Supporting Information

Ligand Assisted, Olefins Switched Divergent Oxidative Heck Cascade with Molecular Oxygen Enabled by Self-Assembled Imines

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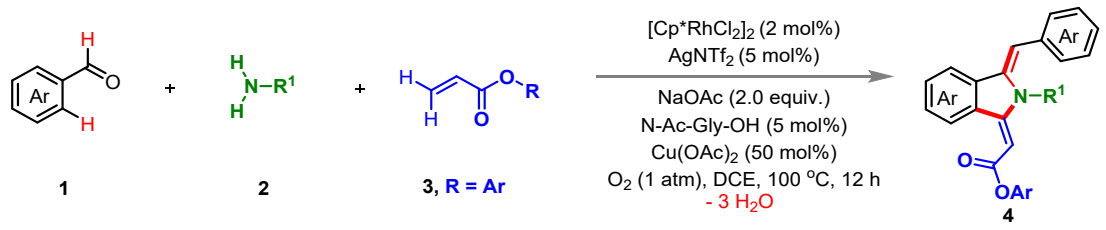
A. General Information

^{1}H and ^{13}C NMR spectra were recorded on BRUKER DRX-400 spectrometer using $CDCl_3$ as solvent and TMS as an internal standard. Chemical shifts for ^{1}H NMR spectra are reported as δ in units of parts per million (ppm) downfield from $SiMe_4$ (δ 0.0) and relative to the signal of chloroform-d (δ 7.26, singlet). Multiplicities were given as: s (singlet); d (doublet); t (triplet); q (quartet); dd (doublets of doublet); dt (doublets of triplet); dq (doublets of quartet). Coupling constants are reported as a J value in Hz. Carbon nuclear magnetic resonance spectra (^{13}C NMR) are reported as δ in units of parts per million (ppm) downfield from $SiMe_4$ (δ 0.0) and relative to the signal of chloroform-d (δ 77.0, triplet). Gas chromatograph mass spectra were obtained with a SHIMADZU model GCMS–QP 5000 spectrometer. HRMS was carried out on a MAT 95XP (Thermo).

B. General procedure:

1) General procedure for multiple dehydrogenative Heck cascade enabled with phenol acrylates

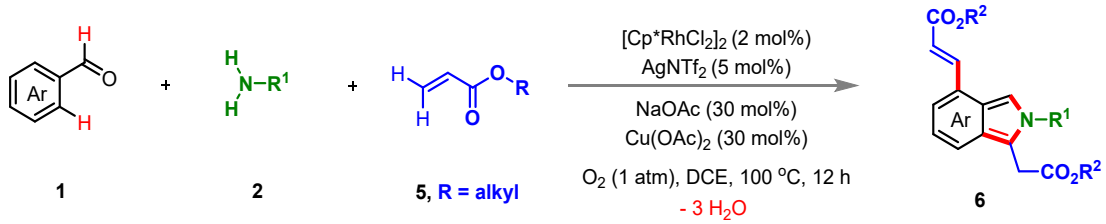


1 2 3, R = Ar 4

Figure S1. Phenol acrylates enabled oxidative Heck cascade.

Procedure: An oven-dried 10 mL Schlenk Tube was charged with benzaldehyde **1** (0.20 mmol), aniline **2** (0.20 mmol), $[RhCp^*Cl_2]_2$ (0.002 mmol), $AgNTf_2$ (0.005 mmol) and $Cu(OAc)_2$ (0.05 mmol), NaOAc (0.20 mmol), N-Ac-Gly-OH (0.005 mmol) in sequence, followed by adding phenol acrylates **3** (0.10 mmol) in DCE (1.0 mL) with O_2 (1 atm) through syringe. The resulting reaction mixture was stirred at 100 ℃ for 12 h and then diluted with CH_2Cl_2 and filtered through diatomite. Removing the solvent in vacuo and purification of the residue by silica gel column chromatography afforded the desired isoindole products **4**.

2) General procedure for multiple dehydrogenative Heck cascade enabled with alkyl acrylates



1 2 5, R = alkyl 6

Figure S2. Alkyl acrylates enabled oxidative Heck cascade.

Procedure: An oven-dried 10 mL Schlenk Tube was charged with benzaldehyde **1** (0.10 mmol), aniline **2** (0.10 mmol), $[RhCp^*Cl_2]_2$ (0.002 mmol), $AgNTf_2$ (0.005 mmol) and $Cu(OAc)_2$ (0.03 mmol), NaOAc (0.03 mmol) in sequence, followed by adding alkyl acrylates **5** (0.20 mmol) in DCE (1.0 mL) with O_2 (1 atm) through syringe. The resulting reaction mixture was stirred at 100 ℃ for 12 h and then diluted with CH_2Cl_2 and filtered through diatomite. Removing the solvent in vacuo and purification of the residue by alkaline aluminum oxide column chromatography afforded the desired isoindole products **6**.

3) General procedure for multiple dehydrogenative Heck cascade enabled with allyl alcohols or acrylamides

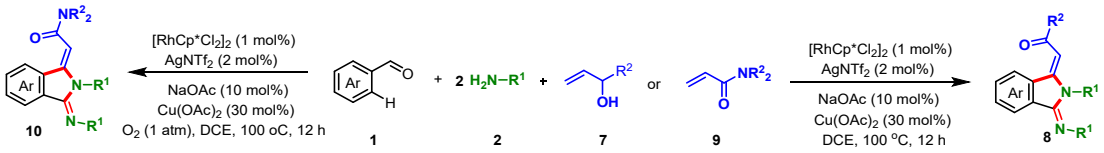


Figure S3. Allyl alcohols or acrylamides enabled oxidative Heck cascade.

Procedure: An oven-dried 10 mL Schlenk Tube was charged with benzaldehyde **1** (0.10 mmol), aniline **2** (0.20 mmol), $[RhCp^*Cl_2]_2$ (0.001 mmol), $AgNTf_2$ (0.002 mmol) and $Cu(OAc)_2$ (0.03 mmol), NaOAc (0.01 mmol) in sequence, followed by adding allyl alcohols **7** (0.10 mmol) with O_2 (1 atm) or acrylamides **9** with air (0.10 mmol) in DCE (1.0 mL) through syringe. The resulting reaction mixture was stirred at 100 ℃ for 12 h and then diluted with CH_2Cl_2 and filtered through diatomite. Removing the solvent in vacuo and purification of the residue by silica gel column chromatography afforded the desired isoindole products **8** or **10**.

C. Synthetic applications:

1) Further transformations via Diels-Alder reaction

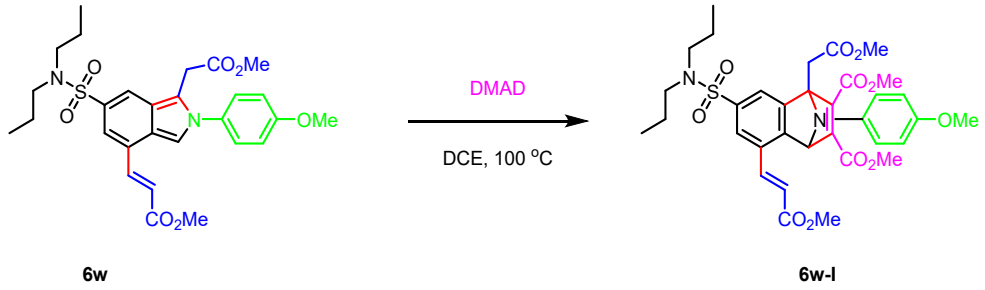


Figure S4. Further transformations via Diels-Alder reaction.

Procedure: An oven-dried 10 mL Schlenk Tube was charged with isoindole **6w** (0.05 mmol) in sequence, followed by adding DMAD (0.10 mmol) in DCE (1.0 mL) through syringe. The resulting reaction mixture was stirred at 100 ℃ for 8 h. Then removing the solvent in vacuo and purification of the residue by silica gel column chromatography afforded the desired product.

2) Further transformations via oxidation

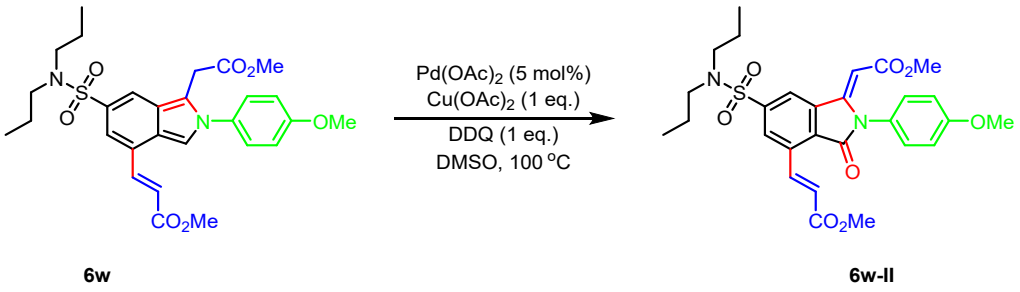


Figure S5. Further transformations via oxidation.

Procedure: An oven-dried 10 mL Schlenk Tube was charged with isoindole 6w (0.05 mmol), $Pd(OAc)_2$ (0.0025 mmol), $Cu(OAc)_2$ (0.05 mmol), DDQ (0.05 mmol) in sequence with DMSO (1.0 mL). The resulting reaction mixture was stirred at 100 ℃

for 10 h and then diluted with CH_2Cl_2 and filtered through diatomite. Removing the solvent in vacuo and purification of the residue by silica gel column chromatography afforded the desired product.

D. Preliminary mechanistic studies

1) Experimental verification

In order to explore the role of the imine formed in situ by aldehyde and aniline in this reaction, we used the pre-synthesized imine **1a-I** and found that the imine could well assist this oxidative Heck cascade, leading to the desired isoindole product **4a** in good yield. This observation indicated that this multicomponent oxidative Heck cascade might initiate with the in situ formation of imines, which assisted the oxidative Heck reaction, and then, followed by further transformations.

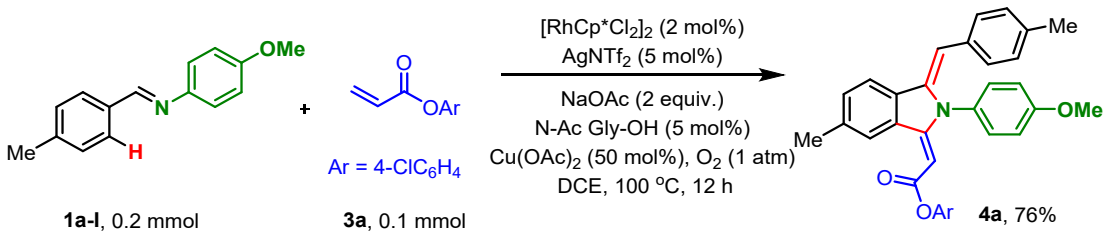


Figure S6. Imine assisted oxidative Heck cascade.

When we used the pre-synthesized imine **1b-1**, another aldehyde **2b** and phenol acrylate **3b** for this multicomponent involved C–H activation cascade, we could obtain different substituted isoindole product **4b** which afford rapid construction of molecular complexity. This observation further supports the above mentioned that the in situ generated imines as the key intermediates to initiate this oxidative Heck cascade.

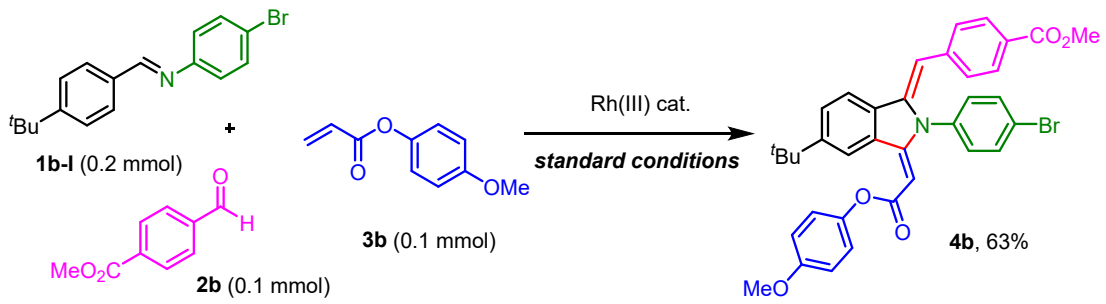


Figure S7. Multicomponent C–H activation cascade.

In order to further verify whether the reaction intermediate contained enamine or ketimine, we only used imines **1b-I** and aldehydes **2b** under standard conditions. Unfortunately, we had not observed any other substances. We indicated that this reaction might proceed via the in situ generated imines assisted the oxidative Heck reaction, and subsequent condensation with another aldehyde led to the desired isoindole product **4**.

These observations further support our previous proposal that, for multicomponent oxidative Heck cascade with phenol acrylates, in situ formation of imines took place first, which assisted the subsequent oxidative Heck reaction, further Michael addition gave isoindole intermediate. Upon further condensation and dehydration led to the formation of isoindole products **4**.

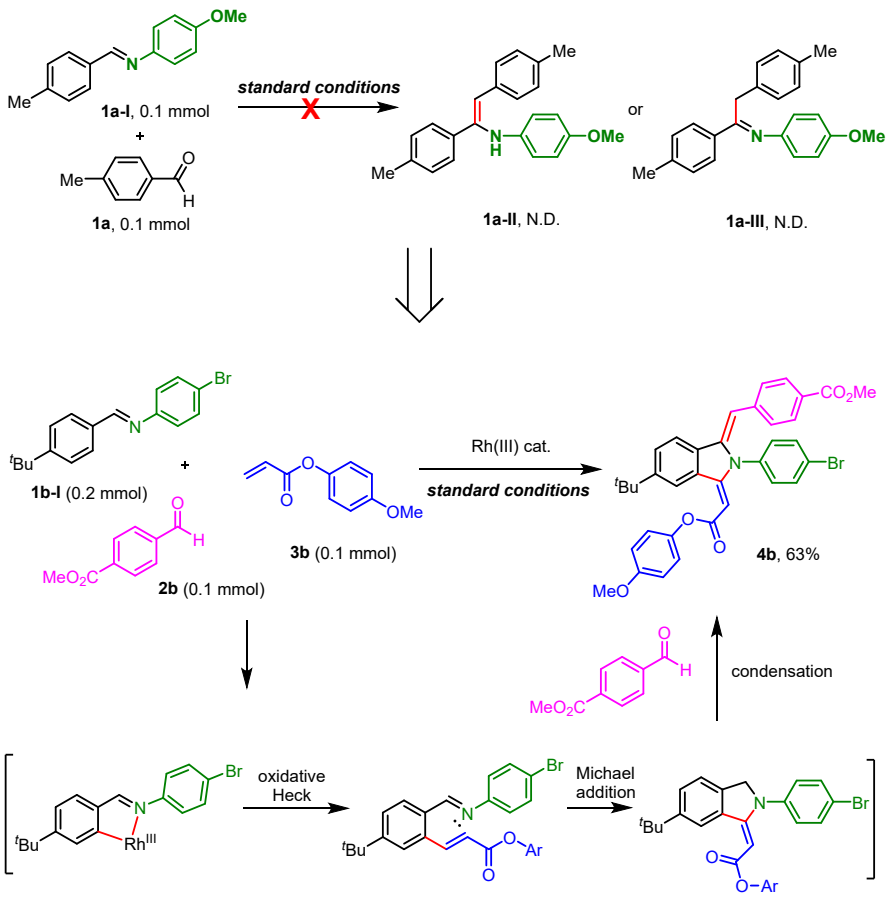


Figure S8. Verification of the formation of enamine or ketimine intermediates.

2) Proposed mechanism

For phenol acrylate substrates in this oxidative Heck cascade, Rh-catalyzed oxidative Heck reaction with in situ generated imines gave **C1**, in which isomerization of imines and subsequent Michael addition took place to give **D1**. Upon the treatment of base to the benzylamine moiety gave benzyl anion, which underwent nucleophilic addition to the aldehydes to afford intermediate **E1**, and the isoindole products **4** were obtained via further dehydration.

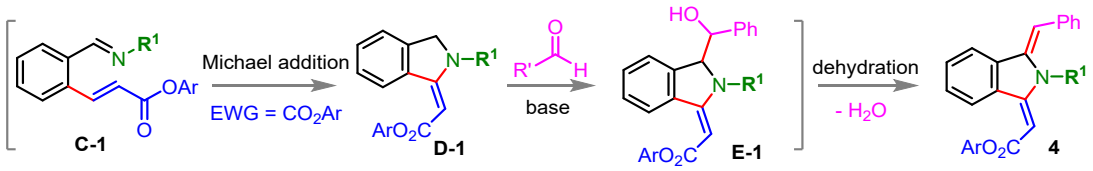


Figure S9. A possible reaction pathway for the generation of isoindole **4.**

When alkyl acrylate participated in the reaction, the more electron-withdrawing esters groups on the electron-bias olefins exhibited better reactivity for the oxidative Heck reaction and gave di-olefination products **C2**. Further aza-Heck reaction via olefin insertion to imines afforded intermediates **D2**, and the isoindole products **6** were obtained upon subsequent protonolysis and aromatization.

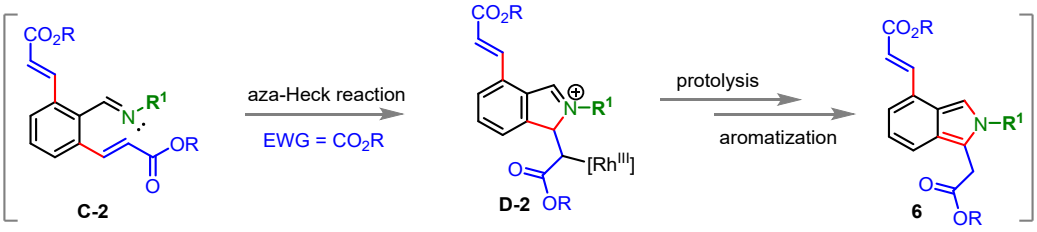


Figure S10. A possible reaction pathway for the generation of isoindoles **6**.

The use of acrylamides that features relatively strong directing ability while weak electron-withdrawing property, oxidative Heck intermediate **C-3** underwent re-insertion of the Rh-H species, facilitated by coordination of imine and amide functionality. Subsequently, coordination and further oxidation of anilines to the corresponding Rh-nitrene intermediate **E-3**, which underwent nitrene insertion to afford **F-3**. Further migratory insertion of amino-rhodium species **F-3** into imines gave **G-3**, upon β-H elimination and further oxidation, the isoindole products **10** was obtained.

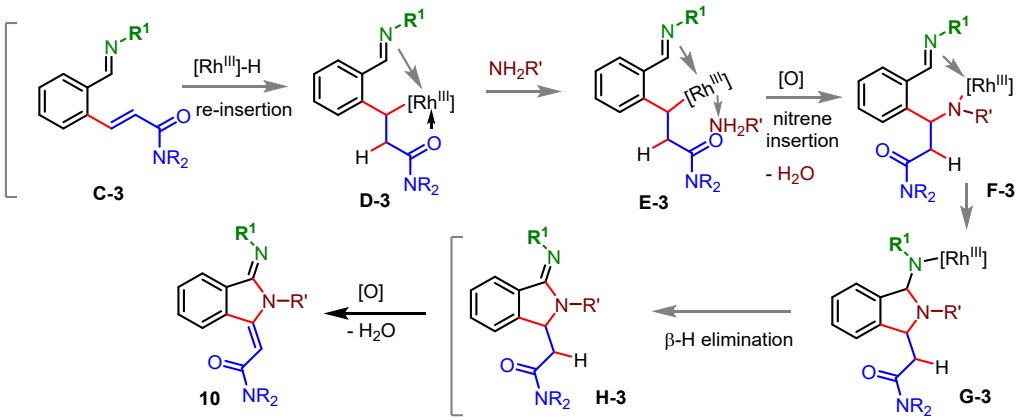
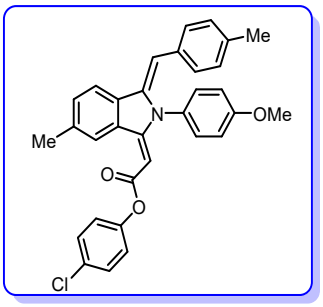
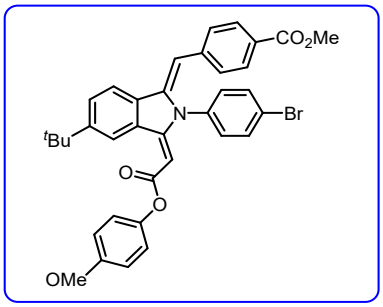


Figure S11. A possible reaction pathway for the generation of isoindoles **10**.

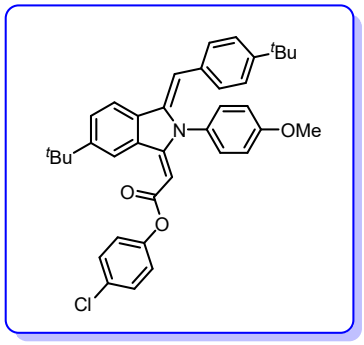
E. Analytical data for the obtained products



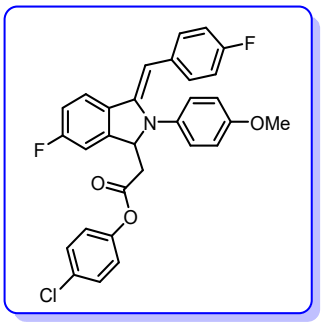
4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-methyl-3-((*Z*)-4-methylbenzylidene)isoindolin-1-ylidene)acetate (4a), ^{1}H NMR (400 MHz, $CDCl_3$) ***δ*** 9.21 (s, 1H), 7.53 (d, *J* = 8.0 Hz, 1H), 7.33-7.29 (m, 5H), 7.27 (s, 1H), 7.25 (s, 1H), 7.16 (d, *J* = 8.0 Hz, 2H), 7.11 (dd, *J* = 2.4 Hz, 6.8 Hz, 2H), 7.05 (dd, *J* = 2.0 Hz, 5.2 Hz, 2H), 5.78 (s, 1H), 5.00 (s, 1H), 3.90 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** ***δ*** 166.0, 159.8, 157.1, 150.0, 141.8, 139.6, 137.0, 133.0, 132.7, 131.7, 131.4, 130.8, 130.3, 129.3, 129.1, 129.1, 128.3, 123.5, 122.2, 115.4, 108.7, 85.0, 55.5, 21.9, 21.3. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{32}H_{27}ClNO_3$: 508.1679, Found: 508.1683.



Methyl 4-(((1*Z*,3*E*)-2-(4-bromophenyl)-5-(*tert*-butyl)-3-(2-(4-methoxyphenoxy)-2-oxoethylidene)isoindolin-1-ylidene)methyl)benzoate (4b), ^{1}H NMR (400 MHz, $CDCl_3$) ***δ*** 9.48 (d, *J* = 1.6 Hz, 1H), 8.02 (d, *J* = 8.4 Hz, 2H), 7.76 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 7.54 (d, *J* = 8.4 Hz, 1H), 7.45 (d, *J* = 8.0 Hz, 2H), 7.39 (dd, *J* = 1.6 Hz, 8.4 Hz, 1H), 7.28 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 7.03 (dd, *J* = 2.4 Hz, 6.8 Hz, 2H), 6.90-6.87 (m, 3H), 5.70 (s, 1H), 5.04 (s, 1H), 3.94 (s, 3H), 3.80 (s, 3H), 1.34 (s, 9H). **^{13}C NMR (100 MHz, $CDCl_3$)** ***δ*** 166.8, 165.8, 156.7, 155.7, 153.8, 144.7, 142.8, 140.8, 135.7, 133.7, 131.7, 131.1, 129.7, 129.4, 128.5, 127.9, 125.3, 123.3, 122.7, 122.1, 114.3, 106.1, 87.9, 55.5, 52.1, 35.4, 31.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{36}H_{33}BrNO_5$: 637.1464, Found: 637.1465.

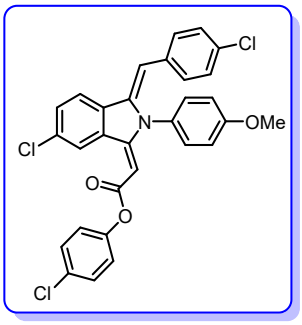


4-Chlorophenyl 2-((*E*)-6-(*tert*-butyl)-3-((*Z*)-4-(*tert*-butyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4c), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.39 (d, *J* = 1.6 Hz, 1H), 7.55 (d, *J* = 8.4 Hz, 1H), 7.32 (dd, *J* = 2.0 Hz, 8.4 Hz, 1H), 7.27 (d, *J* = 8.4 Hz, 1H), 7.23-7.19 (m, 5H), 7.17 (s, 1H), 7.15 (s, 1H), 7.00 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 6.96 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 5.69 (s, 1H), 4.90 (s, 1H), 3.80 (s, 3H), 1.25 (d, *J* = 1.6 Hz, 18H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.6, 159.8, 157.1, 153.0, 150.3, 150.1, 141.8, 132.9, 132.7, 131.6, 130.9, 130.0, 129.2, 129.1, 127.8, 125.3, 125.0, 123.9, 123.5, 122.0, 115.4, 108.7, 85.3, 55.5, 35.4, 34.6, 31.4, 31.3. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{38}H_{39}ClNO_3$: 592.2540, Found: 592.2543.

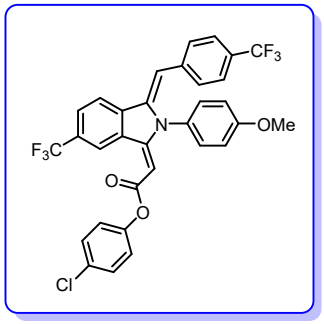


4-Chlorophenyl 2-((*E*)-6-fluoro-3-((*Z*)-4-fluorobenzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4d), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.19 (dd, *J* = 1.6 Hz, 10.4 Hz, 1H), 7.42 (dd, *J* = 5.2 Hz, 8.8 Hz, 1H), 7.32-7.29 (m, 6H), 7.13 (d, *J* = 8.8 Hz, 2H), 7.09-7.03 (m, 5H), 5.78 (s, 1H), 5.04 (s, 1H), 3.91 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.9, 163.2 (d, *J* = 246.0 Hz), 162.1 (d, *J* = 246.0 Hz), 160.0, 155.9, 149.8, 141.5, 134.7, 134.5, 131.1, 131.0, 130.7, 130.5, 129.3, 128.5, 123.8, 123.7, 123.4, 118.1, 117.9, 115.8, 115.6, 115.5, 115.4, 115.2, 107.4, 86.4, 55.6.

^{19}F NMR (60 MHz, $CDCl_3$) δ -109.5, -114.0. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{30}H_{23}ClF_2NO_3$: 517.1256, Found: 517.1259.

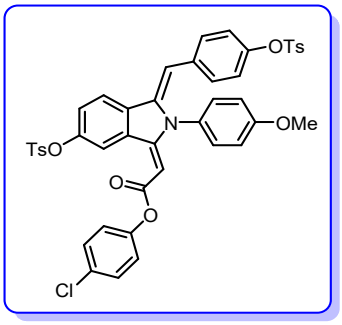


4-Chlorophenyl 2-((*E*)-6-chloro-3-((*Z*)-4-chlorobenzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4e), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.44 (d, J = 2.0 Hz, 1H), 7.43 (d, J = 8.8 Hz, 1H), 7.33-7.28 (m, 6H), 7.27 (s, 2H), 7.24 (d, J = 2.4 Hz, 1H), 7.11 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 7.03 (dd, J = 2.4 Hz, 5.6 Hz, 2H), 5.77 (s, 1H), 5.04 (s, 1H), 3.89 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.8, 160.1, 155.5, 149.7, 141.7, 135.6, 134.2, 133.8, 133.2, 132.1, 130.7, 130.6, 129.3, 128.8, 128.4, 128.3, 127.2, 123.4, 123.3, 115.6, 107.8, 86.9, 55.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{30}H_{21}Cl_3NO_3$: 547.0509, Found: 547.0512.

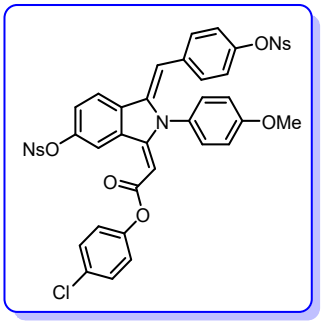


4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(trifluoromethyl)-3-((*Z*)-4-(trifluoromethyl)benzylidene)isoindolin-1-ylidene)acetate (4f), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.76 (s, 1H), 7.64 (d, J = 8.0 Hz, 2H), 7.61 (s, 2H), 7.48 (d. J = 8.0 Hz, 2H), 7.34-7.30 (m, 4H), 7.15 (d, J = 8.8 Hz, 2H), 7.06 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 5.91 (s, 1H), 5.14 (s, 1H), 3.92 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.5, 160.2, 155.2, 149.6, 142.1, 139.1, 138.9 (q, J = 38.0 Hz), 136.5, 133.2, 131.8 (q, J = 33.0 Hz), 130.7, 130.6, 129.9, 129.7, 129.3, 129.1, 128.1, 127.2 (q, J = 4.0 Hz), 125.9 (q, J = 4.0 Hz), 125.5 (q, J = 4.0 Hz), 124.8 (q, J = 270.0 Hz), 123.9 (q, J = 4.0 Hz), 123.4, 123.3,

122.7, 115.8, 114.5, 108.3, 88.2, 55.6. **^{19}F NMR (60 MHz, $CDCl_3$) δ** -62.2, -62.5. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{32}H_{21}ClF_6NO_3$: 615.1036, Found: 615.1037.

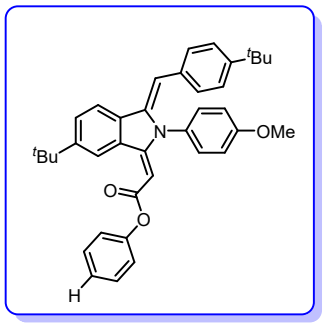


4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(tosyloxy)-3-((*Z*)-4-(tosyloxy)benzylidene)isoindolin-1-ylidene)acetate (4g), ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.99 (d, *J* = 2.0 Hz, 1H), 7.74 (dd, *J* = 8.4 Hz, 12.0 Hz, 4H), 7.36-7.31 (m, 5H), 7.26-7.22 (m, 6H), 7.12-7.09 (m, 3H), 7.01-6.97 (m, 4H), 5.74 (s, 1H), 4.98 (s, 1H), 3.89 (s, 3H), 2.46 (s, 3H), 2.36 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.2, 160.1, 155.2, 150.2, 149.8, 148.7, 145.6, 145.4, 141.6, 134.3, 134.1, 132.5, 132.3, 132.3, 130.6, 130.6, 130.4, 129.9, 129.8, 129.2, 128.5, 128.5, 128.3, 124.7, 123.3, 123.3, 122.6, 122.3, 115.6, 107.6, 87.2, 55.6, 21.7, 21.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{44}H_{35}ClNO_9S_2$: 819.3164, Found: 819.3165.

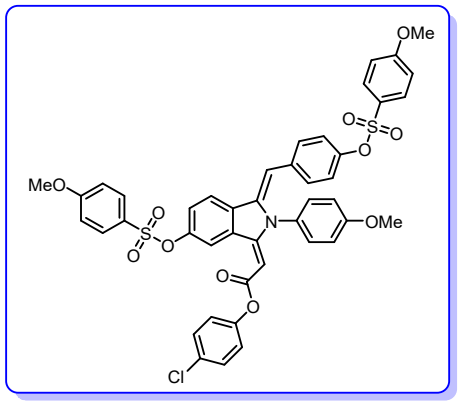


4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(((4-nitrophenyl)sulfonyl)oxy)-3-((*Z*)-4-(((4-nitrophenyl)sulfonyl)oxy)benzylidene)isoindolin-1-ylidene)acetate (4h), ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.82 (d, *J* = 2.4 Hz, 1H), 8.39 (dd, *J* =3.2 Hz, 6.8 Hz, 2H), 8.27 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 8.09-8.04 (m, 5H), 7.45 (d, *J* = 8.8 Hz, 1H), 7.35 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 7.30 (d, *J* = 8.0 Hz, 2H), 7.23 (dd, *J* = 1.6 Hz, 6.4 Hz, 2H), 7.00 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 7.02 (d, *J* = 8.4 Hz, 2H), 6.89 (dd, *J* = 2.0

Hz, 6.8 Hz, 2H), 5.78 (s, 1H), 4.97 (s, 1H), 3.89 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** ***δ*** 165.4, 160.2, 154.8, 151.0, 149.7, 149.4, 148.2, 141.6, 141.0, 140.6, 135.0, 134.2, 132.7, 130.9, 130.6, 130.0, 129.9, 129.4, 128.0, 125.0, 124.5, 124.4, 123.6, 123.1, 122.4, 121.9, 120.9, 115.7, 114.5, 107.6, 87.7, 55.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{42}H_{29}ClN_3O_{13}S_2$: 882.0830, Found: 882.0835.

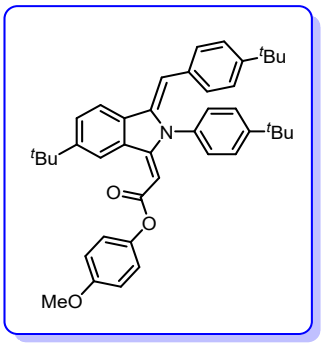


Phenyl 2-((*E*)-6-(*tert*-butyl)-3-((*Z*)-4-(*tert*-butyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4i), ^{1}H NMR (400 MHz, $CDCl_3$) ***δ*** 9.52 (d, *J* = 1.2 Hz, 1H), 7.66 (d, *J* = 8.4 Hz, 1H), 7.42 (dd, *J* = 1.6 Hz, 8.4 Hz, 1H), 7.39-7.34 (m, 6H), 7.30 (d, *J* = 8.8 Hz, 2H), 7.19 (d, *J* = 7.2 Hz, 1H), 7.15-7.10 (m, 4H), 5.78 (s, 1H), 5.06 (s, 1H), 3.90 (s,3H), 1.36 (s, 18H). **^{13}C NMR (100 MHz, $CDCl_3$)** ***δ*** 165.9, 159.7, 156.7, 153.0, 151.5, 150.2, 141.9, 132.9, 132.8, 131.6, 130.9, 130.1, 129.1, 129.1, 1286, 127.7, 125.3, 125.1, 124.8, 122.1, 115.4, 108.2, 85.9, 55.5, 35.4, 34.6, 31.4, 31.3. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{38}H_{41}NO_3$: 558.3008, Found: 558.3013.

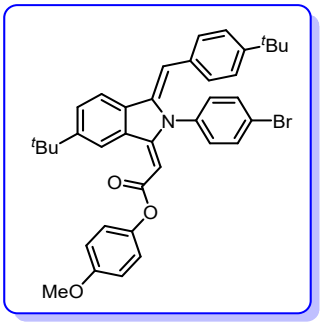


4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(((4-methoxyphenyl)sulfonyl)oxy)-3-((*Z*)-4-(((4-methoxyphenyl)sulfonyl)oxy)benzylidene)isoindolin-1-

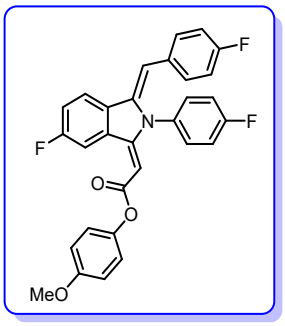
ylidene)acetate (4j), ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.95 (d, J = 2.0 Hz, 1H), 7.78 (dd, J = 6.0 Hz, 11.2 Hz, 4H), 7.35-7.32 (m, 4H), 7.25 (s, 1H), 7.23 (s, 2H), 7.10 (d, J = 8.8 Hz, 2H), 7.00-6.97 (m, 7H), 6.92 (dd, J = 2.0 Hz, 8.8 Hz, 2H), 5.75 (s, 1H), 4.98 (s, 1H), 3.89 (d, J = 1.2 Hz, 6H), 3.79 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.2, 164.2, 164.2, 160.1, 155.3, 150.2, 149.7, 148.8, 141.6, 134.3, 134.1, 132.3, 130.8, 130.7, 130.6, 130.6, 130.3, 129.2, 128.3, 126.7, 124.9, 123.3, 122.7, 122.2, 115.6, 114.5, 114.3, 107.7, 87.1, 55.8, 55.6, 55.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{44}H_{35}ClNO_{11}S_2$: 852.1340, Found: 852.1344.



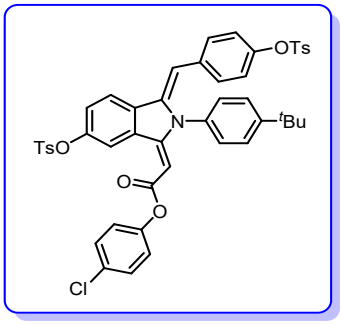
4-Methoxyphenyl 2-((*E*)-6-(*tert*-butyl)-3-((*Z*)-4-(*tert*-butyl)benzylidene)-2-(4-(*tert*-butyl)phenyl)isoindolin-1-ylidene)acetate (4k), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.53 (d, J = 1.6 Hz, 1H), 7.64 (d, J = 8.4 Hz, 1H), 7.61 (dd, J = 1.6 Hz, 6.4 Hz, 2H), 7.42 (dd, J = 1.6 Hz, 8.4 Hz, 1H), 7.38 (d, J = 8.4 Hz, 2H), 7.33 (d, J = 8.4 Hz, 2H), 7.30 (dd, J = 1.6 Hz, 6.4 Hz, 2H), 7.06 (dd, J = 2.4 Hz, 6.8 Hz, 2H), 6.89 (dd, J = 2.4 Hz, 6.8 Hz, 2H), 5.77 (s, 1H), 5.09 (s, 1H), 3.80 (s, 3H), 1.42 (s, 9H), 1.36 (d, J = 1.6 Hz, 18H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 166.3, 156.6, 156.4, 152.9, 151.9, 150.1, 145.0, 141.8, 134.1, 133.0, 132.9, 131.7, 129.3, 129.1, 128.7, 128.4, 127.6, 127.1, 125.3, 125.1, 124.0, 122.9, 122.8, 122.0, 114.3, 108.1, 85.9, 55.5, 35.4, 34.8, 34.6, 31.5, 31.4, 31.3. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{42}H_{47}NO_3$: 613.3556, Found: 613.3559.



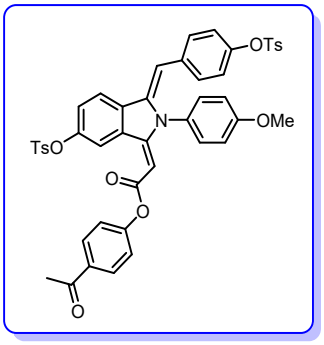
4-Methoxyphenyl 2-((*E*)-2-(4-bromophenyl)-6-(*tert*-butyl)-3-((*Z*)-4-(*tert*-butyl)benzylidene)isoindolin-1-ylidene)acetate (4l), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.51 (d, *J* = 1.6 Hz, 1H), 7.74 (d, *J* = 8.4 Hz, 2H), 7.64 (d, *J* = 8.4 Hz, 1H), 7.43 (dd, *J* = 1.6 Hz, 8.4 Hz, 1H), 7.38 (d, *J* = 8.4 Hz, 2H), 7.31 (d, *J* = 8.4 Hz, 2H), 7.28 (dd, *J* = 1.6 Hz, 6.8 Hz, 2H), 5.74 (s, 1H), 5.01 (s, 1H), 3.80 (s, 3H), 1.36 (d, *J* = 1.6 Hz, 18H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 166.0, 156.7, 156.0, 153.2, 150.4, 144.9, 141.5, 136.0, 133.6, 132.8, 132.5, 132.0, 131.8, 131.5, 130.8, 129.1, 128.4, 127.9, 125.4, 125.1, 124.2, 123.0, 122.8, 122.7, 122.1, 114.3, 108.0, 86.5, 55.5, 35.4, 34.6, 31.4, 31.3. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{38}H_{39}BrNO_3$: 635.2035, Found: 635.2039.



4-Methoxyphenyl 2-((*E*)-6-fluoro-3-((*Z*)-4-fluorobenzylidene)-2-(4-fluorophenyl)isoindolin-1-ylidene)acetate (4m), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.23 (dd, *J* = 2.8 Hz, 10.4 Hz, 1H), 7.42-7.38 (m, 3H), 7.35-7.29 (m, 4H), 7.09-7.05 (m, 3H), 7.01 (dd, *J* = 2.4 Hz, 6.8 Hz, 2H), 6.89 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 5.72 (s, 1H), 5.04 (s, 1H), 3.80 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 166.5, 163.2 (d, *J* = 246.0 Hz), 162.7 (d, *J* = 248 Hz), 162.1 (d, *J* = 246.0 Hz), 156.9, 155.2, 144.6, 141.4, 134.6, 134.5, 132.3, 132.2, 131.7, 131.6, 131.2, 131.2, 131.1, 131.0, 129.9, 129.9, 123.8, 123.7, 122.7, 118.1, 117.9, 117.7, 117.4, 115.8, 115.6, 115.3, 114.4, 106.8, 87.4, 55.5. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{30}H_{21}F_3NO_3$: 500.1474, Found: 500.1480.

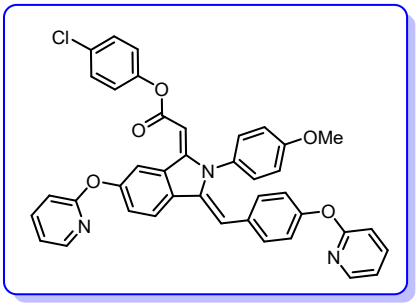


4-Chlorophenyl 2-((*E*)-2-(4-(*tert*-butyl)phenyl)-6-(tosyloxy)-3-((*Z*)-4-(tosyloxy)benzylidene)isoindolin-1-ylidene)acetate (4n), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.01 (d, *J* = 2.0 Hz, 1H), 7.76 (d, *J* = 8.4 Hz, 2H), 7.73 (d, *J* = 8.4 Hz, 2H), 7.34-7.31 (m, 6H), 7.26-7.23 (m, 5H), 7.12 (dd, *J* = 2.4 Hz, 8.8 Hz, 1H), 7.02-6.97 (m, 4H), 5.75 (s, 1H), 5.01 (s, 1H), 2.46 (s, 3H), 2.35 (s, 3H), 1.40 (s, 9H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.3, 155.1, 152.6, 150.2, 149.7, 148.7, 145.6, 145.4, 141.5, 134.4, 134.2, 133.2, 132.5, 132.4, 132.2, 130.6, 130.4, 129.9, 129.8, 129.2, 128.9, 128.5, 128.5, 127.4, 124.7, 123.4, 123.3, 122.6, 122.3, 107.7, 87.1, 34.9, 31.3, 21.7, 21.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{47}H_{41}ClNO_8S_2$:846.1962, Found: 846.1963.

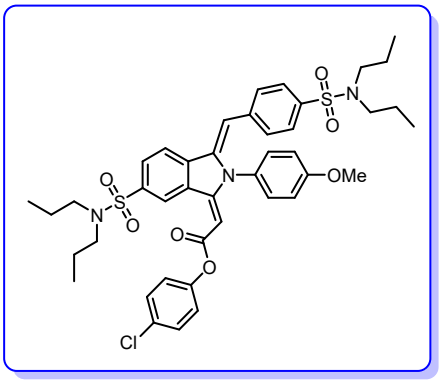


4-Acetylphenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(tosyloxy)-3-((*Z*)-4-(tosyloxy)benzylidene)isoindolin-1-ylidene)acetate (4o), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.00 (d, *J* = 2.0 Hz, 1H), 7.99 (d, *J* = 8.8 Hz,2H), 7.73 (dd, *J* = 8.4 Hz, 9.6 Hz, 4H), 7.36-7.32 (m, 4H), 7.27-7.24 (m, 6H), 7.16 (d, *J* = 8.8 Hz, 2H), 7.11 (d, *J* = 8.8 Hz, 2H), 6.98 (d, *J* = 8.4 Hz, 2H), 5.77 (s, 1H), 5.00 (s, 1H), 3.89 (s, 3H), 2.60 (s, 3H), 2.46 (s, 3H), 2.34 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 197.0, 164.8, 160.1, 155.5, 155.2, 150.1, 148.7, 145.6, 145.4, 141.5, 134.2, 134.1, 134.0, 132.3, 132.3,

132.2, 130.6, 129.9, 129.8, 129.7, 128.5, 128.4, 128.2, 124.7, 123.3, 122.6, 122.3, 122.0, 115.6, 107.9, 87.0, 55.6, 26.5, 21.7, 21.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{46}H_{38}NO_{10}S_2$:828.1937, Found: 828.1939.

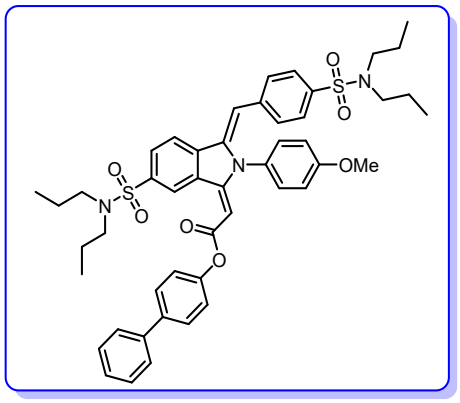


4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(pyridin-2-yloxy)-3-((*Z*)-4-(pyridin-2-yloxy)benzylidene)isoindolin-1-ylidene)acetate (4p), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.23 (d, *J* = 2.4 Hz, 1H), 8.20 (dd, *J* = 1.2 Hz, 4.8 Hz, 1H), 8.11 (dd, *J* = 1.6 Hz, 5.2 Hz, 1H), 7.73 (d, *J* = 8.8 Hz, 1H), 7.70-7.34 (m, 2H), 7.41 (d, *J* = 8.4 Hz, 2H), 7.31-7.27 (m, 4H), 7.16 (dd, *J* = 2.0 Hz, 8.4 Hz,1H), 7.12 (d, *J* = 8.8 Hz, 3H), 7.03-6.98 (m, 4H), 6.95-6.93 (m, 2H), 6.91 (d, *J* = 8.4 Hz, 1H), 5.82 (s, 1H), 5.02 (s, 1H), 3.91 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.8, 163.7, 163.4, 159.9, 156.9, 156.4, 154.6, 153.5, 149.8, 147.7, 147.4, 141.6, 139.5, 139.4, 134.4, 131.8, 130.8, 130.8, 130.3, 129.2, 128.8, 124.5, 123.5, 123.5, 121.5, 121.0, 118.7, 118.4, 115.5, 111.8, 111.6, 108.2, 85.9, 55.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{40}H_{29}ClN3O_5$: 666.1796, Found: 666.1799.



4-Chlorophenyl 2-((*E*)-6-(*N*,*N*-dipropylsulfamoyl)-3-((*Z*)-4-(*N*,*N*-dipropylsulfamoyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate

(4q), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.83 (d, *J* = 1.2 Hz, 1H), 7.81-7.77 (m, 3H), 7.60 (d, *J* = 8.4 Hz, 1H), 7.48 (d, *J* = 8.0 Hz, 2H), 7.31-7.28 (m, 4H), 7.14 (d, *J* = 8.8 Hz, 2H), 7.05 (dd, *J* = 2.0 Hz, 6.4 Hz, 2H), 5.89 (s, 1H), 5.12 (s, 1H), 3.91 (s, 3H), 3.13 (t, *J* = 7.6 Hz, 8H), 1.59-1.53 (m, 8H), 0.88 (t, *J* = 7.2 Hz, 6H), 0.82 (t, *J* = 7.6 Hz, 6H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 164.9, 160.2, 154.7, 149.7, 142.2, 141.9, 139.5, 139.2, 136.4, 133.4, 130.6, 130.3, 129.9, 129.2, 129.1, 128.7, 128.0, 127.3, 127.0, 125.8, 123.2, 123.2, 122.6, 115.8, 114.7, 108.1, 88.6, 55.6, 50.3, 49.7, 22.1, 21.8, 11.2, 11.1. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{42}H_{49}ClN_3O_7S_2$: 806.2700, Found: 806.2705.



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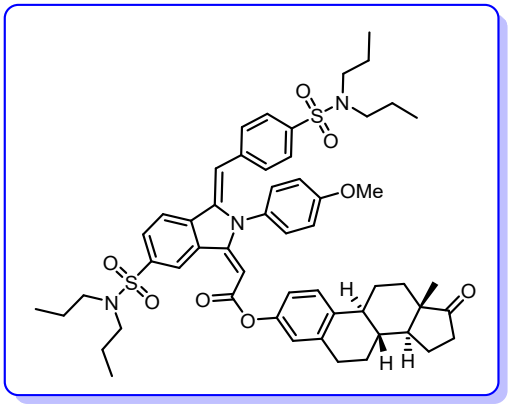
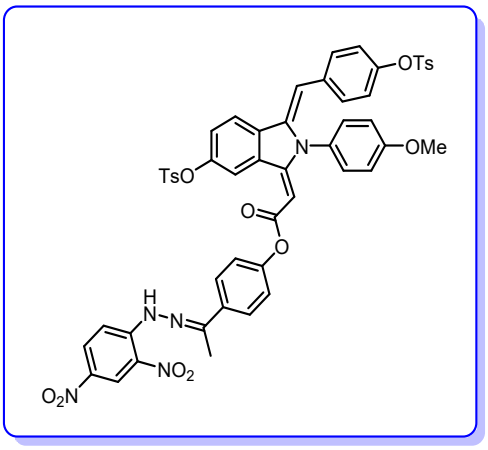
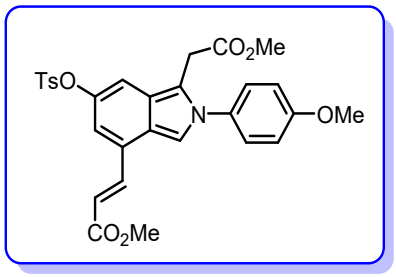
[1,1'-Biphenyl]-4-yl 2-((*E*)-6-(*N*,*N*-dipropylsulfamoyl)-3-((*Z*)-4-(*N*,*N*-dipropylsulfamoyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4r), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.88 (s, 1H), 7.82-7.78 (m, 3H), 7.62 (d, *J* = 8.4 Hz, 1H), 7.58-7.55 (m, 4H), 7.49 (d, *J* = 8.4 Hz, 2H), 7.43 (t, *J* = 8.0 Hz, 3H), 7.32 (d, *J* = 8.8 Hz, 2H), 7.19 (d, *J* = 8.4 HZ, 2H), 7.15 (d, *J* = 8.8 Hz, 2H), 5.89 (s, 1H), 5.19 (s, 1H), 3.92 (s, 3H), 3.16-3.12 (m, 8H), 1.59-1.55 (m, 8H), 0.89 (t, *J* = 7.2 Hz, 6H), 0.84 (t, *J* = 7.2 Hz, 6H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.3, 160.2, 154.4, 150.6, 142.3, 141.9, 140.6, 139.7, 139.2, 138.2, 136.4, 133.5, 130.7, 129.9, 128.7, 128.2, 127.8, 127.4, 127.1, 127.0, 122.6, 122.1, 116.4, 115.8, 114.8, 107.8, 89.2, 55.6, 50.3, 49.8, 22.1, 21.9, 11.2, 11.1. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{48}H_{53}N_3O_7S_2$:847.3327, Found: 847.3329.



(8*R*,9*S*,13*S*,14*S*)-13-Methyl-17-oxo-7,8,9,11,12,13,14,15,16,17-decahydro-6H-cyclopenta[a]phenanthren-3-yl 2-((*E*)-6-(*N*,*N*-dipropylsulfamoyl)-3-((*Z*)-4-(*N*,*N*-dipropylsulfamoyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4s), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.83 (d, J = 1.2 Hz, 1H), 7.79 (d, J = 8.4 Hz, 2H), 7.76 (dd, J = 1.6 Hz, 8.4 Hz, 1H), 7.60 (d, J = 8.4 Hz, 1H), 7.48 (d, J = 8.4 Hz, 2H), 7.30 (d, J = 8.8 Hz, 2H), 7.13 (d, J = 8.8 Hz, 2H), 6.89-6.81 (m, 3H), 5.86 (s, 1H), 5.15 (s, 1H), 3.91 (s, 3H), 3.14-3.10 (m, 8H), 2.89 (t, J = 4.0 Hz, 2H), 2.53-2.46 (m, 1H), 2.41-2.38 (m, 1H), 2.32-2.26 (m, 1H), 2.12 (q, J = 9.2 Hz, 2H), 1.99-1.94 (m, 4H), 1.55 (t, J = 7.6 Hz, 8H), 1.47-1.42 (m, 2H), 0.89 (t, J = 6.4 Hz, 12H), 0.83 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 190.9, 165.4, 160.2, 154.1, 148.9, 142.2, 141.7, 139.7, 139.1, 137.6, 136.6, 136.4, 133.5, 130.6, 129.8, 128.6, 128.2, 127.6, 127.3, 127.1, 126.0, 122.6, 121.9, 119.1, 115.8, 107.6, 89.5, 55.6, 50.4, 50.2, 49.7, 47.9, 44.1, 38.0, 35.8, 31.5, 29.4, 26.3, 25.7, 22.0, 21.8, 21.5, 13.8, 11.2, 11.1. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{54}H_{65}N_3O_8S_2$:947.4213, Found: 947.4216.

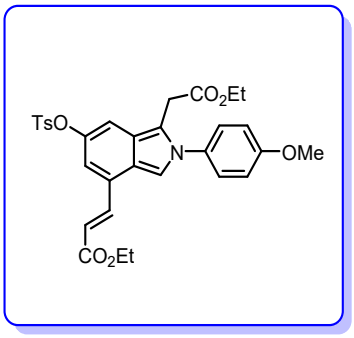


4-(1-(2-(2,4-Dinitrophenyl)hydrazineylidene)ethyl)phenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(tosyloxy)-3-((*Z*)-4-(tosyloxy)benzylidene)isoindolin-1-ylidene)acetate (4t), ^{1}H NMR (400 MHz, $CDCl_3$) δ 11.36 (s, 1H), 9.17 (s, 1H), 9.09 (s, 1H), 8.36 (d, J = 9.6 Hz, 1H), 8.12 (d, J = 9.6 Hz, 1H), 7.88 (d, J = 8.8 Hz, 2H), 7.74 (dd, J = 8.0 Hz, 12.0 Hz, 4H), 7.36-7.32 (m, 3H), 7.28-7.24 (m, 6H), 7.17 (d, J = 8.4 Hz, 2H), 7.12 (d, J = 8.4 Hz, 2H), 7.05 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 8.0 Hz, 2H), 5.77 (s, 1H), 5.04 (s, 1H), 3.91 (s, 3H), 2.49 (s, 6H), 2.37 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 165.2, 160.1, 155.4, 152.9, 151.7, 150.2, 148.7, 145.6, 145.4, 145.0, 141.6, 138.2, 134.3, 134.2, 132.5, 132.3, 132.3, 130.6, 130.6, 130.1, 129.9, 129.8, 129.7, 128.5, 128.5, 128.3, 127.5, 124.5, 123.5, 123.3, 122.7, 122.4, 122.2, 116.7, 115.7, 107.8, 100.0, 87.2, 55.6, 21.7, 21.7, 13.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{52}H_{42}N_5O_{13}S_2$: 1008.2221, Found: 1008.2224.

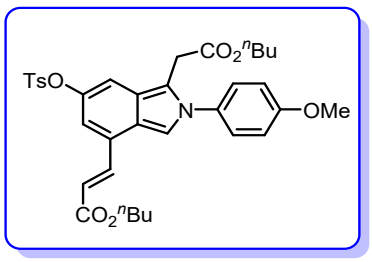


Methyl (*E*)-3-(1-(2-methoxy-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6a), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.76 (s, 1H), 7.72 (d, J = 15.2 Hz, 2H), 7.43 (d, J = 0.8 Hz, 1H), 7.33-7.32 (m, 2H), 7.31 (d, J = 2.4 Hz, 2H), 7.28 (d, J = 1.2 Hz, 1H), 7.00 (dd, J = 2.0 Hz, 6.4 Hz, 2H), 6.70 (d, J = 2.0 Hz, 1H), 6.38 (d, J =16.0 Hz, 1H), 3.88 (s, 3H), 3.80 (s, 2H), 3.79 (s, 3H), 3.62 (s, 3H), 2.46 (s,

3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 170.2, 167.5, 159.9, 145.3, 143.8, 142.9, 132.6, 131.6, 129.7, 128.6, 127.8 (2C), 123.1, 120.8, 119.0, 117.7, 114.4 (2C), 113.0, 55.6, 52.2, 51.7, 30.6, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{29}H_{28}NO_8S$: 550.1536, Found: 550.1539.

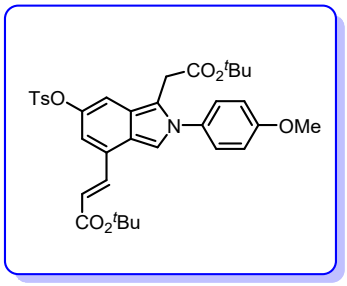


Ethyl (*E*)-3-(1-(2-ethoxy-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2H-isoindol-4-yl)acrylate (6b), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.76 (d, J = 8.4 Hz, 2H), 7.71 (d, J = 16.0 Hz, 1H), 7.44 (s, 1H), 7.35-7.30 (m, 5H), 7.00 (dd, J = 2.0 Hz, 5.2 Hz, 2H), 6.69 (d, J = 1.6Hz, 1H), 6.37 (d, J = 16.0 Hz, 1H), 4.24 (q, J = 7.2 Hz, 2H), 4.07 (q, J = 7.2 Hz, 2H), 3.88(s, 3H), 3.78 (s, 2H), 2.45 (s, 3H), 1.32 (t, J = 7.2 Hz, 3H), 1.12 (t, J = 7.2 Hz, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 169.8, 167.1, 159.9, 145.3, 143.7, 142.7, 132.6, 131.7, 129.7, 128.6, 127.8, 123.1, 120.8, 119.5, 119.4, 117.9, 114.4, 114.4, 113.0, 61.2, 60.5, 55.6, 30.9, 21.7, 14.3, 14.1. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{31}H_{32}NO_8S$: 578.1849, Found: 578.1852.

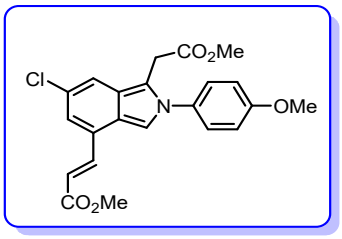


Butyl (*E*)-3-(1-(2-butoxy-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2H-isoindol-4-yl)acrylate (6c), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77 (s, 1H), 7.75-7.69 (m, 2H), 7.43 (s, 1H), 7.34-7.31 (m, 4H), 7.29 (d, J = 0.8 Hz, 1H), 7.00 (dd, J = 2.0 Hz, 4.4 Hz, 2H), 6.69 (d, J = 2.0 Hz, 1H), 6.37 (d, J = 16.4 Hz, 1H), 4.19 (t, J =5.2 Hz, 2H), 4.01 (t, J = 6.8 Hz, 2H), 3.88 (s, 3H), 3.80 (d, J = 14.2 Hz, 2H), 3.45 (s, 3H), 1.71-1.64

(m, 2H), 1.55-1.50 (m, 2H), 1.43-1.38 (m, 2H), 1.30-1.25 (m, 2H), 0.95 (t, J = 7.2 Hz, 3H), 0.88 (t, J = 7.2 Hz, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.9, 167.2, 159.9, 145.3, 143.7, 142.7, 132.6, 131.7, 129.7, 128.6, 127.8, 123.2, 120.9, 119.5, 119.4, 118.0, 114.4, 114.3, 113.0, 65.1, 64.5, 55.6, 30.9, 30.8, 30.5, 21.7, 19.1, 19.0, 13.7, 13.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{35}H_{40}NO_8S$: 634.2475, Found: 634.2477.

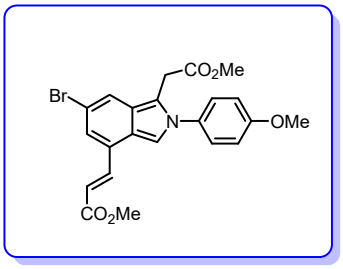


***tert*-Butyl (*E*)-3-(1-(2-(*tert*-butoxy)-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2H-isoindol-4-yl)acrylate (6d), ^{1}H NMR (400 MHz, $CDCl_3$) δ** 7.76 (d, J = 8.4 Hz, 2H), 7.62 (d, J = 16.0 Hz, 1H), 7.41 (s, 1H), 7.36 (dd, J = 2.0 Hz, 6.4 Hz, 2H), 7.33-7.31 (m, 3H), 7.01 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 6.65 (d, J = 1.6 Hz, 1H), 6.29 (d, J = 16.0 Hz, 1H), 3.88 (s, 3H), 3.70 (s, 2H), 2.45 (s, 3H), 1.52 (s, 9H), 1.38 (s, 9H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.1, 166.5, 159.8, 145.2, 143.7, 141.8, 132.7, 131.9, 129.7, 128.62, 128.0, 127.9, 123.1, 121.3, 120.4, 119.6, 118.5, 114.3, 114.2, 112.7, 81.6, 80.6, 55.6, 32.2, 28.2, 27.9, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{35}H_{40}NO_8S$: 634.2475, Found: 634.2478.

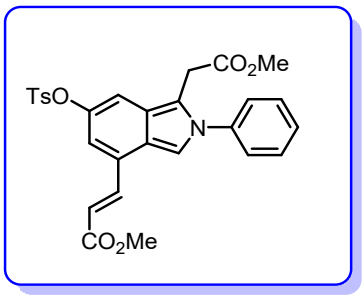


Methyl (*E*)-3-(6-chloro-1-(2-methoxy-2-oxoethyl)-2-(4-methoxyphenyl)-2H-isoindol-4-yl)acrylate (6f), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.85 (d, J = 16.0 Hz, 1H), 7.57 (s, 1H), 7.35 (s, 1H), 7.34 (dd, J = 2.0 Hz, 6.0 Hz, 2H), 7.16 (d, J = 1.2 Hz, 1H), 7.01 (dd, J = 2.4 Hz, 6.0 Hz, 2H), 6.53 (d, J = 16 Hz, 1H), 3.89 (s, 3H), 3.85 (s, 2H), 3.81 (s, 3H), 3.65 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 170.4, 167.6, 159.9, 143.1,

131.7, 128.0, 127.8, 126.5, 126.4, 120.4, 119.0, 116.5, 114.4, 113.2, 55.6, 52.3, 51.7, 30.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{22}H_{21}ClNO_5$: 414.1108, Found: 414.1109.

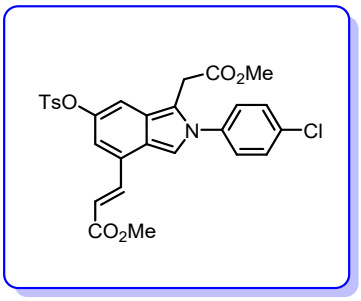


Methyl (*E*)-3-(2-(4-chlorophenyl)-1-(2-methoxy-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6g), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.83 (d, J = 16.0 Hz, 1H), 7.75 (s, 1H), 7.45 (s, 1H), 7.34 (dd, J = 2.0 Hz, 6.4 Hz, 2H), 7.28 (s, 1H), 7.01 (dd, J = 1.6 Hz, 6.8 Hz, 2H), 6.52 (d, J = 16.4 Hz, 1H), 3.89 (s, 3H), 3.84 (s, 2H), 3.81 (s, 3H), 3.64 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 170.3, 167.5, 159.9, 143.0, 131.7, 128.7, 127.8, 126.1, 125.0, 123.8, 119.4, 119.0, 116.4, 114.4, 114.1, 113.2, 55.6, 52.3, 51.7, 30.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{22}H_{21}BrNO_5$: 458.0603, Found: 458.0605.

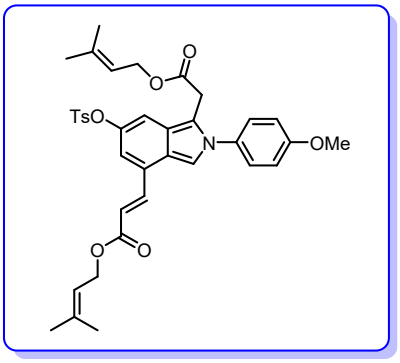


Methyl (*E*)-3-(1-(2-methoxy-2-oxoethyl)-2-phenyl-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6h), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77z (s, 1H), 7.73f (d, J = 15.2 Hz, 2H), 7.53-7.51 (m, 3H), 7.47 (d, J = 0.4 Hz, 1H), 7.41 (dd, J = 1.6 Hz, 8.0 Hz, 2H), 7.34 (d, J = 8.0 Hz, 2H), 7.29 (d, J = 1.2 Hz, 1H), 6.72 (d, J = 1.6 Hz, 1H), 6.39 (d, J = 16.0 Hz, 1H), 3.83 (s, 2H), 3.79 (s, 3H), 3.61 (s, 3H), 2.47 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 170.1, 167.5, 145.3, 143.8, 142.8, 138.9, 132.5, 129.7, 129.4, 129.0, 128.6, 127.9, 126.6, 123.3, 121.0, 119.7, 119.1, 117.5, 114.4, 112.9, 52.2, 51.7, 30.7,

21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{28}H_{26}NO_7S$: 520.1430, Found: 520.1433.

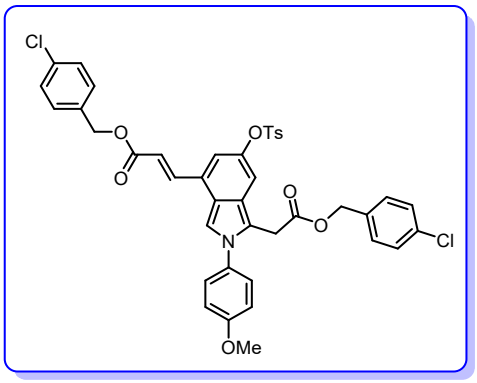


Methyl (*E*)-3-(2-(4-chlorophenyl)-1-(2-methoxy-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6i), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77-7.71 (m, 3H), 7.51 (dd, *J* = 2.0 Hz, 6.4 Hz, 2H), 7.44 (s, 1H), 7.38 (dd, *J* = 2.4 Hz, 6.8 Hz, 2H), 7.33 (d, *J* = 8.4 Hz, 2H), 7.30 (d, *J* = 1.2 Hz, 1H), 6.72 (d, *J* = 1.6 Hz, 1H), 6.38 (d, *J* = 16.0 Hz, 1H), 3.81 (s, 2H), 3.80 (s, 3H), 3.64 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 170.0, 167.4, 145.4, 144.0, 142.6, 137.4, 135.2, 132.6, 129.8, 129.6, 128.6, 127.9, 123.5, 121.0, 119.9, 119.2, 117.5, 114.4, 112.8, 52.4, 51.8, 30.6, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{28}H_{25}ClNO_7S$: 554.1040, Found: 554.1044.

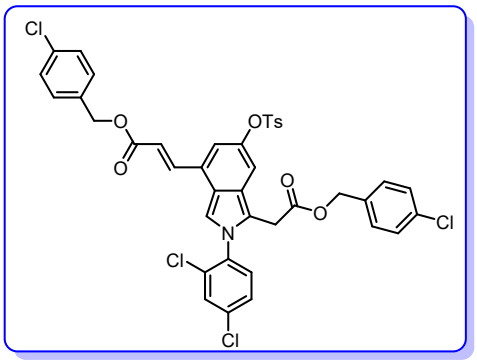


3-Methylbut-2-en-1-yl (*E*)-3-(2-(4-methoxyphenyl)-1-(2-((3-methylbut-2-en-1-yl)oxy)-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6j), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.75 (d, J = 8.0 Hz, 2H), 7.71 (d, *J* = 16.0 Hz, 1H), 7.43 (s, 1H), 7.32 (d, *J* = 8.8 Hz,5H), 6.99 (d, *J* = 8.8 Hz, 2H), 6.67 (d, *J* = 1.6 Hz, 1H), 6.38 (d, *J* = 16.0 Hz, 1H), 5.41 (t, *J* = 3.2 Hz, 1H), 5.26 (t, *J* = 3.2 Hz, 1H), 4.69 (d, *J* = 7.2 Hz, 2H), 4.51 (d, *J* = 7.2 Hz, 2H), 3.88 (s, 3H), 3.78 (s, 2H), 2.45 (s, 3H), 1.77 (s, 3H), 1.74 (d, *J* = 4.0 Hz, 6H), 1.66 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.8, 167.1, 159.8, 145.3,

143.7, 142.8, 139.6, 139.3, 132.6, 131.7, 129.7, 128.6, 127.8, 123.1, 121.0, 119.4, 119.3, 118.5, 118.1, 118.0, 114.5, 114.3, 113.0, 62.1, 61.5, 55.6, 30.9, 25.8, 25.7, 21.6, 18.0, 17.9. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{37}H_{40}NO_8S$: 658.2475, Found: 658.2477.

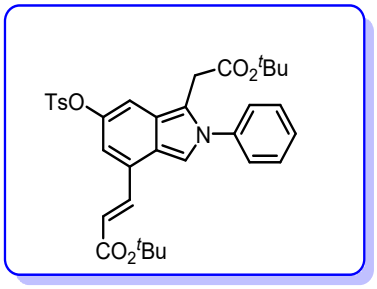


4-Chlorobenzyl (*E*)-3-(1-(2-((4-chlorobenzyl)oxy)-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6k), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77-7.34 (m, 3H), 7.41 (s, 1H), 7.31 (s, 4H), 7.25 (d, J = 12.8 Hz, 5H), 7.23 (dd, J = 2.0 Hz, 6.8 Hz, 4H), 7.15 (d, J = 8.4 Hz, 2H), 6.92 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 6.71 (d, J = 1.6 Hz, 1H), 6.41 (d, J = 16.0 Hz, 1H), 5.19 (s, 2H), 5.01 (s, 2H), 3.86 (s, 3H), 3.84 (s, 2H), 2.43 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.4, 166.7, 159.9, 145.3, 143.7, 143.5, 134.5, 134.3, 134.2, 133.9, 132.6, 131.5, 129.7, 129.7, 128.7, 128.7, 128.6, 127.7, 123.3, 121.2, 119.4, 118.8, 117.6, 114.6, 114.4, 113.2, 66.0, 65.6, 55.6, 30.8, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{41}H_{35}Cl_2NO_8S$: 771.1460, Found: 771.1462.

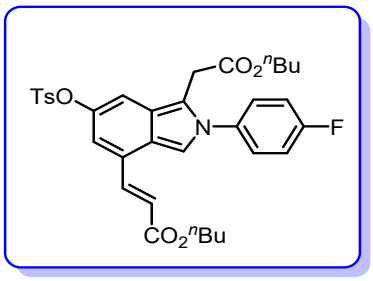


4-Chlorobenzy (*E*)-3-(1-(2-((4-chlorobenzyl)oxy)-2-oxoethyl)-2-(2,4-dichlorophenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6l), ^{1}H NMR (400 MHz,

$CDCl_3$) δ 7.74 (dd, J = 3.6 Hz,12.0 Hz, 3H), 7.52-7.50 (m, 2H), 7.41 (s, 1H), 7.34 (s, 4H), 7.33-7.30 (m, 5H), 7.23 (dd, J = 2.4 Hz, 8.4 Hz, 1H), 7.18-7.16 (m, 2H), 6.73 (d, J = 1.6 Hz, 1H), 6.40 (d, J = 16.0 Hz, 1H), 5.20 (s, 2H), 5.02 (s, 2H), 3.85 (s, 2H), 2.43 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.2, 166.6, 145.4, 144.1, 143.0, 138.0, 134.5, 134.4, 134.2, 133.7, 133.6, 133.5, 132.5, 131.0, 129.8, 129.8, 129.8, 128.9, 128.8, 128.5, 127.9, 125.9, 123.8, 121.7, 112.0, 119.2, 117.2, 114.4, 112.9, 66.4, 65.7, 30.8, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{40}H_{31}Cl_4NO_7S$: 811.0546, Found: 811.0548.

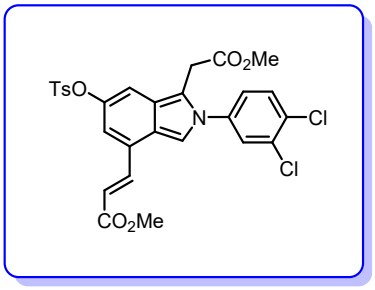


***tert*-Butyl (*E*)-3-(1-(2-(*tert*-butoxy)-2-oxoethyl)-2-phenyl-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6n), ^{1}H NMR (400 MHz, $CDCl_3$) δ** 7.76 (d, J = 8.0 Hz, 2H), 7.63 (d, J = 16.0 Hz, 1H), 7.51-7.49 (m, 3H), 7.45-7.43 (m, 3H), 7.32 (d, J = 8.0 Hz, 3H), 6.66 (d, J = 1.6 Hz, 1H), 6.30 (d, J = 16.0 Hz, 1H), 3.73 (s, 2H), 2.45 (s, 3H), 1.52 (s, 9H), 1.36 (s, 9H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.0, 166.4, 145.2, 143.8, 141.7, 139.1, 132.6, 129.7, 129.3, 128.8, 128.6, 128.1, 126.7, 123.3, 121.4, 120.5, 119.8, 118.2, 114.2, 112.6, 81.6, 80.6, 32.2, 28.2, 27.9, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{34}H_{39}NO_7S$: 605.2447, Found: 605.2449.

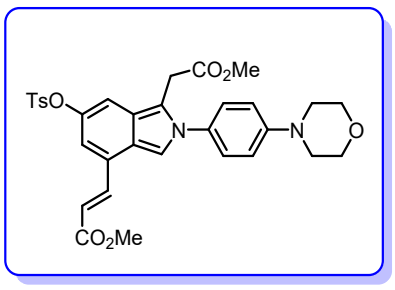


Butyl (*E*)-3-(1-(2-butoxy-2-oxoethyl)-2-(4-fluorophenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6o), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77-7.75 (m, 2H), 7.71 (d, J = 16.0

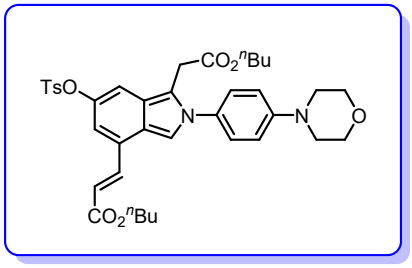
Hz, 1H), 7.44 (s, 1H), 7.43-7.41 (m, 2H), 7.33 (d, J = 8.0 Hz, 2H), 7.30 (d, J = 2.0 H Z, 1H), 7.23-7.19 (m, 2H), 6.70 (d, J = 1.6 Hz, 1H), 6.36 (d, J = 16.0 Hz, 1H), 4.20 (t, J = 2.4 Hz, 2H), 4.02(t, J = 2.8 Hz, 2H), 3.78 (s, 2H), 2.46 (s, 3H), 1.70-1.66 (m, 2H), 1.56-1.51 (m, 2H), 1.45-1.40 (m, 2H), 1.33-1.27 (m, 2H), 0.96 (t, J = 7.2 Hz, 3H), 0.89 (t, J = 7.2 Hz, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 169.7, 167.1, 162.7 (d, J = 254.0 Hz), 145.3, 143.9, 142.5, 137.2, 132.6, 130.0, 129.8, 128.6, 128.5, 128.0, 123.4, 121.0, 119.8, 119.6, 118.2, 117.9, 116.4, 116.2, 114.3, 113.0, 65.2, 64.5, 30.8, 30.7, 30.6, 30.5, 21.7, 19.2, 19.1, 19.0, 13.7, 13.6. **^{19}F NMR (60 MHz, $CDCl_3$)** δ -114.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{34}H_{38}FNO_7S$: 623.2353, Found: 623.2358.



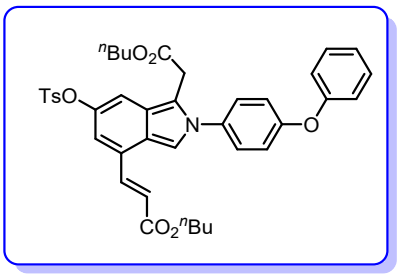
Methyl (*E*)-3-(2-(3,4-dichlorophenyl)-1-(2-methoxy-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6p), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77-7.74 (m, 3H), 7.61 (d, J = 8.8 Hz, 1H), 7.58 (d, J = 2.4 Hz, 1H), 7.43 (s, 1H), 7.39-7.36 (m, 2H), 7.34-7.31 (m, 3H), 7.29 (d, J = 1.6 Hz, 1H), 6.72 (d, J = 16 Hz, 1H), 6.37 (d, J = 16.4 Hz, 1H), 3.81 (s, 2H), 3.80 (s, 3H), 3.67 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 169.9, 167.4, 145.4, 144.2, 142.5, 138.0, 133.5, 132.5, 131.1, 130.1, 129.8, 128.7, 128.6, 128.0, 125.9, 123.7, 121.2, 119.4, 117.5, 114.3, 112.8, 52.5, 51.8, 30.6, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{28}H_{25}ClNO_7S$: 589.0729, Found: 589.0733.



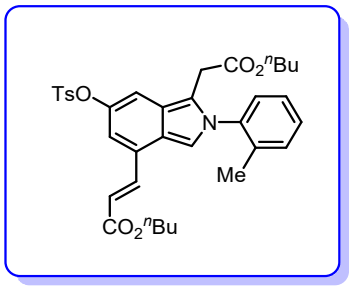
Methyl (*E*)-3-(1-(2-methoxy-2-oxoethyl)-2-(4-morpholinophenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6q), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77-7.71 (m, 3H), 7.42 (s, 1H), 7.32 (d, *J* = 8.0 Hz, 2H), 7.30-7.28 (m, 3H), 6.98 (d, *J* = 8.8 Hz, 2H), 6.69 (d, *J* = 1.6 Hz, 1H), 6.38 (d, *J* = 16.0 Hz, 1H), 3.90 (t, *J* = 4.8 Hz, 4H), 3.81 (s, 2H), 3.79 (s, 3H), 3.63 (s, 3H), 3.25 (t, *J* = 4.8 Hz, 4H), 2.46 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 170.3, 167.5, 151.5, 145.3, 143.7, 143.0, 132.6, 130.5, 129.8, 128.7, 127.8, 127.4, 123.0, 120.8, 119.5, 119.0, 117.7, 115.4, 114.5, 113.0, 66.7, 52.3, 51.7, 48.7, 30.7, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{32}H_{34}N_2O_8S$: 606.2036, Found: 606.2037.



***tert*-Butyl (*E*)-3-(1-(2-(*tert*-butoxy)-2-oxoethyl)-2-(4-morpholinophenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6r), ^{1}H NMR (400 MHz, $CDCl_3$) δ** 7.75 (d, *J* = 8.4 Hz,2H), 7.21 (d, *J* = 16.0 Hz, 1H), 7.42 (s, 1H), 7.33-7.29 (m, 5H), 6.97 (d, *J* = 8.8 Hz, 2H), 6.68 (d, *J* = 1.6 Hz, 1H), 6.37 (d, *J* = 16.0 Hz, 1H), 4.19 (t, *J* = 6.4 Hz, 2H), 4.02 (t, *J* = 6.8 Hz, 2H), 3.89 (t, *J* = 4.8 Hz, 4H), 3.79 (s, 2H), 3.24 (t, *J* = 4.8 Hz, 4H), 2.45 (s, 3H), 1.69-1.64 (m, 2H), 1.58-1.51 (m, 2H), 1.45-1.40 (m, 2H), 1.33-1.25 (m, 2H), 0.95 (t, *J* = 7.2 Hz, 3H), 0.89 (t, *J* = 7.2 Hz, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.9, 167.2, 151.4, 145.3, 143.7, 142.7, 132.6, 130.6, 129.7, 128.6, 127.8, 127.4, 123.1, 120.8, 119.5, 119.4, 117.9, 115.3, 114.5, 112.9, 66.7, 65.1, 64.5, 48.7, 30.9, 30.74, 30.5, 21.7, 19.2, 19.0, 13.7, 13.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{38}H_{46}N_2O_8S$: 690.2975, Found: 690.2977.

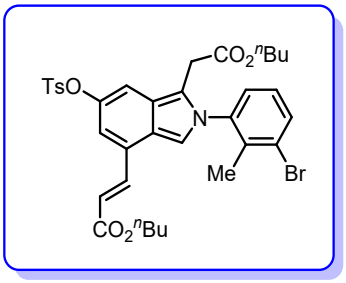


Butyl (*E*)-3-(1-(2-butoxy-2-oxoethyl)-2-(4-phenoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6s), ^{1}H NMR (400 MHz, CDCl$_3$) δ 7.76 (d, *J* = 8.4 Hz, 2H), 7.72 (d, *J* = 16.4 Hz, 1H), 7.46 (s, 1H), 7.41-7.36 (m, 5H), 7.34-7.30 (m, 3H), 7.19-7.17 (m, 1H), 7.10 (dd, *J* = 2.0 Hz, 5.6 Hz, 4H), 6.70 (d, *J* = 1.6 Hz, 1H), 6.38 (d, *J* = 16.0 Hz, 1H), 4.21 (t, *J* = 2.4 Hz, 2H), 4.03 (t, *J* = 2.8 Hz, 2H), 3.82 (s, 2H), 2.46 (s, 3H), 1.72-1.65 (m, 2H), 1.59-1.51 (m, 2H), 1.46-1.41 (m, 2H), 1.34-1.26 (m,2H), 0.96 (t, *J* = 3.2 Hz, 3H), 0.89 (t, *J* = 3.2 Hz, 3H). **^{13}C NMR (100 MHz, CDCl$_3$) δ** 169.8, 167.2, 158.2, 156.1, 145.3, 143.8, 142.6, 133.6, 132.6, 130.0, 129.7, 128.6, 128.1, 127.9, 124.3, 123.3, 120.9, 119.7, 119.6, 119.5, 118.5, 117.9, 114.4, 112.9, 65.1, 64.5, 30.9, 30.7, 30.5, 21.7, 19.1, 19.0, 13.7, 13.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{40}H_{43}NO_8S$: 697.2709, Found: 697.2711.

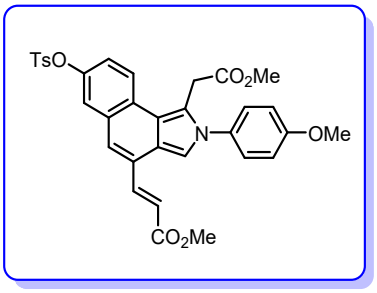


Butyl (*E*)-3-(1-(2-butoxy-2-oxoethyl)-2-(o-tolyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6t), ^{1}H NMR (400 MHz, CDCl$_3$) δ 7.78 (d, *J* = 8.4 Hz, 2H), 7.72 (d, *J* = 16.0 Hz, 1H), 7.42 (dd, *J* = 1.2 Hz, 7.2 Hz, 1H), 7.37 (s, 1H), 7.35 (s, 2H), 7.33 (t, *J* = 2.0 Hz, 2H), 7.32-7.30 (m, 1H), 7.26-7.24 (m, 1H), 6.71 (d, *J* = 2.0 Hz, 1H), 6.36 (d, *J* = 16.0 Hz, 1H), 4.12 (t, *J* = 1.6 Hz, 2H), 3.96 (t, *J* = 2.8 Hz, 2H), 3.75 (d, *J* = 16.4 Hz, 1H), 3.56 (d, *J* = 16.4 Hz, 1H), 2.46 (s, 3H), 1.98 (s, 3H), 1.69-1.65 (m, 2H), 1.51-1.46 (m, 2H), 1.43-1.39 (m, 2H), 1.26-1.20 (m, 2H), 0.95 (t, *J* = 7.2 Hz, 3H), 0.86 (t, *J* = 7.2 Hz, 3H). **^{13}C NMR (100 MHz, CDCl$_3$) δ** 167.2, 145.3, 143.7, 142.7, 137.7, 135.5,

132.7, 130.9, 129.7, 129.6, 128.6, 127.9, 127.9, 126.6, 122.8, 120.9, 119.7, 119.4, 117.9, 114.6, 112.3, 65.0, 64.4, 30.7, 30.4, 21.7, 19.1, 18.9, 17.1, 13.7, 13.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{35}H_{41}NO_7S$: 619.2604, Found: 619.2609.

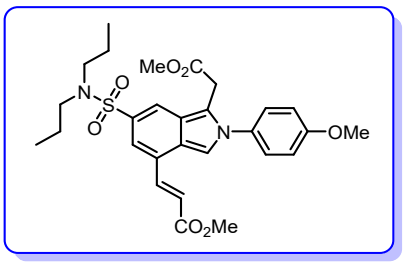


Butyl (*E*)-3-(2-(3-bromo-2-methylphenyl)-1-(2-butoxy-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6u), ^{1}H NMR (400 MHz, $CDCl_3$) ***δ*** 7.78 (d, *J* = 8.4 Hz, 2H), 7.73-7.69 (m, 2H), 7.38-7.33 (m, 4H), 7.24 (d, *J* = 1.2 Hz, 1H), 7.20 (d, *J* = 8.0 Hz, 1H), 6.71 (d, *J* = 1.6 Hz, 1H), 6.34 (d, *J* = 16.0 Hz, 1H), 4.12 (t, *J* = 2.8 Hz, 2H), 3.98 (t, *J* = 2.8 Hz, 2H), 3.75 (d, *J* = 16.4 Hz, 1H), 3.52 (d, *J* = 16.8 Hz, 1H), 2.46 (s, 3H), 1.98 (s, 3H), 1.70-1.63 (m, 2H), 1.51-1.46 (m, 2H), 1.44-1.39 (m, 2H), 1.28-1.21 (m, 2H), 0.95 (t, *J* = 7.2 Hz, 3H), 0.87 (t, *J* = 2.8 Hz, 2H). **^{13}C NMR (100 MHz, $CDCl_3$)** ***δ*** 169.3, 167.1, 145.3, 143.9, 142.5, 138.7, 136.2, 133.9, 132.7, 129.7, 128.6, 128.0, 127.3, 127.2, 126.0, 122.9, 121.0, 119.8, 119.9, 118.1, 114.5, 112.4, 65.1, 64.5, 30.7, 30.7, 30.4, 21.7, 19.1, 19.0, 18.9, 17.9, 13.7, 13.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{35}H_{40}BrNO_7S$: 697.1709, Found: 697.1712.

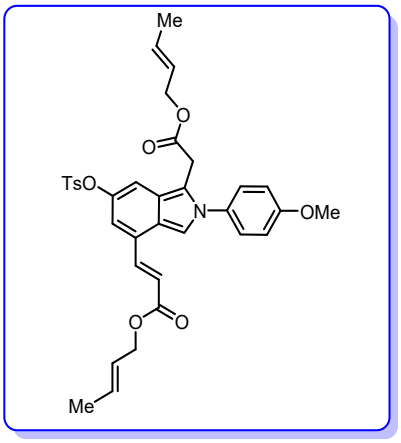


Methyl (*E*)-3-(1-(2-methoxy-2-oxoethyl)-2-(4-methoxyphenyl)-7-(tosyloxy)-2*H*-benzo[*e*]isoindol-4-yl)acrylate (6v), ^{1}H NMR (400 MHz, $CDCl_3$) ***δ*** 7.95 (d, *J* = 8.8 Hz,1H), 7.90 (d, *J* = 16.0 Hz, 1H), 7.71 (d, *J* = 8.4 Hz, 2H), 7.52 (s, 1H), 7.36 (dd, *J* = 1.6 Hz, 7.8 Hz, 2H), 7.32 (d, *J* = 2.4 Hz, 1H), 7.30 (s, 2H), 7.28 (s. 1H), 7.16 (dd, *J* =

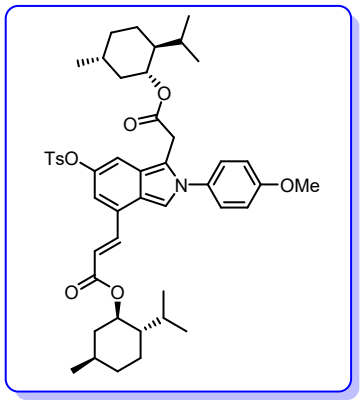
2.4 Hz, 8.8 Hz, 1H), 7.02 (dd, *J* = 1.6 Hz, 7.8 Hz, 2H), 6.58 (d, *J* = 16.0 Hz, 1H), 4.05 (s, 2H), 3.89 (s, 3H), 3.81 (s, 3H), 3.69 (s, 3H), 2.44 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 170.7, 167.6, 159.9, 146.3, 145.3, 143.4, 132.3, 131.8, 131.6, 129.7, 128.6, 128.4, 128.2, 127.6, 126.4, 123.6, 122.1, 121.9, 119.4, 119.3, 119.2, 118.1, 114.9, 114.4, 55.6, 52.4, 51.7, 29.7, 21.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{33}H_{40}NO_8S$: 600.1770, Found: 600.1776.



Methyl (*E*)-3-(6-(*N*,*N*-dipropylsulfamoyl)-1-(2-methoxy-2-oxoethyl)-2-(4-methoxyphenyl)-2*H*-isoindol-4-yl)acrylate (6w), ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.18 (s, 1H), 7.90 (d, *J* = 16.0 Hz, 1H), 7.51 (s, 1H), 7.50 (s, 1H), 7.33 (d, *J* = 8.8 Hz, 2H), 7.01 (d, *J* = 8.8 Hz, 2H), 6.55 (d, *J* = 16.0 Hz, 1H), 3.93 (s, 2H), 3.87 (s, 3H), 3.80 (s, 3H), 3.63 (s, 3H), 3.12 (t, *J* = 7.6 Hz, 4H), 1.61-1.55 (m, 4H), 0.88 (t, *J* = 7.6 Hz, 6H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.9, 167.4, 160.1, 143.2, 132.1, 131.3, 127.7, 127.4, 123.6, 122.6, 122.1, 120.8, 120.4, 119.4, 114.5, 113.6, 55.6, 52.3, 51.7, 50.0, 30.6, 22.1, 11.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{28}H_{35}N_2O_7S$: 543.2243, Found: 543.2249.

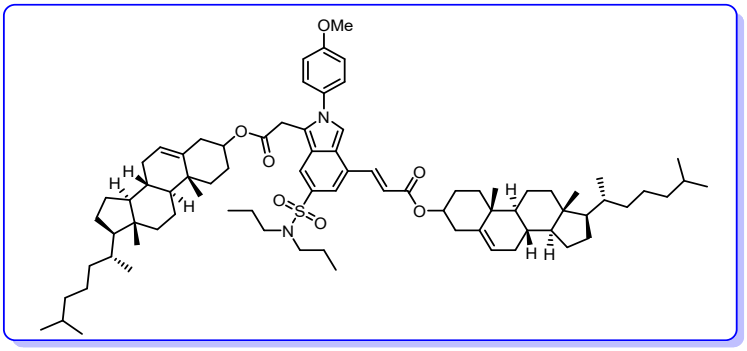


(*E*)-But-2-en-1-yl (*E*)-3-(1-(2-(((*E*)-but-2-en-1-yl)oxy)-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6x), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.75 (d, *J* = 8.4 Hz, 2H), 7.72 (d, *J* = 16.0 Hz, 1H), 7.43 (s, 1H), 7.34 (d, *J* = 8.8 Hz, 5H), 7.00 (dd, *J* = 2.4 Hz, 6.8 Hz, 2H), 6.68 (d, *J* = 1.6 Hz, 1H), 6.38 (d, *J* = 16.0 Hz, 1H), 5.87-5.80 (m, 1H), 5.78-5.70 (m, 1H), 5.69-5.61 (m, 1H), 5.55-5.49 (m, 1H), 4.62 (d, *J* = 6.8 Hz, 2H), 4.44 (d, *J* = 6.4 Hz, 2H), 3.88 (s, 3H), 3.79 (s, 2H), 2.45 (s, 3H), 1.75-1.73 (m, 3H), 1.72-1.70 (m, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 169.6, 166.9, 159.9, 145.3, 143.7, 143.0, 132.6, 131.9, 131.7, 131.6, 129.7, 128.6, 127.8, 127.8, 125.1, 124.6, 123.2, 121.0, 119.4, 119.2, 117.9, 114.5, 114.4, 113.1, 65.9, 65.3, 55.6, 30.9, 29.7, 21.7, 17.8, 17.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{35}H_{37}NO_8S$: 631.2240, Found: 631.2244.

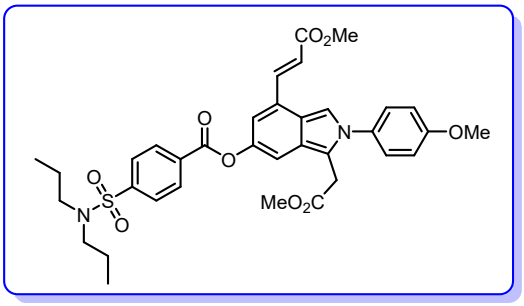


(1*R*,2*S*,5*R*)-2-Isopropyl-5-methylcyclohexyl (*E*)-3-(1-(2-(((1*R*,2*S*,5*R*)-2-isopropyl-5-methylcyclohexyl)oxy)-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6y), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77-7.75 (m, 2H), 7.70 (d, *J* = 16.0 Hz, 1H), 7.43 (s, 1H), 7.34-7.30 (m, 5H), 7.00 (d, *J* = 2.0 Hz, 2H), 6.67 (d, *J* = 1.6 Hz, 1H), 6.35 (d, *J* = 16.0 Hz, 1H), 4.85-4.79 (m, 1H), 4.62-4.45 (m, 1H), 3.87 (s, 3H), 3.78 (s, 2H), 2.45 (s, 3H), 1.93-1.91 (m, 1H), 1.90-1.88 (m, 1H), 1.87-1.85 (m, 1H), 1.85-1.83 (m, 1H), 1.71-1.70 (m, 2H), 1.68-1.67 (m, 2H), 1.64-1.63 (m, 2H), 1.62-1.60 (m, 2H), 1.57-1.55 (m, 1H), 1.53-1.50 (m, 2H), 1.48-1.46 (m, 1H), 1.44-1.40 (m, 2H), 0.91-0.87 (m, 9H), 0.78 (d, *J* = 1.2 Hz, 3H), 0.77 (d, *J* = 1.2 Hz, 3H), 0.61 (d, *J* = 7.2 Hz, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ**169.3, 166.7, 159.8, 145.2, 143.7, 142.6, 132.7, 131.8, 130.1, 130.0, 129.7, 129.0, 128.6, 127.8, 127.8, 123.3, 120.8, 119.8,

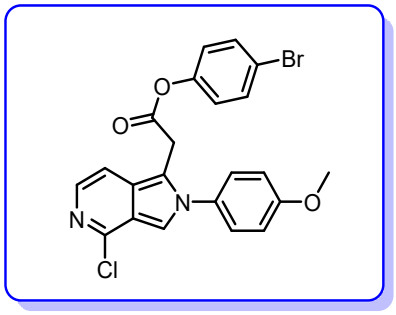
119.5, 118.1, 114.4, 114.3, 112.9, 75.2, 74.3, 74.2, 55.5, 47.2, 47.0, 46.9, 41.0, 40.8, 40.6, 34.3, 34.1, 31.9, 31.4, 31.3, 31.1, 29.7, 29.3, 26.3, 26.2, 26.1, 23.5, 23.4, 23.2, 22.6, 22.0 (2C), 21.9, 21.7, 20.8, 20.7, 16.4, 16.3, 16.1, 14.1. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{47}H_{60}NO_8S$: 798.4118, Found: 798.4125.



(8*S*,9*S*,10*R*,13*R*,14*S*,17*R*)-10,13-Dimethyl-17-((*R*)-6-methylheptan-2-yl)-2,3,4,7,8,9,10,11,12,13,14,15,16,17-tetradecahydro-1*H*-cyclopenta[*a*]phenanthren-3-yl (*E*)-3-(1-(2-(((8*S*,9*S*,10*R*,13*R*,14*S*,17*R*)-10,13-dimethyl-17-((*R*)-6-methylheptan-2-yl)-2,3,4,7,8,9,10,11,12,13,14,15,16,17-tetradecahydro-1*H*-cyclopenta[*a*]phenanthren-3-yl)oxy)-2-oxoethyl)-6-(*N*,*N*-dipropylsulfamoyl)-2-(4-methoxyphenyl)-2*H*-isoindol-4-yl)acrylate (6z), ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.21 (s, 1H), 7.88 (d, J = 16.0 Hz, 1H), 7.52 (s, 1H), 7.46 (s, 1H), 7.37 (d, J = 8.8 Hz, 1H), 7.02 (d, J = 8.8 Hz, 2H), 6.53 (d, J = 16.0 Hz, 1H), 5.40 (d, J = 3.6 Hz, 1H), 5.33 (d, J = 4.0 Hz, 1H), 4.78-4.73 (m, 1H), 4.59-4.51 (m, 1H), 3.90 (s, 2H), 3.89 (s, 3H), 3.13 (t, J = 7.6 Hz, 4H), 2.41 (d, J = 7.6 Hz, 2H), 2.23 (d, J = 6.8 Hz, 2H), 2.00-1.92 (m, 8H), 1.88-1.80 (m, 6H), 1.64-1.54 (m, 8H), 1.51-1.44 (m, 12H), 1.18-1.09 (m, 16H), 1.06 (s, 3), 1.00 (s, 3H), 0.92-0.90 (m, 6H), 0.89 (s, 3H), 0.87-0.86 (m, 9H), 0.85 (t, J = 1.6 Hz, 6H), 0.67 (d, J = 6.0 Hz, 6H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 169.0, 166.5, 160.1, 143.0, 139.6, 139.3, 132.1, 131.5, 127.8, 127.5, 122.9, 122.7, 122.2, 120.9, 120.8, 120.2, 114.5, 75.2, 74.2, 56.7, 56.1, 55.6, 50.1, 50.0, 49.9, 42.3, 39.7, 39.5, 38.2, 37.9, 37.0, 36.8, 36.6, 36.5, 36.2, 35.8, 31.8, 31.8, 31.3, 29.7, 28.2, 28.0, 27.9, 27.6, 24.3, 23.8, 22.8, 22.5, 22.2, 21.0, 19.3, 19.3, 18.7, 11.8, 11.3. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{80}H_{119}N_2O_7S$: 1251.8816, Found: 1251.8820.

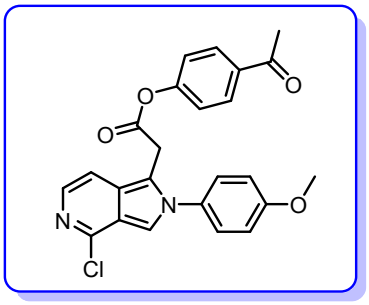


(*E*)-3-(2-Methoxy-2-oxoethyl)-7-(3-methoxy-3-oxoprop-1-en-1-yl)-2-(4-methoxyphenyl)-2*H*-isoindol-5-yl 4-(*N*,*N*-dipropylsulfamoyl)benzoate (6za), ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.35 (d, J = 8.4 Hz, 2H), 7.96 (d, J = 8.4 Hz, 2H), 7.90 (d, J = 16.0 Hz, 1H), 7.51 (s, 1H), 7.46 (d, J = 1.2 Hz, 1H), 7.36 (d, J = 8.4 Hz, 2H), 7.09 (d, J = 1.6 Hz, 1H), 7.03 (dd, J = 2.4 Hz, 6.8 Hz, 2H), 6.55 (d, J = 8.0 Hz, 1H), 3.90 (s, 3H), 3.87 (s, 2H), 3.81 (s, 3H), 3.15 (t, J = 7.6 Hz, 4H), 1.61-1.55 (m, 4H), 0.90 (t, J = 7.2 Hz, 6H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 170.5, 167.6, 164.3, 159.9, 144.8, 144.8, 143.3, 133.0, 131.8, 130.8, 127.9, 127.9, 127.2, 123.4, 121.0, 119.5, 118.9, 117.2, 114.4, 113.2, 112.6, 55.6, 52.3, 51.7, 49.9, 33.9, 30.8, 25.6, 24.9, 21.9, 11.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{35}H_{39}N_2O_9S$: 663.2376, Found: 663.2378.

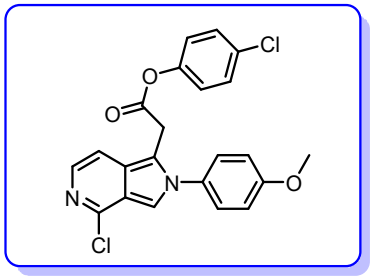


4-Bromophenyl 2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetate (6zb), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77 (d, J = 6.0 Hz, 1H), 7.50 (s, 1H), 7.45 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 7.37 (dd, J = 2.0 Hz, 6.4 Hz, 2H), 7.33 (d, J = 6.0 H, 1H), 7.04 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 6.82 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 4.07 (s, 2H), 3.90 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 167.9, 160.3, 149.4, 146.0, 136.4, 132.5,

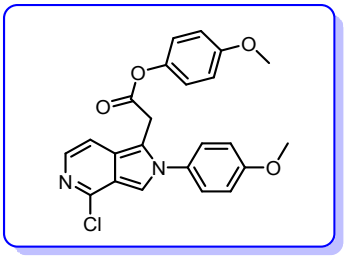
131.1, 127.9, 125.4, 123.0, 119.9, 119.2, 115.9, 114.7, 111.7, 55.7, 31.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{22}H_{17}BrClN_2O_3$: 471.0111, Found: 471.0111.



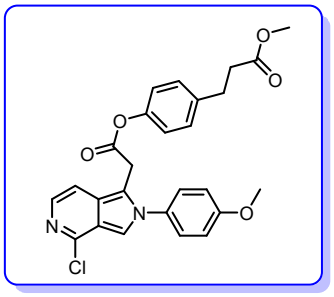
4-Acetylphenyl 2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetate (6zc), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.94 (d, J = 8.4 Hz, 2H), 7.78 (d, J = 6.0 Hz, 1H), 7.51 (s, 1H), 7.38 (d, J = 8.8 Hz, 2H), 7.34 (d, J = 6.4 Hz, 1H), 7.04 (t, J = 8.0 Hz, 4H), 4.10 (s, 2H), 3.90 (s, 3H), 2.57 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.7, 167.7, 160.3, 154.0, 146.0, 136.4, 134.9, 131.0, 129.9, 127.9, 125.4, 121.4, 119.8, 116.0, 115.8, 114.7, 111.7, 55.7, 31.2, 26.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{24}H_{20}ClN_2O_4$: 432.1112, Found: 432.1115.



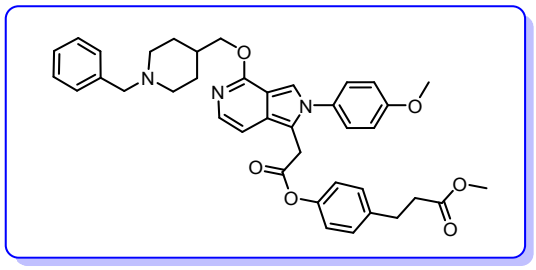
4-Chlorophenyl 2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetate (6zd), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77 (d, J = 6.4 Hz, 1H), 7.51 (s, 1H), 7.37 (d, H = 8.4 Hz, 2H), 7.33 (d, J = 6.0 Hz, 1H), 7.30 (d, J = 8.8 Hz, 2H), 7.05 (d, J = 8.4 Hz, 2H), 6.87 (d, J = 8.4 Hz, 2H), 4.07 (s, 2H), 3.90 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 168.0, 160.3, 148.8, 146.0, 136.2, 131.5, 131.0, 129.5, 127.9, 125.4, 122.6, 119.8, 116.8, 116.0, 116.0, 114.6, 111.8, 55.7, 31.1. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{22}H_{17}Cl_2N_2O_3$: 427.0616, Found: 427.0620.



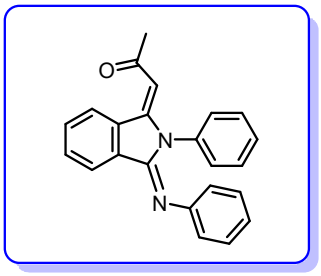
4-Methoxyphenyl 2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetate (6ze), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77 (d, J = 6.0 Hz, 1H), 7.49 (s, 1H), 7.38 (dd, J = 2.4 Hz, 6.8 Hz, 2H), 7.35 (d, J = 6.0 Hz, 1H), 7.04 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 6.84 (s, 4H), 4.05 (s, 2H), 3.90 (s, 3H), 3.77 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 168.6, 160.2, 157.4, 145.9, 143.9, 136.3, 131.1, 127.9, 125.3, 122.0, 119.8, 116.4, 115.7, 114.6, 114.4, 111.9, 55.7, 55.6, 31.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{23}H_{20}ClN_2O_4$: 423.1112, Found: 423.1115.



Methyl 3-(4-(2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetoxy)phenyl)propanoate (6zf), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77 (d, J = 5.6 Hz, 1H), 7.50 (s, 1H), 7.38 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 7.35 (d, J = 6.0 Hz, 1H), 7.16 (d, J = 8.8 Hz, 2H), 7.04 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 6.84 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 4.06 (s, 2H), 3.90 (s, 3H), 3.65 (s, 3H), 3.92 (t, J = 7.6 Hz, 2H), 2.60 (t, J= 8.0 Hz, 2H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 173.1, 168.3, 160.2, 148.8, 145.9, 138.4, 136.2, 131.1, 129.3, 127.9, 125.3, 121.2, 116.3, 115.8, 114.6, 111.9, 55.7, 51.7, 35.5, 31.2, 30.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{26}H_{24}ClN_2O_5$: 479.1374, Found: 479.1377.

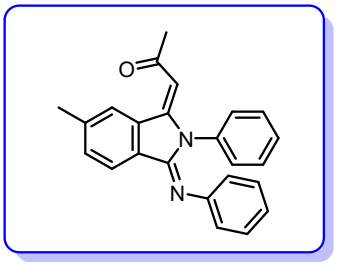


Methyl 3-(4-(2-(4-((1-benzylpiperidin-4-yl)methoxy)-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetoxy)phenyl)propanoate (6zf-I), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.76 (d, J = 6.0 Hz, 1H), 7.49 (s, 1H), 7.38 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 7.34 (dd, J = 0.8 Hz, 6.4 Hz, 1H), 7.31 (d, J = 4.4 Hz, 4H), 7.25-7.23 (m, 1H), 7.16 (d, J = 8.4 Hz, 2H), 7.04 (dd, J = 2.4 Hz, 6.8 Hz, 2H), 6.84 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 4.05 (s, 2H), 3.89 (s, 2H), 3.65 (s, 3H), 3.51 (s, 3H), 3.48 (d, J = 6.4 Hz, 2H), 2.94-2.89 (m, 4H), 2.95 (t, J = 8.0 Hz, 2H), 2.01-1.94 (m, 2H), 1.73-1.68 (m, 2H), 1.34-1.30 (m, 2H), 1.29-1.27 (m, 1H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 173.1, 168.3, 160.2, 148.8, 145.9, 138.4, 138.0, 136.2, 131.1, 129.3, 129.3, 128.1, 127.9, 127.0, 125.3, 121.1, 119.8, 116.3, 115.7, 114.6, 111.9, 67.8, 63.3, 55.6, 53.3, 51.6, 38.4, 35.5, 31.2, 30.2, 28.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{39}H_{42}N_3O_6$: 684.3074, Found: 684.3077.

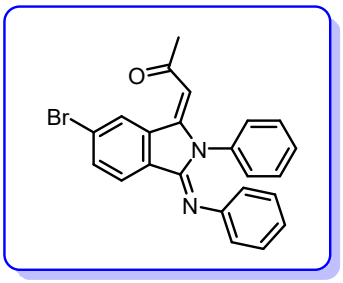


1-((1*E*,3*Z*)-2-Phenyl-3-(phenylimino)isoindolin-1-ylidene)propan-2-one (8a), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.31 (d, J = 8.0 Hz, 1H), 7.59-7.52 (m, 3H), 7.47 (t, J = 7.2 Hz, 1H), 7.39 (d, J = 7.6 Hz, 2H), 7.30 (t, J = 8.0 Hz, 2H), 7.24 (t, J = 7.6 Hz, 1H), 7.09 (t, J = 7.2 Hz, 1H), 6.89 (d, J = 7.6 Hz, 2H), 6.74 (d, J = 8.0 Hz, 1H), 5.62 (s, 1H), 2.18 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.0, 153.1, 151.1, 149.5, 135.8, 134.6, 131.7, 131.0, 129.7 (2C), 129.6 (2C), 129.1 (2C), 128.7, 128.0, 127.8, 125.2, 123.3,

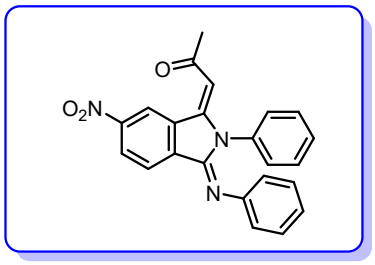
120.1 (2C), 103.3, 32.4. HRMS (ESI-TOF) m/z: [M + H]$^+$ Calcd for $C_{23}H_{19}N_2O$: 339.1419, Found: 33.1423.



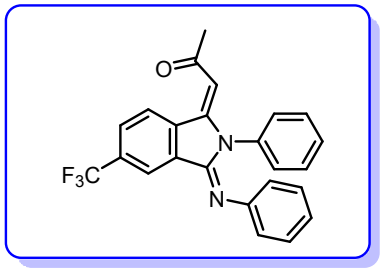
1-((1*E*,3*Z*)-6-Methyl-2-phenyl-3-(phenylimino)isoindolin-1-ylidene)propan-2-one (8b), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.15 (s, 1H), 7.58 (t, J = 7.6 Hz, 2H), 7.48 (t, J = 7.2 Hz, 1H), 7.39 (d, J = 7.6 Hz, 2H), 7.30 (t, J = 7.6 Hz, 2H), 7.12-7.06 (m, 2H), 6.89 (d, J = 8.0 Hz, 2H), 6.62 (d, J = 8.0 Hz, 1H), 5.61 (s, 1H), 2.45 (s, 3H), 2.20 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.1, 153.3, 151.9, 149.7, 142.5, 135.9, 134.9, 131.8, 129.7 (2C), 129.6 (2C), 129.1 (2C), 128.7, 128.3, 125.4, 125.0, 123.3, 120.3 (2C), 103.1, 32.4, 22.0. HRMS (ESI-TOF) m/z: [M+ H]$^+$ Calcd for $C_{24}H_{21}N_2O$: 353.1654, Found: 353.1655.



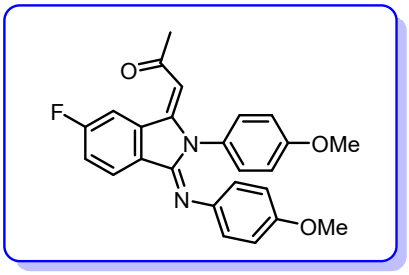
1-((1*E*,3*Z*)-6-Bromo-2-phenyl-3-(phenylimino)isoindolin-1-ylidene)propan-2-one (8c), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.56 (s, 1H), 7.59 (t, J = 7.2 Hz, 2H), 7.50 (t, J = 6.8 Hz, 1H), 7.38 (d, J = 6.0 Hz, 3H), 7.31 (t, J = 7.2 Hz, 2H), 7.11 (t, J = 7.2 Hz, 1H), 6.87 (d, J = 7.2 Hz, 2H), 6.58 (d, J = 8.4 Hz, 1H), 5.63 (s, 1H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.1, 152.4, 150.3, 149.2, 136.3, 135.5, 134.1, 131.1, 129.8 (2C), 129.5 (2C), 129.2 (2C), 129.0, 126.5, 126.3, 123.6, 120.1 (2C), 104.0, 32.4. HRMS (ESI-TOF) m/z: [M + H]$^+$ Calcd for $C_{23}H_{18}BrN_2O$: 417.0603, Found: 417.0606.



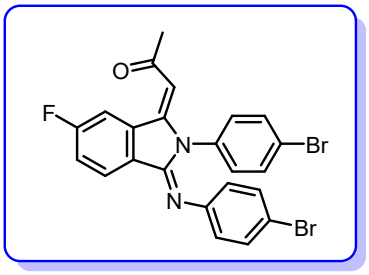
1-((1*E*, 3*Z*)-6-Nitro-2-phenyl-3-(phenylimino)isoindolin-1-ylidene)propan-2-one (8d), **^{1}H NMR (400 MHz, $CDCl_3$) δ** 10.26 (s, 1H), 8.11 (d, *J* = 7.6 Hz, 1H), 7.62 (t, *J* = 7.6 Hz, 2H), 7.53 (t, *J* = 7.2 Hz, 1H), 7.40 (d, *J* = 7.6 Hz, 2H), 7.34 (t, *J* = 7.6 Hz, 2H), 7.17-7.14 (m, 1H), 6.88 (d, *J* = 7.6 Hz, 3H), 5.73 (s, 1H), 2.24 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.2, 151.2, 149.8, 149.4, 148.8, 135.8, 135.2, 132.1, 130.0 (2C), 129.4 (2C), 129.3 (2C), 125.9, 125.4, 124.1, 123.7, 119.9 (2C), 116.5, 104.9, 32.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{23}H_{18}N_3O_3$: 384.1348, Found: 384.1353.



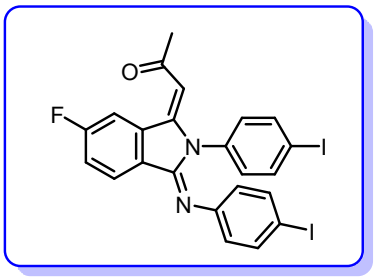
1-((1*E*,3*Z*)-2-Phenyl-3-(phenylimino)-5-(trifluoromethyl)isoindolin-1-ylidene)propan-2-one (8e), **^{1}H NMR (400 MHz, $CDCl_3$) δ** 9.45 (d, *J* = 8.4 Hz, 1H), 7.78 (d, *J* = 8.4 Hz, 1H), 7.61 (t, *J* = 7.6 Hz, 2H), 7.51 (t, *J* = 7.2 Hz, 1H), 7.40 (d, *J* = 7.2 Hz, 2H), 7.34 (t, *J* = 7.6 Hz, 2H), 7.16 (t, *J* = 7.2 Hz, 1H), 6.90 (d, *J* = 8.4 Hz, 3H), 5.70 (s, 1H), 2.22 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.2, 152.1, 150.0, 148.9, 137.4, 135.4, 132.5 (d, J = 32.0 Hz, 1C), 129.9 (2C), 129.4 (2C), 129.3 (2C), 129.1, 128.7, 128.5 (q, *J* = 4.0 Hz, 1C), 128.1, 125.8 (d, J = 2.0 Hz, 1C), 123.2 (d, *J* = 271.0 Hz, 1C), 122.2 (q, *J* = 4.0 Hz, 1C), 104.7, 32.5. **^{19}F NMR (300 MHz, $CDCl_3$) δ** -63.2 (3F). HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{24}H_{18}F_3N_2O$: 407.1371, Found: 407.1373.



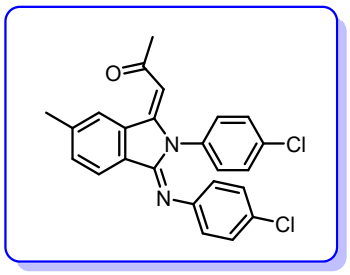
1-((1*E*,3*Z*)-6-Fluoro-2-(4-methoxyphenyl)-3-((4-methoxyphenyl)imino)isoindolin-1-ylidene)propan-2-one (8f), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.14 (dd, J = 2.4 Hz, 10.4 Hz, 1H), 5.62 (s, 1H), 7.29-7.26 (m, 2H), 7.08 (dd, J = 3.2 Hz, 10.0 Hz, 2H), 6.97-6.94 (m, 1H), 6.87-6.85 (m, 2H), 6.82-6.75 (m, 3H), 5.62 (s, 1H), 3.88 (s, 3H), 3.82 (s, 3H), 2.20 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.1, 165.7, 163.2, 159.6, 156.1, 153.1, 151.1, 142.6, 136.9, 130.5 (2C), 128.0, 121.2 (2C), 115.1 (2C), 115.4 (2C), 103.6, 55.5 (2C), 32.4. **^{19}F NMR (300 MHz, $CDCl_3$)** δ -105.9. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{25}H_{22}FN_2O_3$: 417.1614, Found: 417.1616.



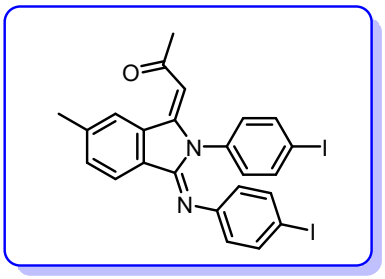
1-((1*E*,3*Z*)-2-(4-Bromophenyl)-3-((4-bromophenyl)imino)-6-fluoro-isoindolin-1-ylidene)propan-2-one (8g), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.11 (dd, J = 2.4 Hz, 10.4 Hz, 1H), 7.71 (d, J = 8.4 Hz, 2H), 7.43 (d, J = 8.4 Hz, 2H), 7.26 (d, J = 8.4 Hz, 2H), 7.04-6.99 (m, 1H), 6.81 (dd, J = 5.2 Hz, 8.8 Hz, 1H), 6.77 (d, J = 8.4 Hz, 2H), 5.64 (s, 1H), 2.22 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.0, 166.0, 163.5, 152.2, 149.9, 148.0, 136.8 (d, J = 12.0 Hz, 1C), 134.4, 133.1 (2C), 132.3 (2C), 131.1 (2C), 126.9 (d, J = 9.0 Hz, 1C), 123.4 (d, J = 44.0 Hz, 1C), 122.0 (2C), 118.5 (d, J = 23.0 Hz, 1C), 116.5, 115.6 (d, J = 27.0 Hz, 1C), 104.4, 32.4. **^{19}F NMR (300 MHz, $CDCl_3$)** δ 104.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{23}H_{16}FBr_2N_2O$: 514.9593, Found: 514.9596.



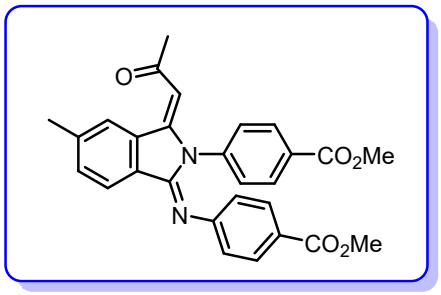
1-((1*E*,3*Z*)-6-Fluoro-2-(4-iodophenyl)-3-((4-iodophenyl)imino)isoindolin-1-ylidene)propan-2-one (8h), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.11 (dd, J = 2.0 Hz, 10.4 Hz, 1H), 7.91 (d, J = 8.4 Hz, 2H), 7.62 (d, J = 8.4 Hz, 2H), 7.12 (d, J = 8.0 Hz, 2H), 7.04-7.00 (m, 1H), 6.82 (dd, J = 4.8 Hz, 8.4 Hz, 1H), 6.65 (d, J = 8.4 Hz, 2H), 5.65 (s, 1H), 2.22 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.1, 152.1, 149.9, 148.7, 139.1 (2C), 138.3 (2C), 138.2, 136.9 (d, J = 12.0 Hz, 1C), 135.1, 131.4 (2C), 126.9 (d, J = 9.0 Hz, 1C), 123.6, 122.5 (2C), 118.6 (d, J = 23.0 Hz, 1C), 115.6 (d, J = 27.0 Hz, 1C), 104.5, 95.0, 86.9, 32.5. **^{19}F NMR (300 MHz, $CDCl_3$)** δ -104.7. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{23}H_{16}FI_2N_2O$: 608.9336, Found: 608.9339.



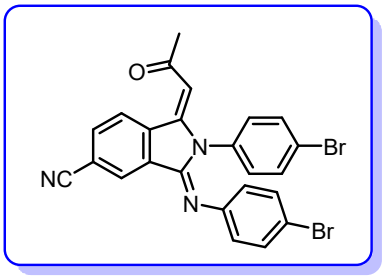
1-((1*E*,3*Z*)-2-(4-Chlorophenyl)-3-((4-chlorophenyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8i), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.11 (s, 1H), 7.54 (d, J = 8.0 Hz, 2H), 7.31 (d, J = 8.4 Hz, 2H), 7.27 (d, J = 8.8 Hz, 2H), 7.12 (d, J = 8.0 Hz, 1H), 6.82 (d, J = 8.0 Hz, 2H), 6.70 (d, J = 8.0 Hz, 1H), 5.59 (s, 1H), 2.46 (s, 3H), 2.21 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.1, 153.5, 151.3, 148.0, 143.0, 134.8, 134.2, 132.1, 131.0 (2C), 130.6, 130.1 (2C), 129.2 (2C), 128.7, 128.5, 125.1, 124.9, 121.7 (2C), 103.7, 32.4, 22.0. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{24}H_{19}Cl_2N_2O$: 421.0874, Found: 421.0879.



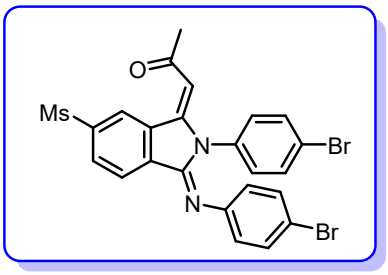
1-((1*E*,3*Z*)-2-(4-Iodophenyl)-3-((4-iodophenyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8j), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.11 (s, 1H), 7.90 (d, *J* = 8.4 Hz, 2H), 7.60 (d, *J* = 8.4 Hz, 2H), 7.14-7.11 (m, 3H), 6.72 (d, *J* = 8.0 Hz, 1H), 6.66 (d, *J* = 8.4 Hz, 2H), 5.60 (s, 1H), 2.46 (s, 3H), 2.22 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.1, 153.2, 151.1, 149.1, 143.0, 139.0 (2C), 138.1 (2C), 135.5, 134.8, 132.1, 131.5 (2C), 128.5, 125.0, 125.0, 122.7 (2C), 103.7, 94.7, 86.7, 32.4, 22.1. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{24}H_{19}I_2N_2O$: 604.9587, Found: 604.9584.



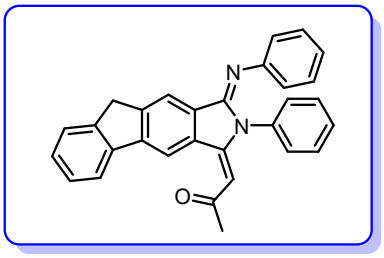
Methyl-4-(((1*Z*,3*E*)-2-(4-(methoxycarbonyl)phenyl)-5-methyl-3-(2-oxopropylidene)isoindolin-1-ylidene)amino)benzoate (8k), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.10 (s, 1H), 8.24 (d, *J* = 6.8 Hz, 2H), 8.00 (d, *J* = 7.6 Hz, 2H), 7.48 (d, *J* = 7.6 Hz, 2H), 7.08 (d, J = 7.2 Hz, 1H), 6.93 (d, *J* = 7.2 Hz, 2H), 6.66 (d, *J* = 6.4 Hz, 1H), 5.62 (s, 1H), 3.95 (s, 3H), 3.91 (s, 3H), 2.45 (s, 3H), 2.20 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.1, 167.0, 166.2, 153.9, 150.9, 143.2, 139.9, 134.7, 132.1, 131.0 (2C), 131.0 (2C), 130.5, 130.2, 129.7 (2C), 128.5, 127.6, 125.1, 124.9, 120.3 (2C), 104.1, 52.4, 51.9, 32.4, 22.1. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{28}H_{25}N_2O_5$: 469.1763, Found: 469.1768.



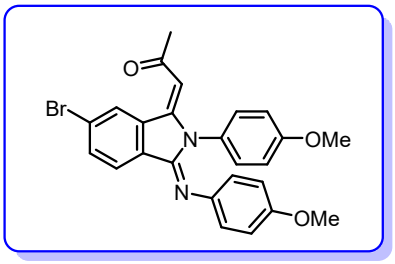
(1*E*, 3*Z*)-2-(4-Bromophenyl)-3-((4-bromophenyl)imino)-1-(2-oxopropylidene)isoindoline-5-carbonitrile (8l), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.45 (d, J = 8.0 Hz, 1H), 7.84 (d, J = 8.4 Hz, 1H), 7.73 (d, J = 8.4 Hz, 2H), 7.47 (d, J = 8.4 Hz, 2H), 7.25 (d, J = 8.0 Hz, 2H), 7.16 (s, 1H), 6.75 (d, J = 8.4 Hz, 2H), 5.72 (s, 1H), 2.45 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.1, 151.0, 148.8, 147.1, 137.8, 135.5, 134.0, 133.3, 132.7, 132.1, 131.0 (2C), 129.1, 128.4, 127.9, 123.5, 121.6, 118.0, 117.6, 117.3, 114.6, 105.8, 32.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{24}H_{16}Br_2N_3O$: 521.9640, Found: 541.9644.



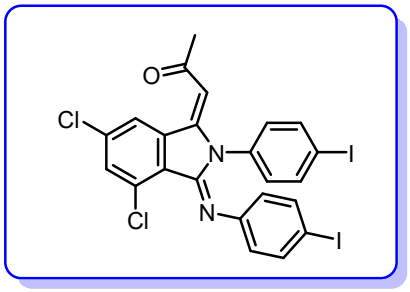
1-((1*E*, 3*Z*)-2-(4-Bromophenyl)-3-((4-bromophenyl)imino)-6-(methylsulfonyl)isoindolin-1-ylidene)propan-2-one (8m), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.93 (s, 1H), 7.91 (d, J = 8.0 Hz, 1H), 7.73 (d, J = 8.4 Hz, 2H), 7.45 (d, J = 8.4 Hz, 2H), 7.26 (d, J = 8.4 Hz, 2H), 7.03 (d, J = 8.4 Hz, 1H), 6.77 (d, J = 8.4 Hz, 2H), 5.72 (s, 1H), 3.12 (s, 3H), 2.25 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.1, 151.4, 149.0, 147.5, 143.9, 135.4, 134.0, 133.3, 132.5, 131.2, 131.0 (2C), 130.3, 129.6, 128.1, 127.5, 125.9, 123.4, 121.8, 117.0, 102.3, 44.0, 32.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{24}H_{19}Br_2N_2O_3S$: 574.9463, Found: 574.9467.



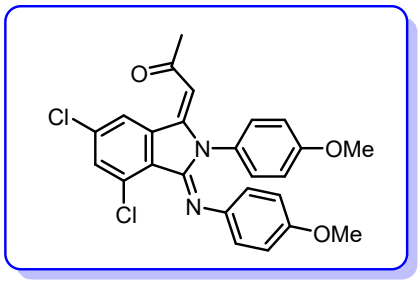
(*E*)-1-((*Z*)-2-Phenyl-1-(phenylimino)-1,9-dihydroindeno[1,2-*f*]isoindol-3(2*H*)-ylidene)propan-2-one (8n), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.82 (s, 1H), 8.03 (d, J = 7.2 Hz, 1H), 7.60 (t, J = 7.6 Hz, 2H), 7.51-7.48 (m, 2H), 7.42 (t, J = 7.6 Hz, 3H), 7.36-7.32 (m, 3H), 7.14 (t, J = 7.2 Hz, 1H), 6.94 (d, J = 7.6 Hz, 2H), 6.87 (s, 1H), 5.65 (s, 1H), 3.75 (s, 2H), 2.24 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.2, 152.2, 149.7, 146.3, 145.5, 143.8, 140.7, 136.0, 134.1, 129.7 (2C), 129.7 (2C), 129.2 (2C), 128.7, 128.4, 127.9, 127.1, 126.4, 124.9, 123.3, 121.8, 121.2, 120.3 (2C), 119.5, 103.0, 37.2, 32.5. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{30}H_{23}N_2O$: 427.1810, Found: 427.1817.



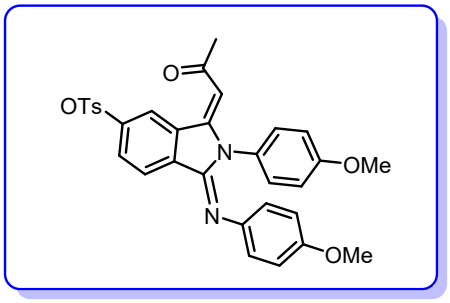
1-((1*E*,3*Z*)-6-Bromo-2-(4-methoxyphenyl)-3-((4-methoxyphenyl)imino)isoindolin-1-ylidene)propan-2-one (8o), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.56 (d, J = 1.6 Hz, 1H), 7.40 (dd, J = 1.6 Hz, 8.0 Hz, 1H), 7.27 (d, J = 8.8 Hz, 2H), 7.08 (d, J = 8.8 Hz, 2H), 6.86 (d, J = 8.8 Hz, 2H), 6.79 (d, J = 8.8 Hz, 2H), 6.65 (d, J = 8.4 Hz, 1H), 5.62 (s, 1H), 3.87 (s, 3H), 3.82 (s, 3H), 2.20 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 196.1, 159.6, 156.1, 153.2, 150.8, 142.5, 136.2, 134.0, 131.0, 130.4 (2C), 127.9, 126.4, 126.3, 121.1 (2C), 115.1 (2C), 114.4 (2C), 103.7, 55.4 (2C), 32.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{25}H_{22}BrN_2O_3$: 477.0814, Found: 477.0816.



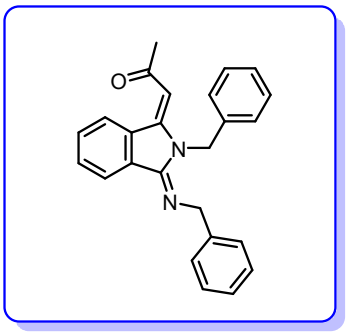
1-((1*E*,3*Z*)-4,6-Dichloro-2-(4iodophenyl)-3-((4-iodophenyl)imino)isoindolin-1-ylidene)propan-2-one (8p), **^{1}H NMR (400 MHz, $CDCl_3$) δ** 9.30 (s, 1H), 7.64 (s, 1H), 7.53 (d, J = 8.4 Hz, 2H), 7.22 (d, J = 8.4 Hz, 2H), 6.66 (d, J = 8.4 Hz, 2H), 6.20 (d, J = 8.0 Hz, 2H), 5.42 (s, 1H), 2.17 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.1, 149.8, 146.6, 139.1, 138.7 (2C), 138.2, 136.9 (2C), 135.6, 133.8, 131.6 (2C), 131.3, 131.3, 126.3, 122.4, 122.1 (2C), 105.1, 94.7, 85.1, 32.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{23}H_{15}Cl_2I_2N_2O$: 658.8651, Found: 658.8658.



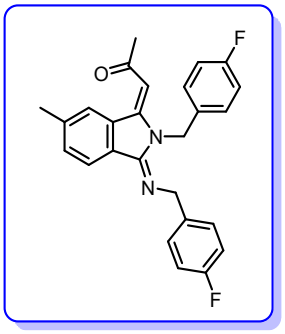
1-((1*E*, 3*Z*)-4,6-Dichloro-2-(4-methoxyphenyl)-3-((4-methoxyphenyl)imino)isoindolin-1-ylidene)propan-2-one (8q), **^{1}H NMR (400 MHz, $CDCl_3$) δ** 9.34 (s, 1H), 7.63 (s, 1H), 6.82 (d, J = 8.8 Hz, 2H), 6.63 (d, J = 8.4 Hz, 2H), 6.44 (d, J = 8.8 Hz, 2H), 6.37 (d, J = 8.8 Hz, 2H), 5.45 (s, 1H), 3.75 (s, 3H), 3.66 (s, 3H), 2.15 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.3, 159.2, 154.8, 150.9, 145.4, 140.5, 137.5, 136.3, 133.6, 131.0, 130.6 (2C), 129.9, 128.8, 127.8, 126.2, 121.0 (2C), 114.5 (2C), 113.4 (2C), 104.1, 55.5 (2C), 32.5. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{25}H_{21}Cl_2N_2O_3$: 467.0929, Found: 467.0932.



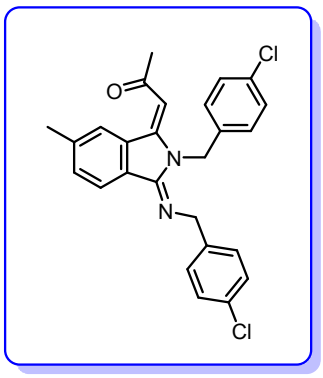
(1*Z*, 3*E*)-2-(4-Methoxyphenyl)-1-((4-methoxyphenyl)imino)-3-(2-oxopropylidene)isoindolin-5-yl 4-methylbenzenesulfonate (8r), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.00 (d, J = 2.0 Hz, 1H), 7.79 (d, J = 8.0 Hz, 2H), 7.34 (d, J = 8.0 Hz, 2H), 7.25 (d, J = 8.0 Hz, 2H), 7.08-7.04 (m, 3H), 6.85 (d, J = 8.8 Hz, 2H), 6.79-6.75 (m, 3H), 5.57 (s, 1H), 3.87 (s, 3H), 3.81 (s, 3H), 2.44 (s, 3H), 2.14 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.6, 159.7, 156.2, 152.9, 151.7, 150.7, 145.6, 142.5, 136.3, 132.3, 130.5, 130.0, 128.5, 128.0, 126.4, 126.3, 125.1, 122.0, 121.2, 115.1, 114.5, 103.9, 55.5, 32.3, 21.8. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{32}H_{29}N_2O_6S$: 569.1746, Found: 569.1749.



1-((1*E*, 3*Z*)-2-Benzyl-3-(benzylimino)isoindolin-1-ylidene)propan-2-one (8s), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.40 (d, J = 7.2 Hz, 1H), 8.09 (d, J = 7.2 Hz, 1H), 7.63-7.56 (m, 2H), 7.43 (d, J = 7.2 Hz, 2H), 7.35-7.29 (m, 5H), 7.24 (dd, J = 4.4 Hz, 7.2Hz, 4H), 5.76 (s, 1H), 5.27 (s, 2H), 5.20 (s, 2H), 2.21 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.6, 152.9, 150.0, 140.9, 137.0, 135.2, 131.6, 131.1, 128.9, 128.6 (2C), 128.5, 128.4, 128.4 (2C), 127.1 (2C), 126.8 (2C), 126.6, 125.2, 101.2, 53.2, 44.0, 32.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{25}H_{23}N_2O$: 367.1810, Found: 367.1815.

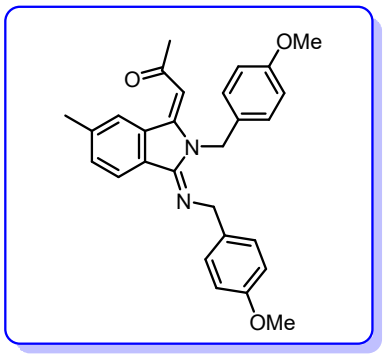


1-((1*E*,3*Z*)-2-(4-Fluorobenzyl)-3-((4-fluorobenzyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8t), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.24 (s, 1H), 7.95 (d, J = 8.0 Hz, 1H), 7.41-7.36 (m, 2H), 7.22-7.19 (m, 2H), 7.04-6.99 (m, 5H), 5.71 (s, 1H), 5.19 (s, 2H), 5.14 (s, 2H), 2.51 (s, 3H), 2.23 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.5, 152.9, 150.1, 142.4, 136.6 (d, J = 3.0 Hz, 1C), 135.3, 132.7 (d, J = 3.0 Hz, 1C), 132.0, 129.5 (d, J = 30.0 Hz, 1C), 129.0, 128.6, 128.5, 128.4, 128.3, 127.2, 125.9, 124.9, 115.6, 115.4, 115.2, 115.0, 101.0, 52.5, 43.3, 32.4, 22.0. **^{19}F NMR (300 MHz, $CDCl_3$)** δ -115.5, -116.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{26}H_{23}F_2N_2O$: 417.1778, Found: 417.1782.

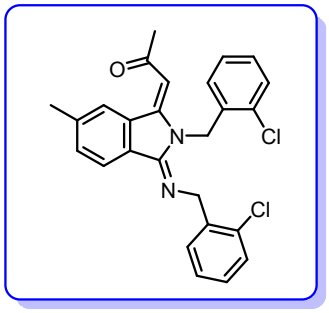


1-((1*E*,3*Z*)-2-(4-Chlorobenzyl)-3-((4-chlorobenzyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8u), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.23 (s, 1H), 7.93 (d, J = 8.0 Hz, 1H), 7.39 (d, J = 7.6 Hz, 1H), 7.34 (d, J = 8.4 Hz, 2H), 7.30-7.26 (m, 4H), 7.16 (d, J = 8.4 Hz, 2H), 5.68 (s, 1H), 5.17 (s, 2H), 5.13 (s, 2H), 2.51 (s, 3H), 2.23 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.5, 153.0, 150.0, 142.5, 139.4, 135.5, 135.3, 132.9, 132.3, 132.0, 129.0, 128.8 (2C), 128.4 (2C), 128.4 (2C), 128.1 (2C), 125.8, 124.9,

101.1, 52.5, 43.4, 32.4, 22.0. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{26}H_{23}Cl_2N_2O$: 449.1187, Found: 449.1188.

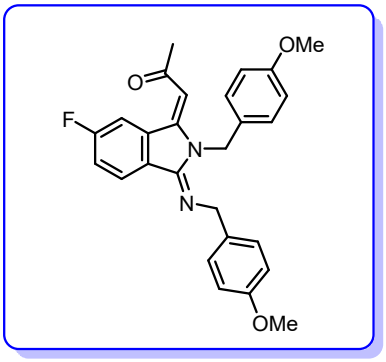


1-((1*E*,3*Z*)-2-(4-Methoxybenzyl)-3-((4-methoxybenzyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8v), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.24 (s, 1H), 7.95 (d, J = 8.0 Hz, 1H), 7.35 (d, J = 8.8 Hz, 2H), 7.18 (d, J = 8.4 Hz, 2H), 6.89-6.83 (m, 5H), 5.76 (s, 1H), 5.18 (s, 2H), 5.11 (s, 2H), 3.80 (s, 3H), 3.78 (s, 3H), 2.50 (s, 3H), 2.23 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.5, 158.6, 158.4, 152.9, 150.4, 142.2, 135.5, 133.2, 131.8, 129.2, 128.9, 128.2 (2C), 128.1 (2C), 126.0, 125.0, 114.0 (2C), 113.8 (2C), 100.8, 55.3, 55.2, 52.7, 43.4, 32.4, 22.0. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{28}H_{28}N_2O_3$: 441.2178, Found: 441.2183.

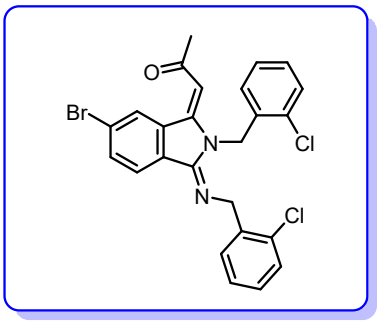


1-((1*E*, 3*Z*)-2-(2-Chlorobenzyl)-3-((2-chlorobenzyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8w), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.26 (s, 1H), 7.97 (d, J = 8.0 Hz, 1H), 7.63 (d, J = 7.6 Hz, 1H), 7.43 (d, J = 7.6 Hz, 2H), 7.37 (d, J = 7.6 Hz, 1H), 7.24-7.12 (m, 4H), 6.99 (d, J = 7.6 Hz, 1H), 5.66 (s, 1H), 5.30 (s, 2H), 5.24 (s, 2H), 2.52 (s, 3H), 2.23 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.7, 153.3, 149.9, 142.5, 138.2, 135.2, 134.0, 132.6, 132.4, 132.1, 129.4, 128.9 (2C), 128.4, 128.3, 127.7, 127.7,

127.1, 126.8, 125.9, 125.1, 101.1, 50.8, 41.5, 32.4, 22.0. HRMS (ESI-TOF) m/z: [M + H]$^+$ Calcd for $C_{26}H_{23}Cl_2N_2O$: 449.1187, Found: 449.1189.

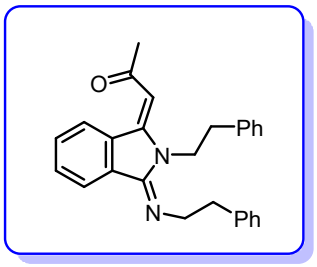


1-((1*E*, 3*Z*)-6-Fluoro-2-(4-methoxybenzyl)-3-((4-methoxybenzyl)imino)isoindolin-1-ylidene)propan-2-one (8x), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.25 (dd, J = 2.4 Hz, 10.4 Hz, 1H), 8.05 (dd, J = 5.2 Hz, 8.8 Hz, 1H), 7.34 (d, J = 8.4 Hz, 2H), 7.18 (d, J = 8.4 Hz, 2H), 6.90-6.84 (m, 5H), 5.79 (s, 1H), 5.17 (s, 2H), 5.11 (s, 2H), 3.80 (s, 3H), 3.78 (s, 3H), 2.23 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.6, 164.5 (d, J = 249.0 Hz), 158.7, 158.4, 151.8, 149.1, 137.7, 132.8, 129.6, 128.8, 128.1, 126.6 (d, J = 9.0 Hz), 124.6, 118.2 (d, J = 23.0 Hz), 116.0 (q, J = 28.0 Hz), 114.0 (d, J = 23.0 Hz), 101.5, 55.3, 55.2, 52.7, 43.5, 32.4. **^{19}F NMR (300 MHz, $CDCl_3$)** δ -106.3. HRMS (ESI-TOF) m/z: [M + H]$^+$ Calcd for $C_{27}H_{26}FN_2O_3$: 445.1927. Found: 445.1929.

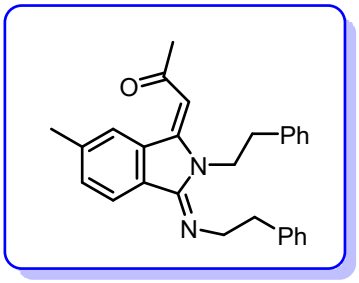


1-((1*E*, 3*Z*)-6-Bromo-2-(2-chlorobenzyl)-3-((2-chlorobenzyl)imino)isoindolin-1-ylidene)propan-2-one (8y), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.68 (s, 1H), 7.94 (d, J = 8.4 Hz, 1H), 7.76 (dd, J = 1.6 Hz, 8.8 Hz, 1H), 7.44 (d, J = 8.0 Hz, 1H), 7.37 (d, J = 7.6 Hz, 1H), 7.21-7.13 (m, 5H), 6.96 (d, J = 7.2 Hz, 1H), 5.70 (s, 1H), 5.30 (s, 2H), 5.23 (s, 2H), 2.24 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.7, 152.4, 148.3, 137.8, 1367, 134.4, 133.7, 132.6, 132.5, 131.7, 129.5, 129.0, 128.5, 128.3, 127.9, 127.6, 127.2,

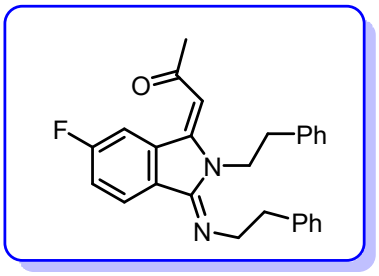
126.9, 126.9, 126.7, 126.3, 102.1, 50.8, 41.6, 32.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{25}H_{20}BrCl_2N_2O$: 513.0136, Found: 513.0139.



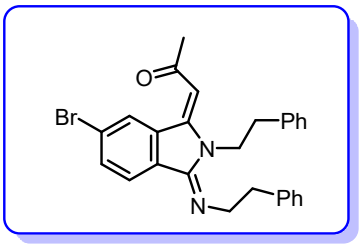
1-((1*E*, 3*Z*)-2-Phenethyl-3-(phenethylimino)isoindolin-1-ylidene)propan-2-one (8z), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.39 (d, J = 7.6 Hz, 1H), 7.95 (d, J = 7.2 Hz, 1H), 7.59-7.49 (m, 3H), 7.36-7.29 (m, 5H), 7.25-7.22 (m, 4H), 5.71 (s, 1H), 4.21 (t, J = 7.2 Hz, 2H), 4.06 (t, J = 7.6 Hz, 2H), 3.10 (t, J = 7.2 Hz, 2H), 2.87 (t, J = 8.0 Hz, 2H), 2.30 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.4, 151.7, 150.2, 140.6, 139.0, 135.0, 131.2, 130.9, 129.0 (2C), 129.0, 128.8 (2C), 128.5 (2C), 128.4, 128.3 (2C), 126.5, 126.1, 124.9, 99.5, 51.6, 41.9, 38.7, 33.4, 32.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{27}H_{27}N_2O$: 395.2123, Found: 395.2125.



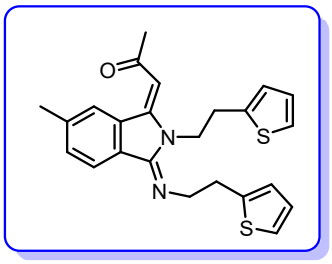
1-((1*E*, 3*Z*)-6-Methyl-2-phenethyl-3-(phenethylimino)isoindolin-1-ylidene)propan-2-one (8za), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.22 (s, 1H), 7.81 (d, J = 8.0 Hz, 1H), 7.35-7.29 (m, 7H), 7.25-7.19 (m, 4H), 5.68 (s, 1H), 4.17 (t, J = 7.2 Hz, 2H), 4.04 (t, J = 7.6 Hz, 2H), 3.08 (t, J = 7.2 Hz, 2H), 2.86 (t, J = 8.0 Hz, 2H), 2.48 (s, 3H), 2.29 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.3, 151.8, 150.6, 141.8, 140.6, 139.1, 135.3, 131.7, 129.0 (2C), 128.8 (2C), 128.8, 128.5 (2C), 128.3 (2C), 126.4, 126.1, 125.9, 124.7, 99.2, 51.6, 41.8, 38.7, 33.4, 32.4, 21.9. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{28}H_{29}N_2O$: 409.2280, Found: 409.2285.



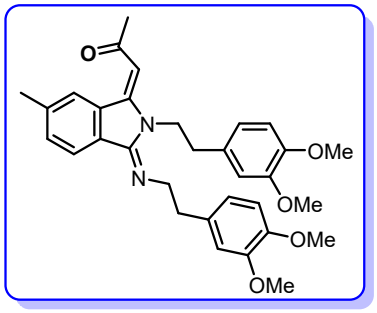
1-((1*E*, 3*Z*)-6-Fluoro-2-phenethyl-3-(phenethylimino)isoindolin-1-ylidene)propan-2-one (8zb), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.24 (dd, J = 2.8 Hz, 10.4 Hz, 1H), 7.91 (dd, J = 5.2 Hz, 8.8 Hz, 1H), 7.35-7.29 (m, 7H), 7.24-7.19 (m, 4H), 5.70 (s, 1H), 4.16 (t, J = 7.2 Hz, 2H), 4.05 (t, J = 8.0 Hz, 2H), 3.09 (t, J = 7.2 Hz, 2H), 2.86 (t, J = 7.6 Hz, 2H), 2.30 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.4, 165.5, 163.0, 150.7, 149.3, 140.4, 138.9, 137.4 (d, J = 12.0 Hz, 1C), 129.0 (2C), 128.8 (2C), 128.6 (2C), 128.3 (2C), 126.5, 126.3 (d, J = 9.0 Hz, 1C) 126.1, 118.0 (d, J = 23.0 Hz, 1C), 115.9 (d, J = 27.0 Hz, 1C), 100.0, 51.5, 41.9, 38.7, 33.3, 32.4. **^{19}F NMR (300 MHz, $CDCl_3$)** δ -106.8. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{27}H_{26}FN_2O$: 413.2029, Found: 413.2033.



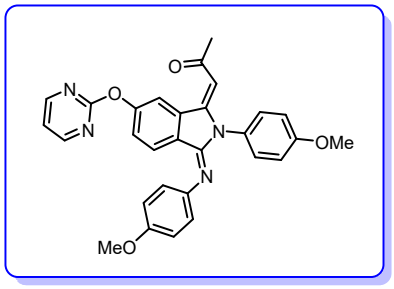
1-((1*E*, 3*Z*)-6-Bromo-2-phenethyl-3-(phenethylimino)isoindolin-1-ylidene)propan-2-one (8zc), **^{1}H NMR (400 MHz, $CDCl_3$)** δ 9.64 (d, J = 1.6 Hz, 1H), 7.78 (d, J = 8.4 Hz, 1H), 7.64 (dd, J = 1.6 Hz, 8.0 Hz, 1H), 7.32-7.30 (m, 6H), 7.24-7.21 (m, 4H), 5.69 (s, 1H), 4.15 (t, J = 7.2 Hz, 2H), 4.04 (t, J = 7.6 Hz, 2H), 3.08 (t, J = 7.2 Hz, 2H), 2.86 (t, J = 8.0 Hz, 2H), 2.29 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.4, 150.8, 149.0, 140.4, 138.8, 1367, 133.9, 131.5, 129.0 (2C), 128.8 (2C), 128.6 (2C), 128.3 (2C), 127.0, 126.5, 126.2, 125.9, 125.9, 100.1, 51.6, 42.0, 38.7, 33.3, 32.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{27}H_{26}BrN_2O$: 473.1229, Found: 473.1233.



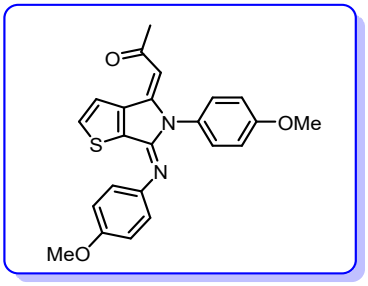
1-((1*E*,3*Z*)-6-Methyl-2-(2-(thiophen-2-yl)ethyl)-3-((2-(thiophen-2-yl)ethyl)imino)isoindolin-1-ylidene)propan-2-one (8zd),^{1}H NMR (400 MHz, $CDCl_3$) δ 9.22 (s, 1H), 7.82 (d, J = 8.0 Hz, 1H), 7.33 (d, J = 7.6 Hz, 1H), 7.18 (dd, J = 0.8 Hz, 5.2 Hz, 1H), 7.14 (dd, J = 1.2 Hz, 5.2 Hz, 1H), 6.97-6.93 (m ,3H), 6.88 (d, J = 2.8 Hz, 1H), 5.70 (s, 1H), 4.18 (t, J = 6.8 Hz, 2H), 4.13 (t, J = 7.6 Hz, 2H), 3.30 (t, J = 6.4 Hz, 2H), 3.13 (t, J = 8.0 Hz, 2H), 2.49 (s, 3H), 2.31 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.5, 152.0, 150.4, 143.1, 141.9, 141.2, 135.3, 131.8, 128.8, 127.0, 126.5, 125.9, 125.4, 125.0, 124.7, 123.8, 123.7, 99.4, 51.4, 42.0, 32.9, 32.4, 27.5, 22.0. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{24}H_{25}N_2OS_2$: 421.1408, Found: 421.1410.



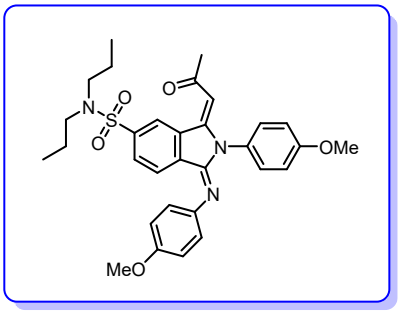
1-((1*E*,3*Z*)-2-(3,4-Dimethoxyphenethyl)-3-((3,4-dimethoxyphenethyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8ze), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.22 (s, 1H), 7.82 (d, J = 8.0 Hz, 1H), 7.32 (d, J = 8.0 Hz, 1H), 6.85 (s, 2H), 6.81 (s, 1H), 6.79 (s, 1H), 6.78 (d, J = 1.6 Hz, 1H), 6.73 (d, J = 1.6 Hz, 1H), 5.69 (s, 1H), 4.14 (t, J = 7.2 Hz, 2H), 4.05 (t, J = 7.6 Hz, 2H), 3.86 (s, 3H), 3.85 (s, 6H), 3.80 (s, 3H), 3.01 (t, J = 7.6 Hz, 2H), 2.84 (t, J = 7.6 Hz, 2H), 2.48 (s, 3H), 2.30 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$)** δ 195.3, 151.9, 150.6, 149.0, 148.8, 147.7, 147.5, 141.9, 135.3, 133.2, 131.7 (2C), 128.8, 125.9, 124.7, 120.8, 120.8, 112.4, 112.2, 111.4, 111.3, 99.3, 56.0, 55.9, 55.8, 55.8, 51.9, 41.9, 38.4, 33.0, 32.4, 22.0. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{32}H_{37}N_2O_5$: 529.2702, Found: 529.2726.



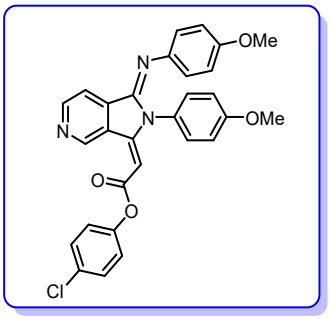
1-((1*E*, 3*E*)-2-(4-Methoxyphenyl)-3-((4-methoxyphenyl)imino)-6-(pyrimidin-2-yloxy)isoindolin-1-ylidene)propan-2-one (8zf), ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.27 (d, *J* = 2.4 Hz, 1H), 8.55 (d, *J* = 4.8 Hz, 2H), 7.27 (d, *J* = 8.8 Hz, 2H), 7.12-7.04 (m, 4H), 6.87-6.81 (m, 5H), 5.61 (s, 1H), 3.87 (s, 3H), 3.80 (s, 3H), 2.15 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.0, 165.1, 159.8, 159.6, 156.1, 155.3, 153.4, 151.5, 142.8, 136.5, 130.5, 128.2, 126.6, 125.2, 124.6, 121.7, 121.3, 116.6, 115.1, 114.5, 103.6, 55.5, 32.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{29}H_{25}N_4O_4$: 493.1876, Found: 493.1879.



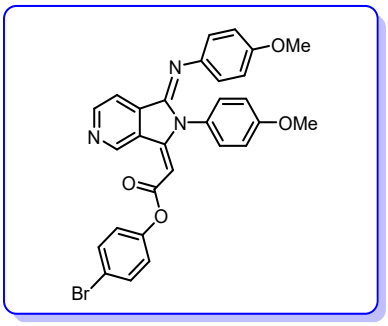
(*E*)-1-((*E*)-5-(4-Methoxyphenyl)-6-((4-methoxyphenyl)imino)-5,6-dihydro-4*H*-thieno[2,3-*c*]pyrrol-4-ylidene)propan-2-one (8zg), ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.19 (d, *J* = 7.2 Hz, 1H), 7.43 (d, *J* = 6.4 Hz, 1H), 7.32 (d, *J* = 8.8 Hz, 2H), 7.06 (d, *J* = 8.8 Hz, 2H), 6.87 (d, *J* = 1.2 Hz, 4H), 5.53 (s, 1H), 3.87 (s, 3H), 3.81 (s, 3H), 2.18 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.2, 159.6, 156.8, 152.3, 148.2, 144.2, 143.3, 133.6, 132.6, 130.7, 128.1, 125.7, 122.2, 115.0, 114.6, 101.7, 55.5, 55.4, 32.0. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{23}H_{21}N_2O_3S$: 405.1273, Found: 405.1278.



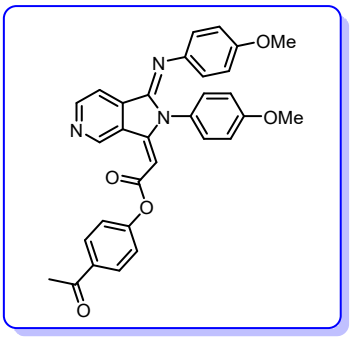
(1*E*, 3*E*)-2-(4-Methoxyphenyl)-1-((4-methoxyphenyl)imino)-3-(2-oxopropylidene)-*N*,*N*-dipropylisoindoline-5-sulfonamide (8zh), ^{1}H NMR (400 MHz, CDCl$_3$) δ 9.76 (d, *J* = 1.2 Hz, 1H), 7.74 (dd, *J* = 1.6 Hz, 8.4 Hz, 1H), 7.28 (d, *J* = 8.8 Hz, 2H), 7.08 (d, *J* = 8.8 Hz, 2H), 6.91 (d, *J* = 8.4 Hz, 1H), 6.87 (d, *J* = 8.8 Hz, 2H), 6.80 (d, *J* = 8.8 Hz, 2H), 5.67 (s, 1H), 3.87 (s, 3H), 3.82 (s, 3H), 3.19 (t, *J* = 7.6 Hz, 4H), 2.21 (s, 3H), 1.62-1.58 (m, 4H), 0.89 (t, *J* = 7.6 Hz, 4H). **^{13}C NMR (100 MHz, CDCl$_3$) δ** 196.1, 159.8, 156.4, 152.7, 150.4, 143.5, 142.3, 135.3, 130.4, 130.3, 129.5, 127.8, 126.4, 125.6, 121.1, 115.2, 114.6, 104.3, 55.5, 55.5, 50.4, 32.4, 22.2, 11.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{31}H_{36}N_3O_5S$: 562.2376, Found: 562.2379.



4-Chlorophenyl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zi), ^{1}H NMR (400 MHz, CDCl$_3$) δ 10.41 (s, 1H), 8.59 (d, *J* = 4.2 Hz, 1H), 7.37-7.33 (m, 4H), 7.11 (d, *J* = 8.8 Hz, 2H), 7.08 (d, *J* = 8.8 Hz, 2H), 6.89 (d, *J* = 8.8 Hz, 2H), 6.83 (d, *J* = 8.8 Hz, 2H), 6.71 (d, *J* = 4.2 Hz, 1H), 5.52 (s, 1H), 3.88 (s, 3H), 3.84 (s, 3H). **^{13}C NMR (100 MHz, CDCl$_3$) δ** 164.8, 160.0, 156.6, 153.0, 152.3, 151.6, 150.4, 149.3, 141.9, 134.3, 131.0, 130.4, 129.5, 129.0, 128.2, 127.4, 125.3, 123.1, 121.0, 118.5, 115.3, 114.5, 94.2, 55.5 (2C). HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{29}H_{23}ClN_3O_4$: 512.1377, Found: 512.1379.

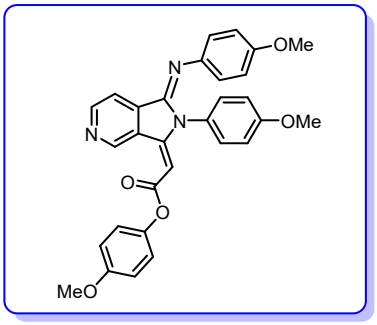


4-Bromophenyl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zj), ^{1}H NMR (400 MHz, $CDCl_3$) δ 10.40 (s, 1H), 8.59 (d, *J* = 4.8 Hz, 1H), 7.50 (d, *J* = 8.8 Hz, 2H), 7.33 (d, *J* = 8.8 Hz, 2H), 7.11 (d, *J* = 8.8 Hz, 2H), 7.02 (d, *J* = 8.8 Hz, 2H), 6.89 (d, *J* = 8.2 Hz, 2H), 6.82 (d, *J* = 8.8 Hz, 2H), 6.71 (d, *J* = 5.2 Hz, 1H), 5.52 (s, 1H), 3.88 (s, 3H), 3.83 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 164.7, 160.0, 156.6, 153.0, 152.3, 151.5, 150.3, 149.8, 141.9, 134.3, 132.4, 130.3, 129.1, 127.4, 123.6, 121.0, 118.7, 118.6, 115.3, 114.5, 94.2, 55.5, 55.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{29}H_{23}BrN_3O_4$: 556.0872, Found: 556.0876.

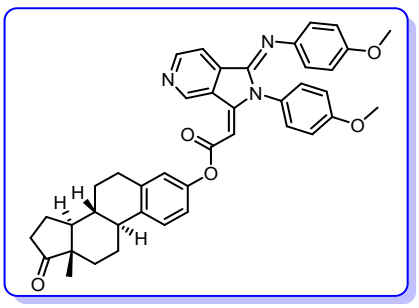


4-Acetylphenyl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zk), ^{1}H NMR (400 MHz, $CDCl_3$) δ 10.41 (s, 1H), 8.60 (d, *J* = 5.2 Hz, 1H), 8.01 (d, *J* = 8.4 Hz, 2H), 7.34 (d, *J* = 8.8 Hz, 2H), 7.24 (d, *J* = 8.8 Hz, 2H), 7.12 (d, *J* = 8.8 Hz, 2H), 6.89 (d, *J* = 8.8 Hz, 2H), 6.83 (d, *J* = 8.8 Hz, 2H), 6.72 (d, *J* = 4.8 Hz, 1H), 5.54 (s, 1H), 3.88 (s, 3H), 3.84 (s, 3H), 2.60 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.9, 164.5, 160.0, 156.6, 154.6, 153.2, 152.3, 151.6, 150.3, 141.9, 134.5, 134.3, 130.3, 129.9, 129.1, 127.4, 121.9,

121.0, 118.6, 115.4, 114.5, 94.0, 55.5 (2C), 26.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{31}H_{26}N_3O_5$: 520.1872, Found: 520.1876.

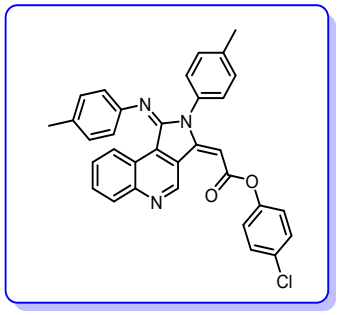


4-Methoxyphenyl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zl), ^{1}H NMR (400 MHz, $CDCl_3$) δ 10.43 (s, 1H), 8.58 (d, *J* = 5.2 Hz, 1H), 7.34 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 7.10 (dd, *J* = 2.4 Hz, 7.2 Hz, 2H), 7.04 (dd, *J* = 2.0 Hz, 6.8 Hz, 2H), 6.92-6.88 (m, 4H), 6.82 (dd, *J* = 2.0 Hz, 6.4 Hz, 2H), 6.69 (d, *J* = 5.2 Hz, 1H), 5.54 (s, 1H), 3.88 (s, 3H), 3.86 (s, 3H), 3.80 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.5, 159.9, 157.2, 156.7, 156.5, 155.3, 152.4, 152.3, 151.4, 150.5, 144.2, 142.1, 134.3, 130.4, 129.2, 127.5, 122.6, 122.5, 121.1, 118.5, 115.3, 114.5, 94.9, 55.6, 55.5, 55.4. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{30}H_{26}N_3O_5$: 508.1872, Found: 508.1875.

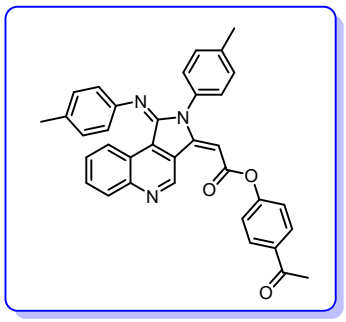


(8*R*, 9*S*, 13*S*, 14*S*)-13-Methyl-17-*oxo*-7,8,9,11,12,13,14,15,16,17-decahydro-6*H*-cyclopenta[*a*]phenanthren-3-yl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zm), ^{1}H NMR (400 MHz, $CDCl_3$) δ 10.44 (s, 1H), 8.58 (d, *J* = 4.8 Hz, 1H), 7.34 (d, *J* = 8.8 Hz, 2H), 7.25 (d, *J* = 8.8 Hz, 2H), 7.19 (s, 1H), 7.12 (d, *J* = 9.2 Hz, 2H), 6.89 (d, *J* = 8.8 Hz, 2H), 6.83 (d, *J* = 8.8 Hz, 2H), 6.70 (d, *J* = 4.2 Hz, 1H), 5.55 (s, 1H), 3.88 (s, 3H), 3.84 (s, 3H), 2.92 (t, *J* = 4.0 Hz, 2H), 2.51 (q, *J* = 8.8 Hz, 1H), 2.43-2.39 (m,

1H), 2.31-2.27 (m, 1H), 2.19-2.14 (m, 1H), 2.13-2.09 (m, 1H), 2.06-1.96 (m, 4H), 0.91 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 165.5, 159.9, 156.5, 152.4, 152.3, 151.4, 150.4, 148.6, 142.0, 138.0, 137.8, 137.3, 134.3, 130.4, 129.2, 129.0, 128.2, 127.5, 126.4, 125.3, 121.8, 121.0, 119.0, 118.5, 115.3, 114.5, 94.9, 55.5, 55.4 (2C), 47.9, 44.2, 38.0, 35.8, 31.5, 29.4, 26.3, 25.7, 21.6, 13.8. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{41}H_{40}N_3O_5$: 654.2968, Found: 654.2969.

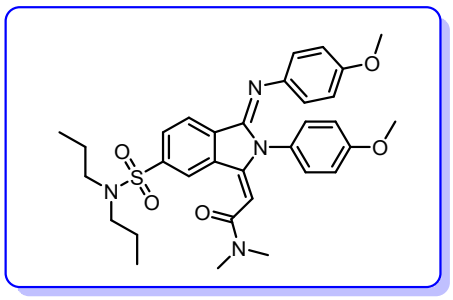


4-Chlorophenyl (*E*)-2-((*E*)-2-(*p*-tolyl)-1-(*p*-tolylimino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]quinolin-3-ylidene)acetate (8zn), ^{1}H NMR (400 MHz, $CDCl_3$) δ 10.53 (s, 1H), 9.50 (d, J = 8.8 Hz, 1H), 8.26 (d, J = 8.4 Hz, 1H), 7.85 (t, J = 8.0 Hz, 1H), 7.69 (t, J = 7.6 Hz, 1H), 7.34 (d, J = 8.8 Hz, 2H), 7.06 (d, J = 8.8 Hz, 2H), 6.94 (d, J = 8.0 Hz, 2H), 6.88 (d, J = 8.0 Hz, 2H), 6.70 (d, J = 8.0 Hz, 2H), 6.43 (d, J = 8.4 Hz, 2H), 5.42 (s, 1H), 2.28 (s, 3H), 2.17 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 164.7, 154.1, 149.6, 149.2, 148.5, 144.2, 138.6, 133.4, 131.7, 131.0, 129.8, 129.6, 129.5, 129.4, 129.4, 128.6, 128.3, 125.9, 123.1, 122.8, 122.4, 120.0, 116.8, 116.0, 95.1, 21.0, 20.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{33}H_{25}ClN_3O_2$: 530.1635, Found: 530.1638.

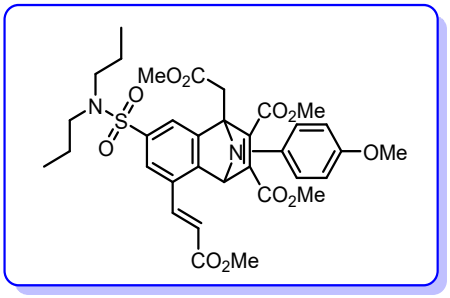


4-Acetylphenyl (*E*)-2-((*E*)-2-(*p*-tolyl)-1-(*p*-tolylimino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]quinolin-3-ylidene)acetate (8zo), ^{1}H NMR (400 MHz, $CDCl_3$) δ 10.53

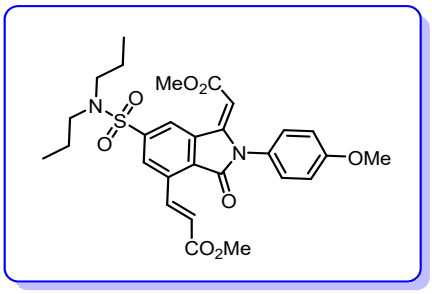
(d, J = 2.0 Hz, 1H), 9.50 (d, J = 8.4 Hz, 1H), 8.26 (d, J = 8.4 Hz, 1H), 8.00 (d, J = 8.8 Hz, 2H), 7.85 (t, J = 6.8 Hz, 1H), 7.69 (t, J = 7.6 Hz, 1H), 7.23 (d, J = 8.4 Hz, 2H), 6.95 (d, J = 8.4 Hz, 2H), 6.89 (d, J = 8.4 Hz, 2H), 6.71 (d, J = 8.0 Hz, 2H), 6.43 (d, J = 8.0 Hz, 2H), 5.44 (s, 1H), 2.60 (s, 3H), 2.28 (s, 3H), 2.17 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 196.9, 164.4, 154.6, 154.4, 149.6, 148.5, 147.3, 144.1, 138.6, 136.5, 134.5, 133.3, 131.8, 131.1, 129.9, 129.8, 129.7, 129.4, 128.6, 128.3, 126.4, 125.9, 122.4, 121.9, 119.9, 94.9, 26.6, 21.0, 20.6. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{35}H_{28}N_3O_3$: 538.2131, Found: 538.2138.



2-((1*E*, 3*Z*)-6-(*N*,*N*-Dipropylsulfamoyl)-2-(4-methoxyphenyl)-3-((4-methoxyphenyl)imino)isoindolin-1-ylidene)-*N*,*N*-dimethylacetamide (10a), ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.81 (s, 1H), 7.64 (dd, J = 1.6Hz, 8.0 Hz, 1H), 7.33 (dd, J = 2.0 Hz, 6.8 Hz, 2H), 7.05 (d, J = 8.8 Hz, 2H), 6.88-6.80 (m,5H), 5.44 (s, 1H), 3.85 (s, 3H), 3.82 (s, 2H), 3.12 (t, J = 7.6 Hz, 4H), 3.05 (s, 3H), 2.97 (s, 3H), 1.59 (q, J = 7.6 Hz, 4H), 0.89 (t, J = 7.6 Hz, 6H). **^{13}C NMR (100 MHz, $CDCl_3$) δ** 166.7, 159.5, 156.1, 152.2, 145.7, 142.7, 142.4, 135.3, 130.4, 128.2, 128.0, 127.2, 125.8, 124.5, 121.5, 115.1, 114.4, 98.3, 55.5, 50.6, 38.1, 35.1, 22.3, 11.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{32}H_{39}N_4O_5S$: 591.2641, Found: 591.2644.



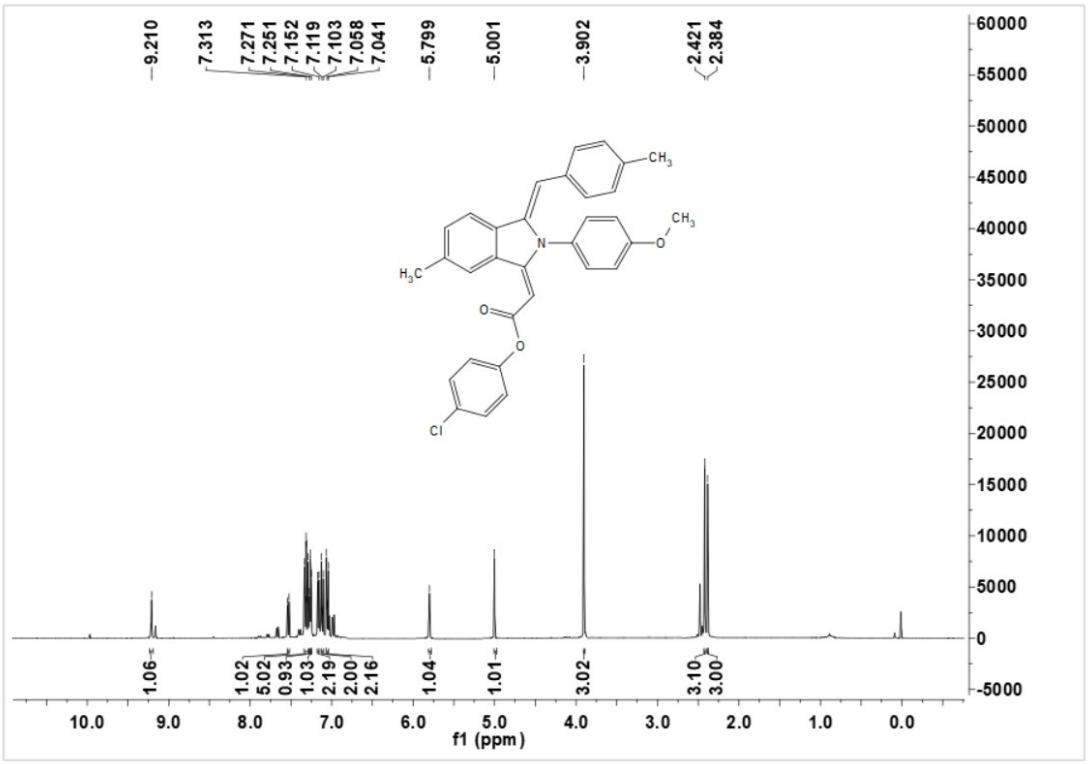
Dimethyl (*E*)-7-(*N*,*N*-dipropylsulfamoyl)-1-(2-methoxy-2-oxoethyl)-5-(3-methoxy-3-oxoprop-1-en-1-yl)-9-(4-methoxyphenyl)-1,4-dihydro-1,4-epiminonaphthalene-2,3-dicarboxylate (6w-I), ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.90 (d, J = 16.0 Hz, 1H), 7.74 (s, 1H), 7.58 (d, J = 0.8 Hz, 1H), 6.75 (s, 4H), 6.60 (d, J = 16.0 Hz, 1H), 5.71 (s, 1H), 3.85 (s, 3H), 3.83 (s, 3H), 3.76 (s, 3H), 3.73 (s, 3H), 3.65 (d, J = 17.2 Hz, 1H), 3.61 (s, 3H), 3.29 (d, J = 17.2 Hz, 1H), 3.09-3.04 (m, 4H), 1.54 (q, J = 3.6 Hz, 4H), 0.86 (t, J = 11.2 Hz, 6H). **^{13}C NMR (100 MHz, $CDCl_3$)** ***δ*** 169.7, 166.7, 164.4, 162.4, 157.2, 151.6, 150.5, 146.6, 139.1, 138.8, 135.7, 129.0, 124.6, 123.4, 121.7, 120.1, 114.3, 80.3, 69.6, 55.3, 52.6, 52.3, 52.1, 52.0, 50.0, 31.4, 22.0, 11.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{34}H_{41}N_2O_{11}S$: 685.2431, Found: 685.2432.

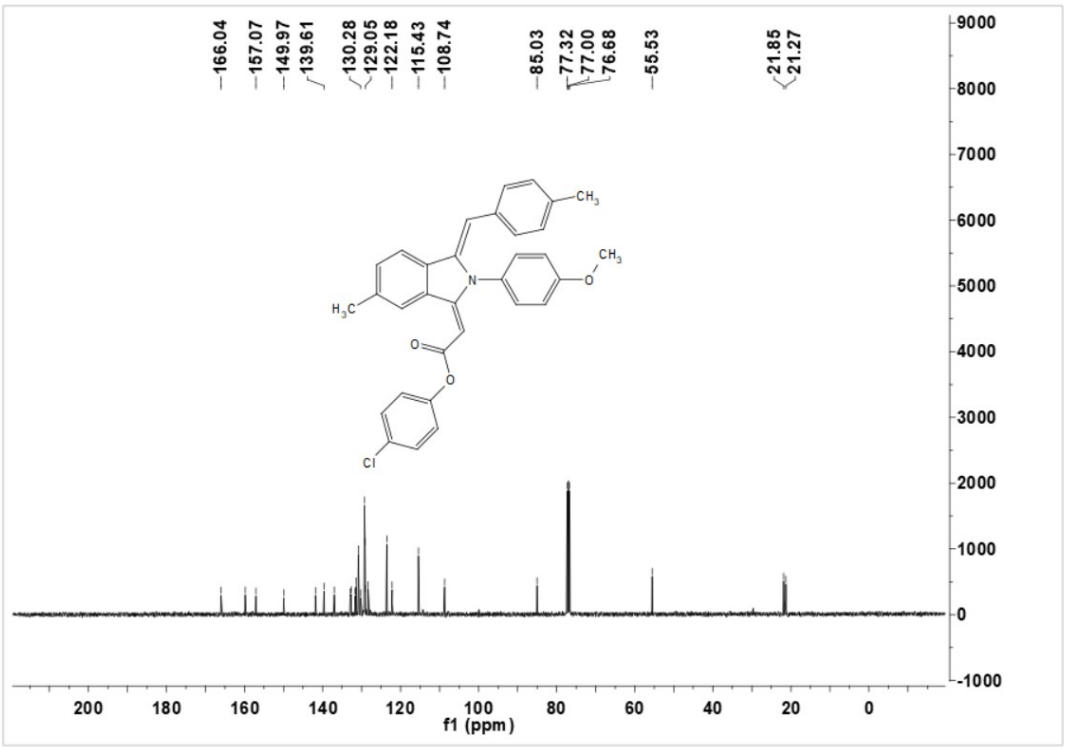


Methyl (*E*)-3-((*E*)-6-(*N*,*N*-dipropylsulfamoyl)-1-(2-methoxy-2-oxoethylidene)-2-(4-methoxyphenyl)-3-oxoisoindolin-4-yl)acrylate (6w-II), ^{1}H NMR (400 MHz, $CDCl_3$) ***δ*** 9.65 (s, 1H), 8.90 (d, J = 16.0 Hz, 1H), 8.31 (s, 1H), 7.19 (d, J = 8.0 Hz, 2H), 7.05 (d, J = 8.8 Hz, 2H), 6.67 (d, J = 16.4 Hz, 1H), 5.62 (s, 1H), 3.88 (s, 3H), 3.81 (s, 3H), 3.76 (s, 3H), 3.24 (t, J = 7.6 Hz, 4H), 1.66-1.60 (m, 4H), 0.92 (t, J = 7.6 Hz, 6H). **^{13}C NMR (100 MHz, $CDCl_3$)** ***δ*** 166.3, 165.9, 165.6, 160.2, 148.0, 145.7, 137.1, 135.3, 134.0, 129.8, 128.7, 127.1, 125.4, 123.7, 115.2, 101.8, 55.6, 52.1, 51.9, 50.2, 22.1, 11.2. HRMS (ESI-TOF) m/z: $[M + H]^+$ Calcd for $C_{28}H_{33}N_2O_8S$: 557.1958, Found: 557.1962.

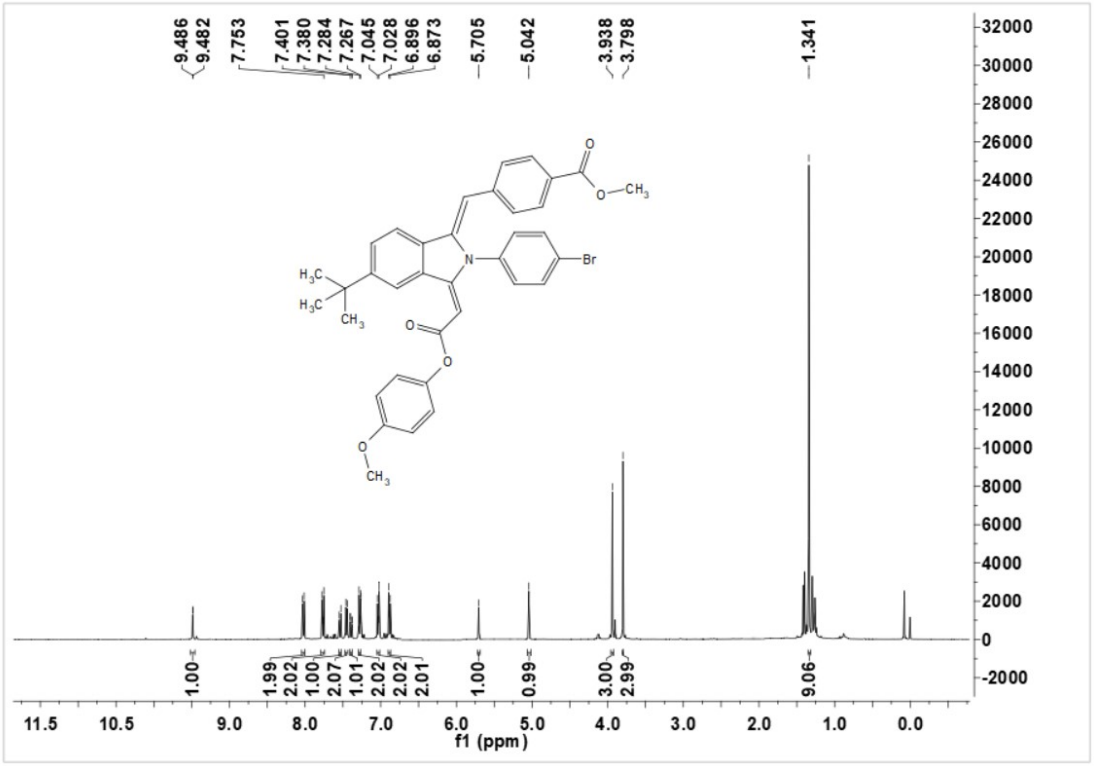
F. NMR spectra

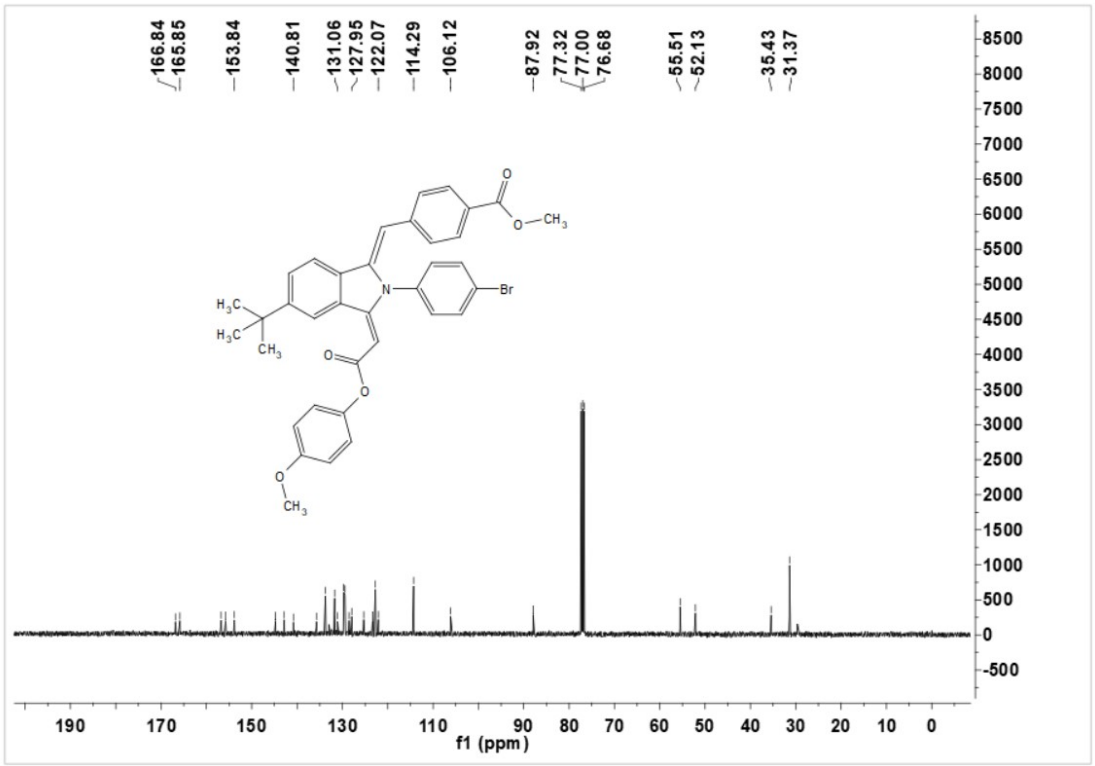
4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-methyl-3-((*Z*)-4-methylbenzylidene)isoindolin-1-ylidene)acetate (4a)



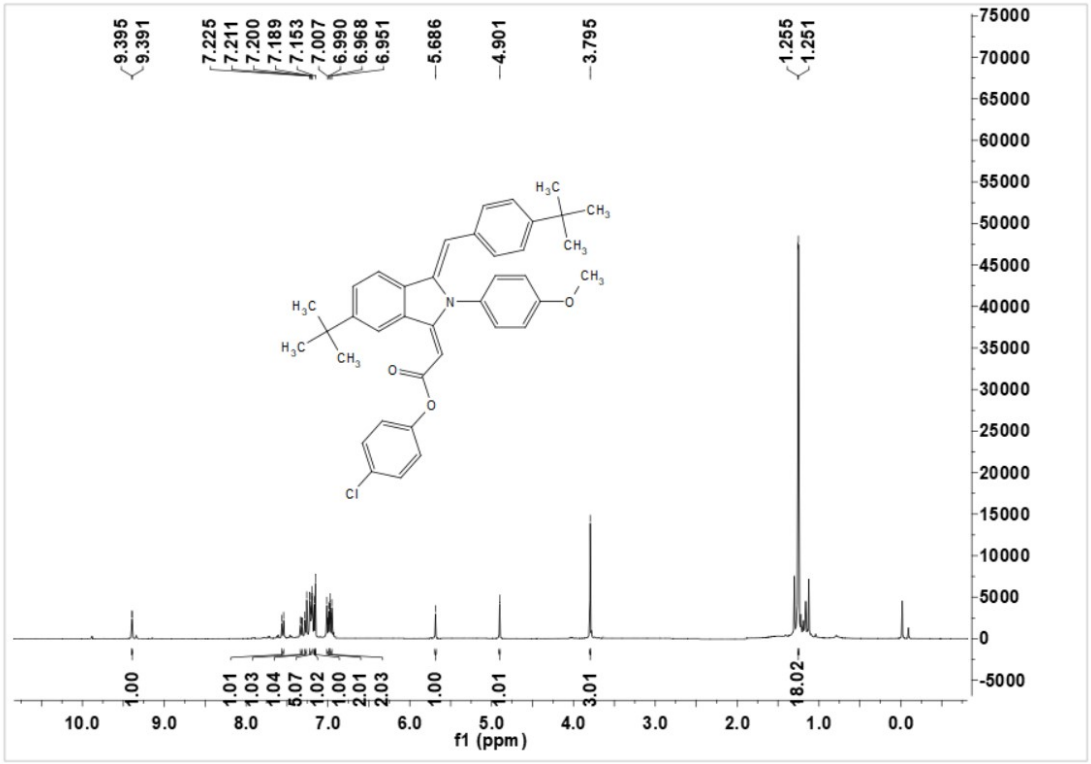


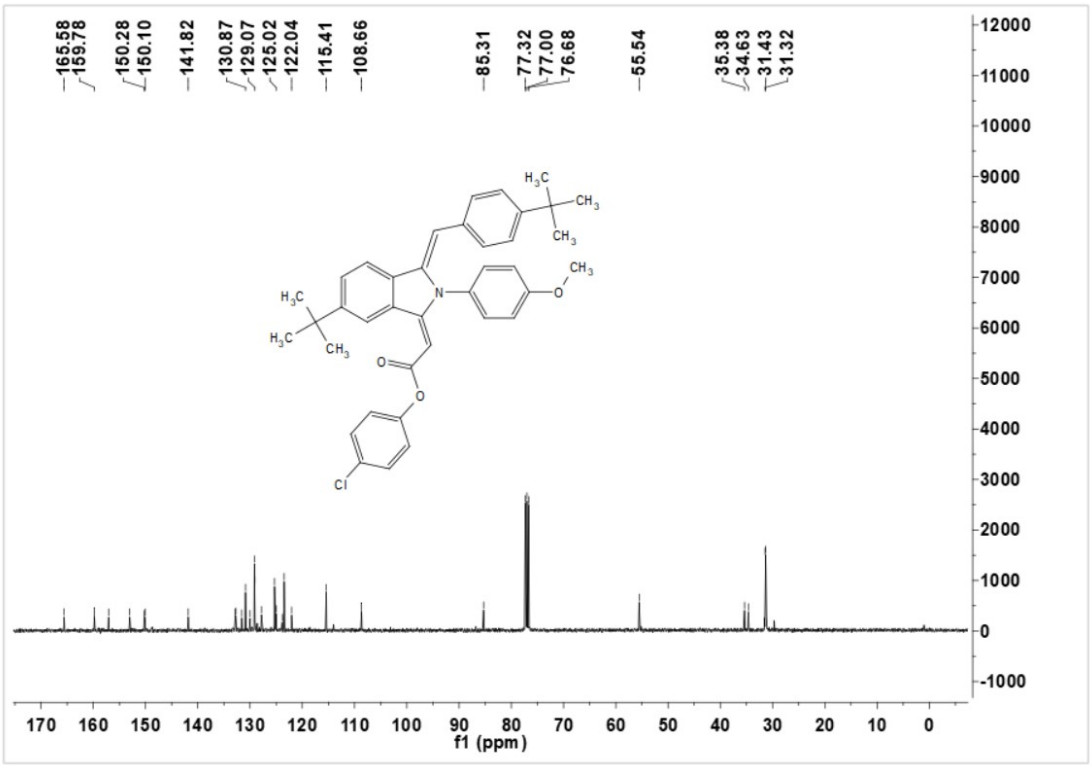
Methyl 4-(((1*Z*,3*E*)-2-(4-bromophenyl)-5-(*tert*-butyl)-3-(2-(4-methoxyphenoxy)-2-oxoethylidene)isoindolin-1-ylidene)methyl)benzoate (4b)



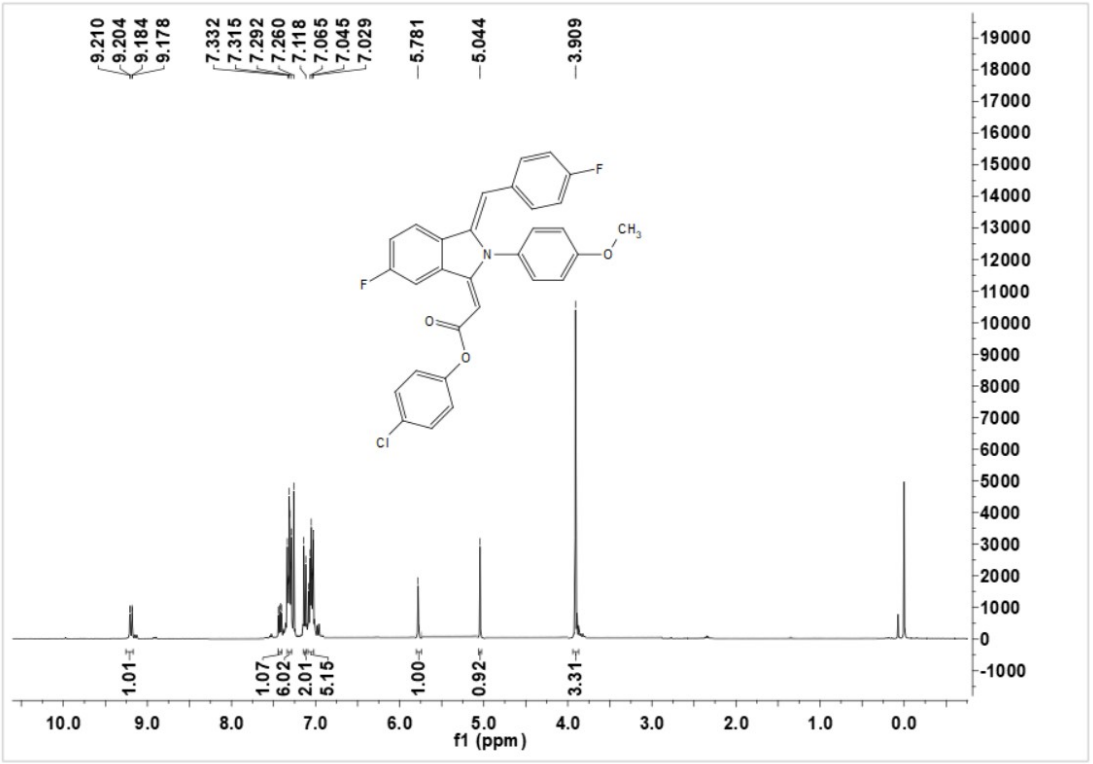


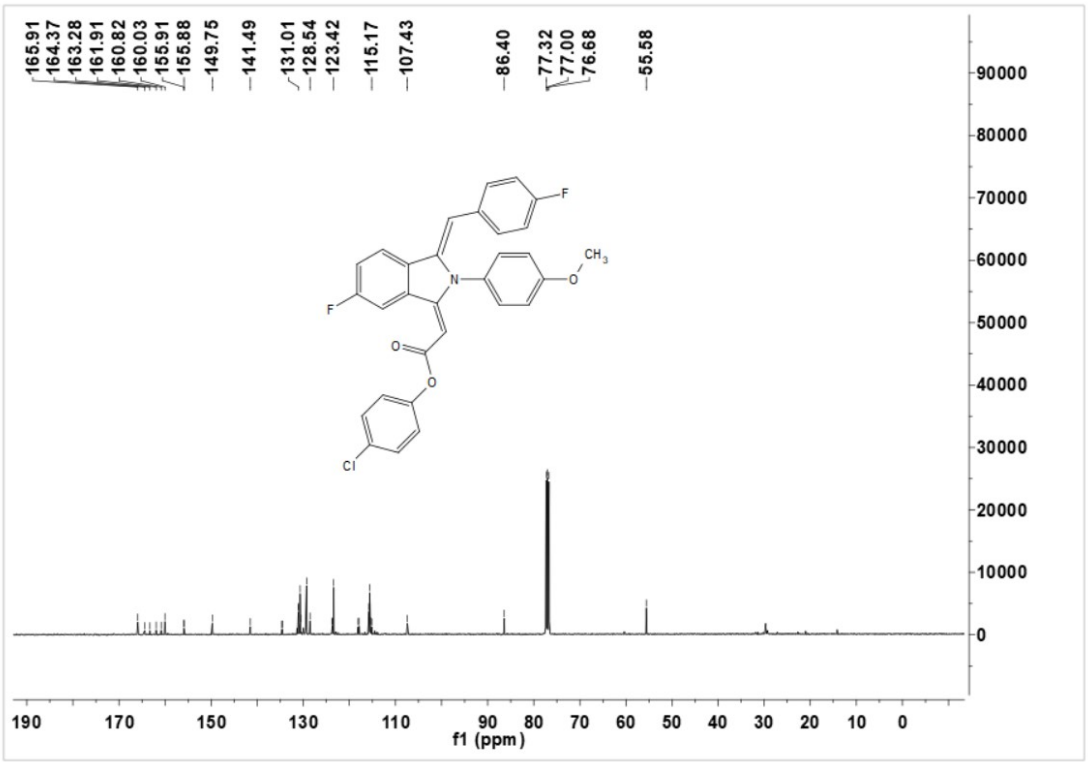
4-Chlorophenyl 2-((*E*)-6-(*tert*-butyl)-3-((*Z*)-4-(*tert*-butyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4c)

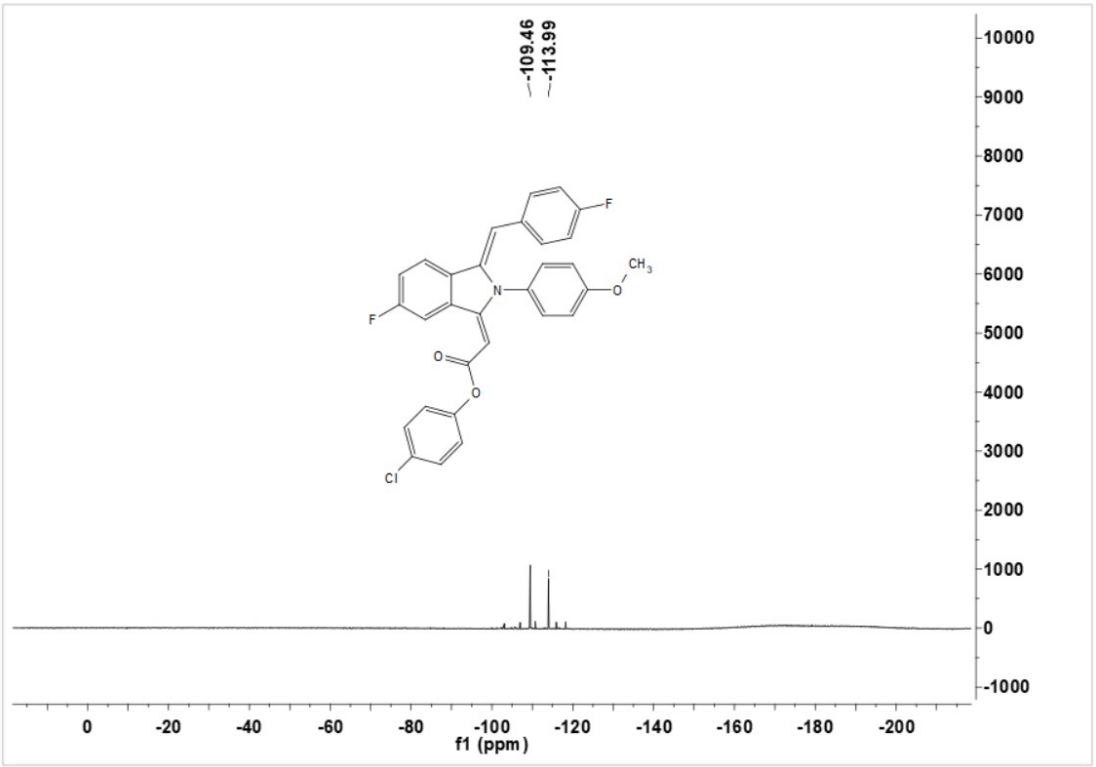




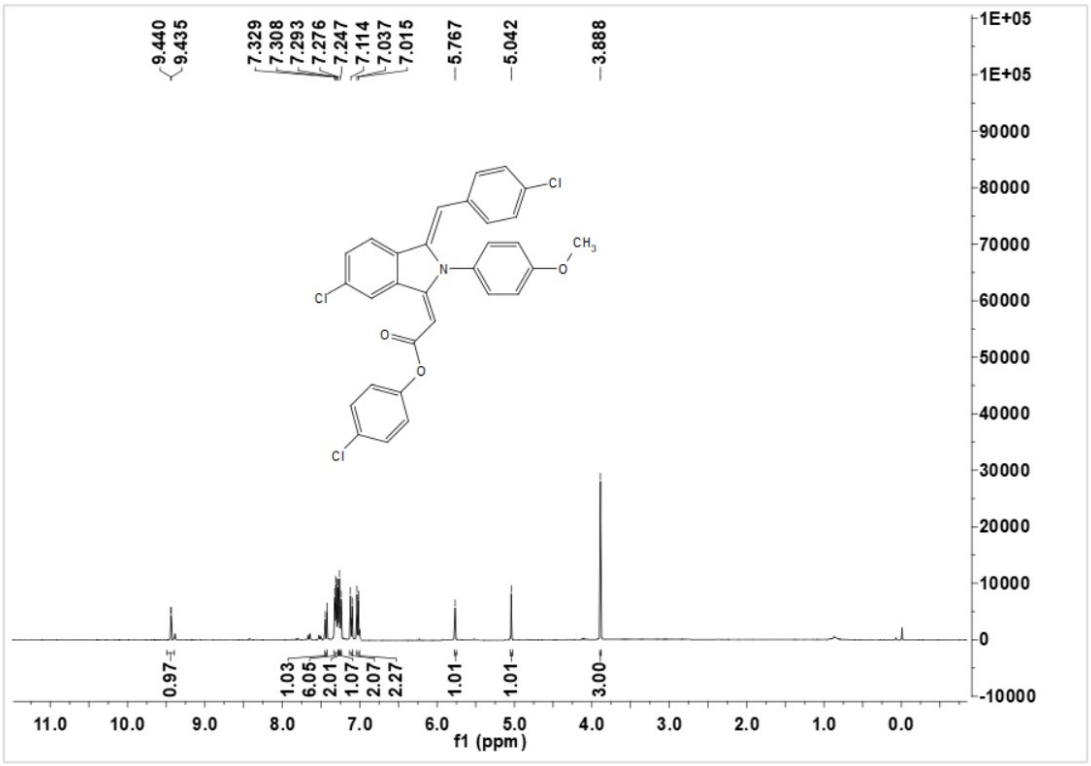
4-Chlorophenyl 2-((*E*)-6-fluoro-3-((*Z*)-4-fluorobenzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4d)

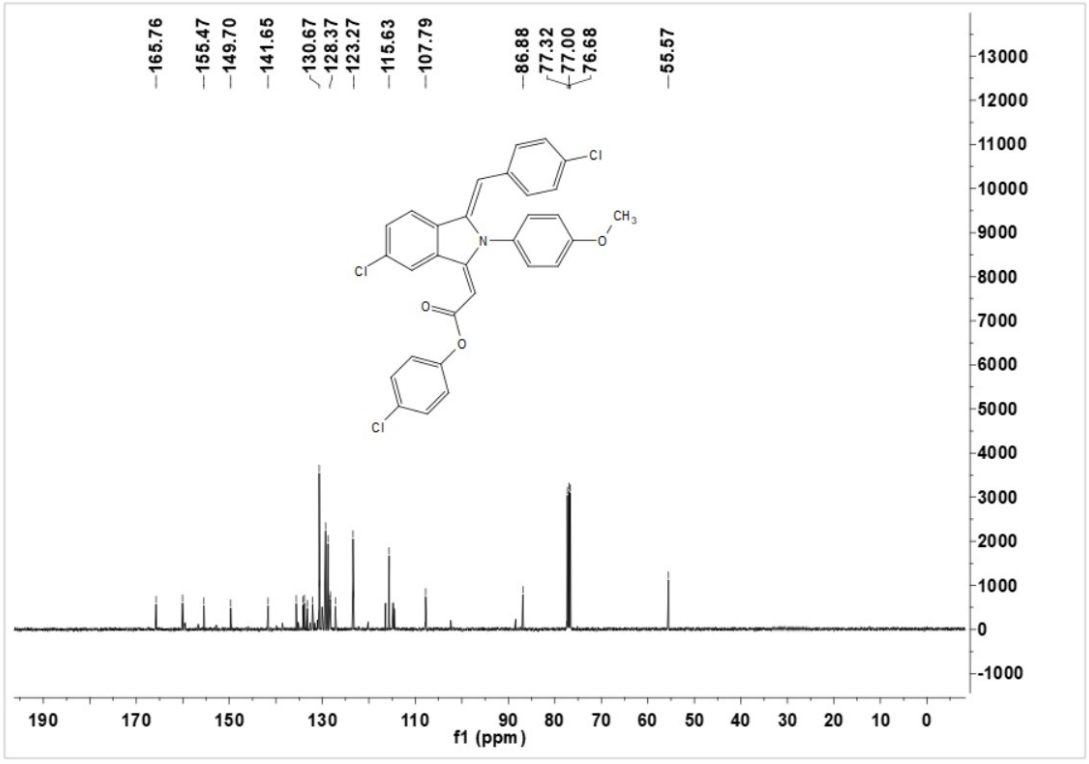




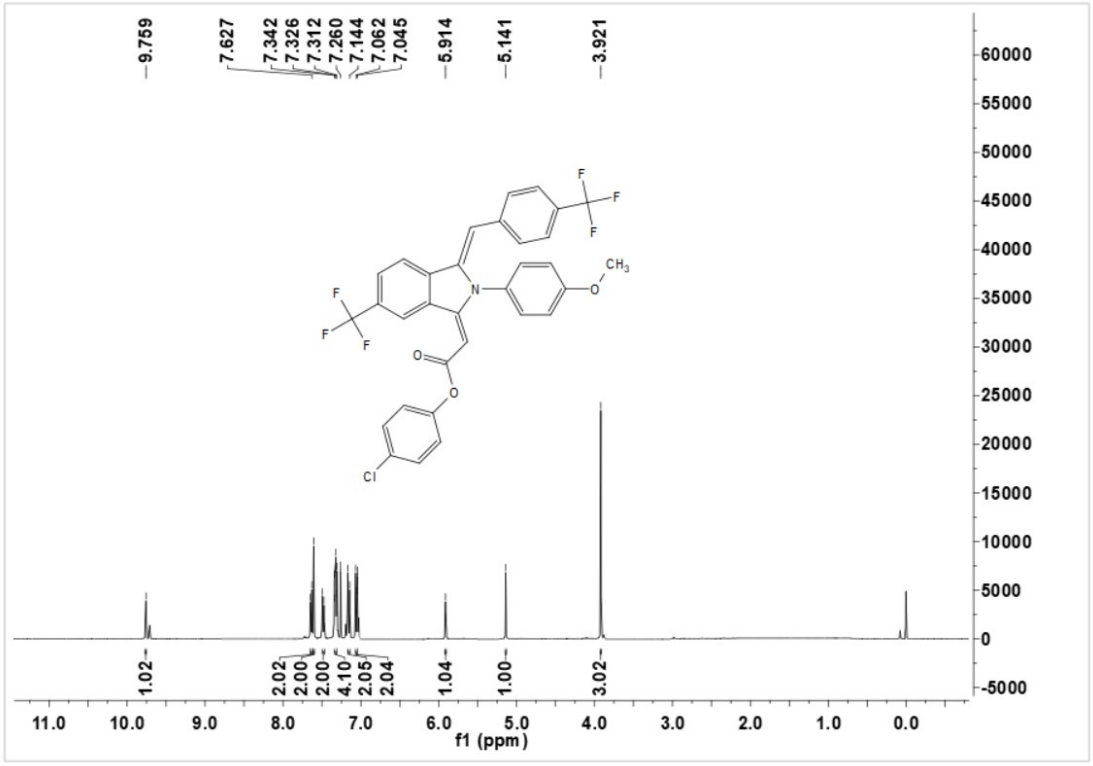


4-Chlorophenyl 2-((*E*)-6-chloro-3-((*Z*)-4-chlorobenzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4e)





4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(trifluoromethyl)-3-((*Z*)-4-(trifluoromethyl)benzylidene)isoindolin-1-ylidene)acetate (4f)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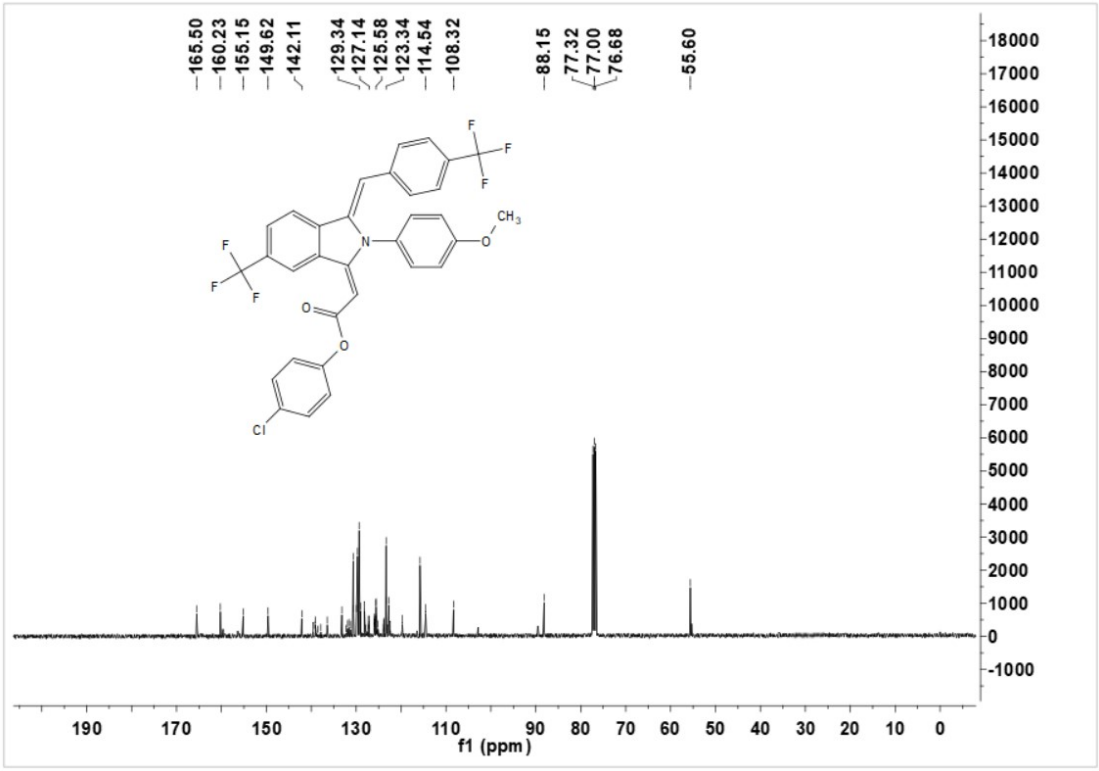
7.627
7.342
7.326
7.312
7.260
7.144
7.062
7.045
5.914
5.141
3.921
1.02
2.02
2.00
2.00
4.10
2.05
2.04
1.04
1.00
3.02
f1 (ppm)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160.23
155.15
149.62
142.11
129.34
127.14
126.58
123.34
114.54
108.32
88.15
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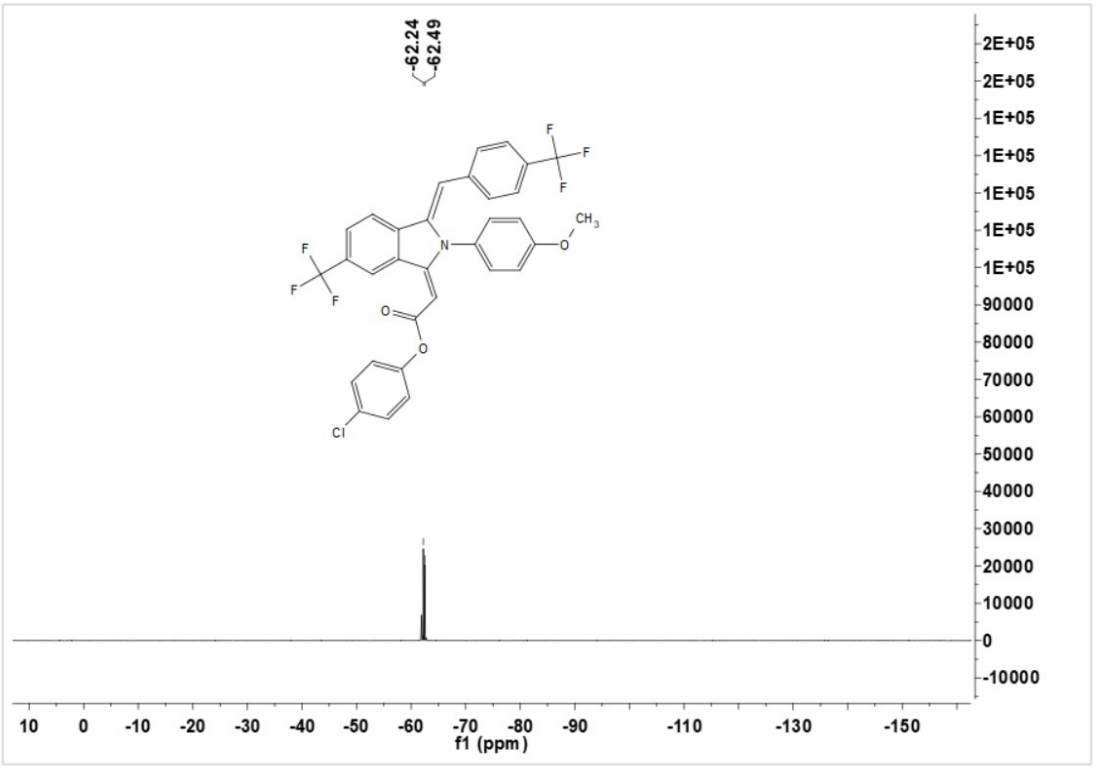
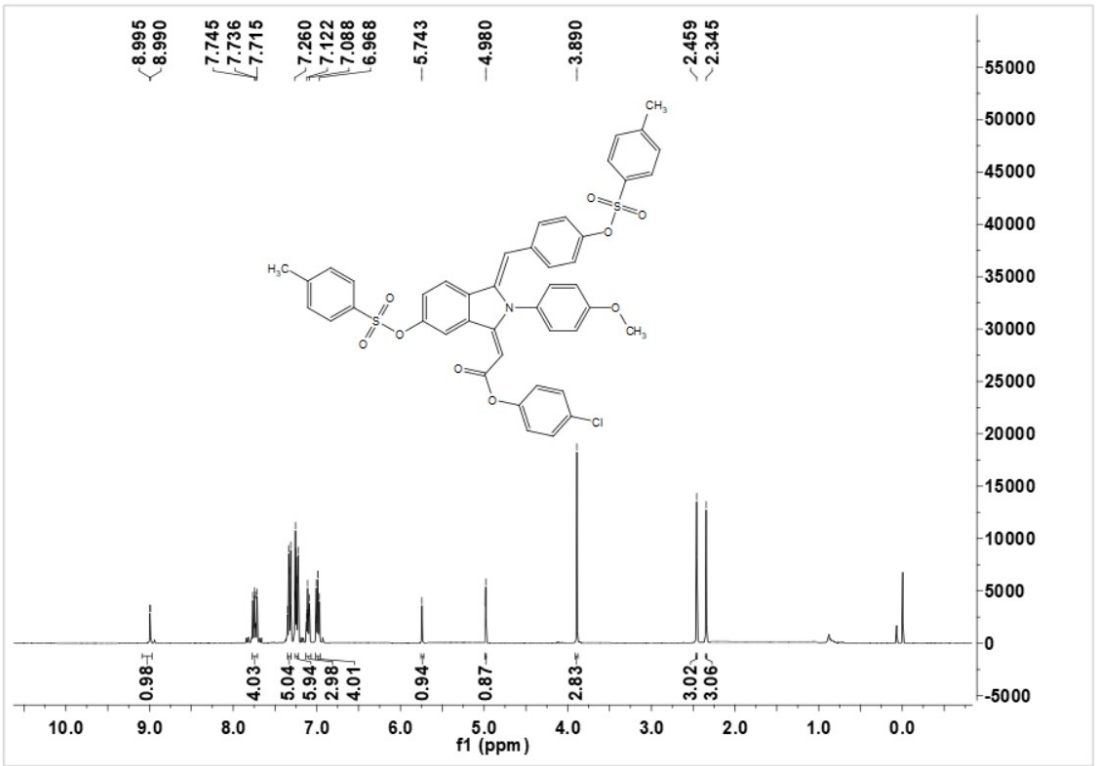
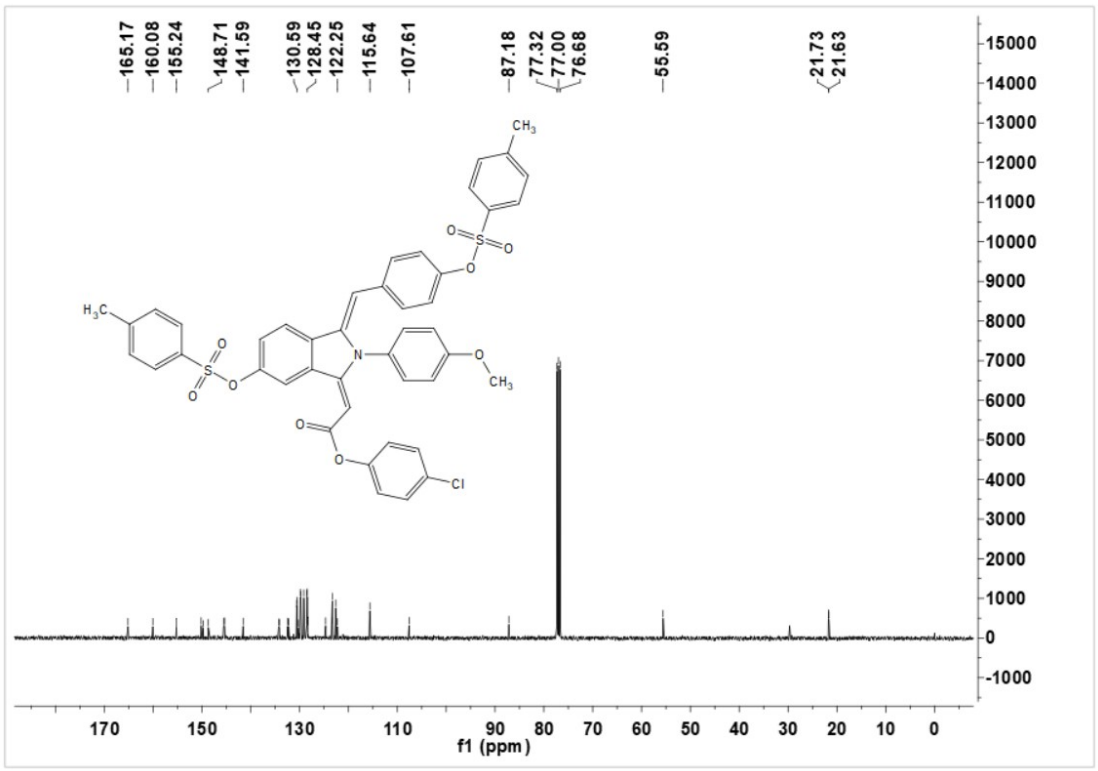
77.00
76.68
55.60
f1 (ppm)

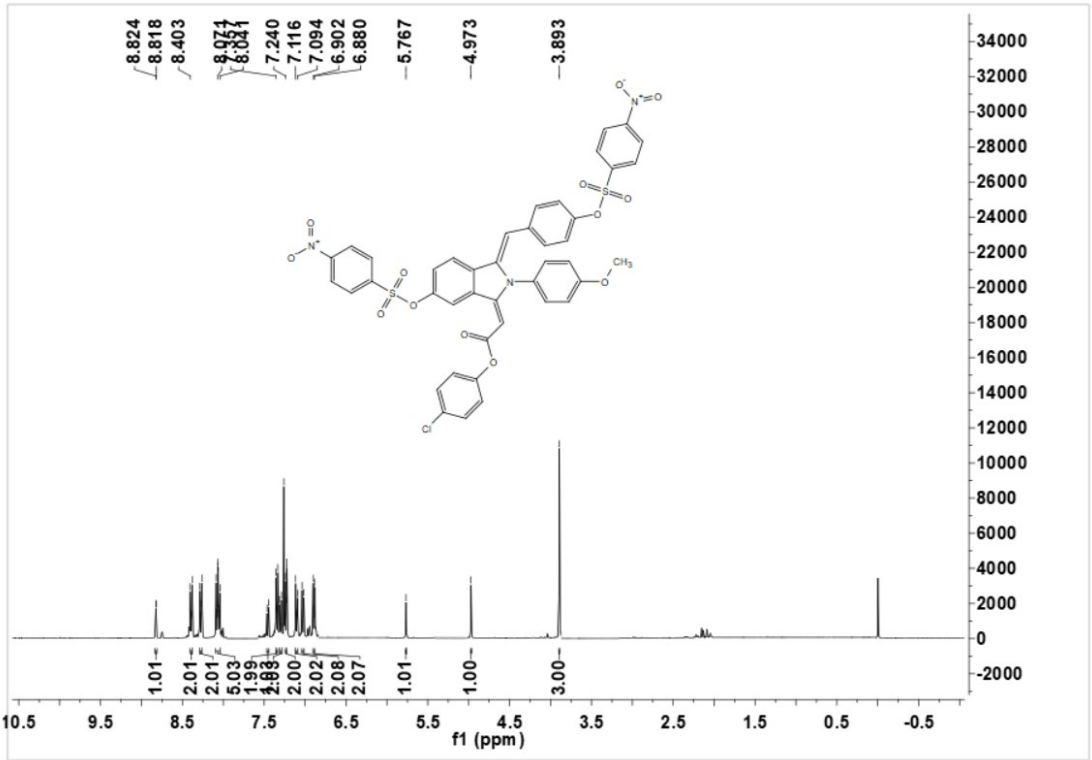


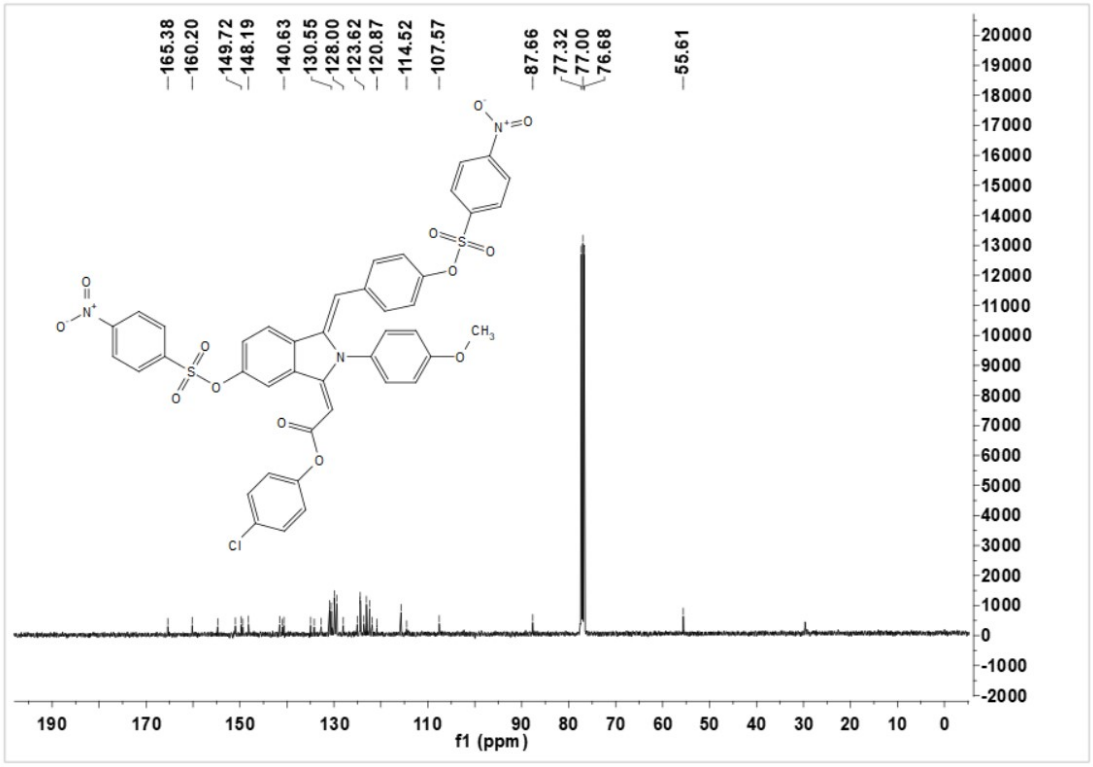
4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(tosyloxy)-3-((*Z*)-4-(tosyloxy)benzylidene)isoindolin-1-ylidene)acetate (4g)



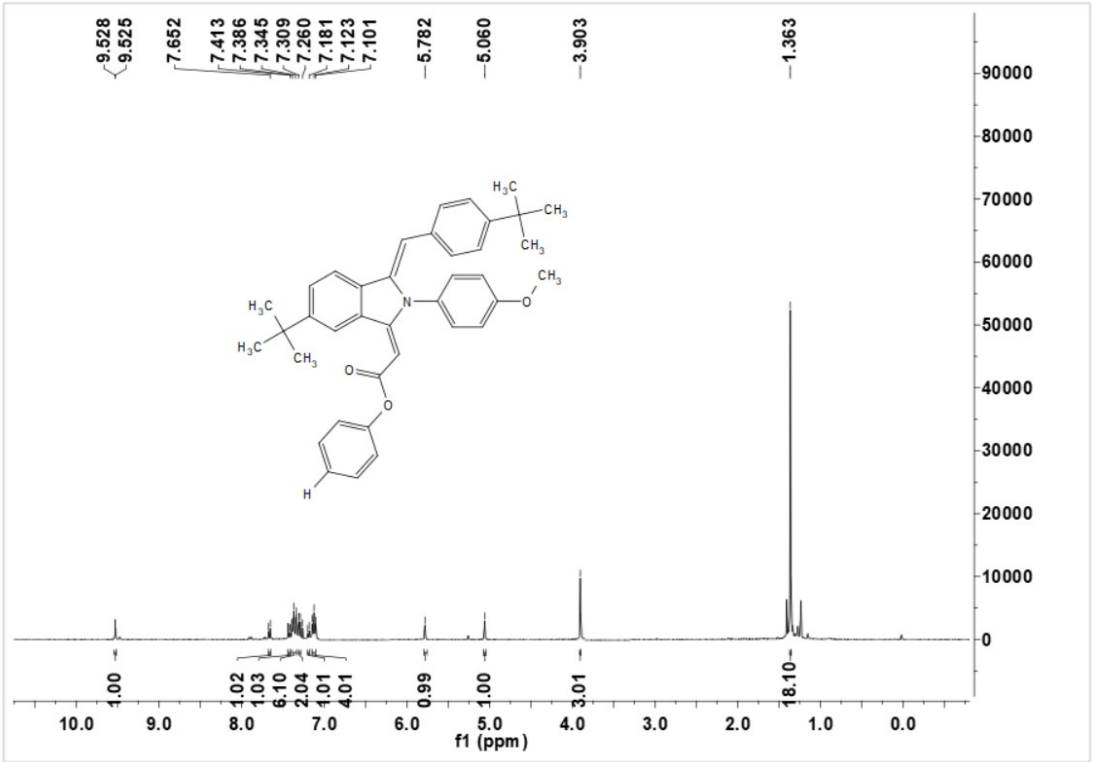


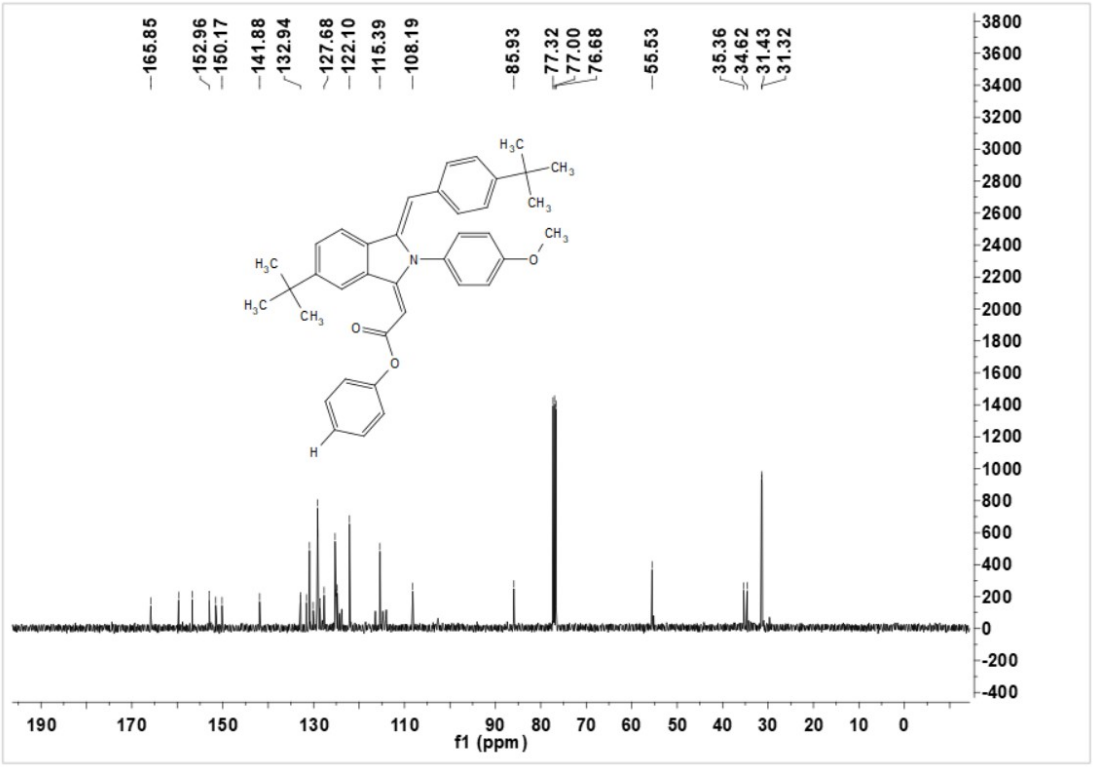
4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(((4-nitrophenyl)sulfonyl)oxy)-3-((*Z*)-4-(((4-nitrophenyl)sulfonyl)oxy)benzylidene)isoindolin-1-ylidene)acetate (4h)



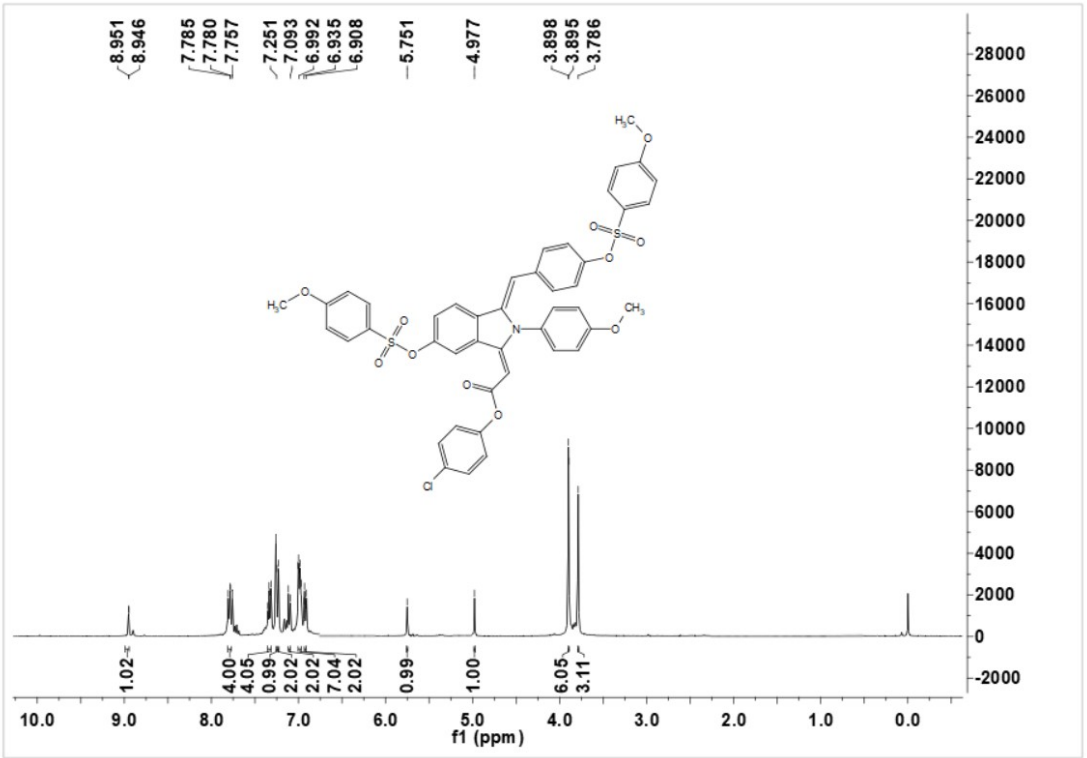


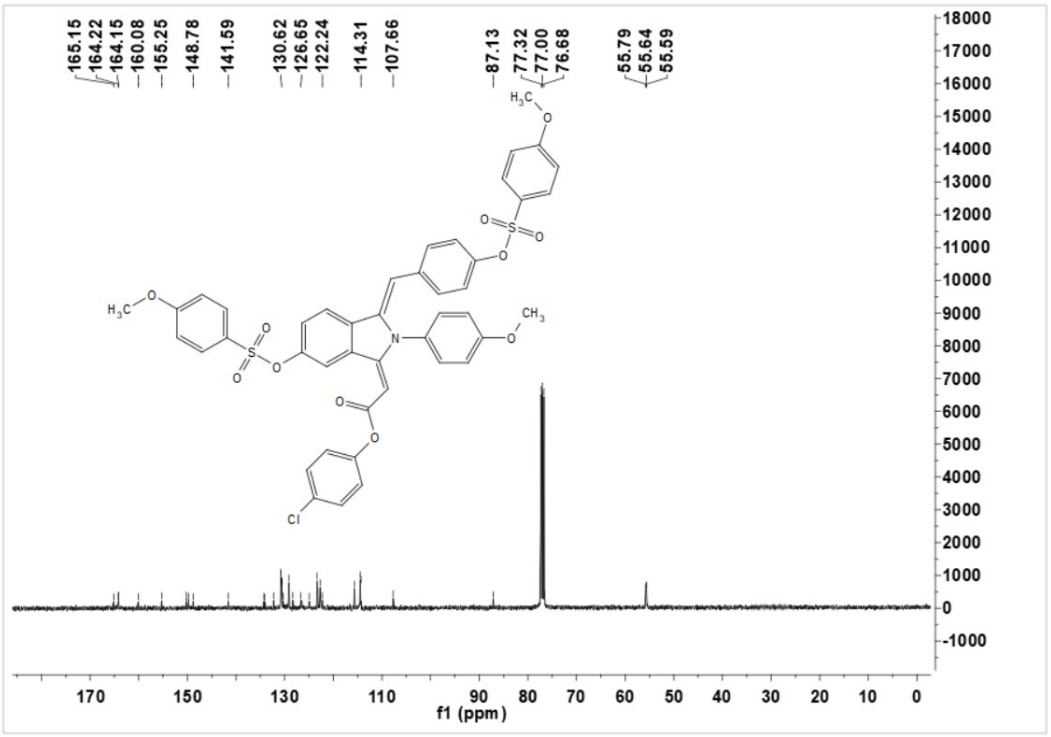
Phenyl 2-((*E*)-6-(*tert*-butyl)-3-((*Z*)-4-(*tert*-butyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4i)



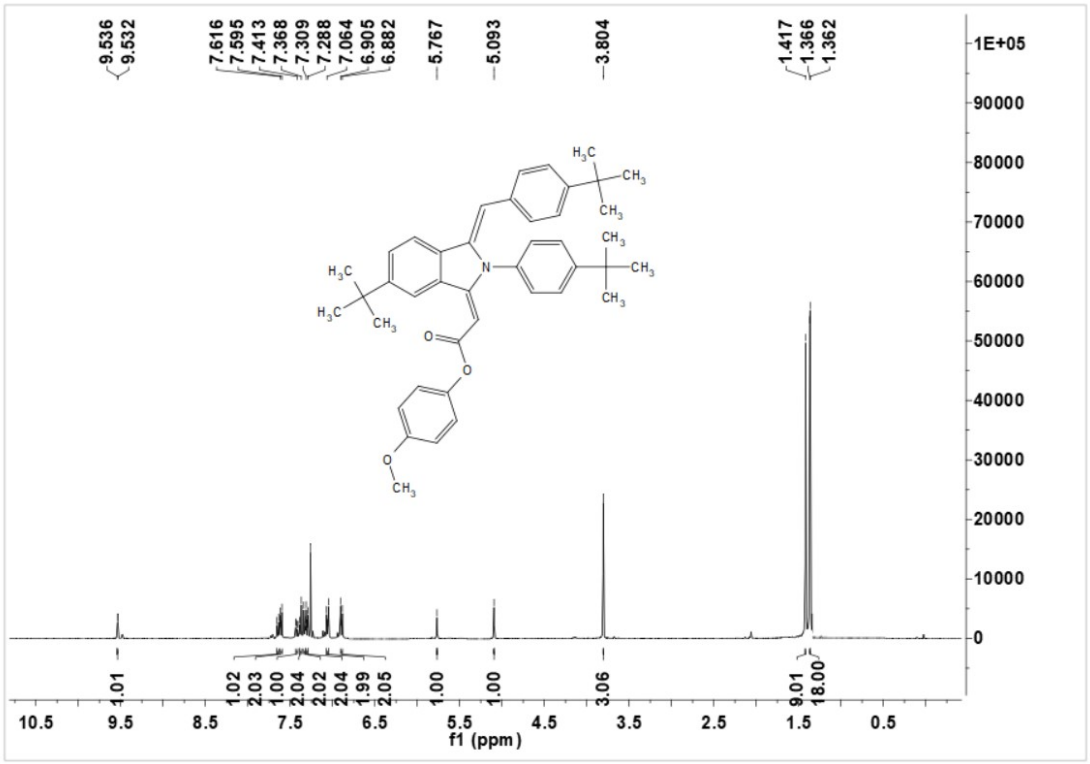


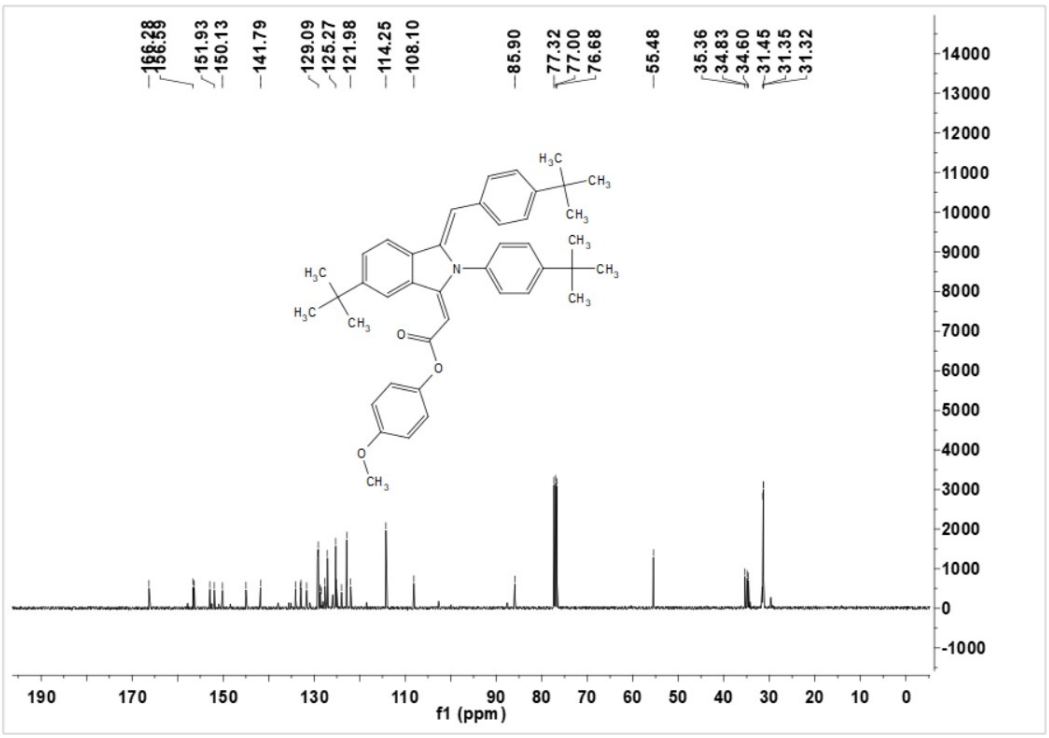
4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(((4-methoxyphenyl)sulfonyl)oxy)-3-((*Z*)-4-(((4-methoxyphenyl)sulfonyl)oxy)benzylidene)isoindolin-1-ylidene)acetate (4j)



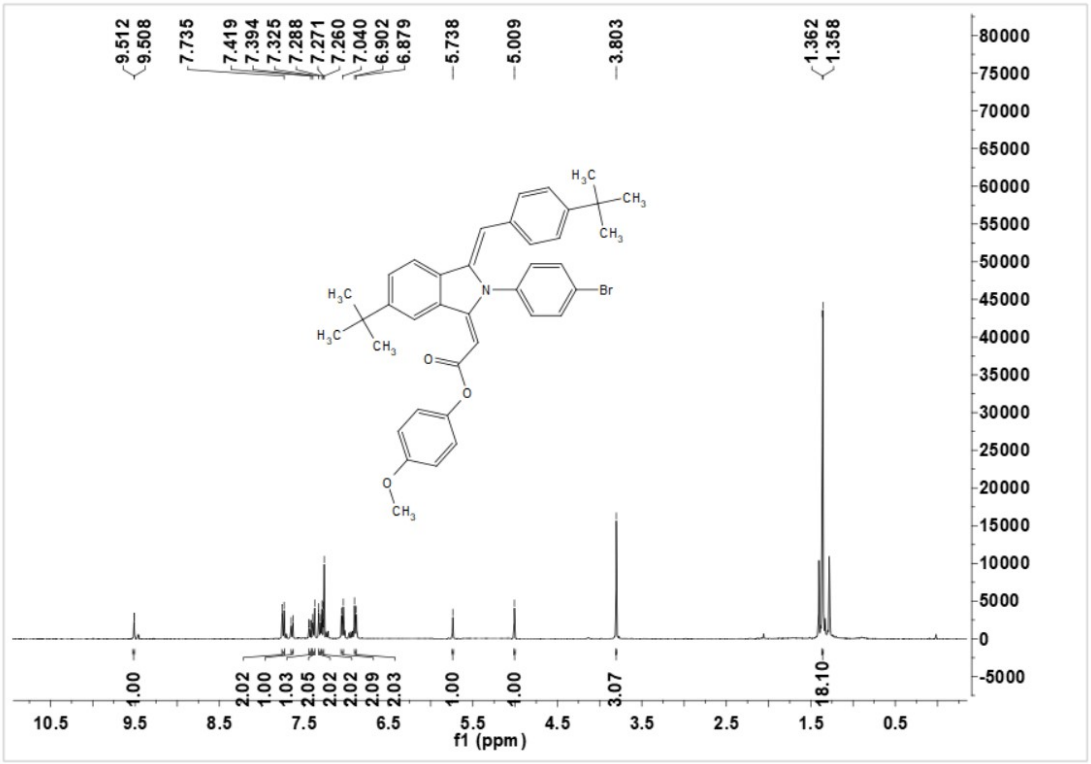


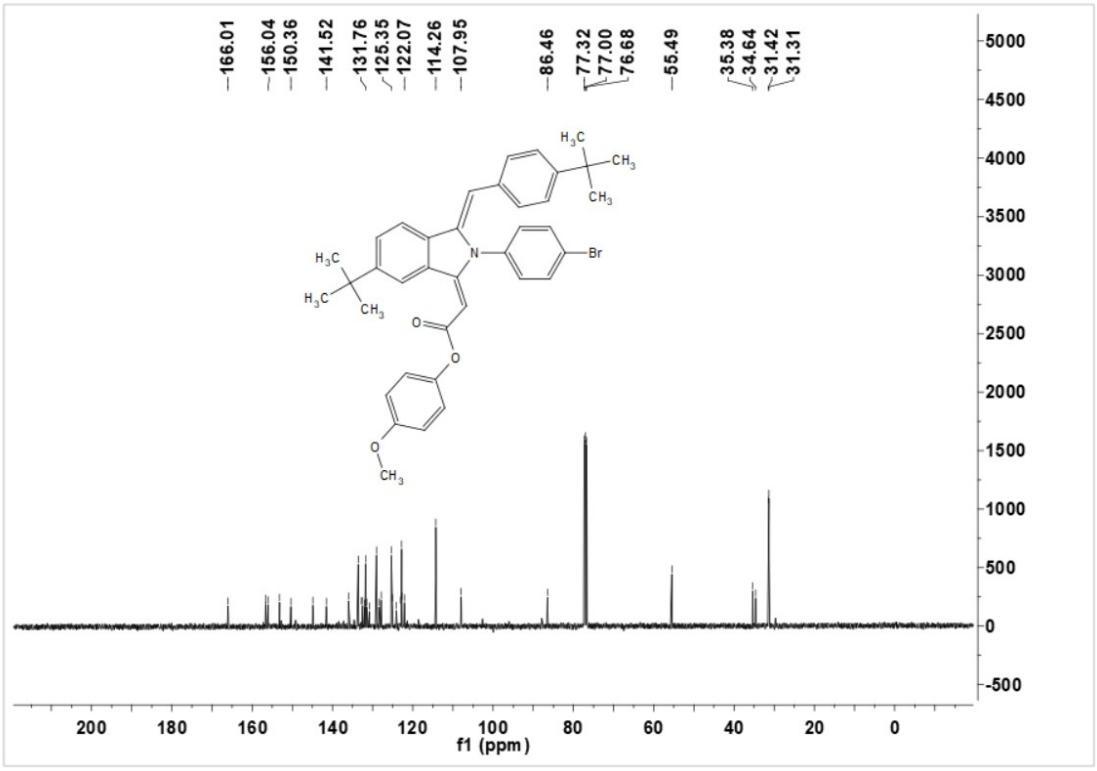
4-Methoxyphenyl 2-((*E*)-6-(*tert*-butyl)-3-((*Z*)-4-(*tert*-butyl)benzylidene)-2-(4-(*tert*-butyl)phenyl)isoindolin-1-ylidene)acetate (4k)



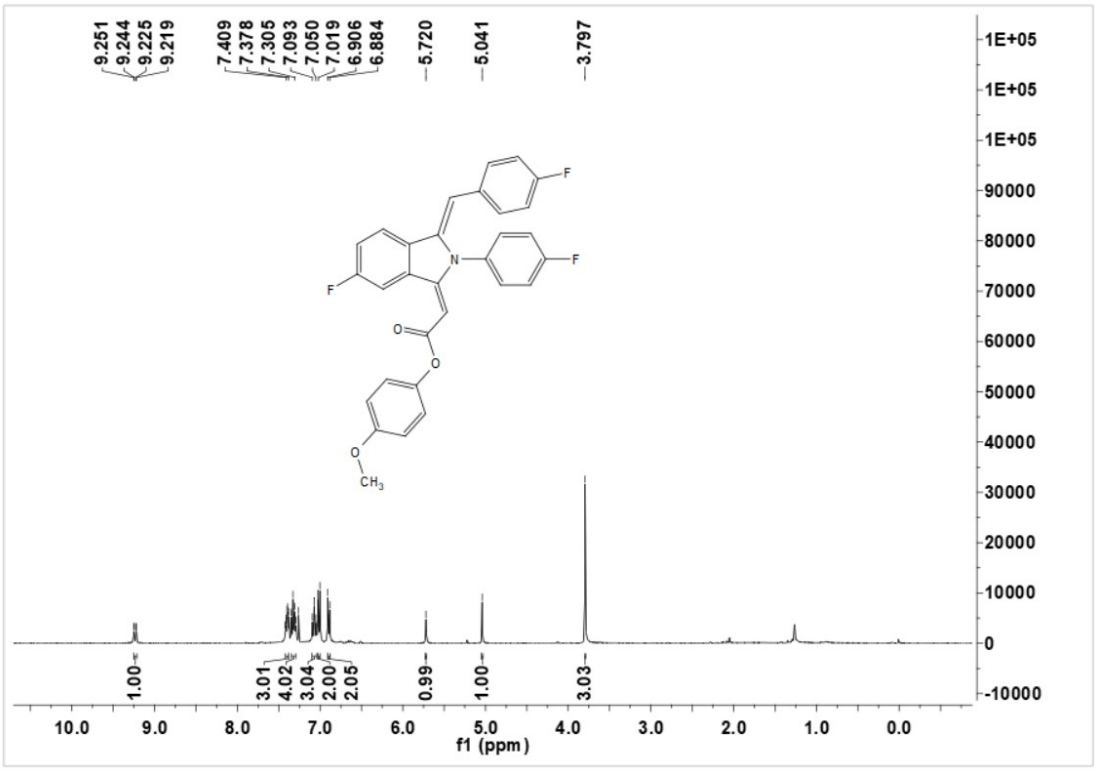


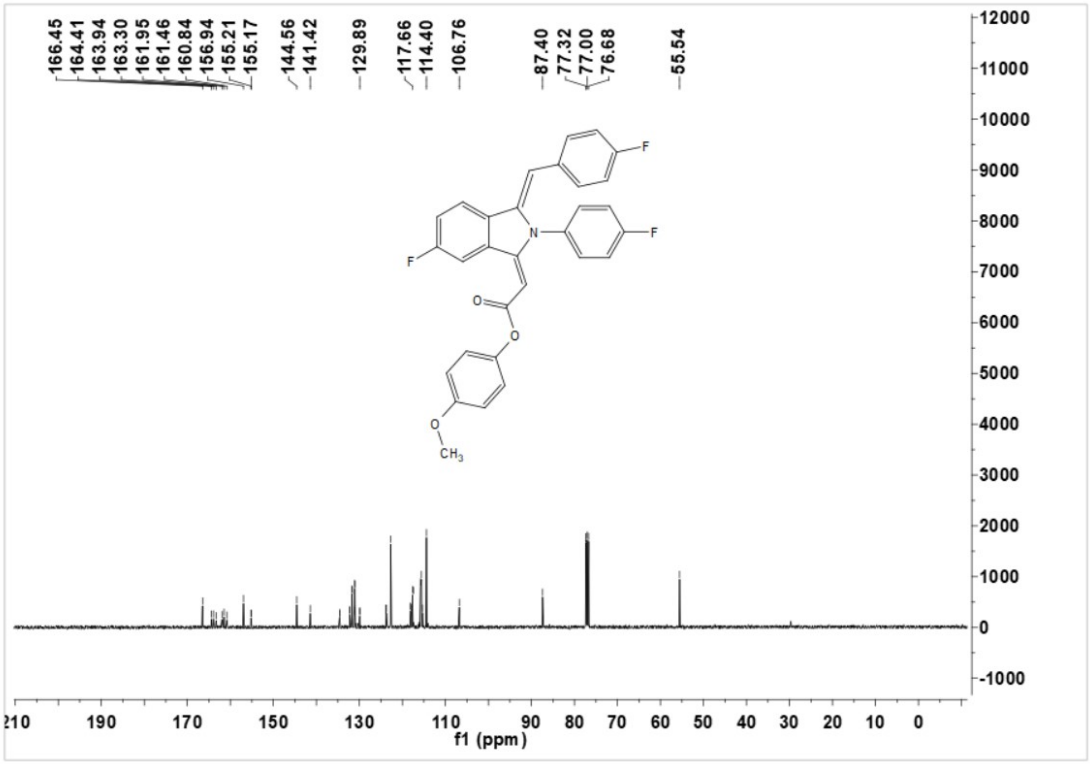
4-Methoxyphenyl 2-((*E*)-2-(4-bromophenyl)-6-(*tert*-butyl)-3-((*Z*)-4-(*tert*-butyl)benzylidene)isoindolin-1-ylidene)acetate (4l)

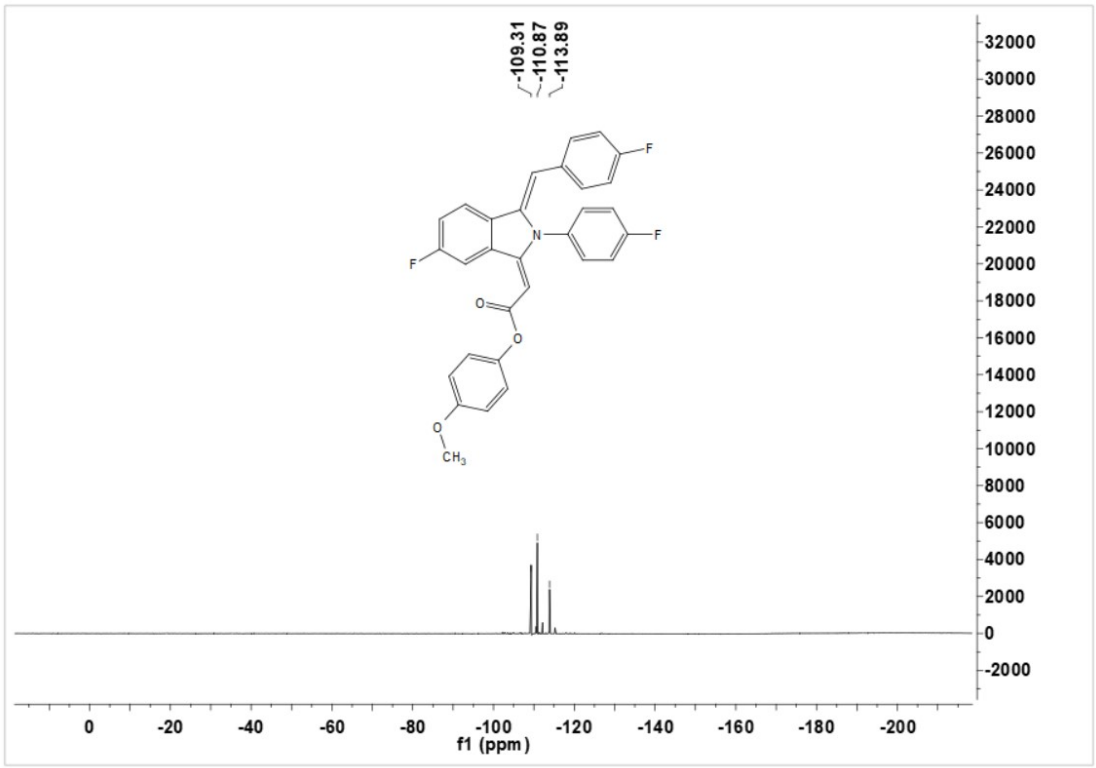




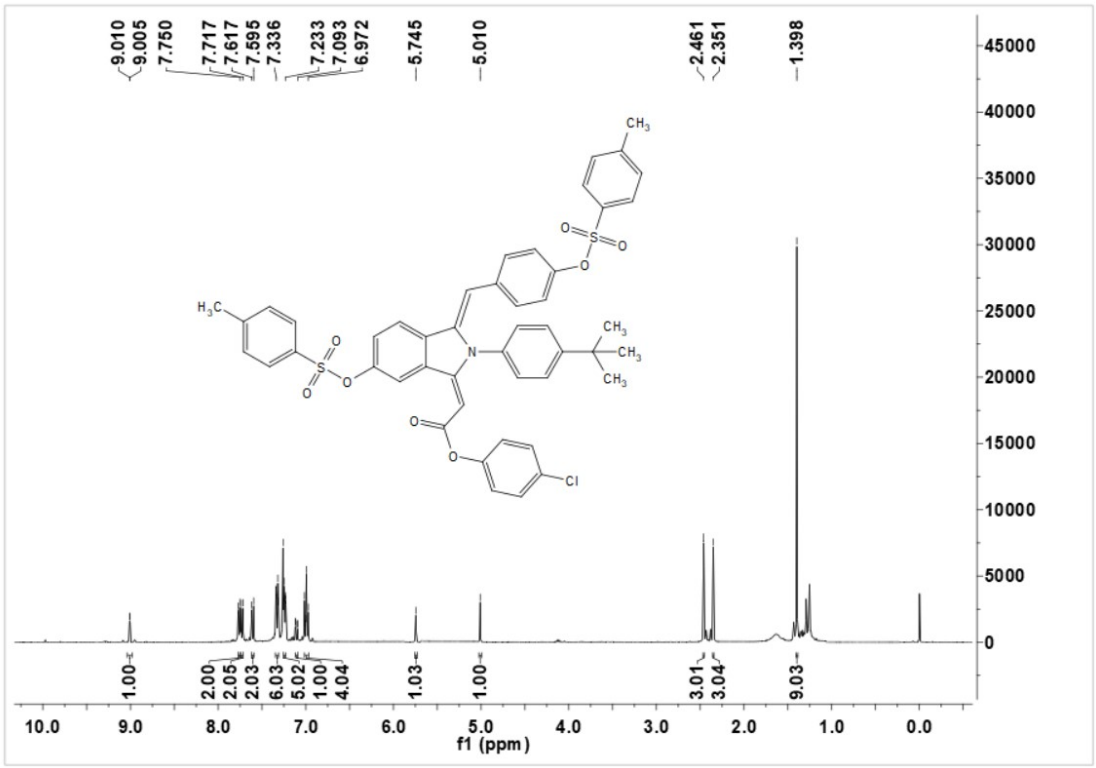
4-Methoxyphenyl 2-((*E*)-6-fluoro-3-((*Z*)-4-fluorobenzylidene)-2-(4-fluorophenyl)isoindolin-1-ylidene)acetate (4m)

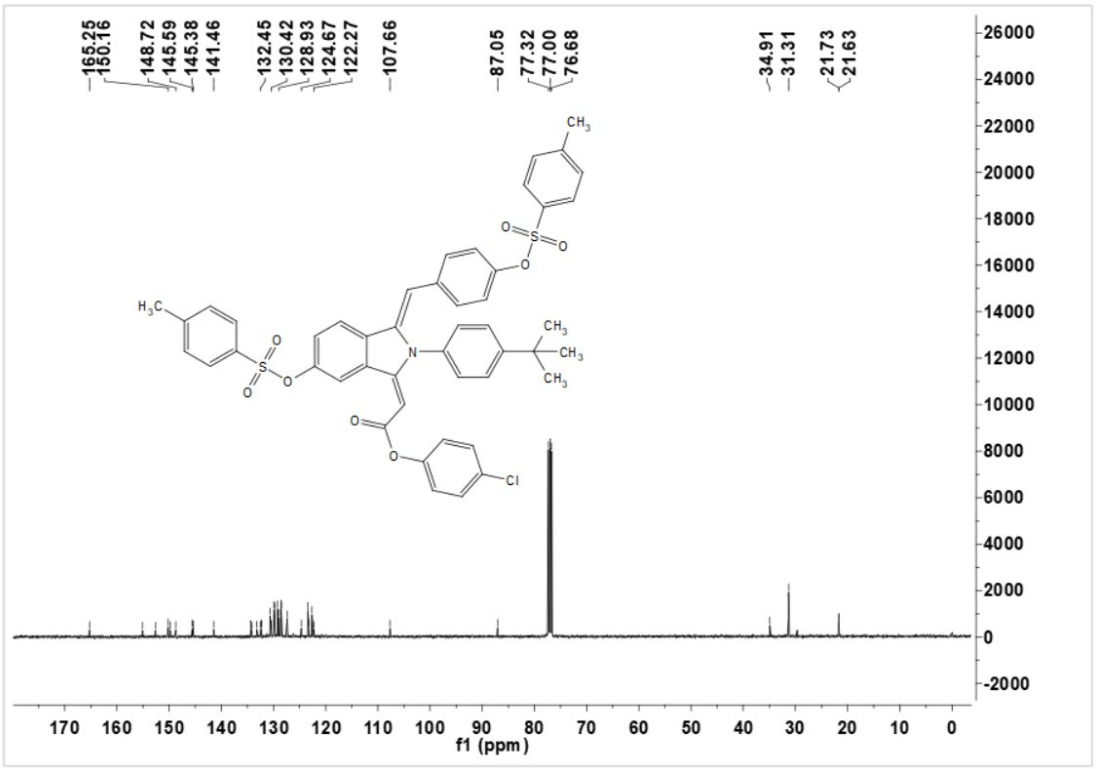




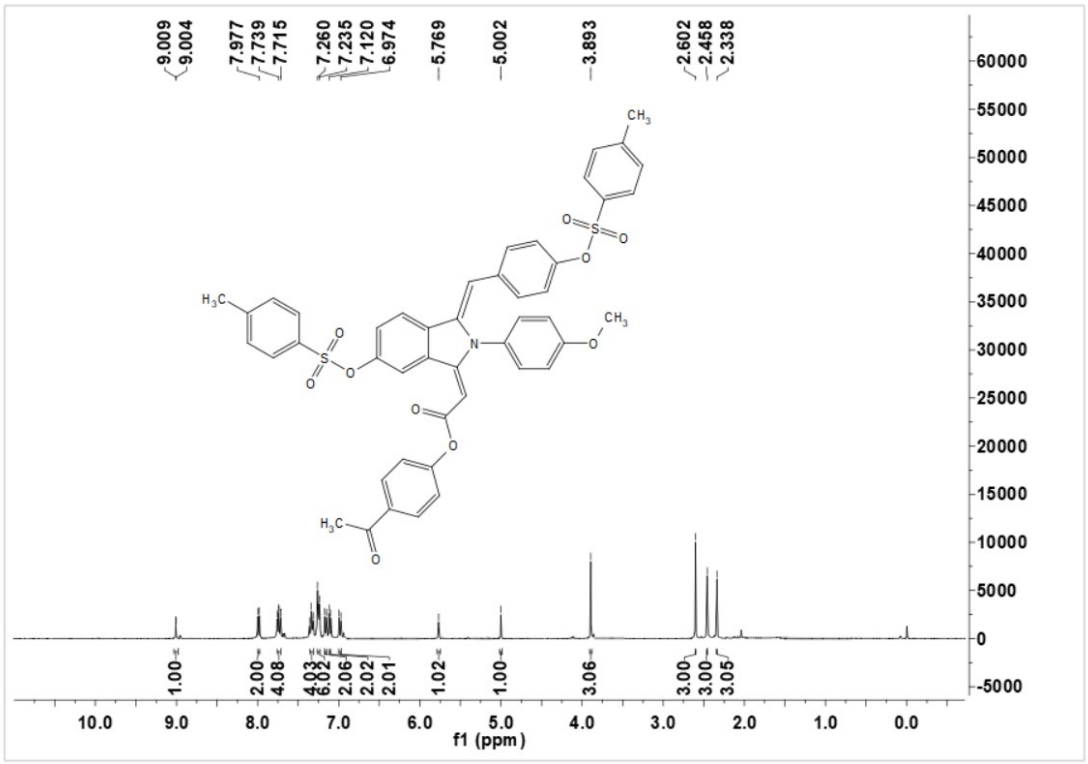


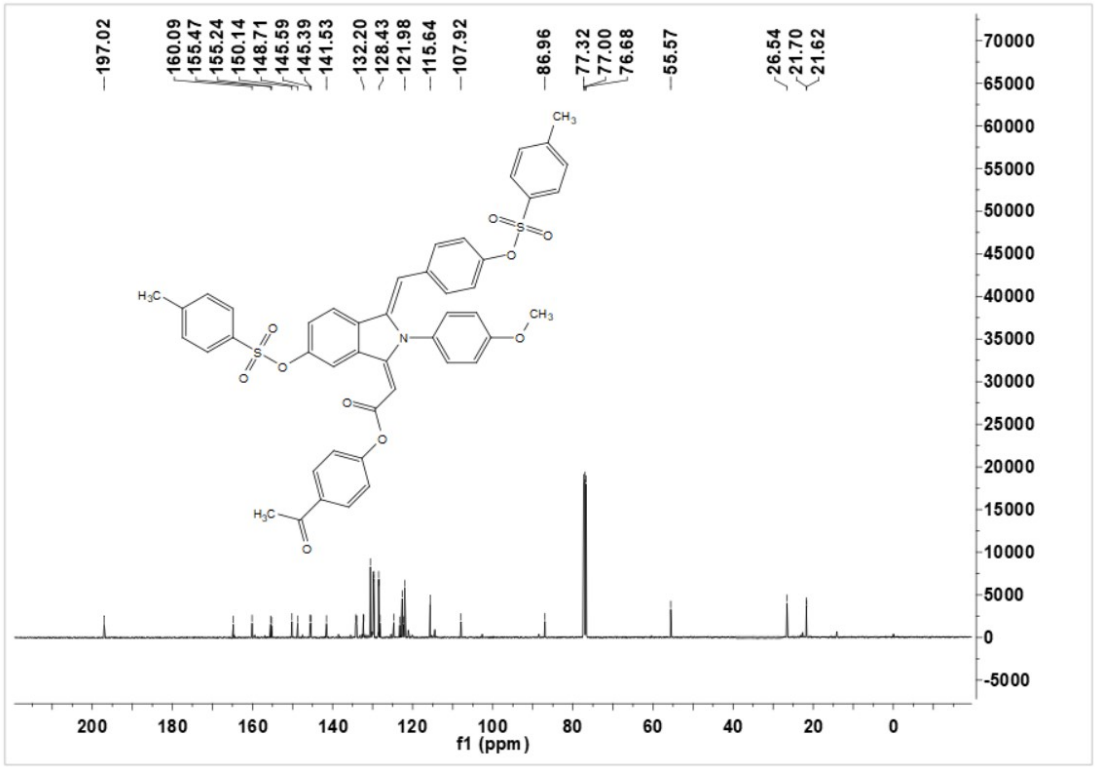
4-Chlorophenyl 2-((*E*)-2-(4-(*tert*-butyl)phenyl)-6-(tosyloxy)-3-((*Z*)-4-(tosyloxy)benzylidene)isoindolin-1-ylidene)acetate (4n)



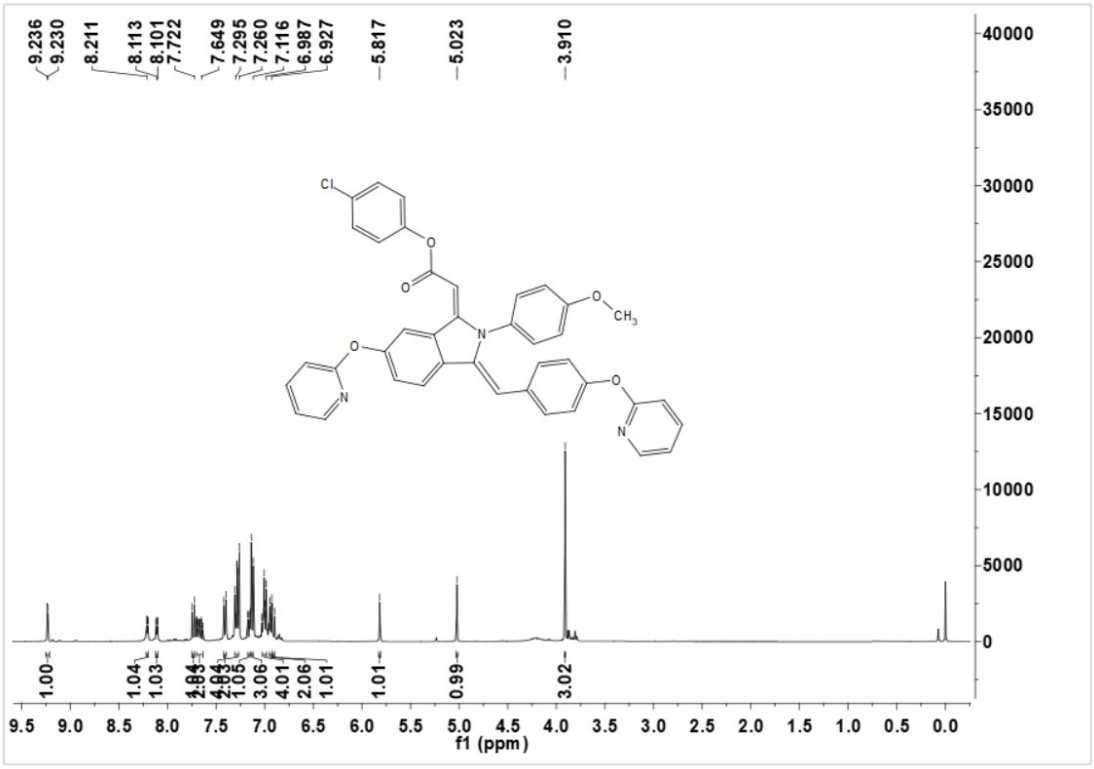


4-Acetylphenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(tosyloxy)-3-((*Z*)-4-(tosyloxy)benzylidene)isoindolin-1-ylidene)acetate (4o)





4-Chlorophenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(pyridin-2-yloxy)-3-((*Z*)-4-(pyridin-2-yloxy)benzylidene)isoindolin-1-ylidene)acetate (4p)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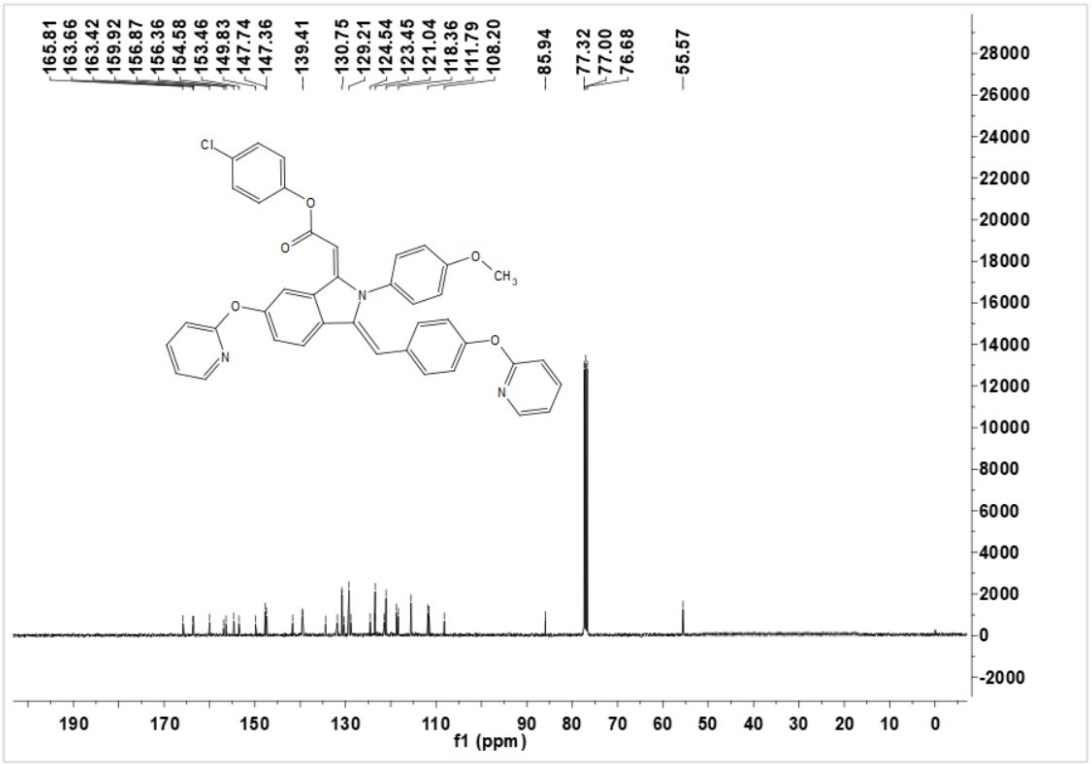
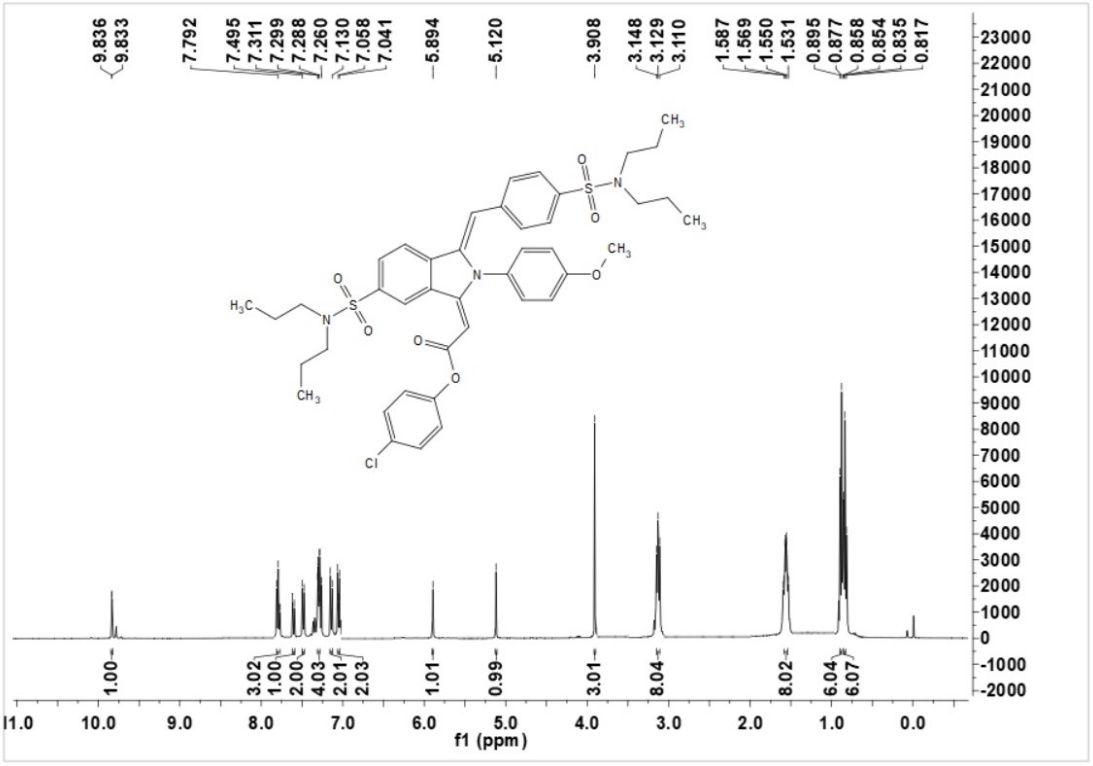
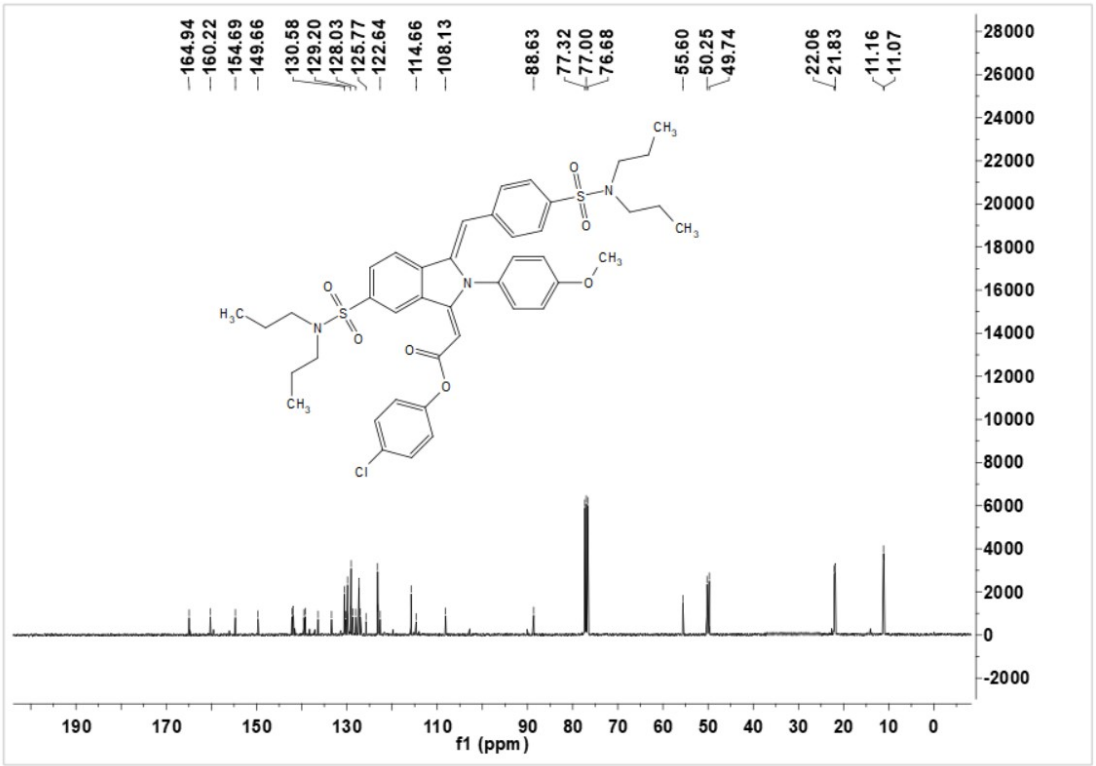
9.230
8.211
8.113
8.101
7.722
7.649
7.295
7.260
7.116
6.987
6.927
5.817
5.023
3.910
Cl
O
O
N
O
CH3
O
N
O
N
1.00
1.04
1.03
1.01
1.01
3.06
4.01
2.06
1.01
1.01
0.99
3.02
40000
35000
30000
25000
20000
15000
10000
5000
0
9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)

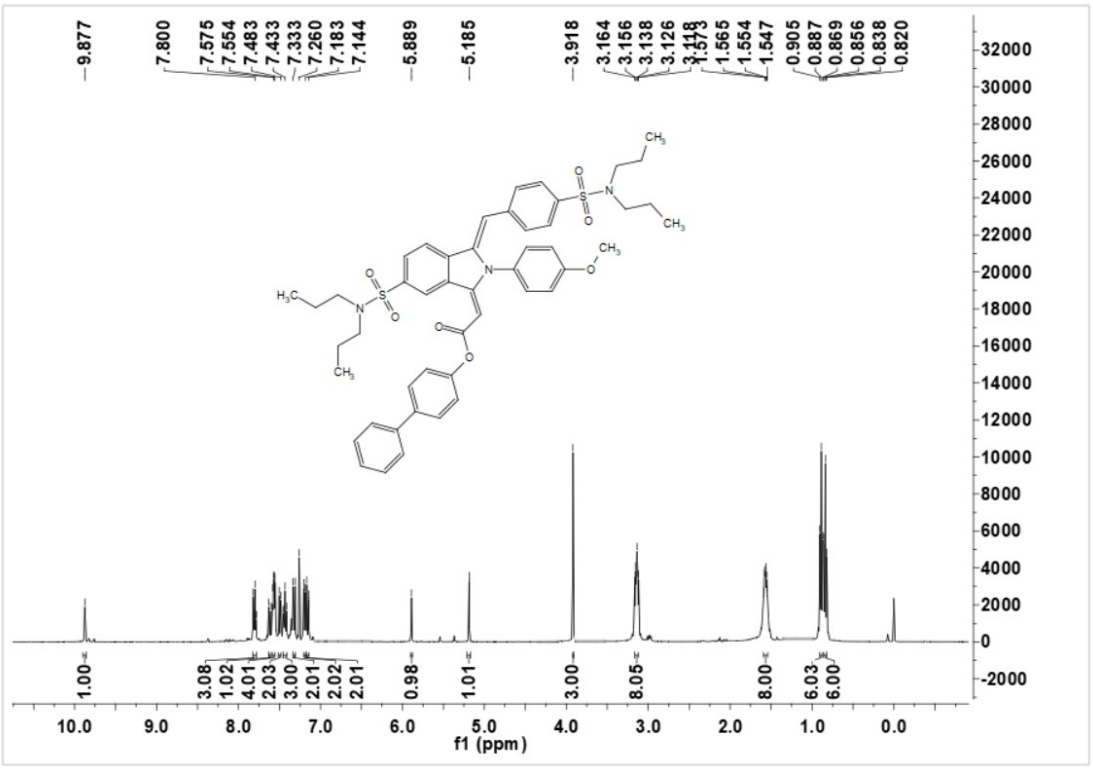

165.81
163.66
163.42
159.92
156.87
156.36
154.58
153.46
149.83
147.74
147.36
139.41
130.75
129.21
124.54
123.45
121.04
118.36
111.79
108.20
85.94
77.32
77.00
76.68
55.57
Cl
O
O
N
O
CH3
O
N
O
N
28000
26000
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
190 170 150 130 110 90 80 70 60 50 40 30 20 10 0
f1 (ppm)

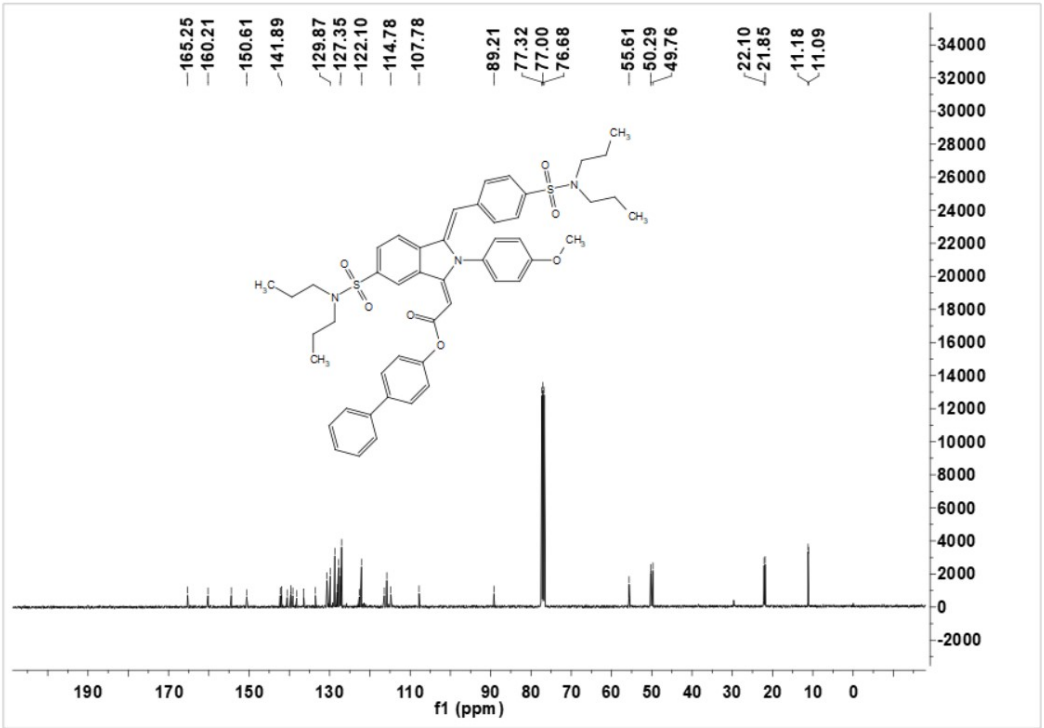
4-Chlorophenyl 2-((*E*)-6-(*N*,*N*-dipropylsulfamoyl)-3-((*Z*)-4-(*N*,*N*-dipropylsulfamoyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4q)



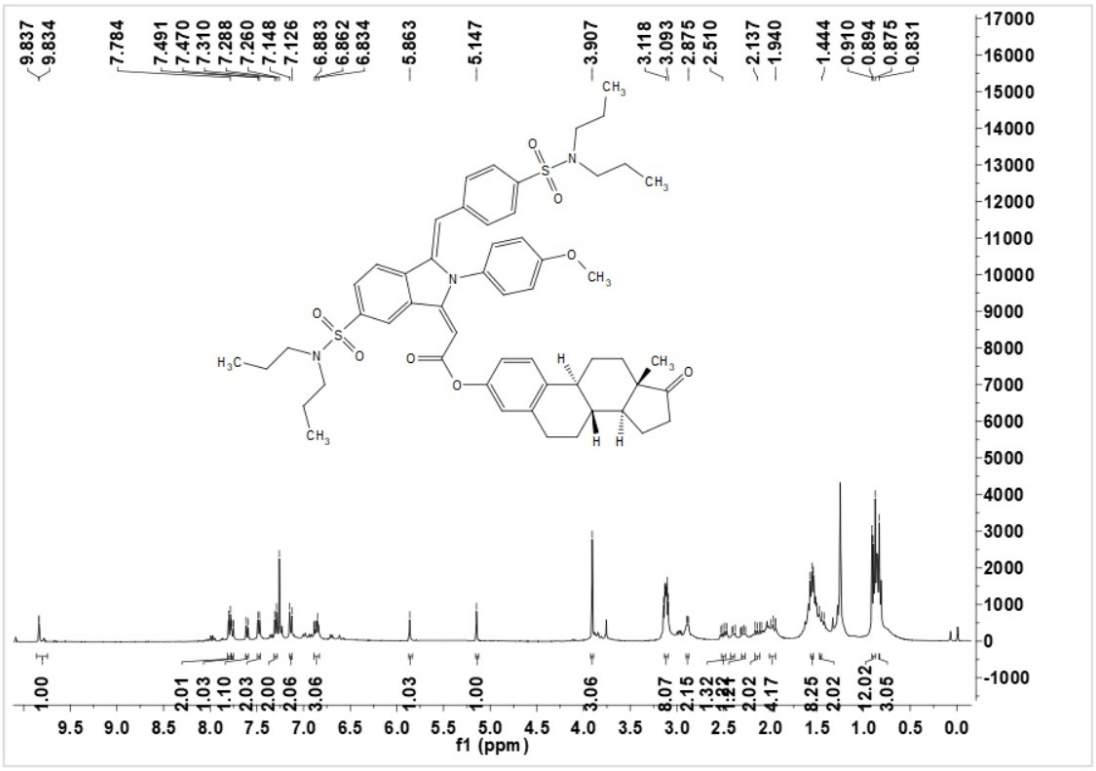


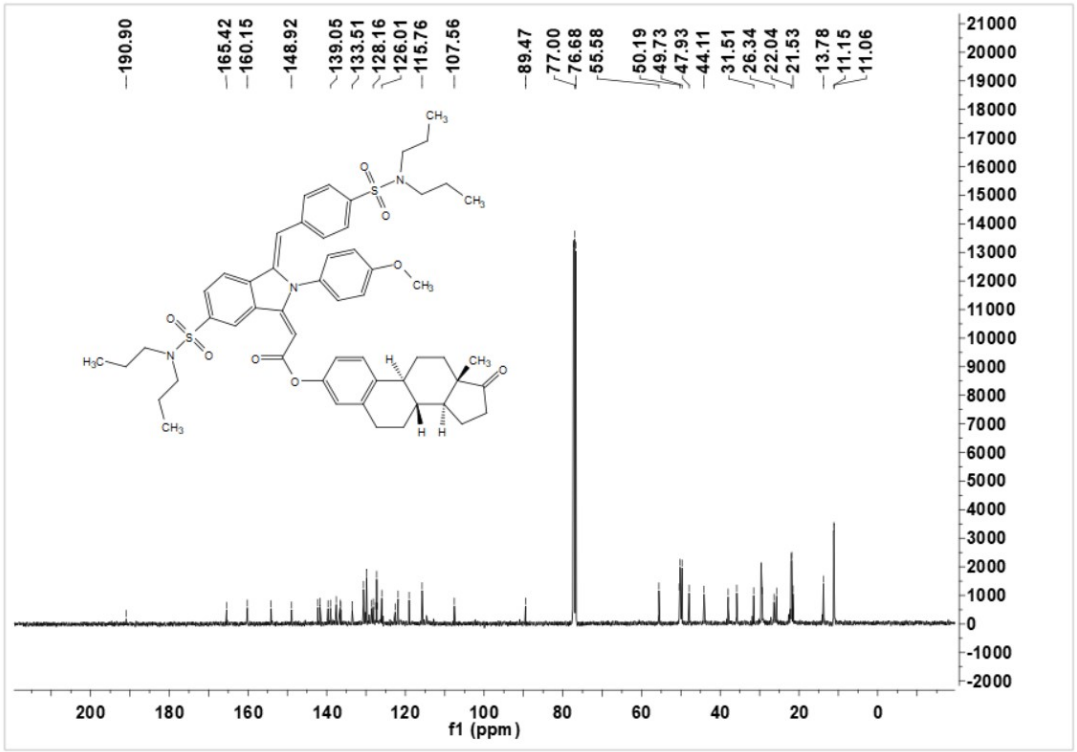
[1,1'-Biphenyl]-4-yl 2-((*E*)-6-(*N*,*N*-dipropylsulfamoyl)-3-((*Z*)-4-(*N*,*N*-dipropylsulfamoyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4r)



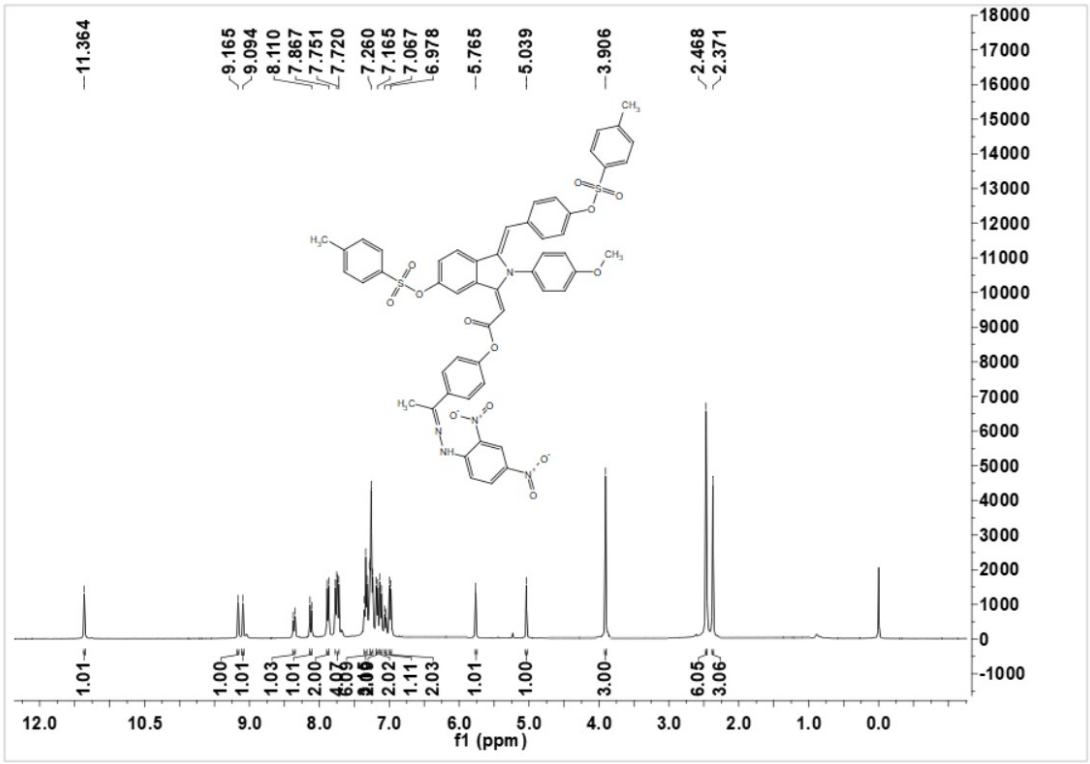


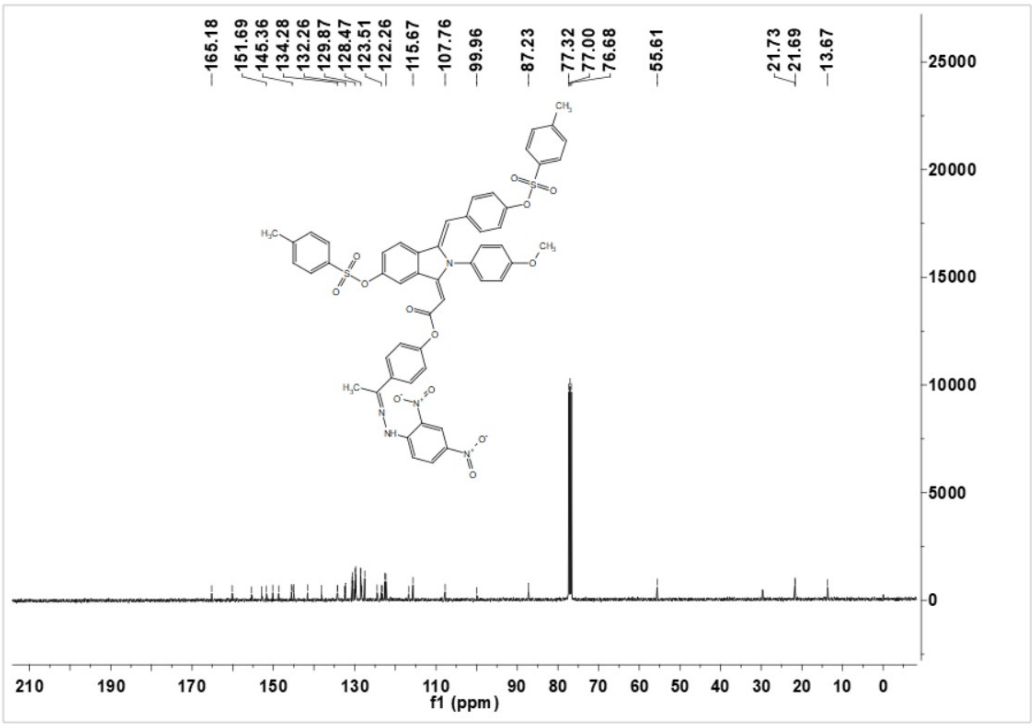
(8*R*, 9*S*, 13*S*, 14*S*)-13-Methyl-17-*oxo*-7,8,9,11,12,13,14,15,16,17-decahydro-6*H*-cyclopenta[a]phenanthren-3-yl 2-((*E*)-6-(*N*,*N*-dipropylsulfamoyl)-3-((*Z*)-4-(*N*,*N*-dipropylsulfamoyl)benzylidene)-2-(4-methoxyphenyl)isoindolin-1-ylidene)acetate (4s)



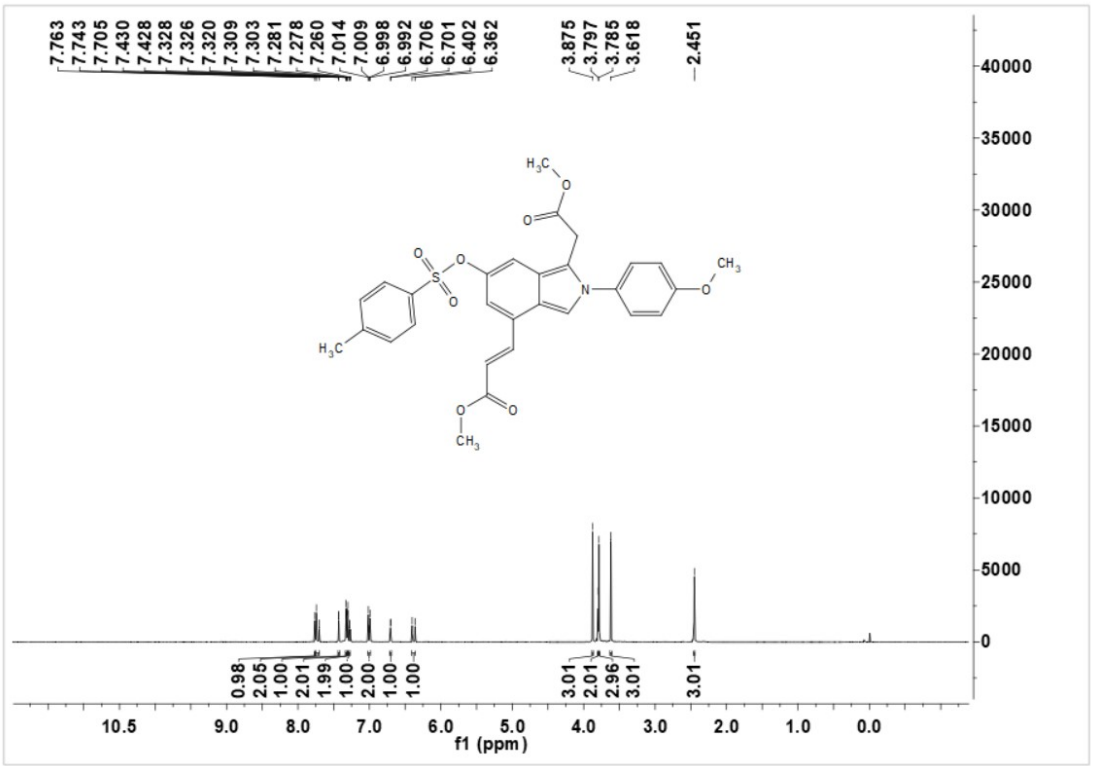


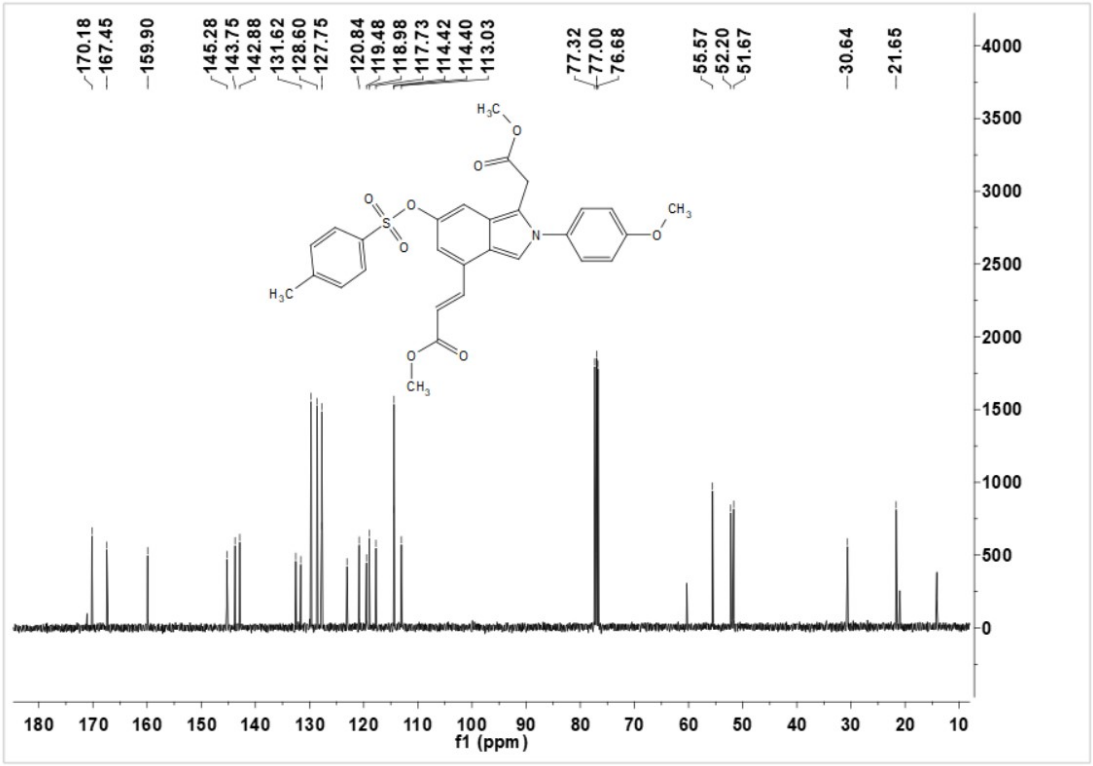
4-(1-(2-(2,4-Dinitrophenyl)hydrazineylidene)ethyl)phenyl 2-((*E*)-2-(4-methoxyphenyl)-6-(tosyloxy)-3-((*Z*)-4-(tosyloxy)benzylidene)isoindolin-1-ylidene)acetate (4t)



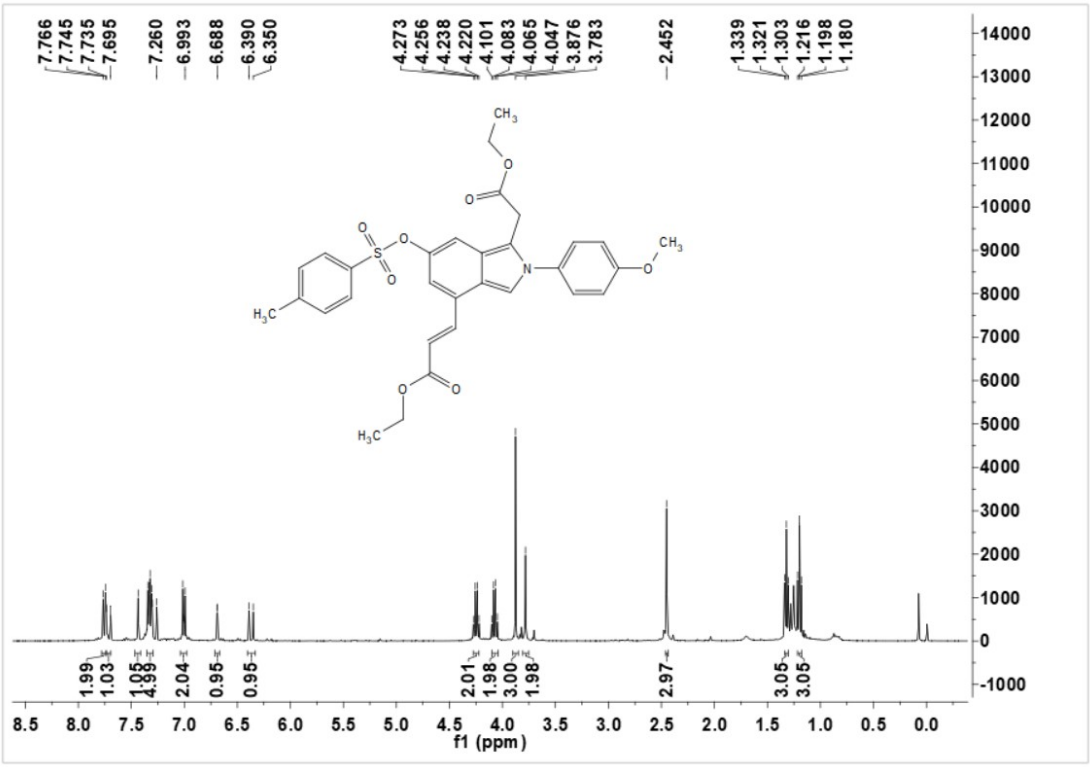


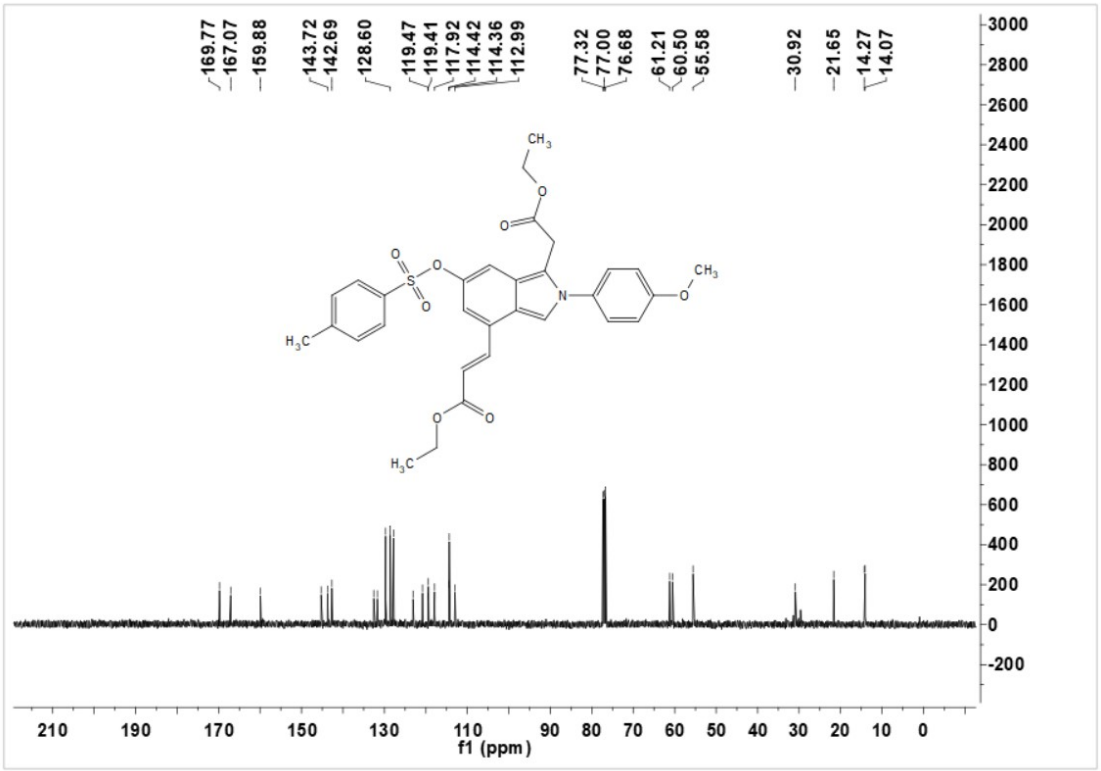
Methyl (*E*)-3-(1-(2-methoxy-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6a)



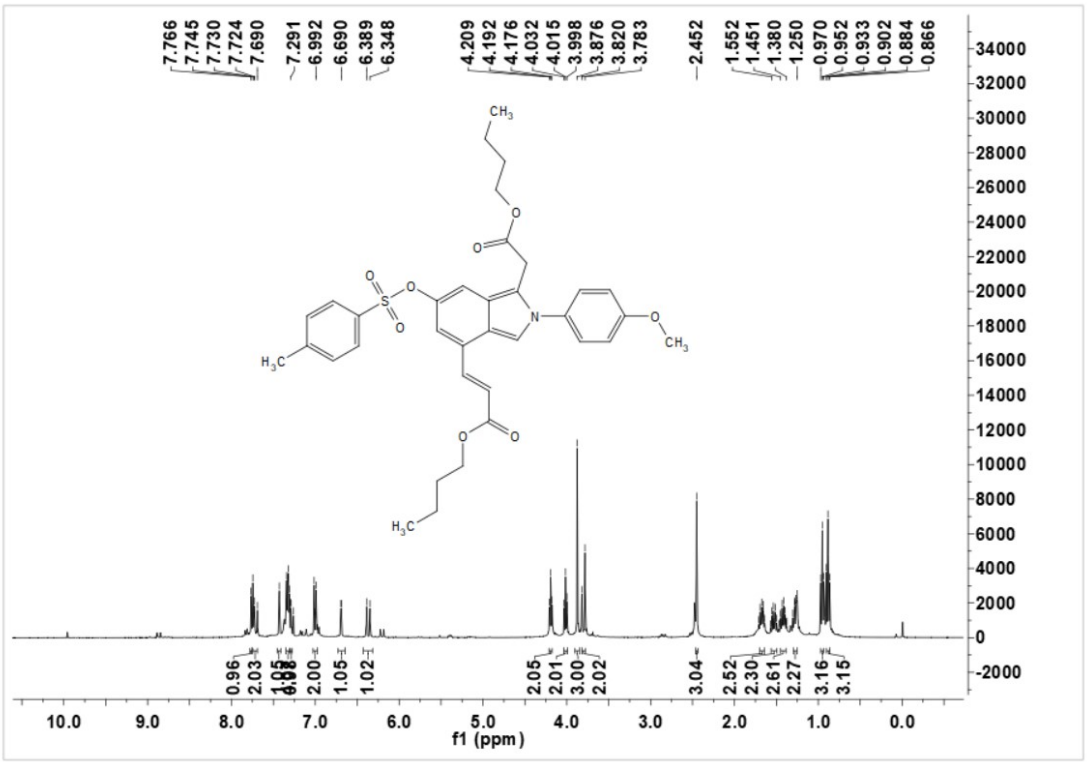


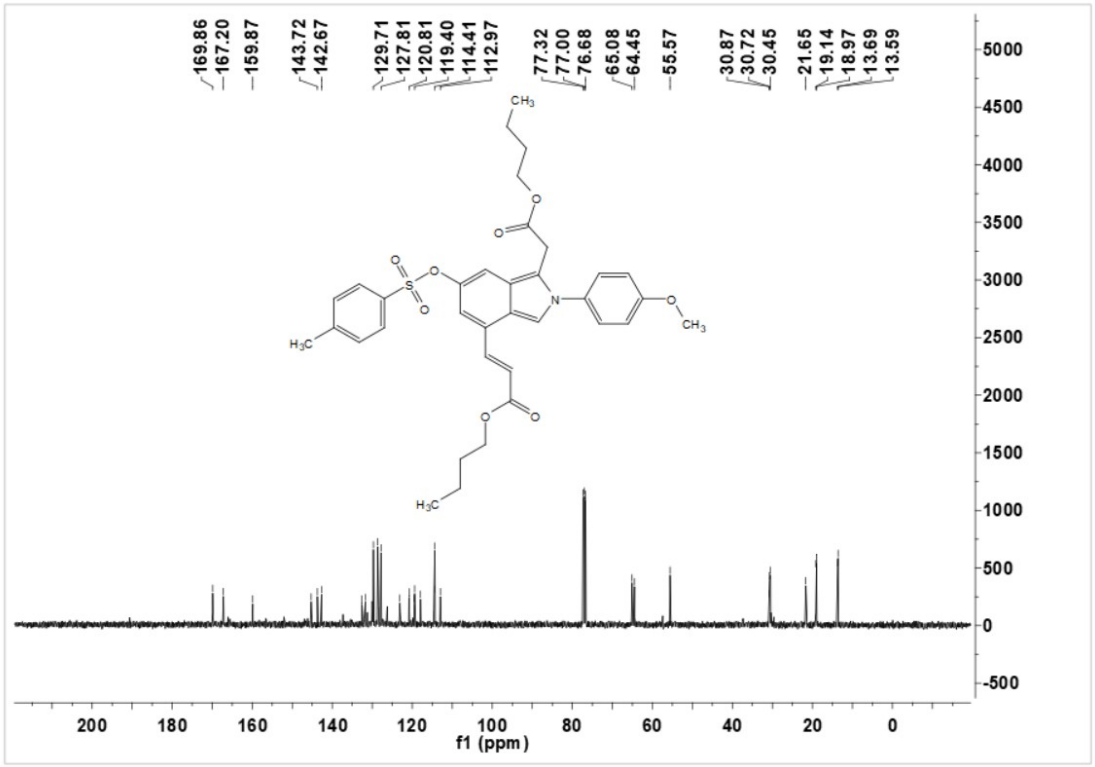
Ethyl (*E)*-3-(1-(2-ethoxy-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6b)



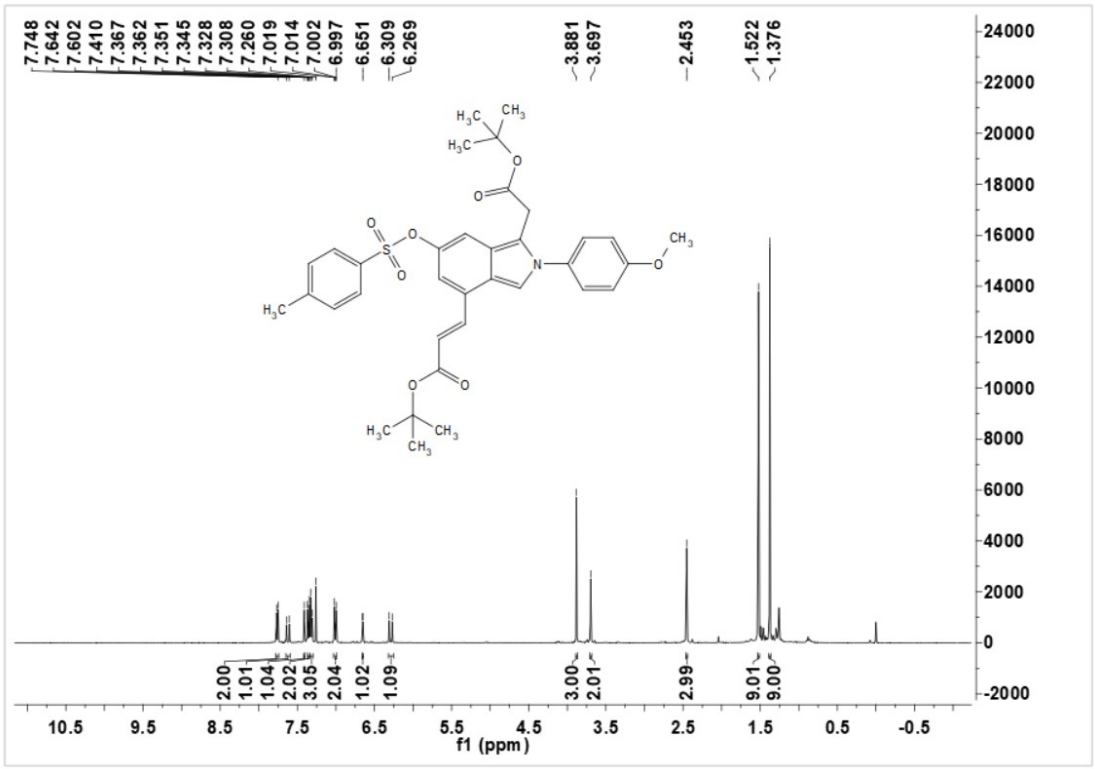


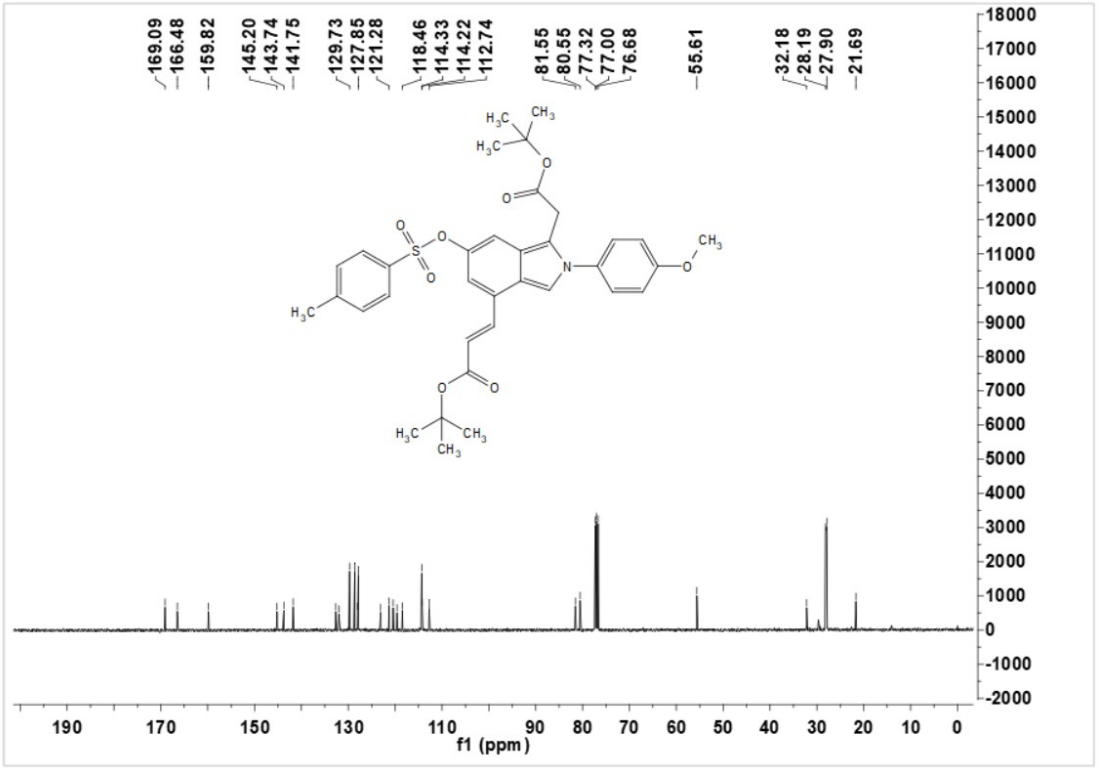
Butyl (*E*)-3-(1-(2-butoxy-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6c)



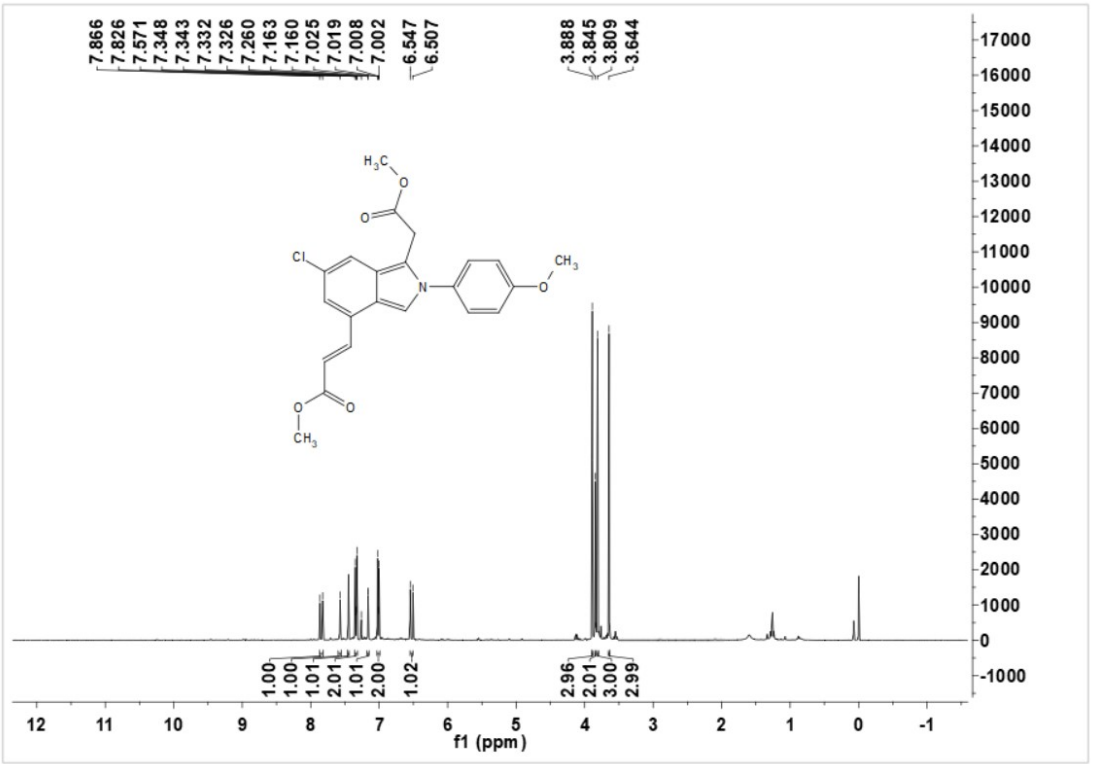


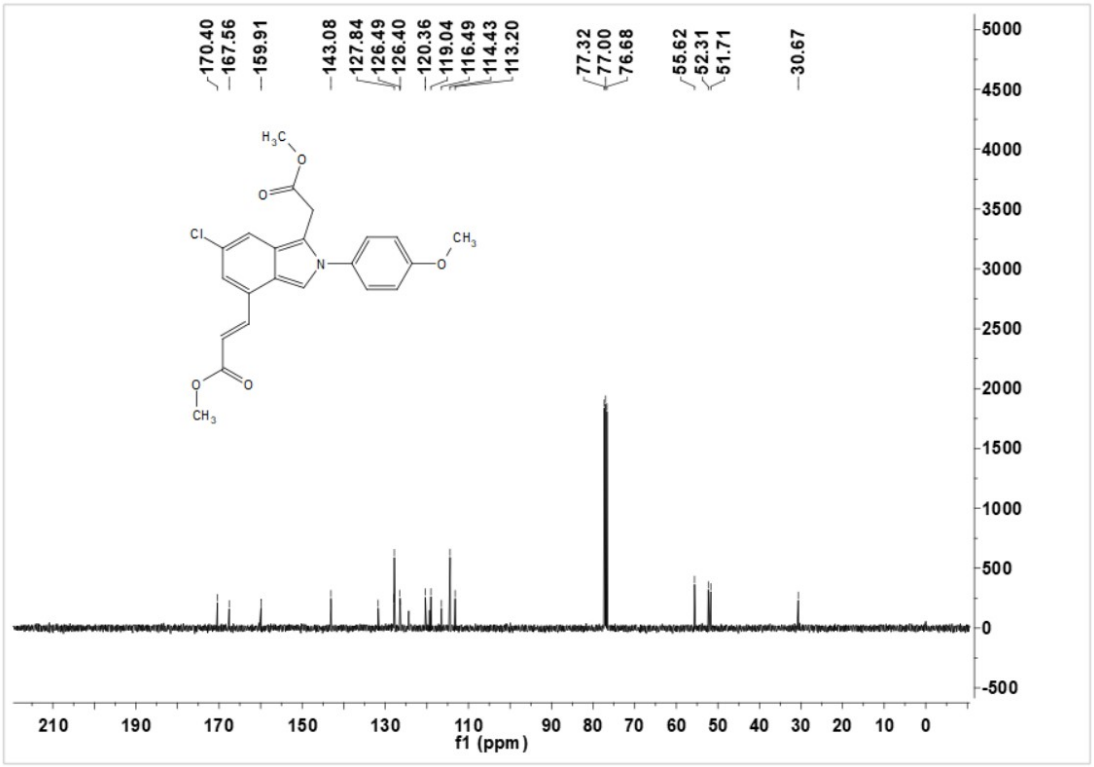
tert-Butyl (_E_)-3-(1-(2-(_tert_-butoxy)-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2_H_-isoindol-4-yl)acrylate (6d)



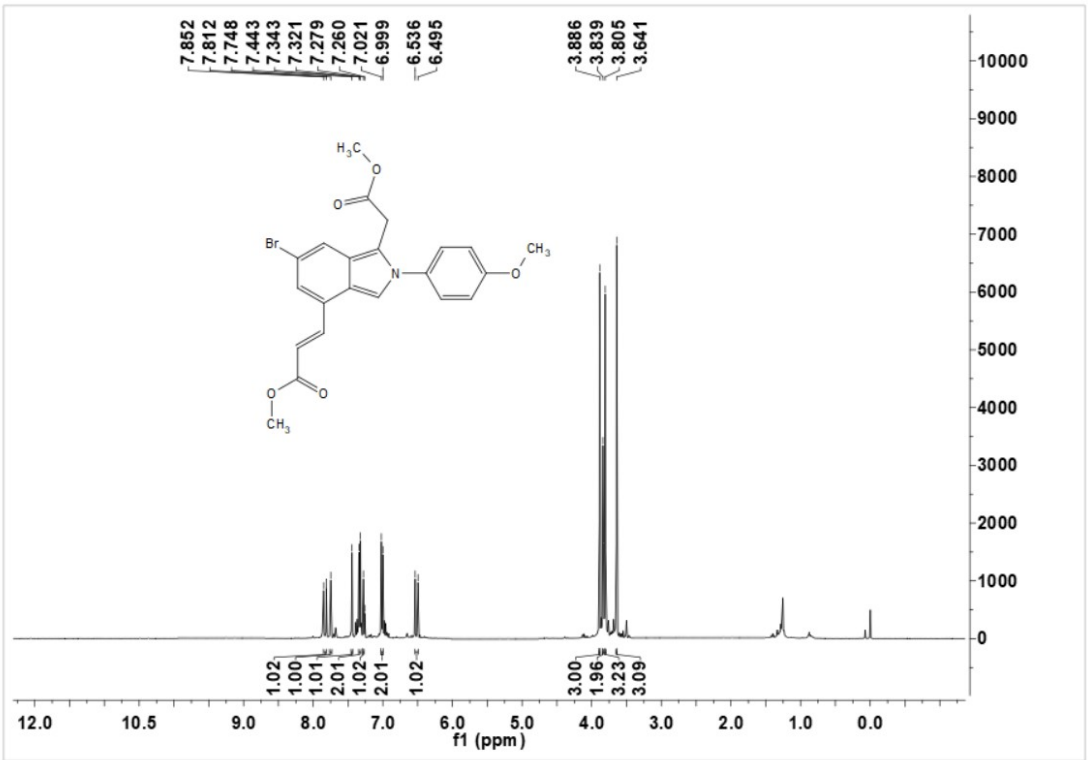


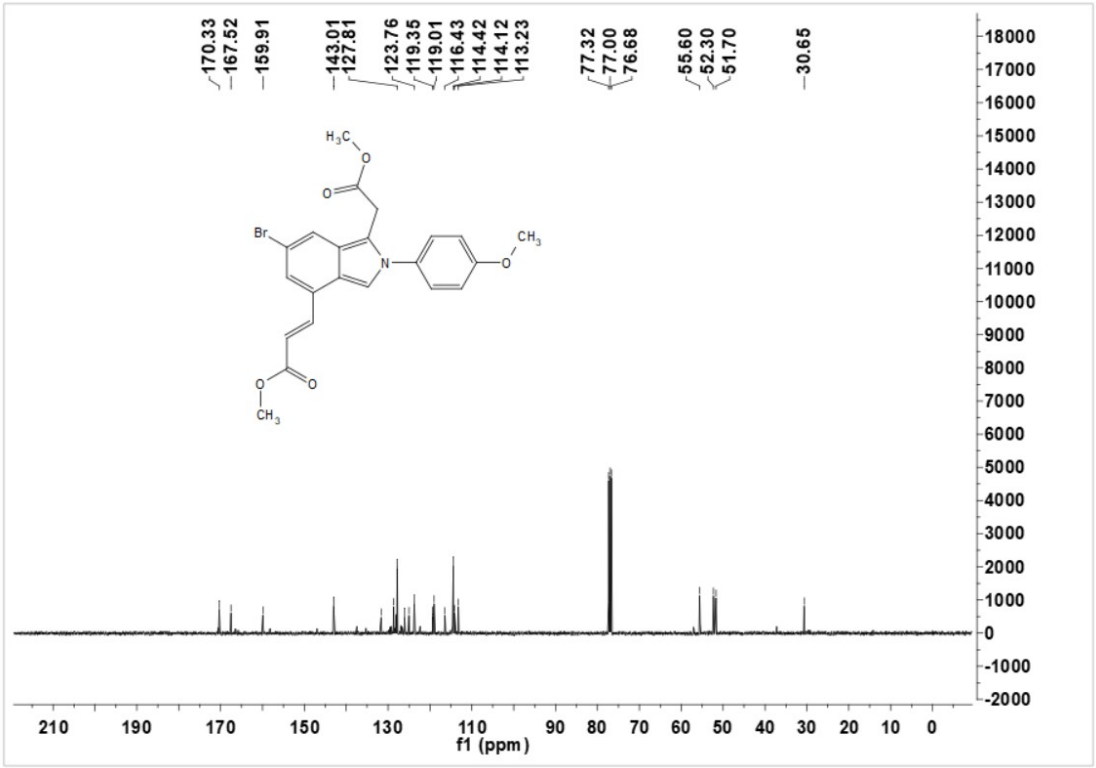
Methyl (*E*)-3-(6-chloro-1-(2-methoxy-2-oxoethyl)-2-(4-methoxyphenyl)-2*H*-isoindol-4-yl)acrylate (6f)



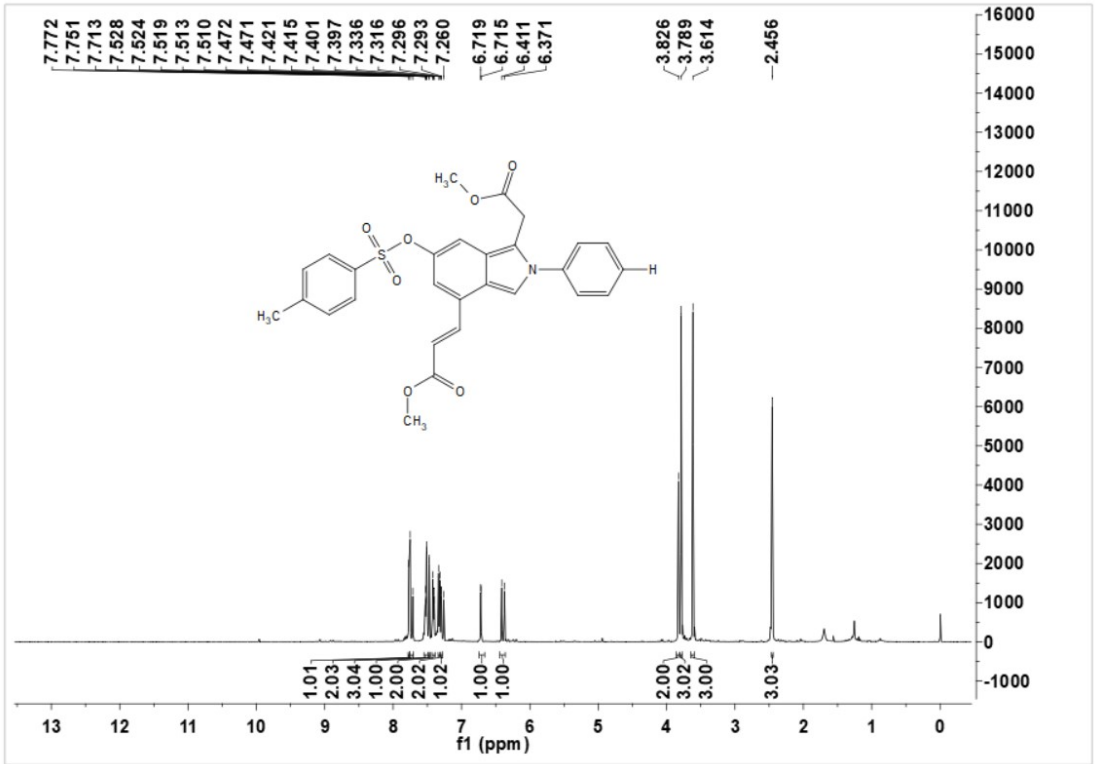


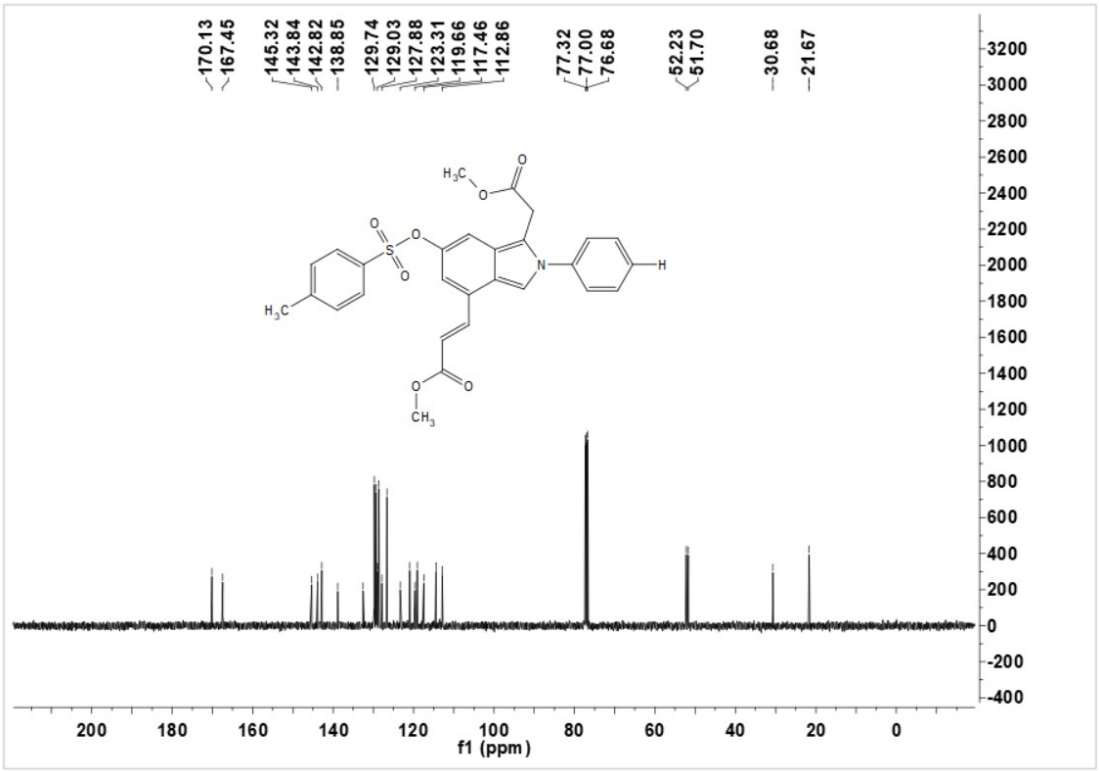
Methyl (*E*)-3-(2-(4-chlorophenyl)-1-(2-methoxy-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6g)



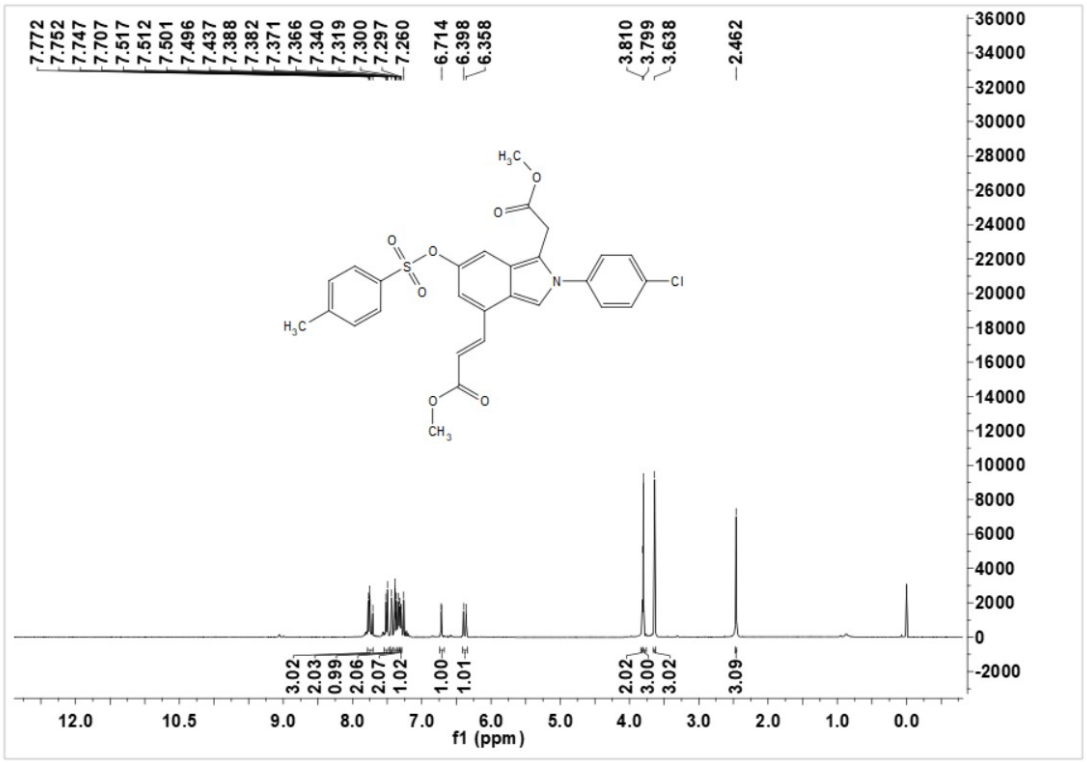


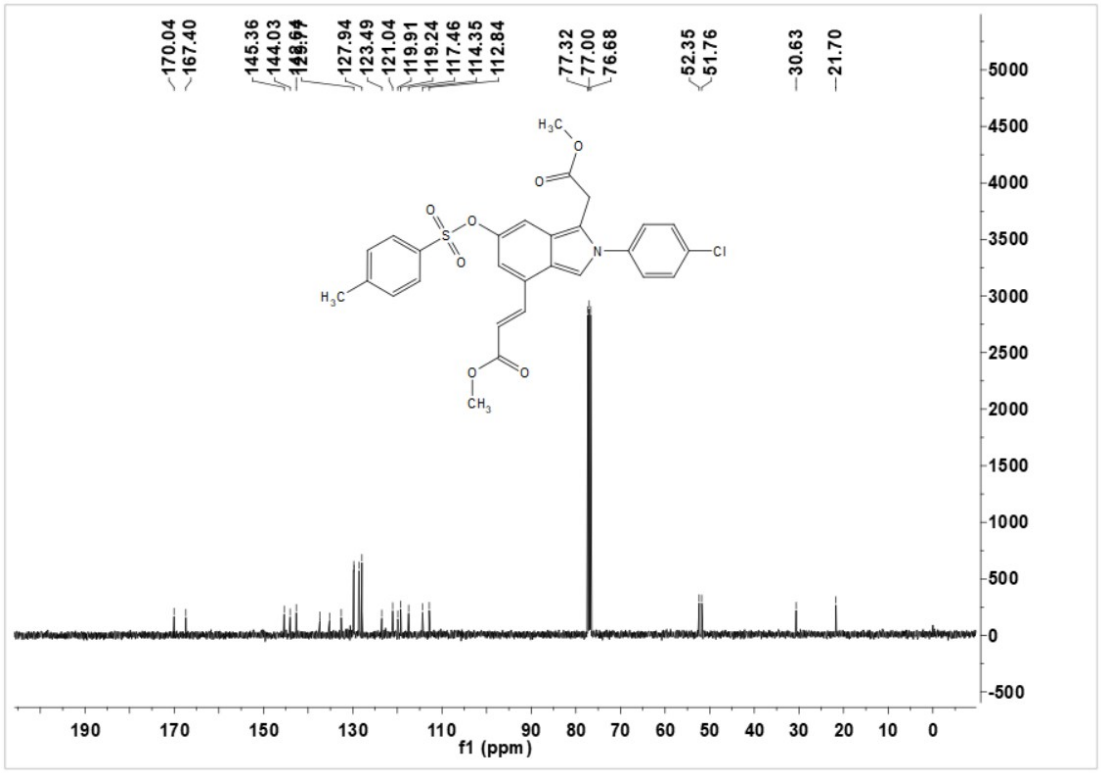
Methyl (*E*)-3-(1-(2-methoxy-2-oxoethyl)-2-phenyl-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6h)



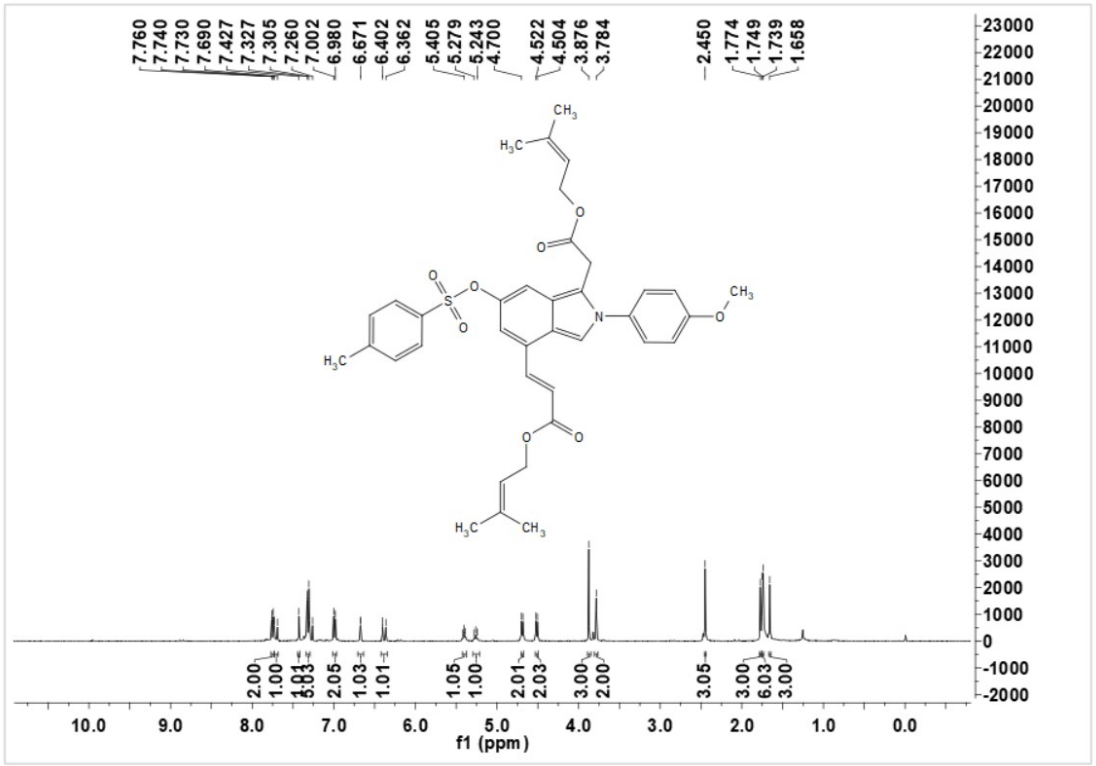


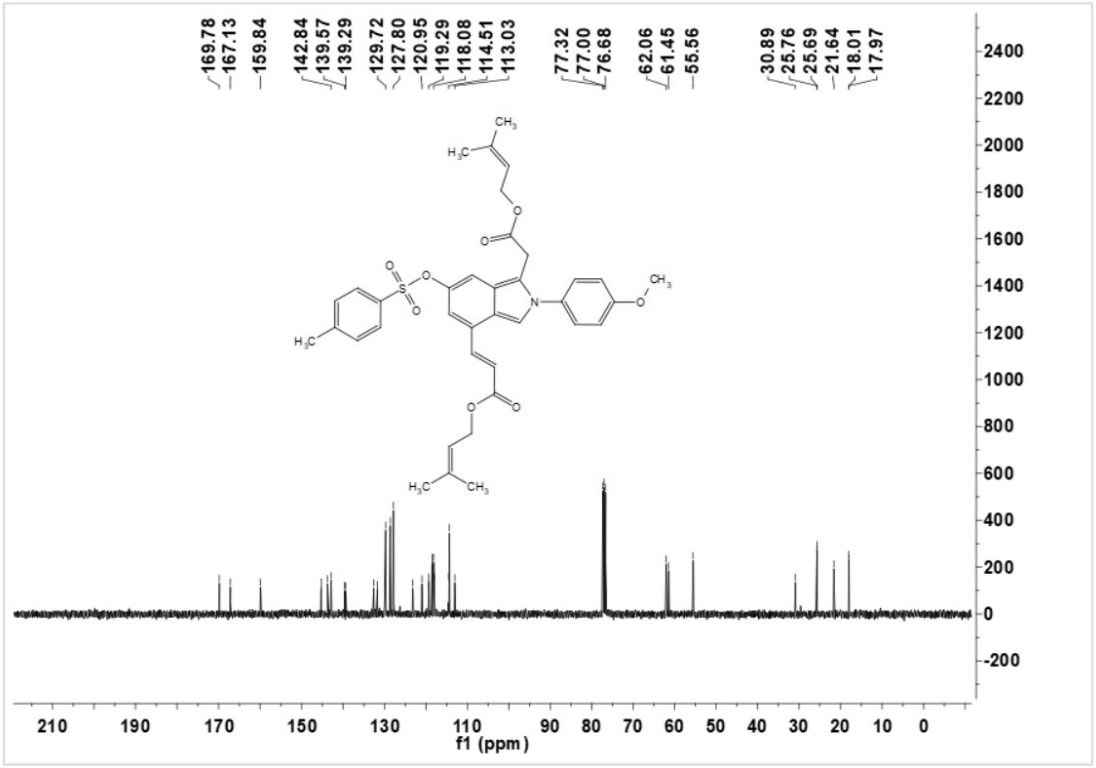
Methyl (*E*)-3-(2-(4-chlorophenyl)-1-(2-methoxy-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6i)



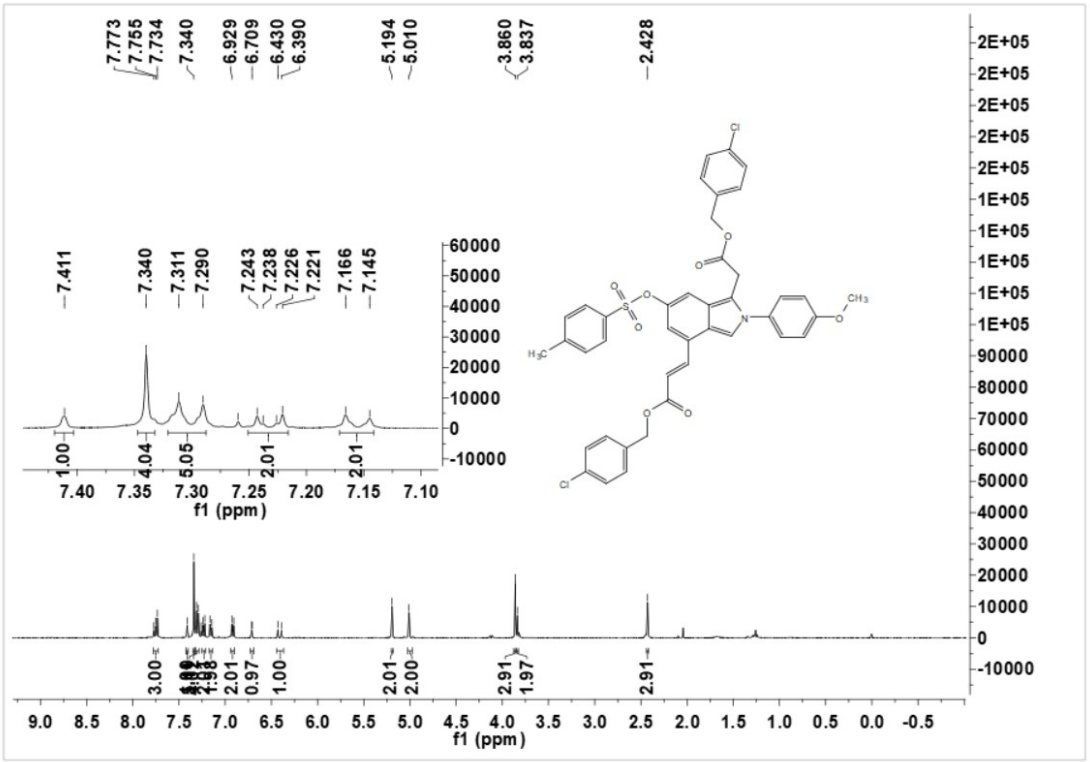


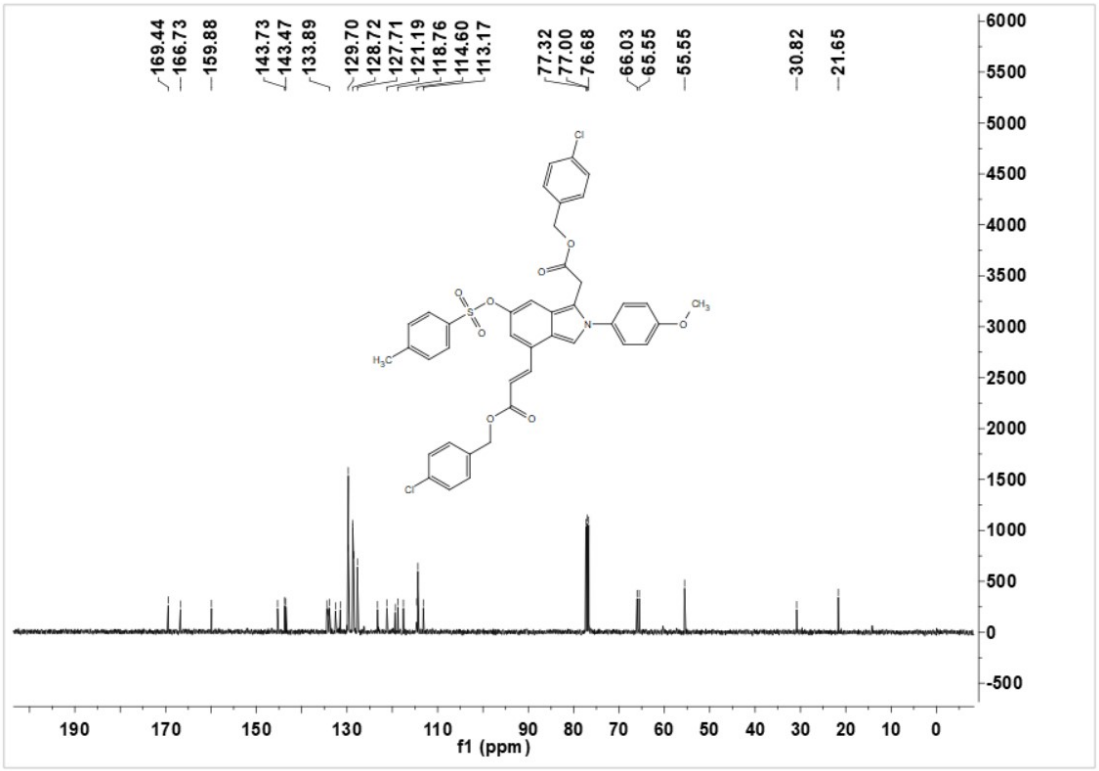
3-Methylbut-2-en-1-yl (*E*)-3-(2-(4-methoxyphenyl)-1-(2-((3-methylbut-2-en-1-yl)oxy)-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6j)



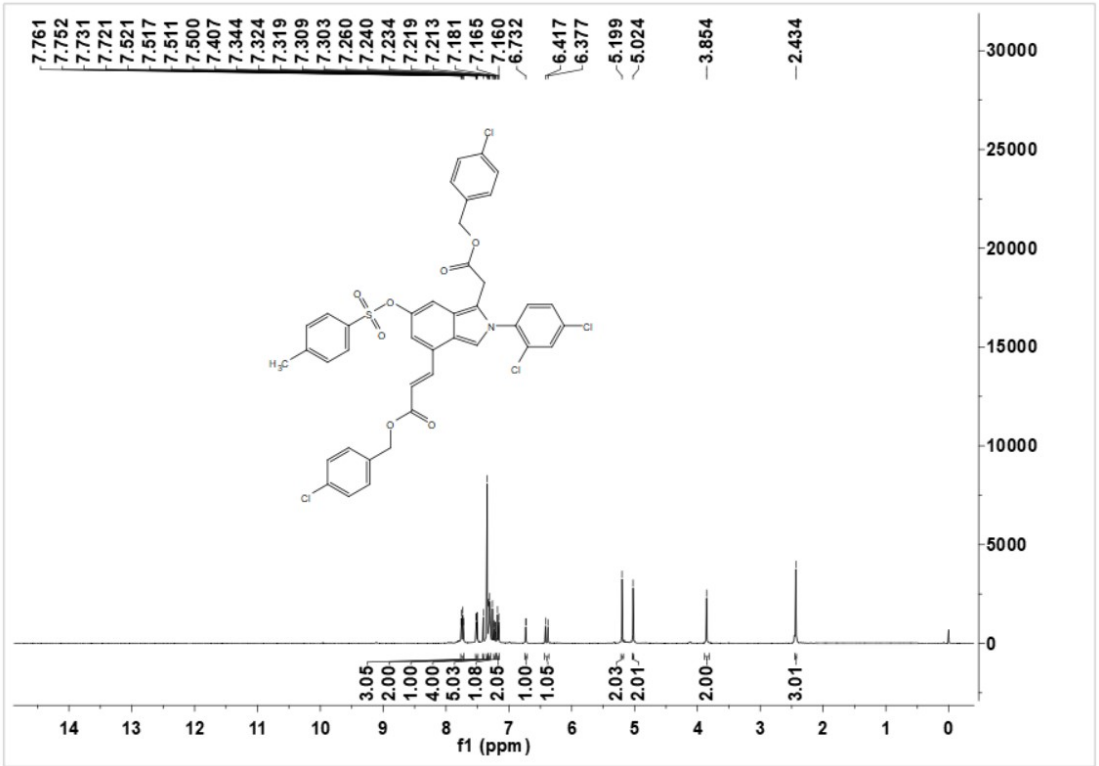


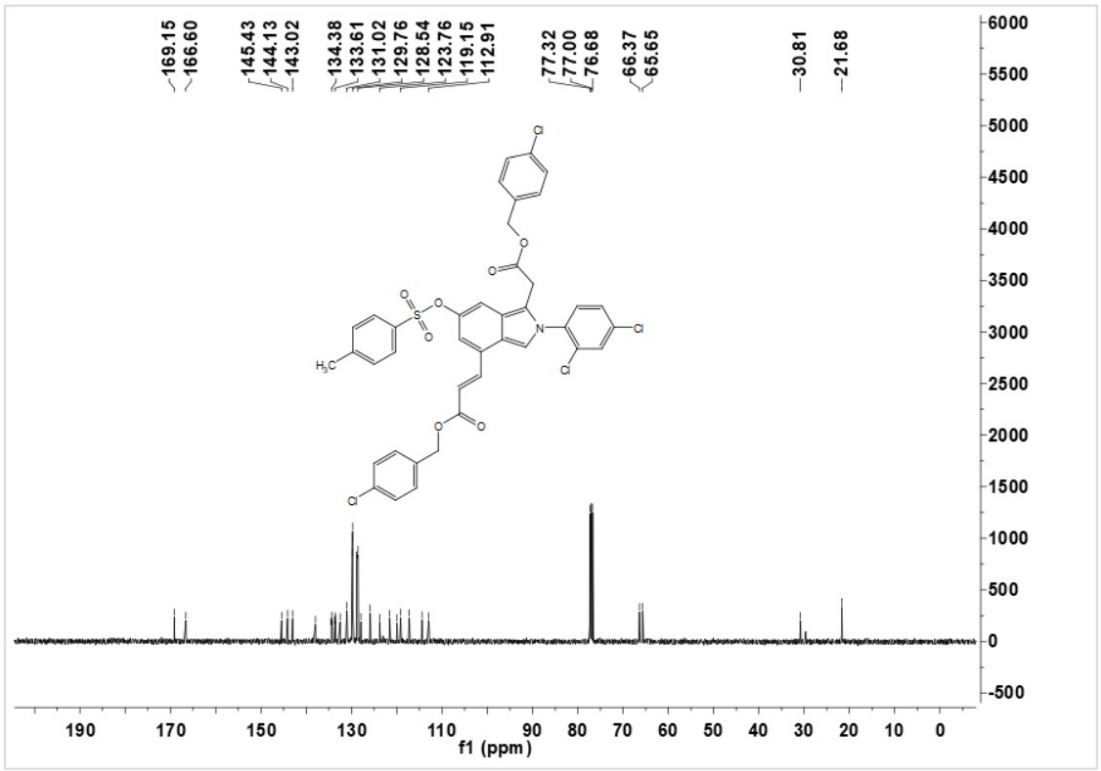
4-Chlorobenzyl (*E*)-3-(1-(2-((4-chlorobenzyl)oxy)-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6k)



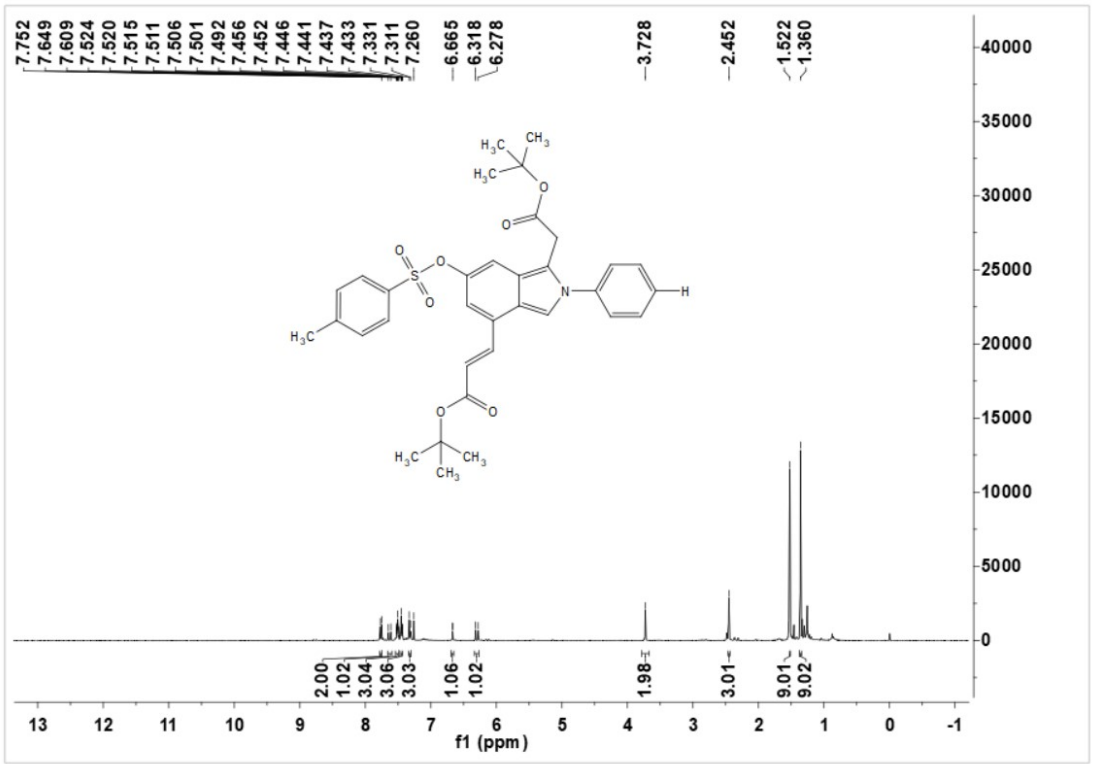


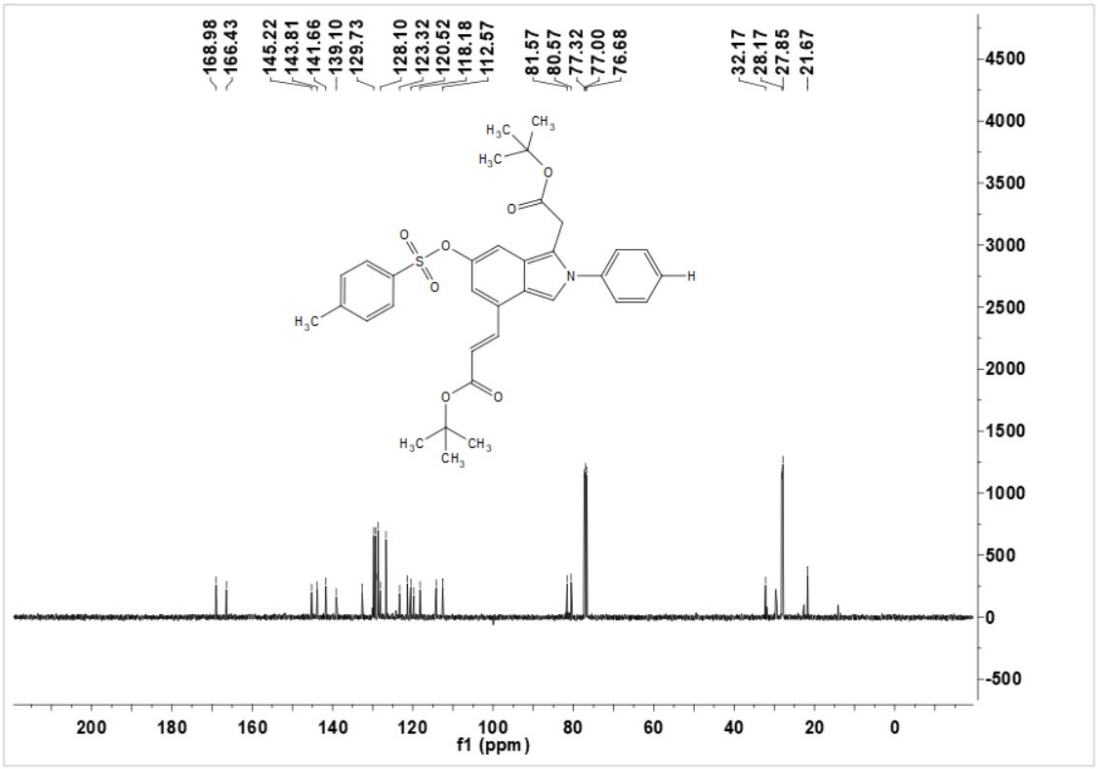
4-Chlorobenzy (*E*)-3-(1-(2-((4-chlorobenzyl)oxy)-2-oxoethyl)-2-(2,4-dichlorophenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6l)



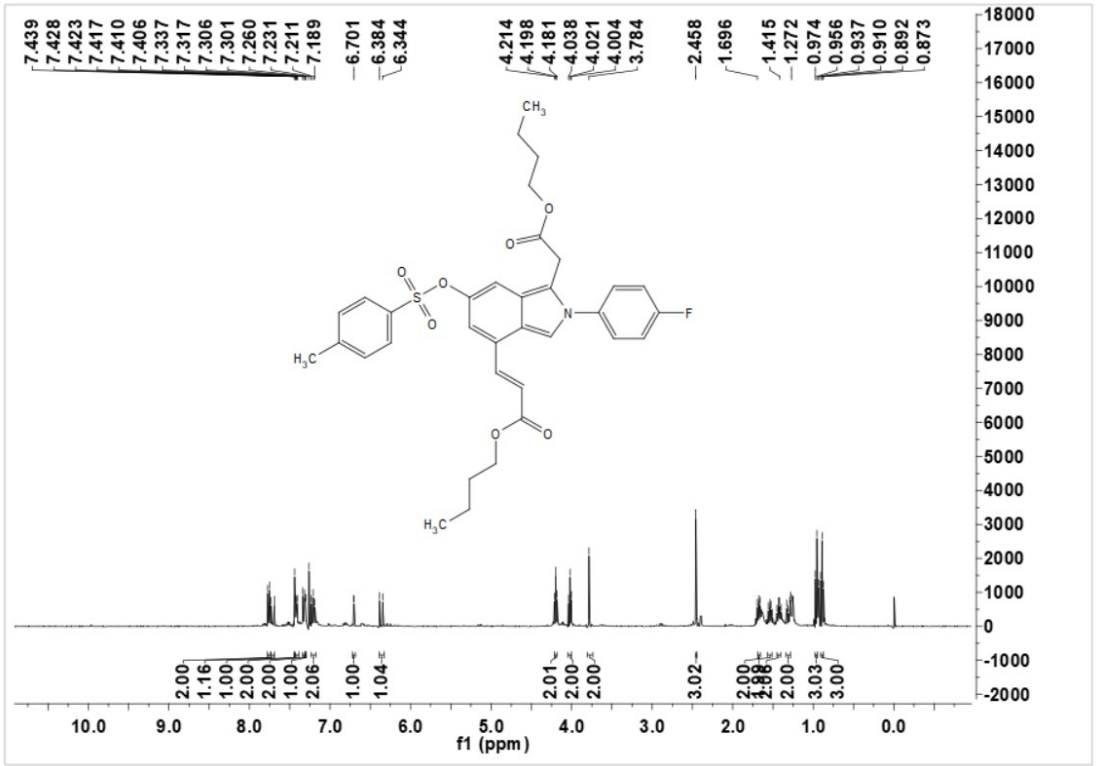


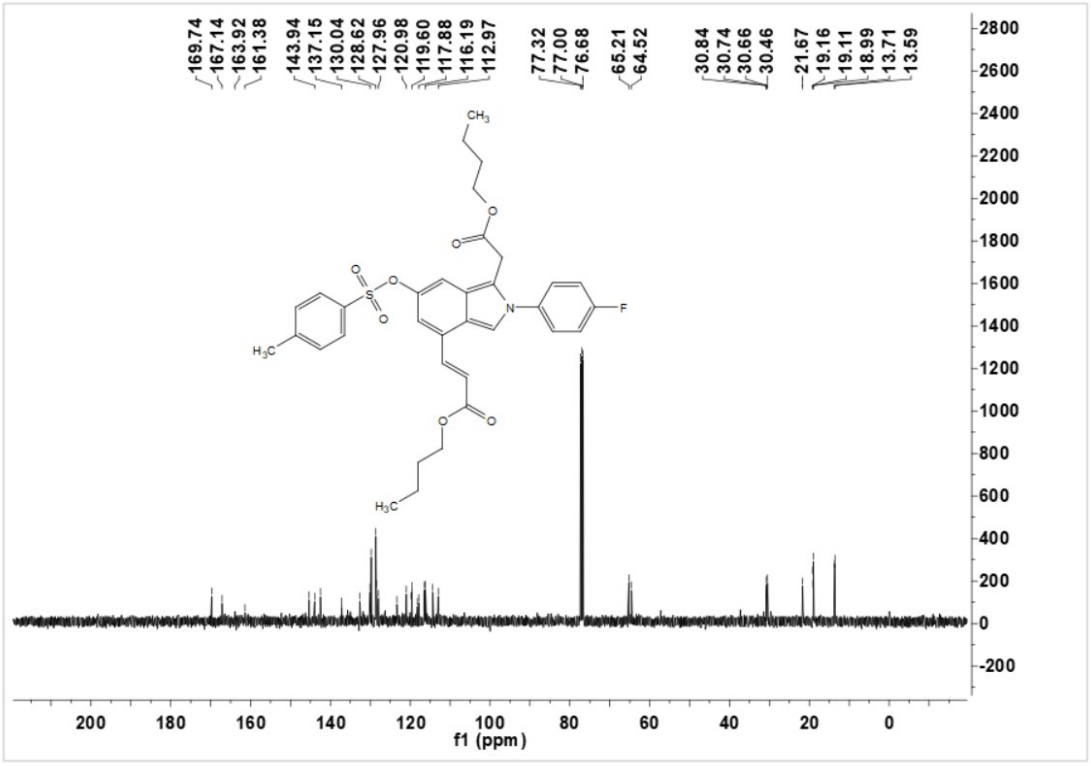
tert-Butyl (_E_)-3-(1-(2-(_tert_-butoxy)-2-oxoethyl)-2-phenyl-6-(tosyloxy)-2_H_-isoindol-4-yl)acrylate (6n)





Butyl (*E*)-3-(1-(2-butoxy-2-oxoethyl)-2-(4-fluorophenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6o)




169.74
167.14
163.92
161.38
143.94
137.15
130.04
128.62
127.96
120.98
119.60
117.88
116.19
112.97
77.32
77.00
76.68
65.21
64.52
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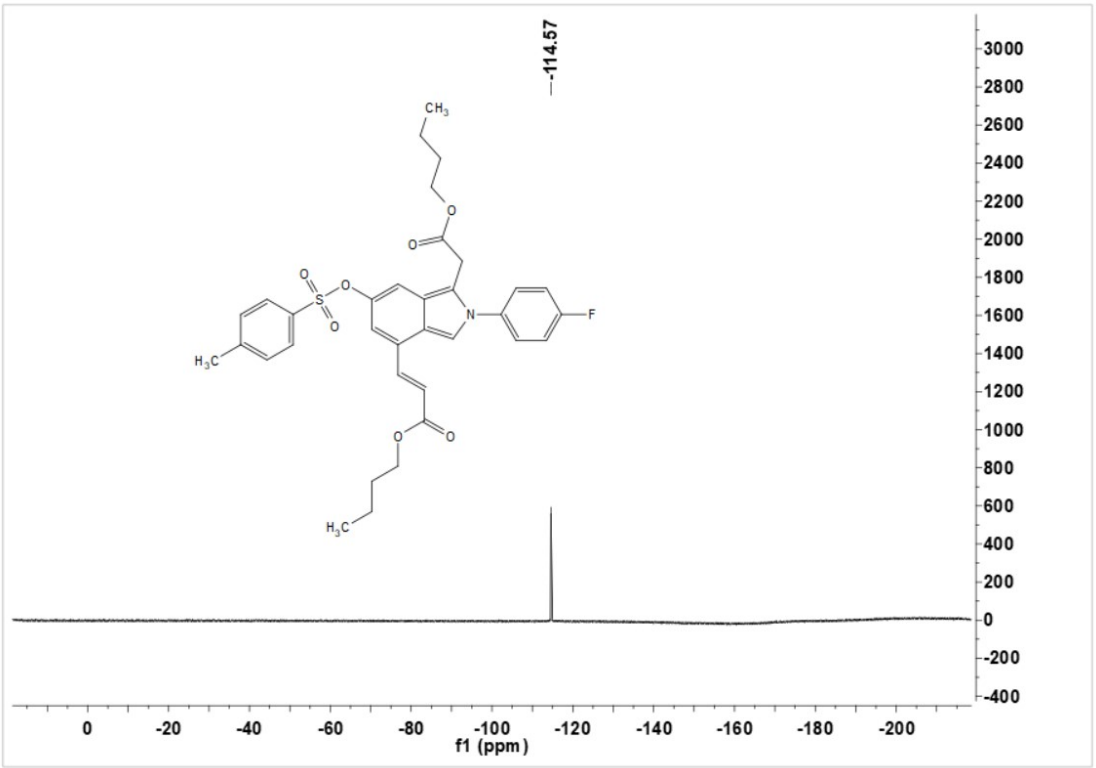
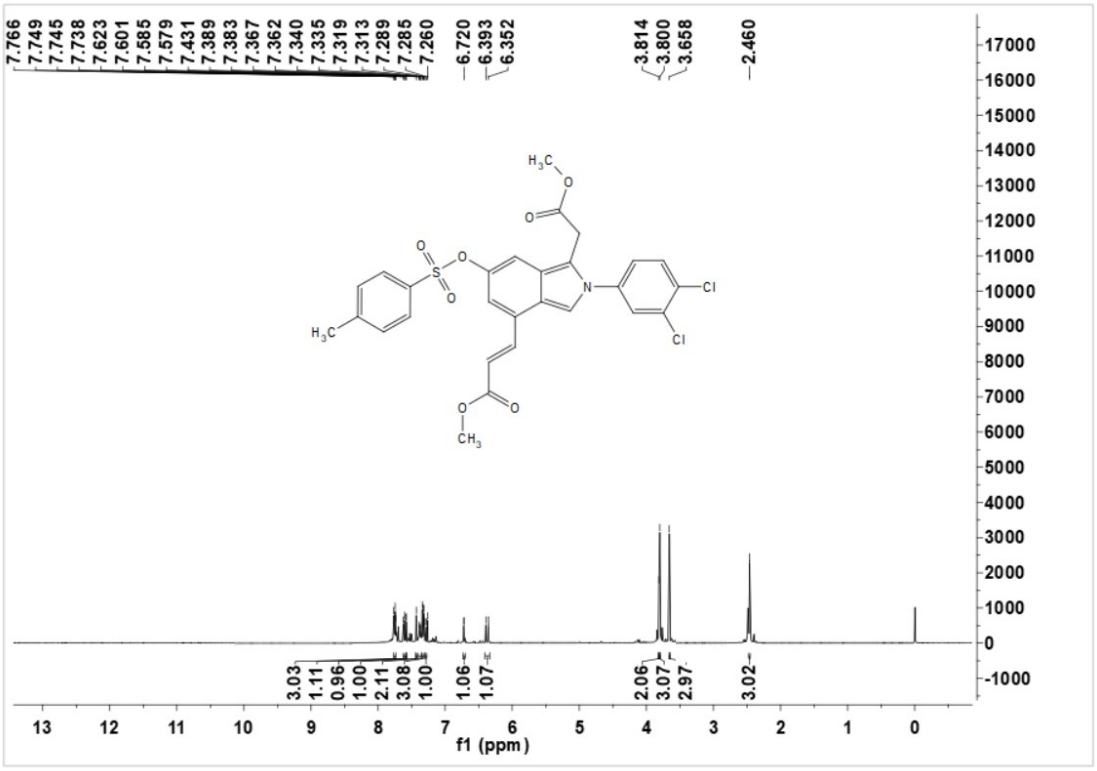
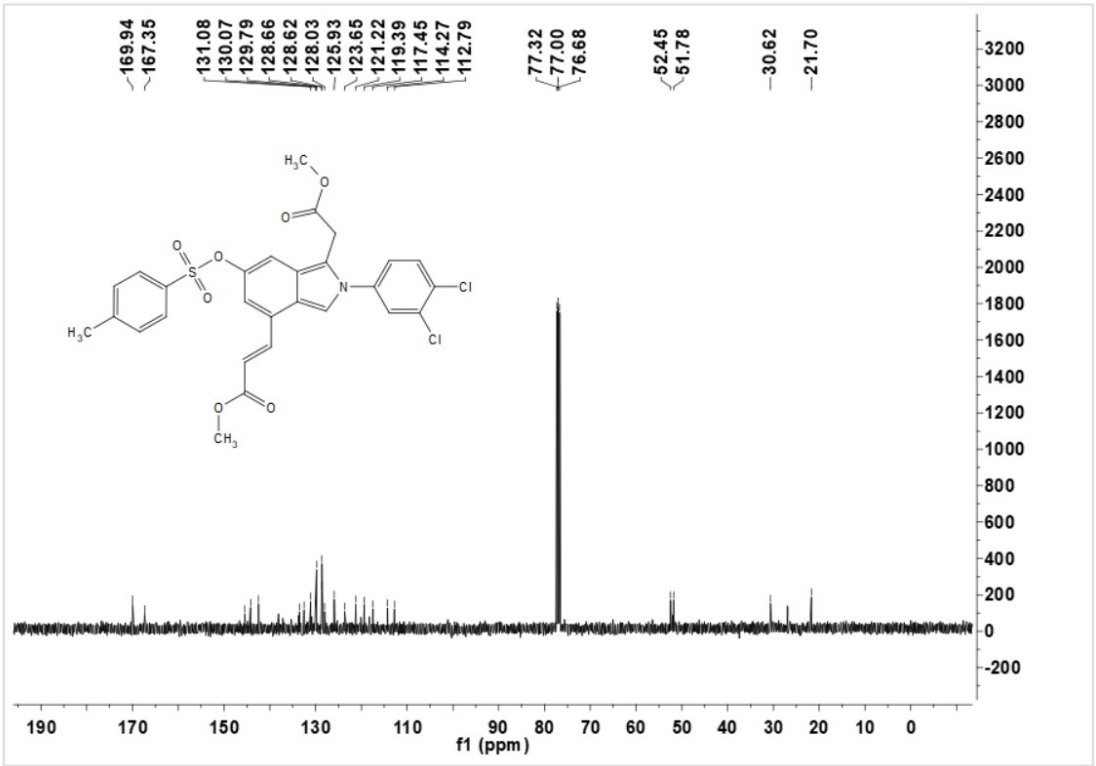
19.16
19.11
18.99
13.71
13.59
f1 (ppm)

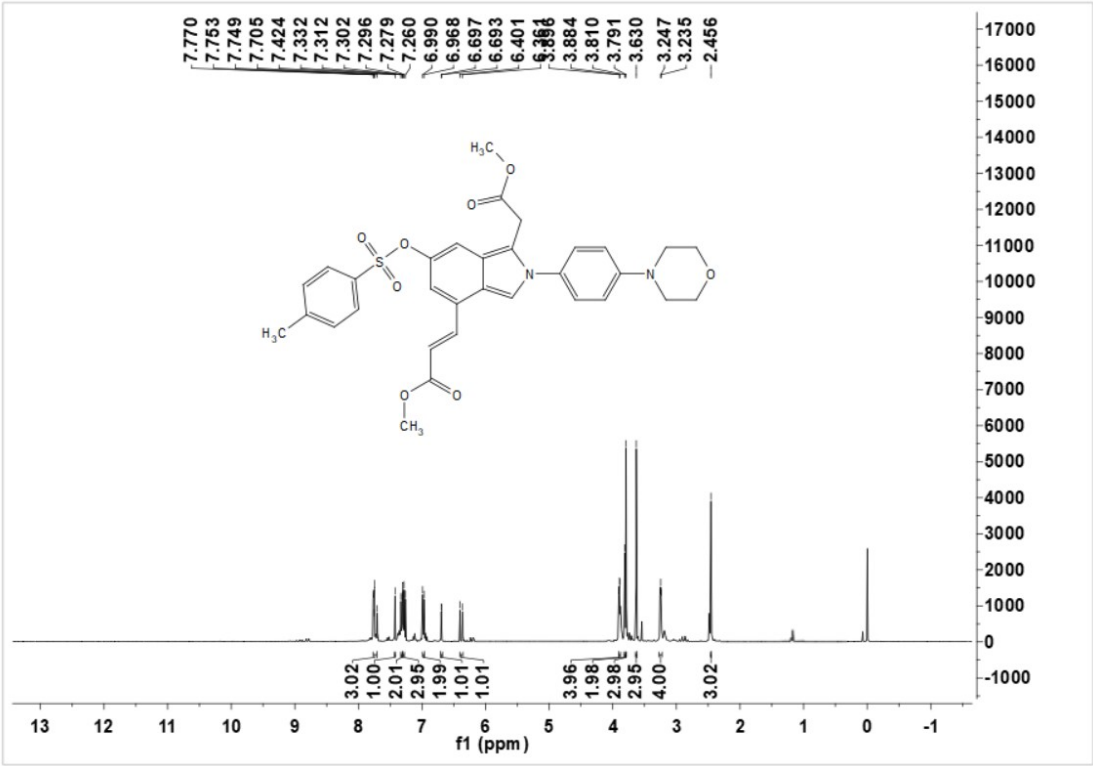

-114.57
f1 (ppm)

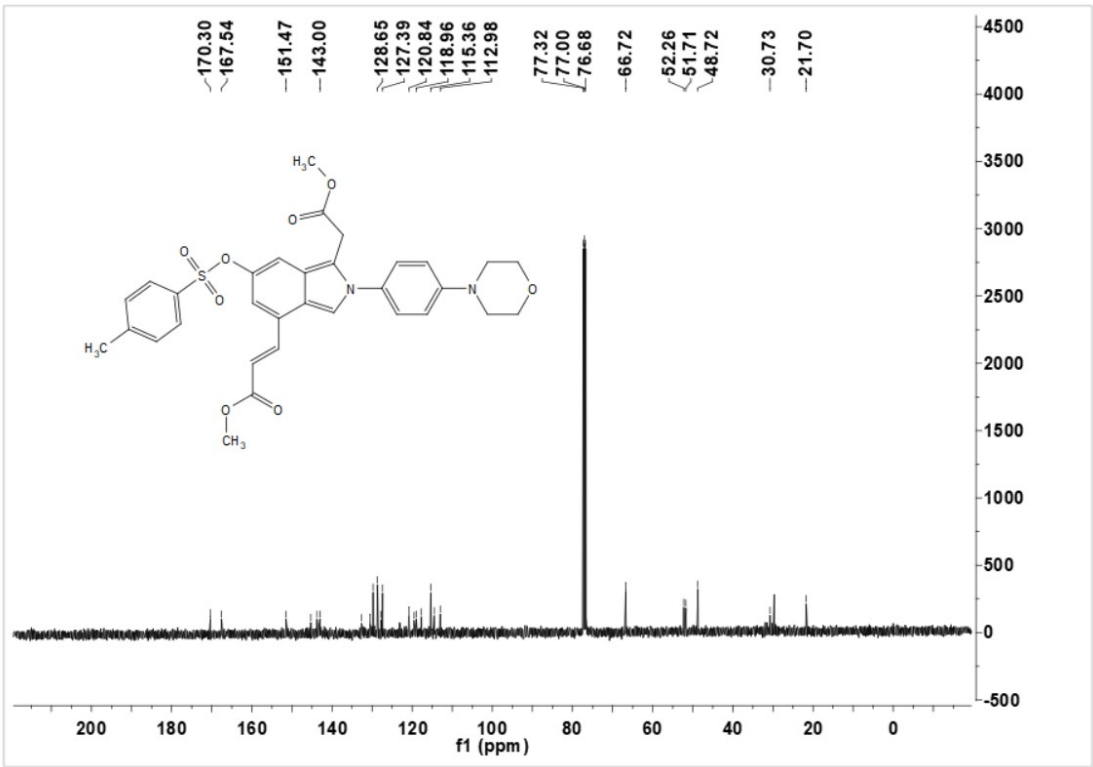
Methyl (*E*)-3-(2-(3,4-dichlorophenyl)-1-(2-methoxy-2-oxoethyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6p)



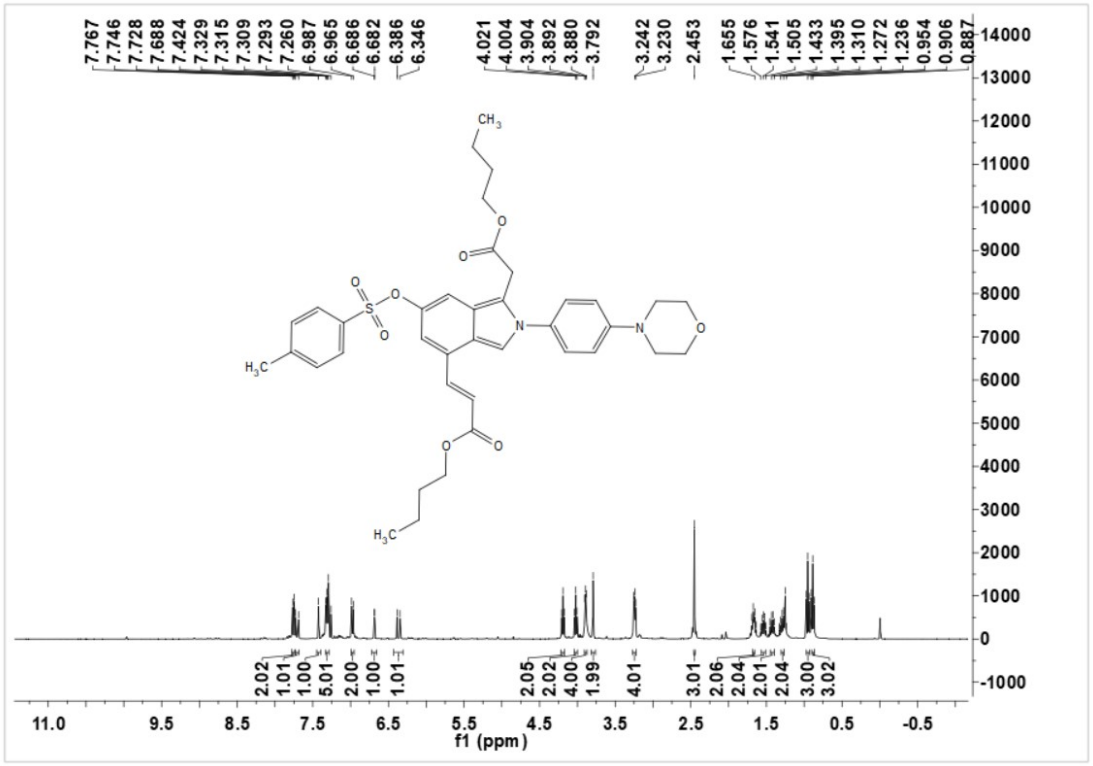


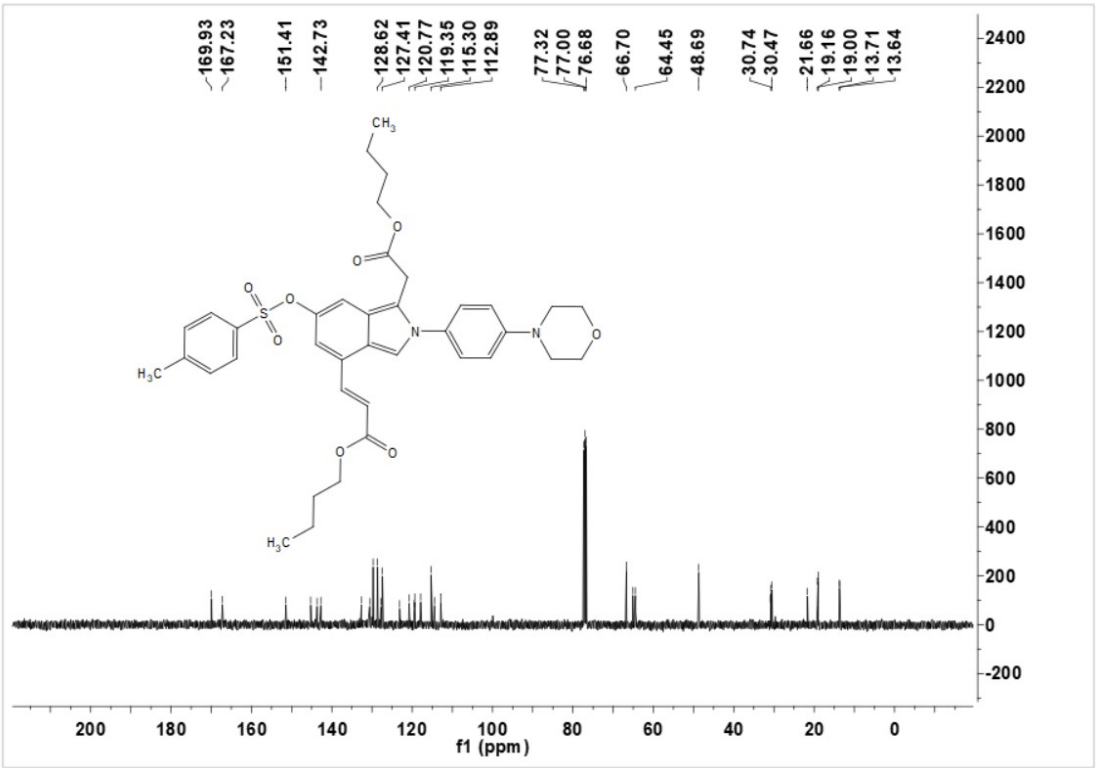
Methyl (*E*)-3-(1-(2-methoxy-2-oxoethyl)-2-(4-morpholinophenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6q)



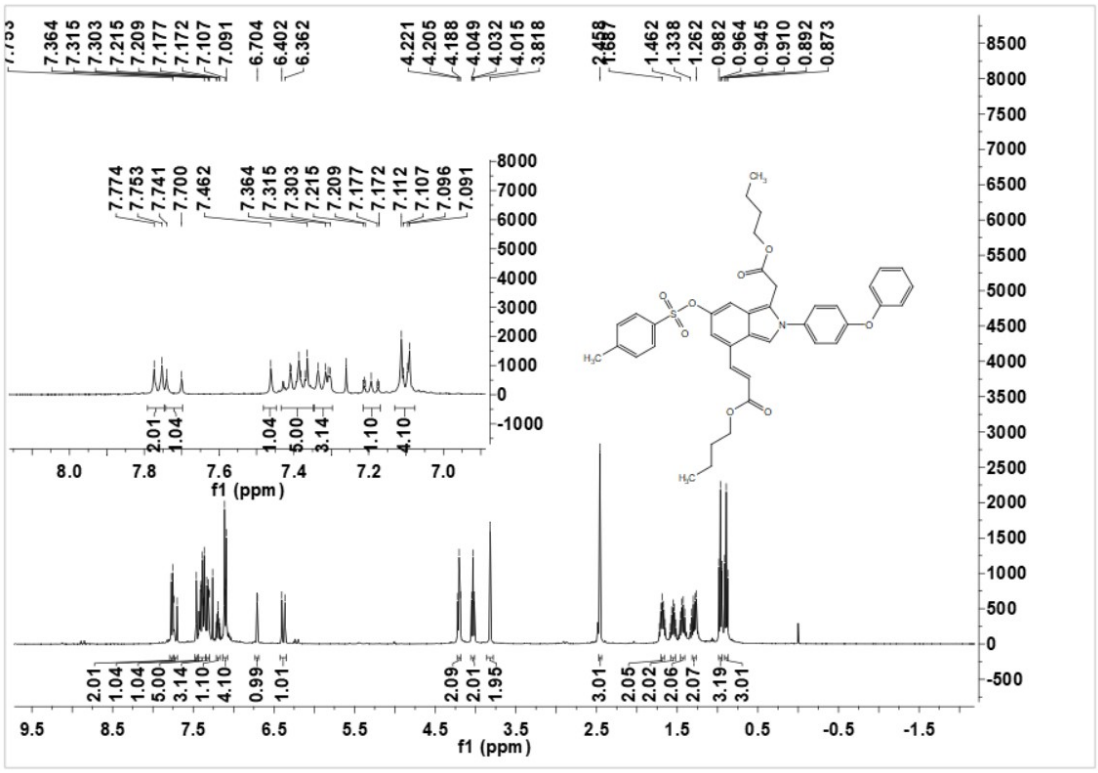


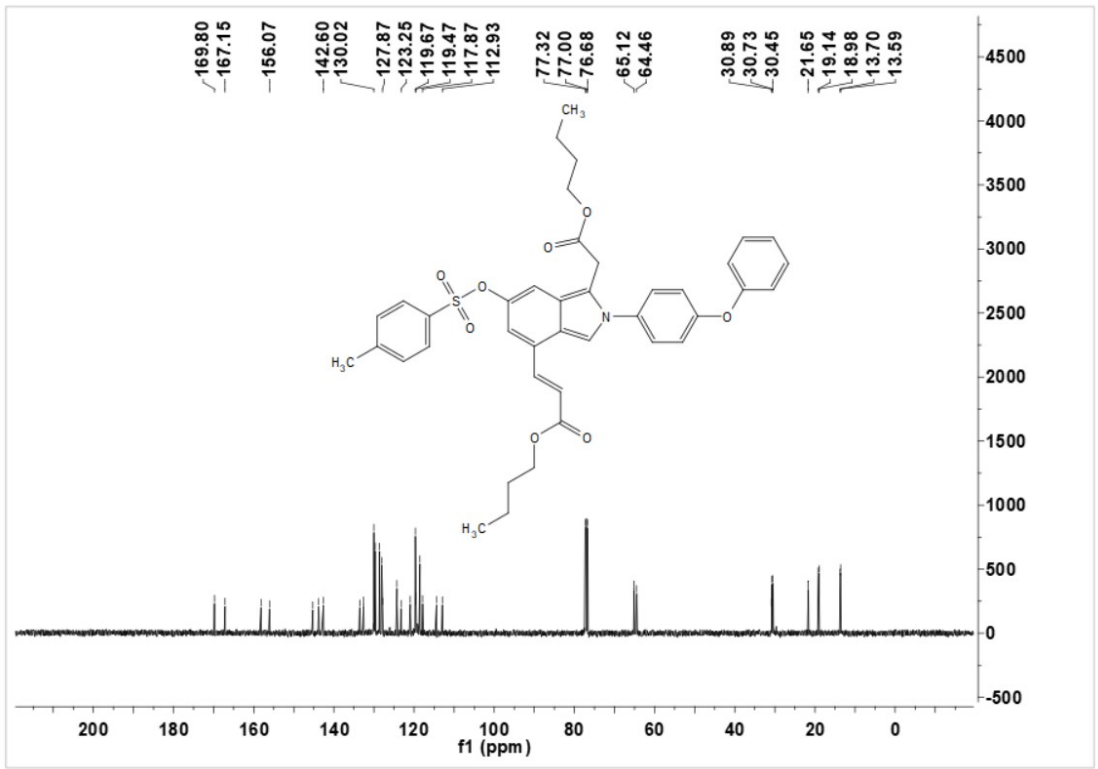
tert-Butyl (_E_)-3-(1-(2-(_tert_-butoxy)-2-oxoethyl)-2-(4-morpholinophenyl)-6-(tosyloxy)-2_H_-isoindol-4-yl)acrylate (6r)



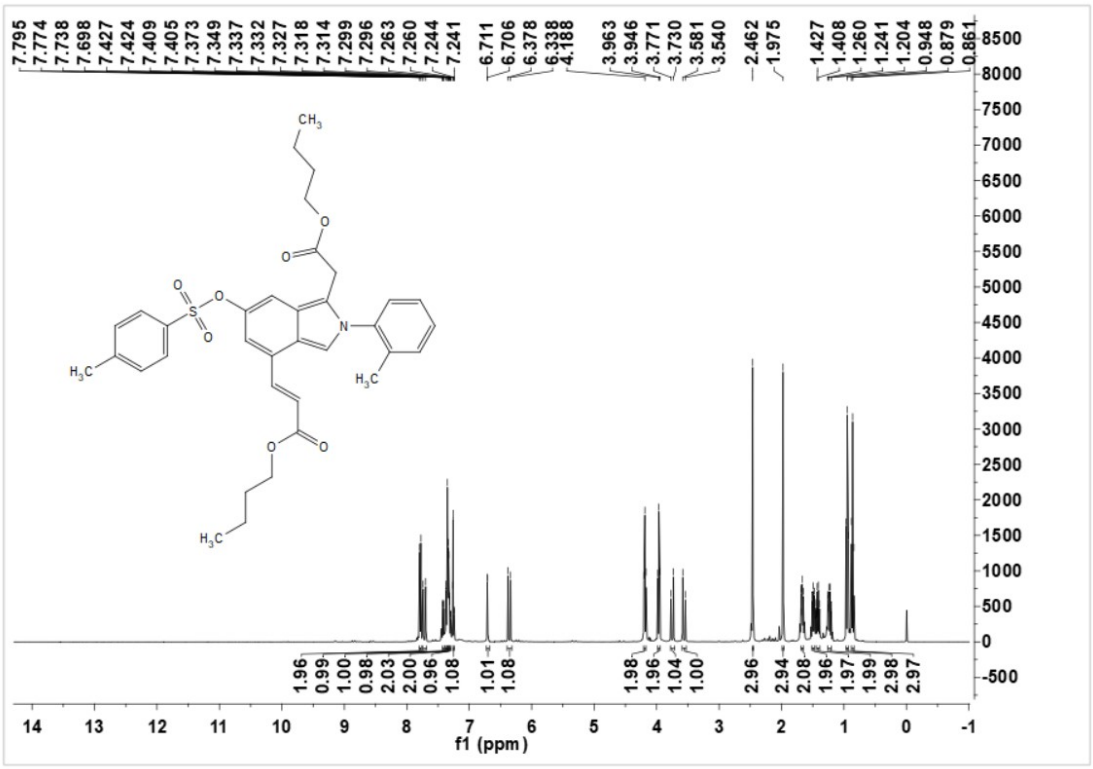


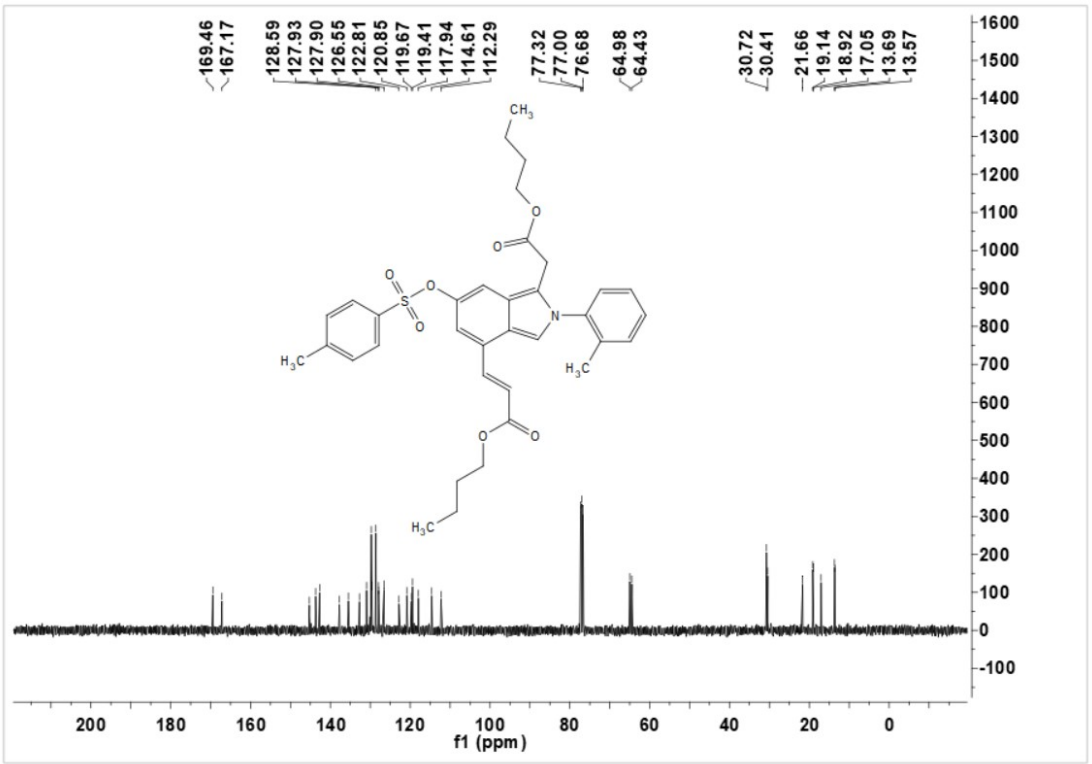
Butyl (*E*)-3-(1-(2-butoxy-2-oxoethyl)-2-(4-phenoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6s)



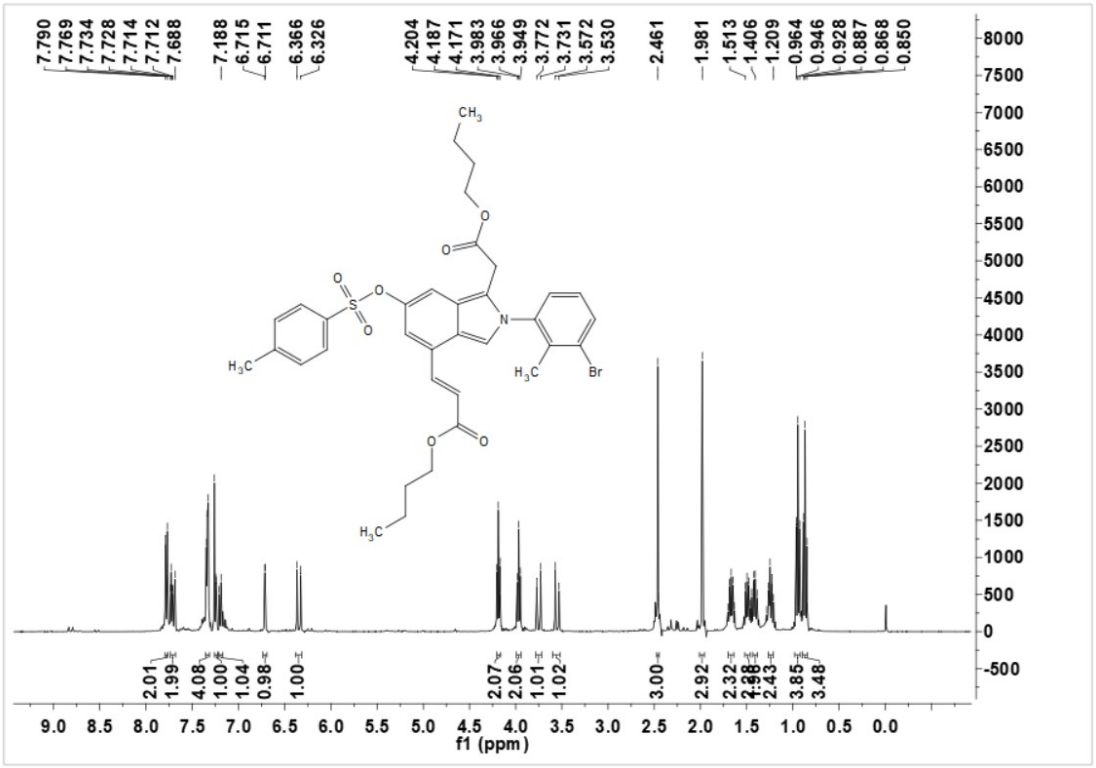


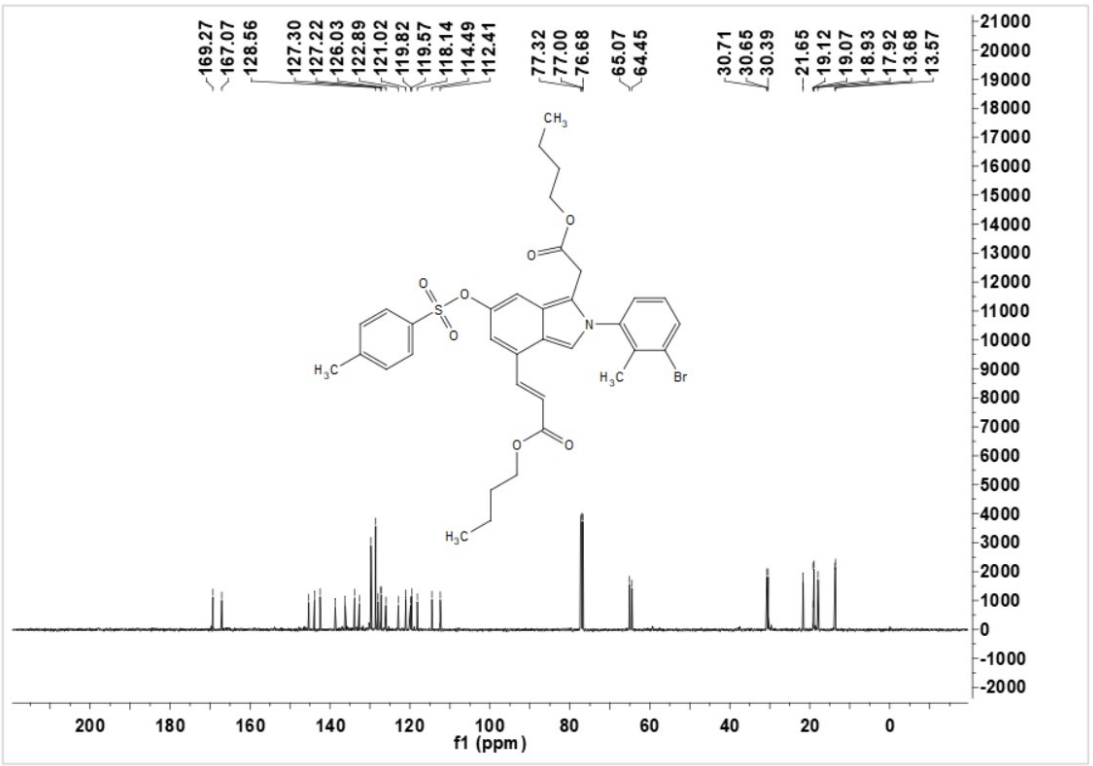
Butyl (*E*)-3-(1-(2-butoxy-2-oxoethyl)-2-(o-tolyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6t)



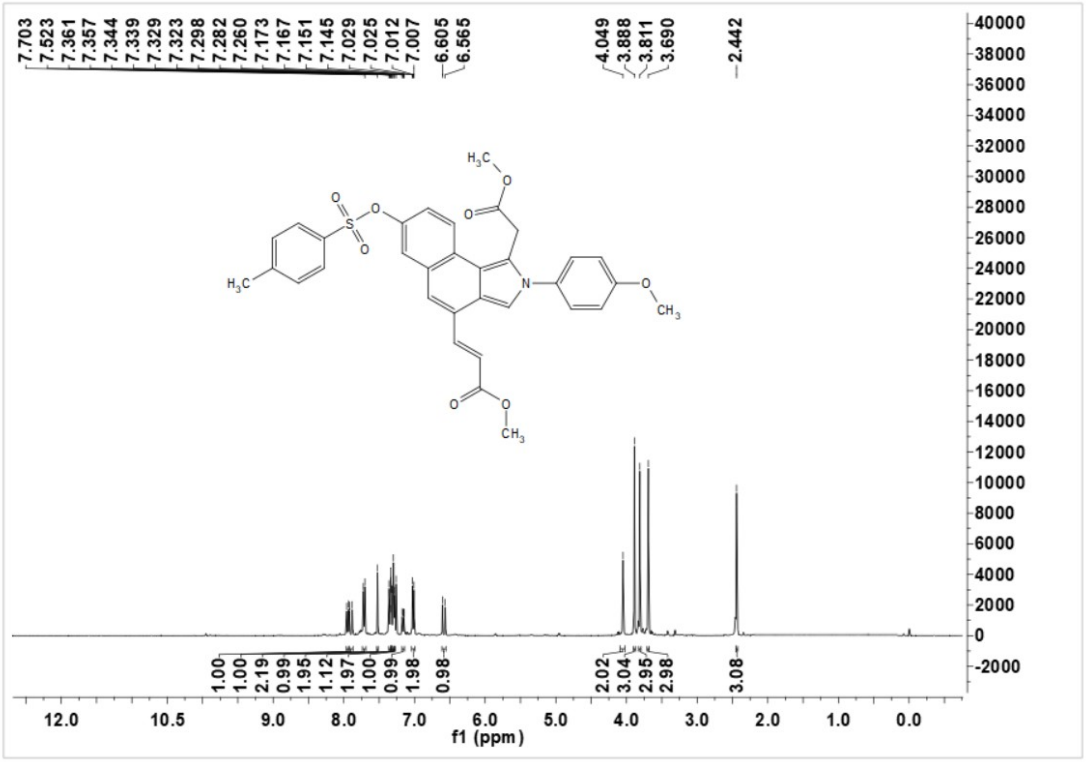


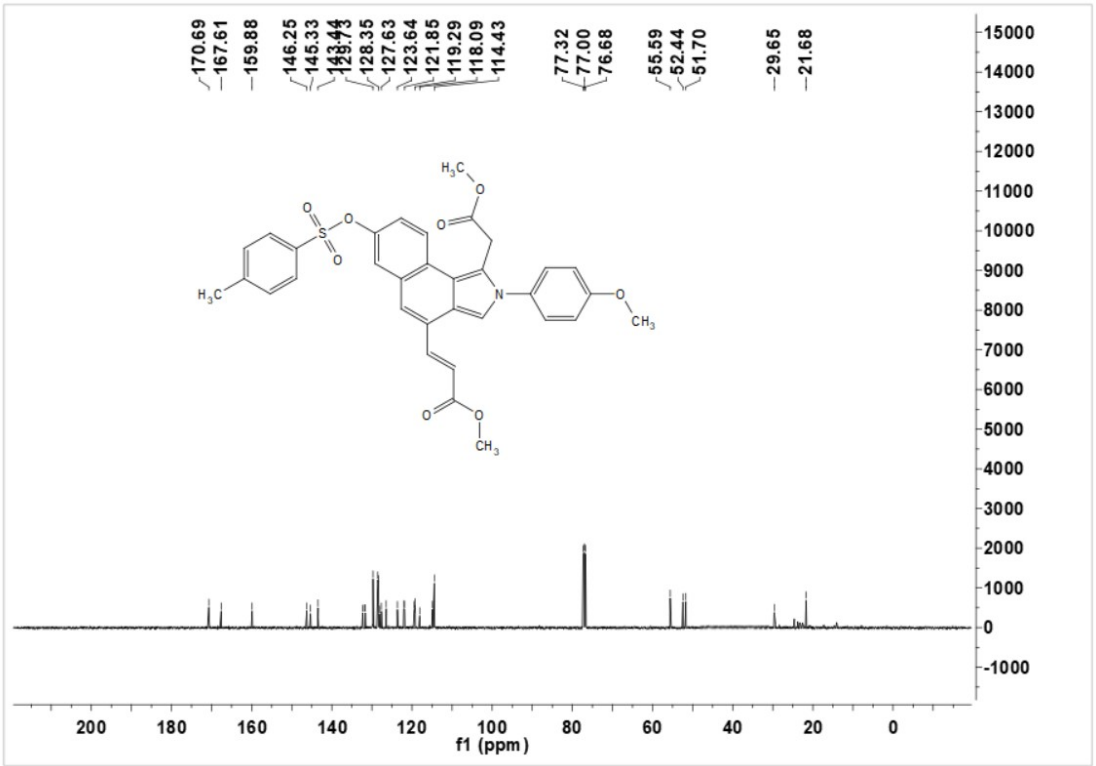
Butyl (*E*)-3-(2-(3-bromo-2-methylphenyl)-1-(2-butoxy-2-oxoethyl)-6-(tosyloxy)-2H-isoindol-4-yl)acrylate (6u)



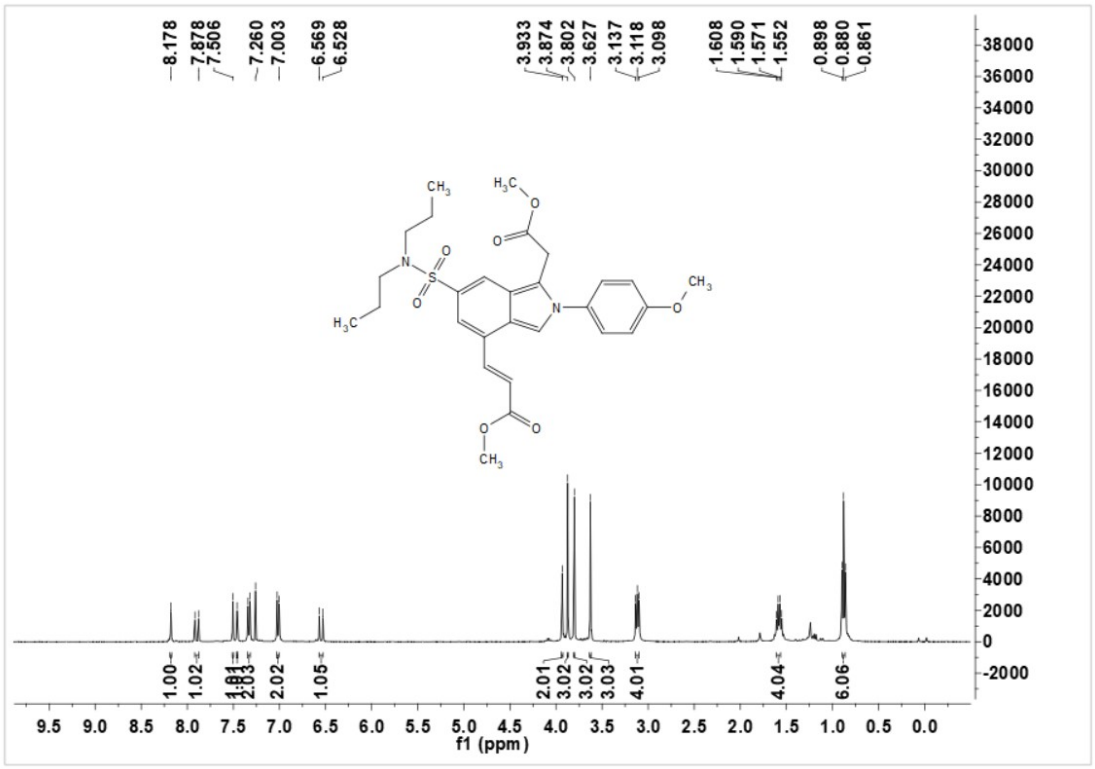


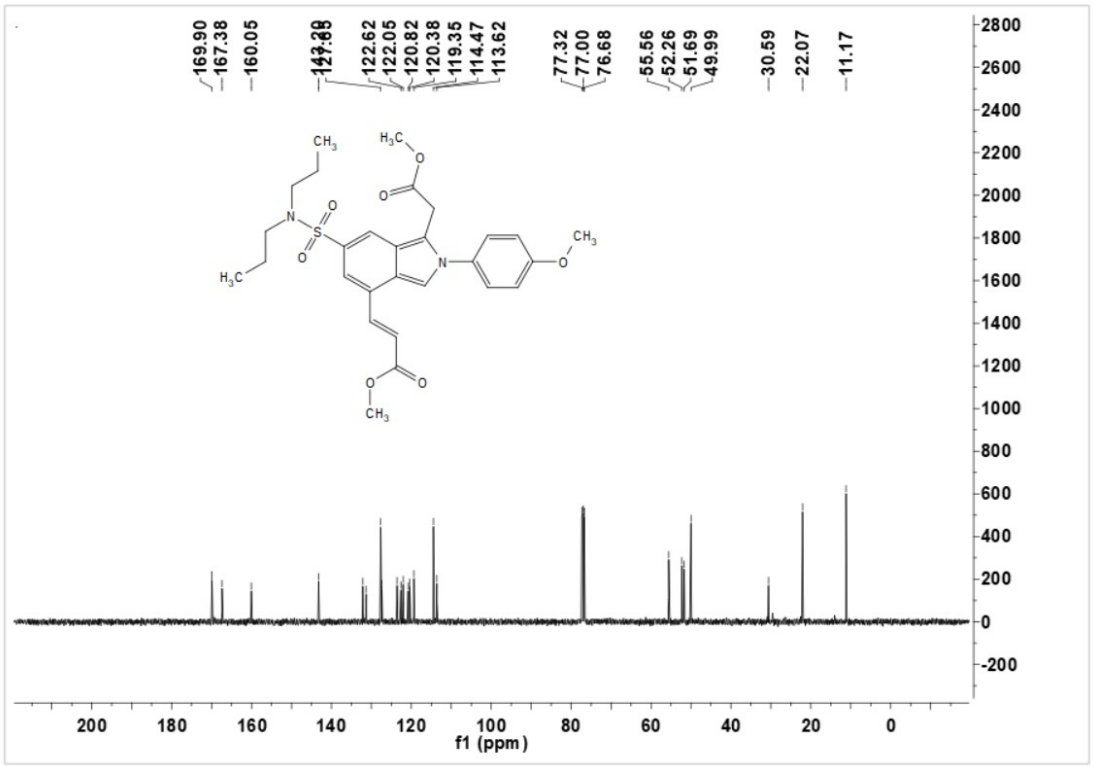
Methyl (*E*)-3-(1-(2-methoxy-2-oxoethyl)-2-(4-methoxyphenyl)-7-(tosyloxy)-2*H*-benzo[e]isoindol-4-yl)acrylate (6v)



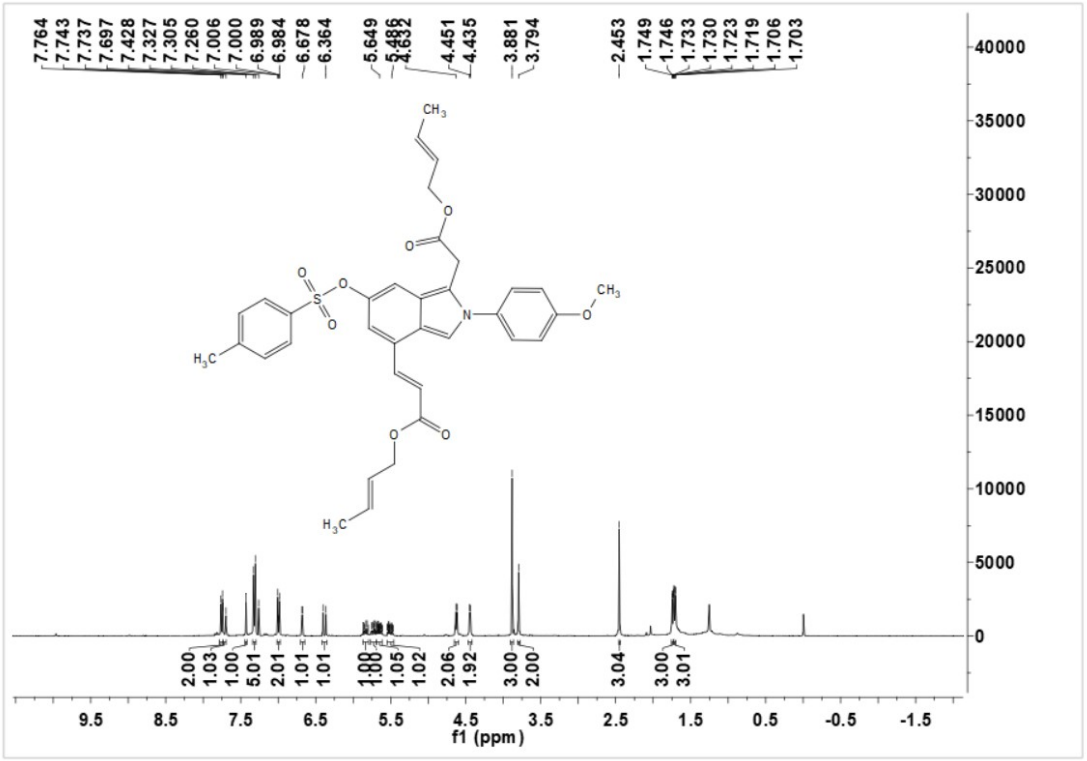


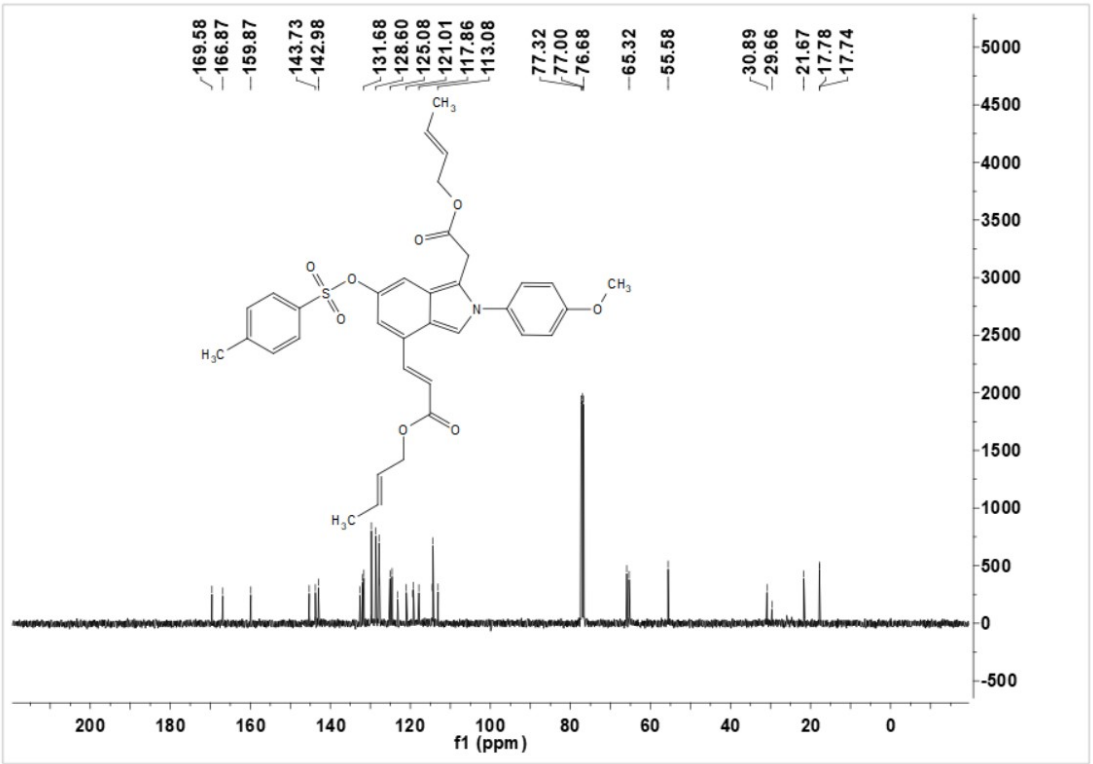
Methyl (*E*)-3-(6-(*N*,*N*-dipropylsulfamoyl)-1-(2-methoxy-2-oxoethyl)-2-(4-methoxyphenyl)-2*H*-isoindol-4-yl)acrylate (6w)



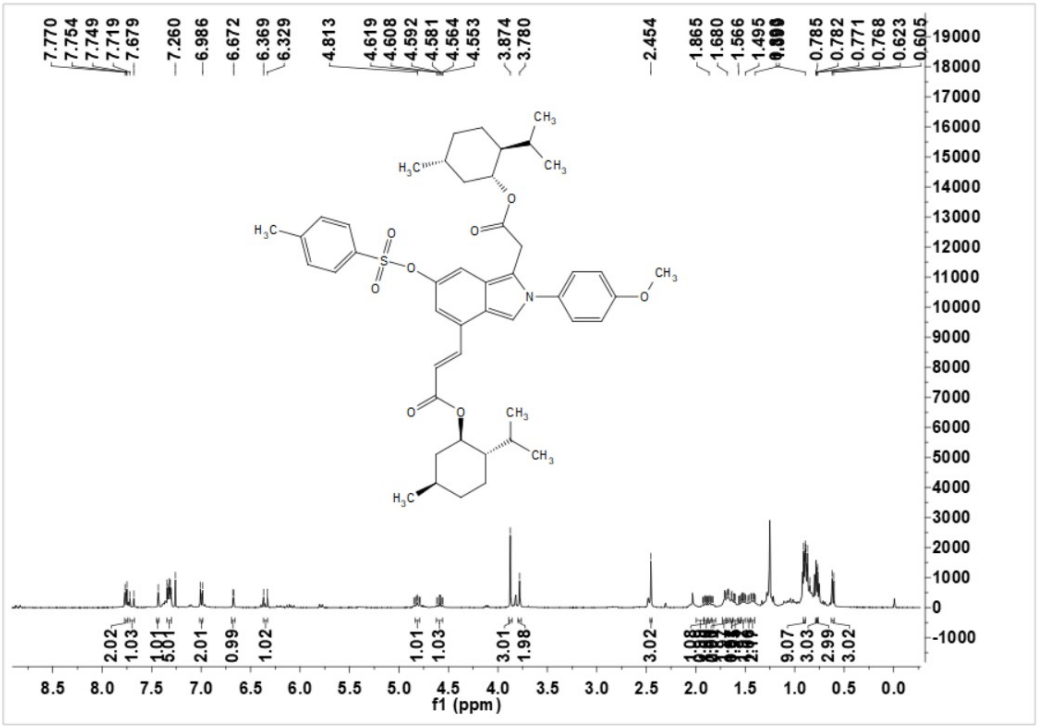


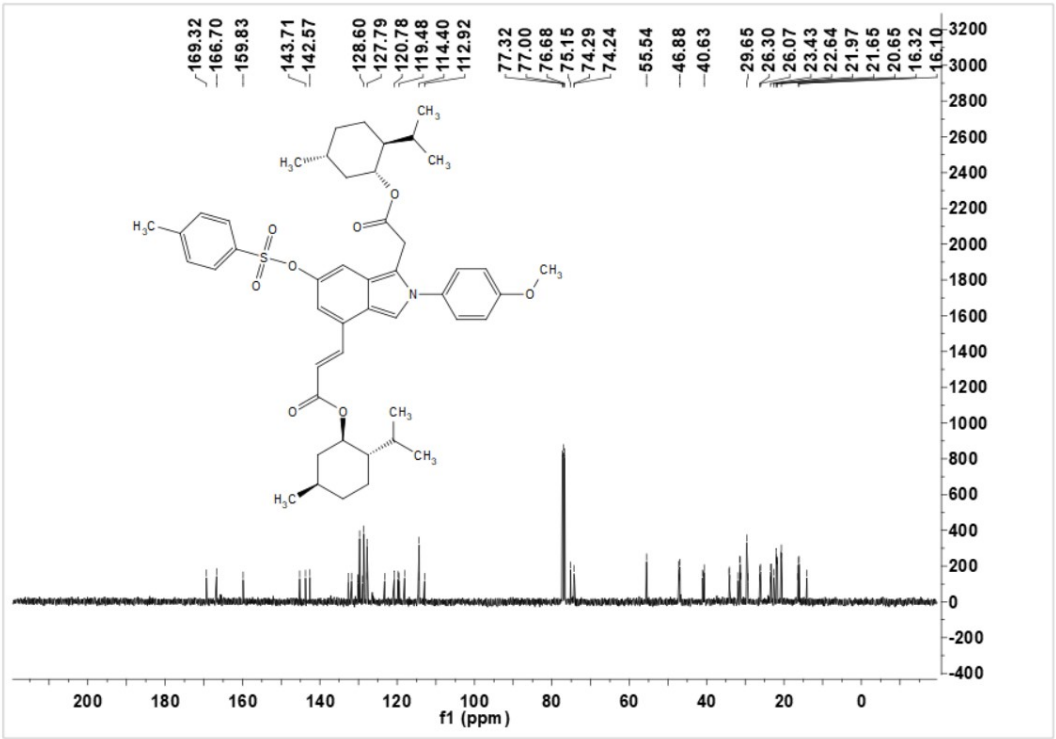
(*E*)-But-2-en-1-yl (*E*)-3-(1-(2-(((*E*)-but-2-en-1-yl)oxy)-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6x)



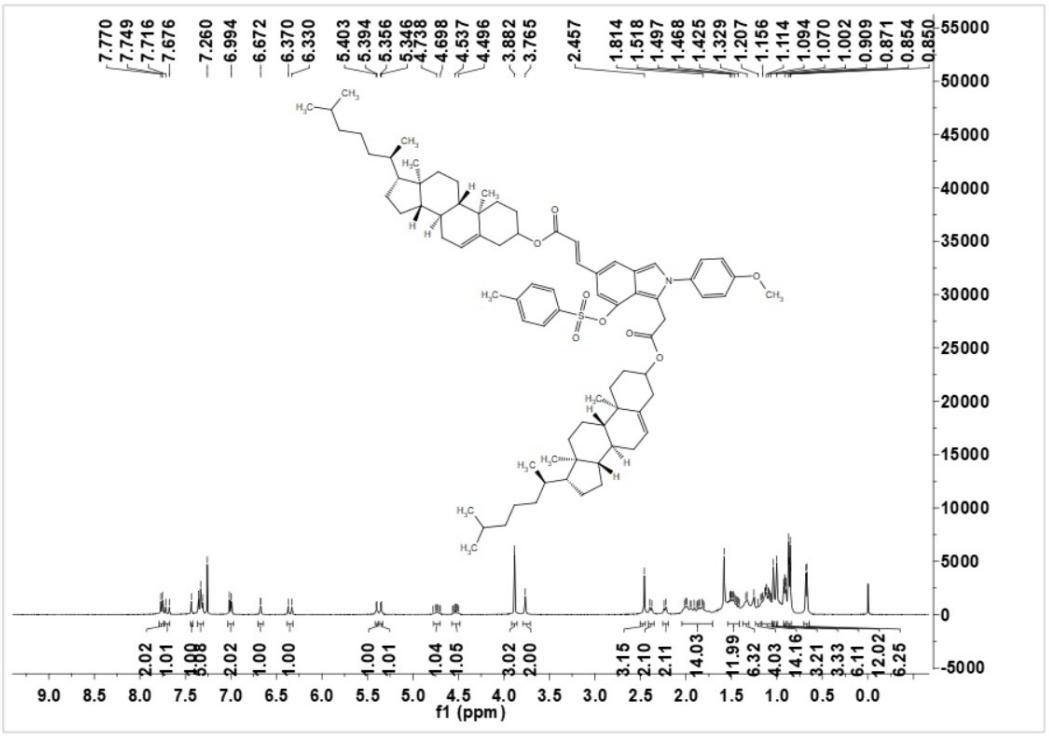


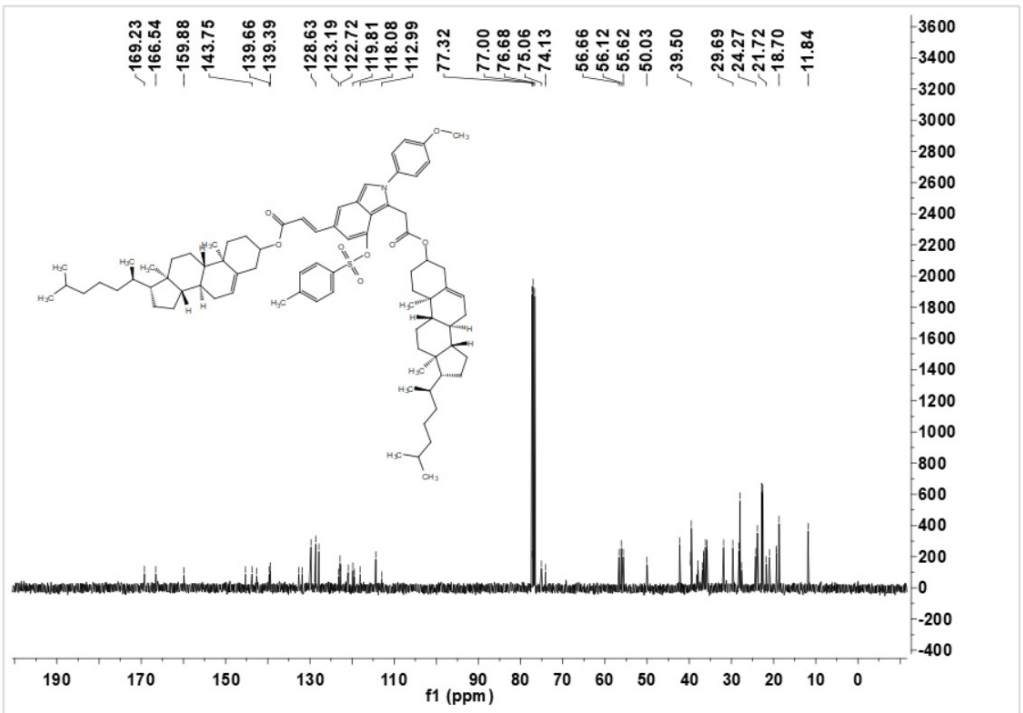
(1*R*, 2*S*, 5*R*)-2-Isopropyl-5-methylcyclohexyl (*E*)-3-(1-(2-(((1*R*,2*S*,5*R*)-2-isopropyl-5-methylcyclohexyl)oxy)-2-oxoethyl)-2-(4-methoxyphenyl)-6-(tosyloxy)-2*H*-isoindol-4-yl)acrylate (6y)



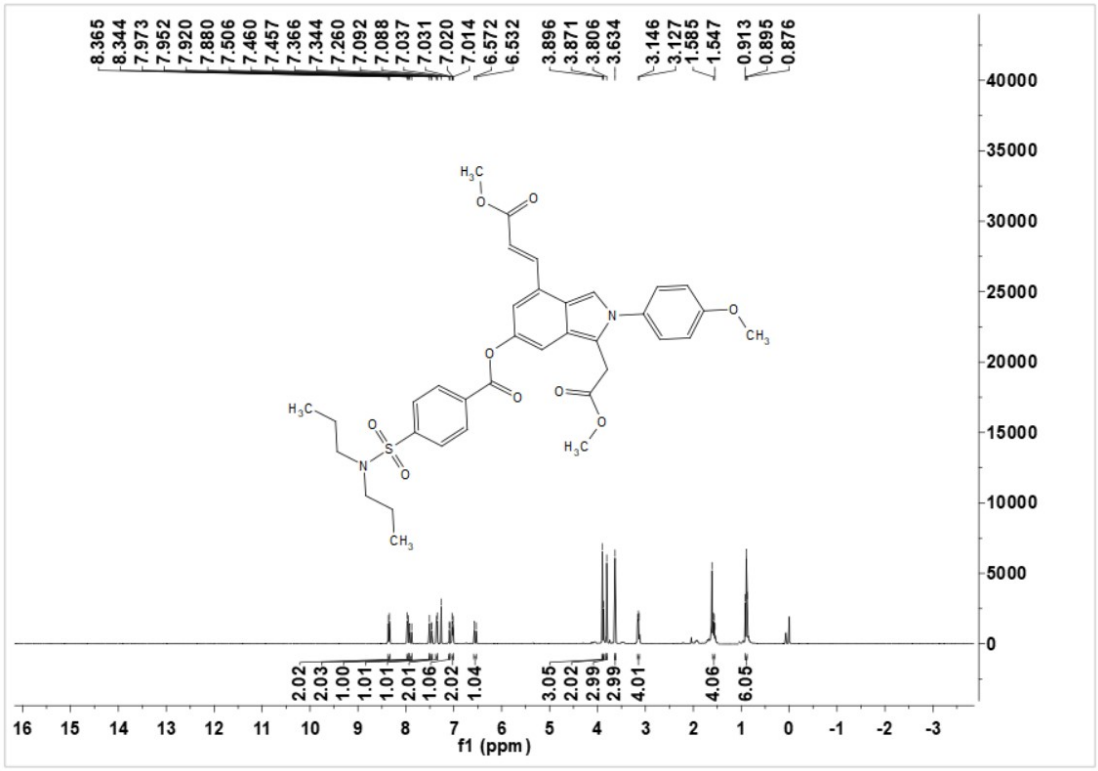


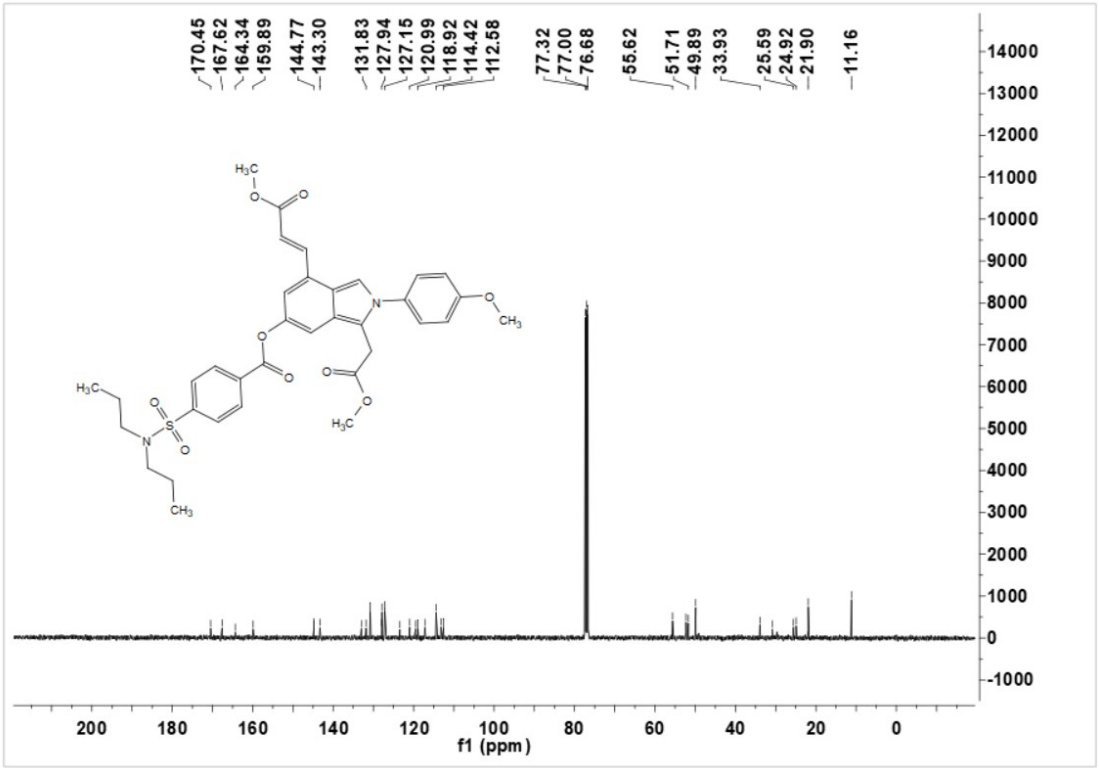
(8*S*,9*S*,10*R*,13*R*,14*S*,17*R*)-10,13-Dimethyl-17-((*R*)-6-methylheptan-2-yl)-2,3,4,7,8,9,10,11,12,13,14,15,16,17-tetradecahydro-1*H*-cyclopenta[a]phenanthren-3-yl (*E*)-3-(1-(2-(((8*S*,9*S*,10*R*,13*R*,14*S*,17*R*)-10,13-dimethyl-17-((*R*)-6-methylheptan-2-yl)-2,3,4,7,8,9,10,11,12,13,14,15,16,17-tetradecahydro-1*H*-cyclopenta[*a*]phenanthren-3-yl)oxy)-2-oxoethyl)-6-(*N*,*N*-dipropylsulfamoyl)-2-(4-methoxyphenyl)-2*H*-isoindol-4-yl)acrylate (6z)



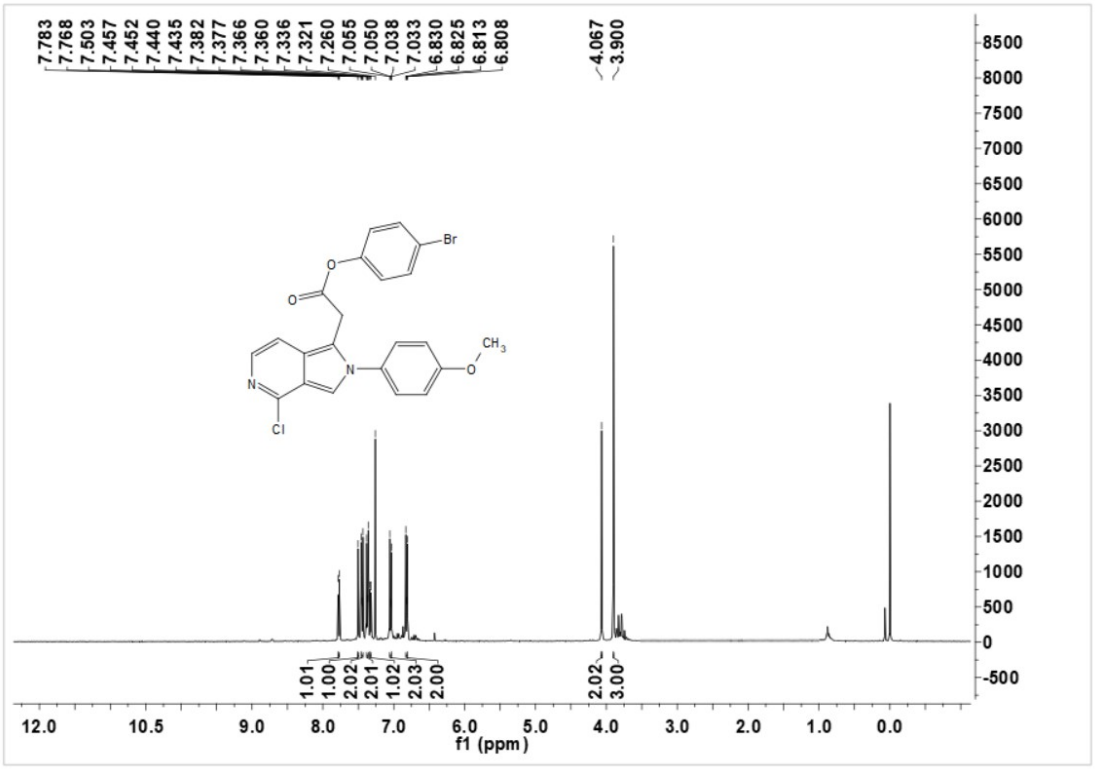


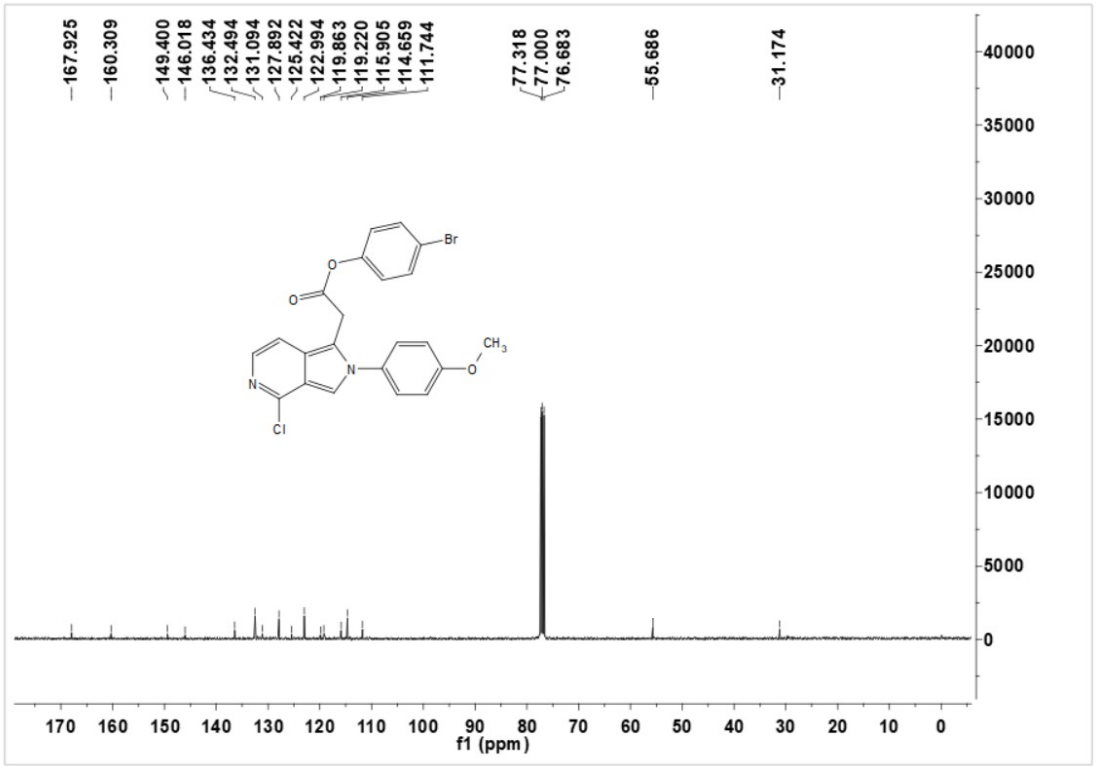
(*E*)-3-(2-Methoxy-2-oxoethyl)-7-(3-methoxy-3-oxoprop-1-en-1-yl)-2-(4-methoxyphenyl)-2*H*-isoindol-5-yl 4-(*N*,*N*-dipropylsulfamoyl)benzoate (6za)



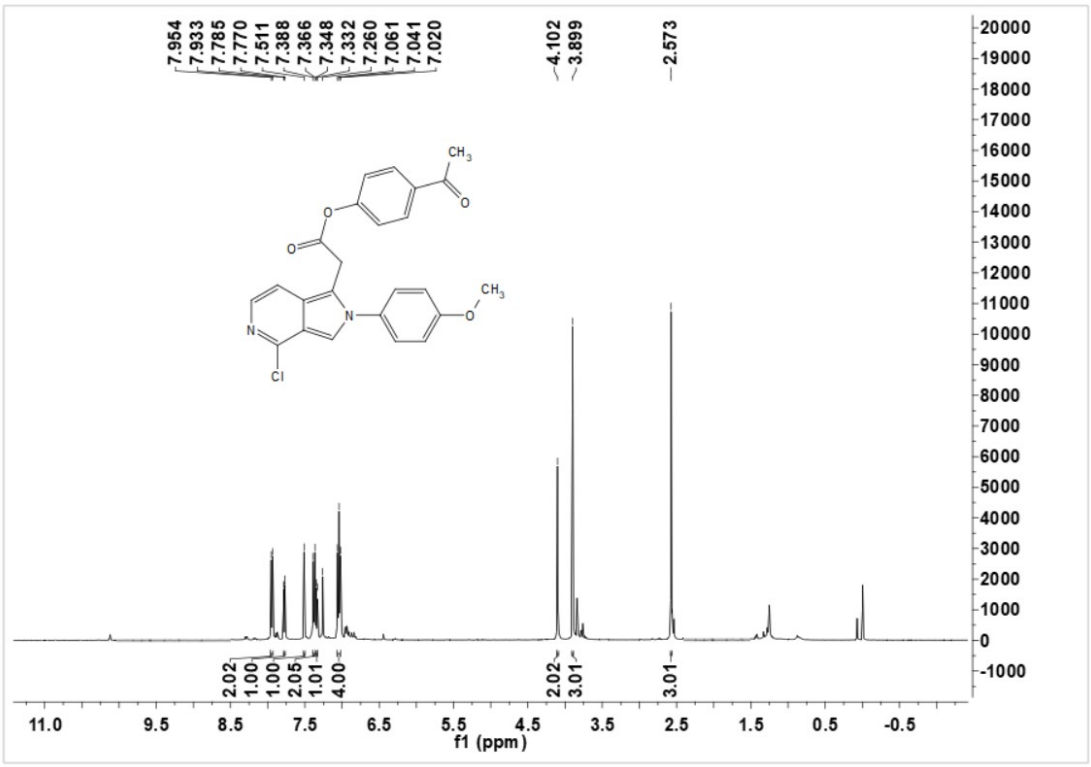


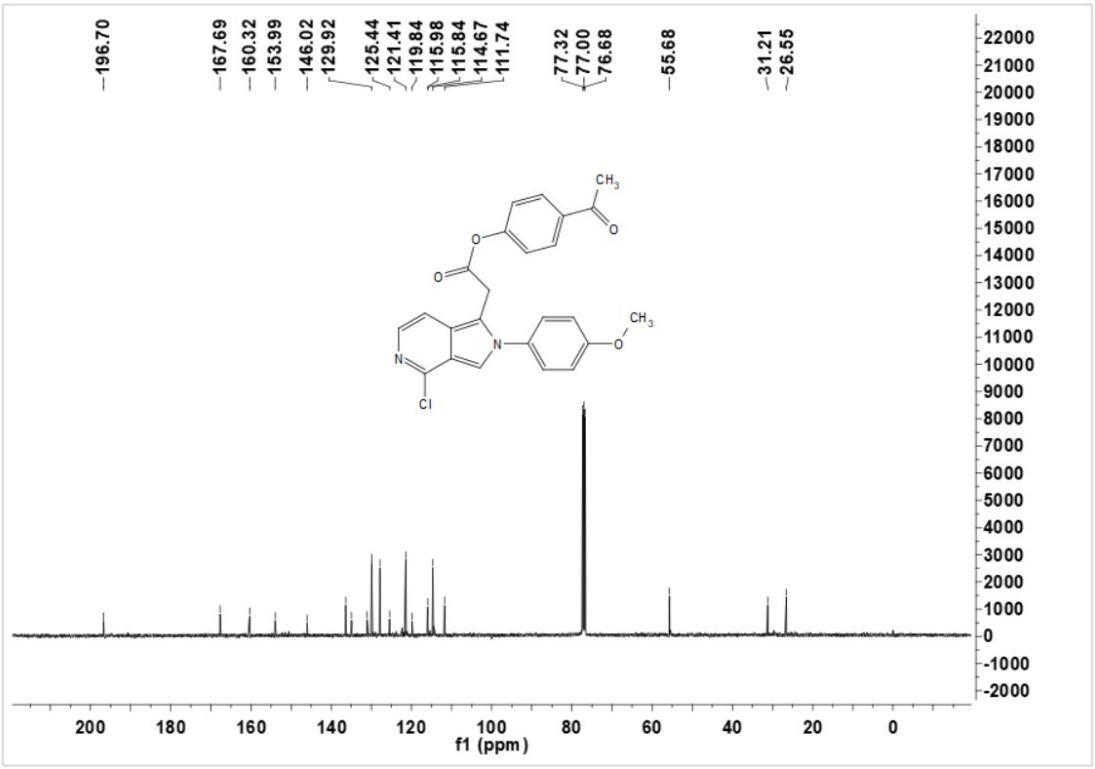
4-Bromophenyl 2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetate (6zb)



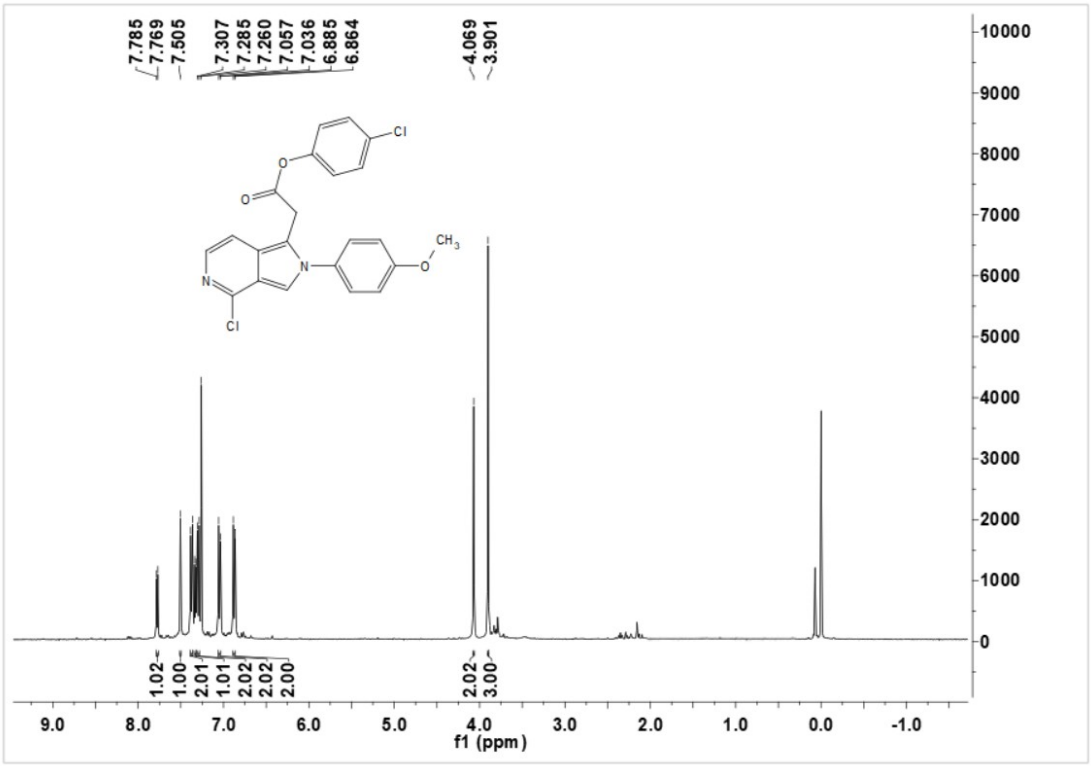


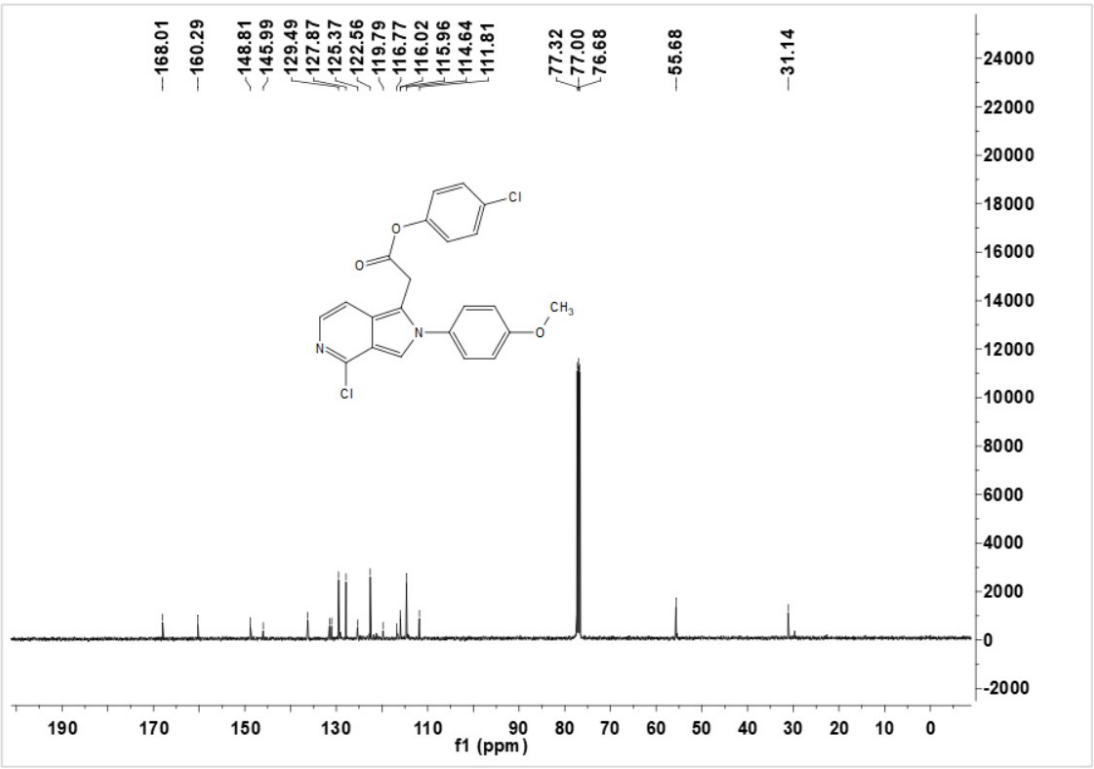
4-Acetylphenyl 2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetate (6zc)



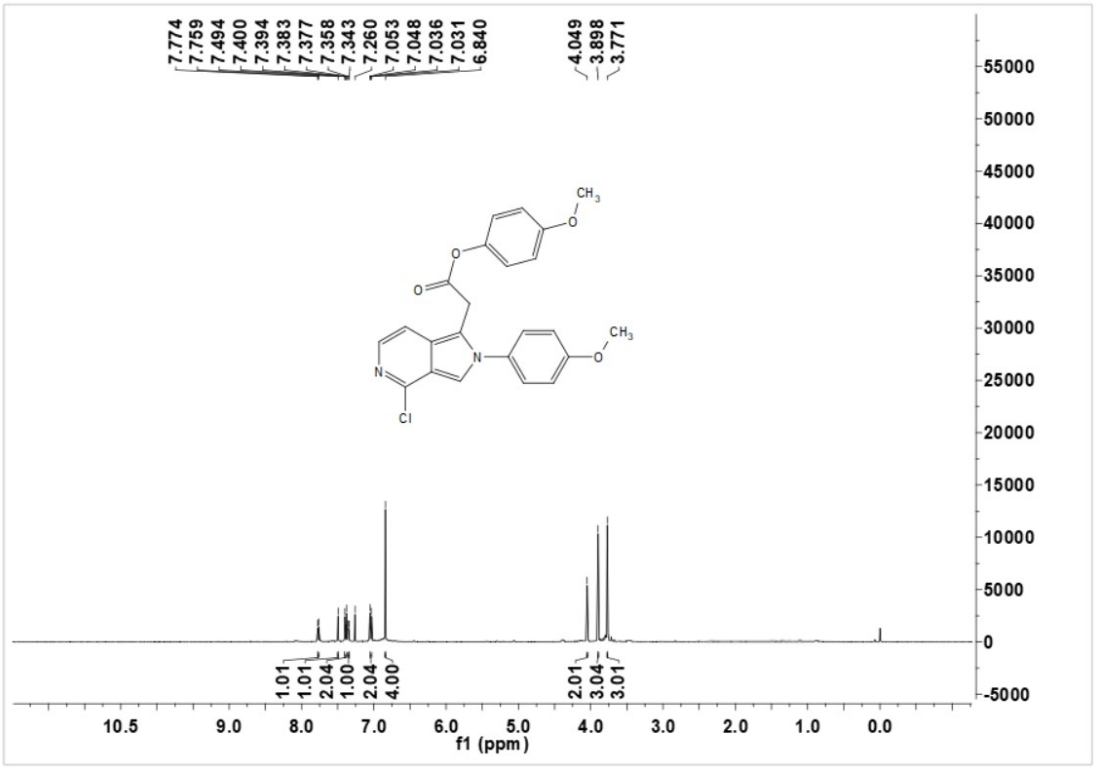


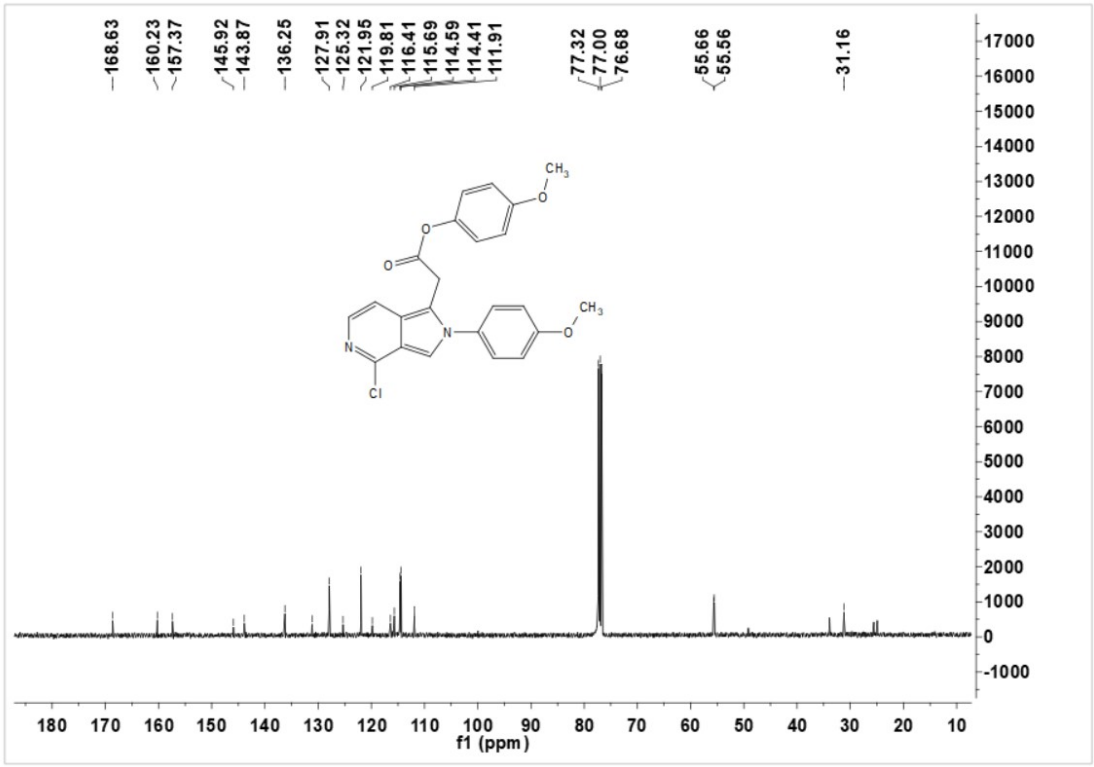
4-Chlorophenyl 2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetate (6zd)



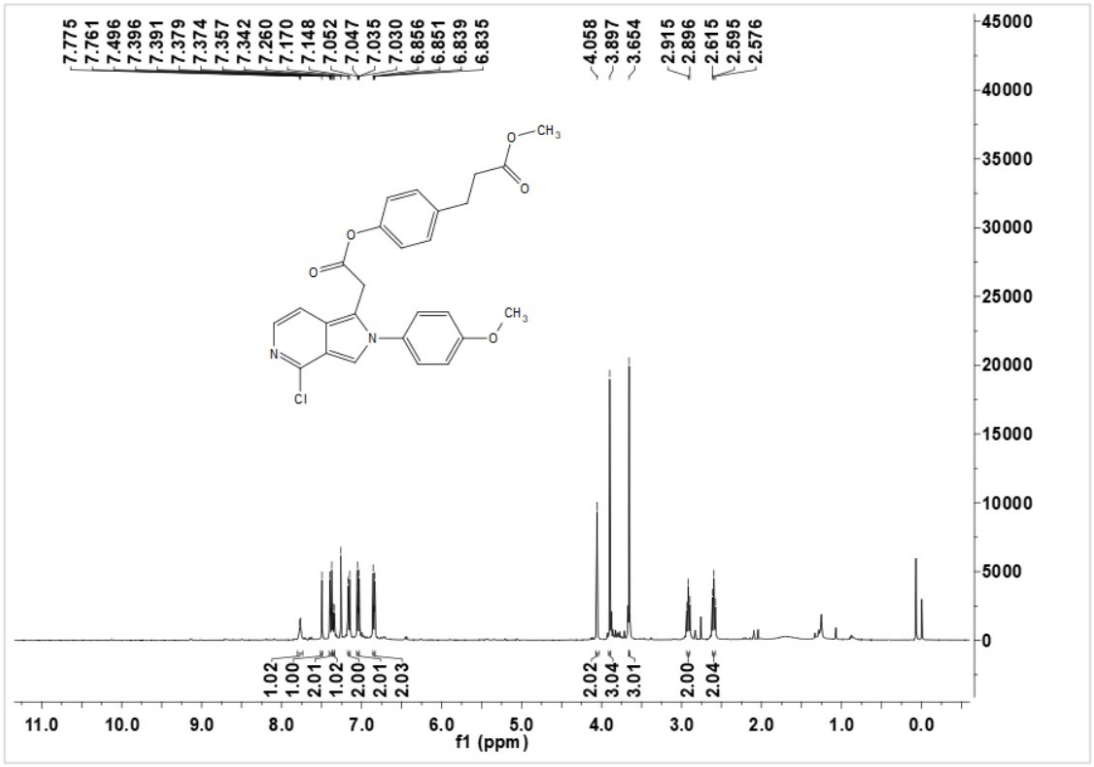


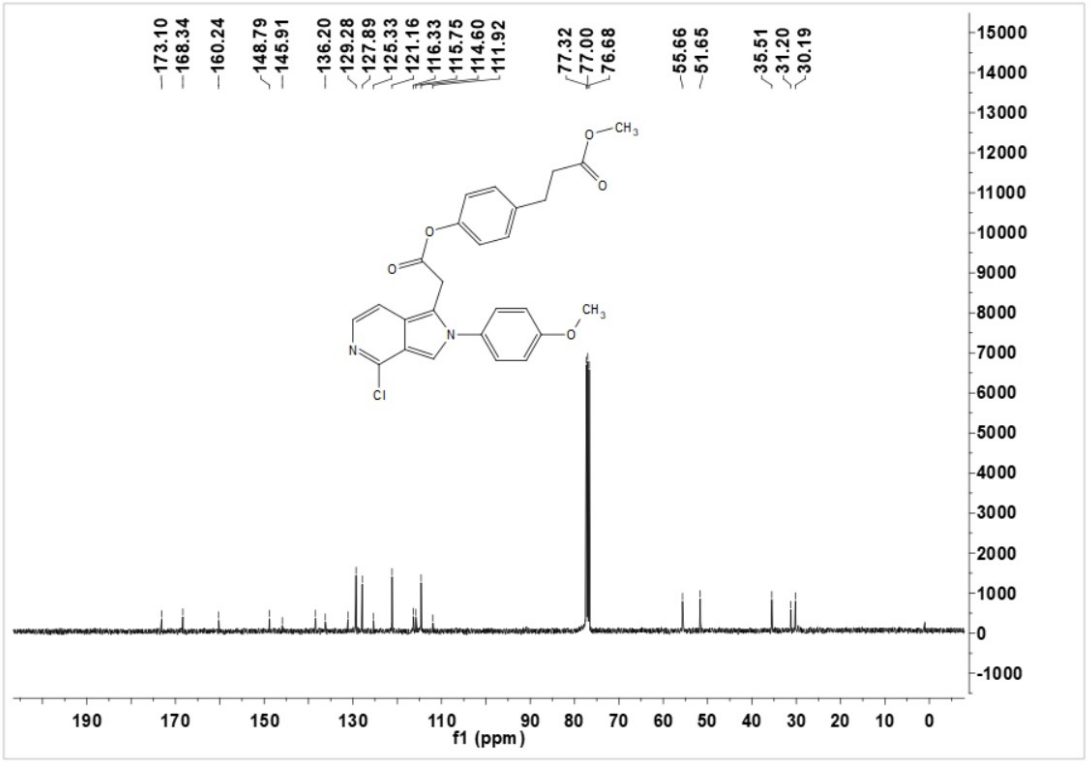
4-Methoxyphenyl 2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetate (6ze)



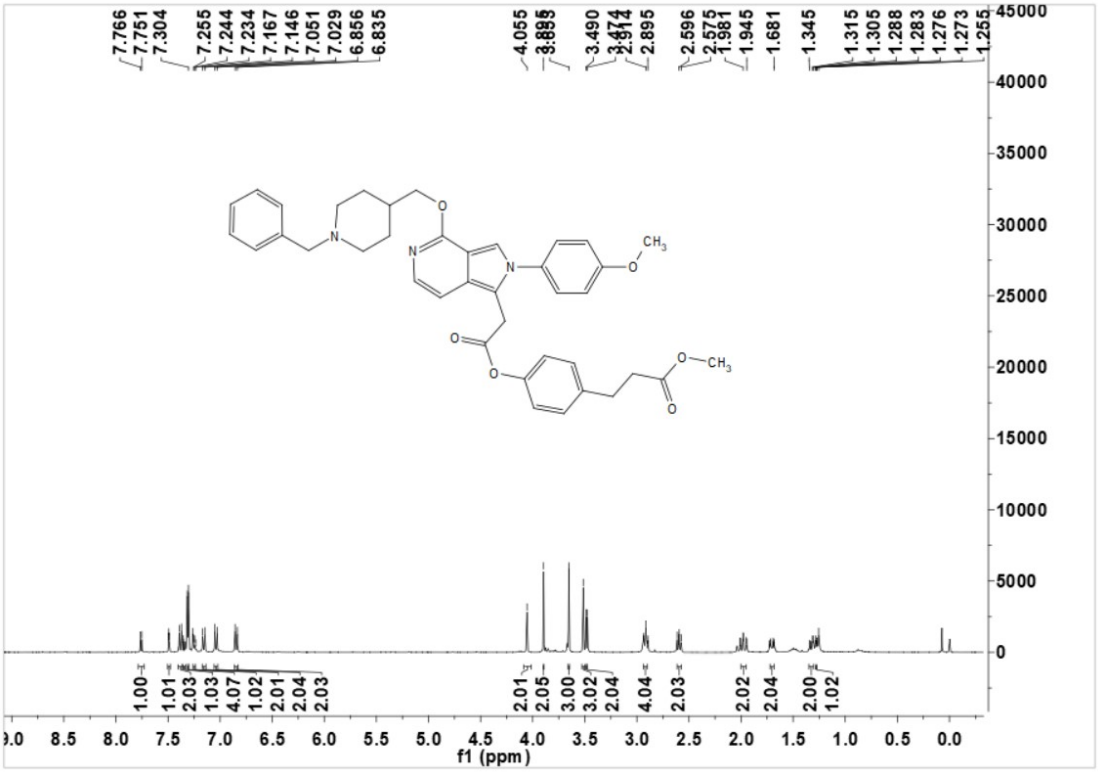


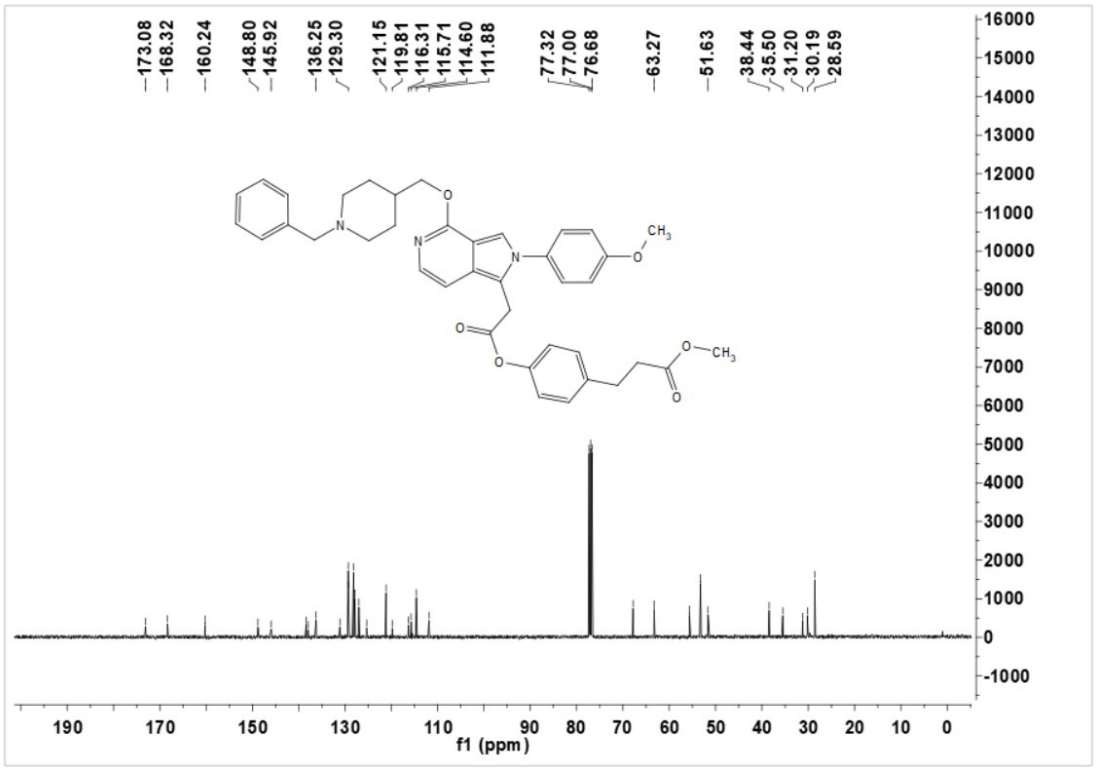
Methyl 3-(4-(2-(4-chloro-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetoxy)phenyl)propanoate (6zf)



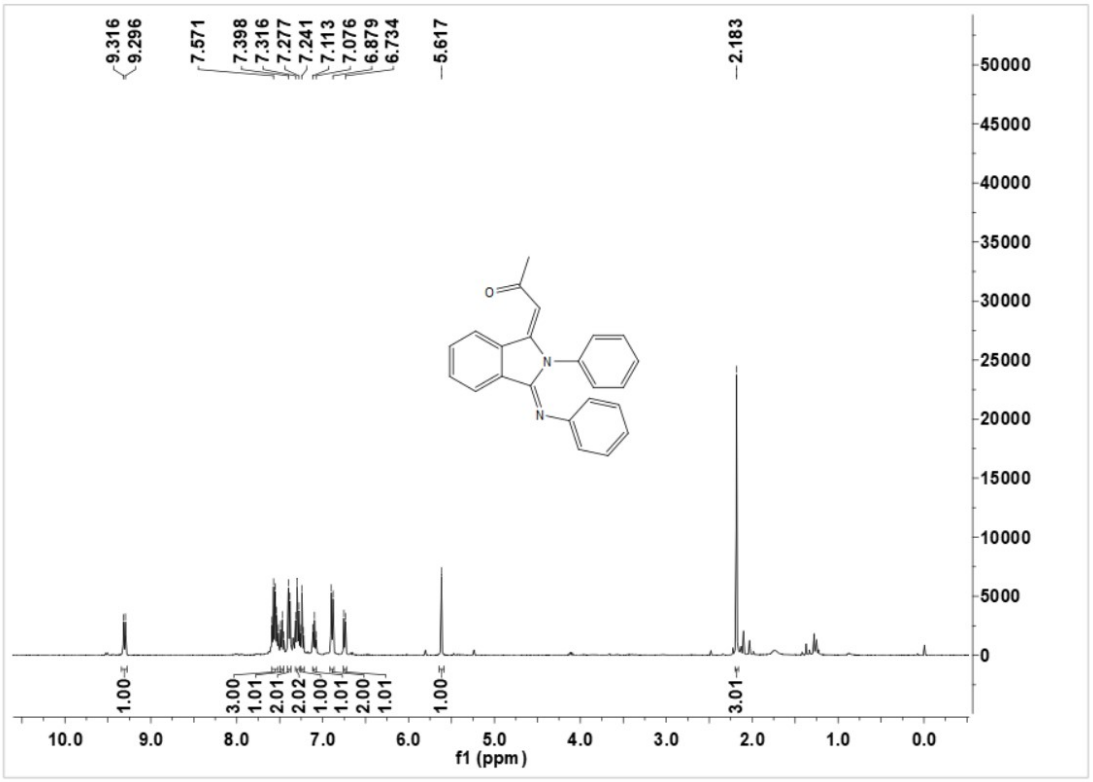


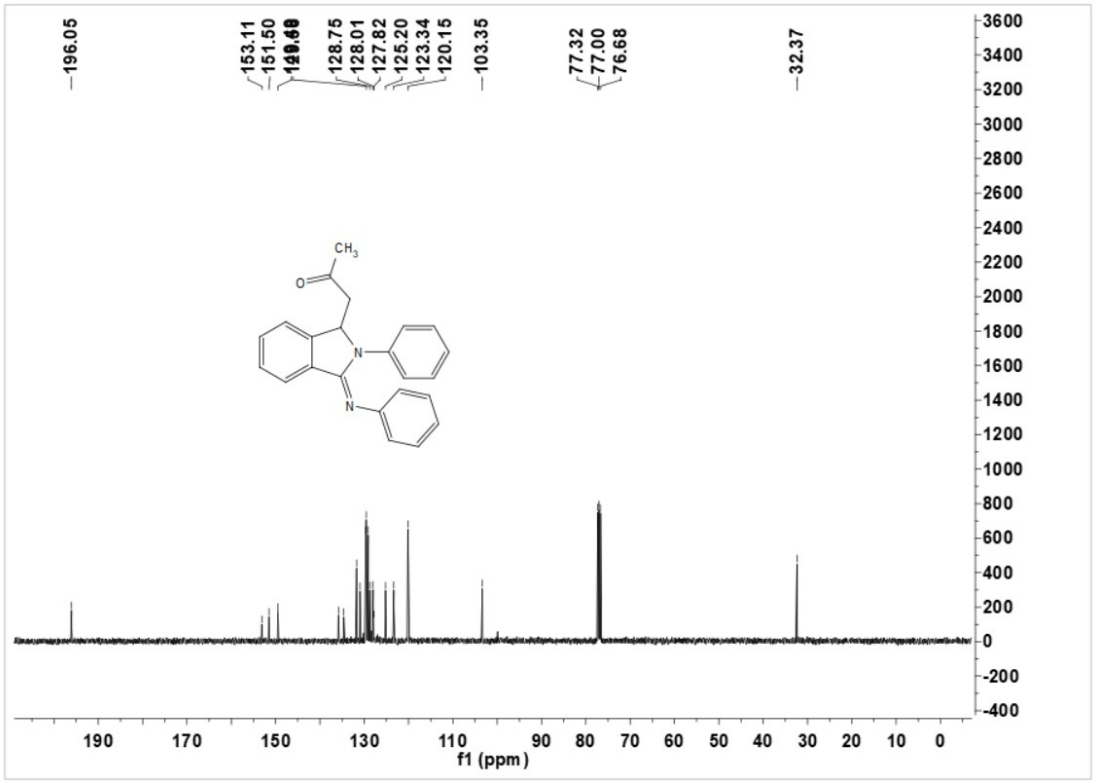
Methyl 3-(4-(2-(4-((1-benzylpiperidin-4-yl)methoxy)-2-(4-methoxyphenyl)-2*H*-pyrrolo[3,4-*c*]pyridin-1-yl)acetoxy)phenyl)propanoate (6zf-I)



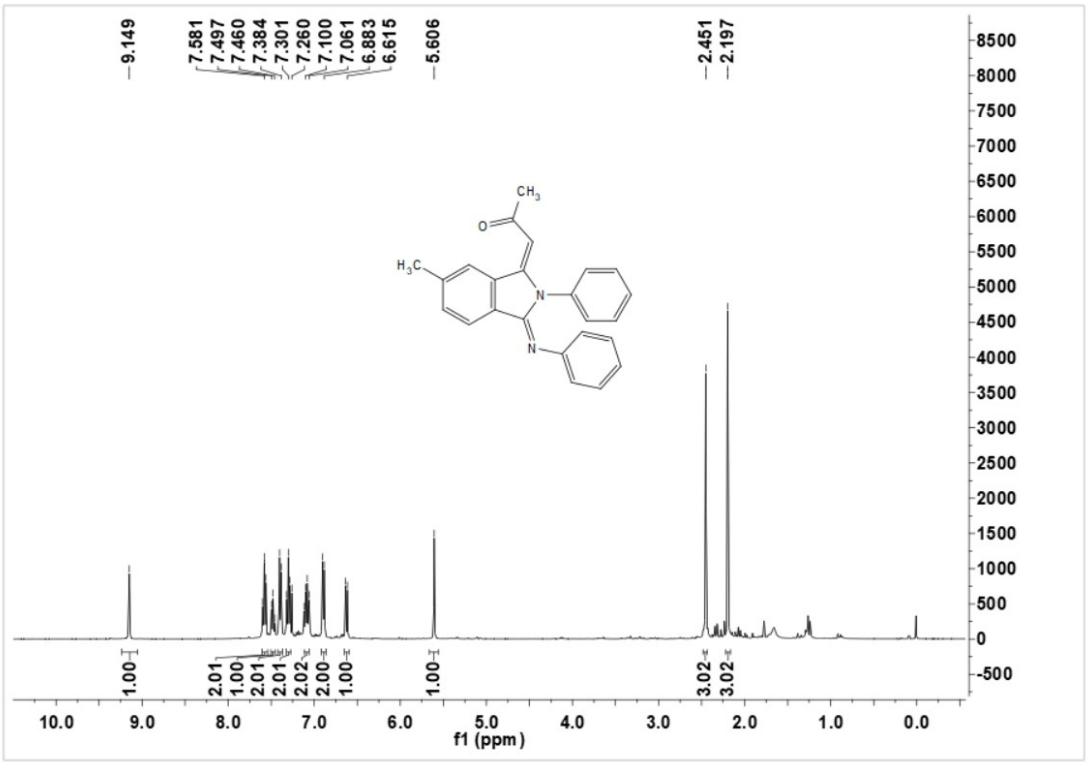


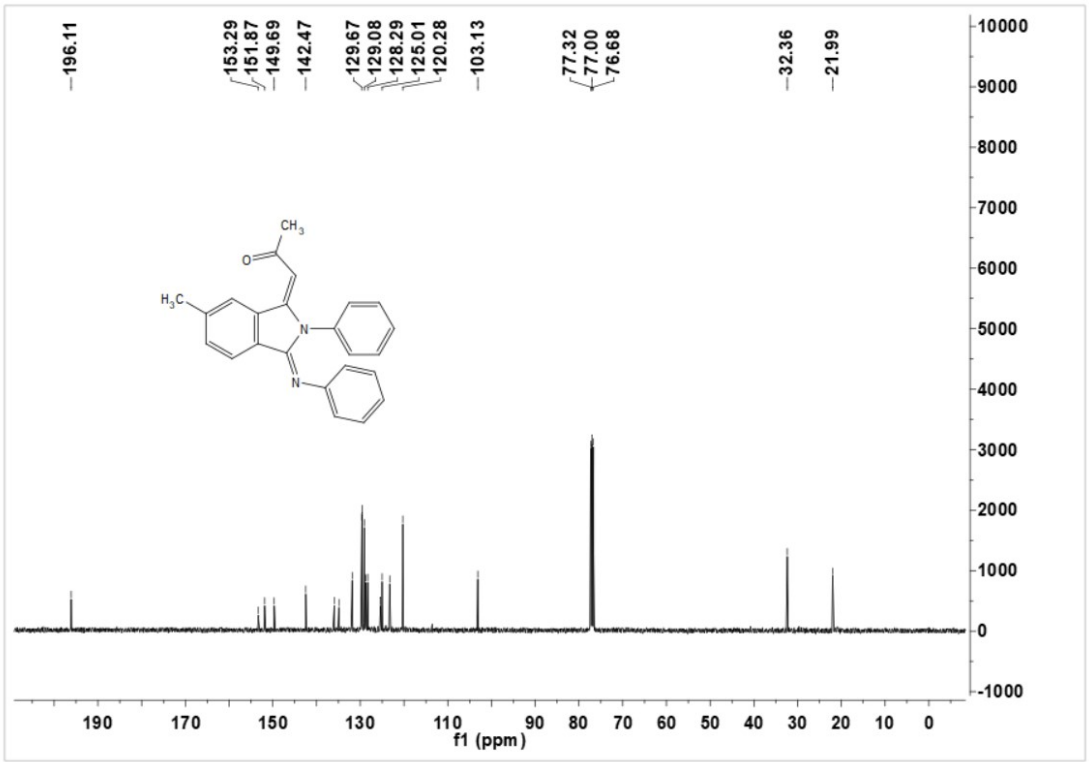
1-((1*E*,3*Z*)-2-Phenyl-3-(phenylimino)isoindolin-1-ylidene)propan-2-one (8a)



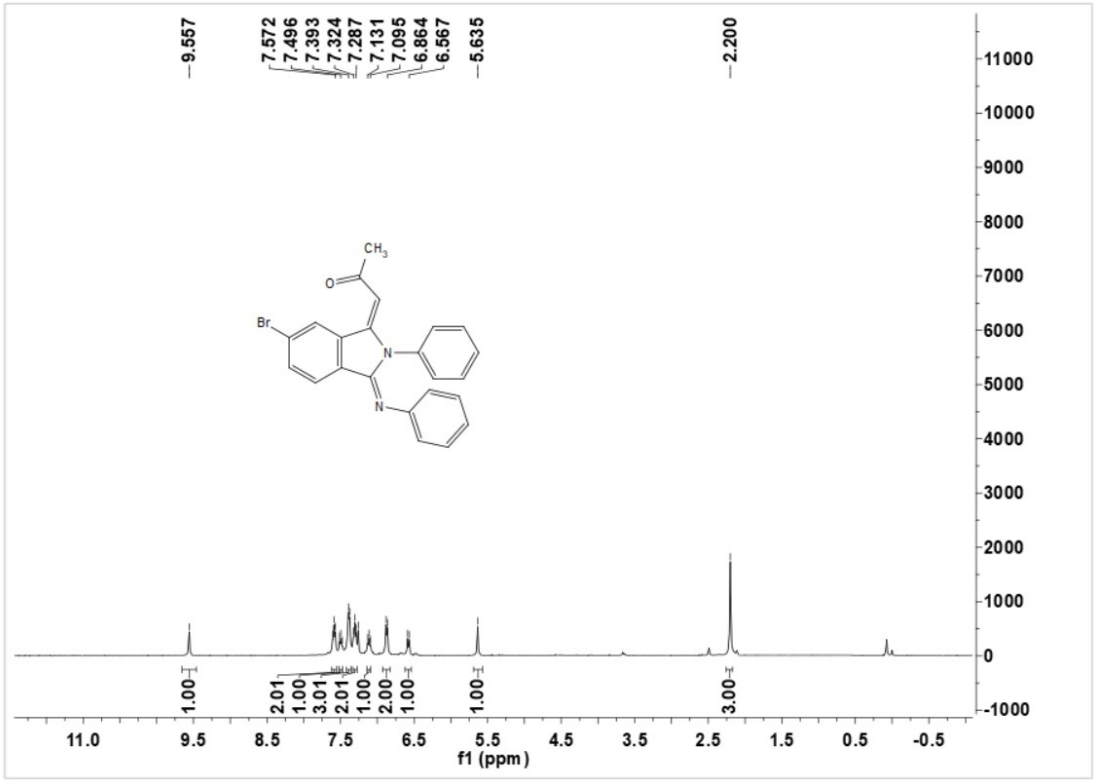


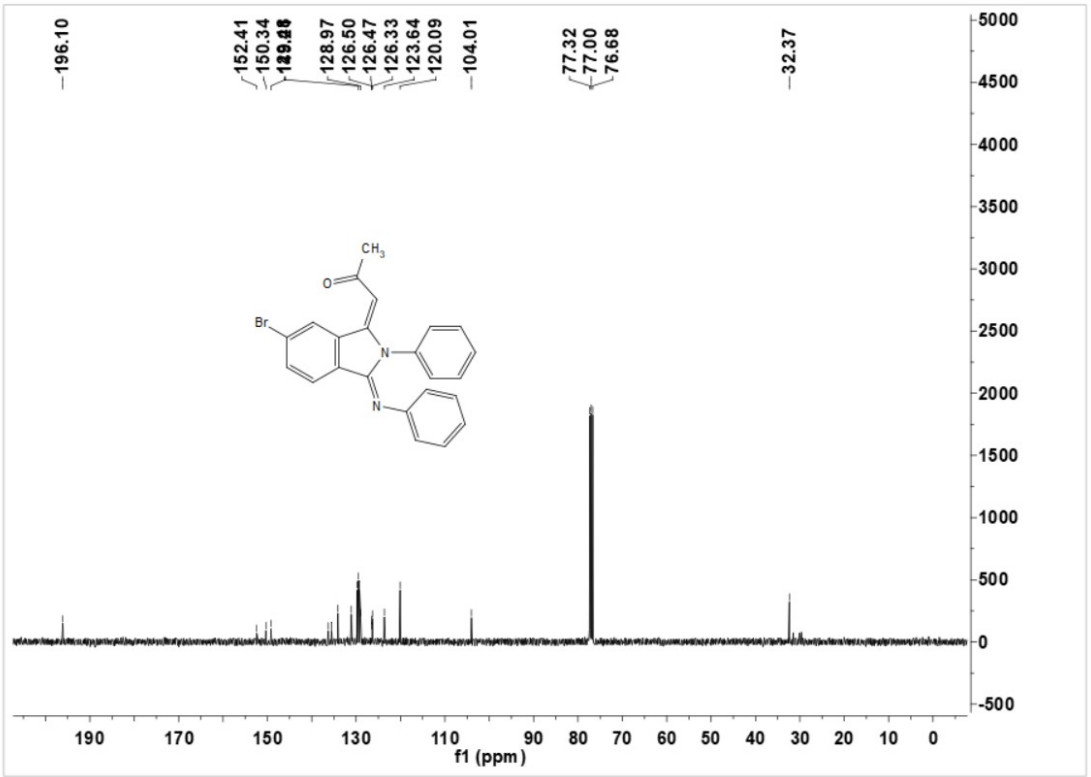
1-((1*E*,3*Z*)-6-Methyl-2-phenyl-3-(phenylimino)isoindolin-1-ylidene)propan-2-one (8b)



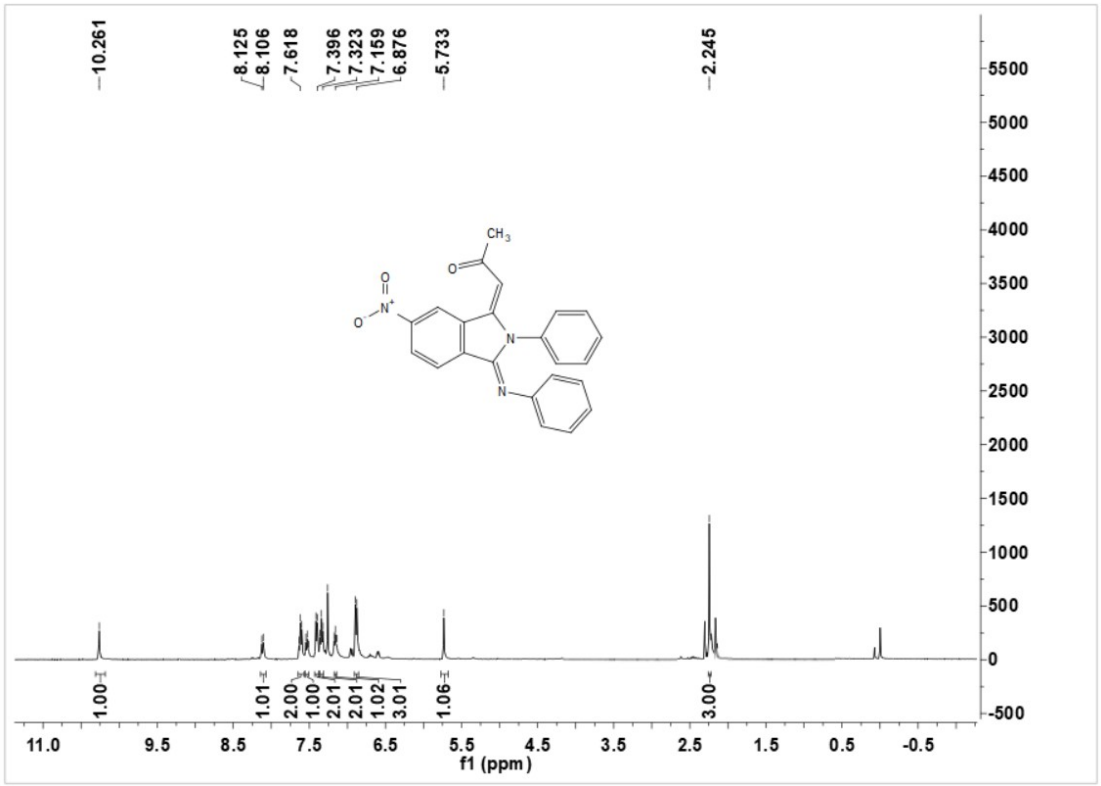


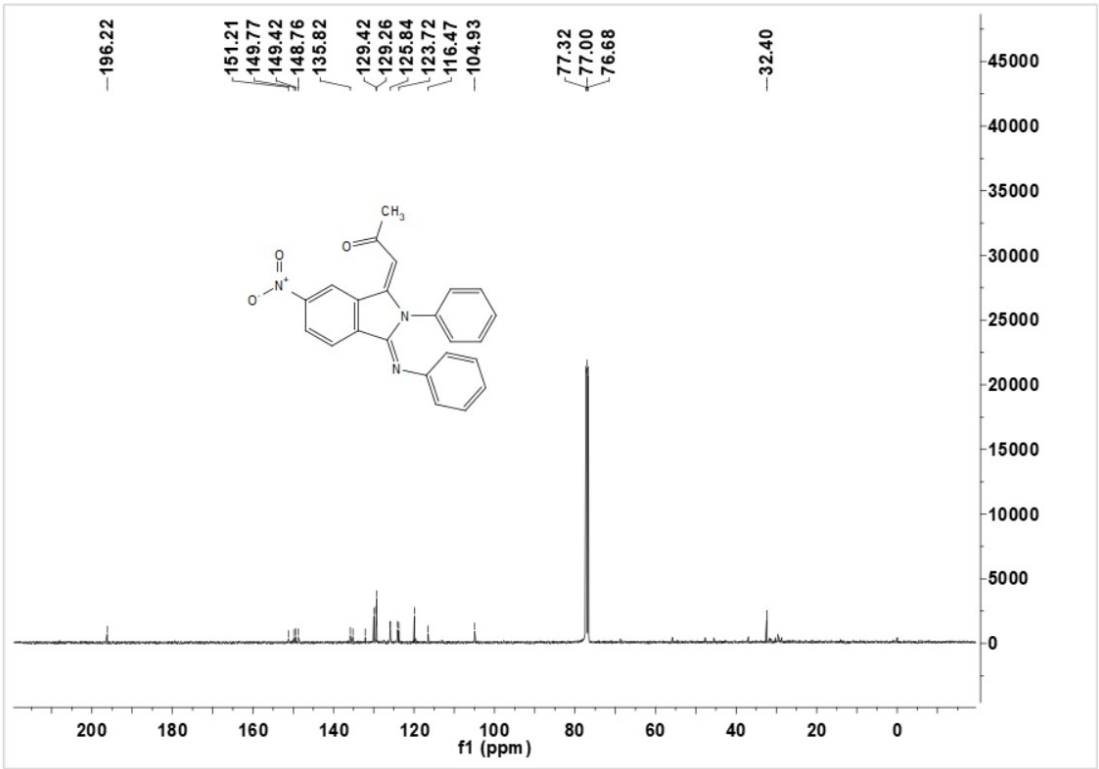
1-((1*E*,3*Z*)-6-Bromo-2-phenyl-3-(phenylimino)isoindolin-1-ylidene)propan-2-one (8c)



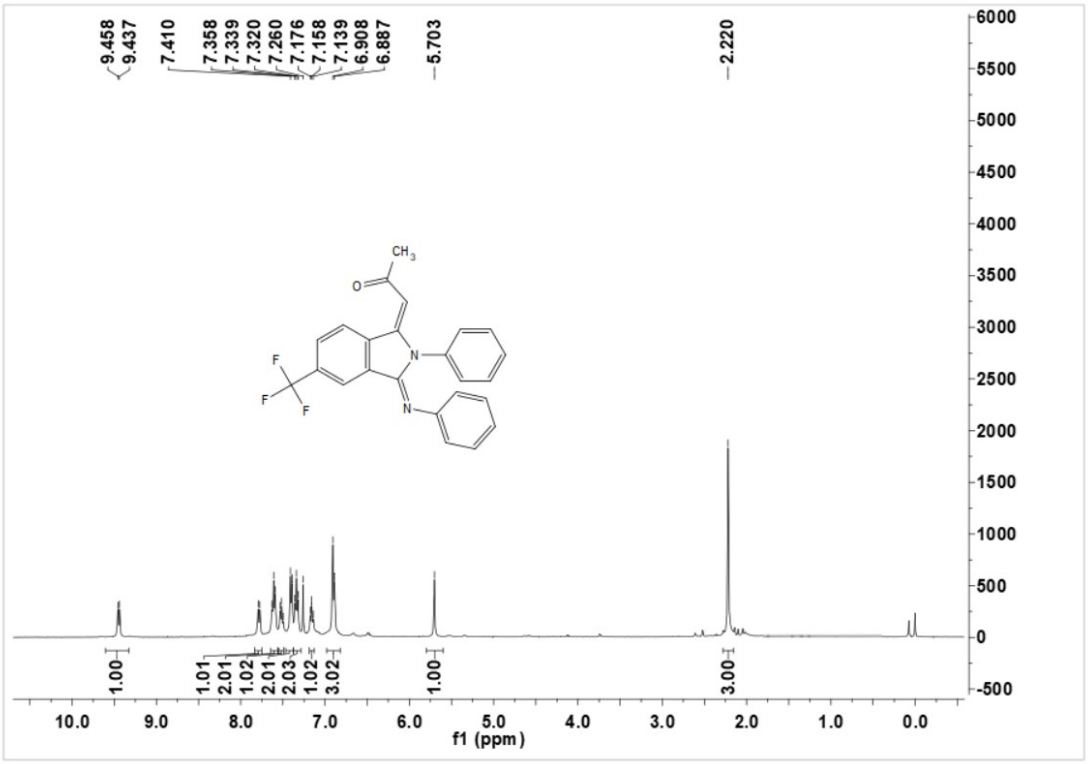


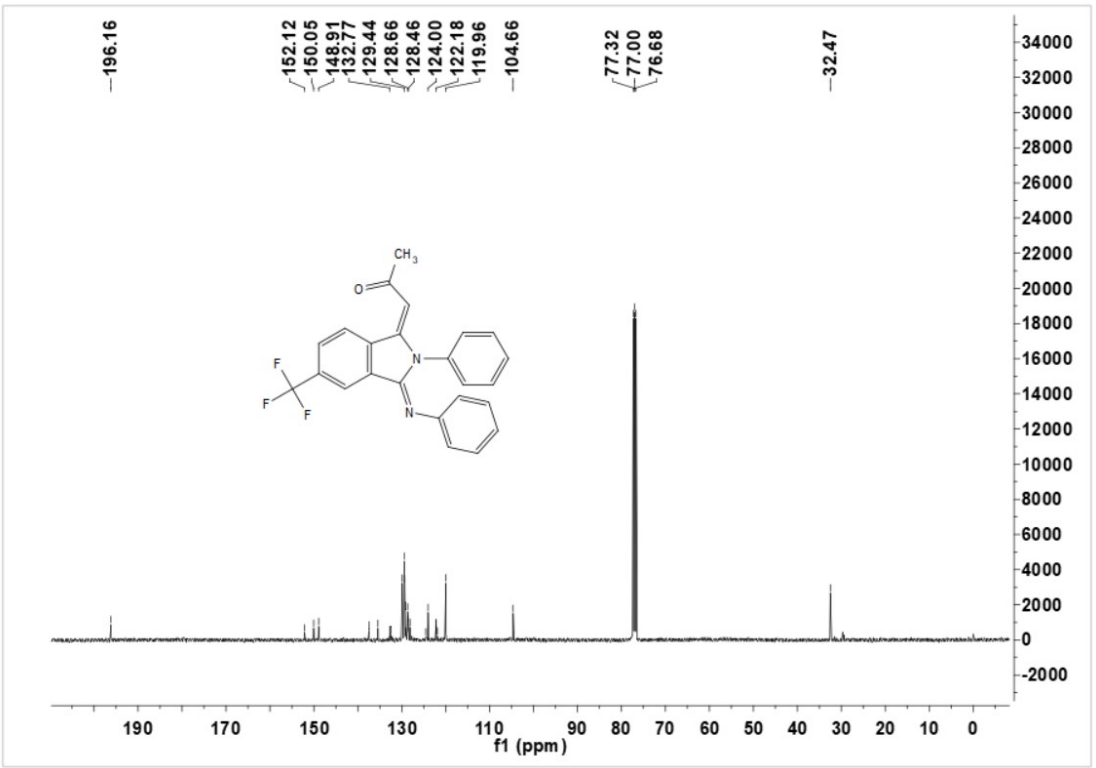
1-((1*E*, 3*Z*)-6-Nitro-2-phenyl-3-(phenylimino)isoindolin-1-ylidene)propan-2-one (8d)

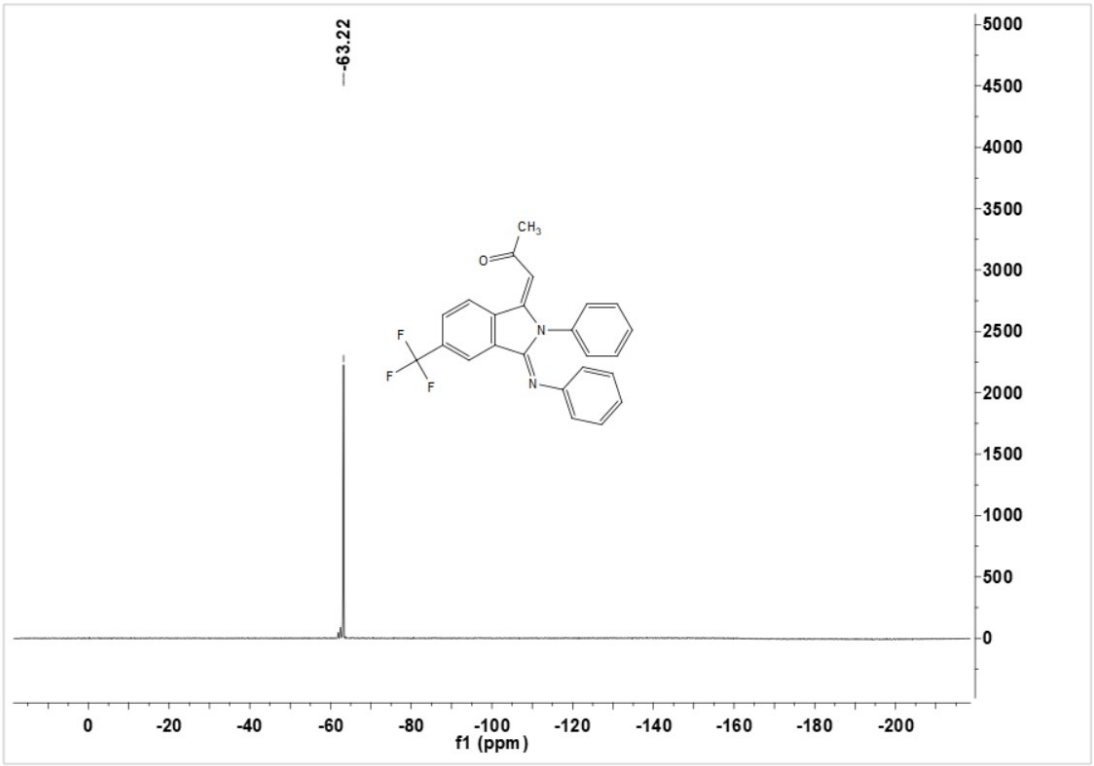




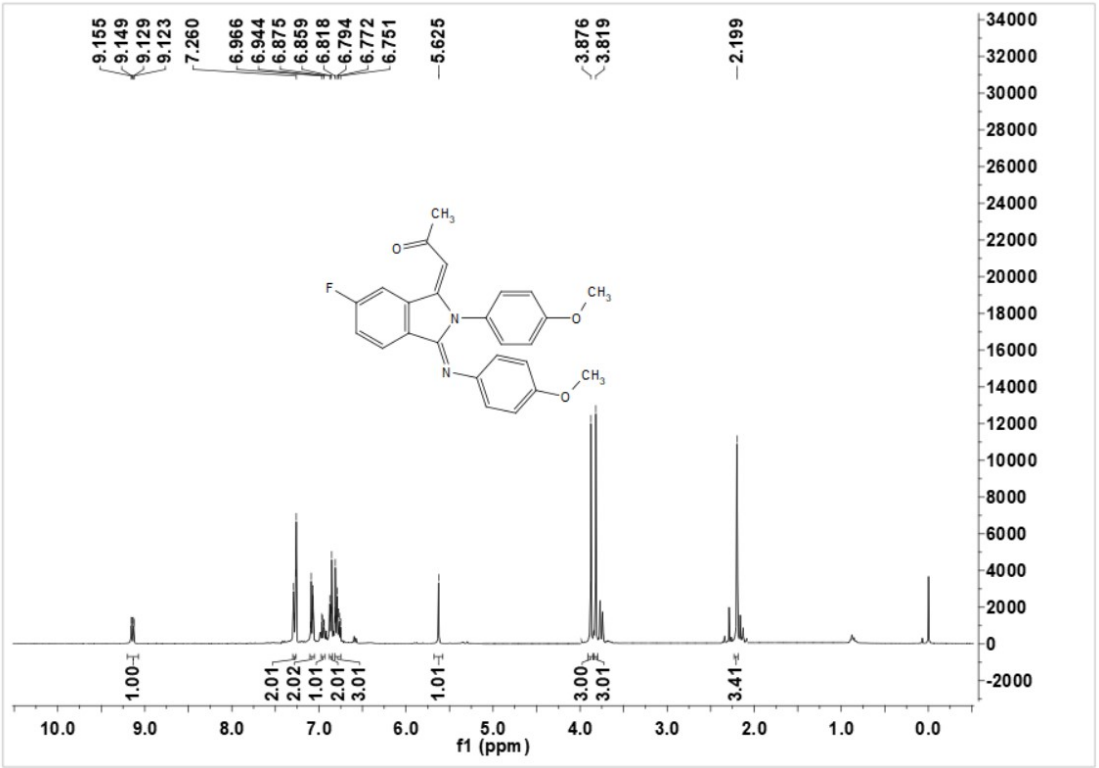
1-((1*E*,3*Z*)-2-Phenyl-3-(phenylimino)-5-(trifluoromethyl)isoindolin-1-ylidene)propan-2-one (8e)

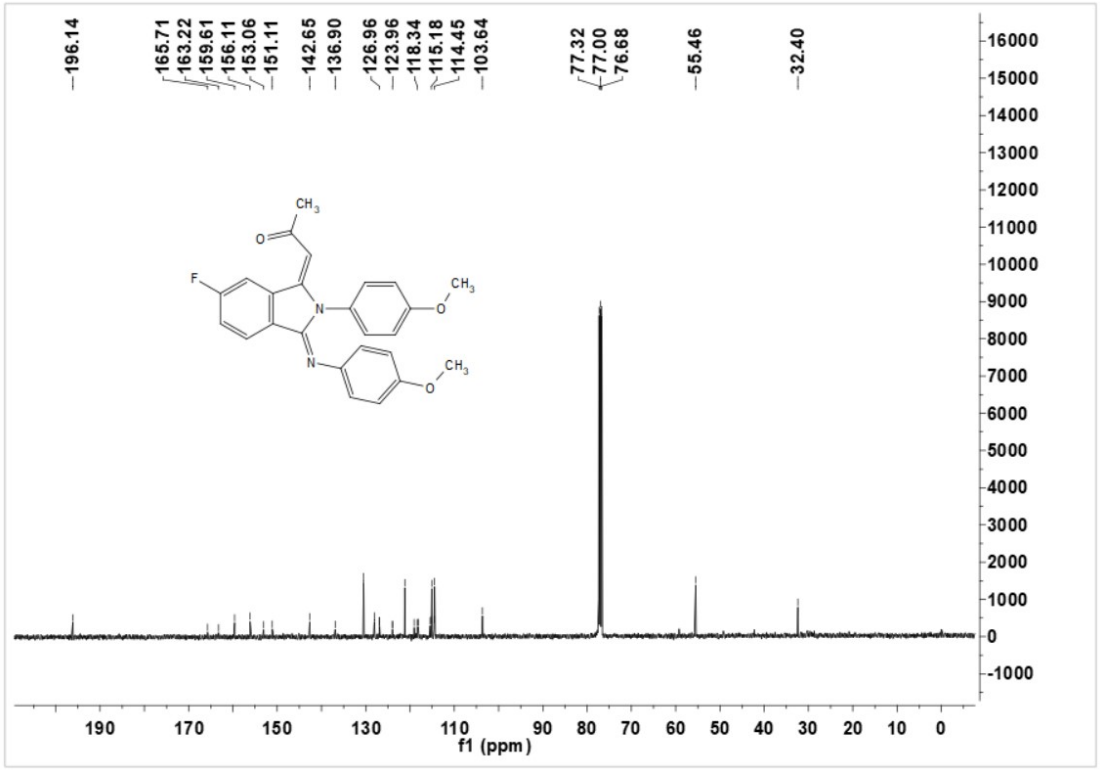


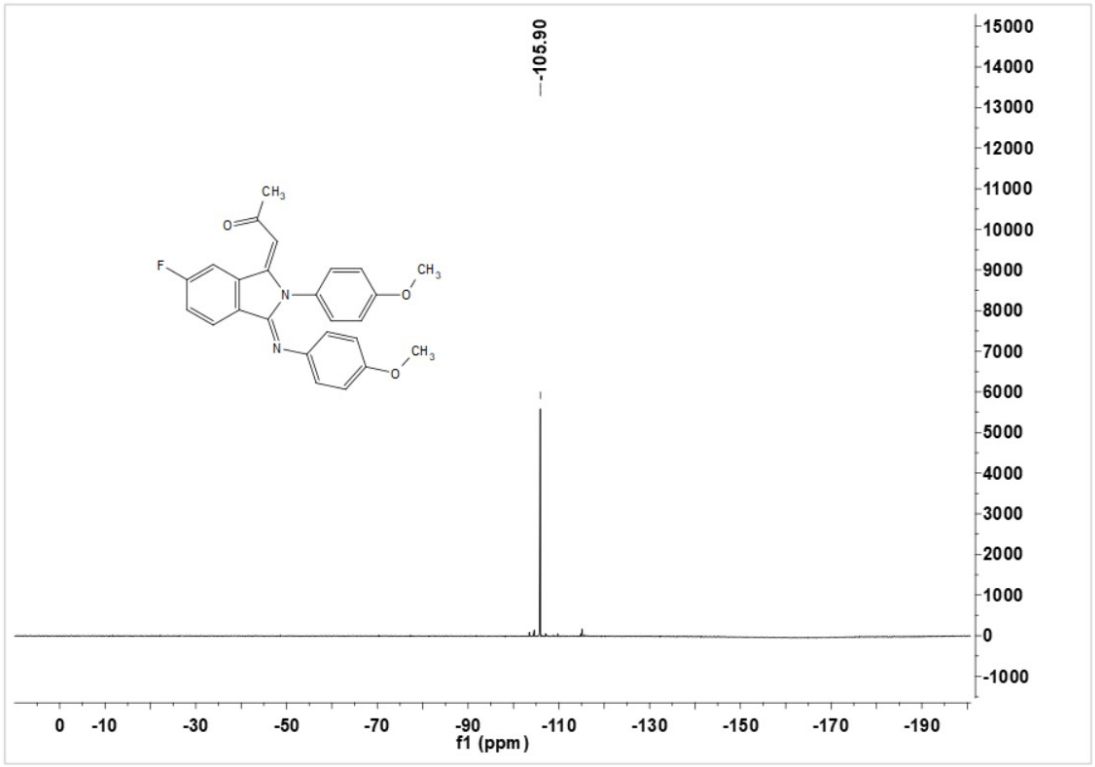




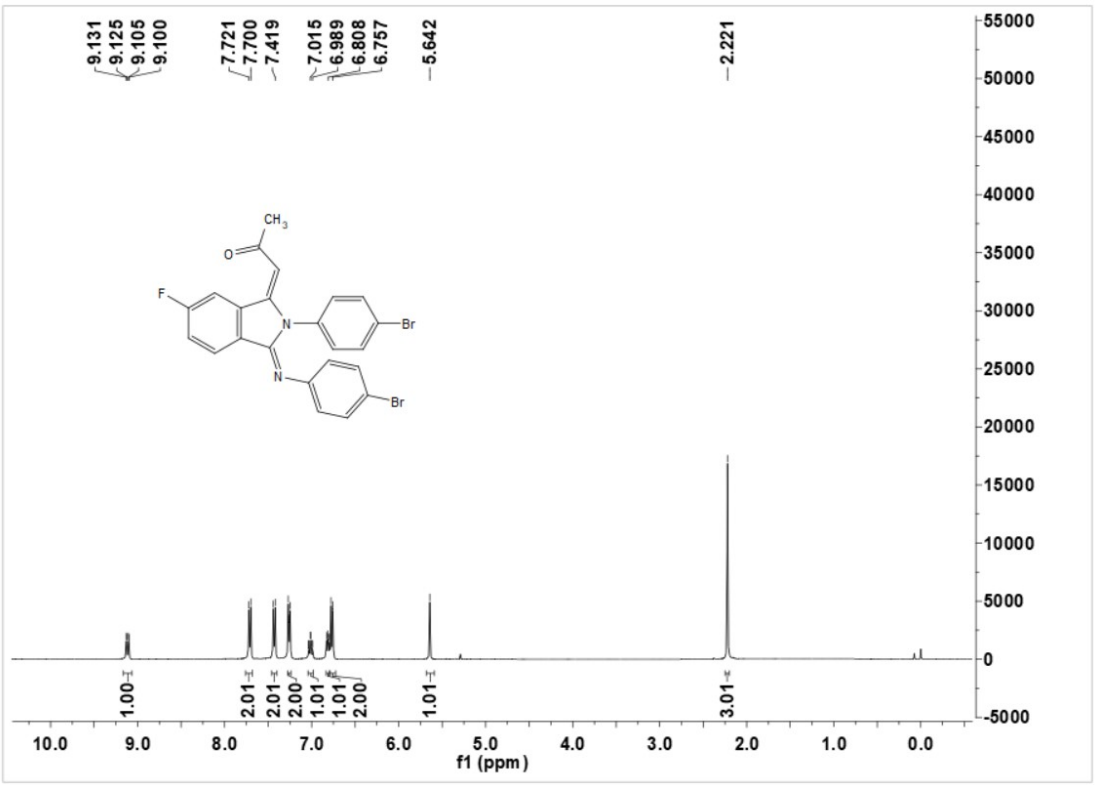
1-((1*E*,3*Z*)-6-Fluoro-2-(4-methoxyphenyl)-3-((4-methoxyphenyl)imino)isoindolin-1-ylidene)propan-2-one (8f)

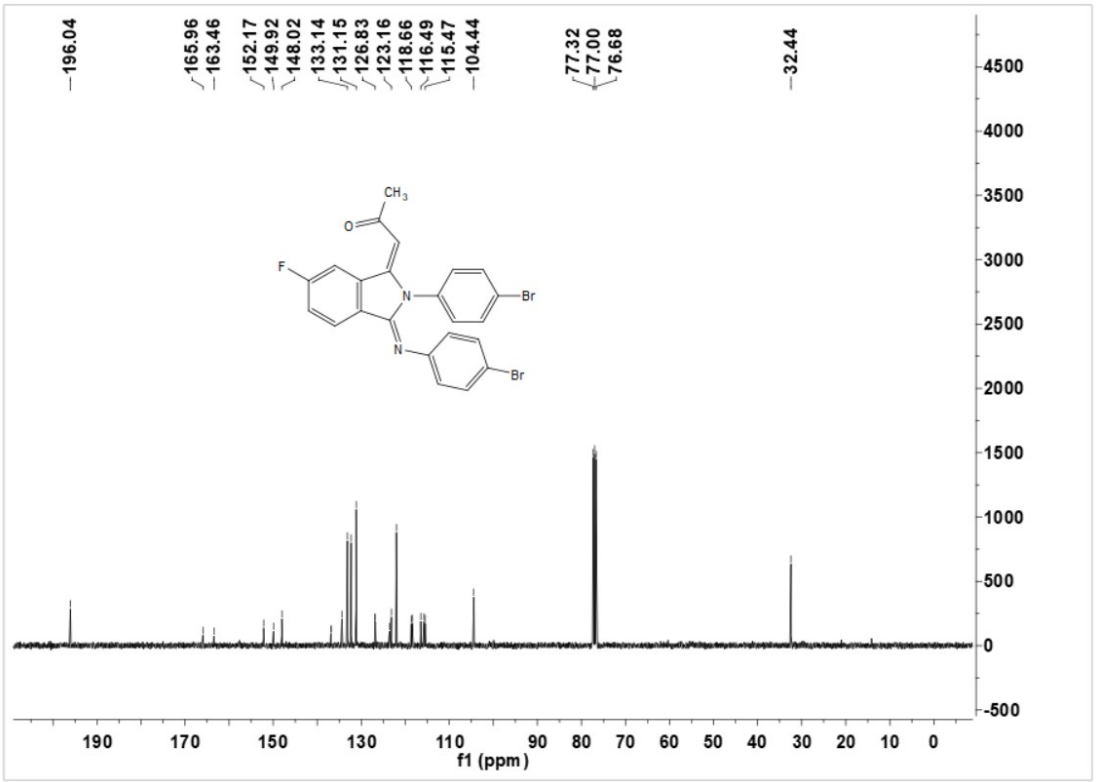


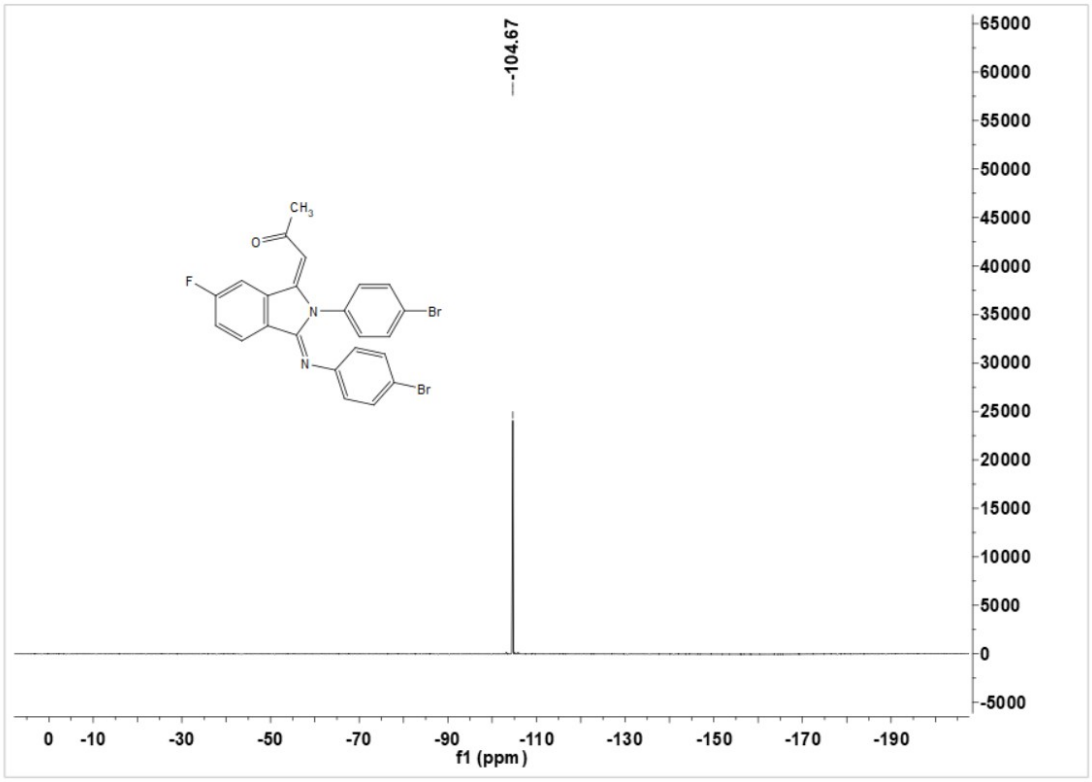

196.14
165.71
163.22
159.61
156.11
153.06
151.11
142.65
136.90
126.96
123.96
118.34
115.18
114.45
103.64
77.32
77.00
76.68
55.46
32.40
f1 (ppm)


-105.90
f1 (ppm)

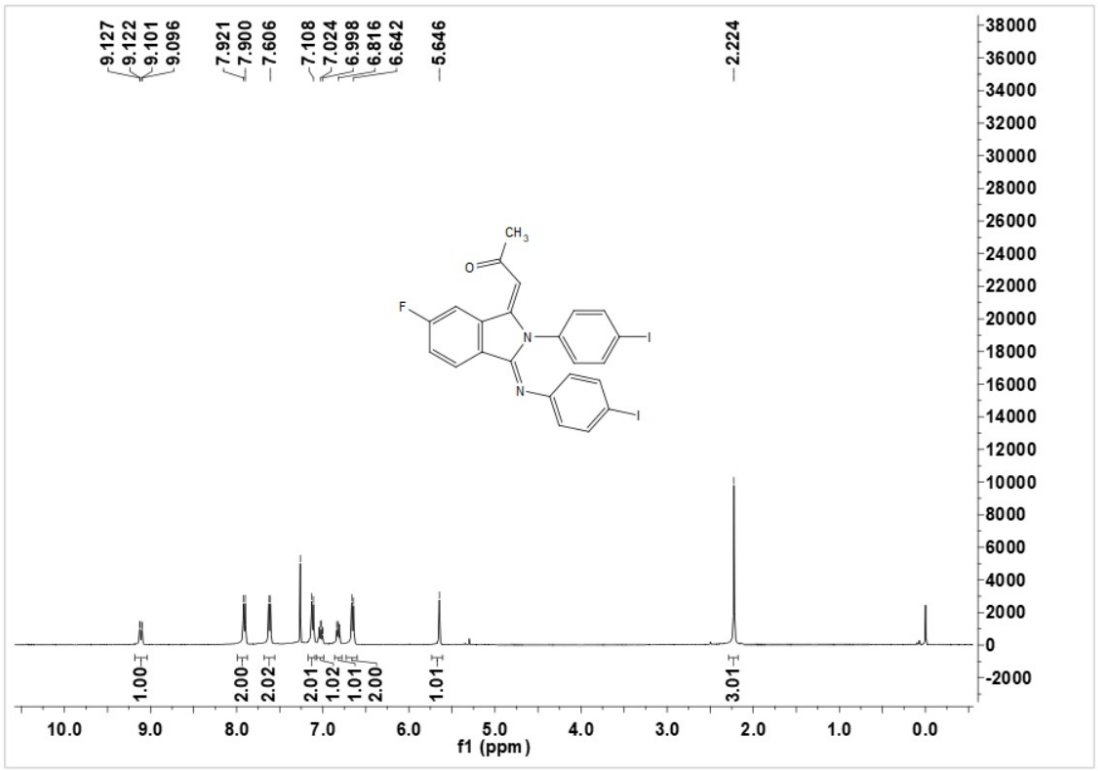
1-((1*E*,3*Z*)-2-(4-Bromophenyl)-3-((4-bromophenyl)imino)-6-Fluoro-Isoindolin-1-ylidene)propan-2-one (8g)

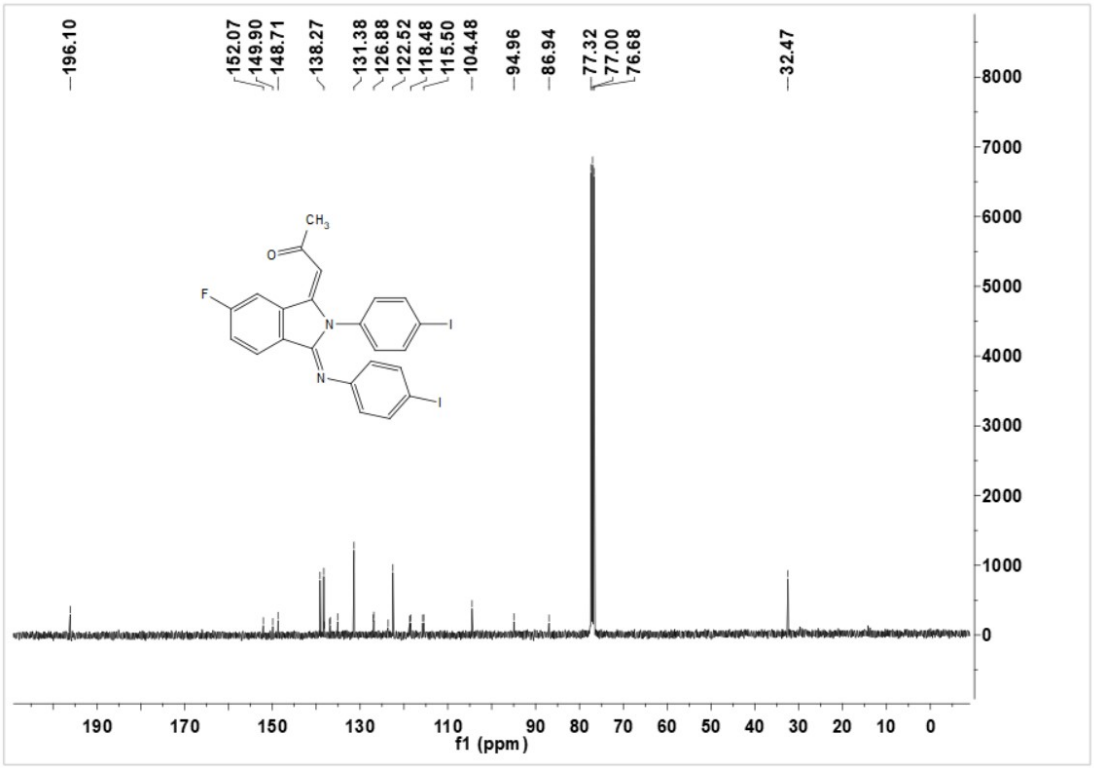


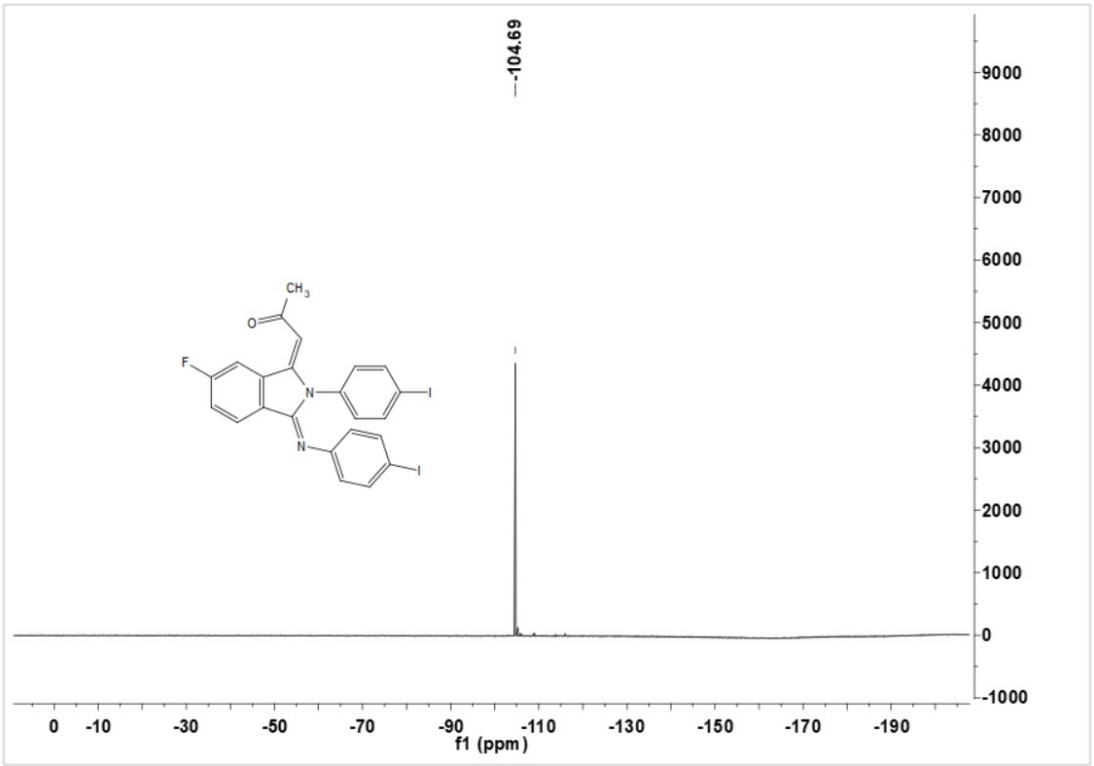




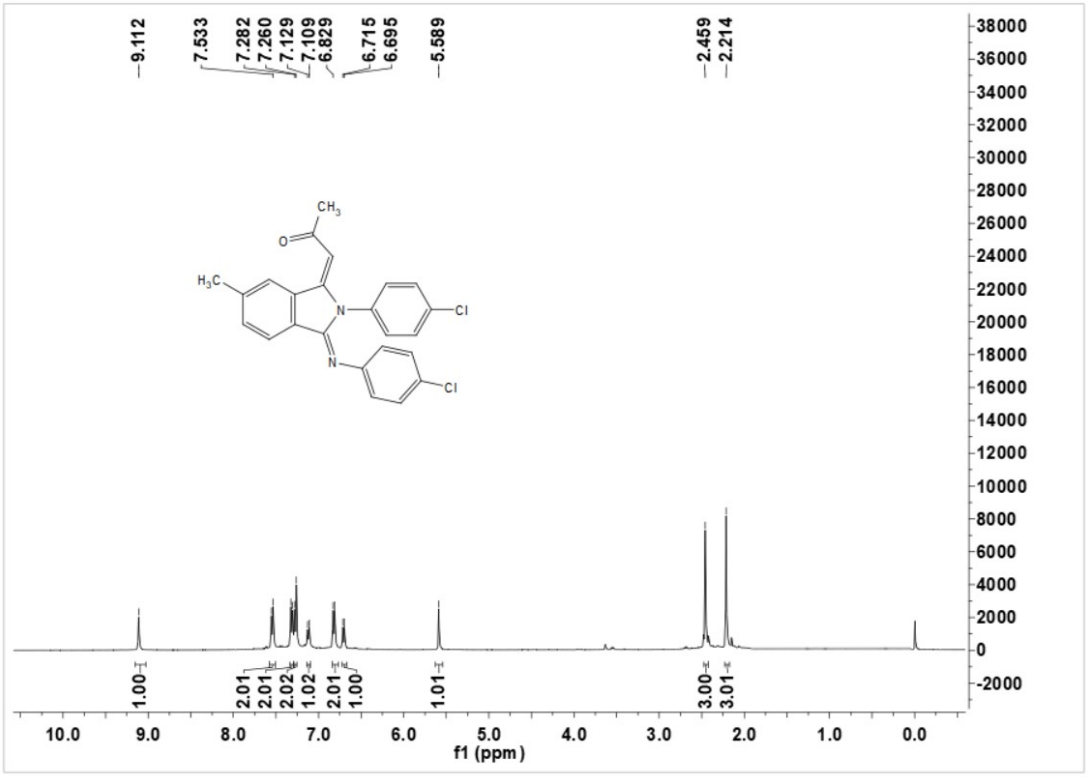
1-((1*E*,3*Z*)-6-Fluoro-2-(4-iodophenyl)-3-((4-iodophenyl)imino)isoindolin-1-ylidene)propan-2-one (8h)

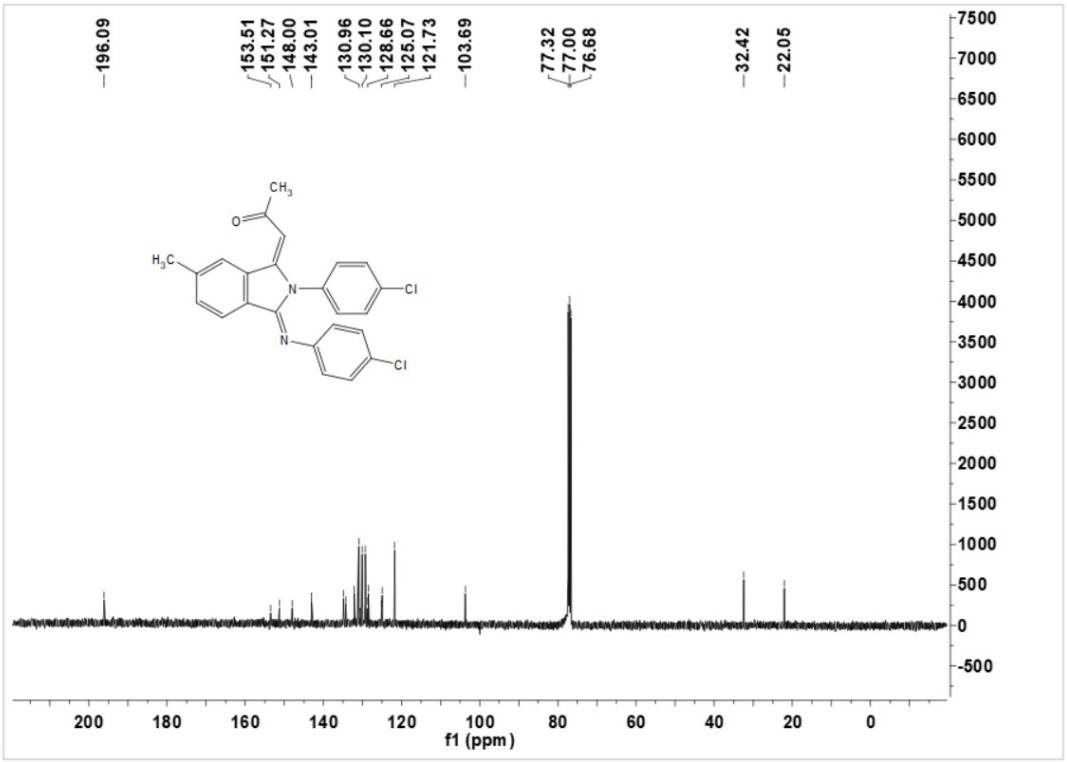



196.10
152.07
149.90
148.71
138.27
131.38
126.88
122.52
118.48
115.50
104.48
94.96
86.94
77.32
77.00
76.68
32.47
CH3
O
F
N
I
N
I
8000
7000
6000
5000
4000
3000
2000
1000
0
190
170
150
130
110
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

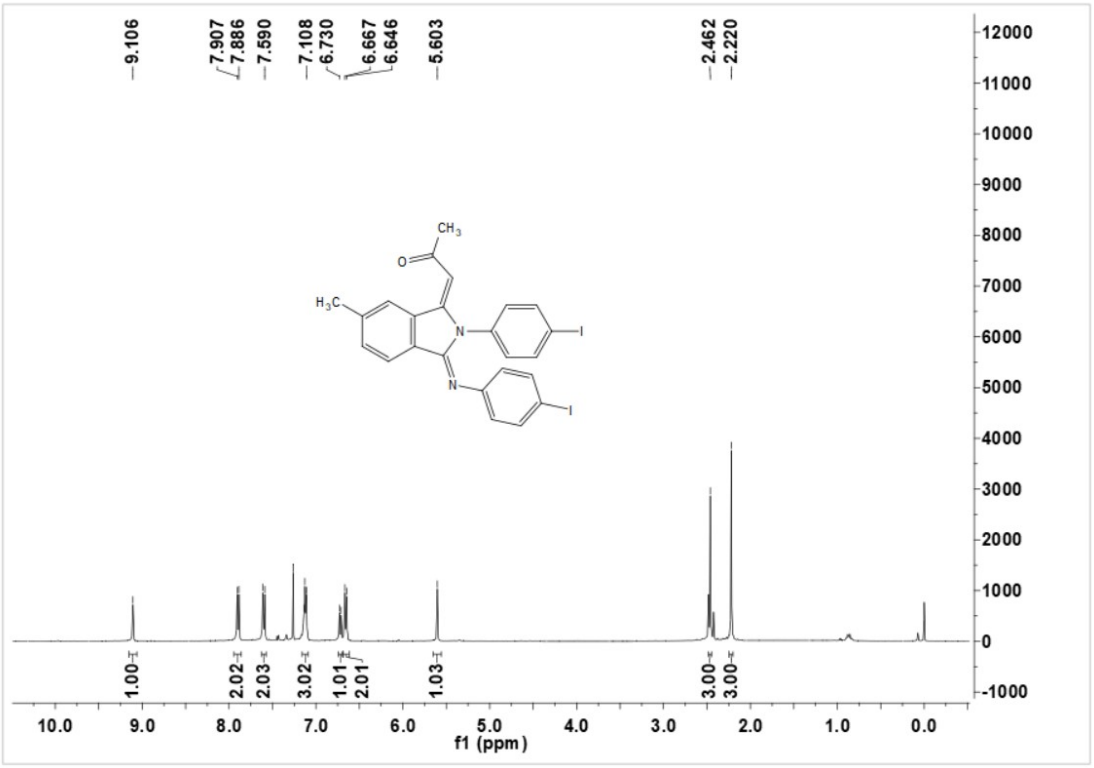

-104.69
CH3
O
F
N
I
N
I
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
-1000
0
-10
-30
-50
-70
-90
-110
-130
-150
-170
-190
f1 (ppm)

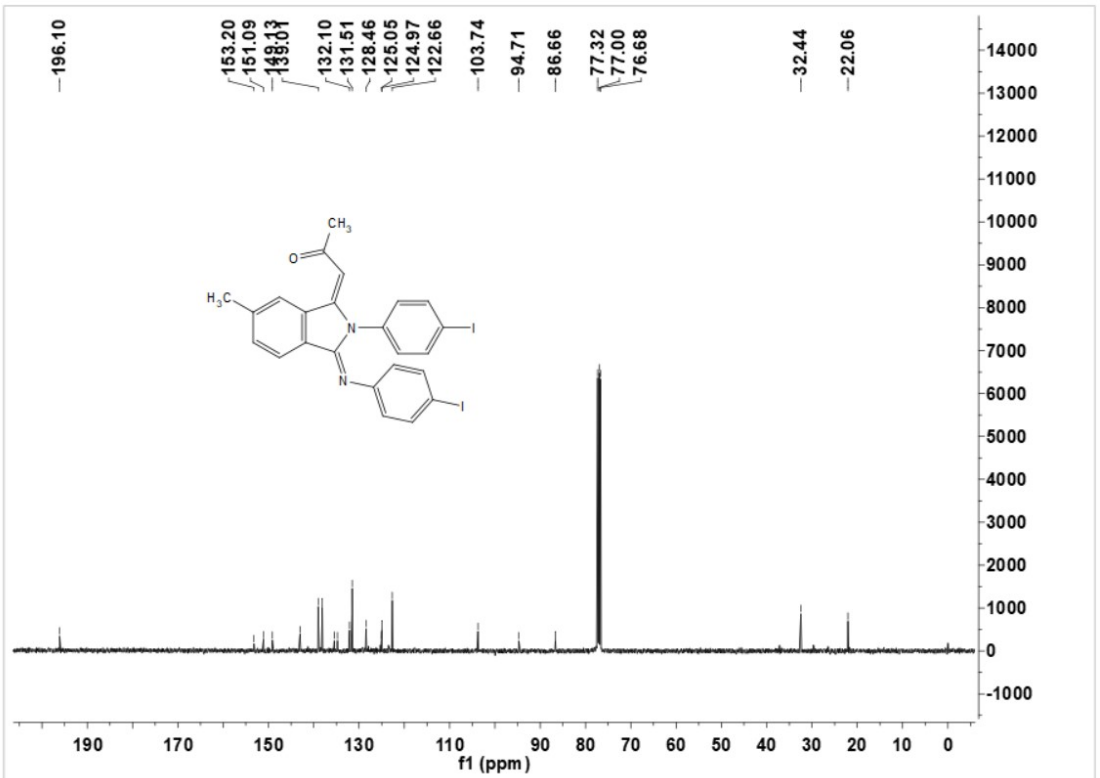
1-((1*E*, 3*Z*)-2-(4-Chlorophenyl)-3-((4-chlorophenyl)imino)-6-methyl-Isoindolin-1-ylidene)propan-2-one (8i)



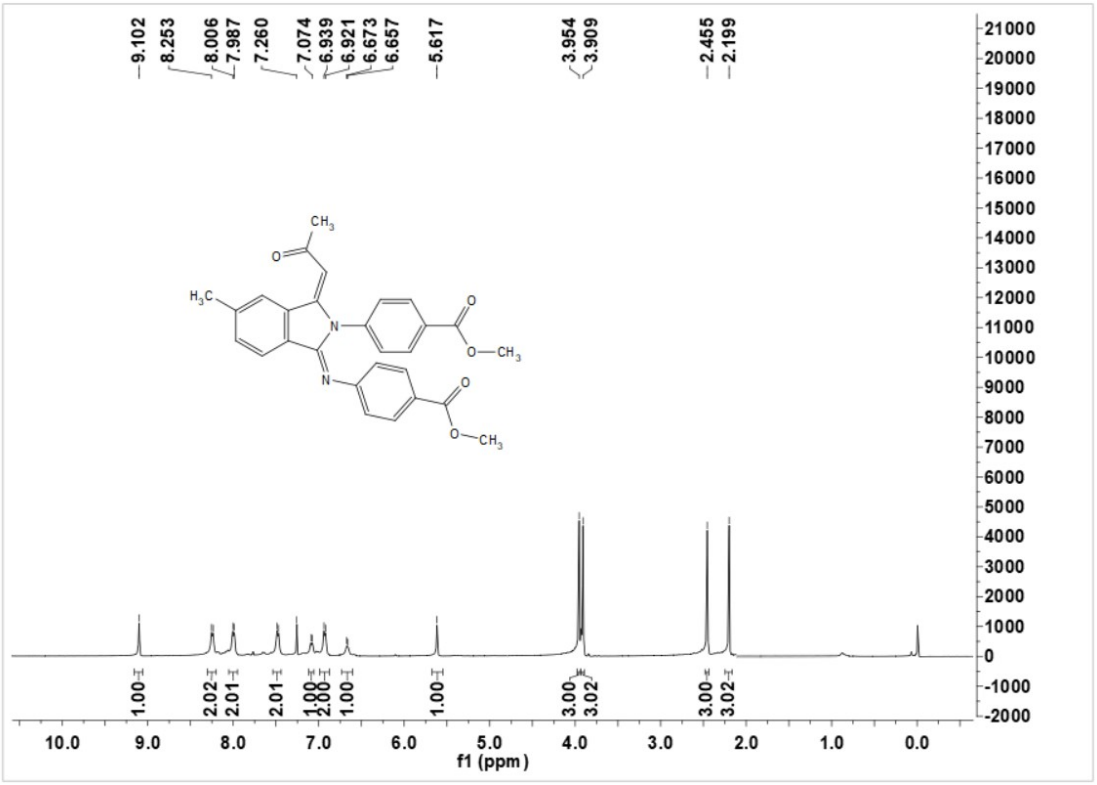


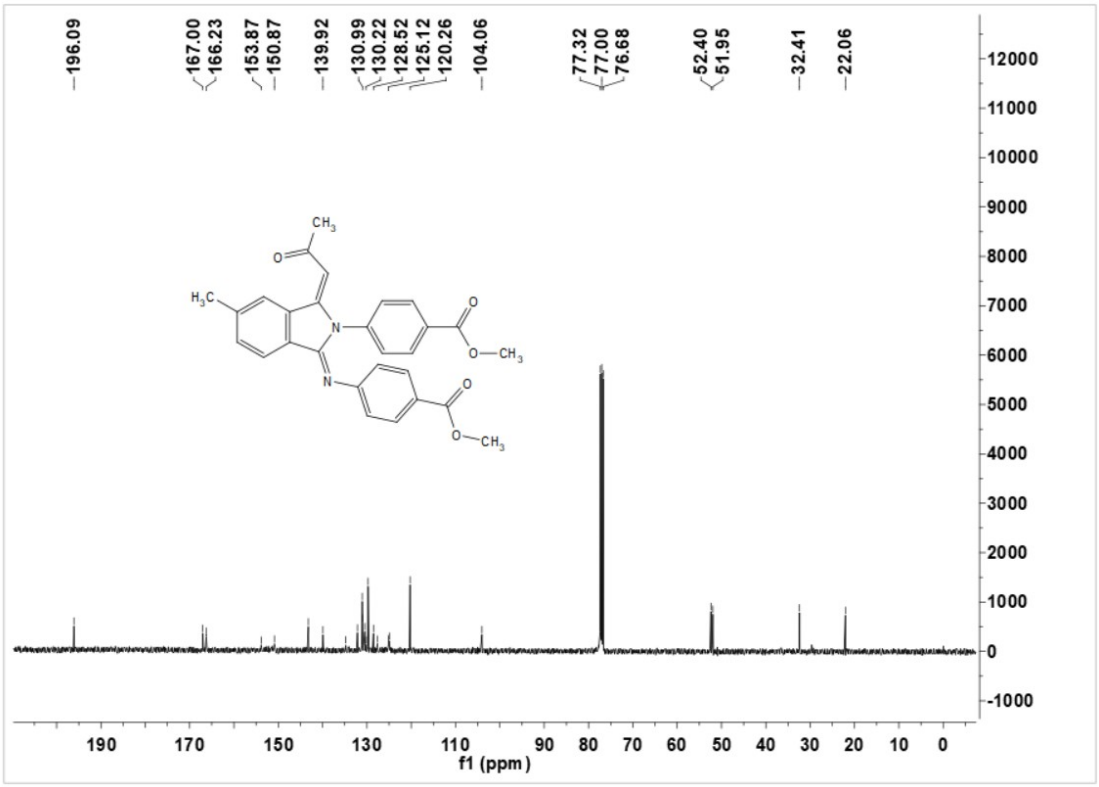
1-((1*E*,3*Z*)-2-(4-Iodophenyl)-3-((4-iodophenyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8j)



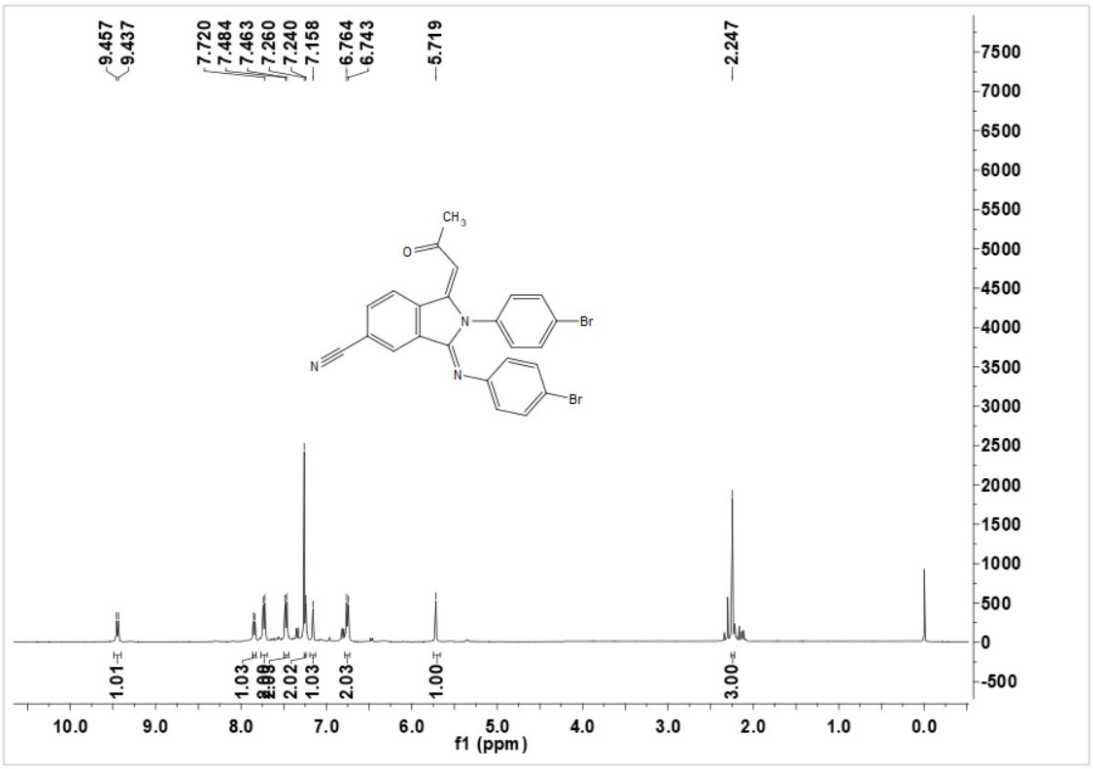


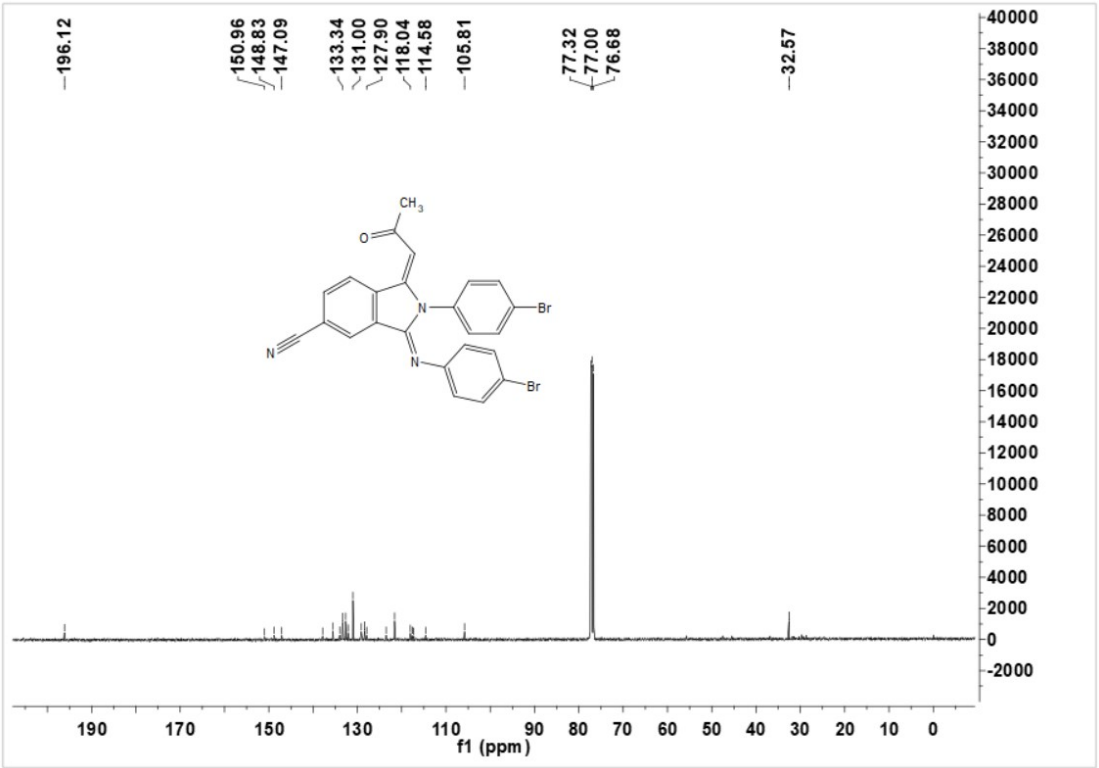
Methyl-4-(((1*Z*,3*E*)-2-(4-(methoxycarbonyl)phenyl)-5-methyl-3-(2-oxopropylidene)isoindolin-1-ylidene)amino)benzoate (8k)



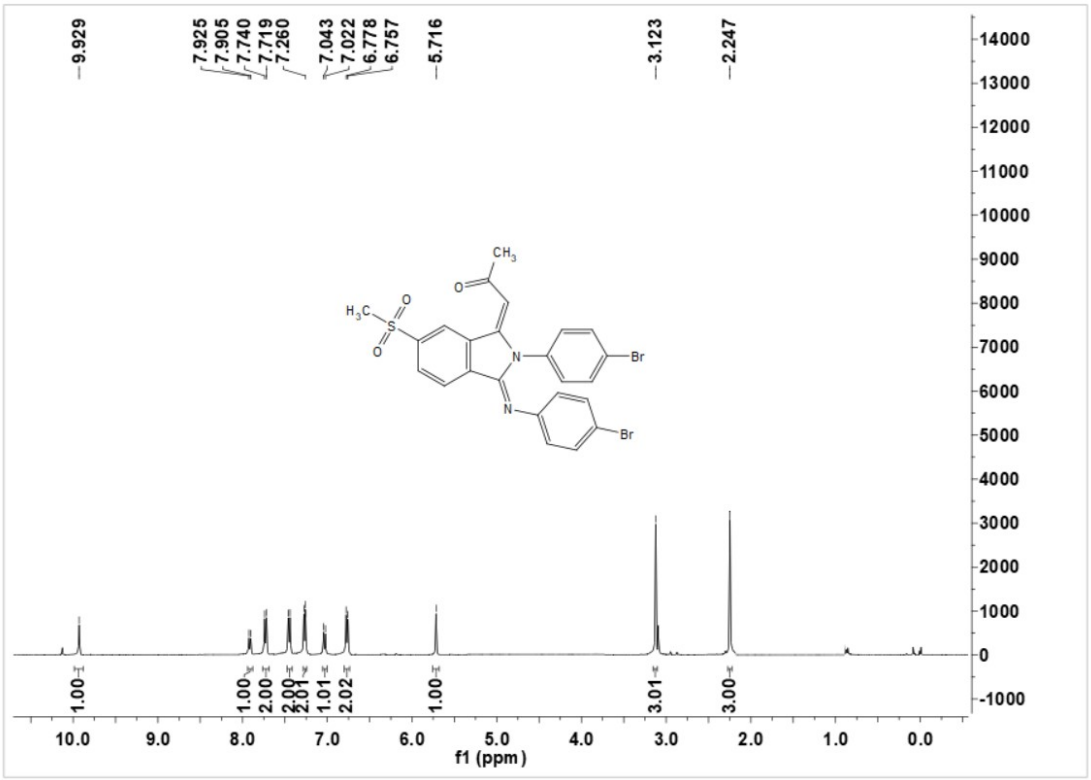


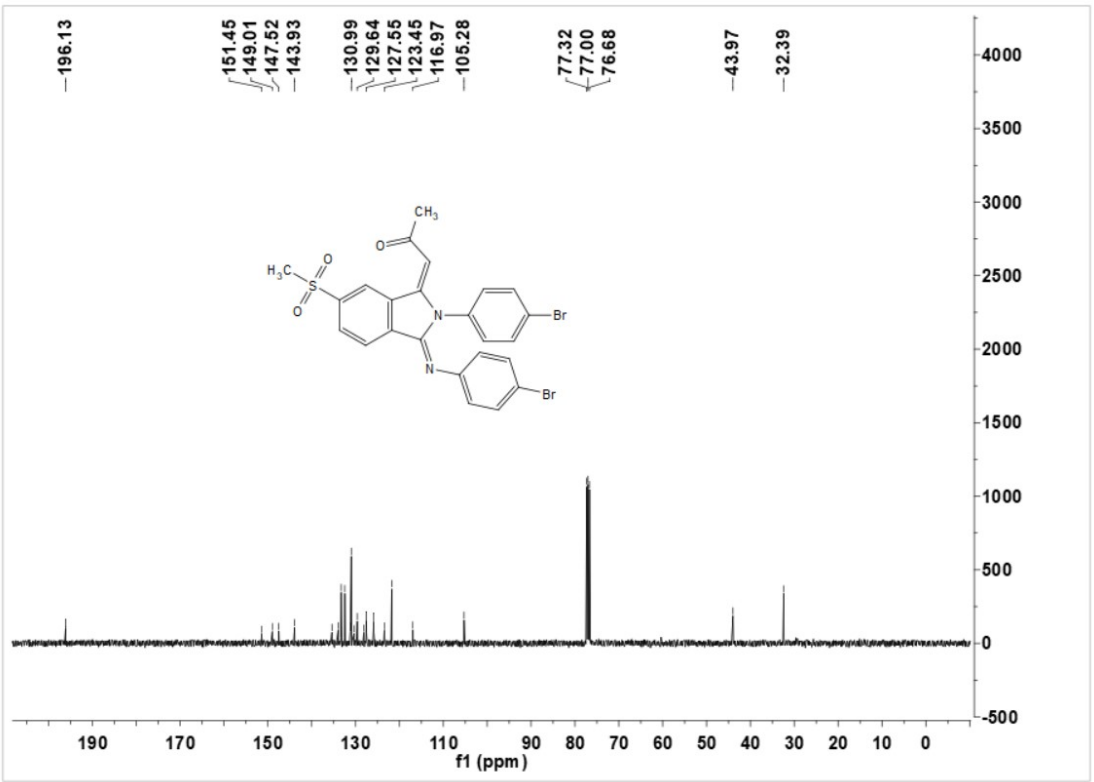
(1*E*, 3*Z*)-2-(4-Bromophenyl)-3-((4-bromophenyl)imino)-1-(2-oxopropylidene)isoindoline-5-carbonitrile (8l)



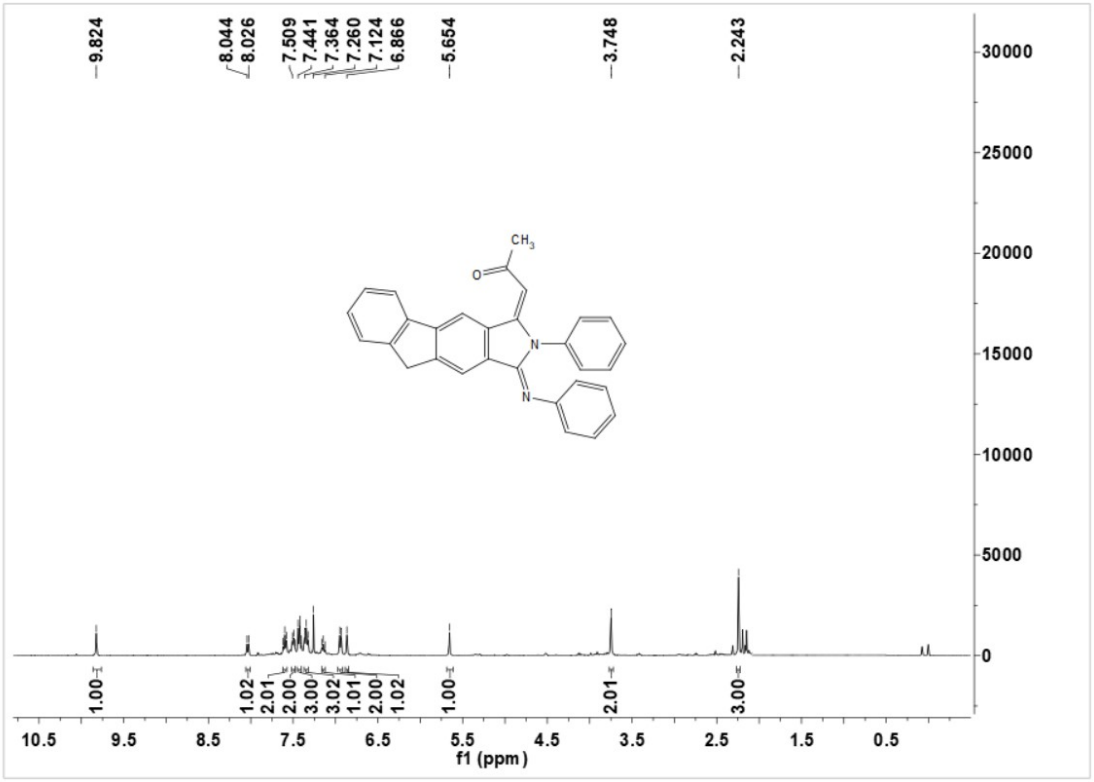


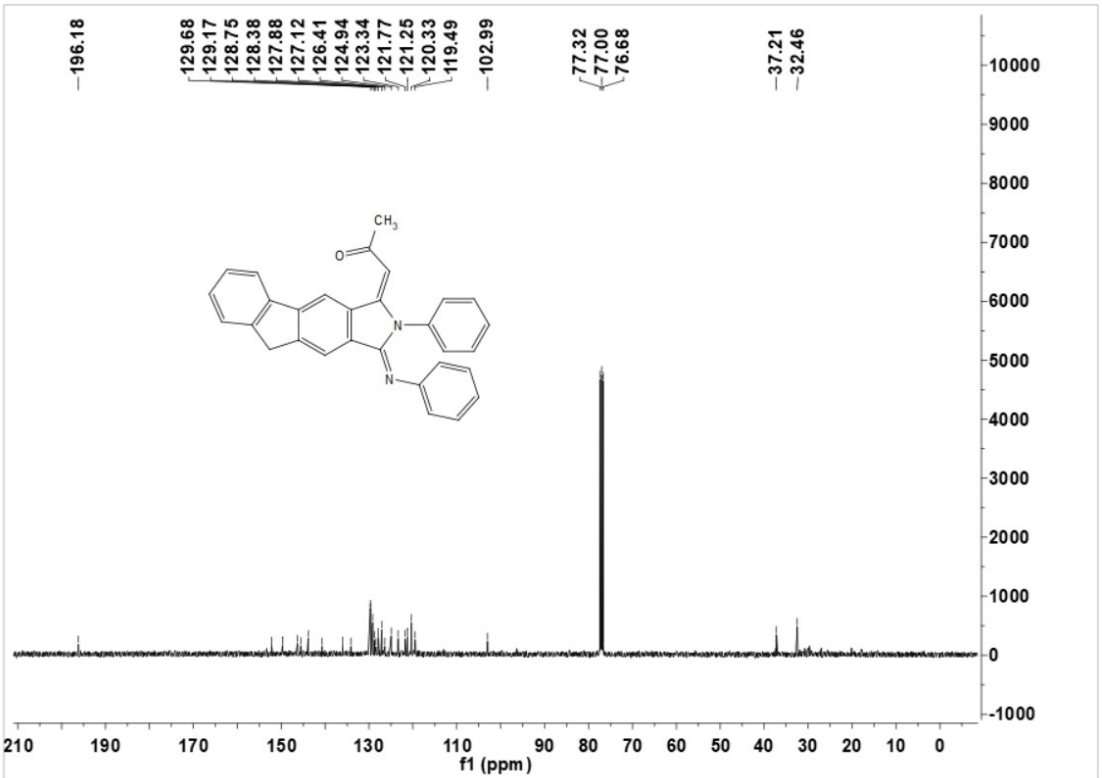
1-((1*E*,3*Z*)-2-(4-Bromophenyl)-3-((4-bromophenyl)imino)-6-(methylsulfonyl)isoindolin-1-ylidene)propan-2-one (8m)



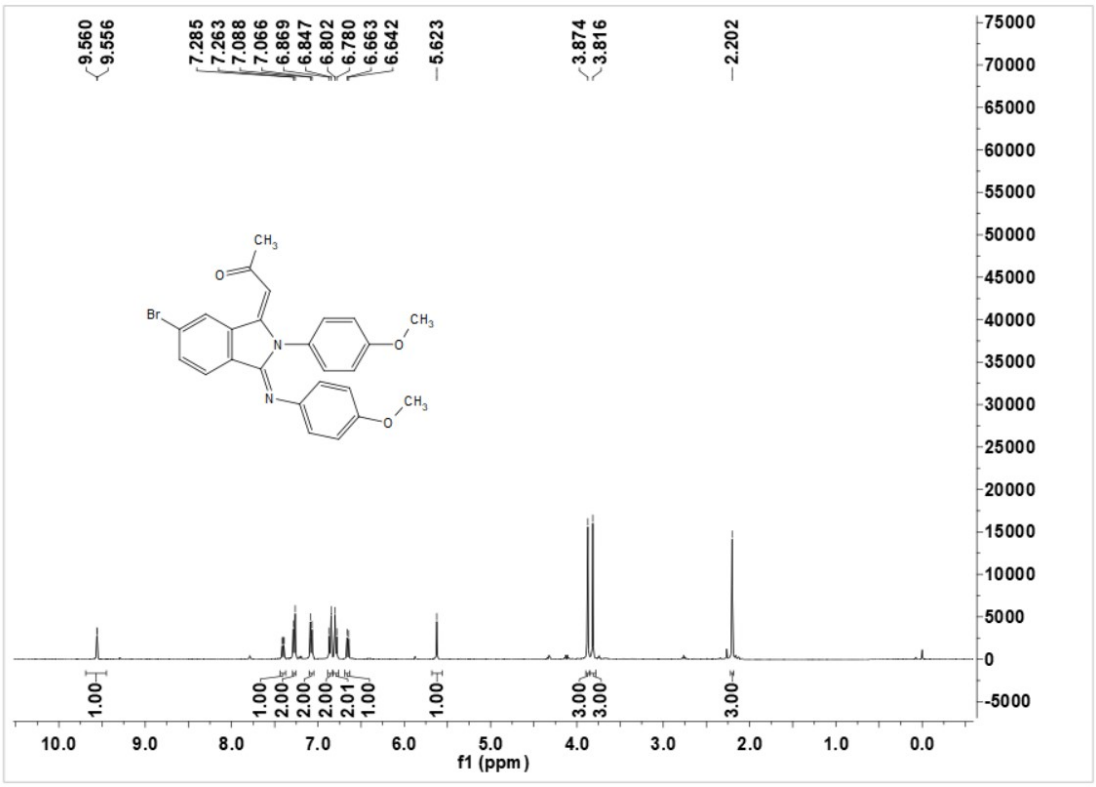


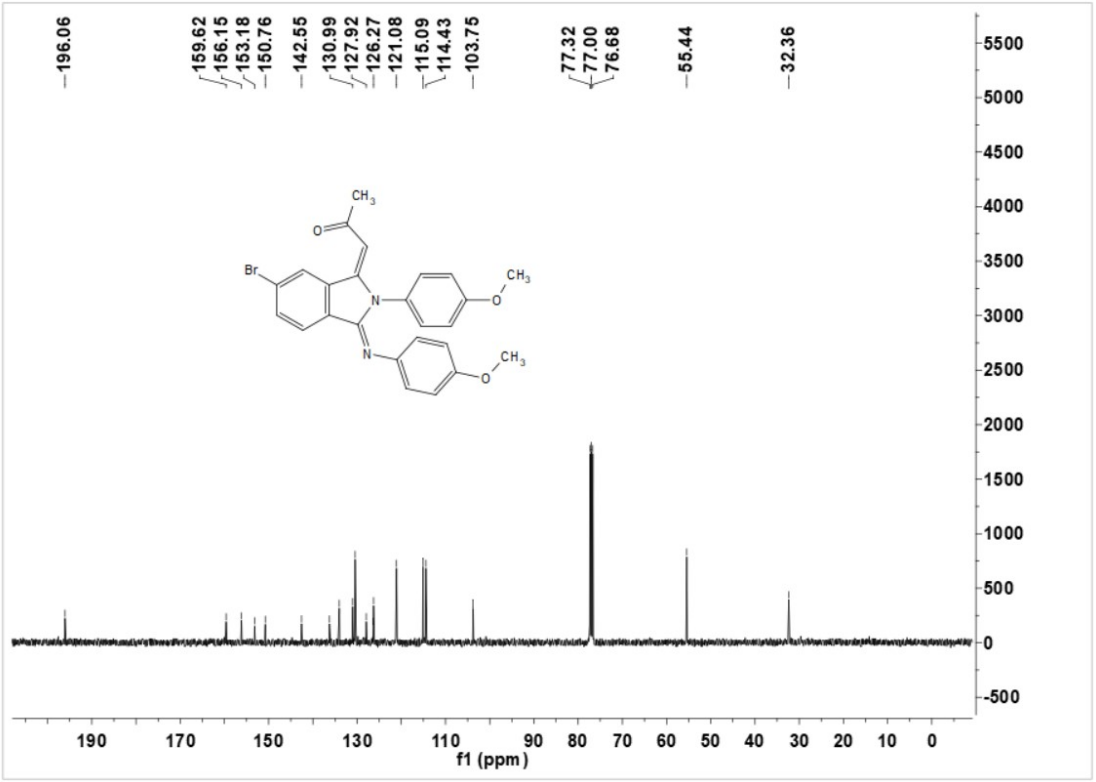
(*E*)-1-((*Z*)-2-Phenyl-1-(phenylimino)-1,9-dihydroindeno[1,2-*f*]isoindol-3(2*H*)-ylidene)propan-2-one (8n)



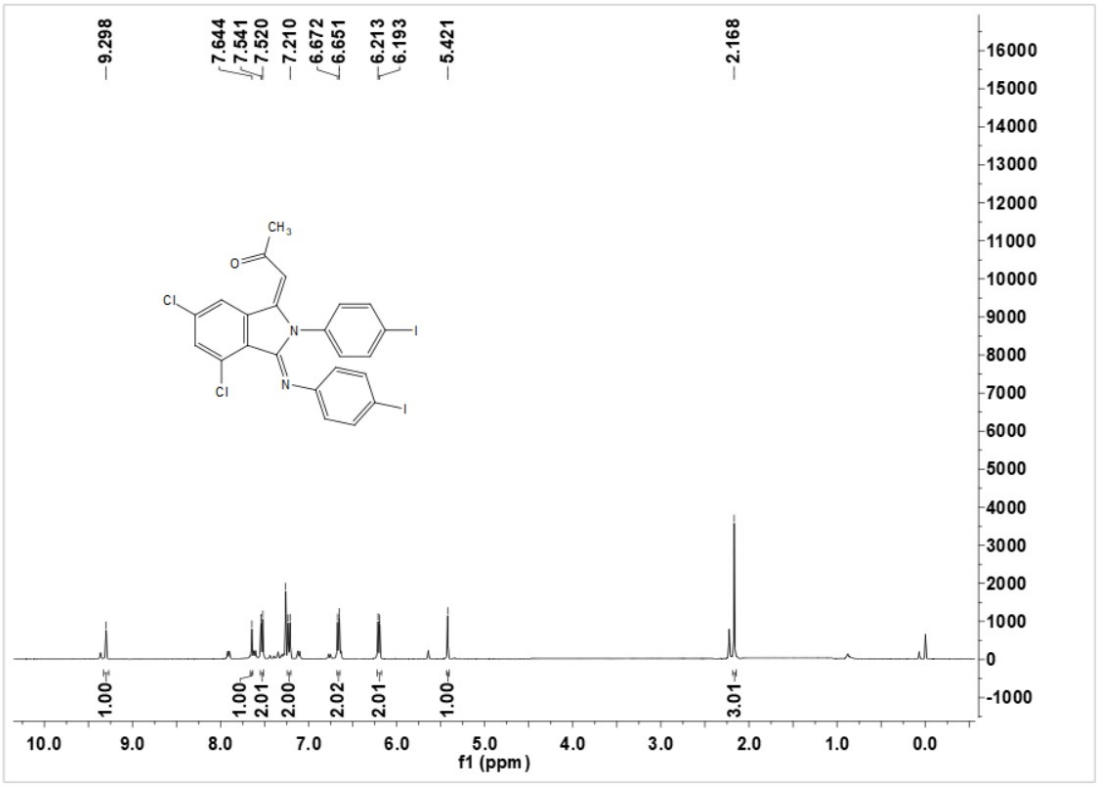


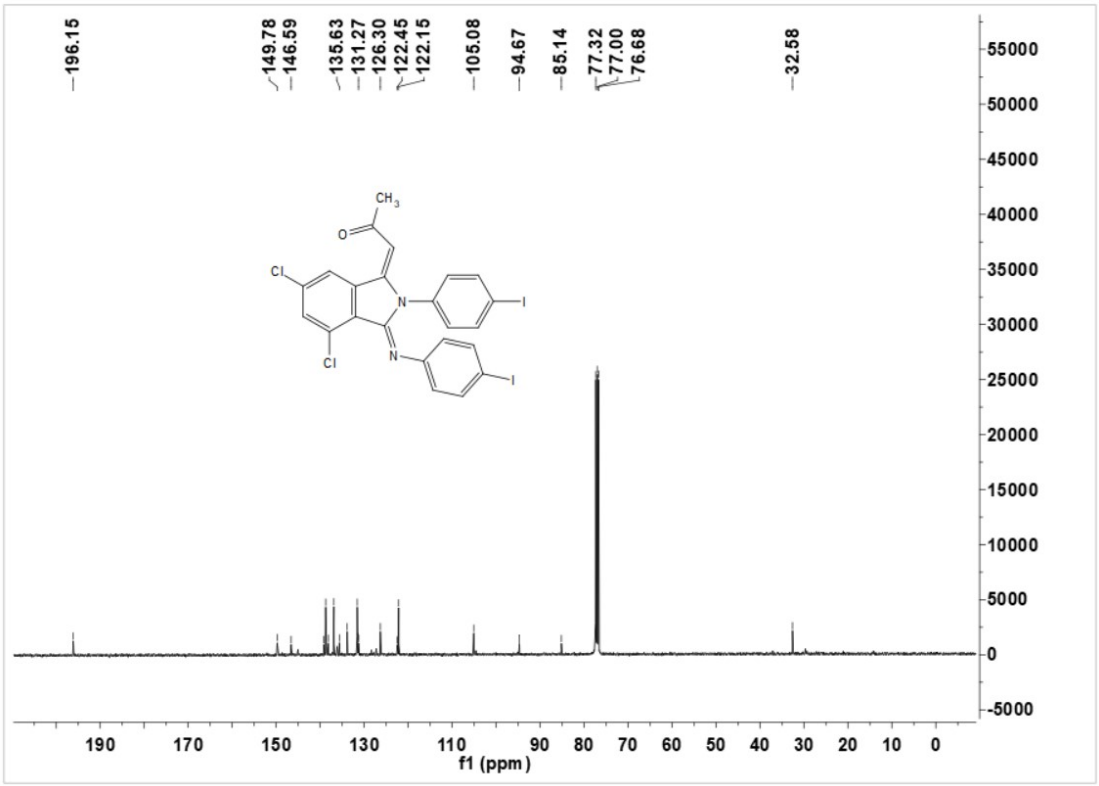
1-((1*E*,3*Z*)-6-Bromo-2-(4-methoxyphenyl)-3-((4-methoxyphenyl)imino)isoindolin-1-ylidene)propan-2-one (8o)



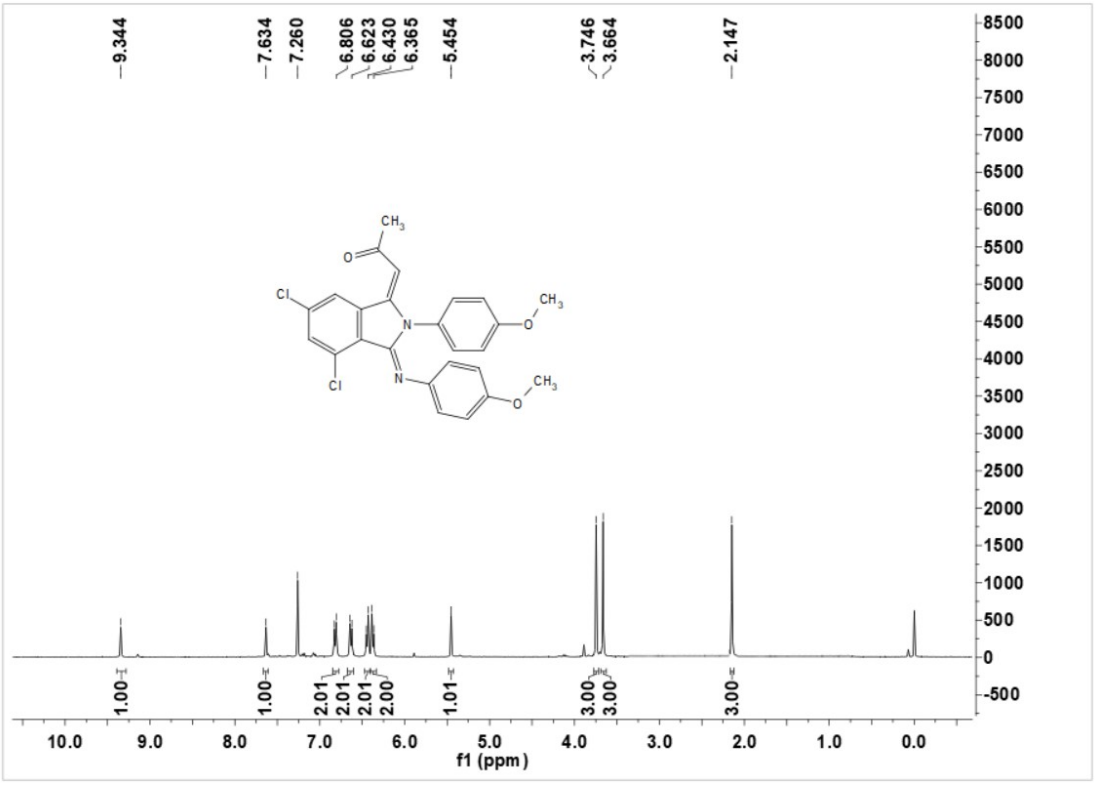


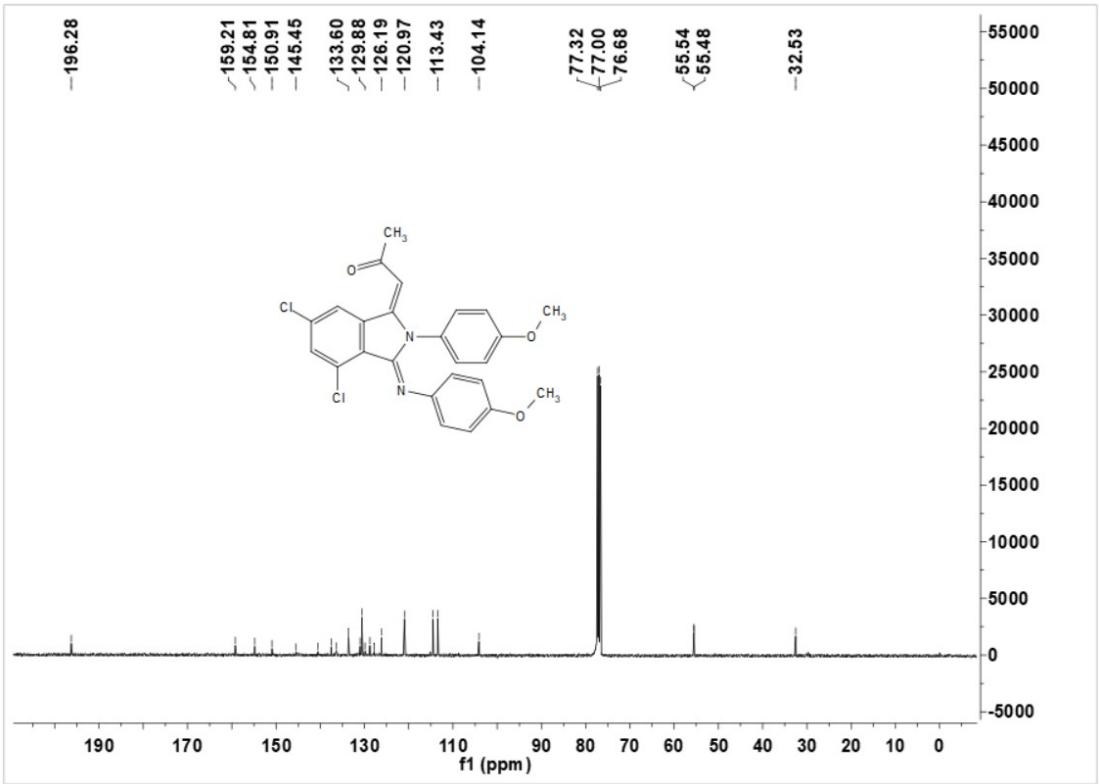
1-((1*E*,3*Z*)-4,6-Dichloro-2-(4-iodophenyl)-3-((4-iodophenyl)imino)isoindolin-1-ylidene)propan-2-one (8p)



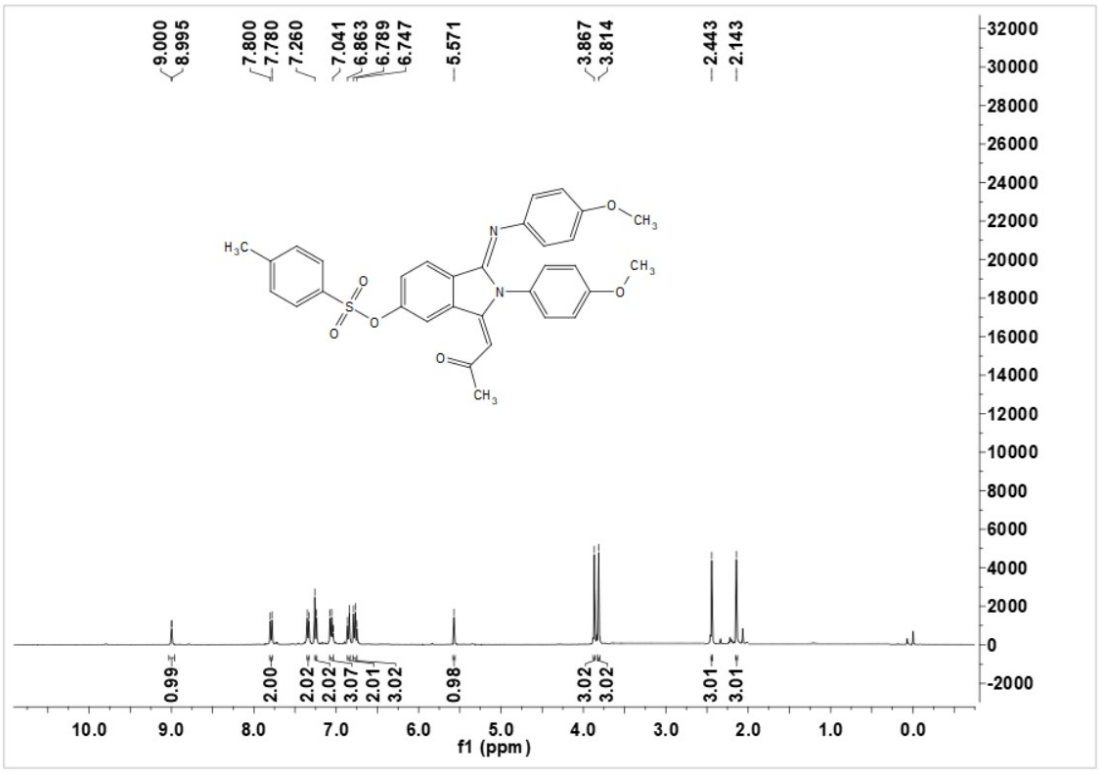


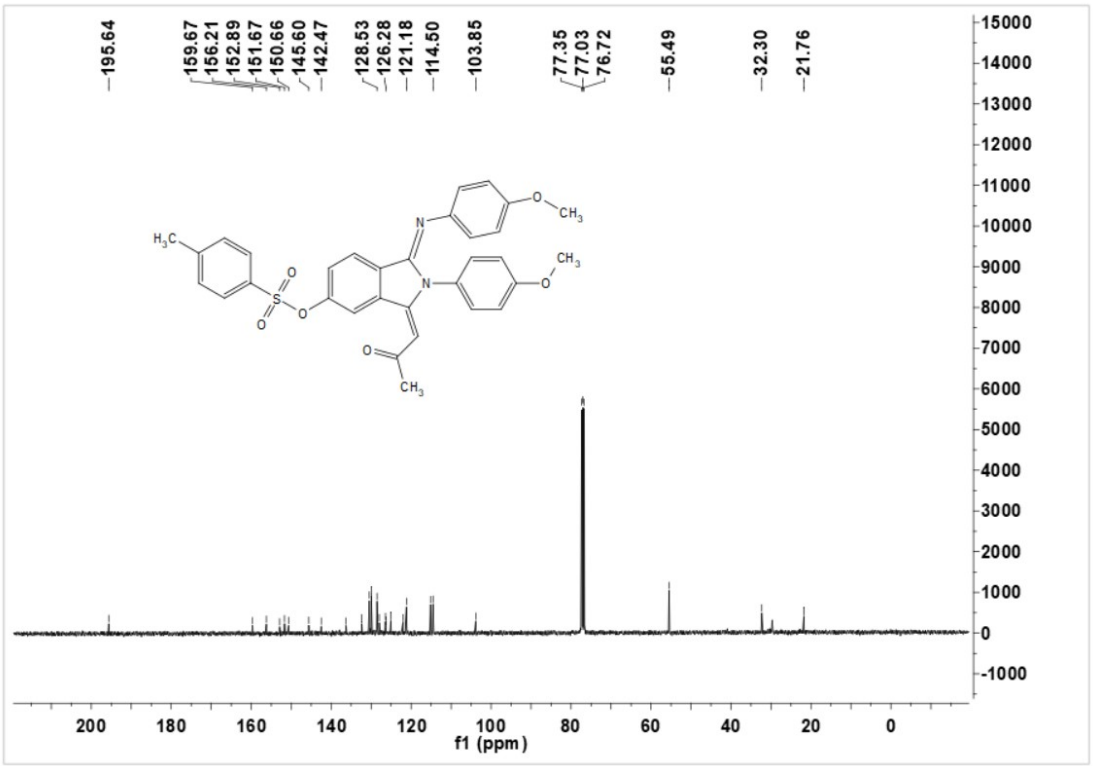
1-((1*E*,3*Z*)-4,6-Dichloro-2-(4-methoxyphenyl)-3-((4-methoxyphenyl)imino)isoindolin-1-ylidene)propan-2-one (8q)



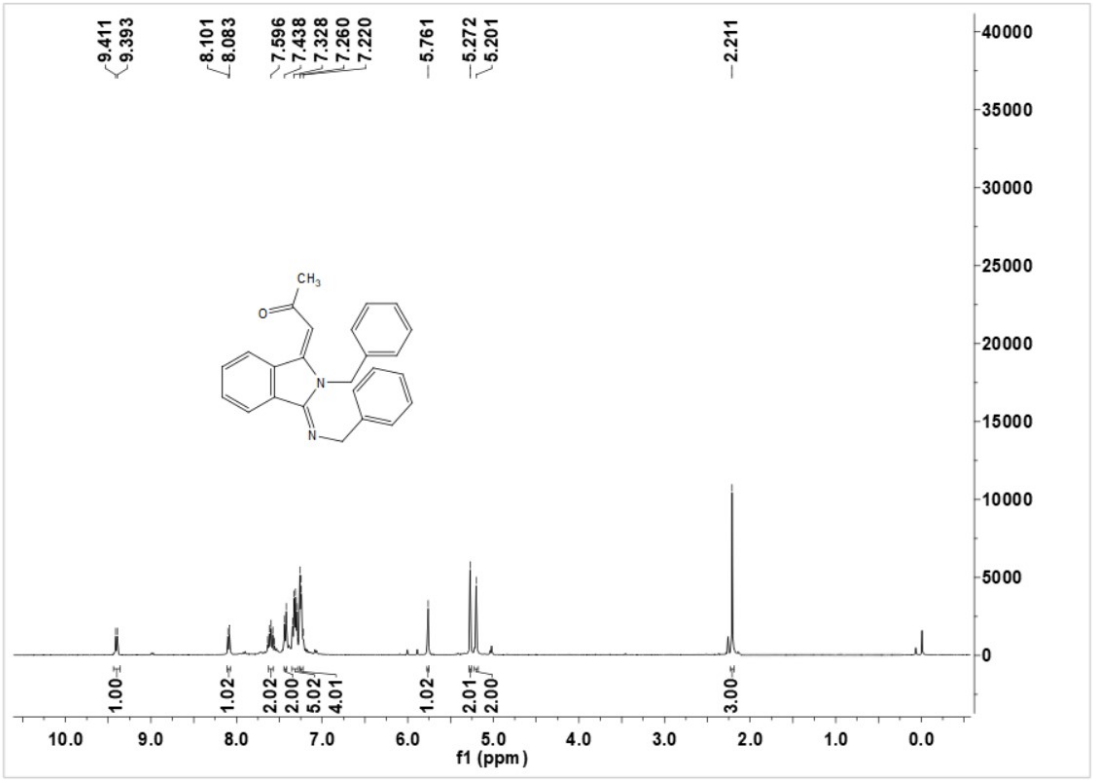


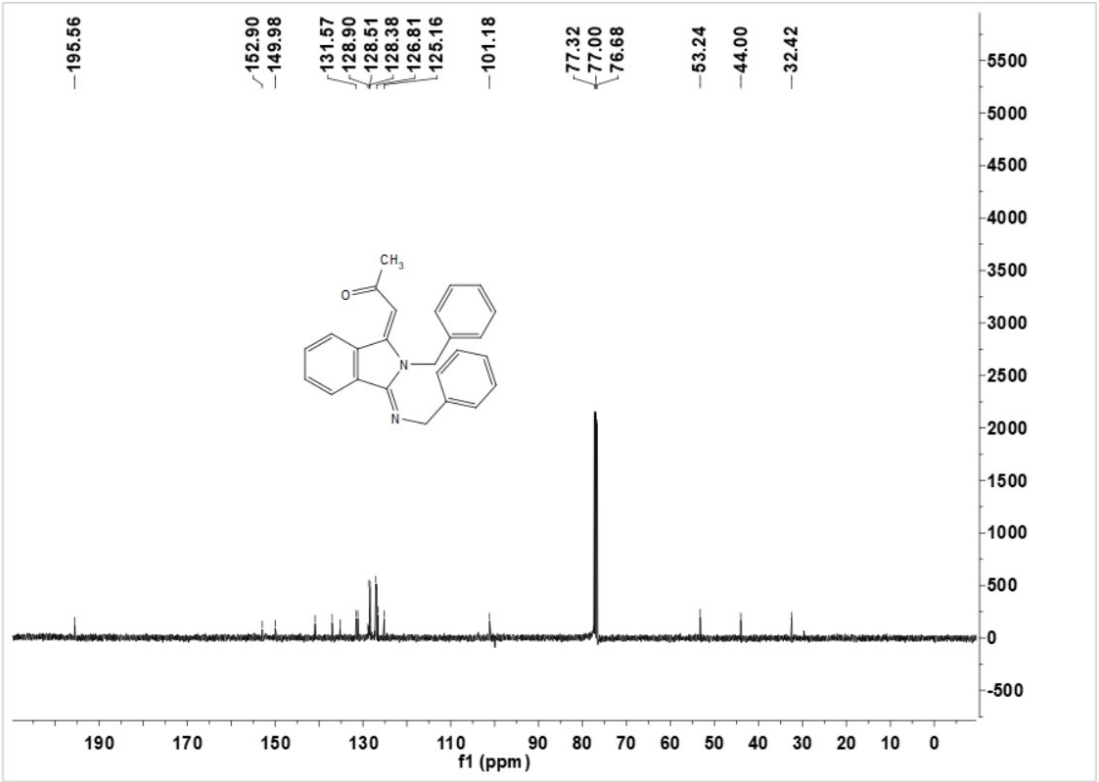
(3*Z*)-2-(4-Methoxyphenyl)-1-((4-methoxyphenyl)imino)-3-(2-oxopropylidene)isoindolin-5-yl 4-methylbenzenesulfonate (8r)



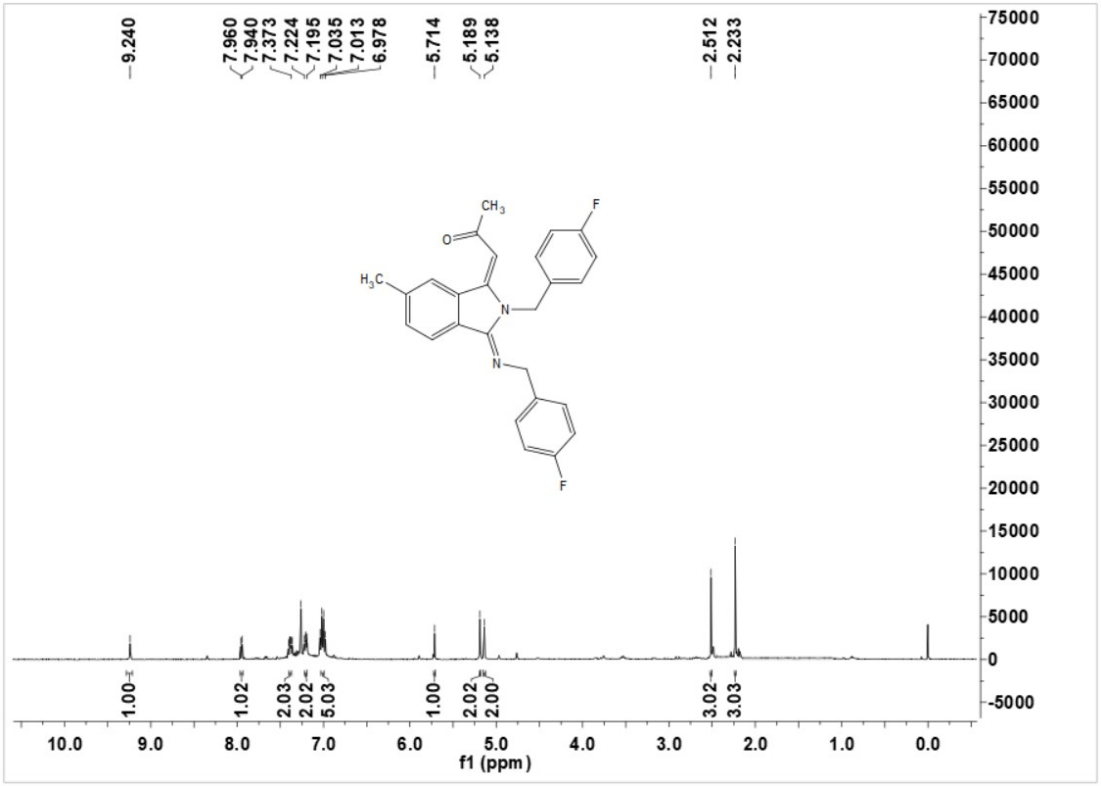


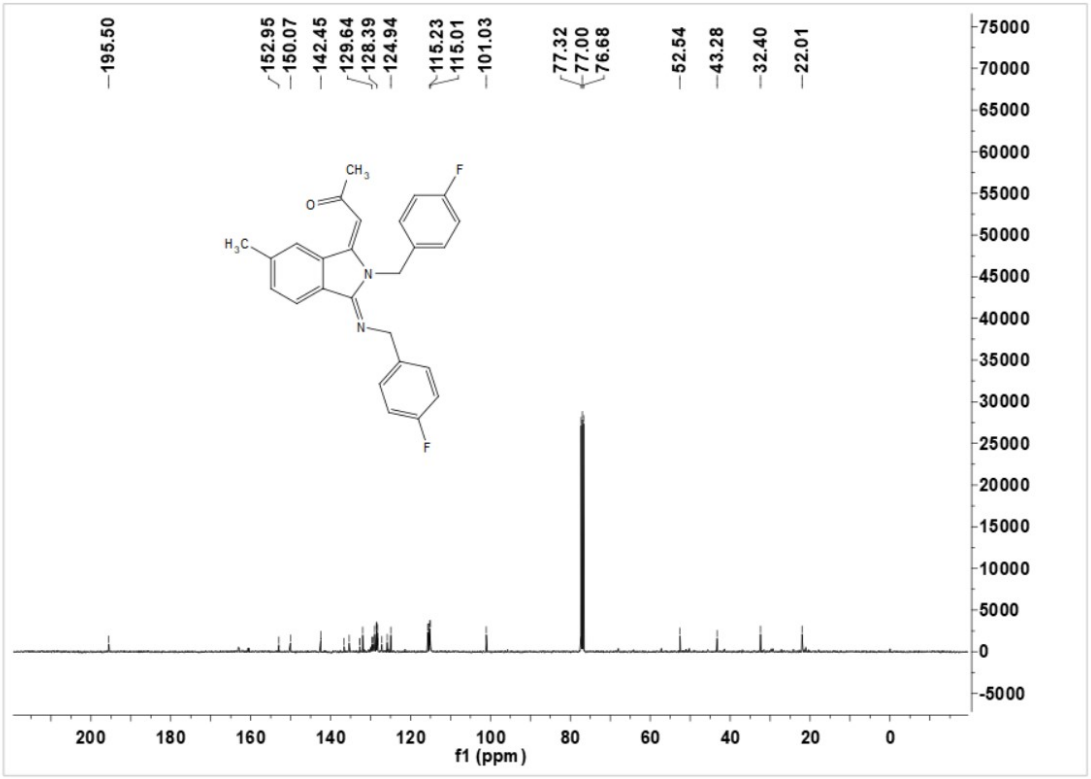
1-((1*E*, 3*Z*)-2-Benzyl-3-(benzylimino)isoindolin-1-ylidene)propan-2-one (8s)

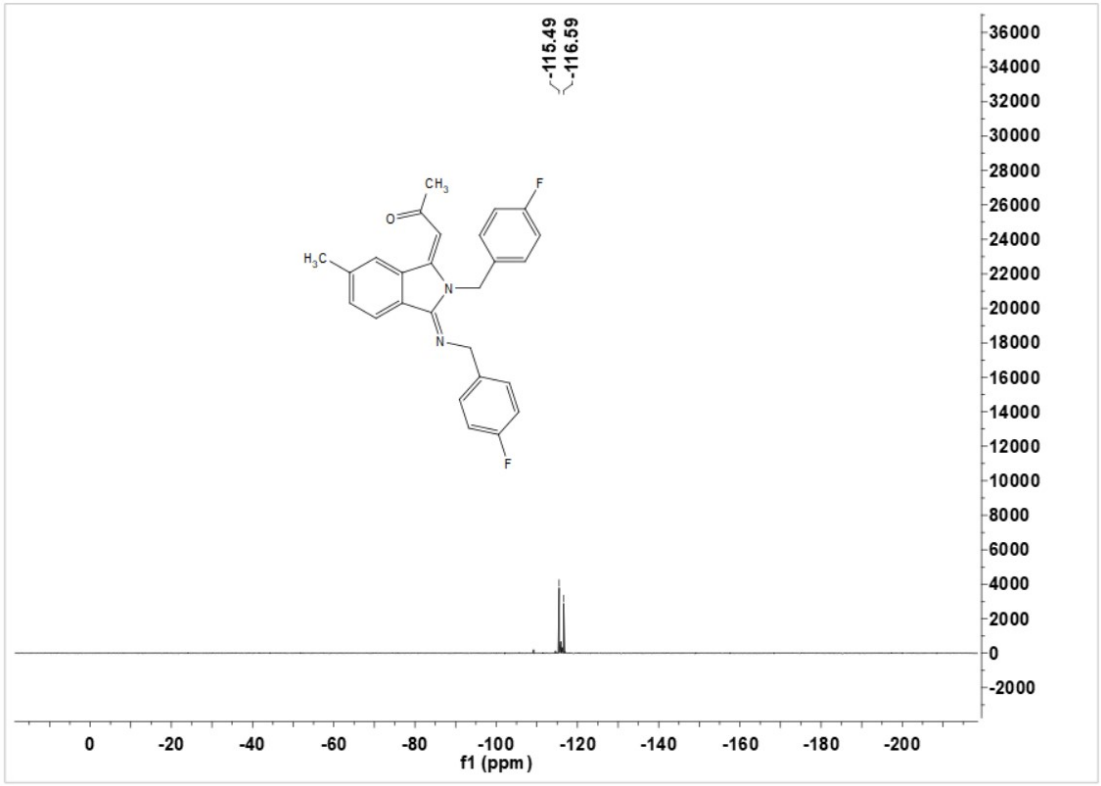




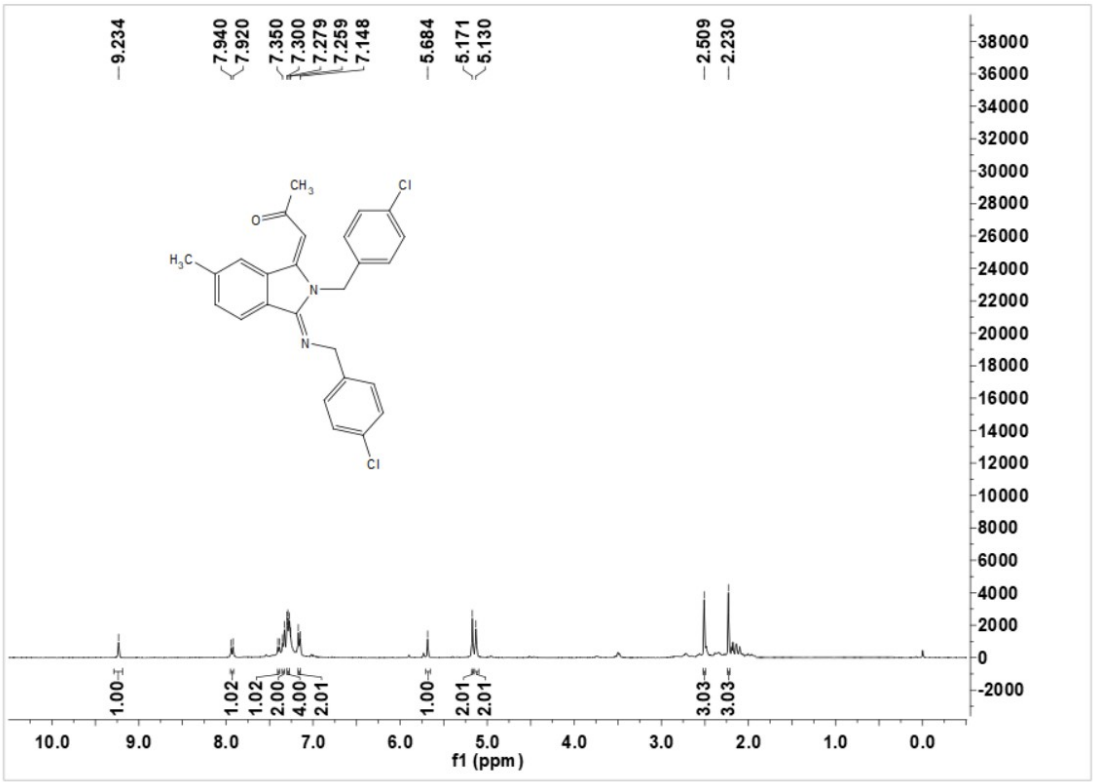
1-((1*E*,3*Z*)-2-(4-Fluorobenzyl)-3-((4-fluorobenzyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8t)

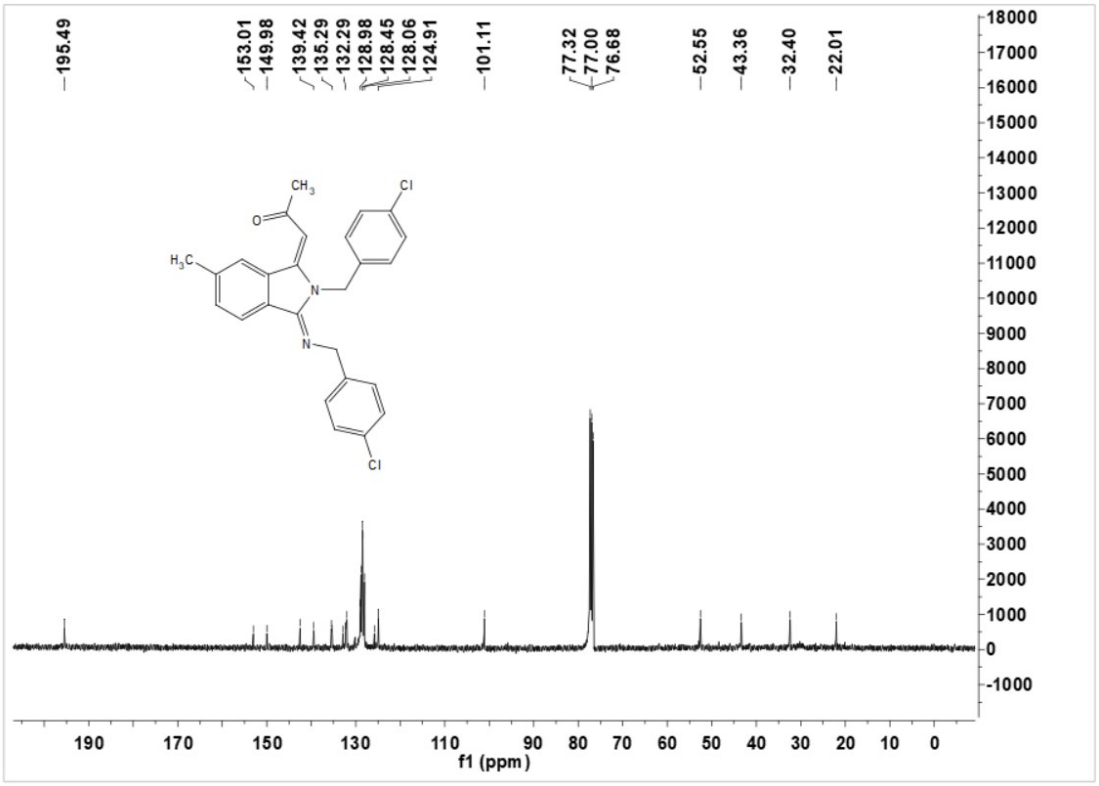




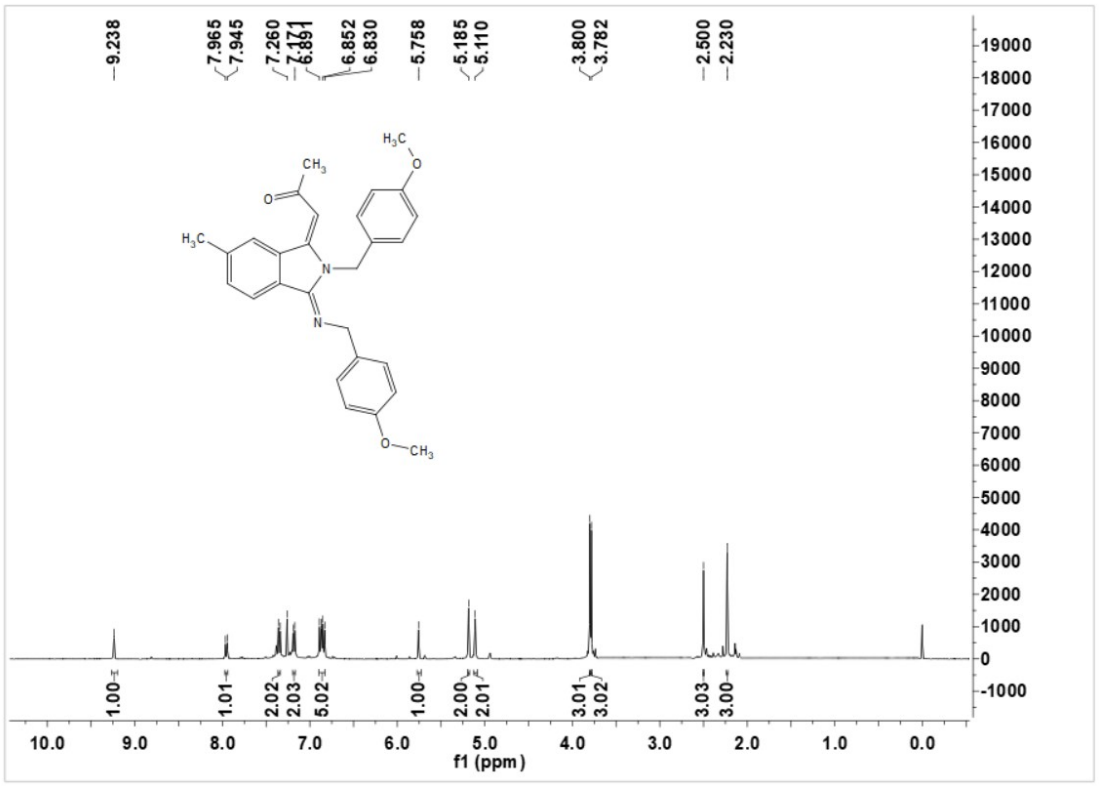


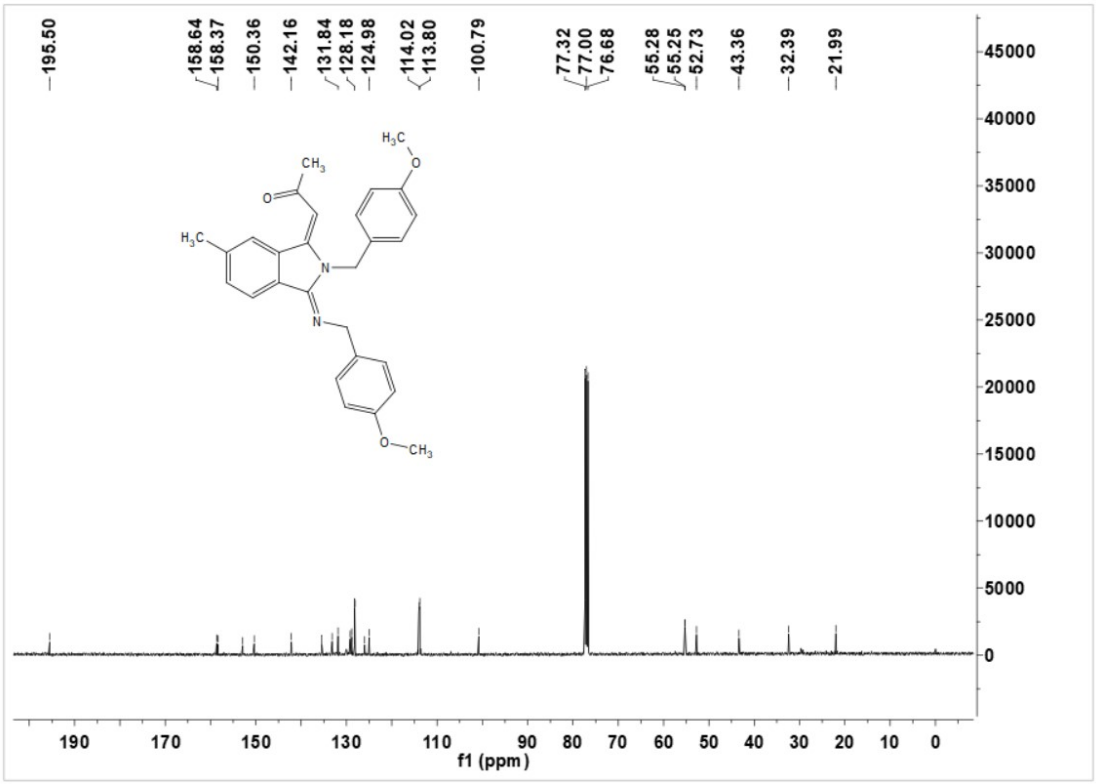
1-((1*E*,3*Z*)-2-(4-Chlorobenzyl)-3-((4-chlorobenzyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8u)



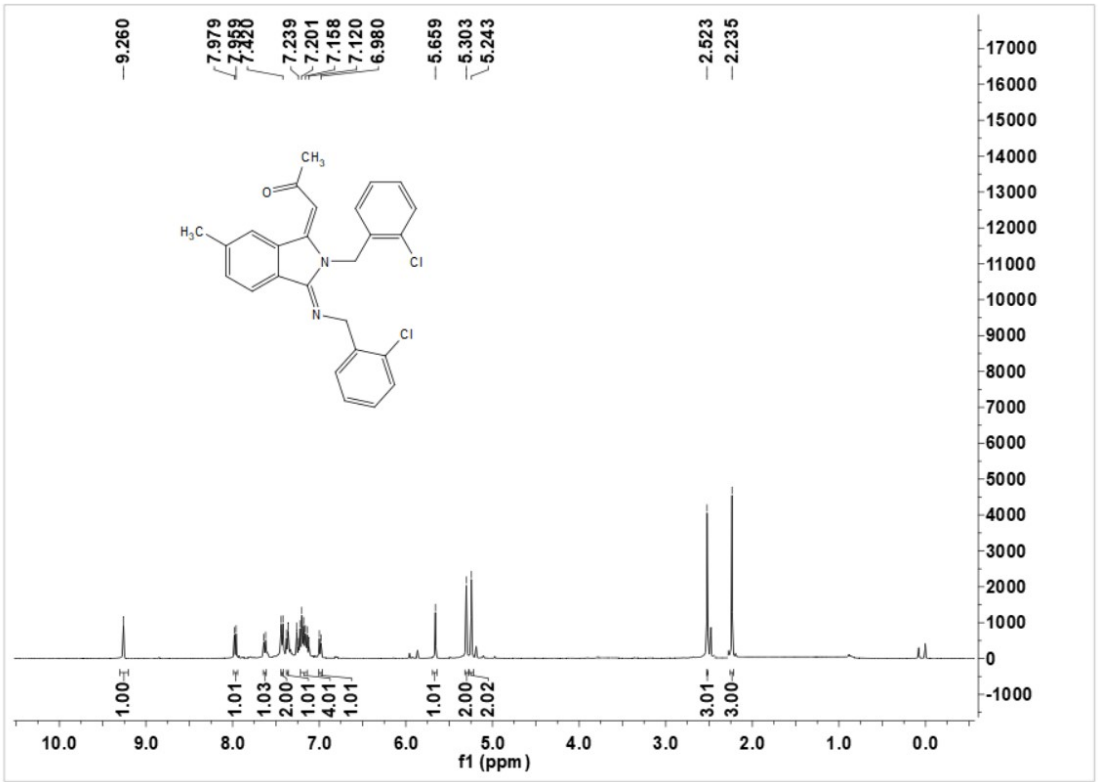


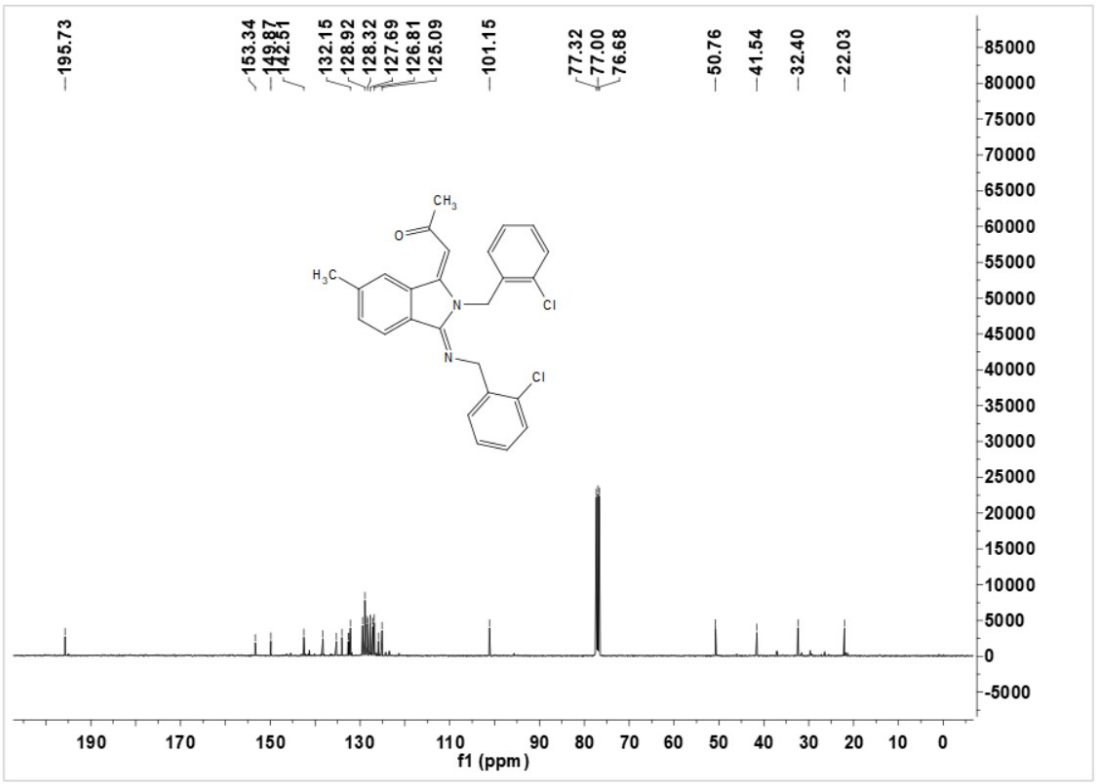
1-((1*E*,3*Z*)-2-(4-Methoxybenzyl)-3-((4-methoxybenzyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8v)



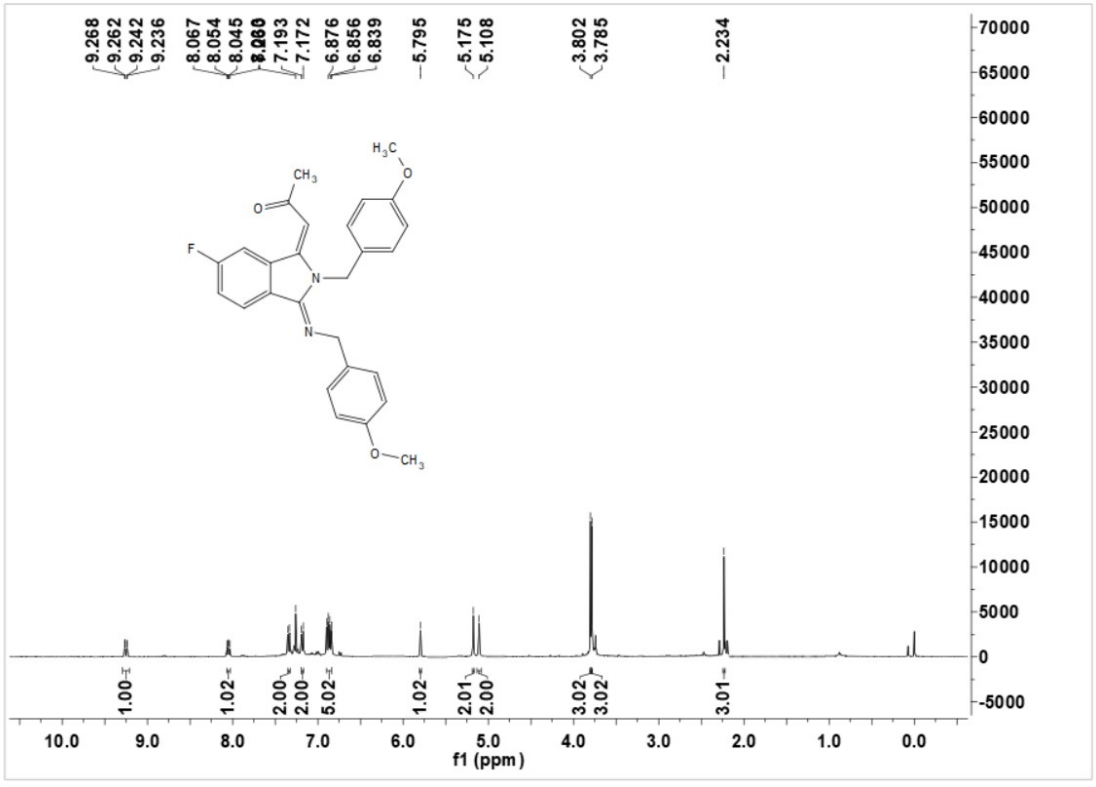


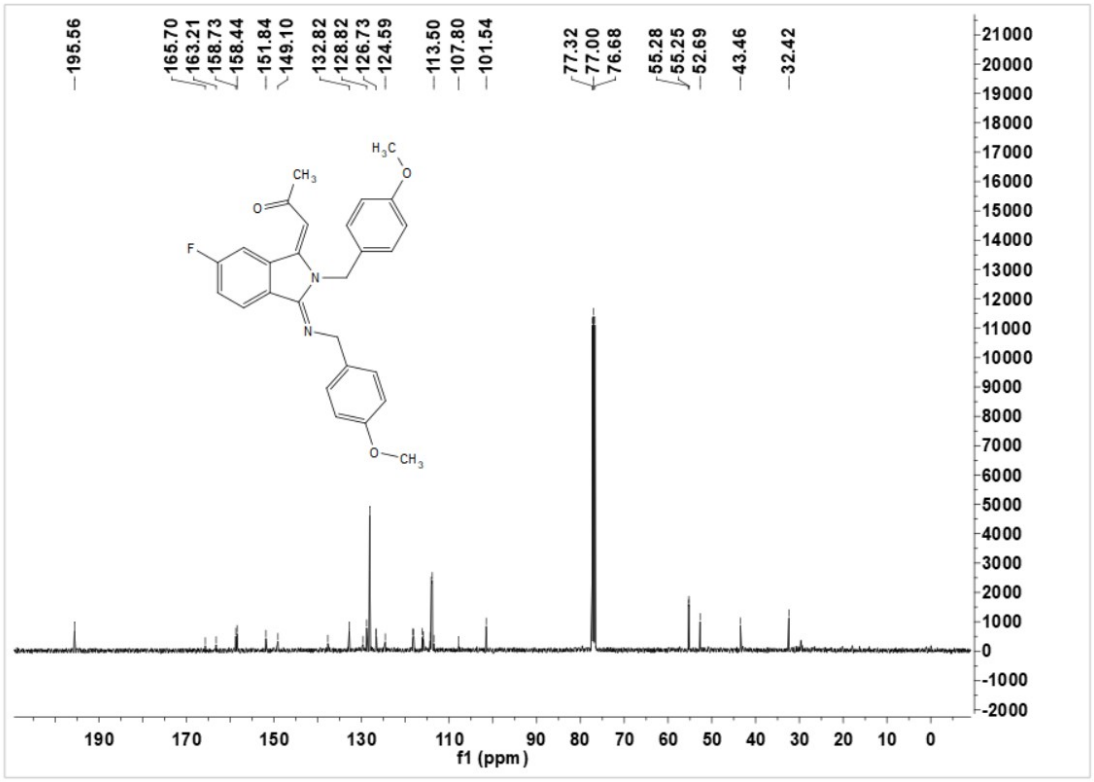
1-((1*E*,3*Z*)-2-(2-Chlorobenzyl)-3-((2-chlorobenzyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8w)

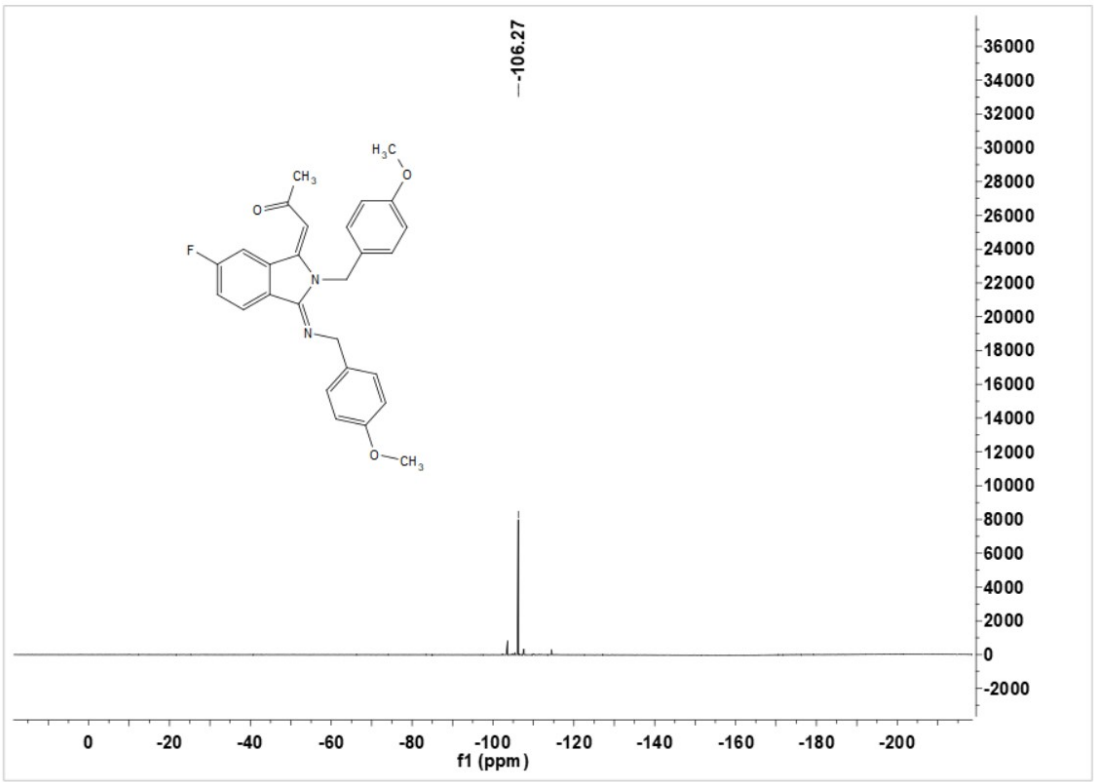




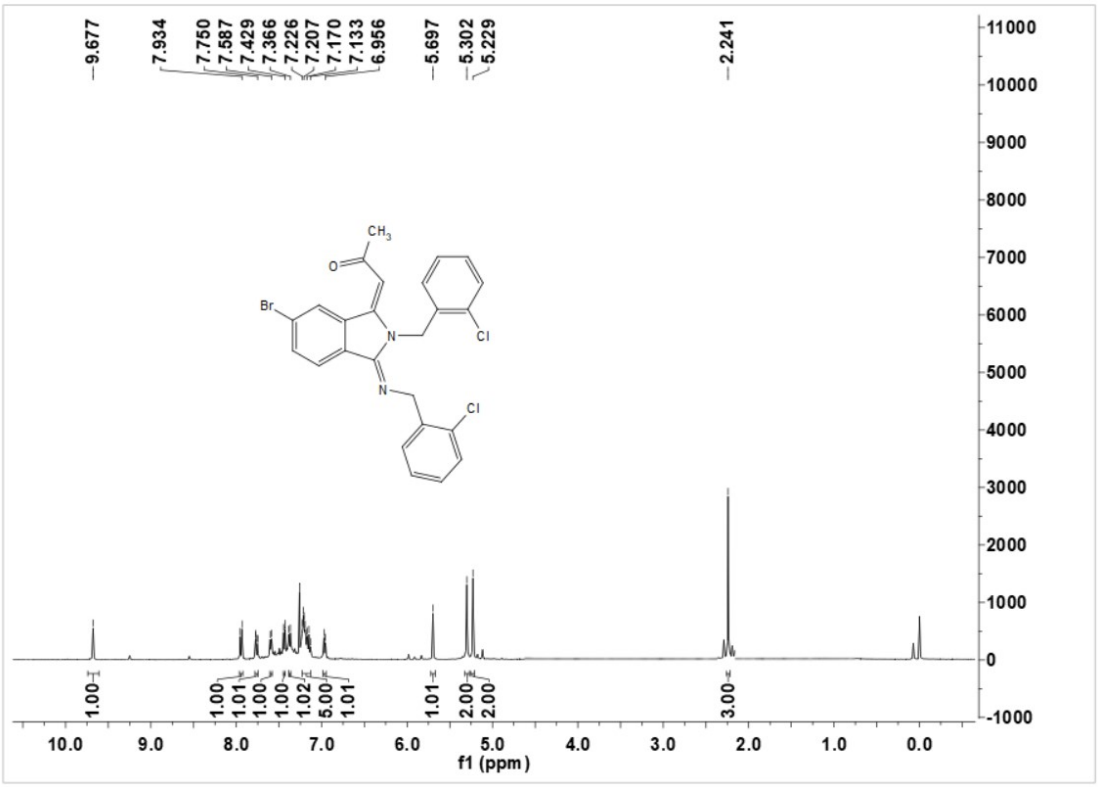
1-((1*E*,3*Z*)-6-Fluoro-2-(4-methoxybenzyl)-3-((4-methoxybenzyl)imino)isoindolin-1-ylidene)propan-2-one (8x)

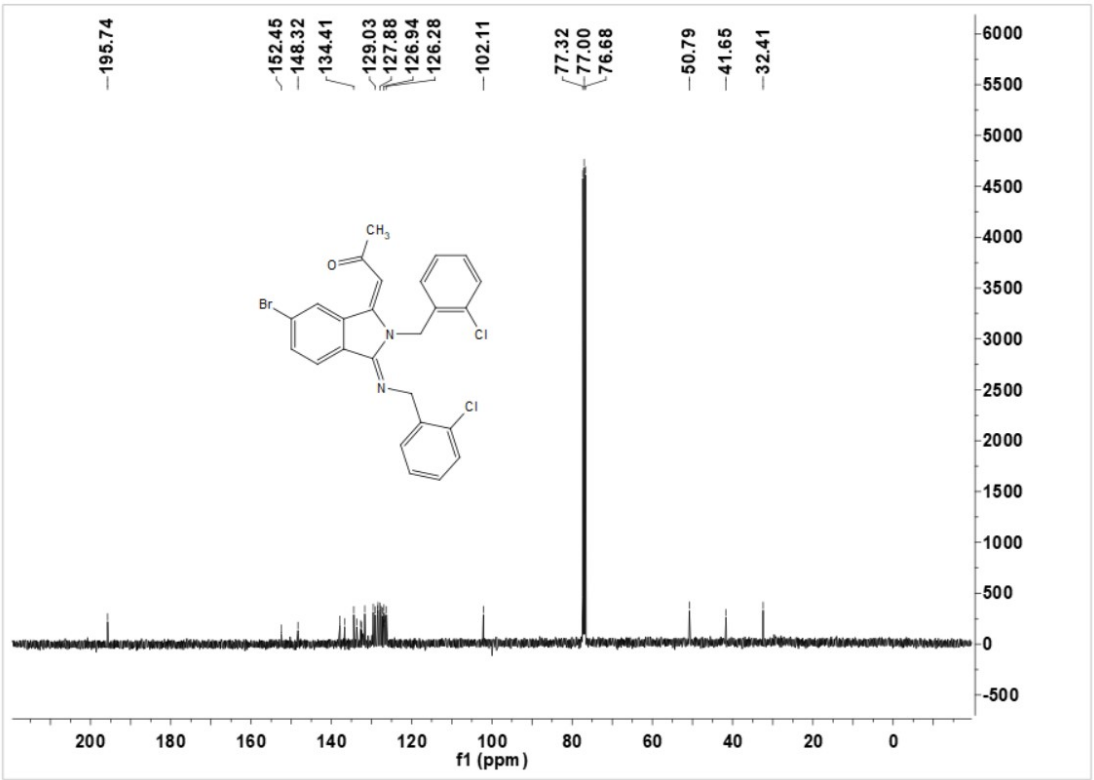



195.56
165.70
163.21
158.73
158.44
151.84
149.10
132.82
128.82
126.73
124.59
113.50
107.80
101.54
77.32
77.00
76.68
55.28
55.25
52.69
43.46
32.42
f1 (ppm)

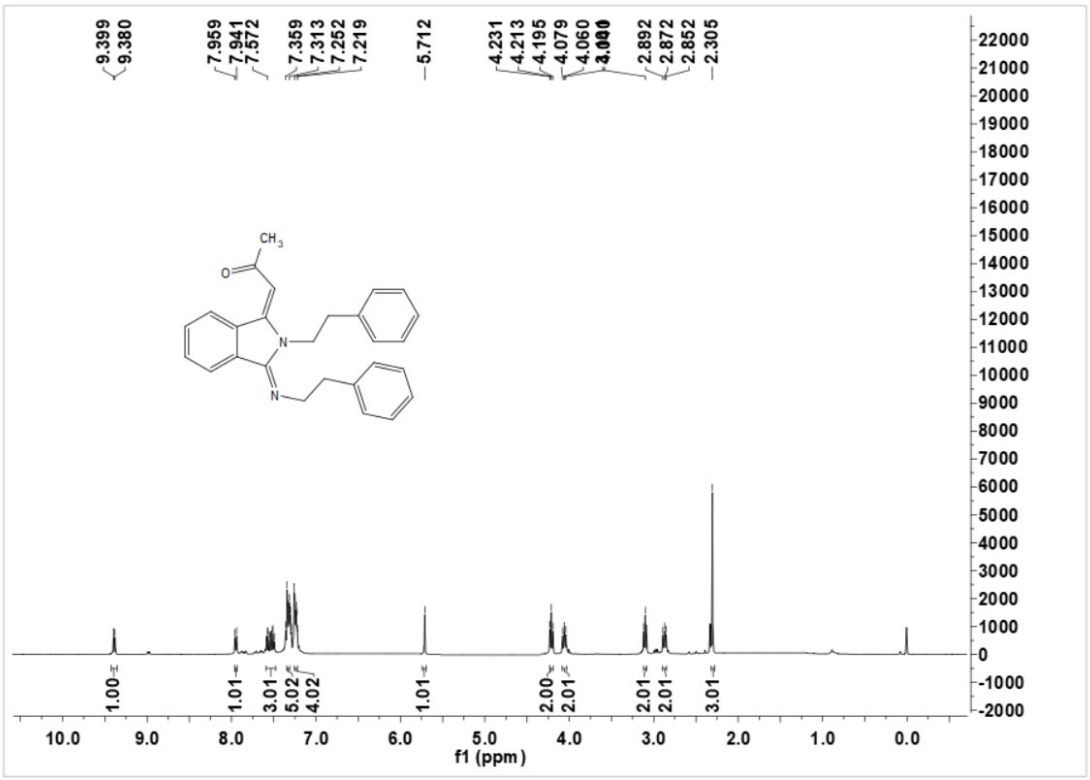

-106.27
f1 (ppm)

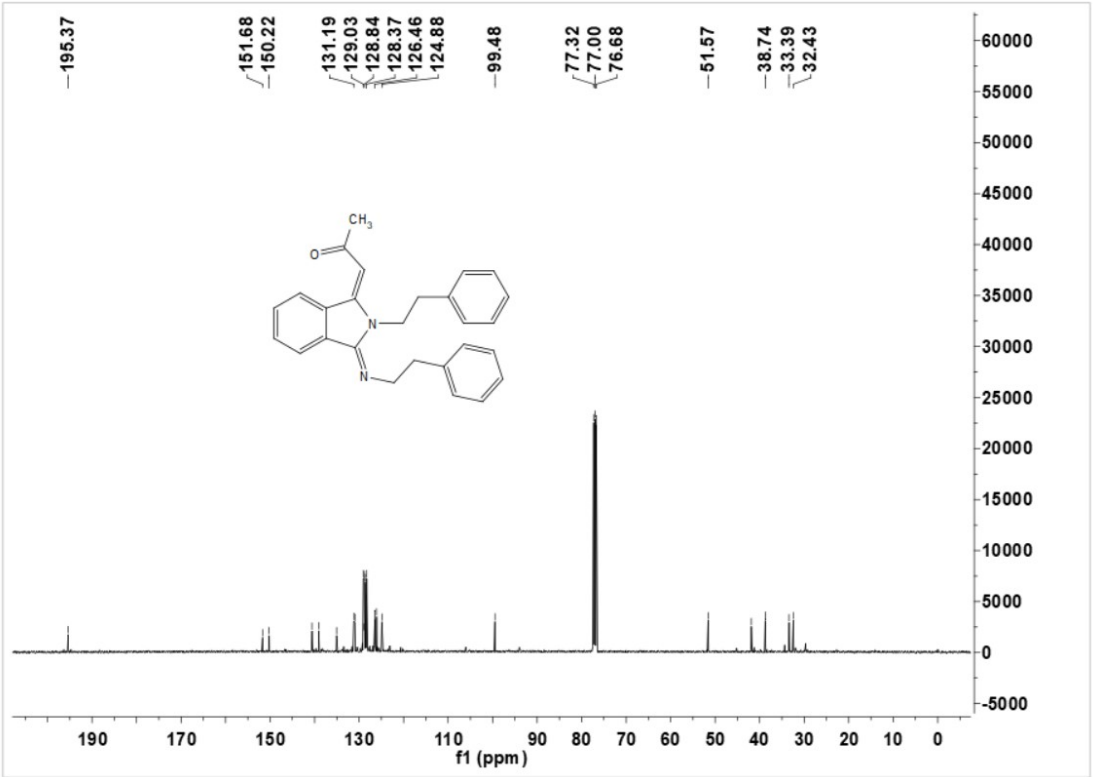
1-((1*E*,3*Z*)-6-Bromo-2-(2-chlorobenzyl)-3-((2-chlorobenzyl)imino)isoindolin-1-ylidene)propan-2-one (8y)



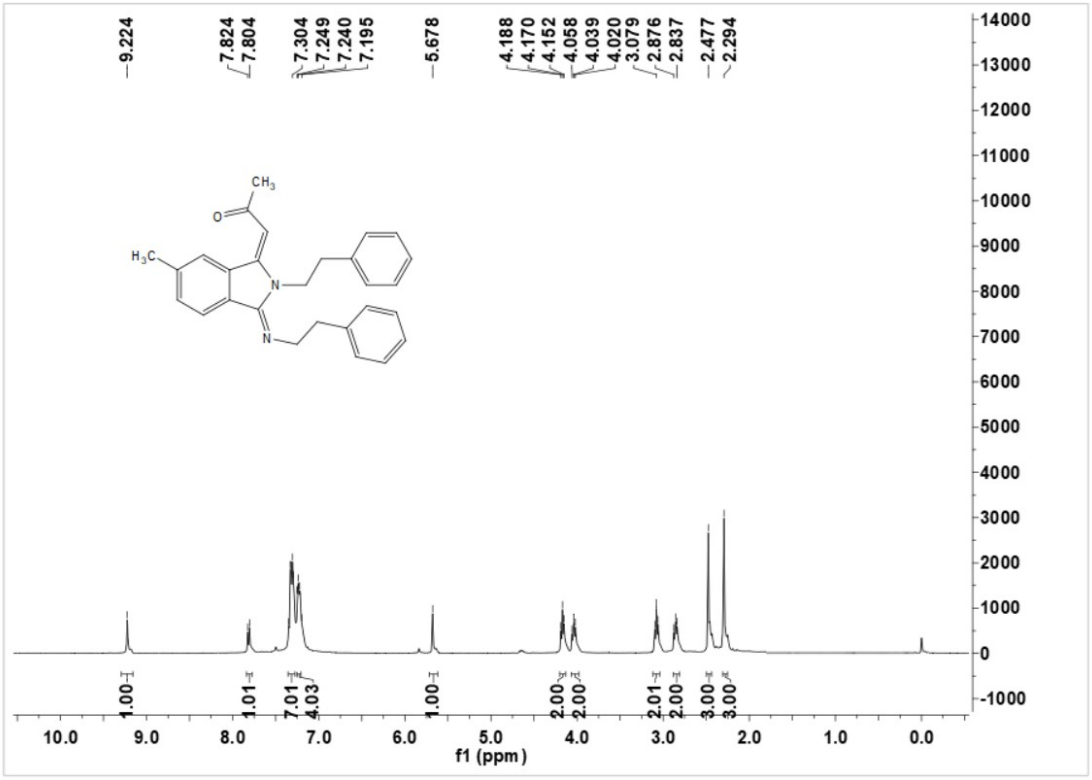


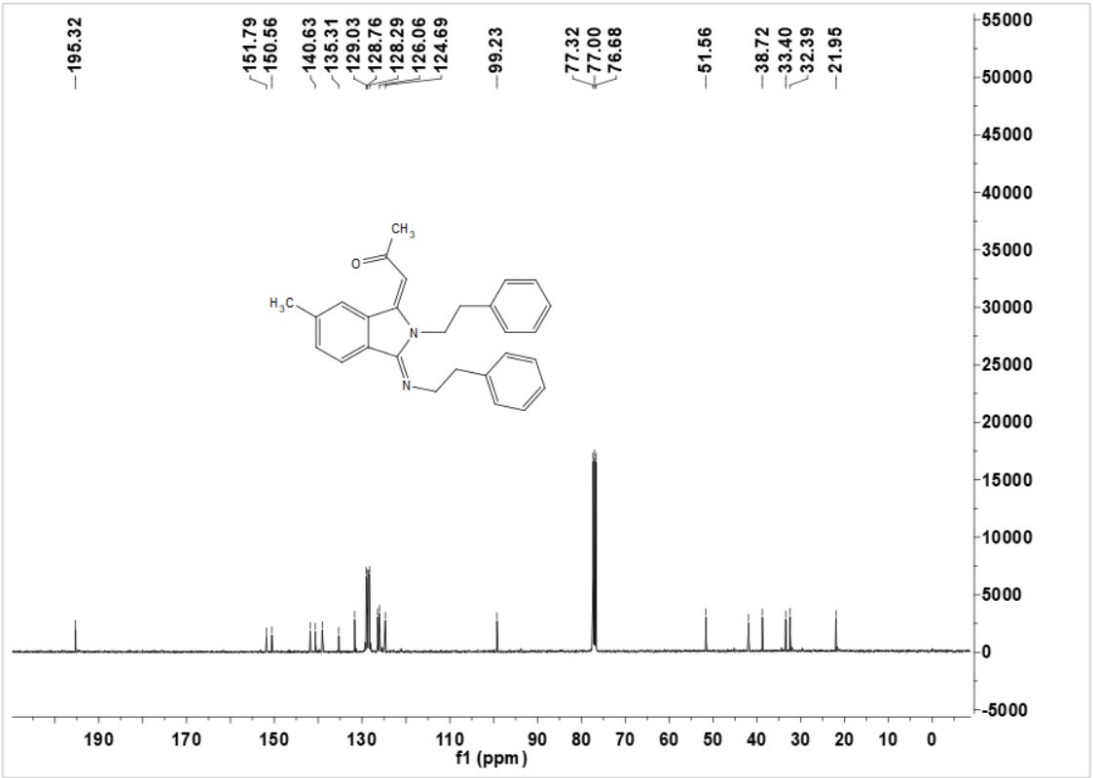
1-((1*E*, 3*Z*)-2-Phenethyl-3-(phenethylimino)isoindolin-1-ylidene)propan-2-one (8z)



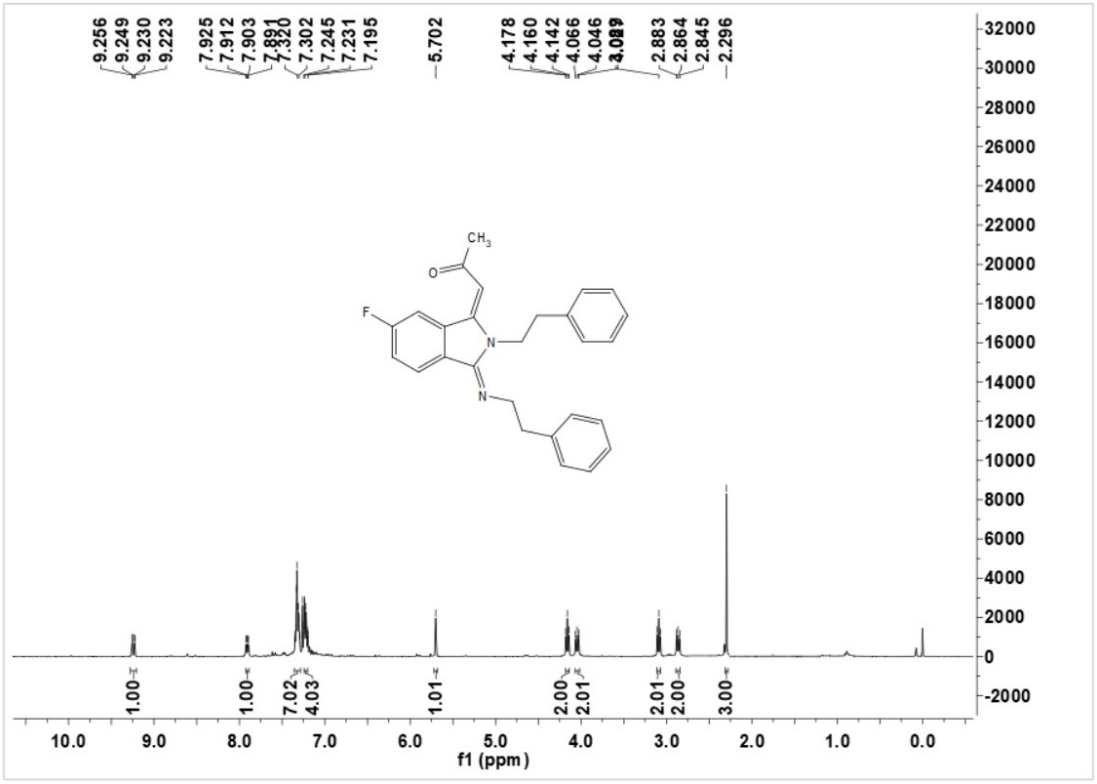


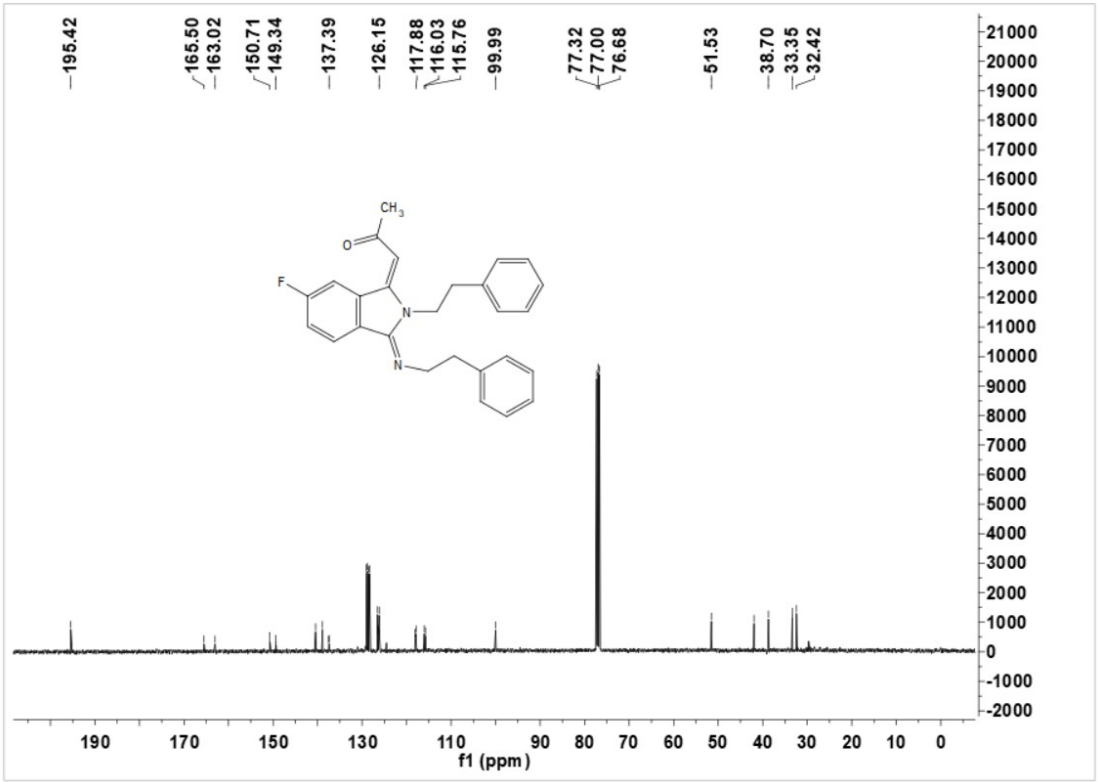
1-((1*E*, 3*Z*)-6-Methyl-2-phenethyl-3-(phenethylimino)isoindolin-1-ylidene)propan-2-one (8za)

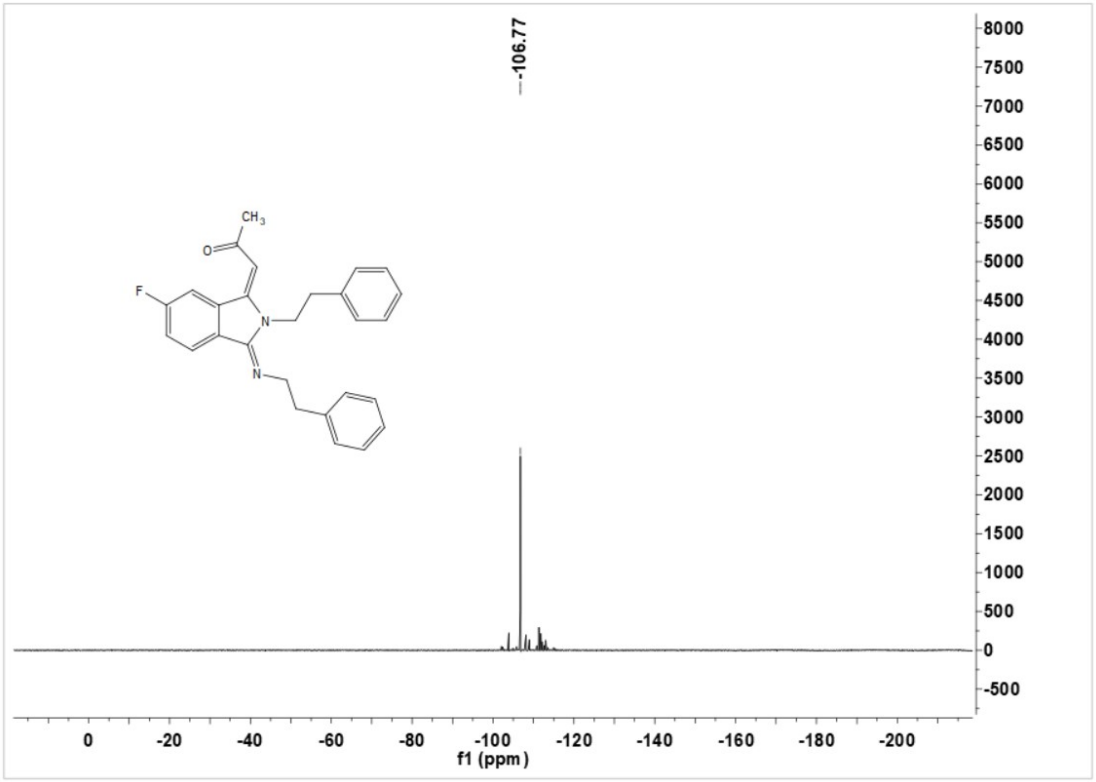




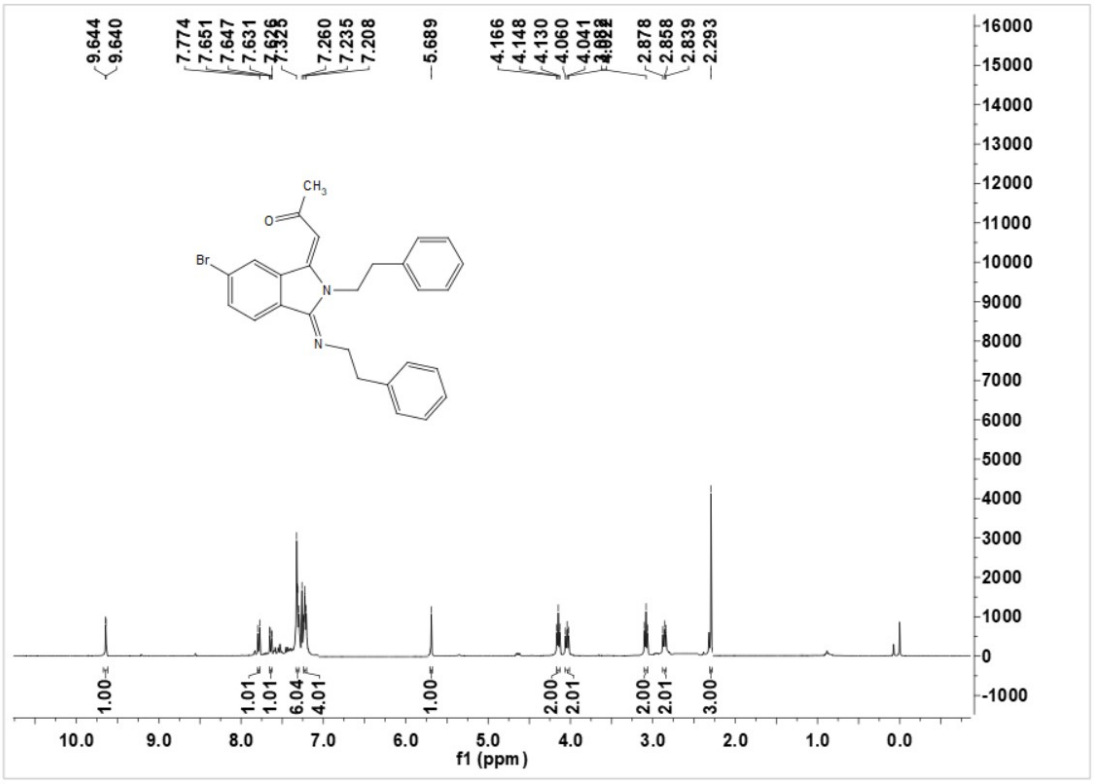
1-((1*E*, 3*Z*)-6-Fluoro-2-phenethyl-3-(phenethylimino)isoindolin-1-ylidene)propan-2-one (8zb)

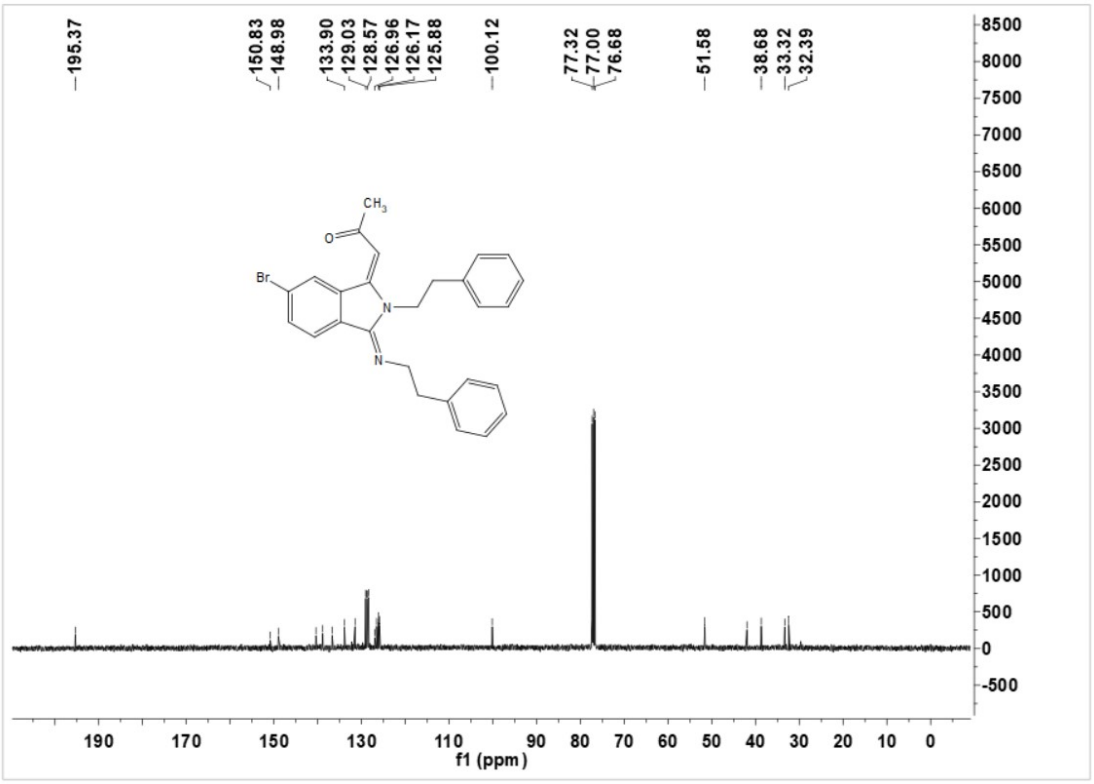




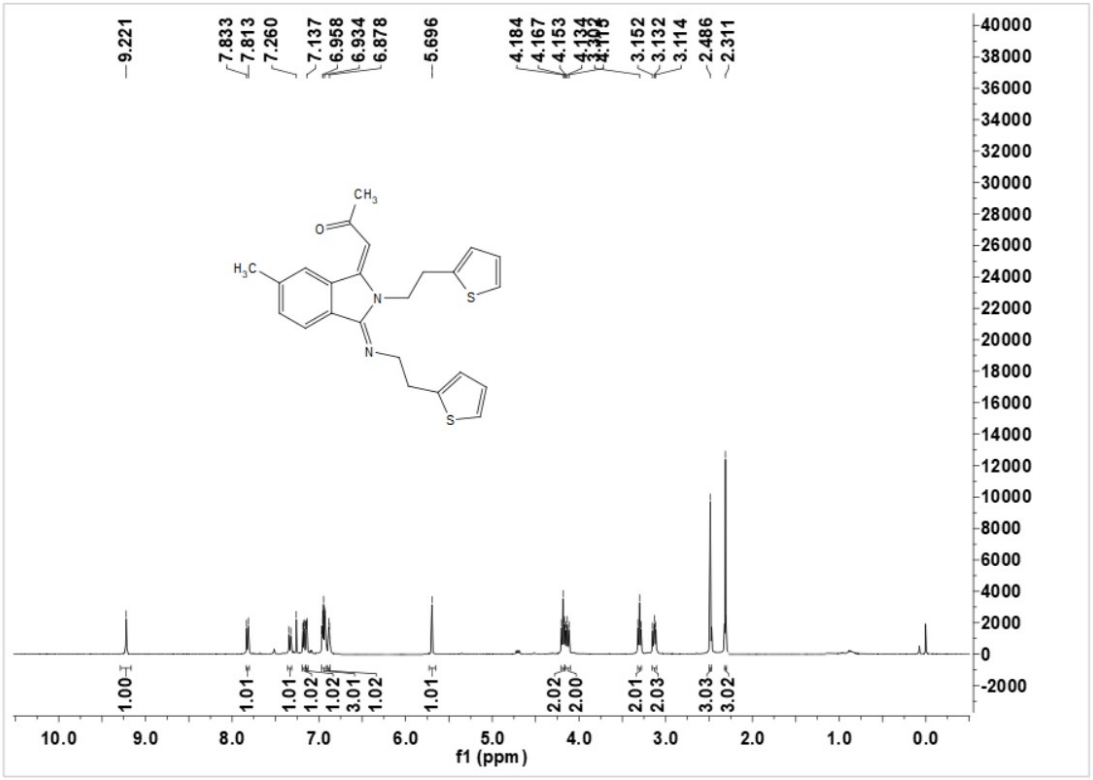


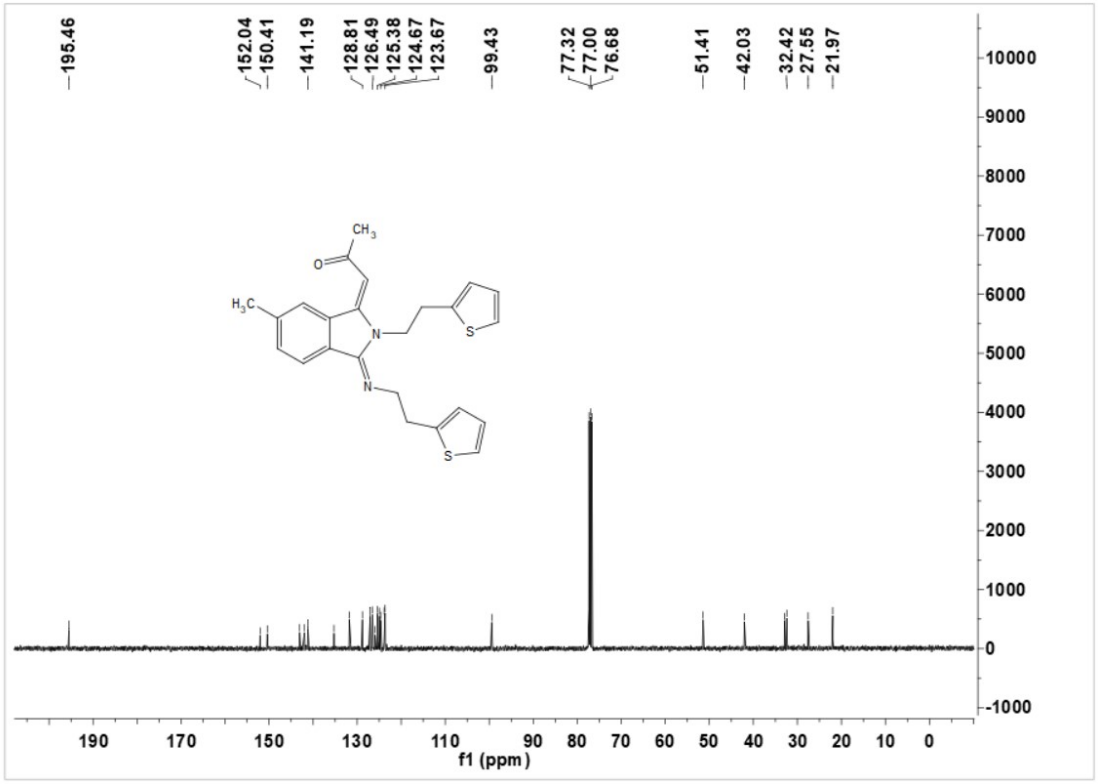
1-((1E,3Z)-6-Bromo-2-phenethyl-3-(phenethylimino)isoindolin-1-ylidene)propan-2-one (8zc)



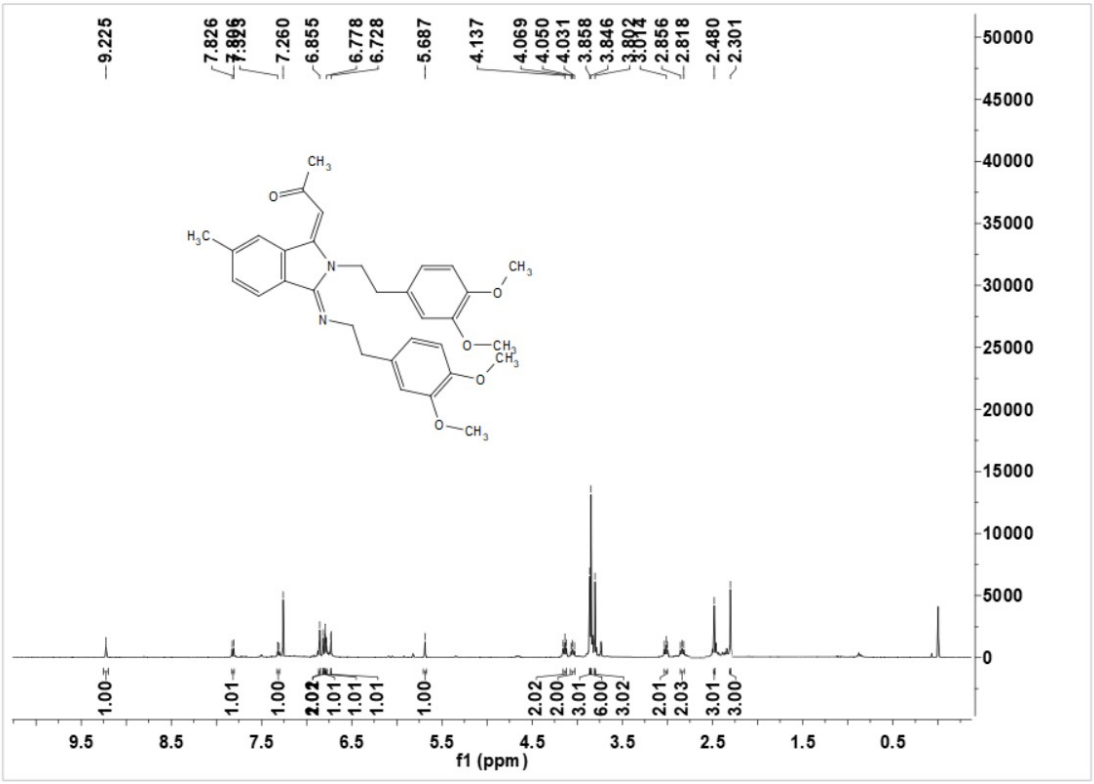


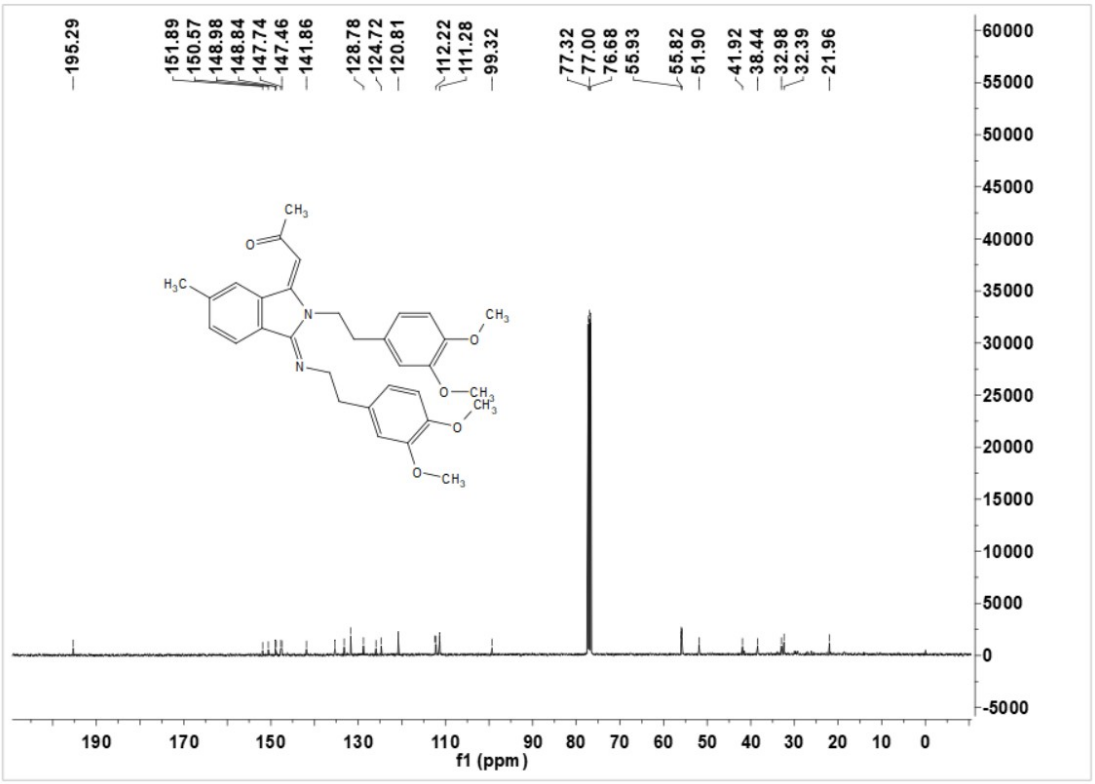
1-((1*E*,3*Z*)-6-Methyl-2-(2-(thiophen-2-yl)ethyl)-3-((2-(thiophen-2-yl)ethyl)imino)isoindolin-1-ylidene)propan-2-one (8zd)



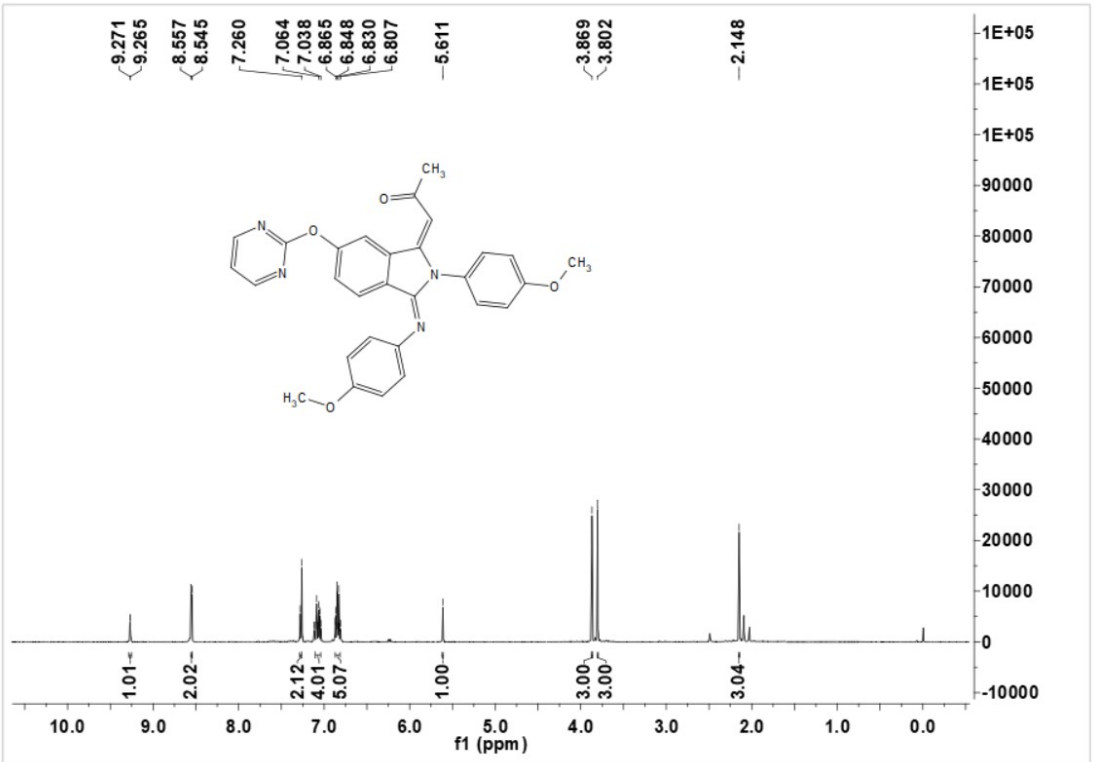


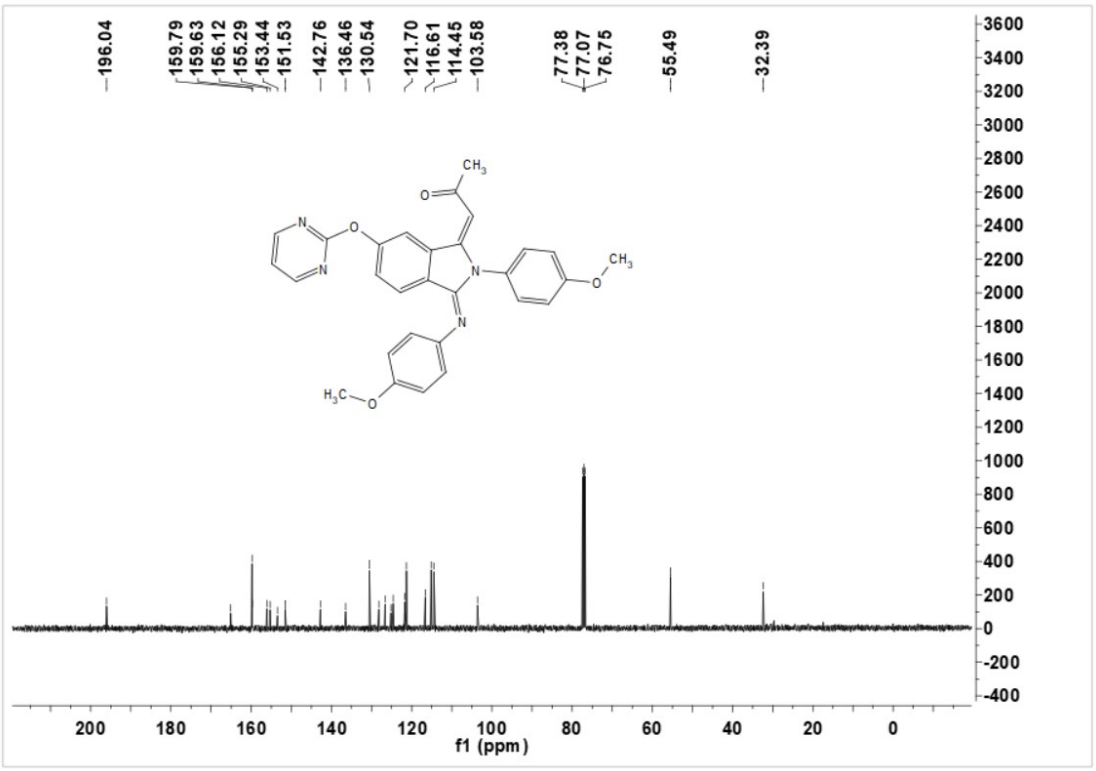
1-((1*E*,3*Z*)-2-(3,4-Dimethoxyphenethyl)-3-((3,4-dimethoxyphenethyl)imino)-6-methyl-isoindolin-1-ylidene)propan-2-one (8ze)



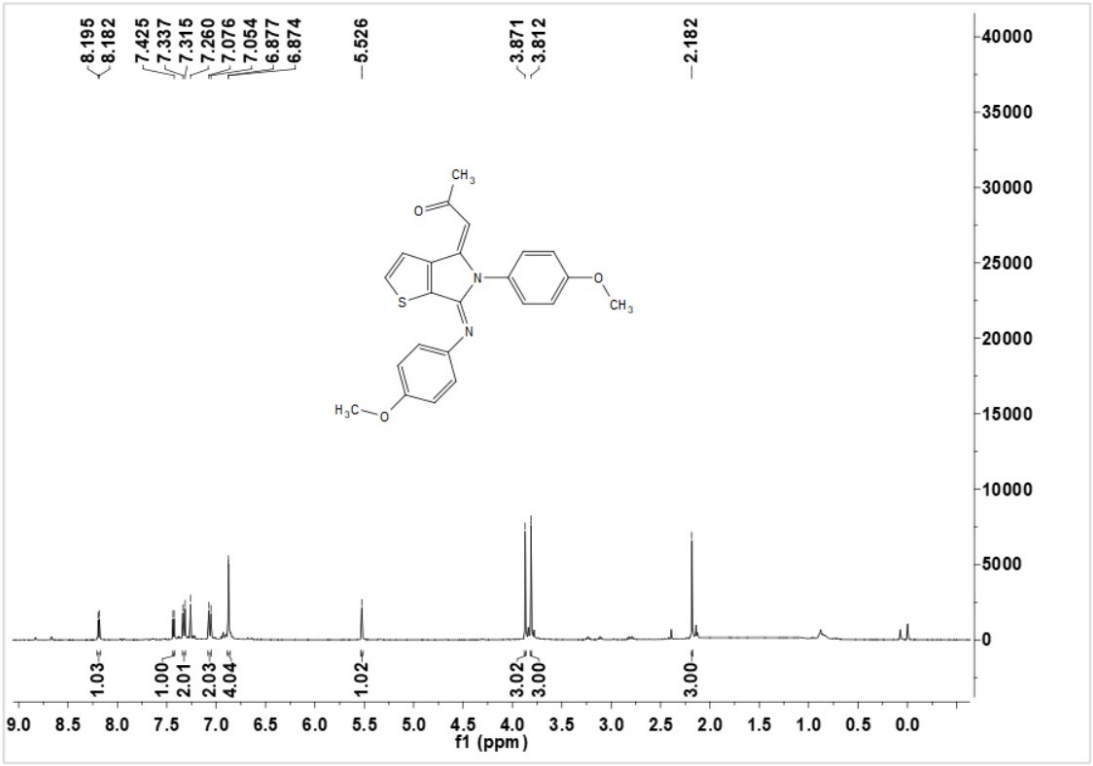


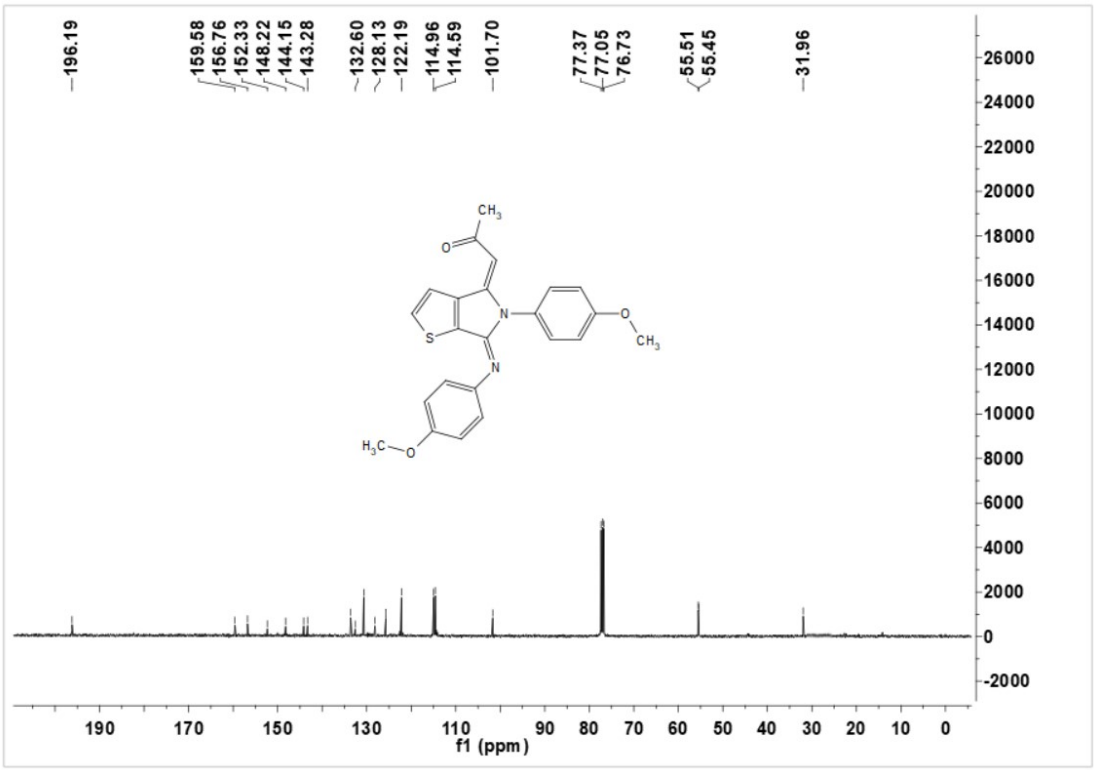
1-((1*E*,3*E*)-2-(4-Methoxyphenyl)-3-((4-methoxyphenyl)imino)-6-(pyrimidin-2-yloxy)isoindolin-1-ylidene)propan-2-one (8zf)



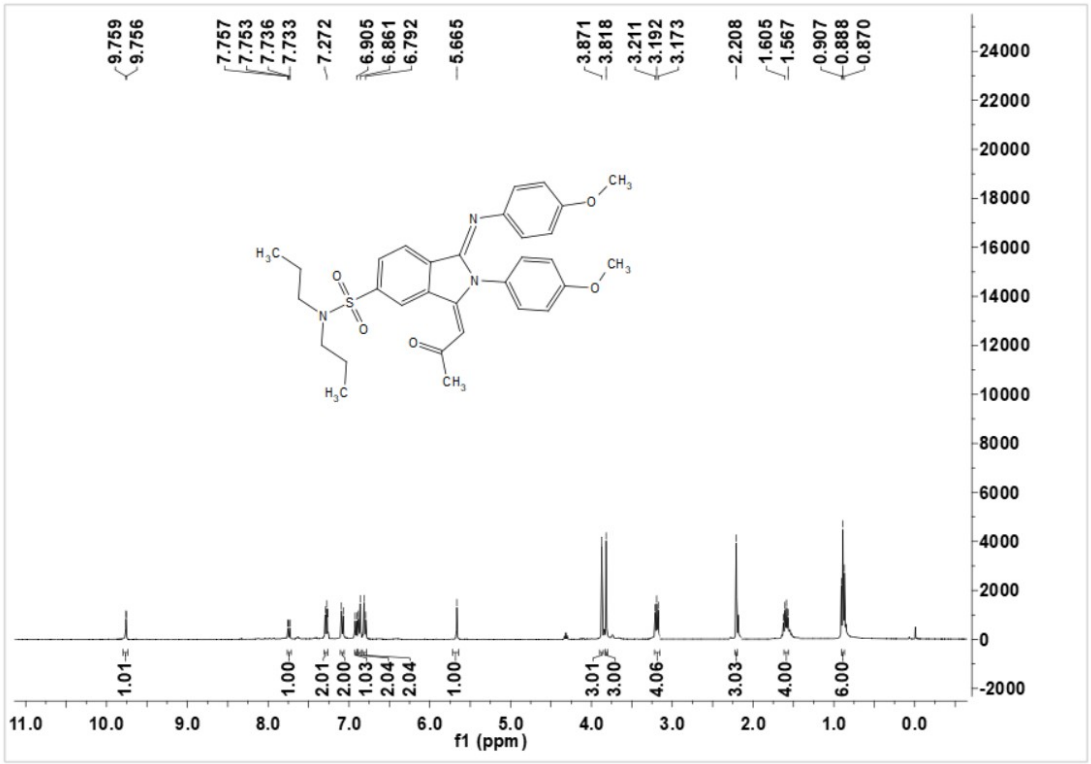


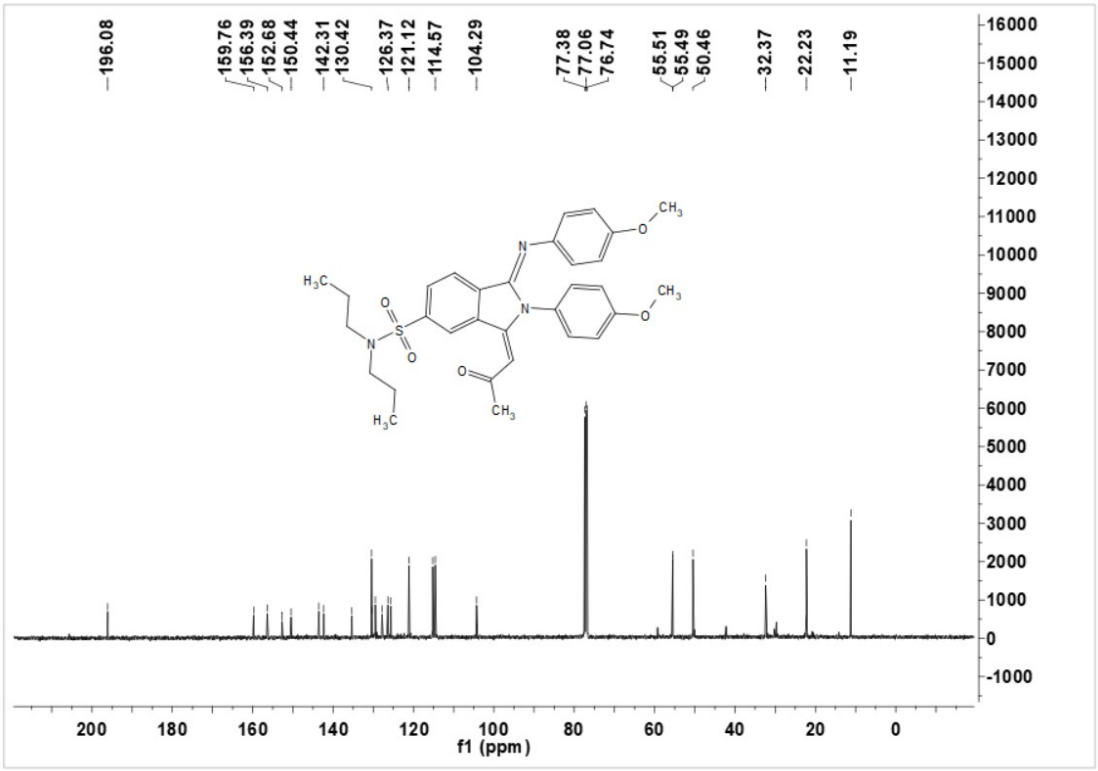
(*E*)-1-((*E*)-5-(4-Methoxyphenyl)-6-((4-methoxyphenyl)imino)-5,6-dihydro-4*H*-thieno[2,3-*c*]pyrrol-4-ylidene)propan-2-one (8zg)



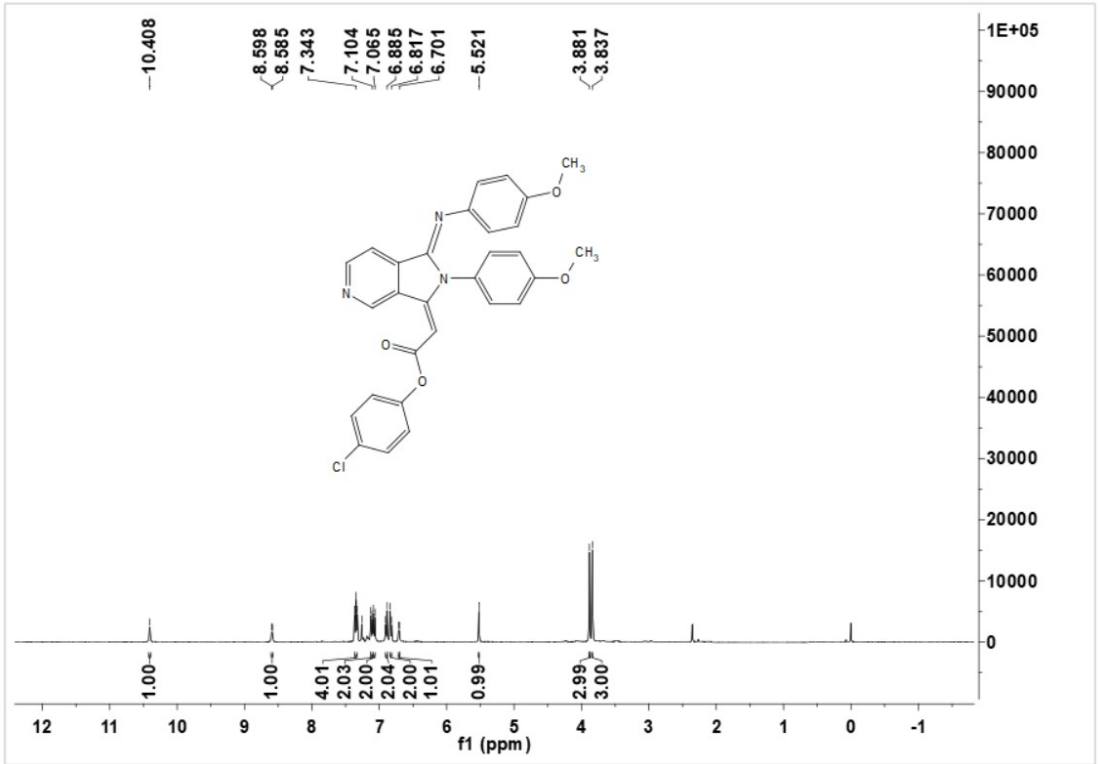


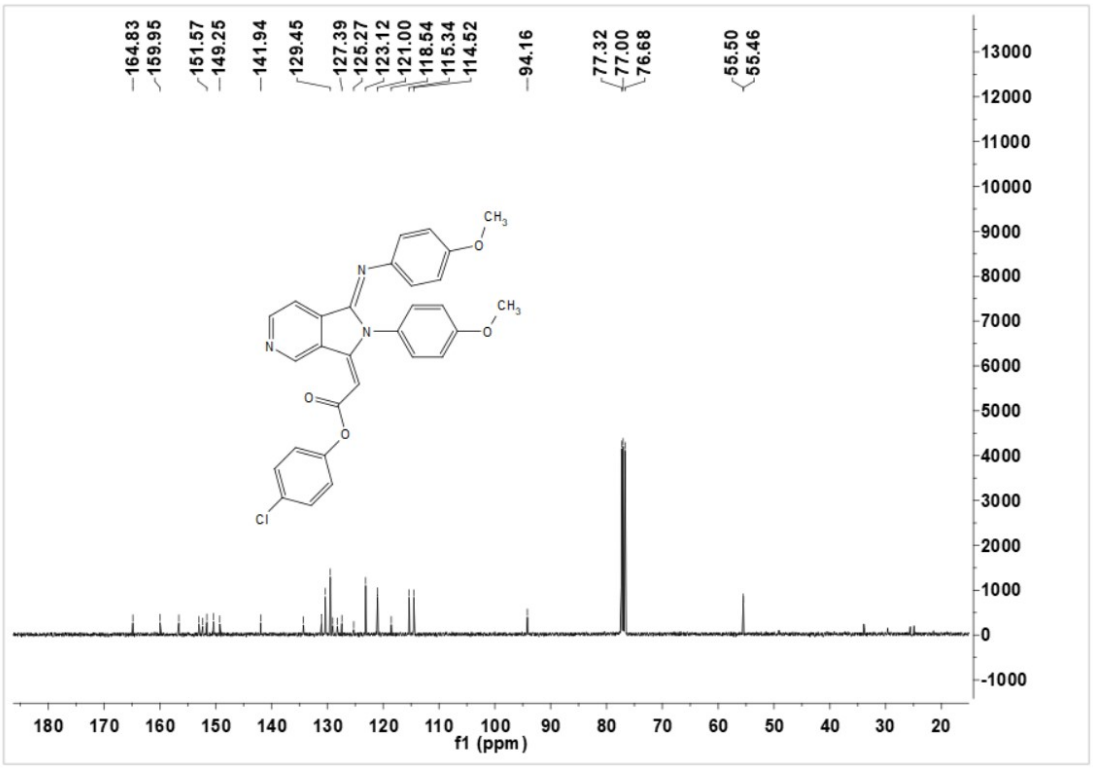
(1*E*,3*E*)-2-(4-Methoxyphenyl)-1-((4-methoxyphenyl)imino)-3-(2-oxopropylidene)-*N*,*N*-dipropylisoindoline-5-sulfonamide (8zh)



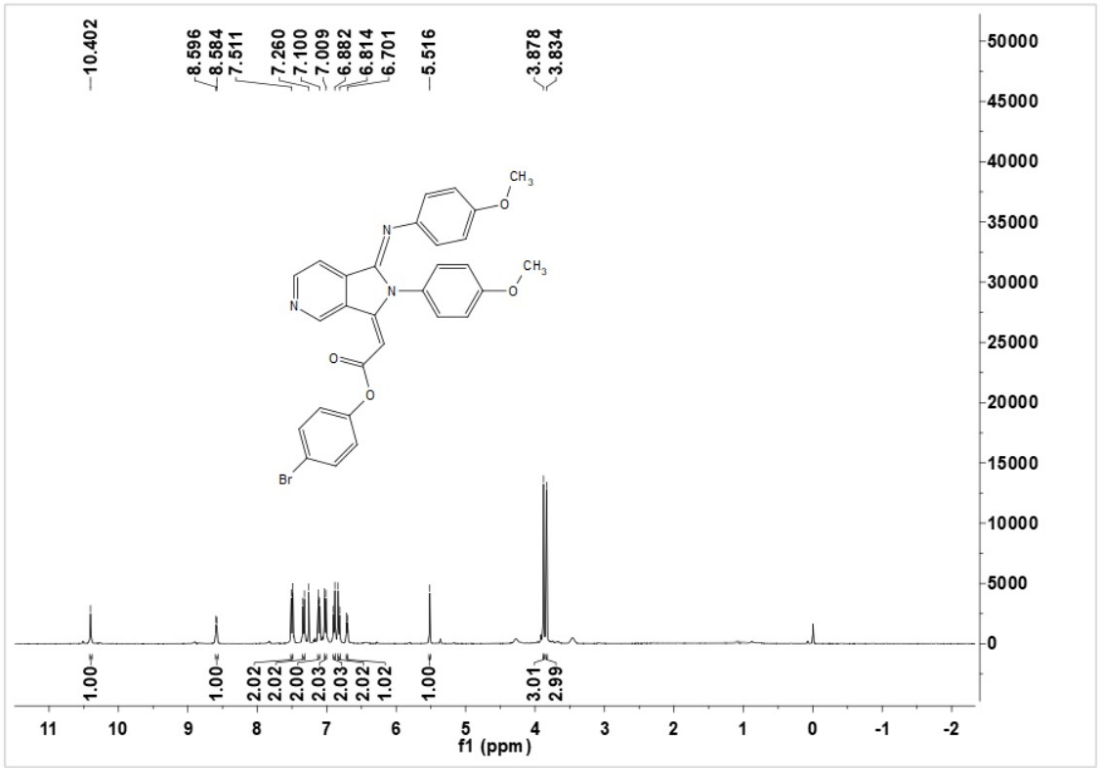


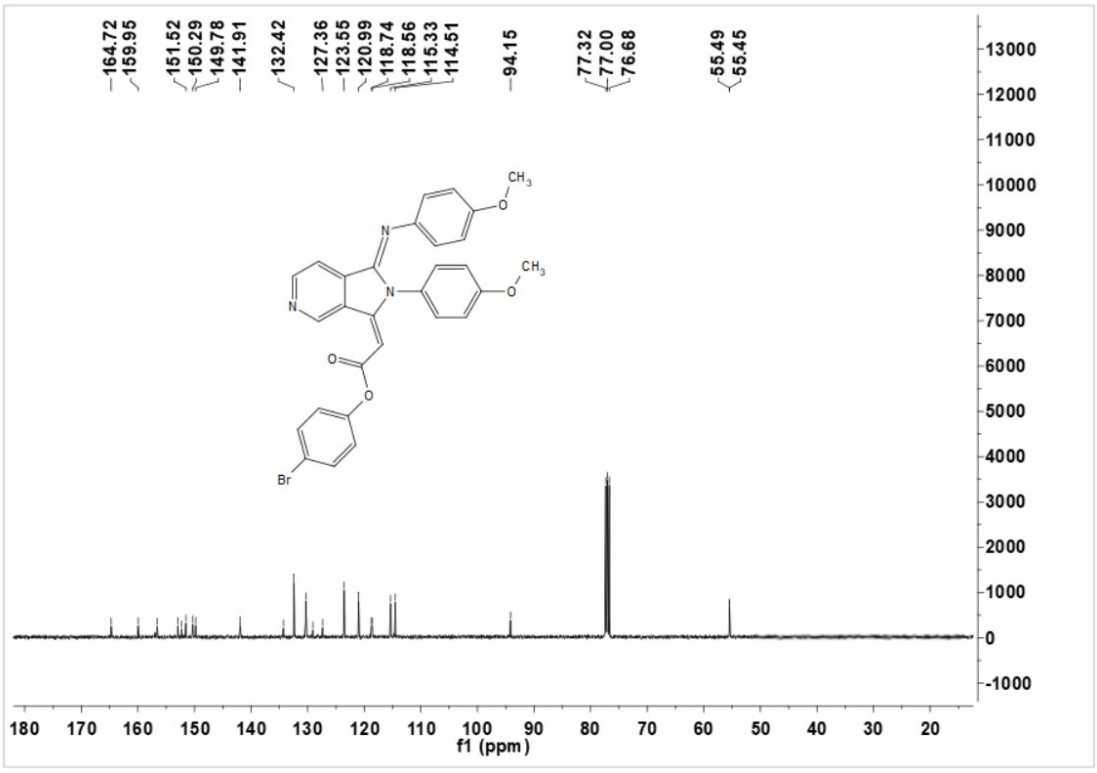
4-Chlorophenyl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zi)



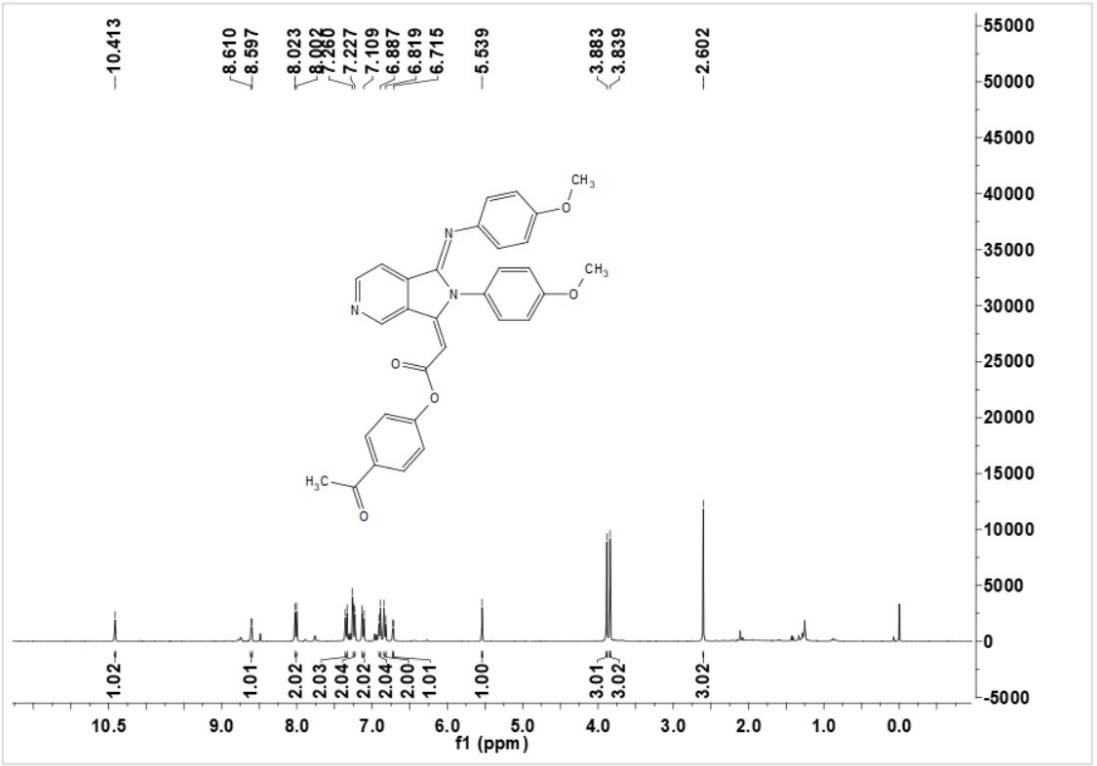


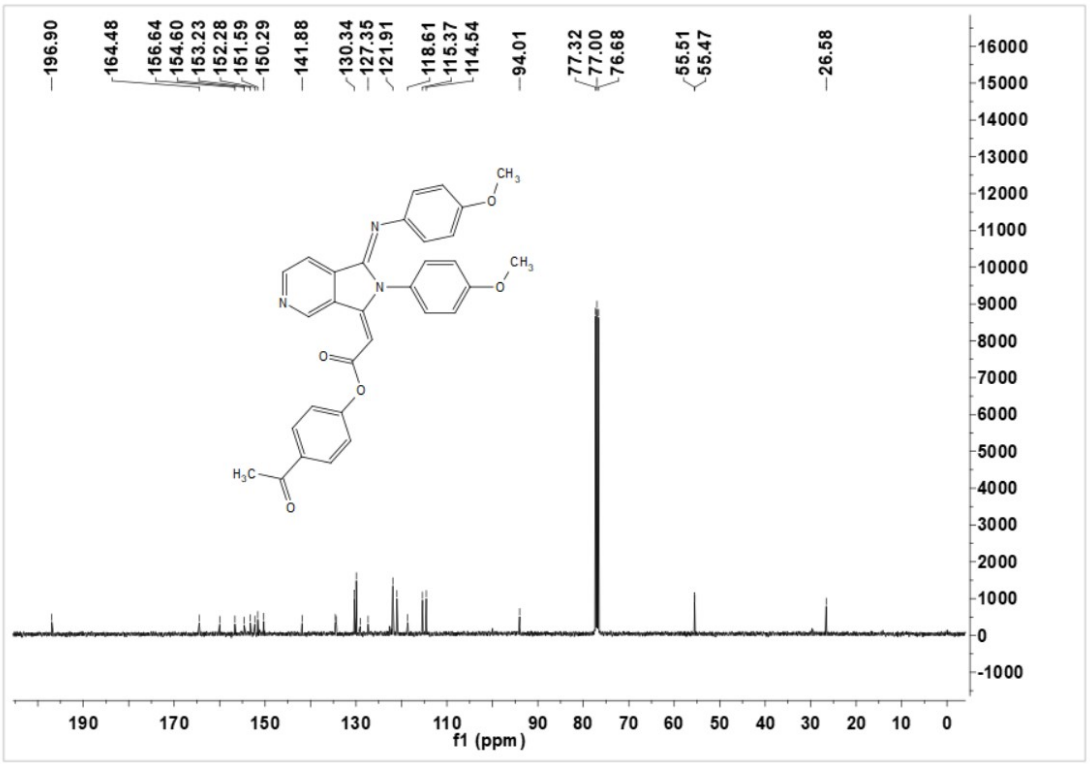
4-Bromophenyl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zj)



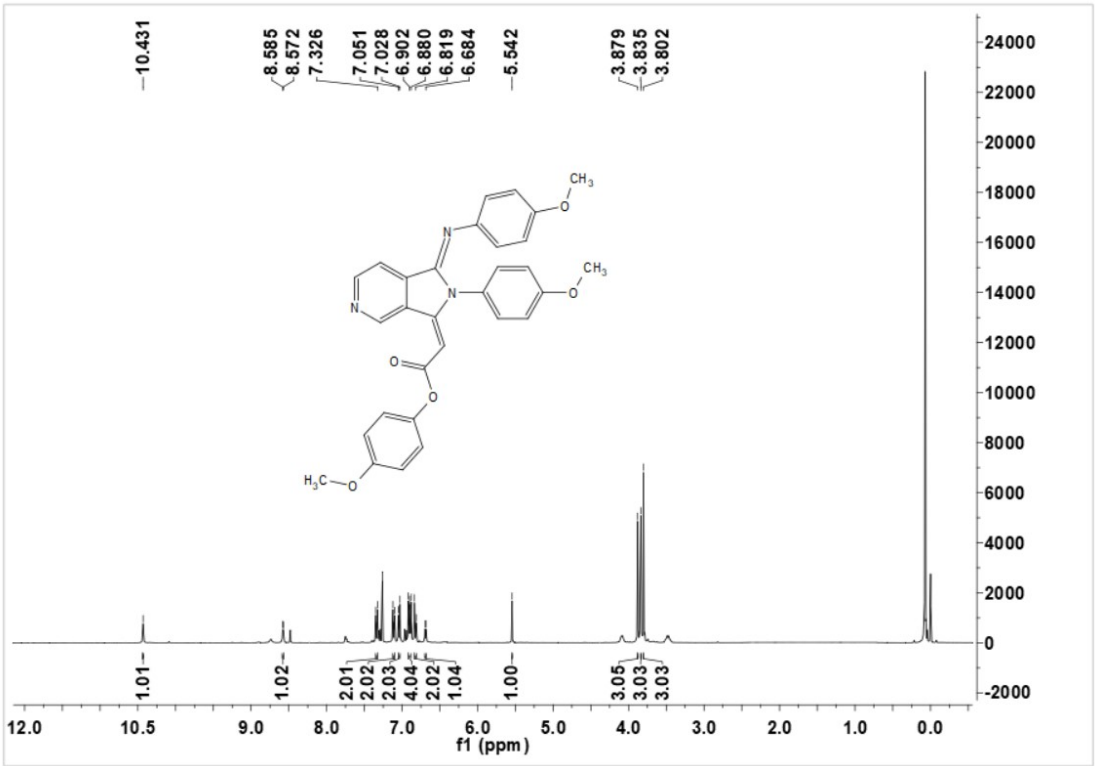


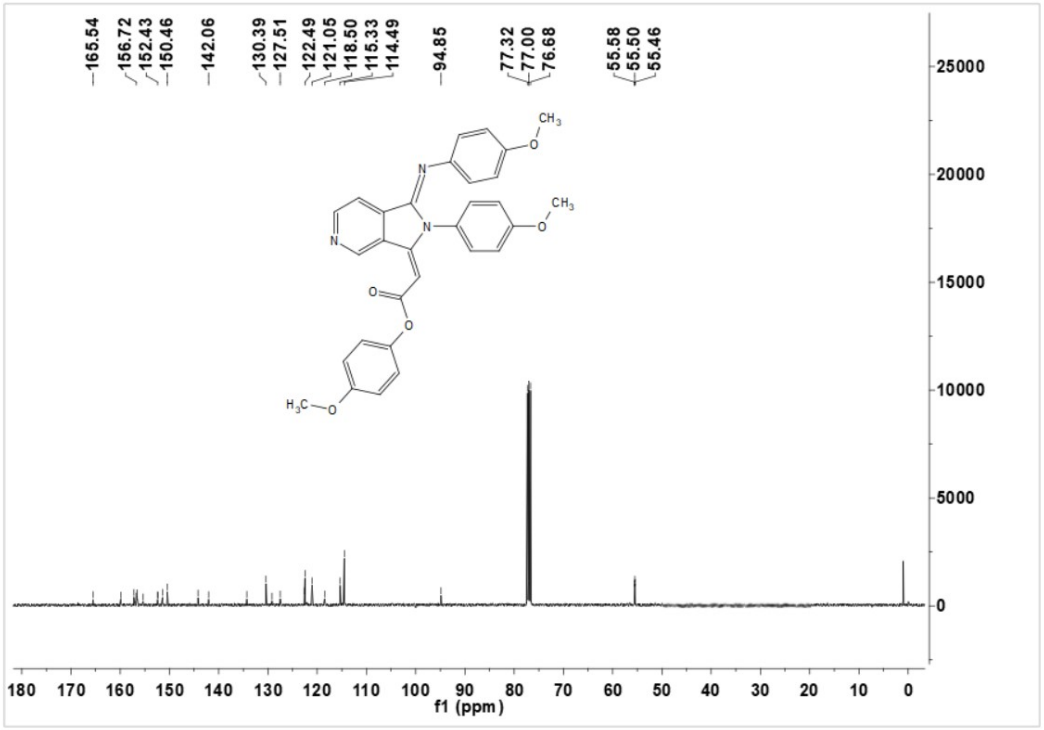
4-Acetylphenyl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zk)



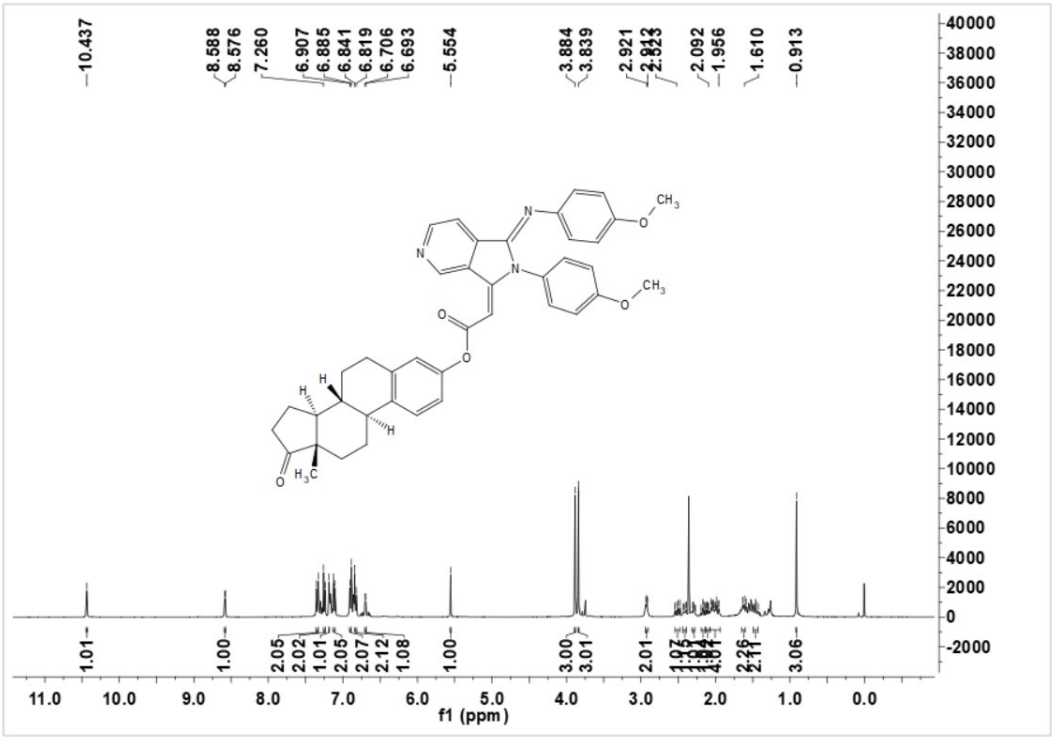


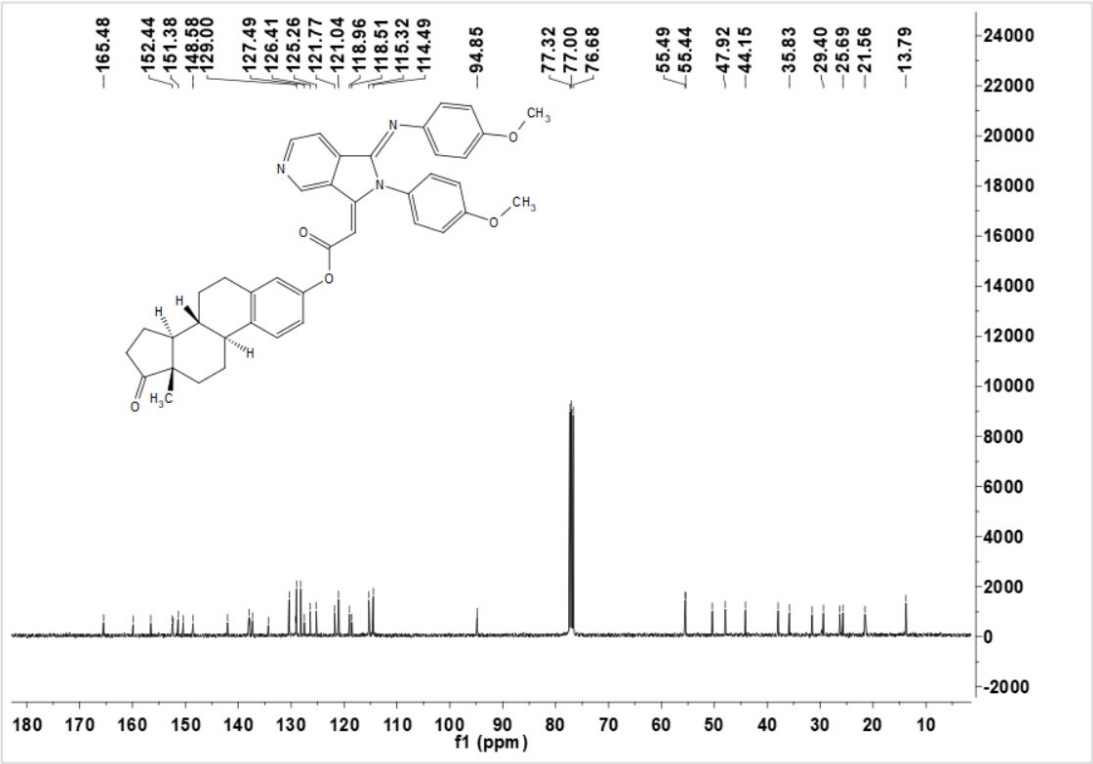
4-Methoxyphenyl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zl)



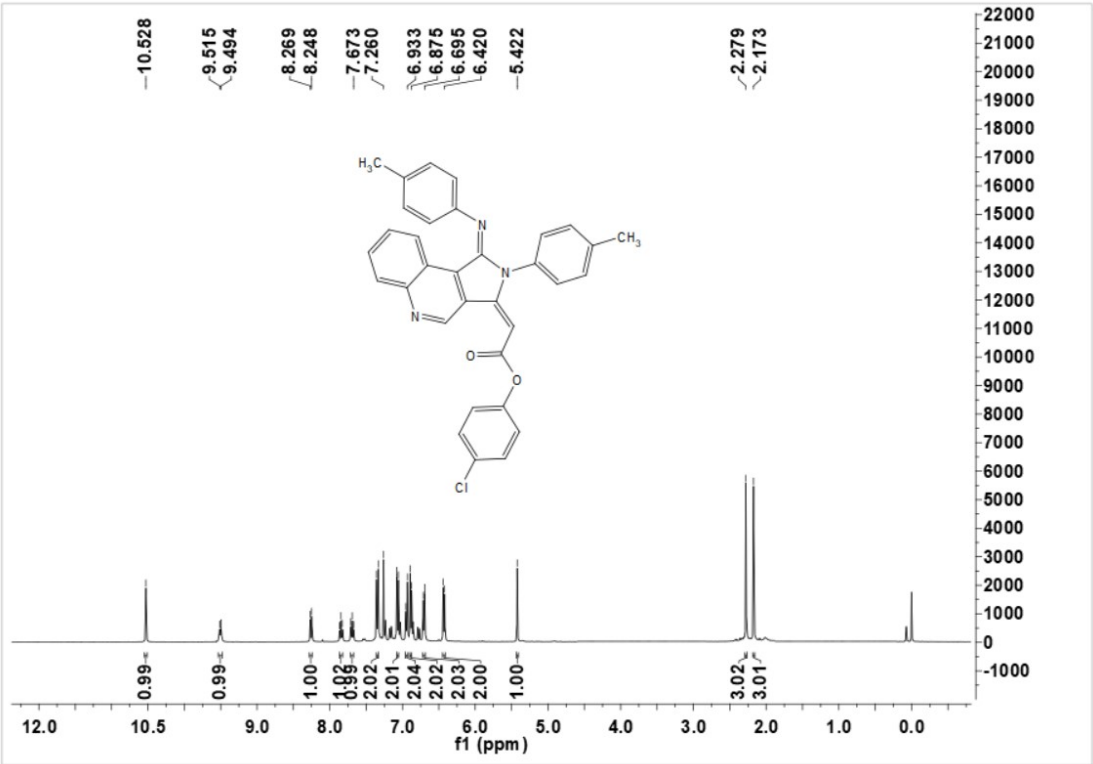


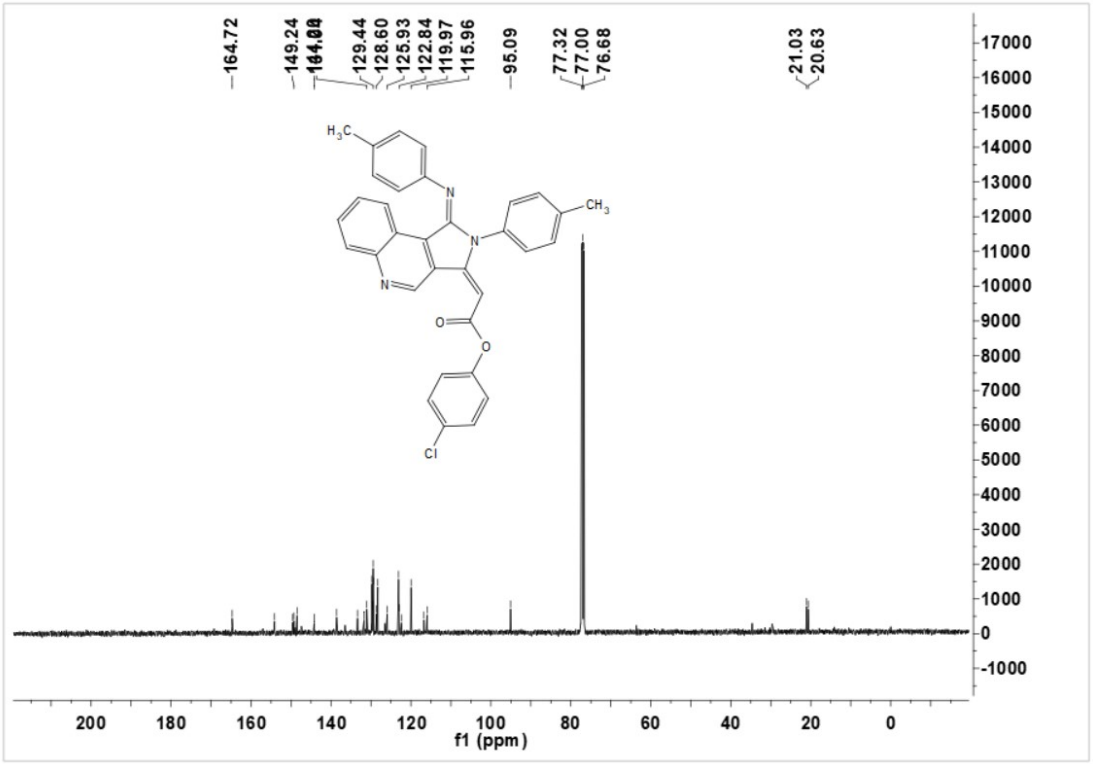
(8*R*,9*S*,13*S*,14*S*)-13-Methyl-17-oxo-7,8,9,11,12,13,14,15,16,17-decahydro-6*H*-cyclopenta[*a*]phenanthren-3-yl (*E*)-2-((*Z*)-2-(4-methoxyphenyl)-1-((4-methoxyphenyl)imino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]pyridin-3-ylidene)acetate (8zm)



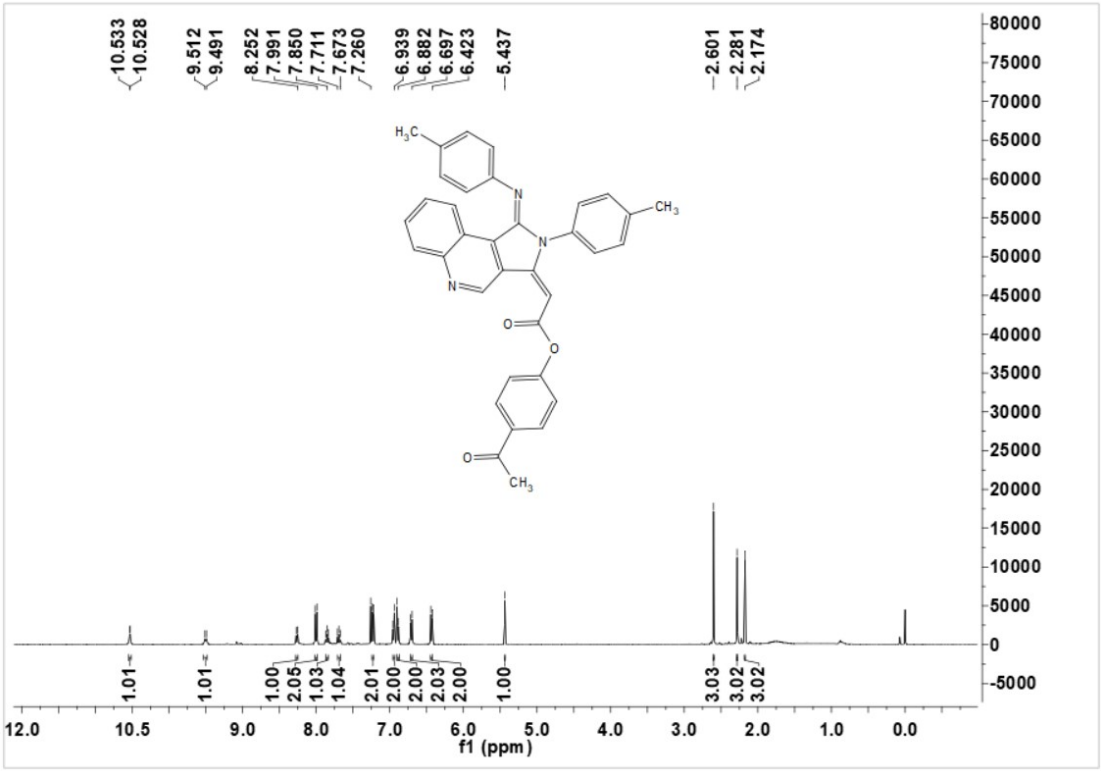


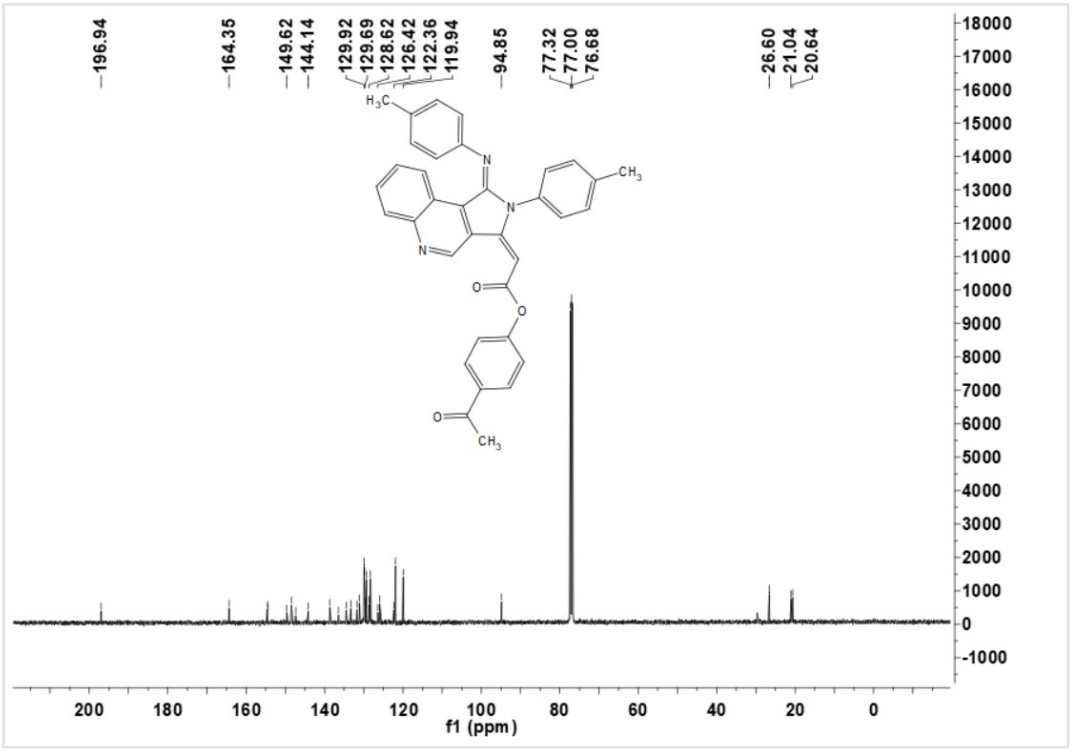
4-Chlorophenyl (*E*)-2-((*E*)-2-(*p*-tolyl)-1-(*p*-tolylimino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]quinolin-3-ylidene)acetate (8zn)



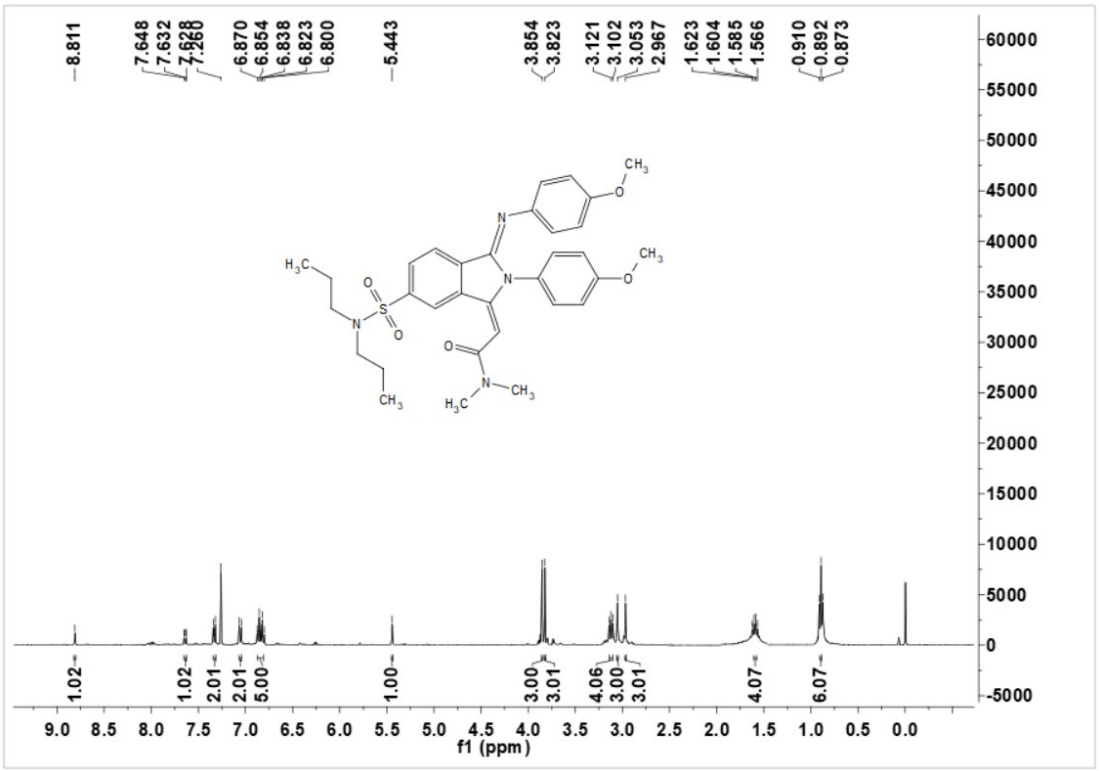


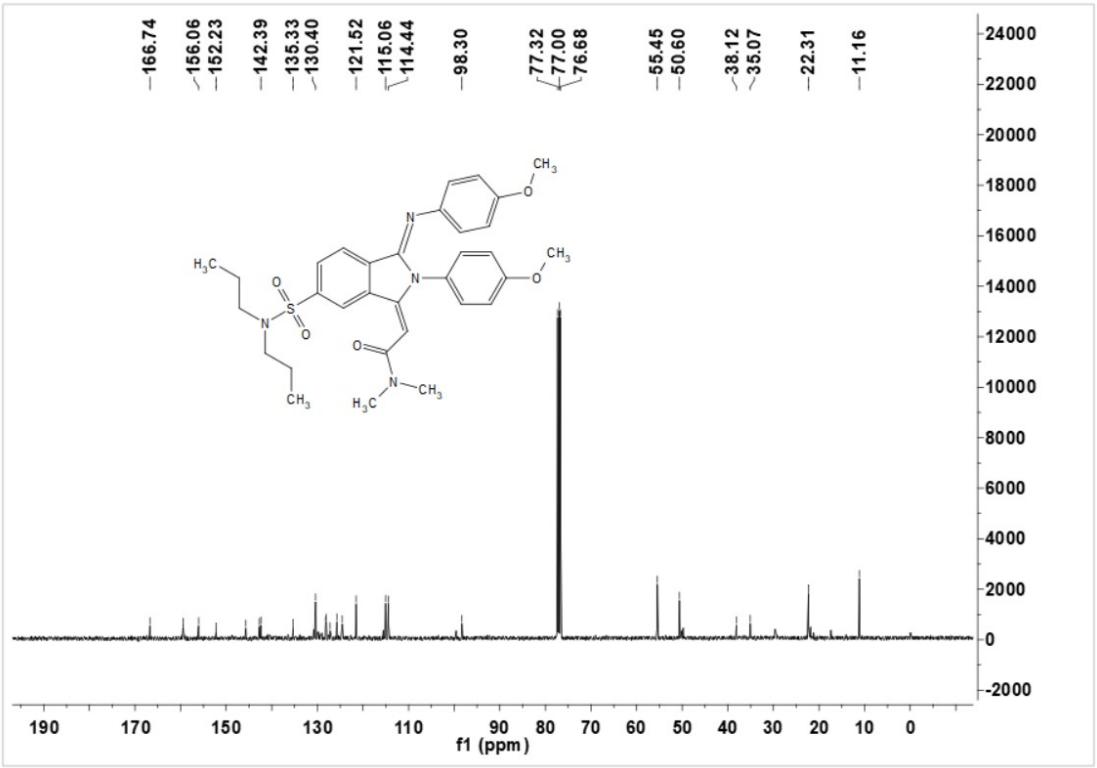
4-Acetylphenyl (*E*)-2-((*E*)-2-(*p*-tolyl)-1-(*p*-tolylimino)-1,2-dihydro-3*H*-pyrrolo[3,4-*c*]quinolin-3-ylidene)acetate (8zo)



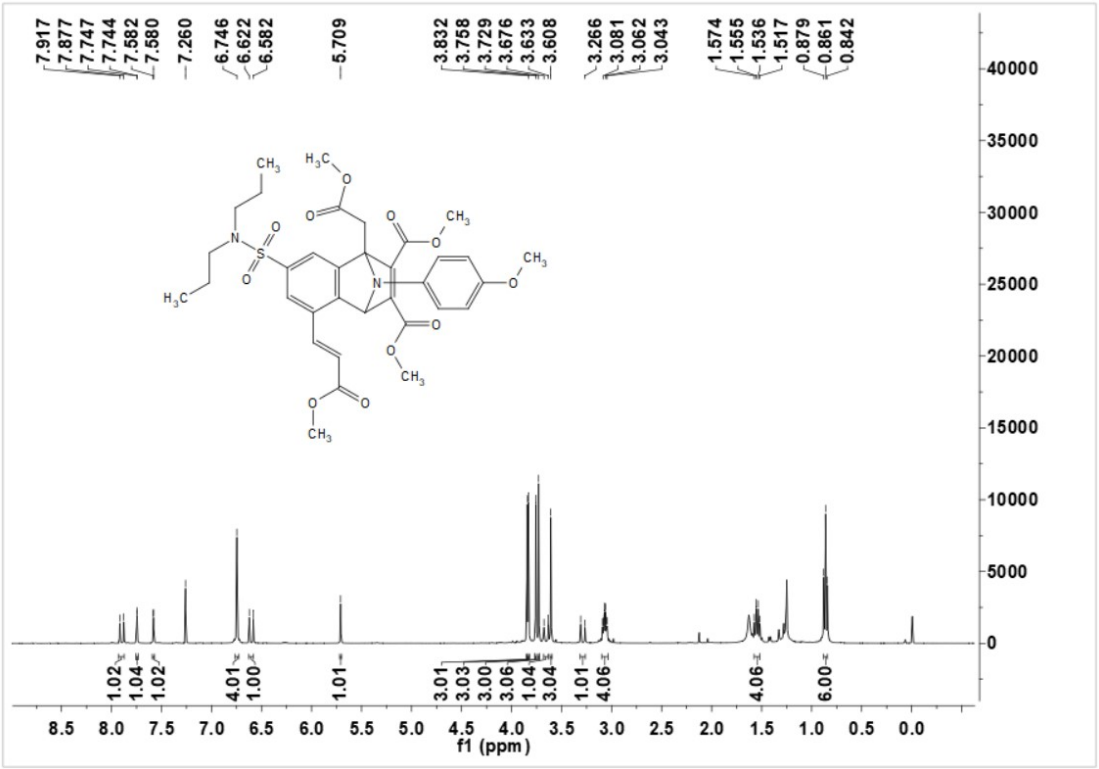


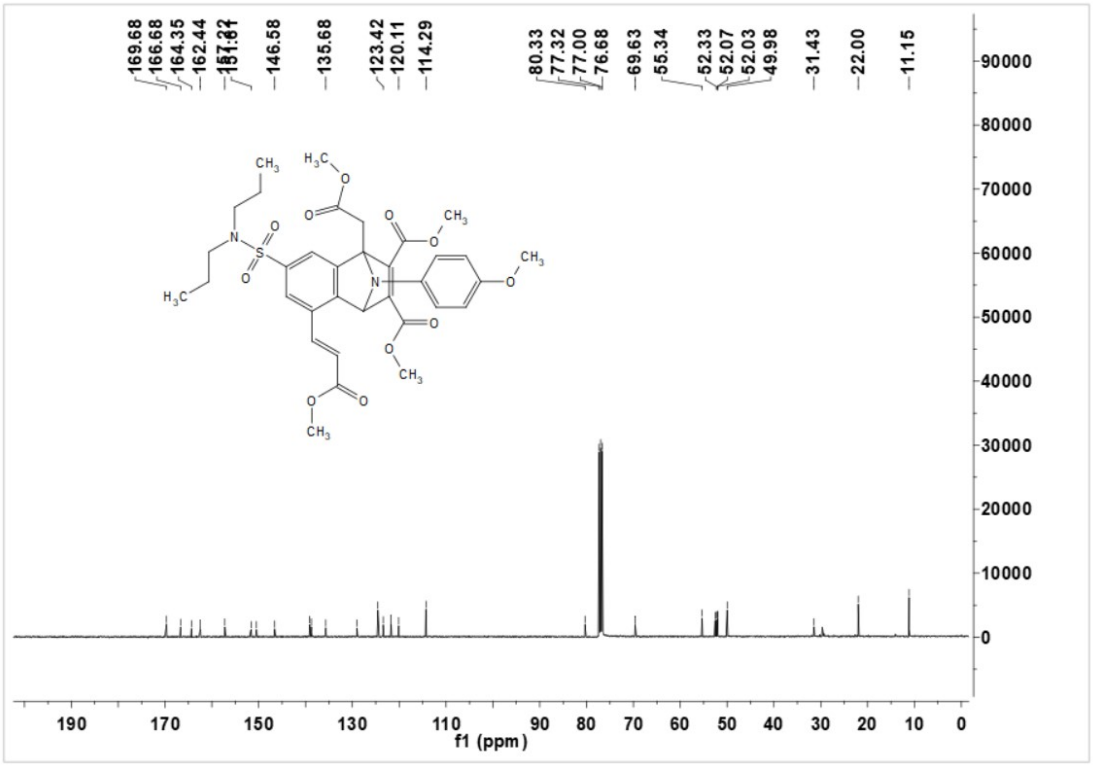
2-((1*E*,3*Z*)-6-(*N*,*N*-Dipropylsulfamoyl)-2-(4-methoxyphenyl)-3-((4-methoxyphenyl)imino)isoindolin-1-ylidene)-*N*,*N*-dimethylacetamide (10a)



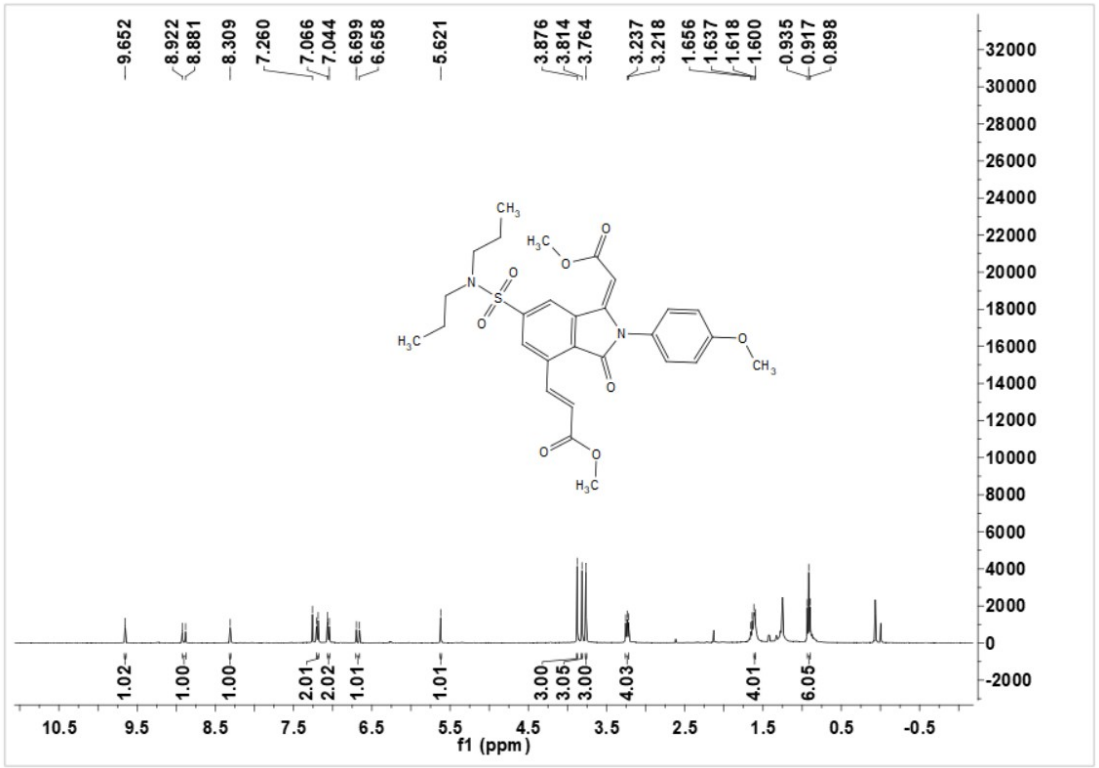


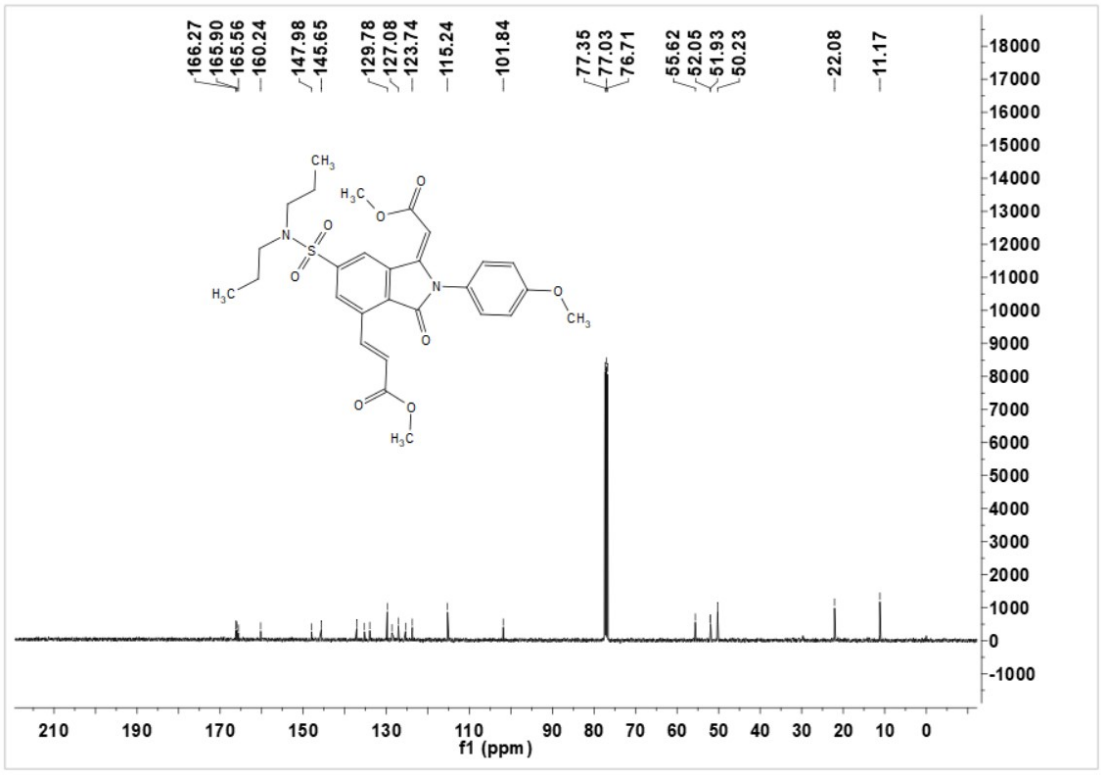
Dimethyl (*E*)-7-(*N*,*N*-dipropylsulfamoyl)-1-(2-methoxy-2-oxoethyl)-5-(3-methoxy-3-oxoprop-1-en-1-yl)-9-(4-methoxyphenyl)-1,4-dihydro-1,4-epiminonaphthalene-2,3-dicarboxylate (6w-I)



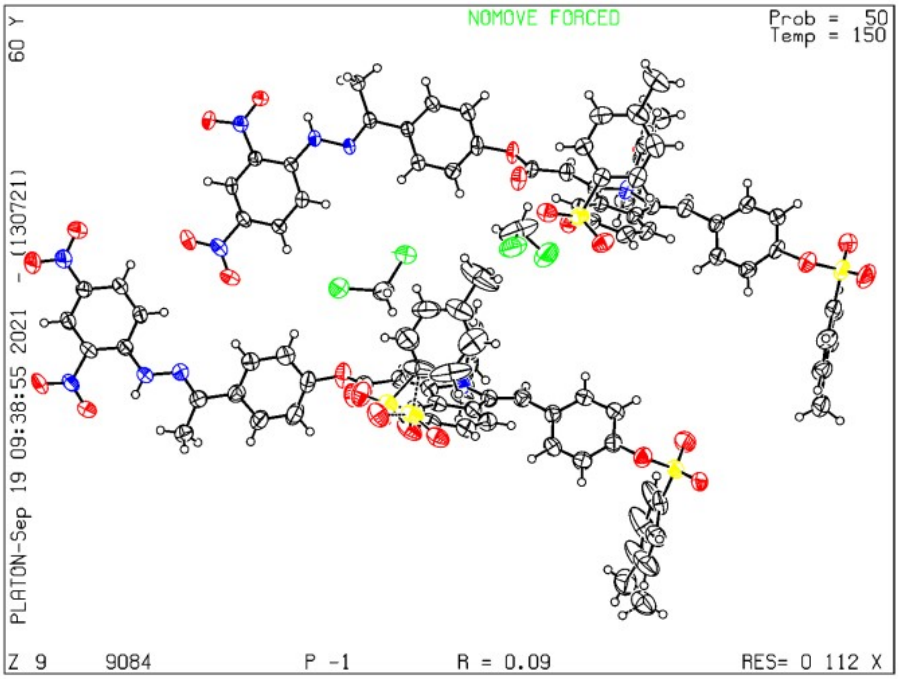


Methyl (*E*)-3-((*E*)-6-(*N*,*N*-dipropylsulfamoyl)-1-(2-methoxy-2-oxoethylidene)-2-(4-methoxyphenyl)-3-oxoisoindolin-4-yl)acrylate (6w-II)




166.27
165.90
165.56
160.24
147.98
145.65
129.78
127.08
123.74
115.24
101.84
77.35
77.03
76.71
55.62
52.05
51.93
50.23
22.08
11.17
18000
17000
16000
15000
14000
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
-1000
210
190
170
150
130
110
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

Crystal Structure of Product 4t



Datablock: 9084

Bond precision: C-C = 0.0082 A Wavelength=1.54184

Cell: a=15.8575(8) b=16.5558(7) c=20.4664(6)
alpha=76.816(3) beta=77.046(4) gamma=84.138(4)
Temperature: 150 K

	Calculated	Reported
Volume	5091.0(4)	5091.0(4)
Space group	P -1	P -1
Hall group	-P 1	-P 1
Moiety formula	C51.59 H39.77 N5 O13 S2, C52 H41 N5 O13 S2, 2(C H2 C12), 0.41(C	C H2 C12, C52 H41 N5 O13 S2
Sum formula	C106 H86 C14 N10 O26 S4	C53 H43 C12 N5 O13 S2
Mr	2185.89	1092.94
Dx,g cm-3	1.426	1.426
Z	2	4
Mu (mm-1)	2.517	2.517
F000	2264.0	2264.0
F000'	2276.32	
h,k,lmax	19,20,25	19,20,25
Nref	20668	19671
Tmin,Tmax	0.738,0.777	0.636,1.000
Tmin'	0.670	

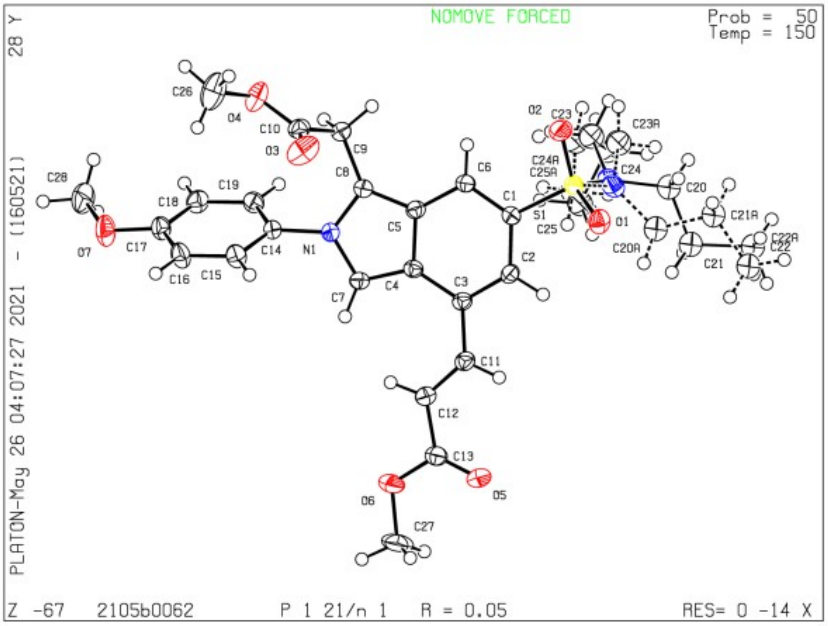
Correction method= # Reported T Limits: Tmin=0.636 Tmax=1.000
AbsCorr = MULTI-SCAN

Data completeness= 0.952 Theta(max)= 73.990

R(reflections)= 0.0897(12019) wR2(reflections)= 0.2764(19671)

S = 1.047 Npar= 1398

Crystal Structure of Product 6w



Datablock: 2105b0062

Bond precision: C-C = 0.0030 A Wavelength=1.54184

Cell: a=12.6360(2) b=17.5646(3) c=12.7053(3)
alpha=90 beta=101.1316(18) gamma=90
Temperature: 150 K

	Calculated	Reported
Volume	2766.84(9)	2766.84(9)
Space group	P 21/n	P 1 21/n 1
Hall group	-P 2yn	-P 2yn
Moiety formula	C28 H34 N2 O7 S	C28 H34 N2 O7 S
Sum formula	C28 H34 N2 O7 S	C28 H34 N2 O7 S
Mr	542.63	542.63
Dx,g cm-3	1.303	1.303
Z	4	4
Mu (mm-1)	1.443	1.443
F000	1152.0	1152.0
F000'	1156.84	
h,k,lmax	15,21,15	15,21,15
Nref	5515	5396
Tmin,Tmax	0.771,0.853	0.923,1.000
Tmin'	0.728	

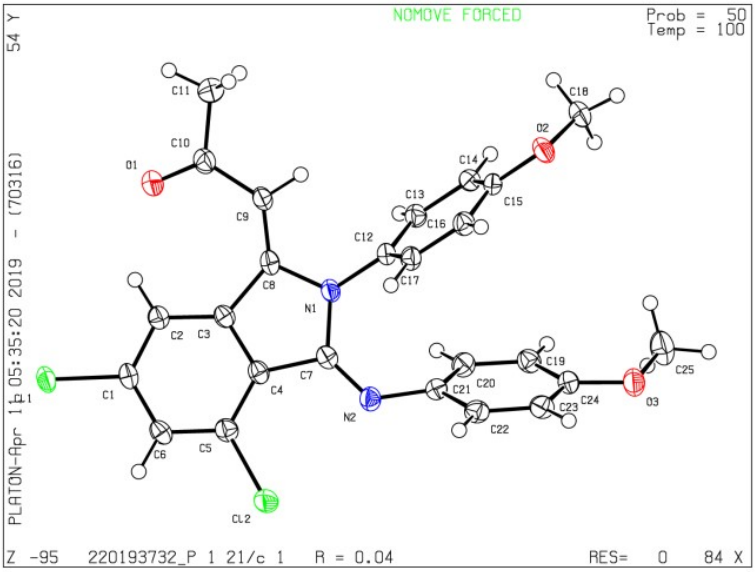
Correction method= # Reported T Limits: Tmin=0.923 Tmax=1.000
AbsCorr = MULTI-SCAN

Data completeness= 0.978 Theta(max)= 72.760

R(reflections)= 0.0533(4774) wR2(reflections)= 0.1402(5396)

S = 1.048 Npar= 349

Crystal Structure of Product 8q



Datablock: 220193732_0m

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Bond precision:  C-C = 0.0022 A          Wavelength=0.71073

Cell:            a=7.8118(3)     b=11.4664(5)       c=24.3378(8)
                 alpha=90        beta=97.242(1)     gamma=90
Temperature:     100 K

                 Calculated                Reported
Volume           2162.62(14)               2162.62(14)
Space group      P 21/c                    P 1 21/c 1
Hall group       -P 2ybc                   -P 2ybc
Moiety formula   C25 H20 Cl2 N2 O3         C25 H20 Cl2 N2 O3
Sum formula      C25 H20 Cl2 N2 O3         C25 H20 Cl2 N2 O3
Mr               467.33                    467.33
Dx,g cm-3        1.435                     1.435
Z                4                         4
Mu (mm-1)        0.332                     0.332
F000             968.0                     968.0
F000'            969.56
h,k,lmax         10,14,31                  10,14,31
Nref             4959                      4944
Tmin,Tmax        0.953,0.974               0.669,0.746
Tmin'            0.951

Correction method= # Reported T Limits: Tmin=0.669 Tmax=0.746
AbsCorr = MULTI-SCAN

Data completeness= 0.997          Theta(max)= 27.502

R(reflections)= 0.0384( 3937)     wR2(reflections)= 0.0989( 4944)

S = 1.068                 Npar= 292
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