

Supporting Information

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Synthesis and Antidiabetic Assessment of Substituted 2-Benzylidene-1-Indanone Derivatives Using *In Vitro* and *In Silico* Techniques

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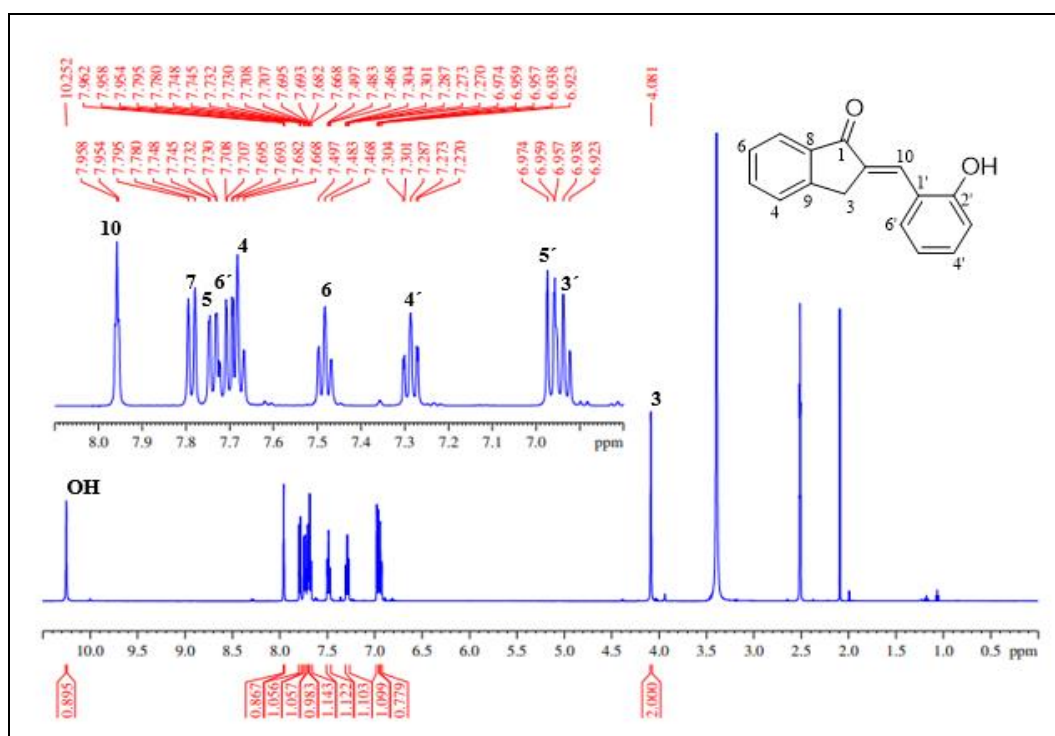


Figure S1: ¹H-NMR (500 MHz, DMSO-d₆) Spectrum 3a

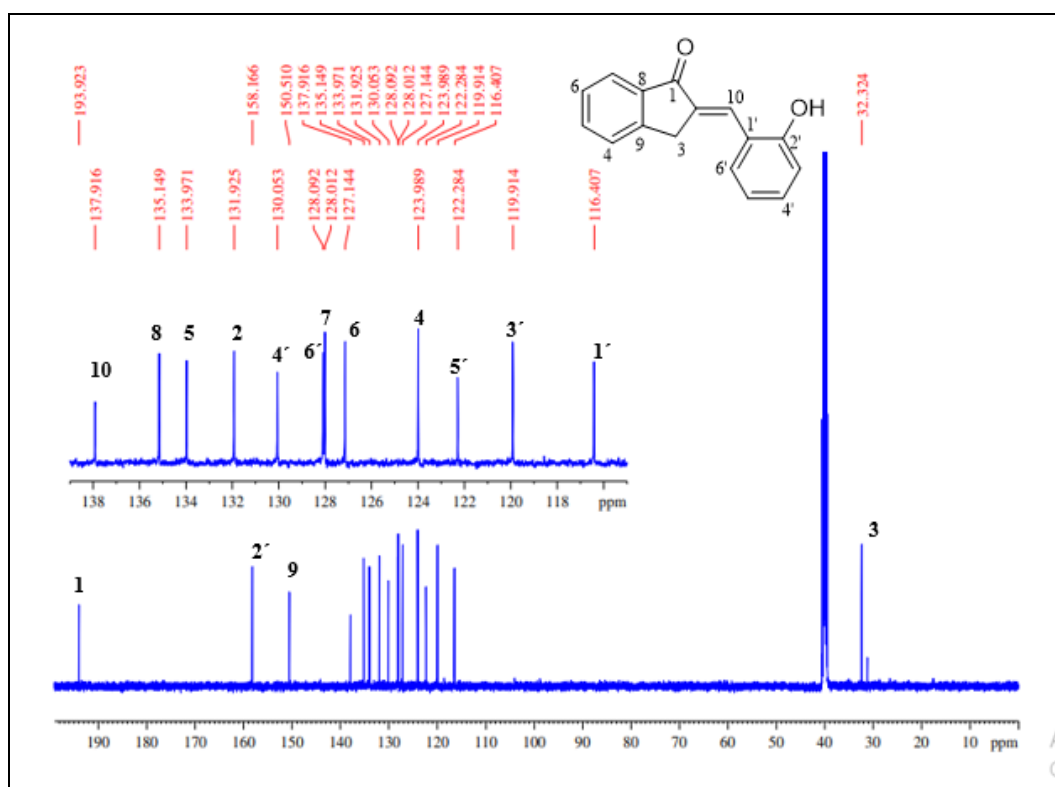


Figure S2: ¹³C-NMR (125 MHz, DMSO-d₆) Spectrum of 3a

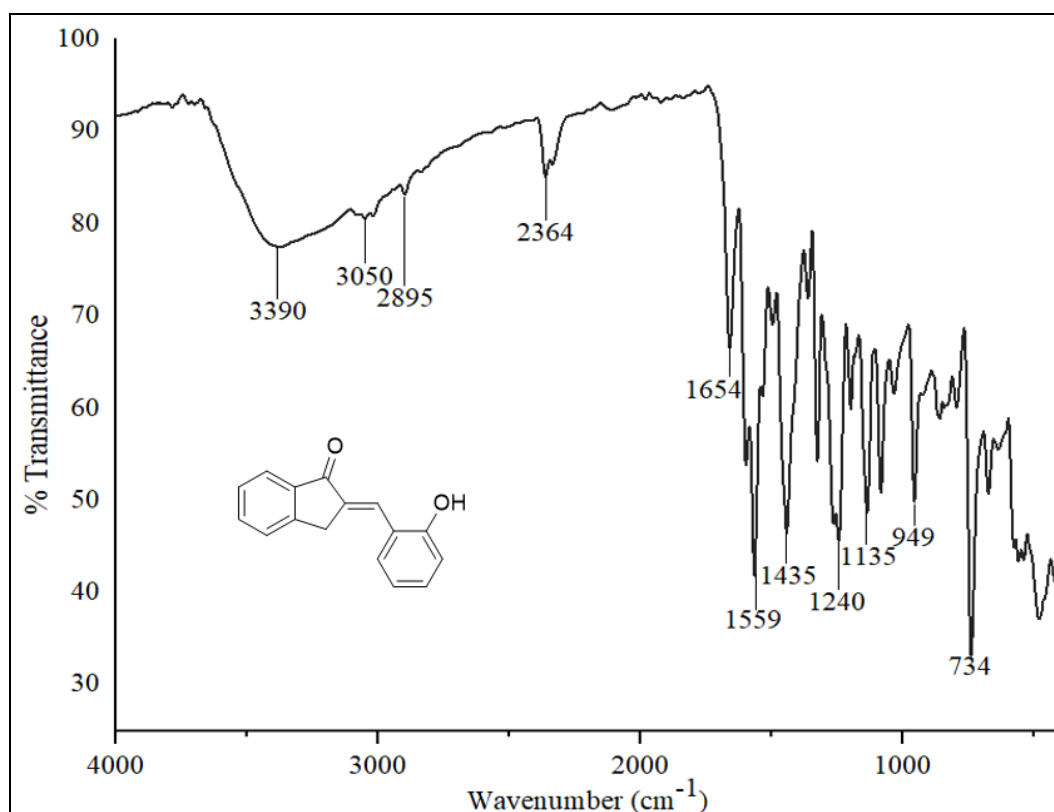


Figure S3: FT-IR Spectrum for compound 3a

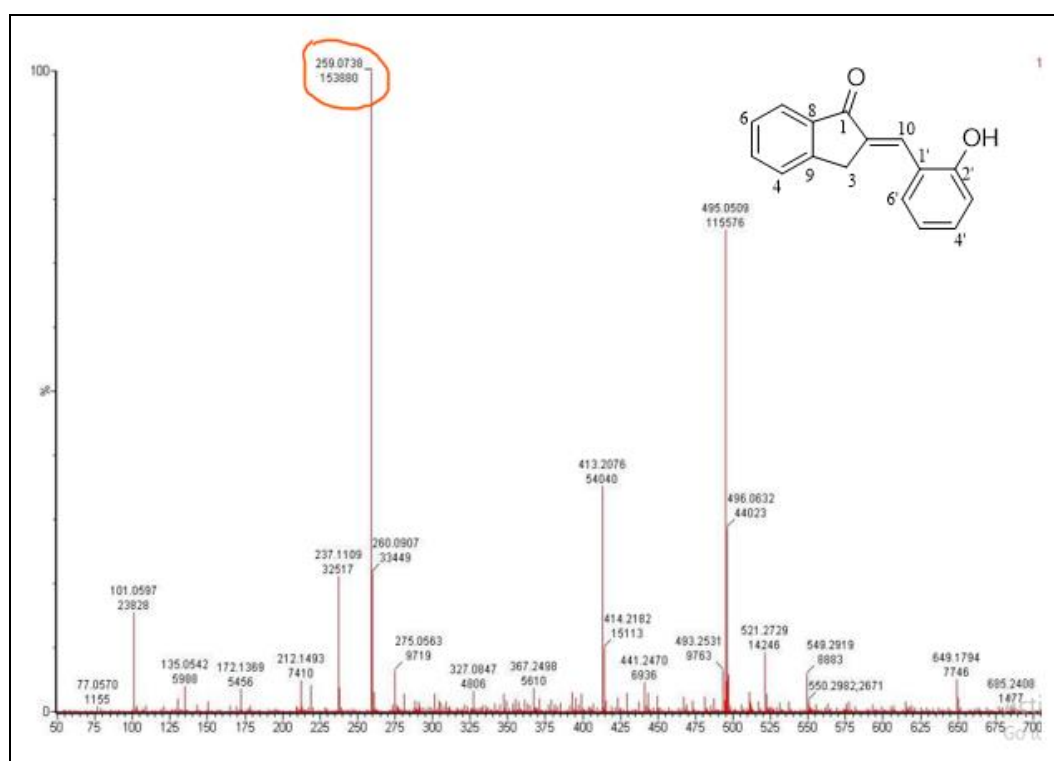


Figure S4: HRMS Spectrum for compound 3a

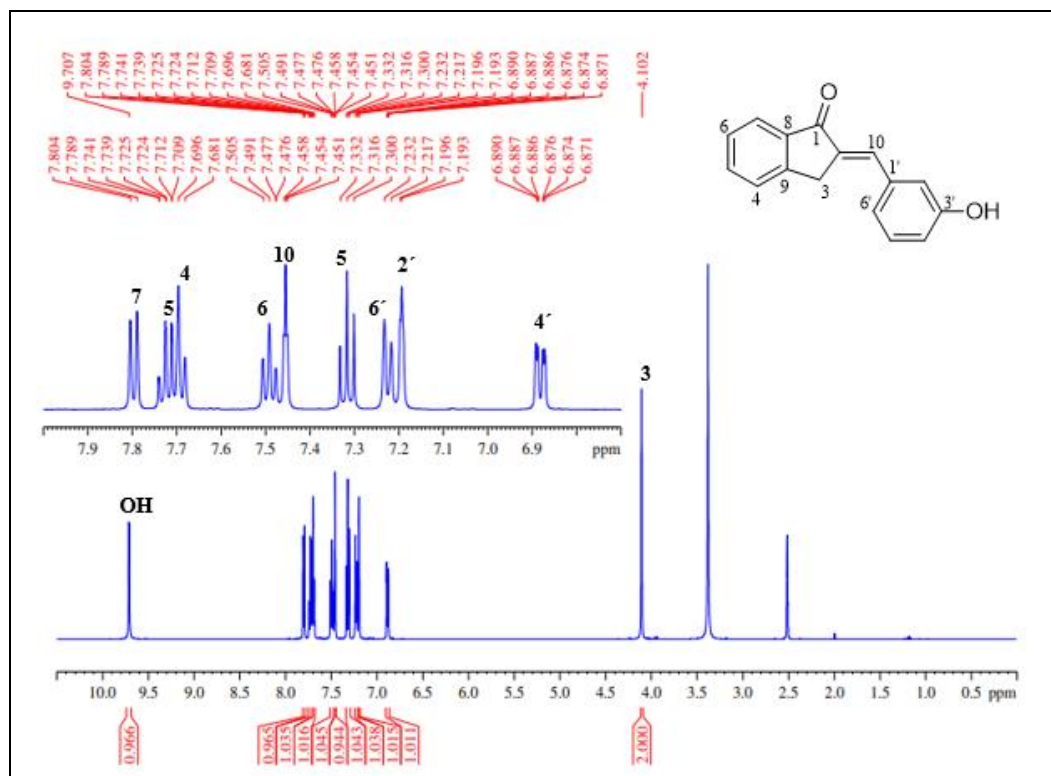


Figure S5: ¹H-NMR (500 MHz, DMSO-d₆) Spectrum of **3b**

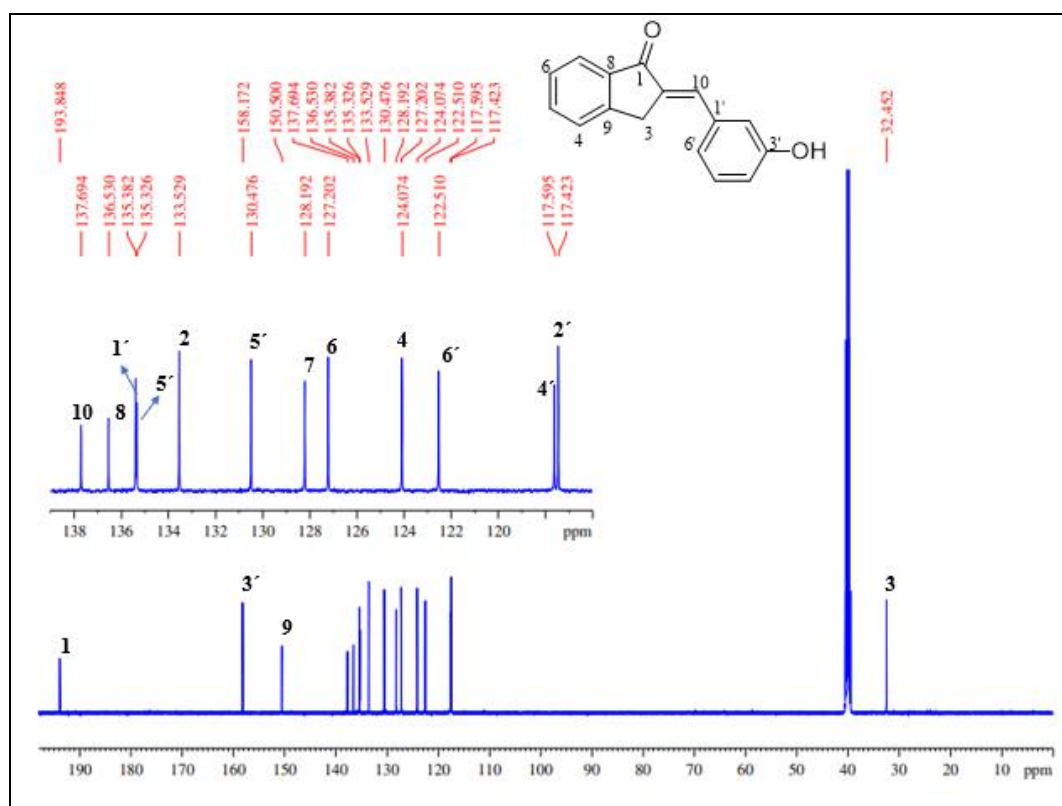


Figure S6: ¹³C-NMR (125 MHz, DMSO-d₆) Spectrum of **3b**

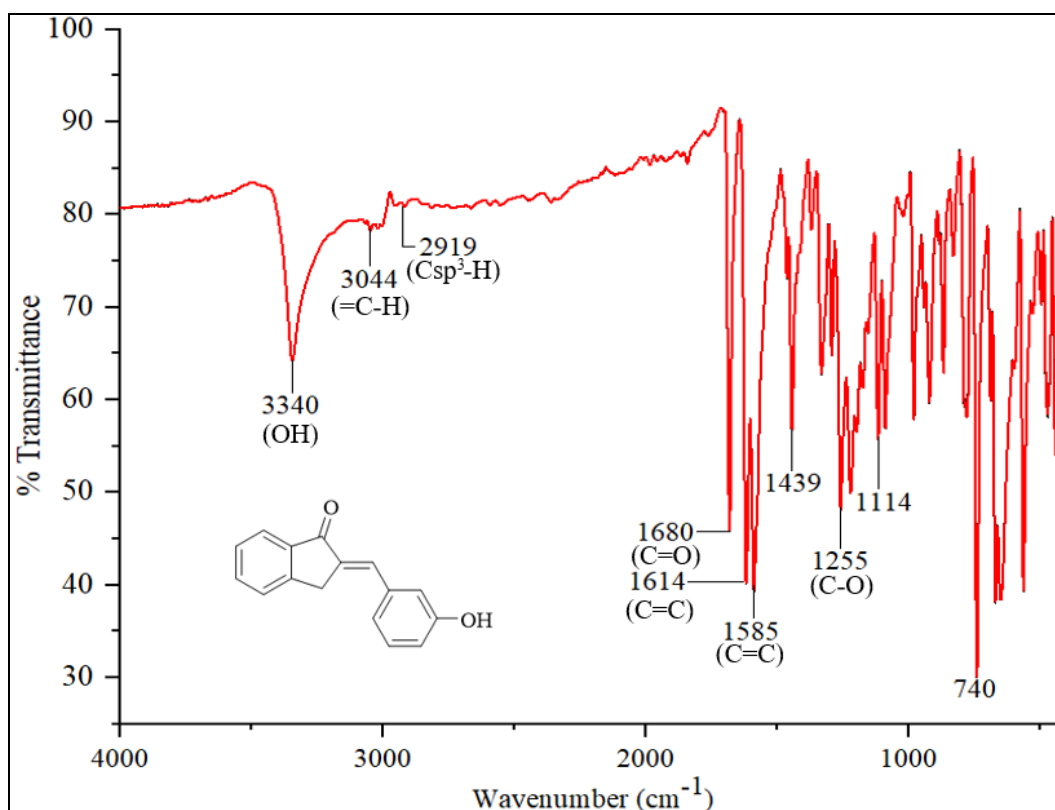


Figure S7: FT-IR Spectrum of 3b

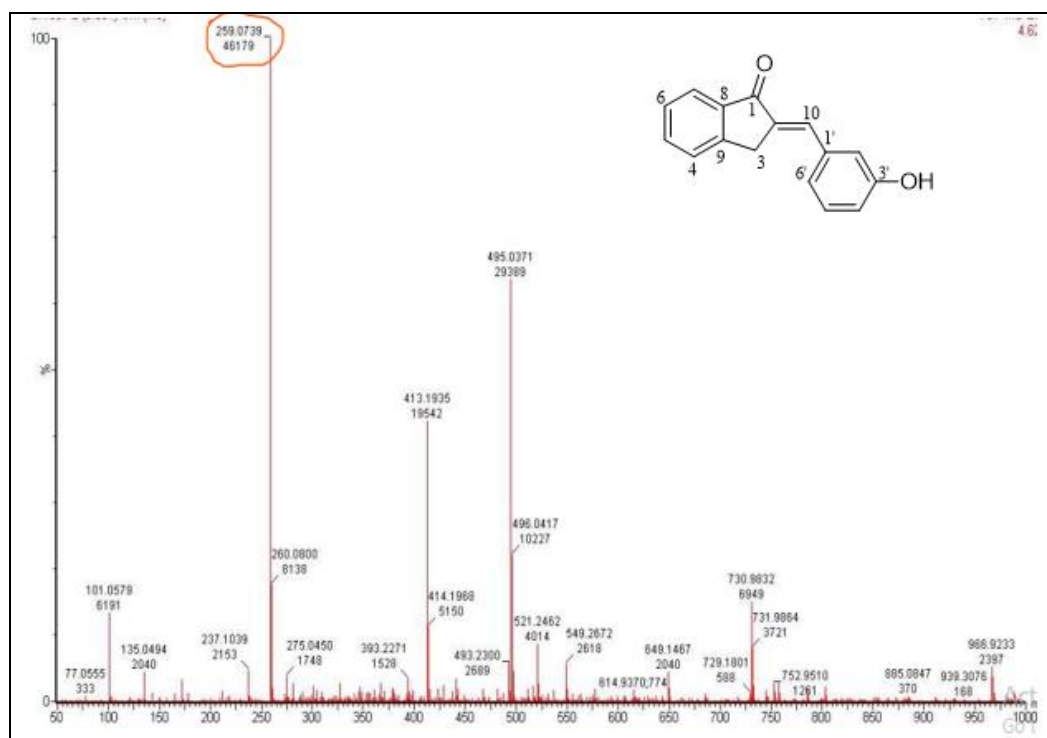


Figure S8: HRMS Spectrum of 3b

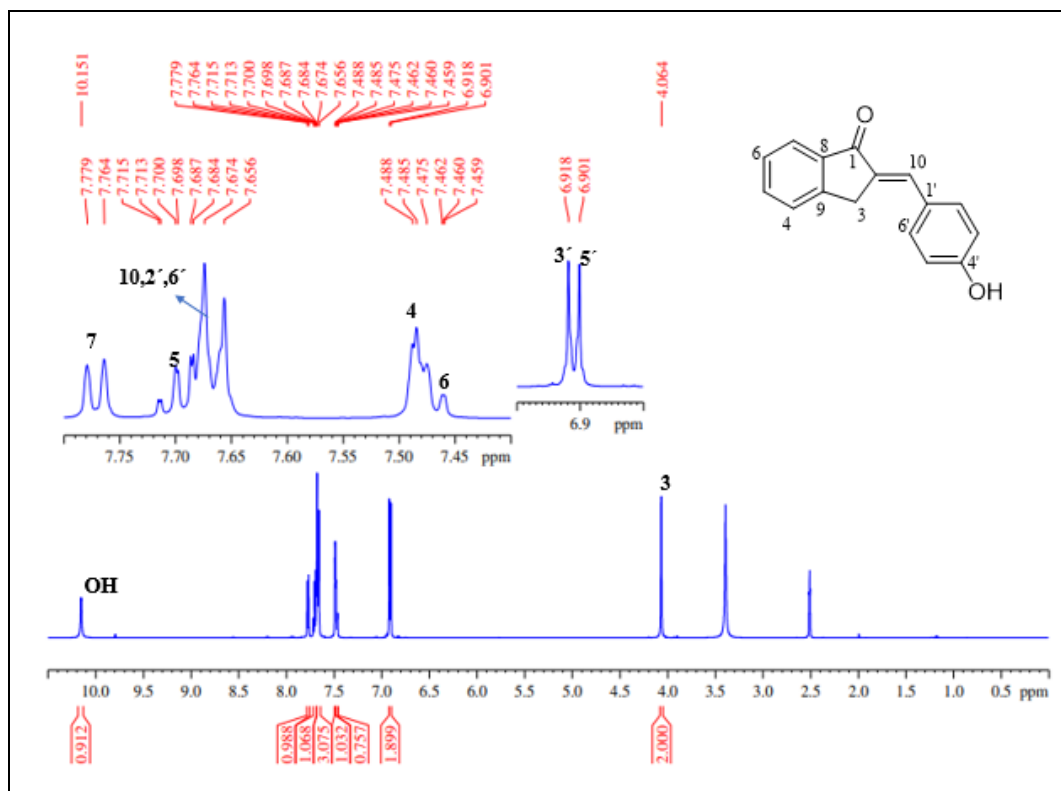


Figure S9: ¹H-NMR (500 MHz, DMSO-d₆) Spectrum 3c

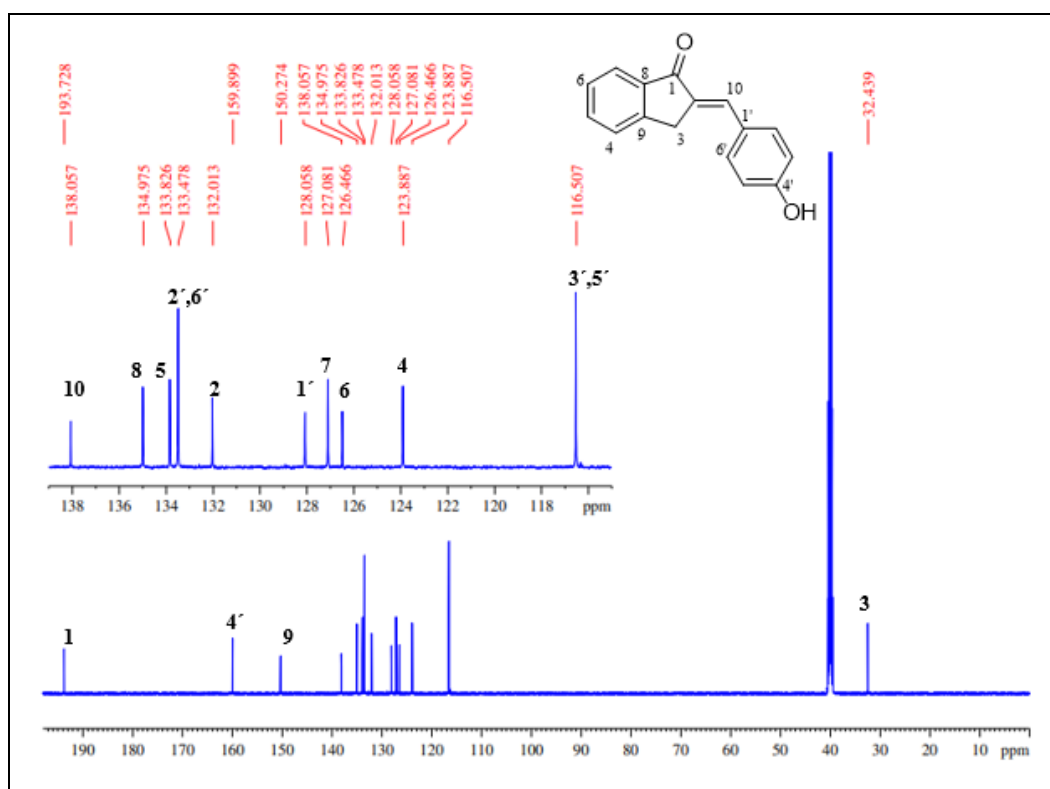


Figure S10: ¹³C-NMR (125 MHz, DMSO-d₆) Spectrum of 3c

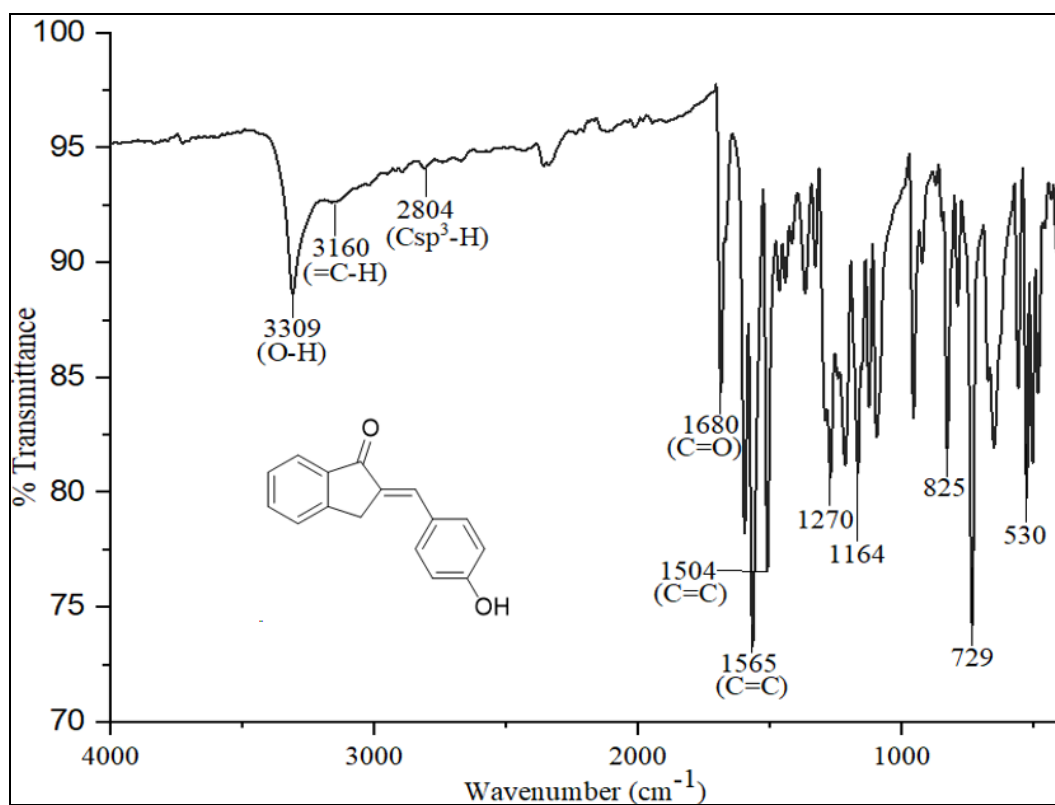


Figure S11: FT-IR Spectrum of **3c**

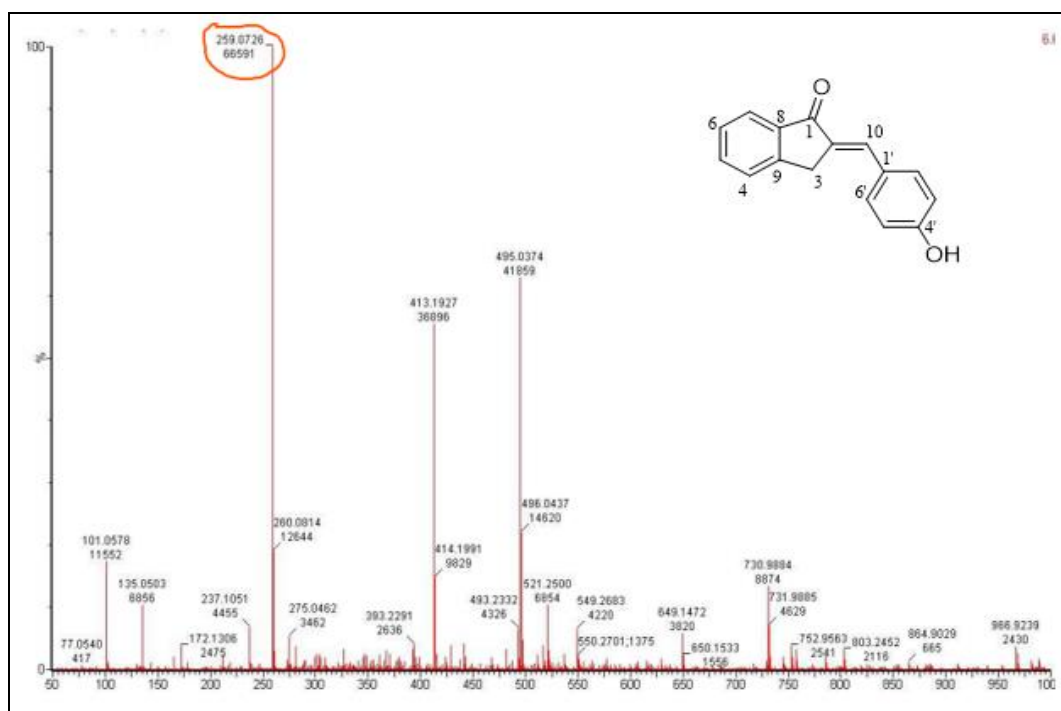


Figure S12: HRMS Spectrum of **3c**

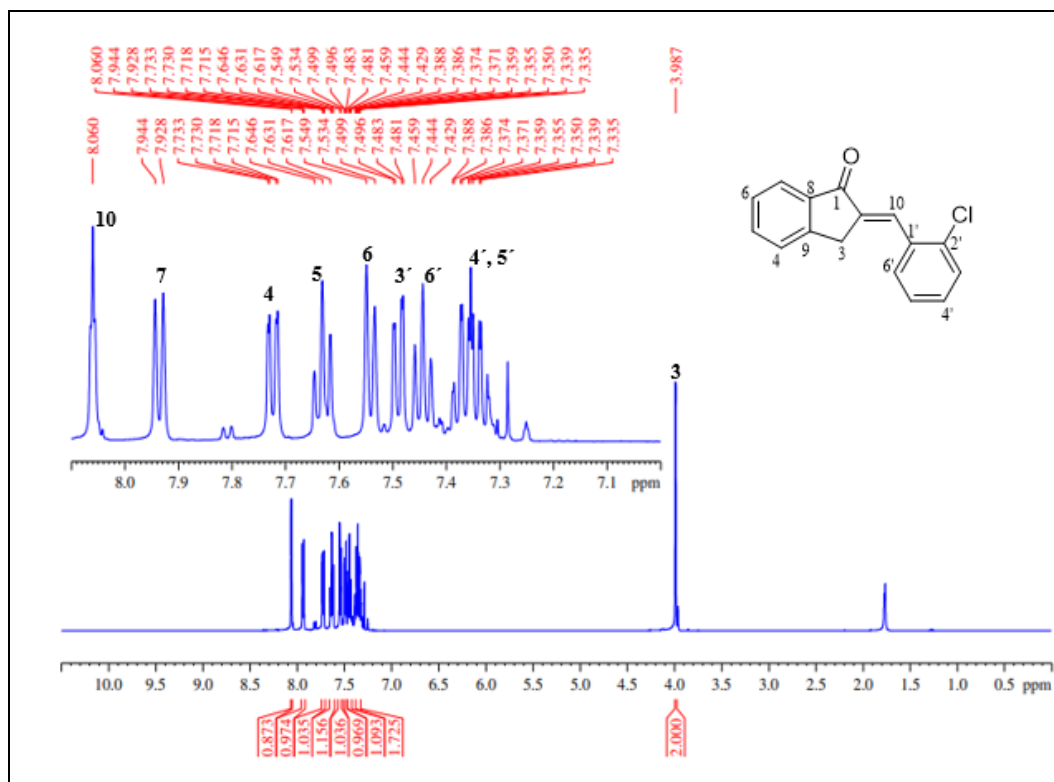


Figure S13: ¹H-NMR (500 MHz, DMSO-d₆) Spectrum 3d

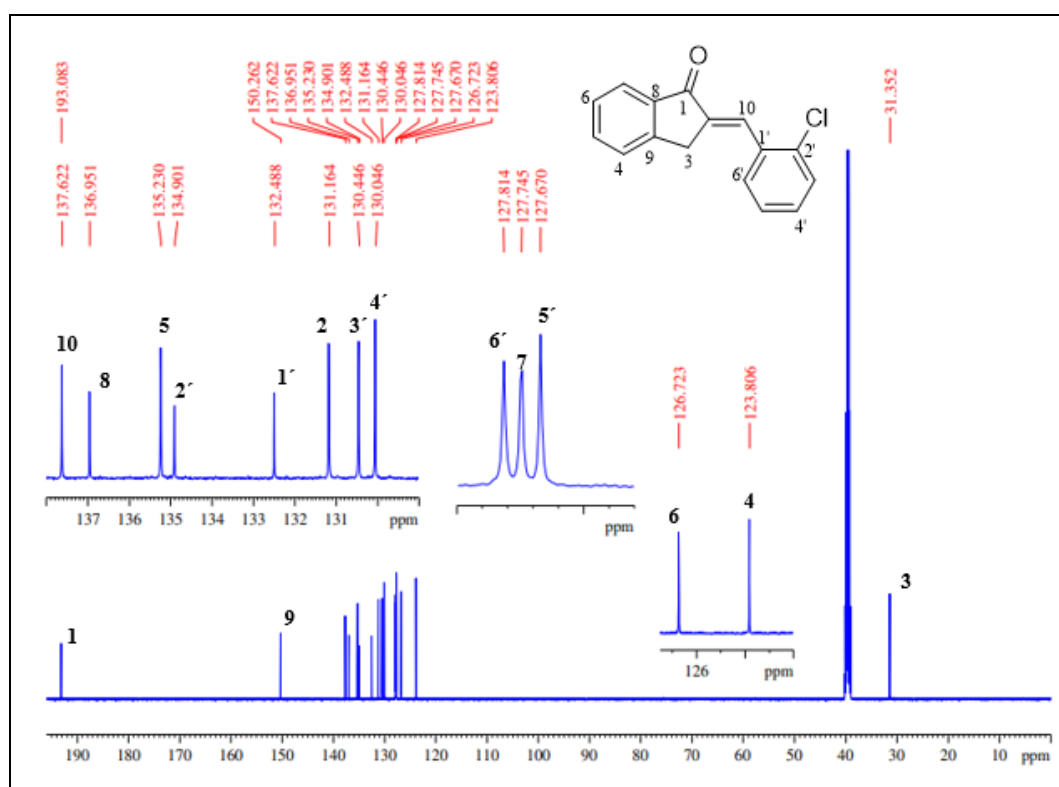


Figure S14: ¹³C-NMR (125 MHz, DMSO-d₆) Spectrum of 3d

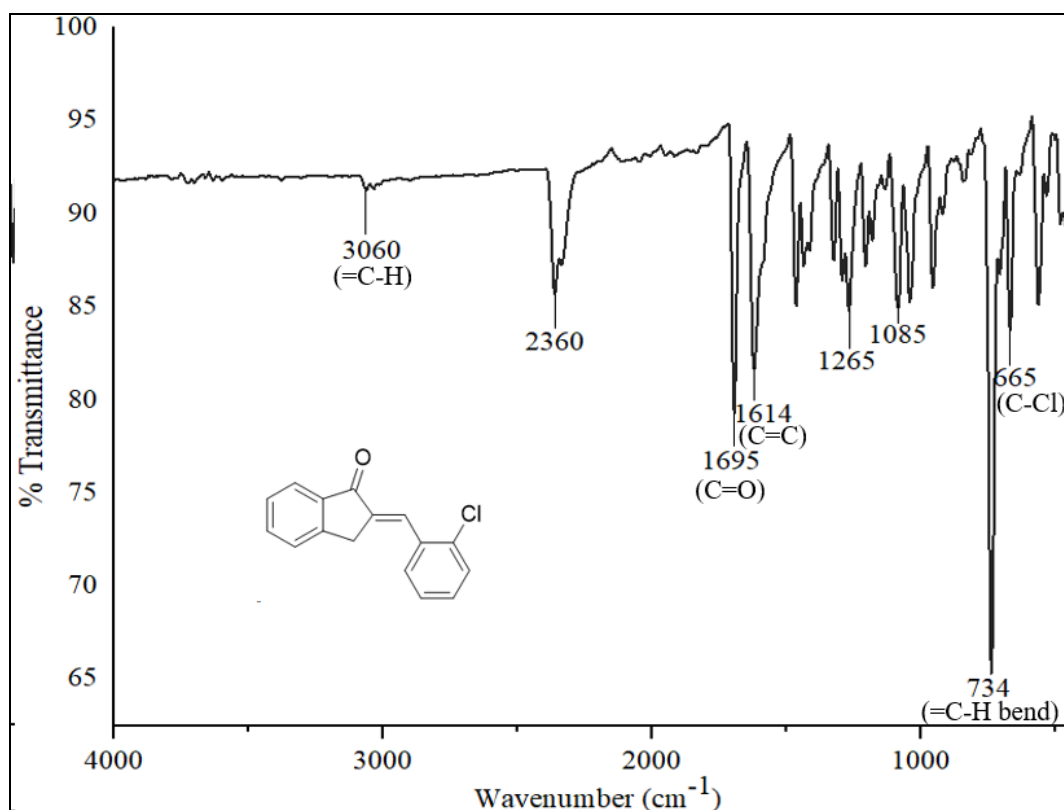


Figure S15: FT-IR Spectrum of 3d

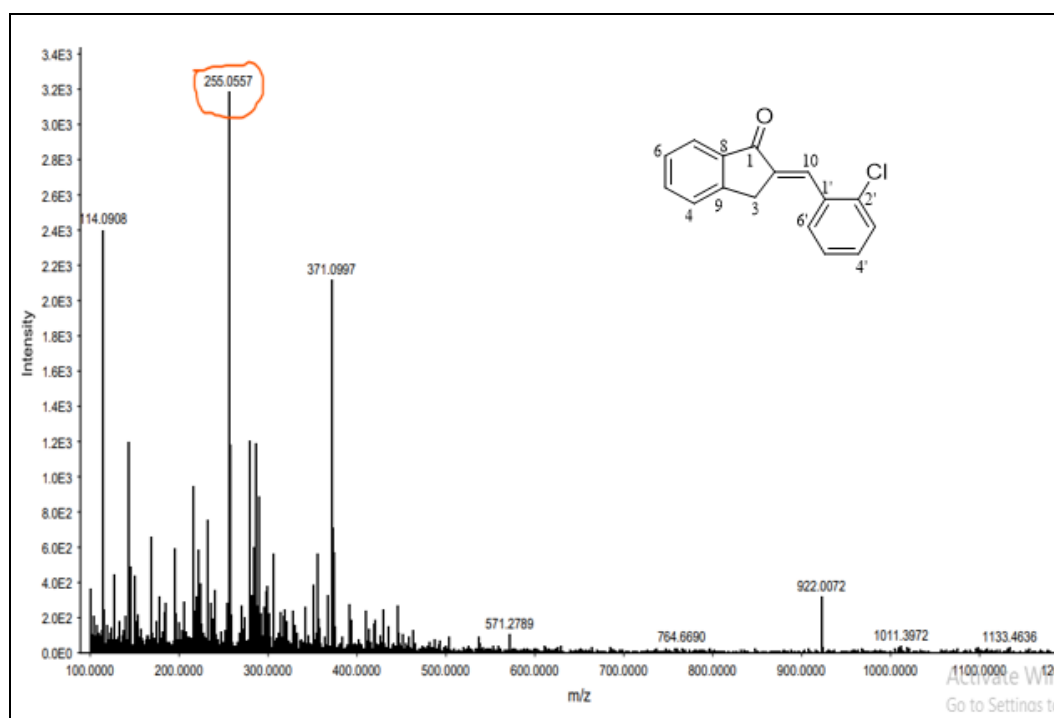


Figure S16: HRMS Spectrum of 3d

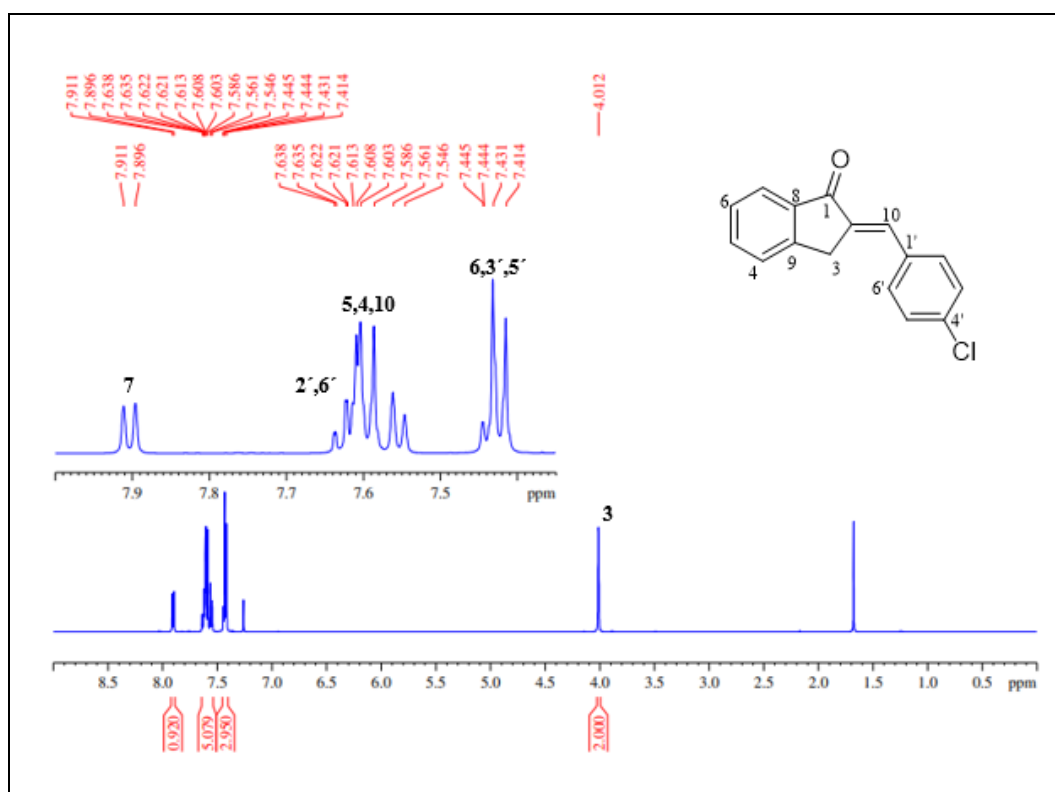


Figure S17: ^1H -NMR (500 MHz, DMSO-d_6) Spectrum **3e**

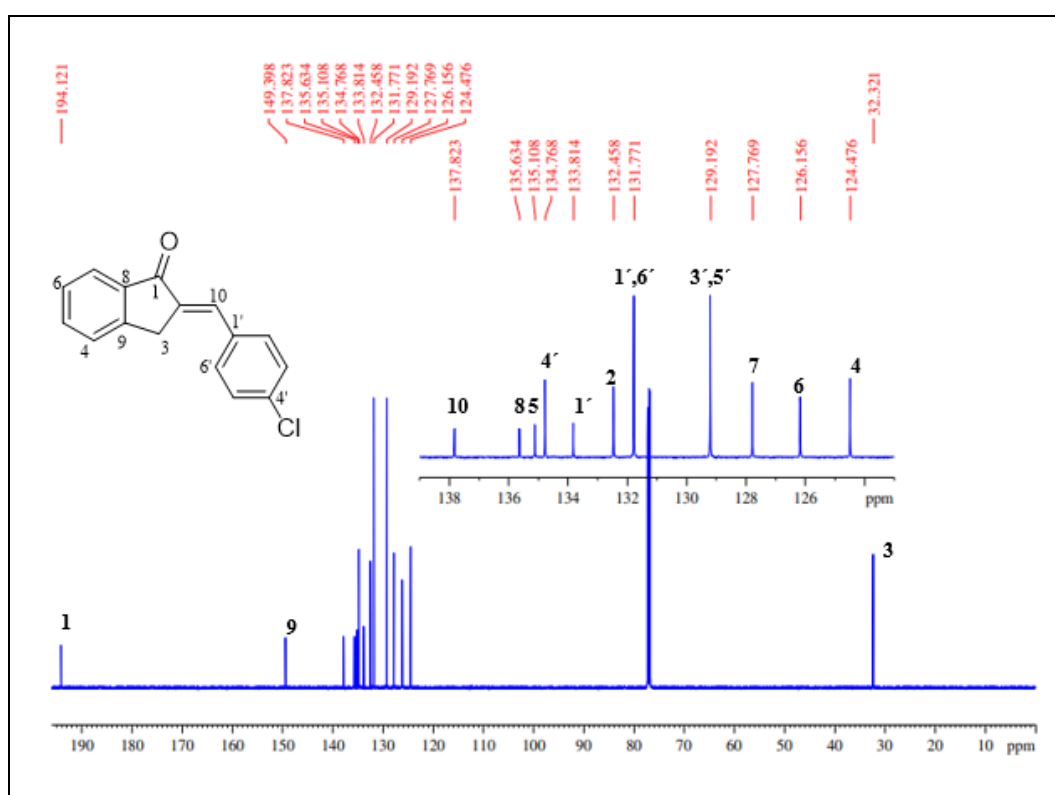


Figure S18: ^{13}C -NMR (125 MHz, DMSO-d_6) Spectrum of **3e**

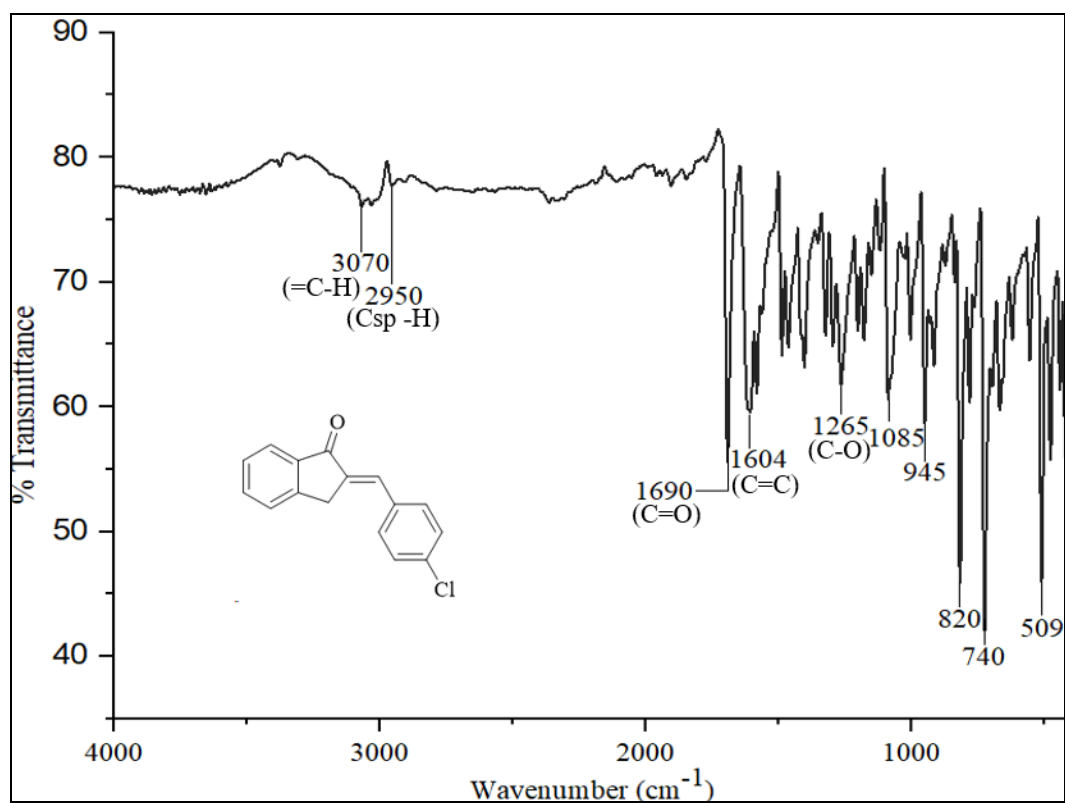


Figure S19: FT-IR Spectrum of **3e**

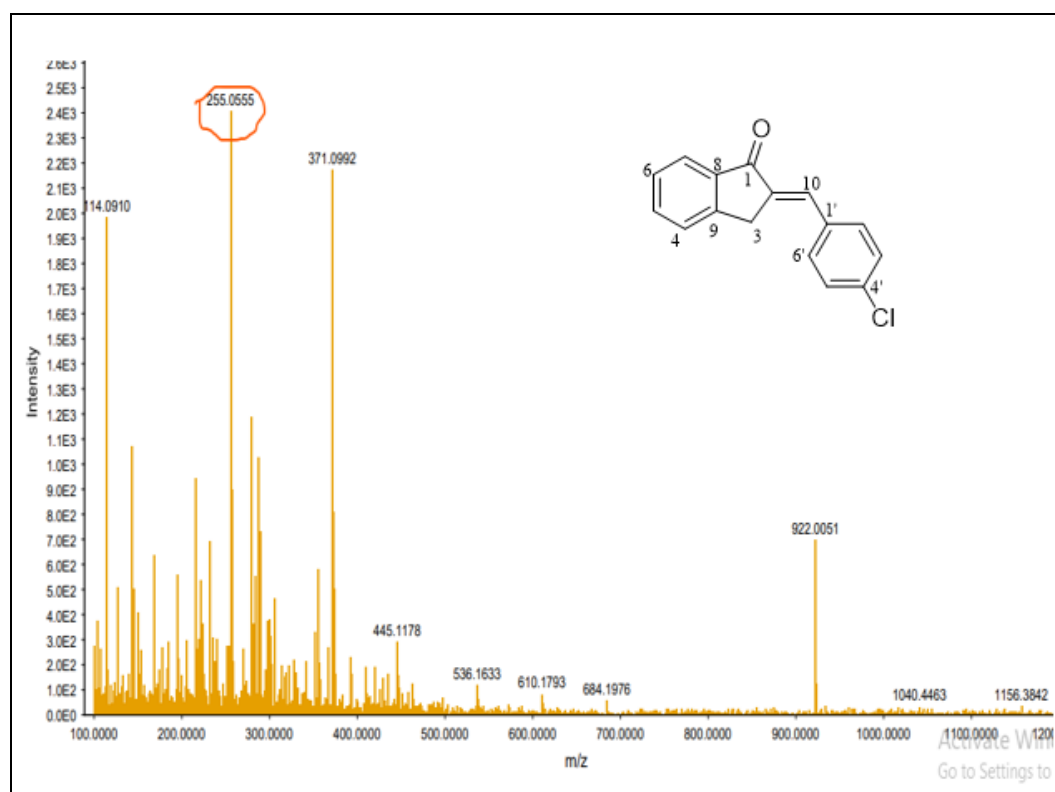


Figure S20: HRMS Spectrum of **3e**

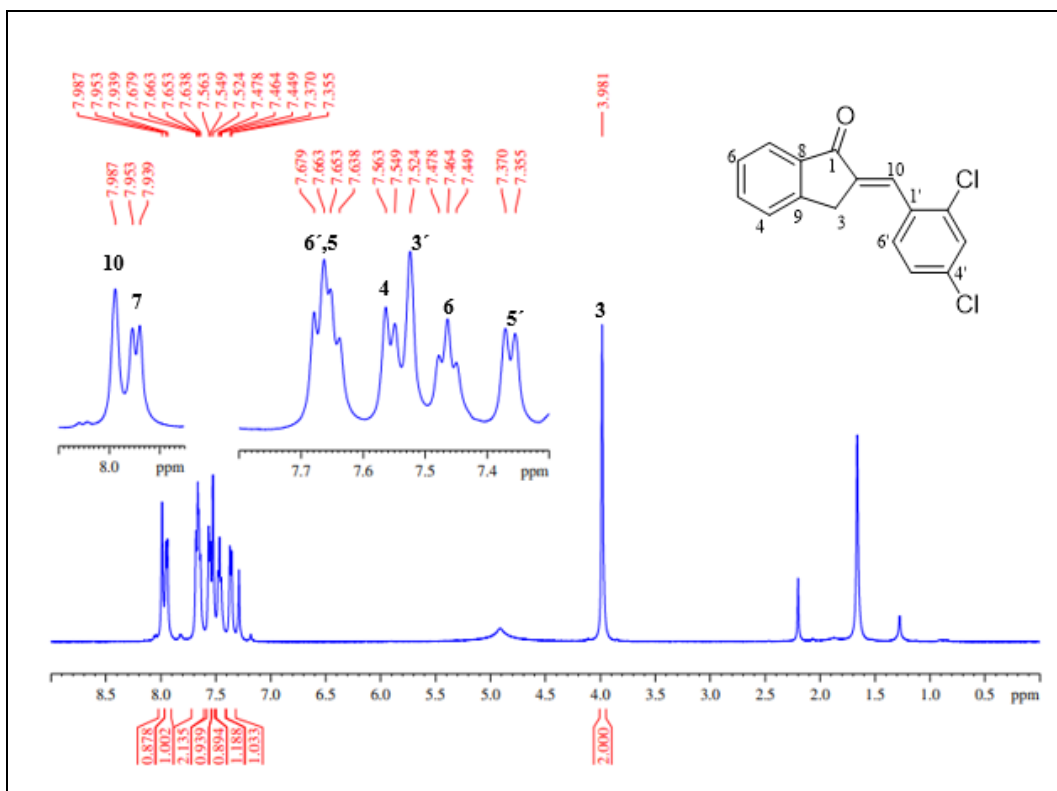


Figure S21: ¹H-NMR (500 MHz, CDCl₃) Spectrum 3f

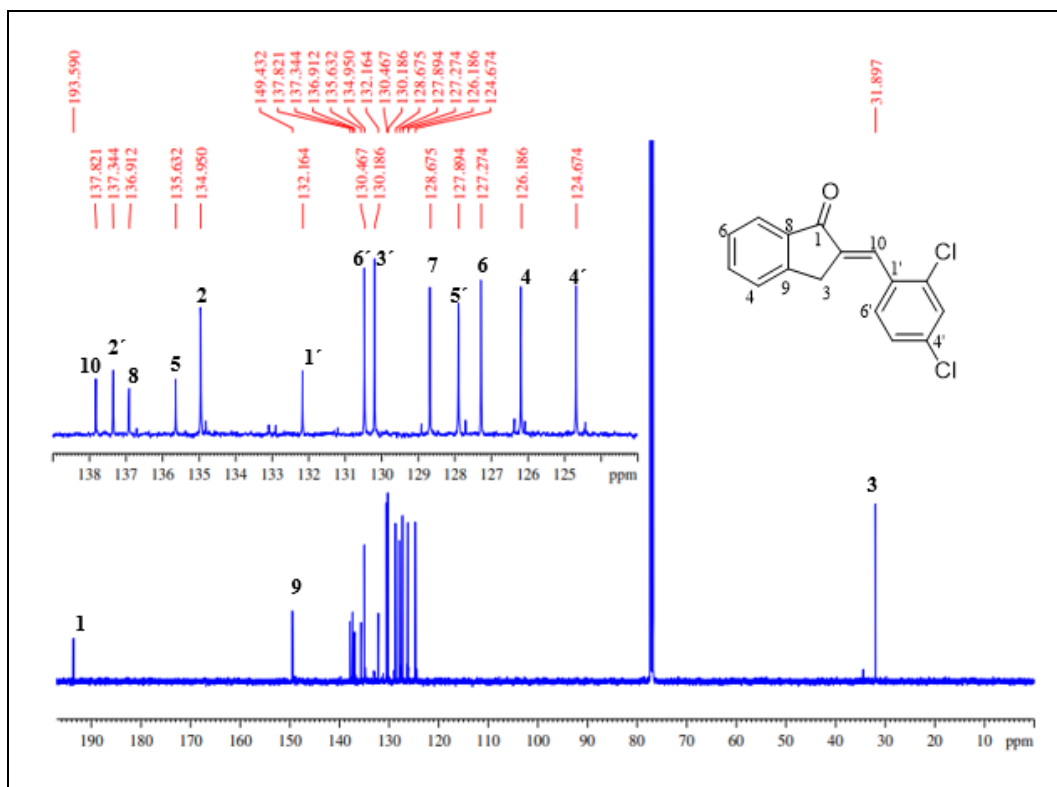


Figure S22: ¹³C-NMR (125 MHz, CDCl₃) Spectrum of 3f

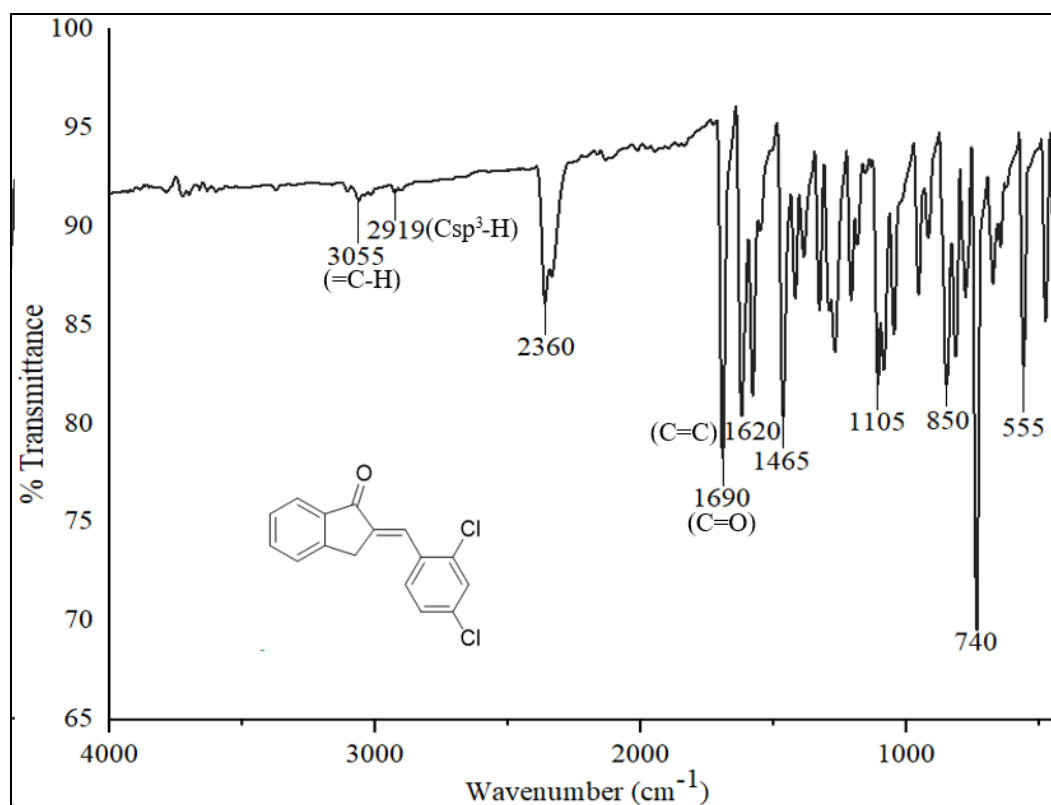


Figure S23: FT-IR Spectrum of 3f

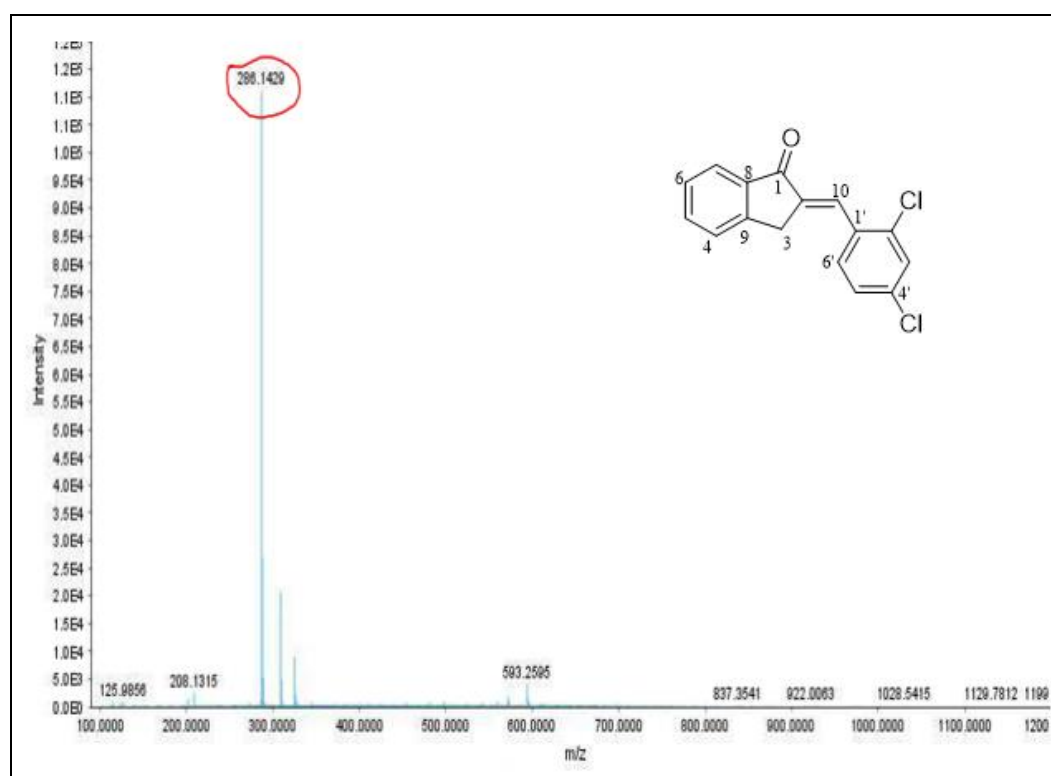


Figure S24: HRMS Spectrum of 3f

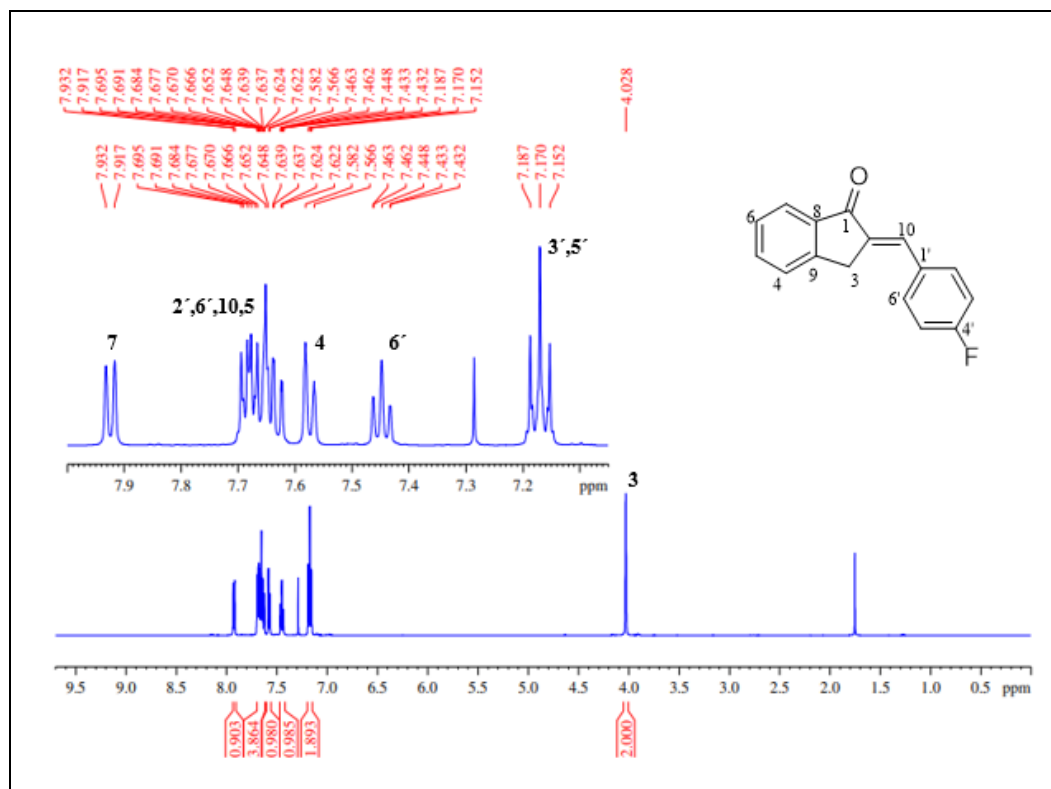


Figure S25: ¹H-NMR (500 MHz, CDCl₃) Spectrum 3g

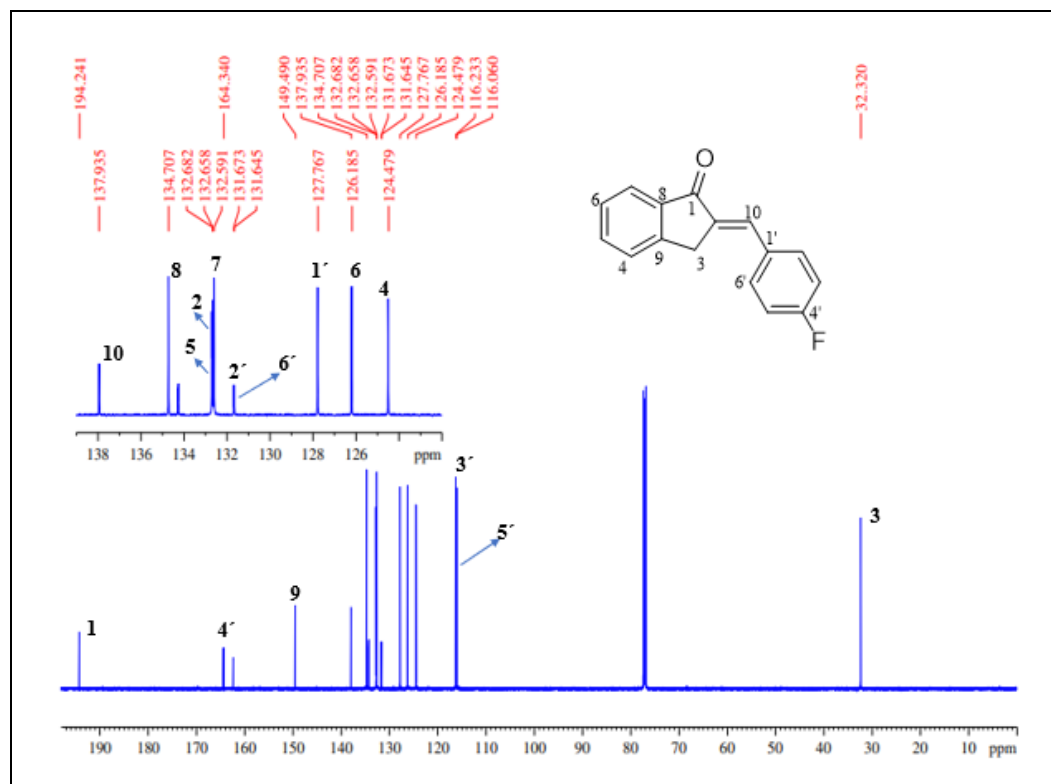


Figure S26: ¹³C-NMR (125 MHz, CDCl₃) Spectrum of 3g

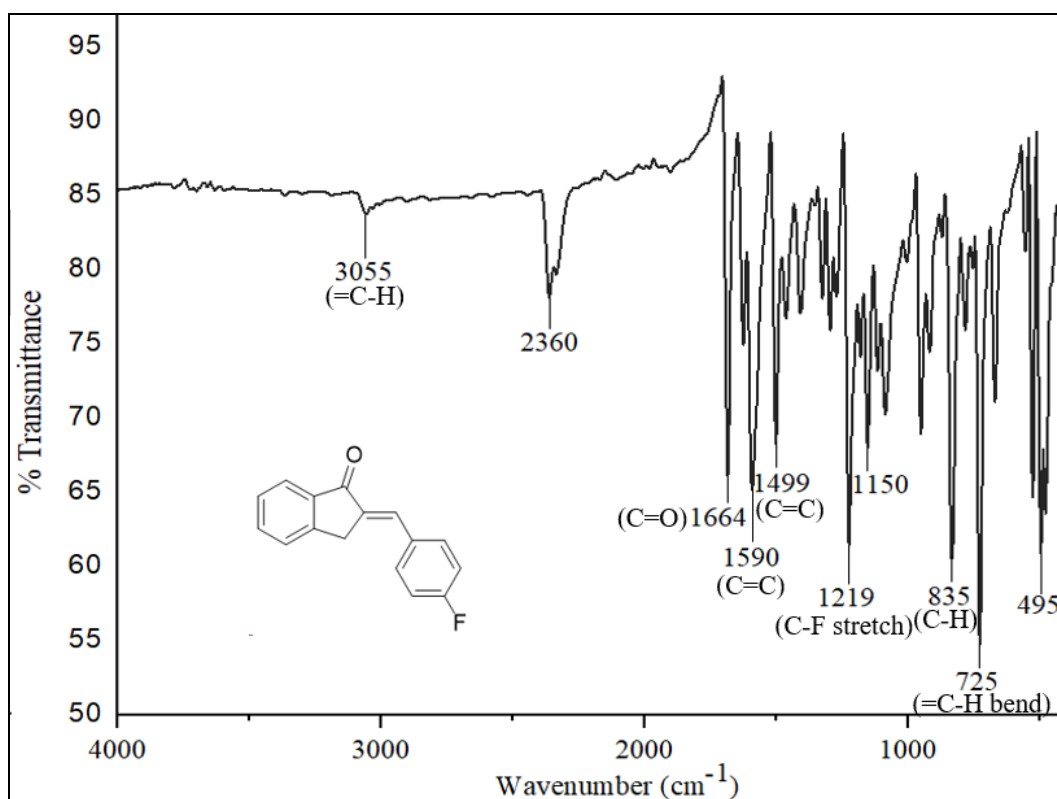


Figure S27: FT-IR Spectrum of **3g**

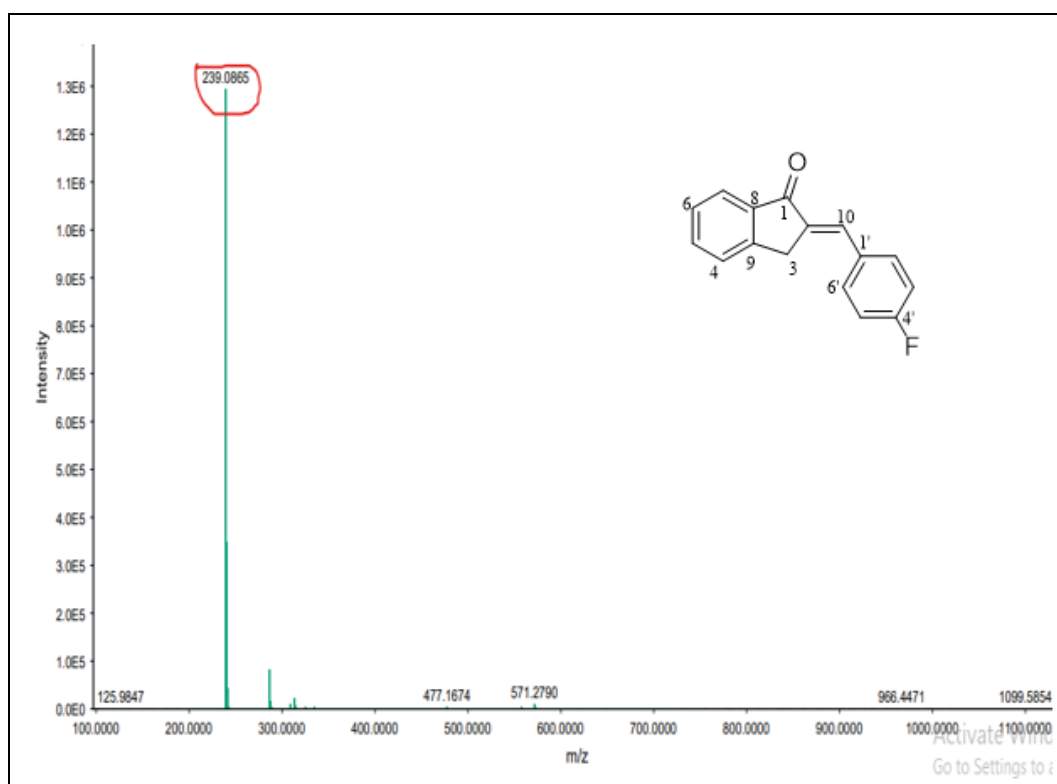


Figure S28: HRMS Spectrum of **3g**

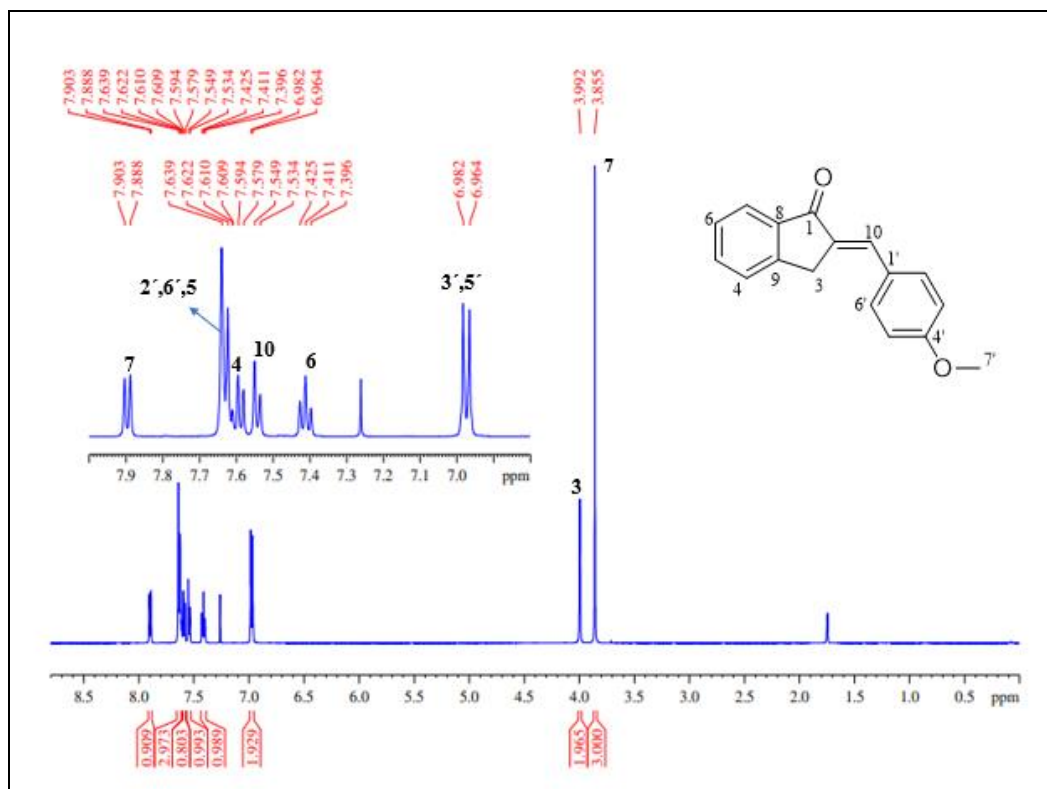


Figure S29: ¹H-NMR (500 MHz, CDCl₃) Spectrum **3h**

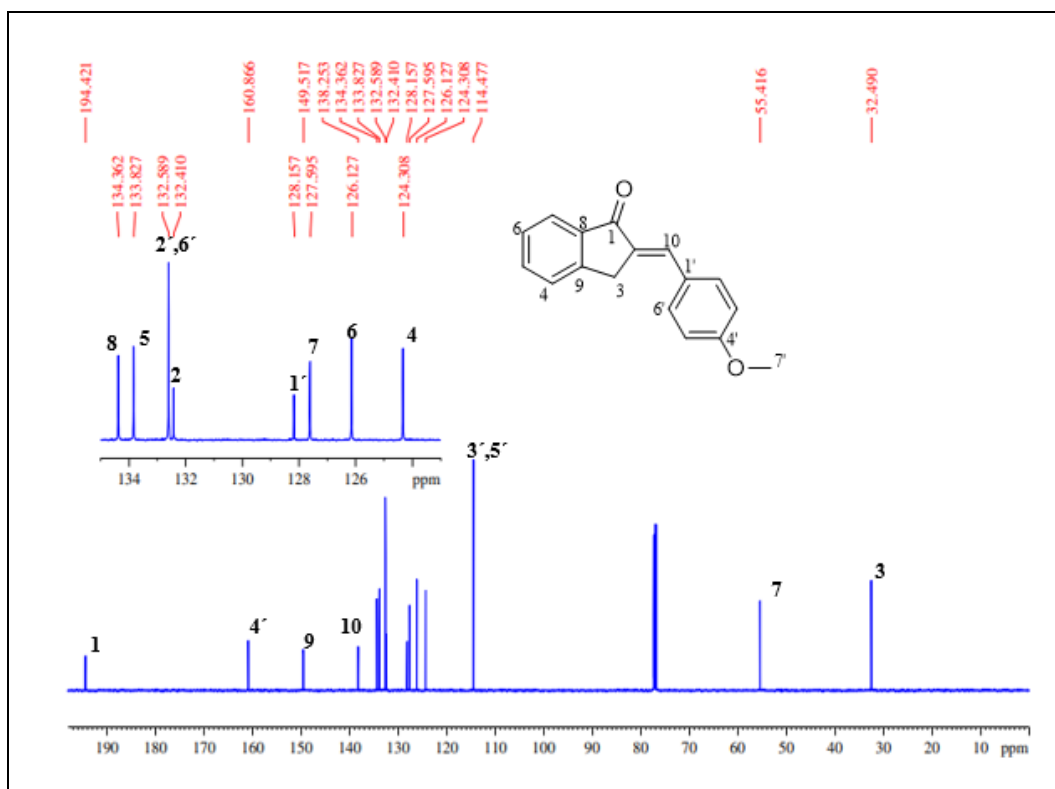


Figure S30: ¹³C-NMR (125 MHz, CDCl₃) Spectrum of **3h**

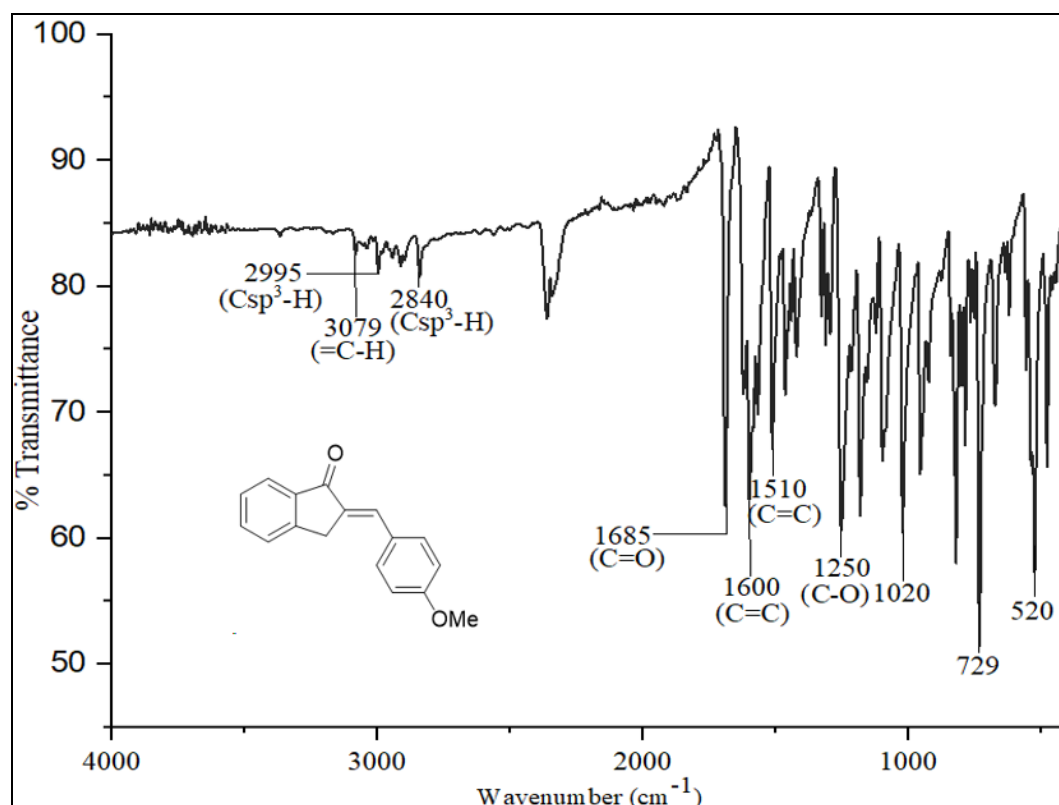


Figure S31: FT-IR Spectrum of 3h

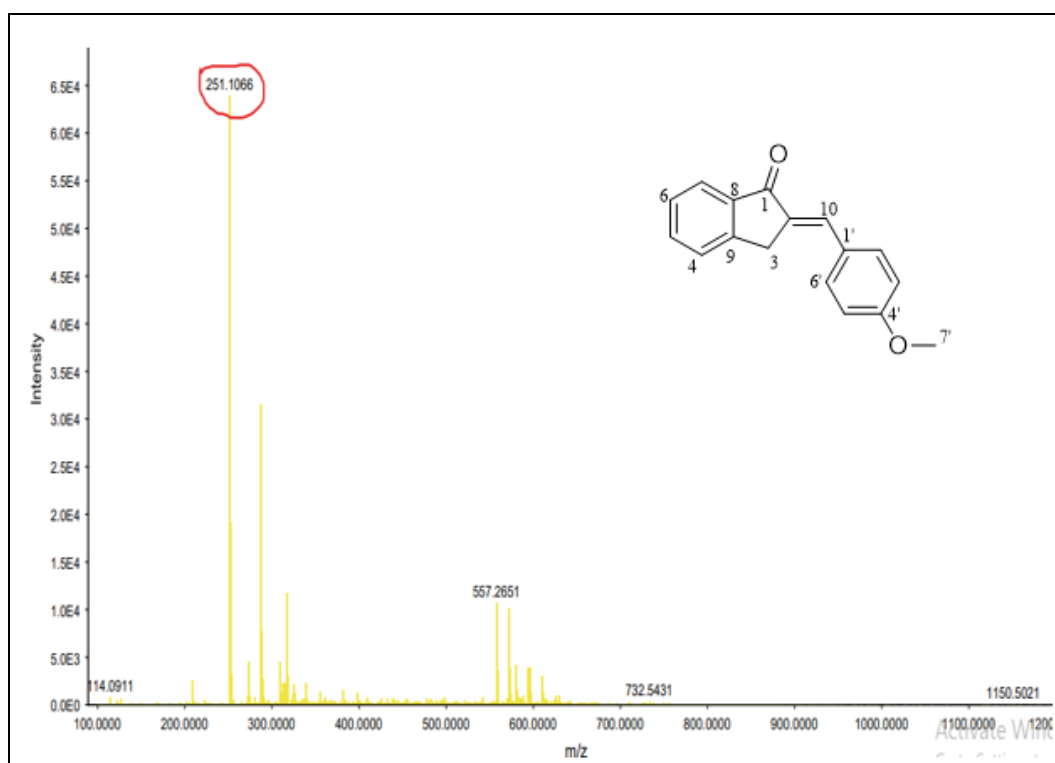


Figure S32: HRMS Spectrum of 3h

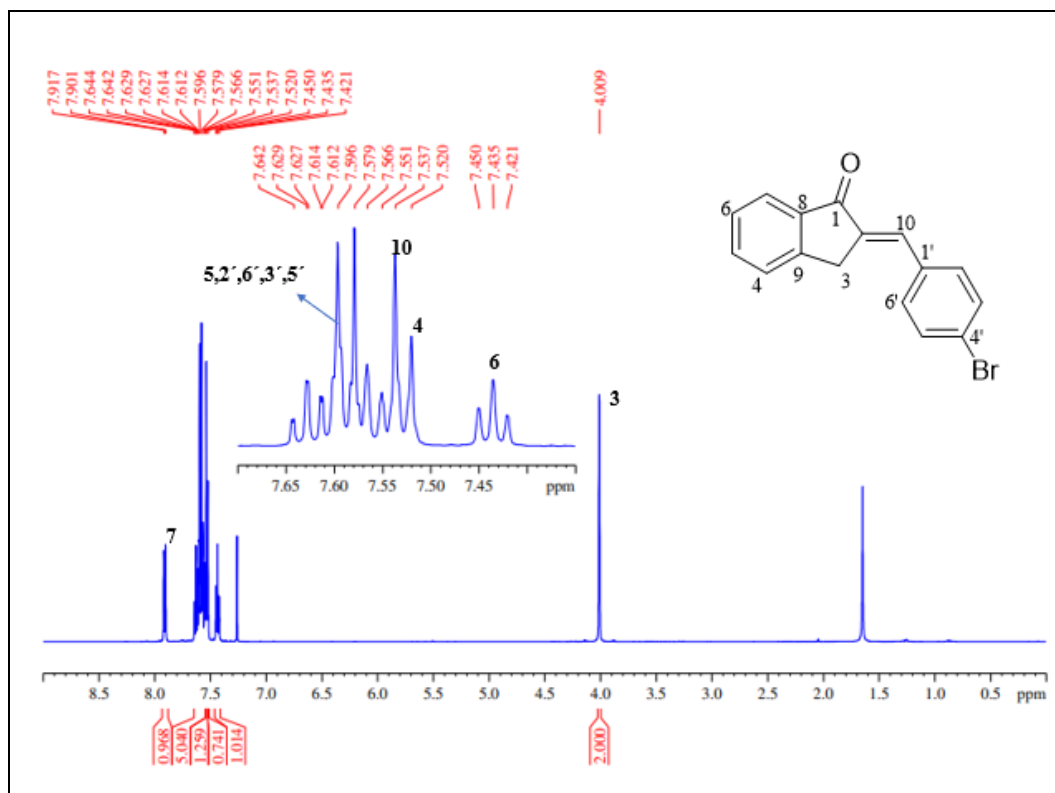


Figure S33: ¹H-NMR (500 MHz, CDCl₃) Spectrum 3i

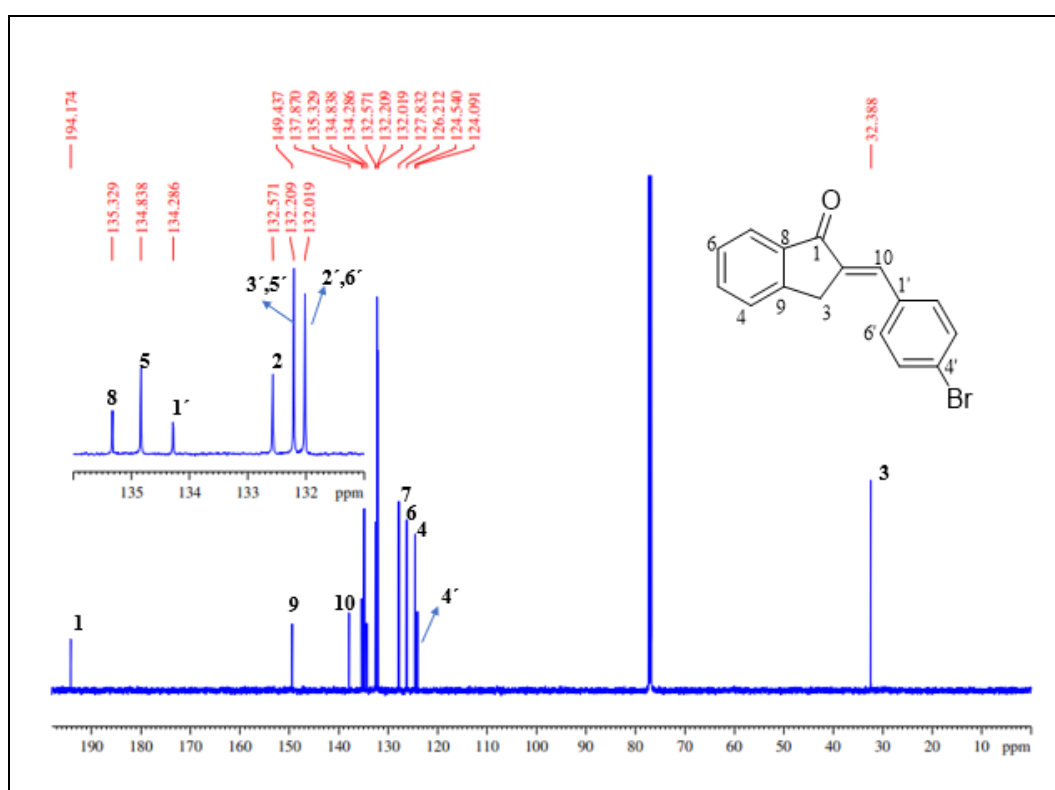


Figure S34: ¹³C-NMR (125 MHz, CDCl₃) Spectrum of 3i

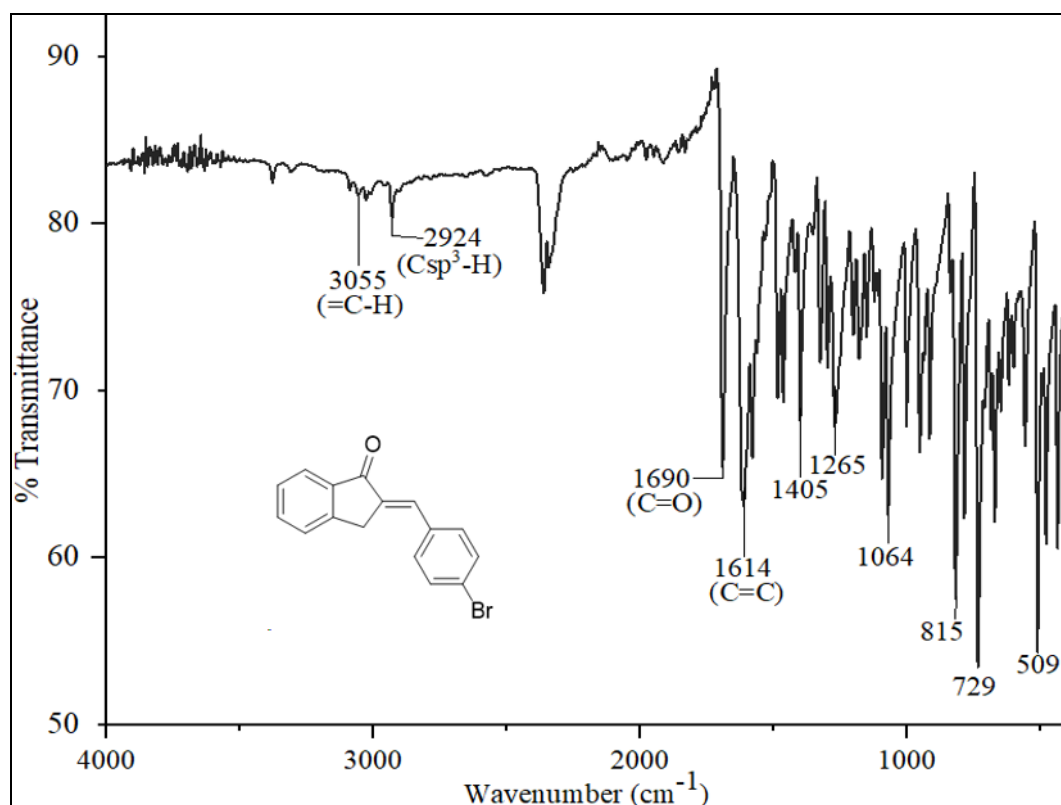


Figure S35: FT-IR Spectrum of **3i**

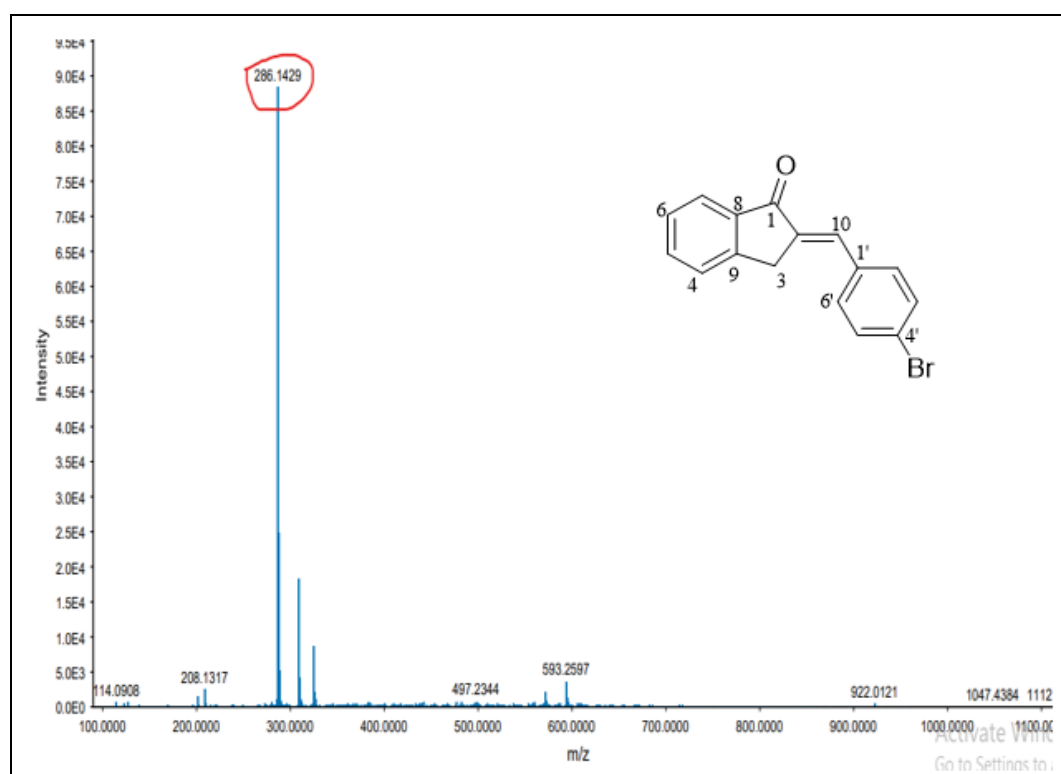


Figure S36: HRMS Spectrum of **3i**

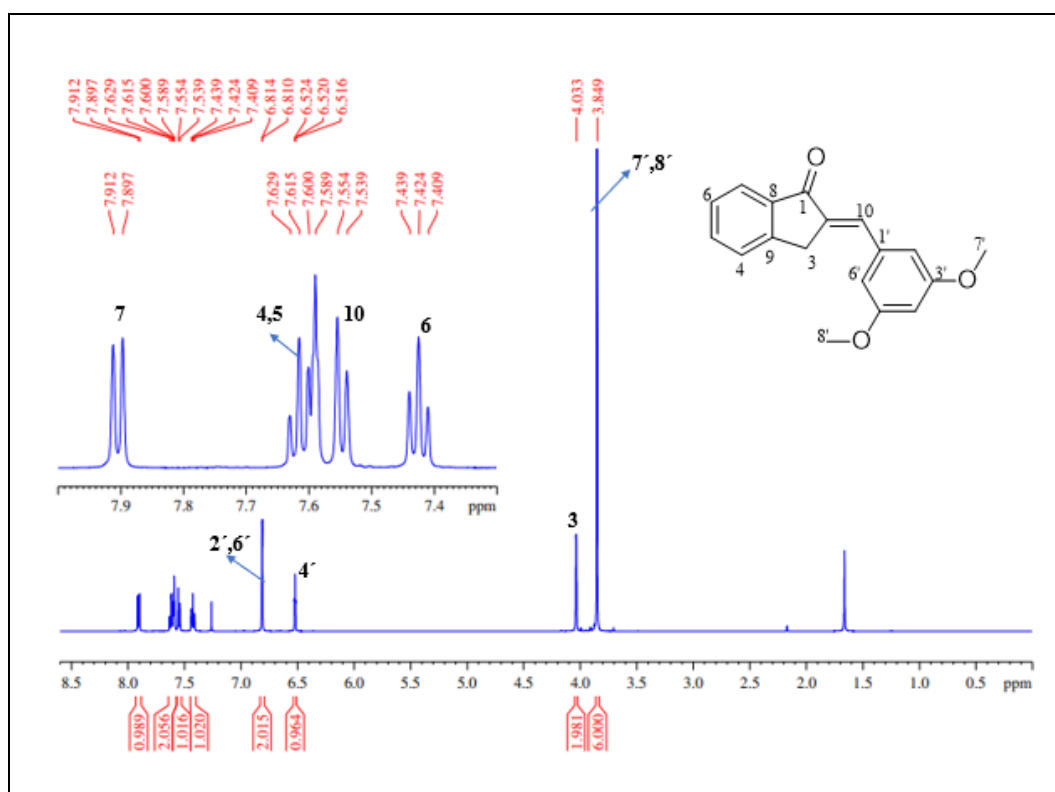


Figure S37: ^1H -NMR (500 MHz, CDCl_3) Spectrum **3j**

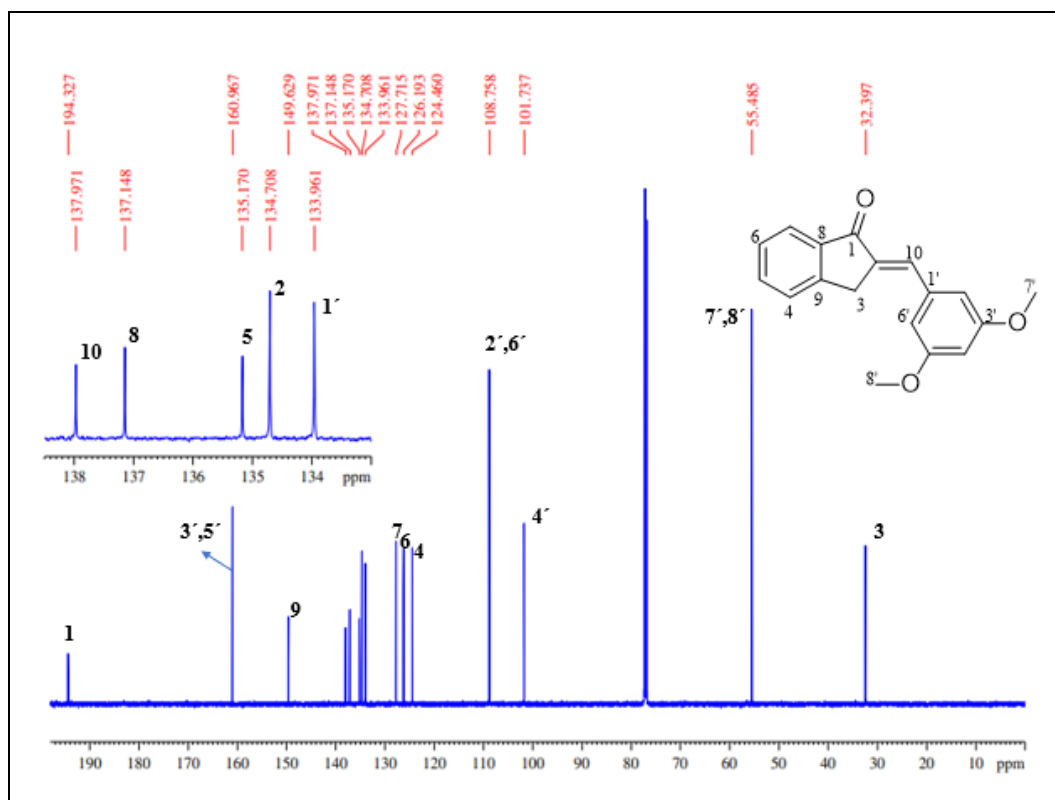


Figure S38: ^{13}C -NMR (125 MHz, CDCl_3) Spectrum of **3j**

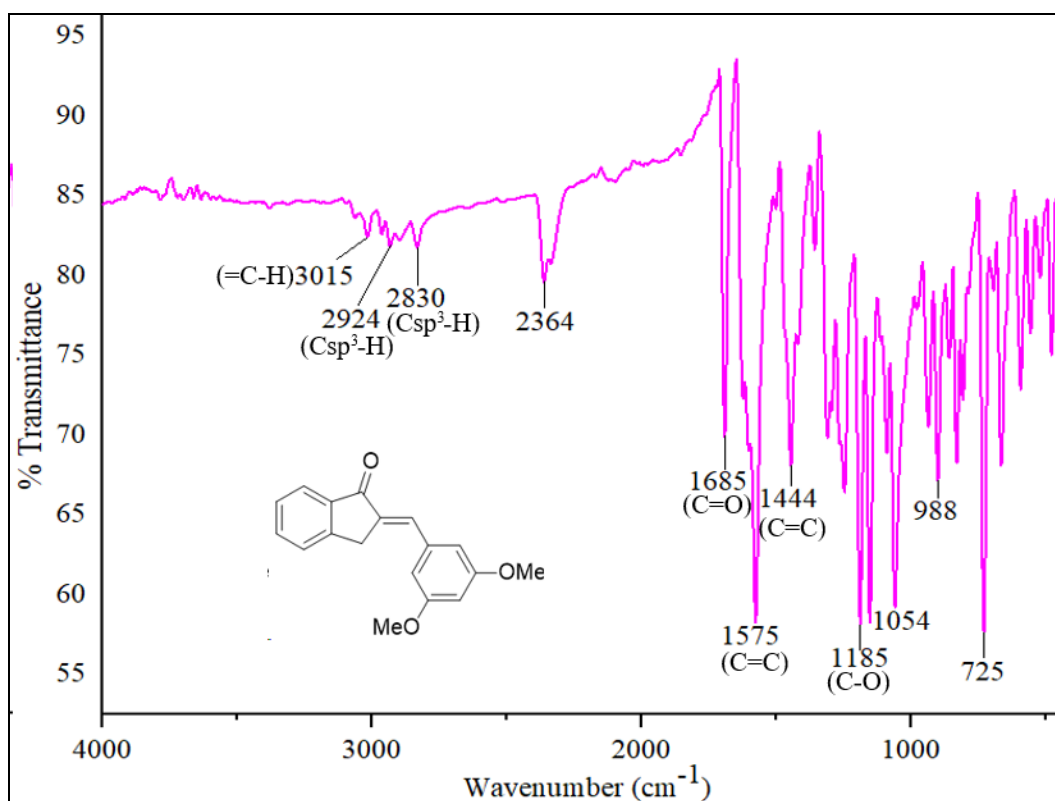


Figure S39: FT-IR Spectrum of **3j**

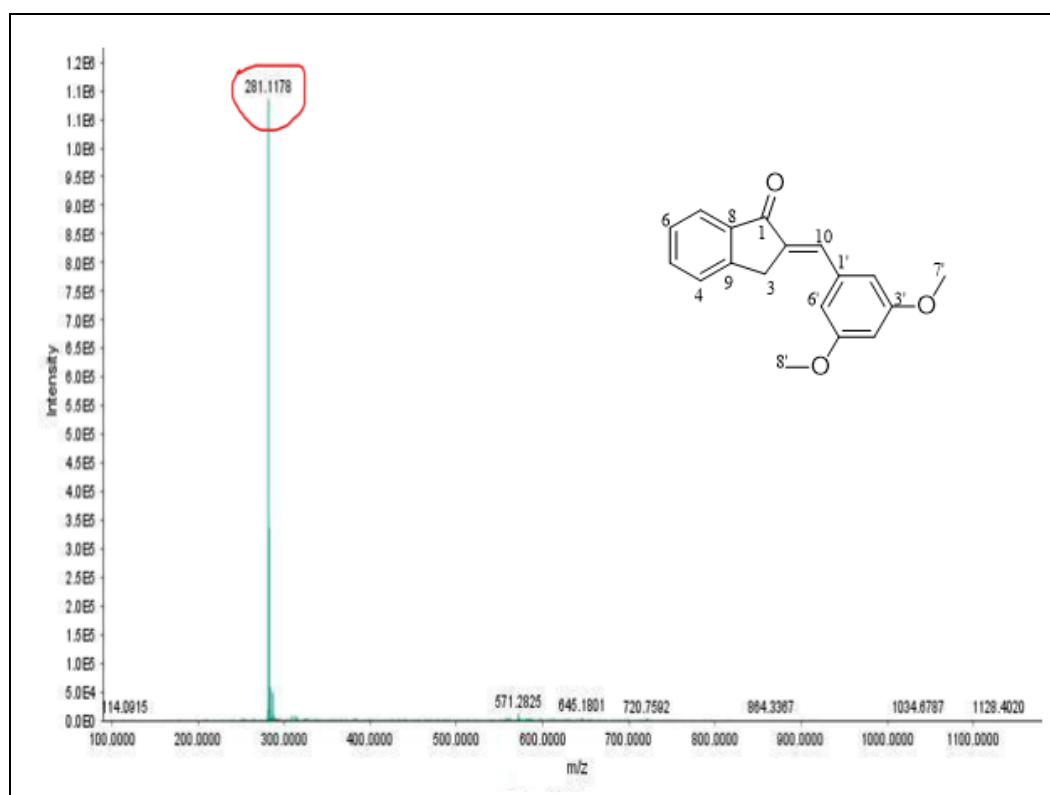
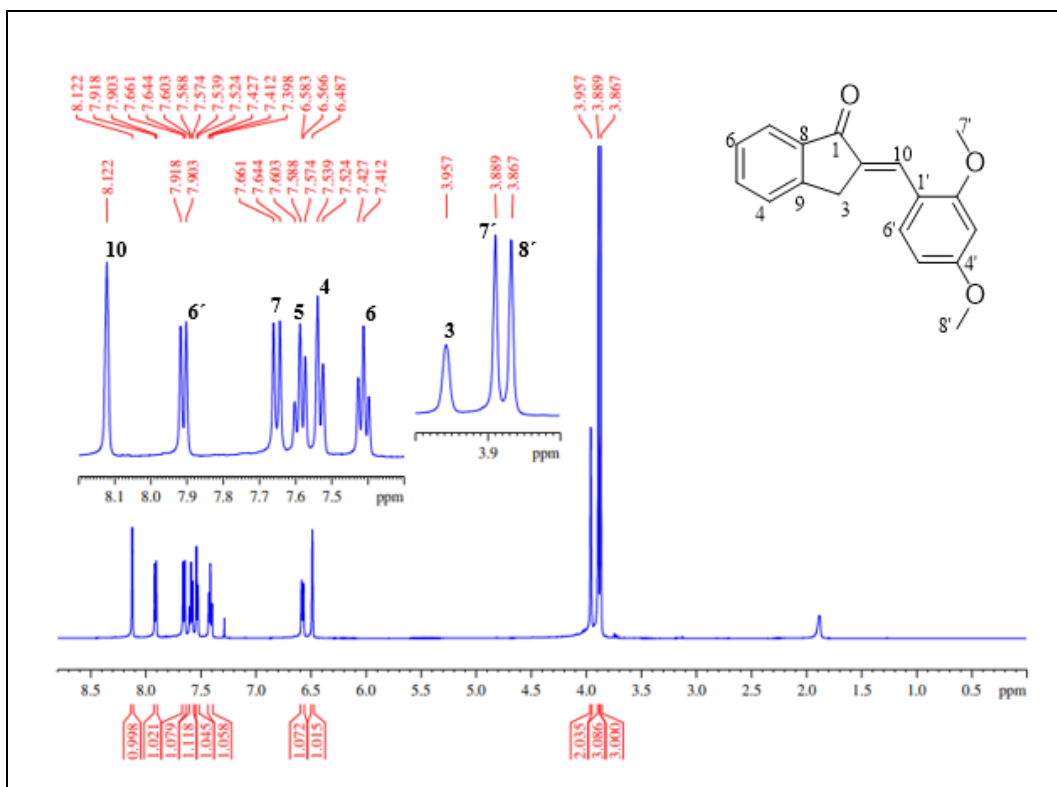


Figure S40: HRMS Spectrum of **3j**



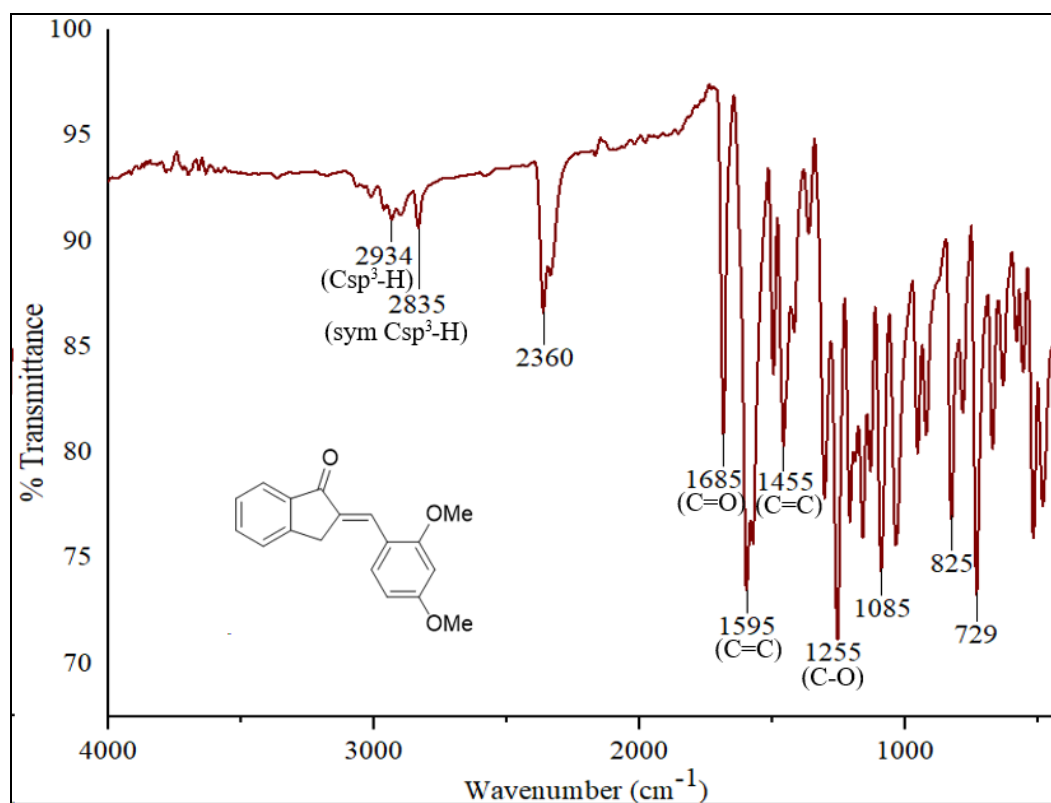


Figure S43: FT-IR Spectrum of **3k**

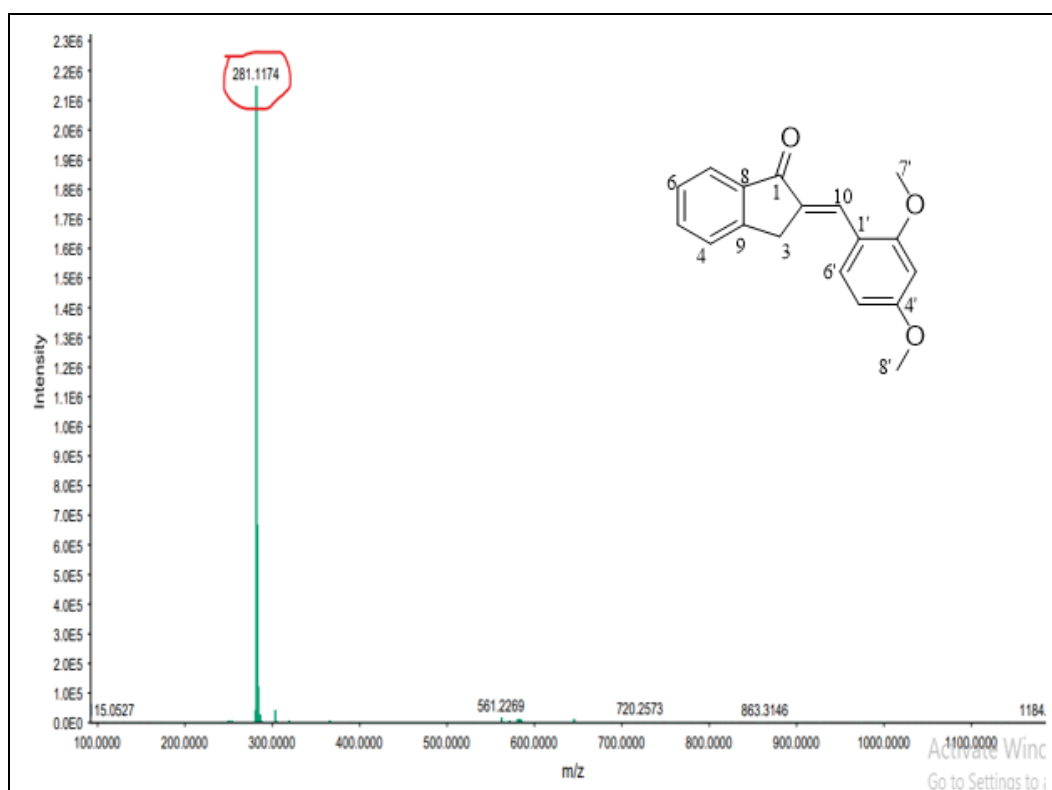


Figure S44: HRMS Spectrum of **3k**

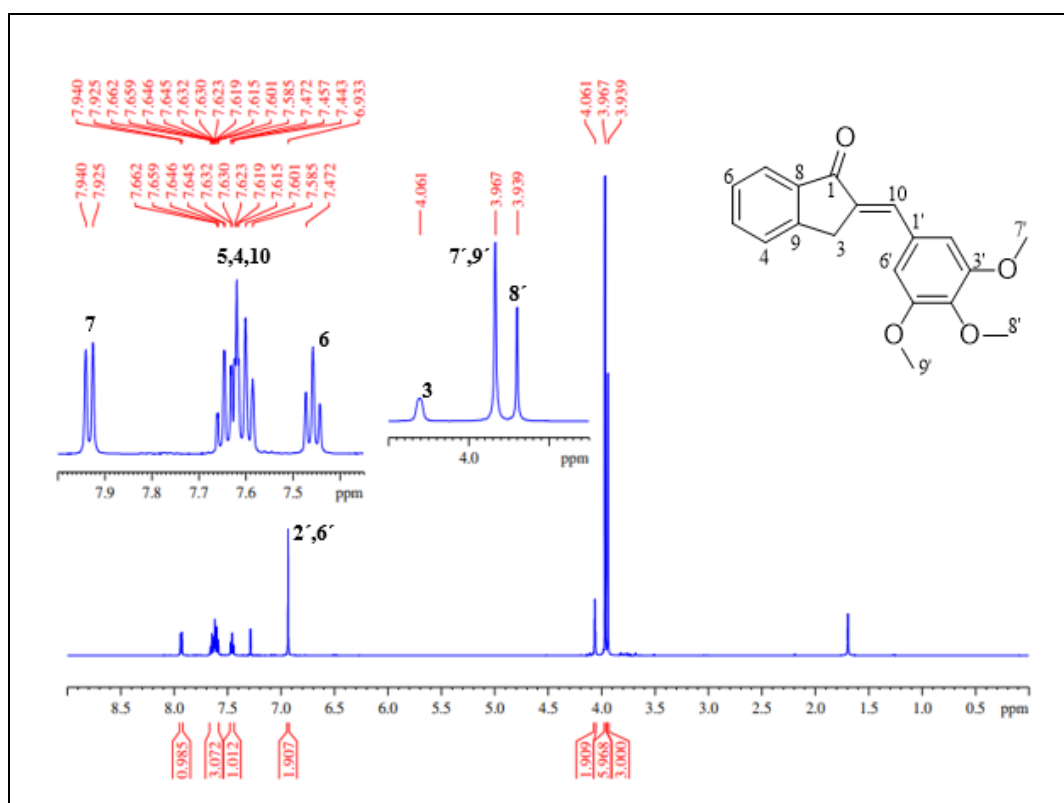


Figure S45: ¹H-NMR (500 MHz, CDCl₃) Spectrum 3I

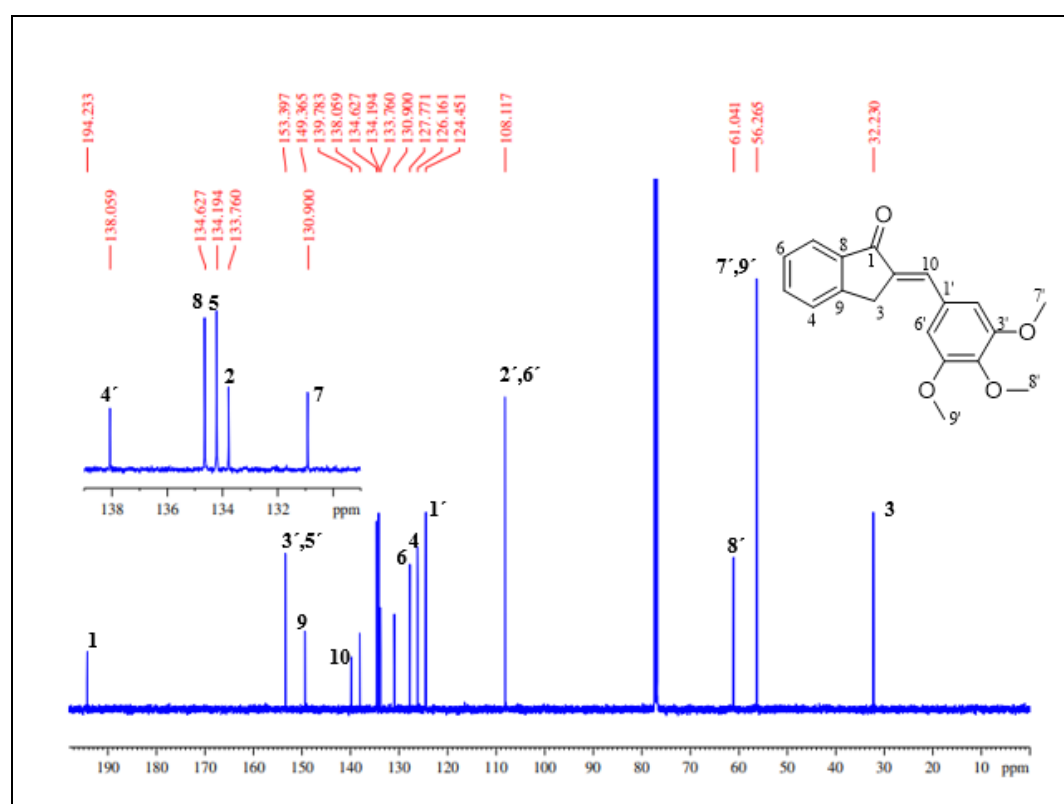


Figure S46: ¹³C-NMR (125 MHz, CDCl₃) Spectrum of 3I

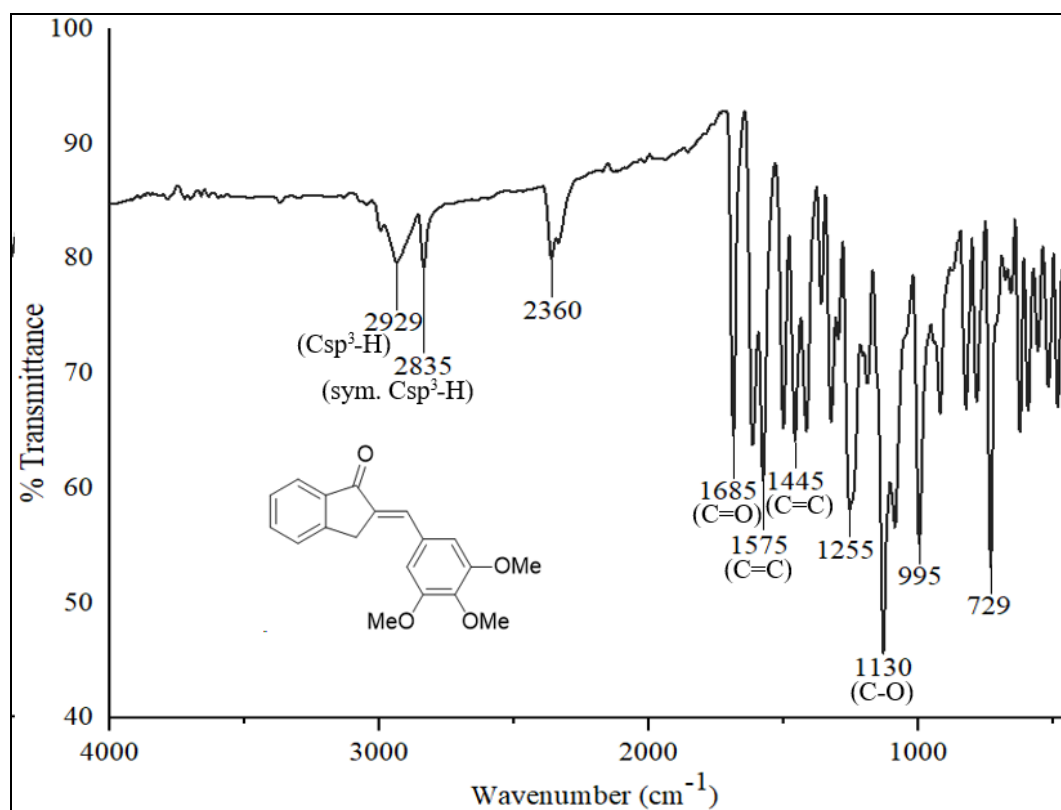


Figure S47: FT-IR Spectrum of **3l**

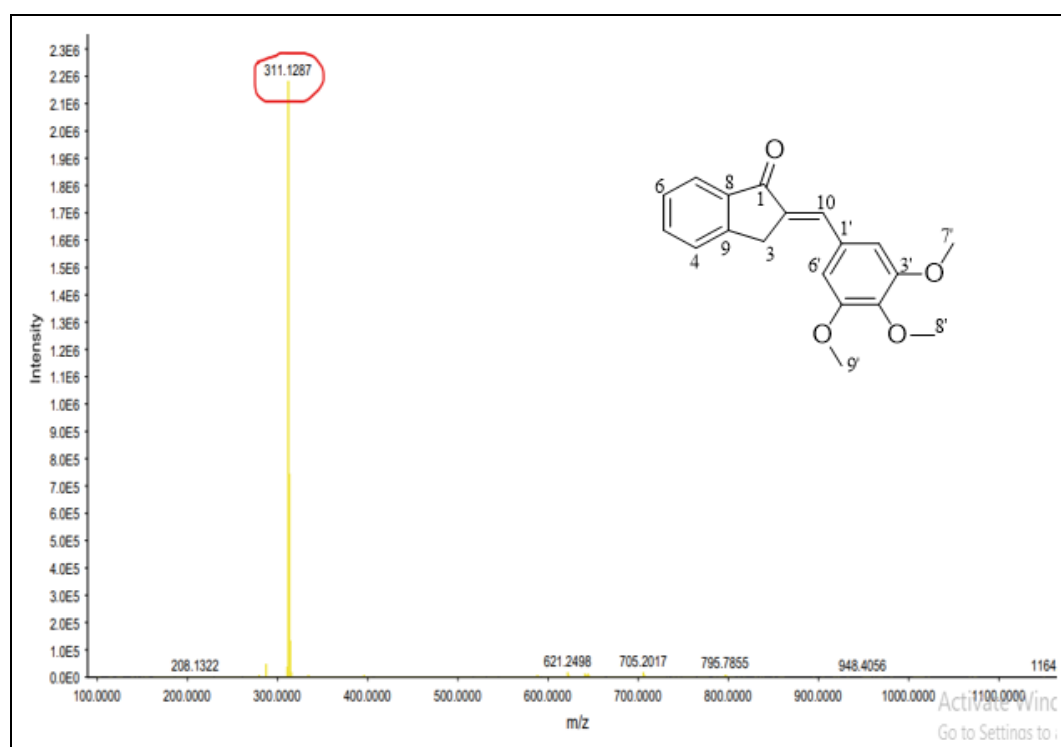


Figure S48: HRMS Spectrum of **3l**

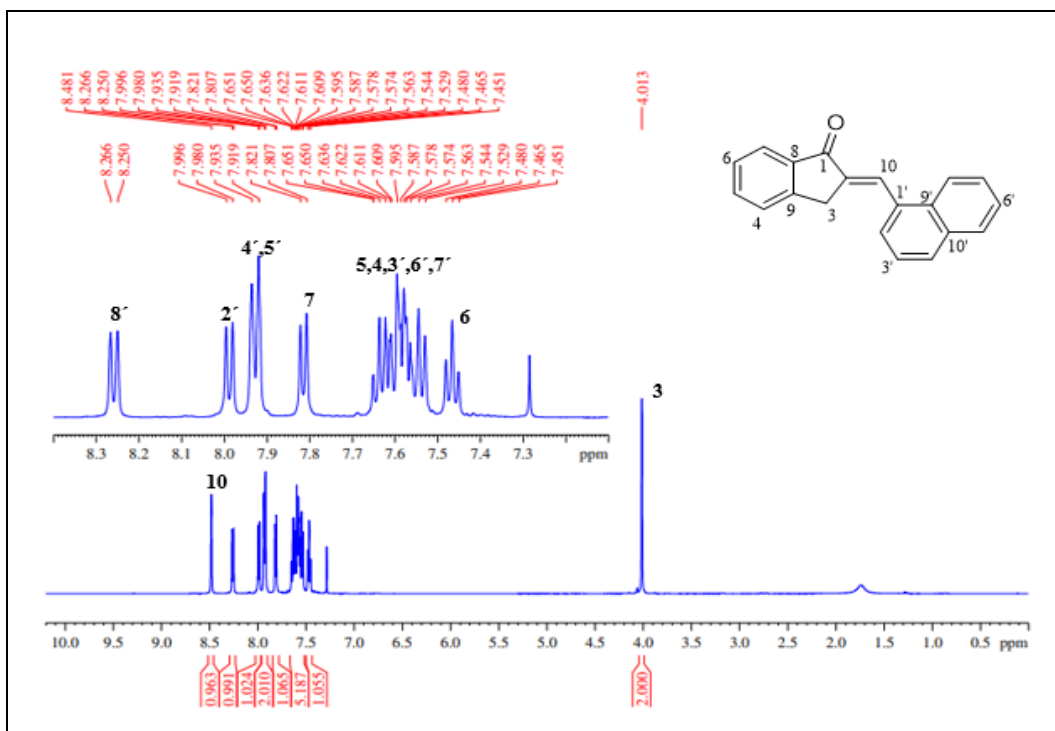


Figure S49: ^1H -NMR (500 MHz, CDCl_3) Spectrum **3m**

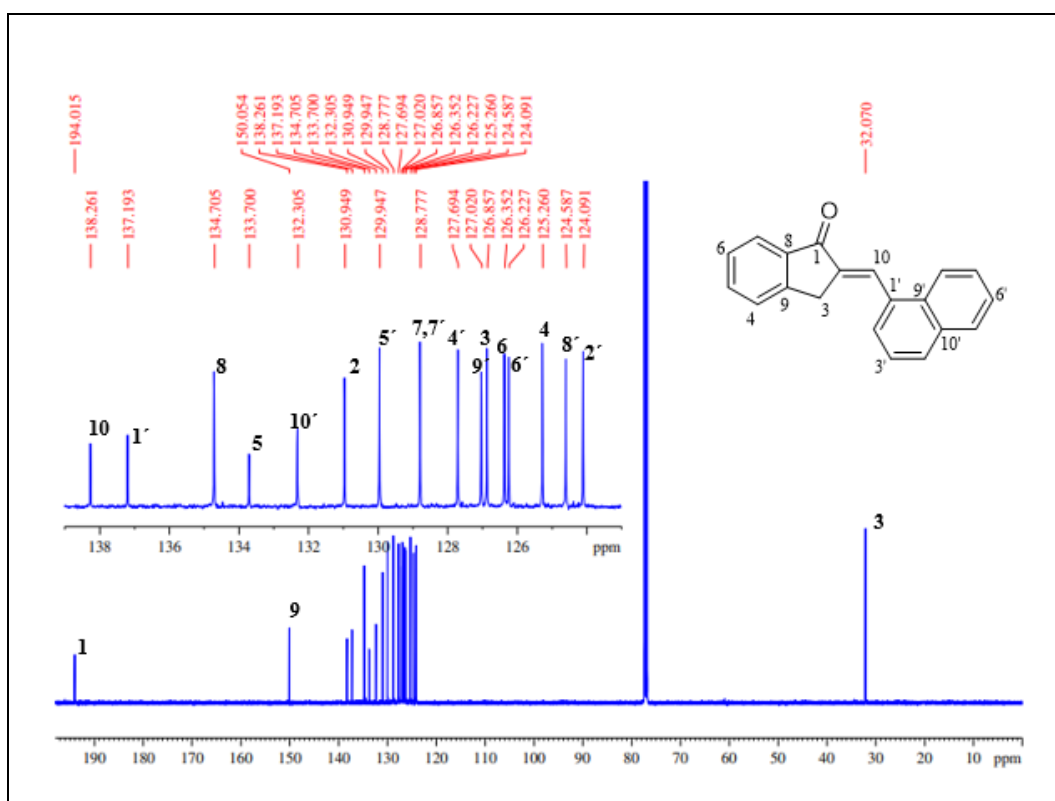


Figure S50: ^{13}C -NMR (125 MHz, CDCl_3) Spectrum of **3m**

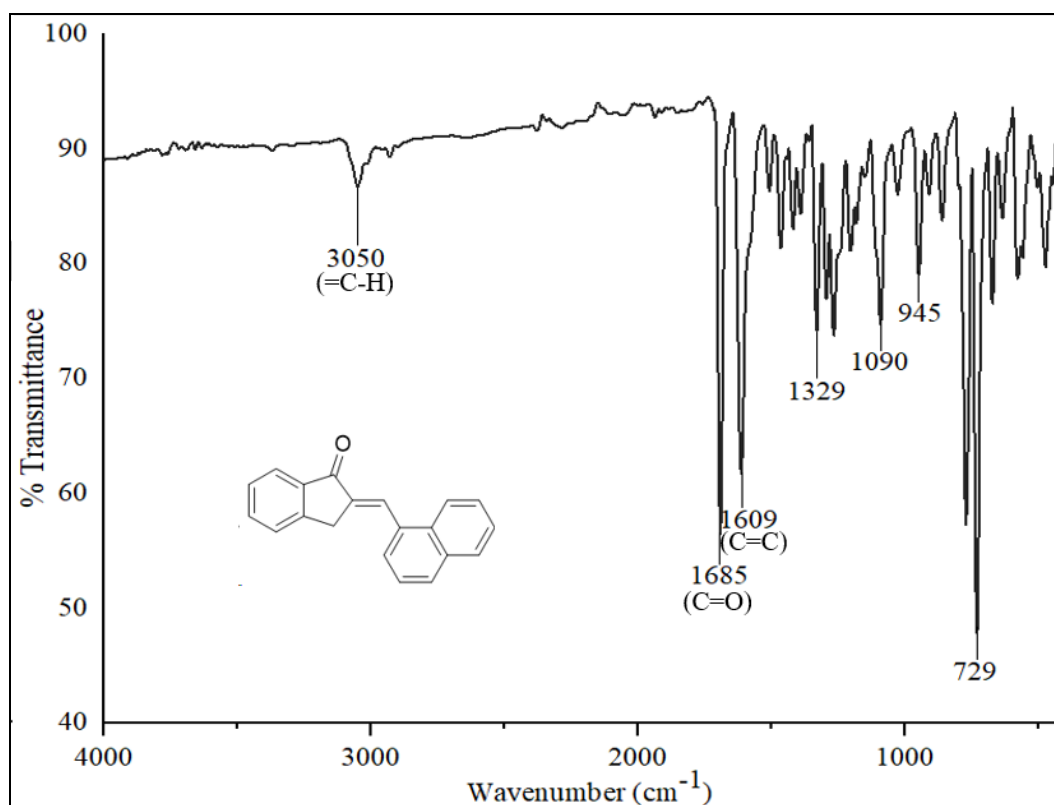


Figure S51: FT-IR Spectrum of **3m**

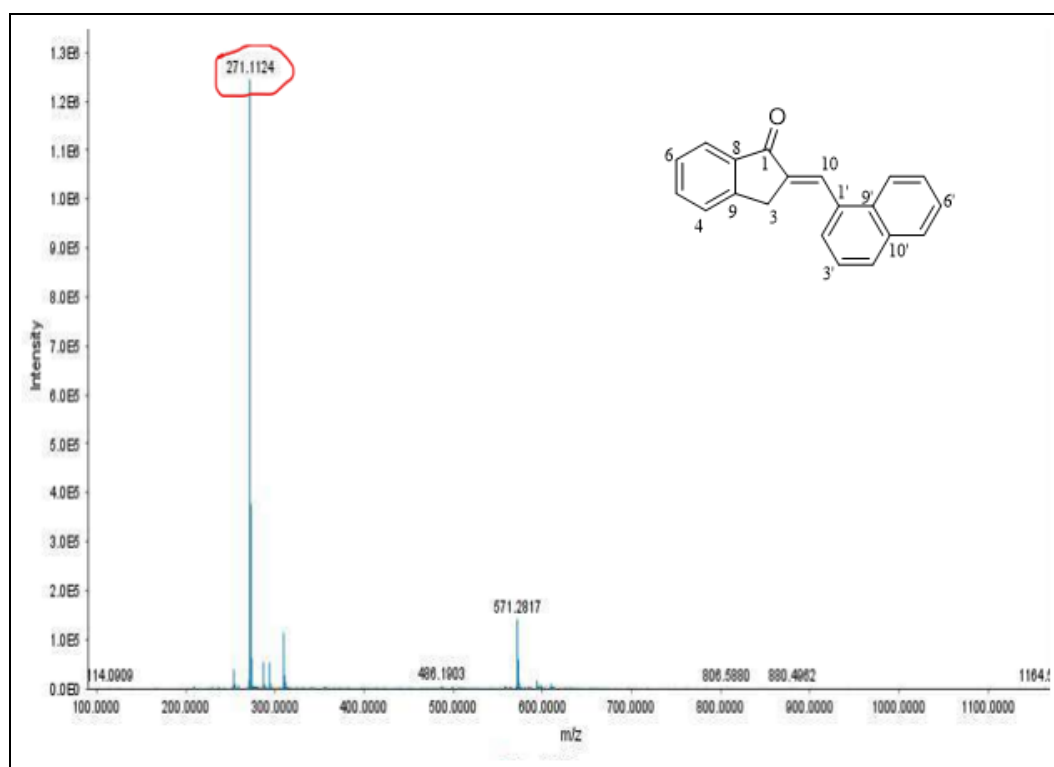


Figure S52: HRMS Spectrum of **3m**

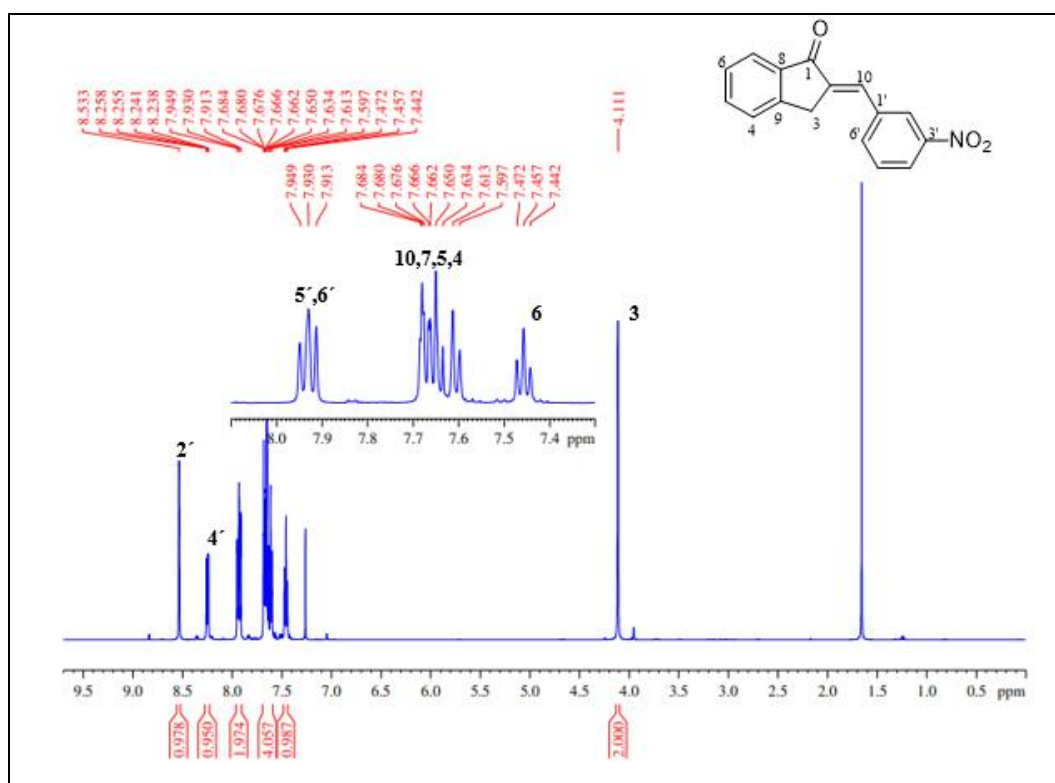


Figure S53: ^1H -NMR (500 MHz, CDCl_3) Spectrum **3n**

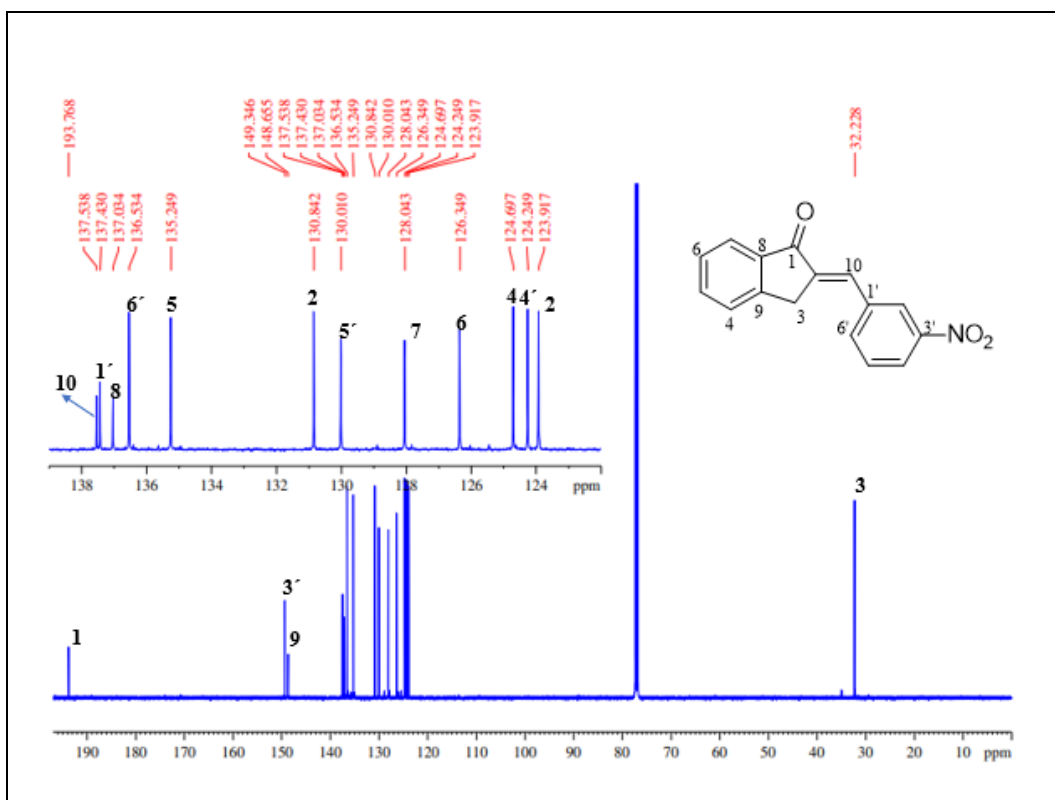


Figure S54: ^{13}C -NMR (125 MHz, CDCl_3) Spectrum of **3n**

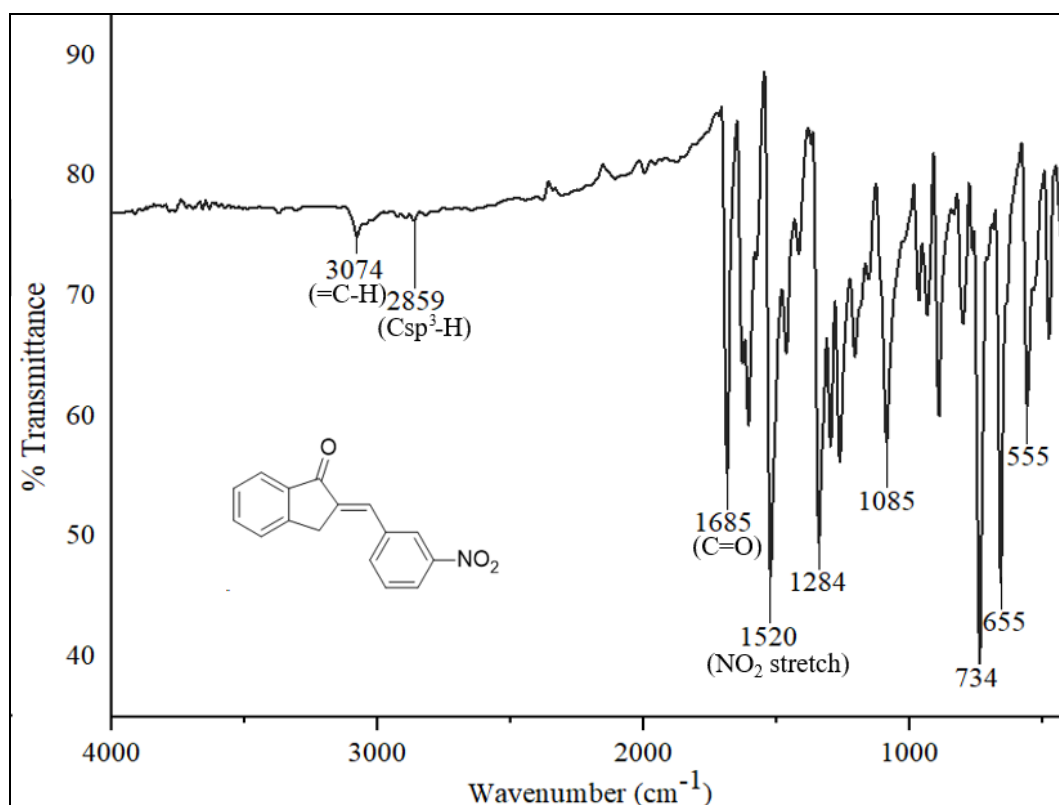


Figure S55: FT-IR Spectrum of **3n**

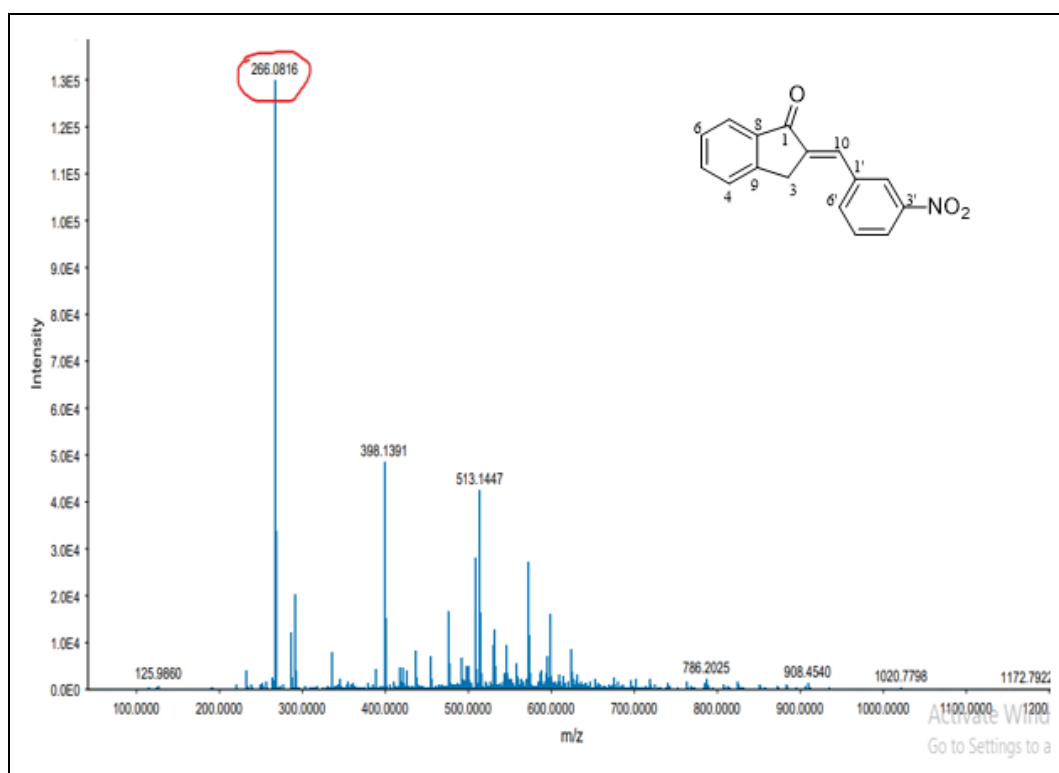


Figure S56: HRMS Spectrum of **3n**

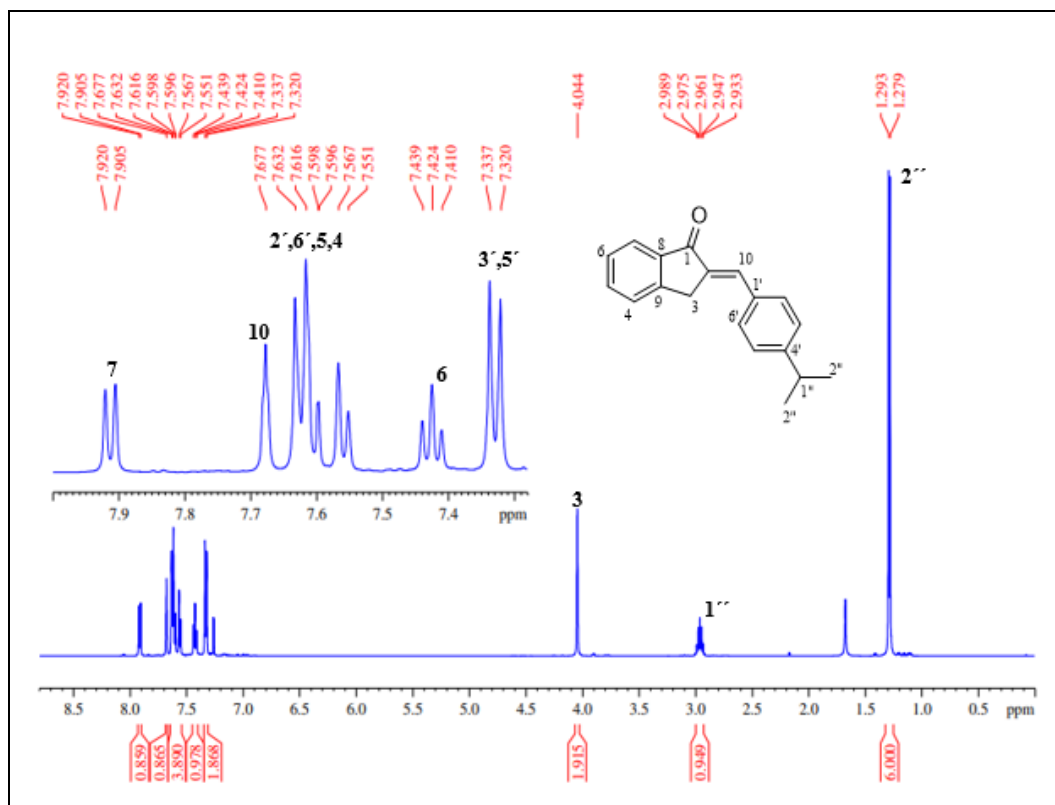


Figure S57: ¹H-NMR (500 MHz, CDCl₃) Spectrum **3o**

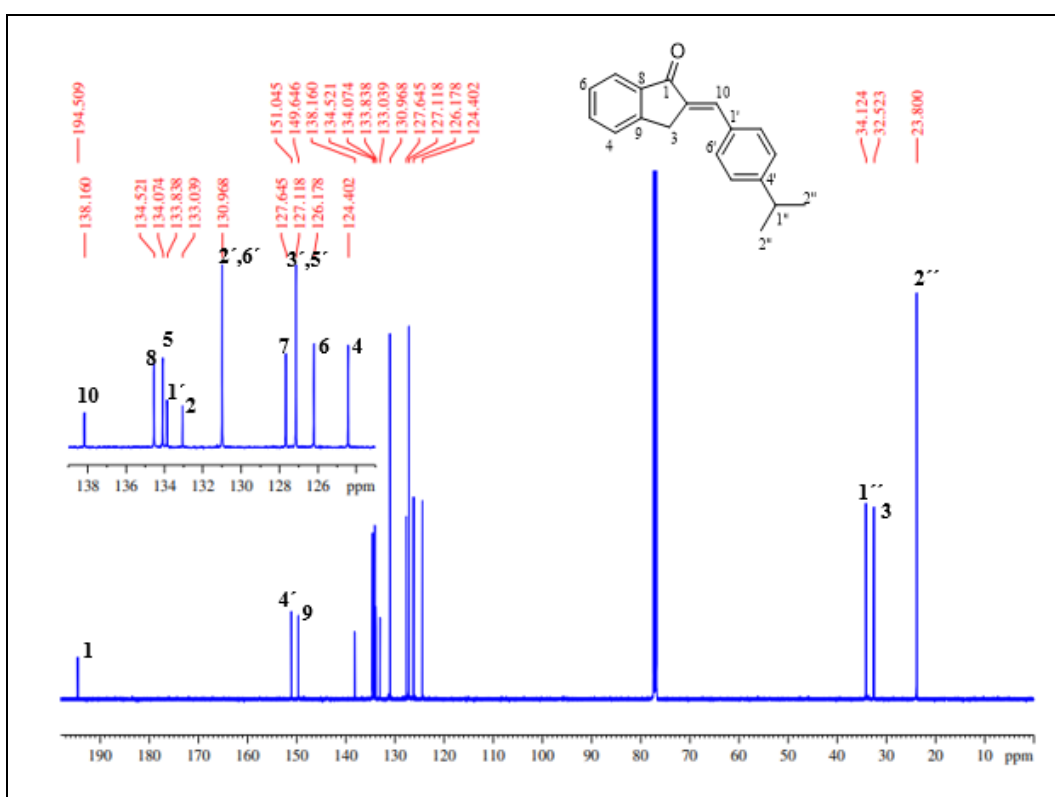


Figure S58: ¹³C-NMR (125 MHz, CDCl₃) Spectrum of **3o**

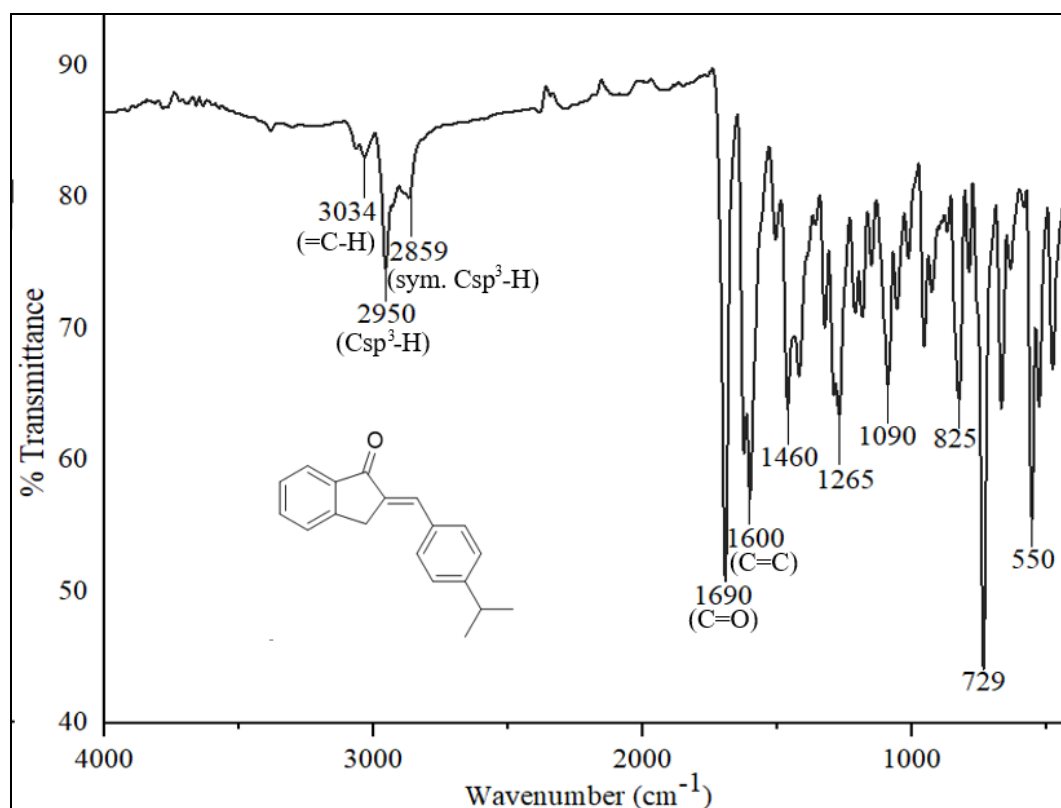


Figure S59: FT-IR Spectrum of **3o**

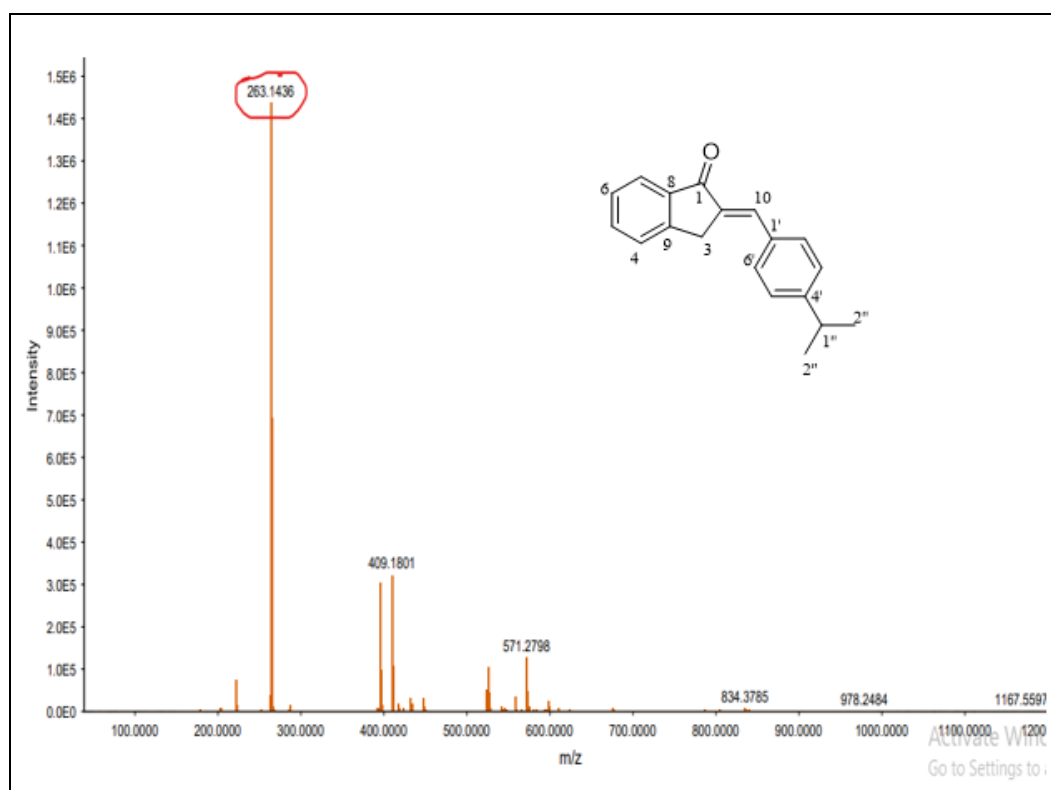


Figure S60: HRMS Spectrum of **3o**

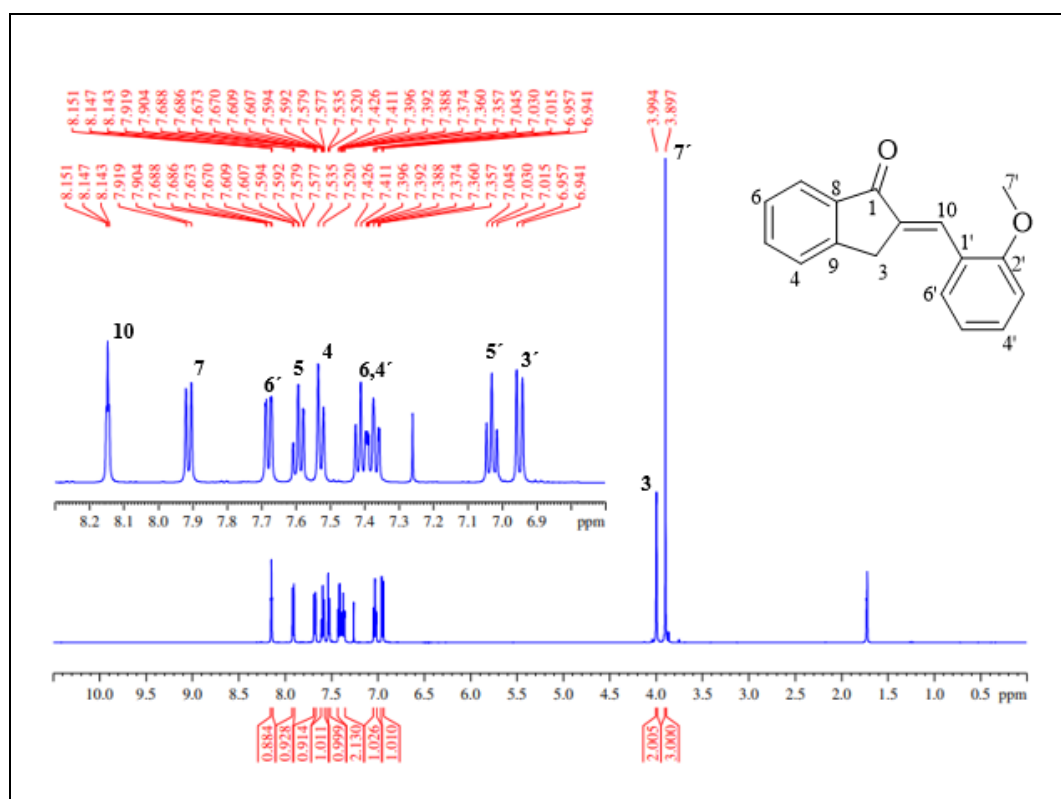


Figure S61: ^1H -NMR (500 MHz, CDCl_3) Spectrum **3p**

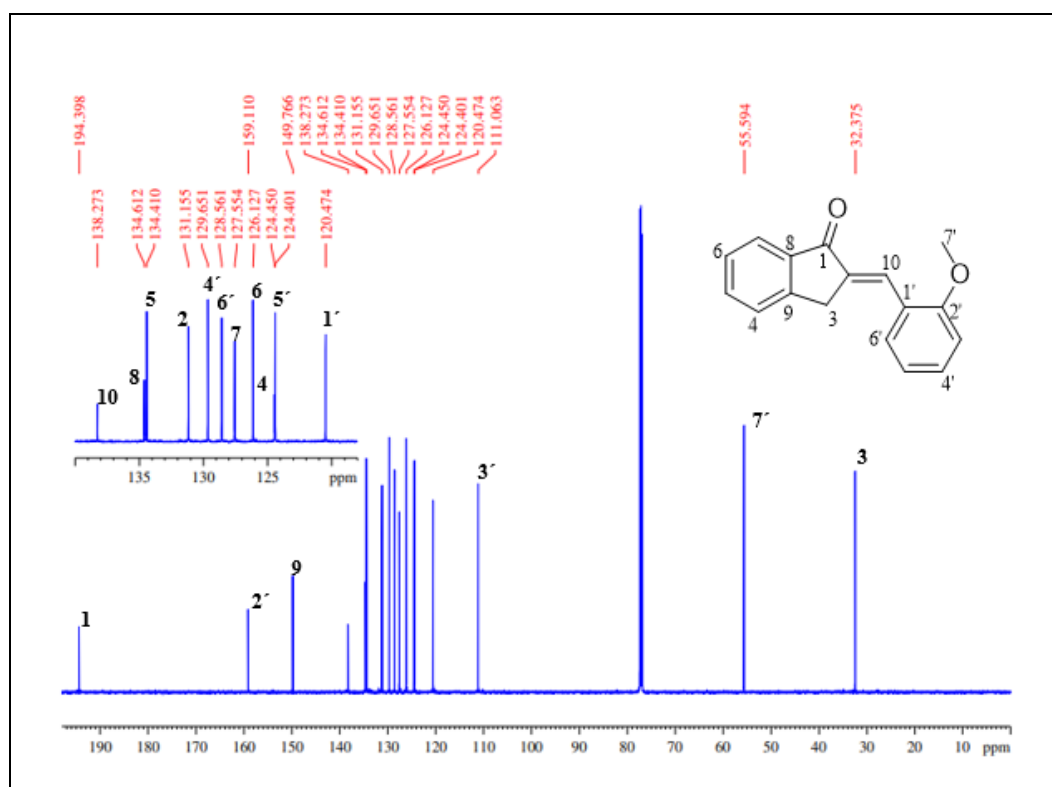


Figure S62: ^{13}C -NMR (125 MHz, CDCl_3) Spectrum of **3p**

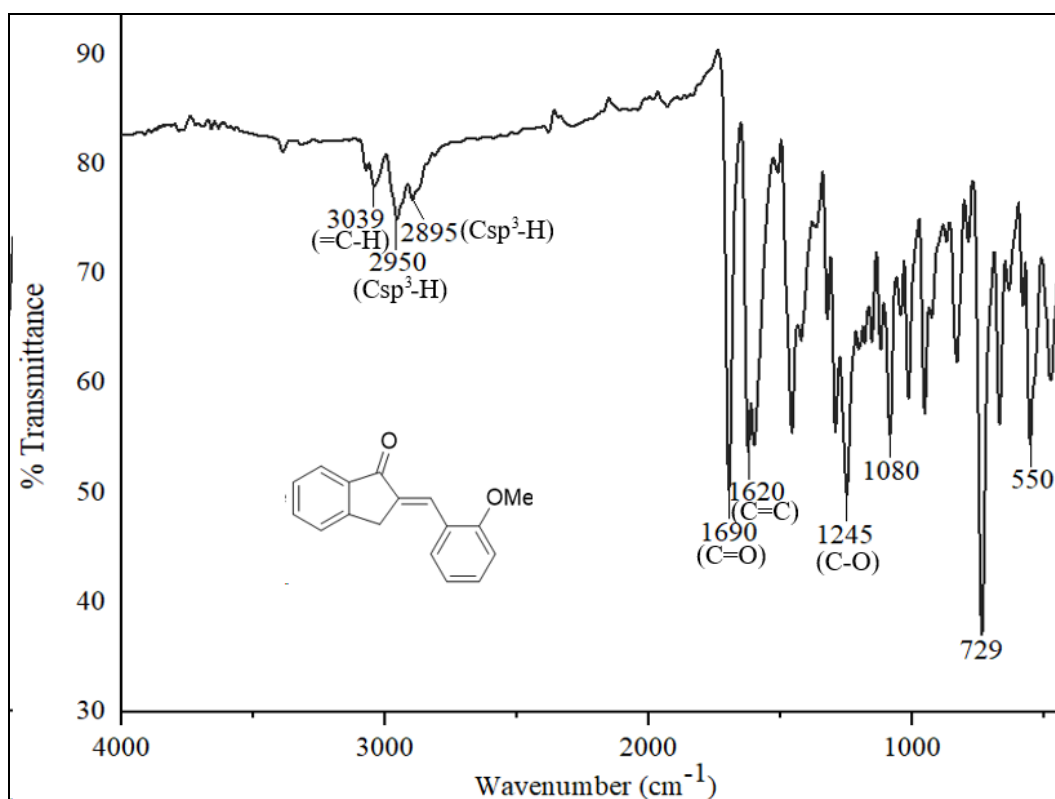


Figure S63: FT-IR Spectrum of **3p**

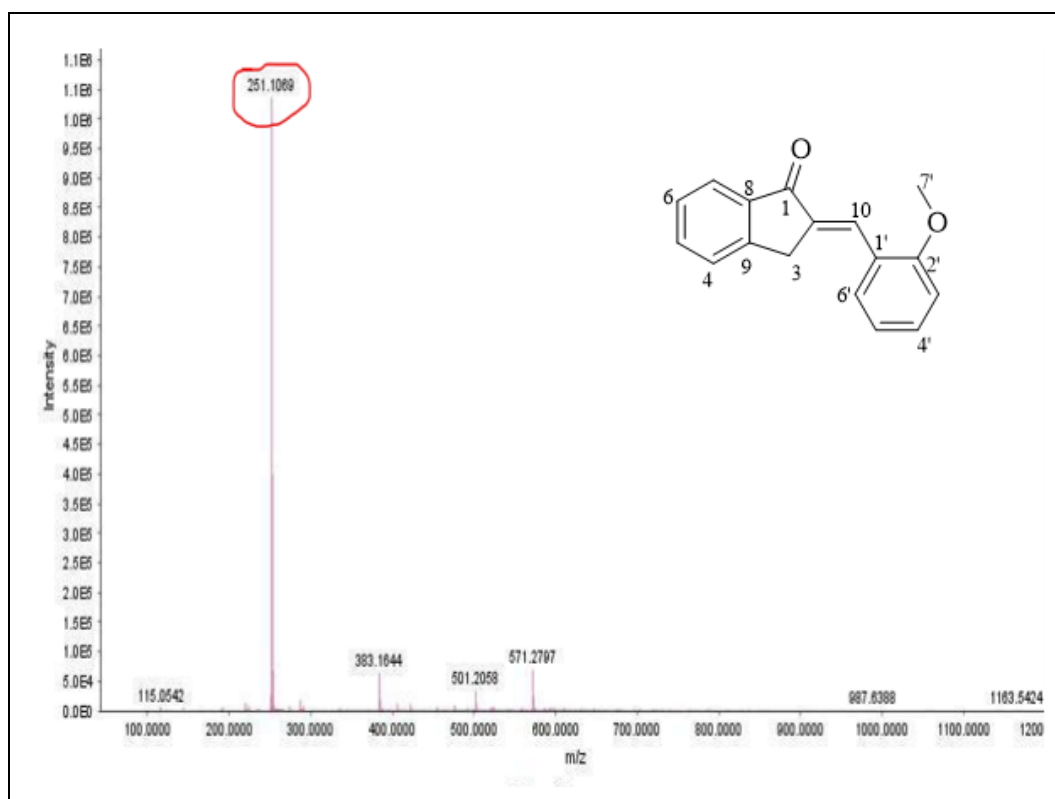


Figure S64: HRMS Spectrum of **3p**

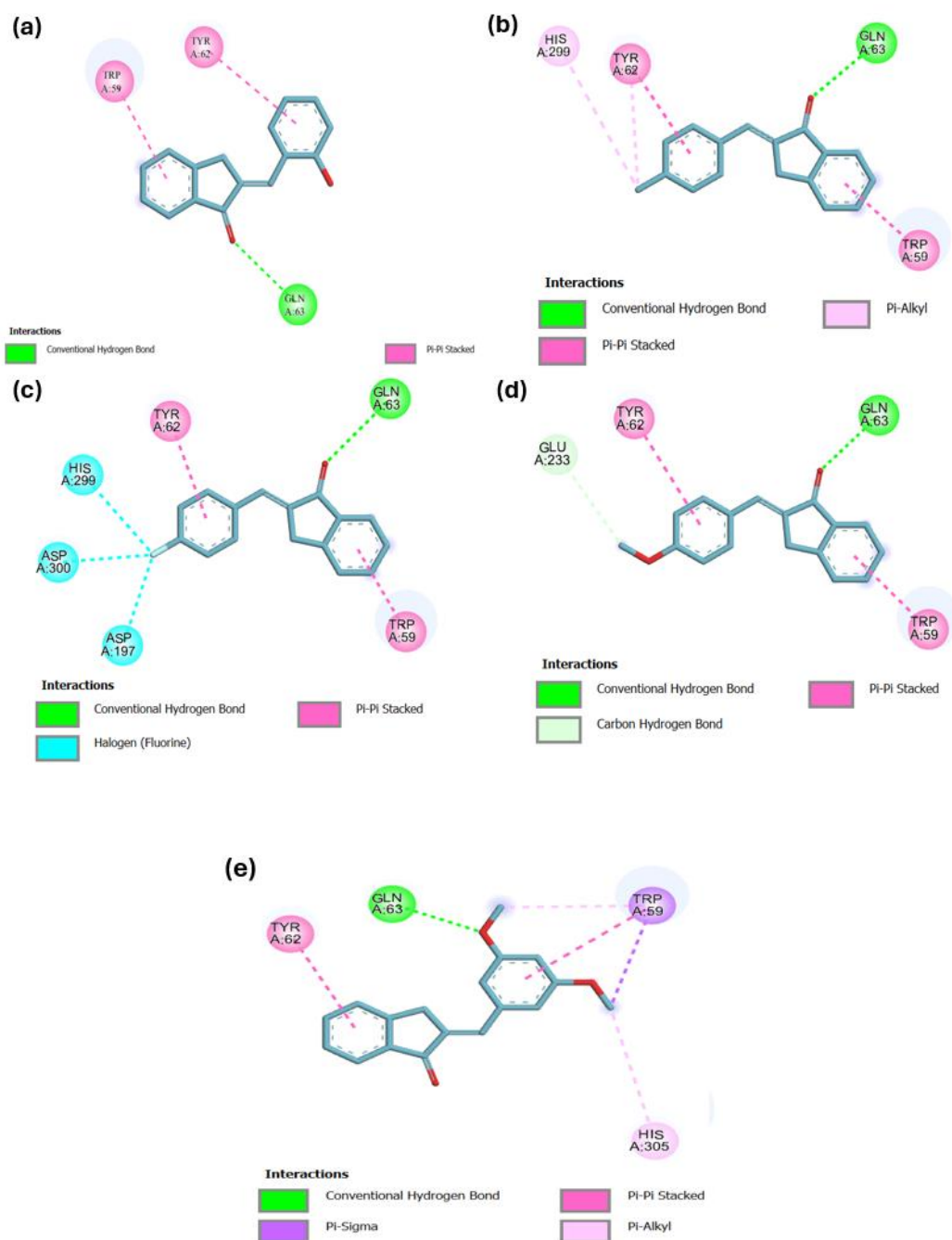


Figure S65: 2D representations of the binding modes of compounds **3a** (a), **3e** (b), **3g** (c), **3h** (d), **3j** (e) to human pancreatic α -amylase (PDB ID: 2QV4).

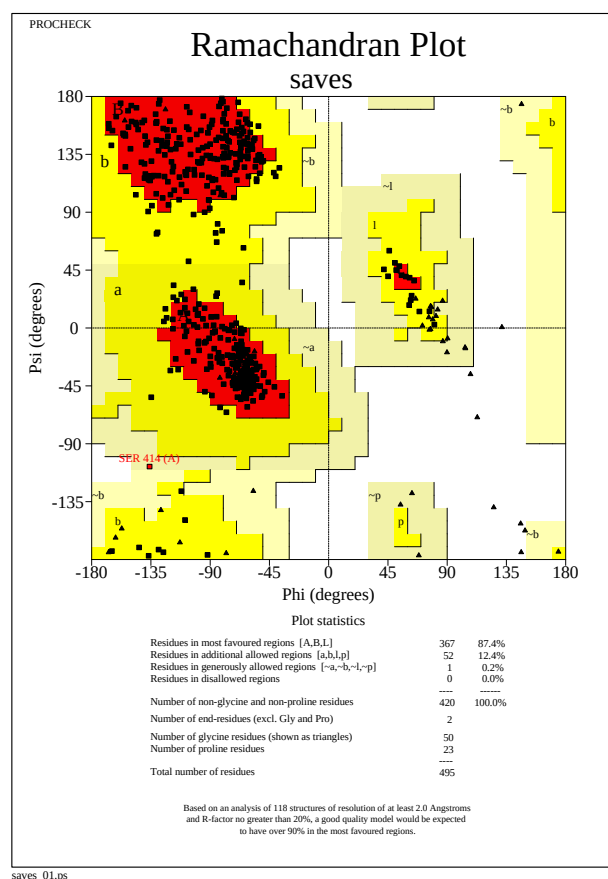


Figure S66. Ramachandran plot of human p pancreatic α -amylase (PDB ID: 2QV4) showing the distribution of phi (ϕ) and psi (ψ) dihedral angles.