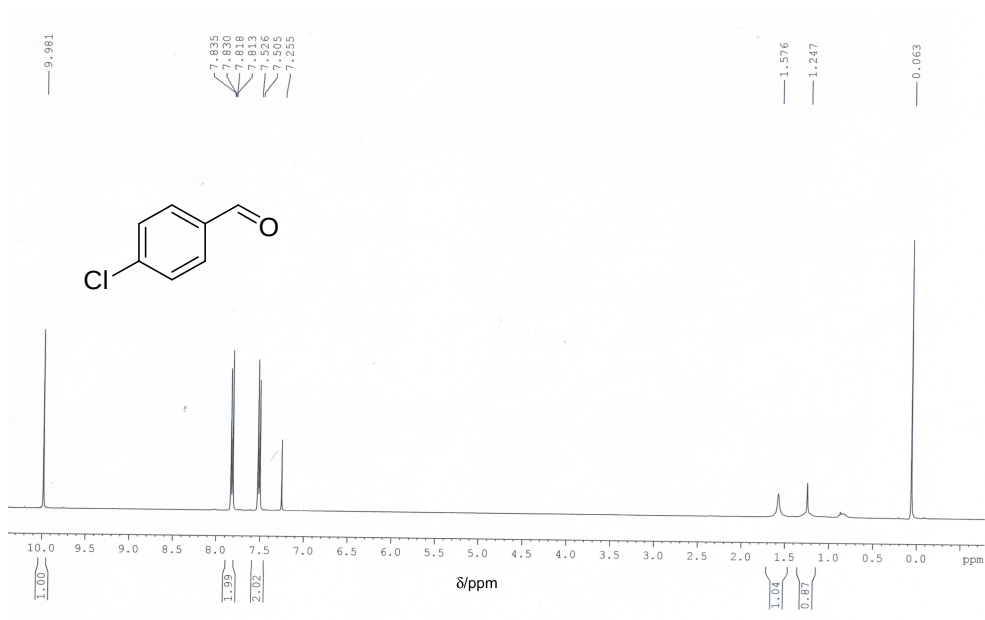


Fig S9 :¹H NMR spectrum of compound **1kk** (400 MHz, CDCl₃).

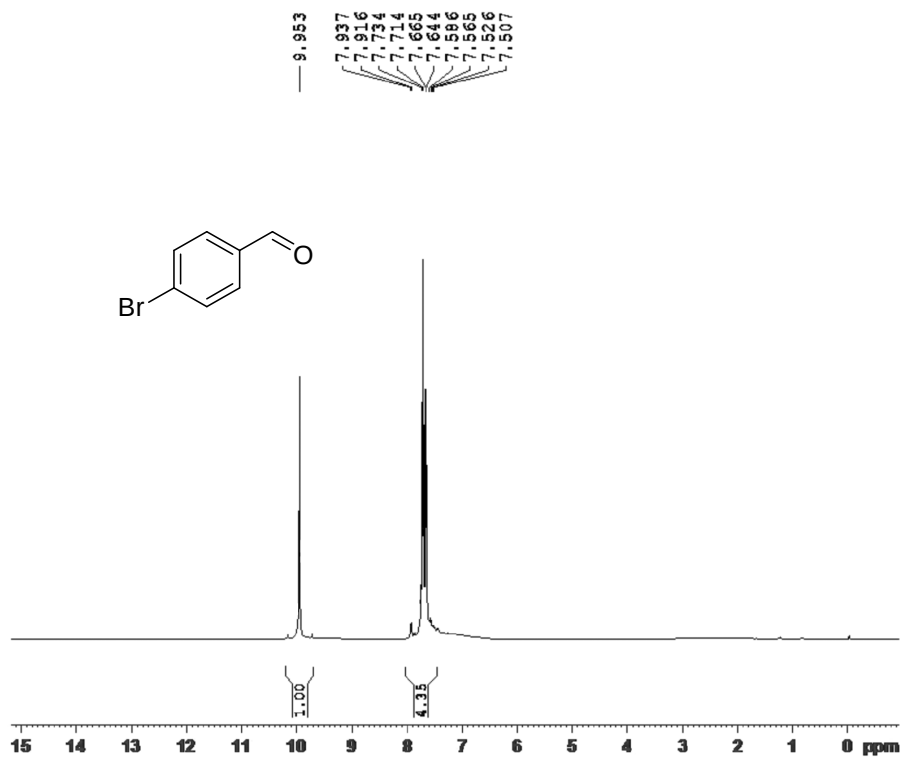


Fig S10 : ^1H NMR spectrum of compound **1nn** (400 MHz, CDCl_3).

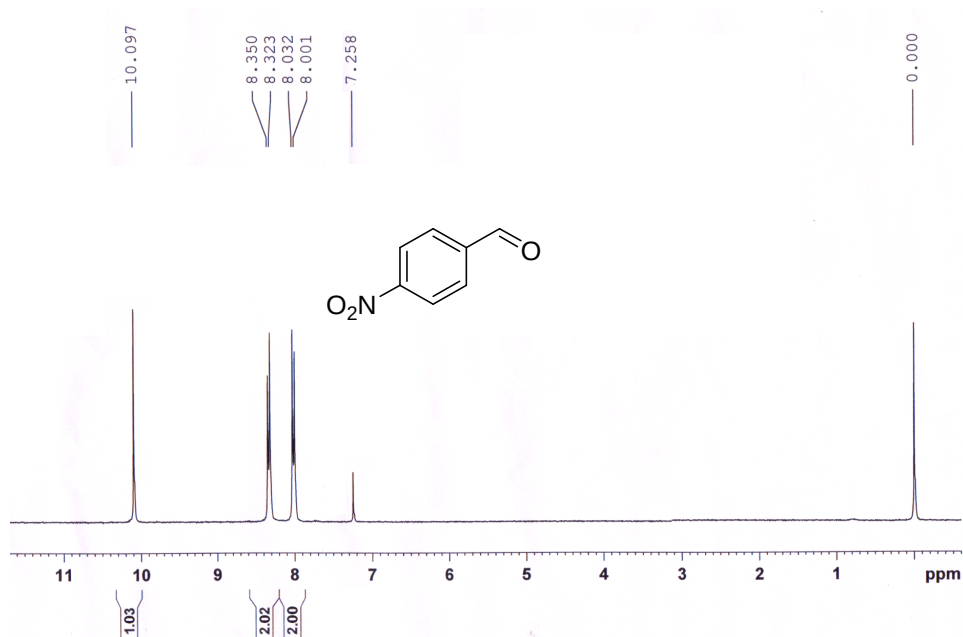


Fig S11 : ^1H NMR spectrum of compound **1oo** (300 MHz, CDCl_3).

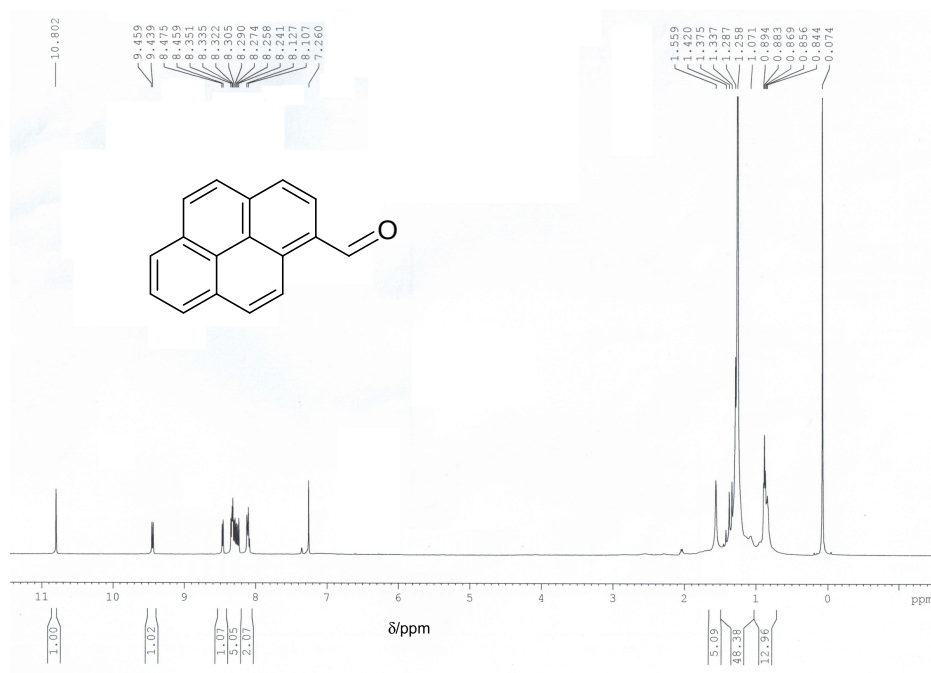


Fig S12 :¹H NMR spectrum of compound **1pp** (400 MHz, CDCl₃).



Fig S13 :¹H NMR spectrum of compound **1qq** (400 MHz, CDCl₃).

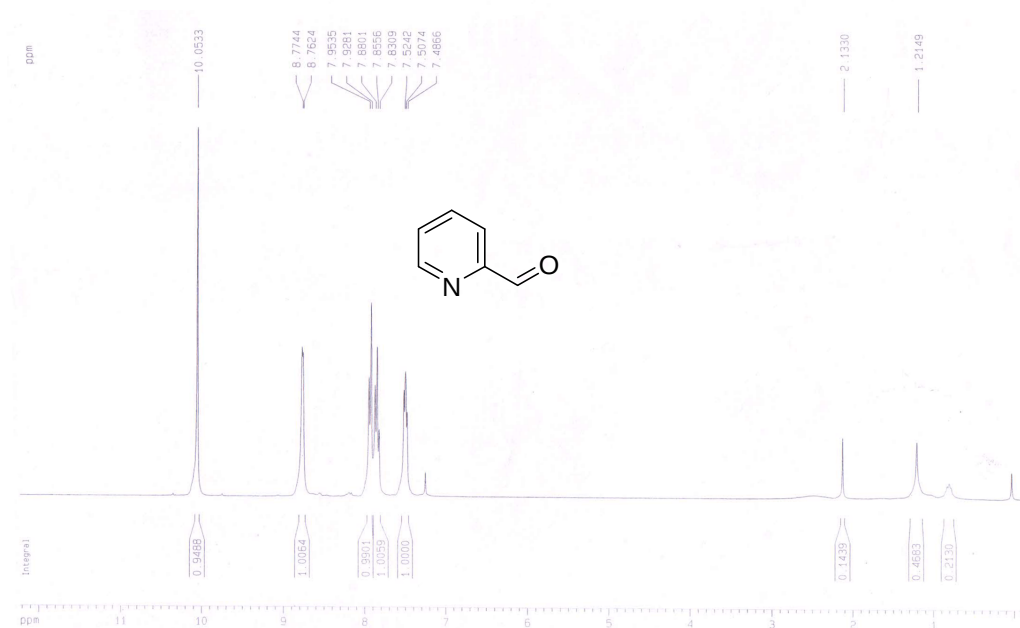


Fig S14 :¹H NMR spectrum of compound **1rr** (300 MHz, CDCl₃).

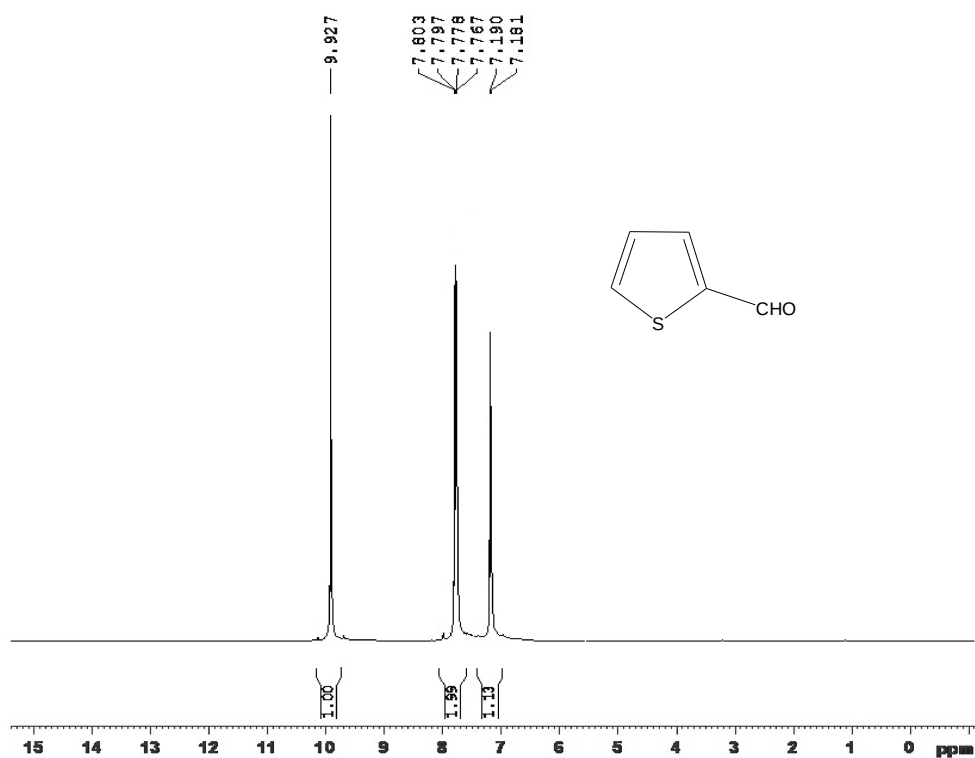


Fig S15 :¹H NMR spectrum of compound **1ss** (300 MHz, CDCl₃).

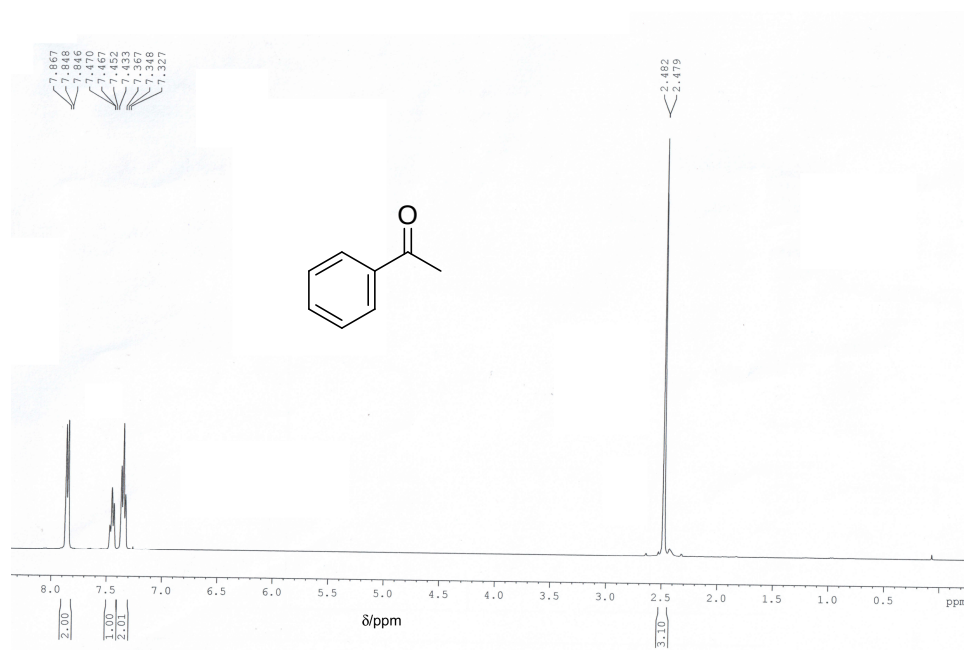


Fig S16 :¹H NMR spectrum of compound **1tt** (400 MHz, CDCl₃).

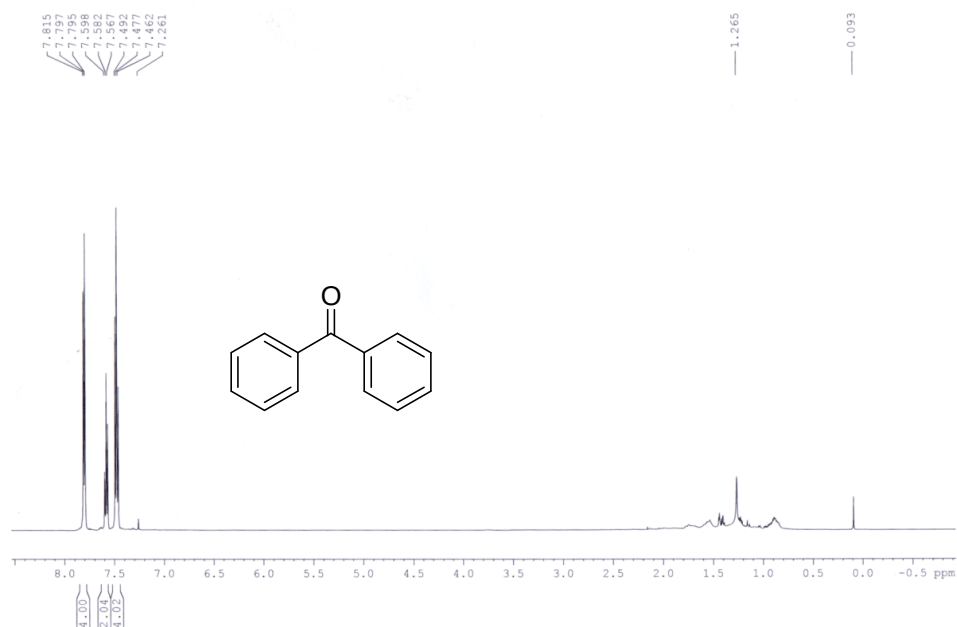


Fig S17 :¹H NMR spectrum of compound **1uu**(400 MHz, CDCl₃).

(II). NMR Spectrum for Quinazolin-4(3H)-ones:

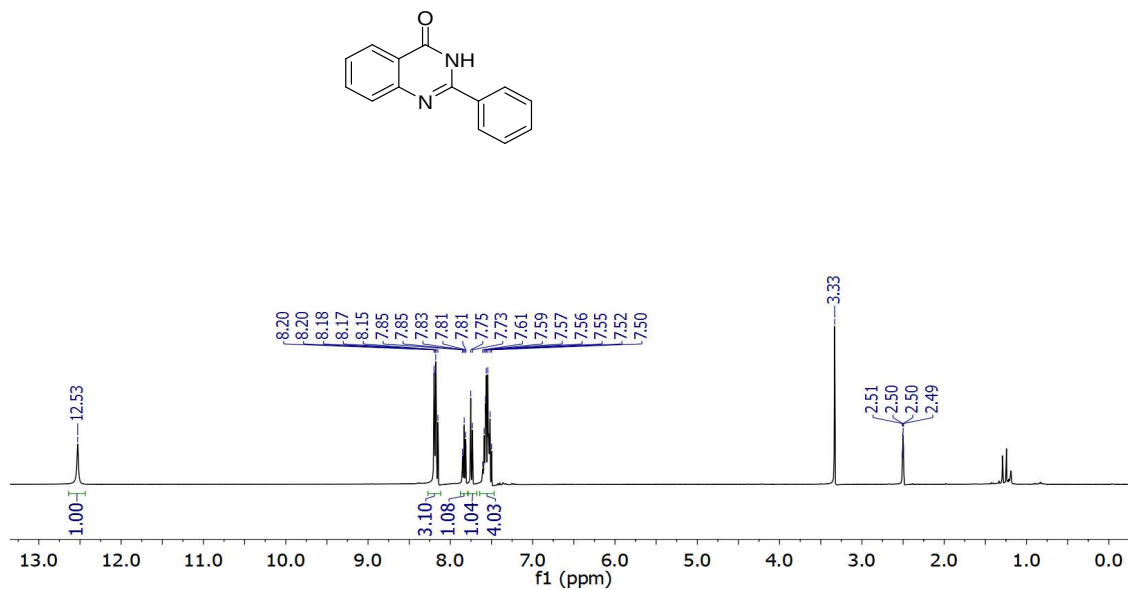


Fig S18 ^1H NMR spectrum of compound **3aa** (400 MHz, DMSO- d_6).

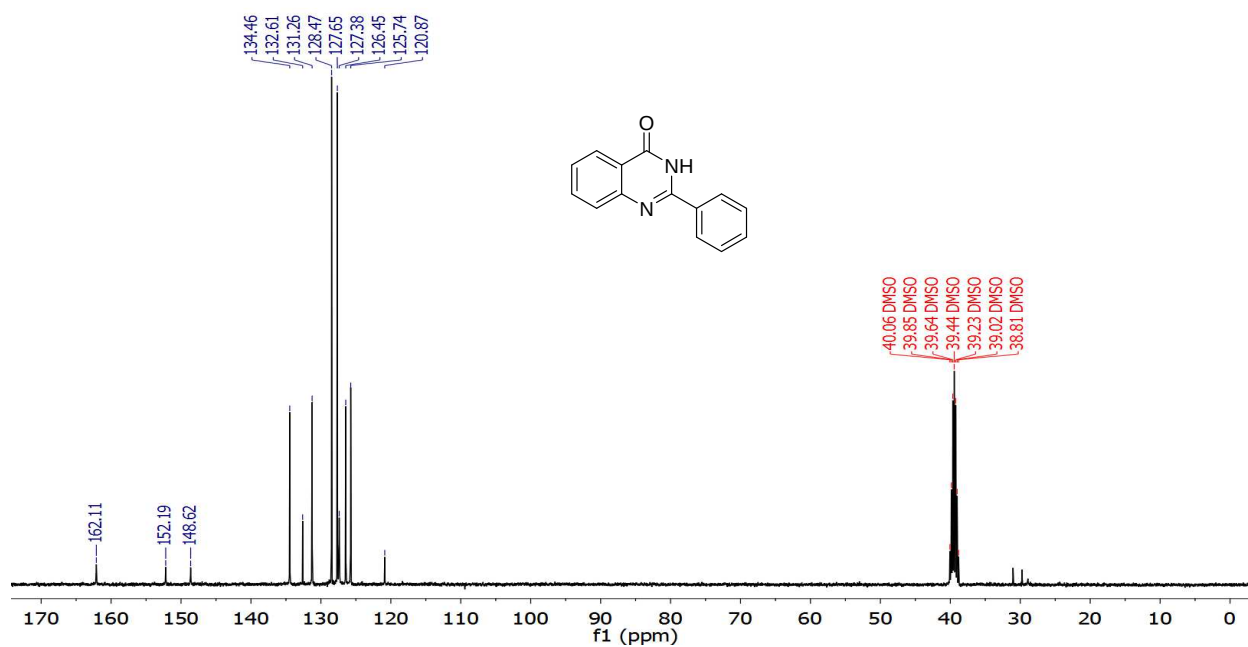


Fig S19 ^{13}C NMR spectrum of compound **3aa** (100 MHz, DMSO- d_6).

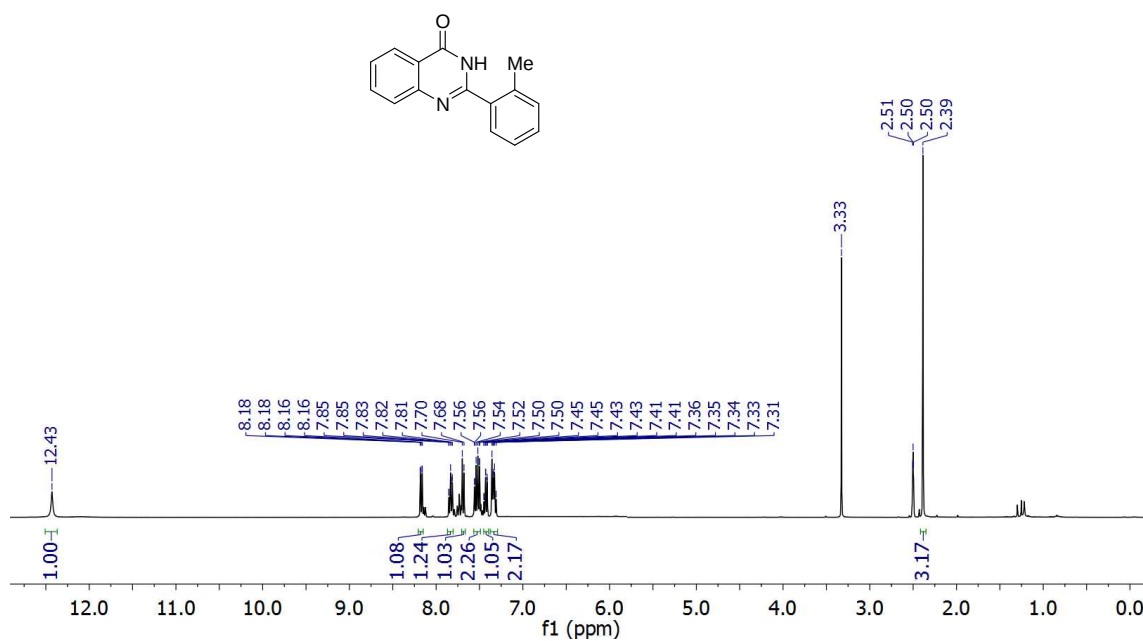


Fig S20 : ^1H NMR spectrum of compound **3bb** (400 MHz, $\text{DMSO}-d_6$).

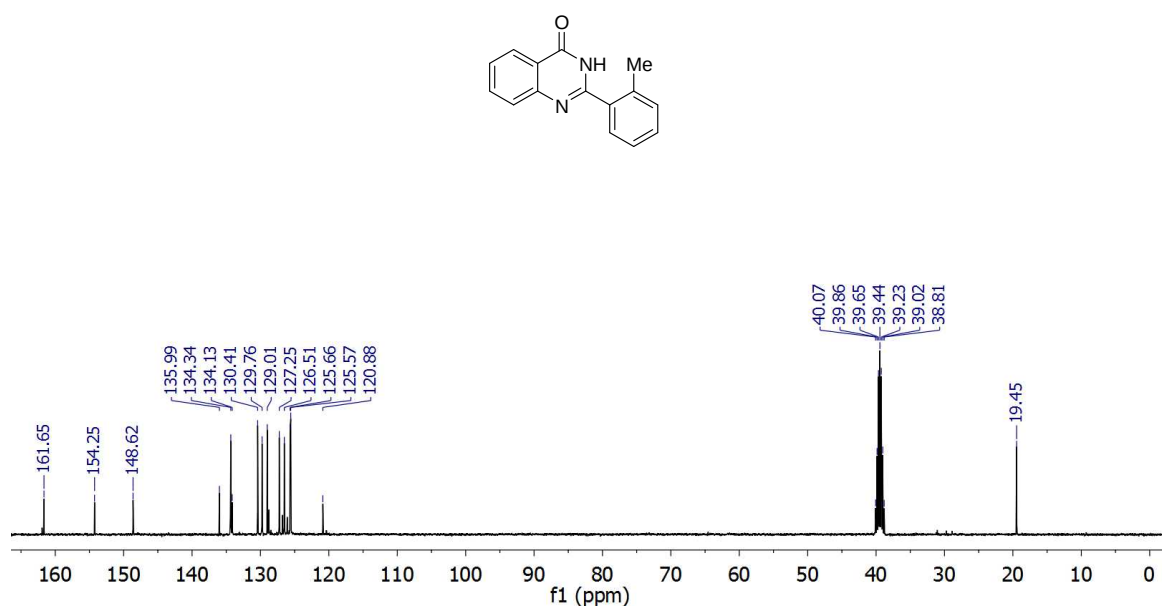


Fig S21 : ^{13}C NMR spectrum of compound **3bb** (100 MHz, $\text{DMSO}-d_6$).

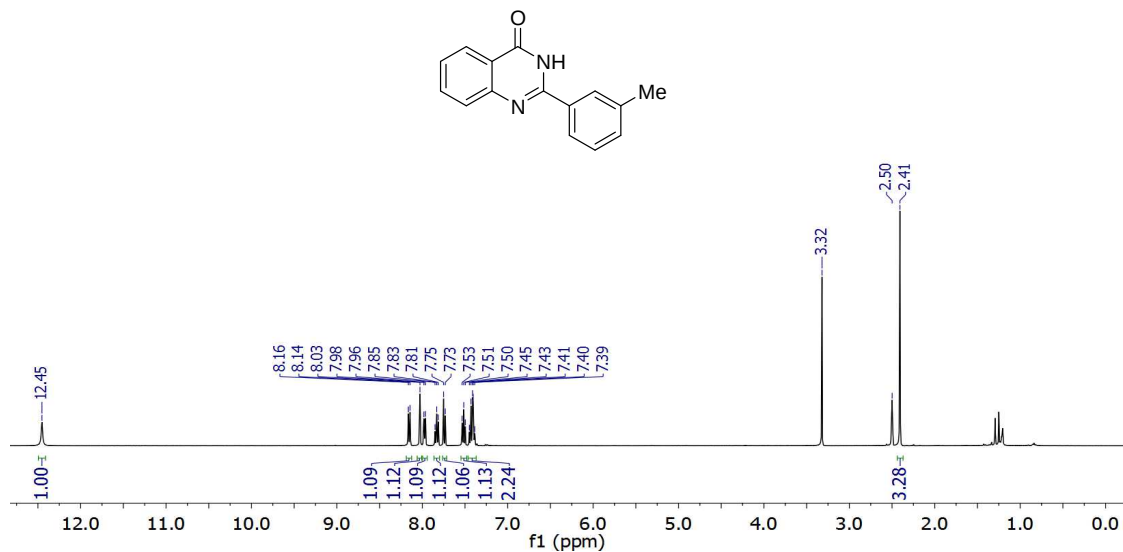


Fig S22 :¹H NMR spectrum of compound **3cc** (400 MHz, DMSO-*d*₆).

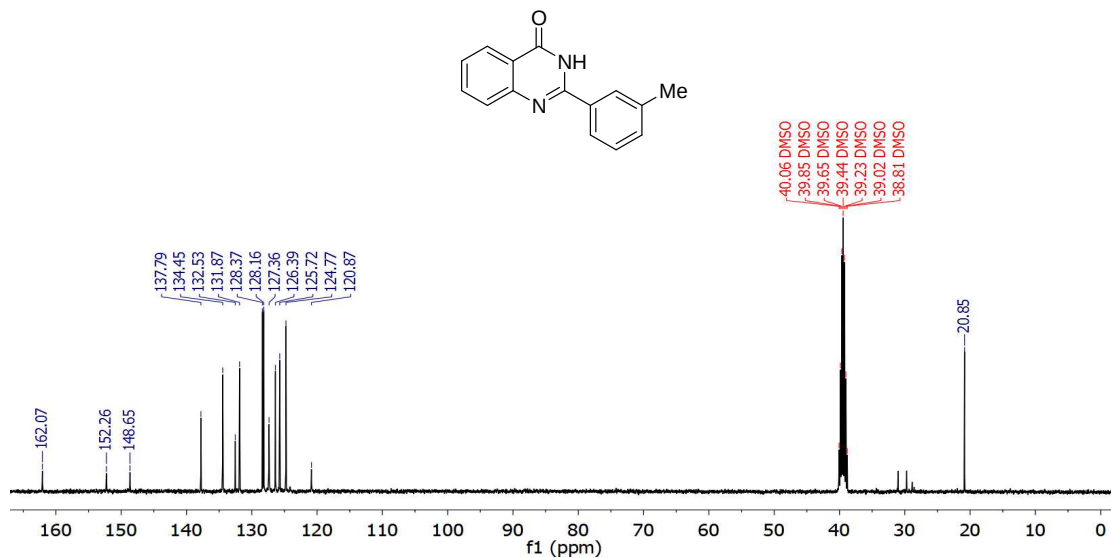


Fig S23: ¹³C NMR spectrum of compound **3cc** (100 MHz, DMSO-*d*₆)

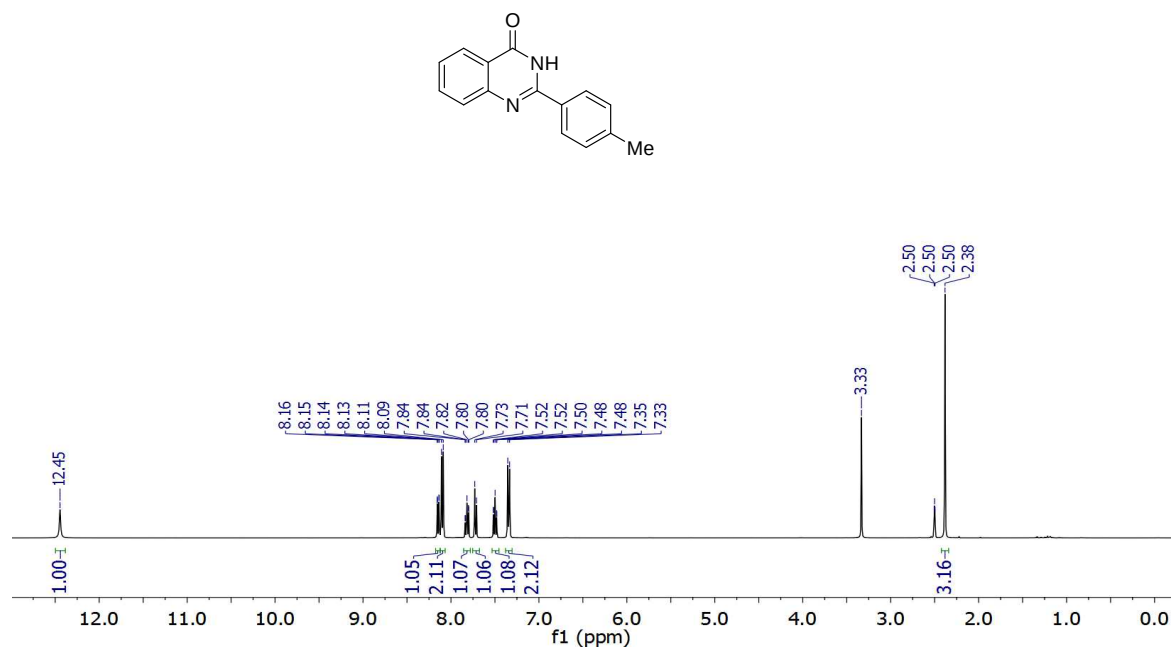


Fig S24 : ¹H NMR spectrum of compound **3dd** (400 MHz, DMSO-*d*₆).

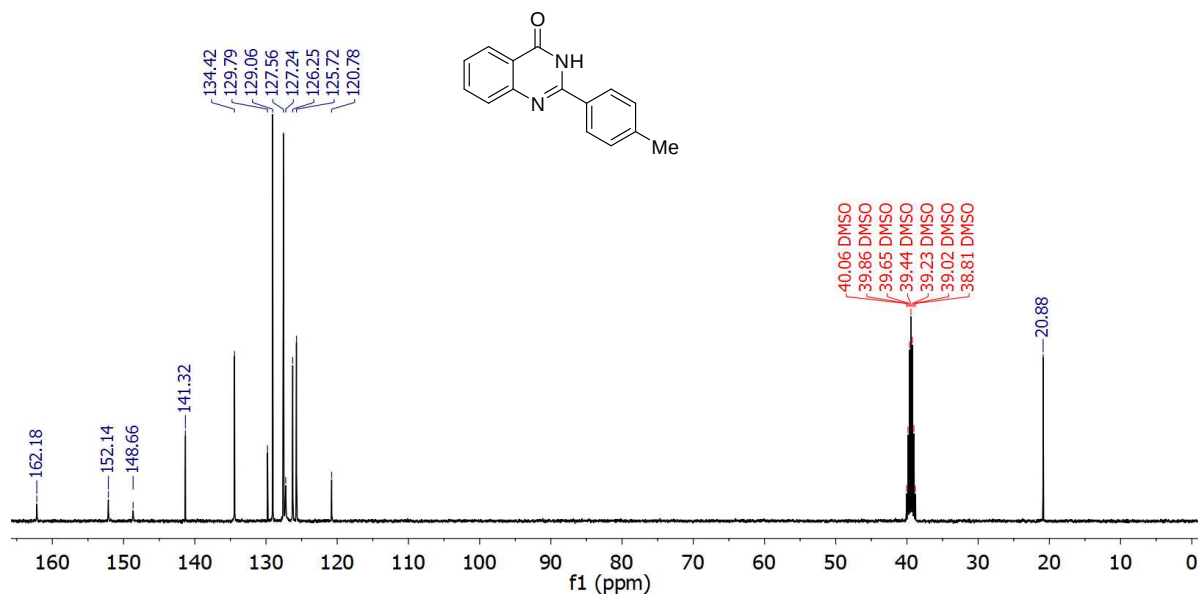


Fig S25 : ¹³C NMR spectrum of compound **3dd** (100 MHz, DMSO-*d*₆).

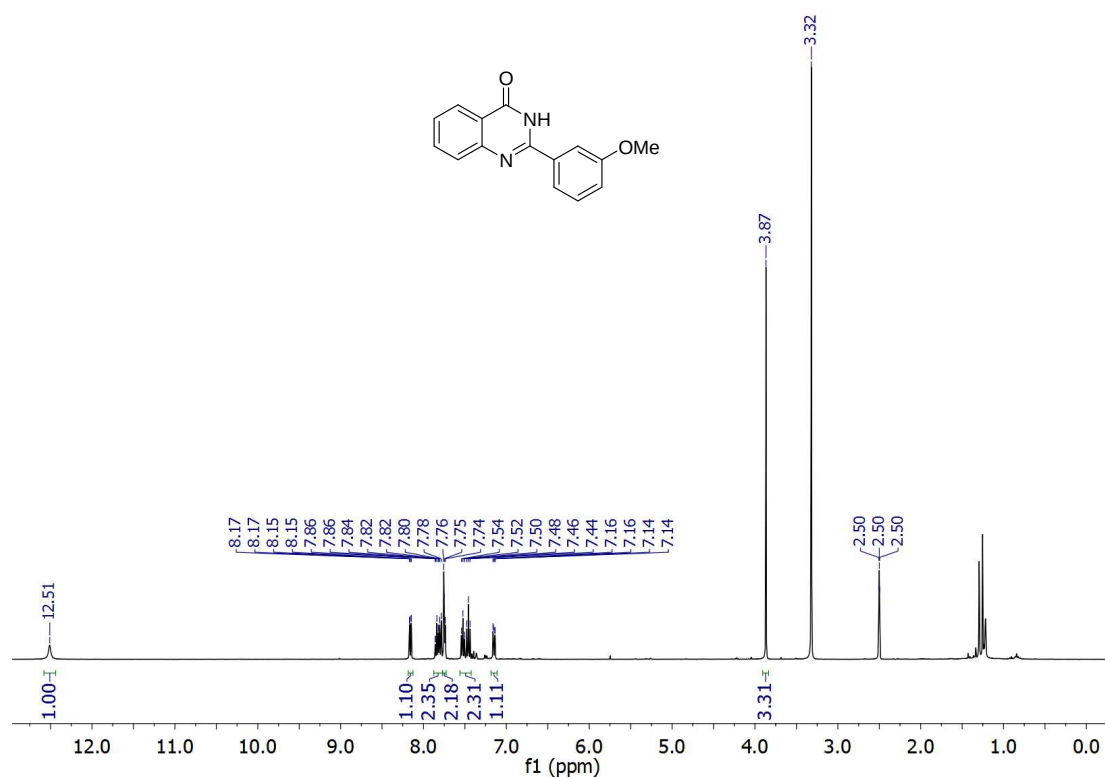


Fig S26 : ¹H NMR spectrum of compound **3ee** (400 MHz, DMSO-*d*₆).

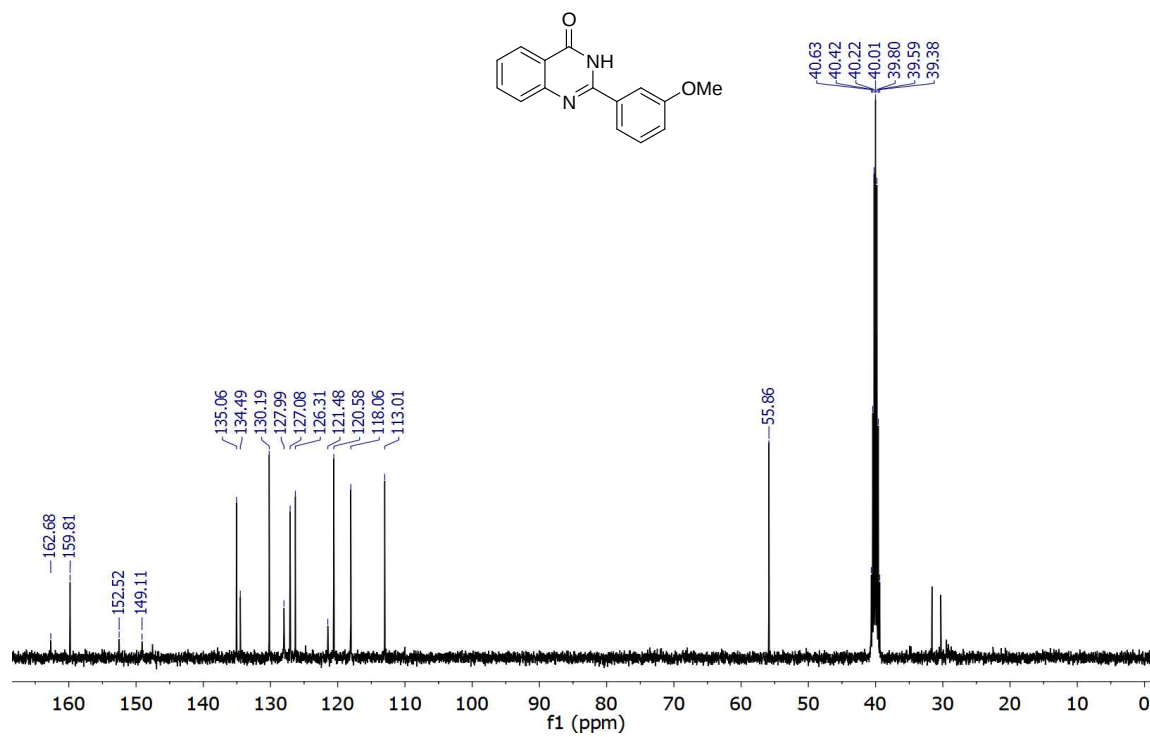


Fig S27 : ¹³C NMR spectrum of compound **3ee** (100 MHz, DMSO-*d*₆).

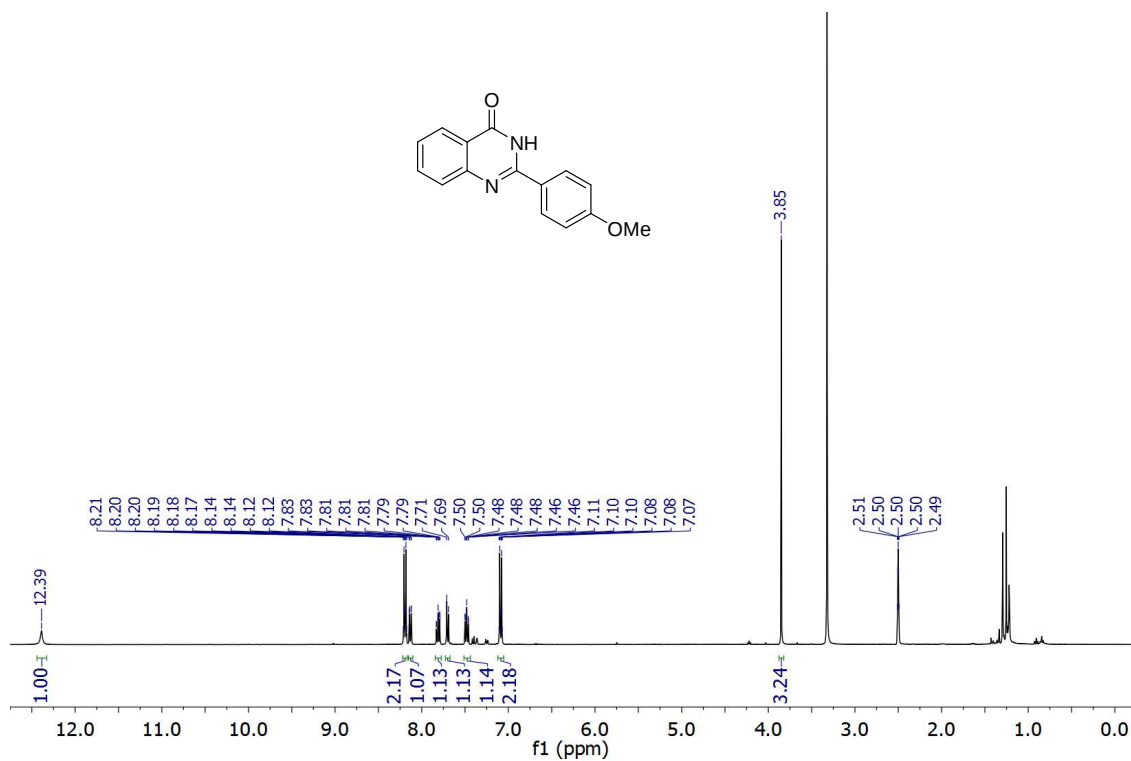


Fig S28 :¹H NMR spectrum of compound **3ff** (400 MHz, DMSO-*d*₆).

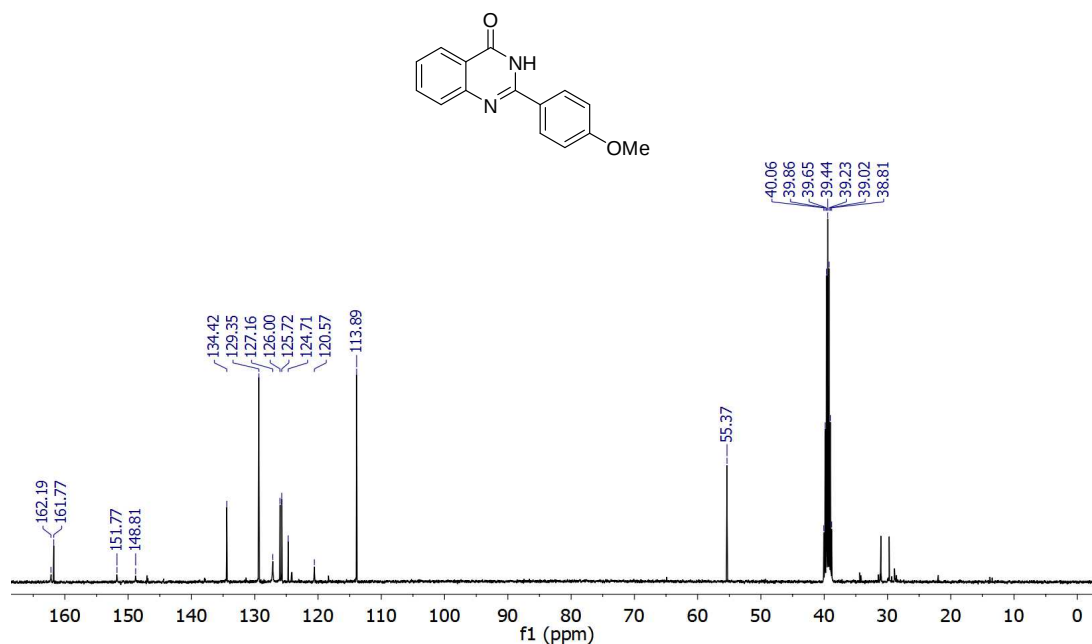


Fig S29 :¹³C NMR spectrum of compound **3ff** (100 MHz, DMSO-*d*₆).

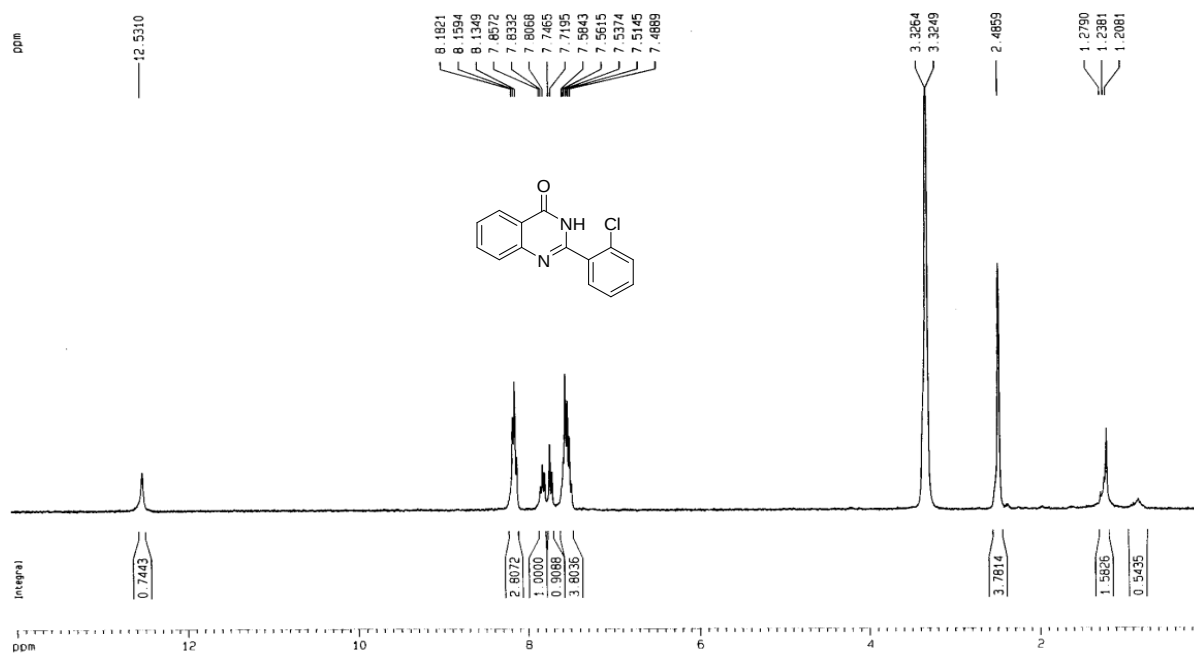


Fig S30 : ^1H NMR spectrum of compound **3hh** (300 MHz, $\text{DMSO}-d_6$).

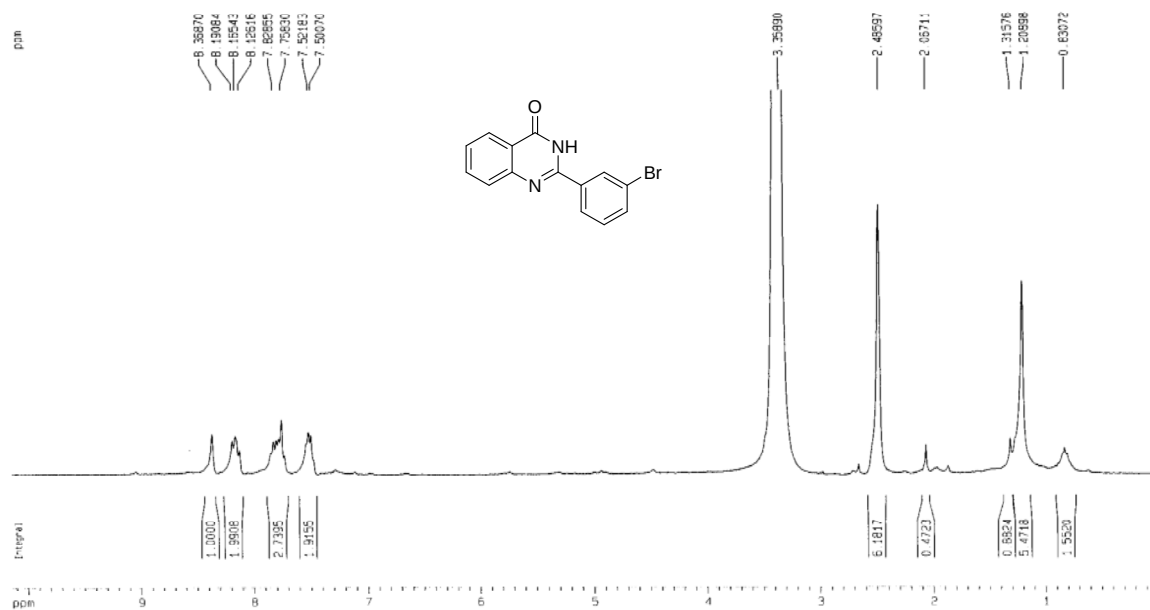


Fig S31: ^1H NMR spectrum of compound **3jj** (300 MHz, $\text{DMSO}-d_6$).

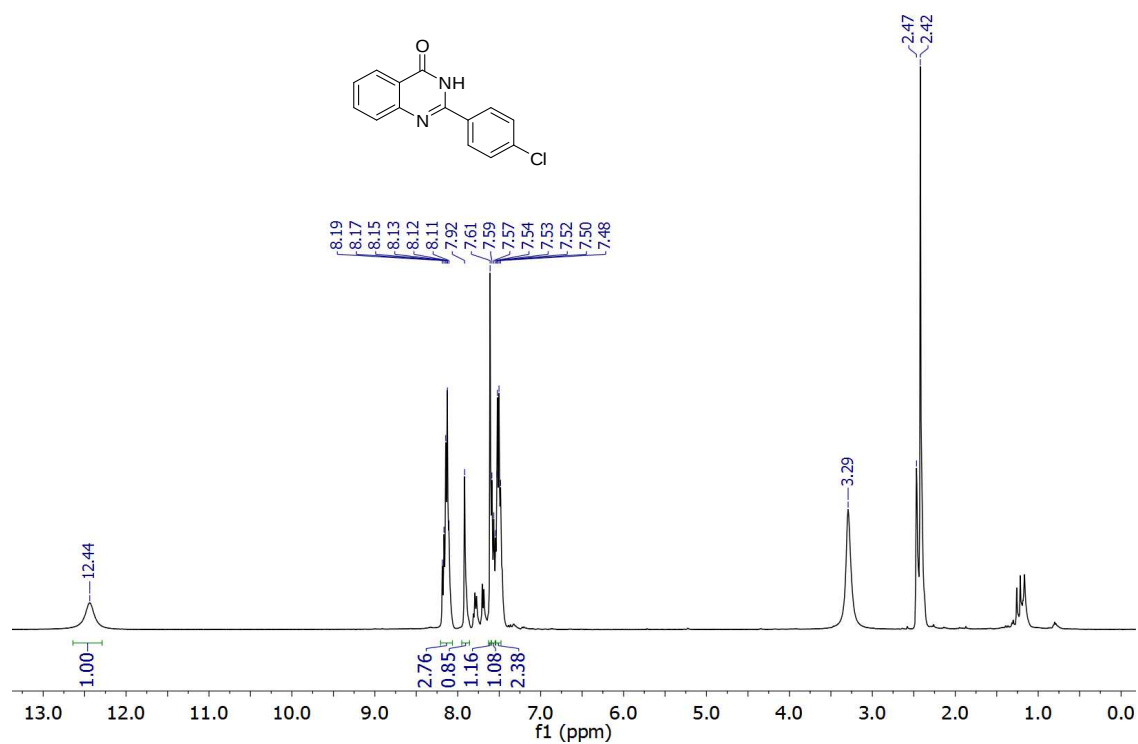


Fig S32 : ^1H NMR spectrum of compound **3kk** (400 MHz, $\text{DMSO}-d_6$).

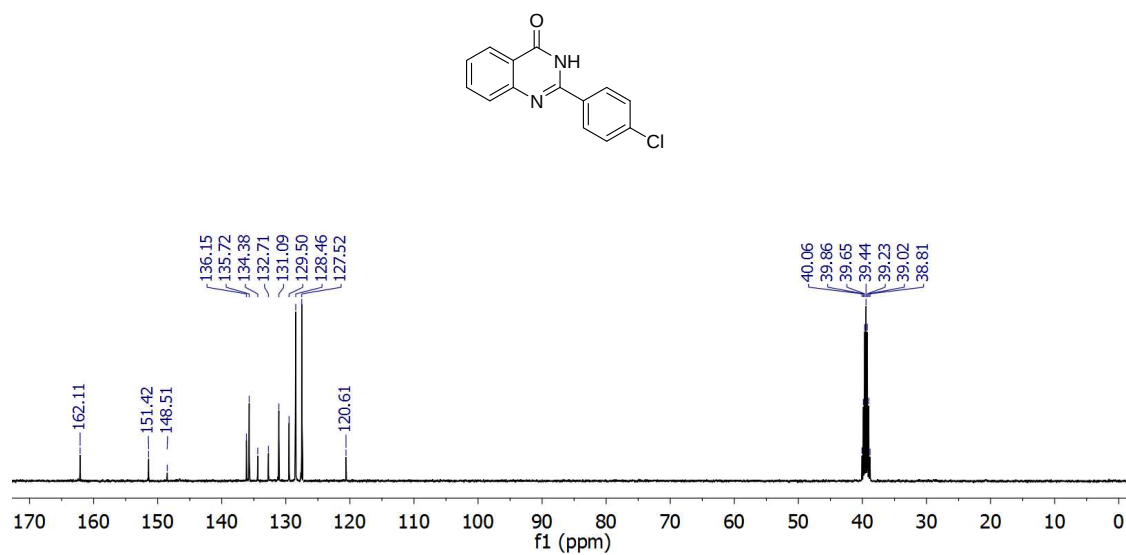


Fig S33: ^{13}C NMR spectrum of compound **3kk** (100 MHz, $\text{DMSO}-d_6$).

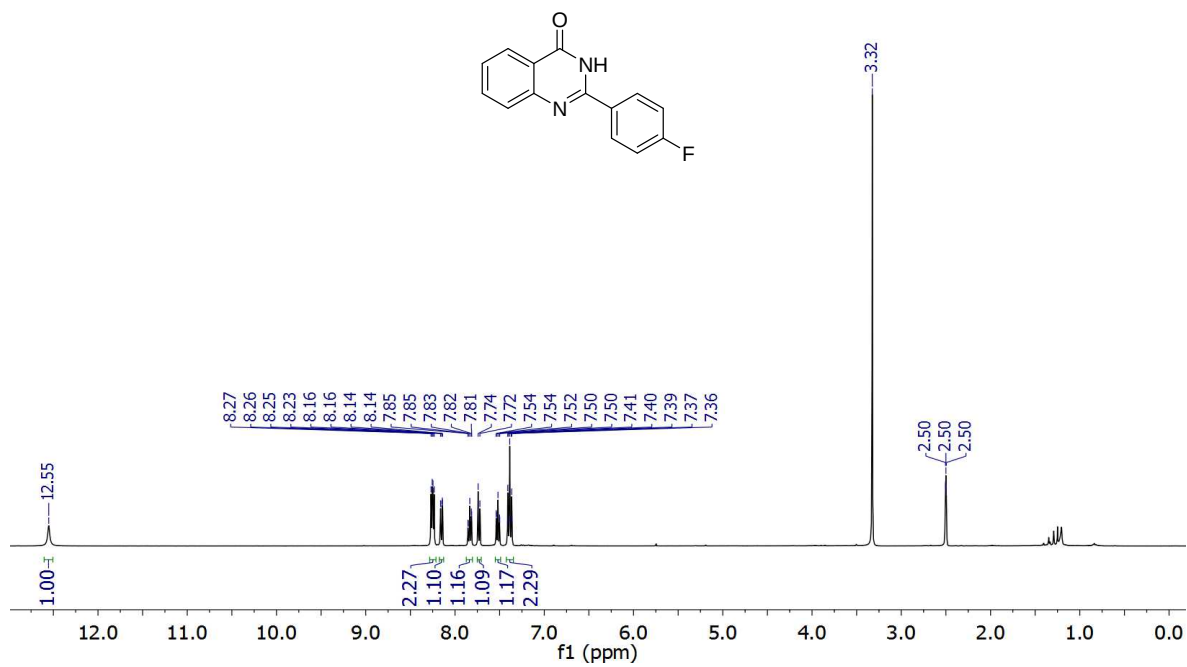


Fig S34 :¹H NMR spectrum of compound **3II** (400 MHz, DMSO-*d*₆).

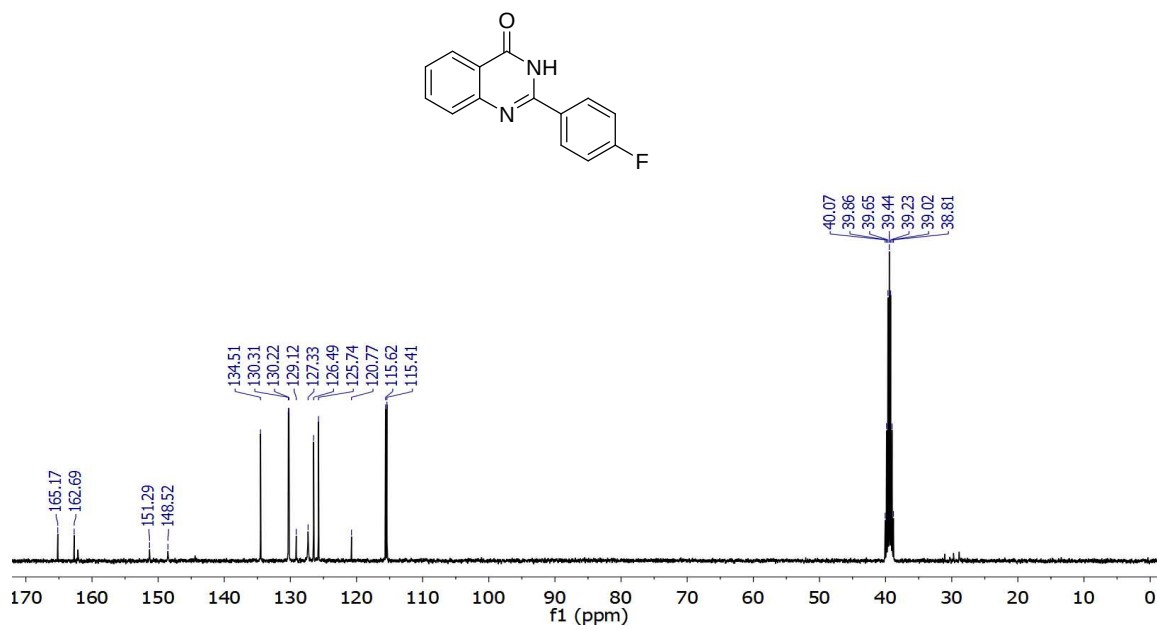


Fig S35 :¹³C NMR spectrum of compound **3II** (100 MHz, DMSO-*d*₆).

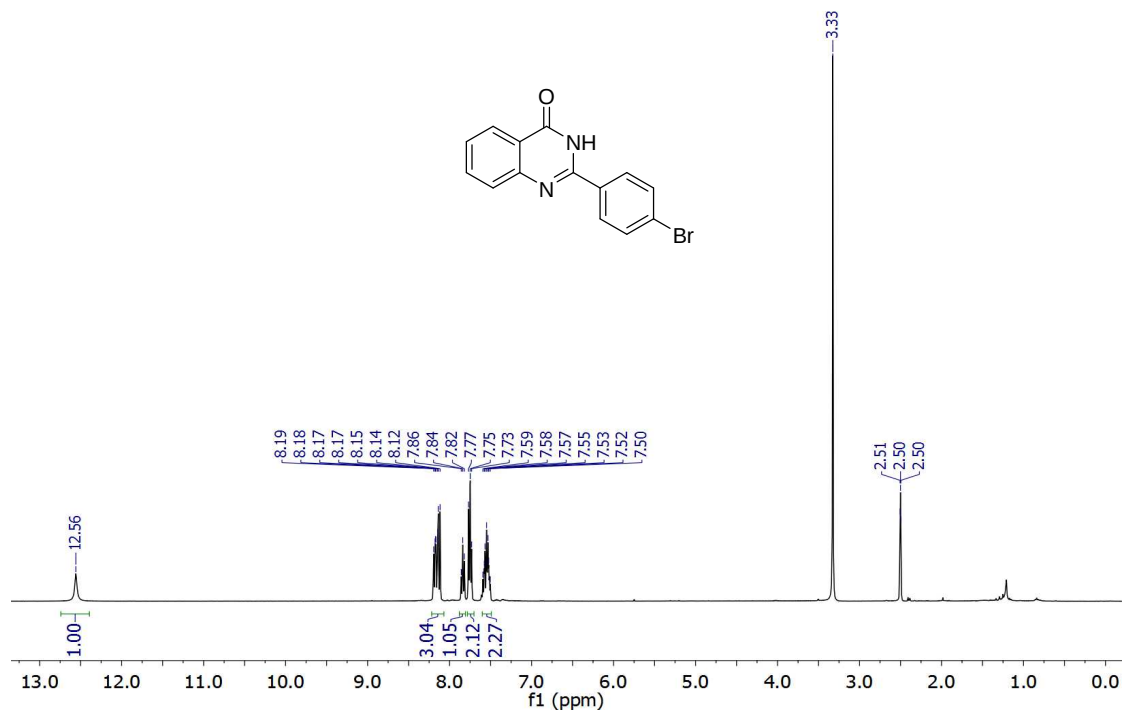


Fig S36 : ¹H NMR spectrum of compound **3mm** (400 MHz, DMSO-*d*₆).

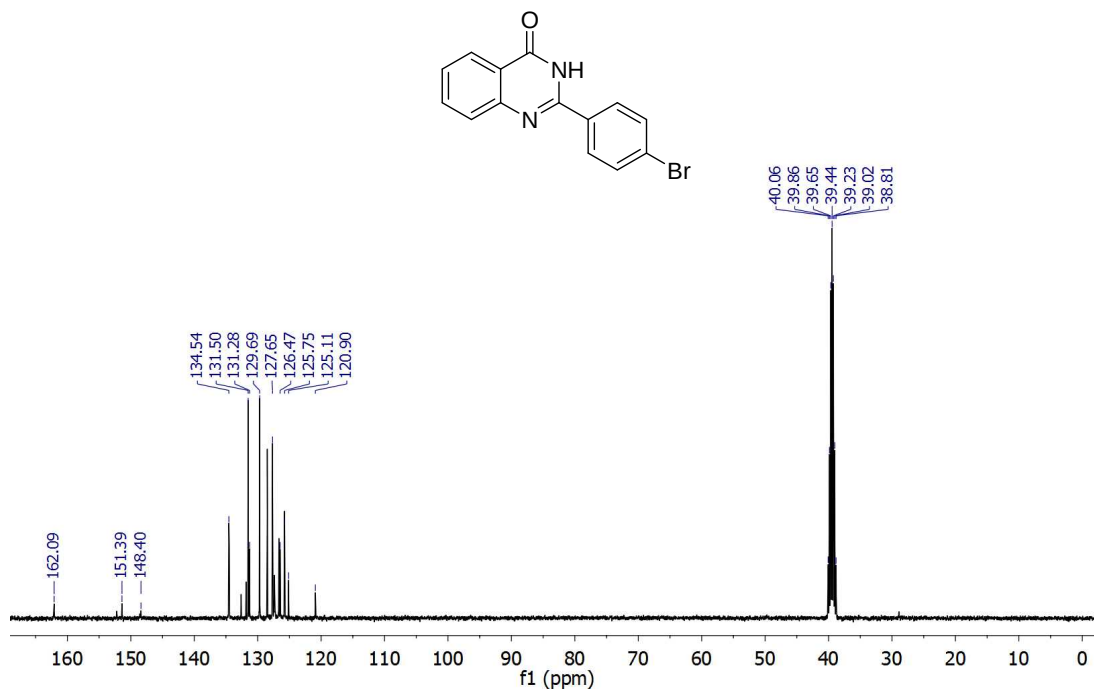


Fig S37: ¹³C NMR spectrum of compound **3mm** (100 MHz, DMSO-*d*₆).

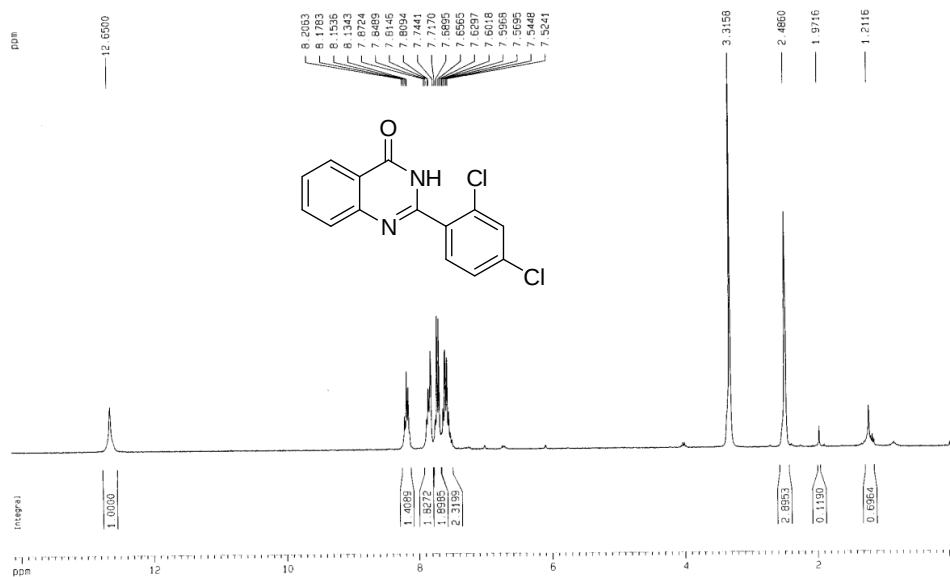


Fig S38 : ¹H NMR spectrum of compound **300** (300 MHz, DMSO-*d*₆).

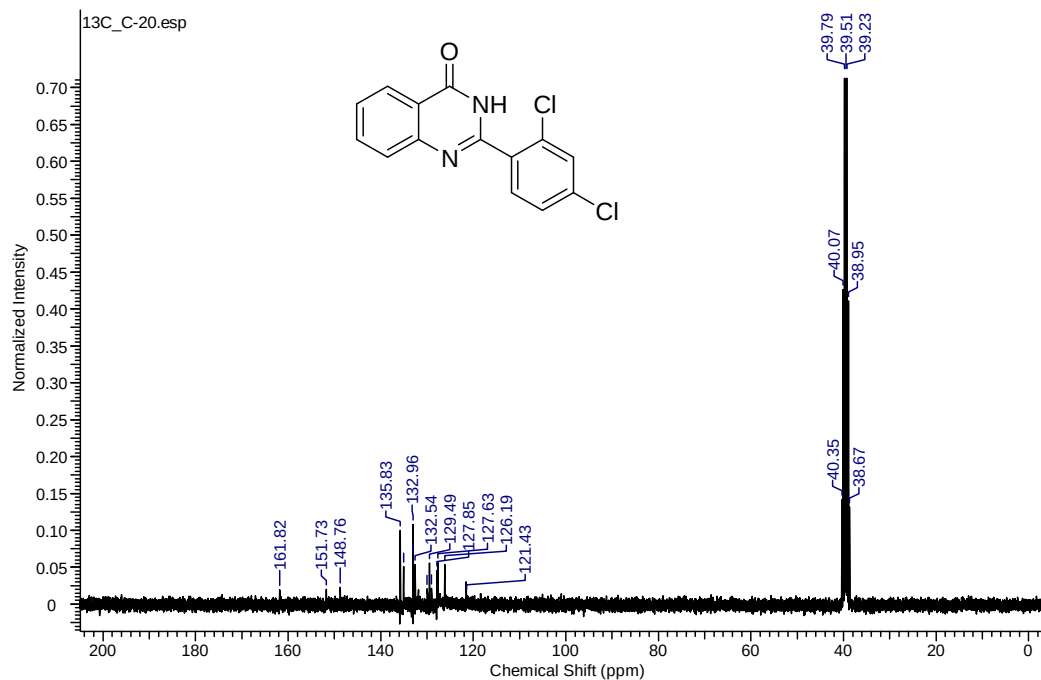


Fig S39 : ¹³C NMR spectrum of compound **300** (100 MHz, DMSO-*d*₆).

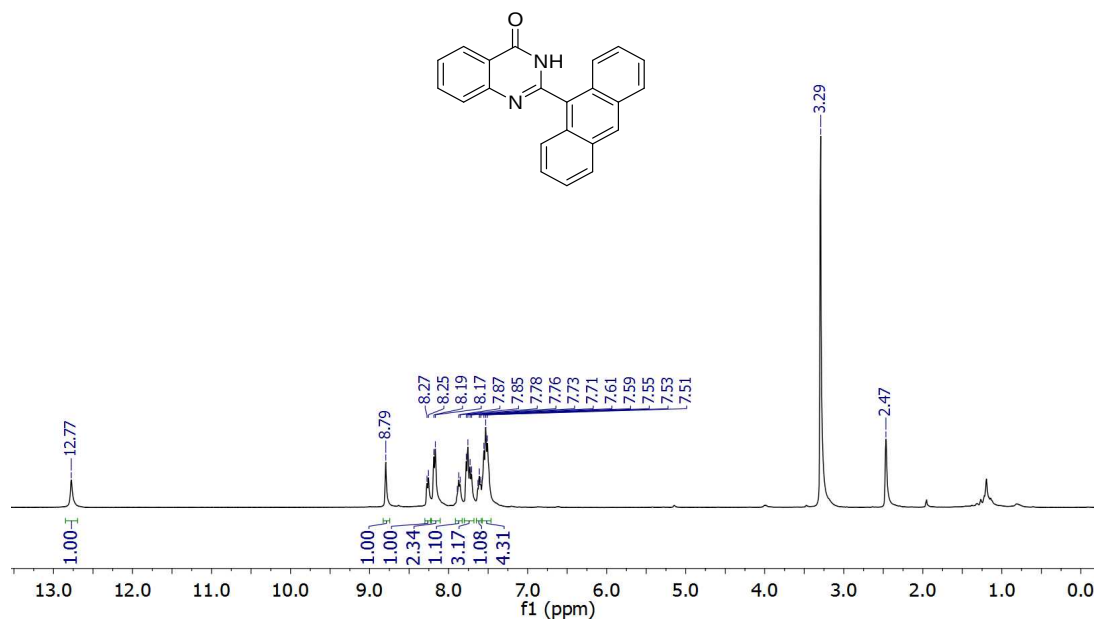


Fig S40 : ¹H NMR spectrum of compound **3pp** (400 MHz, DMSO-*d*₆).

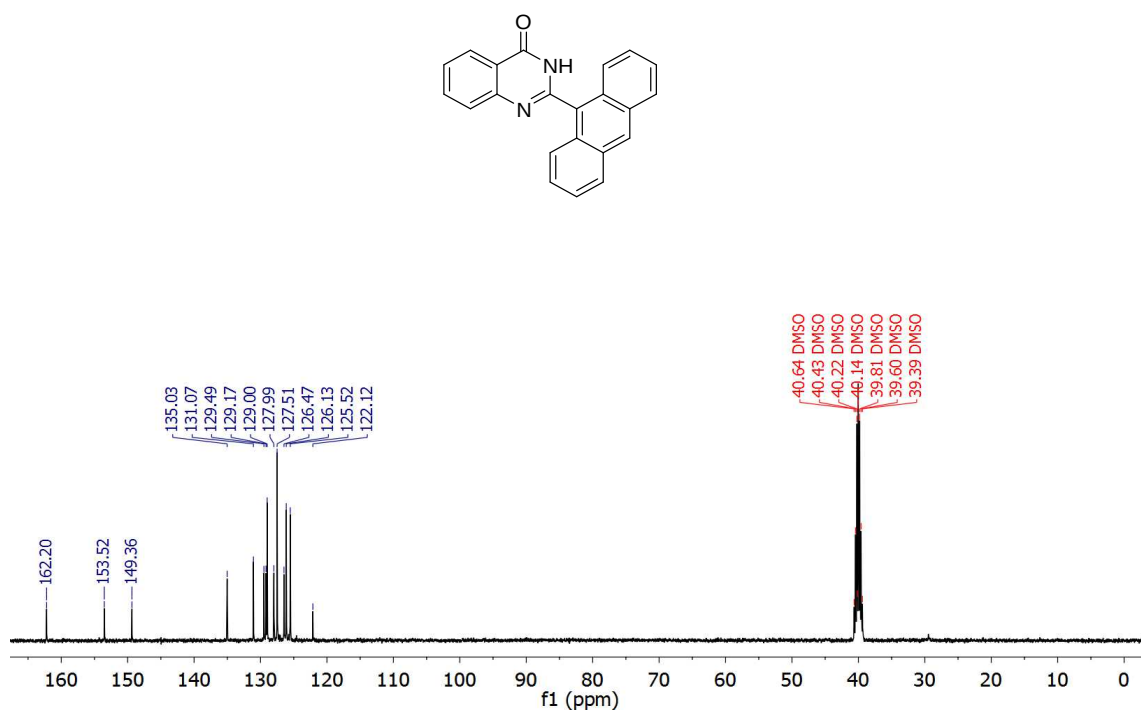


Fig S41 : ¹³C NMR spectrum of compound **3pp** (100 MHz, DMSO-*d*₆).

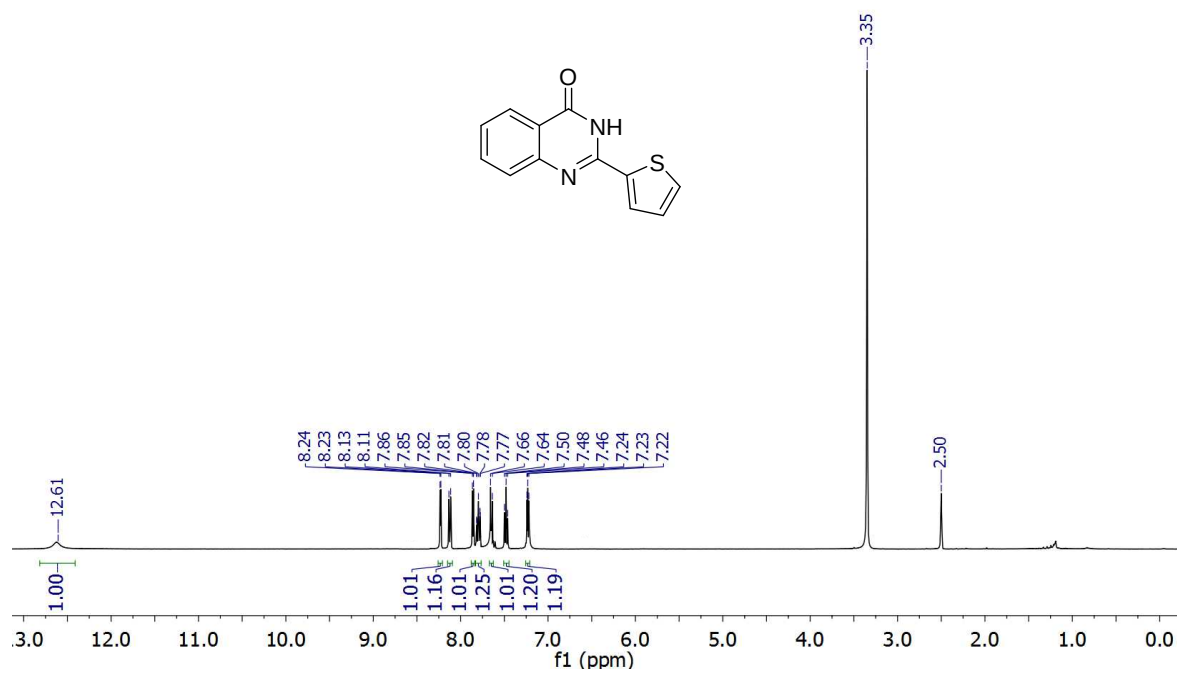


Fig S42 :¹H NMR spectrum of compound **3qq** (400 MHz, DMSO-*d*₆).

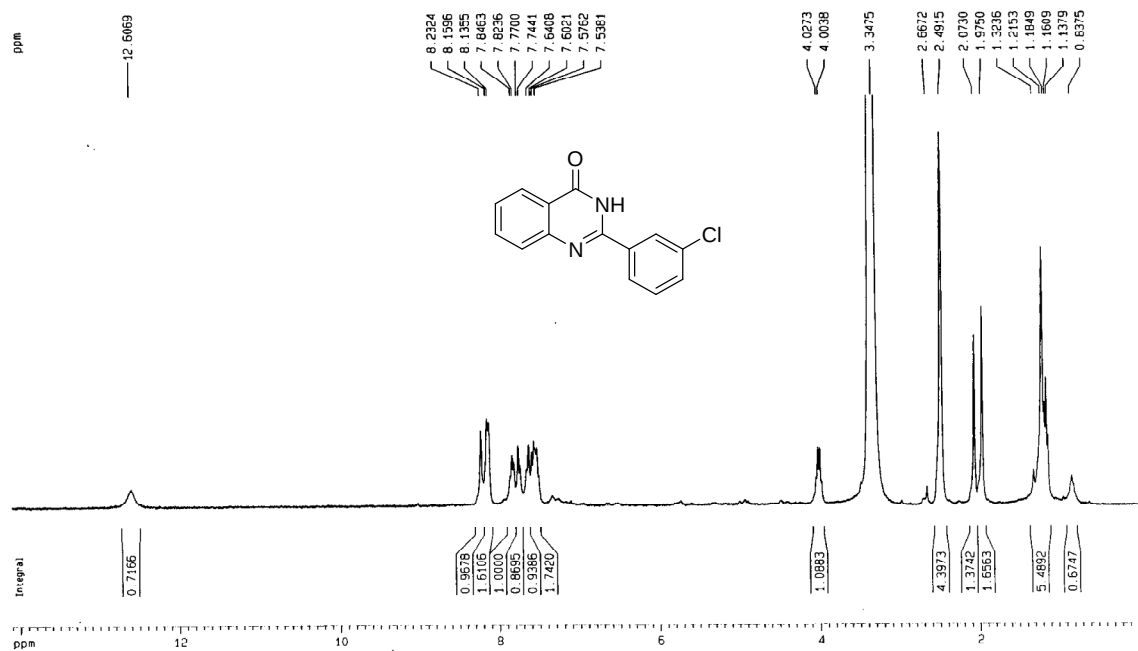


Fig S43 :¹H NMR spectrum of compound **3ii** (300 MHz, DMSO-*d*₆).

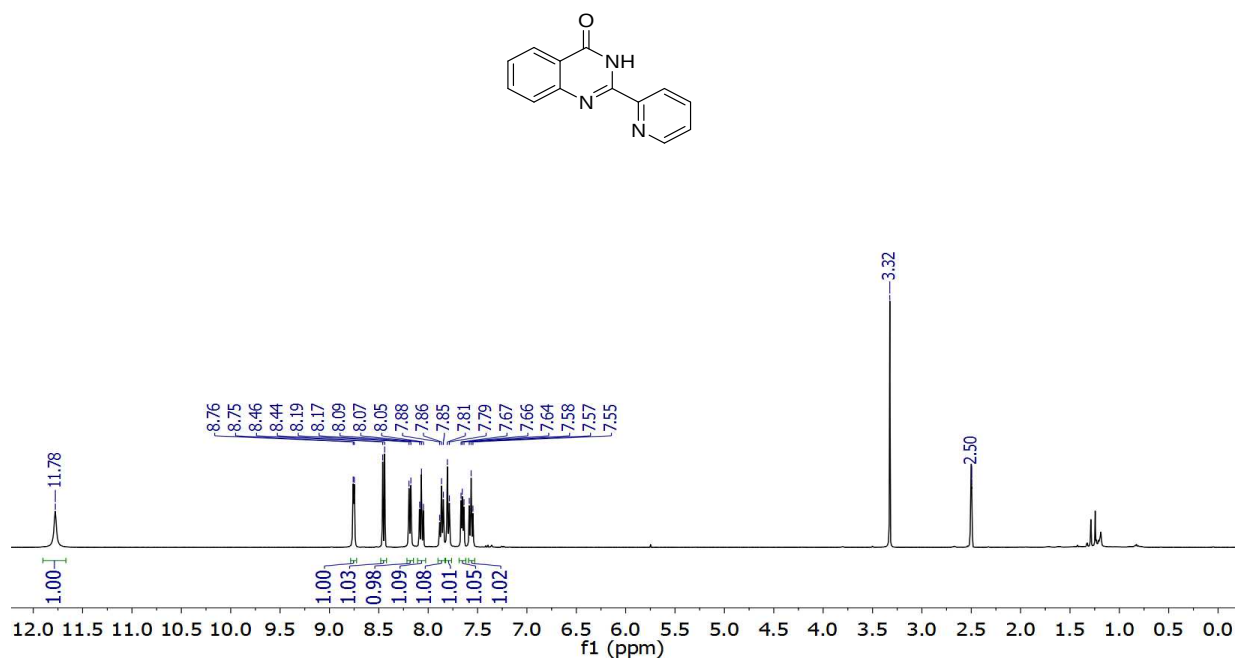


Fig S44 :¹H NMR spectrum of compound **3rr** (400 MHz, DMSO-*d*₆).

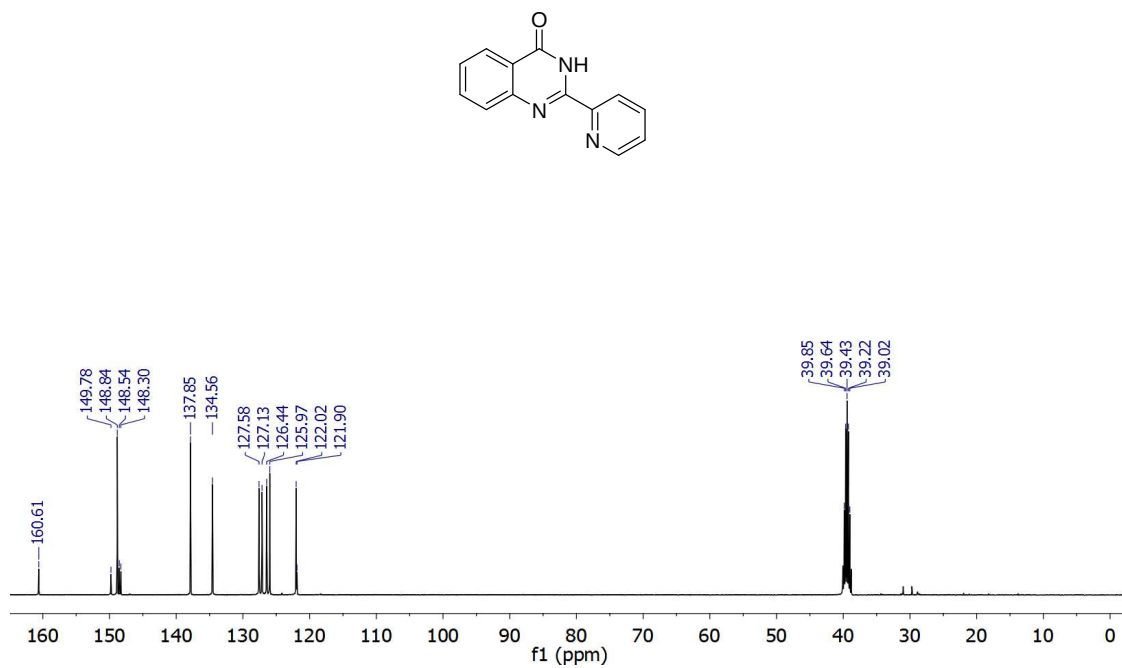


Fig S45 :¹³C NMR spectrum of compound **3rr** (100 MHz, DMSO-*d*₆).

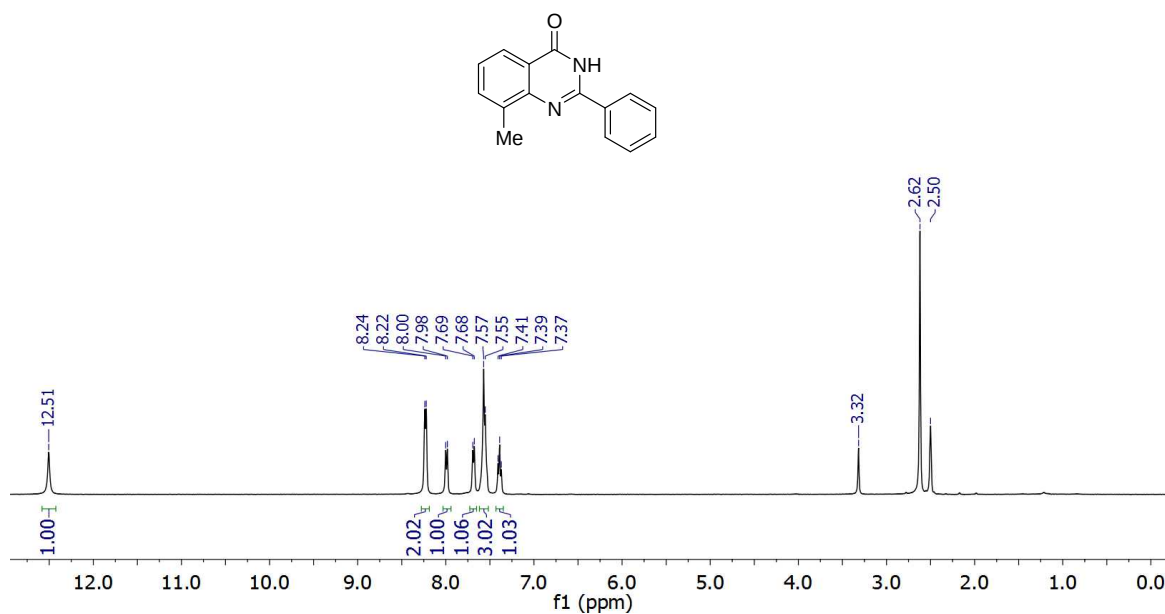


Fig S46 : ¹H NMR spectrum of compound **3tt** (400 MHz, DMSO-*d*₆).

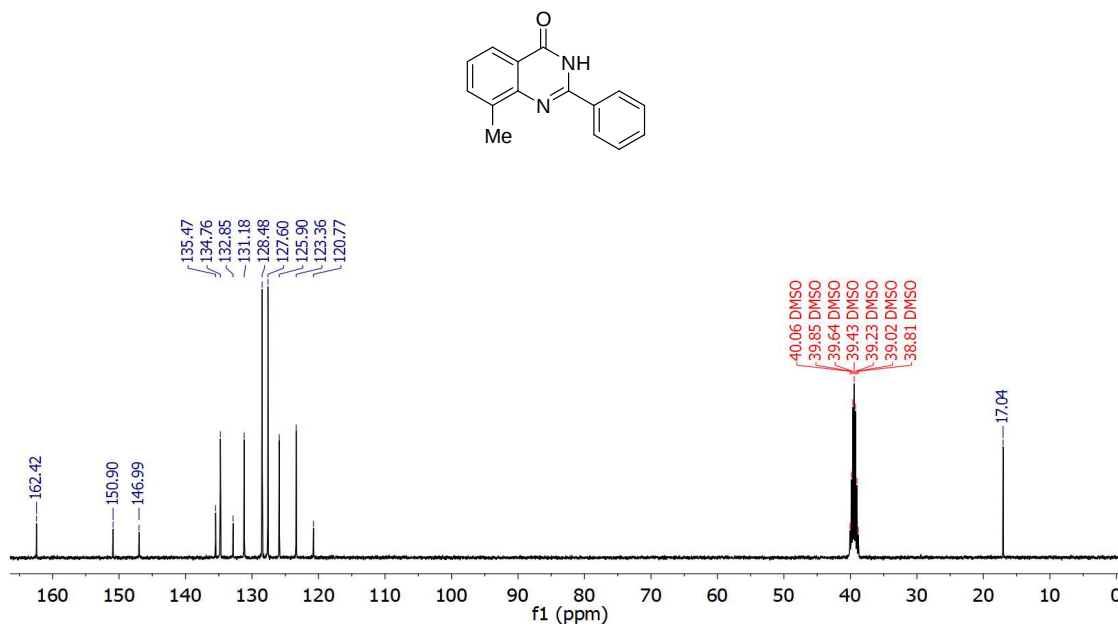


Fig S47 : ¹³C NMR spectrum of compound **3tt** (100 MHz, DMSO-*d*₆).

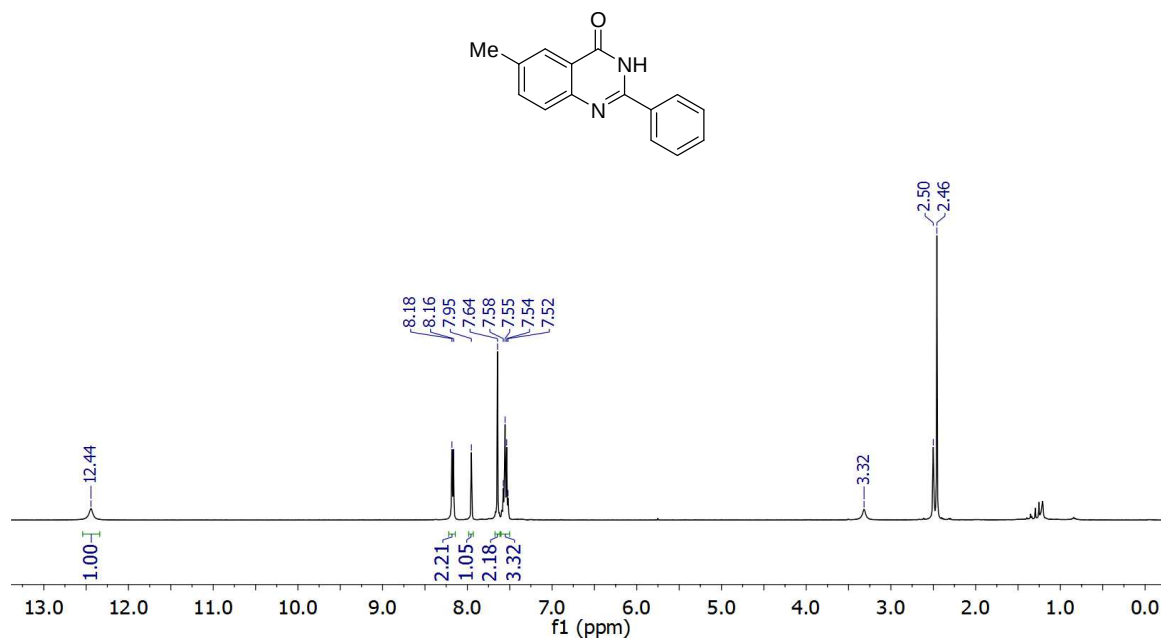


Fig S48 : ¹H NMR spectrum of compound **3uu** (400 MHz, DMSO-*d*₆).

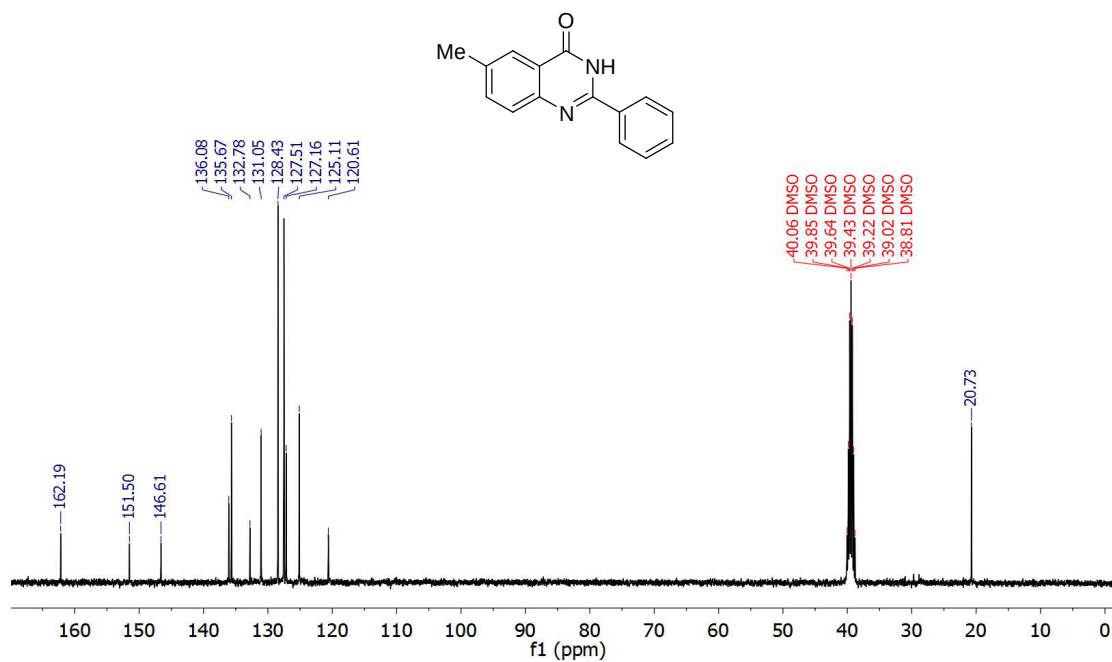


Fig S49 : ¹³C NMR spectrum of compound **3uu** (100 MHz, DMSO-*d*₆).

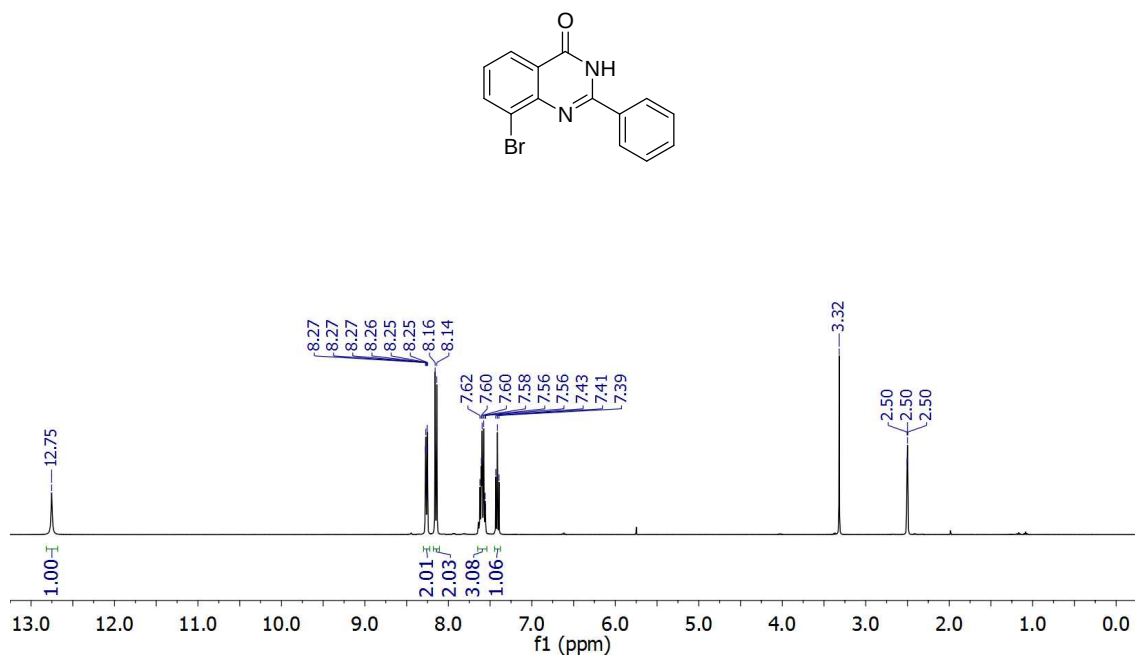


Fig S50 :¹H NMR spectrum of compound **3vv** (400 MHz, DMSO-*d*₆).

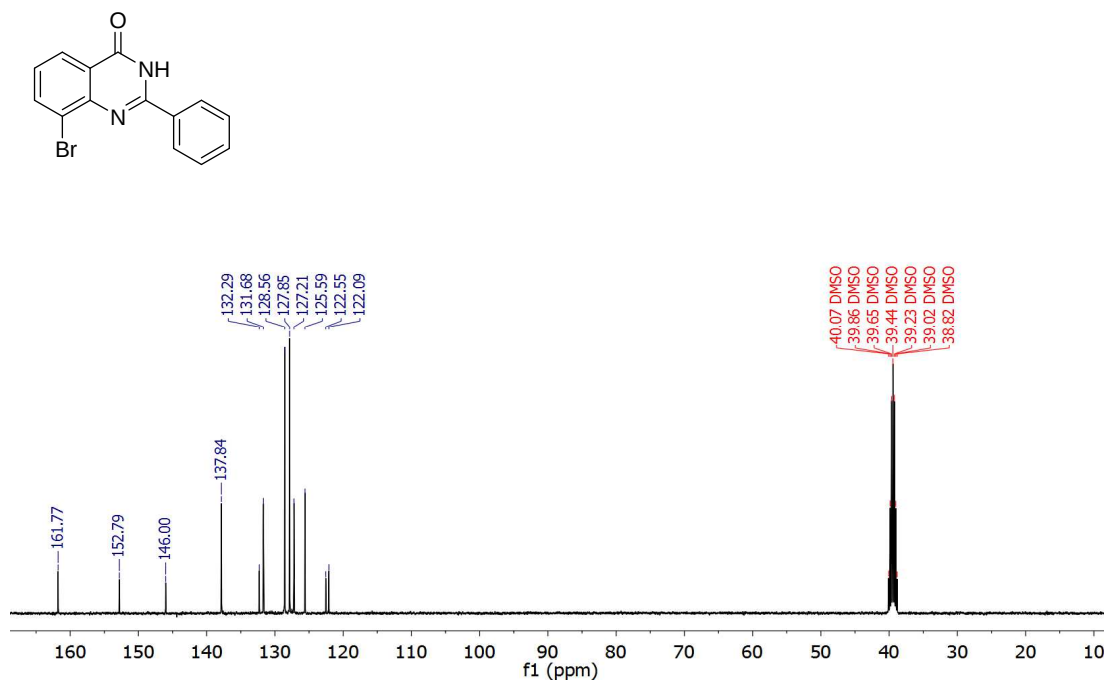


Fig S51 :¹³C NMR spectrum of compound **3vv** (100 MHz, DMSO-*d*₆).

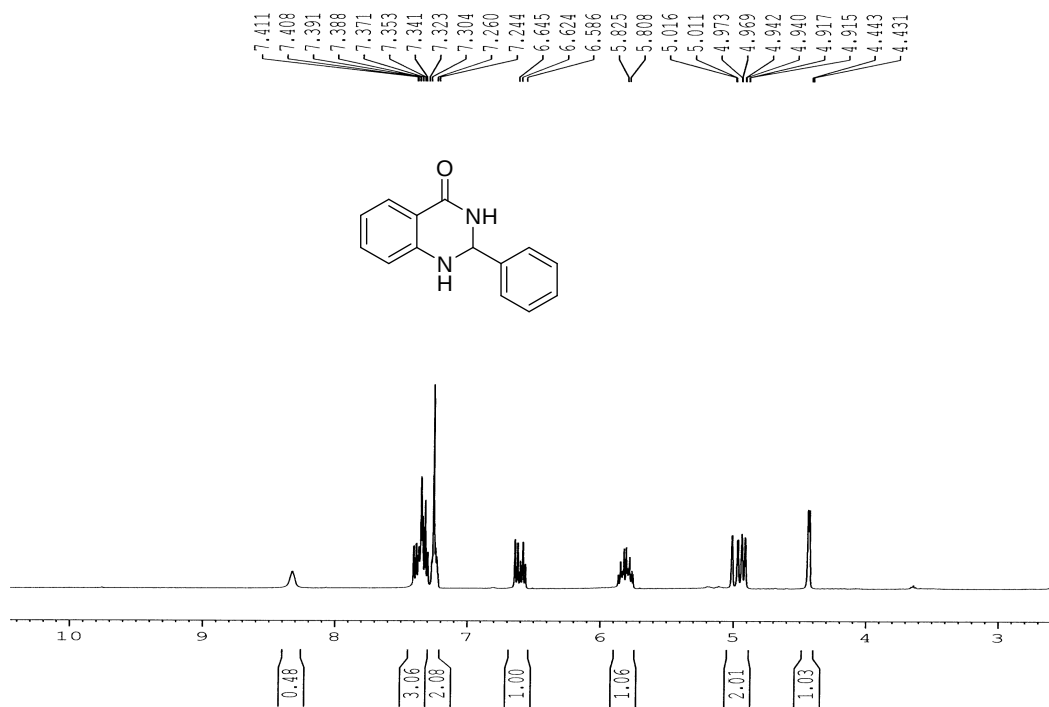


Fig S52: ¹H NMR spectrum of compound 4 (300 MHz, DMSO-*d*₆)

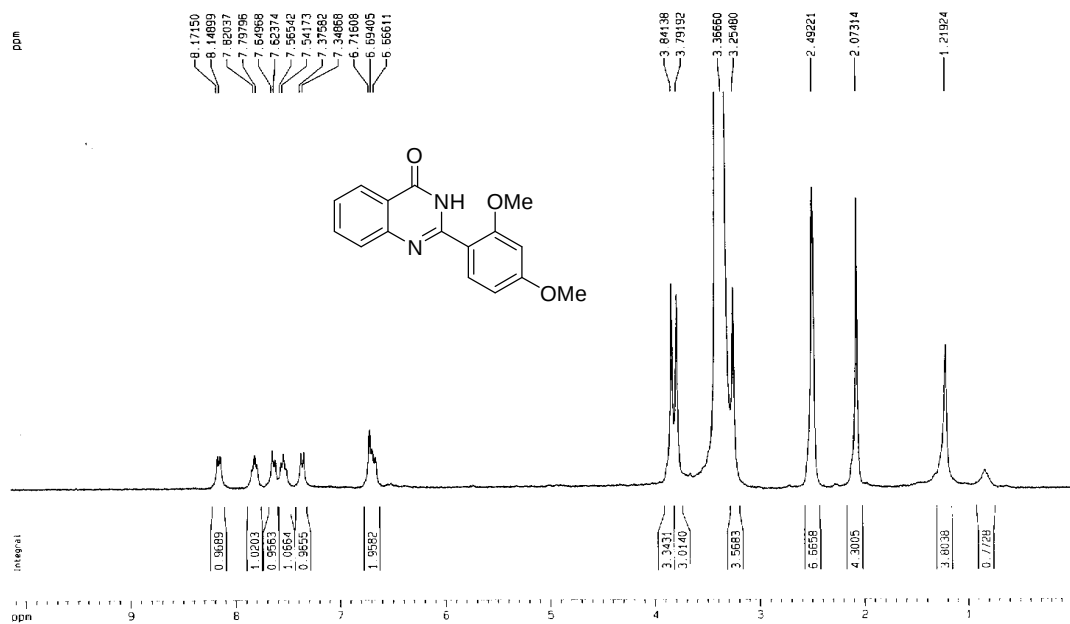


Fig S53: ¹H NMR spectrum of compound 3gg (300 MHz, DMSO-*d*₆).

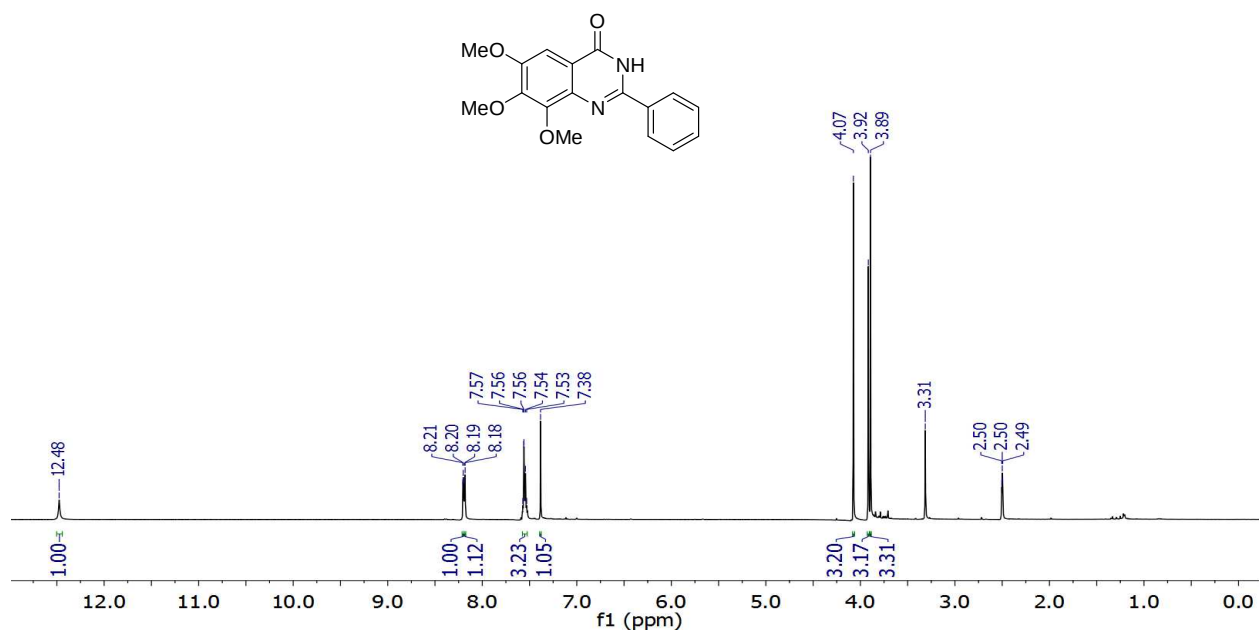


Fig S54 :¹H NMR spectrum of compound **3ww** (400 MHz, DMSO-*d*₆).

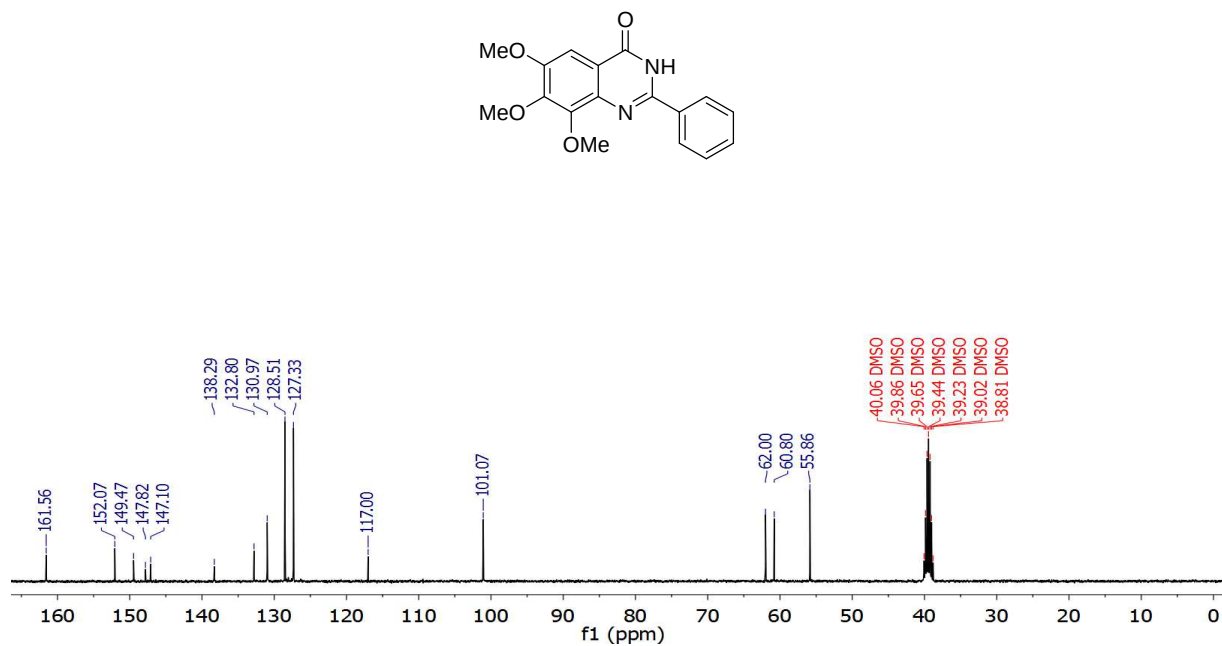


Fig S55 :¹³C NMR spectrum of compound **3ww** (100 MHz, DMSO-*d*₆).

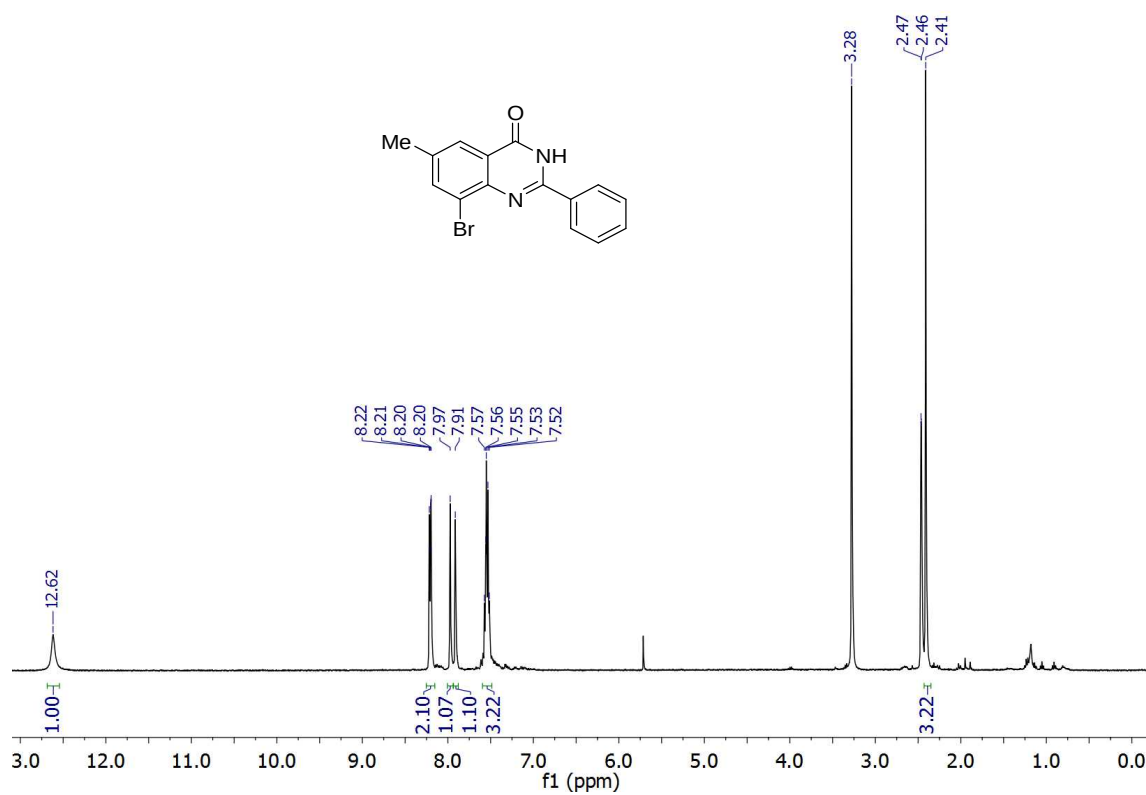


Fig S56: ¹H NMR spectrum of compound **3xx** (400 MHz, DMSO-*d*₆).

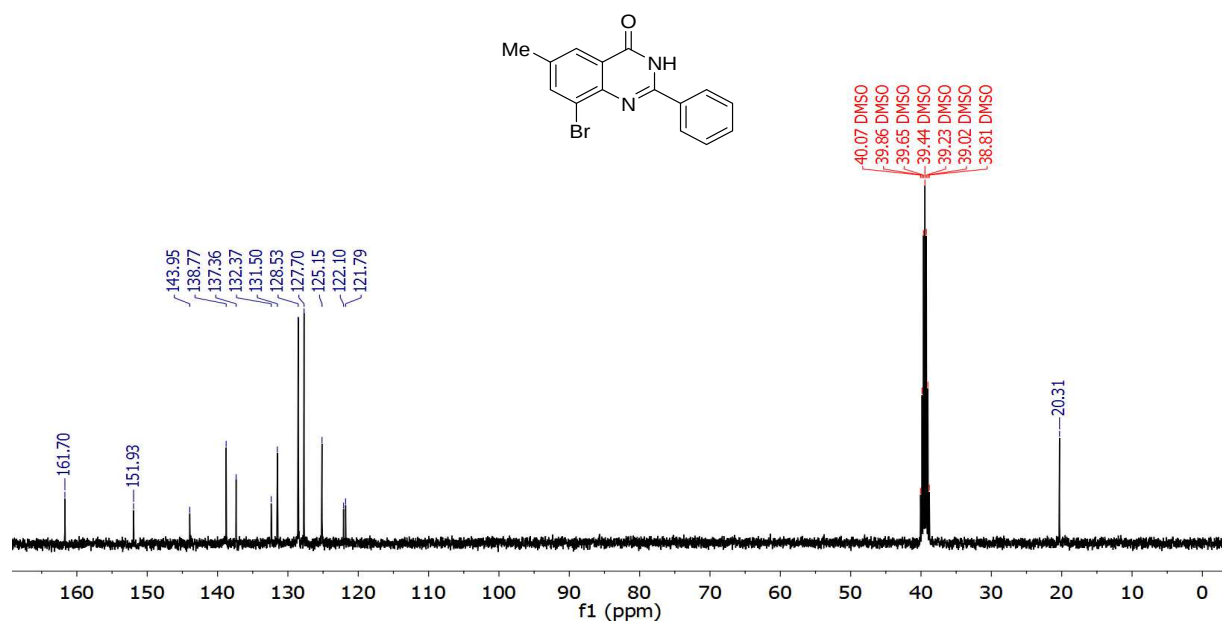


Fig S57: ¹³C NMR spectrum of compound **3xx** (100 MHz, DMSO-*d*₆).

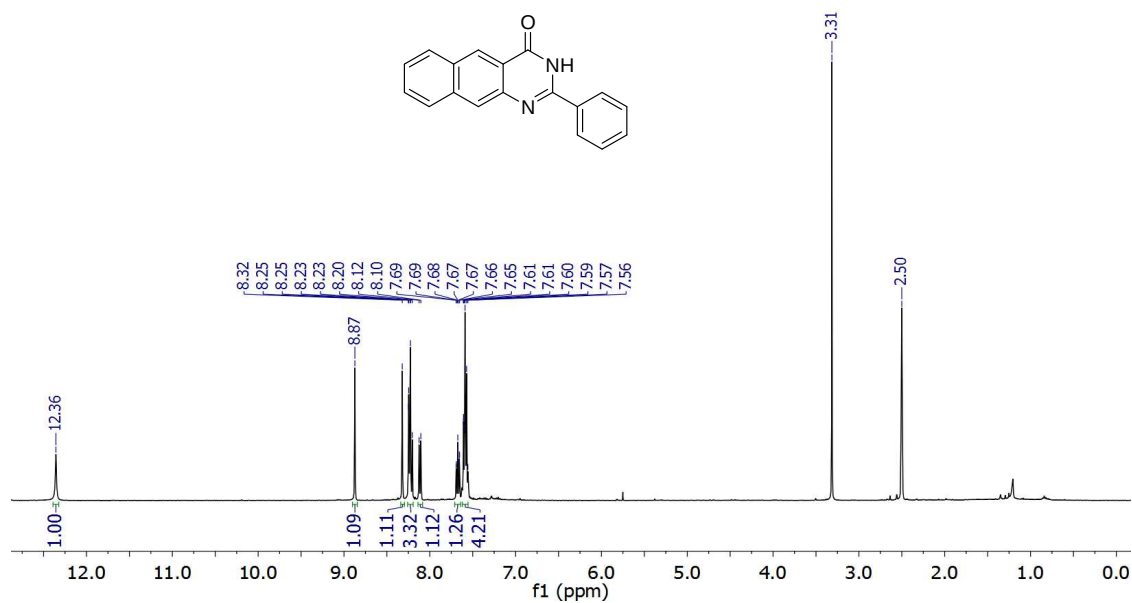


Fig S58 ^1H NMR spectrum of compound **3yy** (400 MHz, DMSO- d_6).

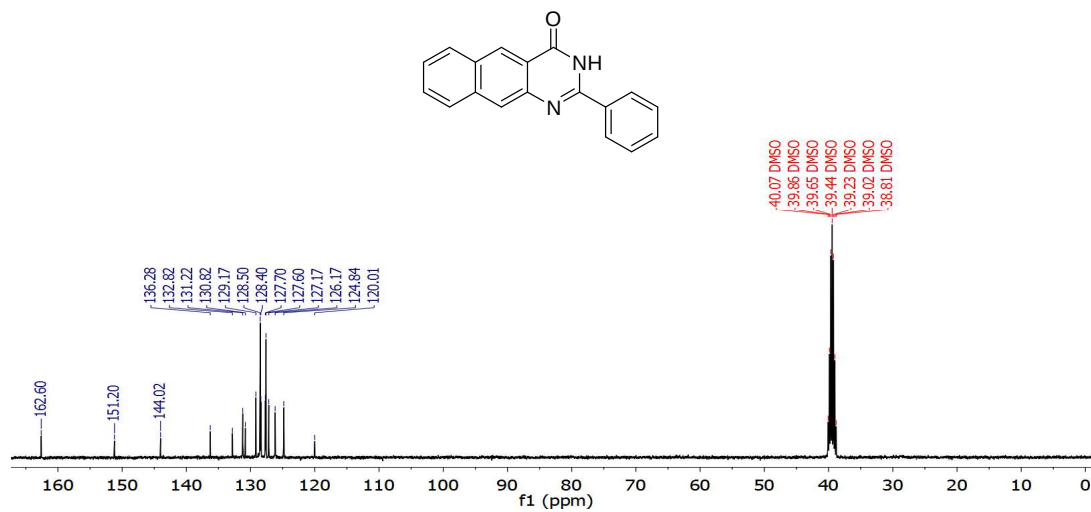


Fig S59 ^{13}C NMR spectrum of compound **3yy** (100 MHz, DMSO- d_6).

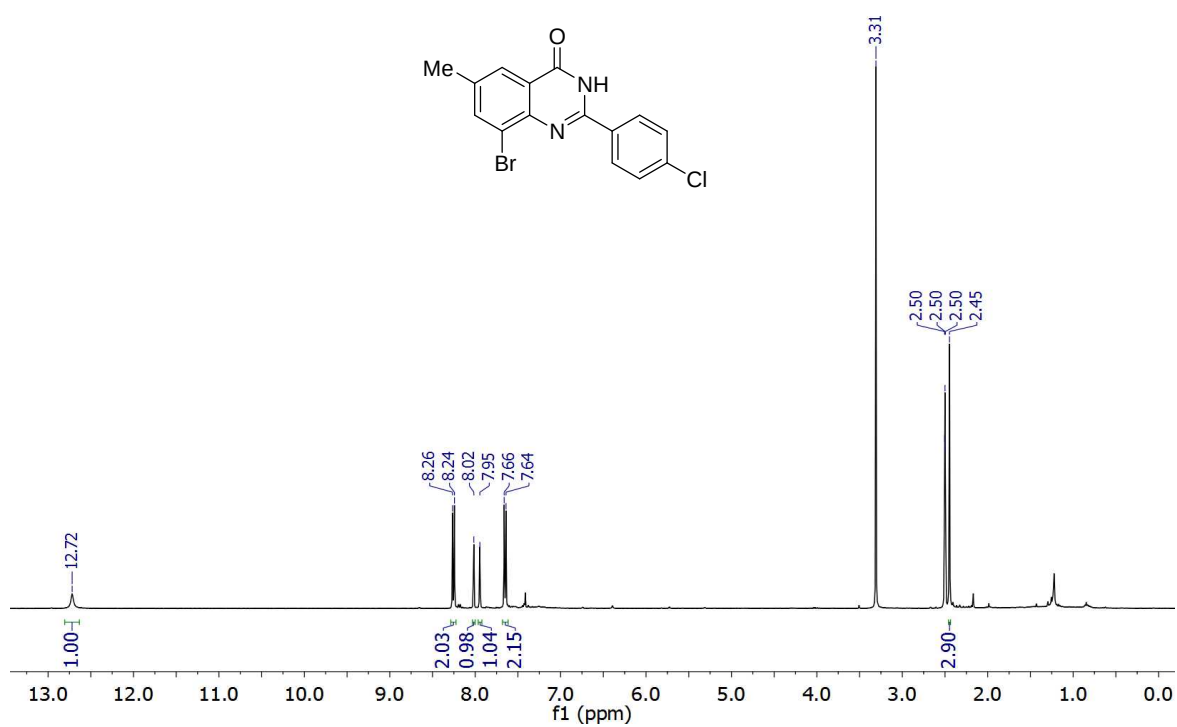


Fig S60 :¹H NMR spectrum of compound **3zz** (400 MHz, DMSO-*d*₆).

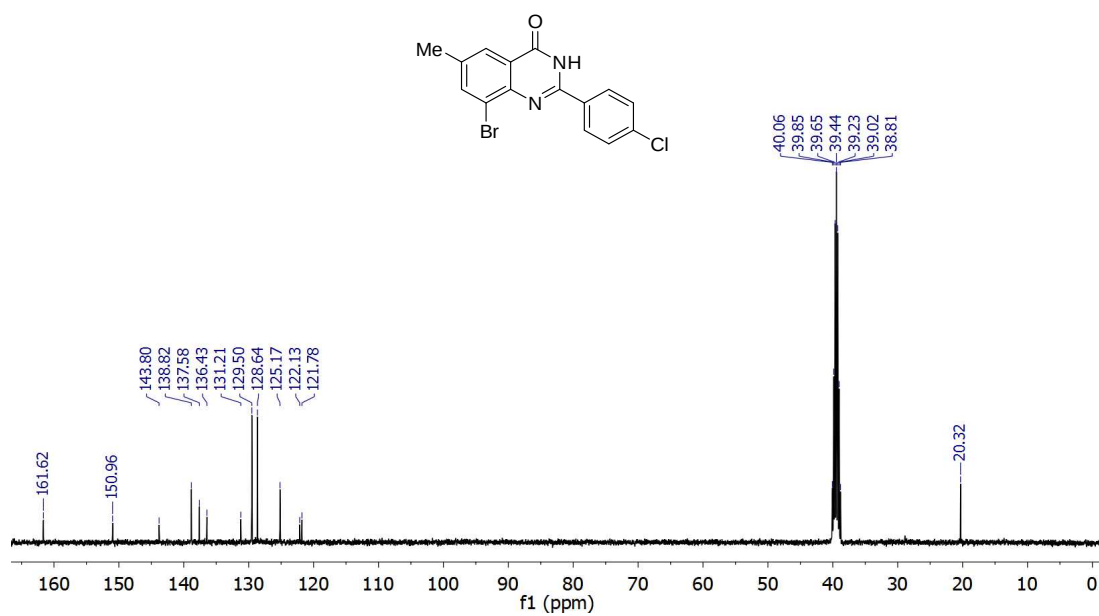


Fig S61 :¹³C NMR spectrum of compound **3zz** (100 MHz, DMSO-*d*₆).

(III). NMR Spectrum for Substituted benzamides:

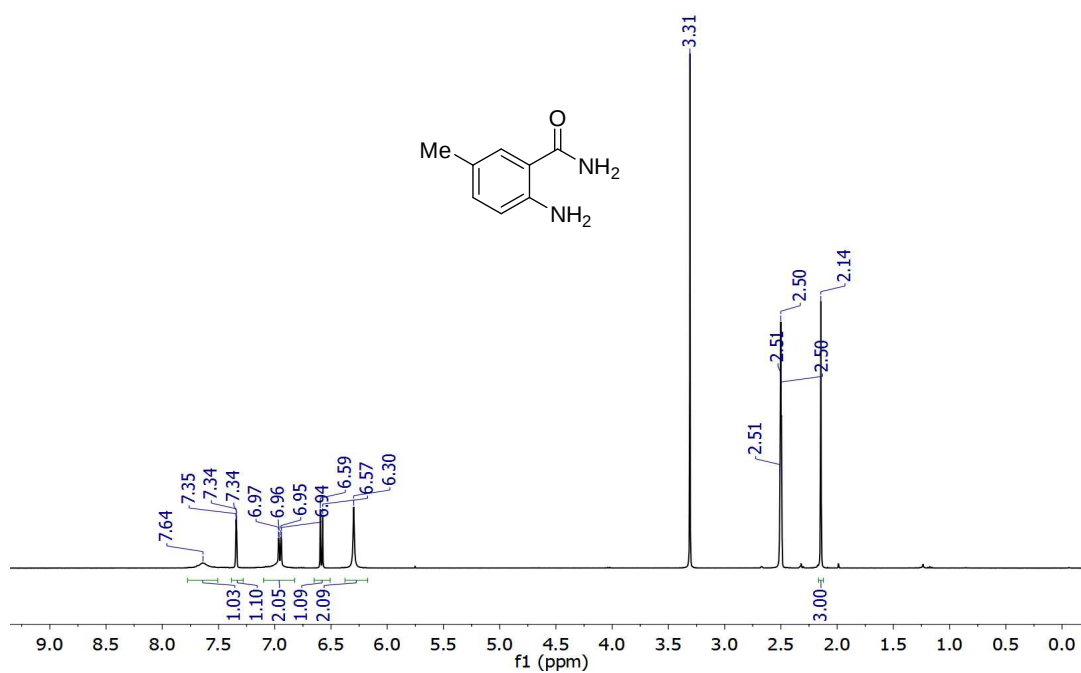


Fig S62 :¹H NMR spectrum of compound **2b** (400 MHz, DMSO-*d*₆).

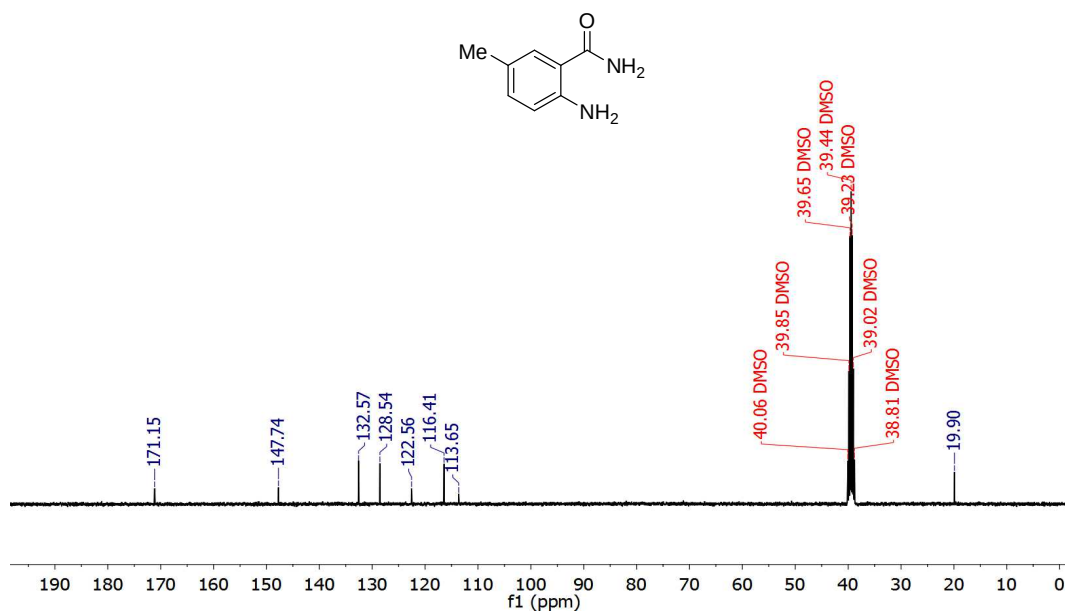


Fig S63 :¹³C NMR spectrum of compound **2b** (100 MHz, DMSO-*d*₆).

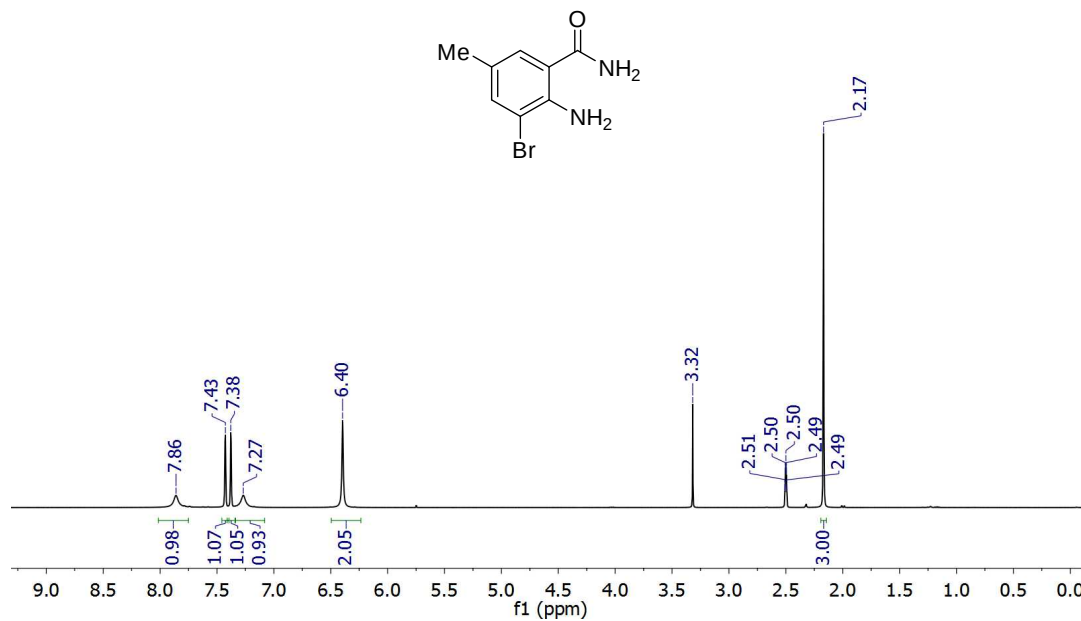


Fig S64 : ^1H NMR spectrum of compound **2c** (400 MHz, $\text{DMSO}-d_6$).

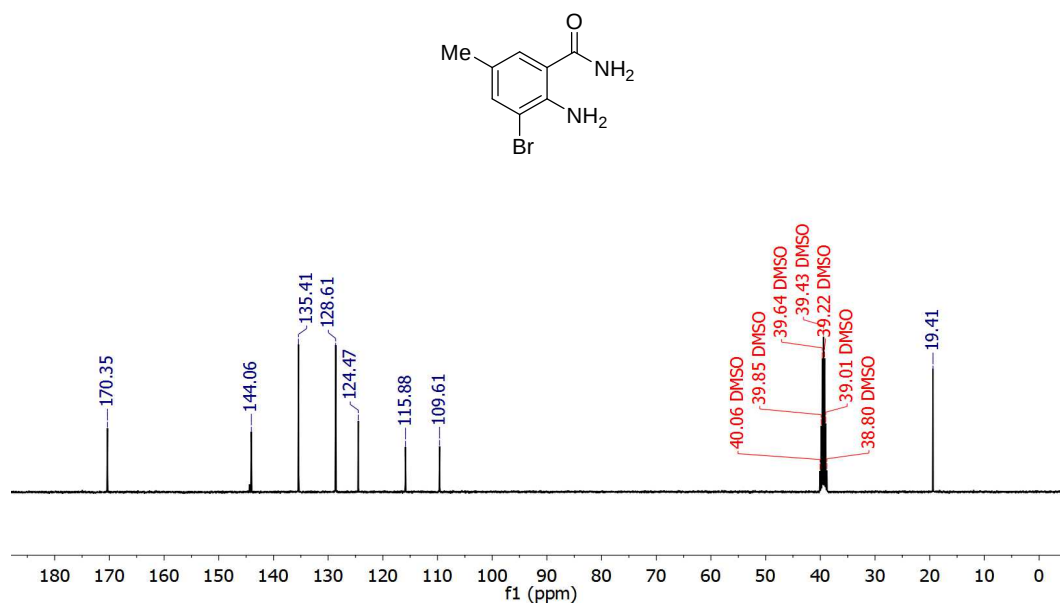


Fig S65 : ^{13}C NMR spectrum of compound **2c** (100 MHz, $\text{DMSO}-d_6$).

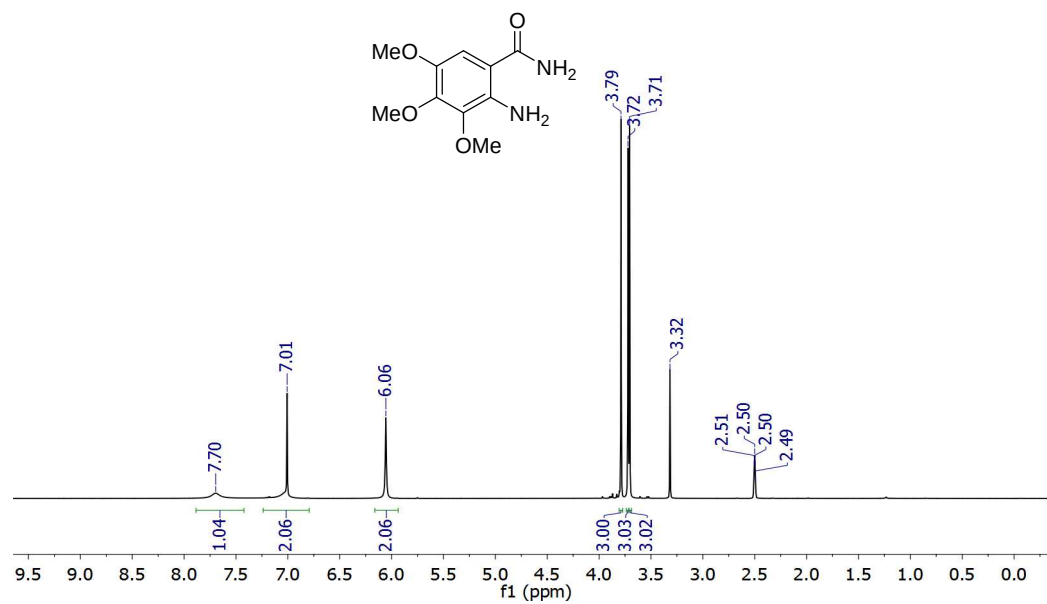


Fig S66 : ¹H NMR spectrum of compound **2d** (400 MHz, DMSO-*d*₆).

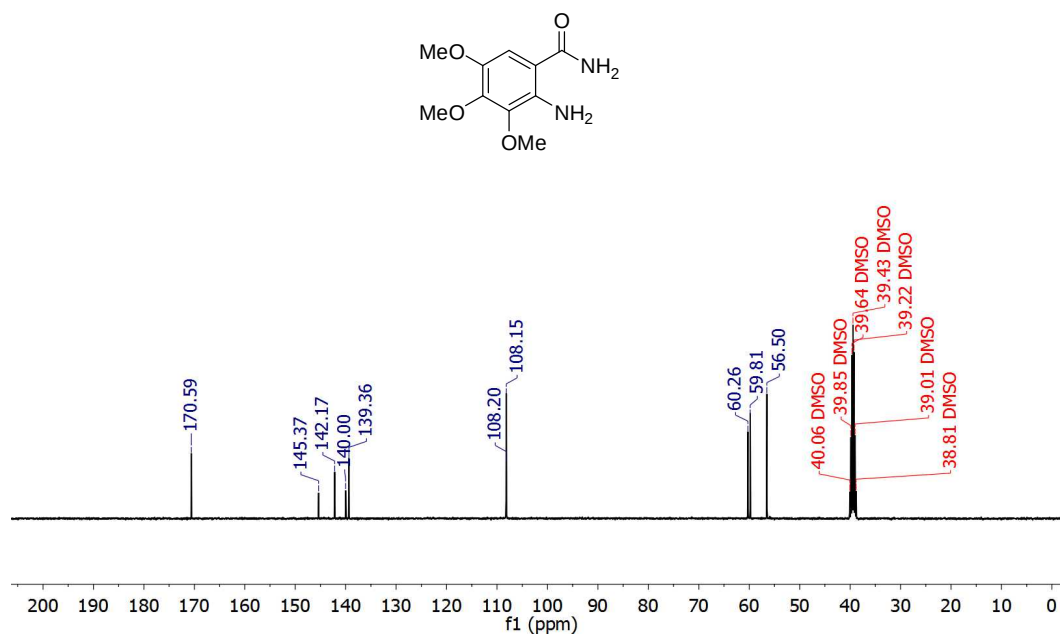


Fig S67 : ¹³C NMR spectrum of compound **2d** (100 MHz, DMSO-*d*₆).

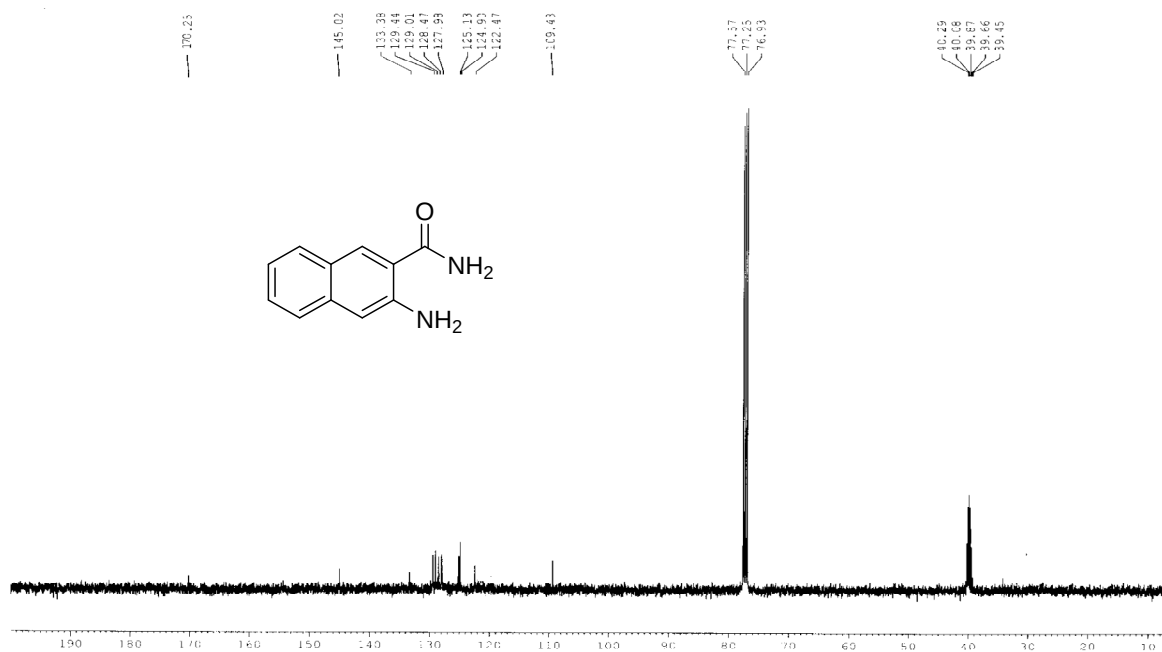


Fig S68 : ^{13}C NMR spectrum of compound 2e (100 MHz, CDCl_3 , $\text{DMSO}-d_6$).

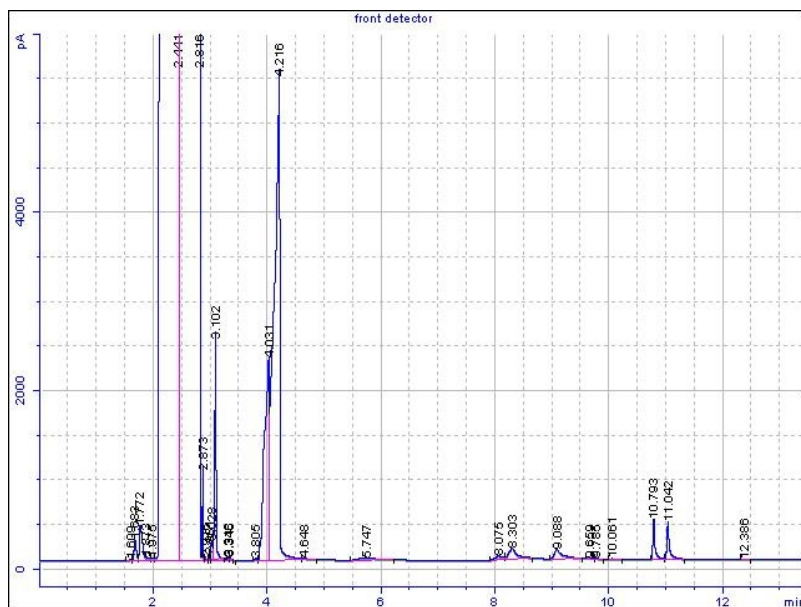


Fig S69 : Gas chromatogram of the reaction mixture containing styrene and ethyl benzene.