

Supporting Information

Branched-Selective Cross-Electrophile Coupling of 2-Alkyl Aziridines and (Hetero)aryl Iodides Using Ti/Ni Catalysis

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1. General Information

General Considerations: Manipulations of air-sensitive compounds were carried out under an atmosphere of nitrogen using standard Schlenk techniques or in a nitrogen-filled glovebox. All Ti/Ni-catalyzed cross-coupling reactions were set up in a nitrogen filled glovebox, using oven dried glass vials (140 °C) that were allowed to cool under vacuum prior to use in the glovebox. Branched/linear connectivity is confirmed for all cross-coupled products by HMBC. Unless otherwise noted yields are reported as a mixture of branched:linear (B:L) isomers and are reported as % yield (B:L).

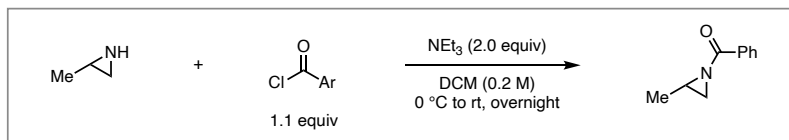
Materials: Tetrahydrofuran (THF) was distilled over Na/benzophenone, degassed by sparging with nitrogen, and stored over 4 Å sieves in a nitrogen-filled glovebox. All liquid reagents used in the glovebox were degassed by sparging with nitrogen for at least 30 minutes and were stored inside the glovebox.

Unless otherwise noted, commercial reagents were used as received. NiBr₂•diglyme, 4,4'-di-*tert*-butylbipyridine (dtbbpy), zinc (dust, <10 μm, ≥98%), and manganese (powder, ~325 mesh, ≥99% trace metal basis) were purchased from Sigma-Aldrich. Cp*TiCl₃ (Cp* = pentamethylcyclopentadienyl) was purchased from Strem. NEt₃•HBr was purchased from Acros Organics and was dried under vacuum overnight at 50 °C. Pyridine•HBr was purchased from Sigma-Aldrich and was dried under vacuum overnight at 50 °C. 2-methyl aziridine was purchased from Oakwood and used as received.

Instrumentation: Proton nuclear magnetic resonance (¹H NMR) spectra were recorded on Bruker spectrometers (at 400, 500, and 600 MHz). Carbon nuclear magnetic resonance (¹³C NMR) spectra were recorded on a Bruker spectrometers (at 126 and 151 MHz). Fluorine nuclear magnetic resonance (¹⁹F NMR) spectra were recorded on Bruker spectrometers (376, 471, and 565 MHz). Proton chemical shifts are reported in parts per million downfield from tetramethylsilane and referenced to residual protium in the NMR solvent (CDCl₃ = δ 7.26 ppm, Methanol-*d*₄ = 3.31 ppm). Carbon chemical shifts are reported in parts per million (ppm) downfield from tetramethylsilane and are referenced to the carbon resonance of the solvent (CDCl₃ = 77.16 ppm). NMR data are represented as follows: chemical shift (δ, ppm), multiplicity (s = singlet, d = doublet, t = triplet, q = quartet, p = pentet, h = sextet, hept = heptet, m = multiplet, br = broad), coupling constant in Hertz (Hz), integration. Gas chromatography with flame ionization detection (GC-FID) was performed using an Agilent 7890A GC. Low-resolution gas chromatography-mass spectrometry (GC-MS) was performed using an Agilent 8890 GC System/Agilent 5977B GC/MSD. High resolution mass spectra were obtained using a Thermo Scientific Thermo Exactive Plus MSD (DART-MS) equipped with an ID-CUBE ion source and a Vapur Interface (ION Sense Inc.) (atmospheric-pressure chemical ionization, APCI) or on an Agilent 6530 LC-QTOF by electrospray ionization (ESI) paired with a time of flight (TOF) mass spectrometer. FTIR spectra were obtained with an Agilent Cary 630 FTIR Spectrometer. Optical rotations were measured with a Rudolf Autopol III Automatic Polarimeter. Chiral SFC data was collected using an Agilent 1260 Infinity II LC system.

2. General Procedures

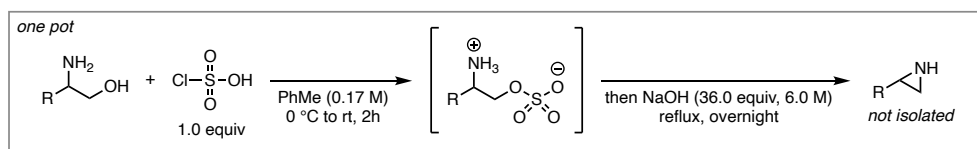
General Procedure A: Benzoyl protection of aziridines



A flame dried flask was charged with 2-methylaziridine (1.0 equiv), DCM (0.2 M), and triethylamine (2.0 equiv). The reaction was cooled to 0 °C and the acid chloride (1.1 equiv) was added dropwise. The reaction was stirred at room temperature overnight. The reaction mixture was then quenched with saturated NaHCO₃. The aqueous layer was extracted with DCM (2x). The organic layers were combined, washed with brine, dried over MgSO₄, filtered, and concentrated. The aziridine was purified by flash chromatography and distilled where indicated.

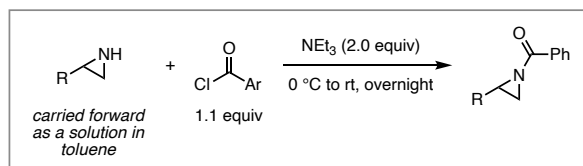
General Procedure B: Synthesis of benzoyl protected aziridines from amino alcohols

Note: Due to the commercial availability of enantioenriched amino alcohols, many of the aziridines (where specified) were prepared from enantioenriched amino alcohols resulting in enantioenriched aziridines.¹ We include the optical rotation for *N*-benzoyl-2-*n*-butyl aziridine (**3a**) and *N*-benzoyl-2-isopropyl aziridine (**6a**) to demonstrate that the resulting aziridines are also enantioenriched. However, subsection of enantioenriched aziridines to cross-coupling results in a racemic product (see **3b**). As the cross-coupling is stereoablative, we do not include additional characterization data for all enantioenriched aziridines or for the resulting cross-coupled products.



Unprotected aziridines were prepared according to a modified literature prep.¹ A flame dried flask was charged with amino alcohol (1.0 equiv) and toluene (0.17 M). The reaction mixture was cooled to 0 °C followed by the dropwise addition of chlorosulfonic acid (1.0 equiv). The reaction was stirred at room temperature for 2 hours to yield the hydrogen sulfate.

NaOH (36.0 equiv, 6.0 M) was added to this reaction mixture and the biphasic solution was heated under reflux overnight. The reaction was then allowed to cool to room temperature and the phases were separated. The aqueous phase was extracted with diethyl ether (3x) and the combined organic layers were washed with brine and dried over MgSO₄. The diethyl ether was gently removed under reduced pressure. Many 2-alkyl aziridines have low boiling points so the aziridine was carried forward as a solution of toluene.



To a solution of the aziridine in toluene was added triethylamine (2.0 equiv). The reaction was cooled to 0 °C and benzoyl chloride (1.1 equiv) was added dropwise. The reaction was stirred at room temperature overnight. The reaction mixture was then quenched with saturated NaHCO₃.

The aqueous layer was extracted with DCM or EtOAc (2x). The organic layers were combined, washed with brine, dried over MgSO₄, filtered, and concentrated. The aziridine was purified by flash chromatography and distilled where indicated.

General Procedure C: Synthesis of cross-coupled products

All reaction preparation was done inside a nitrogen-filled glovebox in oven-dried vials.

The following stock solutions were prepared in 1-dram vials:

Stock Solution 1: Cp*TiCl₃ (23.16 mg, 0.080 mmol, 20 mol%) and 889 μL of THF.

Stock Solution 2: NiBr₂·diglyme (7.05 mg, 0.020 mmol, 5 mol%), dtbbpy (8.05 mg, 0.030 mmol, 7.5 mol%), and 889 μL of THF. This vial was equipped with a Teflon stir bar, capped with a septum cap, and allowed to stir for 15 minutes forming a green suspension.

Stock Solution 3: Zn (78.46 mg, 1.20 mmol, 3.0 equiv) and 889 μL of THF. A suspension of Zn in THF was generated by pipetting up and down a few times before transferring to the reaction.

To a 2-dram vial equipped with a Teflon stir bar was added aziridine (0.40 mmol, 1.0 equiv) and ArI (0.40 mmol, 1.0 equiv). 889 μL of stock solution 1 was added. The reaction was allowed to stir for 15 minutes at which point NEt₃·HBr (145.69 mg, 0.800 mmol, 2.0 equiv), stock solution 2 (889 μL), and stock solution 3 (889 μL) were sequentially added. The reaction vial was capped with a septum cap, wrapped with electrical tape, and brought outside the glovebox. The reactions were set to stir (1200 rpm) at room temperature for 16 hours. After 16 hours the reactions were opened to air. EtOAc (~2 mL) was added to the vial and then the solution was passed through a celite plug with EtOAc to remove any solids. The eluate was concentrated and further purified by flash chromatography to yield the desired cross-coupled product.

3. Additive Screening

The following stock solutions were prepared:

Stock Solution 1: 1a (12.09 mg, 0.075 mmol, 11.3 μ L, 1.0 equiv), PhI (15.30 mg, 0.075 mmol, 8.4 μ L, 1.0 equiv), dodecane (12.78 mg, 0.075 mmol, 17.0 μ L, 1.0 equiv), and 113 μ L of THF (assuming volumes are additive the total volume is 150 μ L).

Stock Solution 2: Cp*TiCl₃ (4.34 mg, 15.0 μ mol, 20 mol%) in 100 μ L of THF.

Stock Solution 3: NiBr₂•diglyme (1.32 mg, 3.8 μ mol, 5 mol%) and dtbbpy (1.51 mg, 5.6 μ mol, 7.5 mol%) in 125 μ L of THF. This vial was equipped with a Teflon stir bar, capped with a septum cap, and allowed to stir for 15 minutes before use.

Stock Solution 4: Zn (14.71 mg, 0.225 mmol, 3.0 equiv) in 125 μ L of THF.

Additive Stock Solution: Additive stock solutions were prepared such that we could keep 40 μ L for GC-FID analysis to get absolute ratio of aziridine (based on response factors) to dodecane and a relative ratio of the additive to dodecane. A volume of 150 μ L of the solution would be transferred to the reaction (such that 0.075 mmol of the aziridine, PhI, and additive is transferred to solution).

The following additive stock solutions were prepared by weighing out the specified amounts of additives (Mass in 190 μ L (mg)) into separate vials. 190 μ L of Stock Solution 1 was added to each vial to generate a stock solution with 0.075 mmol/150 μ L of **1a**, PhI, dodecane, and additive. Styrene and tertbutyl acrylate were distilled before use.

Each additive was screened in a separate reaction.

Table S1. Additive stock solution amounts

Additive	Mass in 150 μ L (mg)	Mass in 190 μ L (mg)
1-decene	10.52	13.33
styrene	7.81	9.89
<i>tert</i> -butyl acrylate	9.61	12.18
2-octanone	9.62	12.18
4-ethylbenzonitrile	9.84	12.46
3-chloropropylbenzene	11.60	14.69
cyclohexyl chloride	8.90	11.27
1-bromoheptane	13.43	17.01
4-chlorobiphenyl	14.15	17.92
<i>p</i> -tolyl trifluoromethanesulfonate	18.02	22.82
phenylboronic acid pinacol ester	15.31	19.39
aniline	6.99	8.85
2-phenyl-1,3-dioxolane	11.26	14.27
<i>N</i> -methyl- <i>p</i> -toluenesulfonamide	13.89	17.60
<i>N</i> -(<i>tert</i> -butoxycarbonyl)methylamine	9.84	12.46
acetophenone	9.01	11.41
4-bromobiphenyl	17.48	22.14
benzyloxytrimethylsilane	13.52	17.13
1-nonyne	9.32	11.80
4-fluorobenzaldehyde	9.31	11.79
4-ethylbenzoic acid	11.26	14.26
4-ethylnitrobenzene	11.34	14.36
4-bromoheptane	13.43	17.01
1-iodooctane	18.01	22.81
iodocyclohexane	15.75	19.95
1-decylamine	11.80	14.95
cyclohexylmethanol	8.56	10.85
4-phenylphenol	12.77	16.18

To an oven dried 1-dram vial with a Teflon stir bar was added $\text{NEt}_3 \cdot \text{HBr}$ (27.32 mg, 0.15 mmol, 2 equiv), Stock Solution 2 (100 μL), and the corresponding Additive Stock Solution (150 μL). The reactions were allowed to stir for 15 min at which point Stock Solution 3 (125 μL) and Stock Solution 4 (125 μL) were added. The reaction vial was capped with a septum cap, wrapped with electrical tape, and brought outside the glovebox. The reaction was set to stir (700 rpm) at room temperature for 16 hours. Yields and additive recovery were determined by GC-FID.

Table S2. GC-FID peak areas and ratios relative to dodecane of starting materials and additives.

Additive	Peak Area			Ratio (relative to dodecane)	
	Dodecane	1a	Additive	1a (corrected)	Additive
1-decene	607.1	412.1	450.3	0.97	0.74
styrene	668.8	454.9	350.8	0.98	0.52
<i>tert</i> -butyl acrylate	682.2	466.0	263.0	0.98	0.39
2-octanone	691.2	471.3	359.2	0.98	0.52
4-ethylbenzotrile	677.8	461.9	484.3	0.98	0.71
3-chloropropylbenzene	670.7	457.0	477.5	0.98	0.71
cyclohexyl chloride	677.8	461.4	279.8	0.98	0.41
1-bromoheptane	612.1	417.1	336.1	0.98	0.55
4-chlorobiphenyl	621.7	425.8	641.2	0.98	1.03
<i>p</i> -tolyl trifluoromethanesulfonate	916.0	657.4	527.2	1.01	0.58
phenylboronic acid pinacol ester	1153.3	835.6	1204.0	1.01	1.04
aniline	686.0	468.7	301.9	0.98	0.44
2-phenyl-1,3-dioxolane	918.8	558	601.9	1.01	0.66
<i>N</i> -methyl- <i>p</i> -toluenesulfonamide	480.8	346.4	365.8	1.00	0.76
<i>N</i> -(<i>tert</i> -butoxycarbonyl)methylamine	1055.4	760.7	439.7	1.00	0.42
acetophenone	640.8	437.0	351.3	0.98	0.55
4-bromobiphenyl	603.2	415.0	655.6	0.99	1.09
benzyloxytrimethylsilane	918.4	660.9	688.9	1.00	0.75
1-nonyne	641.2	435.9	389.5	0.98	0.61
4-fluorobenzaldehyde	623.3	425.2	304.5	0.97	1.21
4-ethylbenzoic acid	636.5	428.2	N/D	0.97	2.43
4-ethylnitrobenzene	652.7	446.0	435.4	0.98	0.67
4-bromoheptane	596.3	404.8	310.7	0.97	0.52
1-iodooctane	599.3	406.0	369.2	0.97	0.62
iodocyclohexane	642.9	436.1	302.9	0.97	0.47
1-decylamine	634.1	433.1	216.7	0.98	0.34
cyclohexylmethanol	693.5	472.3	273.2	0.98	0.39
4-phenylphenol	629.0	437.5	504.9	1.00	0.80

^aReactions containing *p*-tolyl trifluoromethanesulfonate, phenylboronic acid pinacol ester, 2-phenyl-1,3-dioxolane, *N*-methyl-*p*-toluenesulfonamide, *N*-(*tert*-butoxycarbonyl)methylamine, and benzyloxytrimethylsilane were performed following GC-FID maintenance and ratios were calculated using updated response factors.

Table S3. GC-FID peak areas and ratios relative to dodecane of products and additives.

Additive	Peak Area				Ratio (Relative to Dodecane) ^a		
	Dodecane	Branched	Linear	Additive	Branched (corrected)	Linear (corrected)	Additive
1-decene	557.9	399.6	36.3	351.9	0.58	0.04	0.63
styrene	535.7	366.1	35.4	198.5	0.55	0.05	0.37
<i>tert</i> -butyl acrylate	541.2	395.8	50.5	133.1	0.59	0.06	0.25
2-octanone	460.4	459.5	56.8	162.3	0.80	0.09	0.35
4-ethylbenzotrile	454.5	398.8	35.1	231.5	0.71	0.05	0.51
3-chloropropylbenzene	472.6	426.8	45.3	337.9	0.73	0.07	0.71
cyclohexyl chloride	486.6	483.7	52.0	176.9	0.80	0.07	0.36
1-bromoheptane	536.5	473.1	42.4	202.6	0.71	0.05	0.38
4-chlorobiphenyl	435.5	391.8	40.0	428.1	0.72	0.06	0.98
<i>p</i> -tolyl trifluoromethanesulfonate	430.6	356.8	32.3	248.6	0.59	0.05	0.57
phenylboronic acid pinacol ester	423.2	448.6	46.6	456.9	0.72	0.07	1.06
aniline	623.5	576.5	64.4	253.5	0.74	0.07	0.41

<i>N</i> -methyl- <i>p</i> -toluenesulfonamide	520.6	429.4	87.0	394.3	0.58	0.12	0.76
<i>N</i> -(<i>tert</i> -butoxycarbonyl)methylamine	403.4	430.7	57.6	160.6	0.75	0.10	0.40
acetophenone	527.4	412.9	126.6	171.7	0.63	0.17	0.33
4-bromobiphenyl	511.6	453.6	50.1	292.2	0.71	0.07	0.57
benzyloxytrimethylsilane	410.2	299.5	46.3	308.4	0.51	0.08	0.75
1-nonyne	515.4	142.3	8.0	3.1	0.22	0.01	0.01
4-fluorobenzaldehyde	572.4	20.8	14.5	55.3	0.03	0.02	0.10
4-ethylbenzoic acid	551.1	2.7	0.0	N/D	0.00	0.00	N/D
4-ethylnitrobenzene	501.4	0.0	0.0	178	0.00	0.00	0.36
4-bromoheptane	599.2	374.7	31.8	25.1	0.50	0.04	0.04
1-iodooctane	560.2	447.3	38.1	0.0	0.64	0.05	0.00
iodocyclohexane	452.3	437	34.4	2.9	0.78	0.05	0.01
1-decylamine	436.2	261.1	57.6	0.0	0.48	0.09	0.00
cyclohexylmethanol	577.4	11.4	10.9	227.5	0.02	0.01	0.39
4-phenylphenol	507.5	60.6	36.0	367.2	0.10	0.05	0.72

^aReactions containing *p*-tolyl trifluoromethanesulfonate, phenylboronic acid pinacol ester, 2-phenyl-1,3-dioxolane, *N*-methyl-*p*-toluenesulfonamide, *N*-(*tert*-butoxycarbonyl)methylamine, and benzyloxytrimethylsilane were performed following GC-FID maintenance and ratios were calculated using updated response factors.

Table S4: Yields and additive recovery.

Additive	Yield	B:L	Additive Remaining
1-decene	64%	12.8	85%
styrene	61%	12.1	71%
<i>tert</i> -butyl acrylate	67%	9.1	64%
2-octanone	91%	9.4	68%
4-ethylbenzotrile	78%	13.6	71%
3-chloropropylbenzene	81%	11.0	100%
cyclohexyl chloride	89%	10.8	88%
1-bromoheptane	78%	13.0	69%
4-chlorobiphenyl	80%	11.4	95%
<i>p</i> -tolyl trifluoromethanesulfonate	63%	11.2	100%
phenylboronic acid pinacol ester	79%	9.7	101%
aniline	83%	10.4	92%
2-phenyl-1,3-dioxolane	76%	9.9	81%
<i>N</i> -methyl- <i>p</i> -toluenesulfonamide	69%	5.0	100%
<i>N</i> -(<i>tert</i> -butoxycarbonyl)methylamine	84%	7.6	96%
acetophenone	81%	3.8	59%
4-bromobiphenyl	79%	10.6	53%
benzyloxytrimethylsilane	59%	6.5	100%
1-nonyne	24%	20.7	1%
4-fluorobenzaldehyde	5%	1.7	8%
4-ethylbenzoic acid	0%	N/D	0%
4-ethylnitrobenzene	0%	N/D	53%
4-bromoheptane	55%	13.7	8%
1-iodooctane	71%	13.7	0%
iodocyclohexane	85%	14.8	1%
1-decylamine	58%	5.3	0%
cyclohexylmethanol	3%	1.2	100%
4-phenylphenol	15%	2.0	90%

Functional groups we considered to be tolerated in the reaction had yield and additive recovery >60%. If the yield or the additive recovery was <15% we considered this functional group to be incompatible with the method. Potentially problematic functionalities fall in the range of 15-60% yield or additive recovery.

4. Aziridine Synthesis and Characterization



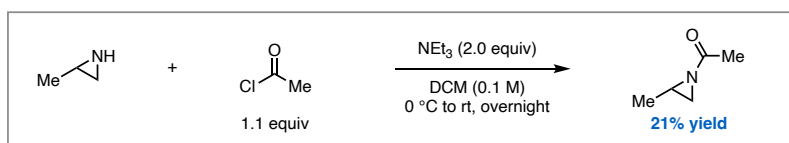
N-benzoyl-2-methyl aziridine (1a) was prepared according to General Procedure A from 2-methyl aziridine (70.0 mmol) and benzoyl chloride. The resulting oil was purified by flash chromatography (8% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 80 °C, full vacuum) to give the product as a clear oil (83% yield). Spectral data are in agreement with reported literature values.²

¹H NMR (500 MHz, CDCl₃): δ 8.06 – 7.99 (m, 2H), 7.59 – 7.51 (m, 1H), 7.49 – 7.41 (m, 2H), 2.58 (pd, *J* = 5.4, 3.5 Hz, 1H), 2.54 (d, *J* = 5.8 Hz, 1H), 2.14 (d, *J* = 3.6 Hz, 1H), 1.40 (d, *J* = 5.3 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 179.4, 133.7, 132.8, 129.2, 128.5, 34.7, 32.3, 17.9.

HRMS (APCI): calculated for C₁₀H₁₂NO⁺ ([M+H]⁺): 162.0913, found 162.0912.

FTIR (ATR, cm⁻¹): 3064, 2995, 2966, 2930, 1672, 1405, 1316, 1297, 703.

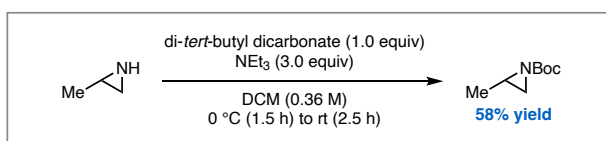


N-acetyl-2-methyl aziridine (S1): A flame-dried flask was charged with 2-methylaziridine (500.0 mg, 0.62 mL, 8.8 mmol, 1.0 equiv), DCM (0.1 M, 87 mL), and triethylamine (1.77 g, 2.44 mL, 17.5 mmol, 2.0 equiv). The solution was cooled to 0 °C and acetyl chloride (756.1 mg, 0.68 mL, 9.6 mmol, 1.1 equiv) was added dropwise. The reaction was stirred at room temperature overnight. The reaction mixture was then quenched with saturated NaHCO₃. The aqueous layer was extracted with DCM (2x). The organic layers were combined and washed with brine, dried over MgSO₄, filtered, and concentrated. The resulting oil was purified by flash chromatography (25% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected yellow oil was further purified by distillation (hot plate temperature = 65 °C, 25 Torr) to give the product as a clear oil (21% yield). *Note:* the product is volatile under full vacuum. Spectral data are in agreement with reported literature values.³

¹H NMR (500 MHz, CDCl₃): δ 2.50 (pd, *J* = 5.6, 3.4 Hz, 1H), 2.32 (d, *J* = 5.8 Hz, 1H), 2.13 (s, 3H), 1.94 (d, *J* = 3.4 Hz, 1H), 1.32 (d, *J* = 5.5 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 183.3, 33.0, 31.7, 23.9, 17.8.

HRMS (APCI): calculated for C₅H₁₀NO⁺ ([M+H]⁺): 100.0757, found 100.0754.



N-Boc-2-methyl aziridine (S2) was prepared according to a modified literature procedure.⁴ A flame-dried flask was charged with 2-methylaziridine (500.0 mg, 0.62 mL, 8.8 mmol, 1.0 equiv), DCM (0.36 M, 24 mL), and triethylamine (2.66 g, 3.66 mL, 26.3 mmol, 3.0 equiv). The solution was cooled to 0 °C and di-*tert*-butyl dicarbonate (1.91 g, 8.8 mmol, 1.0 equiv) was added. The reaction was stirred for 1.5 hours at 0 °C and then was warmed to room temperature and stirred

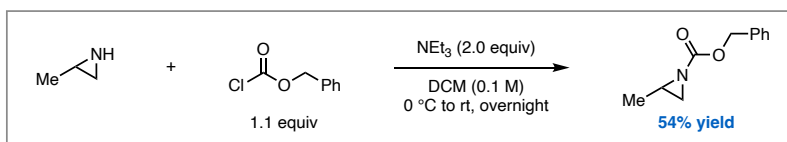
for an additional 2 hours. The reaction mixture was then quenched with saturated NaHCO₃. The aqueous layer was extracted with DCM (2x). The organic layers were combined and washed with brine, dried over MgSO₄, filtered, and concentrated. The resulting oil was purified by flash chromatography (10% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, KMnO₄ stain) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 70 °C, 8 Torr) to give the product as a clear oil (58% yield). *Note:* the product is volatile under full vacuum. Spectral data are in agreement with reported values.⁵

¹H NMR (500 MHz, CDCl₃): δ 2.43 (pd, *J* = 5.6, 3.7 Hz, 1H), 2.23 (d, *J* = 5.9 Hz, 1H), 1.87 (d, *J* = 3.8 Hz, 1H), 1.45 (s, 9H), 1.26 (d, *J* = 5.6 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 162.6, 81.1, 33.7, 32.6, 28.1, 17.5.

HRMS (APCI): calculated for C₈H₁₆NO₂⁺ ([M+H]⁺): 158.1176, found 158.1176.

FTIR (ATR, cm⁻¹): 3001, 2976, 2932, 1712, 1474, 1457, 1367, 1304, 1222, 1148, 749.



***N*-Cbz-2-methyl aziridine (S3):** A flame-dried flask was charged with 2-methylaziridine (500.0 mg, 0.62 mL, 8.8 mmol, 1.0 equiv), DCM (0.1 M, 87 mL), and triethylamine (1.77 g, 2.44 mL, 17.5 mmol, 2.0 equiv). The solution was cooled to 0 °C and benzyl chloroformate (1.64 g, 1.38 mL, 9.6 mmol, 1.1 equiv) was added dropwise. The reaction was stirred at room temperature overnight. The reaction mixture was then quenched with saturated NaHCO₃. The aqueous layer was extracted with DCM (2x). The organic layers were combined and washed with brine, dried over MgSO₄, filtered, and concentrated. The resulting oil was purified by flash chromatography (10% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 85 °C, full vacuum) to give the product as a clear oil (54% yield). Spectral data are in agreement with reported values.⁶

¹H NMR (500 MHz, CDCl₃): δ 7.41 – 7.28 (m, 5H), 5.16 – 5.11 (m, 2H), 2.52 (pd, *J* = 5.6, 3.8 Hz, 1H), 2.33 (d, *J* = 5.9 Hz, 1H), 1.96 (d, *J* = 3.8 Hz, 1H), 1.28 (d, *J* = 5.6 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 163.5, 136.0, 128.7, 128.4, 128.3, 68.2, 34.0, 32.8, 17.6.

HRMS (APCI): calculated for C₁₁H₁₄NO₂⁺ ([M+H]⁺): 192.1019, found 192.1019.

FTIR (ATR, cm⁻¹): 3066, 3033, 3002, 2967, 2932, 1713, 1455, 1408, 1379, 1290, 1203, 1151, 1060, 1027, 695.



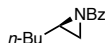
***N*-benzoyl-2-ethyl aziridine (2a)** was prepared according to General Procedure B from 2-aminobutan-1-ol (15.0 mmol). The product was isolated by flash chromatography (10% Et₂O/hexanes). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 80 °C, full vacuum) to give the product as a clear oil (31% yield).

¹H NMR (600 MHz, CDCl₃): δ 8.03 (dd, *J* = 8.1, 1.3 Hz, 2H), 7.58 – 7.50 (m, 1H), 7.47 – 7.42 (m, 2H), 2.56 – 2.51 (m, 1H), 2.50 (d, *J* = 5.9 Hz, 1H), 2.19 (d, *J* = 3.6 Hz, 1H), 1.89 (dq, *J* = 14.7, 7.4, 4.5 Hz, 1H), 1.51 (dp, *J* = 14.5, 7.4 Hz, 1H), 1.03 (t, *J* = 7.5 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 179.5, 133.6, 132.7, 129.2, 128.5, 39.9, 31.1, 25.3, 10.4.

HRMS (APCI): calculated for C₁₁H₁₄NO⁺ ([M+H]⁺): 176.1070, found 176.1076.

FTIR (ATR, cm⁻¹): 3060, 2966, 2931, 2878, 1670, 1315, 1294, 707.



N-benzoyl-2-n-butyl aziridine (3a) was prepared according to General Procedure B from (R)-2-aminohexan-1-ol hydrochloride (5.0 mmol). The product was isolated by flash chromatography (5% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 90 °C, full vacuum) to give the product as a clear oil (41% yield).

¹H NMR (500 MHz, CDCl₃): δ 8.03 (dd, *J* = 8.3, 1.4 Hz, 2H), 7.65 – 7.49 (m, 1H), 7.49 – 7.38 (m, 2H), 2.58 – 2.52 (m, 1H), 2.50 (d, *J* = 5.9 Hz, 1H), 2.19 (d, *J* = 3.7 Hz, 1H), 1.94 – 1.80 (m, 1H), 1.51 – 1.33 (m, 5H), 0.91 (t, *J* = 7.2 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 179.5, 133.6, 132.7, 129.2, 128.5, 38.7, 32.0, 31.8, 28.8, 22.5, 14.1.

HRMS (APCI): calculated for C₁₃H₁₈NO⁺ ([M+H]⁺): 204.1383, found 204.1383.

FTIR (ATR, cm⁻¹): 3058, 2992, 2957, 2859, 1672, 1449, 1315, 1297, 723, 707.

Optical Rotation: [α]_D²³ (*c* 1.0 g/100 mL, CHCl₃) = -68.4.



N-benzoyl-2-benzyl aziridine (4a) was prepared according to General Procedure B from L-phenylalaninol (5.0 mmol). The product was isolated by flash chromatography (10% EtOAc/hexanes). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 125 °C, full vacuum) to give the product as a clear oil (29% yield). Spectral data are in agreement with reported values.⁷

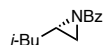
¹H NMR (600 MHz, CDCl₃): δ 8.05 – 7.96 (m, 2H), 7.54 (tt, *J* = 7.3, 1.9 Hz, 1H), 7.47 – 7.37 (m, 2H), 7.36 – 7.29 (m, 2H), 7.29 – 7.22 (m, 3H)^a, 3.22 – 3.15 (m, 1H), 2.86 – 2.75 (m, 2H), 2.58 – 2.53 (m, 1H), 2.30 – 2.26 (m, 1H).

^aOverlaps with solvent residual peak.

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 179.3, 137.5, 133.3, 132.8, 129.3, 129.0, 128.8, 128.5, 126.9, 38.8, 38.6, 31.7.

HRMS (APCI): calculated for C₁₆H₁₆NO⁺ ([M+H]⁺): 238.1226, found 238.1228.

FTIR (ATR, cm⁻¹): 3084, 3060, 3028, 2994, 2916, 1670, 1316, 1294, 723, 699.



N-benzoyl-2-isobutyl aziridine (5a) was prepared according to General Procedure B from L-leucinol (5.0 mmol). The product was isolated by flash chromatography (3% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and

concentrated. The collected oil was further purified by distillation (hot plate temperature = 70 °C, full vacuum) to give the product as a clear oil (27% yield).

¹H NMR (600 MHz, CDCl₃): δ 8.05 – 8.02 (m, 2H), 7.57 – 7.52 (m, 1H), 7.48 – 7.42 (m, 2H), 2.61 – 2.56 (m, 1H), 2.53 – 2.50 (m, 1H), 2.20 (d, *J* = 3.7 Hz, 1H), 1.86 – 1.75 (m, 2H), 1.33 – 1.19 (m, 1H), 1.00 – 0.96 (m, 6H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 179.5, 133.6, 132.7, 129.2, 128.5, 41.4, 37.5, 32.5, 27.1, 22.9, 22.6.

HRMS (APCI): calculated for C₁₃H₁₈NO⁺ ([M+H]⁺): 204.1383, found 204.1389.

FTIR (ATR, cm⁻¹): 3060, 2991, 2956, 2926, 2870, 1671, 1316, 1300, 707.



***N*-benzoyl-2-isopropyl aziridine (6a)** was prepared according to General Procedure B from L-valinol (10.0 mmol). The product was isolated by flash chromatography (10% Et₂O/hexanes). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 90 °C, full vacuum) to give the product as a clear oil (37% yield).

¹H NMR (500 MHz, CDCl₃): δ 8.05 – 8.01 (m, 2H), 7.57 – 7.51 (m, 1H), 7.47 – 7.41 (m, 2H), 2.44 (td, *J* = 6.1, 3.7 Hz, 1H), 2.40 (dd, *J* = 6.1, 0.6 Hz, 1H), 2.27 (dd, *J* = 3.5, 0.6 Hz, 1H), 1.87 – 1.74 (m, 1H), 1.08 (d, *J* = 6.7 Hz, 3H), 0.99 (d, *J* = 6.9 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 179.7, 133.5, 132.7, 129.3, 128.5, 43.8, 30.3, 30.0, 20.1, 18.4.

HRMS (APCI): calculated for C₁₂H₁₆NO⁺ ([M+H]⁺): 190.1226, found 190.1233.

IR (ATM cm⁻¹): 3061, 2960, 2928, 2874, 1670, 1316, 1290, 706.

Optical Rotation: [α]_D²³ (*c* 1.0 g/100 mL, CHCl₃) = +109.2.



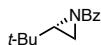
***N*-benzoyl-2-cyclohexyl aziridine (7a)** was prepared according to General Procedure B from (S)-2-amino-2-cyclohexylethanol (5.0 mmol). The product was isolated by flash chromatography (10% EtOAc/hexanes). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 100 °C, full vacuum) to give the product as a clear oil (28% yield).

¹H NMR (600 MHz, CDCl₃): δ 8.05 – 8.02 (m, 2H), 7.56 – 7.51 (m, 1H), 7.44 (t, *J* = 7.7 Hz, 2H), 2.46 – 2.42 (m, 1H), 2.39 (d, *J* = 6.2 Hz, 1H), 2.29 (d, *J* = 3.7 Hz, 1H), 1.91 – 1.84 (m, 1H), 1.81 – 1.74 (m, 3H), 1.72 – 1.65 (m, 1H), 1.48 – 1.37 (m, 1H), 1.33 – 1.14 (m, 4H), 1.14 – 1.04 (m, 1H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 179.8, 133.5, 132.7, 129.2, 128.5, 42.8, 39.7, 30.9, 30.8, 29.3, 26.4, 26.0, 25.9.

HRMS (APCI): calculated for C₁₅H₂₀NO⁺ ([M+H]⁺): 230.1539, found 230.1540.

IR (ATM cm⁻¹): 3064, 2986, 2922, 2850, 1672, 1317, 1305, 708.



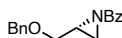
N-benzoyl-2-*tert*-butyl aziridine (8a) was prepared according to General Procedure B from *L-tert*-leucinol (10.0 mmol). The product was isolated by flash chromatography (10% Et₂O/hexanes). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 115 °C, full vacuum) to give the product as a clear oil (51% yield).

¹H NMR (500 MHz, CDCl₃): δ 8.09 – 8.01 (m, 2H), 7.59 – 7.50 (m, 1H), 7.48 – 7.39 (m, 2H), 2.47 (dd, *J* = 6.3, 3.9 Hz, 1H), 2.35 (dd, *J* = 3.8, 0.7 Hz, 1H), 2.29 (dd, *J* = 6.3, 0.7 Hz, 1H), 1.01 (s, 9H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 179.9, 133.5, 132.7, 129.3, 128.4, 46.5, 30.8, 29.7, 26.7.

HRMS (ESI-TOF): calculated for C₁₃H₁₈NO⁺ ([M+H]⁺): 204.1383, found 204.1389.

IR (ATM cm⁻¹): 3060, 3031, 2955, 2904, 2869, 1672, 1318, 1306, 1274, 714, 705.



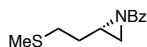
(R)-(2-((benzyloxy)methyl)aziridin-1-yl)(phenyl)methanone (9a) was prepared according to General Procedure B from H-Serinol(Bzl) (2.5 mmol). The product was isolated by flash chromatography (5% to 25% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated to give the product as a yellow oil (26% yield).

¹H NMR (500 MHz, CDCl₃): δ 8.16 – 8.07 (m, 2H), 7.58 – 7.50 (m, 1H), 7.45 – 7.38 (m, 2H), 7.38 – 7.27 (m, 5H), 4.61 – 4.52 (m, 2H), 3.75 – 3.65 (m, 2H), 2.87 (tdd, *J* = 5.8, 4.4, 3.6 Hz, 1H), 2.57 (d, *J* = 6.1 Hz, 1H), 2.35 (d, *J* = 3.6 Hz, 1H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 178.8, 137.9, 133.1, 132.9, 129.5, 128.6, 128.5, 128.0, 127.9, 73.4, 70.6, 37.3, 29.1.

HRMS (APCI): calculated for C₁₇H₁₈NO₂⁺ ([M+H]⁺): 268.1332, found 268.1332.

IR (ATM cm⁻¹): 3062, 3029, 2997, 1670, 1449, 1342, 1315, 1297, 1224, 1094, 1073, 1026, 725, 698.



(S)-(2-(2-(methylthio)ethyl)aziridin-1-yl)(phenyl)methanone (10a) was prepared according to General Procedure B from (S)-2-amino-4-(methylthio)butan-1-ol (2.5 mmol). The product was isolated by flash chromatography (5% to 25% EtOAc/hexanes + 5% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated to give the product as a yellow oil (12% yield).

¹H NMR (500 MHz, CDCl₃): δ 8.08 – 7.98 (m, 2H), 7.61 – 7.52 (m, 1H), 7.49 – 7.41 (m, 2H), 2.72 – 2.66 (m, 1H), 2.67 – 2.62 (m, 2H), 2.53 (d, *J* = 5.9 Hz, 1H), 2.28 (d, *J* = 3.6 Hz, 1H), 2.16 – 2.06 (m, 4H), 1.87 – 1.70 (m, 1H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 179.3, 133.4, 132.9, 129.2, 128.6, 37.4, 32.1, 32.0, 31.3, 15.9.

HRMS (APCI): calculated for C₁₂H₁₆NOS⁺ ([M+H]⁺): 222.0947, found 222.0947.

IR (ATM cm⁻¹): 3058, 2988, 2914, 2851, 2259, 1670, 1449, 1405, 1315, 1296, 708.



(6-azabicyclo[3.1.0]hexan-6-yl)(phenyl)methanone (11a) was prepared according to General Procedure A from 6-azabicyclo[3.1.0]hexane (3.0 mmol) and benzoyl chloride. The resulting oil was purified by flash chromatography (5% to 10% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 90 °C, full vacuum) to give the product as a clear oil (86% yield). Spectral data are in agreement with reported literature values.⁸

¹H NMR (500 MHz, CDCl₃): δ 8.03 – 7.94 (m, 2H), 7.57 – 7.49 (m, 1H), 7.46 – 7.41 (m, 2H), 3.19 (s, 2H), 2.19 – 2.10 (m, 2H), 1.83 – 1.61 (m, 3H), 1.48 – 1.30 (m, 1H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 178.3, 133.8, 132.5, 128.9, 128.5, 43.8, 27.1, 19.7.

HRMS (ESI-TOF): calculated for C₁₂H₁₄NO⁺ ([M+H]⁺): 188.1070, found 188.1070.

FTIR (ATR, cm⁻¹): 3058, 3027, 2956, 2859, 1664, 1381, 1318, 1282, 703.



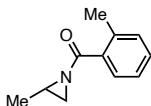
(7-azabicyclo[4.1.0]heptan-7-yl)(phenyl)methanone (12a) was prepared according to General Procedure B from trans-2-aminocyclohexan-1-ol (5.0 mmol). The product was isolated by flash chromatography (5% NEt₃/hexanes). Fractions containing product (determined by TLC, UV light) were collected and concentrated to give the product as a white solid (31% yield). Spectral data are in agreement with reported values.⁸

¹H NMR (500 MHz, CDCl₃): δ 8.05 – 7.96 (m, 2H), 7.59 – 7.49 (m, 1H), 7.49 – 7.40 (m, 2H), 2.76 (m, 2H), 2.13 – 2.03 (m, 2H), 1.97 – 1.85 (m, 2H), 1.66 – 1.49 (m, 2H), 1.43 – 1.30 (m, 2H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 180.4, 133.8, 132.6, 129.2, 128.5, 37.2, 24.1, 20.2.

HRMS (ESI-TOF): calculated for C₁₃H₁₆NO⁺ ([M+H]⁺): 202.1226, found 202.1225.

FTIR (ATR, cm⁻¹): 3060, 3030, 3005, 2933, 2858, 1670, 1312, 1288, 704.



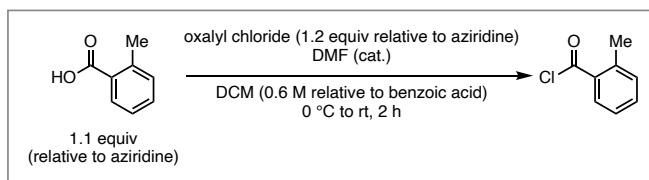
(2-methylaziridin-1-yl)(*o*-tolyl)methanone (13a) was prepared according to General Procedure A from 2-methyl aziridine (8.8 mmol) and synthesized 2-methylbenzoyl chloride (see below). The product was purified by flash chromatography (2% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 75 °C, full vacuum) to give the product as a clear oil (65% yield).

¹H NMR (500 MHz, CDCl₃): δ 7.89 (dd, *J* = 7.8, 1.5 Hz, 1H), 7.37 (td, *J* = 7.5, 1.5 Hz, 1H), 7.29 – 7.19 (m, 2H), 2.53 (s, 3H), 2.52 – 2.48 (m, 1H), 2.46 (d, *J* = 5.7 Hz, 1H), 2.08 (d, *J* = 3.5 Hz, 1H), 1.30 (d, *J* = 5.4 Hz, 3H).

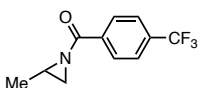
¹³C{¹H} NMR (126 MHz, CDCl₃): δ 181.1, 139.1, 134.0, 131.7, 131.3, 130.3, 125.8, 34.4, 32.3, 21.3, 17.8.

HRMS (APCI): calculated for C₁₁H₁₄NO⁺ ([M+H]⁺): 176.1070, found 176.1075.

IR (ATM cm⁻¹): 3062, 2990, 2966, 2928, 1673, 1404, 1306, 1286, 743.



2-methylbenzoyl chloride: A flame-dried flask was charged with 2-methylbenzoic acid (1.311 g, 9.6 mmol, 1.1 equiv relative to aziridine). The flask was evacuated and backfilled with N₂ (3x). DCM (0.6 M relative to benzoic acid, 16 mL) and a few drops of DMF were added. The reaction was cooled to 0 °C and oxalyl chloride (1.334 g, 0.92 mL, 10.5 mmol, 1.2 equiv relative to aziridine) was added dropwise. The reaction was stirred at room temperature until the carboxylic acid had fully dissolved and bubbling had stopped (~2 hours). The reaction was concentrated under reduced pressure to yield 2-methylbenzoyl chloride that was used without further purification.



(2-methylaziridin-1-yl)(4-(trifluoromethyl)phenyl)methanone (14a) was prepared according to General Procedure A from 2-methyl aziridine (4.4 mmol) and 4-(trifluoromethylbenzoyl) chloride. The product was purified by flash chromatography (5% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 75 °C, full vacuum) to give the product as a clear oil (71% yield).

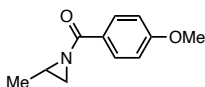
¹H NMR (400 MHz, CDCl₃): δ 8.13 (d, *J* = 8.1 Hz, 2H), 7.72 (d, *J* = 8.1 Hz, 2H), 2.62 (pd, *J* = 5.4, 3.6 Hz, 1H), 2.57 (d, *J* = 5.8 Hz, 1H), 2.19 (d, *J* = 3.6 Hz, 1H), 1.40 (d, *J* = 5.4 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 178.0, 136.8, 134.2 (q, *J* = 32.6 Hz), 129.5, 125.6 (q, *J* = 3.8 Hz), 123.8 (q, *J* = 272.6 Hz), 35.0, 32.5, 17.8.

¹⁹F NMR (376 MHz, CDCl₃): δ -63.0 (s).

HRMS (APCI): calculated for C₁₁H₁₁F₃NO⁺ ([M+H]⁺): 230.0787, found 230.0791.

IR (ATM cm⁻¹): 2998, 2970, 2932, 1675, 1411, 1312, 1164, 1126, 1107, 1065, 778, 717.



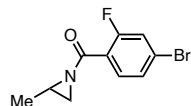
(4-methoxyphenyl)(2-methylaziridin-1-yl)methanone (15a) was prepared according to General Procedure A from 2-methyl aziridine (4.4 mmol) and 4-methoxybenzoyl chloride. The product was purified by flash chromatography (10% EtOAc/hexanes + 1% NEt₃). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 130 °C, full vacuum) to give the product as a clear oil (74% yield).

¹H NMR (500 MHz, CDCl₃): δ 8.03 – 7.96 (m, 2H), 6.98 – 6.89 (m, 2H), 3.87 (s, 3H), 2.58 – 2.53 (m, 1H), 2.52 (d, *J* = 5.8 Hz, 1H), 2.11 (d, *J* = 3.6 Hz, 1H), 1.38 (d, *J* = 5.3 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 179.0, 163.3, 131.2, 126.3, 113.7, 55.6, 34.7, 32.2, 17.9.

HRMS (APCI): calculated for C₁₁H₁₄NO⁺ ([M+H]⁺): 192.1019, found 192.1025.

IR (ATM cm⁻¹): 3065, 2995, 2965, 2932, 2840, 1664, 1603, 1301, 1254, 1167, 776.



(4-bromo-2-fluorophenyl)(2-methylaziridin-1-yl)methanone (16a) was prepared according to a modified General Procedure A from 2-methyl aziridine (4.4 mmol) and synthesized 4-bromo-2-fluorobenzoyl chloride (see below). NEt_3 was added to a solution of 4-bromo-2-fluorobenzoyl chloride in DCM followed by addition of 2-methyl aziridine at 0 °C. The product was purified by flash chromatography (10% EtOAc/hexanes). Fractions containing product (determined by TLC, UV light) were collected and concentrated. The collected oil was further purified by distillation (hot plate temperature = 90 °C, full vacuum) to give the product as a clear oil (65% yield).

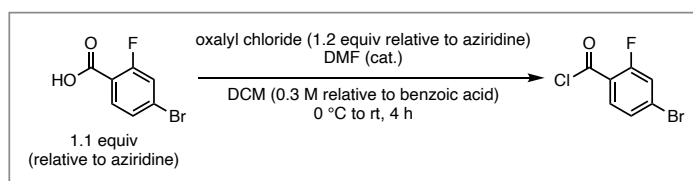
$^1\text{H NMR}$ (600 MHz, CDCl_3): δ 7.89 – 7.77 (m, 1H), 7.43 – 7.31 (m, 2H), 2.71 – 2.64 (m, 1H), 2.53 (dd, $J = 5.8, 0.8$ Hz, 1H), 2.17 (dd, $J = 3.7, 1.0$ Hz, 1H), 1.34 (d, $J = 5.5$ Hz, 3H).

$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3): δ 175.0 (d, $J = 4.1$ Hz), 161.1 (d, $J = 262.1$ Hz), 133.0 (d, $J = 2.6$ Hz), 127.8 (d, $J = 3.8$ Hz), 127.5 (d, $J = 9.7$ Hz), 121.3 (d, $J = 11.5$ Hz), 120.6 (d, $J = 26.3$ Hz), 35.3 (d, $J = 1.9$ Hz), 32.8 (d, $J = 1.9$ Hz), 17.7 (d, $J = 1.4$ Hz).

$^{19}\text{F NMR}$ (565 MHz, CDCl_3): δ -106.9 (t, $J = 9.0$ Hz).

HRMS (ESI-TOF): calculated for $\text{C}_{10}\text{H}_{10}^{79}\text{BrFNO}^+$ ($[\text{M}+\text{H}]^+$): 257.9924, found 257.9924.

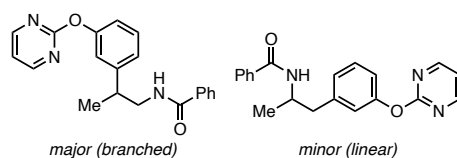
IR (ATM cm^{-1}): 3069, 2995, 2969, 2932, 1663, 1597, 1405, 1311, 1214, 772.



4-bromo-2-fluorobenzoyl chloride: A flame-dried flask was charged with 4-bromo-2-fluorobenzoic acid (1.055 g, 4.8 mmol, 1.1 equiv relative to aziridine). The flask was evacuated and backfilled with N_2 (3x). DCM (0.6 M relative to benzoic acid, 8 mL) and a few drops of DMF were added. The reaction was cooled to 0 °C and oxalyl chloride (666.8 mg, 0.46 mL, 5.3 mmol, 1.2 equiv relative to aziridine) was added dropwise. The reaction was stirred at room temperature for 4 hours (DCM (8 mL) added at 1.5 hours). The reaction was concentrated under reduced pressure to yield 4-bromo-2-fluorobenzoyl chloride that was used without further purification. At the time this manuscript was prepared, 4-bromo-2-fluorobenzoyl chloride was commercially available.

5. Characterization of Cross-Coupled Products

5.1. Cross-Coupling of 1a with Aryl Iodides



***N*-(2-(4-(pyrimidin-2-yloxy)phenyl)propyl)benzamide (A-1)** was prepared according to General Procedure C from **1a** and 2-(4-iodophenoxy)pyrimidine. The product was isolated by flash chromatography (35% acetone/hexanes + 1% NEt₃) to produce **A-1** as a yellow oil (45% yield (14:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 53% yield (12.5:1)

Run 2: 37% yield (15.4:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 8.48 (d, *J* = 4.9 Hz, 2H), 7.66 – 7.61 (m, 2H), 7.48 – 7.32 (m, 4H), 7.15 (dt, *J* = 7.7, 1.4 Hz, 1H), 7.11 – 7.06 (m, 2H), 7.01 (t, *J* = 4.8 Hz, 1H), 6.20 (br s, 1H), 3.90 – 3.81 (m, 1H), 3.38 (ddd, *J* = 13.5, 8.8, 5.0 Hz, 1H), 3.18 – 3.07 (m, 1H), 1.35 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.7, 165.4, 159.8, 153.3, 146.3, 134.8, 131.5, 130.1, 128.6, 127.0, 124.5, 120.7, 120.0, 116.3, 46.7, 39.7, 19.1.

Linear Isomer:

¹H NMR (500 MHz, CDCl₃): δ 8.56 (d, *J* = 4.7 Hz, 2H), 7.70 – 7.67 (m, 2H), 7.54 – 7.31 (m, 4H), 7.21 – 6.96 (m, 4H), 6.04 (d, *J* = 8.3 Hz, 1H), 4.55 – 4.42 (m, 1H), 2.98 (dd, *J* = 13.5, 5.4 Hz, 1H), 2.90 (dd, *J* = 13.6, 6.9 Hz, 1H), 1.24 (d, *J* = 6.7 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃)^{a,b}: δ 166.98, 165.47, 159.90, 153.01, 139.81, 129.75, 128.65, 126.94, 126.91, 124.46, 123.03, 120.63, 119.85, 116.27, 46.40, 42.12, 19.99.

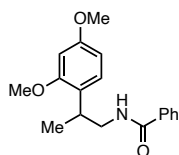
^aTwo decimal places shown to distinguish between peaks at δ 126.94 and 126.91.

^bDue to a trace impurity in the sample, ¹³C{¹H} assignments for the linear isomer are less certain.

Mixture of Isomers:

HRMS (APCI): calculated for C₂₀H₂₀N₃O₂⁺ ([M+H]⁺): 334.1550, found 334.1549.

IR (ATM cm⁻¹): 3313 (br), 3071, 3062, 2967, 2928, 2915, 1641, 1571, 1540, 1488, 1405, 1305, 698.



***N*-(2-(2,4-dimethoxyphenyl)propyl)benzamide (B-1)** was prepared according to General Procedure C from **1a** and 1-iodo-2,4-dimethoxybenzene. The product was isolated by flash chromatography (20% acetone/hexanes) to produce **B-1** as a white solid (22% yield (>20:1)). The product was isolated with high selectivity for the branched isomer (>20:1); as such, only branched isomer characterization data is provided.

Run 1: 21% yield (>20:1)

Run 2: 22% yield (>20:1)

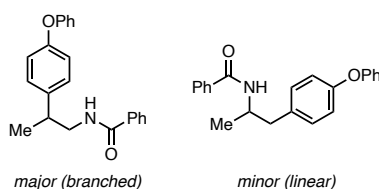
¹H NMR (500 MHz, CDCl₃): δ 7.63 (d, *J* = 7.4 Hz, 2H), 7.48 – 7.41 (m, 1H), 7.42 – 7.34 (m, 2H), 7.14 (d, *J* = 8.4 Hz, 1H), 6.50 (dd, *J* = 8.4, 2.4 Hz, 1H), 6.47 (d, *J* = 2.4 Hz, 1H), 6.28 (br s, 1H), 3.83 – 3.76 (m, 6H), 3.74 – 3.65 (m, 1H), 3.52 – 3.40 (m, 2H), 1.30 (d, *J* = 6.4 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃)^a: δ 167.52, 159.53, 158.13, 135.10, 131.27, 128.56, 127.75, 126.86, 124.56, 104.65, 98.83, 55.53, 55.47, 46.46, 31.93, 18.28.

^aTwo decimal places shown to distinguish between peaks at δ 55.53 and 55.47.

HRMS (APCI): calculated for C₁₈H₂₂NO₃⁺ ([M+H]⁺): 300.1594, found 300.1594.

IR (ATM cm⁻¹): 3320 (br), 3067, 3004, 2995, 2958, 2934, 2876, 2837, 1639, 1612, 1582, 1540, 1506, 1489, 1457, 1292, 1261, 1208, 1158, 1034, 933, 711, 695.



***N*-(2-(4-phenoxyphenyl)propyl)benzamide (C-1)** was prepared according to General Procedure C from **1a** and benzyl 1-iodo-4-phenoxybenzene. The product was isolated by flash chromatography (15% acetone/hexanes) to produce **C-1** as a white solid (71% yield (11:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 74% yield (10.0:1)

Run 2: 68% yield (11.1:1)

Partial isolation of branched and linear isomers was done via preparative thin layer chromatography (20% EtOAc/hexanes) to aid in characterization.

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.66 – 7.61 (m, 2H), 7.51 – 7.44 (m, 1H), 7.40 (t, *J* = 7.6 Hz, 2H), 7.37 – 7.29 (m, 2H), 7.25 – 7.20 (m, 2H), 7.13 – 7.07 (m, 1H), 7.05 – 6.97 (m, 4H), 6.01 (br s, 1H), 3.82 (dt, *J* = 13.5, 6.4 Hz, 1H), 3.41 (ddd, *J* = 13.6, 8.8, 5.0 Hz, 1H), 3.13 – 3.04 (m, 1H), 1.34 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.6, 157.4, 156.1, 139.0, 134.8, 131.5, 129.9, 128.7, 128.6, 126.9, 123.4, 119.3, 118.9, 46.8, 39.3, 19.5.

Linear Isomer:

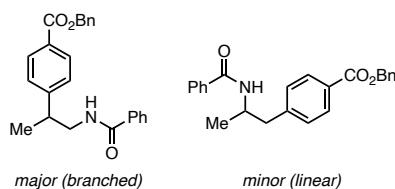
¹H NMR (500 MHz, CDCl₃): δ 7.70 (d, *J* = 6.9 Hz, 2H), 7.51 – 7.31 (m, 5H), 7.23 – 7.17 (m, 2H), 7.12 – 7.09 (m, 1H), 7.02 – 6.94 (m, 4H), 5.93 (br s, 1H), 4.52 – 4.40 (m, 1H), 2.92 (dd, *J* = 13.6, 5.7 Hz, 1H), 2.84 (dd, *J* = 13.6, 7.0 Hz, 1H), 1.24 (d, *J* = 6.7 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 166.9, 157.5, 156.0, 135.0, 132.9, 131.5, 130.9, 129.9, 128.7, 127.0, 123.3, 119.1, 118.9, 46.7, 41.8, 20.2.

Mixture of Isomers:

HRMS (APCI): calculated for C₂₂H₂₂NO₂⁺ ([M+H]⁺): 332.1645, found 332.1644.

IR (ATM cm⁻¹): 3319 (br), 3060, 3038, 2967, 2930, 2873, 1636, 1540, 1507, 1489, 1237, 870, 848, 692.



Benzyl 4-(1-benzamidopropan-2-yl)benzoate (D-1) was prepared according to General Procedure C from **1a** and benzyl 4-iodobenzoate. The product was isolated by flash chromatography (20% acetone/hexanes) to produce **D-1** as a white solid (87% yield (8:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 89% yield (8.3:1)

Run 2: 85% yield (6.9:1)

Partial isolation of branched and linear products was done via preparative thin layer chromatography (20% EtOAc/hexanes) to aid in characterization.

Branched Isomer

¹H NMR (500 MHz, CDCl₃): δ 8.05 (d, *J* = 8.1 Hz, 2H), 7.61 (d, *J* = 7.2 Hz, 2H), 7.50 – 7.28 (m, 10H), 6.00 (br s, 1H), 5.36 (s, 2H), 3.83 (dt, *J* = 12.8, 6.4 Hz, 1H), 3.44 (ddd, *J* = 13.7, 8.7, 5.2 Hz, 1H), 3.23 – 3.11 (m, 1H), 1.35 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃)^a: δ 167.63, 166.39, 149.85, 136.18, 134.60, 131.62, 130.37, 128.91, 128.74, 128.73, 128.40, 128.31, 127.47, 126.87, 66.80, 46.51, 40.08, 19.20.

^aTwo decimal places shown to distinguish between peaks at δ 128.74 and 128.73.

Linear Isomer:

¹H NMR (500 MHz, CDCl₃): δ 8.01 (d, *J* = 8.0 Hz, 2H), 7.69 (d, *J* = 7.3 Hz, 2H), 7.50 – 7.28 (m, 10H), 5.93 (br s, 1H), 5.35 (s, 2H), 4.49 (hept, *J* = 6.8 Hz, 1H), 3.02 (dd, *J* = 13.5, 5.7 Hz, 1H), 2.91 (dd, *J* = 13.5, 7.1 Hz, 1H), 1.22 (d, *J* = 6.7 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 166.94, 166.47, 143.69, 136.20, 134.76, 131.63, 130.01, 129.72, 128.76^b, 128.73^c, 128.64, 128.37, 128.34^d, 126.88, 66.78, 42.54, 30.75, 20.08.

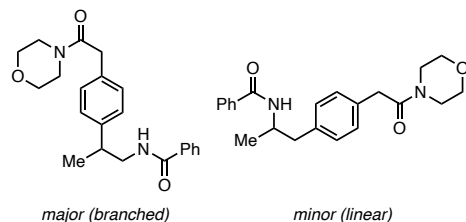
^aTwo decimal places shown to distinguish between peaks at δ 128.76 and 128.73.

^{b-d}Peak overlaps with branched isomer, appears to be linear isomer based on sample with higher concentration of linear sample.

Mixture of Isomers:

HRMS (APCI): calculated for C₂₄H₂₄NO₃⁺ ([M+H]⁺): 374.1751, found 374.1747.

IR (ATM cm⁻¹): 3326 (br), 3069, 2963, 2932, 1716, 1639, 1540, 1272, 1102, 707, 696.



***N*-(2-(4-(2-morpholino-2-oxoethyl)phenyl)propyl)benzamide (E-1)** was prepared according to General Procedure C from **1a** and 2-(4-iodophenyl)-1-morpholinoethan-1-one. The product was isolated by flash chromatography (40% acetone/hexanes) to produce a **E-1** as a slightly yellow oil (62% yield (12:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 59% yield (12.5:1)

Run 2: 66% yield (11.1:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.64 – 7.60 (m, 2H), 7.51 – 7.43 (m, 1H), 7.41 – 7.35 (m, 2H), 7.24 – 7.19 (m, 4H), 5.99 (br s, 1H), 3.81 (dt, *J* = 13.0, 6.4 Hz, 1H), 3.71 (s, 2H), 3.65 – 3.63 (m, 4H), 3.51 – 3.38 (m, 5H), 3.12 – 3.02 (m, 1H), 1.33 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 169.8, 167.6, 142.9, 134.8, 133.4, 131.5, 129.2, 128.7, 127.8, 126.9, 66.9^a, 66.6^a, 46.7^b, 46.6^b, 42.3, 40.4, 39.6, 19.4.

^{a,b}Rotamer

Linear Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.68 (d, *J* = 7.5 Hz, 2H), 7.52 – 7.32 (m, 3H), 7.25 – 7.15 (m, 4H), 5.91 (d, *J* = 8.2 Hz, 1H), 4.52 – 4.40 (m, 1H), 3.70 (s, 2H), 3.63 – 3.62 (m, 4H), 3.52 – 3.38 (m, 4H), 2.92 (dd, *J* = 13.6, 5.8 Hz, 1H), 2.84 (dd, *J* = 13.6, 7.0 Hz, 1H), 1.22 (d, *J* = 6.6 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 169.8, 166.9, 142.9, 136.7, 134.9, 133.1, 131.6, 130.1, 128.8, 126.9, 66.6^a, 46.6^{b,c}, 42.2, 40.6, 20.2.

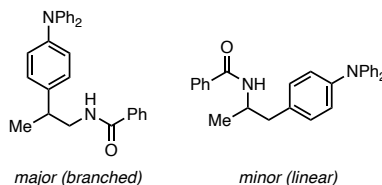
^{a,b}Only single signal for rotameric carbon is reported due to overlap with branched isomer.

^cTwo carbons, see HMBC.

Mixture of Isomers:

HRMS (APCI): calculated for C₂₂H₂₇N₂O₃⁺ ([M+H]⁺): 367.2016, found 367.2015.

IR (ATM cm⁻¹): 3324 (br), 2972, 2898, 2867, 1636, 1538, 1458, 1431, 1299, 115, 717, 697.



***N*-(2-(4-(diphenylamino)phenyl)propyl)benzamide (F-1)** was prepared according to General Procedure C from **1a** and 4-iodo-*N,N*-diphenylaniline. The product was isolated by flash chromatography (15% acetone/hexanes) to produce **F-1** as an off-white solid (63% yield (11:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 63% yield (10.0:1)

Run 2: 62% yield (11.3:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.64 (d, *J* = 7.5 Hz, 2H), 7.51 – 7.45 (m, 1H), 7.41 (t, *J* = 7.6 Hz, 2H), 7.27 – 7.21 (m, 4H), 7.13 (d, *J* = 8.4 Hz, 2H), 7.10 – 7.04 (m, 6H), 7.01 (t, *J* = 7.3 Hz, 2H), 6.00 (br s, 1H), 3.81 (dt, *J* = 13.1, 6.4 Hz, 1H), 3.41 (ddd, *J* = 12.0, 8.0, 4.2 Hz, 1H), 3.09 – 2.99 (m, 1H), 1.34 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.5, 147.9, 146.7, 138.3, 135.0, 131.5, 129.4, 128.7, 128.1, 126.9, 124.5, 124.2, 122.8, 46.8, 39.3, 19.4.

Linear Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.69 (d, *J* = 7.4 Hz, 2H), 7.51 – 7.17 (m, 7H), 7.17 – 6.97 (m, 10H), 5.92 (d, *J* = 8.1 Hz, 1H), 4.45 (hept, *J* = 6.8 Hz, 1H), 2.88 (dd, *J* = 13.6, 6.0 Hz, 1H), 2.82 (dd, *J* = 13.6, 6.9 Hz, 1H), 1.26 (d, *J* = 6.4 Hz, 3H).

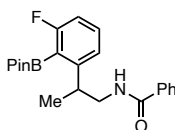
¹³C{¹H} NMR (126 MHz, CDCl₃): δ 166.87, 147.97, 146.50, 135.10, 132.33, 131.49, 131.46, 130.44, 129.33, 126.95, 124.35, 124.17, 122.75, 46.71, 42.01, 20.34.

^aTwo decimal places shown to distinguish between peaks at δ 131.49 and 131.46.

Mixture of Isomers:

HRMS (APCI): calculated for C₂₈H₂₇N₂O⁺ ([M+H]⁺): 407.2118, found 407.2118.

IR (ATM cm⁻¹): 3322 (br), 3056, 3028, 2965, 2930, 1636, 1588, 1540, 1508, 1491, 1313, 1278, 754, 712, 695.



N-(2-(3-fluoro-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)propyl)benzamide (G-1) was prepared according to General Procedure C from **1a** and 2-(2-fluoro-6-iodophenyl)-4,4,5,5-tetramethyl-1,3,2-dioxaborolane. Yields were determined by ¹⁹F NMR versus 1-fluoronaphthalene as an external standard (25% yield (>20:1)). The product was isolated for characterization by preparative thin layer chromatography (60% Et₂O/hexanes). The product was isolated with high selectivity for the branched isomer (>20:1); as such, only branched characterization data is provided.

Run 1: 27% yield (>20:1)

Run 2: 22% yield (>20:1)

¹H NMR (500 MHz, CDCl₃): δ 7.71 (d, *J* = 7.3 Hz, 2H), 7.44 (t, *J* = 7.5 Hz, 1H), 7.41 – 7.32 (m, 3H), 7.13 (d, *J* = 7.8 Hz, 1H), 6.89 (s, *J* = 8.5 Hz, 1H), 6.73 (br s, 1H), 3.70 (dt, *J* = 13.3, 4.3 Hz, 1H), 3.57 (ddd, *J* = 13.2, 10.8, 5.3 Hz, 1H), 3.20 – 3.09 (m, 1H), 1.40 – 1.33 (m, 15H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.5, 165.7 (d, *J* = 243.8 Hz), 150.9 (d, *J* = 7.6 Hz), 134.6, 132.4 (d, *J* = 9.0 Hz), 131.3, 128.4, 127.2, 121.3 (d, *J* = 2.8 Hz), 117.5^a, 113.2 (d, *J* = 23.7 Hz), 85.0, 48.0, 38.9, 25.1^b, 24.8^b, 20.3.

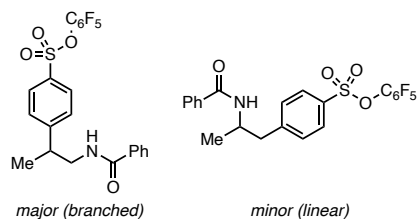
^aCarbon directly connected to boron not observed in ¹³C{¹H} NMR but observed in HMBC.

^bRotameric carbons on the methyl substituents of the BPin.

¹⁹F NMR (376 MHz, CDCl₃): δ -104.3 (ddd, *J* = 9.2, 6.5, 3.7 Hz).

HRMS (APCI): calculated for C₂₂H₂₈BFNO₃⁺ ([M+H]⁺): 384.2141, found 384.2138.

IR (ATM cm⁻¹): 3354 (br), 3059, 2976, 2932, 2874, 1644, 1613, 1534, 1489, 1452, 1381, 1366, 1317, 1224, 1142, 855, 738, 712, 693.



Perfluorophenyl 4-(1-benzamidopropan-2-yl)benzenesulfonate (H-1) was prepared according to General Procedure C from **1a** and perfluorophenyl 4-iodobenzenesulfonate. The product was isolated by flash chromatography (20% acetone/hexanes) to produce a **H-1** as a white solid (90% yield (7:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 94% yield (7.3:1)

Run 2: 85% yield (7.4:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.95 (d, *J* = 8.5 Hz, 2H), 7.66 – 7.61 (m, 2H), 7.54 – 7.47 (m, 3H), 7.43 – 7.38 (m, 2H), 6.03 (br s, 1H), 3.82 (dt, *J* = 13.3, 6.4 Hz, 1H), 3.53 (ddd, *J* = 13.9, 8.5, 5.7 Hz, 1H), 3.40 – 3.24 (m, 1H), 1.40 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.76, 153.04, 143.32 – 141.31 (m), 141.37 – 139.32 (m), 139.03 – 136.73 (m), 134.29, 132.89, 131.69, 128.96, 128.65, 128.63, 126.85, 124.28 – 123.95 (m), 46.37, 40.10, 18.96.

¹⁹F NMR (565 MHz, CDCl₃): δ -150.80 (d, *J* = 19.9 Hz, 2F), -155.25 (t, *J* = 22.0 Hz, 1F), -161.03 (t, *J* = 21.1 Hz, 2F).

Linear Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.91 (d, *J* = 8.2 Hz, 2H), 7.72 – 7.68 (m, 2H), 7.53 – 7.38 (m, 5H), 5.90 (d, *J* = 7.8 Hz, 1H), 4.52 (hept, *J* = 6.9 Hz, 1H), 3.15 (dd, *J* = 13.4, 5.6 Hz, 1H), 2.98 (dd, *J* = 13.4, 7.3 Hz, 1H), 1.25 (d, *J* = 6.6 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃)^a: δ 167.1, 147.1, 134.4, 132.9, 132.7, 131.7, 130.6, 128.7, 126.9, 46.6, 42.5, 19.9.

^aDue to overlap with the branched isomer in both ¹³C{¹H} and ¹³C{¹⁹F} NMR, perfluoroarene peaks were not observed.

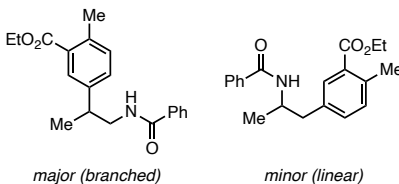
¹⁹F NMR (565 MHz, CDCl₃): δ -150.73 (d, *J* = 19.9 Hz, 2F), -155.23 – -155.35 (m, 1F)^a, -161.01 – -161.14 (m, 2F)^b.

^{a,b}Could not observe all peaks due to overlap with branched isomer.

Mixture of Isomers:

HRMS (APCI): calculated for C₂₂H₁₇F₅NO₄S⁺ ([M+H]⁺): 486.0793, found 486.0786.

IR (ATR cm⁻¹): 3325 (br), 3082, 3031, 2972, 2933, 1642, 1519, 1392, 1198, 1183, 997, 716.



Ethyl 5-(1-benzamidopropan-2-yl)-2-methylbenzoate (I-1) was prepared according to General Procedure C from **1a** and ethyl 5-iodo-2-methylbenzoate. The product was isolated by flash

chromatography (17% acetone/hexanes) to produce **I-1** as a yellow oil (84% yield (10:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 84% yield (10.0:1)

Run 2: 85% yield (10.8:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.78 (d, *J* = 2.0 Hz, 1H), 7.63 (dd, *J* = 8.2, 1.4 Hz, 2H), 7.46 (t, *J* = 7.4 Hz, 1H), 7.38 (dd, *J* = 8.3, 7.0 Hz, 2H), 7.29 (dd, *J* = 7.8, 2.1 Hz, 1H), 7.22 (d, *J* = 7.8 Hz, 1H), 5.99 (br s, 1H), 4.35 (q, *J* = 7.2 Hz, 2H), 3.83 (dt, *J* = 13.2, 6.5 Hz, 1H), 3.41 (ddd, *J* = 13.5, 8.7, 5.0 Hz, 1H), 3.16 – 3.07 (m, 1H), 2.57 (s, 3H), 1.41 – 1.31 (m, 6H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.8, 167.7, 141.7, 138.5, 134.8, 132.3, 131.5, 130.7, 130.5, 129.4, 128.7, 126.9, 61.0, 46.6, 39.4, 21.5, 19.3, 14.5.

Linear Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.75 (d, *J* = 1.9 Hz, 1H), 7.70 (dd, *J* = 8.3, 1.3 Hz, 2H), 7.51 – 7.35 (m, 4H), 7.18 (d, *J* = 7.8 Hz, 1H), 5.91 (d, *J* = 8.1 Hz, 1H), 4.53 – 4.43 (m, 1H), 4.39 – 4.30 (m, 2H), 2.94 (dd, *J* = 13.6, 5.6 Hz, 1H), 2.87 (dd, *J* = 13.6, 6.9 Hz, 1H), 2.56 (s, 3H), 1.41 – 1.31 (m, 3H), 1.22 (d, *J* = 6.7 Hz, 3H).

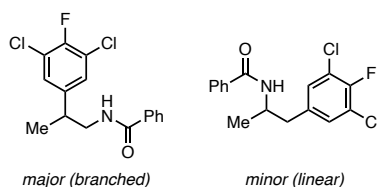
¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.8, 166.9, 141.7^a, 138.4, 135.4, 134.9, 133.1, 132.0, 131.6, 130.1, 128.7, 126.9, 60.9, 46.5, 41.7, 23.0, 20.0, 14.5.

^aNot fully resolved in HMBC, some uncertainty.

Mixture of Isomers:

HRMS (APCI): calculated for C₂₀H₂₄NO₃⁺ ([M+H]⁺): 326.1751, found 326.1753.

IR (ATR cm⁻¹): 3314 (br), 3071, 3064, 3027, 2967, 2931, 2875, 1718, 1639, 1540, 1294, 1262, 1196, 1077, 711, 694.



***N*-(2-(3,5-dichloro-4-fluorophenyl)propyl)benzamide (**J-1**)** was prepared according to General Procedure C from **1a** and 1,3-dichloro-2-fluoro-5-iodobenzene. The product was isolated by flash chromatography (17% acetone/hexanes) to produce **J-1** as an off-white solid (76% yield (8:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 78% yield (7.7:1)

Run 2: 73% yield (8.2:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.66 (d, *J* = 8.0 Hz, 2H), 7.51 – 7.43 (m, 1H), 7.42 – 7.34 (m, 2H), 7.15 (d, *J* = 6.2 Hz, 2H), 6.48 (br s, 1H), 3.64 (dt, *J* = 13.3, 6.5 Hz, 1H), 3.37 (ddd, *J* = 13.7, 8.1, 5.7 Hz, 1H), 3.04 (h, *J* = 7.1 Hz, 1H), 1.27 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.9, 152.9 (d, *J* = 249.2 Hz), 141.7 (d, *J* = 4.8 Hz), 134.4, 131.7, 128.7, 127.8, 126.9, 122.4 (d, *J* = 17.6 Hz), 46.6, 39.1, 19.0.

¹⁹F NMR (565 MHz, Chloroform-*d*): δ -118.5 (t, *J* = 6.1 Hz).

Linear Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.70 (d, *J* = 7.9 Hz, 2H), 7.51 – 7.43 (m, 1H), 7.42 – 7.34 (m, 2H), 7.15 (d, *J* = 6.2 Hz, 2H), 6.28 (d, *J* = 8.0 Hz, 1H), 4.34 (hept, *J* = 6.8 Hz, 1H), 2.90 (dd, *J* = 13.6, 5.7 Hz, 1H), 2.70 (dd, *J* = 13.6, 7.3 Hz, 1H), 1.21 (d, *J* = 6.7 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃)^a: δ 167.22, 152.99 (d, *J* = 249.0 Hz), 135.64 (d, *J* = 5.1 Hz), 134.58, 131.66, 129.78, 126.90, 126.87, 122.11 (d, *J* = 17.6 Hz), 46.71, 41.42, 19.84.

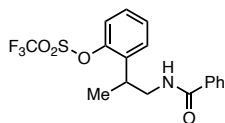
^aTwo decimal places shown to distinguish between peaks at δ 126.90 and 126.87.

¹⁹F NMR (565 MHz, Chloroform-*d*): δ -119.0 (t, *J* = 6.2 Hz).

Mixture of Isomers:

HRMS (APCI): calculated for C₁₆H₁₅³⁵Cl₂NO⁺ ([M+H]⁺): 326.0509, found 326.0509.

IR (ATR cm⁻¹): 3295 (br), 3081, 3071, 3059, 2970, 2934, 1636, 1578, 1540, 1483, 1412, 1270, 812, 705, 695.



2-(1-benzamidopropan-2-yl)phenyl trifluoromethanesulfonate (K-1) was prepared according to General Procedure C from **1a** and 2-iodophenyl trifluoromethanesulfonate. Yields were determined by ¹⁹F NMR versus 1-fluoronaphthalene as an external standard (5% yield (>20:1)). Product for characterization was isolated via preparative thin layer chromatography (1% MeOH in DCM, ran in a fridge kept at 4 °C to prevent decomposition). The product was isolated with high selectivity for the branched isomer (>20:1); as such, only branched characterization data is provided.

Run 1: 6% yield (>20:1)

Run 2: 5% yield (>20:1)

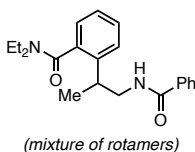
¹H NMR (500 MHz, CDCl₃): δ 7.65 – 7.61 (m, 2H), 7.49 (dd, *J* = 7.9, 1.7 Hz, 1H), 7.48 – 7.44 (m, 1H), 7.43 – 7.36 (m, 3H), 7.32 (ddd, *J* = 8.2, 7.2, 1.7 Hz, 1H), 7.29 – 7.24 (m, 1H), 6.09 (br s, 1H), 3.80 – 3.72 (m, 2H), 3.48 (dp, *J* = 8.5, 6.9 Hz, 1H), 1.35 (d, *J* = 6.9 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃)^a: δ 167.68, 147.63, 137.10, 134.48, 131.57, 129.30, 128.67, 128.66, 128.56, 126.94, 121.77, 118.70 (q, *J* = 320.1 Hz), 45.29, 33.26, 19.59.

^aTwo decimal places shown to distinguish between peaks at δ 128.67 and 128.66.

¹⁹F NMR (565 MHz, CDCl₃): δ -73.50 (s).

HRMS (APCI): calculated for C₁₇H₁₇F₃NO₄S⁺ ([M+H]⁺): 388.0825, found 388.0818.



2-(1-benzamidopropan-2-yl)-*N,N*-diethylbenzamide (O-1) was prepared according to General Procedure C from **1a** and *N,N*-diethyl-2-iodobenzamide. The product was isolated by flash chromatography (20% acetone/hexanes) to produce **O-1** as a white solid (55% yield (>20:1)). The product was isolated with high selectivity for the branched isomer (>20:1); as such, only branched characterization data is provided.

Run 1: 51% yield (>20:1)

Run 2: 58% yield (>20:1)

Compound **O-1** was produced as a mixture of atropisomers (~6:1).⁹ Characterization for the major atropisomer in CDCl₃ is provided; however, exchange in CDCl₃ was not observed. In CD₃OD the two rotamers can equilibrate (reaching a ratio of ~2:1). In addition, exchange is observed in the NOESY as confirmation that the two isomers arise from conformational isomerism, not from the presence of two regioisomers. Specifically, the exchange cross-peak from the two methyl peaks at 1.1 and 0.9 serves as an indicator of conformational isomerism. These peaks have sufficient resolution and distinct enough integrations (2:1) to assign them as terminal methyl groups on different atropisomers. While exchange cross-peaks are observed in the δ 3.9 – 2.8 range (4 sets with sufficient resolution from the diagonal), this region of the ¹H NMR does not have sufficient resolution to obtain good integration values to determine if these cross-peaks are from exchange between the two atropisomers or rotation amongst the C–N tertiary amide bond within the same isomer. However, the number of exchange peaks observed is greater than what would be observed with rotation about the amide bond with two regioisomers (1 exchange set x 2 isomers = 2 exchange sets).

¹H NMR (500 MHz, Chloroform-*d*): δ 8.27 (br s, 1H), 7.87 (d, *J* = 6.7 Hz, 2H), 7.83 (d, *J* = 7.7 Hz)^a, 7.46 – 7.40 (m, 1H), 7.40 – 7.30 (m, 4H), 7.25 – 7.19 (m, 1H), 7.19 – 7.13 (m, 1H), 3.72 – 3.47 (m, 4H), 3.37 – 3.25 (m, 1H), 3.25 – 3.12 (m, 1H), 3.12 – 3.01 (m, 1H), 1.38 (d, *J* = 7.0 Hz, 3H), 1.30 (t, *J* = 7.1 Hz, 3H), 1.09 (t, *J* = 7.0 Hz, 3H).

^aResolved minor atropisomer peak used for quantification.

¹H NMR (500 MHz, Methanol-*d*₄): δ 7.82 – 7.76 (m, 2H), 7.75 – 7.70 (m)^b, 7.58 – 7.06 (m, 7H), 4.01 – 2.80 (m, 7H)^c, 1.43 – 1.19 (m, 6H), 1.10 (t, *J* = 7.1 Hz, 3H)^d, 0.95 (t, *J* = 7.1 Hz)^d.

^aAmide proton not observed.

^bResolved minor atropisomer peak.

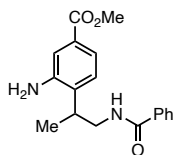
^cOverlaps with solvent residual peak.

^dResolved peaks for the two atropisomers for which exchange is observed and used for quantification.

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 171.8, 167.6, 141.5, 136.5, 134.5, 130.9, 129.8, 128.3, 127.5, 126.6, 126.5, 125.1, 49.1, 43.3, 39.3, 34.7, 19.8, 14.3, 13.1.

HRMS (APCI): calculated for C₂₁H₂₇N₂O₂⁺ ([M+H]⁺): 339.2067, found 339.2068.

IR (ATR cm⁻¹): 3291 (br), 3066, 2970, 2935, 2875, 1655, 1636, 1612, 1598, 1540, 1491, 1433, 1292, 1077, 713, 695.



Methyl 3-amino-4-(1-benzamidopropan-2-yl)benzoate (P-1) was prepared according to General Procedure C from **1a** and methyl 3-amino-4-iodobenzoate. The product was isolated by flash chromatography (30% acetone/hexanes) to produce a **P-1** as a yellow solid (28% yield (>20:1)). The product was isolated with high selectivity for the branched isomer (>20:1); as such, only branched characterization data is provided.

Run 1: 28% yield (>20:1)

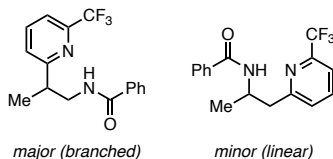
Run 2: 27% yield (>20:1)

¹H NMR (500 MHz, CDCl₃): δ 7.74 (d, *J* = 8.4 Hz, 2H), 7.53 – 7.49 (m, 1H), 7.46 – 7.40 (m, 3H), 7.25 – 7.19 (m, 1H), 7.19 – 7.13 (m, 1H), 6.65 (br s, 1H), 4.55 (br s, 2H), 3.88 (s, 3H), 3.75 (dt, *J* = 14.1, 5.4 Hz, 1H), 3.35 – 3.24 (m, 1H), 3.17 – 3.08 (m, 1H), 1.39 (d, *J* = 5.8 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 168.6, 167.4, 145.3, 134.3, 132.5, 131.9, 129.3, 128.8, 127.0, 126.0, 119.5, 116.6, 52.1, 47.1, 33.2, 17.2.

HRMS (APCI): calculated for C₁₈H₂₁N₂O₃⁺ ([M+H]⁺): 313.1547, found 313.1545.

IR (ATR cm⁻¹): 3357 (br), 3267 (br), 3074, 3048, 2980, 2961, 2900, 2887, 2875, 1714, 1638, 1578, 1534, 1438, 1298, 1243, 1118, 998, 714, 693.



***N*-(2-(6-(trifluoromethyl)pyridin-2-yl)propyl)benzamide (het-1)** was prepared according to General Procedure C from **1a** and 2-iodo-6-(trifluoromethyl)pyridine. The product was isolated by flash chromatography (25% acetone/hexanes) to produce **het-1** as a yellow oil (83% yield (11:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 84% yield (10.0:1)

Run 2: 81% yield (11.1:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.86 – 7.78 (m, 1H), 7.80 – 7.73 (m, 2H), 7.59 (br s, 1H)^a, 7.54 (d, *J* = 7.8 Hz, 1H), 7.49 – 7.32 (m, 4H), 3.87 – 3.73 (m, 2H), 3.34 (pd, *J* = 7.1, 4.2 Hz, 1H), 1.37 (d, *J* = 7.1 Hz, 3H).

^aIn samples of lower concentration, the amide proton is not observed, likely due to intramolecular hydrogen bonding.

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.4, 165.4, 147.3 (q, *J* = 34.3 Hz), 138.3, 134.5, 131.4, 128.5, 126.9, 125.4, 121.6 (q, *J* = 274.1 Hz), 118.4 (q, *J* = 2.9 Hz), 44.3, 40.3, 18.4.

¹⁹F NMR (565 MHz, CDCl₃): δ -68.0 (s).

Linear Isomer:

¹H NMR (500 MHz, CDCl₃)^a: δ 7.87 – 7.73 (m, 3H), 7.57 – 7.52 (m, 1H), 7.49 – 7.32 (m, 4H), 4.66 – 4.56 (m, 1H), 3.22 (dd, *J* = 14.3, 4.8 Hz, 1H)^b, 3.04 (dd, *J* = 14.3, 6.2 Hz, 1H), 1.24 (d, *J* = 6.7 Hz, 3H).

^aAmide proton not directly observed, likely due to overlap with amide proton of branched isomer or intramolecular hydrogen bonding.

^bIn repeated samples, this peak exhibits significant broadening; therefore, integration values are higher than expected in ¹H NMR.

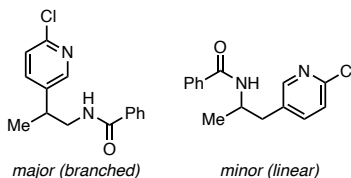
¹³C{¹H} NMR (126 MHz, CDCl₃): δ 166.5, 160.1, 147.5 (q, *J* = 34.4 Hz), 138.2, 134.6, 131.4, 128.5, 127.3, 127.0, 121.6 (q, *J* = 274.2 Hz), 118.7 – 118.6 (m), 45.4, 42.7, 20.1.

¹⁹F NMR (565 MHz, CDCl₃): δ -67.9 (s).

Mixture of Isomers:

HRMS (ESI-TOF): calculated for C₁₆H₁₆F₃N₂O⁺ ([M+H]⁺): 309.1209, found 309.1194.

IR (ATR cm^{-1}): 3326 (br), 3069, 2970, 2936, 2895, 2872, 1641, 1601, 1579, 1534, 1489, 1467, 1339, 1309, 1186, 1161, 1139, 1096, 993, 819, 750, 711, 695.



***N*-(2-(6-chloropyridin-3-yl)propyl)benzamide (het-2)** was prepared according to General Procedure C from **1a** and 2-chloro-5-iodopyridine. The product was isolated by flash chromatography (25% acetone/hexanes) to produce **het-2** as a yellow solid (72% yield (10:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 73% yield (10.0:1)

Run 2: 71% yield (9.1:1)

Branched Isomer:

^1H NMR (500 MHz, CDCl_3): δ 8.10 (s, 1H), 7.66 – 7.62 (m, 2H), 7.53 – 7.46 (m, 1H), 7.46 – 7.41 (m, 1H), 7.37 – 7.30 (m, 2H), 7.25 – 7.19 (m, 1H), 6.68 (br s, 1H), 3.75 – 3.58 (m, 1H), 3.49 – 3.36 (m, 1H), 3.10 (h, $J = 7.1$ Hz, 1H), 1.28 (d, $J = 7.2$ Hz, 3H).

$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3): δ 167.9, 149.7, 148.9, 138.6, 137.6, 134.4, 131.6, 128.6, 126.9, 124.4, 46.4, 36.9, 18.9.

Linear Isomer:

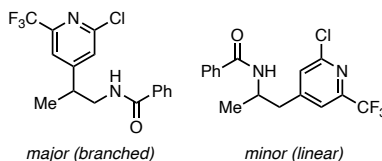
^1H NMR (500 MHz, CDCl_3): δ 8.12 (s, 1H), 7.69 – 7.66 (m, 2H), 7.54 – 7.48 (m, 1H), 7.47 – 7.40 (m, 1H), 7.40 – 7.30 (m, 2H), 7.25 – 7.19 (m, 1H), 6.32 (br s, 1H), 4.38 (hept, $J = 7.0, 6.5$ Hz, 1H), 2.89 (dd, $J = 13.8, 6.0$ Hz, 1H), 2.80 (dd, $J = 14.0, 6.8$ Hz, 1H), 1.20 (d, $J = 6.7$ Hz, 3H).

$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3): δ 167.2, 150.2, 149.7, 139.8, 134.5, 132.7, 131.6, 128.7, 126.9, 124.1, 46.3, 38.7, 19.9.

Mixture of Isomers:

HRMS (APCI): calculated for $\text{C}_{15}\text{H}_{16}^{35}\text{ClN}_2\text{O}^+$ ($[\text{M}+\text{H}]^+$): 275.0946, found 275.0945.

IR (ATR cm^{-1}): 3306 (br), 3089, 3080, 3056, 2971, 2822, 2872, 1636, 1603, 1540, 1458, 1308, 1143, 1108, 742, 711, 695.



***N*-(2-(2-chloro-6-(trifluoromethyl)pyridin-4-yl)propyl)benzamide (het-3)** was prepared according to General Procedure C from **1a** and 2-chloro-4-iodo-6-(trifluoromethyl)pyridine. The product was isolated by flash chromatography (25% acetone/hexanes) to produce **het-3** as a white solid (69% yield (8:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 60% yield (7.1:1)

Run 2: 77% yield (8.3:1)

Branched Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.68 – 7.64 (m, 2H), 7.55 – 7.47 (m, 2H), 7.47 – 7.39 (m, 3H), 6.19 (br s, 1H), 3.71 (dt, *J* = 13.4, 6.5 Hz, 1H), 3.53 (ddd, *J* = 13.9, 8.0, 6.1 Hz, 1H), 3.29 (h, *J* = 7.1 Hz, 1H), 1.38 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 168.0, 158.8, 152.6, 148.7 (q, *J* = 35.8 Hz), 134.1, 132.0, 128.9, 126.9, 126.4, 120.8 (q, *J* = 274.5 Hz), 118.5 (q, *J* = 2.9 Hz), 46.1, 39.6, 18.3.

¹⁹F NMR (565 MHz, CDCl₃): δ -67.9 (s).

Linear Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.71 – 7.69 (m, 2H), 7.55 – 7.47 (m, 2H), 7.47 – 7.39 (m, 3H), 5.96 (br s, 1H), 4.46 (hept, *J* = 6.9 Hz, 1H), 3.12 (dd, *J* = 13.5, 5.5 Hz, 1H), 2.91 (dd, *J* = 13.5, 7.4 Hz, 1H), 1.27 (d, *J* = 6.8 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃)^{a,b}: δ 167.31, 152.65, 152.31, 149.23 – 148.16 (m), 134.25, 131.99, 128.22, 126.93, 126.87, 120.45 (q, *J* = 2.2 Hz), 46.24, 41.77, 19.95.

^aTwo decimal places shown to distinguish between peaks at δ 126.93 and 126.87.

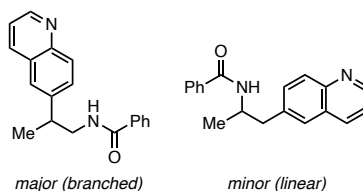
^bTrifluoromethyl carbon not observed.

¹⁹F NMR (565 MHz, CDCl₃): δ -68.0 (s).

Mixture of Isomers:

HRMS (ESI-TOF): calculated for C₁₆H₁₅³⁵ClF₃N₂O⁺ ([M+H]⁺): 343.0820, found 343.0817.

IR (ATR cm⁻¹): 3288 (br), 3096, 3066, 2973, 2932, 1636, 1603, 1540, 1429, 1325, 1193, 1142, 910, 837, 708, 694.



***N*-(2-(quinolin-6-yl)propyl)benzamide (het-4)** was prepared according to General Procedure C from **1a** and 6-iodoquinoline. The product was isolated by flash chromatography (35% EtOAc/hexanes + 10% NEt₃) to produce **het-4** as a pink oil (48% yield (10:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 43% yield (10.0:1)

Run 2: 53% yield (10.0:1)

Branched Isomer:

¹H NMR (600 MHz, CDCl₃): δ 8.89 (dd, *J* = 4.2, 1.7 Hz, 1H), 8.13 – 8.10 (m, 1H), 8.09 (d, *J* = 8.5 Hz, 1H), 7.73 – 7.57 (m, 4H), 7.46 – 7.42 (m, 1H), 7.41 – 7.38 (m, 1H), 7.37 – 7.33 (m, 2H), 6.08 (br s, 1H), 3.92 (ddd, *J* = 13.3, 6.8, 6.0 Hz, 1H), 3.54 (ddd, *J* = 13.7, 8.7, 5.1 Hz, 1H), 3.32 (dp, *J* = 8.9, 6.9 Hz, 1H), 1.44 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.7, 150.3, 147.7, 142.6, 135.9, 134.7, 131.6, 130.1, 129.3, 128.7, 128.5, 126.9, 125.7, 121.5, 46.7, 40.0, 19.5.

Linear Isomer:

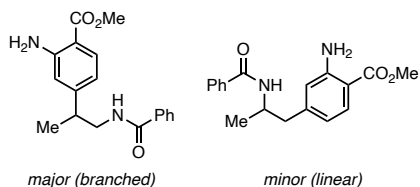
¹H NMR (600 MHz, CDCl₃): δ 8.90 – 8.86 (m, 1H), 8.05 (d, *J* = 8.6 Hz, 1H), 7.73 – 7.57 (m, 3H), 7.50 – 7.46 (m, 2H), 7.46 – 7.32 (m, 4H), 5.99 (d, *J* = 7.9 Hz, 1H), 4.64 – 4.53 (m, 1H), 3.18 (dd, *J* = 13.6, 5.5 Hz, 1H), 3.03 (dd, *J* = 13.6, 7.3 Hz, 1H), 1.27 (d, *J* = 6.7 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.0, 150.2, 147.5, 136.6, 135.8, 134.8, 131.8, 129.6, 128.7, 128.6, 128.4, 127.8, 126.9, 121.4, 46.8, 42.5, 20.1.

Mixture of Isomers:

HRMS (ESI-TOF): calculated for C₁₉H₁₉N₂O⁺ ([M+H]⁺): 291.1492, found 291.1497.

IR (ATR cm⁻¹): 3476 (br shoulder), 3299 (br), 3058, 3029, 2963, 2926, 2873, 1636, 1577, 1540, 1500, 1490, 1453, 1307, 1292, 1121, 1074, 1029, 837, 800, 696.



Methyl 2-amino-4-(1-benzamidopropan-2-yl)benzoate (I-2) was prepared according to General Procedure C from **1a** and methyl 2-amino-4-iodobenzoate. The product was isolated by flash chromatography (25% acetone/hexanes) to produce a **I-2** as a yellow oil (71% yield (6:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 72% yield (6.7:1)

Run 2: 71% yield (6.3:1)

Branched Isomer:

¹H NMR (600 MHz, CDCl₃)^a: δ 7.82 (d, *J* = 8.2 Hz, 1H), 7.66 – 7.62 (m, 2H), 7.46 – 7.42 (m, 1H), 7.39 – 7.34 (m, 2H), 6.61 – 6.53 (m, 2H), 6.18 (br s, 1H), 3.85 (s, 3H), 3.79 (ddd, *J* = 13.2, 7.0, 6.0 Hz, 1H), 3.37 (ddd, *J* = 13.6, 8.8, 5.0 Hz, 1H), 2.99 (dp, *J* = 9.0, 6.9 Hz, 1H), 1.28 (d, *J* = 7.0 Hz, 3H).

^aAniline protons not observed possibly due to intramolecular hydrogen bonding.

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 168.4, 167.6, 151.0, 150.0, 134.6, 131.9, 131.5, 128.7, 126.9, 116.1, 115.8, 110.1, 51.7, 46.2, 39.9, 19.0.

Linear Isomer:

¹H NMR (600 MHz, CDCl₃)^a: δ 7.78 (d, *J* = 8.1 Hz, 1H), 7.72 – 7.69 (m, 2H), 7.49 – 7.42 (m, 1H), 7.41 – 7.33 (m, 2H), 6.61 – 6.53 (m, 2H), 6.10 (d, *J* = 8.1 Hz, 1H), 4.48 – 4.40 (m, 1H), 3.84 (s, 3H), 2.88 (dd, *J* = 13.4, 5.7 Hz, 1H), 2.72 (dd, *J* = 13.4, 7.3 Hz, 1H), 1.21 (d, *J* = 6.7 Hz, 3H).

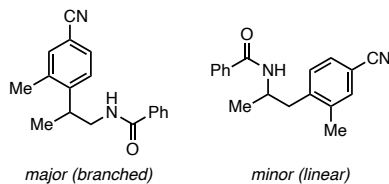
^aAniline protons not observed possibly due to intramolecular hydrogen bonding.

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 168.5, 167.0, 149.8, 144.9, 134.8, 131.5, 128.7, 128.6, 127.0, 118.5, 117.8, 109.9, 51.6, 46.4, 42.5, 20.1.

Mixture of Isomers:

HRMS (APCI): calculated for C₁₈H₂₁N₂O₃⁺ ([M+H]⁺): 313.1547, found 313.1547.

IR (ATR cm⁻¹): 3458 (br), 3363 (br), 3060, 3028, 2951, 2928, 2876, 1685, 1653, 1636, 1618, 1602, 1591, 1577, 1539, 1523, 1487, 1437, 1298, 1248, 1189, 1103, 906, 726.



***N*-(2-(4-cyano-2-methylphenyl)propyl)benzamide (L-2)** was prepared according to General Procedure C from **1a** and 4-iodo-3-methylbenzonitrile. The product was isolated by flash chromatography (25% to 50% EtOAc/hexanes) to produce a **L-2** as a light brown solid (42% yield (9:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 41% yield (9.3:1)

Run 2: 42% yield (7.7:1)

Branched Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.66 – 7.62 (m, 2H), 7.50 – 7.45 (m, 2H), 7.44 – 7.36 (m, 3H), 7.34 (d, *J* = 8.0 Hz, 1H), 6.21 (br s, 1H), 3.68 (dt, *J* = 13.0, 6.5 Hz, 1H), 3.56 – 3.45 (m, 2H), 2.38 (s, 3H), 1.30 (d, *J* = 6.7 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.8, 148.3, 137.9, 134.4, 134.0, 131.7, 130.3, 128.8, 126.9, 126.4, 119.1, 110.2, 45.9, 35.1, 19.5, 18.7.

Linear Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.72 – 7.69 (m, 2H), 7.53 – 7.22 (m, 6H), 6.10 (d, *J* = 8.0 Hz, 1H), 4.49 – 4.39 (m, 1H), 3.11 (dd, *J* = 13.7, 6.1 Hz, 1H), 2.78 (dd, *J* = 13.5, 7.7 Hz, 1H), 2.44 (s, 3H), 1.25 (d, *J* = 6.7 Hz, 3H).

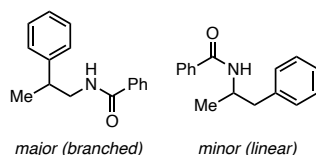
¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.0, 142.5, 138.4, 134.6, 133.9, 131.7, 130.9, 129.6, 128.8, 126.9, 119.2, 110.5, 45.9, 40.6, 20.3, 19.6.

Mixture of Isomers:

HRMS (APCI): calculated for C₁₈H₁₉N₂O⁺ ([M+H]⁺): 279.1492, found 279.1493.

IR (ATR cm⁻¹): 3325, 3062, 2970, 2929, 2231, 1636, 1604, 1578, 1539, 1490, 1311, 1293, 712, 696.

5.2. Aziridine Substrate Scope



***N*-(2-phenylpropyl)benzamide (1b)** was prepared according to General Procedure C from **1a** and phenyl iodide. The product was isolated by flash chromatography (15% acetone/hexanes) to produce a white solid (81% yield (11:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 82% yield (11.1:1)

Run 2: 80% yield (10.0:1)

Partial isolation of branched and linear products was done via preparative thin layer chromatography (20% EtOAc/hexanes) to aid in characterization. Spectral data are in agreement with reported literature values.^{10,11}

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.64 – 7.58 (m, 2H), 7.49 – 7.44 (m, 1H), 7.41 – 7.33 (m, 4H), 7.28 – 7.24 (m, 3H), 5.95 (br s, 1H), 3.86 (ddd, *J* = 13.1, 7.1, 5.9 Hz, 1H), 3.41 (ddd, *J* = 13.5, 8.9, 4.8 Hz, 1H), 3.08 (dp, *J* = 9.0, 6.9 Hz, 1H), 1.35 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.6, 144.2, 134.8, 131.5, 129.0, 128.7, 127.4, 127.0, 126.9, 46.7, 40.0, 19.4.

Linear Isomer:

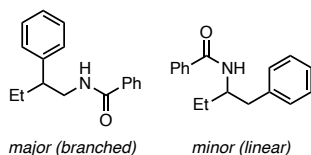
¹H NMR (500 MHz, CDCl₃): δ 7.69 (dd, *J* = 7.9, 1.6 Hz, 2H), 7.51 – 7.20 (m, 8H), 5.88 (br s, 1H), 4.55 – 4.40 (m, 1H), 2.95 (dd, *J* = 13.5, 5.6 Hz, 1H), 2.87 (dd, *J* = 13.5, 7.0 Hz, 1H), 1.23 (d, *J* = 6.7 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 166.9, 137.9, 135.0, 131.5, 129.7, 128.7, 128.6, 126.9, 126.7, 46.6, 42.5, 20.1.

Mixture of Isomers:

HRMS (APCI): calculated for C₁₆H₁₈NO⁺ ([M+H]⁺): 240.1383, found 240.1384.

IR (ATM cm⁻¹): 3321 (br), 3060, 3028, 2964, 2927, 1636, 1542, 1535, 1491, 698.



***N*-(2-phenylbutyl)benzamide (2b)** was prepared according to General Procedure C from **2a** and phenyl iodide. The product was isolated by flash chromatography (12 to 20% EtOAc/hexanes) to produce a white solid (67% yield (>20:1)).

Run 1: 63% yield (>20:1)

Run 2: 70% yield (>20:1)

As the branched isomer could be cleanly isolated, we obtained ¹H NMR yield and selectivity versus ethylene carbonate as an external standard (82% yield (9:1)). Linear isomer yield based on literature characterization data.¹²

¹H NMR run 1: 84% yield (9.1:1)

¹H NMR run 2: 80% yield (9.5:1)

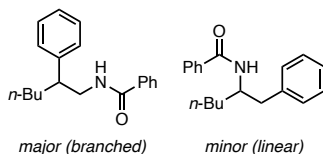
Branched Isomer:

¹H NMR (400 MHz, CDCl₃): δ 7.61 – 7.54 (m, 2H), 7.50 – 7.40 (m, 1H), 7.40 – 7.31 (m, 4H), 7.31 – 7.18 (m, 3H), 5.89 (br s, 1H), 3.97 (ddd, *J* = 13.3, 7.2, 5.4 Hz, 1H), 3.37 (ddd, *J* = 13.7, 9.6, 4.5 Hz, 1H), 2.86 – 2.75 (m, 1H), 1.88 – 1.74 (m, 1H), 1.73 – 1.60 (m, 1H), 0.86 (t, *J* = 7.4 Hz, 3H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.5, 142.7, 134.9, 131.4, 128.9, 128.6, 128.0, 127.0, 126.9, 47.7, 45.4, 26.9, 12.1.

HRMS (ESI-TOF): calculated for C₁₇H₂₀NO⁺ ([M+H]⁺): 254.1539, found 254.1538.

IR (ATM cm⁻¹): 3305 (br), 3080, 3061, 3028, 2962, 2928, 2873, 1636, 1578, 1540, 1491, 1307, 699.



N-(2-phenylhexyl)benzamide (3b) was prepared according to General Procedure C from **3a** and phenyl iodide. The product was isolated by flash chromatography (10 to 40% EtOAc/hexanes) to produce a white solid (74% yield (>20:1)).

Run 1: 77% yield (>20:1)

Run 2: 72% yield (>20:1)

As the branched isomer could be cleanly isolated, we obtained ^1H NMR yield and selectivity versus ethylene carbonate as an external standard (91% yield (9:1)).

^1H NMR run 1: 92% yield (9.1:1)

^1H NMR run 2: 89% yield (9.2:1)

Branched Isomer:

^1H NMR (600 MHz, CDCl_3): δ 7.58 – 7.54 (m, 2H), 7.47 – 7.42 (m, 1H), 7.40 – 7.32 (m, 4H), 7.29 – 7.23 (m, 1H), 7.24 – 7.19 (m, 2H), 5.87 (br s, 1H), 3.97 (ddd, $J = 13.4, 7.3, 5.3$ Hz, 1H), 3.34 (ddd, $J = 13.4, 9.7, 4.5$ Hz, 1H), 2.88 (tt, $J = 9.5, 5.4$ Hz, 1H), 1.74 (ddt, $J = 13.4, 10.4, 5.4$ Hz, 1H), 1.65 (dtd, $J = 13.5, 9.6, 5.3$ Hz, 1H), 1.36 – 1.12 (m, 4H), 0.84 (t, $J = 7.2$ Hz, 3H).

$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3): δ 167.5, 143.0, 134.9, 131.4, 129.0, 128.7, 128.0, 127.0, 126.9, 46.0, 45.7, 33.6, 29.6, 22.8, 14.1.

HRMS (ESI-TOF): calculated for $\text{C}_{19}\text{H}_{24}\text{NO}^+$ ($[\text{M}+\text{H}]^+$): 282.1852, found 282.1853.

IR (ATM cm^{-1}): 3300 (br), 3060, 3028, 2956, 2928, 2858, 1636, 1603, 1579, 1540, 1491, 1453, 1307, 1292, 699.

Linear Isomer:

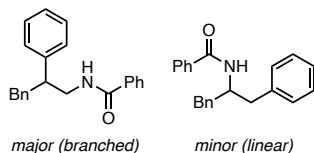
^1H NMR (600 MHz, CDCl_3): δ 7.73 – 7.68 (m, 2H), 7.54 – 7.48 (m, 1H), 7.46 – 7.41 (m, 2H), 7.34 – 7.30 (m, 2H), 7.26 – 7.22 (m, 3H), 5.82 (d, $J = 8.7$ Hz, 1H), 4.42 (tq, $J = 8.6, 6.0$ Hz, 1H), 2.96 (dd, $J = 13.7, 6.5$ Hz, 1H), 2.92 (dd, $J = 13.7, 5.9$ Hz, 1H), 1.68 – 1.26 (m, 6H)^a, 0.90 (t, $J = 7.2$ Hz, 3H).

^aOverlap with H_2O and with branched isomer

$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3): δ 167.1, 138.0, 135.1, 131.5, 129.8, 128.7, 128.6, 126.9, 126.6, 50.6, 40.9, 33.9, 28.4, 22.7, 14.2.

HRMS (ESI-TOF): calculated for $\text{C}_{19}\text{H}_{24}\text{NO}^+$ ($[\text{M}+\text{H}]^+$): 282.1852, found 282.1854.

IR (ATM cm^{-1}): 3314 (br), 3070, 3027, 2950, 2926, 2854, 1634, 1535, 1311, 694.



N-(2,3-diphenylpropyl)benzamide (4b) was prepared according to General Procedure C from **4a** and phenyl iodide. The product was isolated by flash chromatography (20% acetone/hexanes) to produce a yellow solid (87% yield (6:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 87% yield (5.9:1)

Run 2: 86% yield (5.3:1)

Partial isolation of branched and linear products was done via preparative thin layer chromatography (20% EtOAc/hexanes) to aid in characterization.

Branched Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.53 – 7.48 (m, 2H), 7.46 – 7.40 (m, 1H), 7.37 – 7.29 (m, 4H), 7.27 – 7.19 (m, 5H), 7.19 – 7.14 (m, 1H), 7.13 – 7.09 (m, 2H), 5.84 (br s, 1H), 3.94 (ddd, *J* = 13.5, 6.7, 5.7 Hz, 1H), 3.55 (ddd, *J* = 13.5, 9.1, 5.0 Hz, 1H), 3.24 (dtd, *J* = 9.1, 7.5, 5.6 Hz, 1H), 3.07 – 2.97 (m, 2H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.4, 142.2, 139.6, 134.7, 131.5, 129.2, 128.9, 128.6, 128.5, 128.0, 127.2, 126.8, 126.3, 47.6, 45.0, 41.0.

Linear Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.57 (dd, *J* = 8.3, 1.3 Hz, 2H), 7.49 – 7.43 (m, 1H), 7.38 (dd, *J* = 8.3, 7.0 Hz, 2H), 7.34 – 7.28 (m, 4H), 7.27 – 7.20 (m, 6H), 5.85 (d, *J* = 8.2 Hz, 1H), 4.68 (dp, *J* = 8.2, 6.6 Hz, 1H), 2.97 (dd, *J* = 14.0, 6.3 Hz, 2H), 2.90 (dd, *J* = 14.0, 6.9 Hz, 2H).

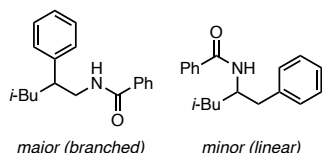
¹³C{¹H} NMR (151 MHz, CDCl₃): δ 166.5, 138.0, 134.5, 131.5, 129.6, 128.7^a, 126.8, 126.8, 51.7, 39.8.

^aTwo carbons, see HSQC

Mixture of Isomers:

HRMS (APCI): calculated for C₂₂H₂₂NO⁺ ([M+H]⁺): 316.1696, found 316.1696.

IR (ATM cm⁻¹): 3315 (br), 3060, 3026, 2923, 1636, 1579, 1540, 1490, 1453, 1307, 1291, 697.



***N*-(4-methyl-2-phenylpentyl)benzamide (5b)** was prepared according to General Procedure C from **5a** and phenyl iodide. The product was isolated by flash chromatography (13% acetone/hexanes) to produce a white solid (83% yield (>20:1)). The product was isolated and characterized as a mixture of isomers. While minor amounts of linear isomer are observed by ¹H NMR, due to the high selectivity of the reaction, only branched isomer characterization data is provided.

Run 1: 83% yield (20.6:1)

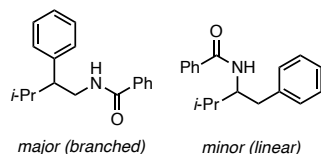
Run 2: 83% yield (20.0:1)

¹H NMR (600 MHz, CDCl₃): δ 7.59 (d, *J* = 7.3 Hz, 2H), 7.43 (t, *J* = 7.4 Hz, 1H), 7.39 – 7.31 (m, 4H), 7.28 – 7.20 (m, 3H), 6.09 (br s, 1H), 3.91 (dt, *J* = 12.1, 5.8 Hz, 1H), 3.31 (ddd, *J* = 13.6, 9.5, 4.6 Hz, 1H), 3.01 (tt, *J* = 10.0, 5.3 Hz, 1H), 1.64 (ddd, *J* = 13.3, 9.9, 5.0 Hz, 1H), 1.55 – 1.41 (m, 2H), 0.88 (d, *J* = 3.7 Hz, 3H), 0.87 (d, *J* = 3.8 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.4, 142.9, 134.8, 131.3, 128.8, 128.5, 127.9, 126.9, 126.8, 46.0, 43.6, 42.9, 25.4, 23.5, 21.9.

HRMS (APCI): calculated for C₁₉H₂₄NO⁺ ([M+H]⁺): 282.1852, found 282.1852.

IR (ATM cm⁻¹): 3320 (br), 3028, 2955, 2927, 1636, 1540, 1490, 1307, 1293, 699.



***N*-(3-methyl-2-phenylbutyl)benzamide (6b)** was prepared according to General Procedure C from **6a** and phenyl iodide. Yields were determined by ^1H NMR versus ethylene carbonate as an external standard (86% yield (2:1)).

^1H NMR run 1: 86% yield (2.2:1)

^1H NMR run 2: 86% yield (2.0:1)

Partial isolation of branched and linear products was done via preparative thin layer chromatography (20% EtOAc/hexanes) to aid in characterization.

Branched Isomer:

^1H NMR (600 MHz, CDCl_3): δ 7.50 – 7.48 (m, 2H), 7.45 – 7.40 (m, 1H), 7.38 – 7.31 (m, 4H), 7.28 – 7.24 (m, 1H), 7.22 – 7.19 (m, 2H), 5.74 (br s, 1H), 4.18 (ddd, $J = 13.4, 7.3, 4.8$ Hz, 1H), 3.39 (ddd, $J = 13.4, 10.9, 4.0$ Hz, 1H), 2.61 (ddd, $J = 10.8, 8.4, 4.8$ Hz, 1H), 1.96 (dhept, $J = 8.4, 6.7$ Hz, 1H), 1.09 (d, $J = 6.6$ Hz, 3H), 0.78 (d, $J = 6.7$ Hz, 3H).

$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3): δ 167.43, 141.97, 134.90, 131.38, 128.84, 128.6^b, 127.02, 126.81, 52.98, 43.07, 31.87, 21.04, 21.02.

^aTwo decimal places shown to distinguish between peaks at δ 21.04 and 21.02.

^bLikely two carbons

HRMS (APCI): calculated for $\text{C}_{18}\text{H}_{22}\text{NO}^+$ ($[\text{M}+\text{H}]^+$): 268.1696, found 268.1697.

IR (ATM cm^{-1}): 3314 (br), 3083, 3062, 3028, 2959, 2928, 2872, 1636, 1542, 1307, 1293, 700.

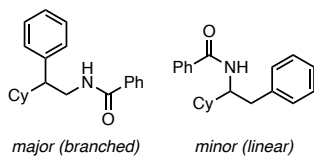
Linear Isomer:

^1H NMR (600 MHz, CDCl_3): δ 7.67 – 7.59 (m, 2H), 7.49 – 7.45 (m, 1H), 7.42 – 7.38 (m, 2H), 7.30 – 7.26 (m, 2H), 7.25 – 7.22 (m, 2H), 7.22 – 7.17 (m, 1H), 5.83 (d, $J = 9.3$ Hz, 1H), 4.32 (ddt, $J = 9.3, 7.7, 5.9$ Hz, 1H), 2.96 (dd, $J = 14.1, 6.1$ Hz, 1H), 2.84 (dd, $J = 14.1, 7.8$ Hz, 1H), 1.95 – 1.88 (m, 1H), 1.05 (d, $J = 6.8$ Hz, 3H), 1.00 (d, $J = 6.8$ Hz, 3H).

$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3): δ 167.3, 138.4, 135.3, 131.4, 129.4, 128.7, 128.6, 126.8, 126.6, 55.6, 38.1, 30.8, 19.9, 17.9.

HRMS (APCI): calculated for $\text{C}_{18}\text{H}_{22}\text{NO}^+$ ($[\text{M}+\text{H}]^+$): 268.1696, found 268.1696.

IR (ATM cm^{-1}): 3301 (br), 3084, 3076, 3058, 3023, 3010, 2955, 2925, 1636, 1534, 1336, 1288, 1196, 698.



***N*-(2-cyclohexyl-2-phenylethyl)benzamide (7b)** was prepared according to General Procedure C from **7a** and phenyl iodide. Yields were determined by ^1H NMR versus ethylene carbonate as an external standard (87% yield (4:1)).

Run 1: 85% yield (3.9:1)

Run 2: 89% yield (4.0:1)

Partial isolation of branched and linear products was done via preparative thin layer chromatography (15% EtOAc/hexanes) to aid in characterization.

Branched Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.50 – 7.47 (m, 2H), 7.44 – 7.39 (m, 1H), 7.36 – 7.31 (m, 4H), 7.29 – 7.23 (m, 1H), 7.21 – 7.18 (m, 2H), 5.73 (s, 1H), 4.20 (ddd, *J* = 13.3, 7.3, 4.8 Hz, 1H), 3.37 (ddd, *J* = 13.3, 10.9, 3.9 Hz, 1H), 2.66 (ddd, *J* = 10.9, 8.4, 4.8 Hz, 1H), 2.04 – 1.99 (m, 1H), 1.81 – 1.75 (m, 1H), 1.64 – 1.59 (m, 3H), 1.48 – 1.41 (m, 1H), 1.33 – 1.03 (m, 4H)^a, 0.90 – 0.79 (m, 1H)^a.

^aCyclohexyl peaks exhibit overlap with the linear isomer in a sample with a B:L ratio of 10:1.

¹³C{¹H} NMR (151 MHz, CDCl₃)^a: δ 167.27, 141.87, 134.80, 131.22, 128.70, 128.53, 128.47, 126.83, 126.68, 51.82, 42.59, 41.39, 31.18, 31.13, 26.43, 26.35, 26.32.

^aTwo decimal places shown to distinguish between peaks at δ 26.35 and 26.32.

HRMS (APCI): calculated for C₂₁H₂₆NO⁺ ([M+H]⁺): 308.2009, found 308.2010.

IR (ATM cm⁻¹): 3310 (br), 3082, 3060, 3027, 2922, 2850, 1635, 1540, 1489, 1305, 1293, 700.

Linear Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.67 – 7.62 (m, 2H), 7.51 – 7.46 (m, 1H), 7.46 – 7.39 (m, 2H), 7.32 – 7.29 (m, 2H), 7.26 – 7.20 (m, 3H), 5.84 (d, *J* = 9.4 Hz, 1H), 4.34 (ddt, *J* = 9.4, 7.8, 6.0 Hz, 1H), 3.02 (dd, *J* = 14.1, 5.8 Hz, 1H), 2.86 (dd, *J* = 14.1, 7.8 Hz, 1H), 1.96 – 1.83 (m, 2H), 1.83 – 1.75 (m, 2H), 1.70 (d, *J* = 11.9 Hz, 1H), 1.37 – 1.02 (m, 6H)^a.

^aCyclohexyl peaks exhibit overlap with the branched isomer in a sample with a B:L ratio of 1:15.

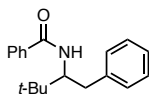
¹³C{¹H} NMR (151 MHz, CDCl₃)^a: δ 167.08, 138.35, 135.13, 131.23, 129.29, 128.54, 128.48, 126.71, 126.41, 54.85, 40.77, 37.70, 30.22, 28.50, 26.41, 26.15^b.

^aTwo decimal places shown to distinguish between peaks at δ 128.54 and 128.48.

^bLikely two carbons.

HRMS (APCI): calculated for C₂₁H₂₆NO⁺ ([M+H]⁺): 308.2009, found 308.2008.

IR (ATM cm⁻¹): 3291 (br), 3062, 3028, 2915, 1849, 1634, 1543, 699.



***N*-(3,3-dimethyl-1-phenylbutan-2-yl)benzamide (8b)** was prepared according to General Procedure C from **8a** and phenyl iodide. Yields were determined by ¹H NMR versus ethylene carbonate as an external standard (12% yield (<1:20)).

¹H NMR run 1: 15% yield (<1:20)

¹H NMR run 2: 9% yield (<1:20)

Isolation was done via preparative thin layer chromatography (100% DCM) to aid in characterization. The product was isolated with high selectivity for the linear isomer (<1:20); as such, only linear characterization data is provided.

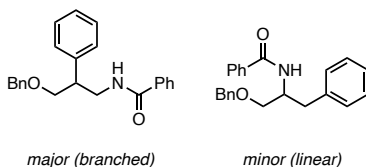
¹H NMR (500 MHz, CDCl₃): δ 7.48 (d, *J* = 8.0 Hz, 2H), 7.45 – 7.39 (m, 1H), 7.34 (t, *J* = 7.6 Hz, 2H), 7.24 – 7.20 (m, 4H), 7.17 – 7.10 (m, 1H), 5.68 (d, *J* = 9.9 Hz, 1H), 4.36 (td, *J* = 10.8, 3.5 Hz, 1H), 3.18 (dd, *J* = 14.3, 3.6 Hz, 1H), 2.50 (dd, *J* = 14.4, 11.4 Hz, 1H), 1.06 (s, 9H).

¹³C{¹H} NMR (126 MHz, CDCl₃)^a: δ 167.64, 139.06, 135.62, 131.17, 128.99, 128.61, 128.55, 126.71, 126.42, 58.41, 36.80, 35.48, 26.75.

^aTwo decimal places shown to distinguish between peaks at δ 128.61 and 128.55.

HRMS (ESI-TOF): calculated for C₁₉H₂₄NO⁺ ([M+H]⁺): 282.1852, found 282.1852.

IR (ATM cm⁻¹): 3306 (br), 3060, 3032, 2966, 2865, 1634, 1578, 1492, 1368, 1107, 741, 694.



***N*-(3-(benzyloxy)-2-phenylpropyl)benzamide (9b)** was prepared according to General Procedure C from **9a** and phenyl iodide. The product was isolated by flash chromatography (15% acetone/hexanes) to produce a yellow oil (78% yield (2:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 76% yield (2.0:1)

Run 2: 80% yield (2.1:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.59 – 7.54 (m, 2H), 7.51 – 7.21 (m, 13H), 7.07 (br s, 1H), 4.72 – 4.41 (m, 2H), 3.92 (dt, *J* = 13.4, 6.1 Hz, 1H), 3.87 – 3.83 (m, 2H), 3.79 (ddd, *J* = 13.3, 8.5, 4.4 Hz, 1H), 3.30 (tt, *J* = 7.9, 5.7 Hz, 1H).

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.1, 140.0, 137.8, 134.5, 131.2, 128.8, 128.6, 128.4, 128.0, 127.9, 127.8, 127.2, 126.8, 74.9, 73.7, 45.2, 44.3.

Linear Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.76 – 7.72 (m, 2H), 7.51 – 7.21 (m, 13H), 6.70 – 6.57 (br s, 1H), 4.61 – 4.51 (m, 3H), 3.52 (d, *J* = 3.7 Hz, 2H), 3.07 (dd, *J* = 13.4, 6.1 Hz, 1H), 3.01 (dd, *J* = 13.4, 8.4 Hz, 1H).

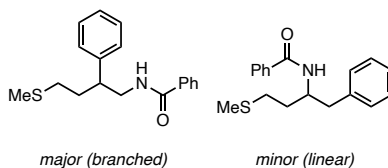
¹³C{¹H} NMR (126 MHz, CDCl₃)^a: δ 166.94, 138.03, 137.98, 134.66, 131.42, 129.46, 128.54, 128.51, 128.51, 127.91, 127.88, 126.95, 126.49, 73.29, 69.65, 50.79, 37.49.

^aTwo decimal places shown to distinguish between peaks at δ 138.03 and 137.98.

Mixture of Isomers:

HRMS (APCI): calculated for C₂₃H₂₄NO₂⁺ ([M+H]⁺): 346.1802, found 346.1802.

IR (ATM cm⁻¹): 3314 (br), 3062, 3028, 2923, 2857, 1636, 1577, 1528, 1487, 1453, 1289, 1088, 1073, 1027, 908, 730, 6943.



***N*-(4-(methylthio)-2-phenylbutyl)benzamide (10b)** was prepared according to General Procedure C from **10a** and phenyl iodide. The product was isolated by flash chromatography (15% acetone/hexanes) to produce a yellow oil (54% yield (11:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 54% yield (10.0:1)

Run 2: 54% yield (12.5:1)

Branched Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.61 – 7.55 (m, 2H), 7.46 – 7.41 (m, 1H), 7.37 – 7.31 (m, 4H), 7.28 – 7.19 (m, 3H), 6.14 (br s, 1H), 3.94 – 3.84 (m, 1H), 3.41 (ddd, *J* = 13.5, 9.0, 4.8 Hz, 1H), 3.06 (tt, *J* = 9.8, 5.4 Hz, 1H), 2.43 – 2.29 (m, 2H), 2.11 – 1.97 (m, 4H), 1.98 – 1.79 (m, 1H).
¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.5, 141.7, 134.6, 131.5, 129.0, 128.6, 127.9, 127.2, 126.8, 45.3, 44.8, 33.0, 31.9, 15.5.

Linear Isomer:

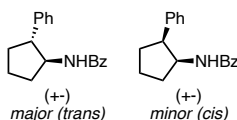
Due to trace impurity, we did not obtain full characterization of the linear isomer. Below are listed the diagnostic peaks observed used to determine B:L ratio.

¹H NMR (500 MHz, CDCl₃): δ 2.96 (dd, *J* = 13.6, 6.1 Hz, 1H), 2.90 (dd, *J* = 13.2, 6.5 Hz, 1H).

Mixture of Isomers:

HRMS (APCI): calculated for C₁₈H₂₂NOS⁺ ([M+H]⁺): 300.1417, found 300.1421.

IR (ATM cm⁻¹): 3314 (br), 3062, 3028, 2923, 2857, 1636, 1577, 1528, 1487, 1453, 1289, 1088, 1073, 1027, 908, 730, 6943.



***N*-2-phenylcyclopentyl)benzamide (11b)** was prepared according to General Procedure C from **11a** and phenyl iodide. Yields were determined by ¹H NMR versus trimethoxy benzene as an external standard (60% yield (7:1)).

¹H NMR run 1: 57% yield (7.1:1)

¹H NMR run 2: 63% yield (5.9:1)

Isolation of the trans isomer was achieved by flash chromatography (15% EtOAc/hexanes) followed by recrystallization from hot EtOAc/hexanes. Spectral data for the trans isomer are in agreement with literature values.¹³ Cis isomer yield based on literature characterization data from the same paper.

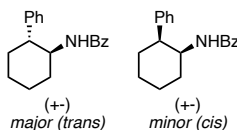
Trans Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.69 – 7.64 (m, 2H), 7.48 – 7.43 (m, 1H), 7.38 (t, *J* = 7.6 Hz, 2H), 7.32 – 7.28 (m, 4H), 7.23 – 7.18 (m, 1H), 6.06 (br s, 1H), 4.50 (dq, *J* = 9.6, 7.8 Hz, 1H), 2.99 (td, *J* = 9.9, 8.0 Hz, 1H), 2.45 (dtd, *J* = 13.3, 7.9, 5.4 Hz, 1H), 2.27 – 2.17 (m, 1H), 1.93 – 1.86 (m, 2H), 1.83 – 1.76 (m, 1H), 1.70 – 1.54 (m, 1H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.5, 142.4, 134.9, 131.4, 128.8, 128.6, 127.4, 127.0, 126.8, 57.6, 52.3, 33.2, 32.9, 22.5.

HRMS (ESI-TOF): calculated for C₁₈H₂₀NO⁺ ([M+H]⁺): 266.1539, found 266.1538.

IR (ATM cm⁻¹): 3282 (br), 3062, 3028, 2958, 2872, 1632, 1578, 1540, 1491, 1317, 697.



***N*-2-phenylcyclohexyl)benzamide (12b)** was prepared according to General Procedure C from **12a** and phenyl iodide. Yields were determined by ¹H NMR versus trimethoxy benzene as an external standard (29% yield (5:1)).

¹H NMR run 1: 26% yield (4.6:1)

¹H NMR run 2: 32% yield (5.2:1)

Isolation of the trans isomer was achieved by flash chromatography (10% EtOAc, 10% NEt₃, 80% hexanes). Under these column conditions the cis isomer coeluted with a side product of the reaction and the trans isomer could be collected cleanly. Partial isolation of the cis product was done via preparative thin layer chromatography (40% Et₂O/hexanes) to aid in characterization (collecting the top portion of the band to obtain cis isomer cleanly).

Trans Isomer:

¹H NMR (500 MHz, CDCl₃): δ 7.44 – 7.35 (m, 3H), 7.33 – 7.22 (m, 6H), 7.20 – 7.13 (m, 1H), 5.70 (d, *J* = 8.3 Hz, 1H), 4.23 (tdd, *J* = 11.4, 8.1, 3.9 Hz, 1H), 2.54 (td, *J* = 11.6, 3.6 Hz, 1H), 2.41 – 2.34 (m, 1H), 2.02 – 1.95 (m, 1H), 1.91 – 1.80 (m, 2H), 1.69 – 1.20 (m, 4H)^a.

^aOverlaps with H₂O.

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.1, 143.6, 135.3, 131.2, 128.8, 128.5, 127.5, 126.8, 126.8, 53.1, 51.1, 35.6, 34.2, 26.4, 25.5.

HRMS (ESI-TOF): calculated for C₁₉H₂₂NO⁺ ([M+H]⁺): 280.1696, found 280.1695.

IR (ATM cm⁻¹): 3295 (br), 3090, 3080, 3062, 3030, 2928, 2853, 1632, 1603, 1578, 1543, 1492, 1447, 1340, 1329, 755, 697, 669.

Cis Isomer:

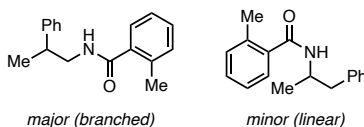
¹H NMR (500 MHz, CDCl₃): δ 7.55 – 7.49 (m, 2H), 7.47 – 7.40 (m, 1H), 7.39 – 7.32 (m, 2H), 7.32 – 7.24 (m, 4H), 7.24 – 7.15 (m, 1H), 6.05 (d, *J* = 7.9 Hz, 1H), 4.57 (dq, *J* = 7.7, 3.8 Hz, 1H), 3.08 (dt, *J* = 12.3, 3.9 Hz, 1H), 2.22 – 2.15 (m, 1H), 2.03 – 1.89 (m, 2H), 1.86 – 1.23 (m, 5H)^a.

^aOverlaps with H₂O and grease

¹³C{¹H} NMR (126 MHz, CDCl₃): δ 167.00, 142.82, 135.32, 131.13, 128.49, 128.48, 127.31, 126.66, 126.60, 50.23, 44.74, 30.80, 26.00, 25.50, 20.96.

^aTwo decimal places shown to distinguish between peaks at δ 128.49 and 128.48.

HRMS (ESI-TOF): calculated for C₁₉H₂₂NO⁺ ([M+H]⁺): 280.1696, found 280.1696.



2-methyl-N-(2-phenylpropyl)benzamide (13b) was prepared according to General Procedure C from **13a** and phenyl iodide. The product was isolated by flash chromatography (15% EtOAc/hexanes) to produce a yellow solid (58% yield (8:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 57% yield (9.1:1)

Run 2: 58% yield (7.7:1)

Branched Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.36 – 7.32 (m, 2H), 7.29 – 7.19 (m, 4H), 7.18 – 7.15 (m, 2H), 7.14 – 7.10 (m, 1H), 5.74 (br s, 1H), 3.78 (dt, *J* = 13.5, 6.4 Hz, 1H), 3.45 (ddd, *J* = 13.4, 9.0, 5.3 Hz, 1H), 3.08 (dp, *J* = 9.2, 6.9 Hz, 1H), 2.33 (s, 3H), 1.34 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 170.1, 144.1, 136.7, 136.0, 131.0, 129.8, 128.8, 127.3, 126.9, 126.7, 125.7, 46.4, 40.0, 19.7, 19.7.

Linear Isomer:

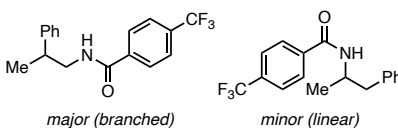
¹H NMR (600 MHz, CDCl₃): δ 7.38 – 7.10 (m, 9H), 5.74 (br s, 1H), 4.52 – 4.42 (m, 1H), 2.90 (dd, *J* = 13.6, 6.6 Hz, 1H), 2.85 (dd, *J* = 13.7, 6.9 Hz, 1H), 2.33 (s, 3H), 1.24 (d, *J* = 6.8 Hz, 3H).
¹³C{¹H} NMR (151 MHz, CDCl₃): δ 169.48, 138.06, 136.86, 135.96, 130.93, 129.71, 129.50, 128.50, 127.31, 126.59, 126.58, 46.46, 42.63, 20.41, 19.63.

^aTwo decimal places shown to distinguish between peaks at δ 126.59 and 126.58.

Mixture of Isomers:

HRMS (APCI): calculated for C₁₇H₂₀NO⁺ ([M+H]⁺): 254.1539, found 254.1538.

IR (ATM cm⁻¹): 3268 (br), 3027, 2965, 2926, 2872, 1636, 1535, 1453, 1306, 760, 741, 699.



***N*-(2-phenylpropyl)-4-(trifluoromethyl)benzamide (14b)** was prepared according to General Procedure C from **14a** and phenyl iodide. The product was isolated by flash chromatography (15% EtOAc/hexanes) to produce a white solid (48% yield (20:1)). The product was isolated and characterized as a mixture of isomers. While minor amounts of linear isomer are observed by ¹H NMR, due to the high selectivity of the reaction, only branched isomer characterization data is provided.

Run 1: 52% yield (20:1)

Run 2: 44% yield (20:1)

Branched Isomer:

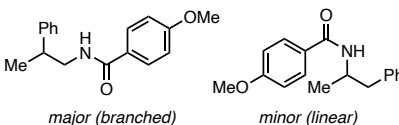
¹H NMR (600 MHz, CDCl₃): δ 7.70 (d, *J* = 8.1 Hz, 2H), 7.62 (d, *J* = 8.1 Hz, 2H), 7.38 – 7.32 (m, 2H), 7.28 – 7.23 (m, 3H), 6.17 (br s, 1H), 3.83 (dt, *J* = 13.4, 6.3 Hz, 1H), 3.42 (ddd, *J* = 13.6, 8.9, 5.0 Hz, 1H), 3.09 (dp, *J* = 9.1, 6.9 Hz, 1H), 1.35 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 166.3, 143.9, 138.1, 133.2 (q, *J* = 32.7 Hz), 129.0, 127.4, 127.3, 127.1, 125.7 (q, *J* = 3.8 Hz), 123.8 (q, *J* = 272.6 Hz), 46.8, 39.8, 19.4.

¹⁹F NMR (565 MHz, CDCl₃): δ -62.97 (s).

HRMS (APCI): calculated for C₁₇H₁₇F₃NO⁺ ([M+H]⁺): 308.1257, found 308.1257.

IR (ATM cm⁻¹): 3322 (br), 3028, 2965, 2932, 1642, 1546, 1327, 1165, 1126, 1069, 700.



4-methoxy-*N*-(2-phenylpropyl)benzamide (15b) was prepared according to General Procedure C from **15a** and phenyl iodide. The product was isolated by flash chromatography (10% to 15% acetone/hexanes) to produce a white solid (78% yield (10:1)). The product was isolated and characterized as a mixture of isomers.

Run 1: 74% yield (9:1)

Run 2: 81% yield (10:1)

Branched Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.61 (d, *J* = 8.7 Hz, 2H), 7.36 – 7.29 (m, 2H), 7.25 – 7.19 (m, 3H), 6.84 (d, *J* = 8.8 Hz, 2H), 6.23 (br s, 1H), 3.83 – 3.73 (m, 4H), 3.39 (ddd, *J* = 13.4, 8.5, 5.0 Hz, 1H), 3.11 – 3.01 (m, 1H), 1.31 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 167.0, 162.1, 144.3, 128.7, 128.6, 127.3, 127.0, 126.8, 113.7, 55.4, 46.6, 39.8, 19.3.

Linear Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.69 (d, *J* = 8.8 Hz, 2H), 7.37 – 7.18 (m, 5H), 6.84 (d, *J* = 8.8 Hz, 2H), 6.23 (br s, 1H), 4.48 – 4.41 (m, 1H), 3.83 – 3.73 (m, 3H)^a, 2.95 (dd, *J* = 13.5, 5.6 Hz, 1H), 2.81 (dd, *J* = 13.4, 7.2 Hz, 1H), 1.20 (d, *J* = 6.6 Hz, 3H).

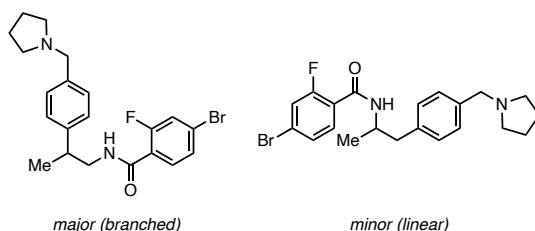
^aNot resolved from branched isomer.

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 166.4, 162.0, 138.1, 129.6, 128.7, 128.4, 127.2, 126.5, 113.6, 55.4, 46.5, 42.5, 20.0.

Mixture of Isomers:

HRMS (APCI): calculated for C₁₇H₂₀NO⁺ ([M+H]⁺): 270.1489, found 270.1489.

IR (ATM cm⁻¹): 3313 (br), 3059, 3028, 3001, 2961, 2928, 2871, 2838, 1631, 1606, 1545, 1504, 1253, 1178, 1032, 844, 763, 701.



16b was prepared according to a modified General Procedure C from **16a** and 1-(4-iodobenzyl)pyrrolidine (synthesized according to reference 14 and distilled at 100 °C under full vacuum before use; at the time this manuscript was prepared, 1-(4-iodobenzyl)pyrrolidine was commercially available).

The following stock solutions were prepared in 1-dram vials:

Stock Solution 1: Cp*TiCl₃ (23.16 mg, 0.080 mmol, 20 mol%) and 889 μL of THF.

Stock Solution 2: NiBr₂•diglyme (7.05 mg, 0.020 mmol, 5 mol%), dtbbpy (8.05 mg, 0.030 mmol, 7.5 mol%), and 889 μL of THF. This vial was equipped with a Teflon stir bar, capped with a septum cap, and allowed to stir for 15 minutes forming a green suspension.

Stock Solution 3: Zn (78.46 mg, 1.20 mmol, 3.0 equiv) and 889 μL of THF. A suspension of Zn in THF was generated by pipetting up and down a few times before transferring to the reaction.

To a 2-dram vial equipped with a Teflon stir bar was added pyridine•HBr (64.00 mg, 0.40 mmol, 1.0 equiv), aziridine (103.24 mg, 0.40 mmol, 1.0 equiv), and ArI (114.86 mg, 0.40 mmol, 1.0 equiv). 889 μL of stock solution 1 was added. The reaction was allowed to stir for 15 minutes at which point stock solution 2 (889 μL), and stock solution 3 (889 μL) were sequentially added. The reaction vial was capped with a septum cap, wrapped with electrical tape, and brought outside the glovebox. The reactions were set to stir (1200 rpm) at room temperature for 3 hours. After 3 hours

the reactions were opened to air. EtOAc (~2 mL) was added to the vial and then the solution was passed through a celite plug with EtOAc to remove any solids. The eluate was concentrated and purified by flash chromatography (5% EtOAc/hexanes + 15% NEt₃) to produce a slightly pink solid (46% yield (10:1)). The product was isolated and characterized as a mixture of isomers. Spectral data are in agreement with literature values.¹⁵

Run 1: 47% yield (9.1:1)

Run 2: 45% yield (10.0:1)

Branched Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.96 – 7.85 (m, 1H), 7.37 – 7.34 (m, 1H), 7.30 – 7.27 (m, 2H), 7.23 – 7.19 (m, 1H), 7.19 – 7.16 (m, 2H), 6.57 – 6.47 (m, 1H), 3.78 (dtd, *J* = 12.8, 6.4, 1.7 Hz, 1H), 3.58 (s, 2H), 3.45 (dddd, *J* = 13.3, 8.5, 4.8, 1.2 Hz, 1H), 3.04 (dp, *J* = 8.6, 6.9 Hz, 1H), 2.57 – 2.40 (m, 4H), 1.86 – 1.68 (m, 4H), 1.32 (d, *J* = 7.0 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 162.4 (d, *J* = 3.3 Hz), 160.1 (d, *J* = 251.7 Hz), 142.4, 138.0, 133.2 (d, *J* = 2.9 Hz), 129.4, 128.3 (d, *J* = 3.3 Hz), 127.1, 126.2 (d, *J* = 10.3 Hz), 120.3 (d, *J* = 11.8 Hz), 119.6 (d, *J* = 28.2 Hz), 60.4, 54.2, 47.0, 39.3, 23.5, 19.3.

¹⁹F NMR (565 MHz, CDCl₃): δ -111.6 (q, *J* = 10.9 Hz).

Linear Isomer:

¹H NMR (600 MHz, CDCl₃): δ 7.93 – 7.88 (m, 1H), 7.38 – 7.33 (m, 1H), 7.30 – 7.19 (m, 3H), 7.16 – 7.13 (m, 2H), 6.55 – 6.48 (m, 1H), 4.49 – 4.38 (m, 1H), 3.57 (s, 2H), 2.91 (dd, *J* = 13.5, 5.9 Hz, 1H), 2.79 (dd, *J* = 13.6, 7.1 Hz, 1H), 2.57 – 2.40 (m, 4H), 1.86 – 1.68 (m, 4H), 1.21 (d, *J* = 6.7 Hz, 3H).

¹³C{¹H} NMR (151 MHz, CDCl₃): δ 161.6 (d, *J* = 3.4 Hz), 160.1 (d, *J* = 251.4 Hz), 137.7, 136.3, 133.3 – 133.2 (m)^a, 129.4, 129.1, 128.4 – 128.3 (m)^b, 126.2 (d, *J* = 10.3 Hz), 120.5 (d, *J* = 11.9 Hz), 119.6 (d, *J* = 28.2 Hz), 60.5, 54.2^c, 47.1, 42.1, 23.5, 20.0.

^{a,b}Overlap with branched isomer precluded full resolution of multiplet.

^cNot observed in ¹³C{¹H} NMR, assumed overlap with branched isomer.

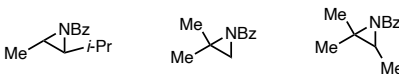
¹⁹F NMR (565 MHz, CDCl₃): δ -111.3 (q, *J* = 10.9 Hz).

Mixture of Isomers:

HRMS (ESI-TOF): calculated for C₂₁H₂₅⁷⁹BrFN₂O⁺ ([M+H]⁺): 419.1129, found 419.1126.

IR (ATM cm⁻¹): 3449 (br shoulder), 3385 (br), 2964, 2930, 2872, 2787, 1654, 1603, 1535, 1477, 1401, 1299, 1205, 1154, 1128, 1113, 877, 766.

Unsuccessful Aziridines:



6. Construction of Aryl Iodide Chemical Space

6.1. Commercial Aryl Iodide Search

The search was performed on Reaxys® on Aug 24, 2022.

Initial Search:

The search was initiated under “Query builder” in Reaxys® on the following structure (where Ary=Aryl using the prebuilt functionality under “Reaxys Group Generics”).



The following filters were also applied on this page:

- Molecular Weight ≤ 500 (*Identification* \rightarrow *Molecular Weight*)
- Number of Fragments = 1 (*Identification* \rightarrow *Number of Fragments*)

The search was performed in the “Commercial Substances” database (Search in Substances >> Change database from Reaxys® to Commercial Substances) to give 392,214 aryl iodides.

Subsequent Filters:

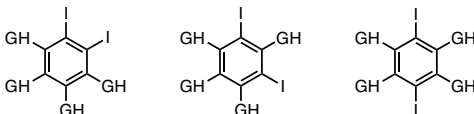
From the initial set of aryl iodides the following filters were applied:

- Availability: Limit to “PubChem”
- Availability: Limit to “Reaxys”
- Price: Filter by Value ≤ 500
- Stock Availability: Limit to “In Stock”

This narrowed our initial search space to 4,284 aryl iodides.

Functional Group Filters:

We limited our search space to mono-substituted aryl iodides. This was done by using the “By Structure” filter in the lefthand column and excluding following structures: (GH=Any group or H)



This gave us a final aryl iodide search space of 4,116 aryl iodides.

6.2. Descriptor Generation

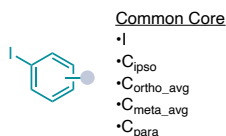
In order to compare aryl iodides in chemical space we first needed to generate descriptors for each aryl iodide. While many types of descriptors exist, we wanted descriptors that would distinguish aryl iodides based on their chemical reactivity. Thus, we turned to density functional theory (DFT) descriptors to capture electronic and local steric features as these features would most likely distinguish aryl iodide reactivity.

Global and common core atomic DFT descriptors were generated for the minimum energy conformer for the 4,116 aryl iodides using Auto-QChem. Calculations were performed using the APFD¹⁶ functional with the 6-31G** basis set¹⁷⁻²¹ for light atoms and LanL2DZ basis set²²⁻²⁴ for heavy atoms. All calculations for these descriptors were performed using the PCM solvation model²⁵ for acetonitrile. From the initial list of descriptors, we hand selected the following features based on chemical intuition.

Global descriptors

homo_energy	lumo_energy
-------------	-------------

Atomic descriptors



APT_charge	ES_root_Mulliken_charge	ES_root_NPA_Rydberg	ES_root_NPA_charge
ES_root_NPA_core	ES_root_NPA_total	ES_root_NPA_valence	Mulliken_charge
NMR_anisotropy	NMR_shift	NPA_Rydberg	NPA_charge
NPA_core	NPA_total	NPA_valence	VBur

Before we could use the descriptors in clustering, we standardized the descriptors using `sklearn.preprocessing.scale` (StandardScaler). We then removed any zero-variance features (descriptors that do not change across the data set) and highly correlated (>95%) features (this avoids “double counting” or “overweighting” of a single feature).

Table S5. Aryl iodide features used in clustering. Features highlighted in light grey do not vary across the dataset. Features highlighted in dark grey correlate with at least one non-highlighted feature above 95%. Features that are not highlighted are ones used for dimensionality reduction and clustering.

Global

homo_energy	lumo_energy
-------------	-------------

I

APT_charge	ES_root_Mulliken_charge	ES_root_NPA_Rydberg	ES_root_NPA_charge
ES_root_NPA_core	ES_root_NPA_total	ES_root_NPA_valence	Mulliken_charge
NMR_anisotropy	NMR_shift	NPA_Rydberg	NPA_charge
NPA_core	NPA_total	NPA_valence	VBur

C_{ipso}

APT_charge	ES_root_Mulliken_charge	ES_root_NPA_Rydberg	ES_root_NPA_charge
ES_root_NPA_core	ES_root_NPA_total	ES_root_NPA_valence	Mulliken_charge
NMR_anisotropy	NMR_shift	NPA_Rydberg	NPA_charge
NPA_core	NPA_total	NPA_valence	VBur

C_{ortho_avg}

APT_charge	ES_root_Mulliken_charge	ES_root_NPA_Rydberg	ES_root_NPA_charge
ES_root_NPA_core	ES_root_NPA_total	ES_root_NPA_valence	Mulliken_charge
NMR_anisotropy	NMR_shift	NPA_Rydberg	NPA_charge
NPA_core	NPA_total	NPA_valence	VBur

C_meta_avg

APT_charge	ES_root_Mulliken_charge	ES_root_NPA_Rydberg	ES_root_NPA_charge
ES_root_NPA_core	ES_root_NPA_total	ES_root_NPA_valence	Mulliken_charge
NMR_anisotropy	NMR_shift	NPA_Rydberg	NPA_charge
NPA_core	NPA_total	NPA_valence	VBur

C_para_avg

APT_charge	ES_root_Mulliken_charge	ES_root_NPA_Rydberg	ES_root_NPA_charge
ES_root_NPA_core	ES_root_NPA_total	ES_root_NPA_valence	Mulliken_charge
NMR_anisotropy	NMR_shift	NPA_Rydberg	NPA_charge
NPA_core	NPA_total	NPA_valence	VBur

6.3. Dimensionality Reduction

The next step of the workflow involves applying a dimensionality reduction technique. Principal Components Analysis (PCA) and Uniform Manifold Approximation and Projection (UMAP). For both algorithms, we tested several benchmark levels of compression from the original 45 dimensions to 20, 10, 5, 3, and 2 dimensions.

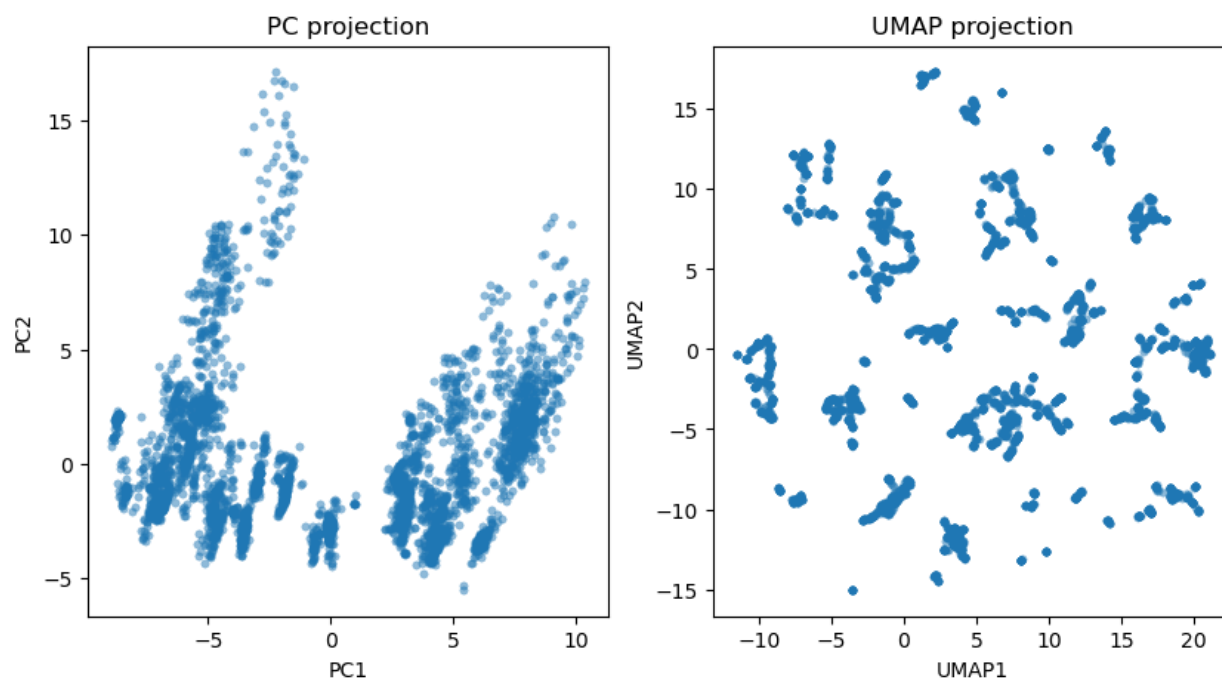


Figure S1. Two-dimensional imbedding of PCA and UMAP clustering methods

The quality of clustering was then tested by the silhouette value, a common clustering metric. For each sample (aryl iodide) $i \in C_i$ (data point i in cluster C_i) we compute two values:

Average distance of an aryl iodide to the other aryl iodides within its same cluster:

$$a(i) = \frac{1}{|C_i|-1} \sum_{j \in C_i, i \neq j} d(i, j) \quad \text{SEq.1}$$

Average distance of an aryl iodide to other clusters:

$$b(i) = \min_{k \neq i} \frac{1}{|C_k|} \sum_{j \in C_k} d(i, j) \quad \text{SEq.2}$$

The silhouette value is then defined by:

$$s(i) = \frac{b(i) - a(i)}{\max\{a(i), b(i)\}} \quad \text{SEq.3}$$

This value can hypothetically span the range of $-1 \leq s(i) \leq 1$. Larger values mean that aryl iodides within the same cluster match the other aryl iodides within the same cluster while differing from those in other clusters. We computed silhouette scores for 5-45 clusters (aiming to have a high silhouette score).

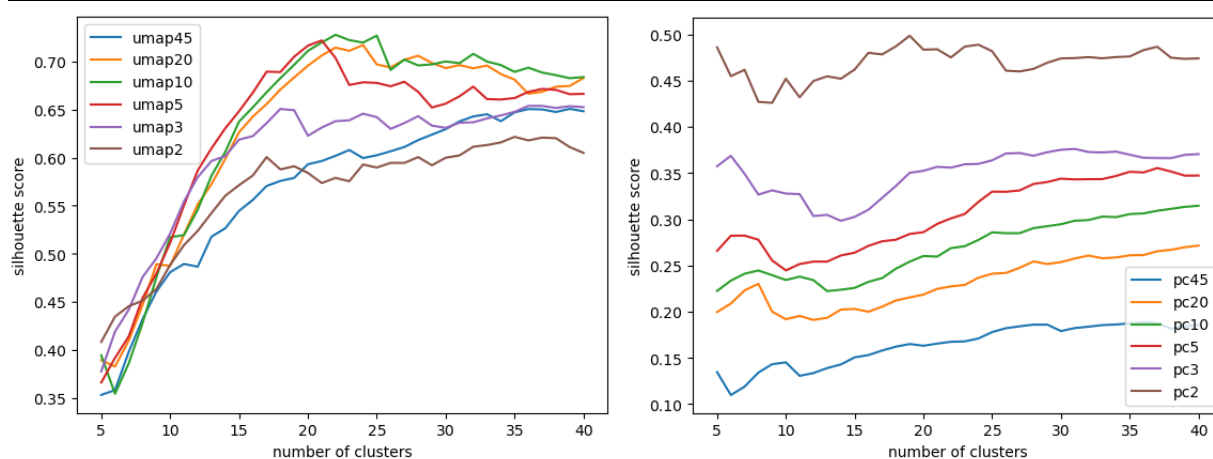


Figure S2. Average silhouette score as a function of number of clusters (5-45) for both UMAP (top) and PCA (bottom) clustering methods.

We found that overall UMAP provided higher silhouette scores, beginning low but then quickly rising until they begin to taper off around 15-20 clusters. For our substrate scope selection, we chose to proceed with UMAP clustering, at 10 dimensions and 16 clusters. A full list of aryl iodides sorted by cluster is included in section 12.

UMAP, like other non-linear dimensionality reduction techniques, involves the transformation of high-dimensional data into a lower-dimensional Euclidean space. This transformation requires warping the high-dimensional shape, which means that distances in the lower-dimensional space may not carry the same intuitive physical meaning as in linear reduction techniques, such as PCA.

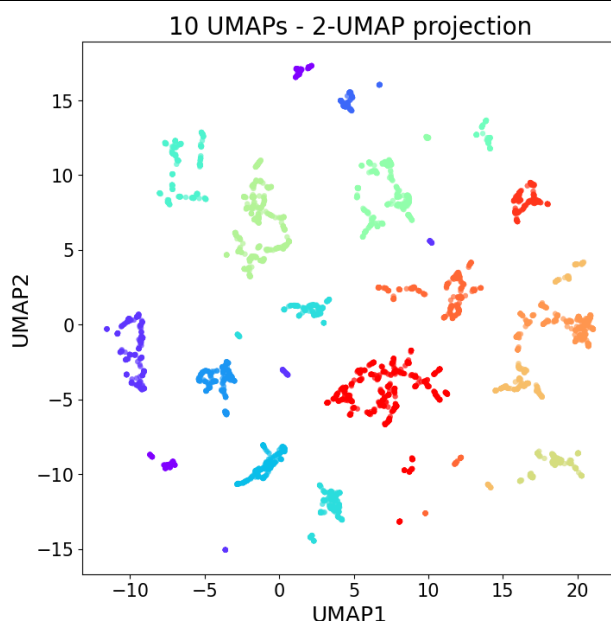


Figure S3. Clusters generated in 10-dimensions plotted on 2-dimension UMAP space.

6.4. Functional Group Filter

With initial clusters in hand, we next removed functional groups we envisioned would be incompatible with the method. These functional groups include those that gave either <15% yield or <15% additive recovery in the robustness screen. In addition, we also removed acid halides, sulfonyl halides, tertiary alkyl bromides, and anything with more than one iodide. We found that even without these aryl iodides we still had a good representation of ArI chemical space.

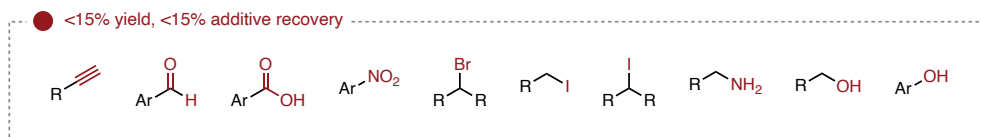


Figure S4. Functional groups that are not tolerated in the reaction as determined by Glorius additive screen.

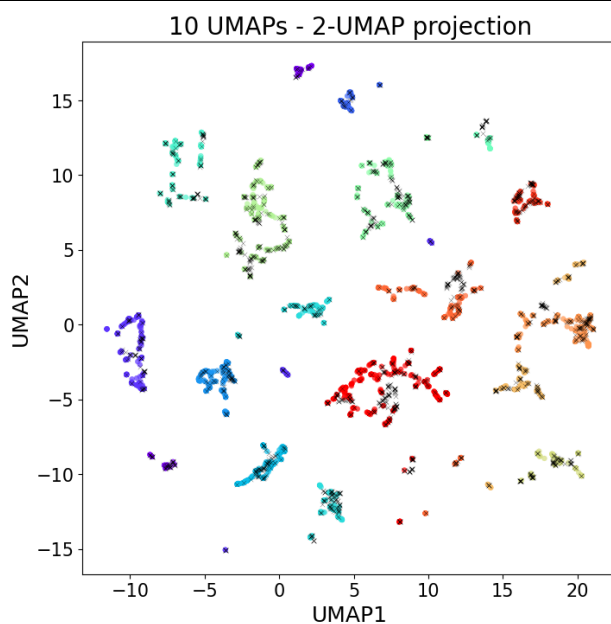


Figure S5. Chemical space with aryl iodides containing unsuitable functional groups marked with an “x”.

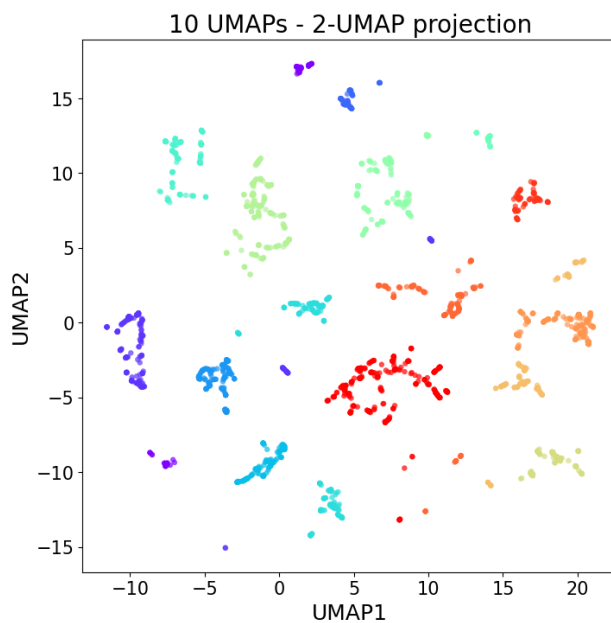


Figure S6. Chemical space following functional group filter.

6.5. Aryl Iodide Scope Selection

One aryl iodide from each cluster was hand selected for analysis in the substrate scope (Figure 4B). In selecting aryl iodides, we considered similarity to other aryl iodides in the cluster, distance to the centroid of the cluster (see section 6.6), vendor availability, and cost. Figure S7 shows an

overlay of the observed reaction yields on the plot and Figure S8 shows an overlay of the predicted reaction yields on the plot. While cluster identity appears to be correlated with reactivity, we would recommend that a user apply the prediction model to assess the performance of an untested substrate rather than using the cluster identity of the unseen substrate.

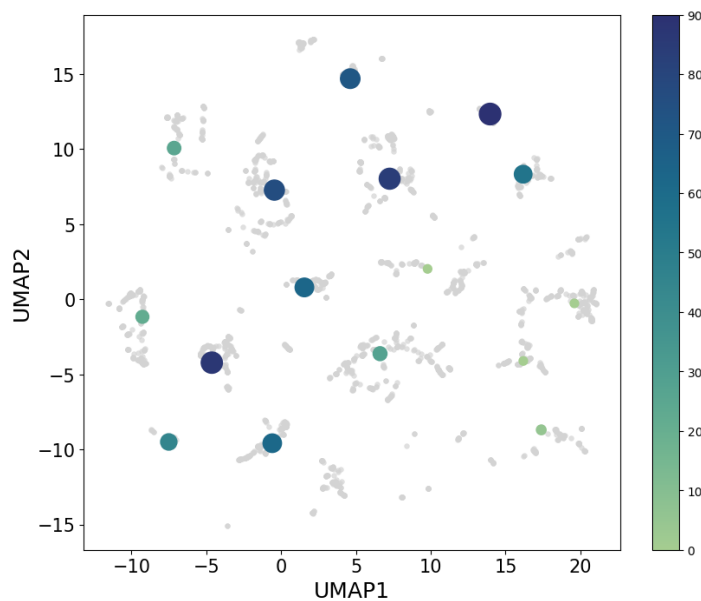


Figure S7. Heat map plot of observed yields across aryl iodide scope.

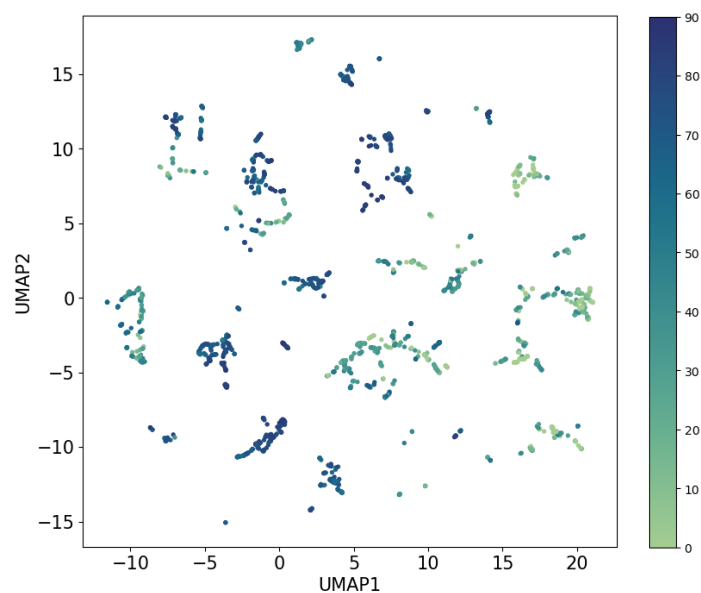
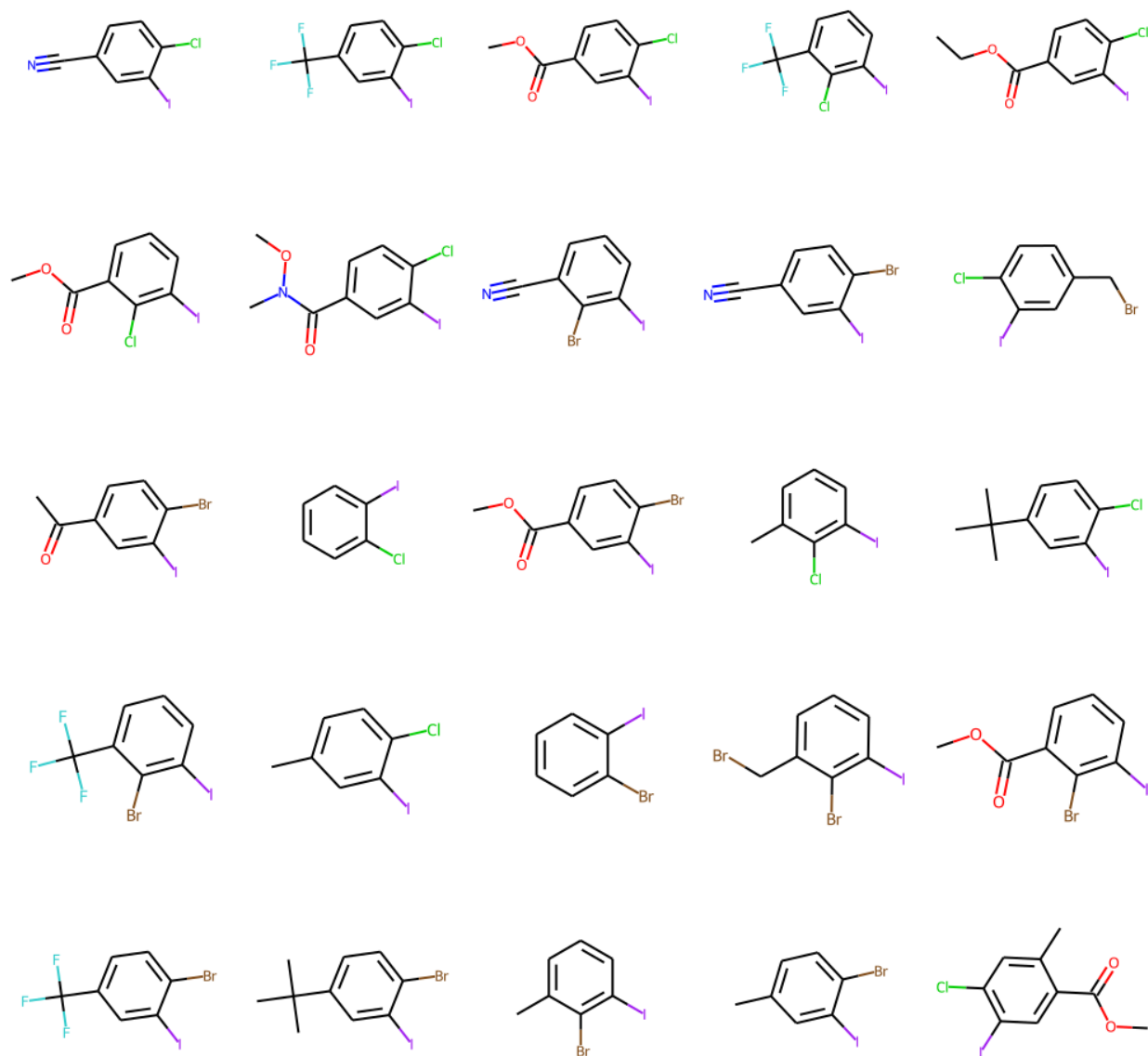


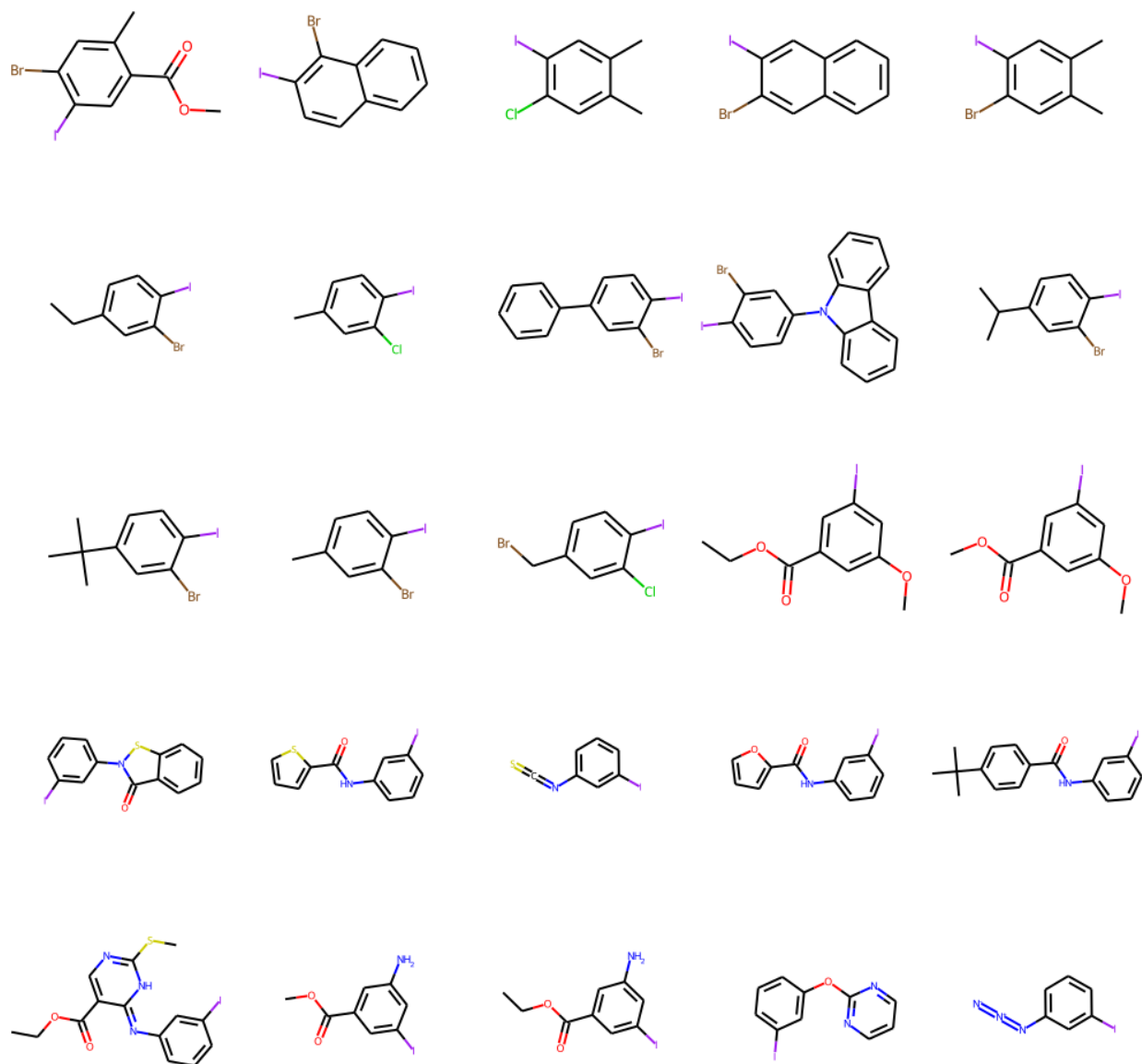
Figure S8. Heat map plot of predicted yields across all aryl iodides. Yields that are predicted to be less than 0% yield are set to 0% yield.

6.6. Center 50 Aryl Iodides in Each Cluster

For each cluster we computed the centroid position based on 10 UMAP features from the full aryl iodide space. We then applied the functional group filter and sorted the remaining aryl iodides in order of distance to the centroid. Below the center 50 from each cluster are displayed. In cases where a cluster has fewer than fifty aryl iodides, all aryl iodides are displayed.

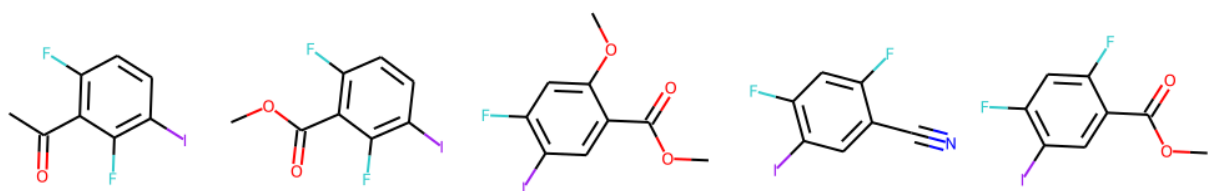
Cluster A:

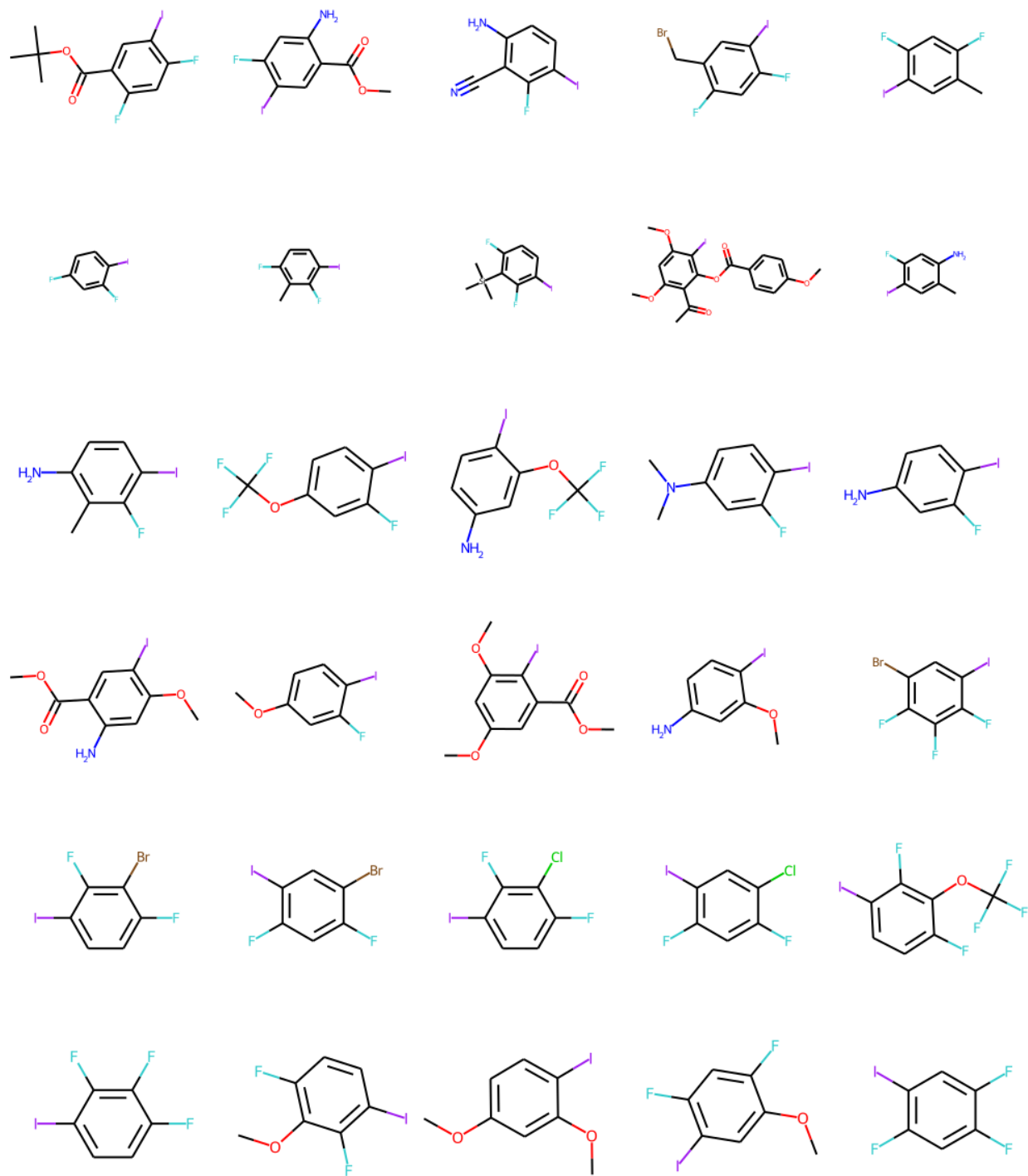


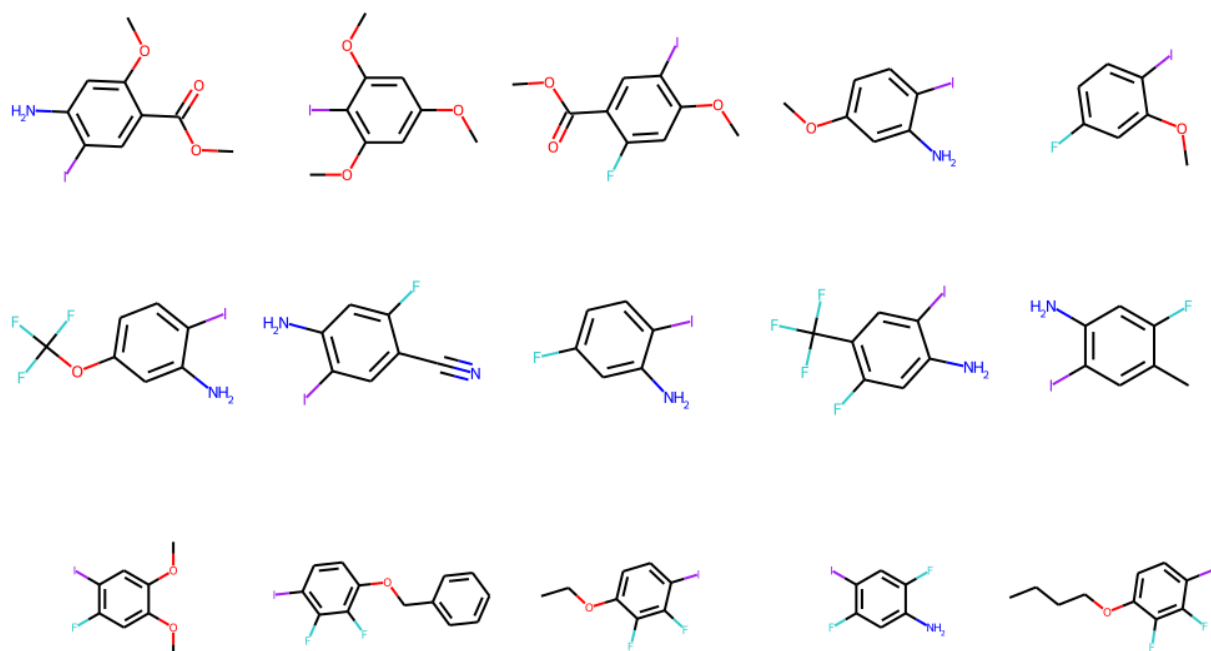


In this cluster we opted to select an aryl iodide that represented the substrates without a single *ortho* substituent as overall our substrate scope had several substrates with *ortho* substitution.

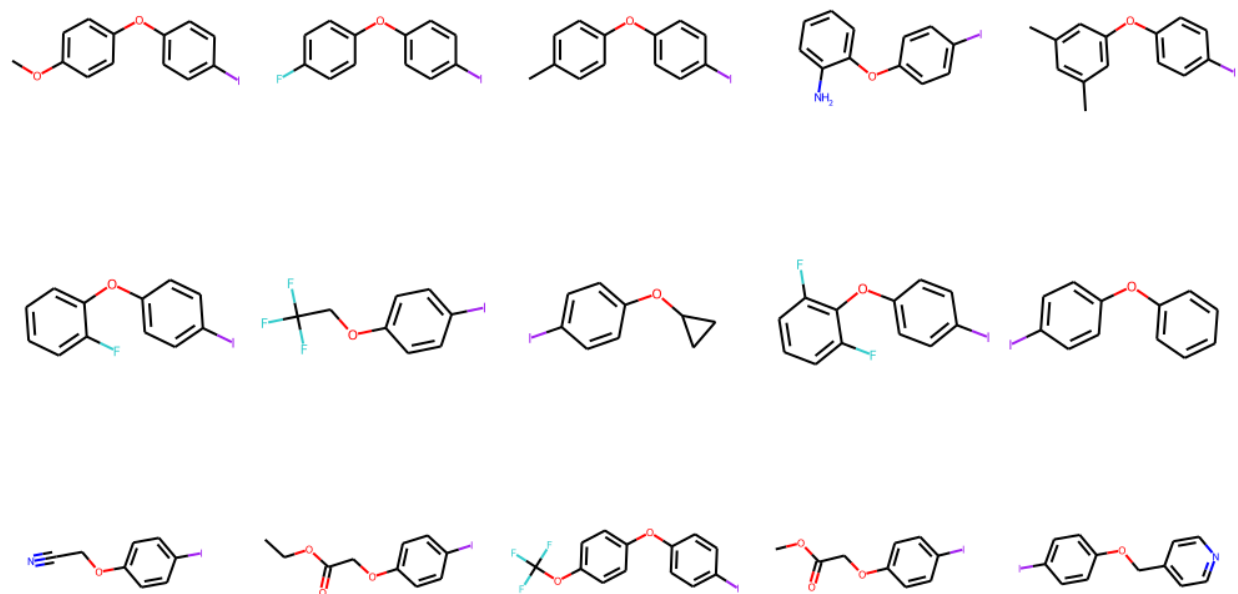
Cluster B:

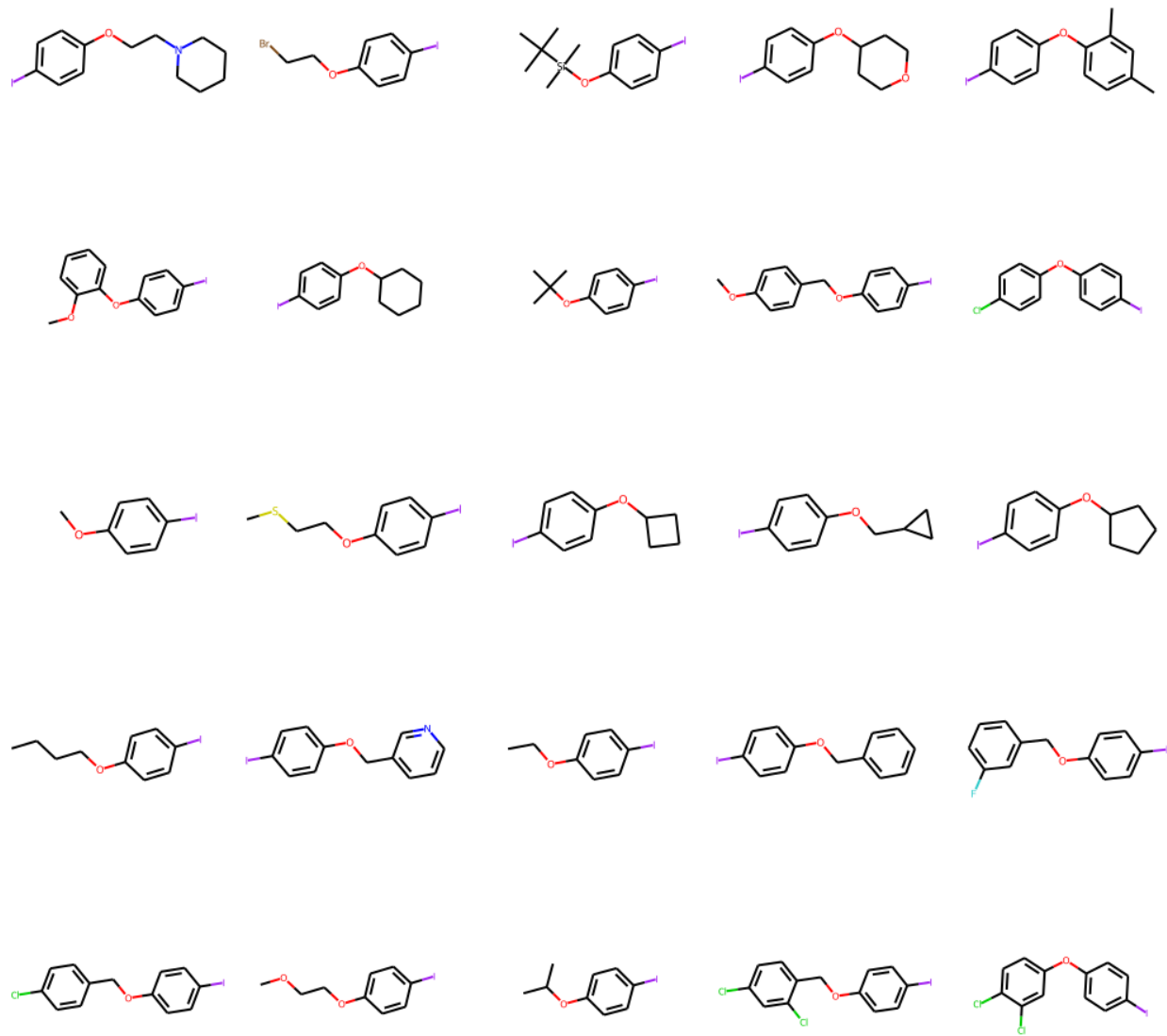


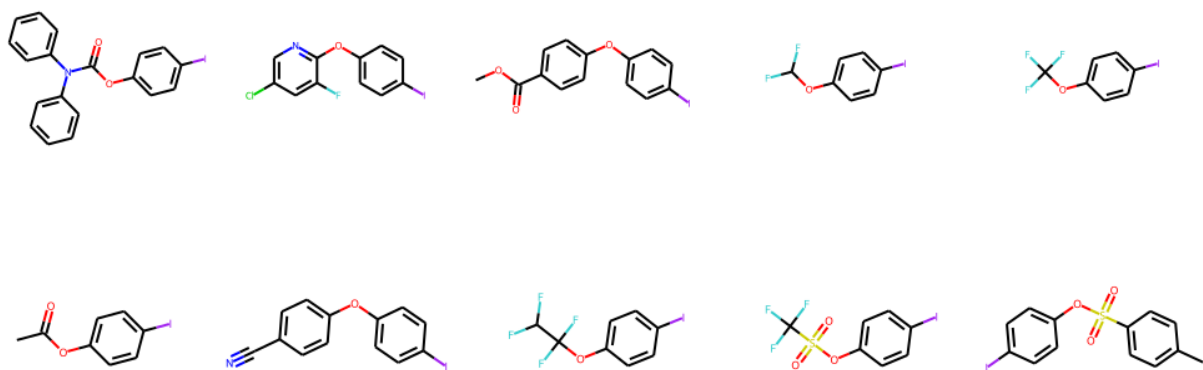




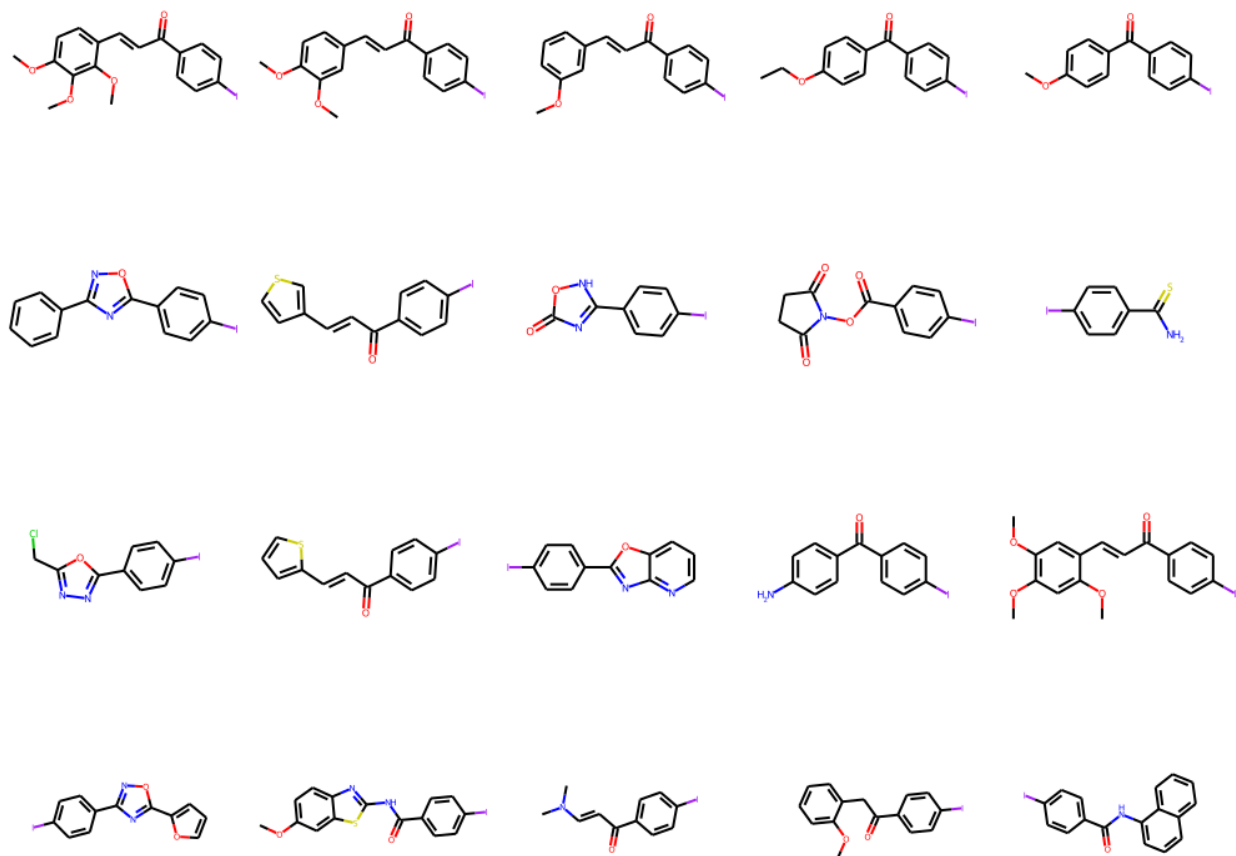
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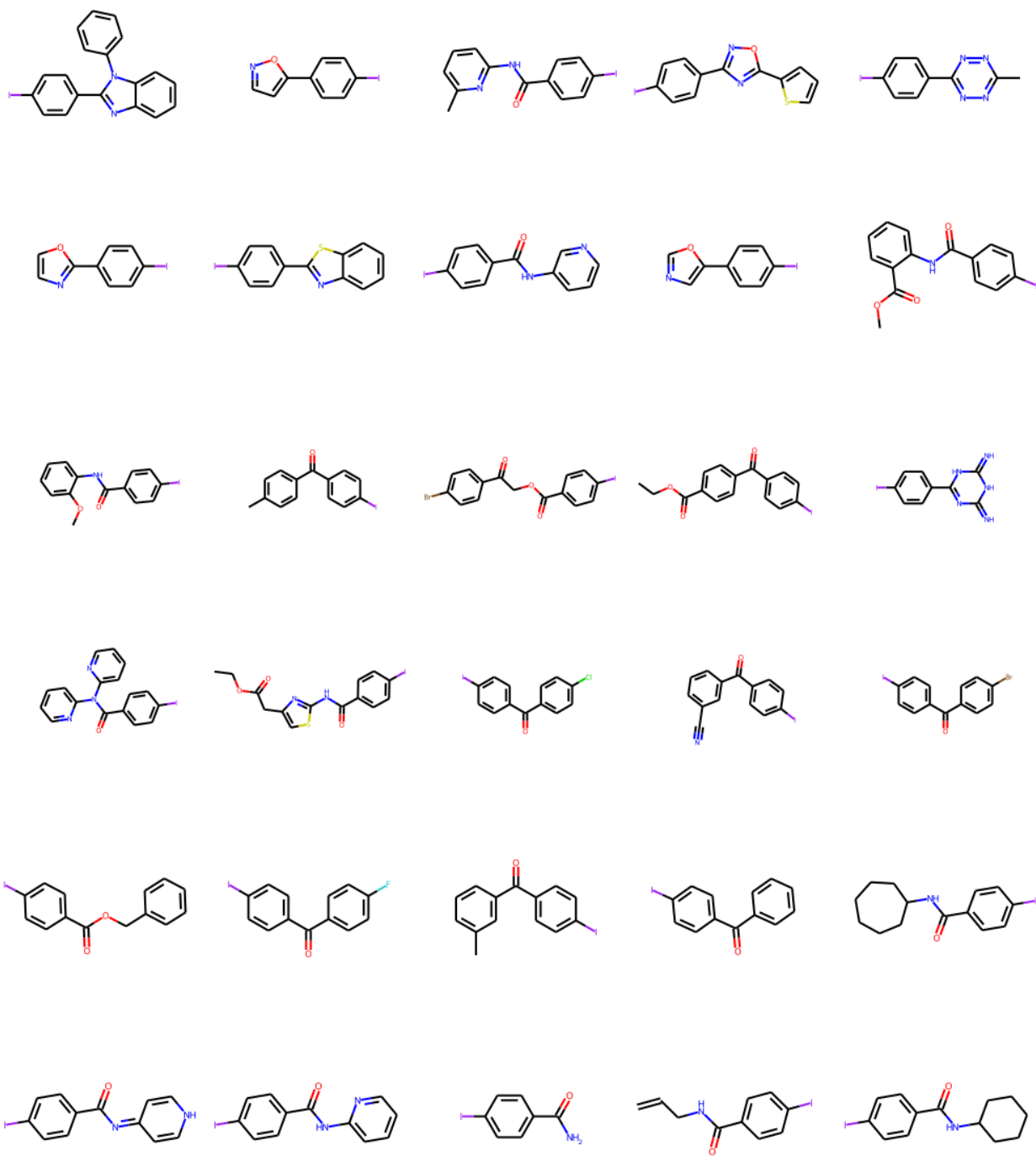




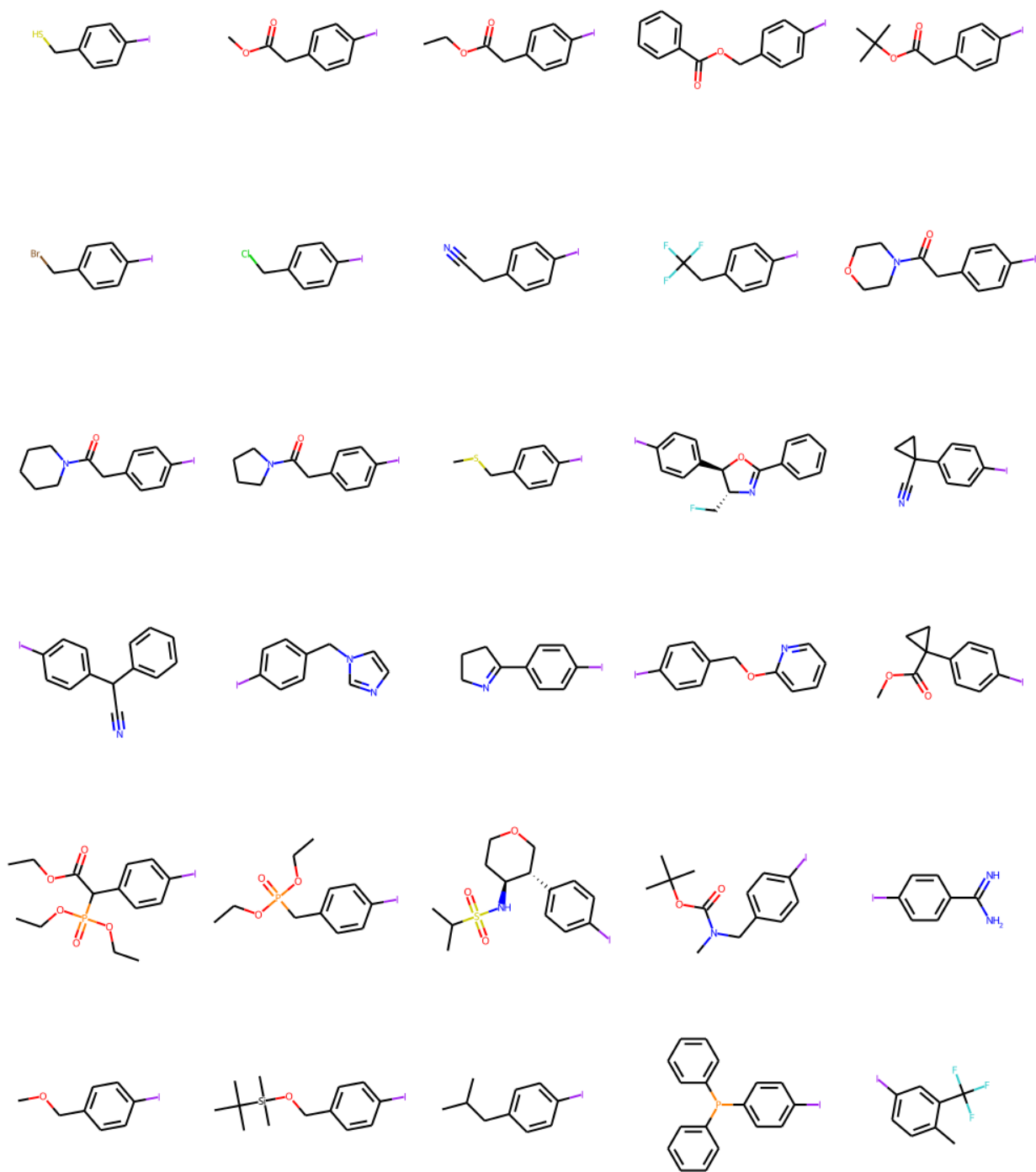


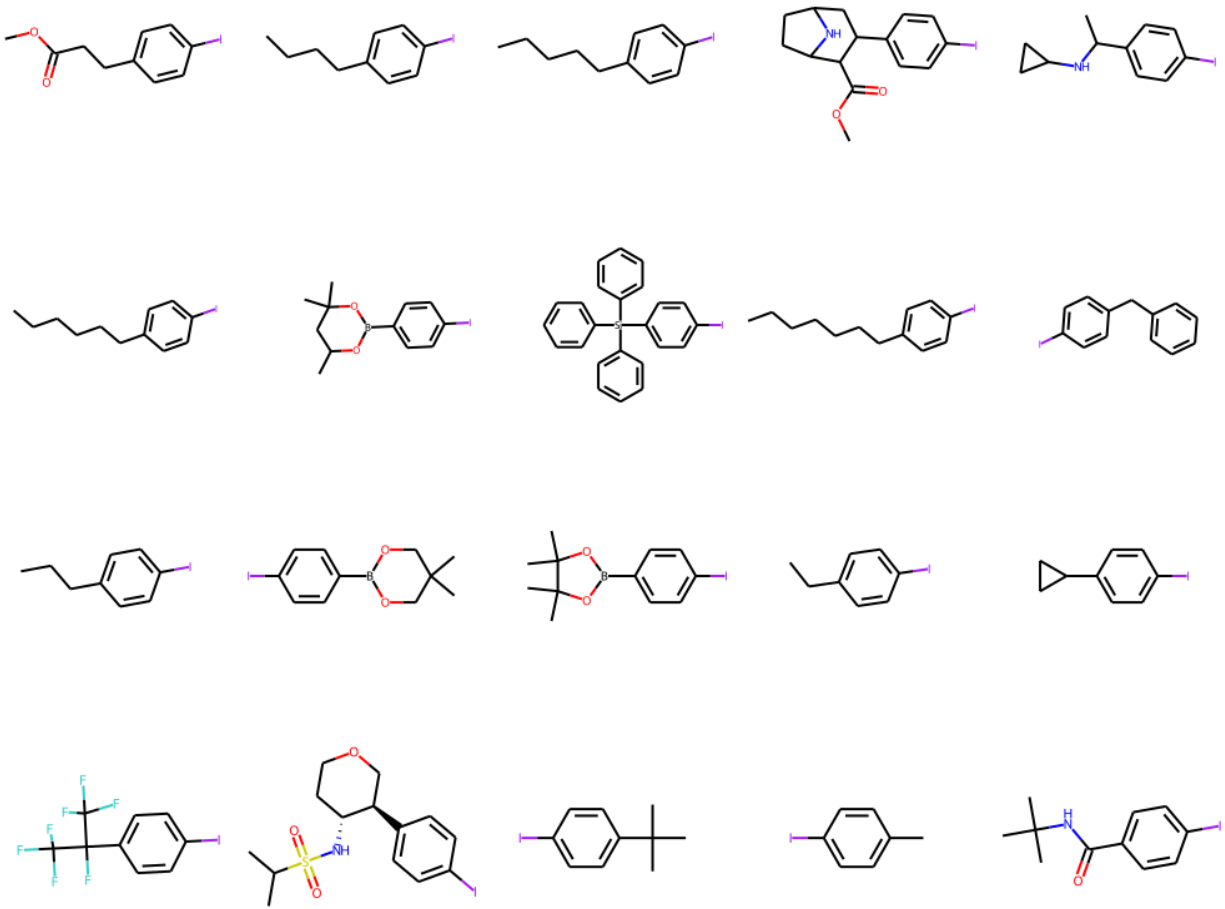
Cluster D:



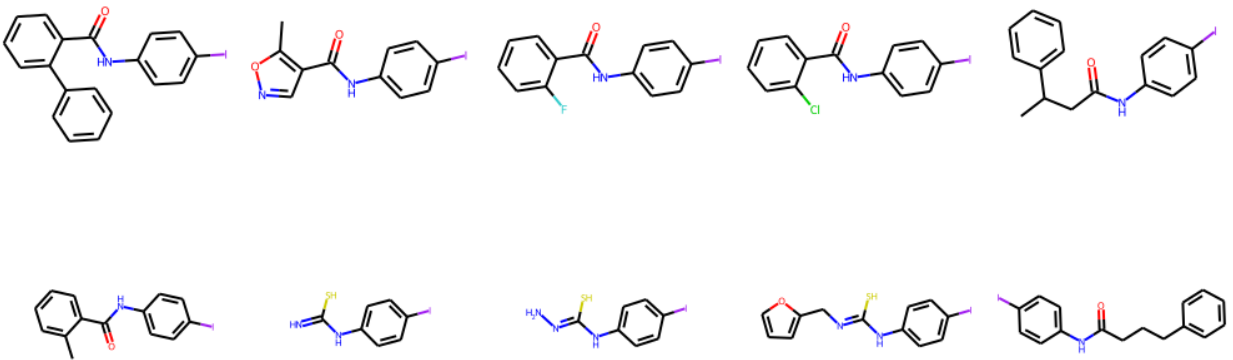


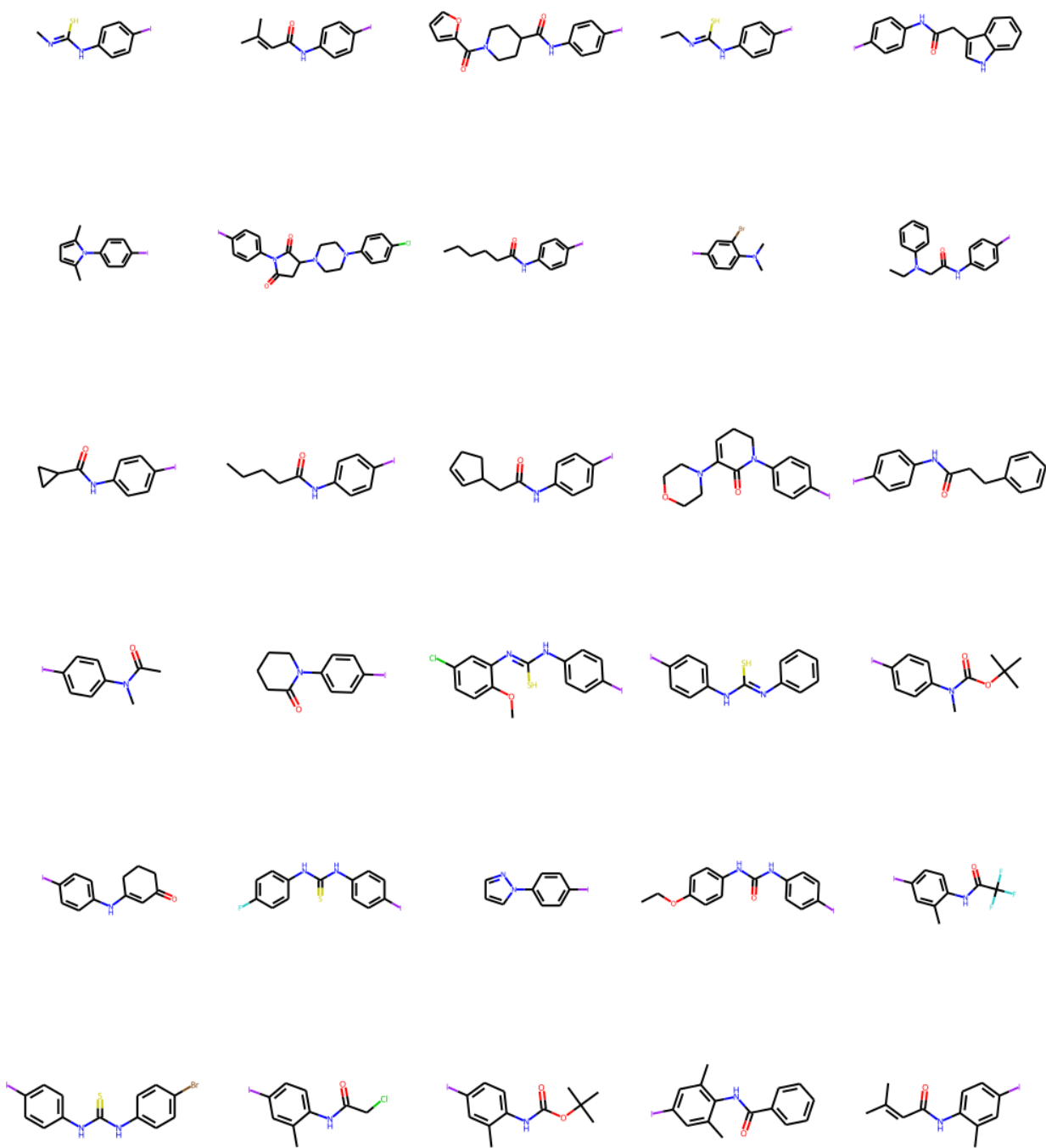
Cluster E:

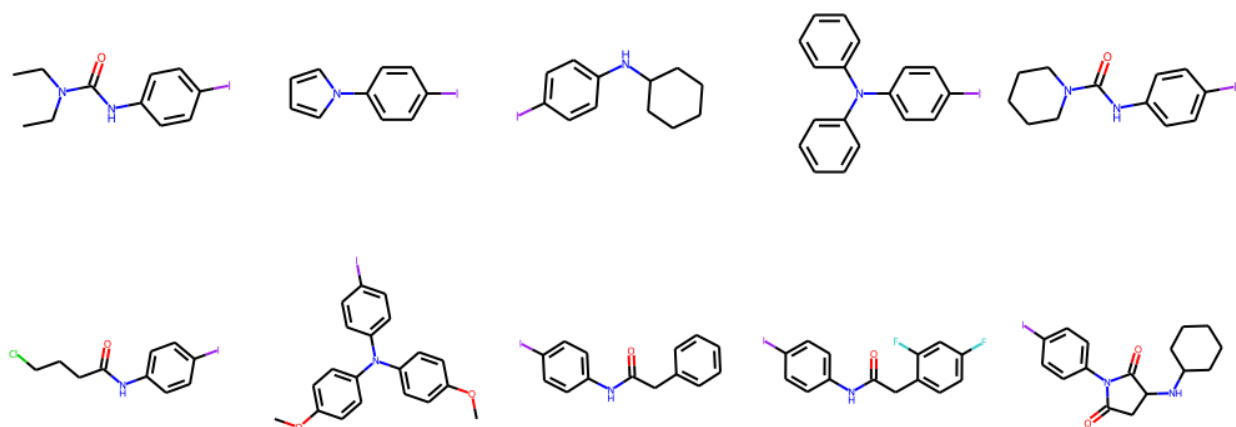




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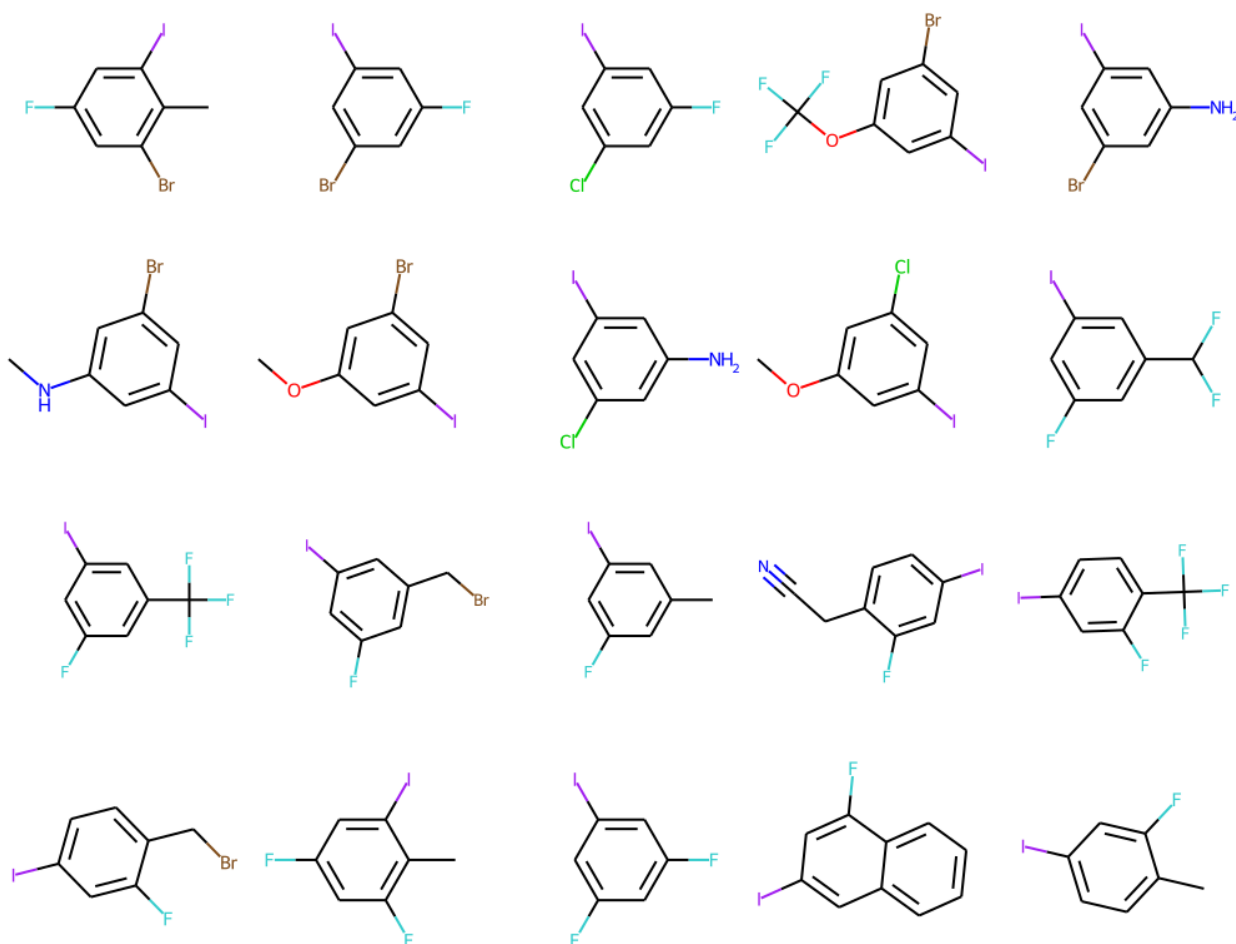


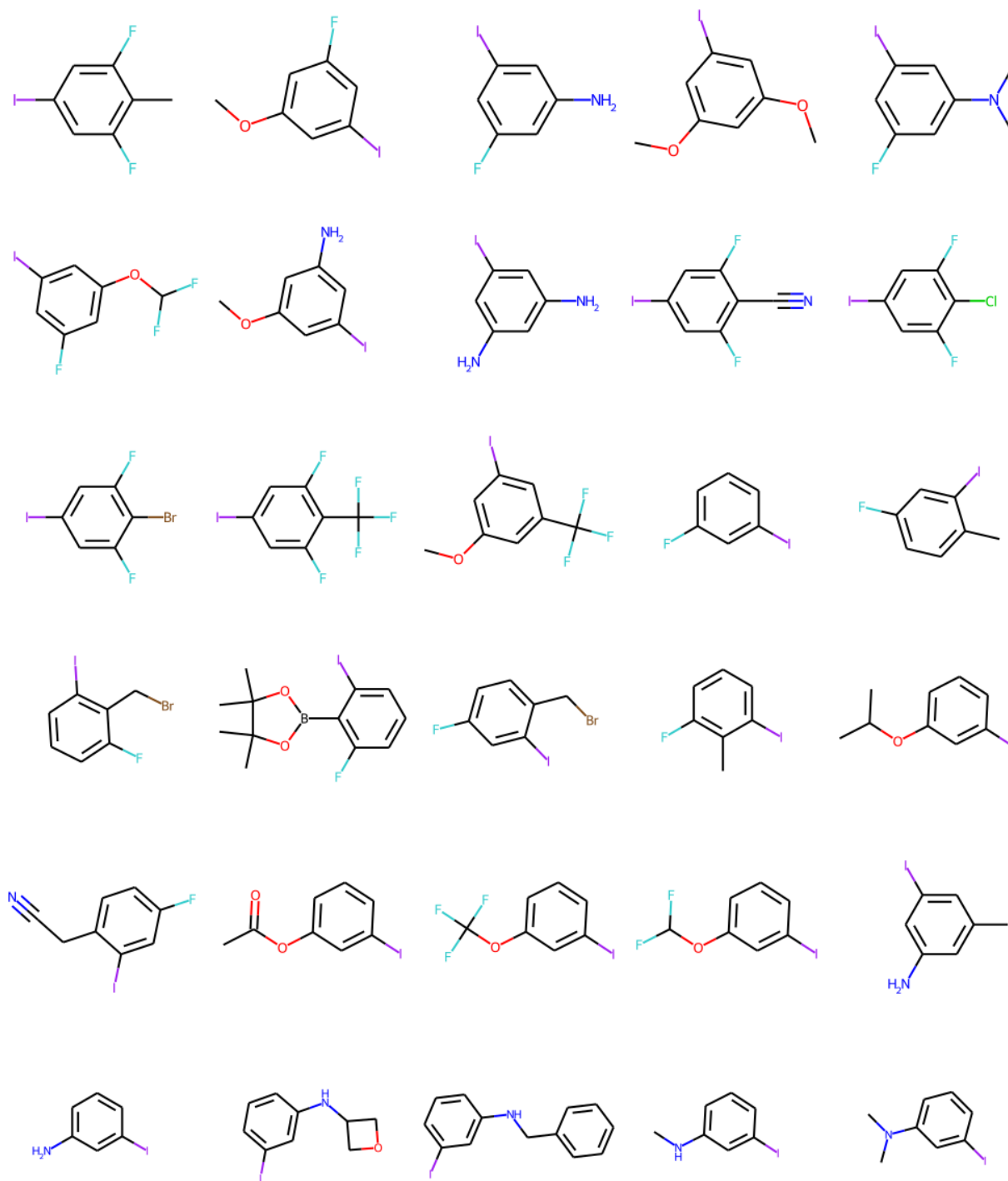




Many of the amides we tested were not soluble under reaction conditions. Thus, the selected aryl iodide does not contain the amide functionality.

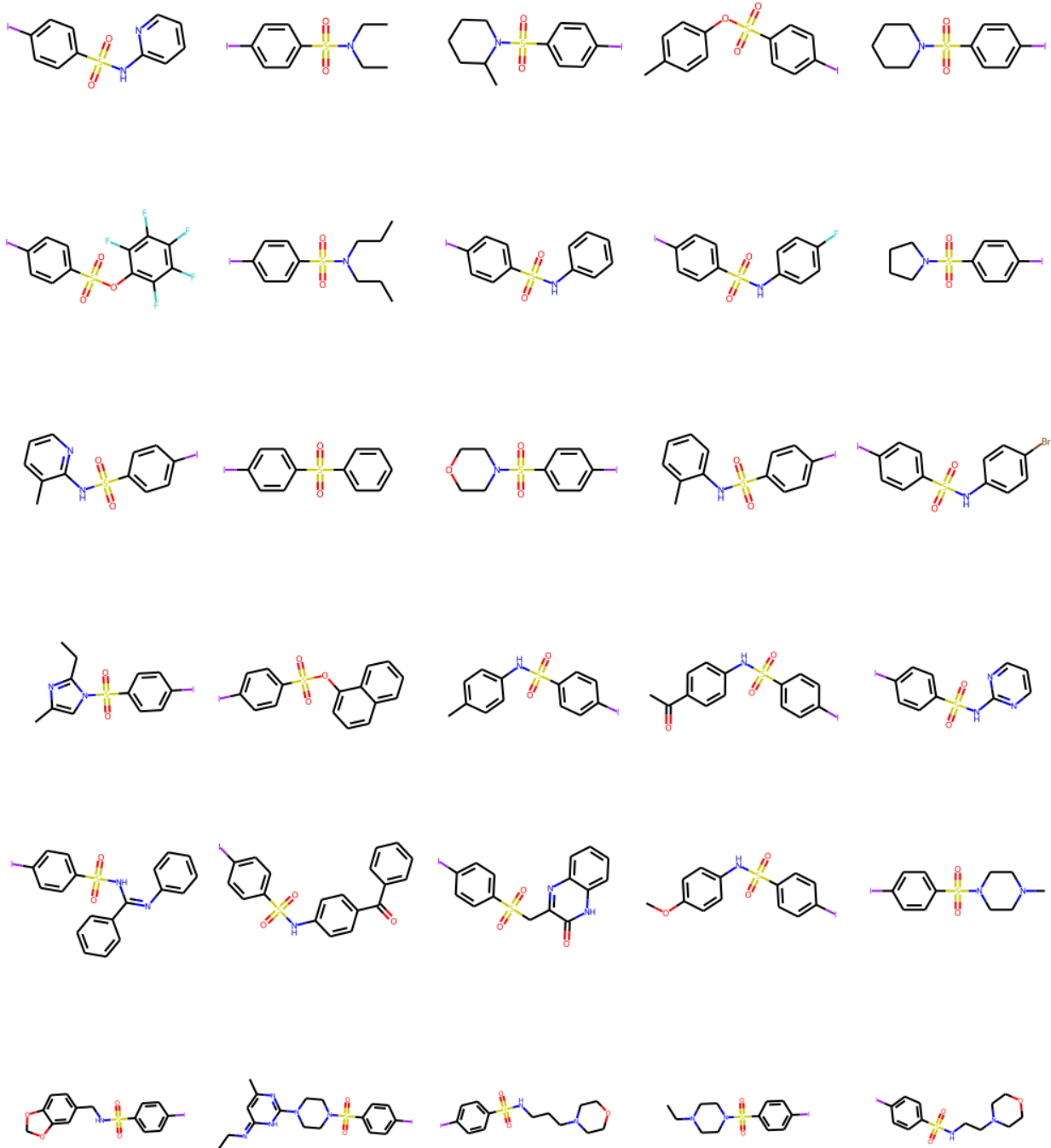
Cluster G:

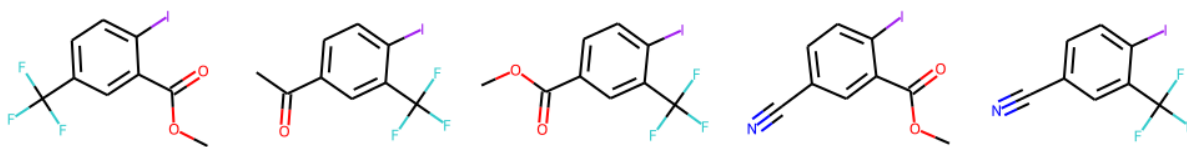




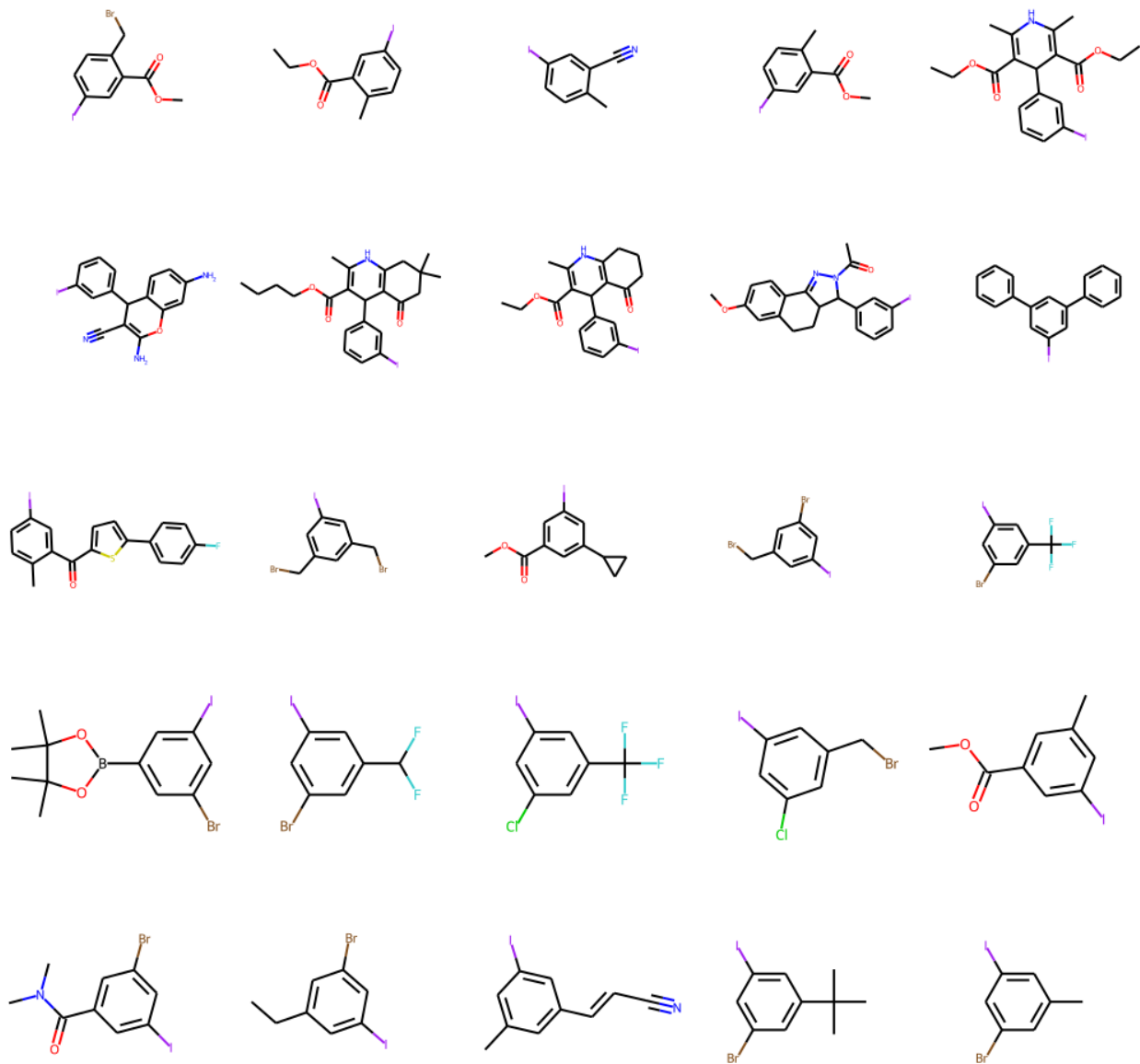
While this cluster has a spread of aryl iodides with and without a single *ortho* substituent, we found the *ortho* boronic acid pinacol ester substituent a particularly interesting stretch of our method as it contains a bulky *ortho* substituent that could be used for further diversification.

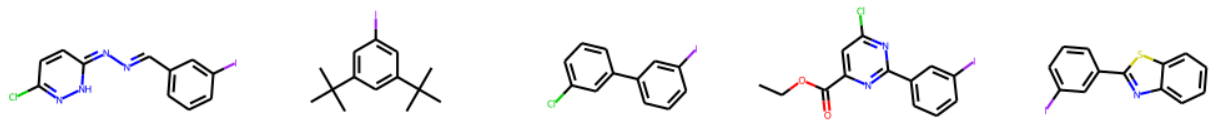
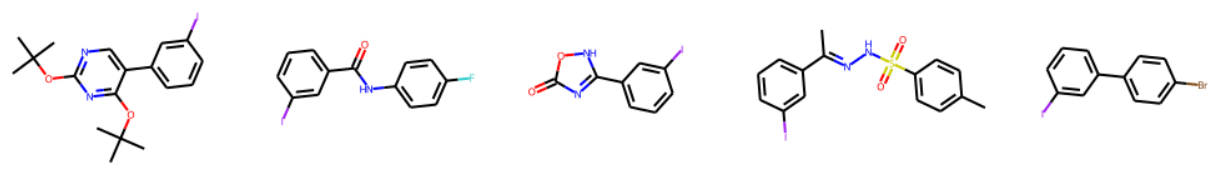
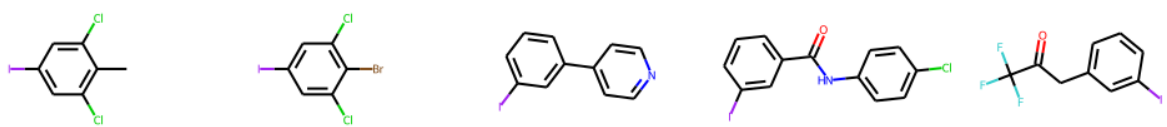
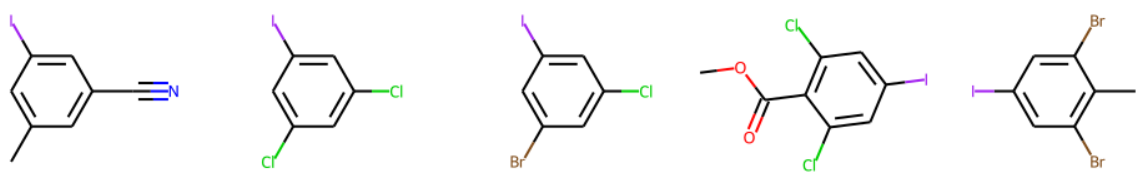
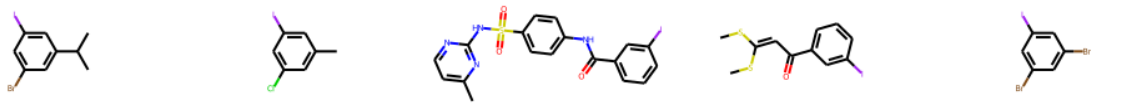
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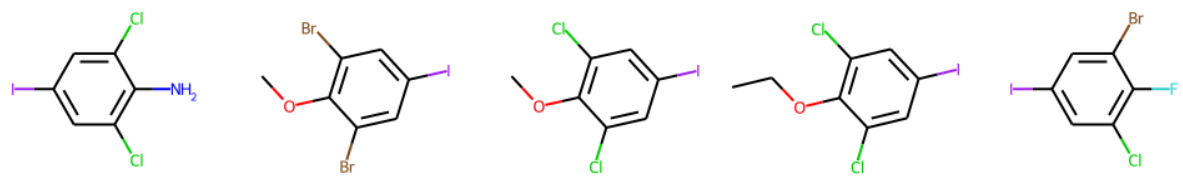


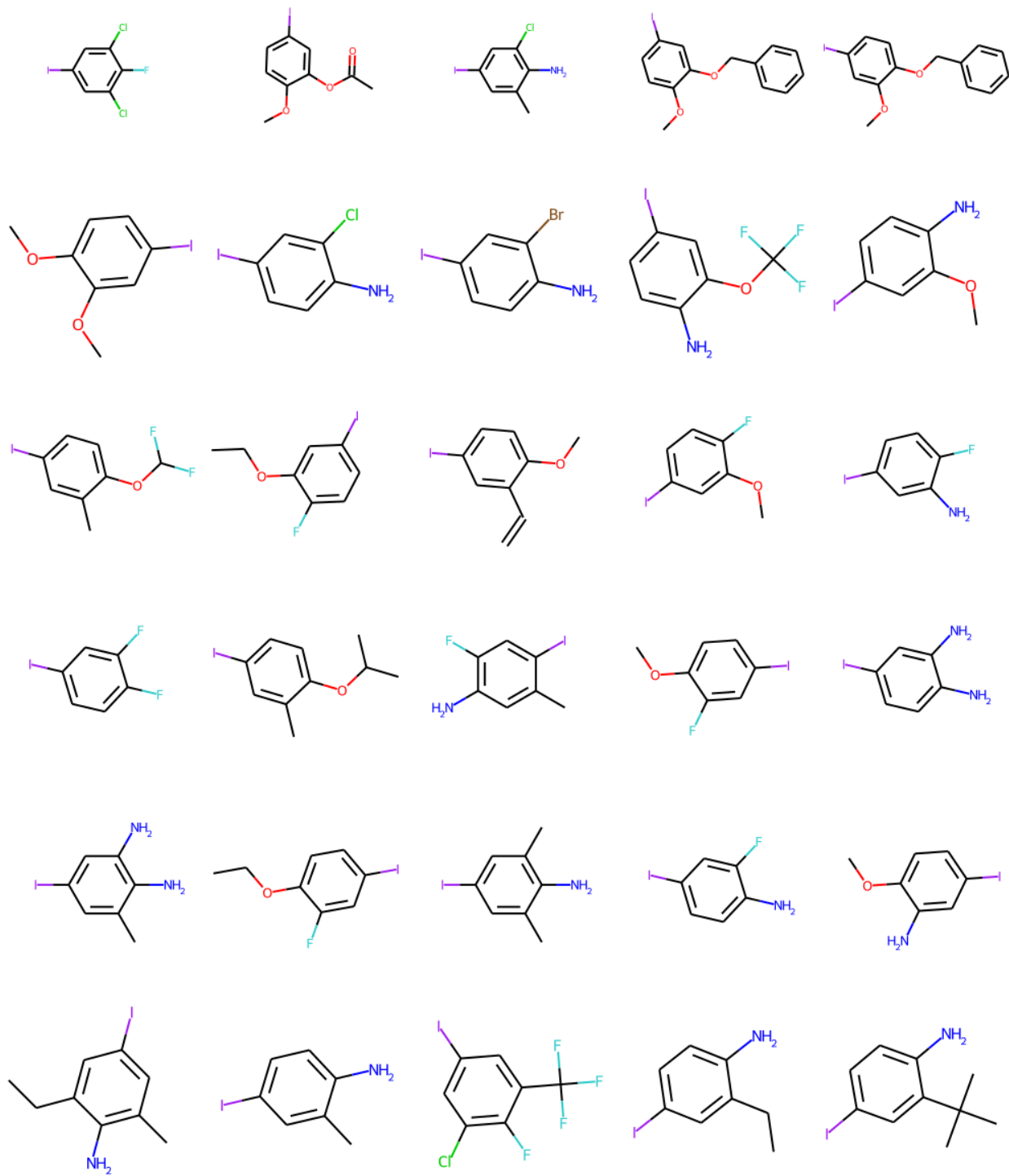
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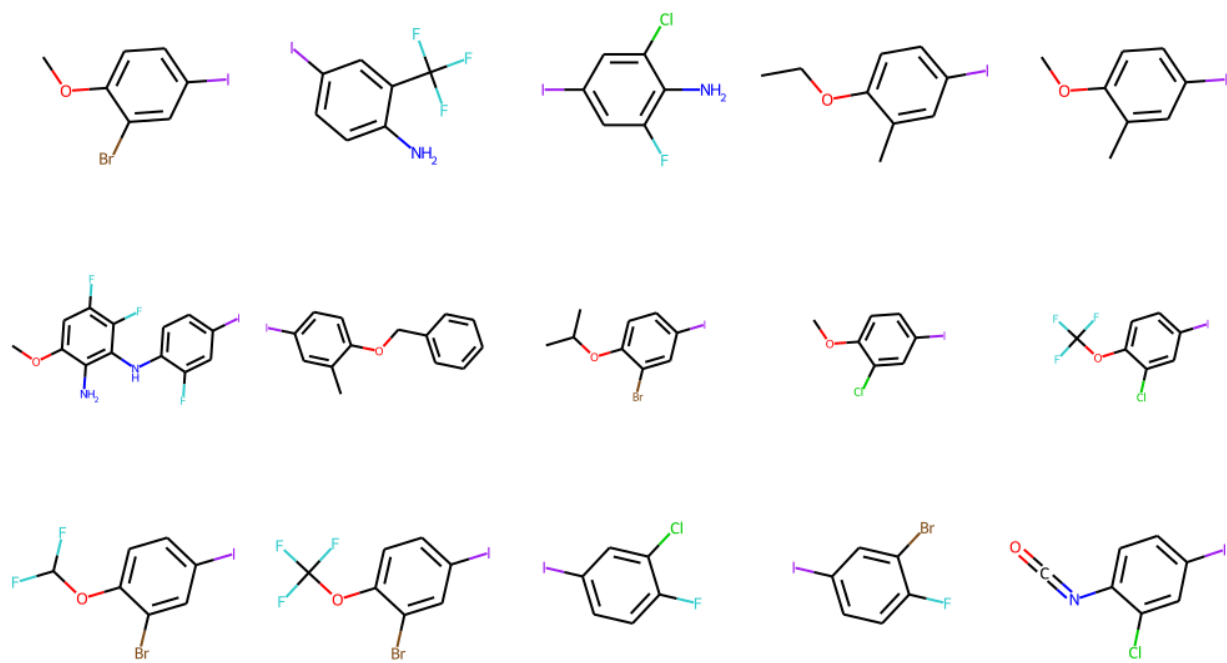




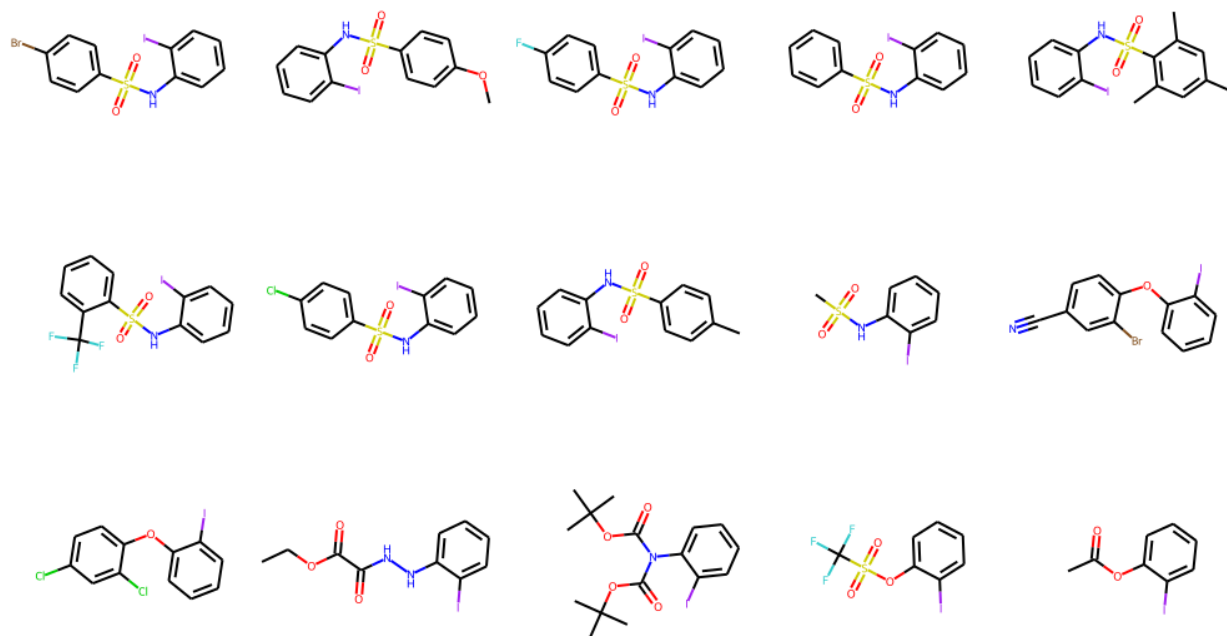
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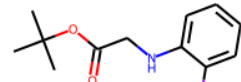
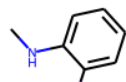
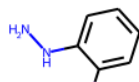
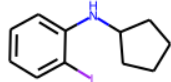
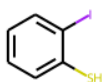
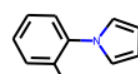
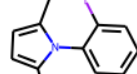
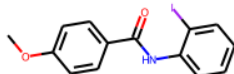
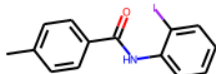
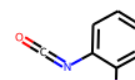
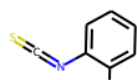
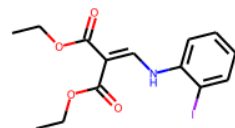
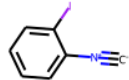
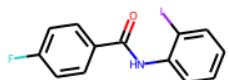
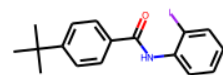
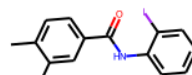
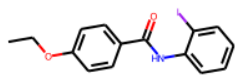
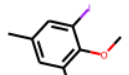
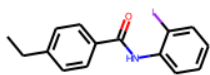
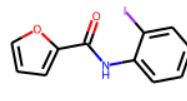
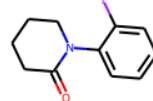
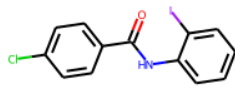
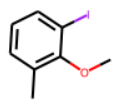
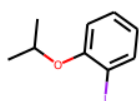
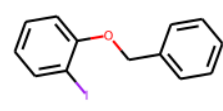
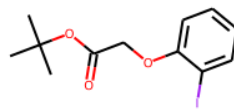
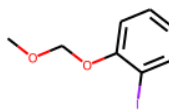
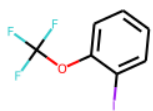
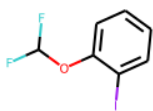


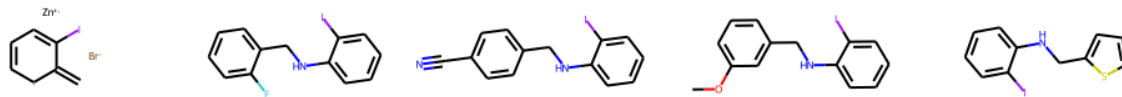




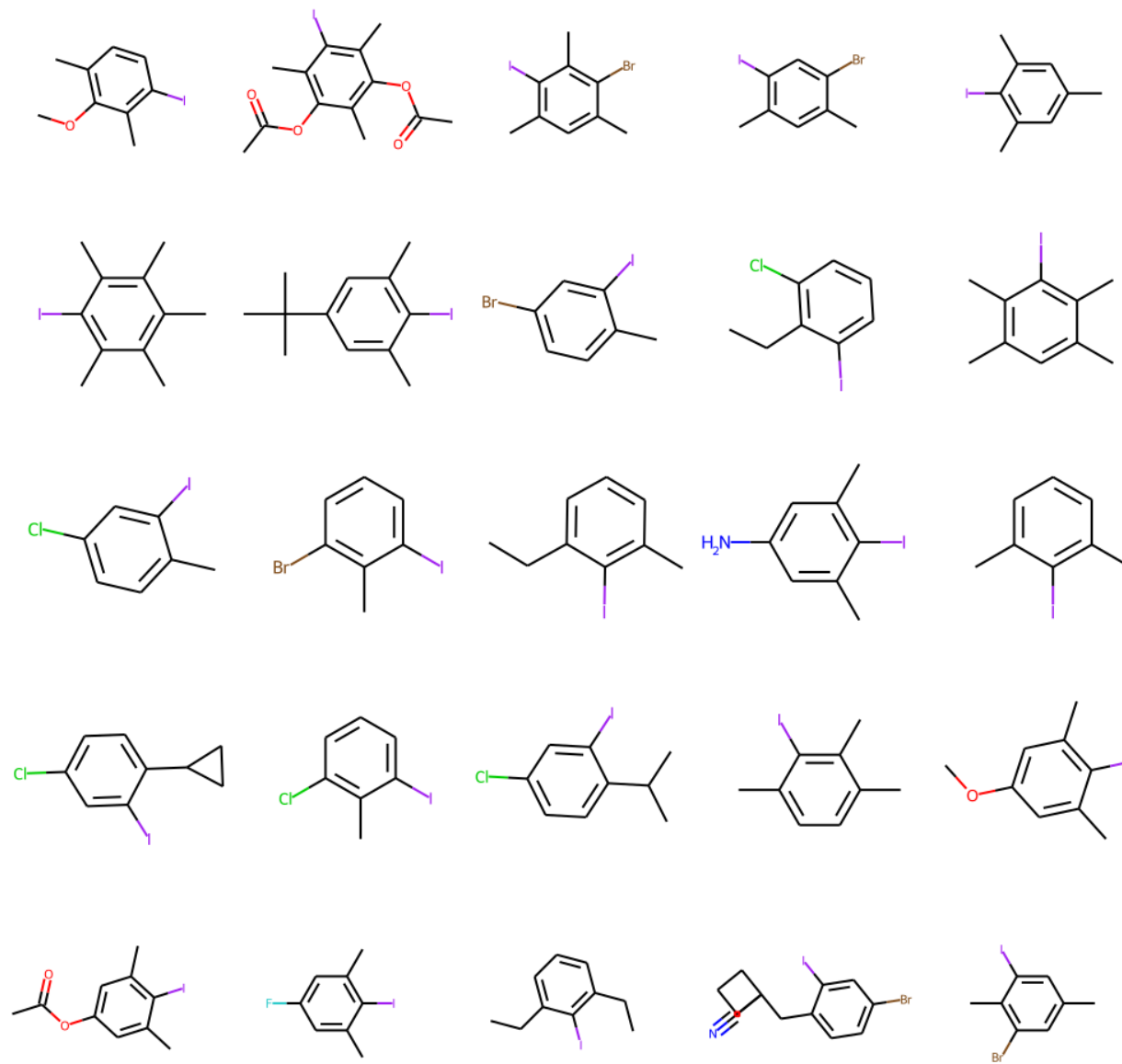
Cluster K:

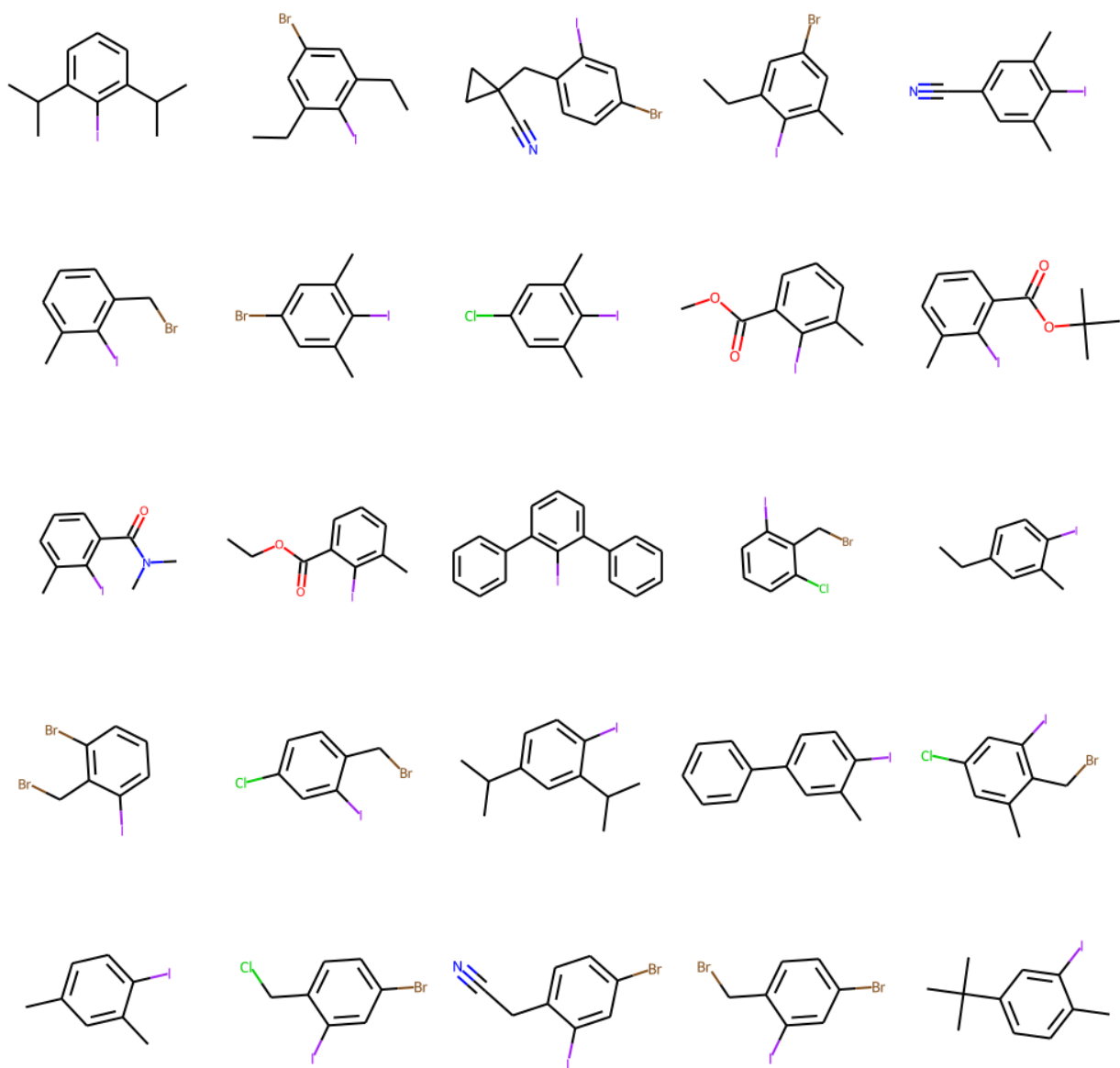




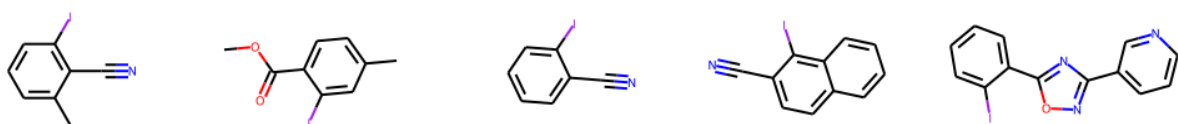


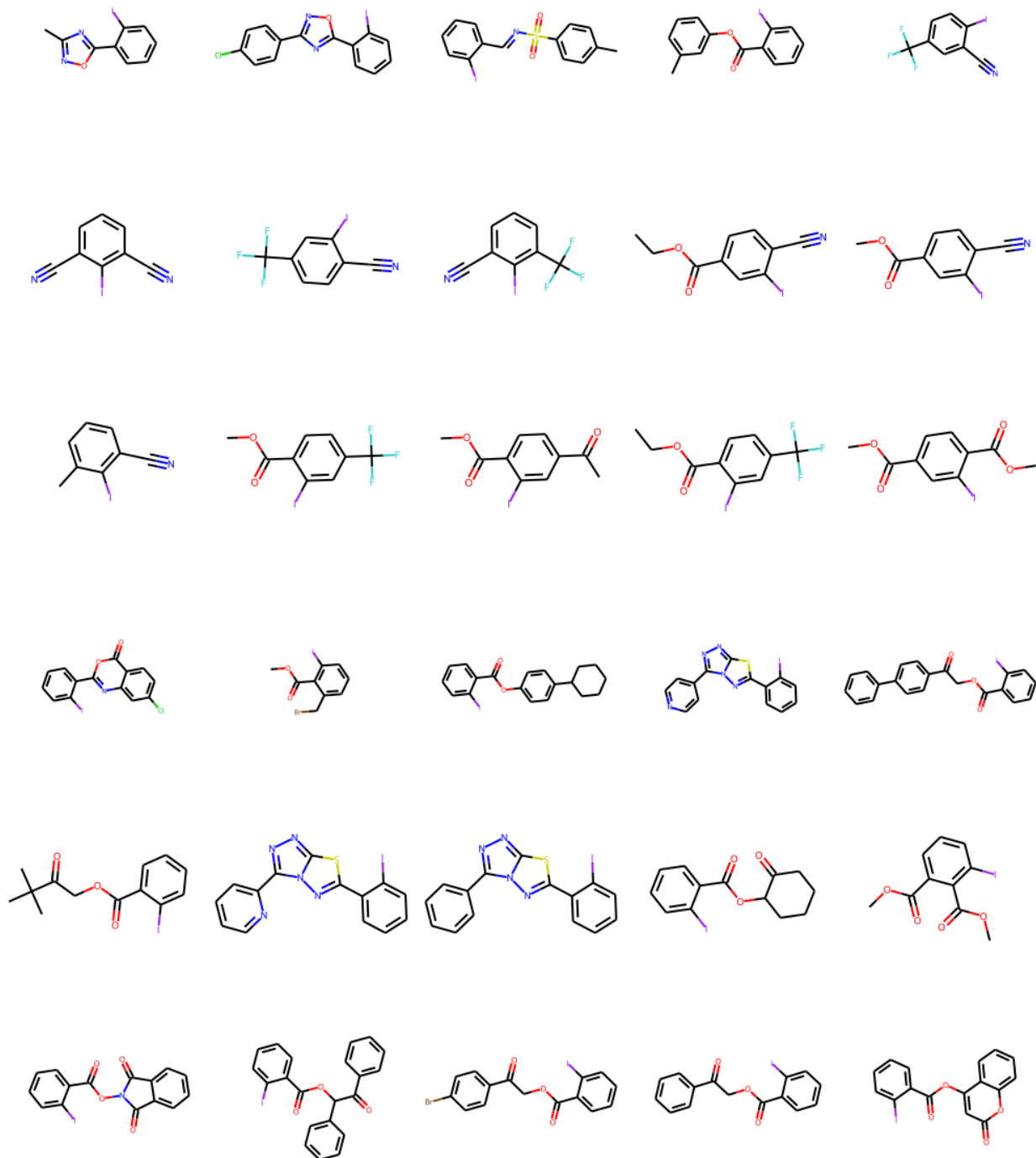
Cluster L:

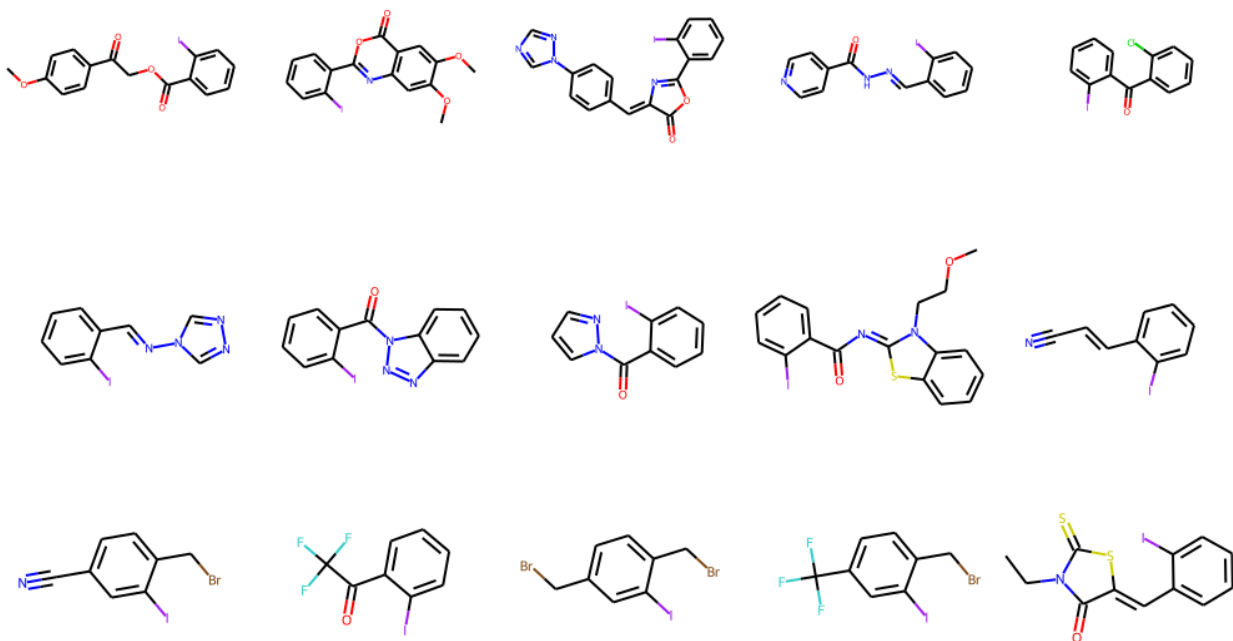




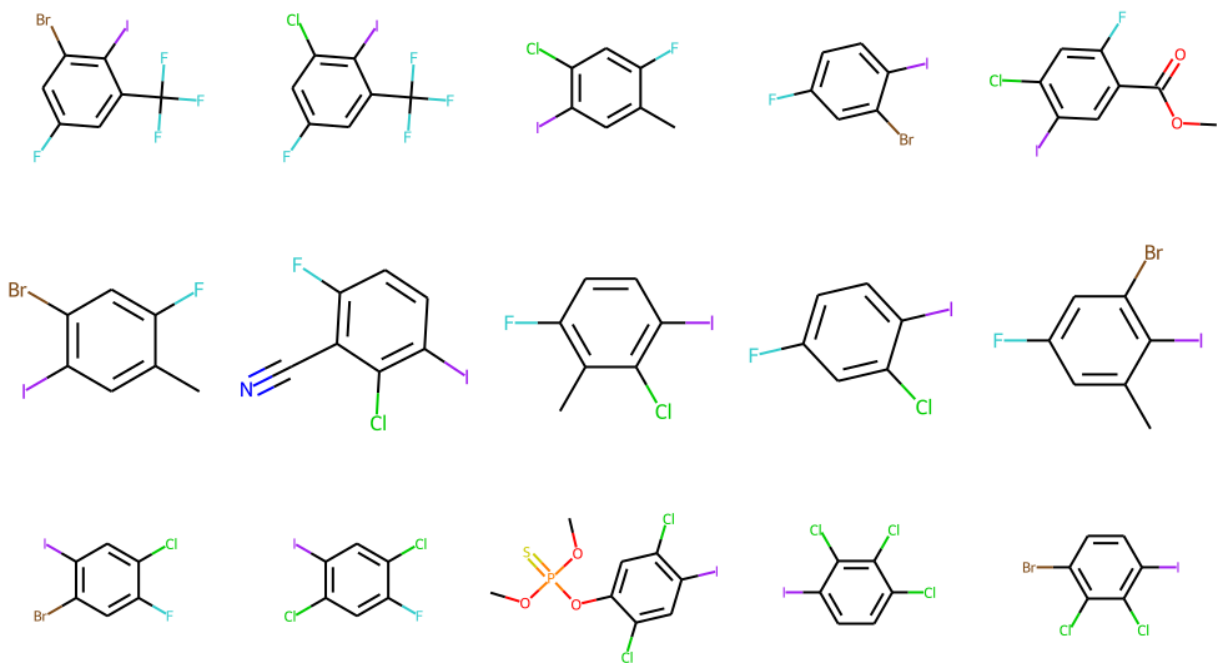
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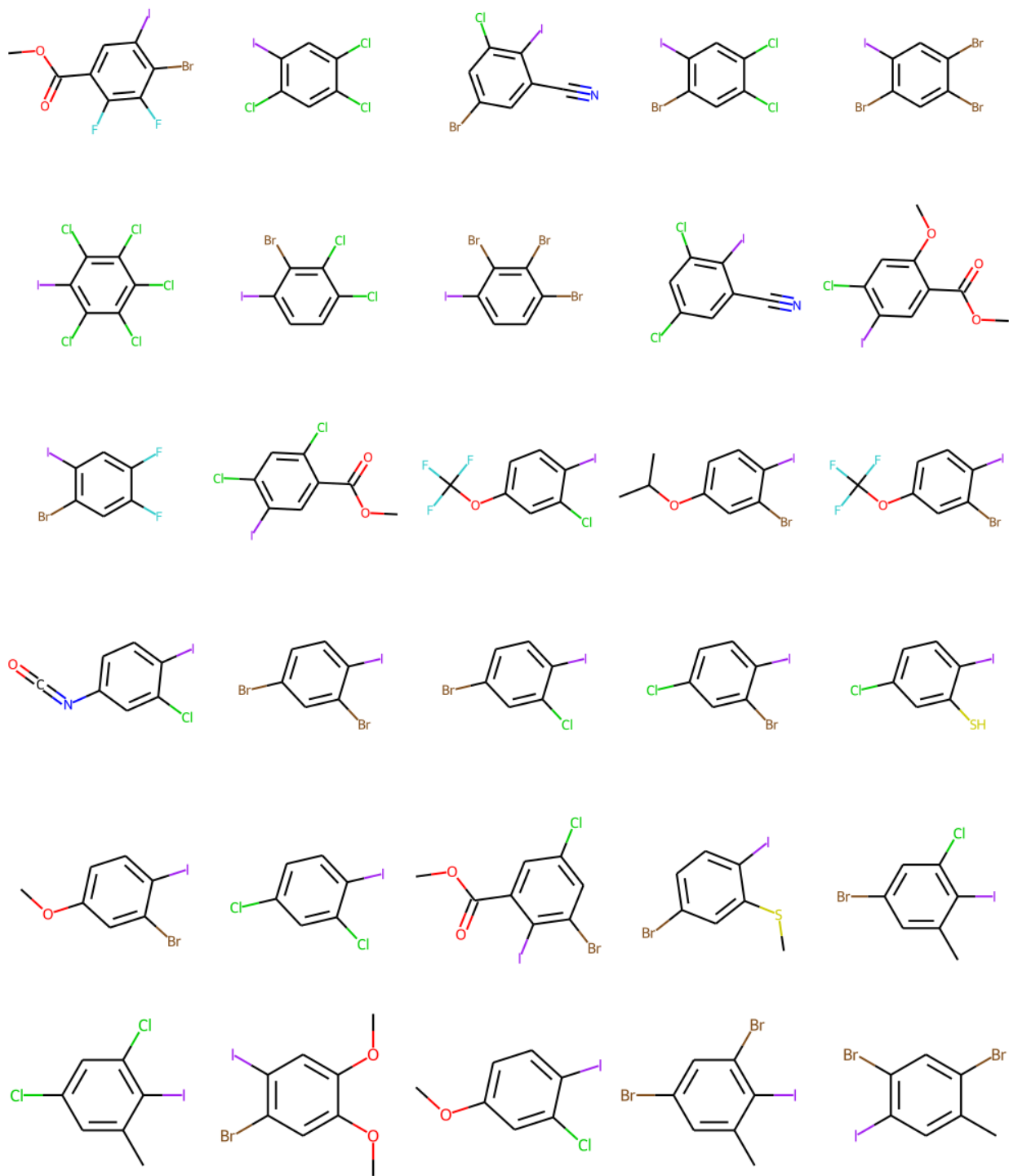


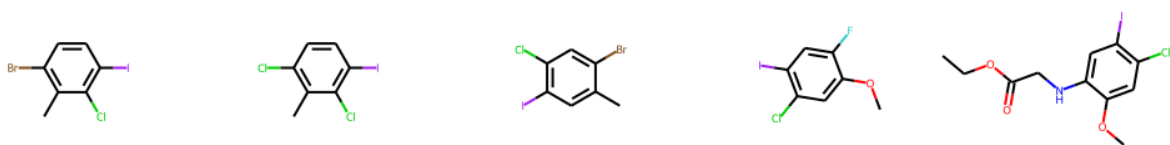




Cluster N:

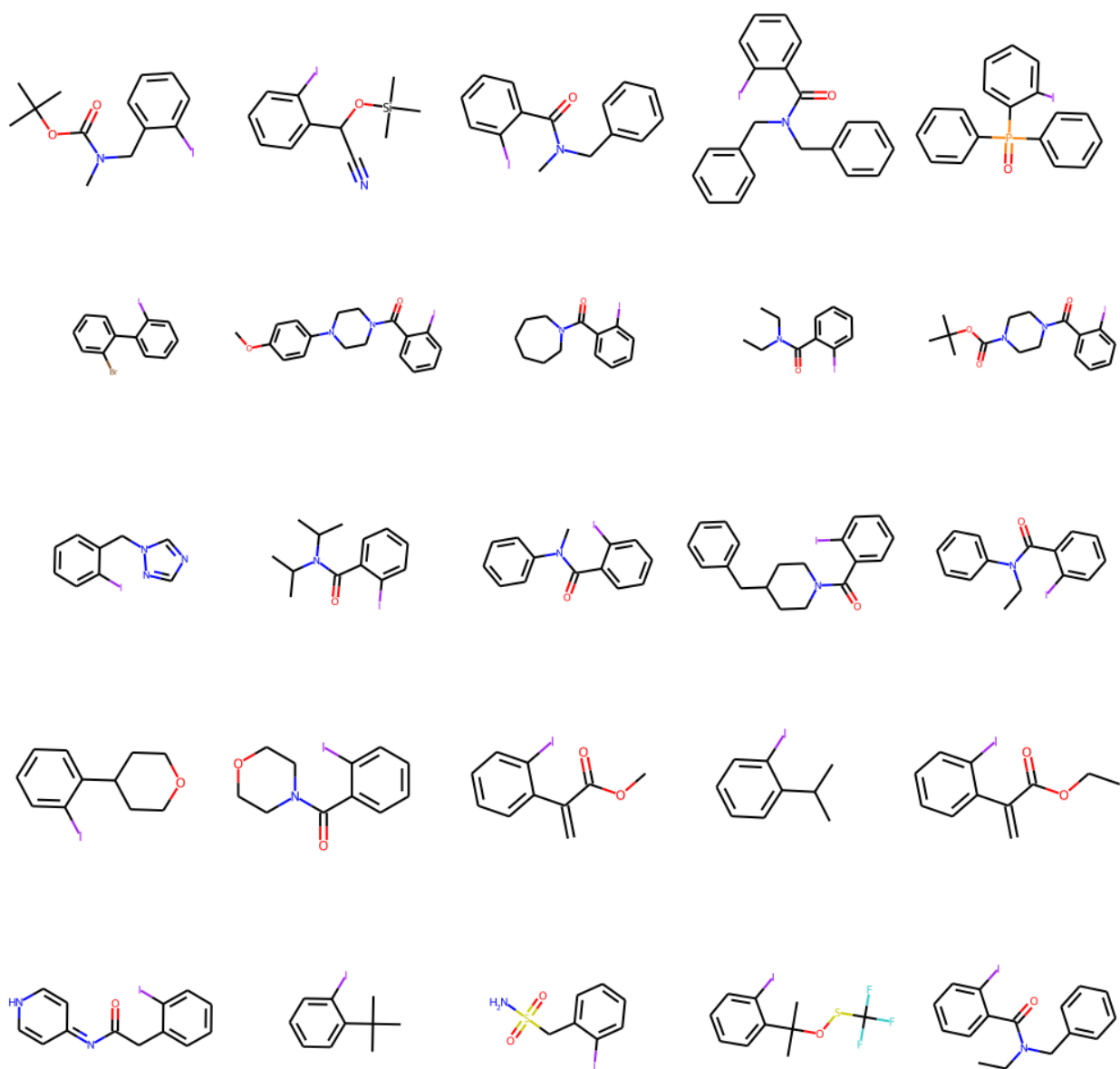


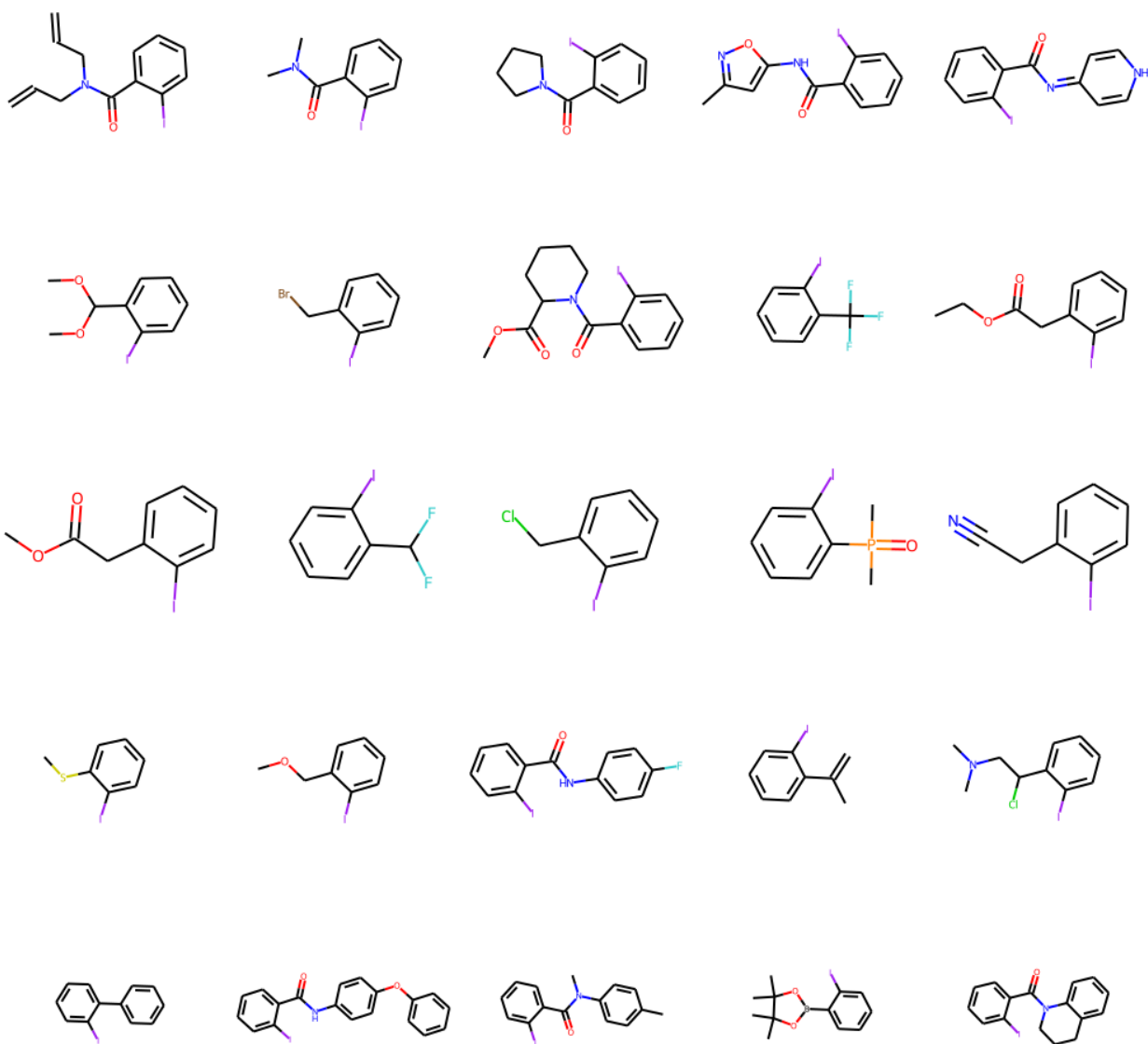




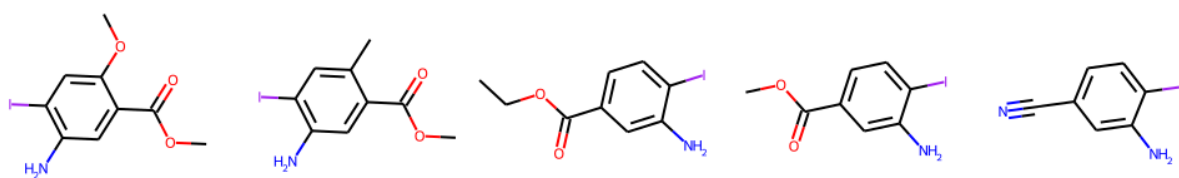
Although not featured prominently in the central region, this cluster comprised several aryl iodides characterized by 2,6-dihalide substitution reaction. While selecting our scope we sought to explore how the electronic properties at this location would influence reactivity. However, we ultimately found that di-*ortho* substituted aryl iodides were unreactive.

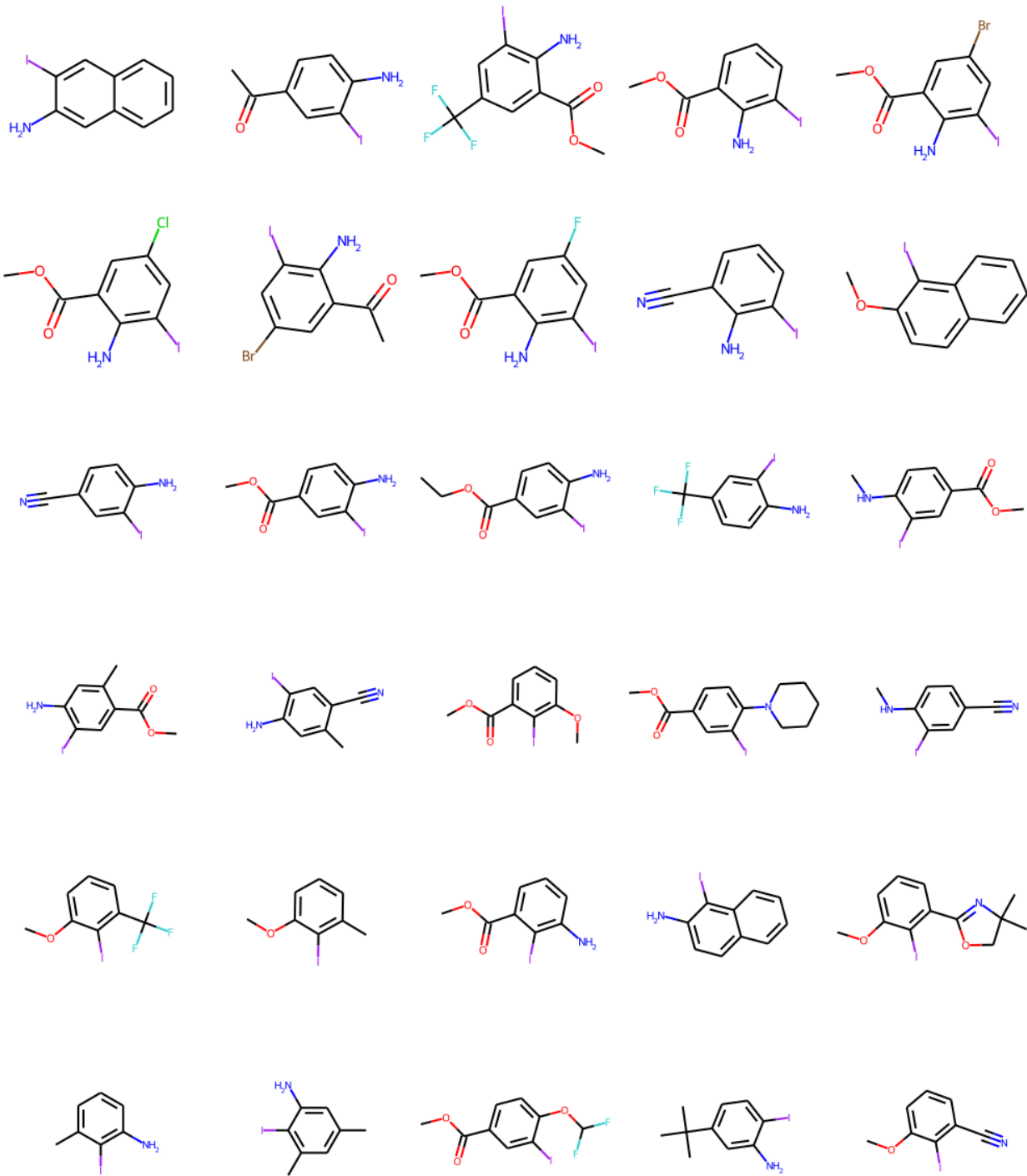
Cluster O:

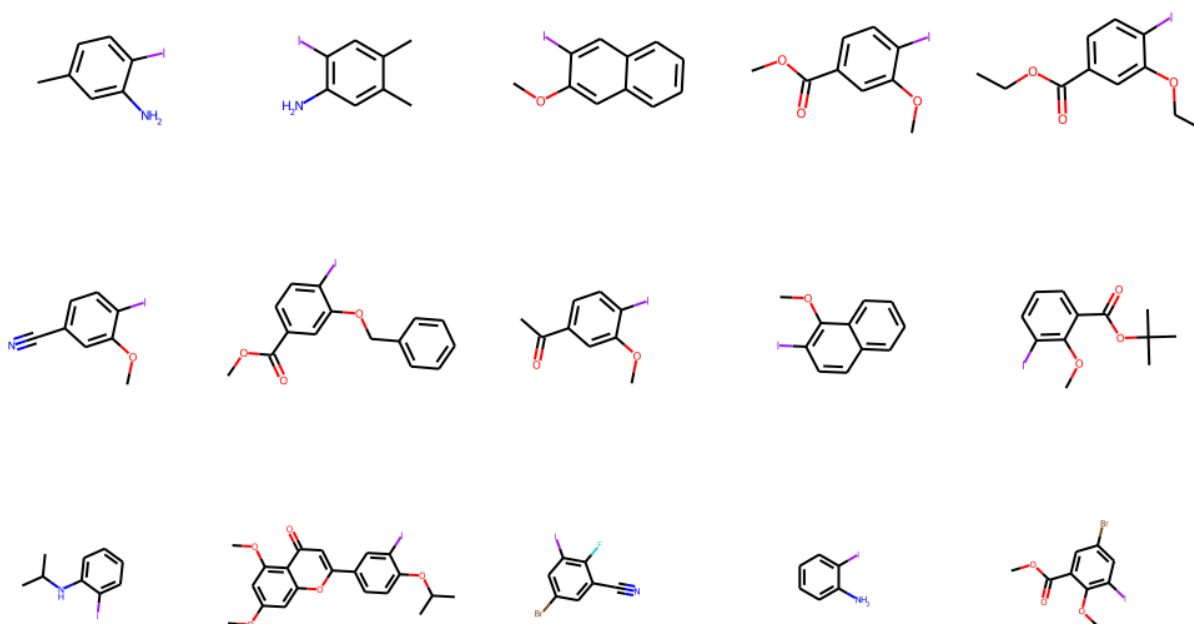




Cluster P:







6.7. 2D-Feature Plots

In a retrospective analysis, we sought to explore how well our substrate scope covered steric and electronic feature space (Figure S9). This analysis revealed that we had excluded electron-deficient and -neutral aryl iodides with a single small *ortho* substituent from our scope. Initially, we overlooked this gap in the chemical space due to the presence of multiple mono-*ortho* substituted electron-deficient aryl iodides (**O**, **G**, **K**). However, the size of these *ortho* substituents prevented them from being included in this particular region of chemical space.

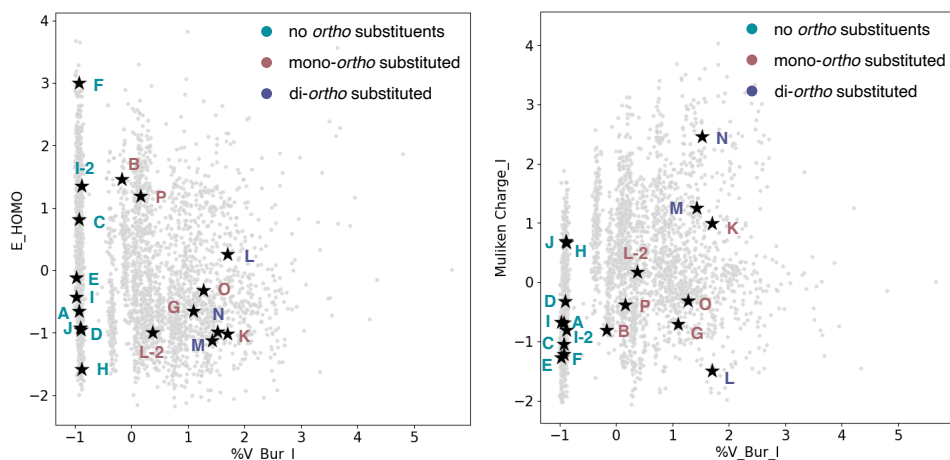


Figure S9. Selected aryl iodides plotted onto a bivariate steric (%V_{Bur_I}) and electronic (E_{HOMO} or Muliken Charge_I) feature space.

Therefore, when assessing the performance of our reactivity model (Figure 4B, 5) on unknown aryl iodides, we chose **L-2** to ensure coverage of this specific chemical space region. Gratifyingly,

even though our reactivity model was not trained on this region of chemical space, it could still predict the performance of aryl iodides from this region.

7. Reaction Modeling

7.1. Aziridine B:L Selectivity Model

The aziridine B:L selectivity model was built using features from Auto-QChem. Specifically, the Boltzmann average %V_{Bur_C} at 3.5 Å from DFT optimized geometries was used.

Table S6. Values used in aziridine reaction modeling.

Aziridine	%V _{Bur_C}	B:L
1a	60	11
2a	64	9
3a	65	6
4a	66	2
6a	68	0
7a	68	9
8a	72	20
5a	67	4

7.2. ArI Yield Model

The ArI model was built using features from Auto-QChem. The model was based on the minimum energy conformer of the respective aryl iodide. These features were preprocessed as part of the construction of chemical space (see above). %V_{Bur_I} is calculated at 3.5 Å.

With only 14 points used to construct the model, we assessed its robustness using leave-one-out cross-validation (LOOCV), a k-fold cross-validation technique in which a single data point is excluded from the dataset, and the model is trained on the remaining points. Subsequently, we evaluated the model's performance by mean absolute error (MAE) values for both the training set and the excluded data point. This process was iterated over the entire dataset, the MAE values presented in Figure 4D represent the average of these values.

Table S7. Values used in ArI reaction modeling.

ArI	%V _{Bur_I}	E _{HOMO}	Observed % Yield	Predicted % Yield
B	-0.17	1.45	22	40
C	-0.93	0.81	71	68
D	-0.91	-0.93	87	80
E	-0.98	-0.13	62	76
F	-0.93	3.00	63	52
G	1.10	-0.67	25	16
H	-0.88	-1.59	90	84
I	-0.97	-0.44	84	78
J	-0.89	-0.97	76	80
K	1.71	-1.03	5	0
L	1.71	0.25	0	-9
M	1.43	-1.14	0	10

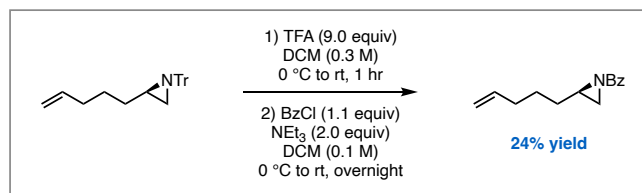
N	1.53	-1.00	0	6
P	0.16	1.18	28	32
A	-0.93	-0.66	45	79
O	1.28	-0.33	55	8

While not included in the model, we also evaluated two additional aryl iodides (Table S8) to assess the utility of the model in predicting substrates with multiple substitutions with competing effects on reactivity.

Table S8. Values used to compute yields of validation substrates.

Product	%V _{Bur I}	E _{HOMO}	Observed % Yield	Predicted % Yield
I-2	-0.89	1.35	71	63
L-2	0.37	-1.00	42	34

8. Mechanistic Experiments



(2-(pent-4-en-1-yl)aziridin-1-yl)(phenyl)methanone (17a): To a round bottom flask was added 2-(pent-4-en-1-yl)tritylaziridine (1.9131 g, 4.8 mmol, 1.0 equiv)²⁶ and DCM (0.3 M, 16 mL). The reaction was cooled to 0 °C and trifluoroacetic acid (4.9425 g, 3.34 mL, 43.4 mmol, 9.0 equiv) was added dropwise. The reaction turned bright yellow and was stirred at room temperature for 1 hour. H₂O (16 mL) was added and the reaction was stirred until the bright yellow color of the trityl cation disappeared. NaHCO₃ was slowly added until bubbling ceased. The aqueous layer was extracted with DCM (16 mL, 2x). The organic layers were combined and washed with saturated NaHCO₃, washed with brine, dried over MgSO₄, and filtered.

The unprotected aziridine was taken forward as a mixture in DCM. NEt₃ (974.5 mg, 1.34 mL, 9.6 mmol, 2.0 equiv) was added to the reaction and the reaction was cooled to 0 °C. Benzoyl chloride (744.8 mg, 0.62 mL, 5.3 mmol, 1.1 equiv) was added dropwise. The reaction was stirred at room temperature overnight. The reaction mixture was then quenched with saturated NaHCO₃. The aqueous layer was extracted with DCM (2x). The organic layers were combined and washed with brine, dried over MgSO₄, filtered, and concentrated. The resulting oil was purified by flash chromatography (10% NEt₃/hexanes). Fractions containing product (determined by TLC, UV light) were collected and concentrated to yield **17a** as a slightly yellow oil (24% yield).

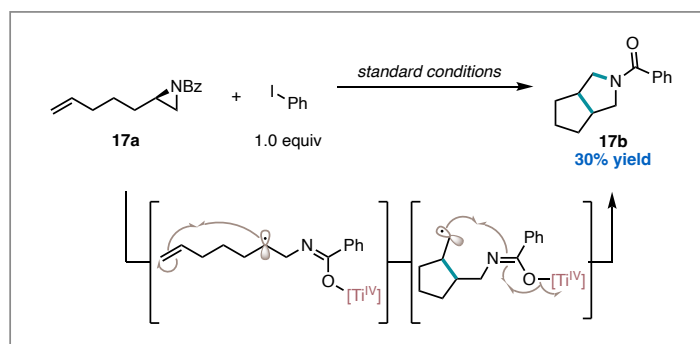
¹H NMR (500 MHz, CDCl₃): δ 8.09 – 7.97 (m, 2H), 7.55 (tt, *J* = 6.8, 1.4 Hz, 1H), 7.45 (dd, *J* = 8.3, 7.0 Hz, 2H), 5.80 (ddt, *J* = 16.9, 10.1, 6.6 Hz, 1H), 5.02 (dq, *J* = 17.1, 1.7 Hz, 1H), 4.97 (ddt,

$J = 10.2, 2.2, 1.3$ Hz, 1H), 2.60 – 2.52 (m, 1H), 2.50 (d, $J = 5.9$ Hz, 1H), 2.20 (d, $J = 3.6$ Hz, 1H), 2.17 – 2.07 (m, 2H), 1.91 – 1.81 (m, 1H), 1.62 – 1.52 (m, 2H), 1.52 – 1.42 (m, 1H).

$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3): δ 179.5, 138.4, 133.5, 132.8, 129.2, 128.5, 115.1, 38.4, 33.4, 31.8, 31.7, 25.9.

HRMS (ESI-TOF): calculated for $\text{C}_{14}\text{H}_{18}\text{NO}^+$ ($[\text{M}+\text{H}]^+$): 216.1383, found 216.1382.

IR (ATR cm^{-1}): 3066, 2992, 2976, 2932, 2857, 1675, 1641, 1580, 1466, 1450, 1406, 1317, 1300, 1228, 1071, 1025, 993, 912, 723, 708, 689.



(Hexahydrocyclopenta[*c*]pyrrol-2(1*H*)-yl)(phenyl)methanone (**17b**) was observed in the cross-coupling of **17a** and phenyl iodide according to General Procedure C. **17b** likely arises from radical ring opening and sequential cyclizations. Yield was determined by GC-FID versus dodecane as an external standard. Authentic product for characterization and GC-FID response factors was purified by preparative thin layer chromatography (15% EtOAc/hexanes). Spectral data are in agreement with reported literature values.²⁷

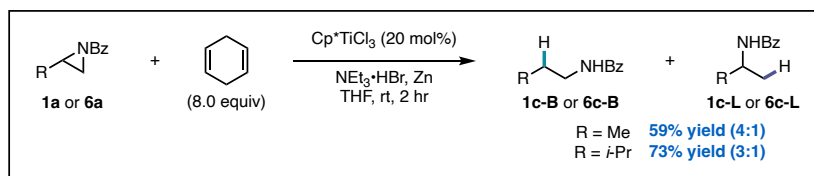
^1H NMR (500 MHz, CDCl_3): δ 7.51 – 7.44 (m, 2H), 7.42 – 7.36 (m, 3H), 3.86 (dd, $J = 12.7, 8.6$ Hz, 1H), 3.64 – 3.57 (m, 1H), 3.50 (dd, $J = 13.0, 4.6$ Hz, 1H), 3.19 (dd, $J = 11.8, 4.5$ Hz, 1H), 2.82 – 2.55 (m, 2H), 1.92 – 1.81 (m, 1H), 1.81 – 1.69 (m, 2H), 1.67 – 1.50 (m, 2H)^a, 1.39 – 1.33 (m, 1H).

^aOverlaps with H_2O .

$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3): δ 169.6, 137.3, 129.8, 128.4, 127.2, 55.4, 51.9, 43.9, 42.1, 32.5, 31.9, 25.8.

HRMS (ESI-TOF): calculated for $\text{C}_{14}\text{H}_{18}\text{NO}^+$ ($[\text{M}+\text{H}]^+$): 216.1383, found 216.1384.

IR (ATR cm^{-1}): 3058, 2946, 2865, 1629, 1577, 1446, 1420, 1245, 791, 721, 700, 663.



The following manipulations were performed in a nitrogen filled glovebox.

In a 1-dram vial the following stock solution was prepared:

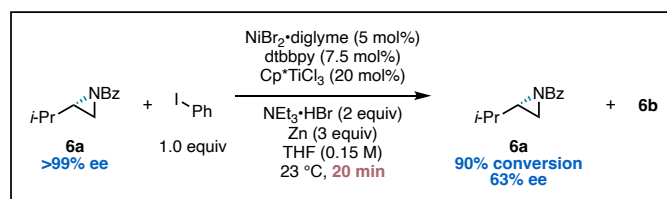
Stock Solution 1: Cp^*TiCl_3 (2.89 mg, 0.01 mmol, 20 mol%), Zn (9.81 mg, 0.15 mmol, 3.0 equiv) and 333 μL of THF. This vial was equipped with a Teflon stir bar, capped with a septum cap, and allowed to stir for 10 min. The solution turned from red to blue.

In a separate 1-dram vial equipped with a Teflon stir bar was added aziridine (**1a** or **6a**) (0.05 mmol, 1.0 equiv), 1,4-cyclohexadiene (32.1 mg, 37.8 μL , 0.40 mmol, 8.0 equiv), and $\text{NEt}_3\cdot\text{HBr}$

(18.2 mg, 0.10 mmol, 2.0 equiv). Stock solution 1 (333 μ L) was then added and the solution rapidly turned back to red. The reaction vial was capped with a septum cap, wrapped with electrical tape, and brought outside the glovebox. The reaction vial was set to stir (700 rpm) for 2 hours. Yields were determined by GC with dodecane as an external standard.

1c-B and **1c-L**: Authentic product was obtained by flash chromatography (15 to 40% EtOAc/hexanes). Spectral data are in agreement with literature reports.²⁸

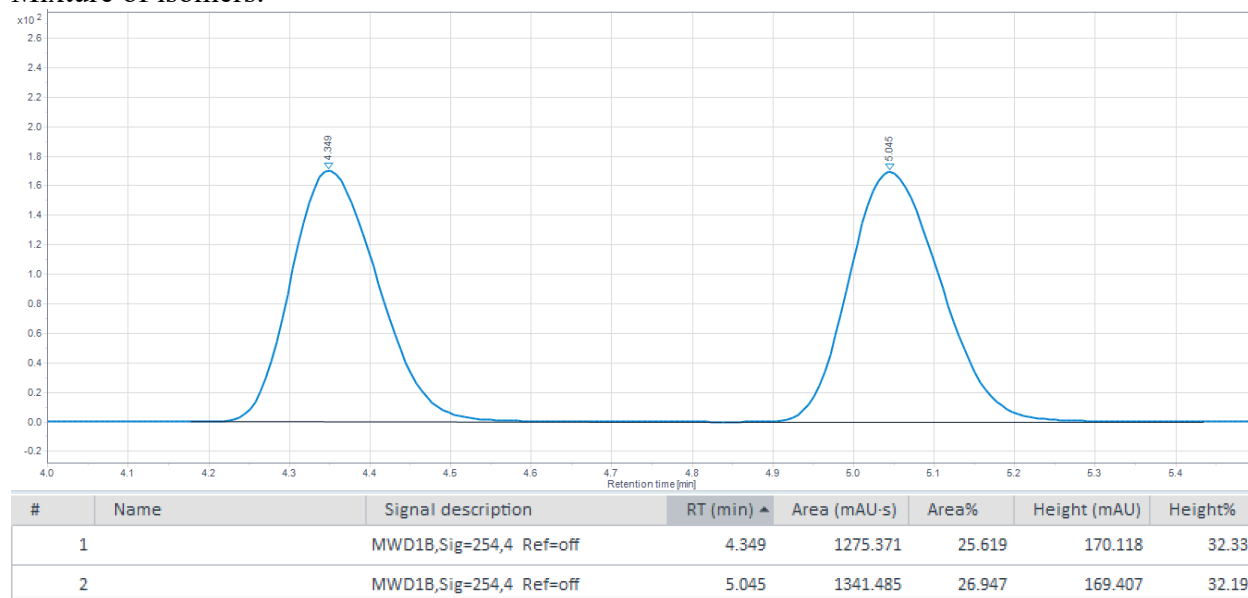
6c-B and **6c-L**: Authentic product was obtained by flash chromatography (15 to 20% EtOAc/hexanes). Spectral data are in agreement with literature reports.^{29,30}



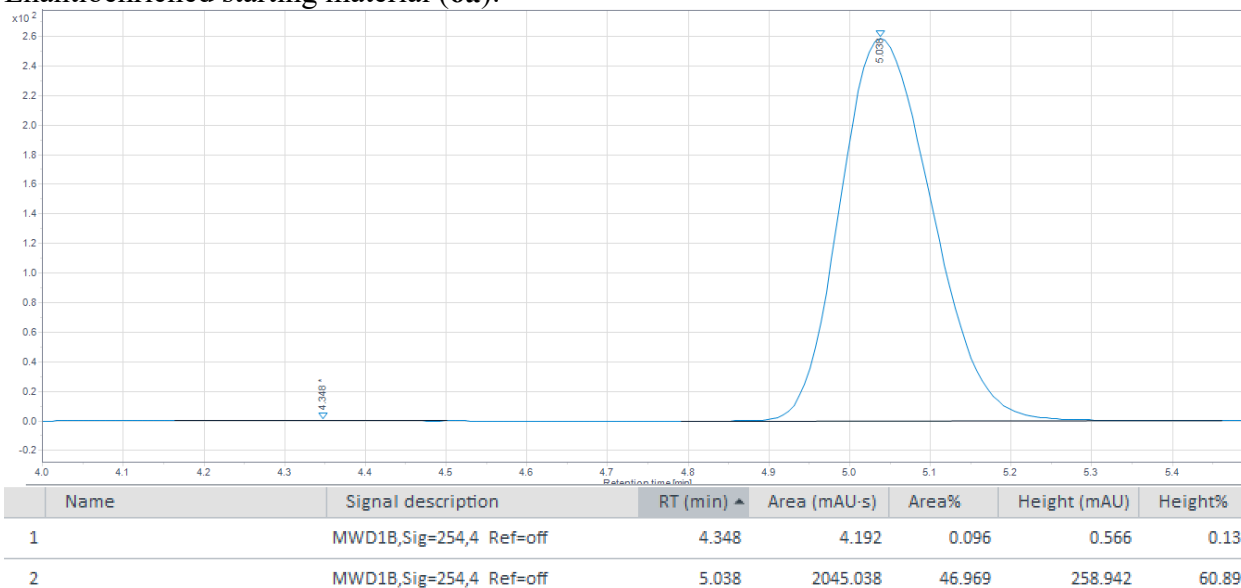
6a was subjected to General Procedure C with phenyl iodide (reaction was run on 0.1 mmol scale). The reaction was tracked by TLC and quenched after 20 minutes by passing through a plug of silica gel with EtOAc. The reaction had gone to 90% conversion (determined by ¹H NMR versus ethylene carbonate as an external standard). Starting material was recovered by flash chromatography (5% EtOAc/hexanes). % ee was determined by chiral SFC.

Chiral SFC traces (CHIRALPAK IC-10 SFC, 1.5 mL/min, 20% IPA in CO₂, 30 °C, 130.00 bar):

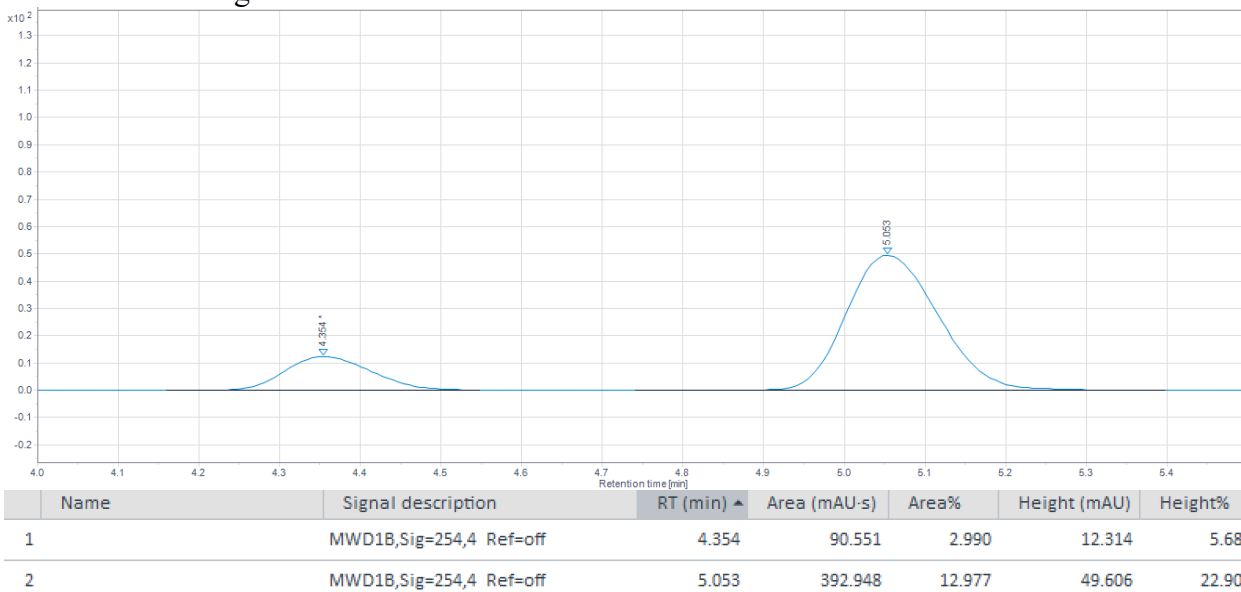
Mixture of isomers:



Enantioenriched starting material (6a):



Recovered Starting Material:



9. DFT Calculations

DFT calculations were performed using the Gaussian16 software package. All geometries were optimized using the UM06 functional³¹ and the 6-31g(d,p) basis set¹⁷⁻²¹ for C, H, O, N, and Cl and the LanL2DZ pseudopotential/basis set²²⁻²⁴ for Ti. Vibrational frequencies were computed at the same level of theory to confirm stationary points (zero negative frequencies) and transition states (one negative frequency). Corrections to vibrational frequencies were performed using the GoodVibes.py program.³² Vibrational frequencies were corrected using Truhlar's quasiharmonic oscillator approximation,³³ setting all vibrational frequencies below 50 cm⁻¹ to 50 cm⁻¹. Single-point energy calculations were performed using the UM06 functional with the Def2TZVP basis set^{34,35} for all atoms. All calculations were performed using the SMD solvation model³⁶ for tetrahydrofuran.

Full Gaussian16 Reference: Gaussian 16, Revision A.03, M. J. Frisch, G. W. Trucks, H. B. Schlegel, G. E. Scuseria, M. A. Robb, J. R. Cheeseman, G. Scalmani, V. Barone, G. A. Petersson, H. Nakatsuji, X. Li, M. Caricato, A. V. Marenich, J. Bloino, B. G. Janesko, R. Gomperts, B. Mennucci, H. P. Hratchian, J. V. Ortiz, A. F. Izmaylov, J. L. Sonnenberg, D. Williams-Young, F. Ding, F. Lipparini, F. Egidi, J. Goings, B. Peng, A. Petrone, T. Henderson, D. Ranasinghe, V. G. Zakrzewski, J. Gao, N. Rega, G. Zheng, W. Liang, M. Hada, M. Ehara, K. Toyota, R. Fukuda, J. Hasegawa, M. Ishida, T. Nakajima, Y. Honda, O. Kitao, H. Nakai, T. Vreven, K. Throssell, J. A. Montgomery, Jr., J. E. Peralta, F. Ogliaro, M. J. Bearpark, J. J. Heyd, E. N. Brothers, K. N. Kudin, V. N. Staroverov, T. A. Keith, R. Kobayashi, J. Normand, K. Raghavachari, A. P. Rendell, J. C. Burant, S. S. Iyengar, J. Tomasi, M. Cossi, J. M. Millam, M. Klene, C. Adamo, R. Cammi, J. W. Ochterski, R. L. Martin, K. Morokuma, O. Farkas, J. B. Foresman, and D. J. Fox, Gaussian, Inc., Wallingford CT, 2016.

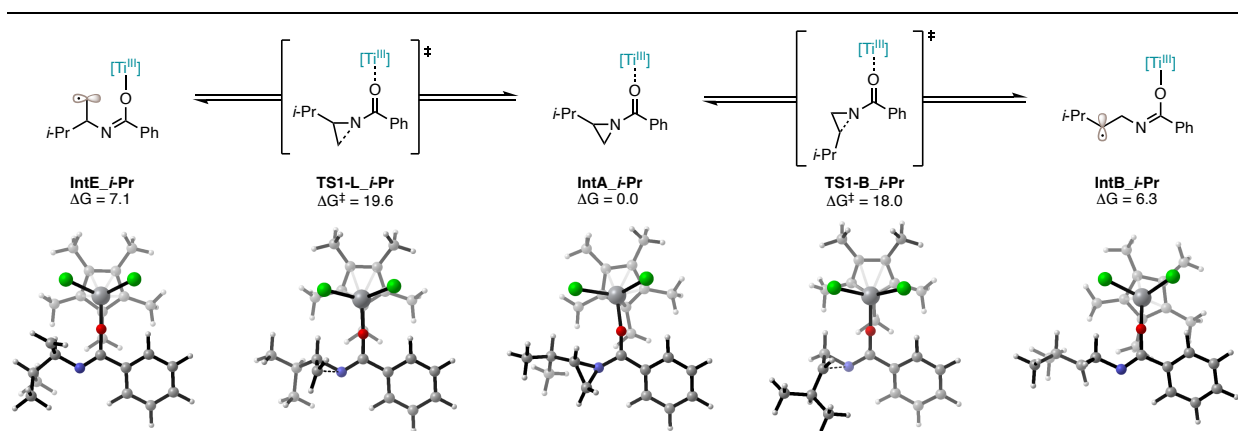


Figure S10. Ti^{III} induced radical ring-opening.

Table S9. Electronic (E) and free energies (G) for computed structures and single point energy calculations (SPC) reported in Hartree.

Structure	Imaginary Frequency	E_SPC	E	G(T)_SPC	qh-G(T)_SPC
IntA_i-Pr		-2756.06062	-1964.299925	-2755.656179	-2755.654431
TS1-B_i-Pr	-586.00	-2756.03003	-1964.268108	-2755.628258	-2755.625816
IntB_i-Pr		-2756.04957	-1964.284247	-2755.645801	-2755.644458
TS1-L_i-Pr	-677.32	-2756.02826	-1964.265741	-2755.624648	-2755.623168
IntE_i-Pr		-2756.04603	-1964.280985	-2755.645612	-2755.643162

XYZ Coordinates:

IntA_i-Pr:

C	3.32346400	1.93644800	-0.59639700
C	1.91078400	2.38896300	-0.72662600
H	3.79620100	1.47025600	-1.46042400
H	3.99825500	2.43906100	0.09533200
N	2.23761200	1.19702500	0.03044700
C	1.80838100	-0.04953400	-0.32426000
O	0.61889900	-0.20197000	-0.70499900
C	2.68933100	-1.20360000	-0.15657300
C	3.91213000	-1.09596000	0.52029500
C	2.27830700	-2.44909700	-0.65533100
C	4.71076200	-2.21841000	0.68944600
H	4.22430500	-0.13908900	0.93175900
C	3.08450000	-3.56512100	-0.48430800
H	1.32997900	-2.52345400	-1.18525800
C	4.30105300	-3.45198600	0.18697500
H	5.65546700	-2.13297200	1.22089900
H	2.76543200	-4.52715900	-0.87785800
H	4.93075500	-4.32857700	0.32052700
C	-1.95574900	0.55318100	1.53430200
C	-1.16171300	-0.62101000	1.67038400
C	-1.88640800	-1.70264200	1.08874600
C	-3.13323700	-1.19643700	0.61101900
C	-3.17452700	0.19410100	0.88547800
Ti	-1.33507600	-0.19955600	-0.56591600
C	-1.41144700	-3.11671200	1.03310800
H	-1.49776200	-3.59313600	2.01921700
H	-1.99196100	-3.71237300	0.32222900
H	-0.35664700	-3.18380400	0.73444400
C	-4.23325600	-1.97278600	-0.02729800
H	-5.01573700	-2.20975700	0.70672500
H	-4.70658200	-1.40589200	-0.83790700
H	-3.87637400	-2.91626100	-0.45129300
C	-4.31995000	1.09471800	0.57348900
H	-5.11807500	0.97744500	1.31943000
H	-4.02108100	2.14744400	0.56856700
H	-4.75446700	0.86977800	-0.40795700
C	-1.56424700	1.90486600	2.02866100
H	-0.49026600	2.08897500	1.88851400

H	-2.10786600	2.70398400	1.51414200
H	-1.76866700	1.99876300	3.10421900
C	0.15101000	-0.71588600	2.37307400
H	0.00278300	-0.79865100	3.45857500
H	0.71923700	-1.59782700	2.05507800
H	0.78017300	0.16779600	2.20257100
Cl	-1.62474400	-1.80525500	-2.23181200
Cl	-1.71683600	1.89005600	-1.49895200
C	1.33695600	3.58703900	-0.00636100
H	1.43884300	2.18528800	-1.69224600
C	1.45349600	4.80394300	-0.91418500
H	1.01073600	5.68890300	-0.44249900
H	2.50827000	5.02921900	-1.12660500
H	0.94265300	4.64160700	-1.87190400
H	0.26635800	3.36388100	0.13606500
C	1.96658000	3.84690300	1.35233000
H	3.00381200	4.19543300	1.25355000
H	1.41079800	4.63007200	1.88116600
H	1.96814500	2.95034700	1.98514100

TS1-B_i-Pr

C	-2.78235800	-2.09529300	-0.21615500
C	-1.86053400	-1.93178300	0.91538500
H	-2.39428100	-1.88107100	-1.21506400
N	-2.30495700	-0.55325800	0.89964600
C	-1.57295300	0.35143400	0.27385000
O	-0.40723800	0.07009200	-0.28004600
C	-2.06401300	1.72557900	0.13607600
C	-3.25852500	2.11707200	0.76084000
C	-1.34272400	2.67451300	-0.60414200
C	-3.71442400	3.42232200	0.64770000
H	-3.81497100	1.38340700	1.33903700
C	-1.80445200	3.98112500	-0.71049400
H	-0.42580200	2.37870200	-1.11110000
C	-2.98947400	4.36146900	-0.08565600
H	-4.64116200	3.71232000	1.13833900
H	-1.23697200	4.70499600	-1.29152200
H	-3.34906600	5.38446800	-0.17093400
C	2.19321300	-0.98017000	1.52224700
C	1.70091000	0.34817600	1.66169800
C	2.50393600	1.19981900	0.84851400
C	3.51008500	0.39882200	0.22951400
C	3.31311500	-0.94434200	0.63933200
Ti	1.37124200	-0.26637500	-0.53689500
C	2.32793300	2.67506400	0.72025300
H	2.68880200	3.18225900	1.62512800
H	2.88198100	3.07747100	-0.13300100
H	1.27357300	2.95362700	0.59436400
C	4.61674800	0.86309500	-0.65164500
H	5.55471000	0.91159700	-0.08192900
H	4.77947500	0.17745600	-1.49134400
H	4.42455300	1.85749100	-1.06462300
C	4.18214400	-2.09399800	0.26676800
H	5.09184300	-2.09353000	0.88281600
H	3.67640900	-3.05226500	0.41926500
H	4.49659900	-2.04265800	-0.78196100

C	1.68491400	-2.18951800	2.23000200
H	0.67230600	-2.03831500	2.61919500
H	1.67107500	-3.07119700	1.57938500
H	2.33153200	-2.42518800	3.08609100
C	0.59392200	0.79552900	2.55168600
H	0.98625100	1.03586900	3.54884600
H	0.10353900	1.69809400	2.16954000
H	-0.17526600	0.02550700	2.68130600
Cl	1.78035700	1.03287300	-2.37261400
Cl	1.30045700	-2.39170900	-1.37883500
H	-0.80056500	-2.10934500	0.70263800
H	-2.17057500	-2.43956900	1.83545400
C	-4.21704600	-2.44995500	-0.05535400
C	-4.40349200	-3.93573800	-0.38140700
H	-5.45196400	-4.23048300	-0.24647800
H	-4.12822700	-4.13959700	-1.42473200
H	-3.78394500	-4.57135200	0.26263100
H	-4.48423600	-2.28961600	1.00113400
C	-5.10539800	-1.58314300	-0.93777100
H	-4.98000100	-0.51924500	-0.70163900
H	-4.84982900	-1.72461800	-1.99702400
H	-6.16349400	-1.84315200	-0.81208000

IntB_i-Pr

C	-3.10430400	1.90079200	0.09762700
C	-2.15765600	1.87334800	-1.05090800
H	-3.01762600	2.73721500	0.79756300
H	-2.02225700	0.83355500	-1.39984200
N	-0.91447200	2.54362600	-0.72021300
C	0.17824400	1.89324400	-0.70128800
O	0.28641900	0.58133200	-0.99462700
C	1.46273300	2.54837800	-0.35856400
C	1.46394000	3.68690200	0.45305000
C	2.67480600	2.03173900	-0.82413500
C	2.66404400	4.28952400	0.80746700
H	0.51388400	4.07961900	0.80918500
C	3.87348800	2.64886400	-0.48220300
H	2.67607700	1.14603100	-1.45713900
C	3.87104500	3.77210800	0.33995400
H	2.65933900	5.16591800	1.45173100
H	4.81279700	2.24662100	-0.85506900
H	4.80999700	4.24657400	0.61674900
C	-0.78182800	-1.78435800	1.26723100
C	0.06928300	-0.69205100	1.60168200
C	1.41727600	-1.12180900	1.45157700
C	1.39659900	-2.49035600	1.05045200
C	0.04100500	-2.89809200	0.92877400
Ti	0.39753000	-1.19574400	-0.64600400
C	2.64706900	-0.32576900	1.72524300
H	3.42701400	-0.50738200	0.97628300
H	2.44673600	0.75107300	1.74654500
H	3.06448800	-0.60686200	2.70173300
C	2.58064900	-3.37782400	0.90300800
H	2.77099700	-3.89361400	1.85432700
H	2.42464700	-4.14519200	0.13746500
H	3.48394900	-2.81742500	0.64323800

C	-0.40093400	-4.26608500	0.53898900
H	-0.20143400	-4.97335600	1.35505200
H	-1.47117200	-4.30224400	0.31704300
H	0.13868400	-4.62909300	-0.34445000
C	-2.26823900	-1.73624900	1.33558300
H	-2.65180200	-0.79153900	0.92888300
H	-2.73579700	-2.55697800	0.78436400
H	-2.59823900	-1.79766800	2.38202000
C	-0.40582000	0.61801600	2.12404000
H	-0.64481400	0.51851500	3.19188500
H	0.34916200	1.40579500	2.03017000
H	-1.32194800	0.95777200	1.62039500
Cl	2.20991800	-1.79178800	-1.86597200
Cl	-1.31997700	-2.01583900	-1.87975600
H	-2.59632400	2.41745100	-1.91058000
C	-4.40467500	1.16875500	0.03567800
C	-5.40127500	1.90263600	-0.86914100
H	-6.35645500	1.36383100	-0.92077200
H	-5.60258200	2.90928800	-0.47728300
H	-5.01983700	2.00936800	-1.89173800
H	-4.22062300	0.17374800	-0.41003900
C	-4.99069700	0.98897300	1.43072100
H	-5.20904300	1.96820500	1.87976700
H	-5.92784200	0.41961800	1.40209300
H	-4.29321200	0.46702800	2.09938300

TS1-L_i-Pr

C	2.44091200	2.07168600	-1.72052500
C	1.80480100	2.19155500	-0.40071700
H	1.92181600	1.54704800	-2.51888400
H	3.46656600	2.38911200	-1.88272100
N	2.46299700	0.92609200	-0.15708100
C	1.79345700	-0.20445200	-0.31475500
O	0.51245700	-0.23388600	-0.64955500
C	2.47376600	-1.49261100	-0.17128400
C	3.81690000	-1.54271800	0.23393100
C	1.79407000	-2.69535900	-0.41842400
C	4.45634400	-2.76298500	0.39335700
H	4.34443100	-0.61120800	0.42291000
C	2.44100900	-3.91435200	-0.25465400
H	0.75903100	-2.66943000	-0.75435000
C	3.77198200	-3.95452800	0.15312400
H	5.49700300	-2.78728100	0.70949600
H	1.90282700	-4.83865300	-0.45364500
H	4.27626000	-4.90978900	0.28072800
C	-1.90042700	1.00667200	1.34656800
C	-1.10745000	-0.11630000	1.71796000
C	-1.82458600	-1.29526600	1.36361200
C	-3.07467600	-0.89775700	0.80205800
C	-3.11809900	0.51970100	0.78371600
Ti	-1.30706000	-0.14765400	-0.58091500
C	-1.36437200	-2.69488100	1.58973900
H	-1.63164200	-3.02551000	2.60247300
H	-1.82275100	-3.39315700	0.88179600
H	-0.27595200	-2.78852900	1.49425600
C	-4.18646800	-1.79017000	0.37567100

H	-4.93891200	-1.85267900	1.17375600
H	-4.69027300	-1.41165900	-0.52068500
H	-3.84112300	-2.80621700	0.16353400
C	-4.27283700	1.32973700	0.30629700
H	-5.08613700	1.29824600	1.04401900
H	-4.00151900	2.37824100	0.15299300
H	-4.67442700	0.94473600	-0.63863600
C	-1.54061700	2.43424400	1.57586800
H	-0.45570500	2.59106100	1.53973100
H	-2.00189700	3.09726700	0.83671100
H	-1.88078800	2.75543400	2.56971100
C	0.20276200	-0.06869500	2.42386500
H	0.04109600	0.00720900	3.50740400
H	0.79861000	-0.97075800	2.24583300
H	0.80769000	0.79576700	2.12559600
Cl	-1.87757500	-1.88219500	-1.94582200
Cl	-1.71813400	1.69847800	-1.86075100
C	2.22580200	3.32778800	0.52086800
H	0.70894600	2.13411700	-0.44595300
C	1.58279800	4.61672300	0.02694200
H	0.49016700	4.52840700	-0.04396300
H	1.81301600	5.45619300	0.69350800
H	1.95914300	4.87225600	-0.97385700
H	1.81174300	3.08350500	1.51487700
C	3.73149300	3.48685900	0.66093600
H	3.96391100	4.24059000	1.42268800
H	4.21523800	2.54809100	0.95261200
H	4.18599300	3.82826600	-0.27898200

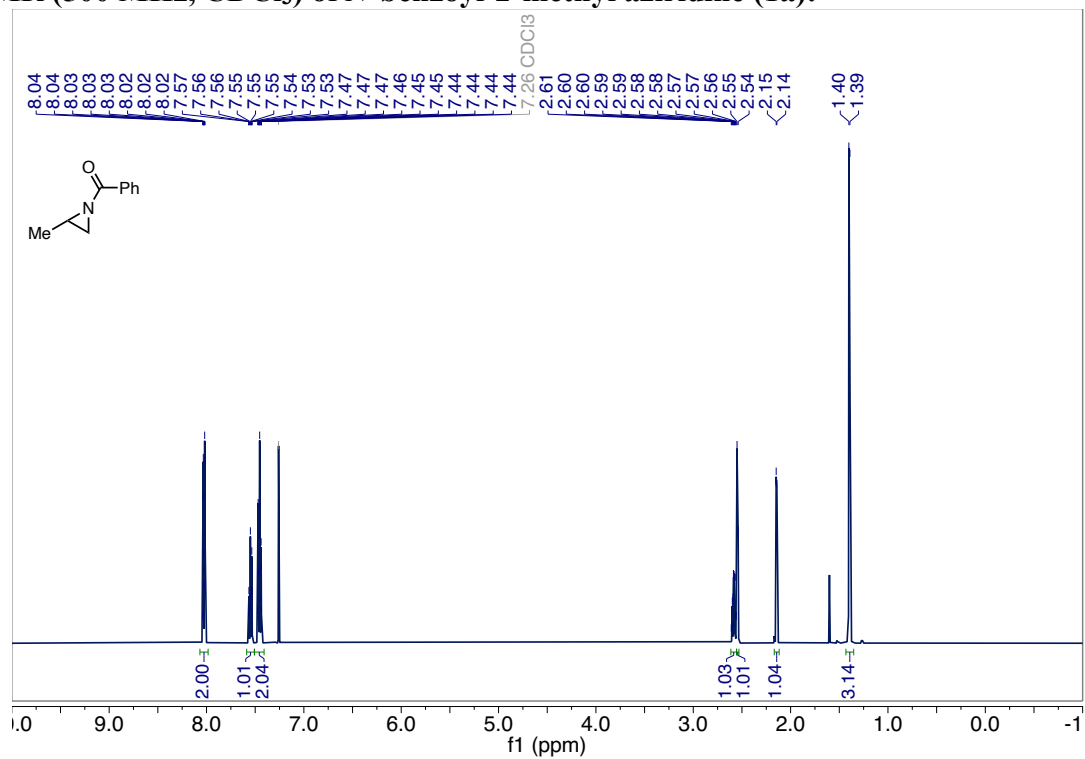
IntE_i-Pr

C	-1.71815300	-2.40233300	-1.89027300
C	-1.99625200	-2.10750100	-0.45854000
H	-1.90615200	-1.66820900	-2.66925900
H	-1.37238600	-3.39393600	-2.17586400
N	-2.52790200	-0.76325900	-0.28669800
C	-1.74859400	0.23497500	-0.41652400
O	-0.44540500	0.12325400	-0.73133400
C	-2.23451900	1.62473100	-0.24621400
C	-3.45621800	1.85142700	0.39614500
C	-1.48932200	2.71263700	-0.70969600
C	-3.92158400	3.14677200	0.57590600
H	-4.02735300	0.99805200	0.75482100
C	-1.96197300	4.00954400	-0.53236700
H	-0.54227800	2.54243900	-1.21897700
C	-3.17550000	4.22929400	0.11222300
H	-4.86916800	3.31489600	1.08279900
H	-1.37904000	4.85022400	-0.90198100
H	-3.54140800	5.24386800	0.25377000
C	1.72734500	-1.07933700	1.49147400
C	1.05574700	0.15562300	1.71225500
C	1.91211100	1.20667200	1.27364600
C	3.12621700	0.61828500	0.80772600
C	3.00837800	-0.79029700	0.93631500
Ti	1.35018600	-0.07151000	-0.58003700
C	1.60140000	2.66219800	1.34500600
H	1.77178400	3.03628300	2.36341600

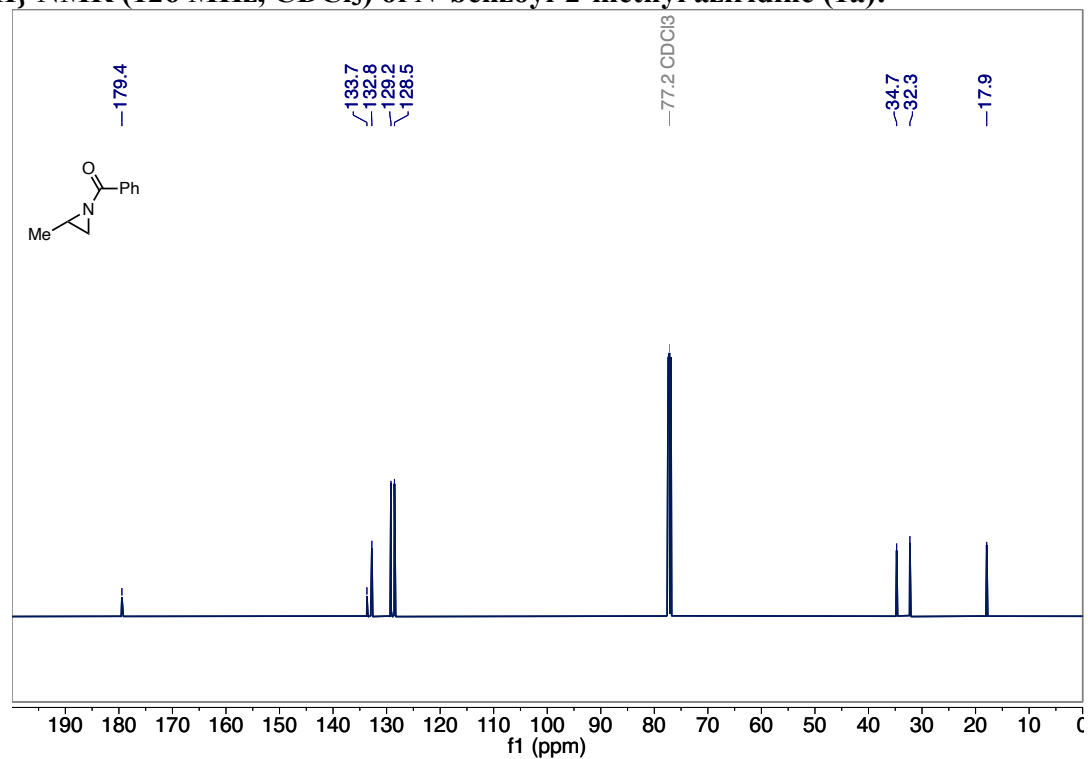
H	2.23044800	3.24604800	0.66626000
H	0.55438000	2.87144800	1.09398700
C	4.34755100	1.32595100	0.33602900
H	5.09121700	1.35892000	1.14385900
H	4.81044200	0.81152900	-0.51368000
H	4.13829500	2.35552500	0.03244000
C	4.07998300	-1.77558200	0.62677800
H	4.82440700	-1.78093900	1.43469800
H	3.68379400	-2.79084100	0.53096300
H	4.60681500	-1.52880800	-0.30205700
C	1.22124000	-2.43336400	1.85198900
H	0.14394600	-2.42066900	2.05141300
H	1.41363900	-3.17050700	1.06422700
H	1.72052600	-2.79012000	2.76297000
C	-0.26943700	0.32561100	2.36958200
H	-0.15298300	0.26266200	3.45964900
H	-0.71486700	1.30056000	2.14457300
H	-0.98743400	-0.44980200	2.07657800
Cl	2.07829000	1.50687800	-2.03644800
Cl	1.74380300	-1.99023600	-1.70716500
C	-2.97138800	-3.13290200	0.15624400
H	-2.50765600	-4.11995900	-0.00631300
H	-1.04347400	-2.20378300	0.10838600
C	-4.32102400	-3.11293000	-0.54525100
H	-4.99093200	-3.87812600	-0.13409400
H	-4.80697100	-2.13684000	-0.42033900
H	-4.21475000	-3.29760200	-1.62259900
C	-3.12452800	-2.91226300	1.65286200
H	-3.78556400	-3.66539400	2.09942300
H	-2.15764500	-2.96888500	2.17244900
H	-3.55964800	-1.92419700	1.85638900

10. NMR Spectra

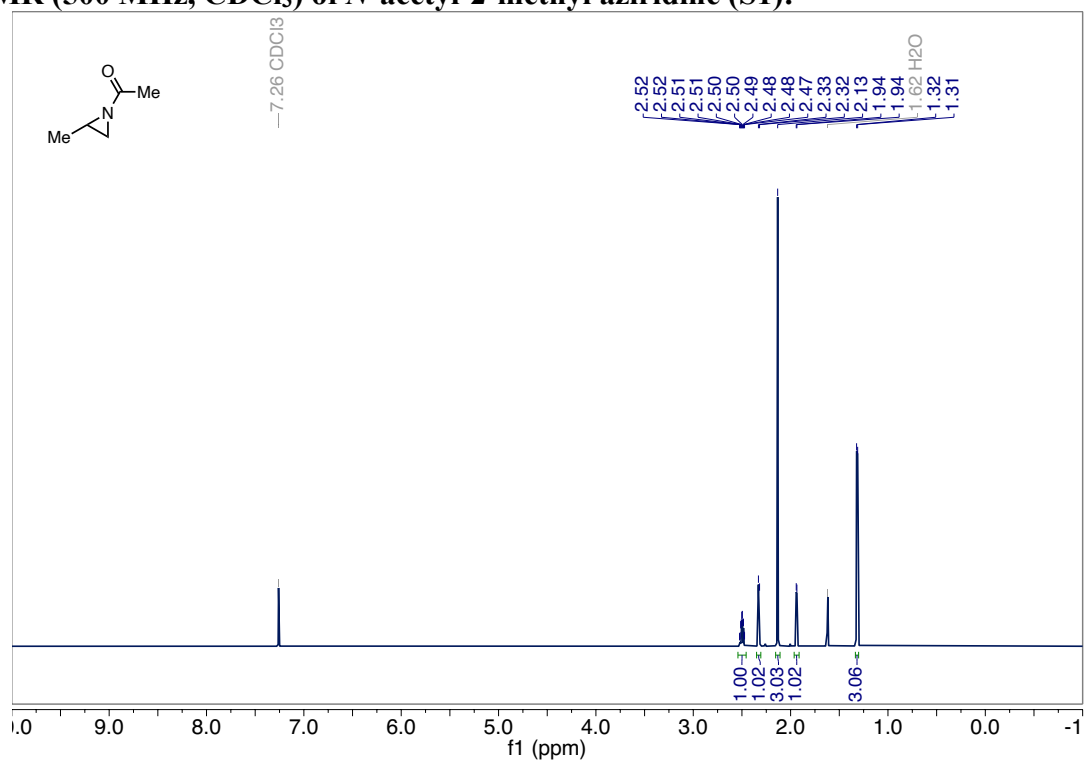
^1H NMR (500 MHz, CDCl_3) of *N*-benzoyl-2-methyl aziridine (1a):



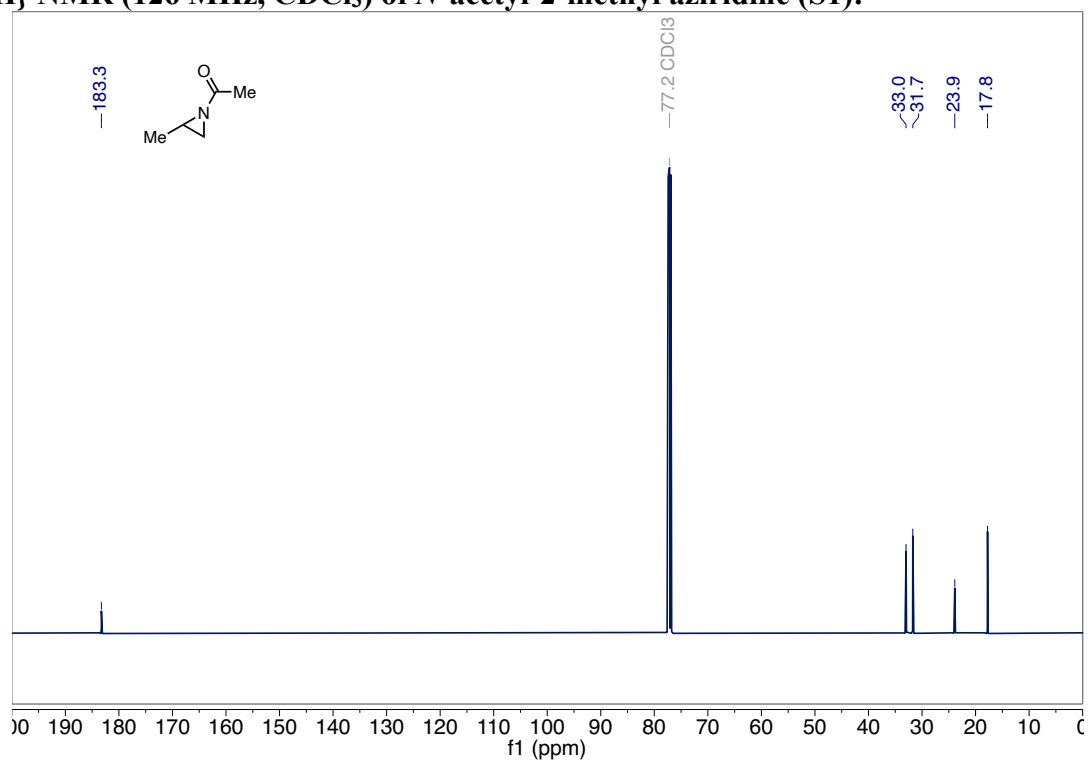
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-benzoyl-2-methyl aziridine (1a):



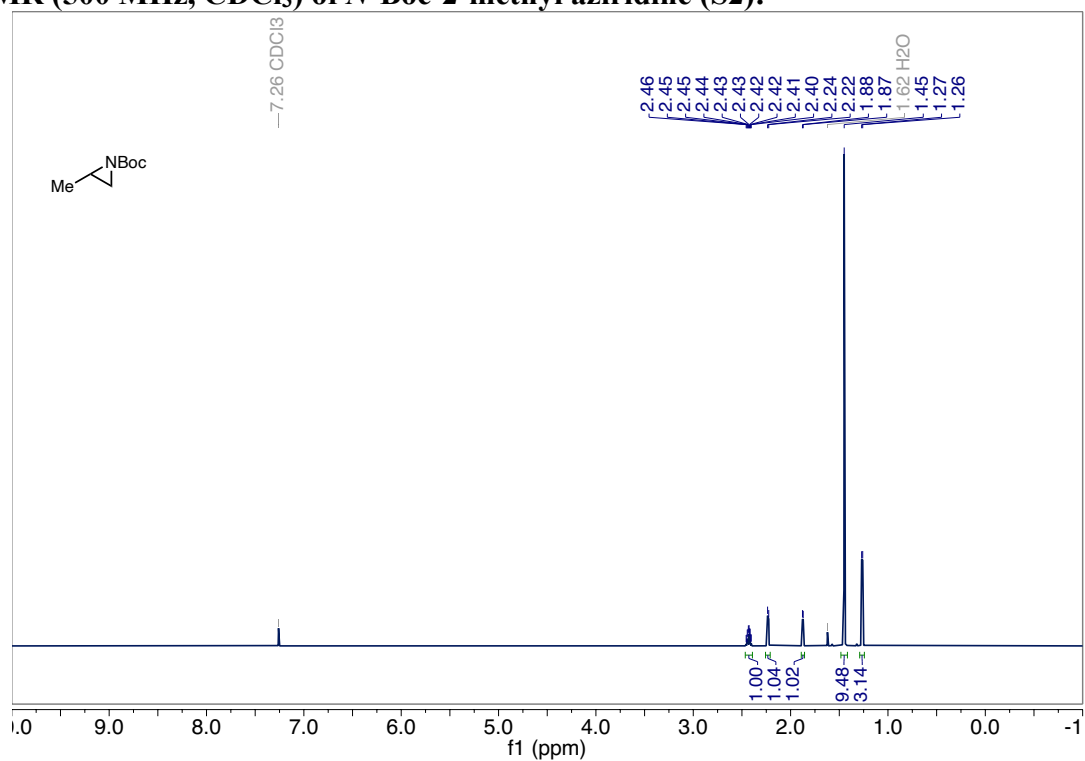
¹H NMR (500 MHz, CDCl₃) of *N*-acetyl-2-methyl aziridine (S1):



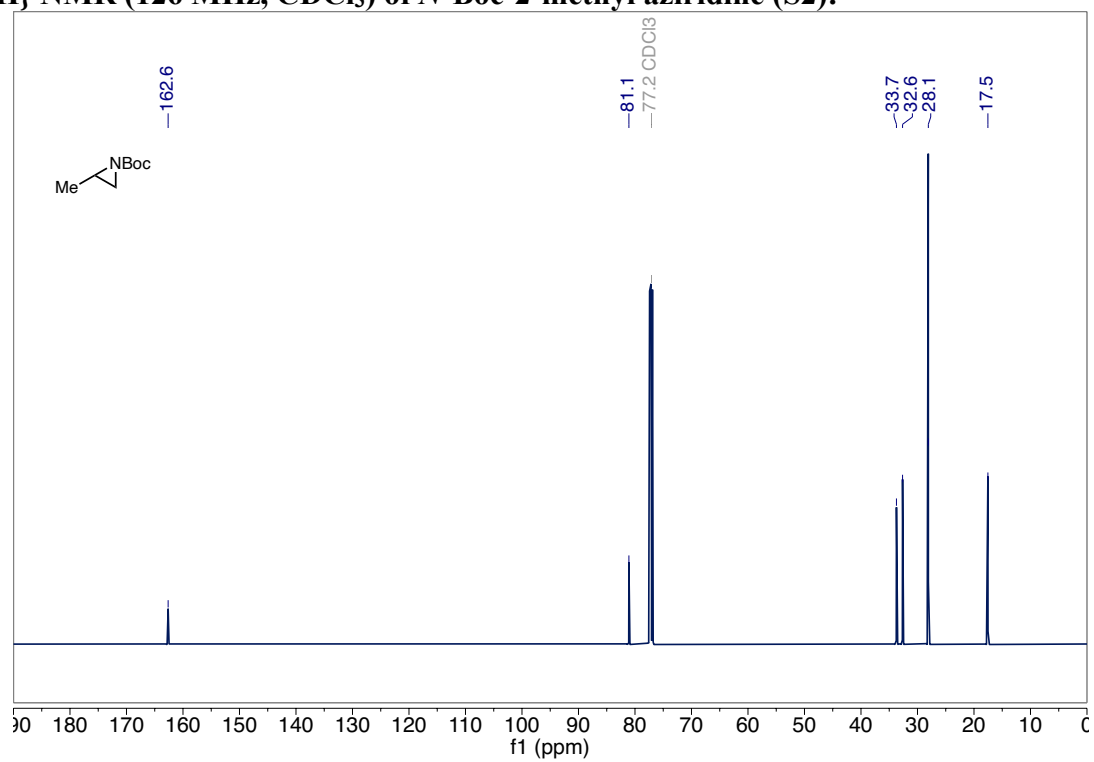
¹³C{¹H} NMR (126 MHz, CDCl₃) of *N*-acetyl-2-methyl aziridine (S1):



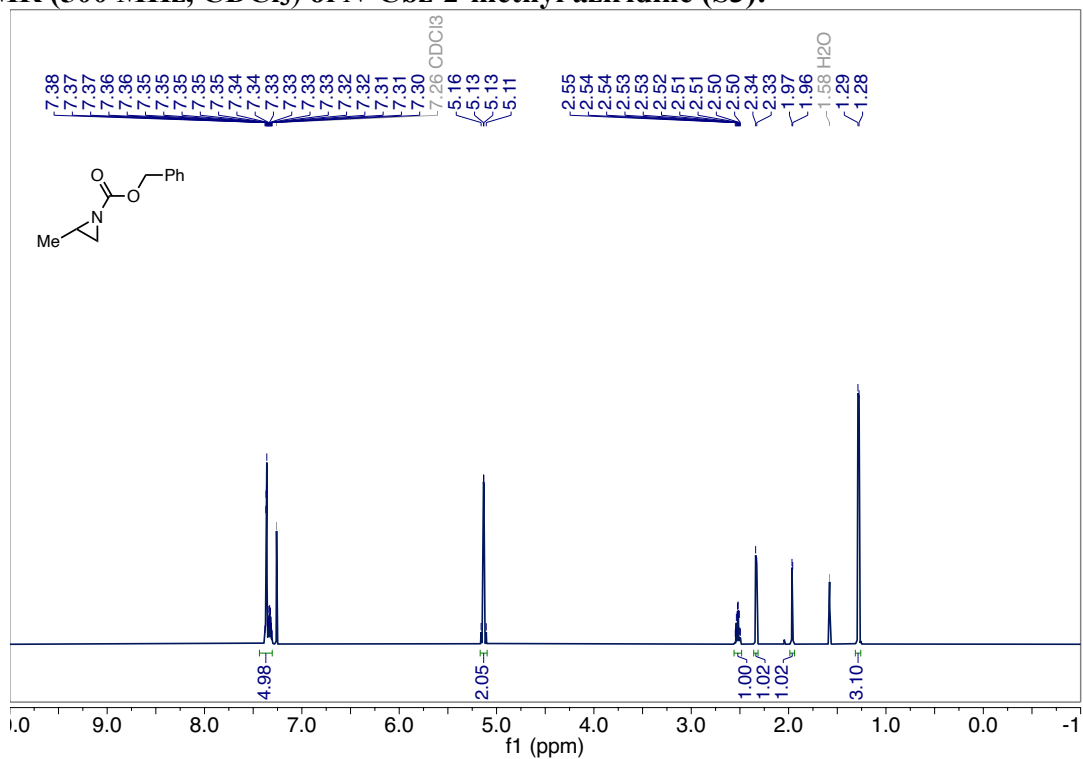
^1H NMR (500 MHz, CDCl_3) of *N*-Boc-2-methyl aziridine (S2):



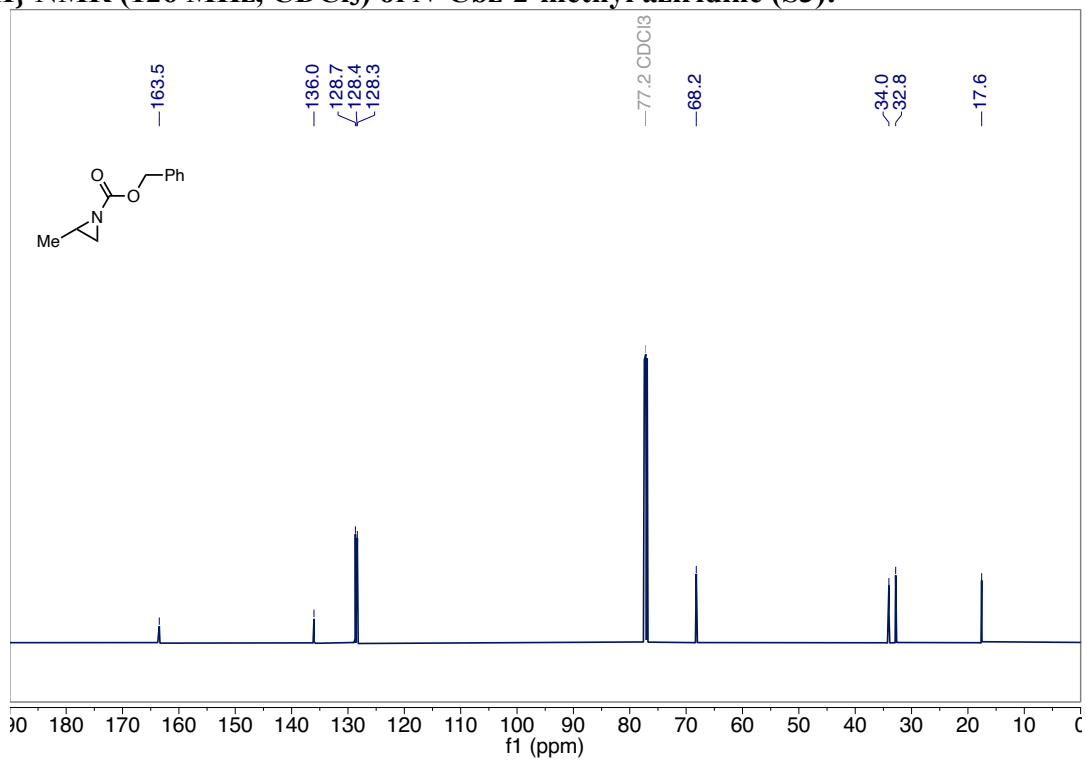
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-Boc-2-methyl aziridine (S2):



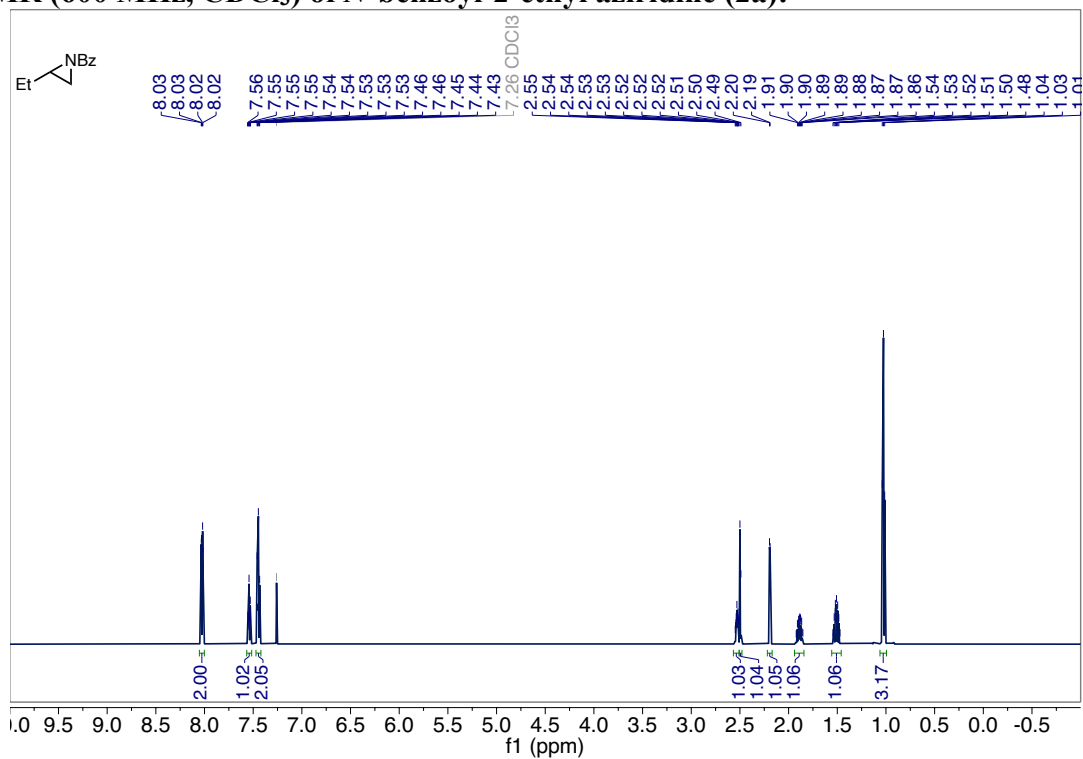
^1H NMR (500 MHz, CDCl_3) of *N*-Cbz-2-methyl aziridine (S3):



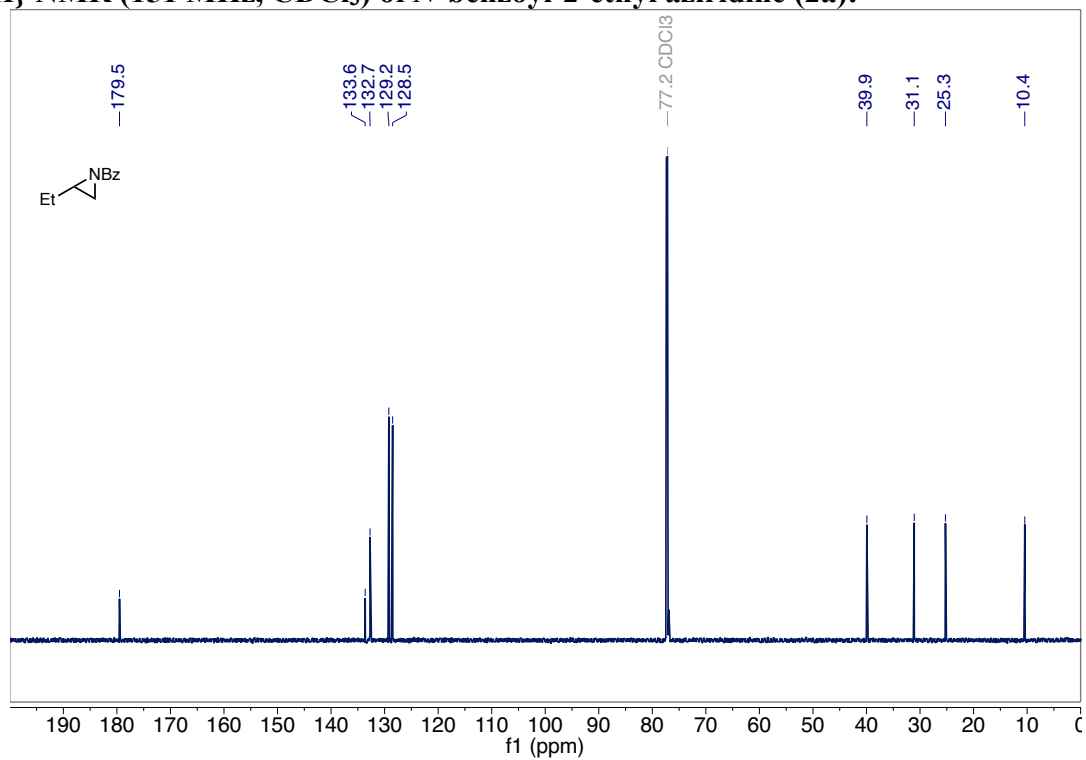
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-Cbz-2-methyl aziridine (S3):



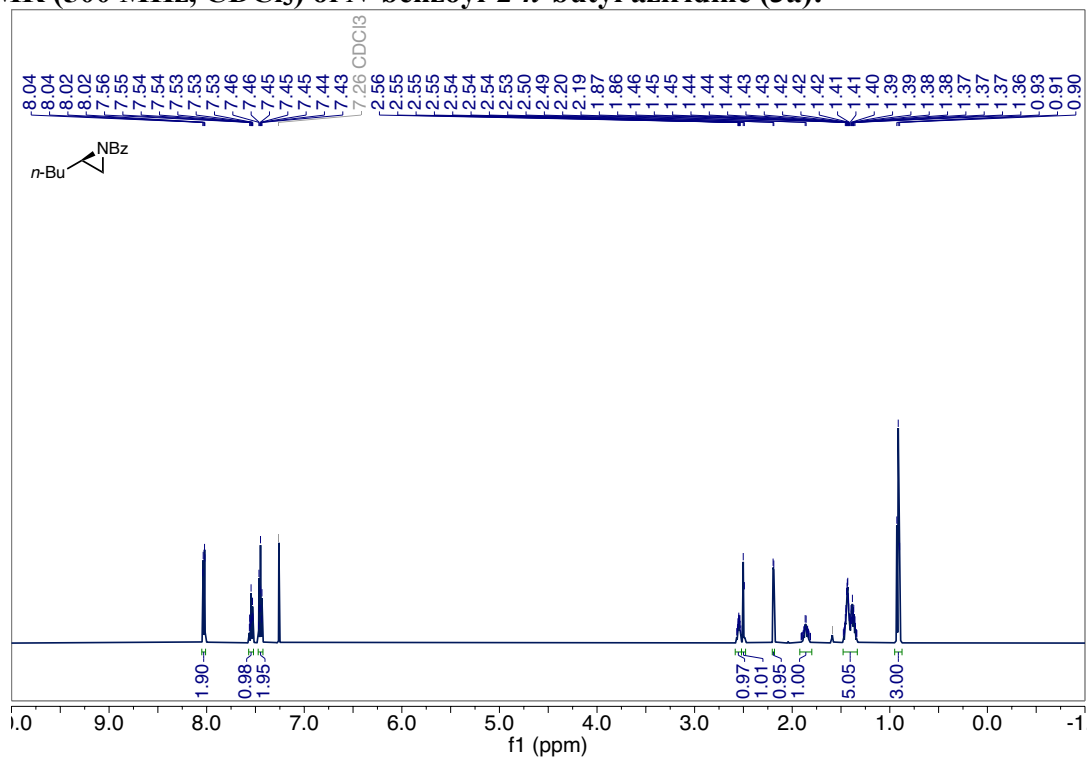
^1H NMR (600 MHz, CDCl_3) of *N*-benzoyl-2-ethyl aziridine (2a):



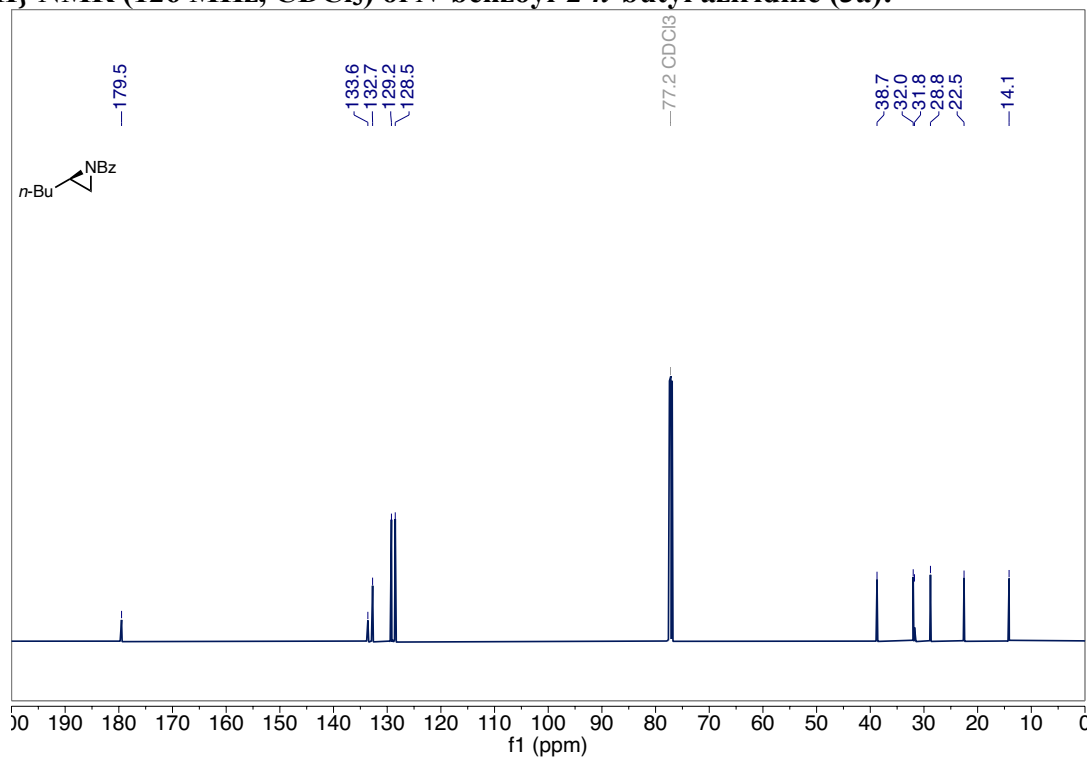
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-benzoyl-2-ethyl aziridine (2a):



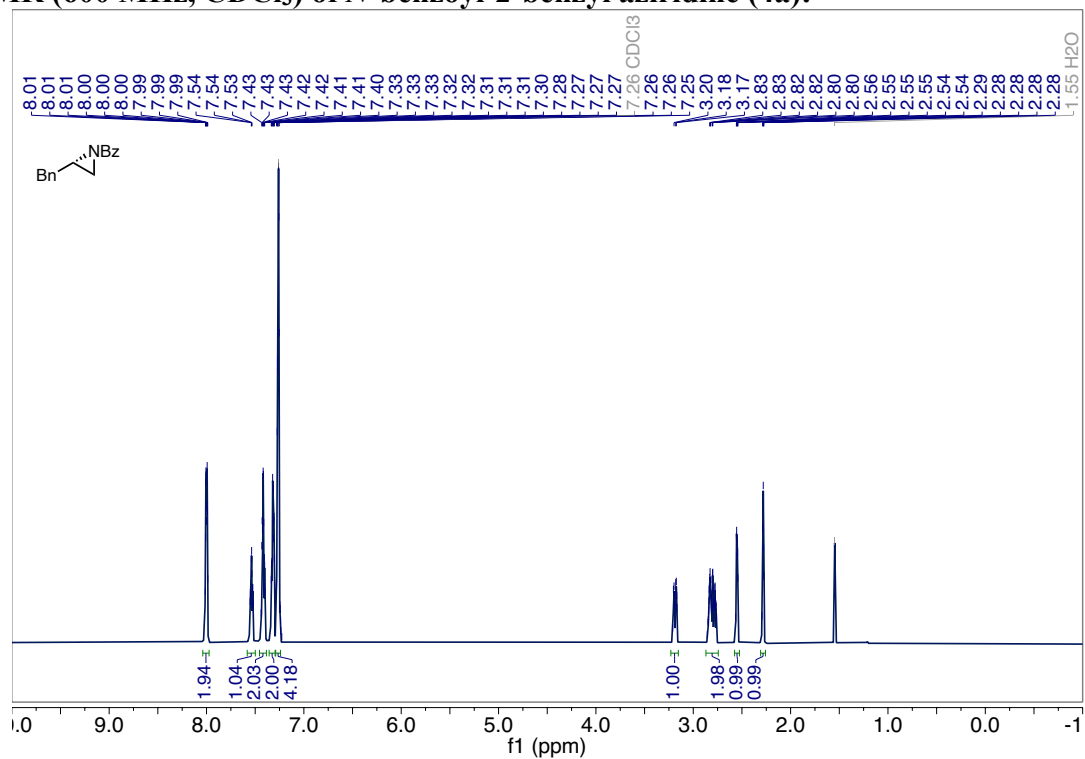
¹H NMR (500 MHz, CDCl₃) of *N*-benzoyl-2-*n*-butyl aziridine (3a):



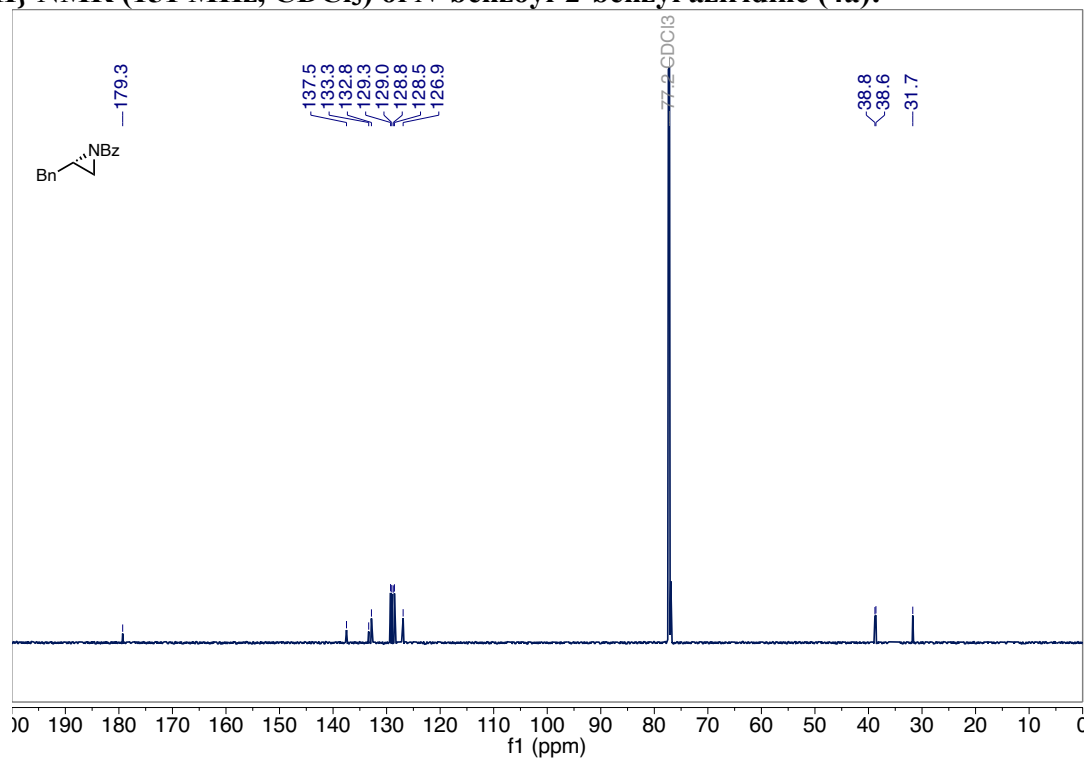
¹³C{¹H} NMR (126 MHz, CDCl₃) of *N*-benzoyl-2-*n*-butyl aziridine (3a):



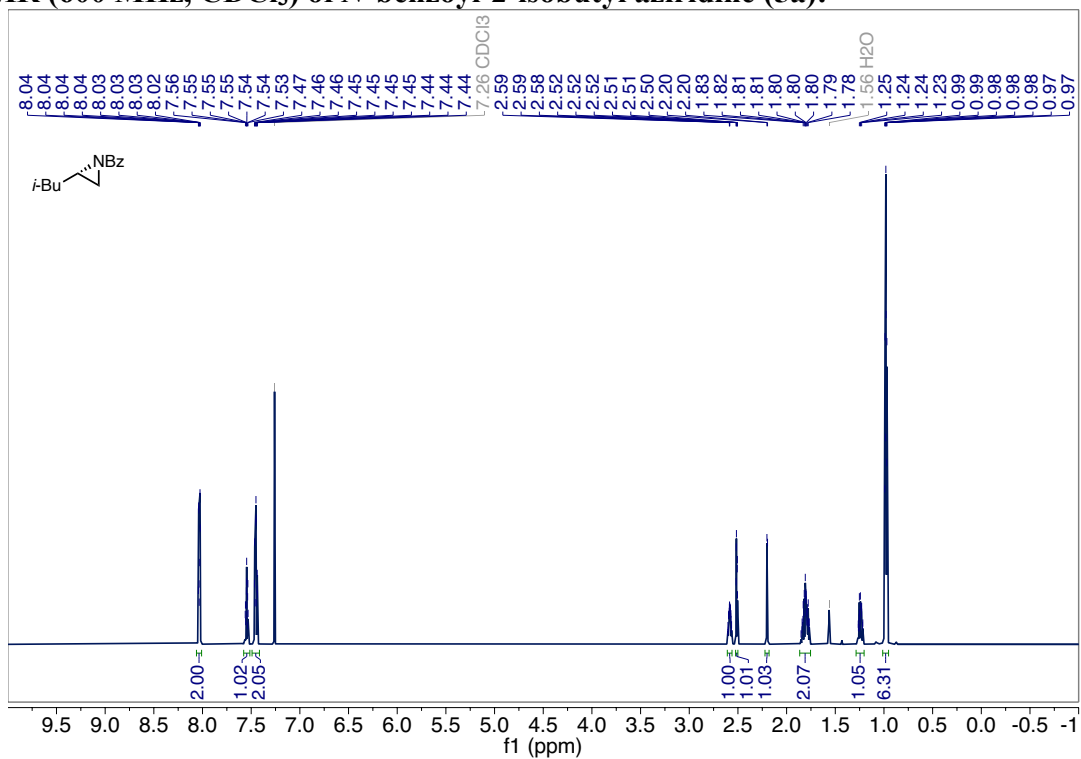
¹H NMR (600 MHz, CDCl₃) of *N*-benzoyl-2-benzyl aziridine (4a):



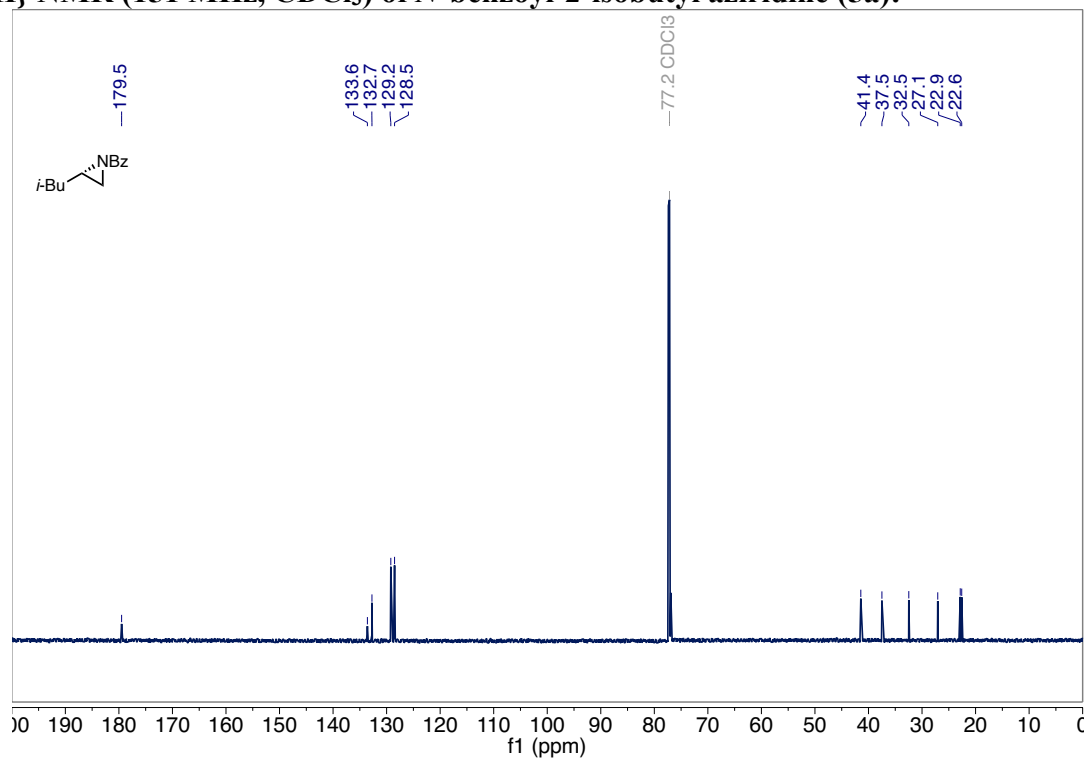
¹³C{¹H} NMR (151 MHz, CDCl₃) of *N*-benzoyl-2-benzyl aziridine (4a):



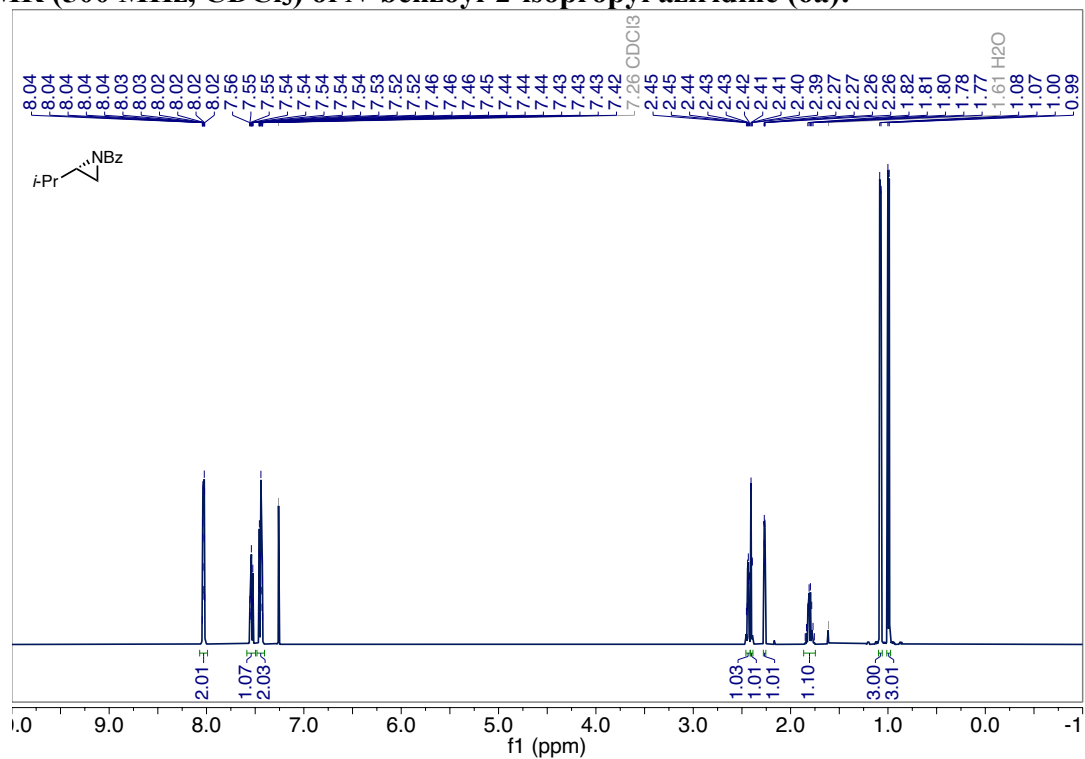
^1H NMR (600 MHz, CDCl_3) of *N*-benzoyl-2-isobutyl aziridine (5a):



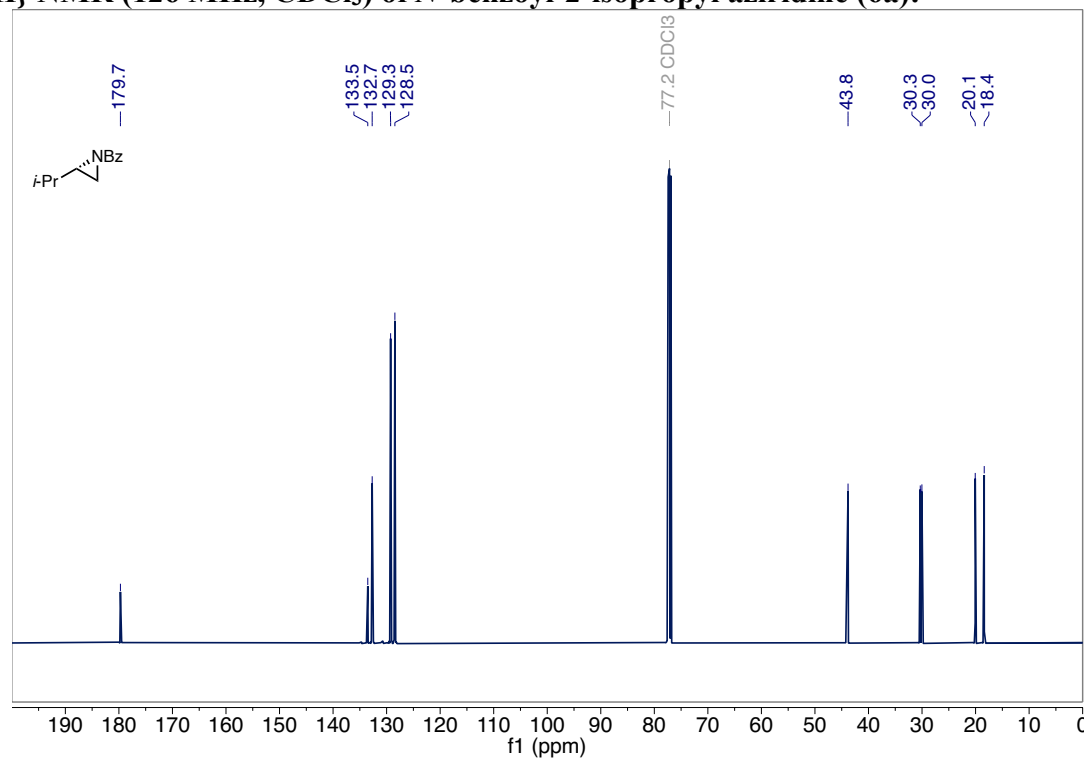
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-benzoyl-2-isobutyl aziridine (5a):



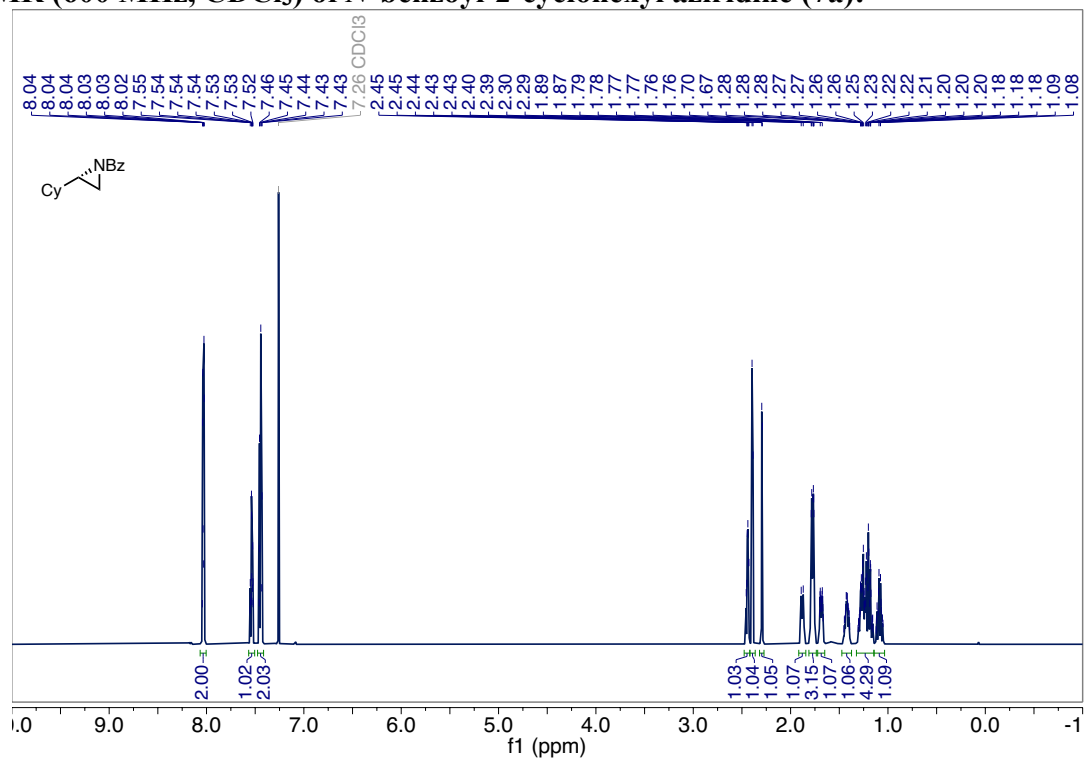
^1H NMR (500 MHz, CDCl_3) of *N*-benzoyl-2-isopropyl aziridine (6a):



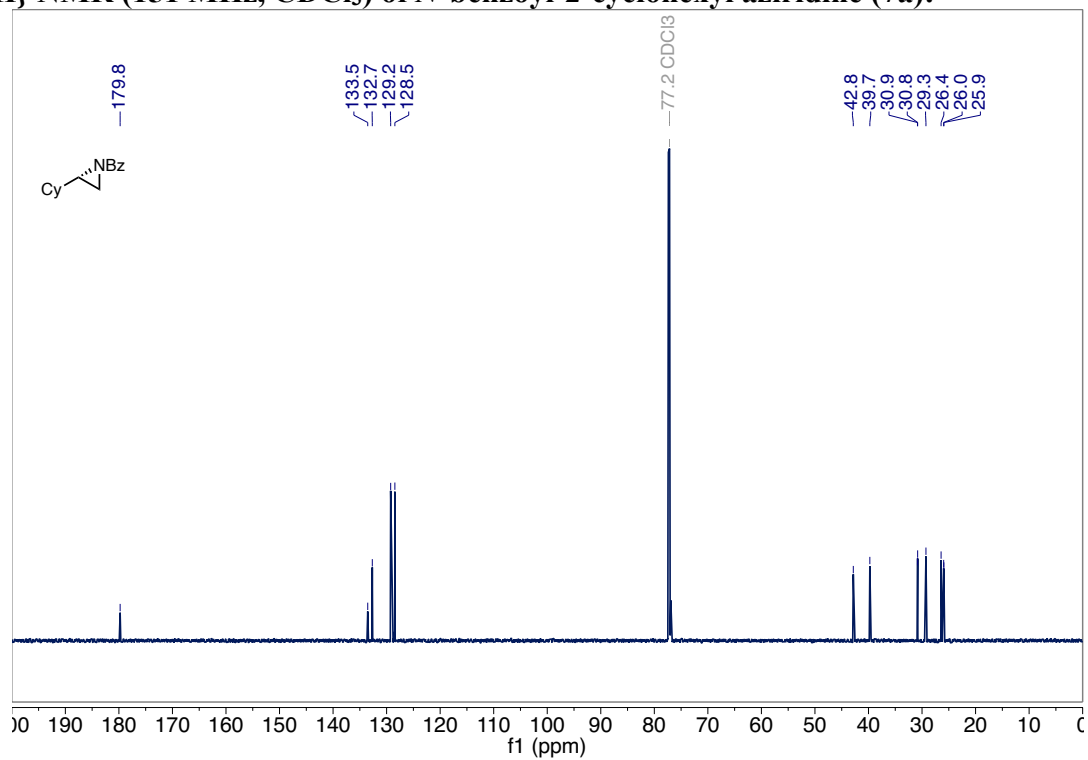
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-benzoyl-2-isopropyl aziridine (6a):



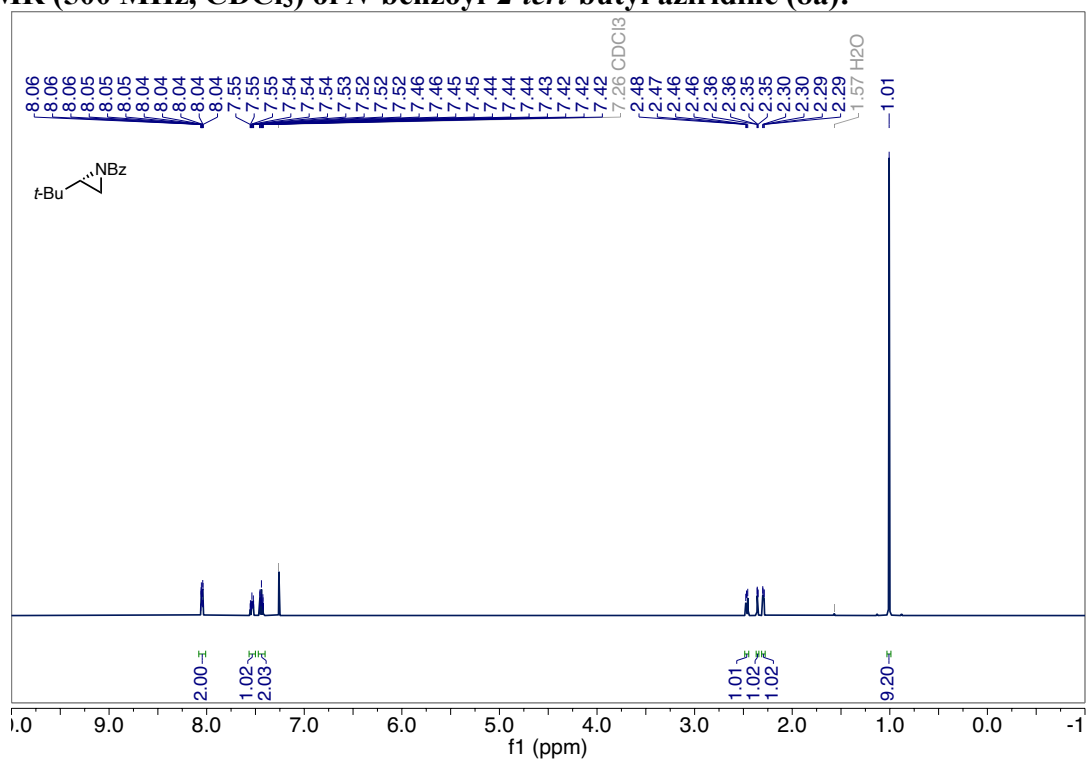
¹H NMR (600 MHz, CDCl₃) of *N*-benzoyl-2-cyclohexyl aziridine (7a):



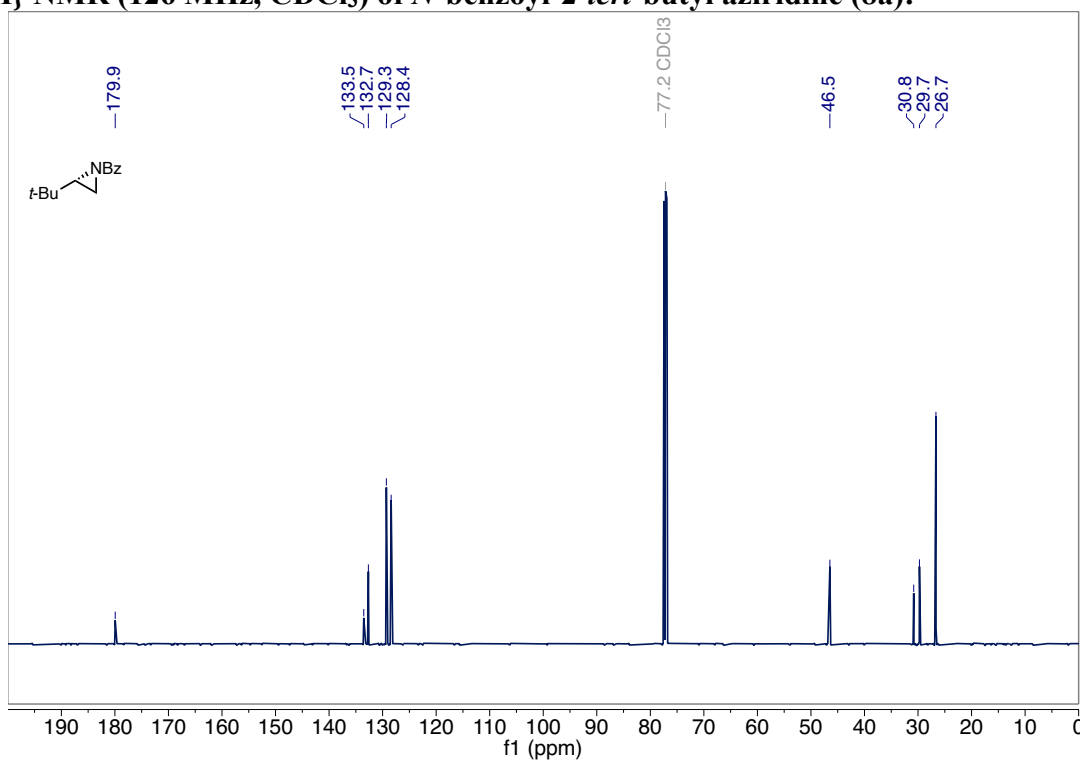
¹³C{¹H} NMR (151 MHz, CDCl₃) of *N*-benzoyl-2-cyclohexyl aziridine (7a):



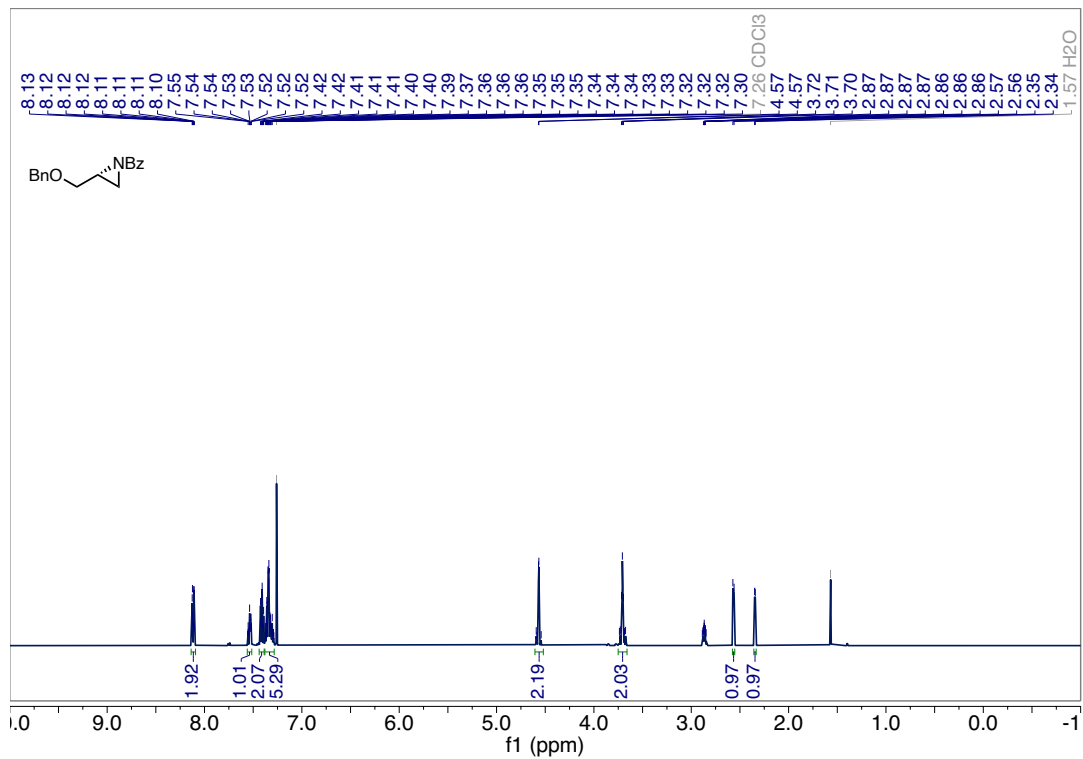
¹H NMR (500 MHz, CDCl₃) of *N*-benzoyl-2-*tert*-butyl aziridine (8a):



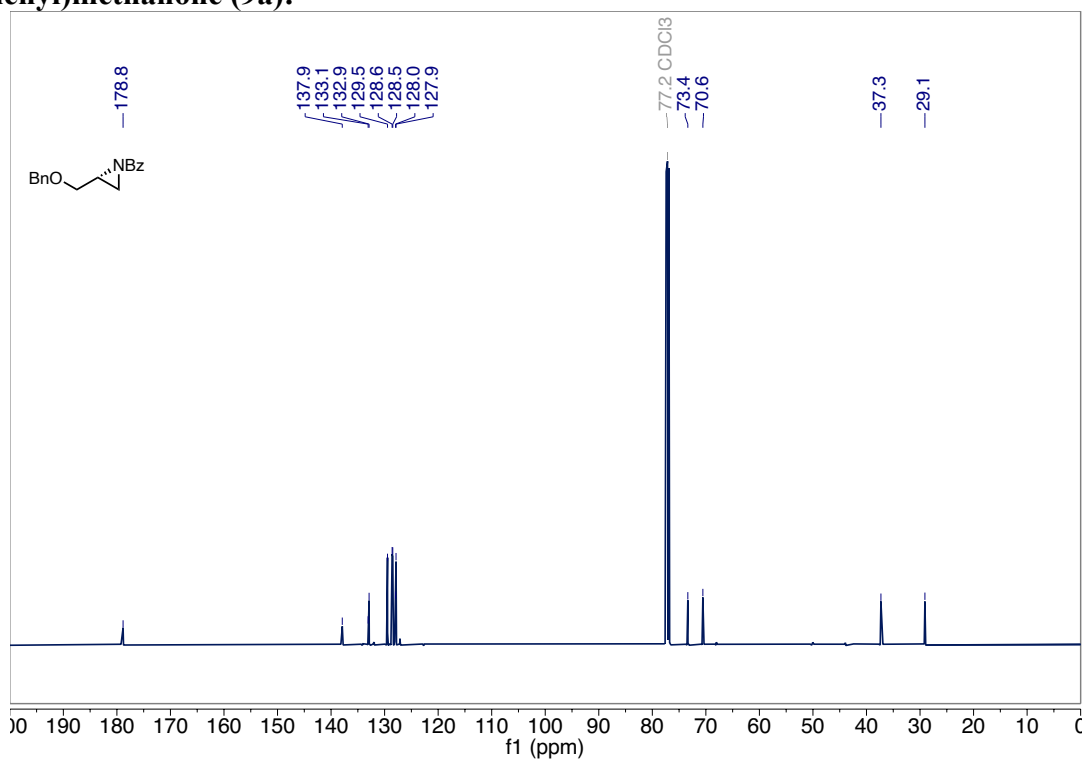
¹³C{¹H} NMR (126 MHz, CDCl₃) of *N*-benzoyl-2-*tert*-butyl aziridine (8a):



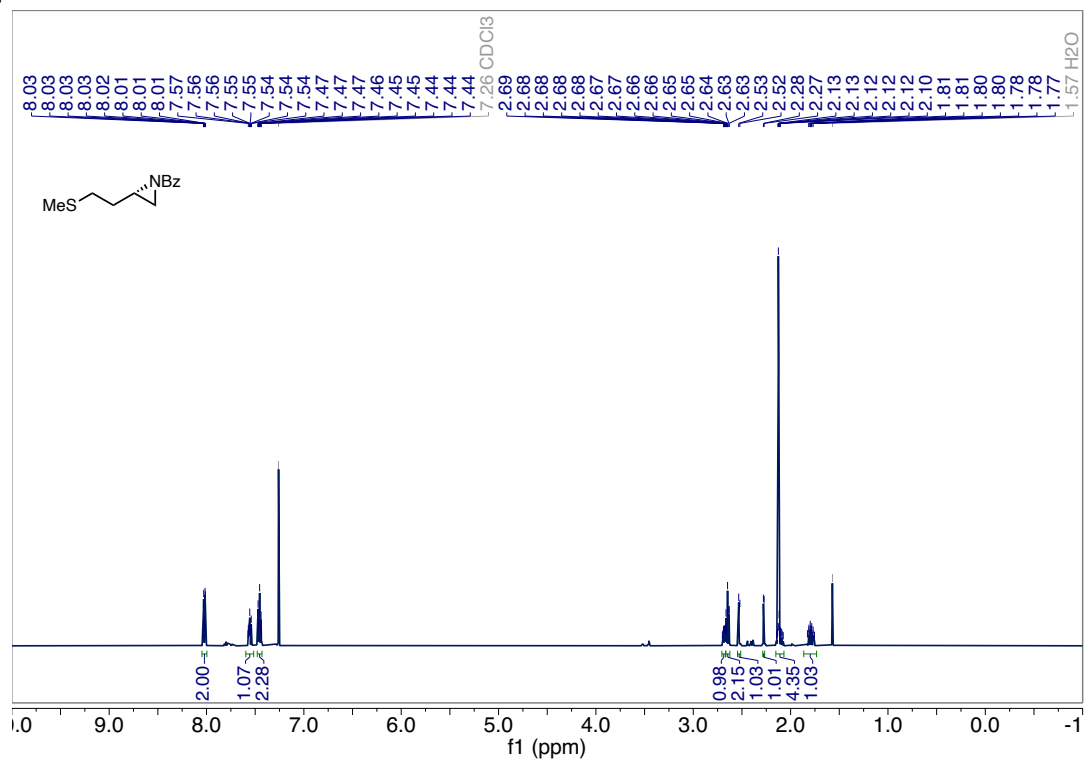
¹H NMR (500 MHz, CDCl₃) of (R)-2-((benzyloxy)methyl)aziridin-1-yl(phenyl)methanone (9a):



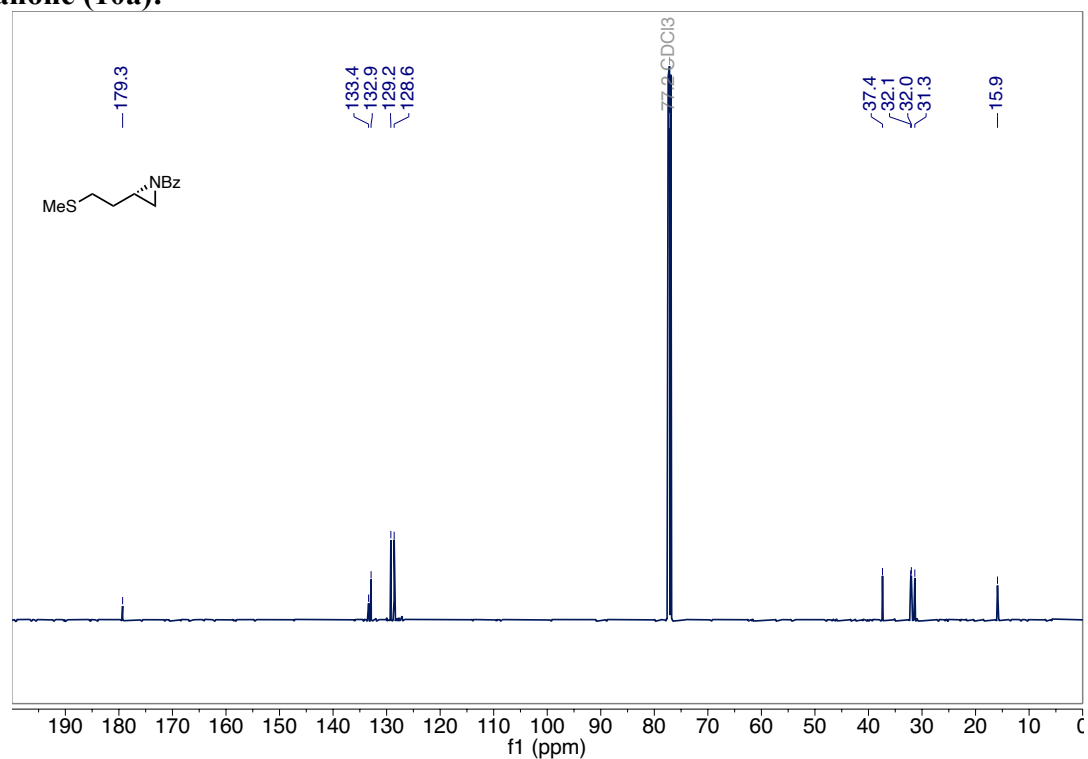
¹³C{¹H} NMR (126 MHz, CDCl₃) of (R)-2-((benzyloxy)methyl)aziridin-1-yl(phenyl)methanone (9a):



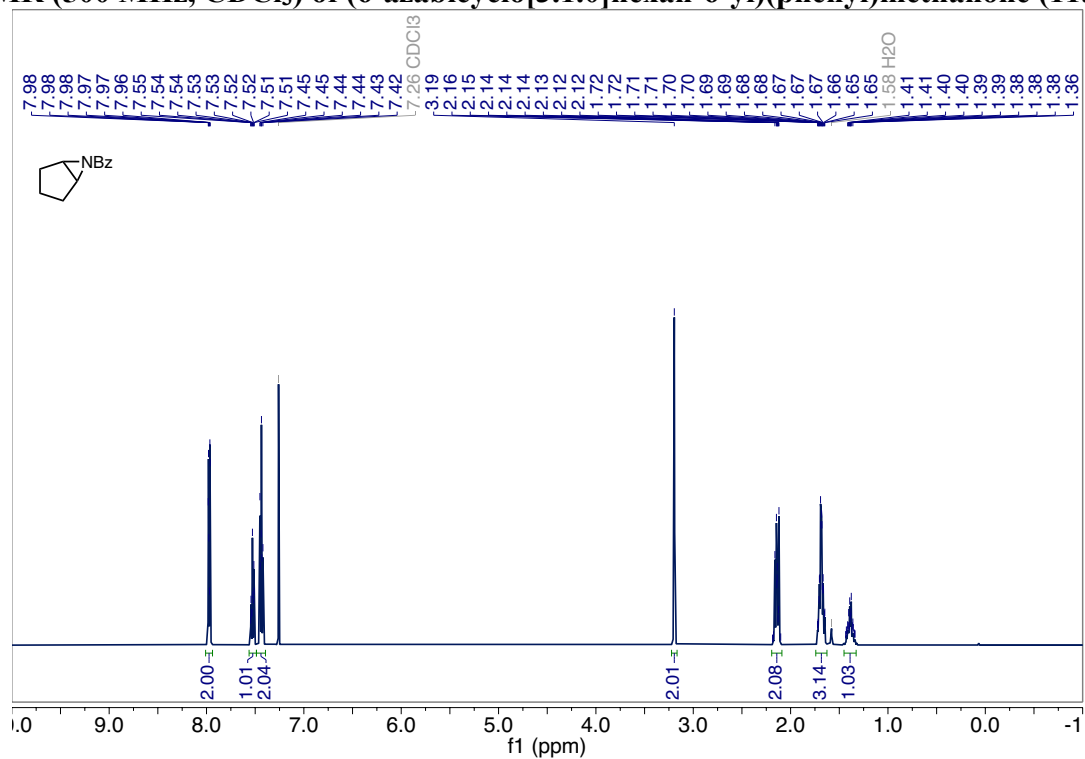
^1H NMR (500 MHz, CDCl_3) of (S)-2-(2-(methylthio)ethyl)aziridin-1-yl(phenyl)methanone (10a):



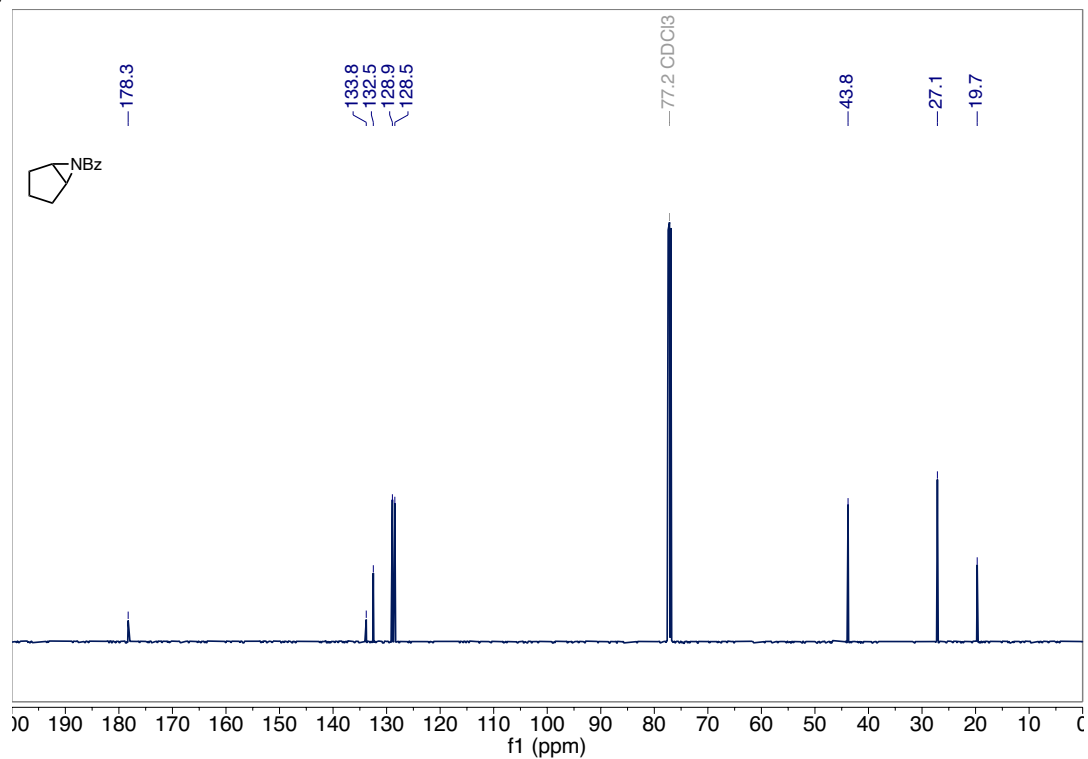
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of (S)-2-(2-(methylthio)ethyl)aziridin-1-yl(phenyl)methanone (10a):



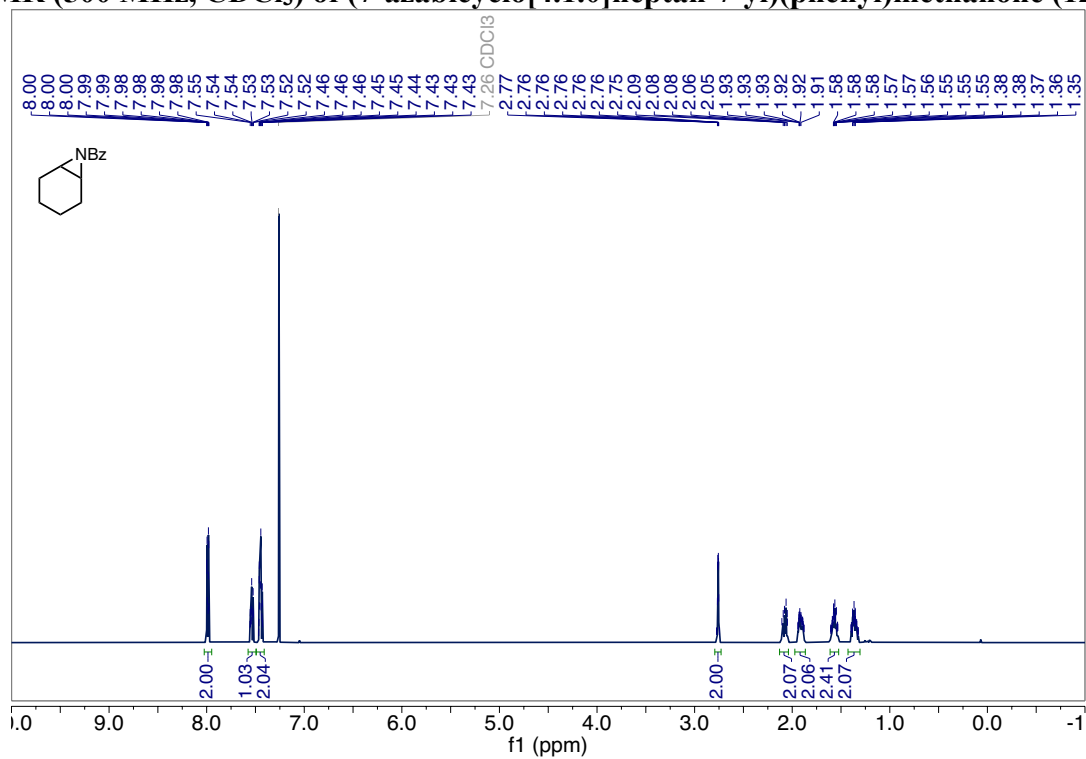
^1H NMR (500 MHz, CDCl_3) of (6-azabicyclo[3.1.0]hexan-6-yl)(phenyl)methanone (11a):



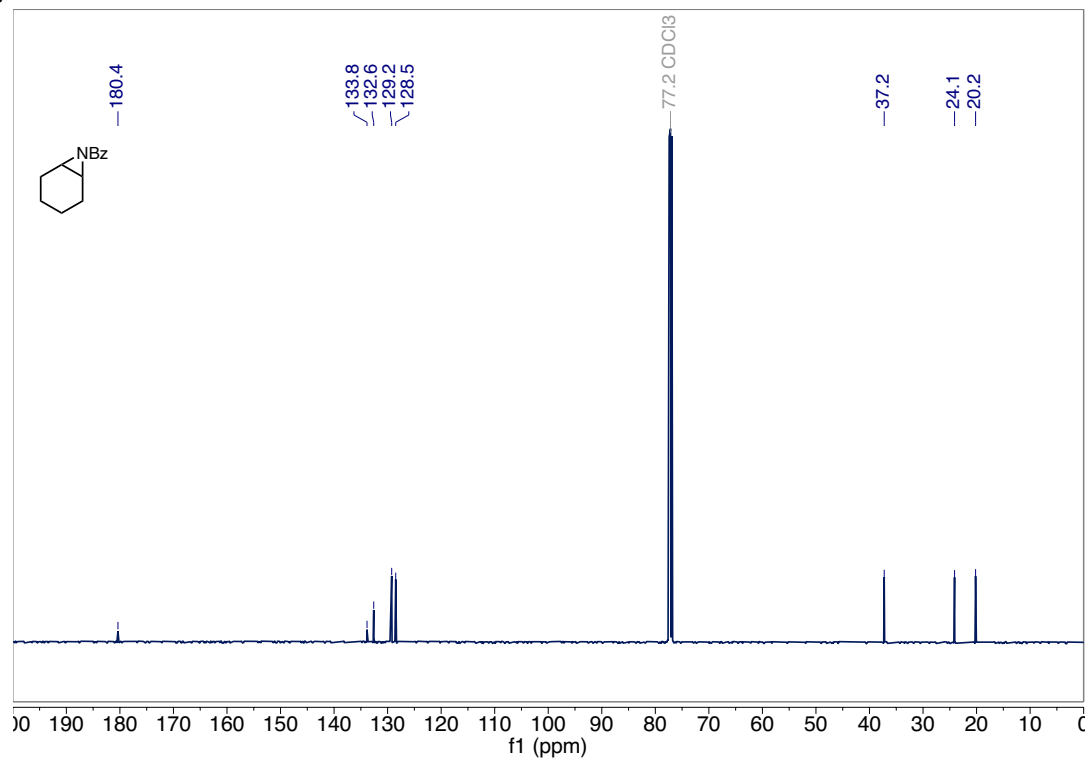
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of (6-azabicyclo[3.1.0]hexan-6-yl)(phenyl)methanone (11a):



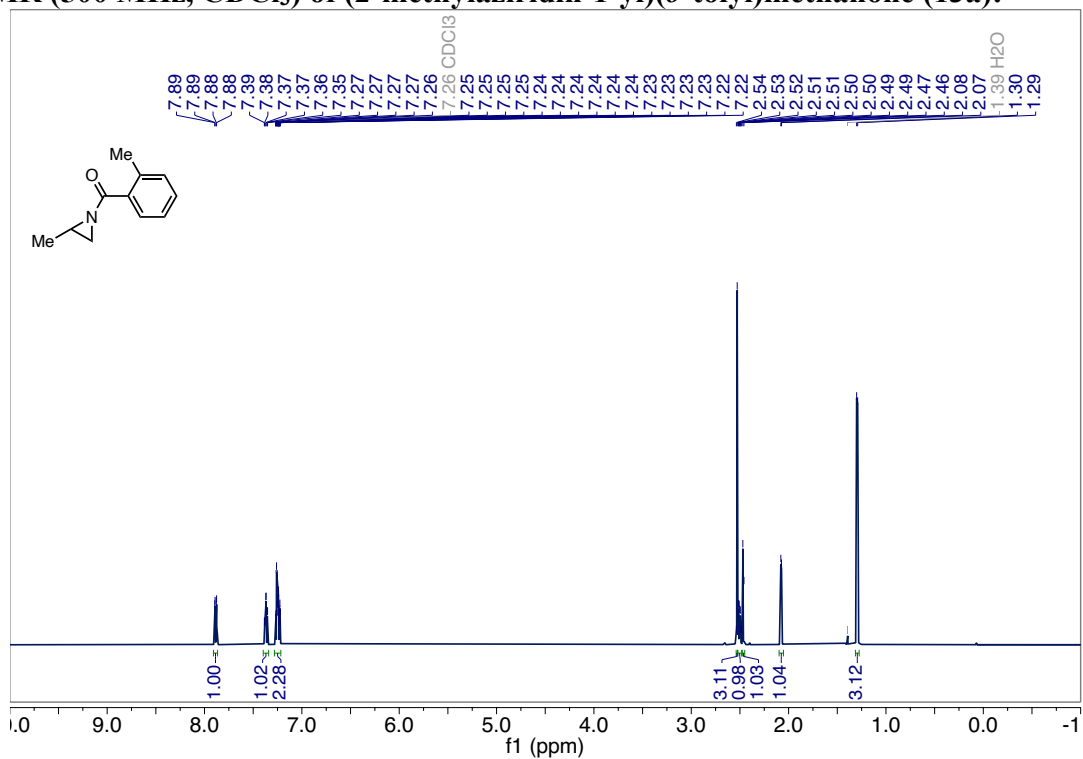
^1H NMR (500 MHz, CDCl_3) of (7-azabicyclo[4.1.0]heptan-7-yl)(phenyl)methanone (12a):



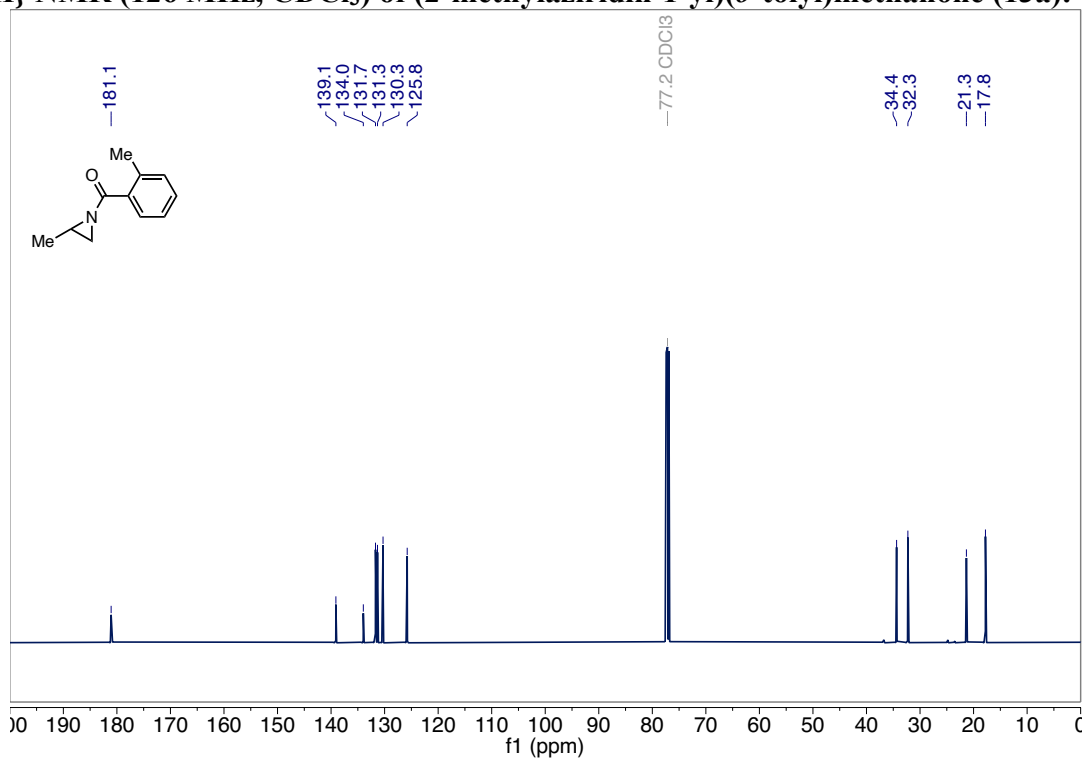
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of (7-azabicyclo[4.1.0]heptan-7-yl)(phenyl)methanone (12a):



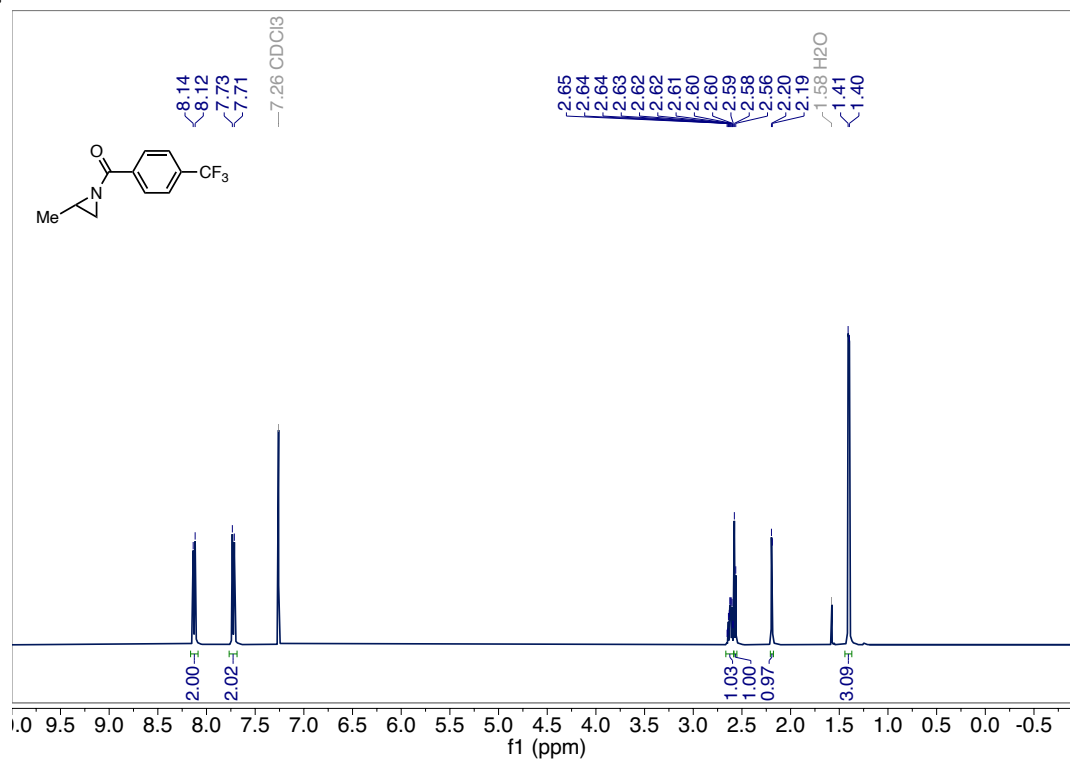
^1H NMR (500 MHz, CDCl_3) of (2-methylaziridin-1-yl)(*o*-tolyl)methanone (13a):



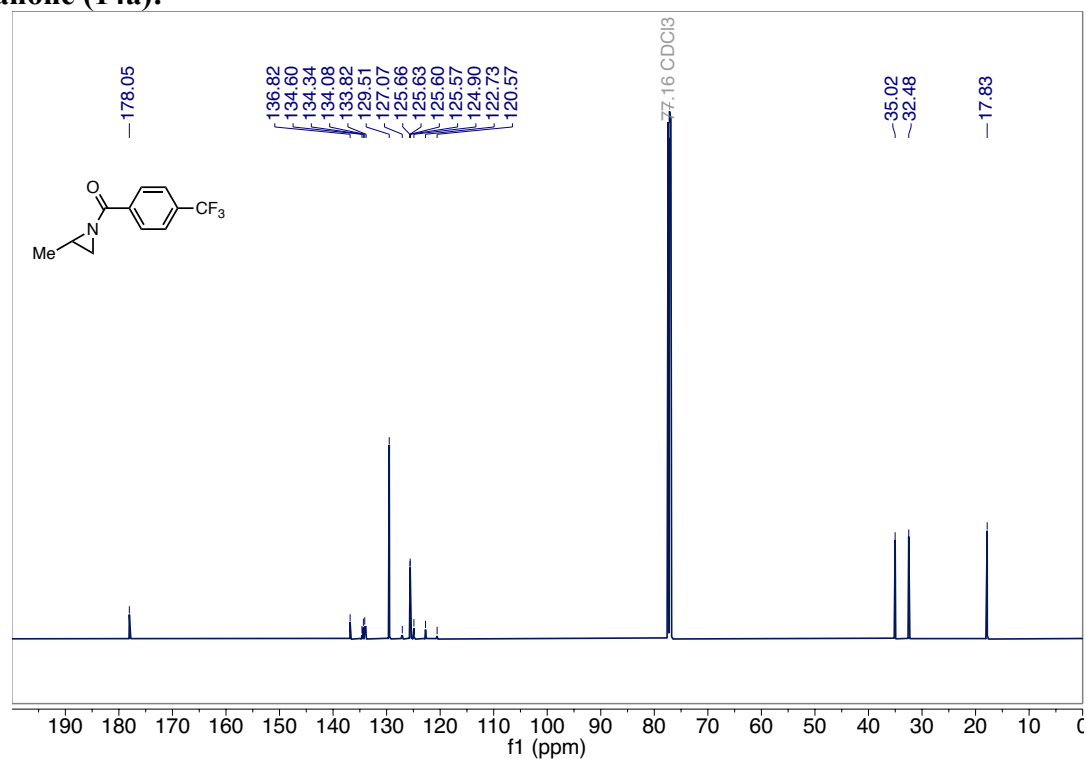
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of (2-methylaziridin-1-yl)(*o*-tolyl)methanone (13a):



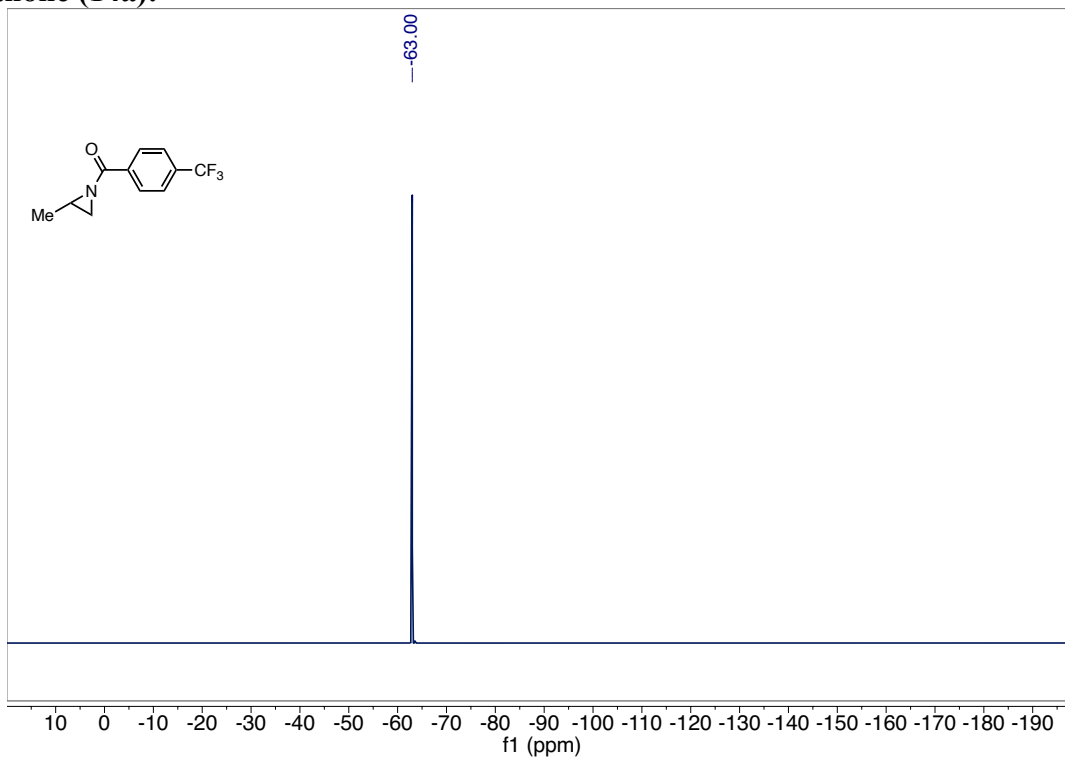
^1H NMR (400 MHz, CDCl_3) of (2-methylaziridin-1-yl)(4-(trifluoromethyl)phenyl)methanone (14a):



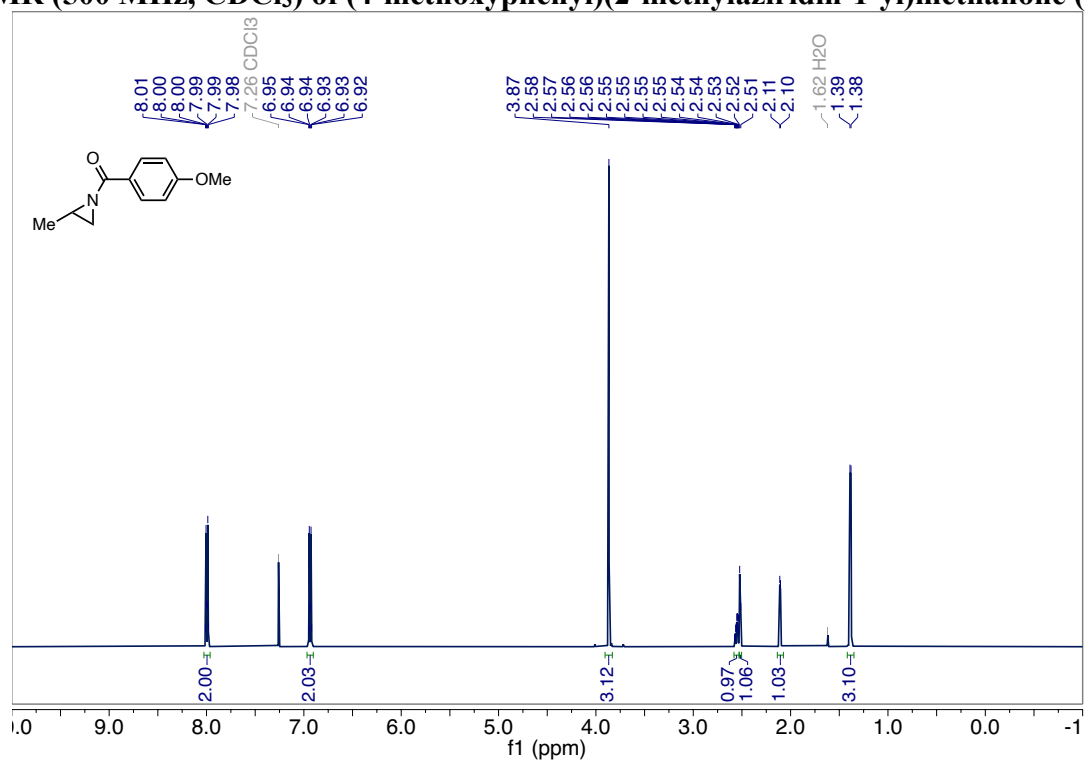
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of (2-methylaziridin-1-yl)(4-(trifluoromethyl)phenyl)methanone (14a):



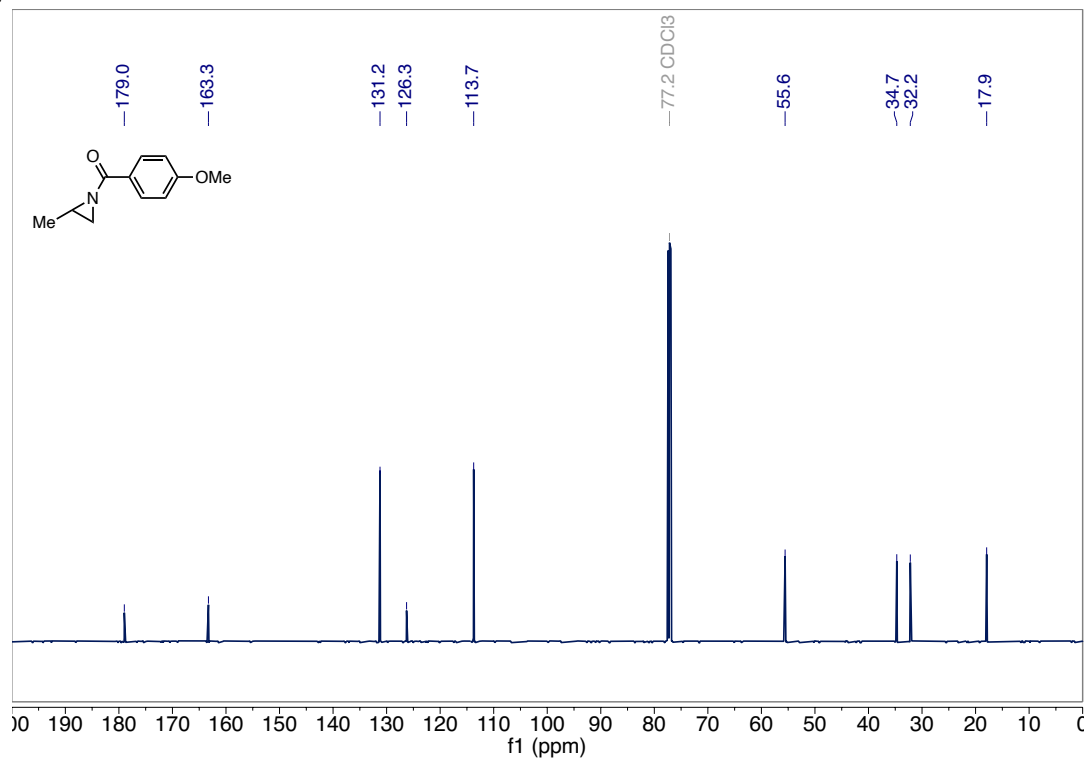
¹⁹F NMR (376 MHz, CDCl₃) of (2-methylaziridin-1-yl)(4-(trifluoromethyl)phenyl) methanone (14a):



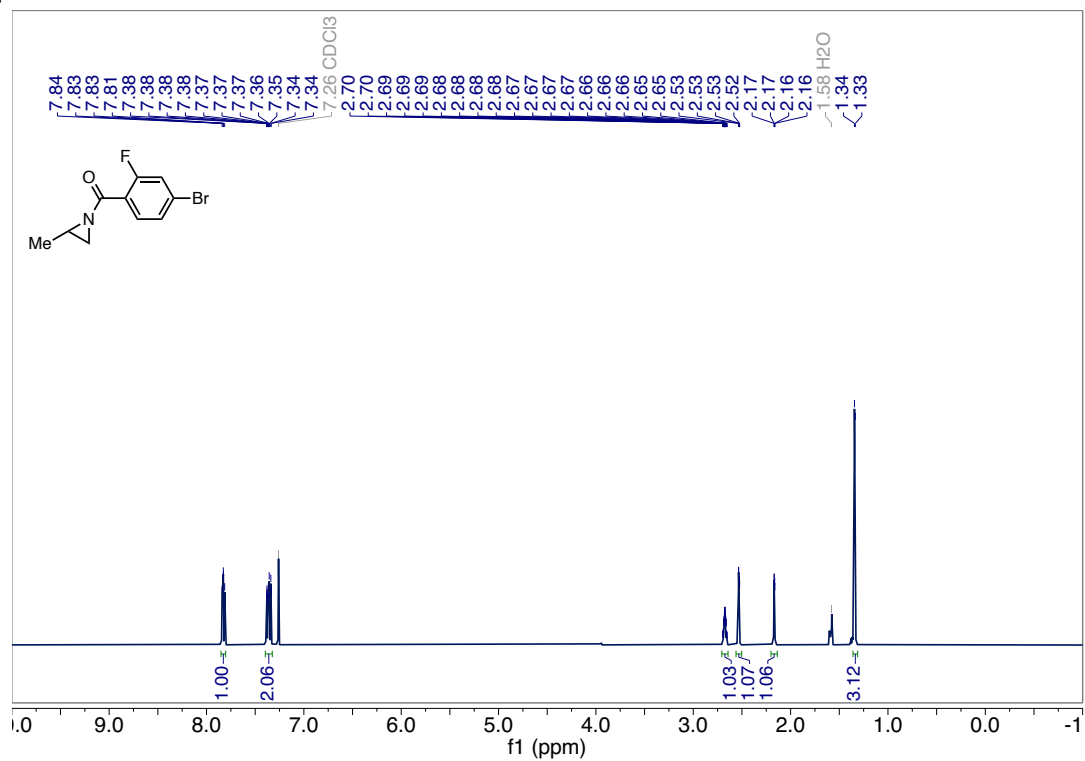
^1H NMR (500 MHz, CDCl_3) of (4-methoxyphenyl)(2-methylaziridin-1-yl)methanone (15a):



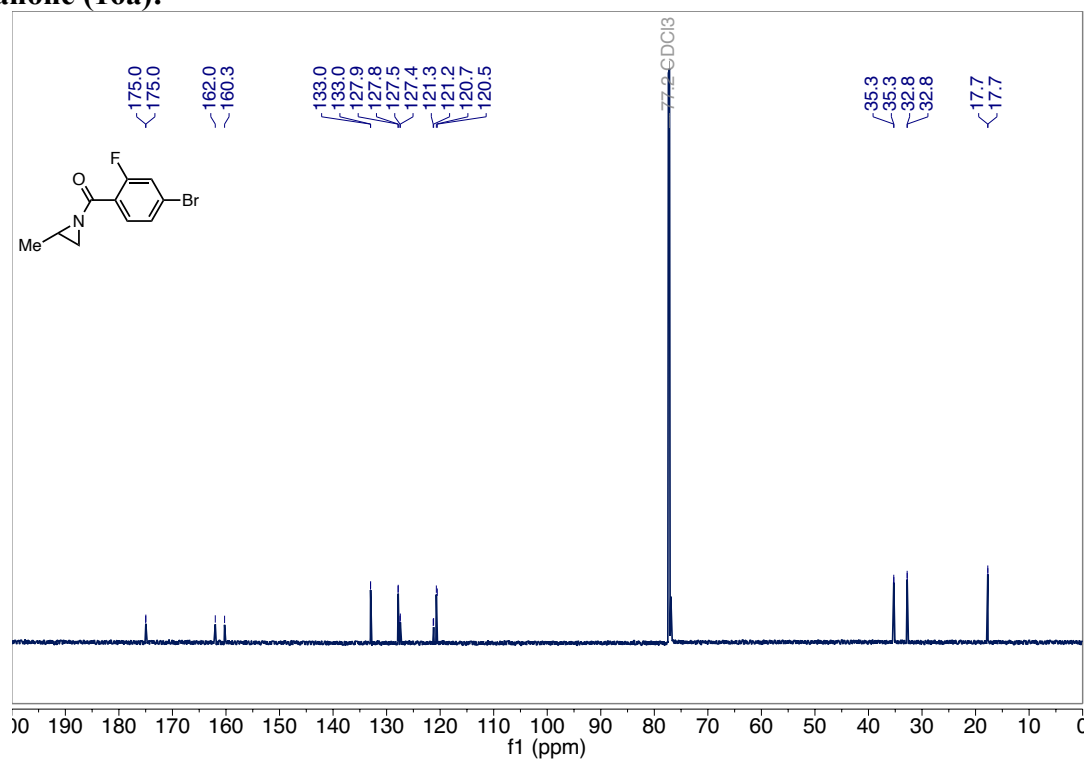
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of (4-methoxyphenyl)(2-methylaziridin-1-yl)methanone (15a):



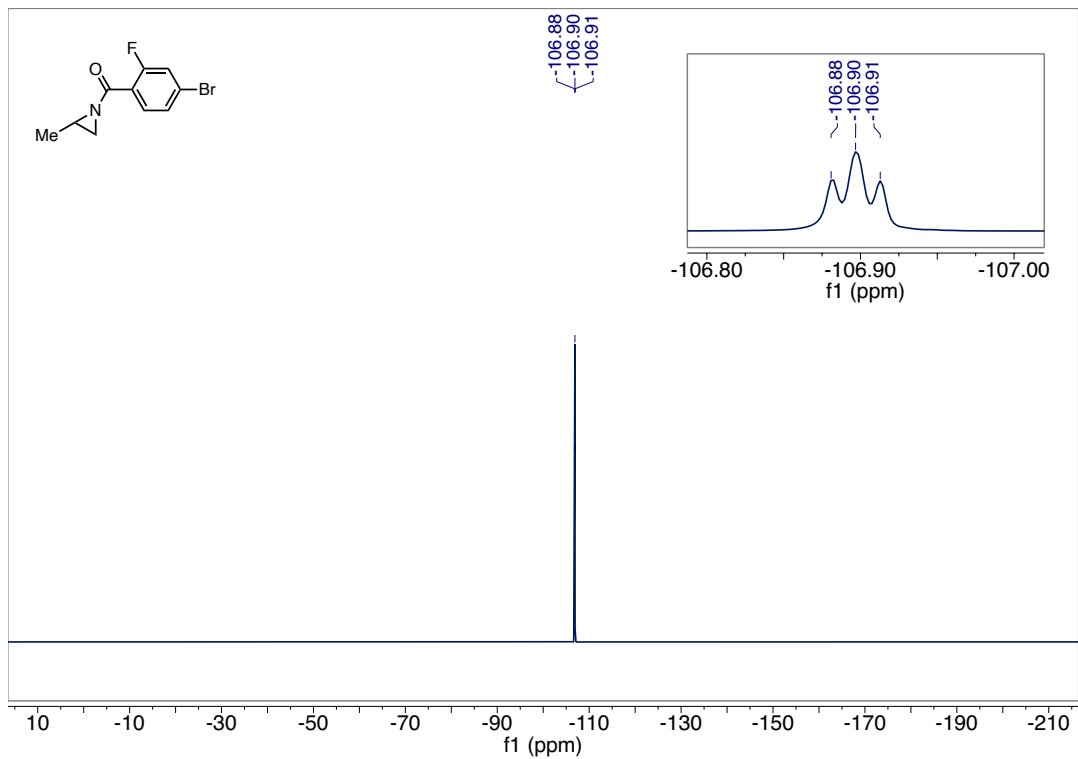
^1H NMR (600 MHz, CDCl_3) of (4-bromo-2-fluorophenyl)(2-methylaziridin-1-yl)methanone (16a):



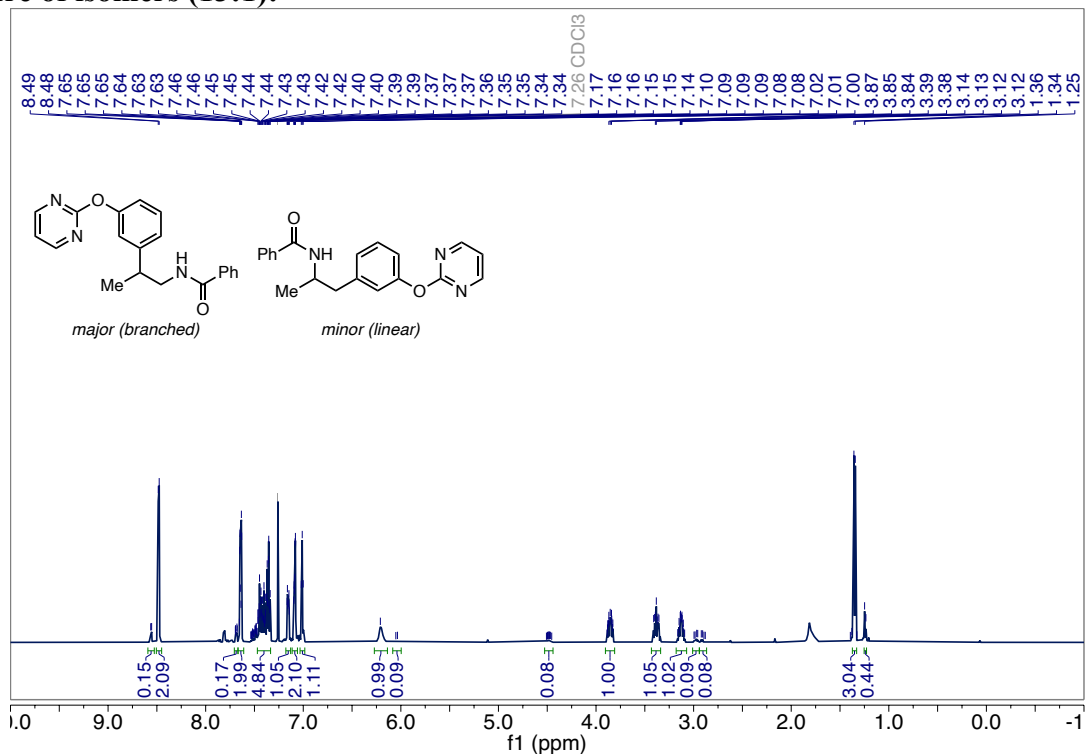
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of (4-bromo-2-fluorophenyl)(2-methylaziridin-1-yl)methanone (16a):



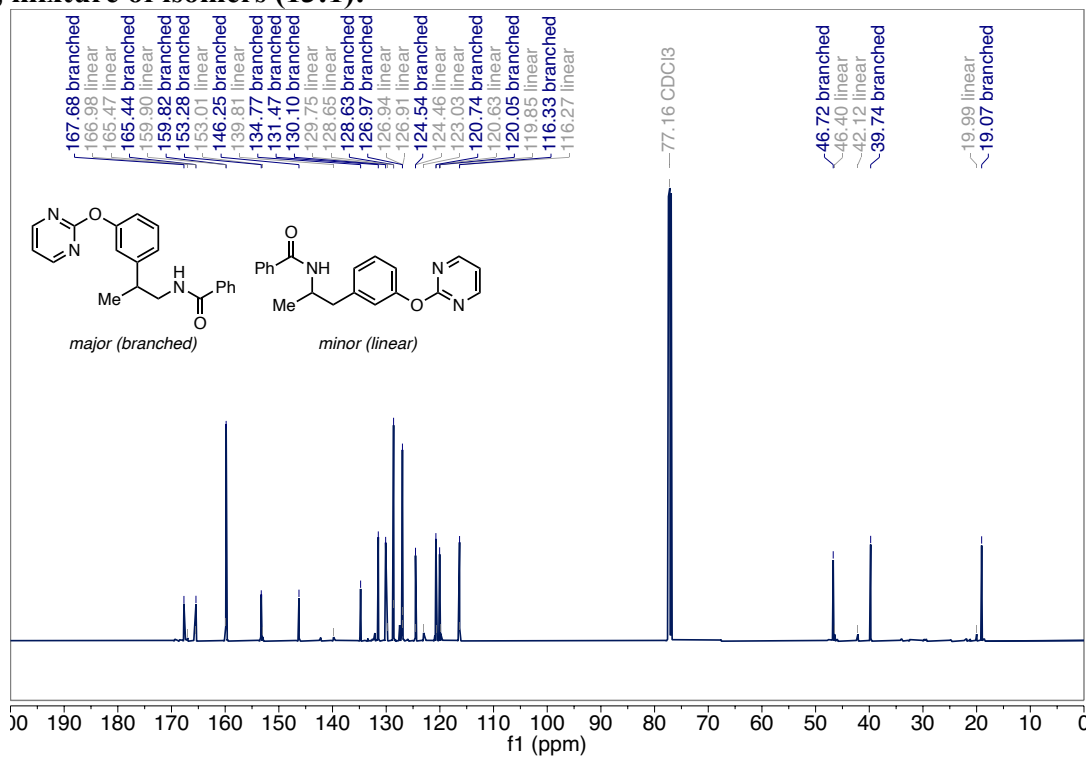
¹⁹F NMR (565 MHz, CDCl₃) of (4-bromo-2-fluorophenyl)(2-methylaziridin-1-yl)methanone (16a):



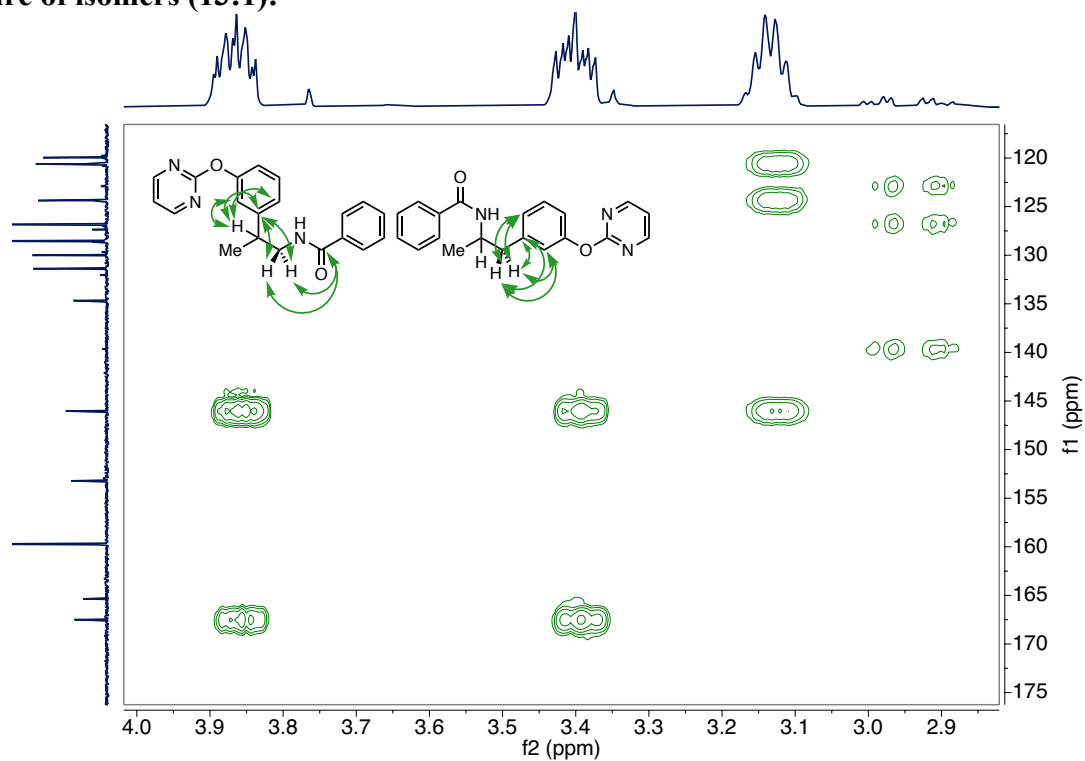
¹H NMR (500 MHz, CDCl₃) of *N*-(2-(4-(pyrimidin-2-yloxy)phenyl)propyl)benzamide (A-1), mixture of isomers (13:1):



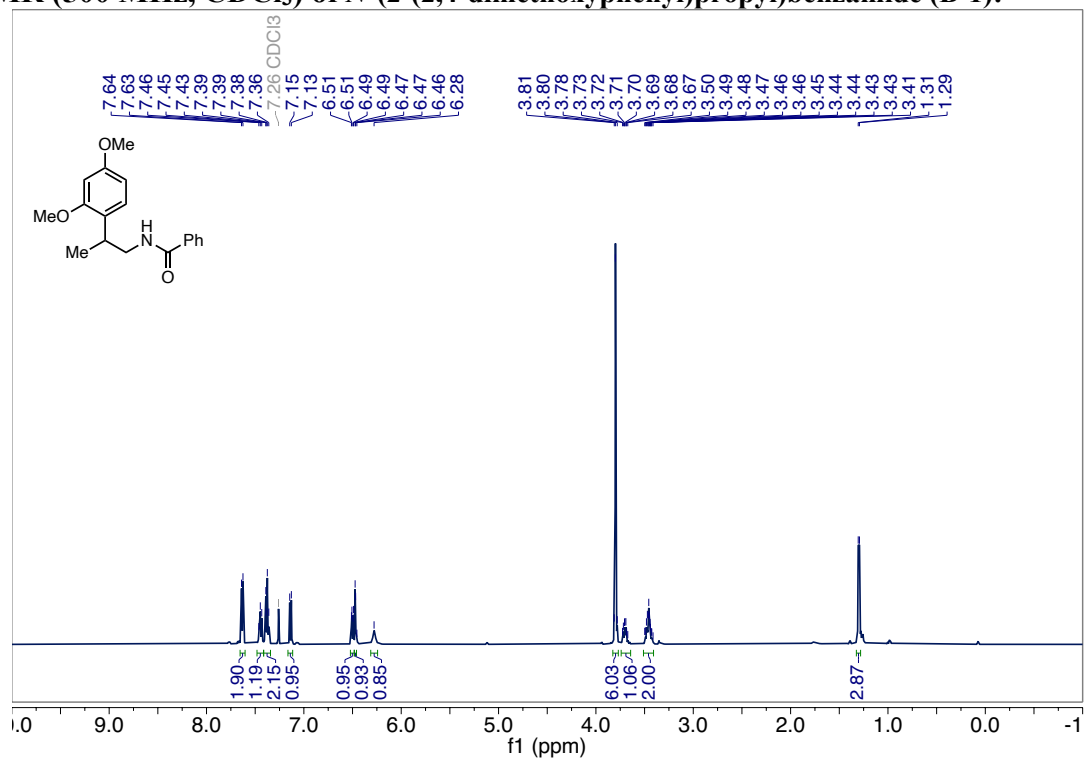
¹³C{¹H} NMR (126 MHz, CDCl₃) of *N*-(2-(4-(pyrimidin-2-yloxy)phenyl)propyl)benzamide (A-1), mixture of isomers (13:1):



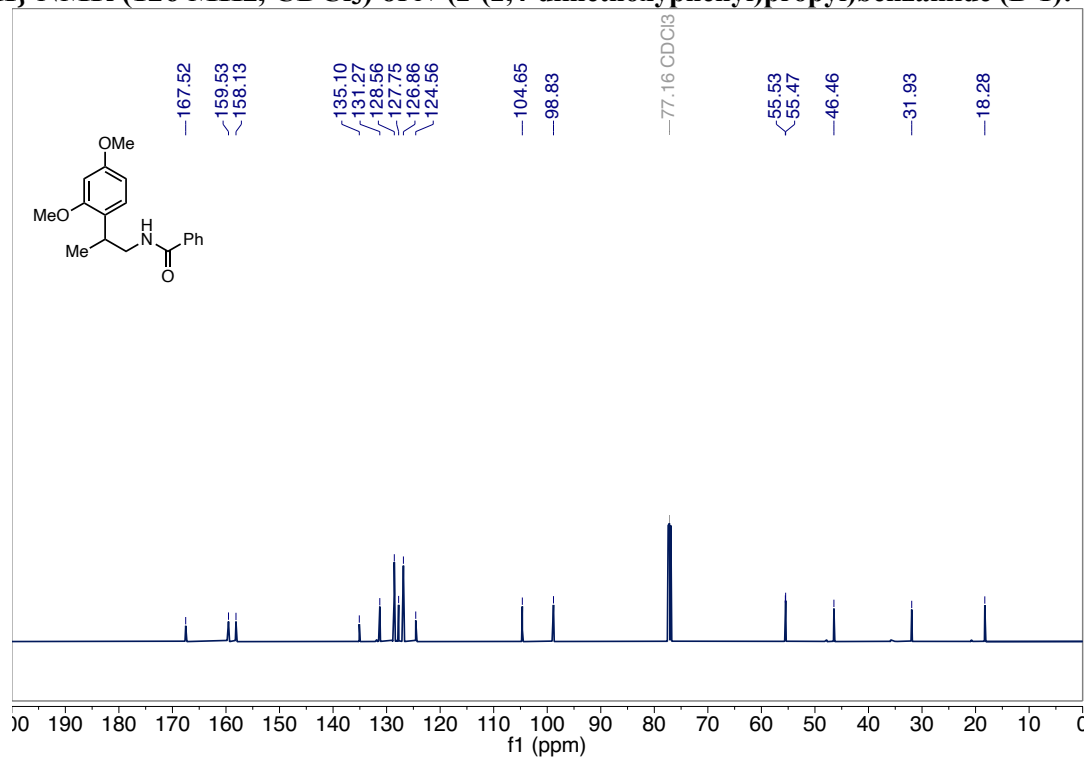
HMBC (500 MHz, CDCl₃) of *N*-(2-(4-(pyrimidin-2-yloxy)phenyl)propyl)benzamide (A-1), mixture of isomers (13:1):



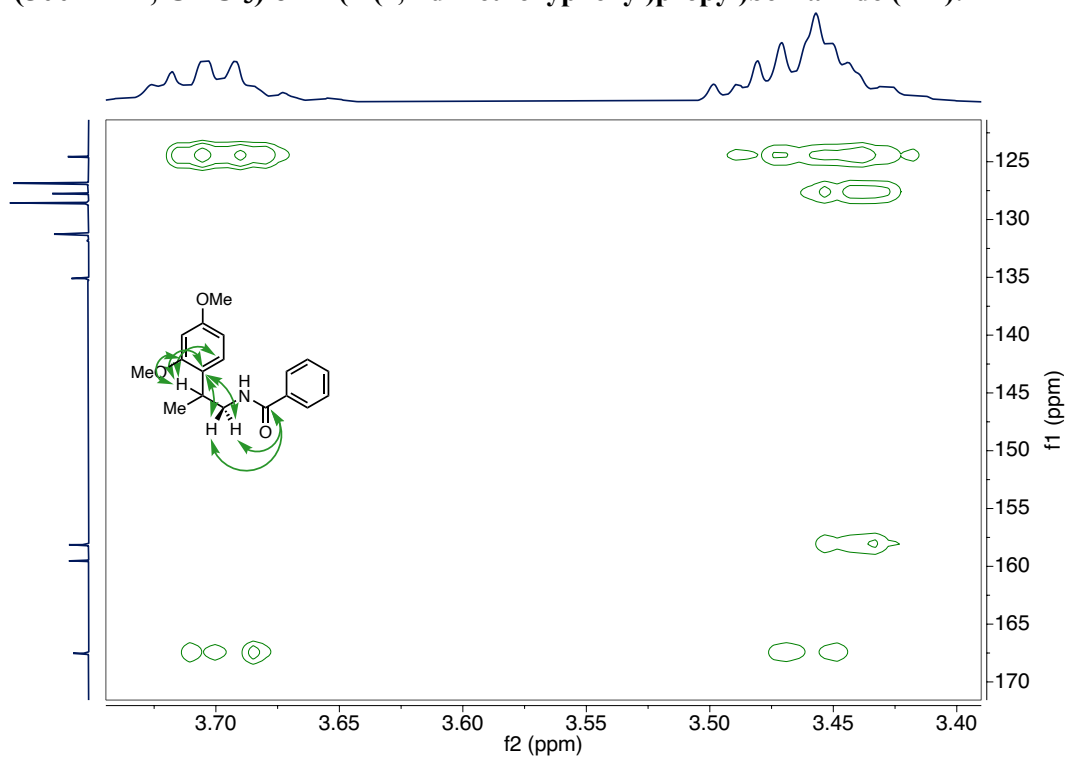
^1H NMR (500 MHz, CDCl_3) of *N*-(2-(2,4-dimethoxyphenyl)propyl)benzamide (B-1):



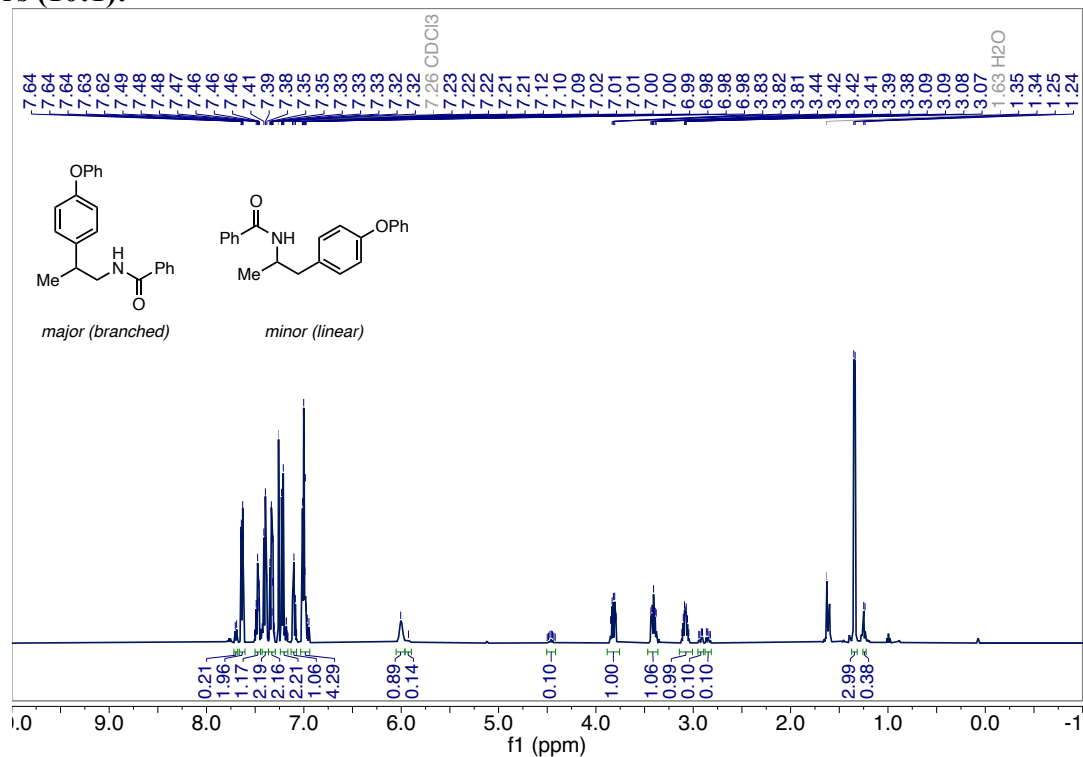
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-(2,4-dimethoxyphenyl)propyl)benzamide (B-1):



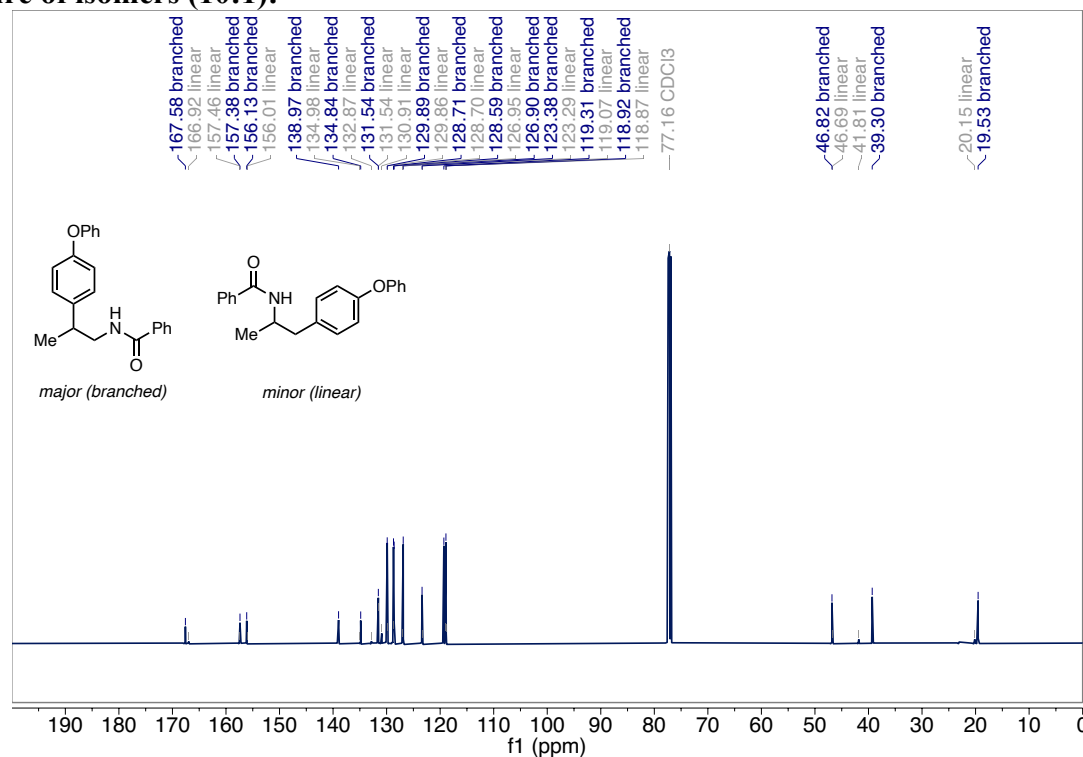
HMBC (500 MHz, CDCl₃) of *N*-(2-(2,4-dimethoxyphenyl)propyl)benzamide (B-1):



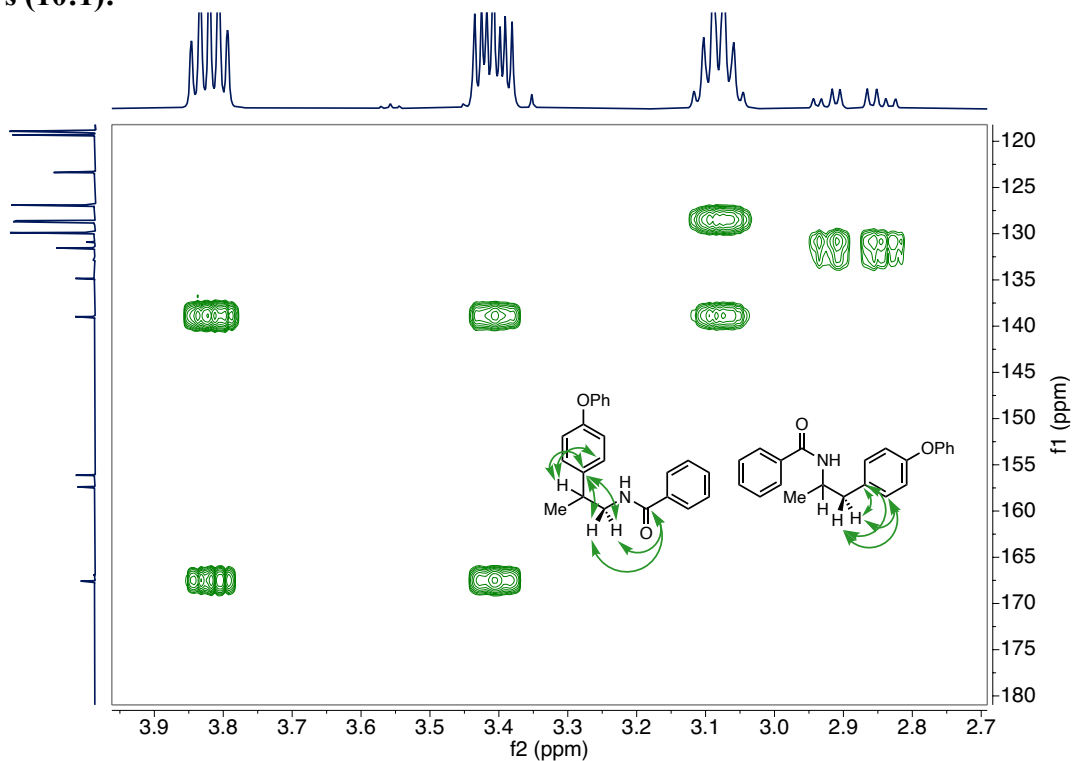
^1H NMR (500 MHz, CDCl_3) of *N*-(2-(4-phenoxyphenyl)propyl)benzamide (C-1), mixture of isomers (10:1):



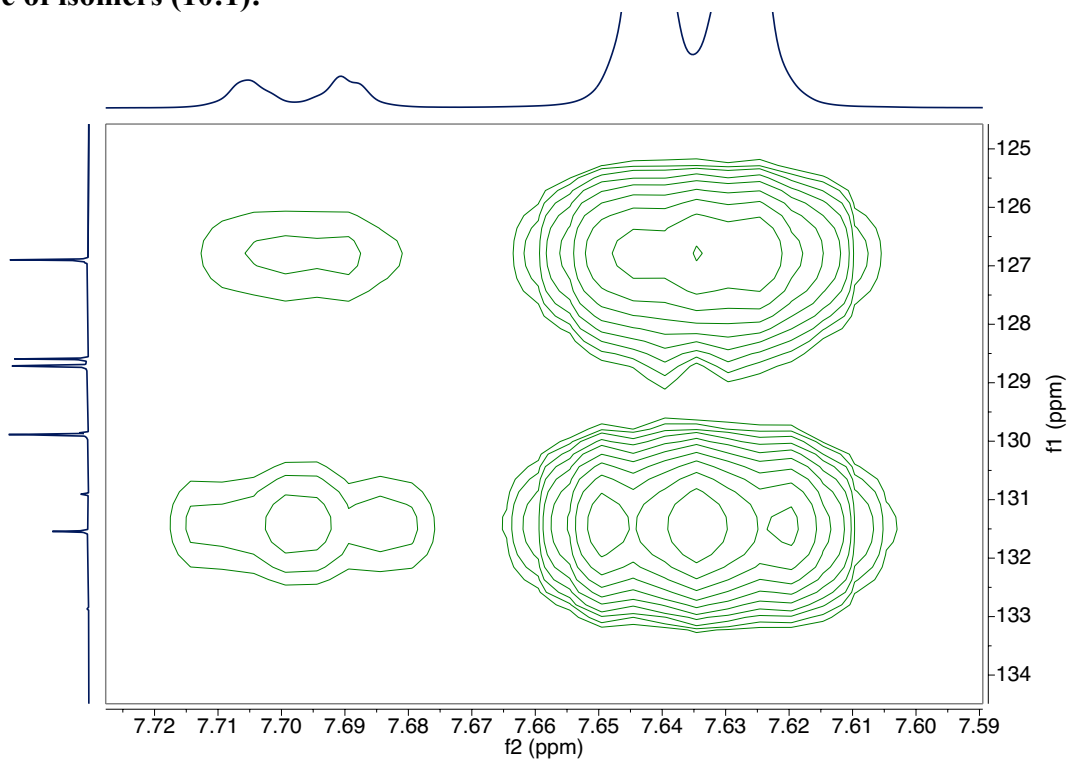
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-(4-phenoxyphenyl)propyl)benzamide (C-1), mixture of isomers (10:1):



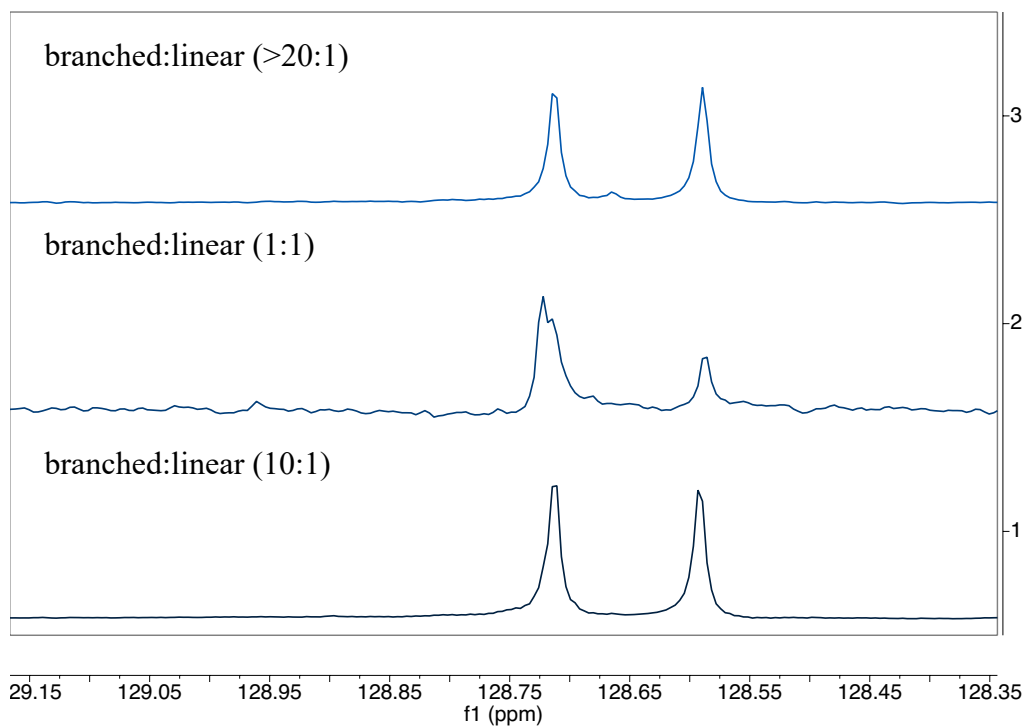
HMBC (500 MHz, CDCl₃) of *N*-(2-(4-phenoxyphenyl)propyl)benzamide (C-1), mixture of isomers (10:1):



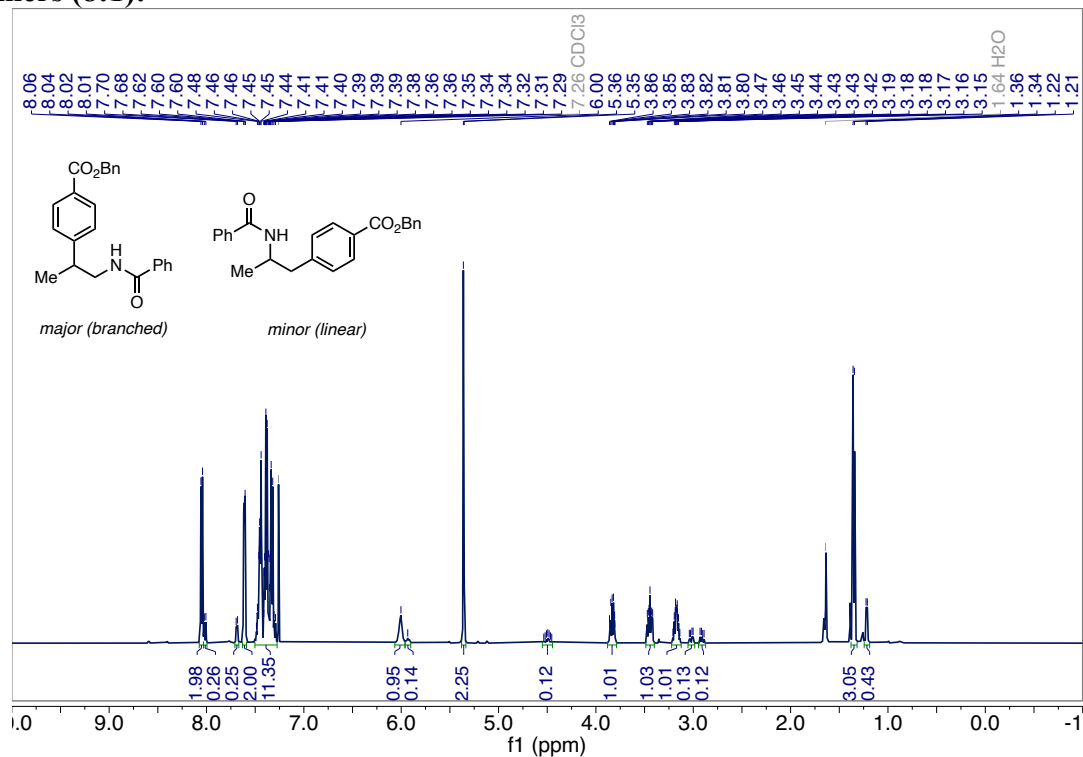
HMBC (500 MHz, CDCl₃) of *N*-(2-(4-phenoxyphenyl)propyl)benzamide (C-1) to demonstrate two carbons contributing to the signals at δ 131.5 and 126.9 in ¹³C{¹H} NMR, mixture of isomers (10:1):



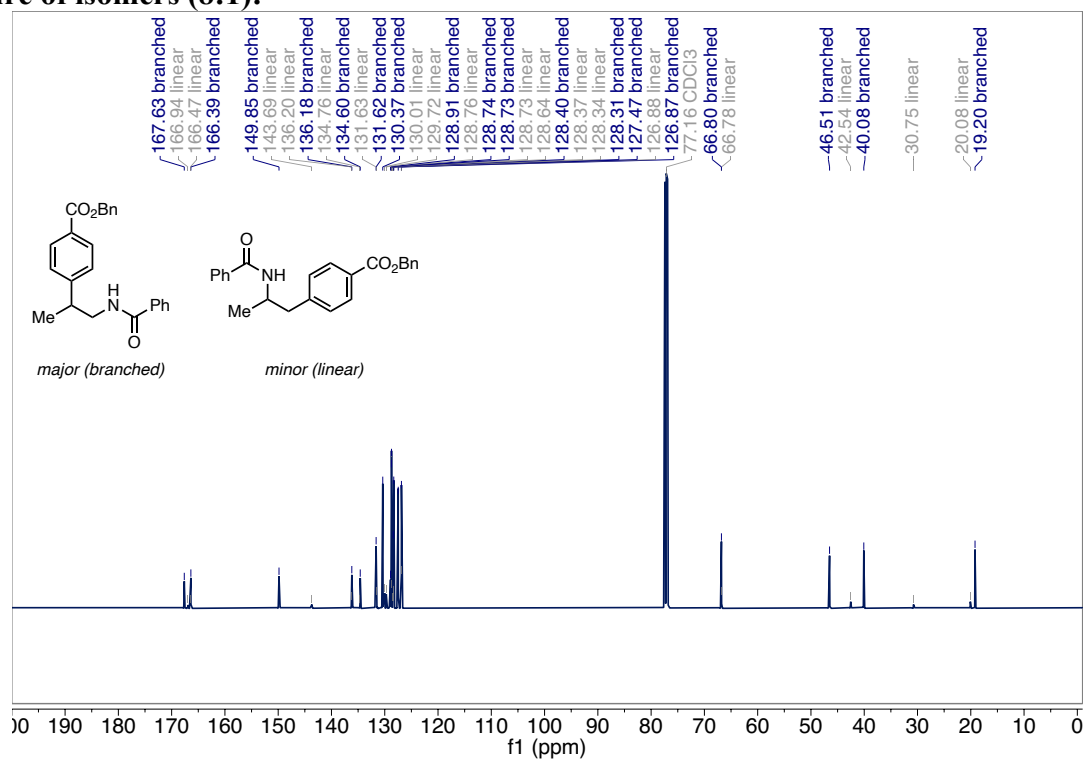
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-(4-phenoxyphenyl)propyl)benzamide (C-1) identifying overlapping peaks at δ 128.7:



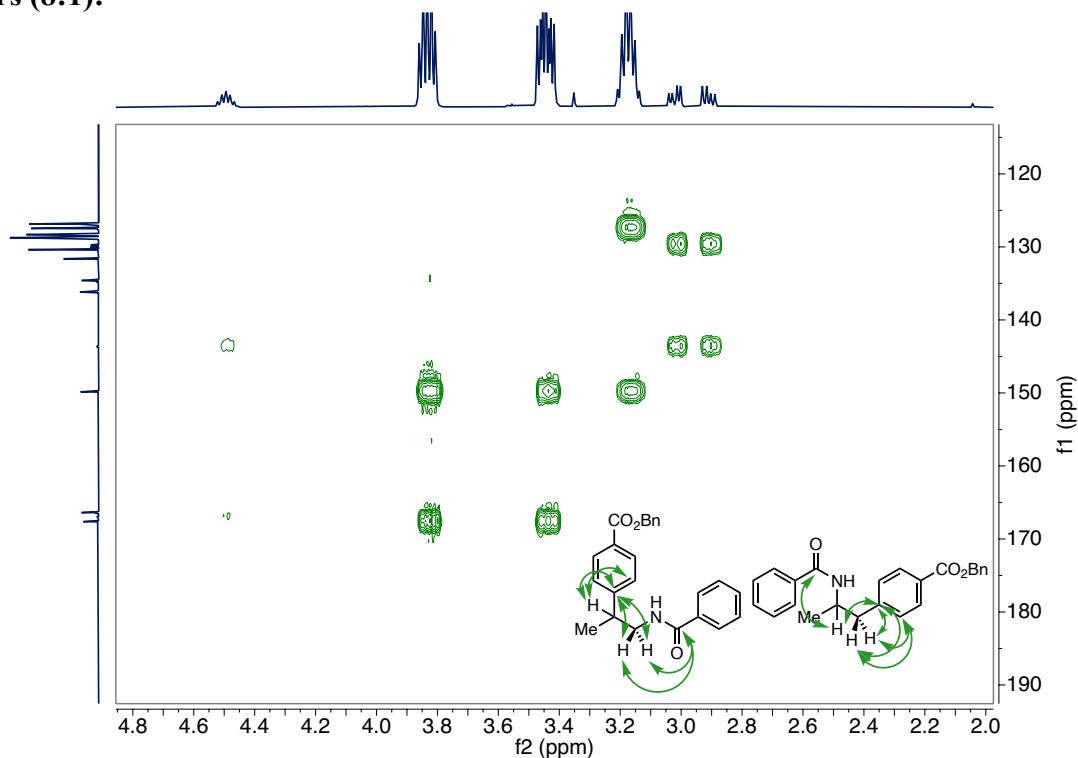
^1H NMR (500 MHz, CDCl_3) of Benzyl 4-(1-benzamidopropan-2-yl)benzoate (D-1), mixture of isomers (8:1):



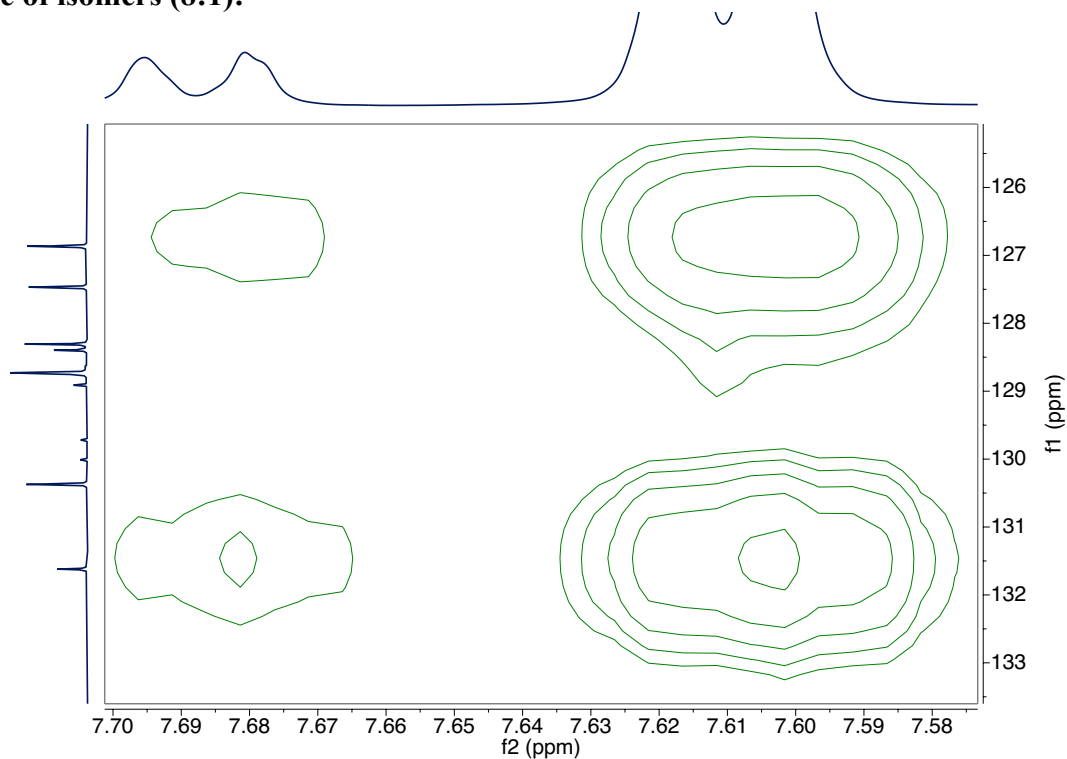
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of Benzyl 4-(1-benzamidopropan-2-yl)benzoate (D-1), mixture of isomers (8:1):



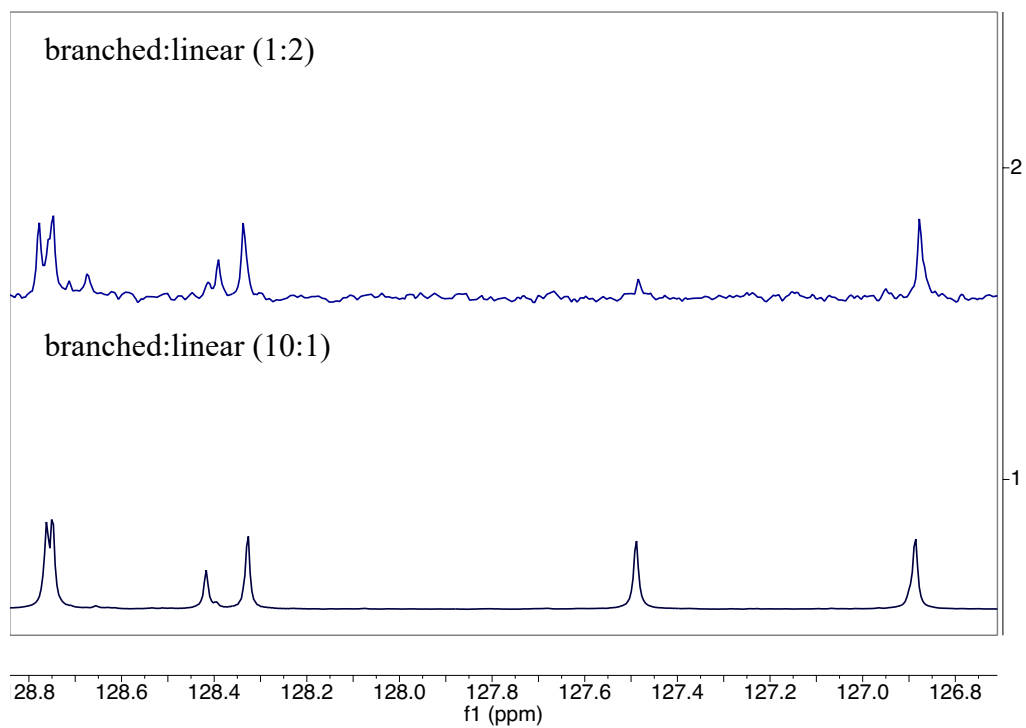
HMBC (500 MHz, CDCl₃) of Benzyl 4-(1-benzamidopropan-2-yl)benzoate (D-1), mixture of isomers (8:1):



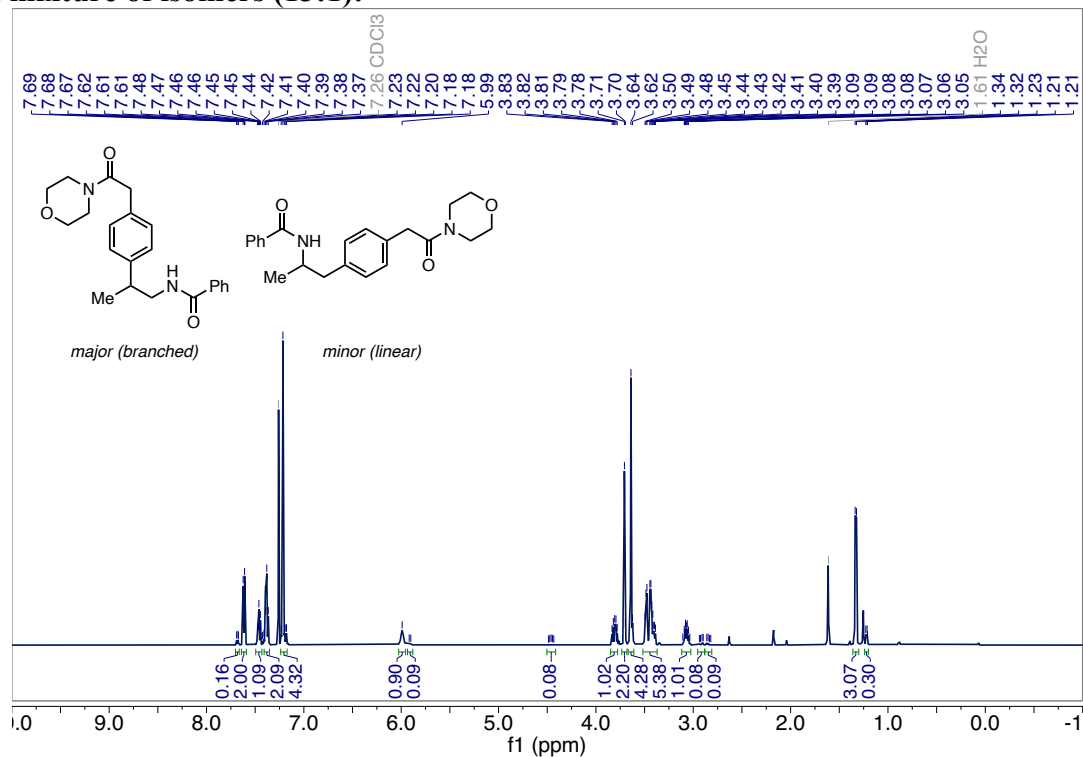
HMBC (500 MHz, CDCl₃) of Benzyl 4-(1-benzamidopropan-2-yl)benzoate (D-1) to demonstrate two carbons contributing to the signals at δ 131.62 and 126.87 in ¹³C{¹H} NMR, mixture of isomers (8:1):



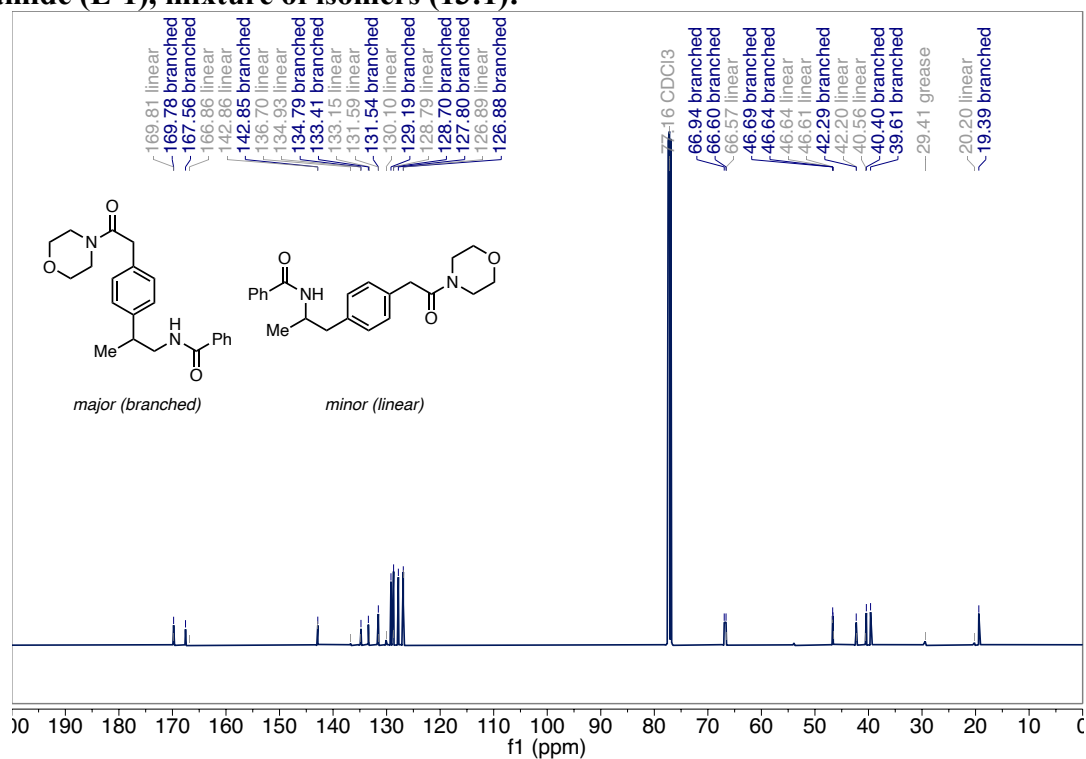
**$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of Benzyl 4-(1-benzamidopropan-2-yl)benzoate (D-1)
identifying overlapping peaks at δ 128.76, 128.73, and 128.34:**



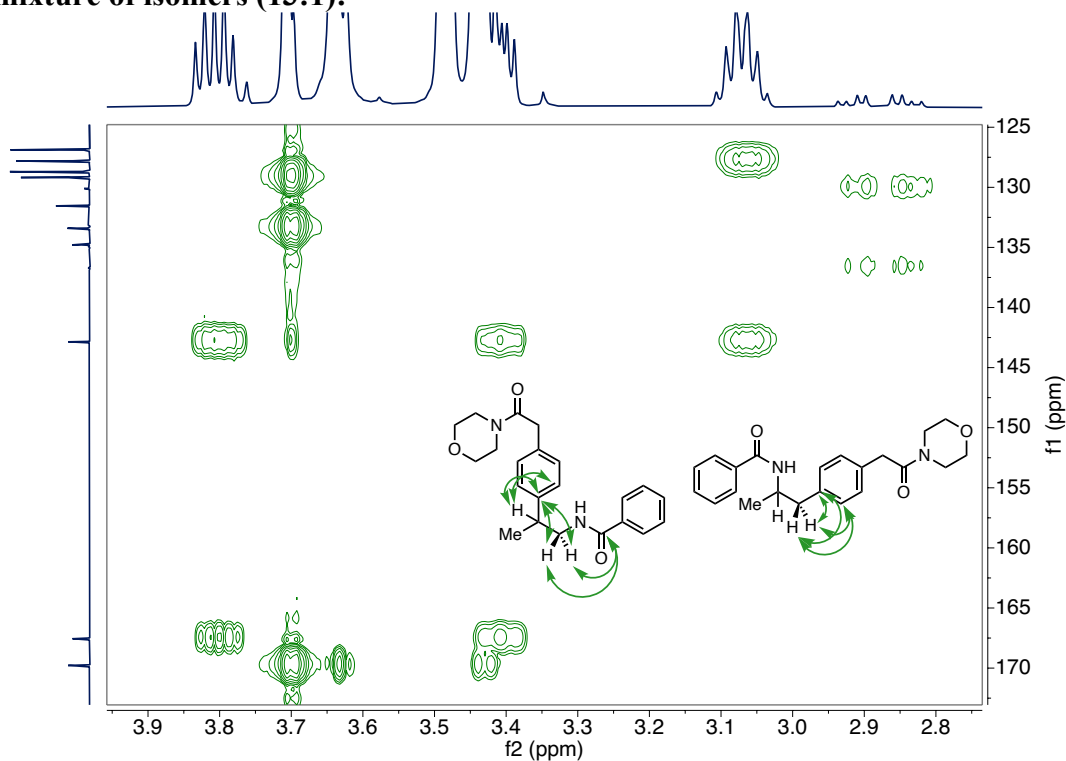
^1H NMR (500 MHz, CDCl_3) of *N*-(2-(4-(2-morpholino-2-oxoethyl)phenyl)propyl)benzamide (E-1), mixture of isomers (13:1):



$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-(4-(2-morpholino-2-oxoethyl)phenyl)propyl)benzamide (E-1), mixture of isomers (13:1):

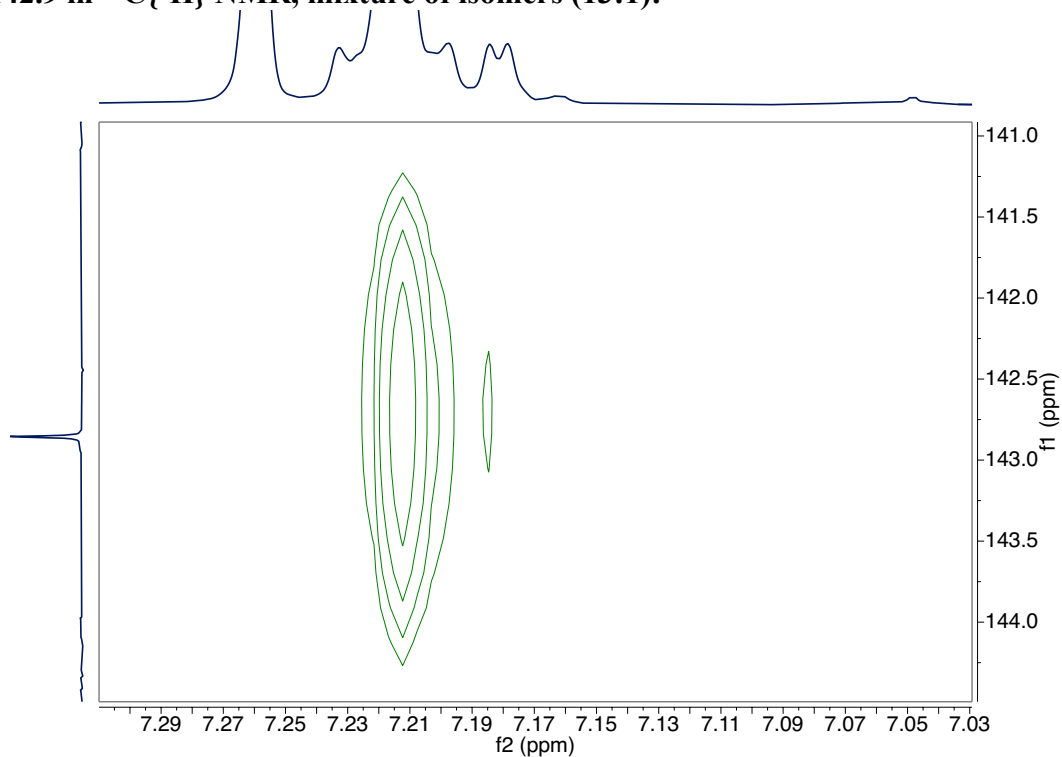


HMBC (500 MHz, CDCl₃) of *N*-(2-(4-(2-morpholino-2-oxoethyl)phenyl)propyl)benzamide (E-1), mixture of isomers (13:1):

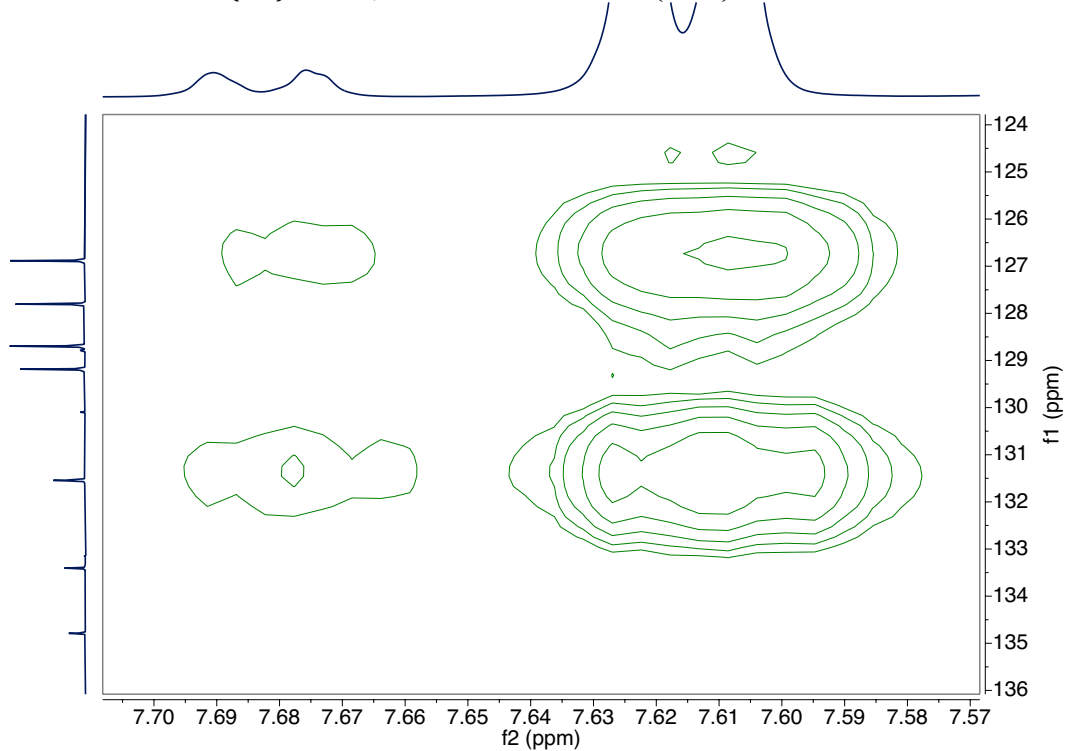


Only correlations necessary to establish branched/linear connectivity are identified.

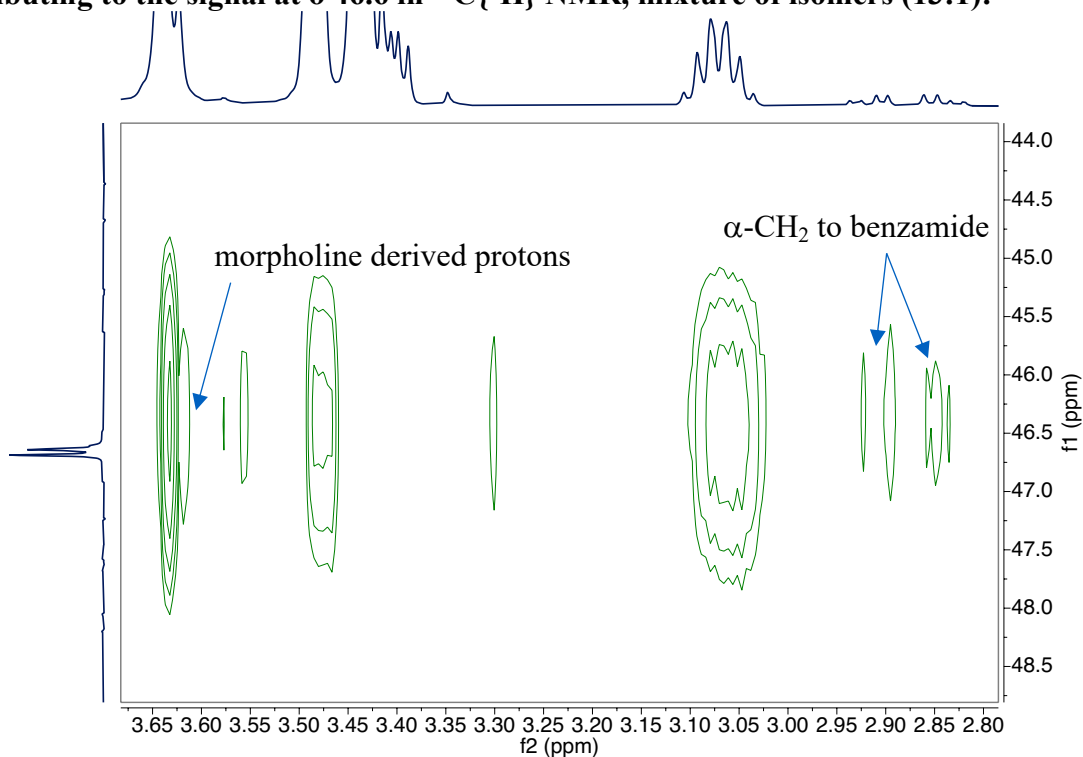
HMBC (500 MHz, CDCl₃) of E-1 to demonstrate two carbons contributing to the signal at δ 142.9 in ¹³C{¹H} NMR, mixture of isomers (13:1):



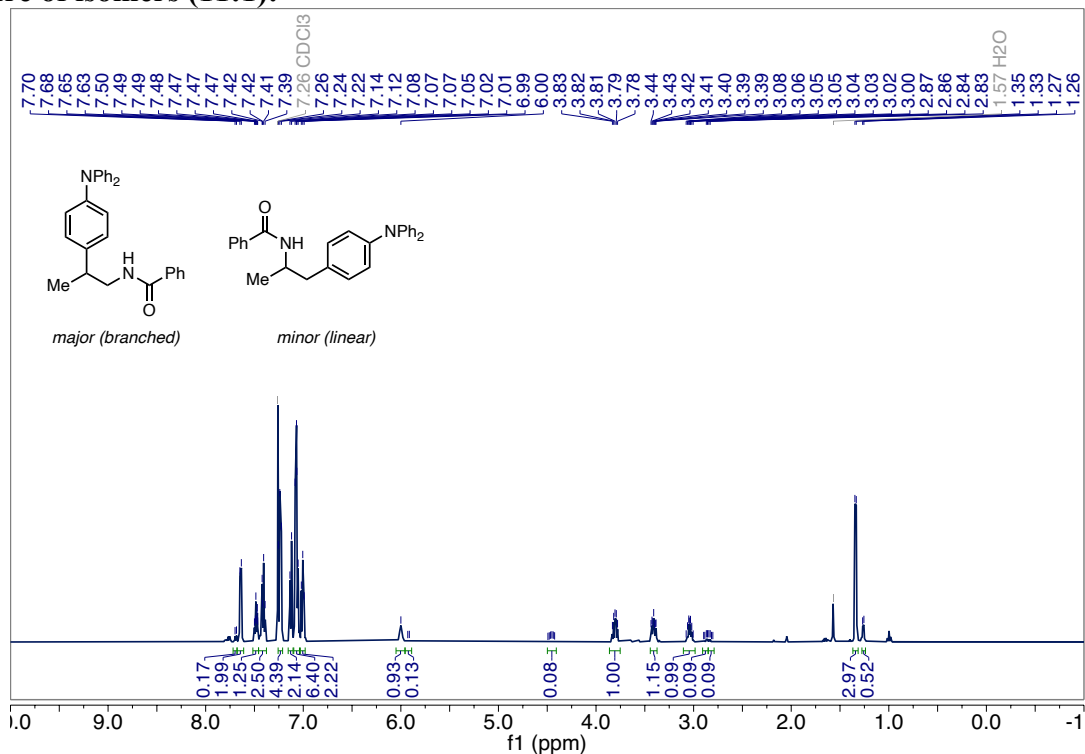
HMBC (500 MHz, CDCl₃) of E-1 to demonstrate two carbons contributing to the signals at δ 131.5 and 126.9 in ¹³C{¹H} NMR, mixture of isomers (13:1):



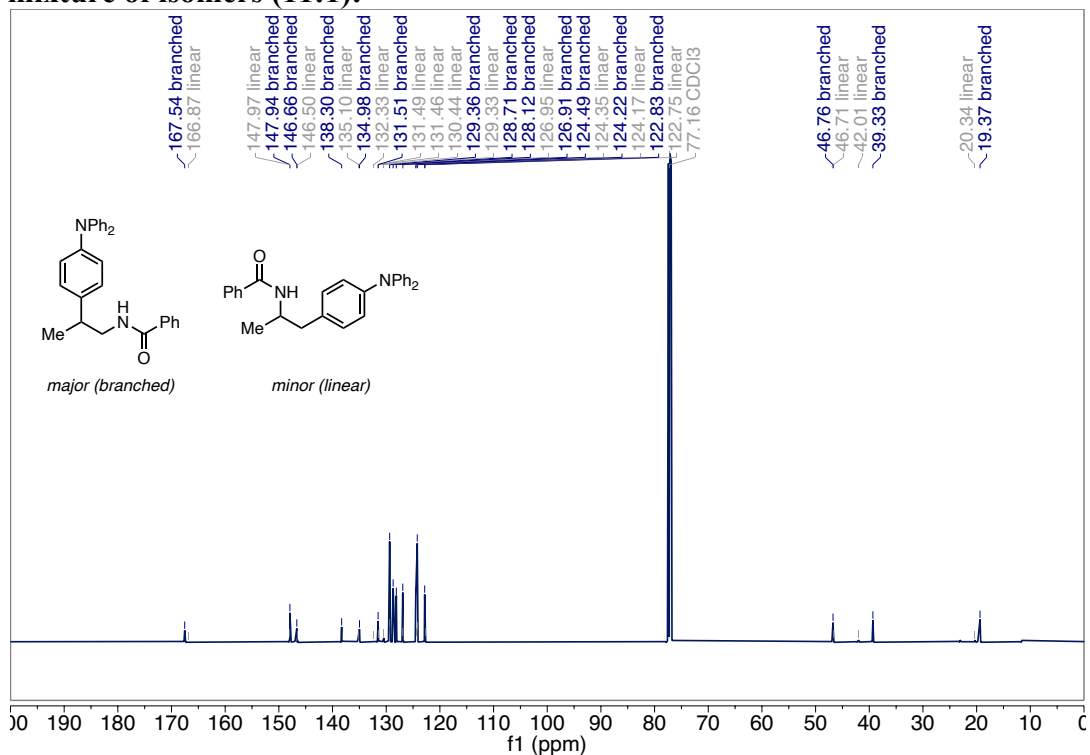
HMBC (500 MHz, CDCl₃) of E-1 to demonstrate two carbons from the linear isomer contributing to the signal at δ 46.6 in ¹³C{¹H} NMR, mixture of isomers (13:1):



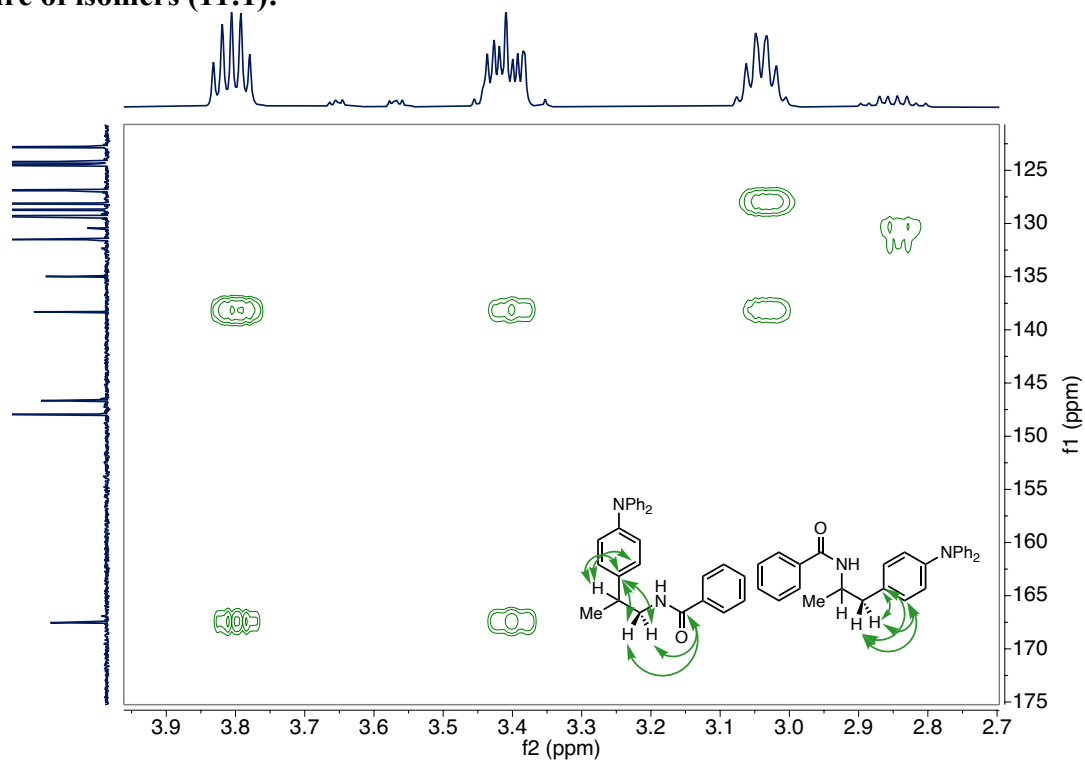
^1H NMR (500 MHz, CDCl_3) of *N*-(2-(4-(diphenylamino)phenyl)propyl)benzamide (F-1), mixture of isomers (11:1):



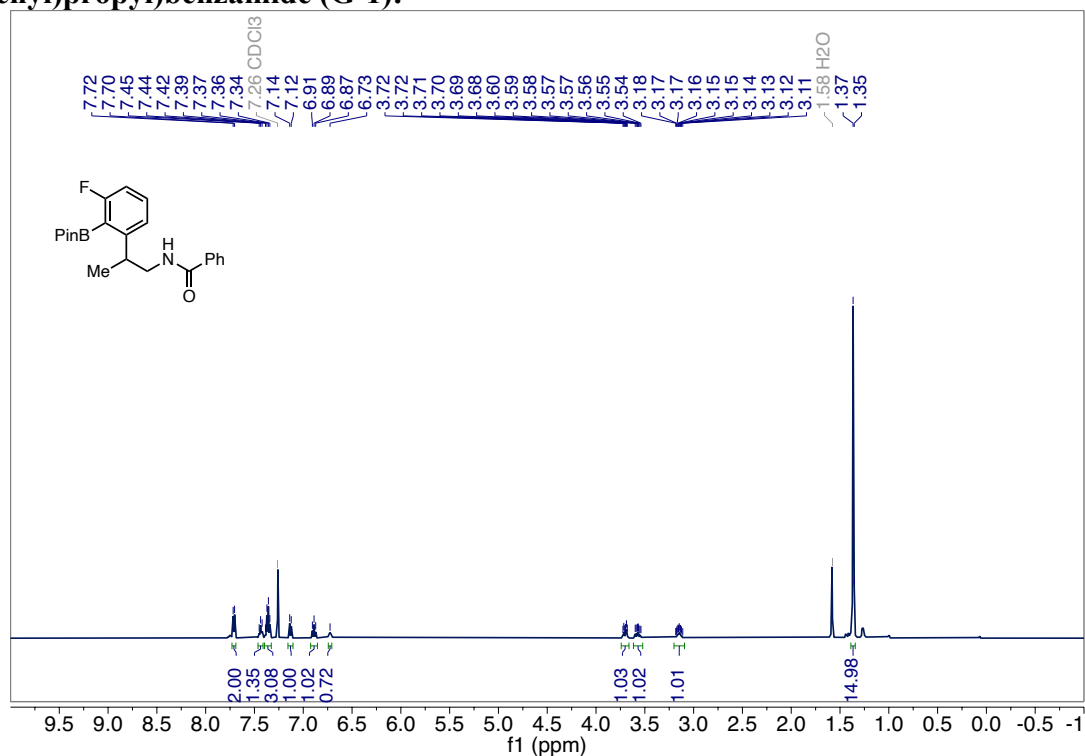
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-(4-(diphenylamino)phenyl)propyl)benzamide (F-1), mixture of isomers (11:1):



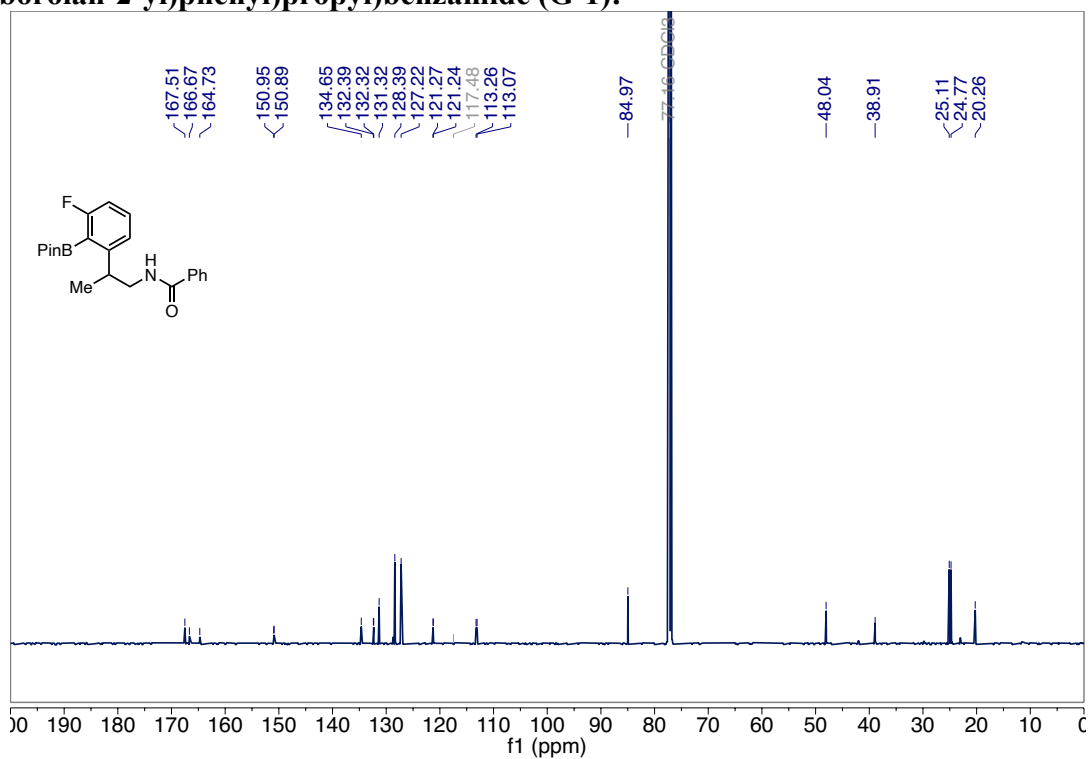
HMBC (500 MHz, CDCl₃) of *N*-(2-(4-(diphenylamino)phenyl)propyl)benzamide (F-1), mixture of isomers (11:1):



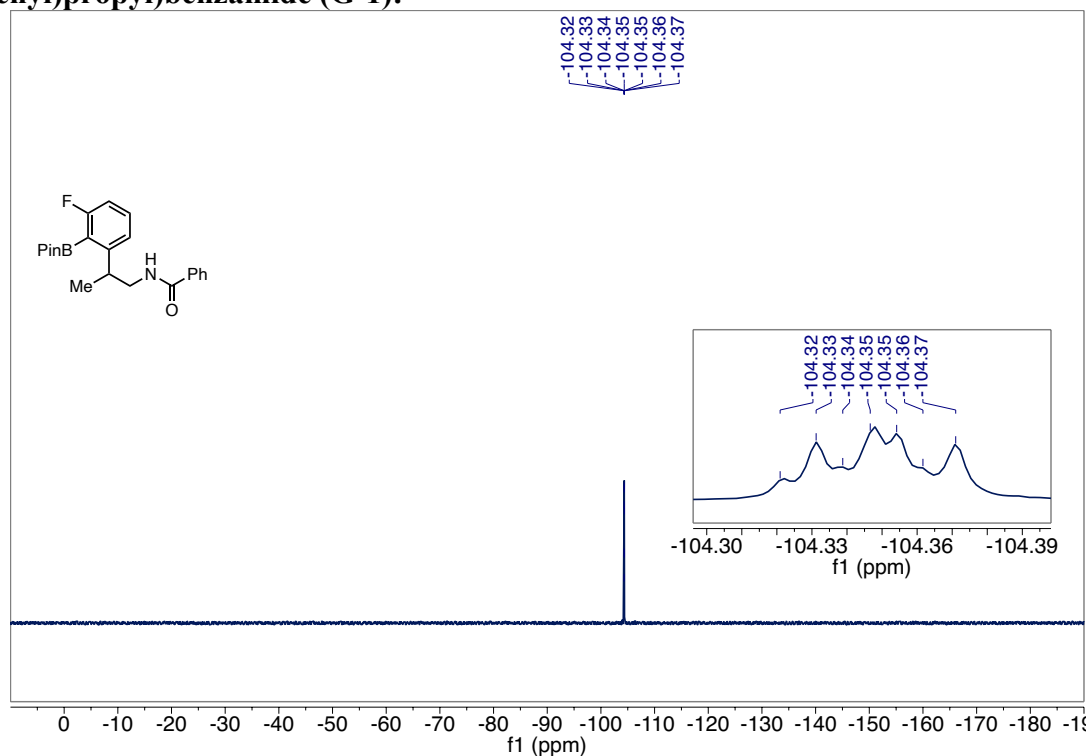
^1H NMR (500 MHz, CDCl_3) of *N*-(2-(3-fluoro-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)propyl)benzamide (G-1):



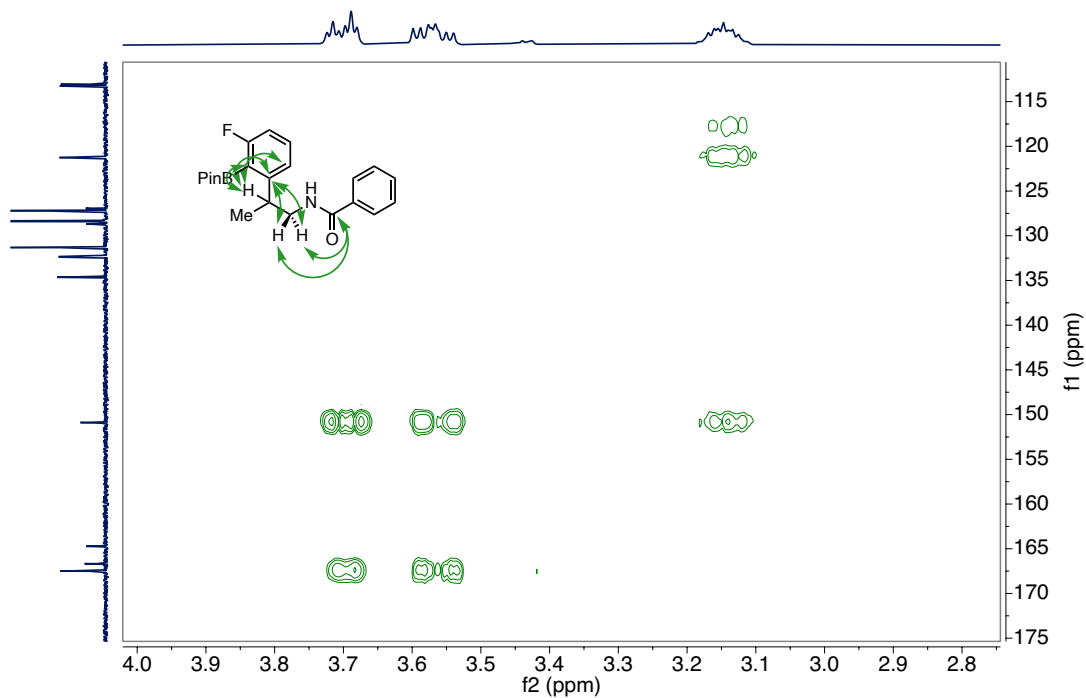
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-(3-fluoro-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)propyl)benzamide (G-1):



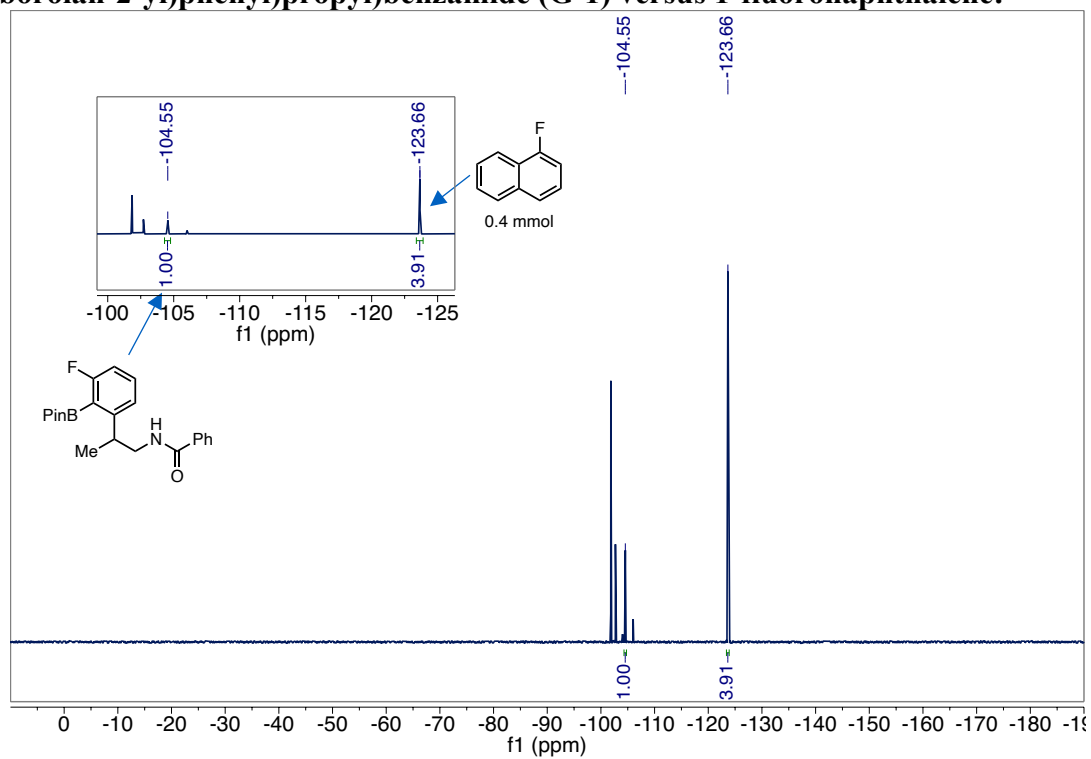
^{19}F NMR (376 MHz, CDCl_3) of *N*-(2-(3-fluoro-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)propyl)benzamide (G-1):



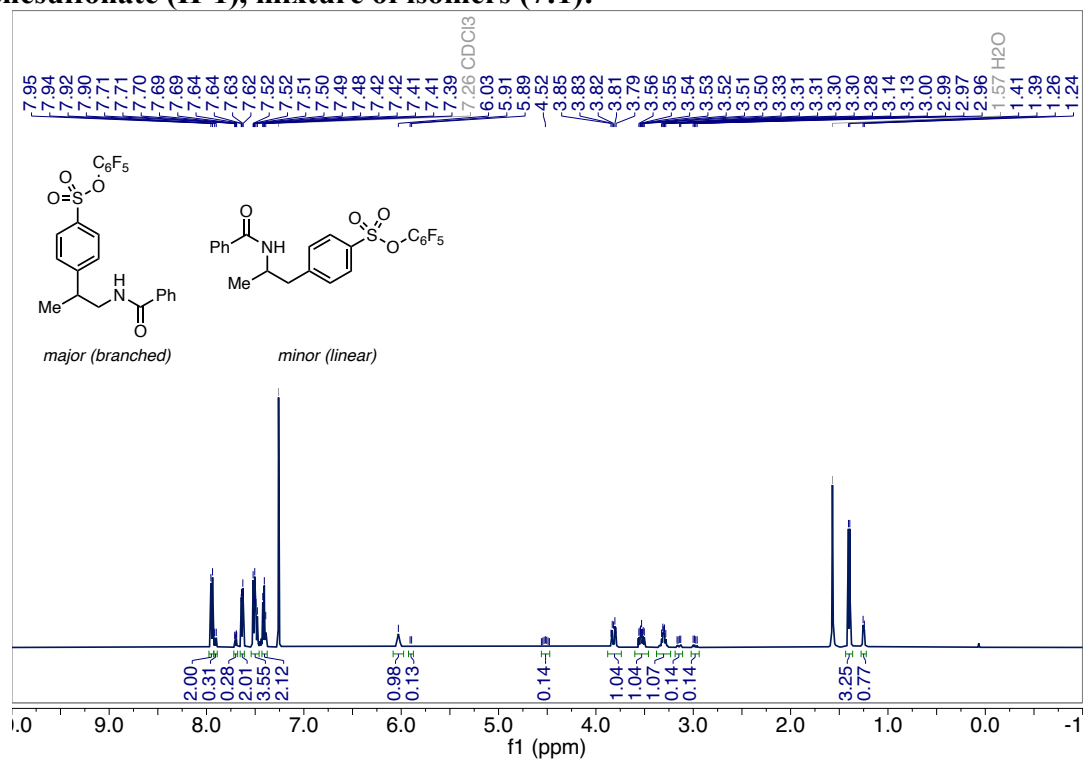
HMBC (500 MHz, CDCl_3) of *N*-(2-(3-fluoro-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)propyl)benzamide (G-1):



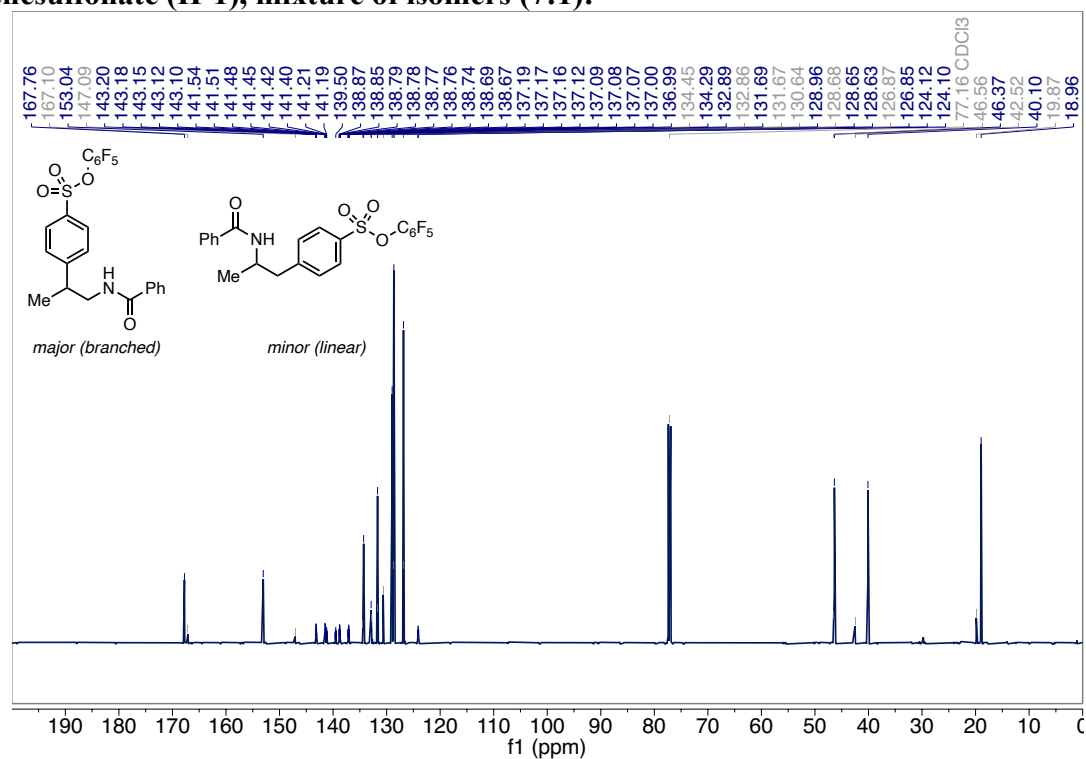
$^{19}\text{F}\{^1\text{H}\}$ NMR (376 MHz, CDCl_3) yield of *N*-(2-(3-fluoro-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)propyl)benzamide (G-1) versus 1-fluoronaphthalene:



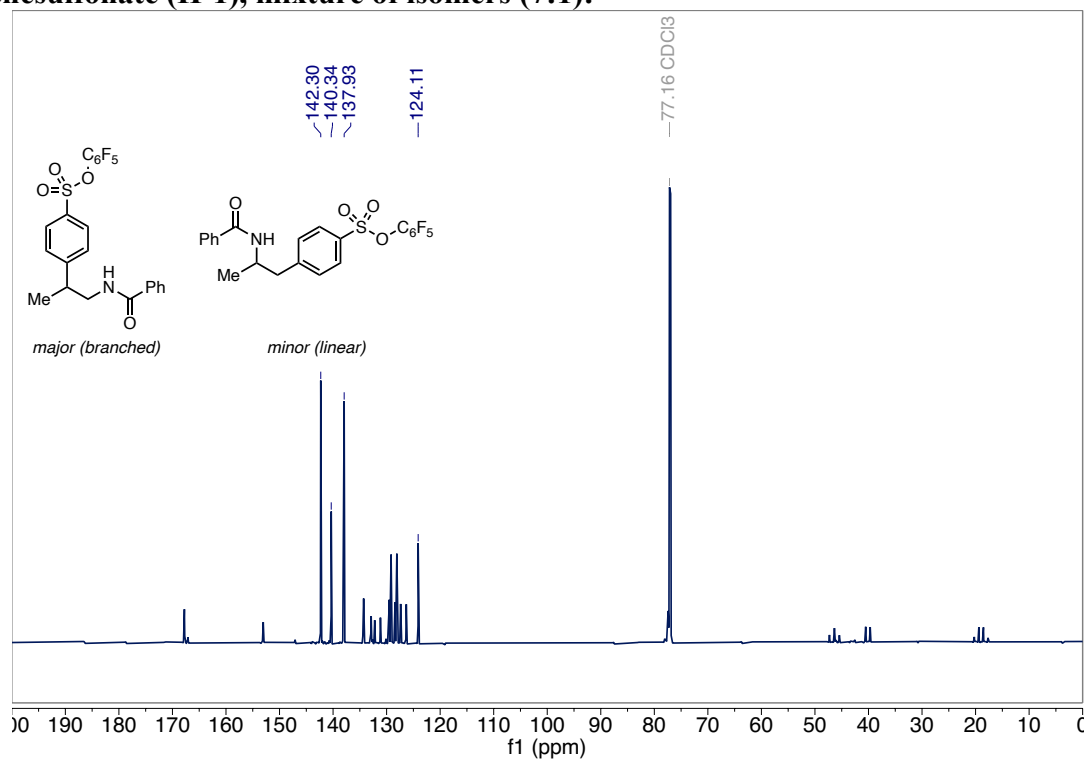
^1H NMR (500 MHz, CDCl_3) of perfluorophenyl 4-(1-benzamidopropan-2-yl) benzenesulfonate (H-1), mixture of isomers (7:1):



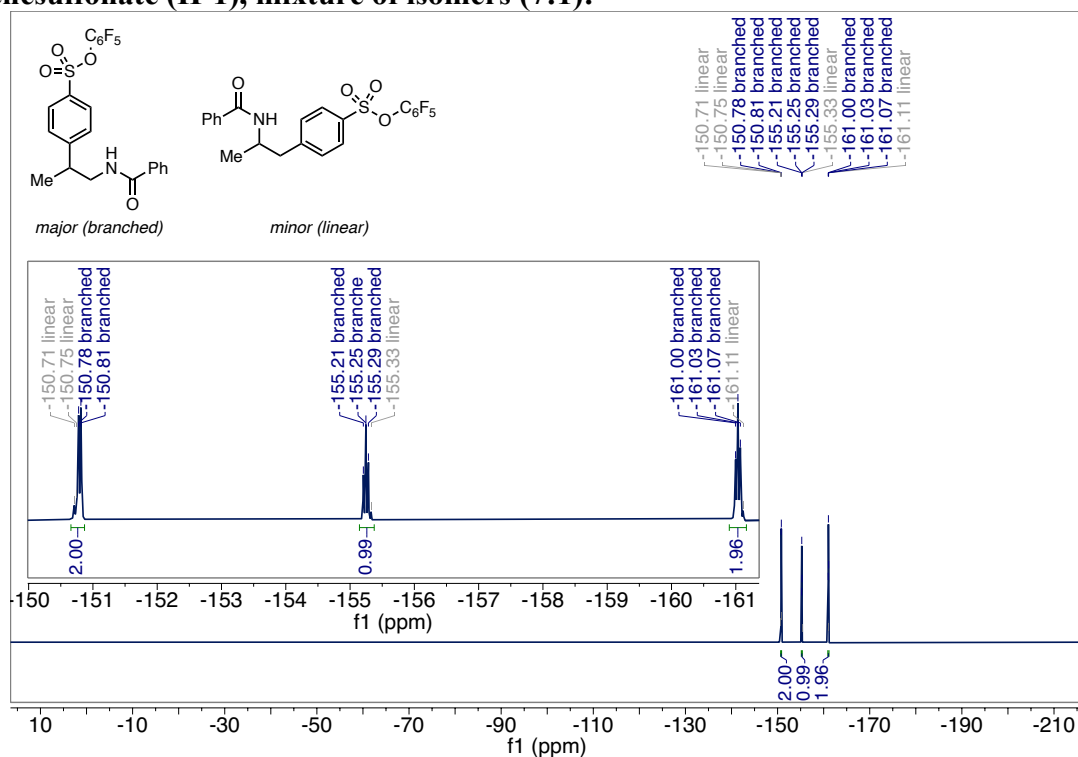
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of perfluorophenyl 4-(1-benzamidopropan-2-yl) benzenesulfonate (H-1), mixture of isomers (7:1):



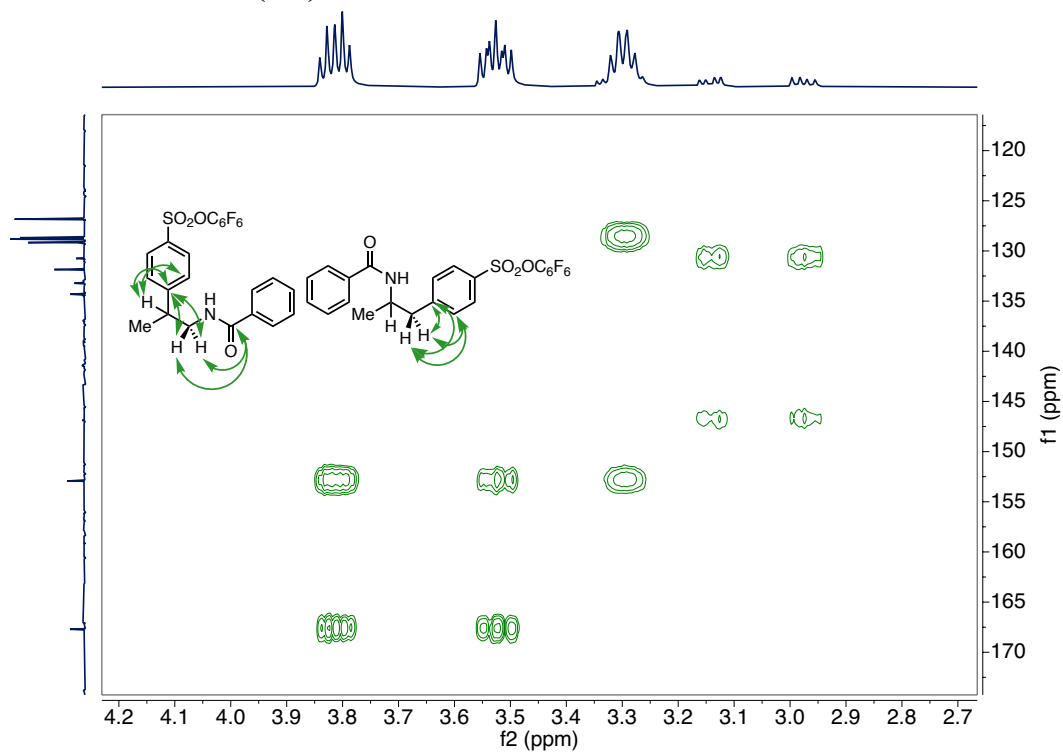
$^{13}\text{C}\{^{19}\text{F}\}$ NMR (151 MHz, CDCl_3) of perfluorophenyl 4-(1-benzamidopropan-2-yl) benzenesulfonate (H-1), mixture of isomers (7:1):



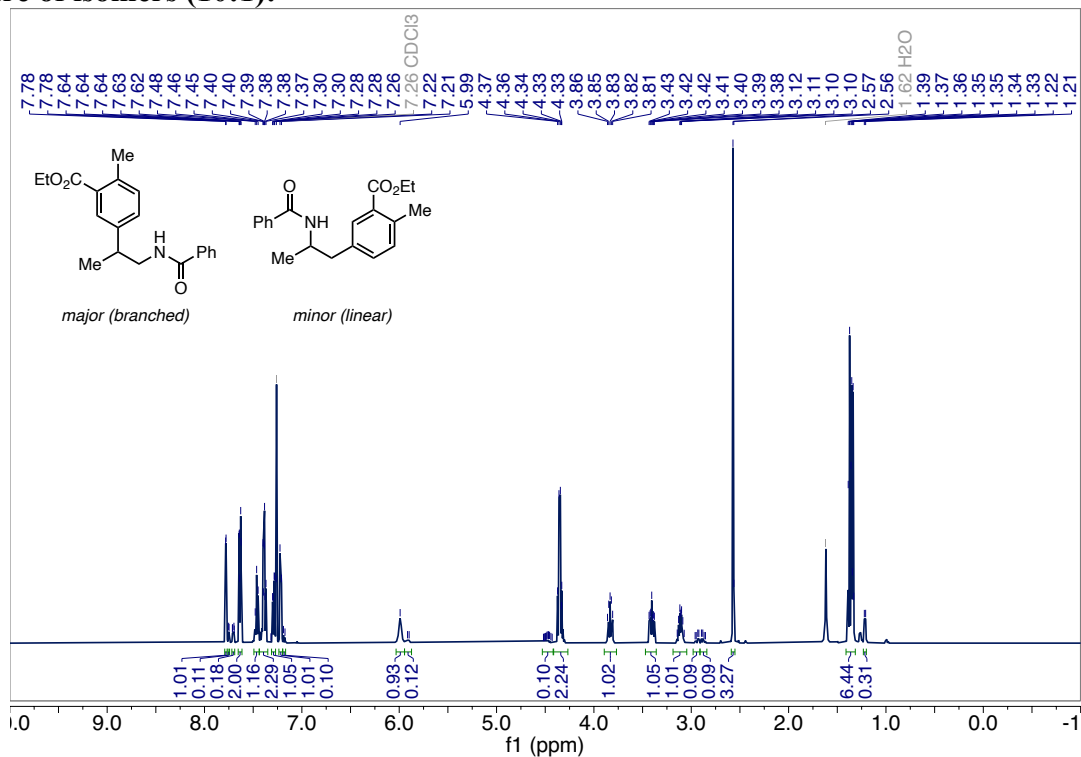
^{19}F NMR (565 MHz, CDCl_3) of perfluorophenyl 4-(1-benzamidopropan-2-yl) benzenesulfonate (H-1), mixture of isomers (7:1):



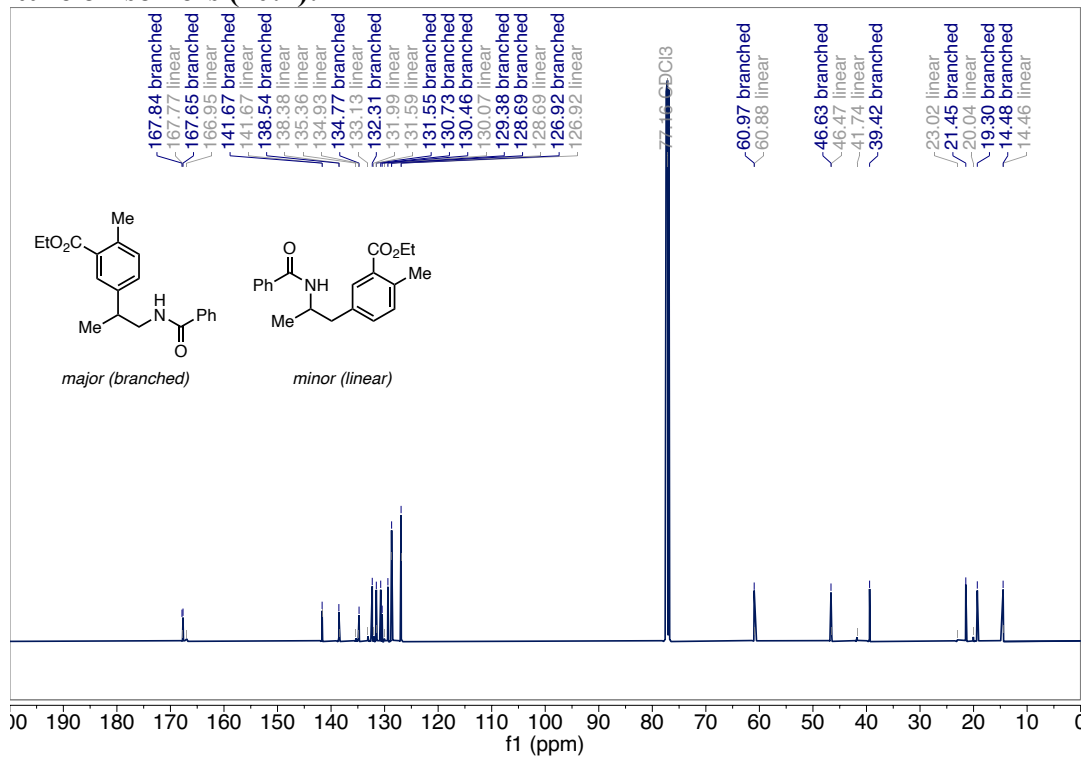
HMBC (500 MHz, CDCl₃) of perfluorophenyl 4-(1-benzamidopropan-2-yl)benzenesulfonate (H-1), mixture of isomers (7:1):



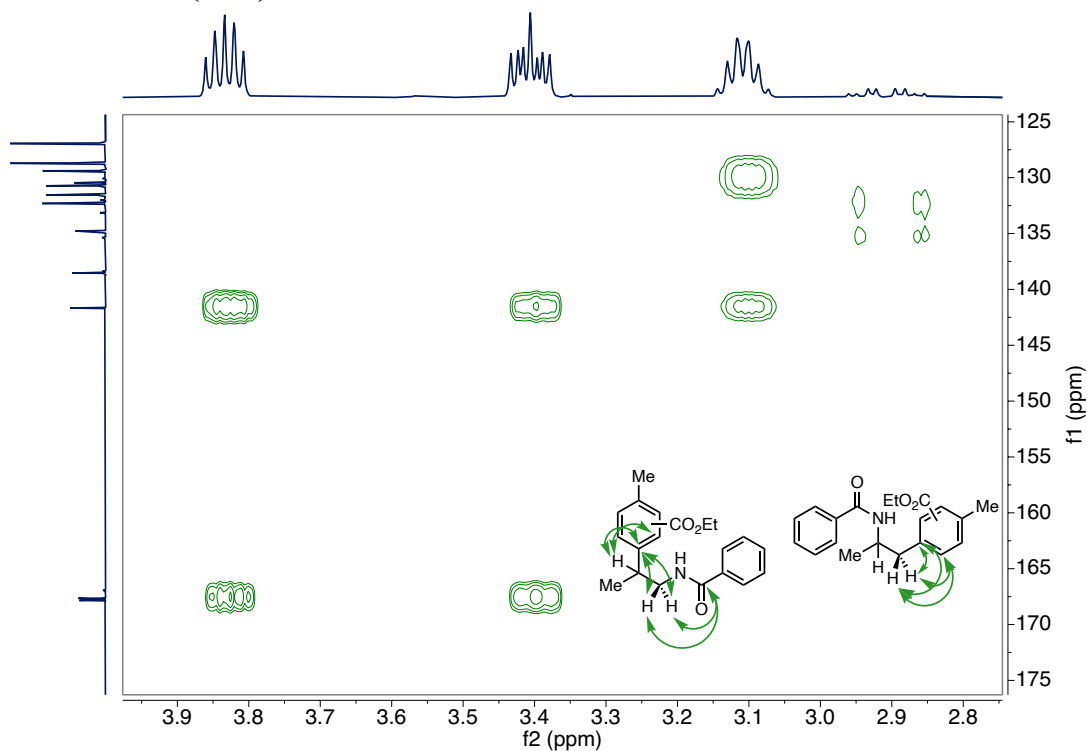
¹H NMR (500 MHz, CDCl₃) of ethyl 5-(1-benzamidopropan-2-yl)-2-methylbenzoate (I-1), mixture of isomers (10:1):



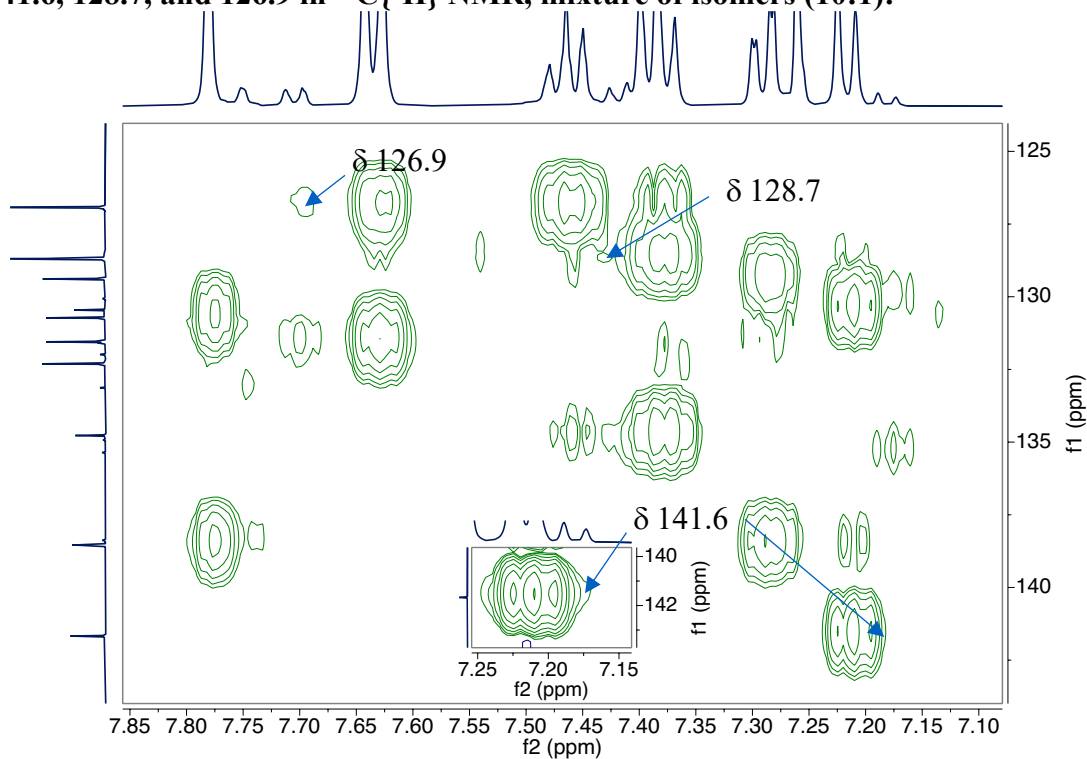
¹³C{¹H} NMR (126 MHz, CDCl₃) of ethyl 5-(1-benzamidopropan-2-yl)-2-methylbenzoate (I-1), mixture of isomers (10:1):



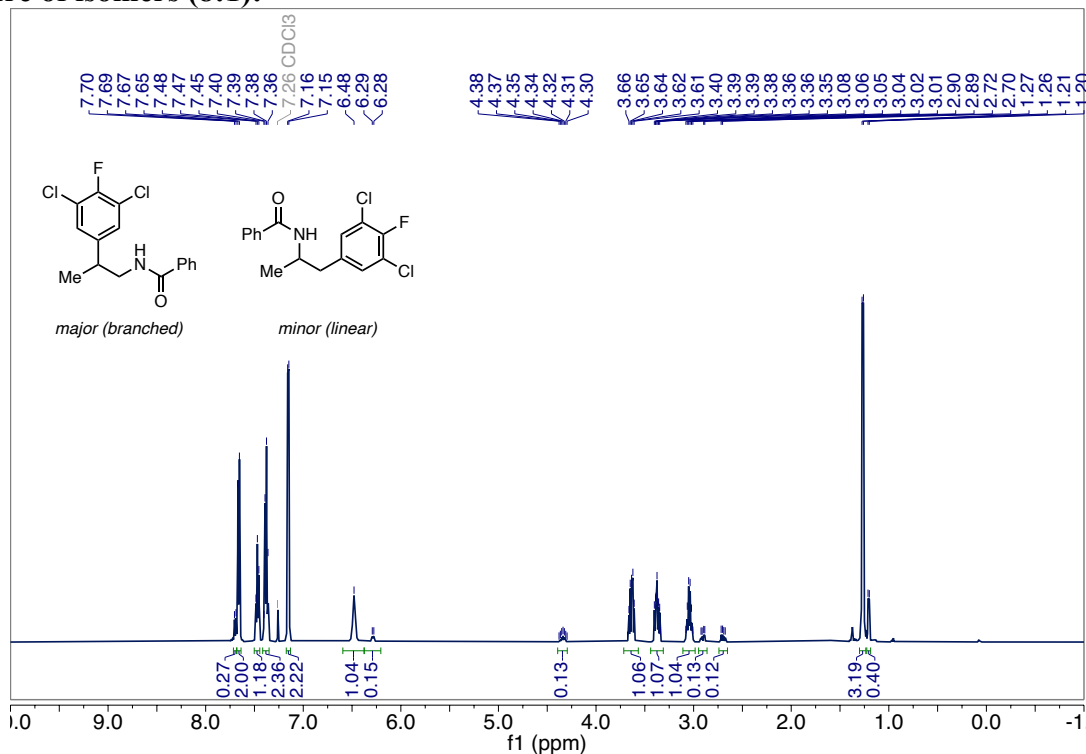
^1H NMR (500 MHz, CDCl_3) of ethyl 5-(1-benzamidopropan-2-yl)-2-methylbenzoate (I-1), mixture of isomers (10:1):



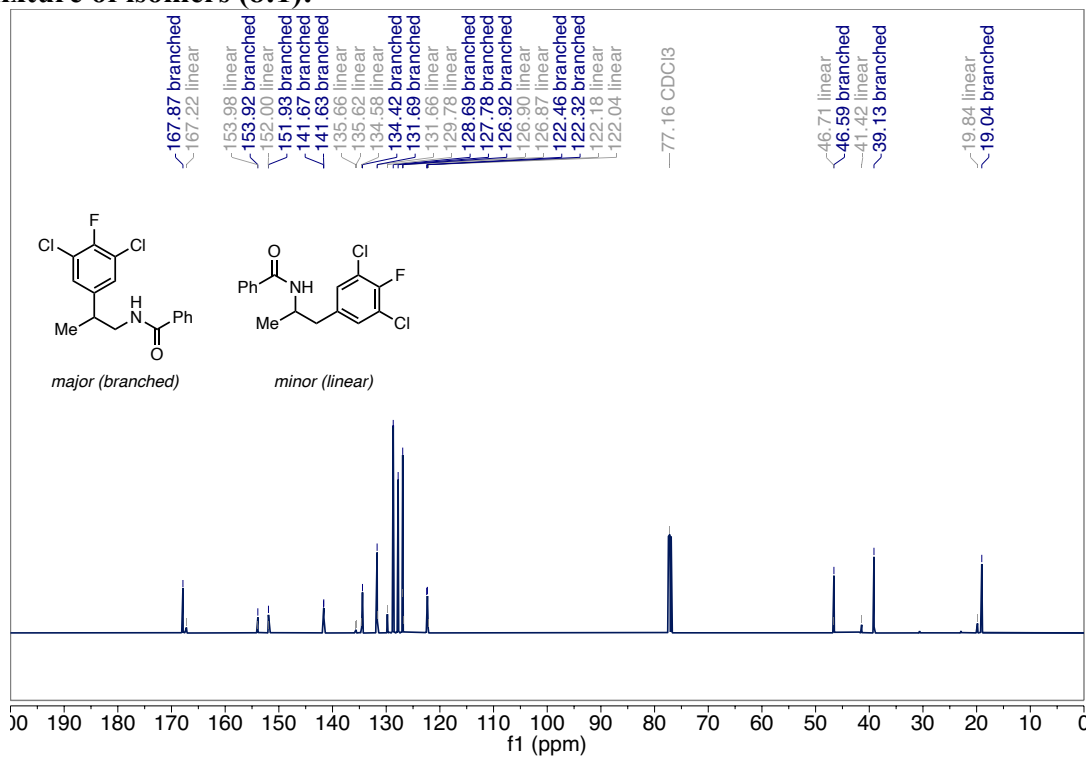
HMBC (500 MHz, CDCl_3) of I-1 to demonstrate overlap of carbons from the linear isomer at δ 141.6, 128.7, and 126.9 in $^{13}\text{C}\{^1\text{H}\}$ NMR, mixture of isomers (10:1):



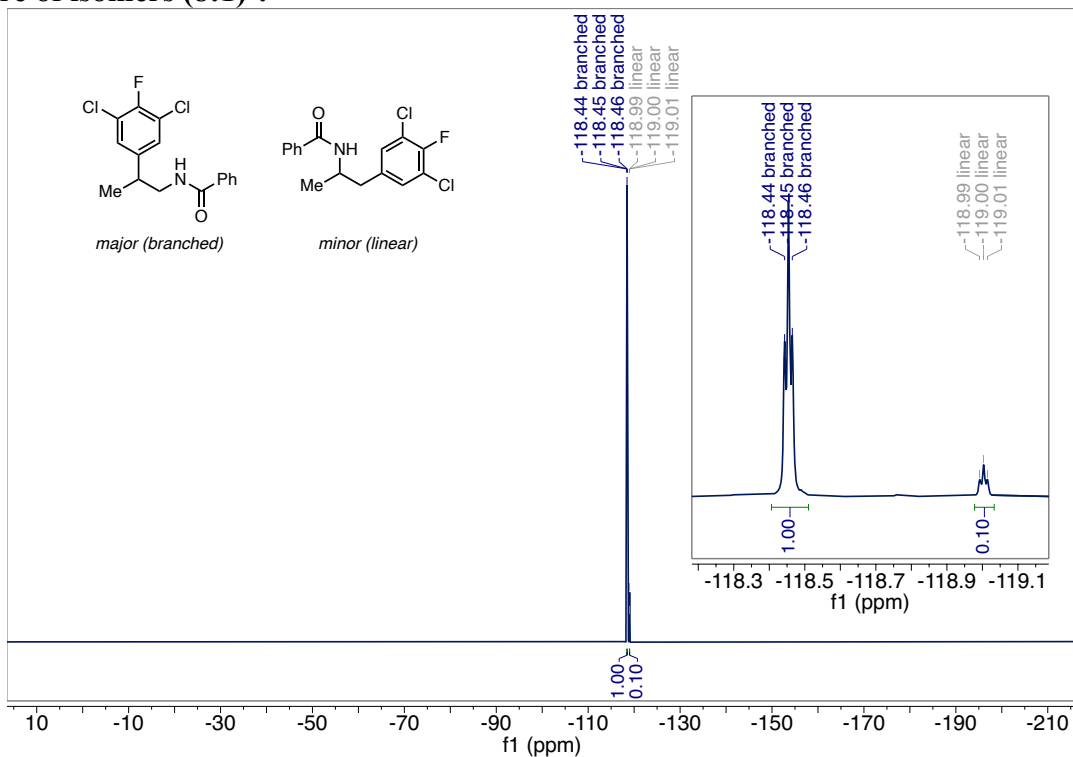
^1H NMR (500 MHz, CDCl_3) of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl)benzamide (J-1), mixture of isomers (8:1):



$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl)benzamide (J-1), mixture of isomers (8:1):

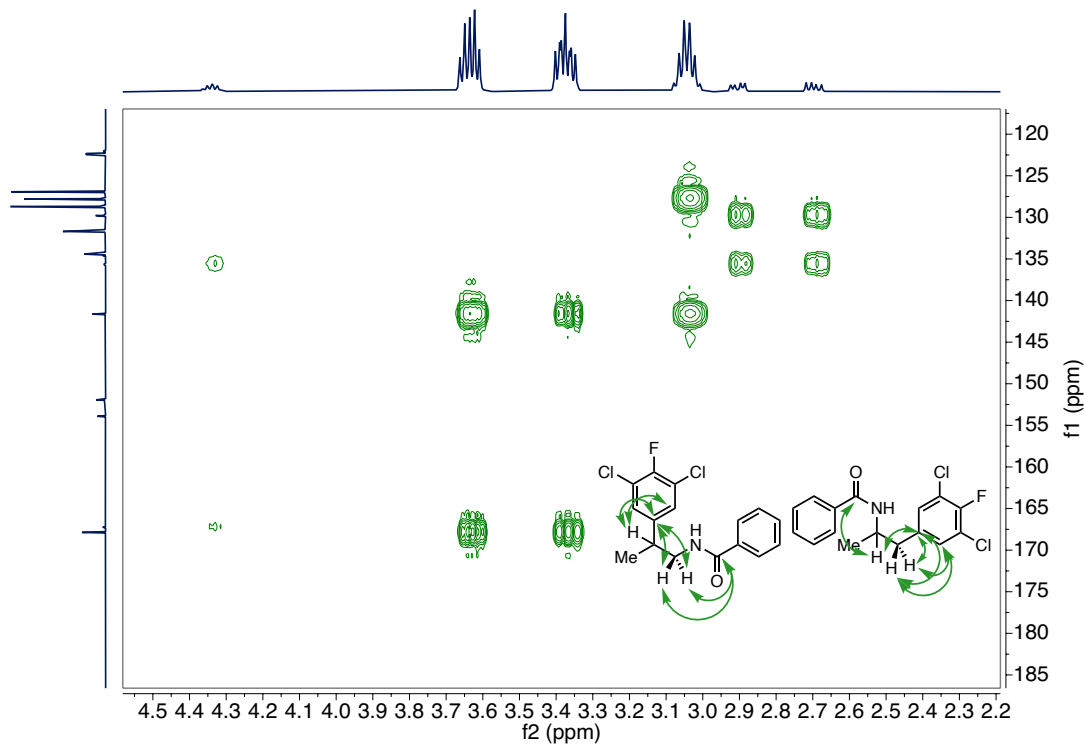


^{19}F NMR (565 MHz, CDCl_3) of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl)benzamide (J-1), mixture of isomers (8:1)^a:

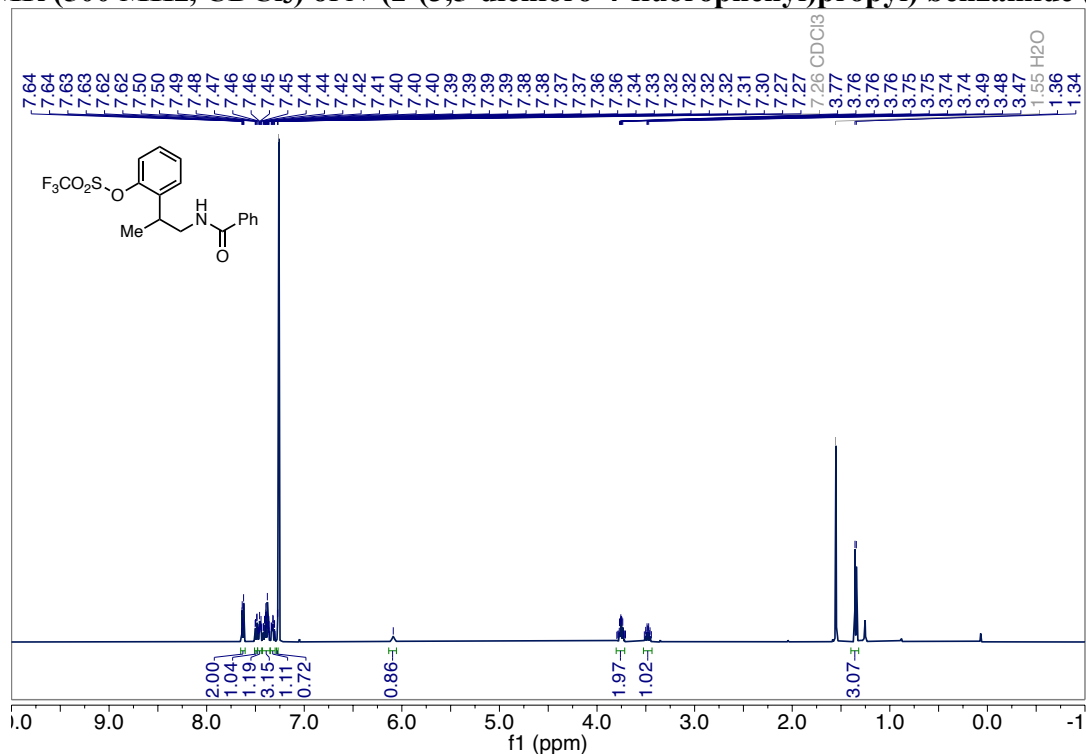


^aDetermined by ^1H NMR of same sample.

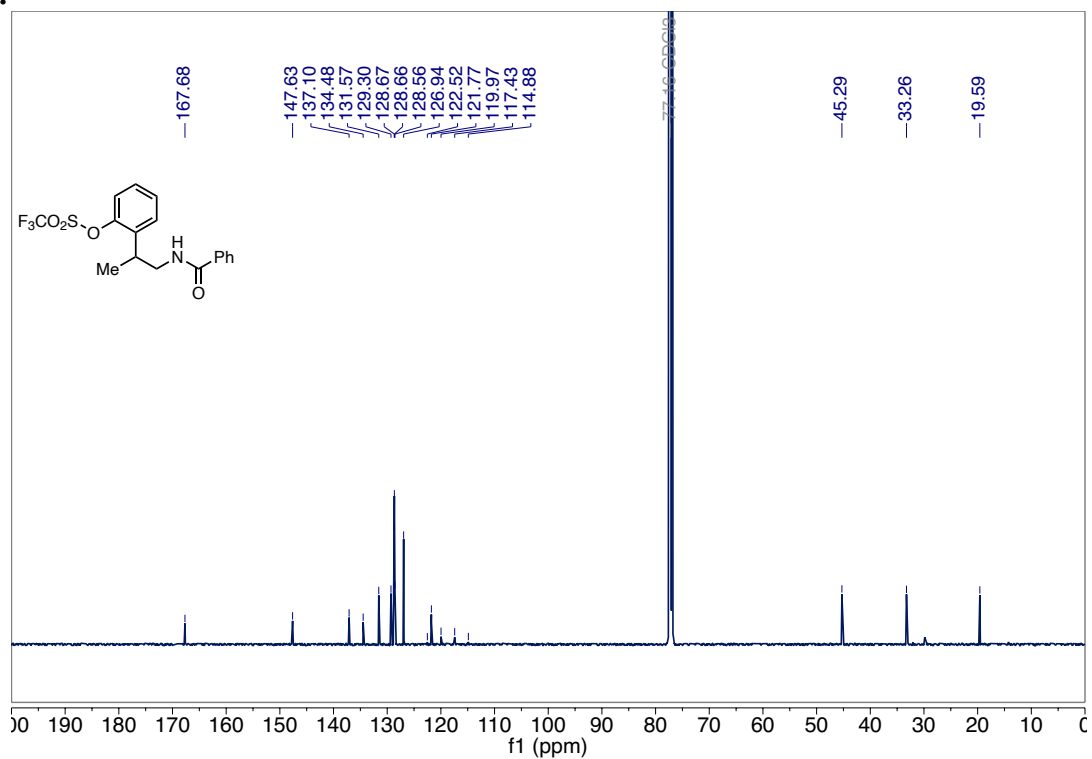
HMBC (500 MHz, CDCl_3) of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl)benzamide (J-1), mixture of isomers (8:1):



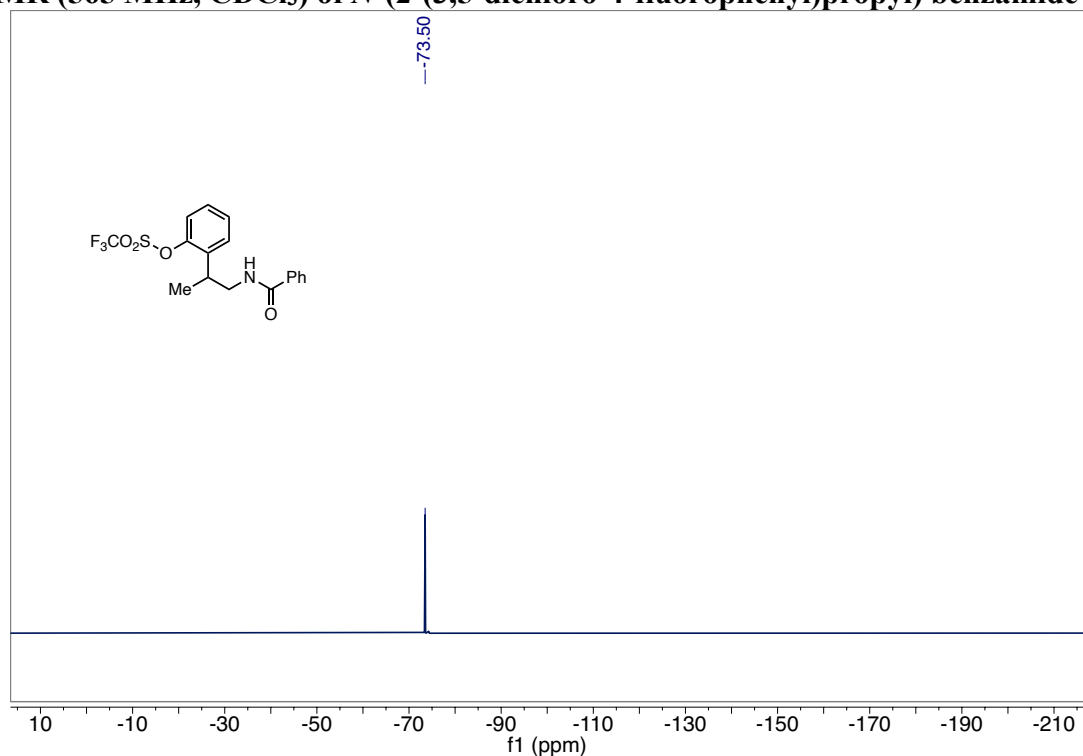
¹H NMR (500 MHz, CDCl₃) of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl) benzamide (K-1):



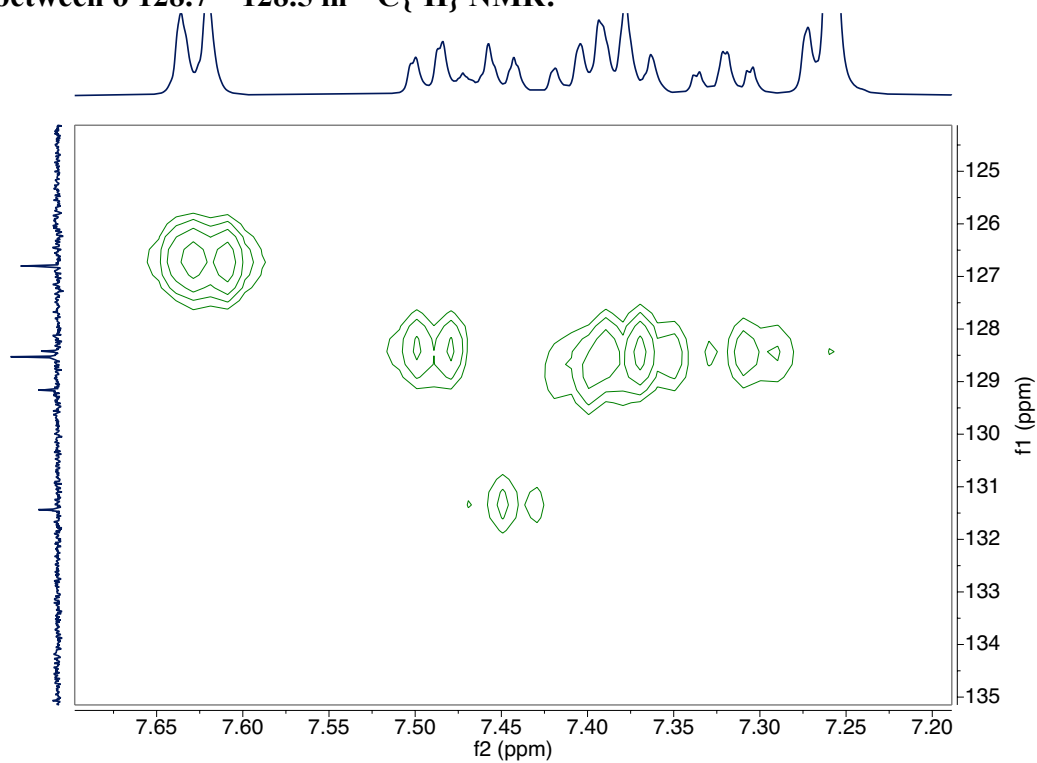
¹³C{¹H} NMR (126 MHz, CDCl₃) of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl) benzamide (K-1):



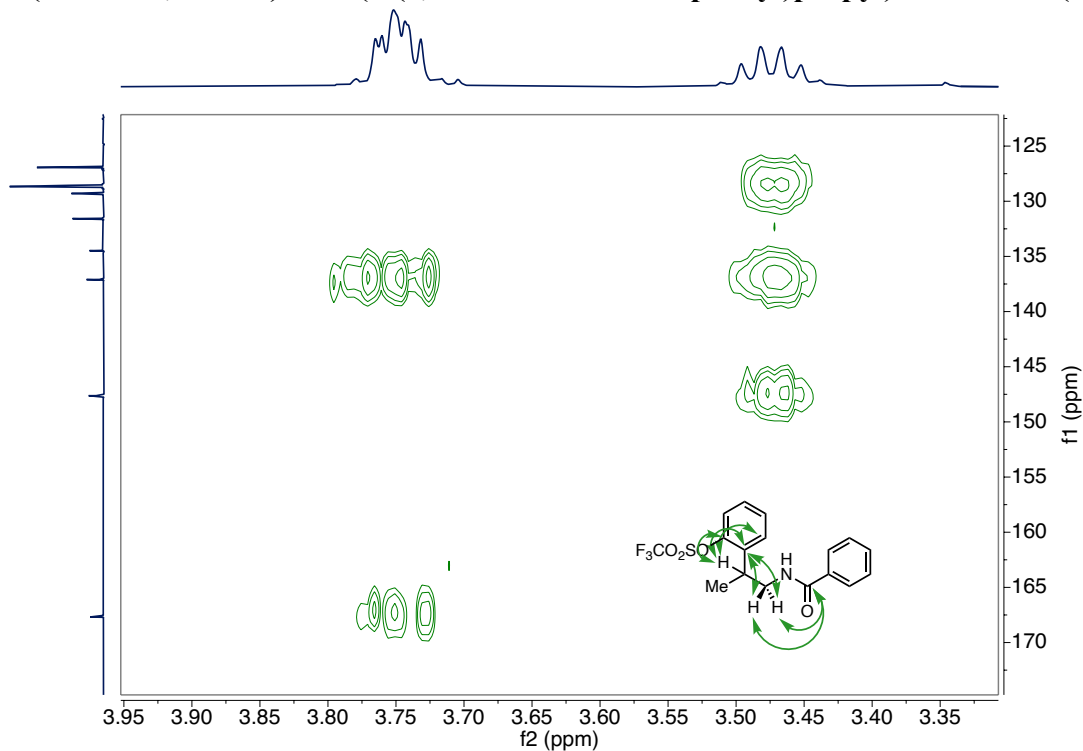
¹⁹F NMR (565 MHz, CDCl₃) of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl) benzamide (K-1):



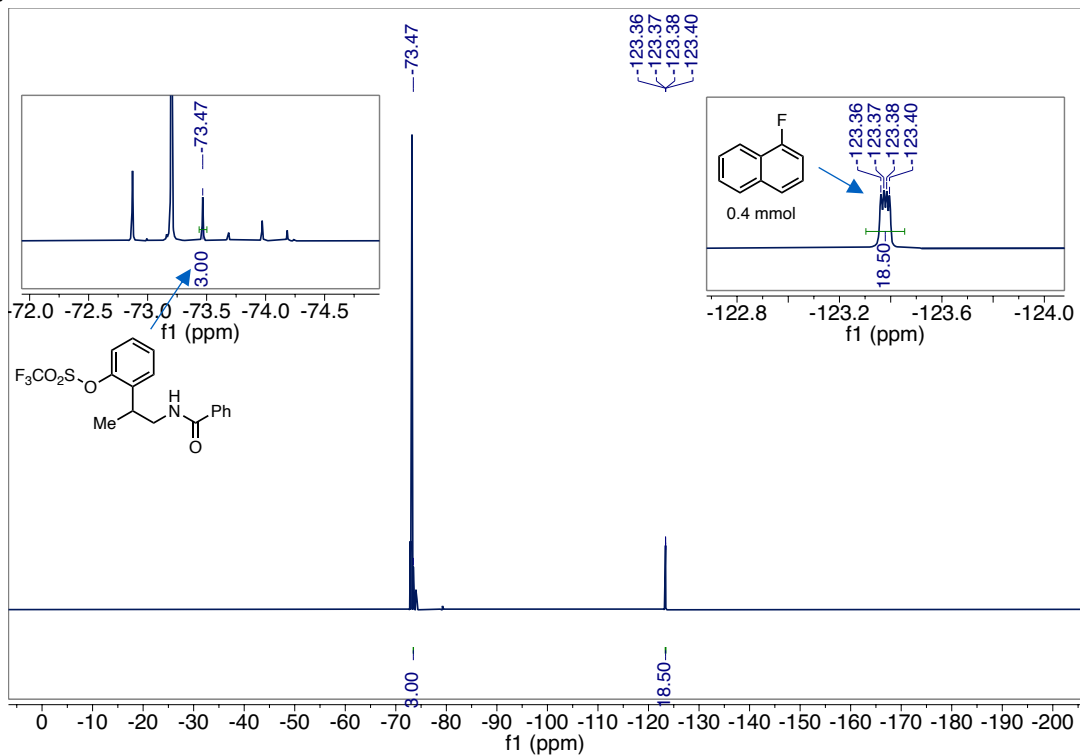
HSQC of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl) benzamide (K-1) to demonstrate three carbons between δ 128.7 – 128.5 in ¹³C{¹H} NMR:



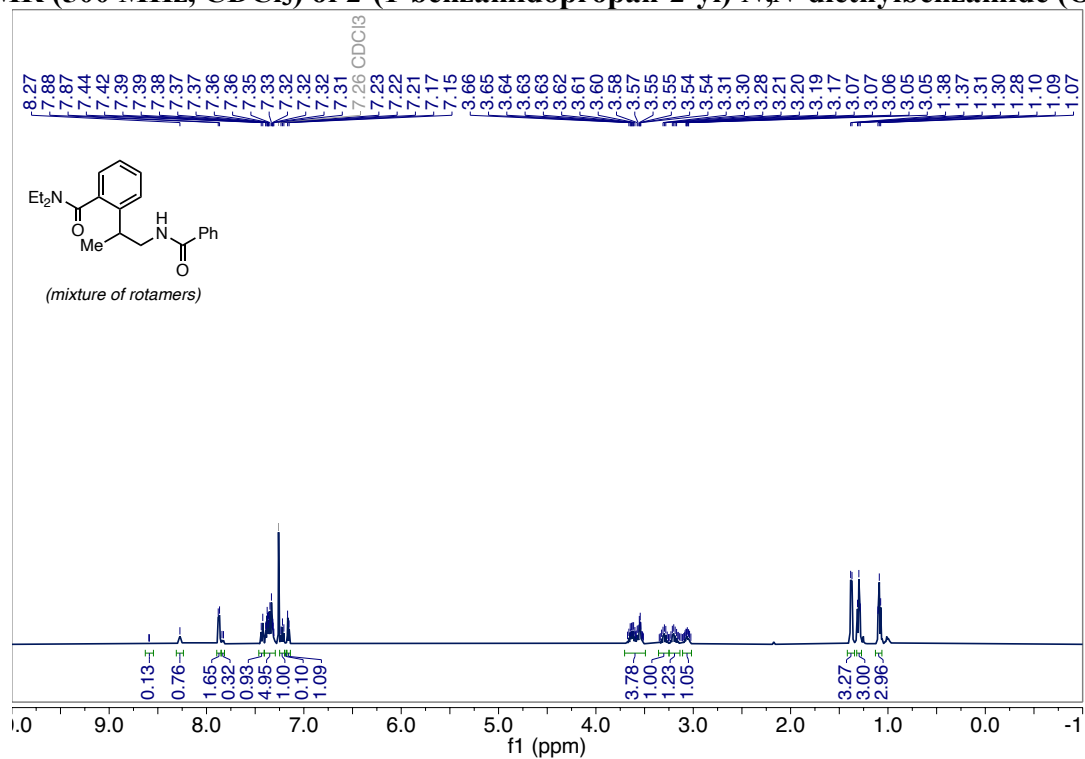
HMBC (500 MHz, CDCl₃) of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl) benzamide (K-1):



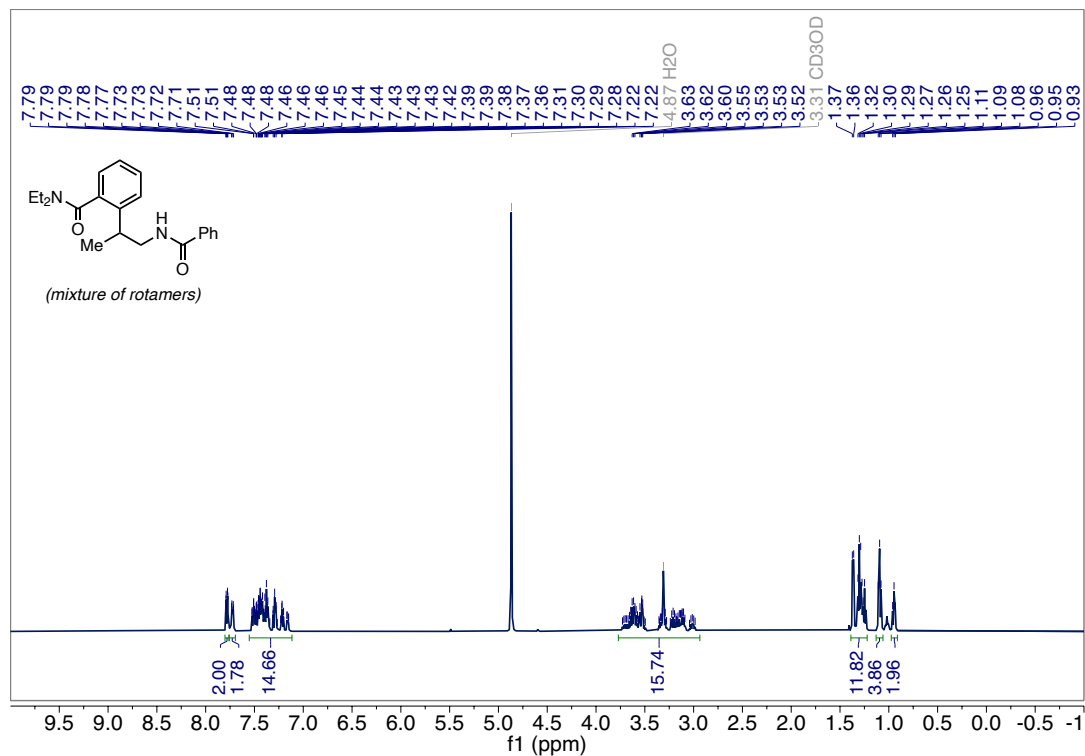
¹⁹F NMR (471 MHz, CDCl₃) yield of *N*-(2-(3,5-dichloro-4-fluorophenyl)propyl) benzamide (K-1):



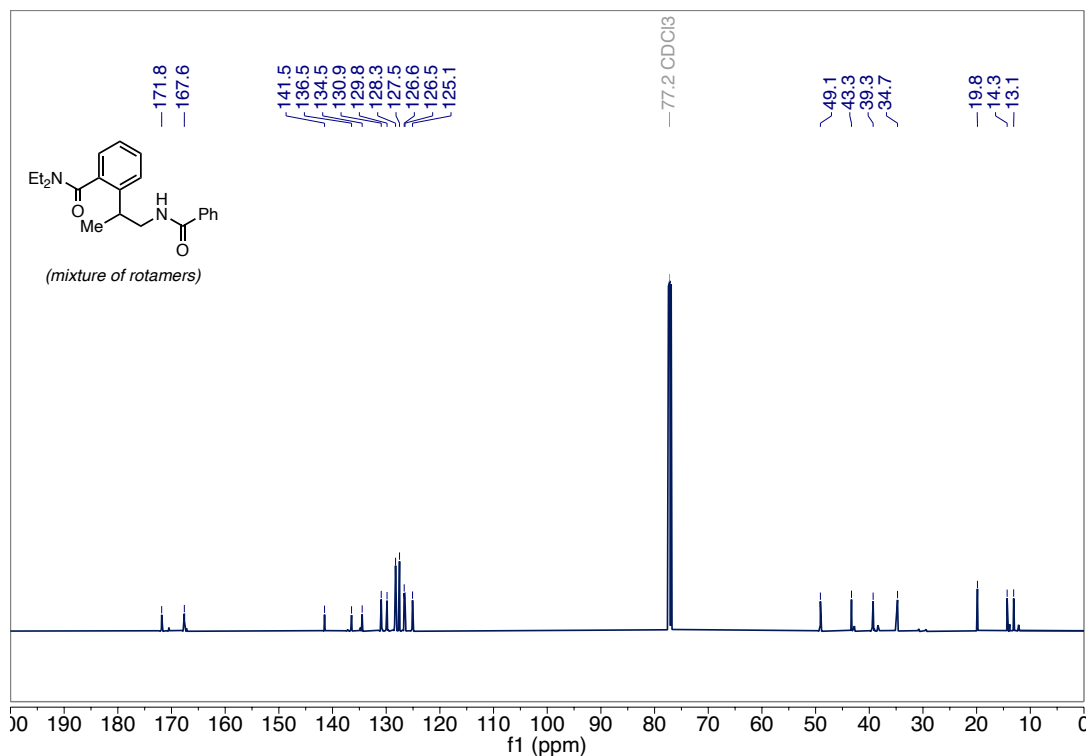
¹H NMR (500 MHz, CDCl₃) of 2-(1-benzamidopropan-2-yl)-*N,N*-diethylbenzamide (O-1):



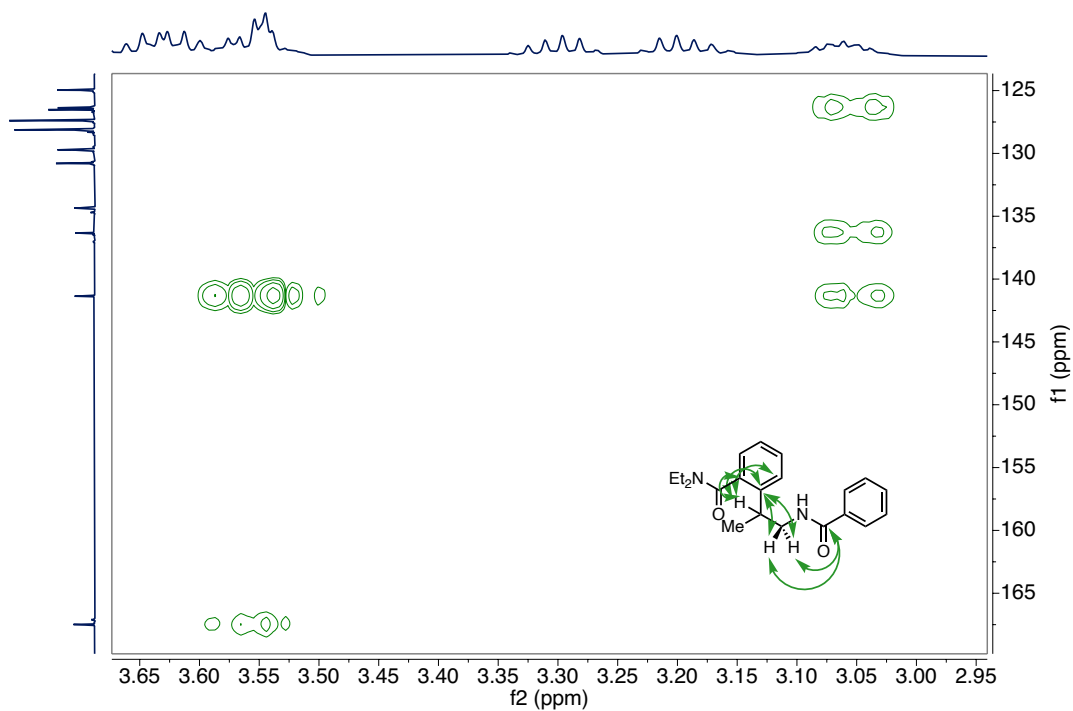
¹H NMR (500 MHz, Methanol-*d*₄) of 2-(1-benzamidopropan-2-yl)-*N,N*-diethylbenzamide (O-1):



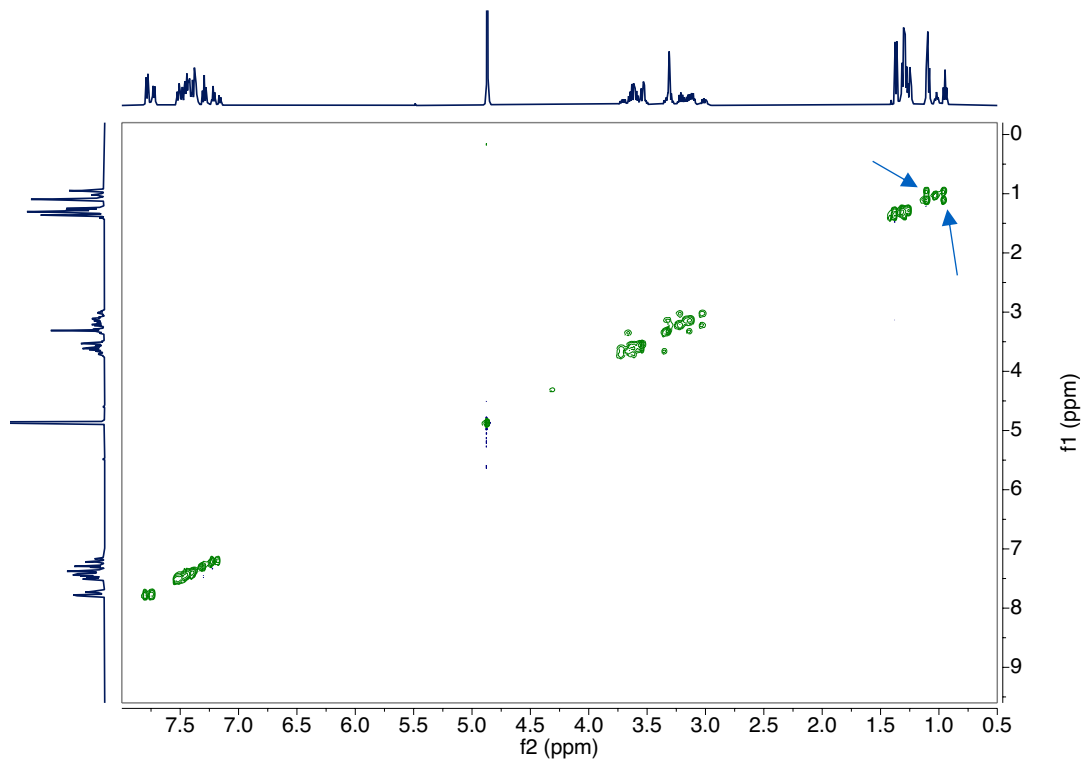
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of 2-(1-benzamidopropan-2-yl)-*N,N*-diethylbenzamide (O-1):



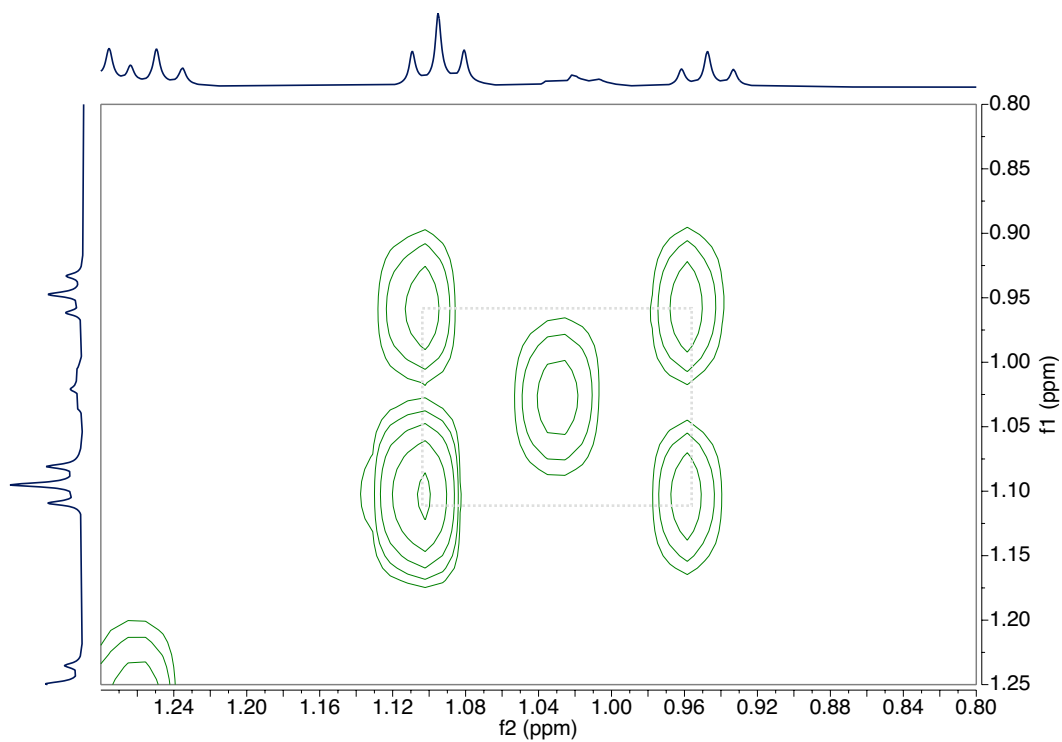
HMBC (500 MHz, CDCl_3) of 2-(1-benzamidopropan-2-yl)-*N,N*-diethylbenzamide (O-1):



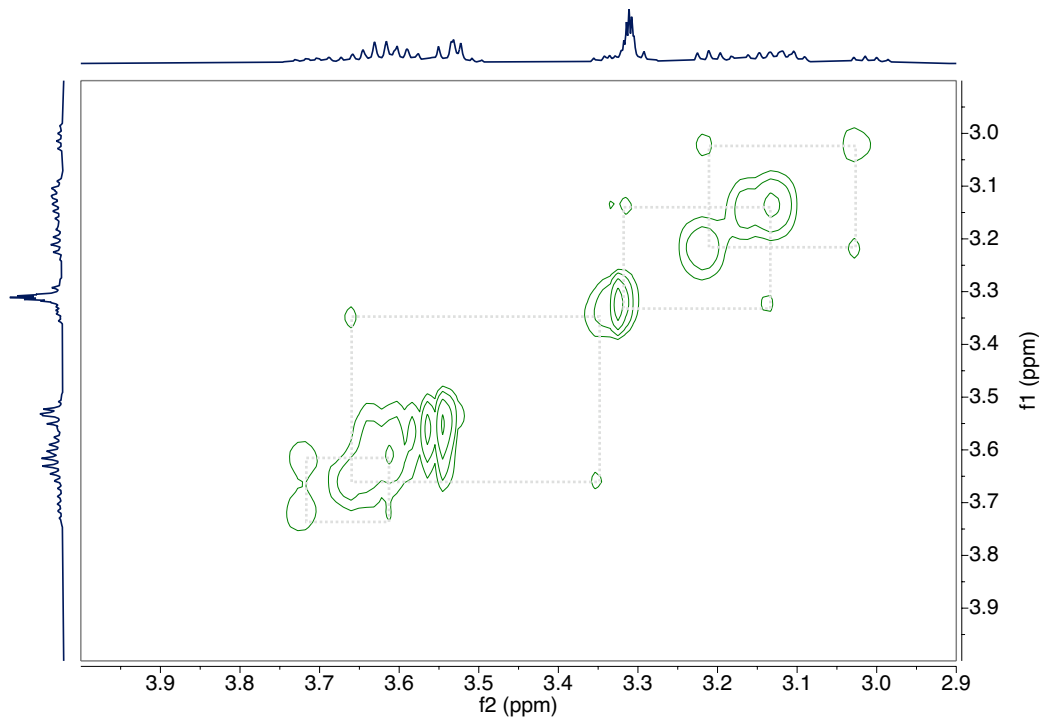
NOESY (500 MHz, Methanol-*d*₄) of 2-(1-benzamidopropan-2-yl)-*N,N*-diethylbenzamide (O-1):



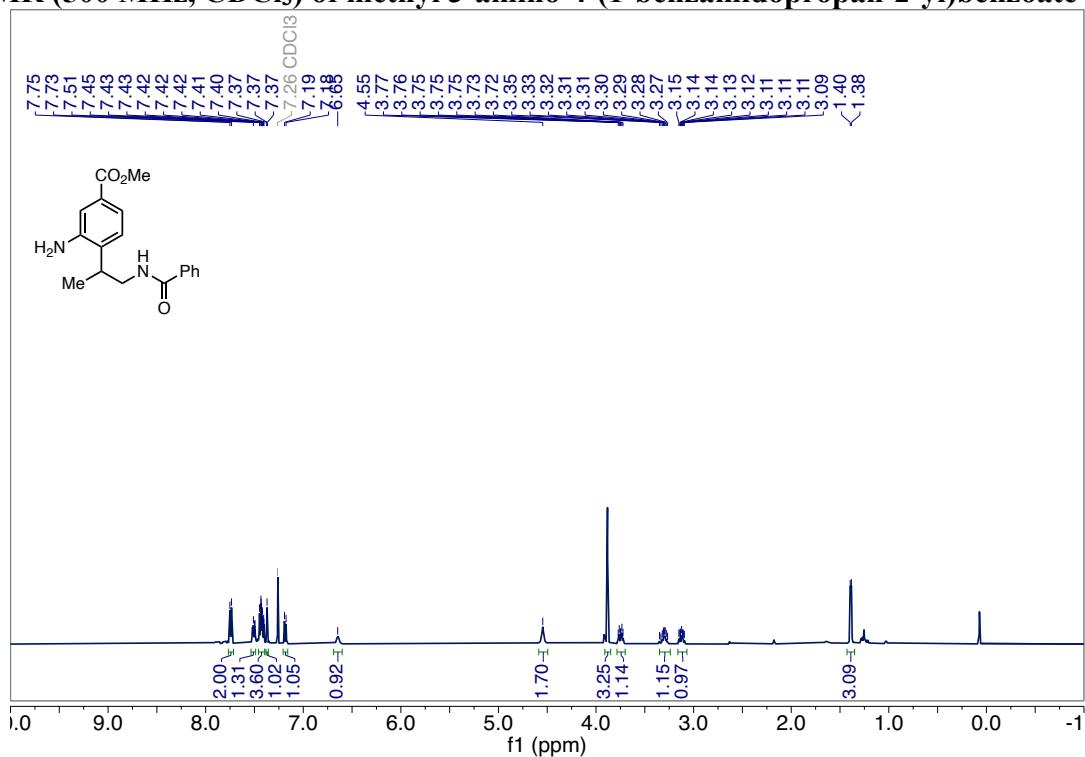
NOESY (500 MHz, Methanol-*d*₄) of 2-(1-benzamidopropan-2-yl)-*N,N*-diethylbenzamide (O-1):



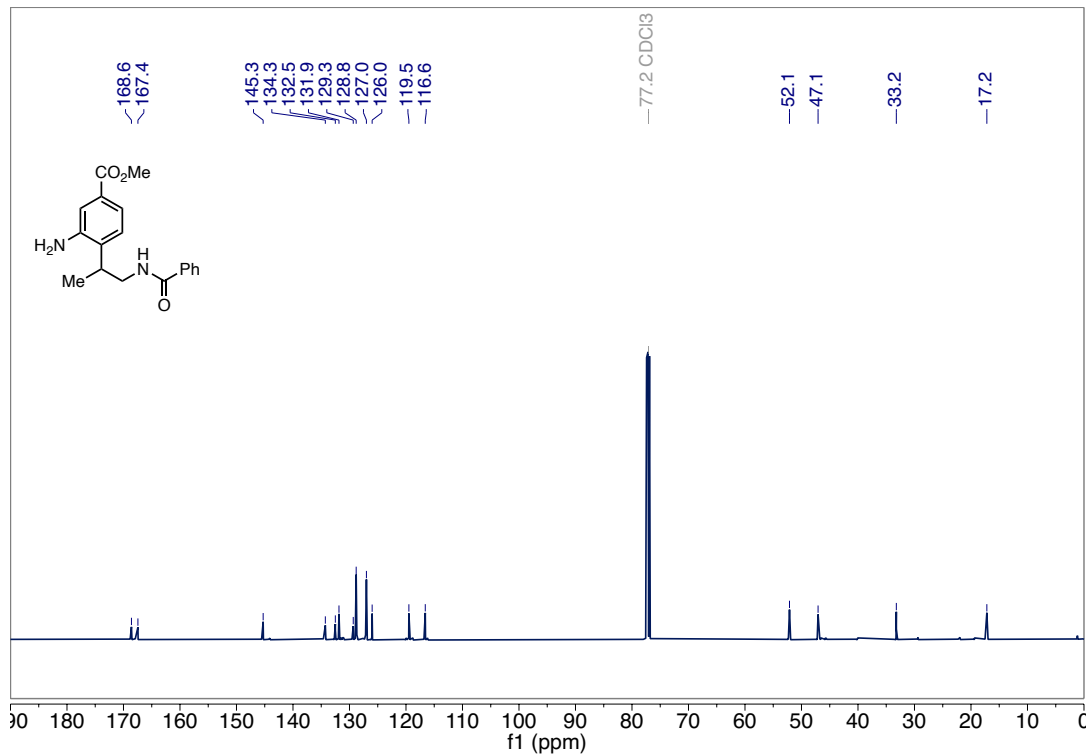
NOESY (500 MHz, Methanol-*d*₄) of 2-(1-benzamidopropan-2-yl)-*N,N*-diethylbenzamide (O-1):



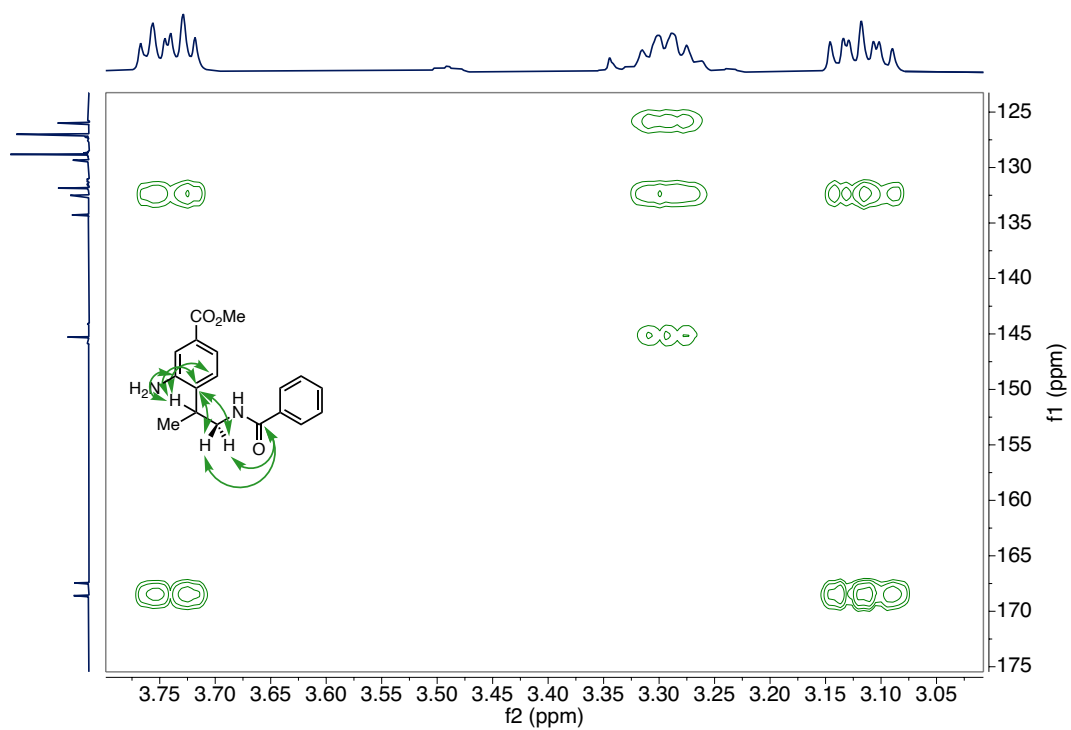
^1H NMR (500 MHz, CDCl_3) of methyl 3-amino-4-(1-benzamidopropan-2-yl)benzoate (P-1):



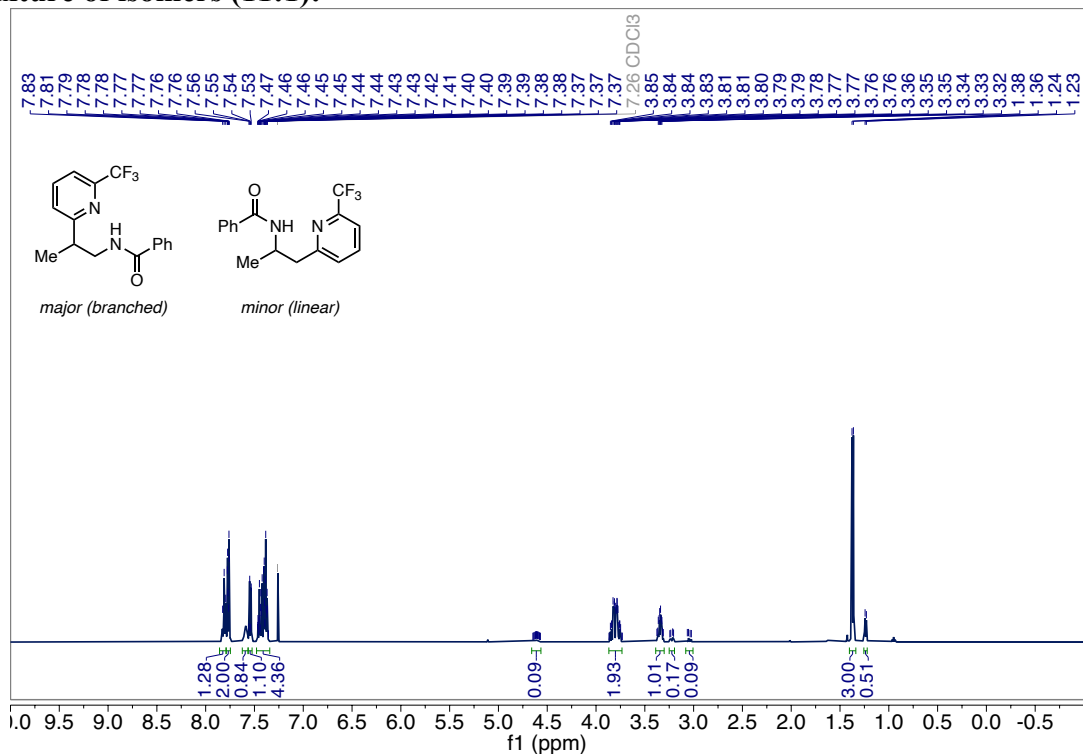
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of methyl 3-amino-4-(1-benzamidopropan-2-yl)benzoate (P-1):



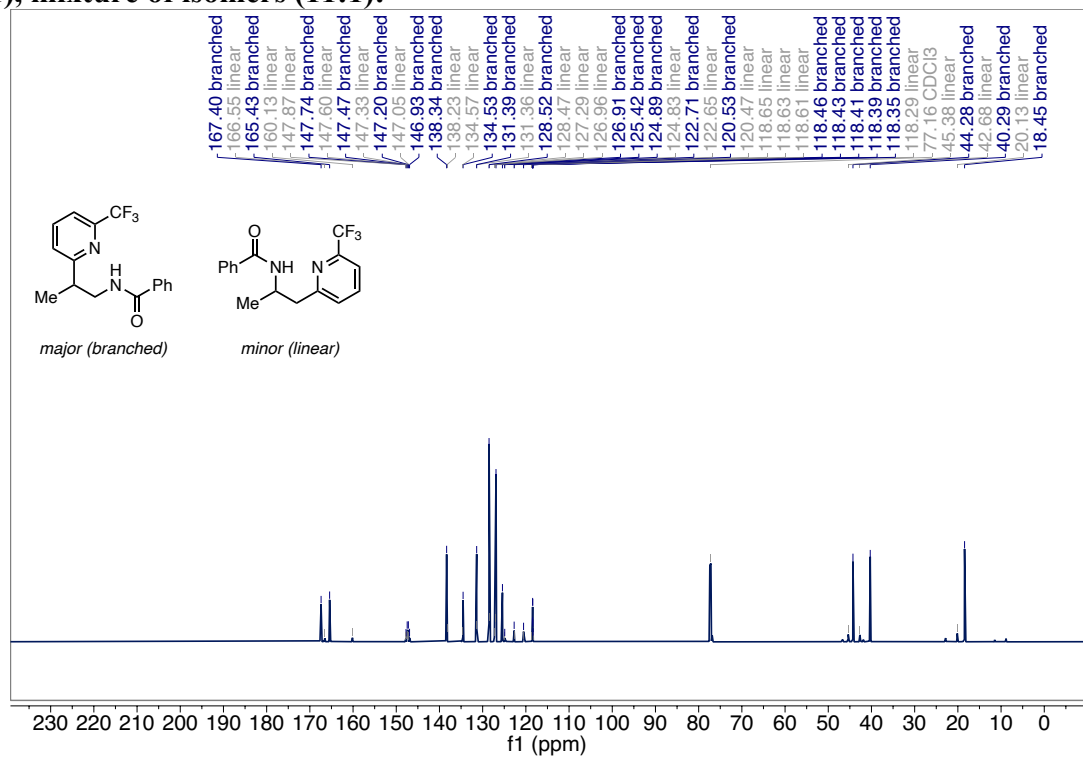
HMBC (500 MHz, CDCl₃) of methyl 3-amino-4-(1-benzamidopropan-2-yl)benzoate (P-1):



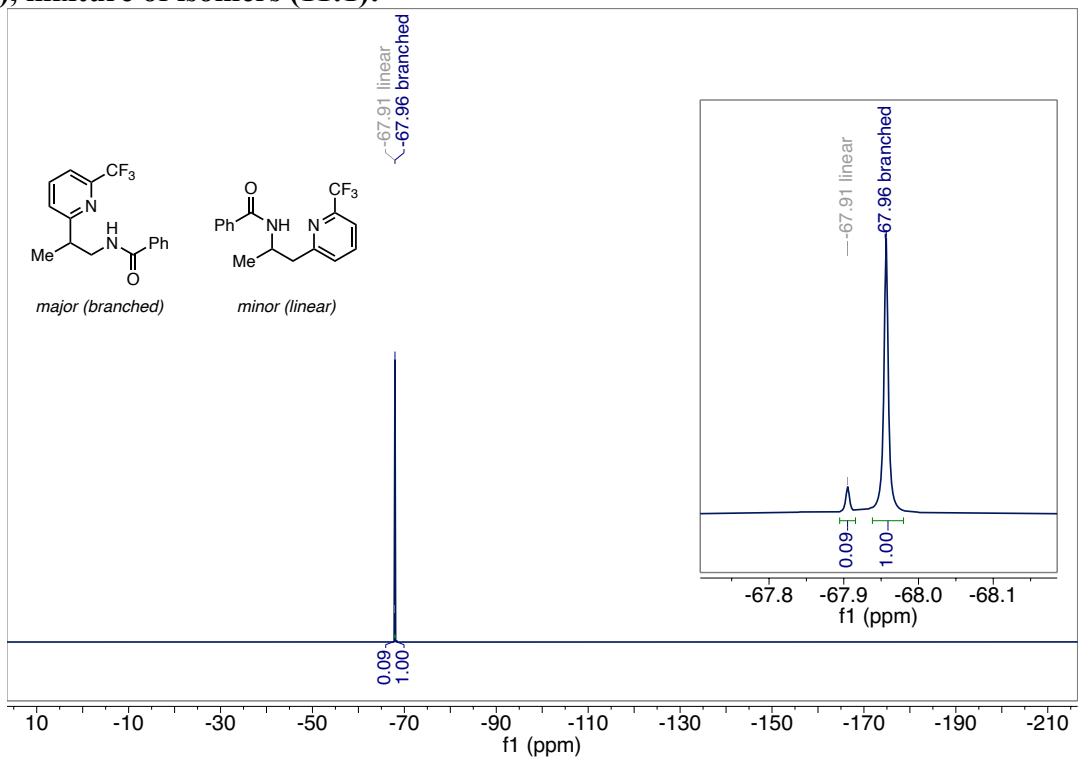
¹H NMR (500 MHz, CDCl₃) of *N*-(2-(6-(trifluoromethyl)pyridin-2-yl)propyl)benzamide (het-1), mixture of isomers (11:1):



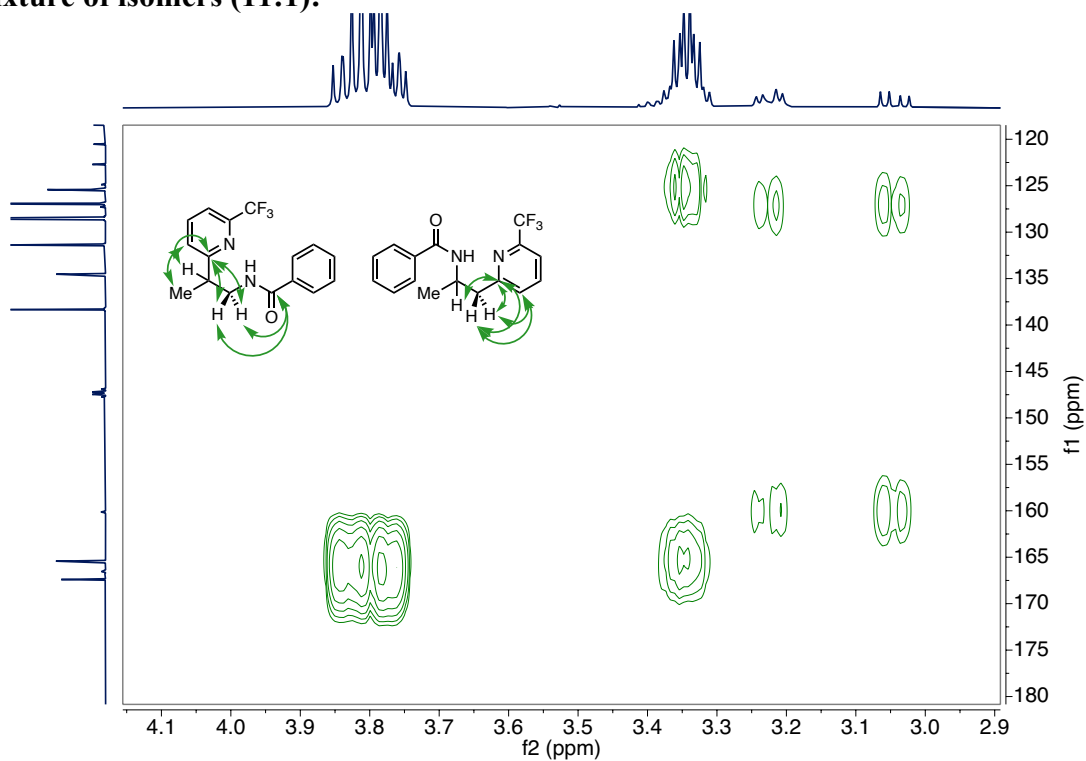
¹³C{¹H} NMR (126 MHz, CDCl₃) of *N*-(2-(6-(trifluoromethyl)pyridin-2-yl)propyl)benzamide (het-1), mixture of isomers (11:1):



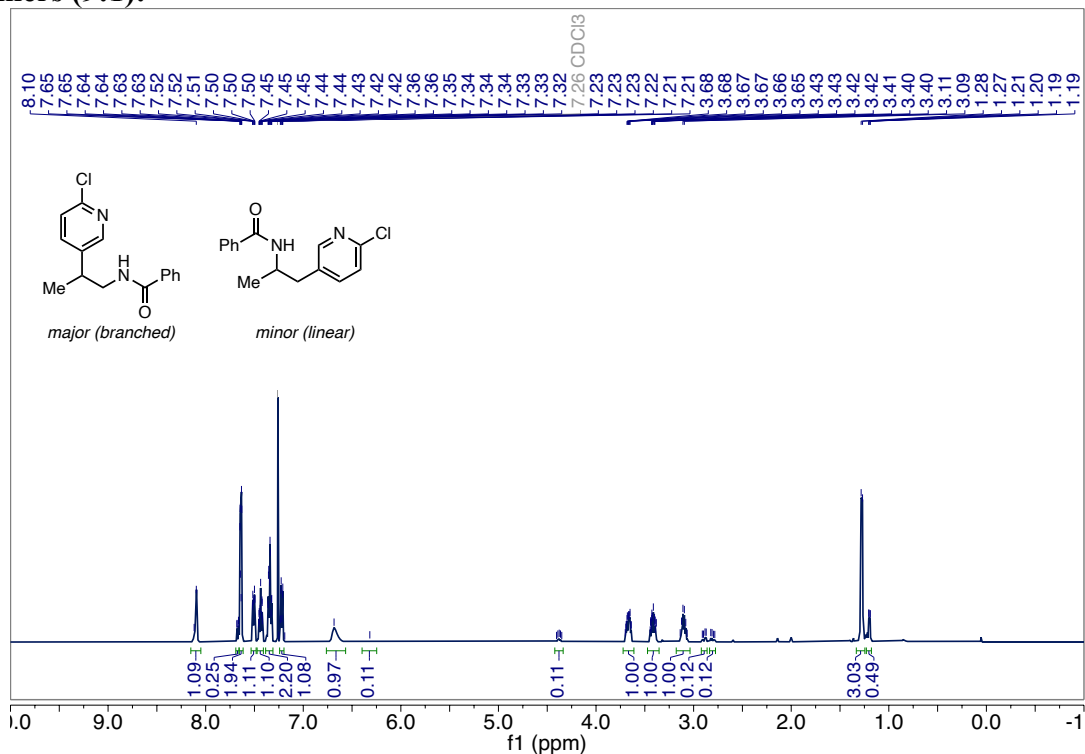
^{19}F NMR (565 MHz, CDCl_3) of *N*-(2-(6-(trifluoromethyl)pyridin-2-yl)propyl)benzamide (het-1), mixture of isomers (11:1):



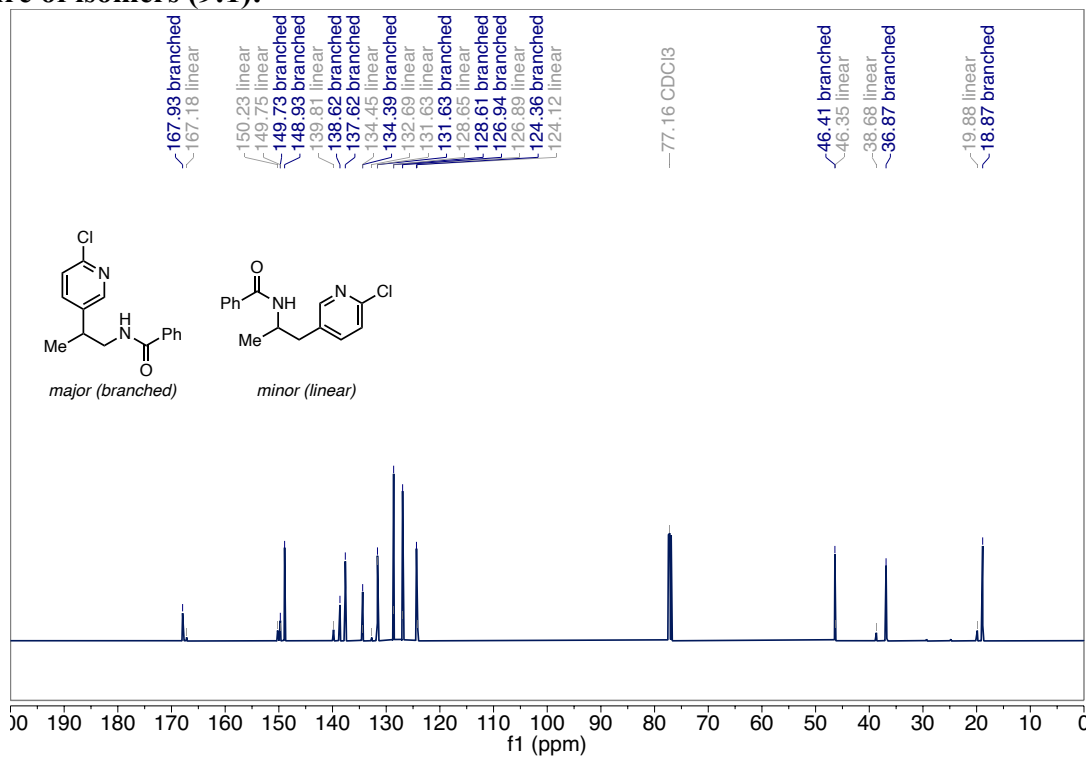
HMBC (500 MHz, CDCl_3) of *N*-(2-(6-(trifluoromethyl)pyridin-2-yl)propyl)benzamide (het-1), mixture of isomers (11:1):



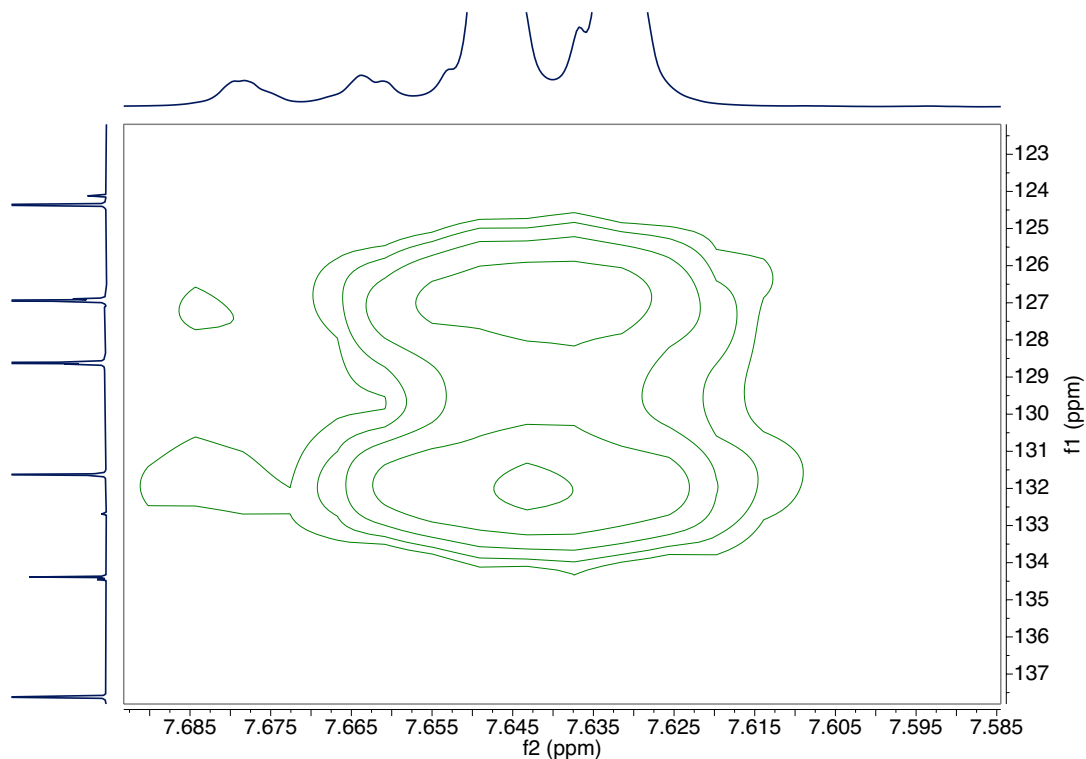
¹H NMR (500 MHz, CDCl₃) of *N*-(2-(6-chloropyridin-3-yl)propyl)benzamide (het-2), mixture of isomers (9:1):



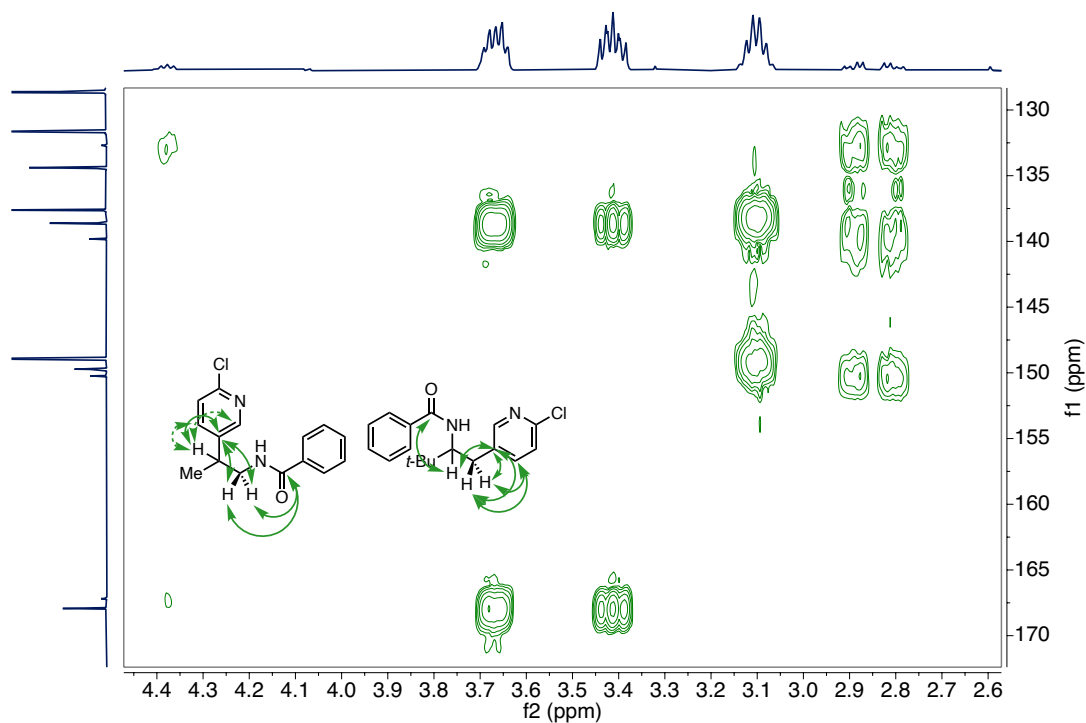
¹³C{¹H} NMR (126 MHz, CDCl₃) of *N*-(2-(6-chloropyridin-3-yl)propyl)benzamide (het-2), mixture of isomers (9:1):



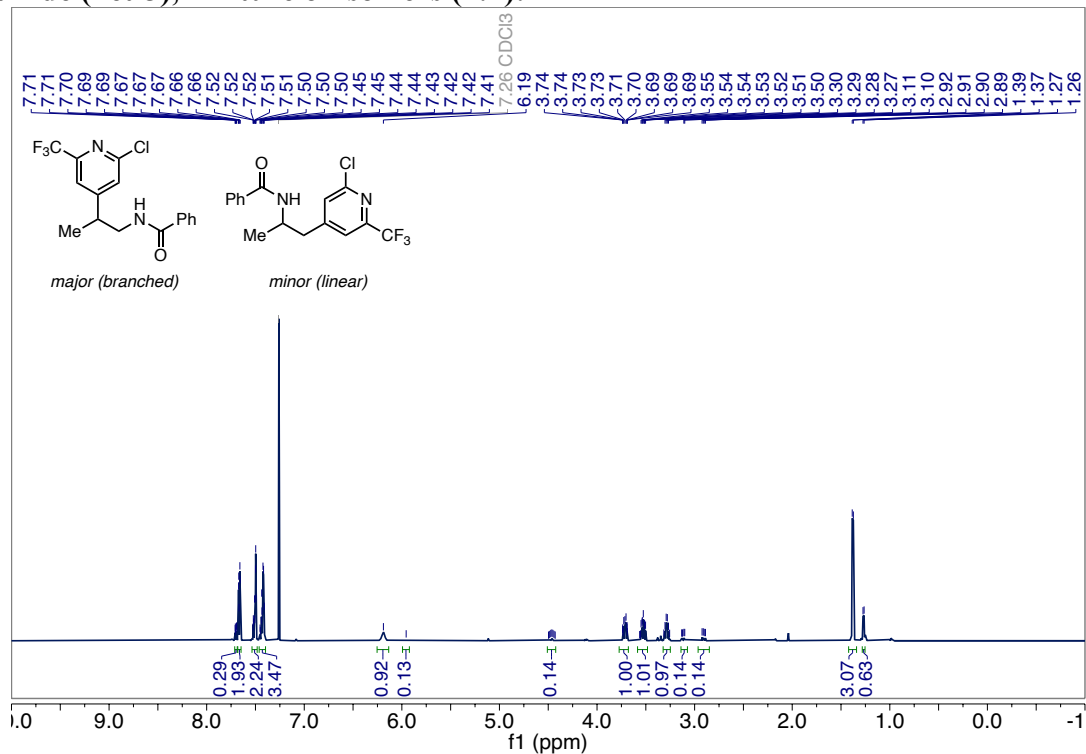
HMBC (500 MHz, CDCl₃) of het-2 to demonstrate overlap of carbon from the linear isomer at δ 131.6 in ¹³C{¹H} NMR, mixture of isomers (9:1):



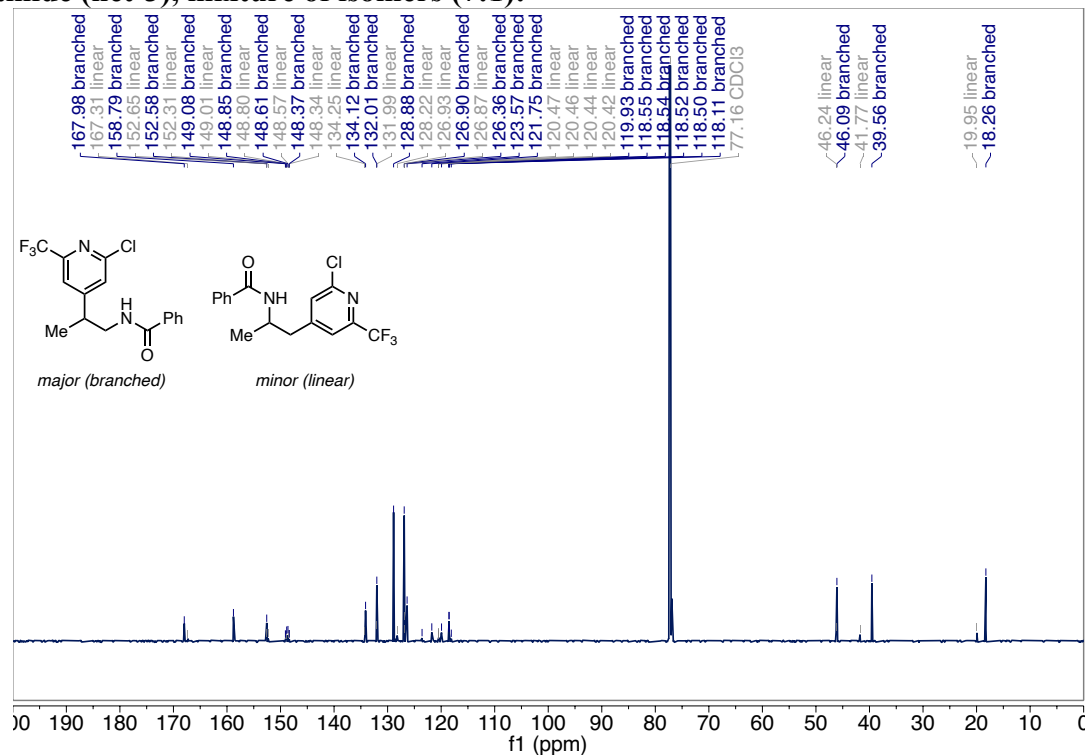
HMBC (500 MHz, CDCl₃) of *N*-(2-(6-chloropyridin-3-yl)propyl)benzamide (het-2), mixture of isomers (9:1):



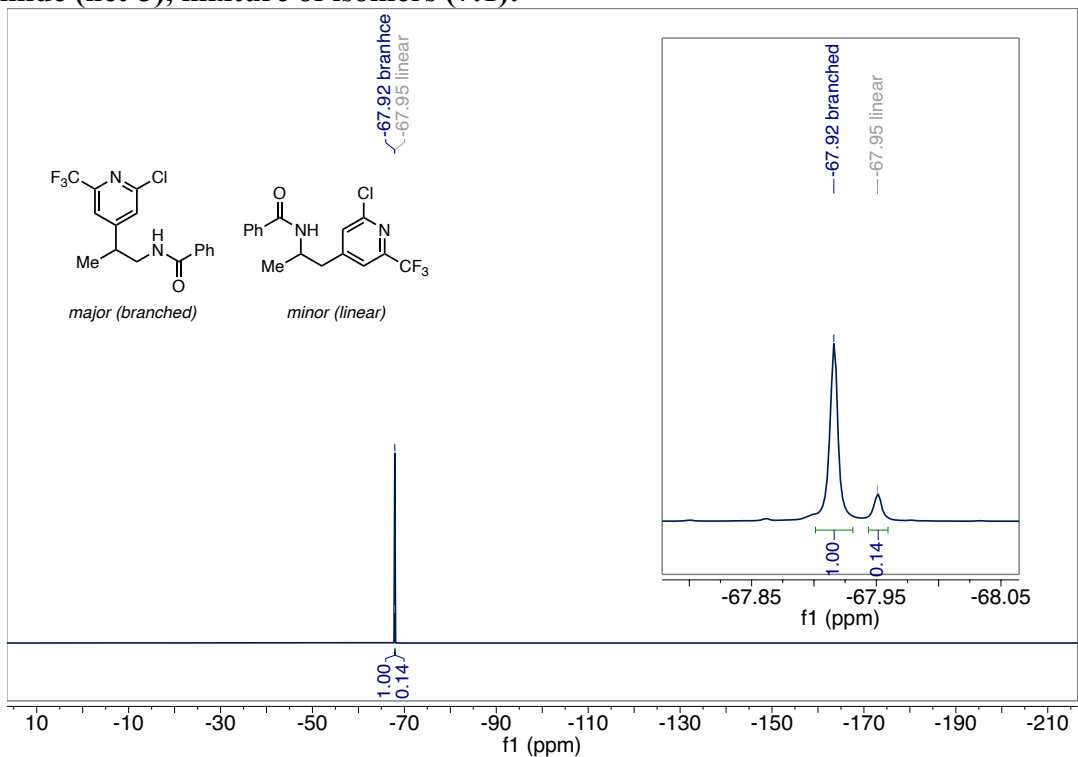
^1H NMR (600 MHz, CDCl_3) of *N*-(2-(2-chloro-6-(trifluoromethyl)pyridin-4-yl)propyl)benzamide (het-3), mixture of isomers (7:1):



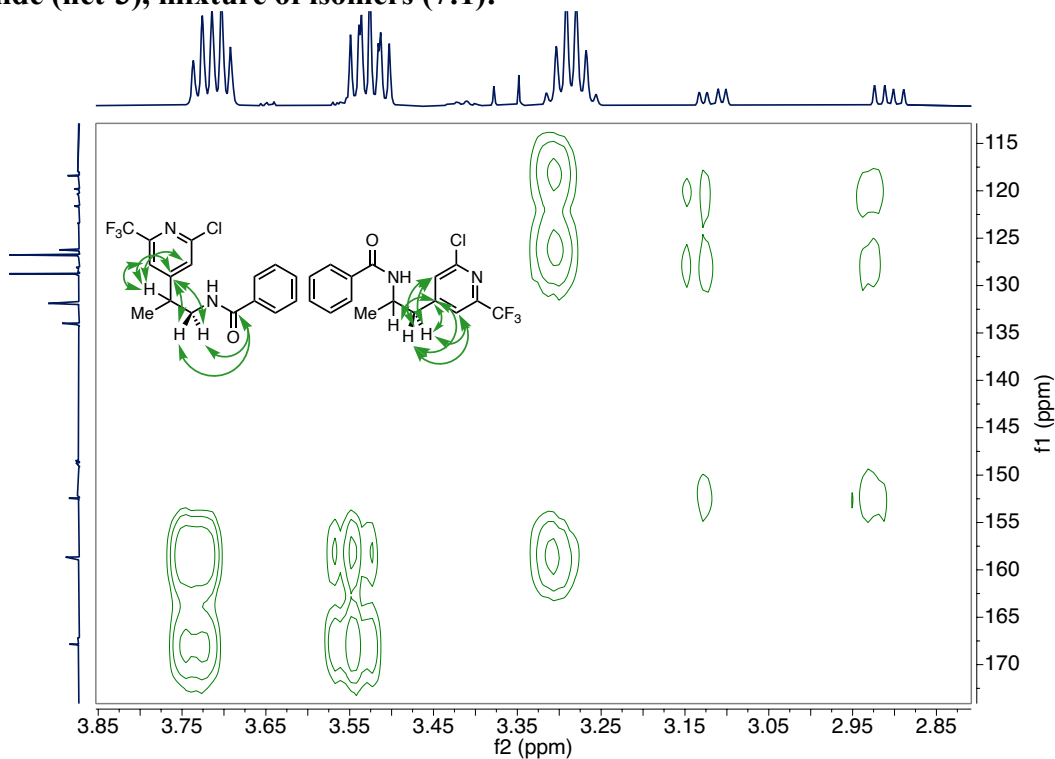
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2-(2-chloro-6-(trifluoromethyl)pyridin-4-yl)propyl)benzamide (het-3), mixture of isomers (7:1):



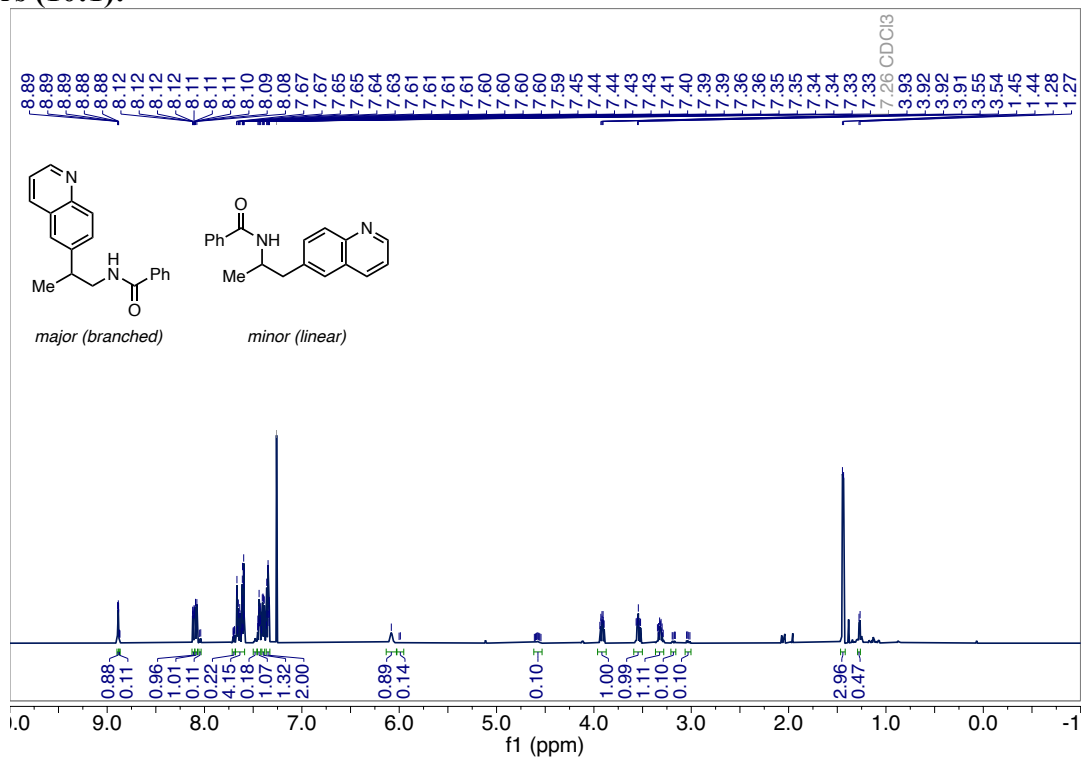
^{19}F NMR (565 MHz, CDCl_3) of *N*-(2-(2-chloro-6-(trifluoromethyl)pyridin-4-yl)propyl) benzamide (het-3), mixture of isomers (7:1):



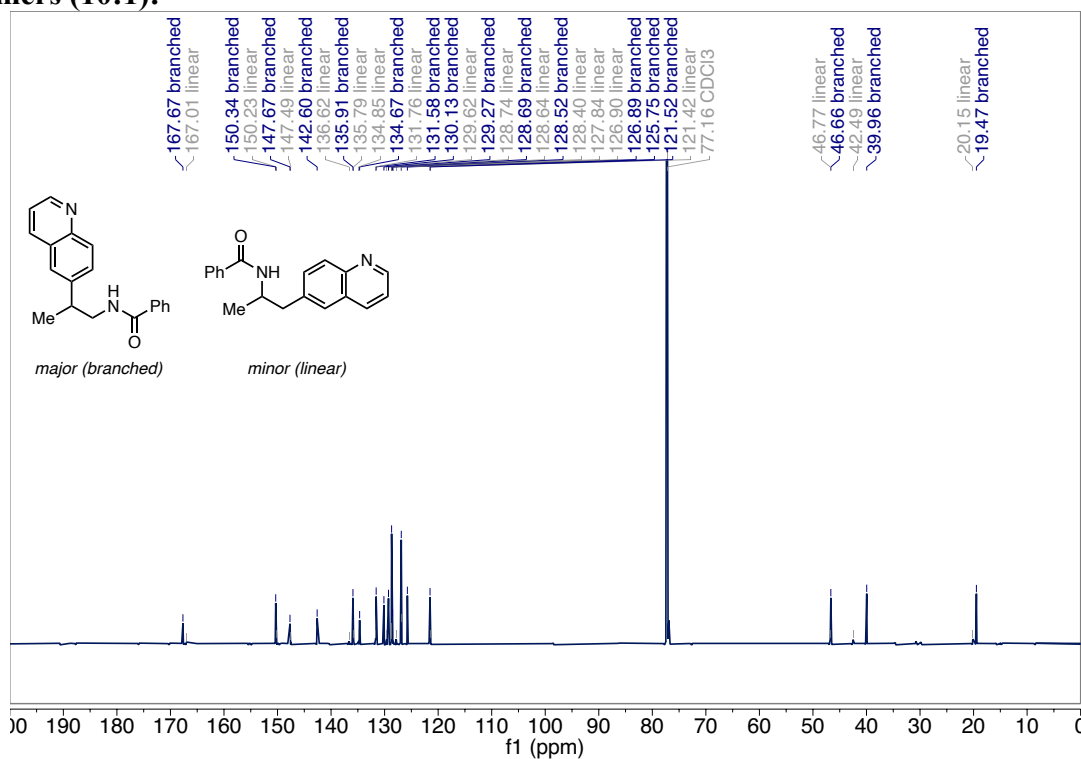
HMBC (600 MHz, CDCl_3) of *N*-(2-(2-chloro-6-(trifluoromethyl)pyridin-4-yl)propyl) benzamide (het-3), mixture of isomers (7:1):



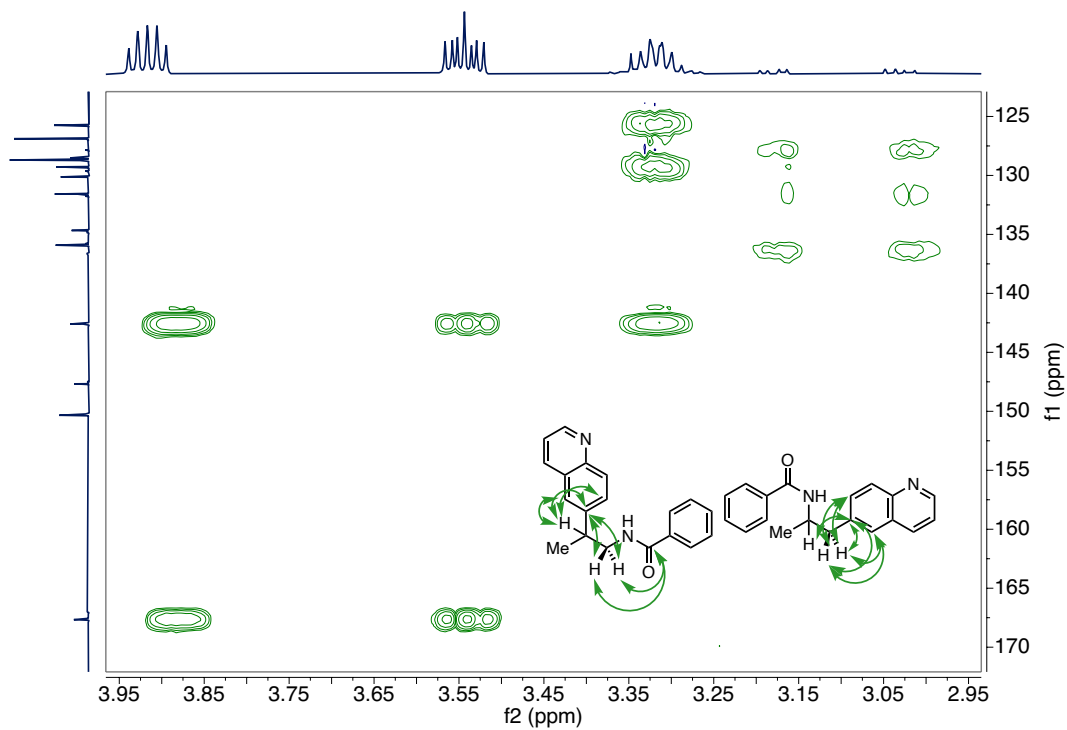
^1H NMR (600 MHz, CDCl_3) of *N*-(2-(quinolin-6-yl)propyl)benzamide (het-4), mixture of isomers (10:1):



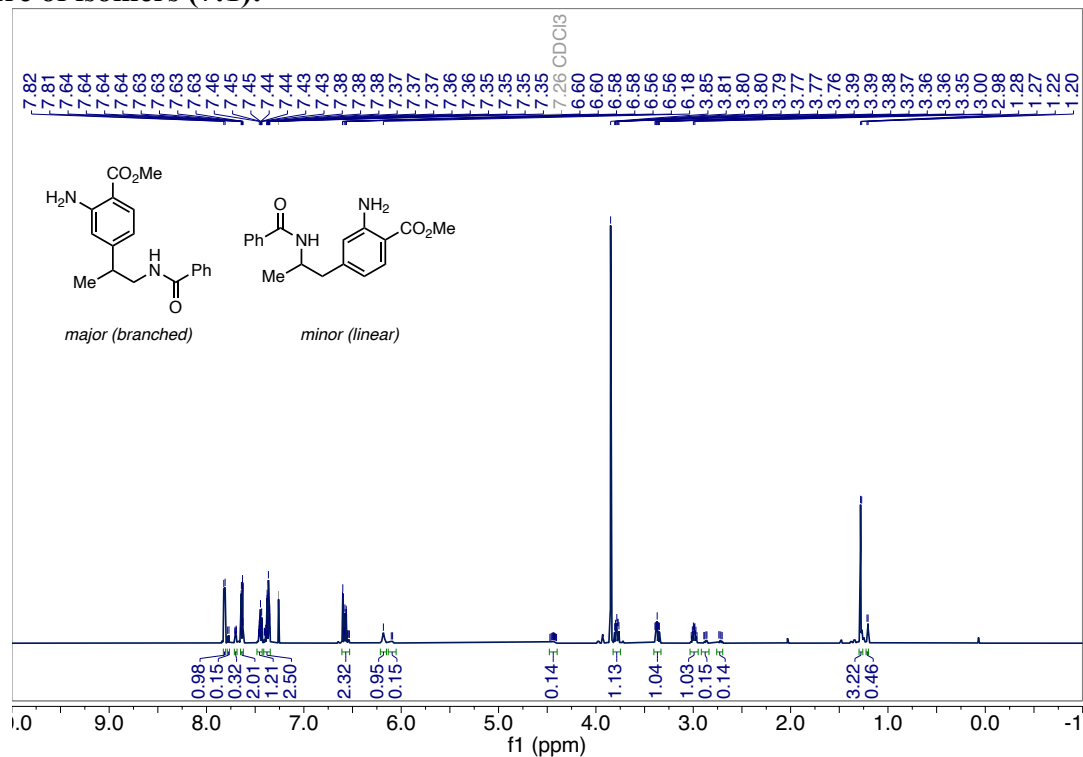
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2-(quinolin-6-yl)propyl)benzamide (het-4), mixture of isomers (10:1):



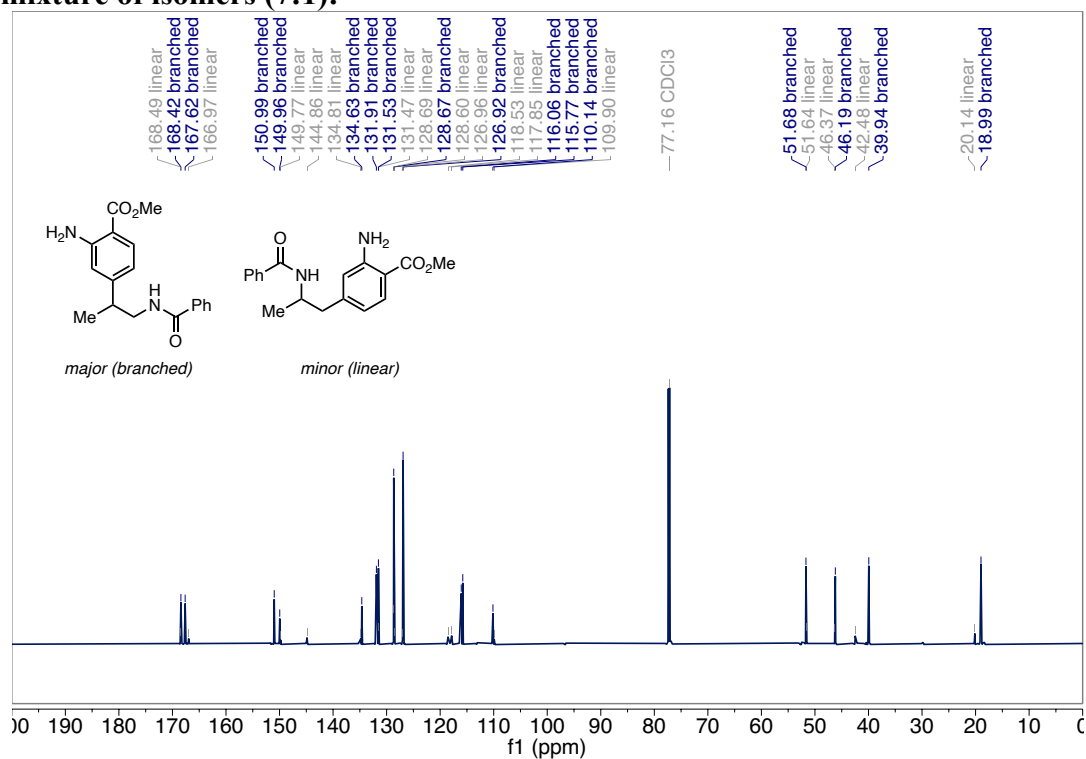
HMBC (600 MHz, CDCl₃) of *N*-(2-(quinolin-6-yl)propyl)benzamide (het-4), mixture of isomers (10:1):



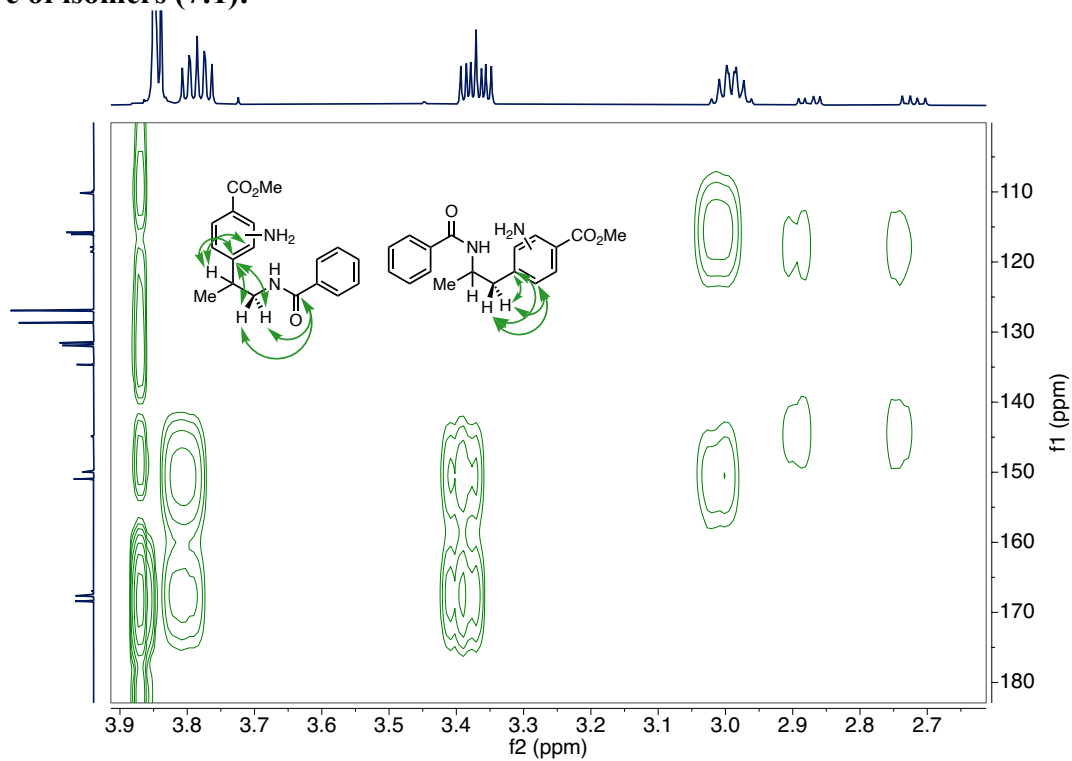
^1H NMR (600 MHz, CDCl_3) of methyl 2-amino-4-(1-benzamidopropan-2-yl)benzoate (I-2), mixture of isomers (7:1):



$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of methyl 2-amino-4-(1-benzamidopropan-2-yl)benzoate (I-2), mixture of isomers (7:1):

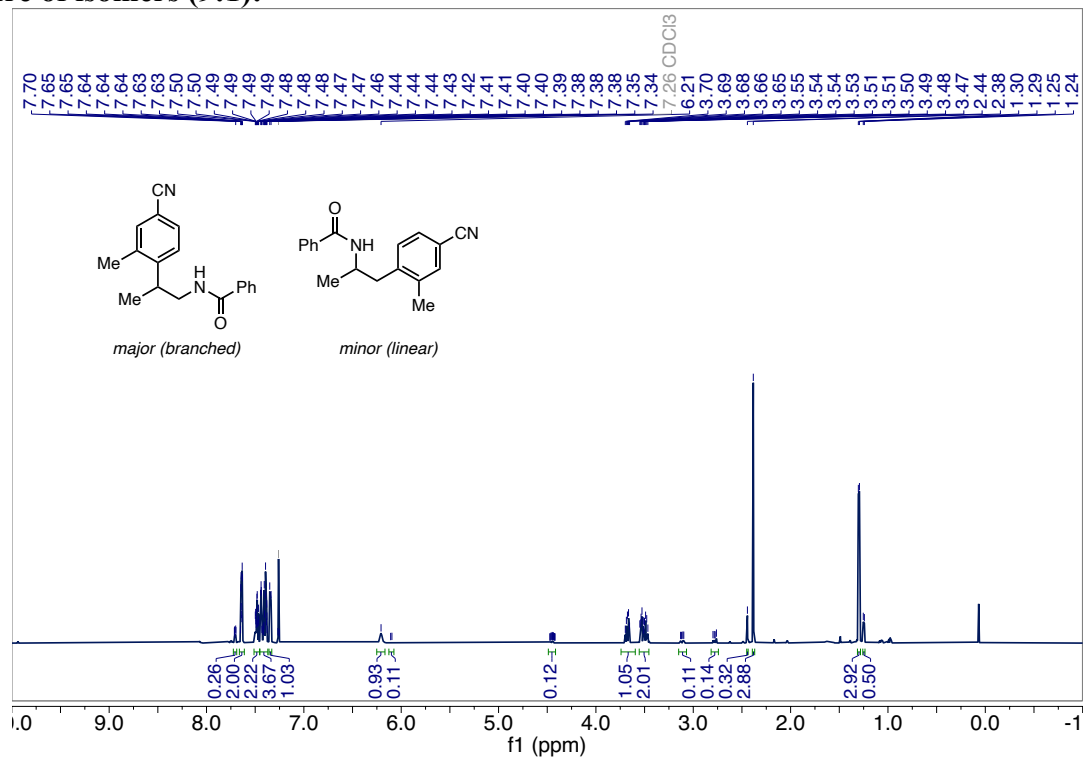


HMBC (600 MHz, CDCl₃) of methyl 2-amino-4-(1-benzamidopropan-2-yl)benzoate (I-2), mixture of isomers (7:1):

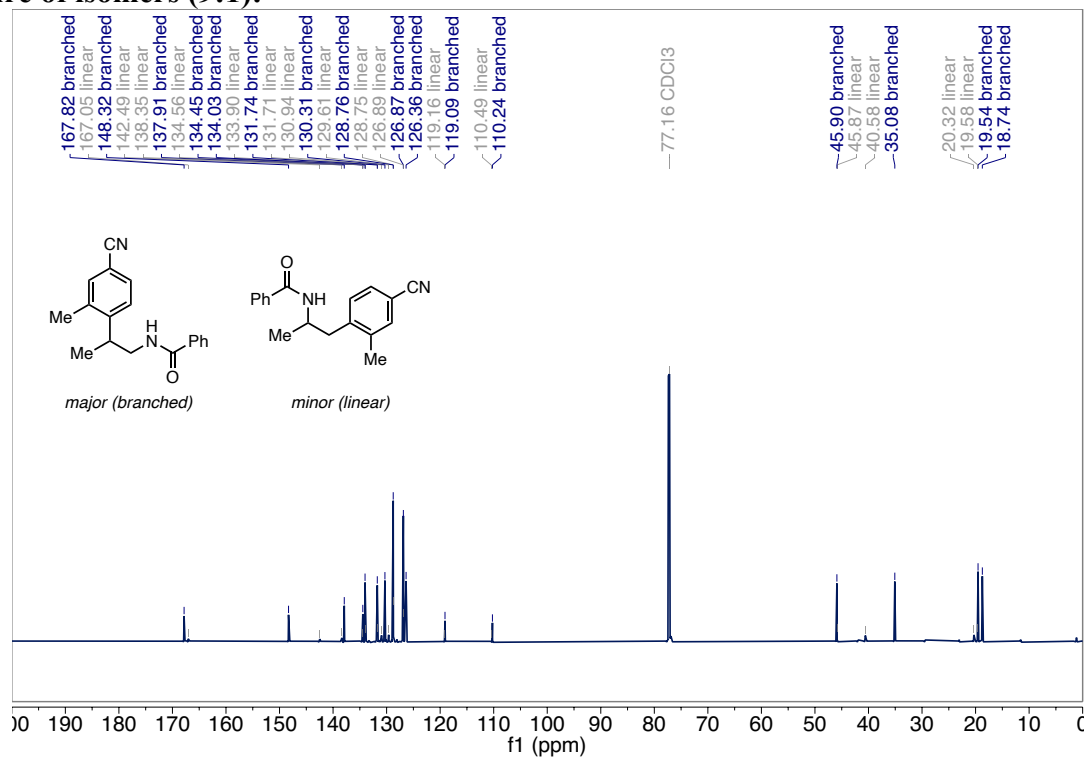


Only correlations necessary to establish branched/linear connectivity are identified.

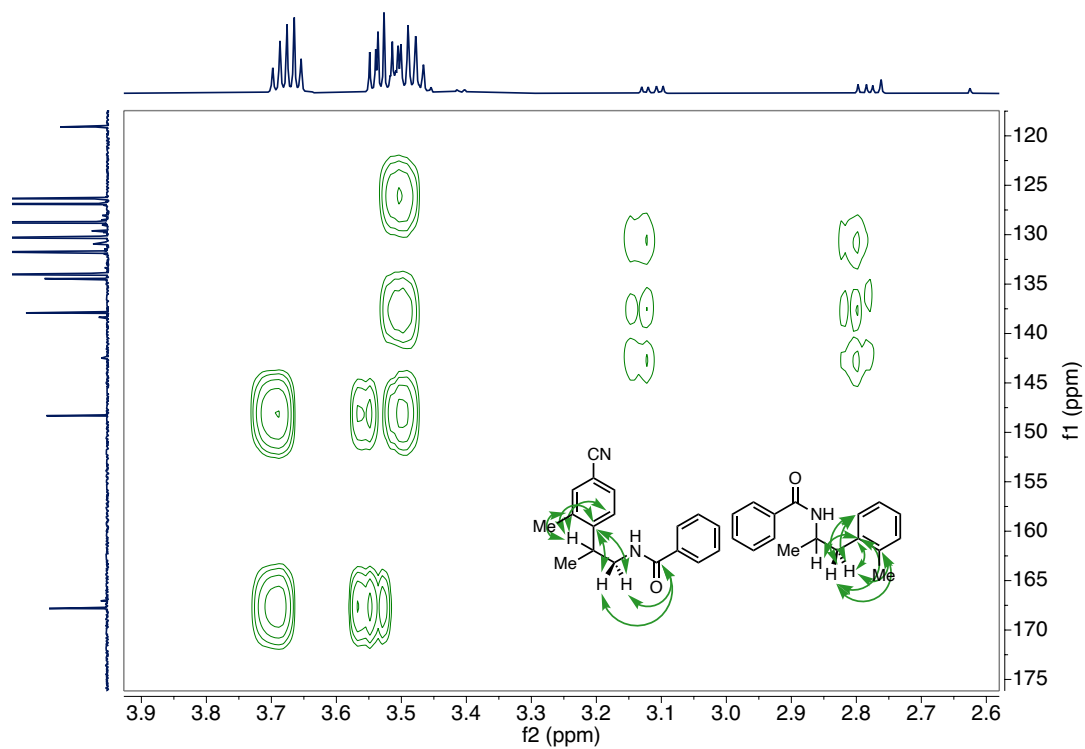
^1H NMR (600 MHz, CDCl_3) of *N*-(2-(4-cyano-2-methylphenyl)propyl)benzamide (L-2), mixture of isomers (9:1):



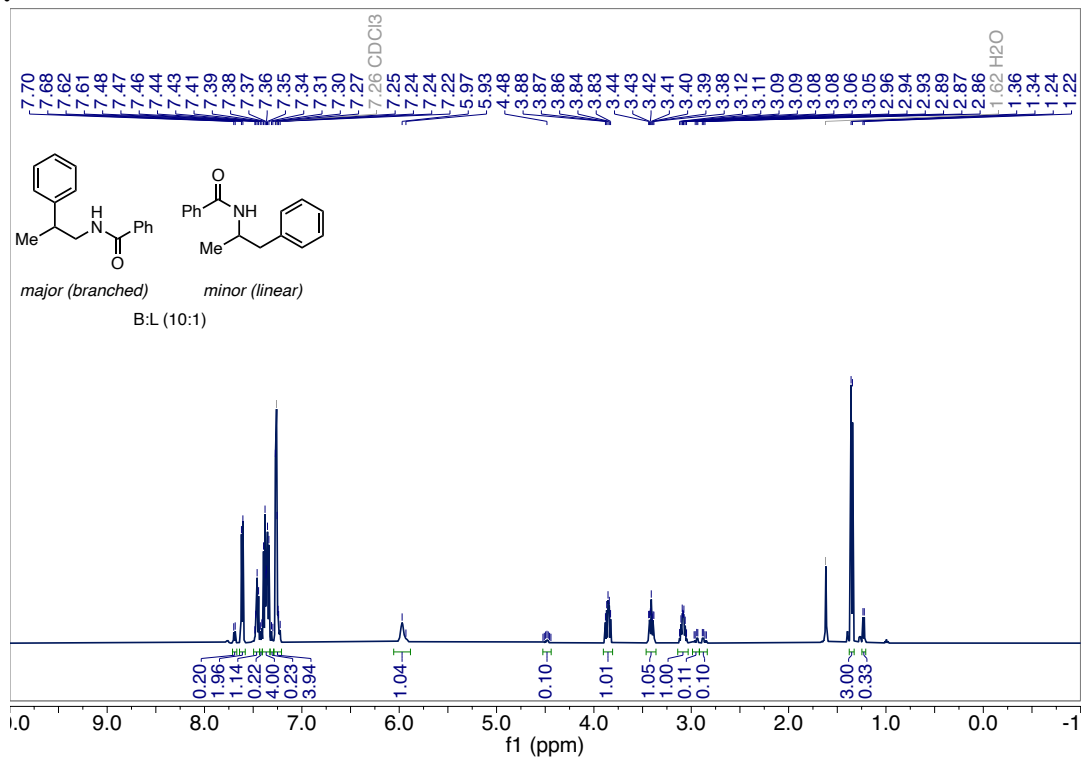
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2-(4-cyano-2-methylphenyl)propyl)benzamide (L-2), mixture of isomers (9:1):



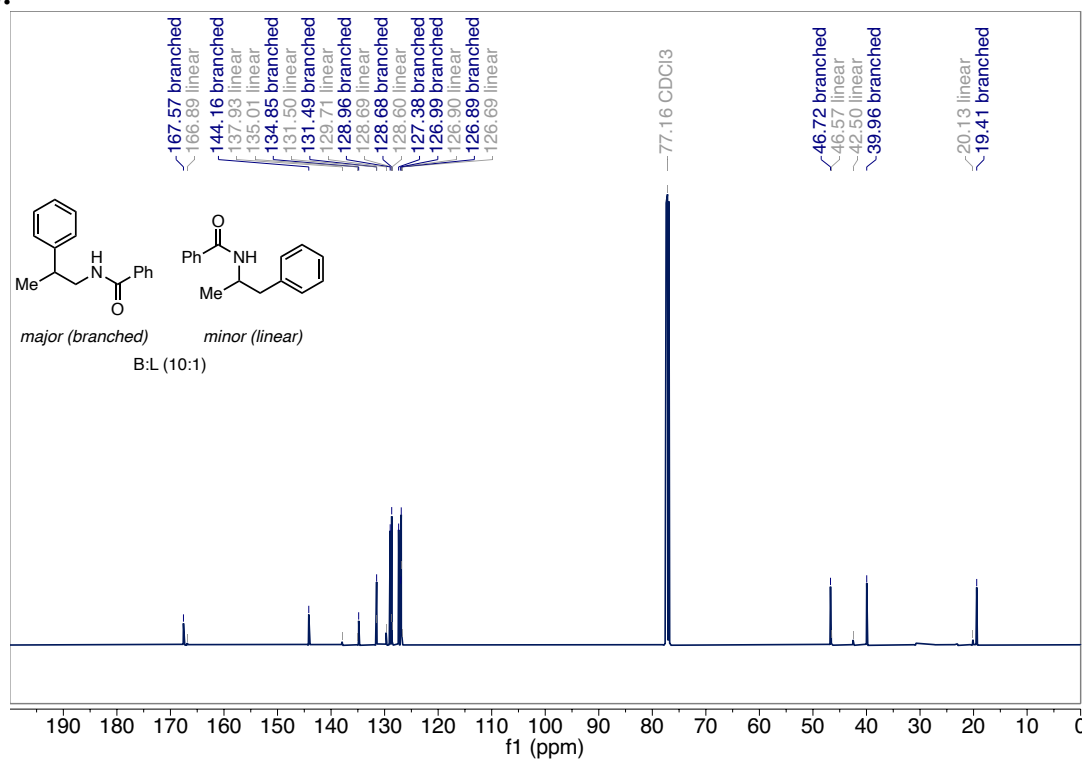
HMBC (600 MHz, CDCl₃) of *N*-(2-(4-cyano-2-methylphenyl)propyl)benzamide (L-2), mixture of isomers (9:1):



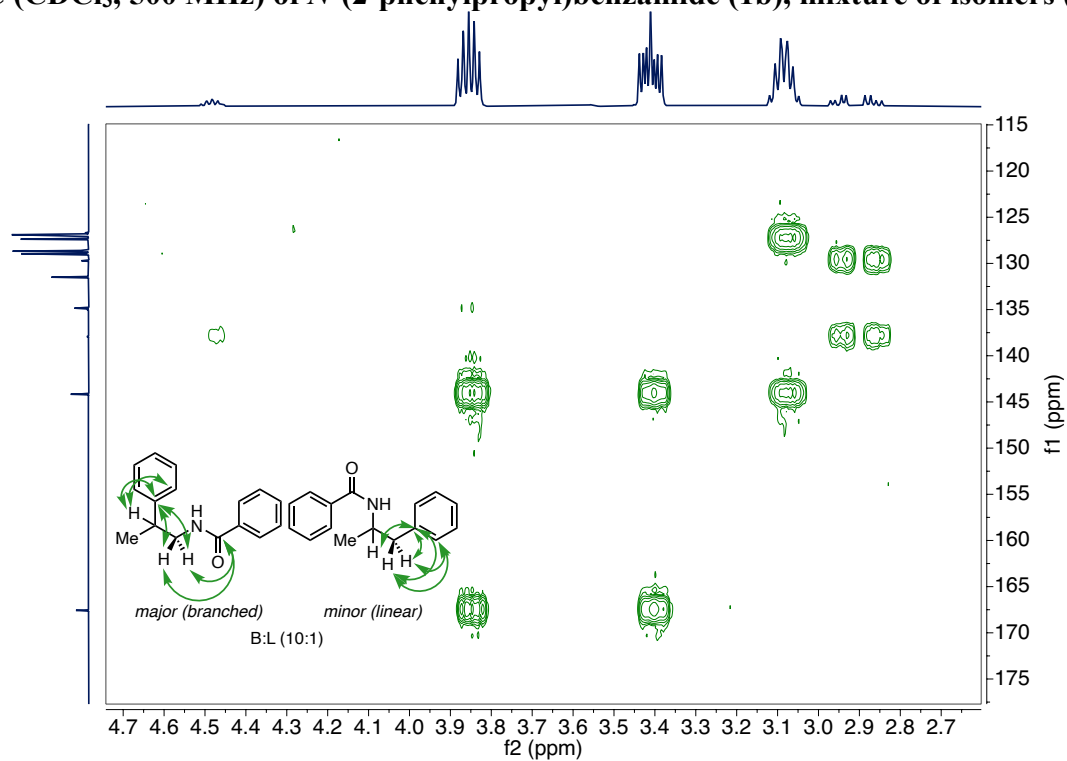
^1H NMR (500 MHz, CDCl_3) of *N*-(2-phenylpropyl)benzamide (1b), mixture of isomers (10:1):



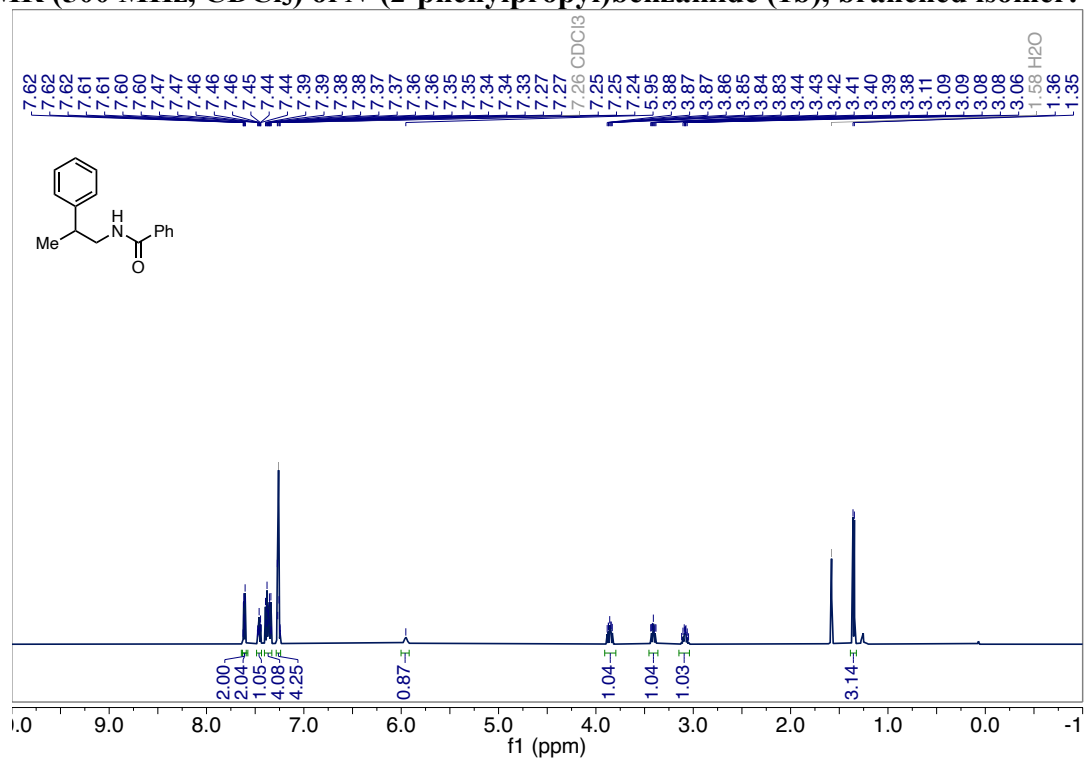
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-phenylpropyl)benzamide (1b), mixture of isomers (10:1):



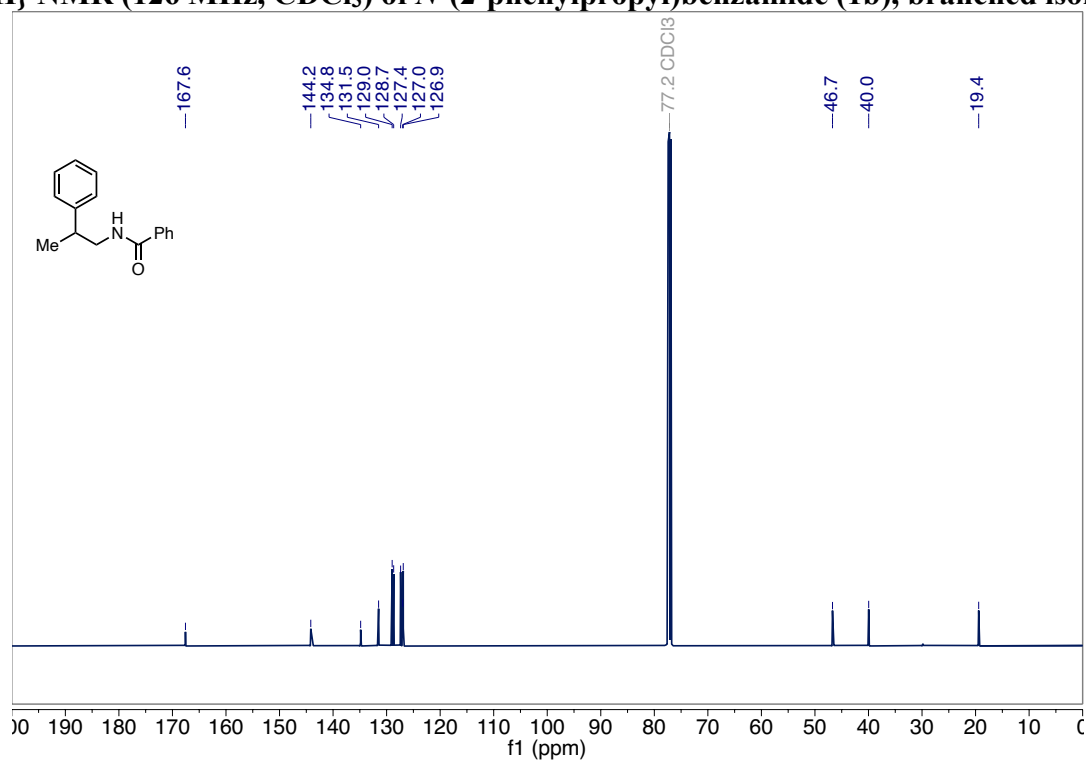
HMBC (CDCl₃, 500 MHz) of *N*-(2-phenylpropyl)benzamide (1b), mixture of isomers (10:1):



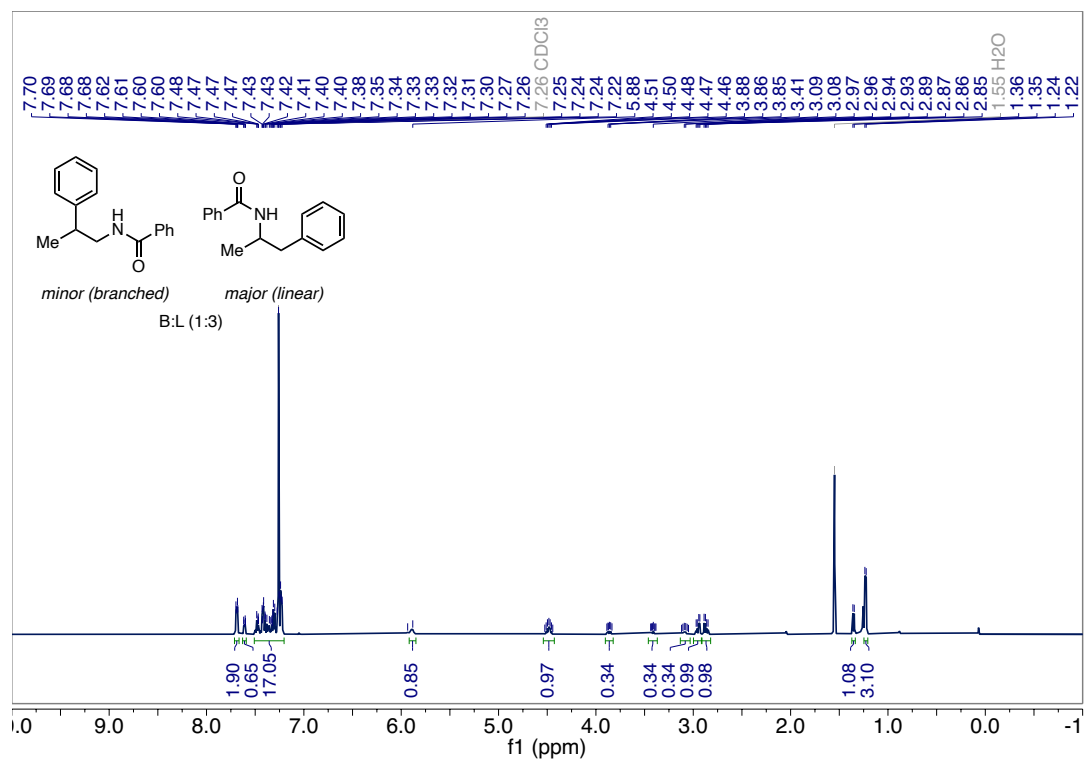
¹H NMR (500 MHz, CDCl₃) of *N*-(2-phenylpropyl)benzamide (1b), branched isomer:



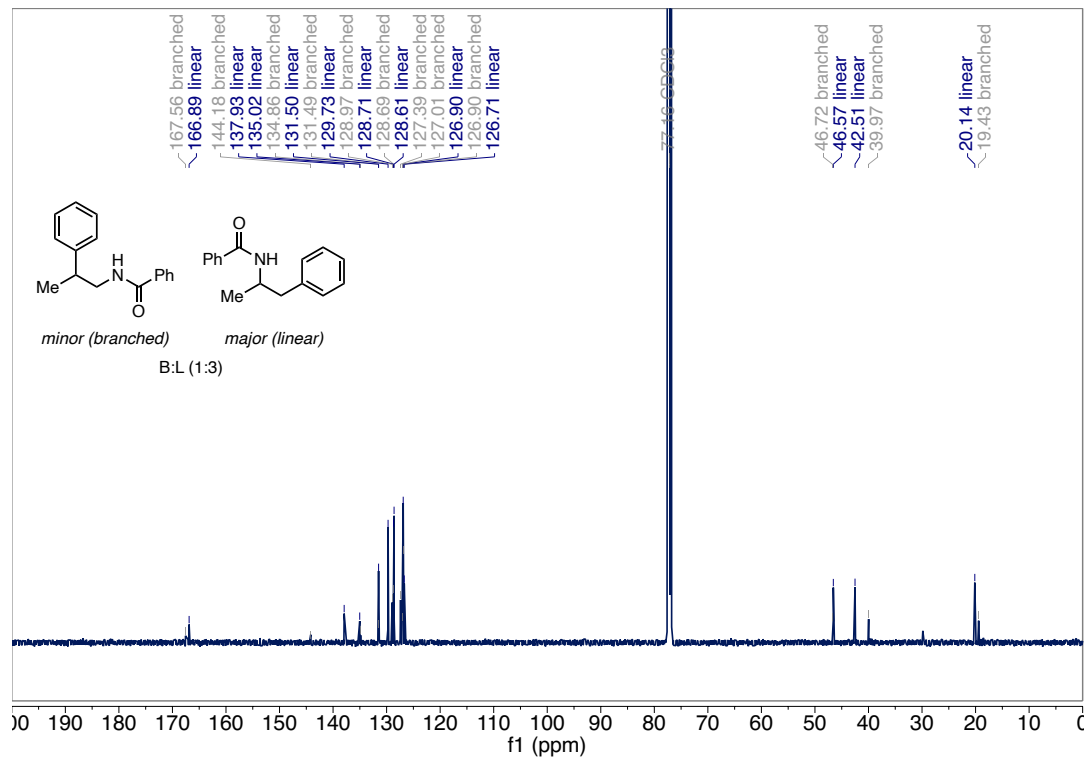
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-phenylpropyl)benzamide (1b), branched isomer:



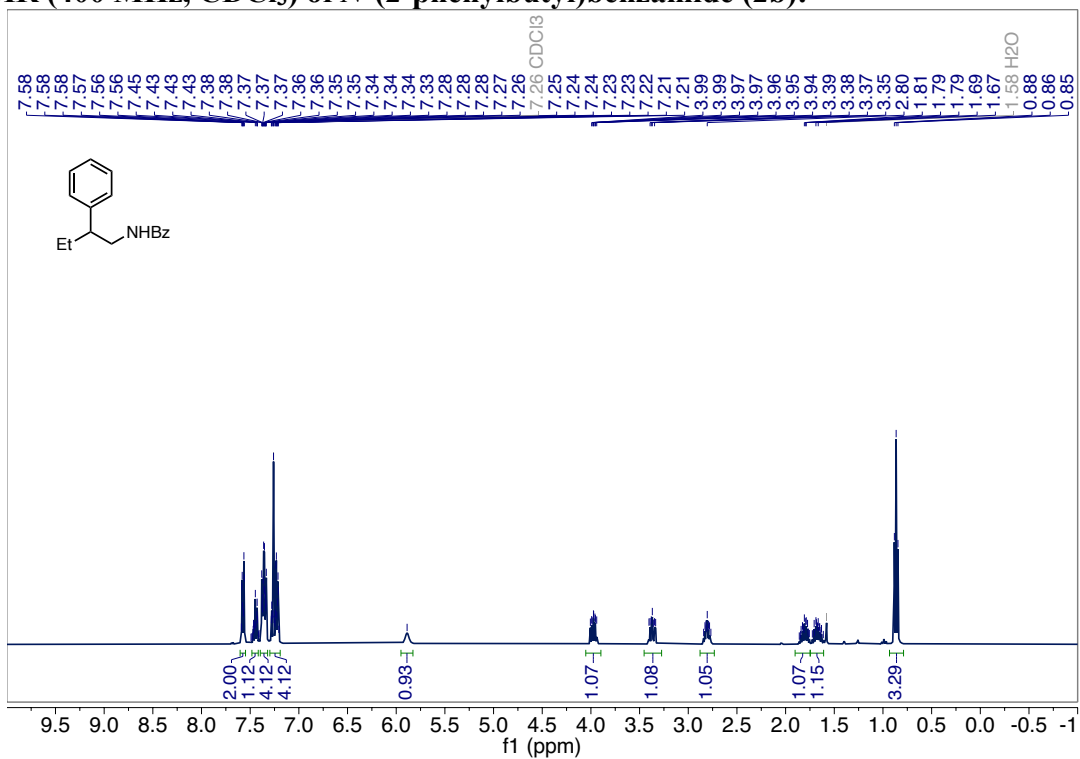
^1H NMR (500 MHz, CDCl_3) of *N*-(2-phenylpropyl)benzamide (1b), mixture of isomers (1:3):



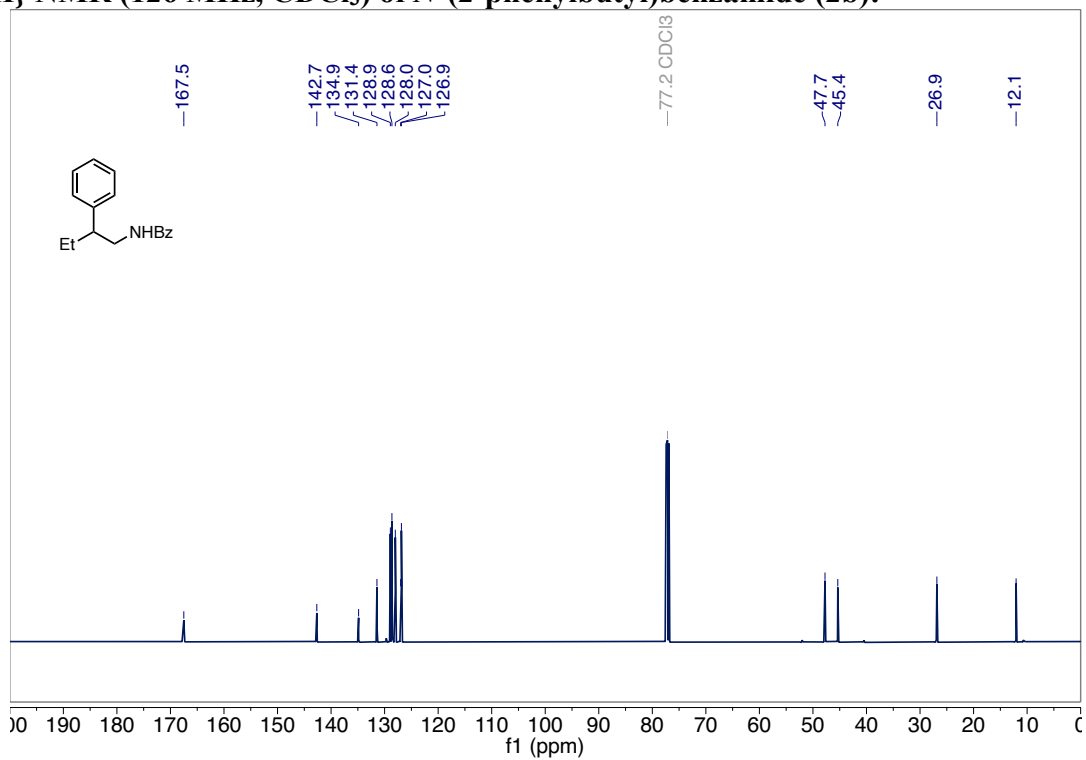
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-phenylpropyl)benzamide (1b), mixture of isomers (1:3):



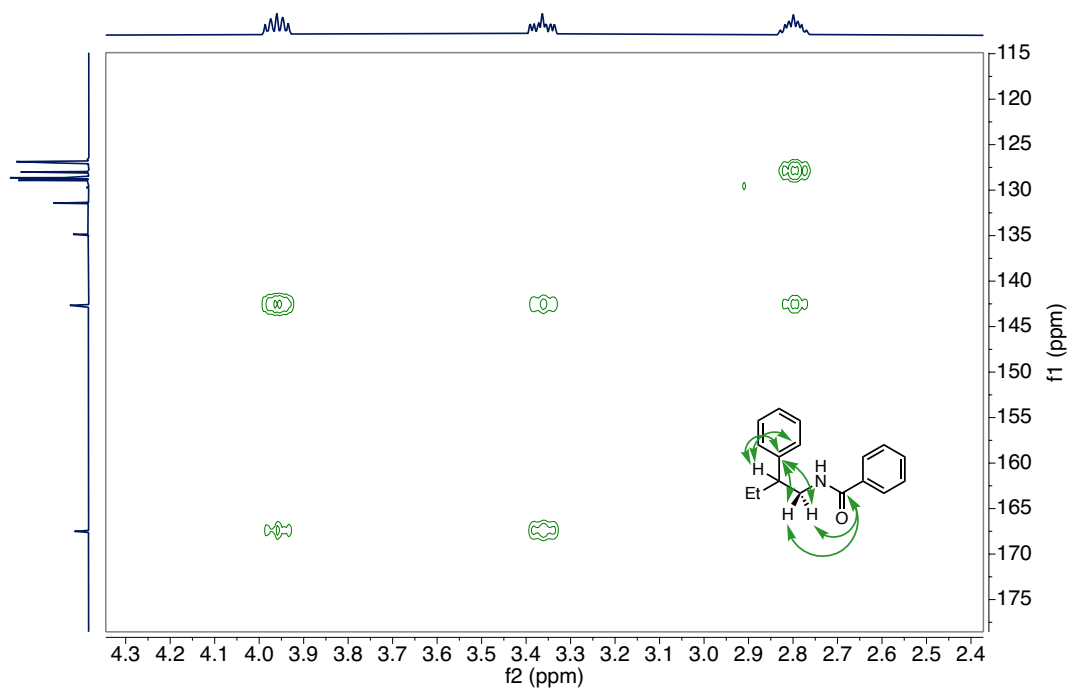
^1H NMR (400 MHz, CDCl_3) of *N*-(2-phenylbutyl)benzamide (2b):



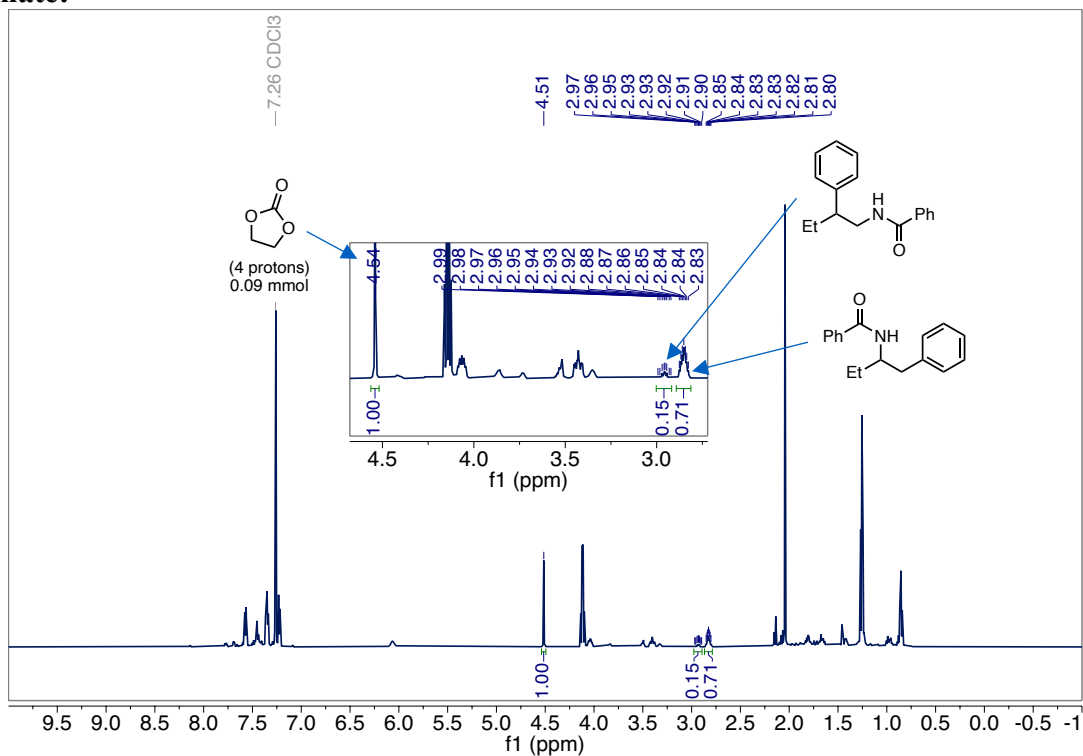
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-phenylbutyl)benzamide (2b):



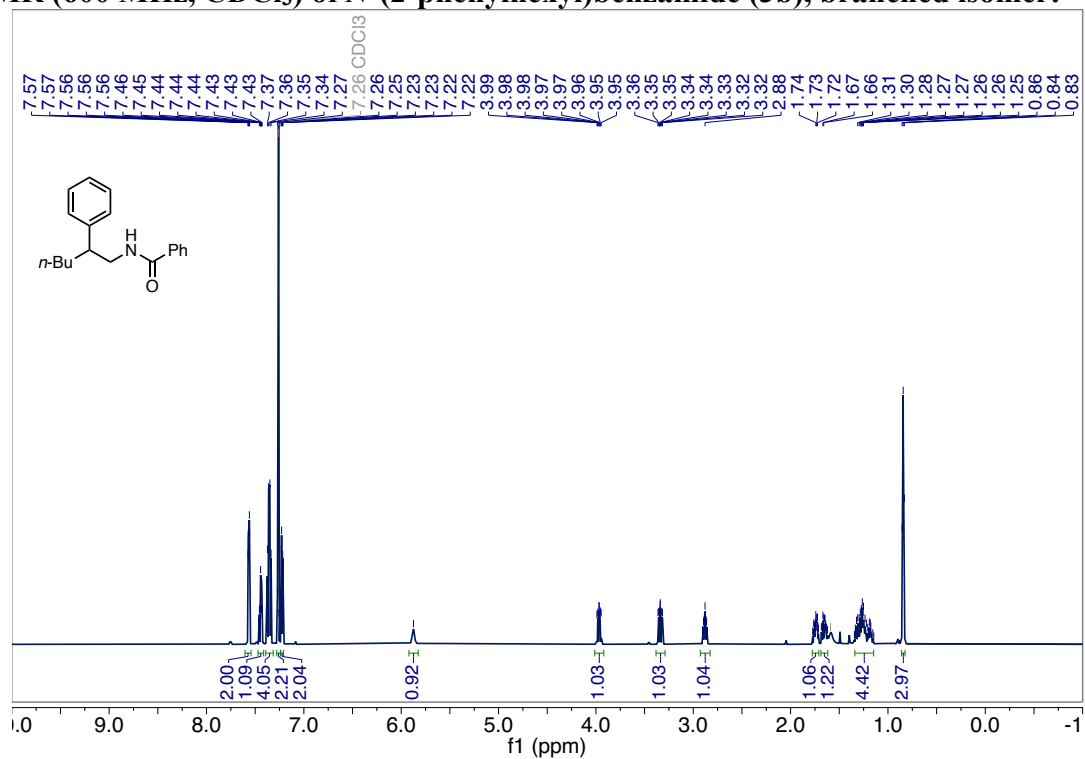
HMBC (CDCl₃, 500 MHz) of *N*-(2-phenylpropyl)benzamide (2b):



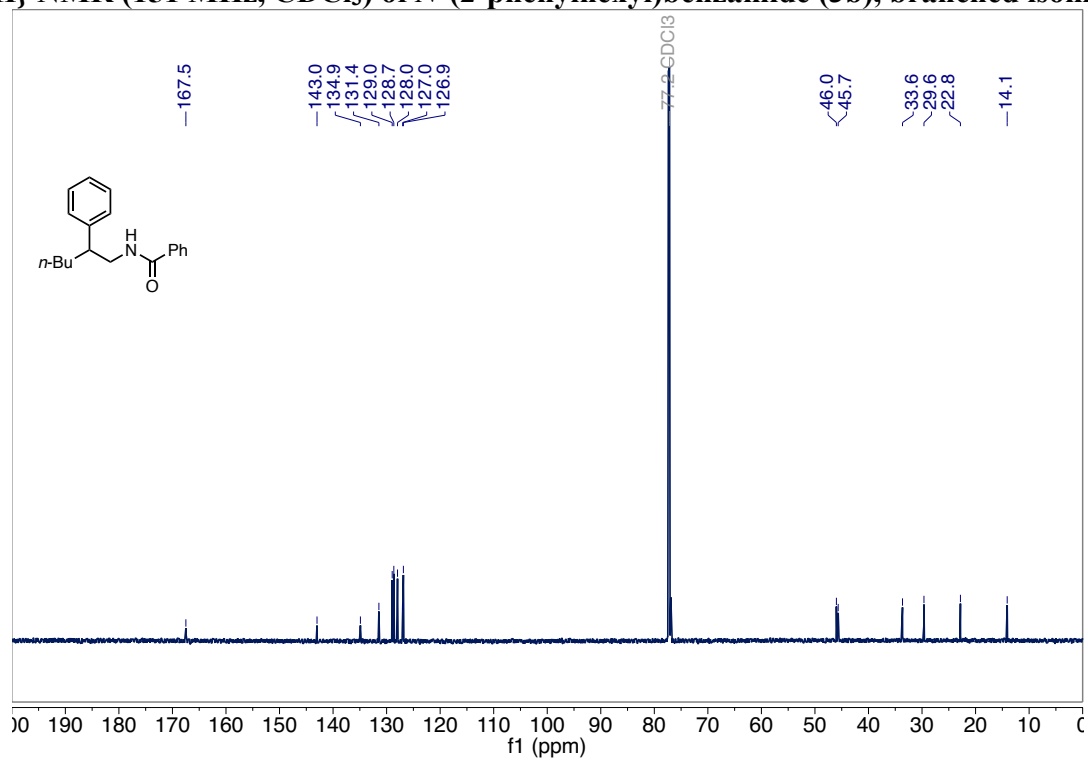
¹H NMR (600 MHz, CDCl₃) yield of *N*-(2-phenylbutyl)benzamide (2b) versus ethylene carbonate:



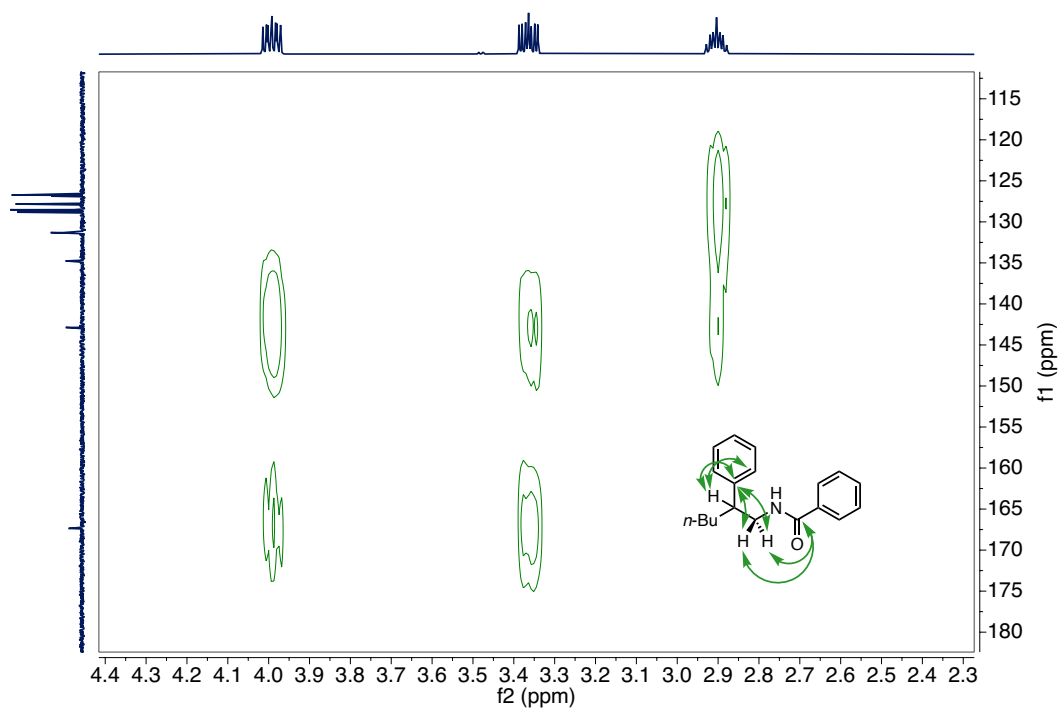
^1H NMR (600 MHz, CDCl_3) of *N*-(2-phenylhexyl)benzamide (3b), branched isomer:



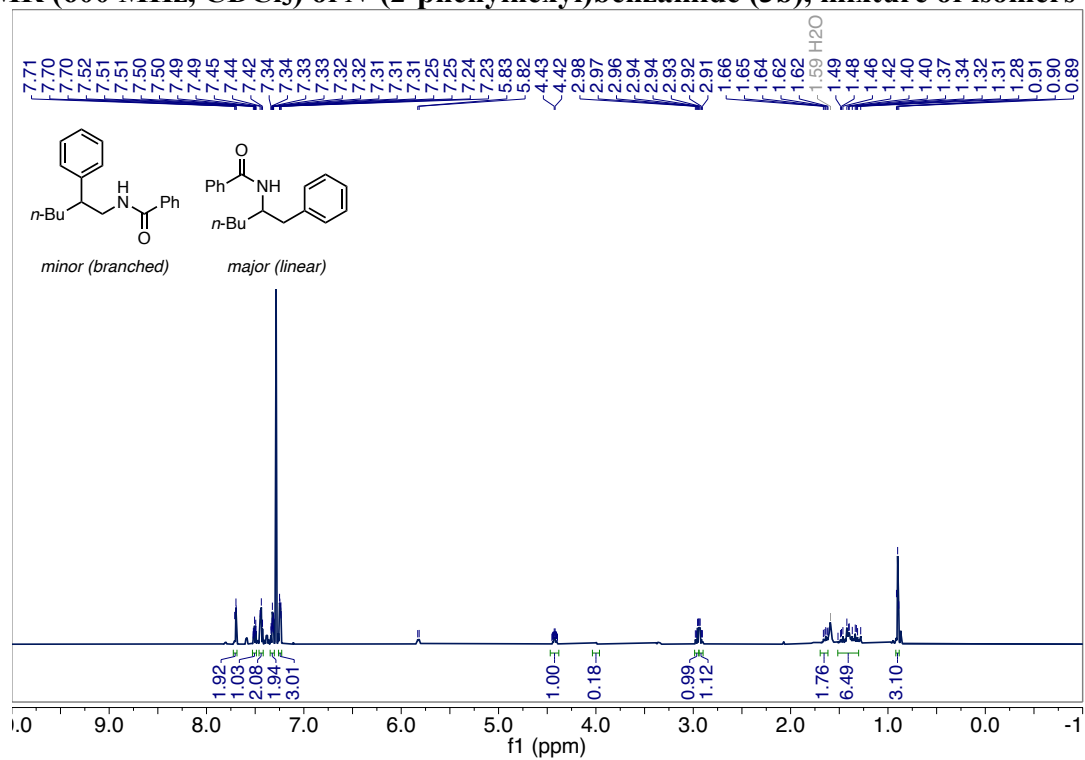
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2-phenylhexyl)benzamide (3b), branched isomer:



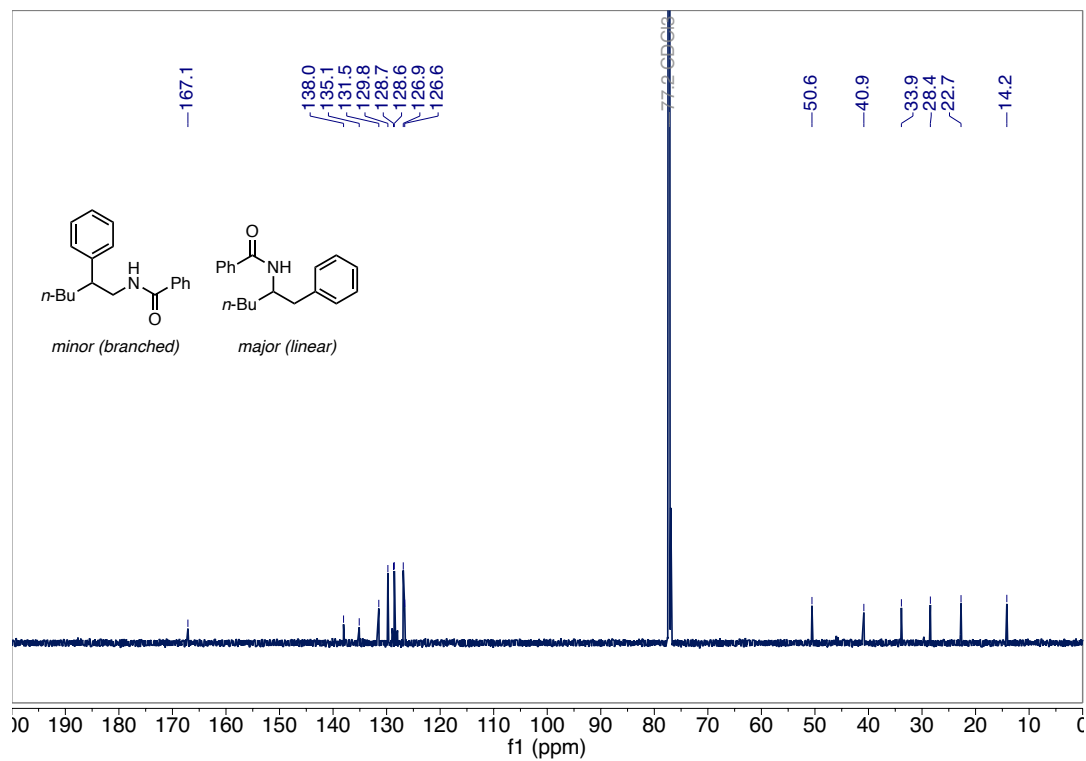
HMBC (600 MHz, CDCl₃) of *N*-(2-phenylhexyl)benzamide (3b), branched isomer:



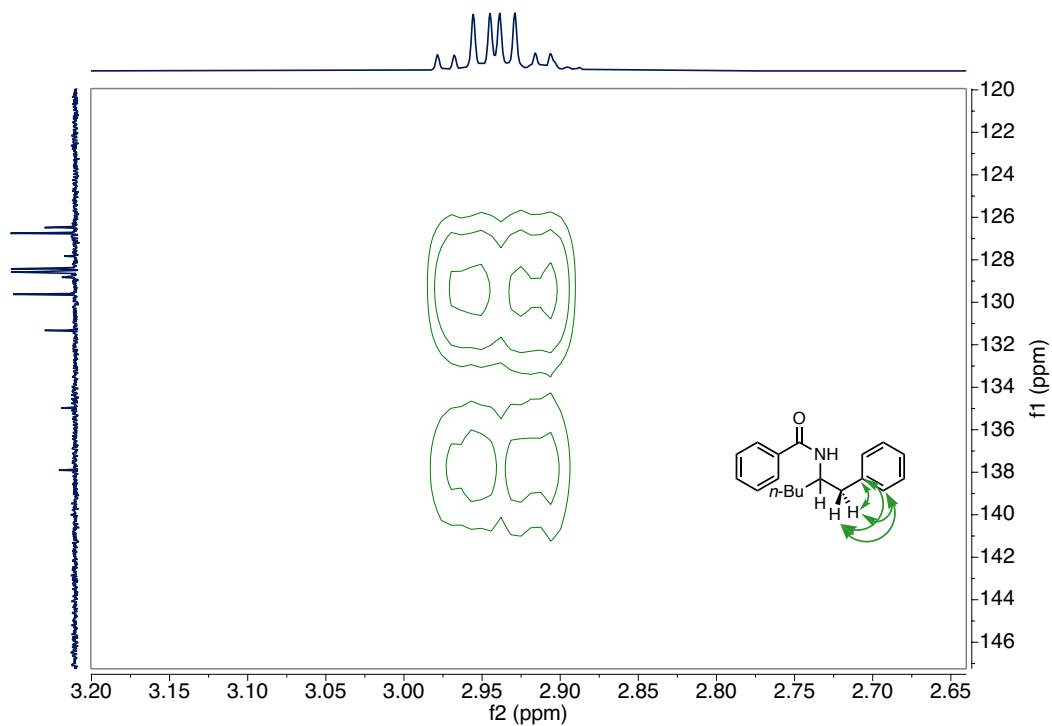
¹H NMR (600 MHz, CDCl₃) of *N*-(2-phenylhexyl)benzamide (3b), mixture of isomers (1:5):



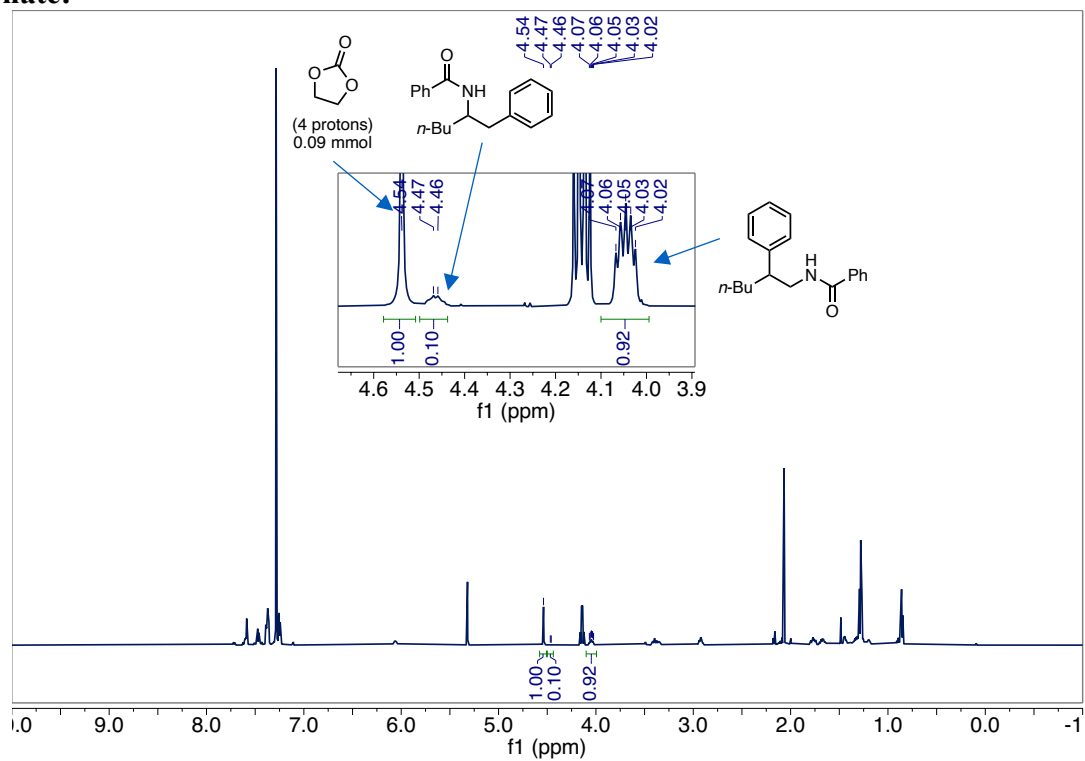
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2-phenylhexyl)benzamide (3b), mixture of isomers (1:5):



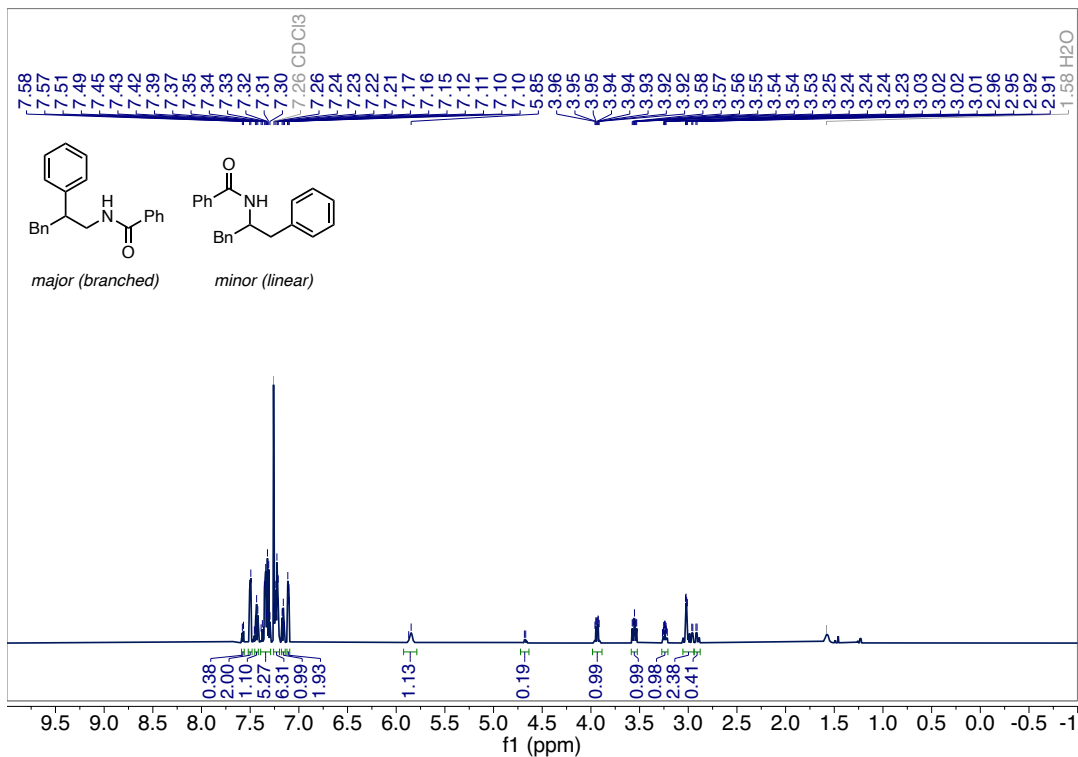
HMBC (600 MHz, CDCl_3) of *N*-(2-phenylhexyl)benzamide (3b), mixture of isomers (1:5):



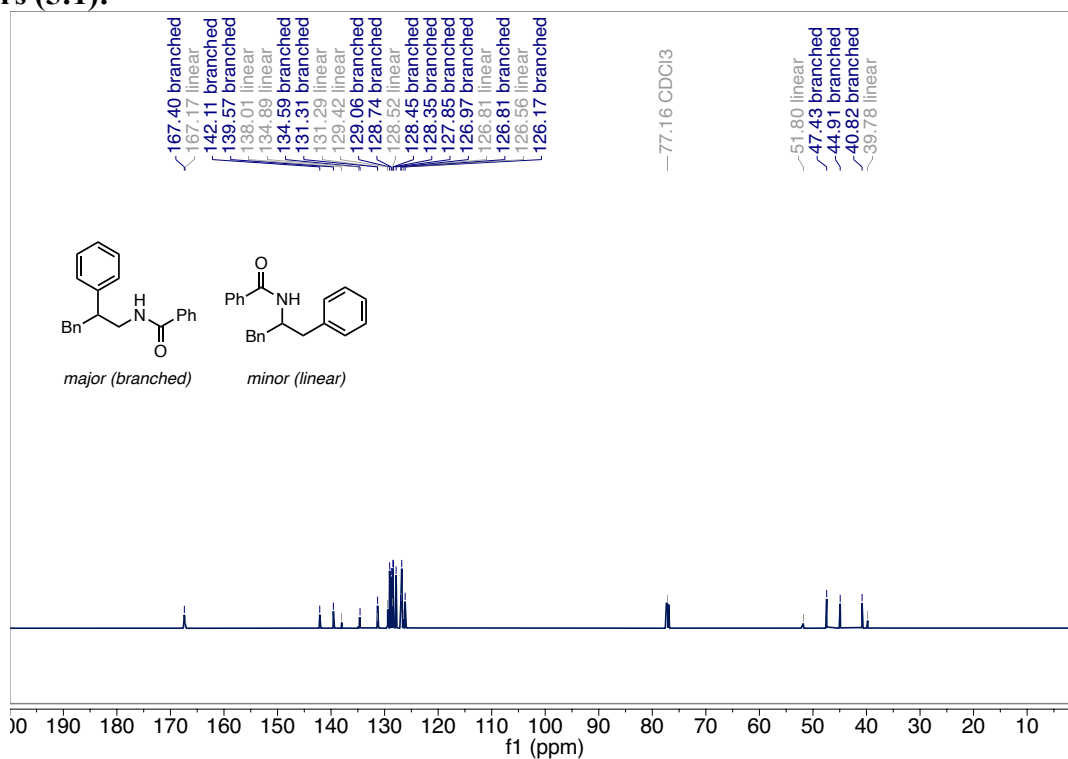
¹H NMR (600 MHz, CDCl₃) yield of *N*-(2-phenylhexyl)benzamide (3b) versus ethylene carbonate:



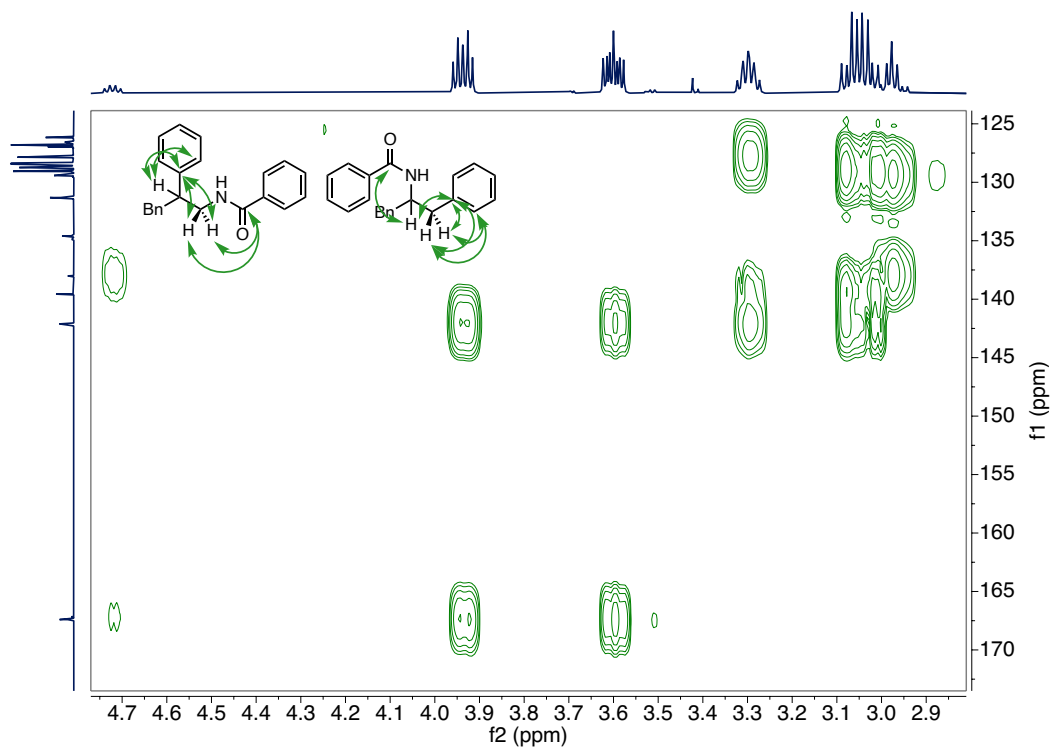
^1H NMR (600 MHz, CDCl_3) of *N*-(2,3-diphenylpropyl)benzamide (4b), mixture of isomers (5:1):



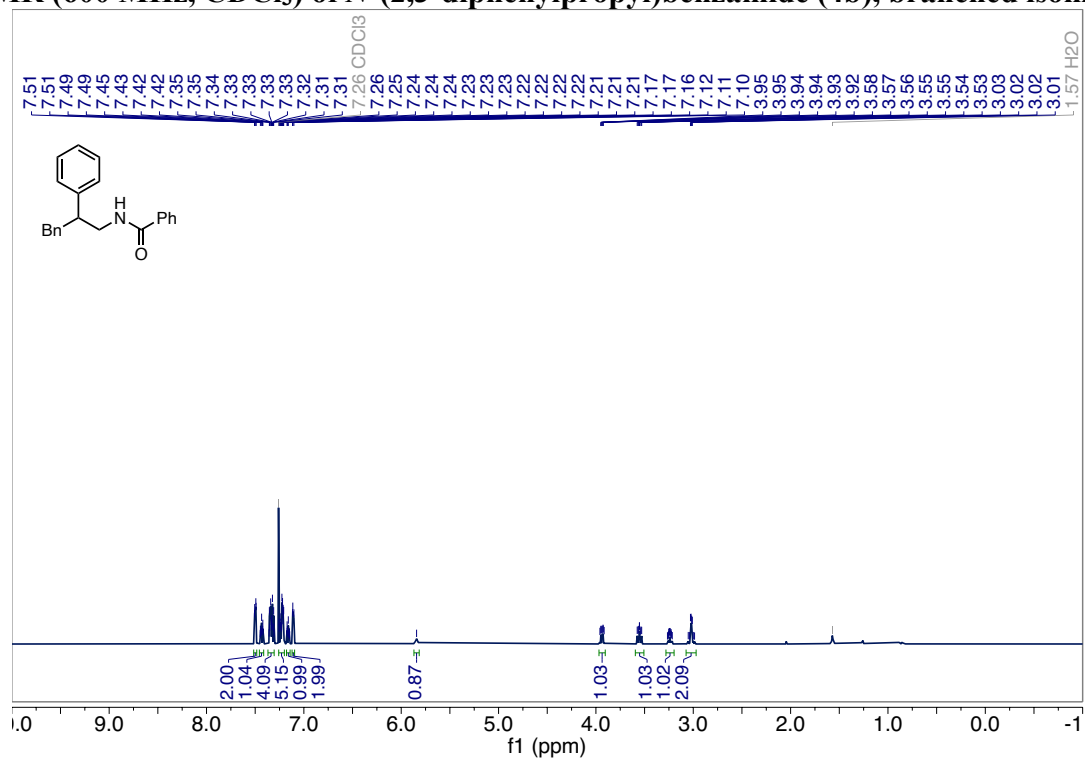
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2,3-diphenylpropyl)benzamide (4b), mixture of isomers (5:1):



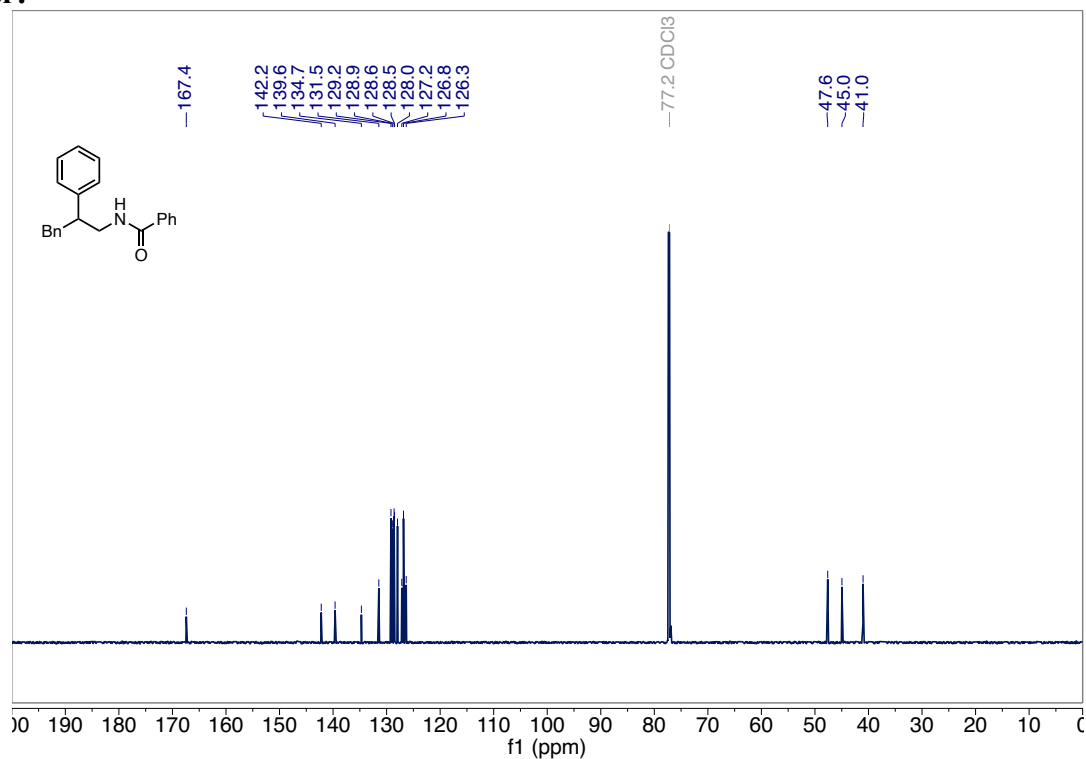
HMBC (600 MHz, CDCl₃) of *N*-(2,3-diphenylpropyl)benzamide (4b), mixture of isomers (5:1):



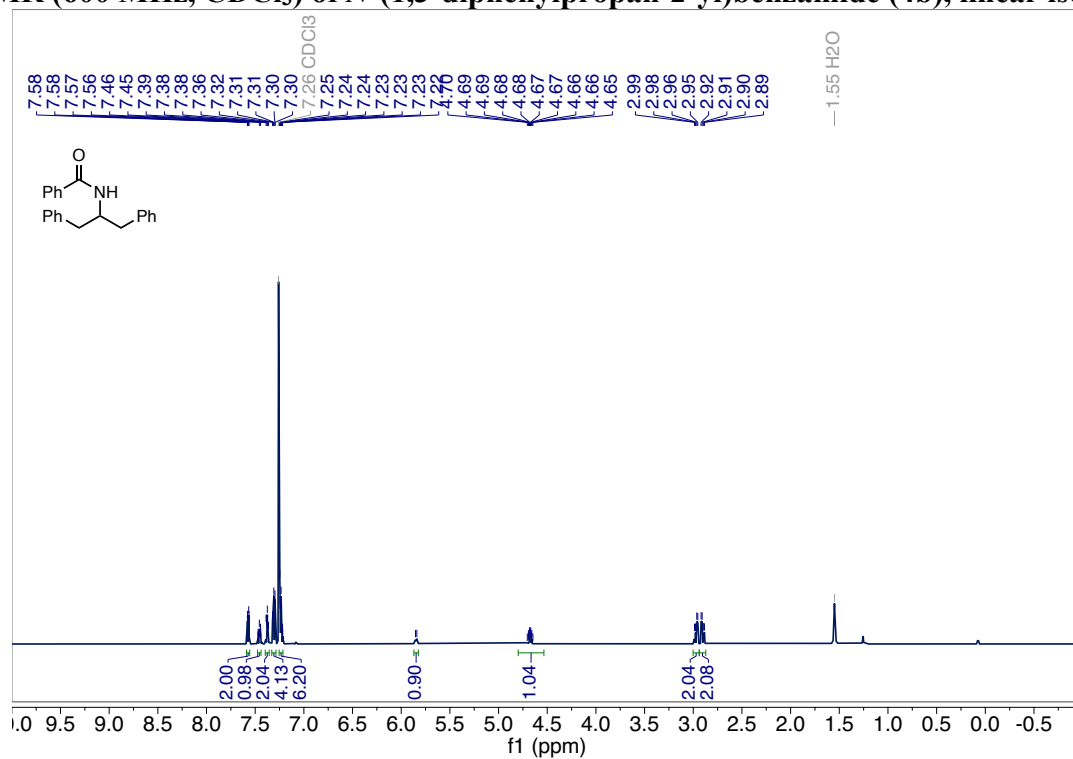
¹H NMR (600 MHz, CDCl₃) of *N*-(2,3-diphenylpropyl)benzamide (4b), branched isomer:



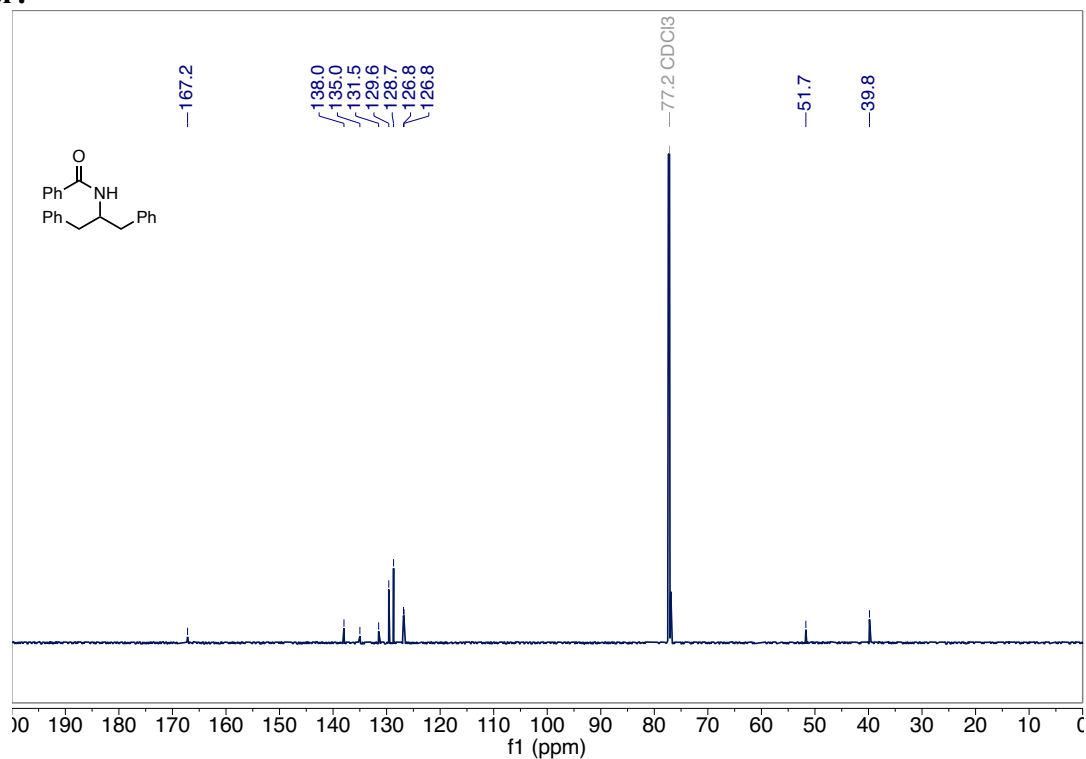
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2,3-diphenylpropyl)benzamide (4b), branched isomer:



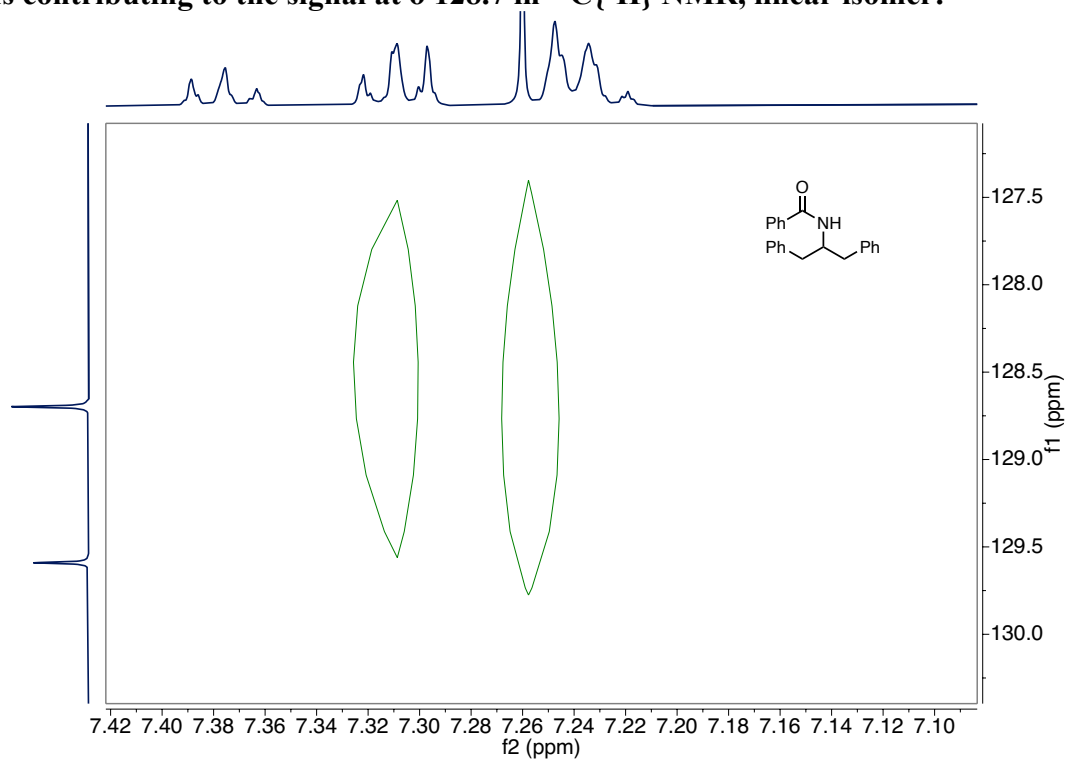
^1H NMR (600 MHz, CDCl_3) of *N*-(1,3-diphenylpropan-2-yl)benzamide (4b), linear isomer:



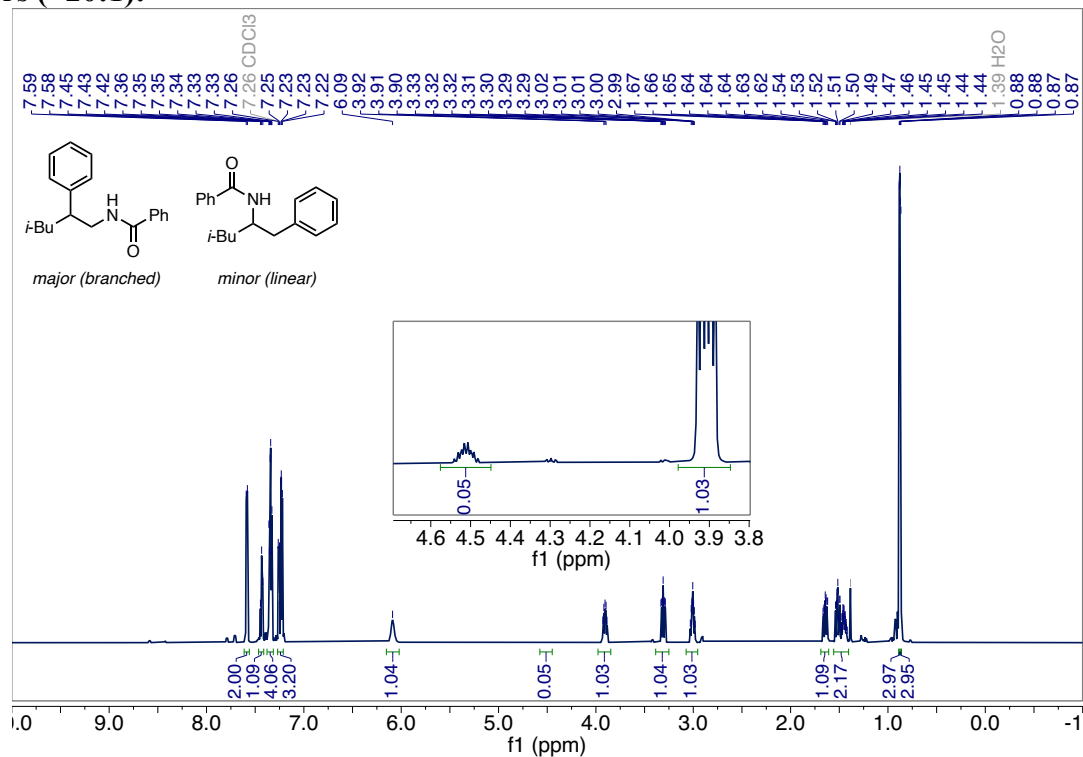
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(1,3-diphenylpropan-2-yl)benzamide (4b), linear isomer:



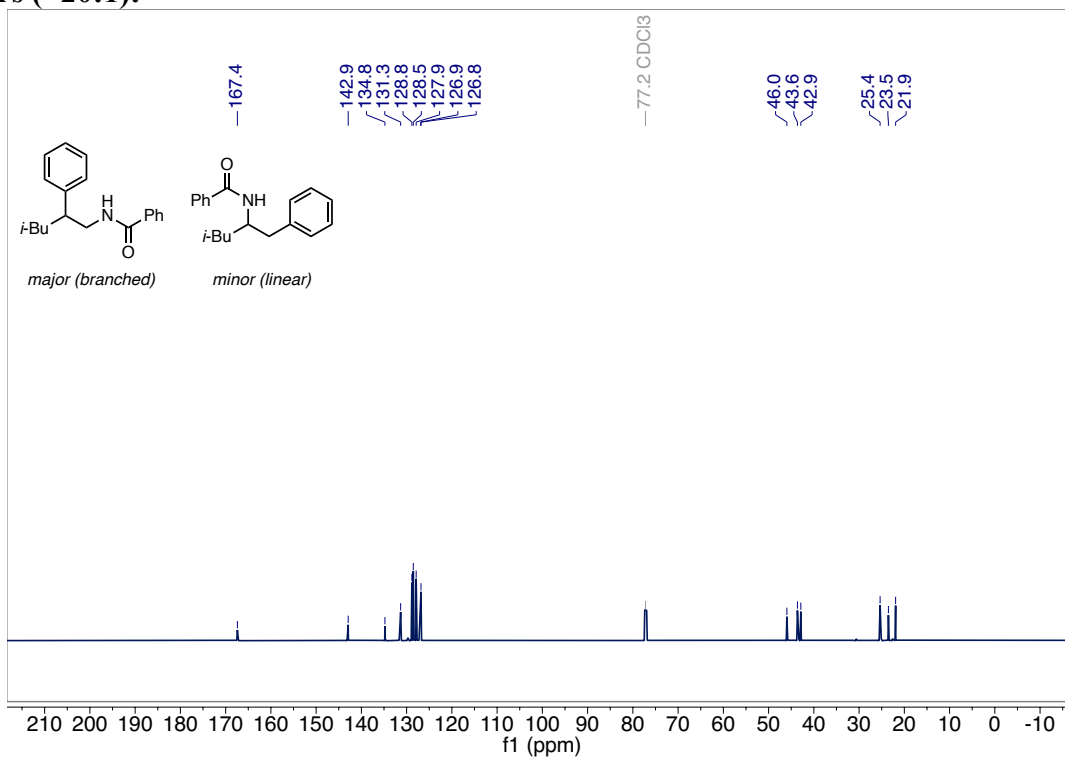
HSQC (600 MHz, CDCl_3) of *N*-(1,3-diphenylpropan-2-yl)benzamide (4b) to demonstrate two carbons contributing to the signal at δ 128.7 in $^{13}\text{C}\{^1\text{H}\}$ NMR, linear isomer:



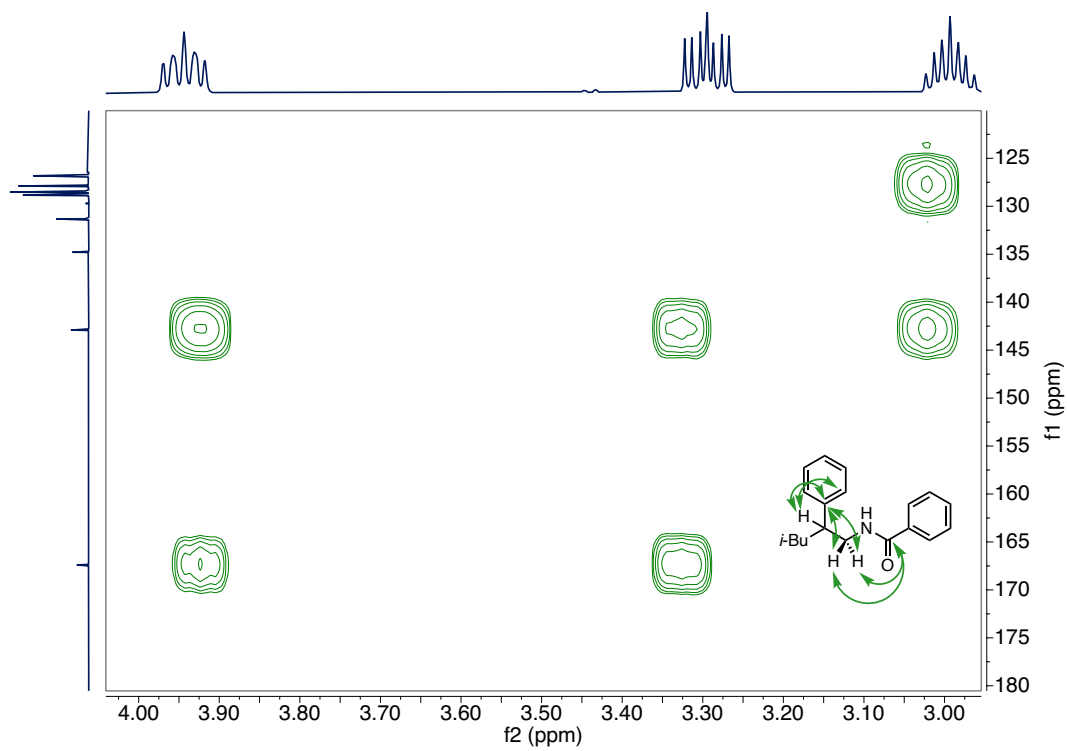
^1H NMR (600 MHz, CDCl_3) of N-(4-methyl-2-phenylpentyl)benzamide (5b), mixture of isomers (>20:1):



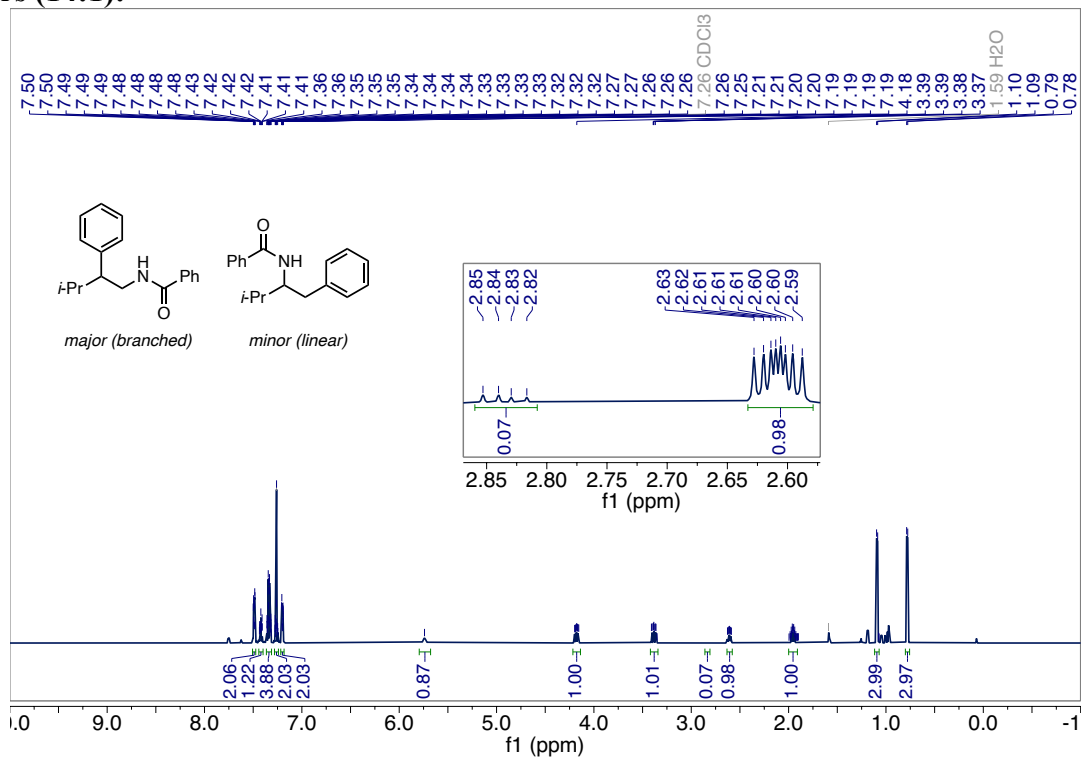
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of N-(4-methyl-2-phenylpentyl)benzamide (5b), mixture of isomers (>20:1):



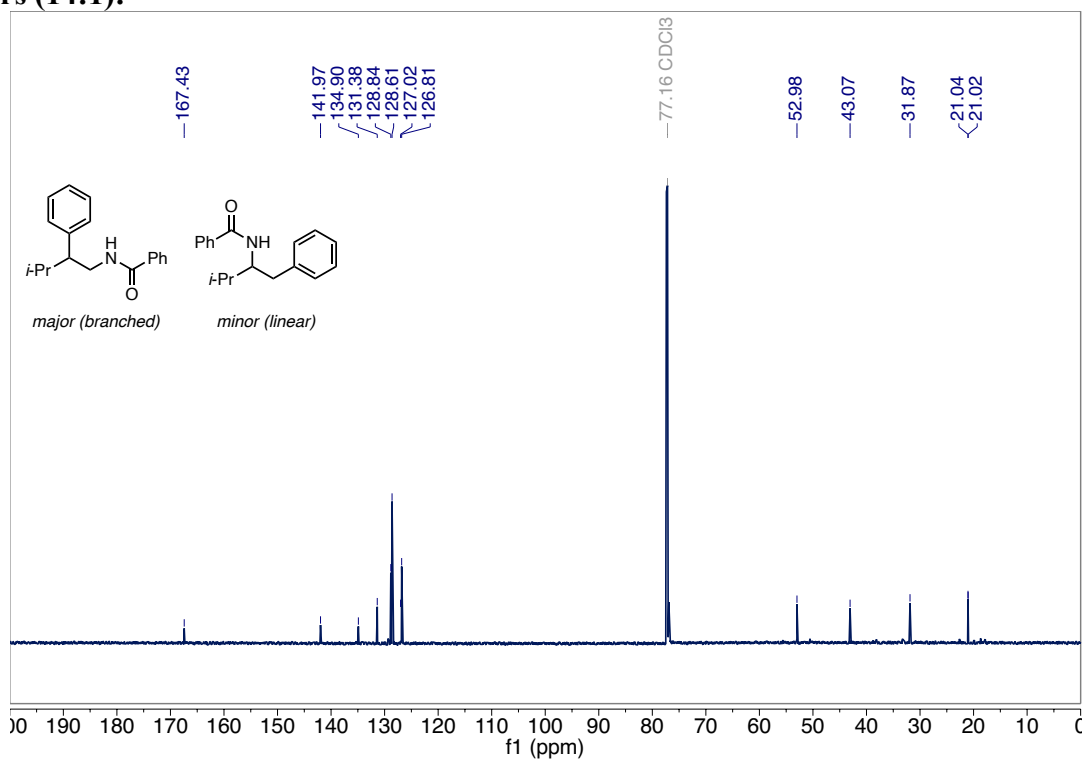
HMBC (600 MHz, CDCl₃) of N-(4-methyl-2-phenylpentyl)benzamide (5b), mixture of isomers (>20:1):



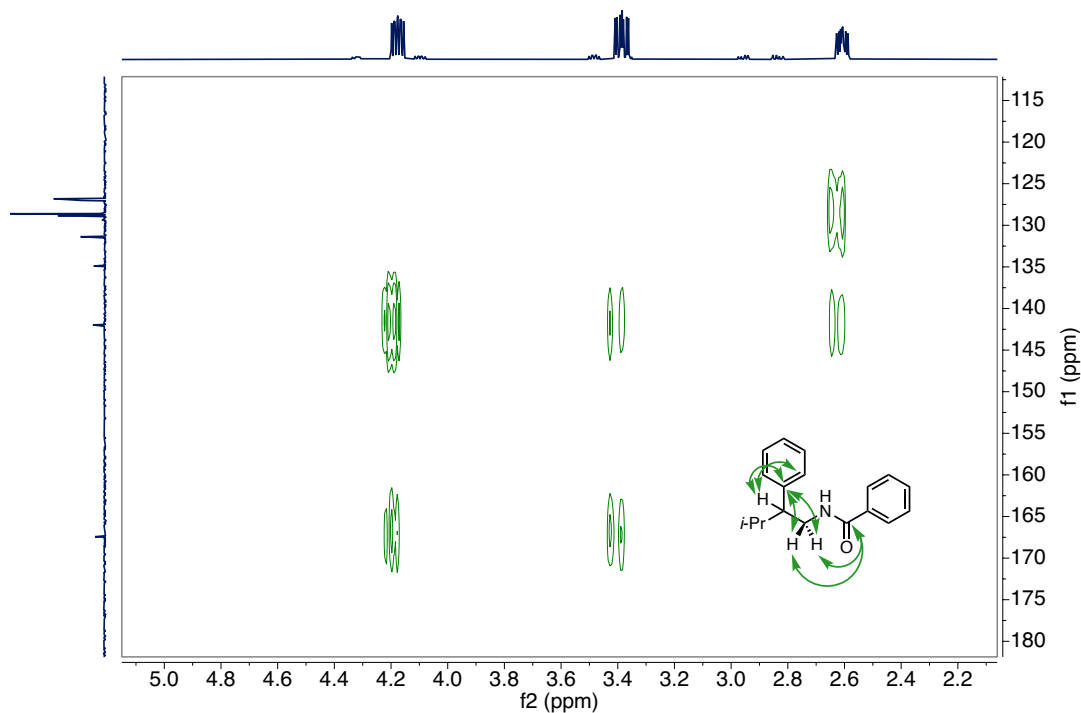
^1H NMR (600 MHz, CDCl_3) of *N*-(3-methyl-2-phenylbutyl)benzamide (6b), mixture of isomers (14:1):



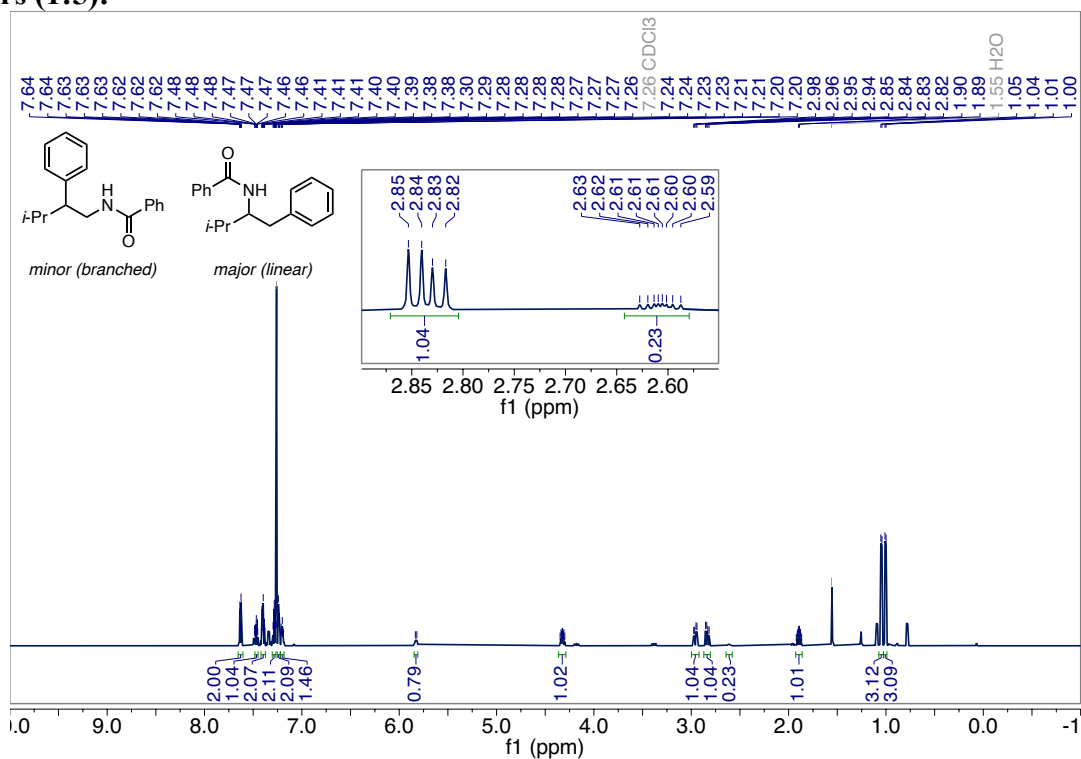
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(3-methyl-2-phenylbutyl)benzamide (6b), mixture of isomers (14:1):



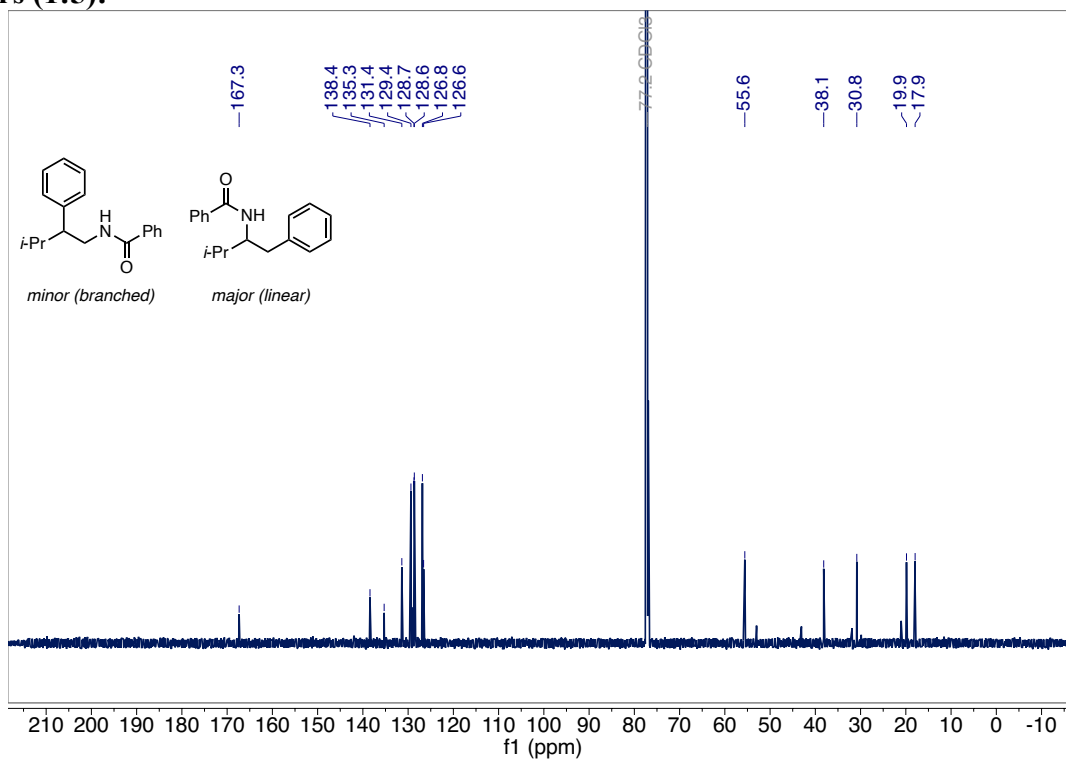
HMBC (600 MHz, CDCl₃) of *N*-(3-methyl-2-phenylbutyl)benzamide (6b), mixture of isomers (14:1):



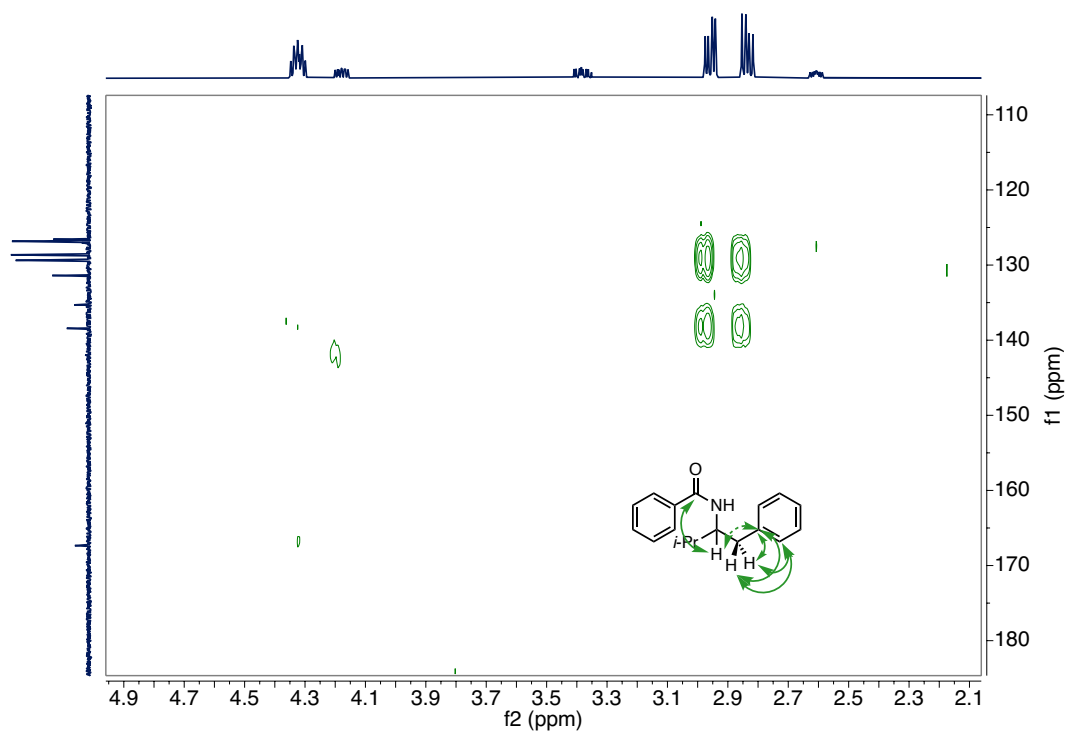
¹H NMR (600 MHz, CDCl₃) of *N*-(3-methyl-2-phenylbutyl)benzamide (6b), mixture of isomers (1:5):



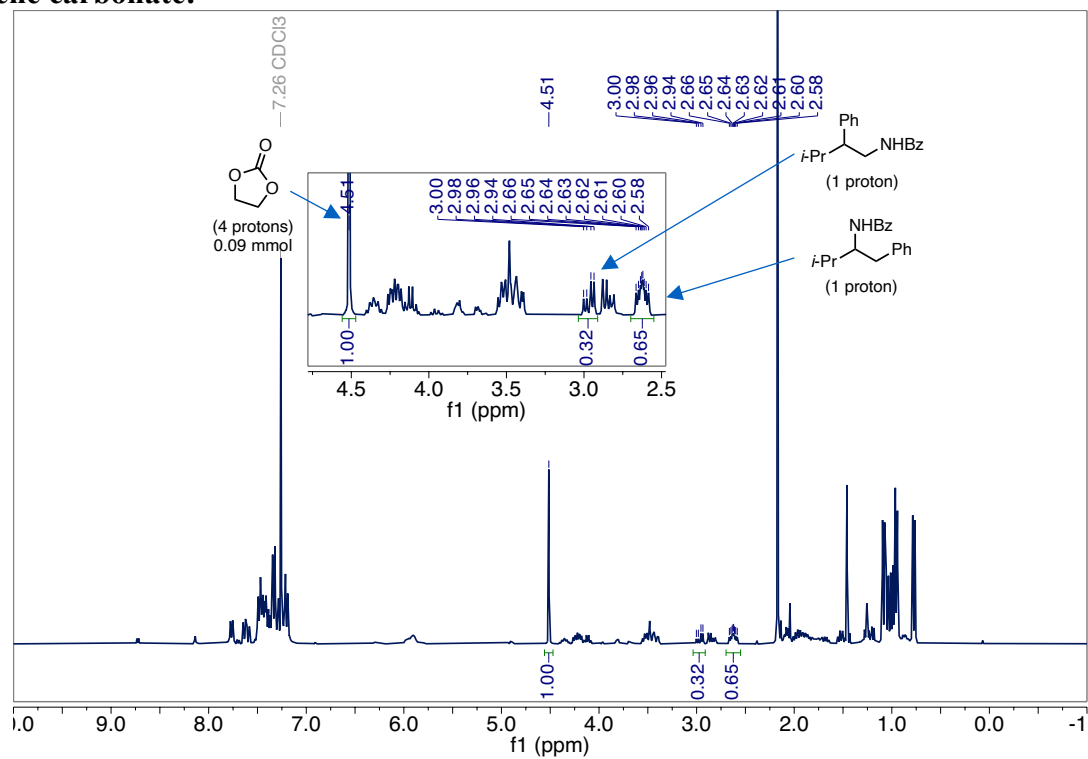
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(3-methyl-2-phenylbutyl)benzamide (6b), mixture of isomers (1:5):



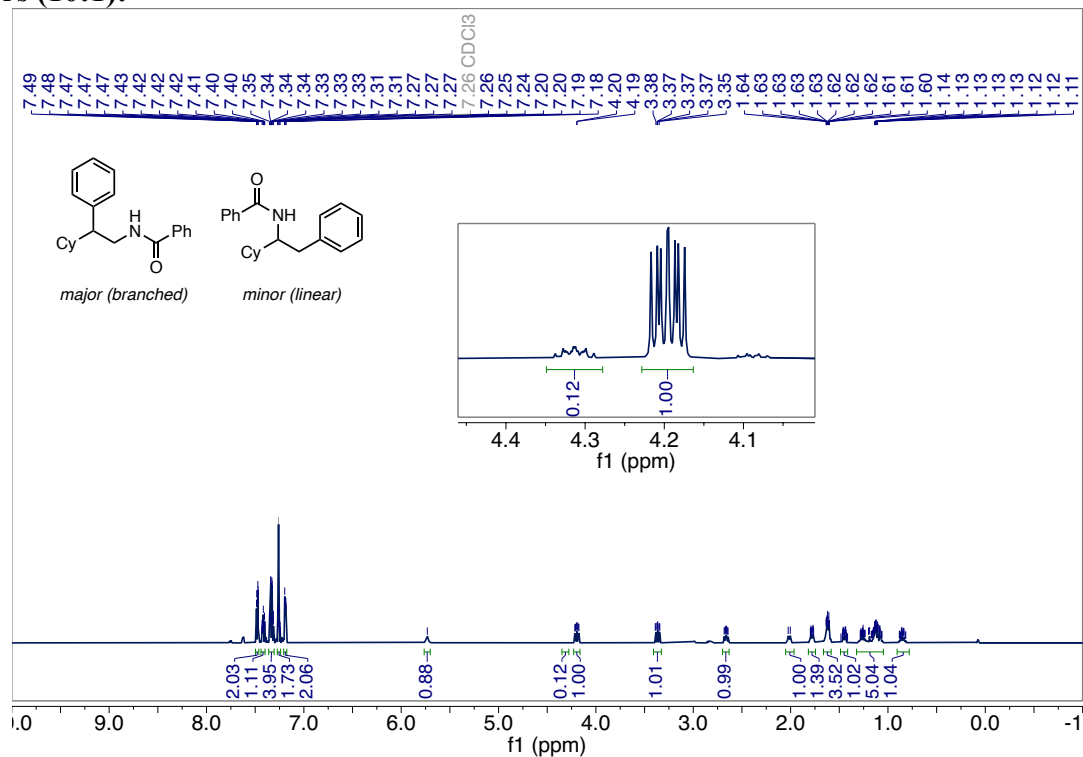
HMBC (600 MHz, CDCl_3) of *N*-(3-methyl-2-phenylbutyl)benzamide (6b), mixture of isomers (1:5):



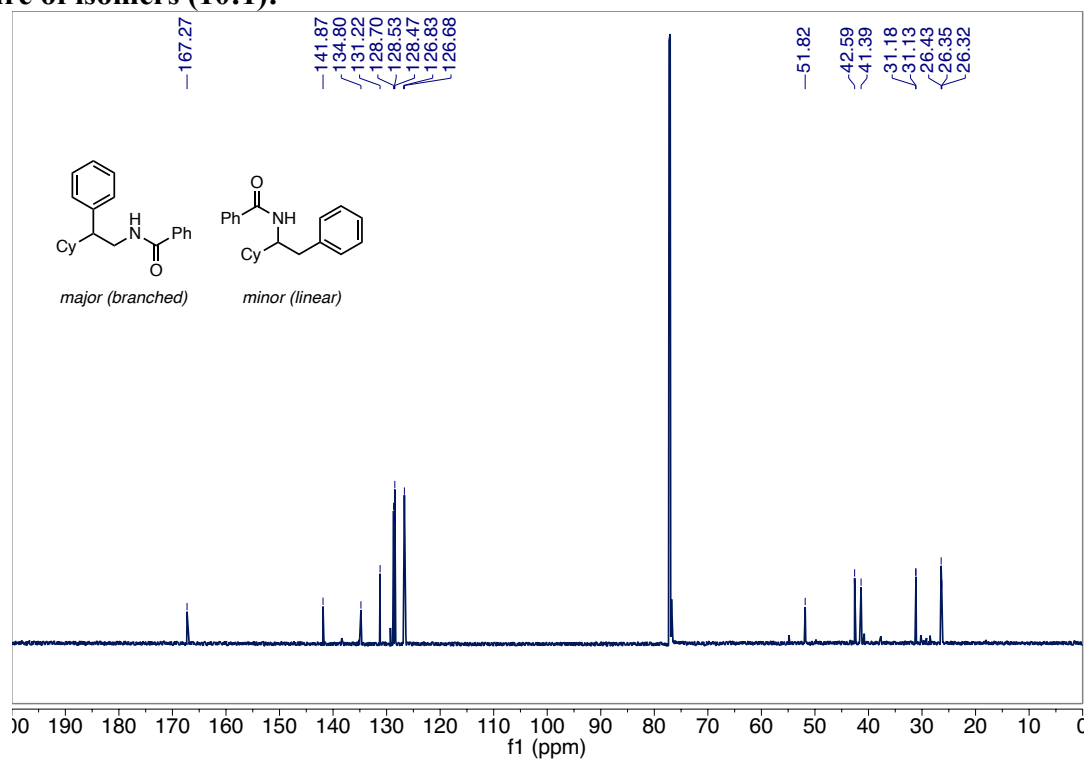
¹H NMR (500 MHz, CDCl₃) yield of *N*-(3-methyl-2-phenylbutyl)benzamide (6b) versus ethylene carbonate:



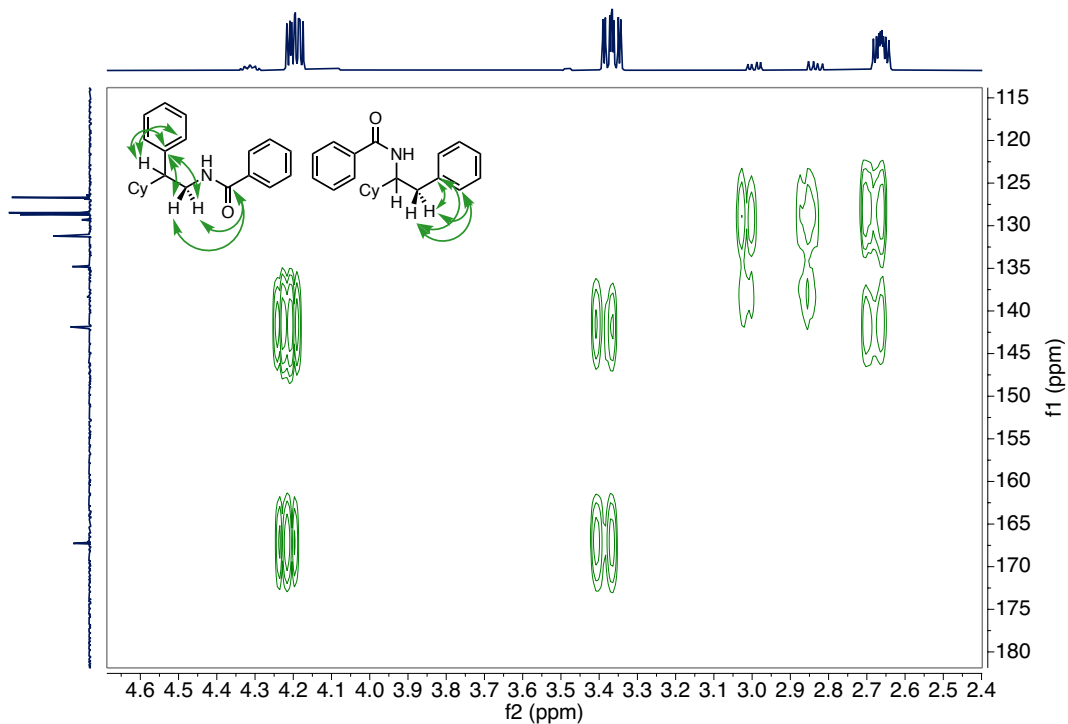
^1H NMR (600 MHz, CDCl_3) of *N*-(2-cyclohexyl-2-phenylethyl)benzamide (7b), mixture of isomers (10:1):



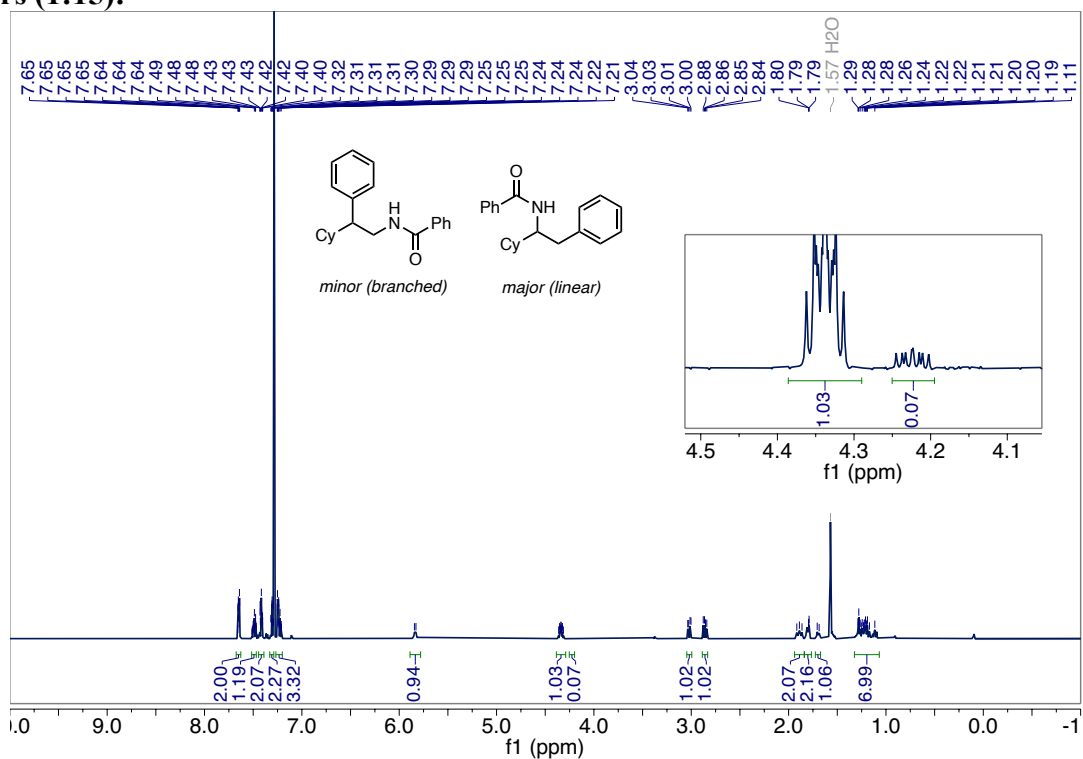
$^{13}\text{C}\{^1\text{H}\}$ NMR (600 MHz, CDCl_3) of *N*-(2-cyclohexyl-2-phenylethyl)benzamide (7b), mixture of isomers (10:1):



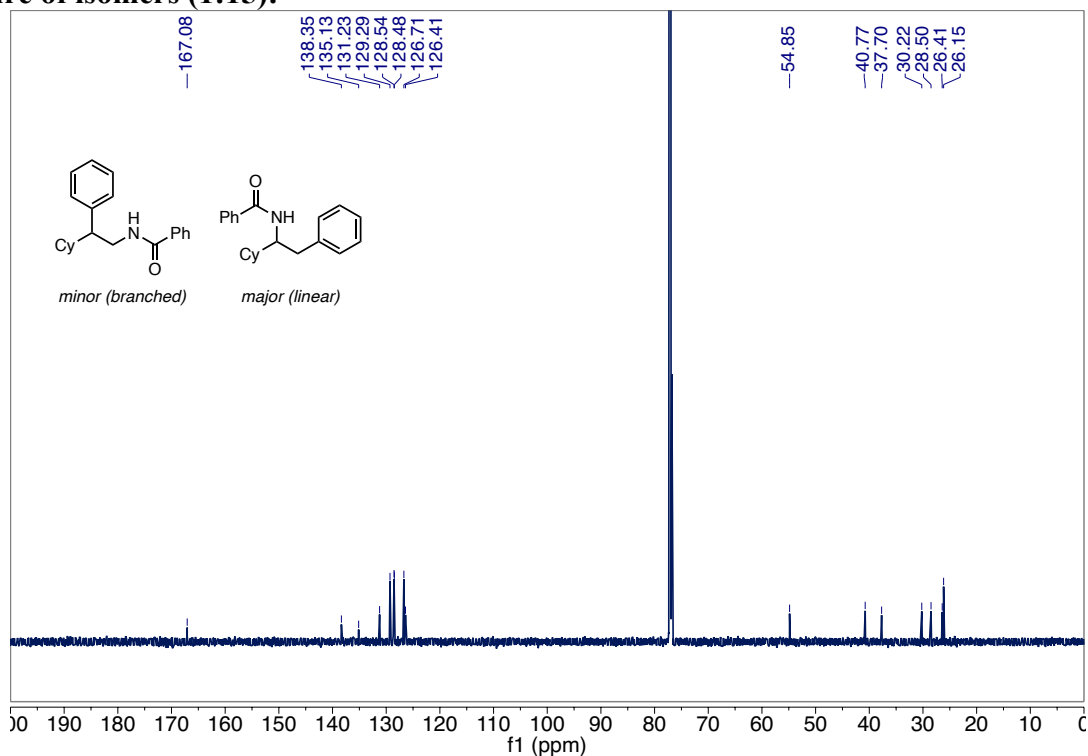
HMBC (600 MHz, CDCl₃) of *N*-(2-cyclohexyl-2-phenylethyl)benzamide (7b), mixture of isomers (10:1):



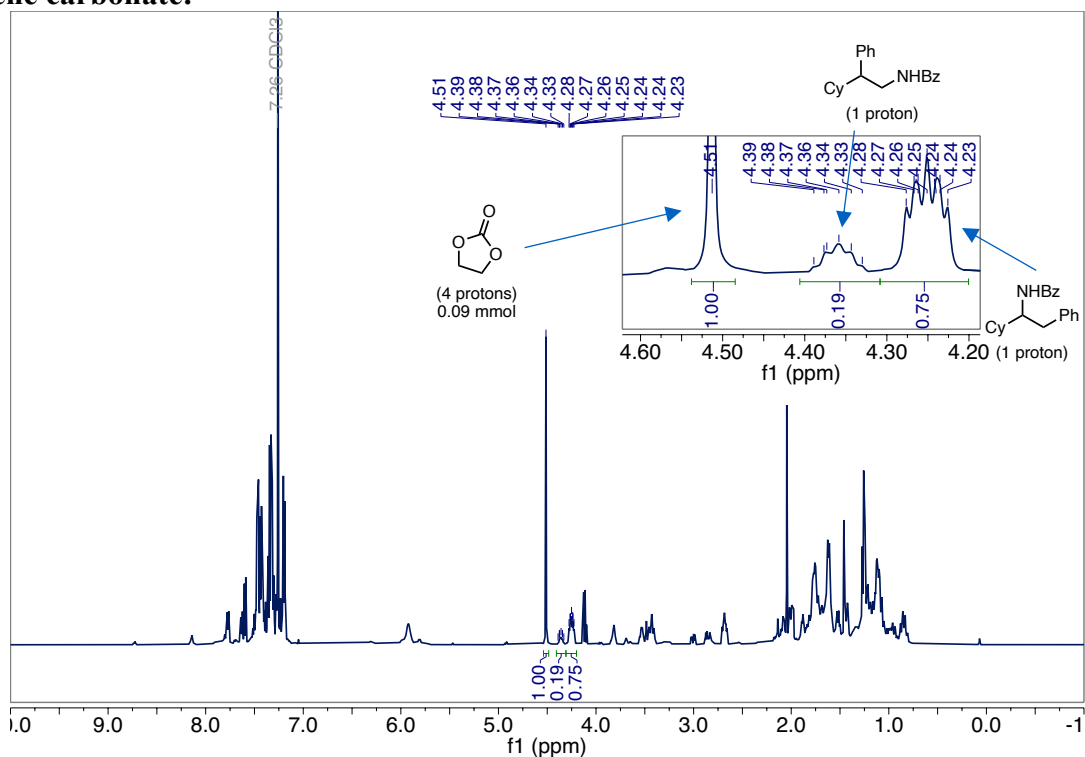
¹H NMR (600 MHz, CDCl₃) of *N*-(2-cyclohexyl-2-phenylethyl)benzamide (7b), mixture of isomers (1:15):



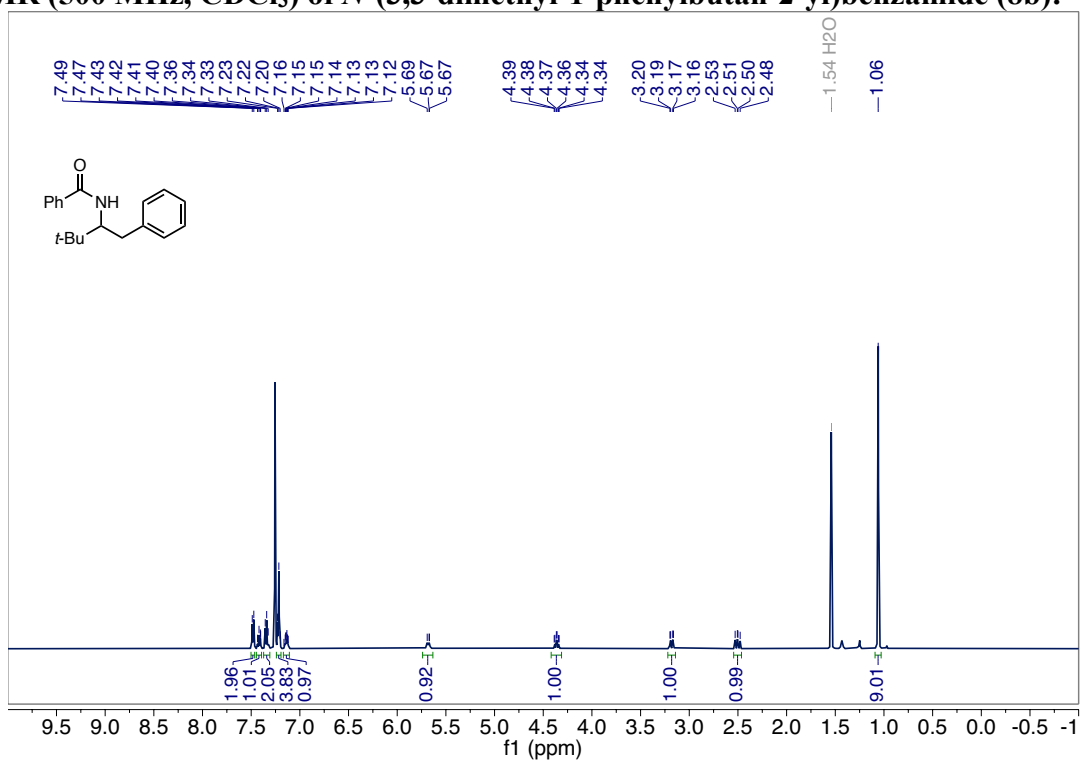
$^{13}\text{C}\{^1\text{H}\}$ NMR (600 MHz, CDCl_3) of *N*-(2-cyclohexyl-2-phenylethyl)benzamide (7b), mixture of isomers (1:15):



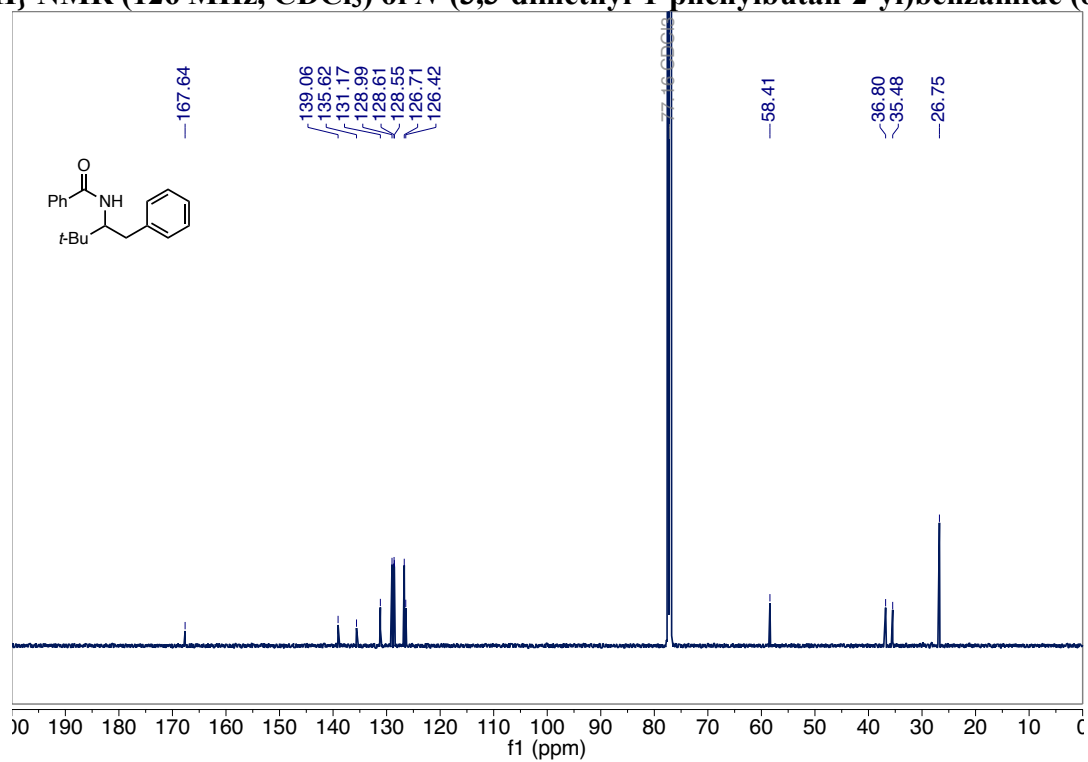
^1H NMR (600 MHz, CDCl_3) yield of *N*-(2-cyclohexyl-2-phenylethyl)benzamide (7b) versus ethylene carbonate:



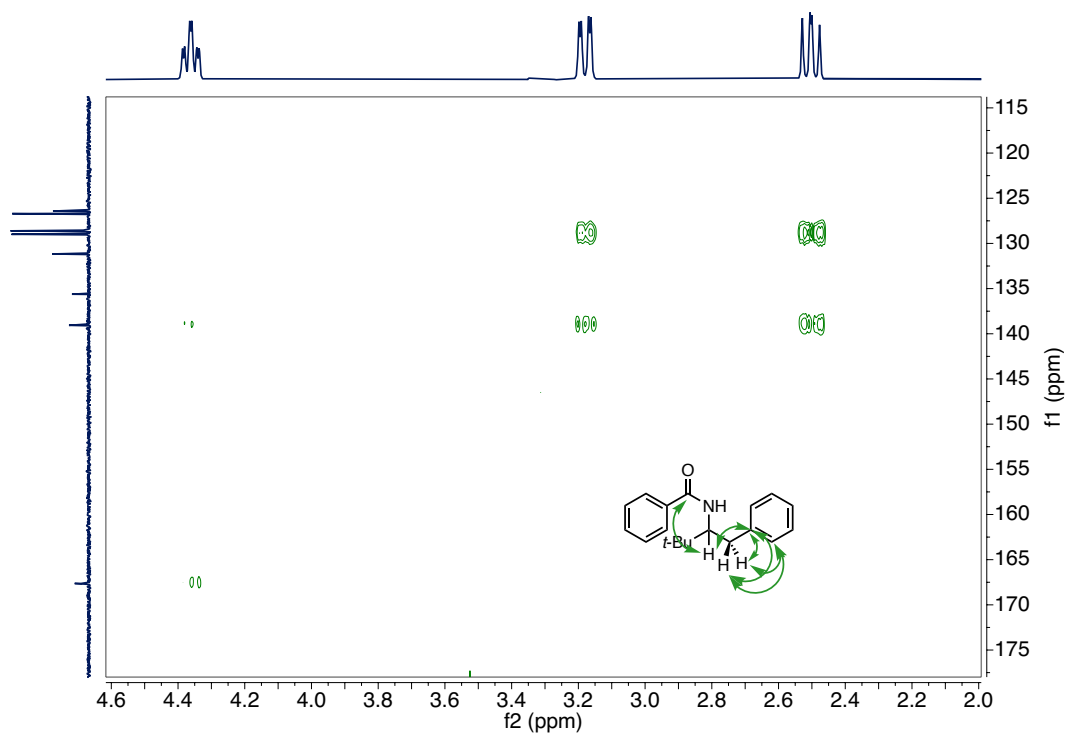
^1H NMR (500 MHz, CDCl_3) of *N*-(3,3-dimethyl-1-phenylbutan-2-yl)benzamide (8b):



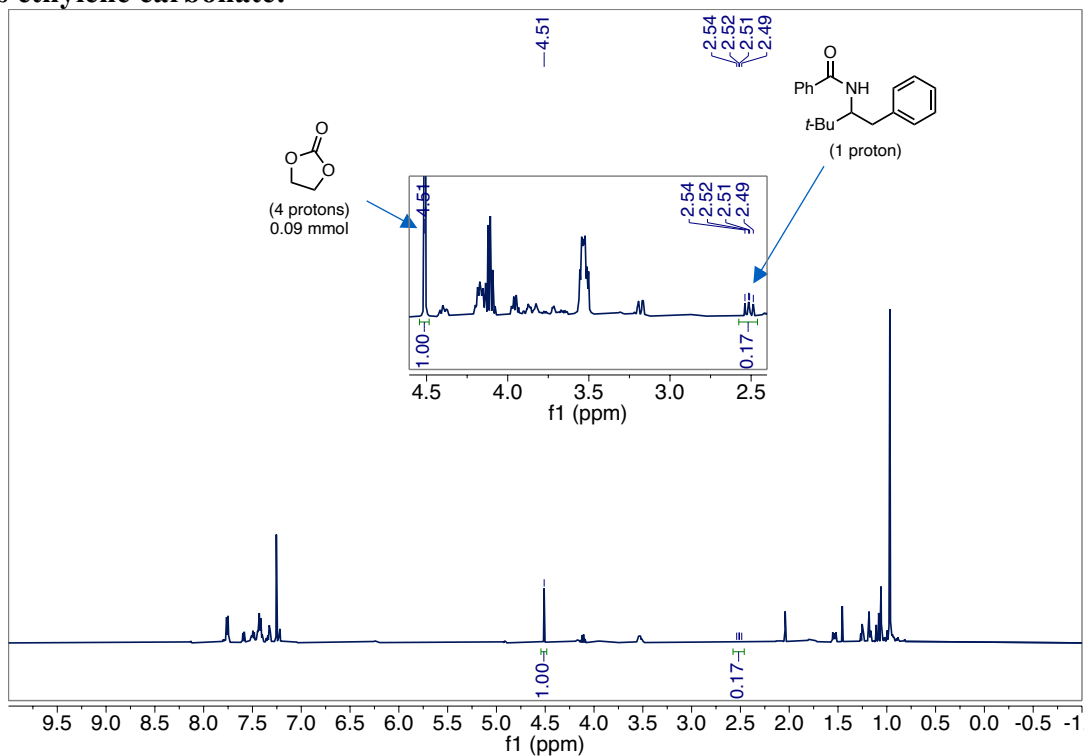
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(3,3-dimethyl-1-phenylbutan-2-yl)benzamide (8b):



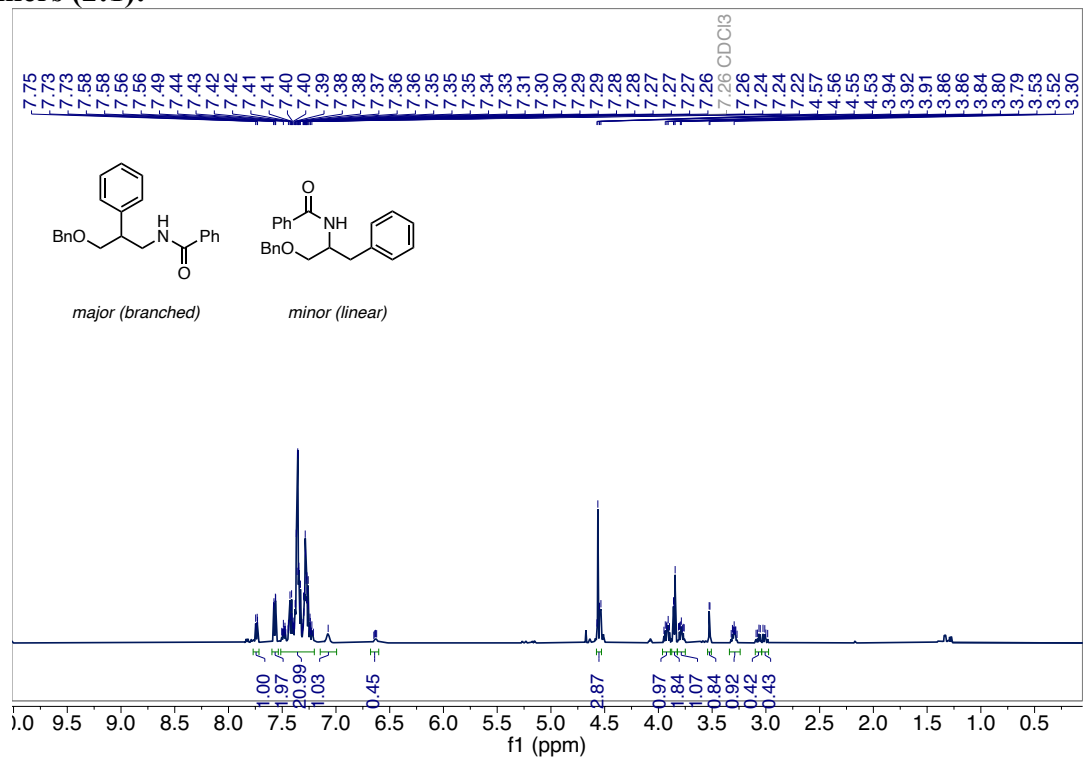
HMBC (500 MHz, CDCl₃) of *N*-(3,3-dimethyl-1-phenylbutan-2-yl)benzamide (8b):



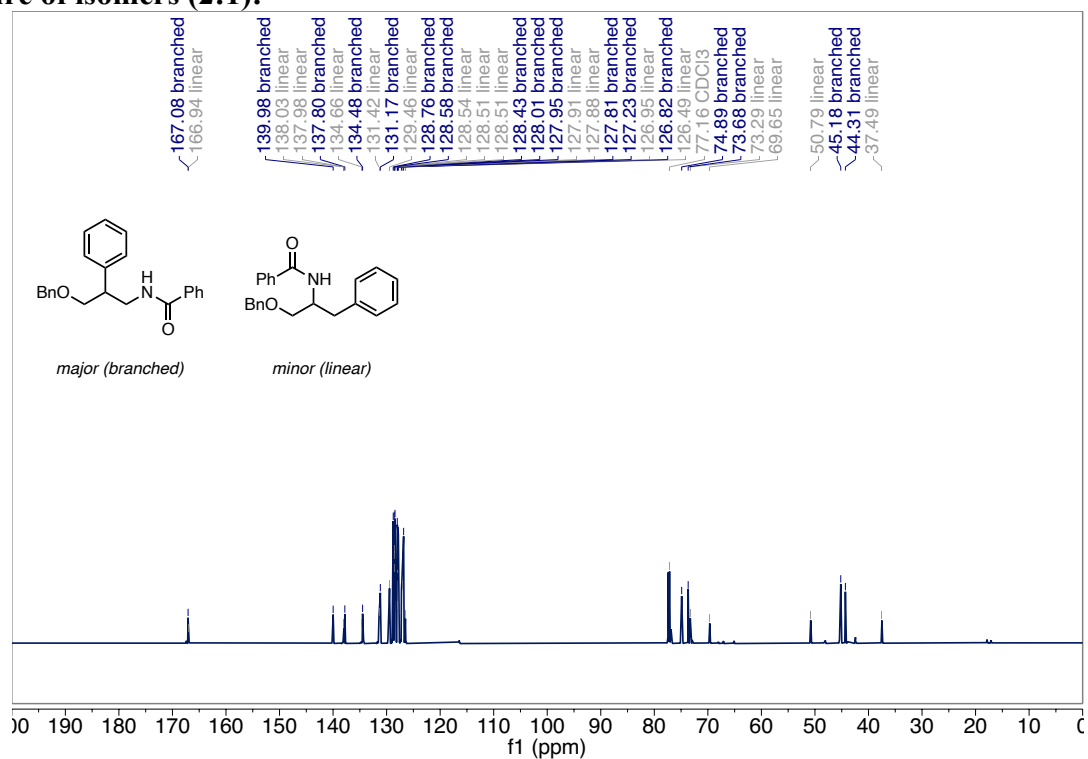
¹H NMR (500 MHz, CDCl₃) yield of *N*-(3,3-dimethyl-1-phenylbutan-2-yl)benzamide (8b) versus ethylene carbonate:



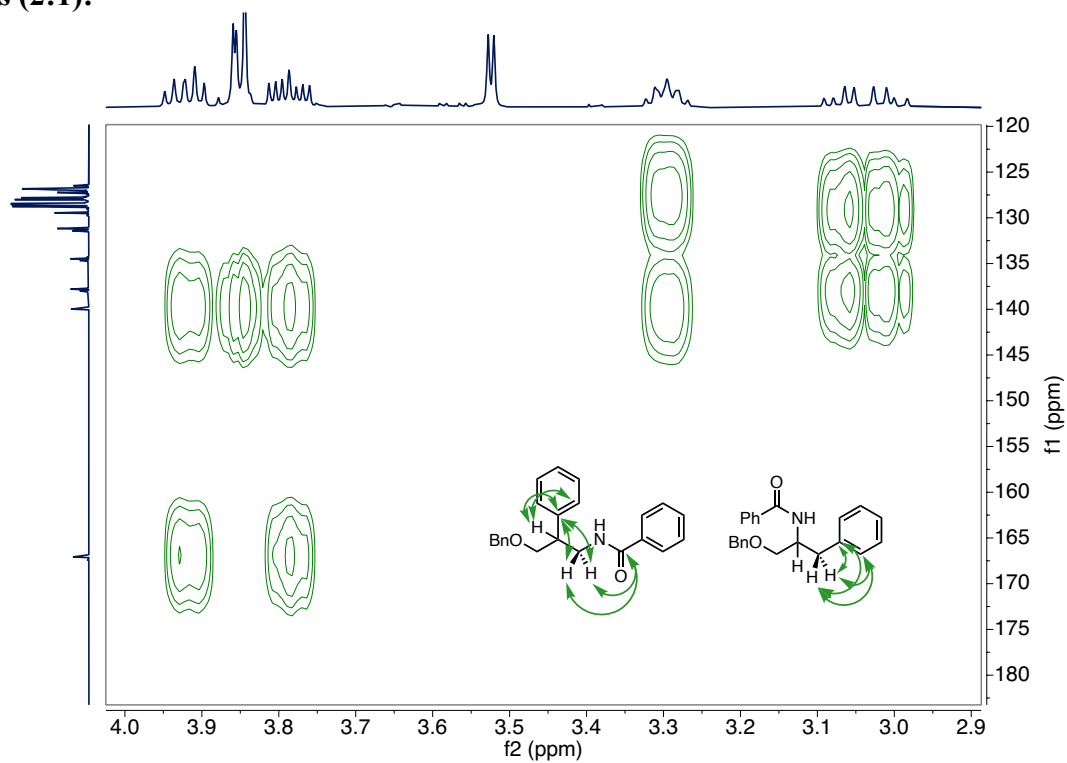
^1H NMR (500 MHz, CDCl_3) of *N*-(3-(benzyloxy)-2-phenylpropyl)benzamide (9b), mixture of isomers (2:1):



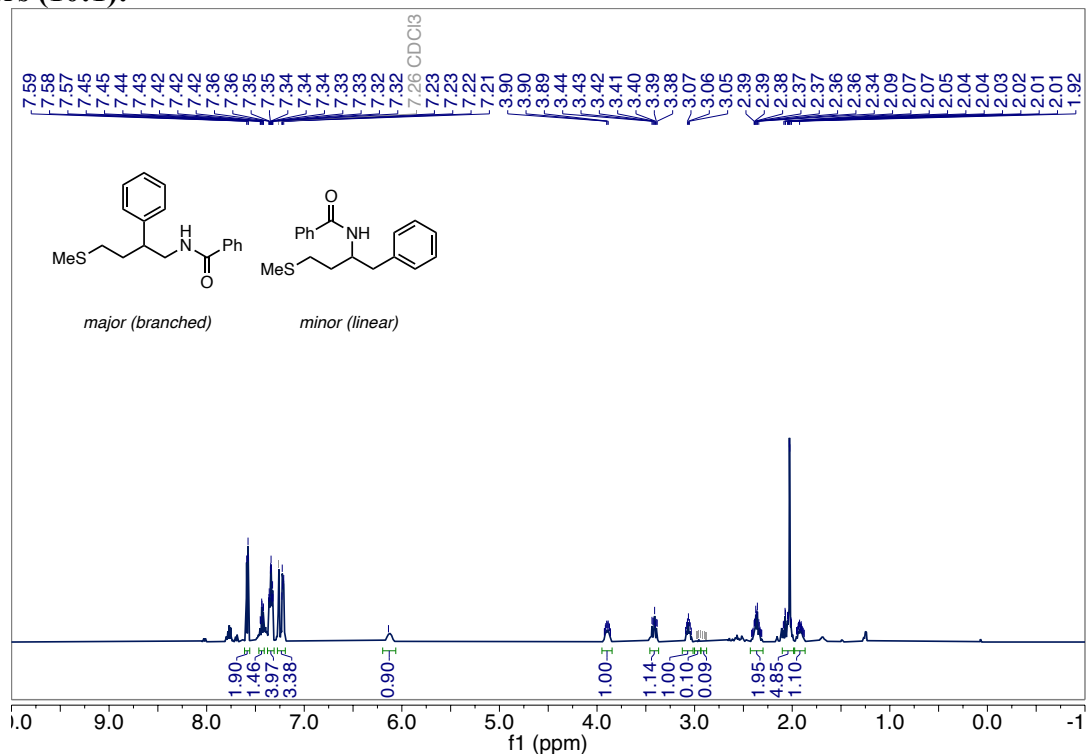
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(3-(benzyloxy)-2-phenylpropyl)benzamide (9b), mixture of isomers (2:1):



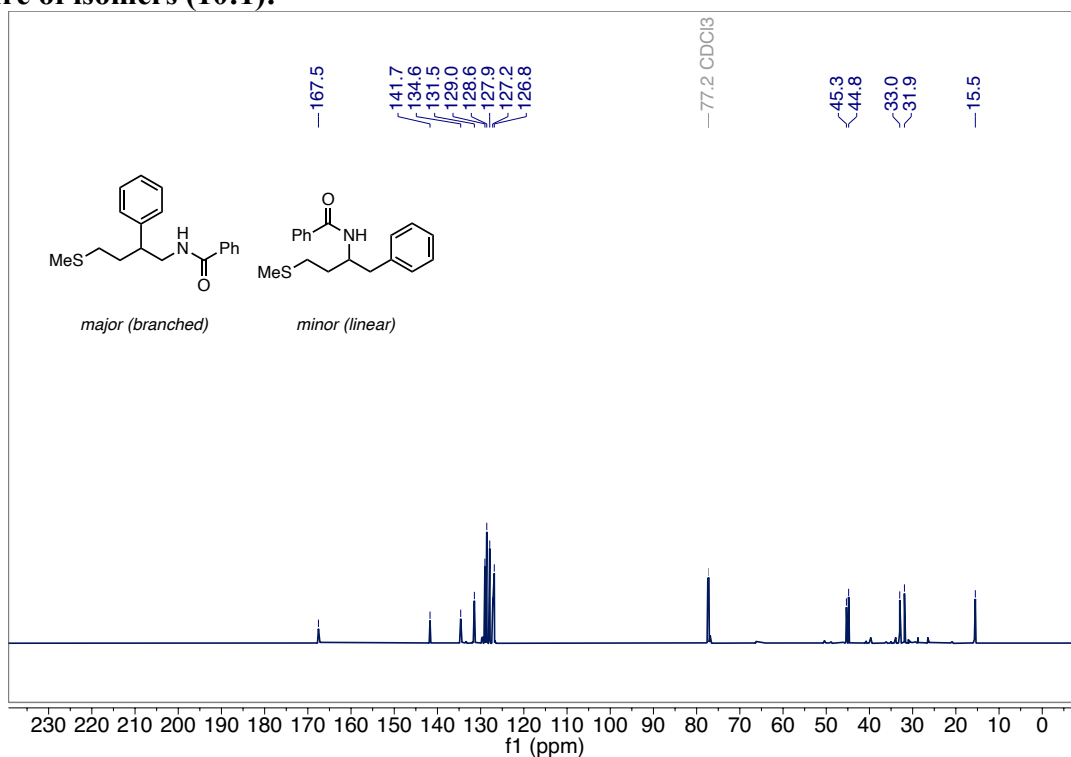
HMBC (600 MHz, CDCl₃) of *N*-(3-(benzyloxy)-2-phenylpropyl)benzamide (9b), mixture of isomers (2:1):



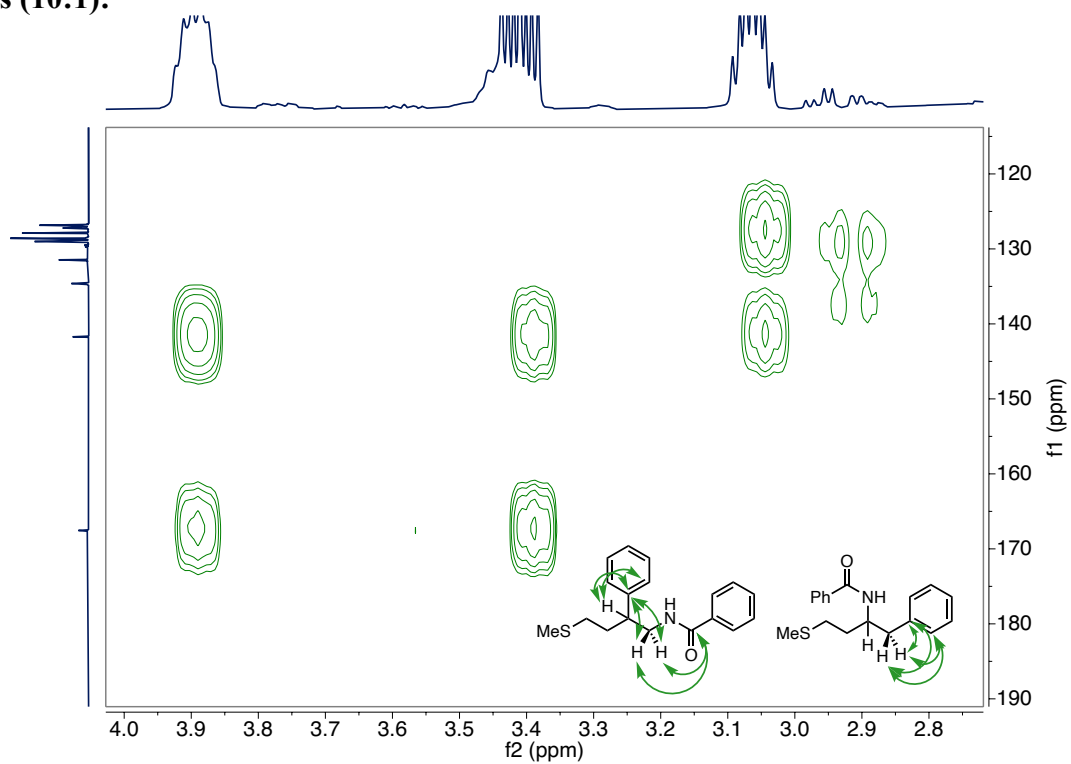
^1H NMR (500 MHz, CDCl_3) of *N*-(4-(methylthio)-2-phenylbutyl)benzamide (10b), mixture of isomers (10:1):



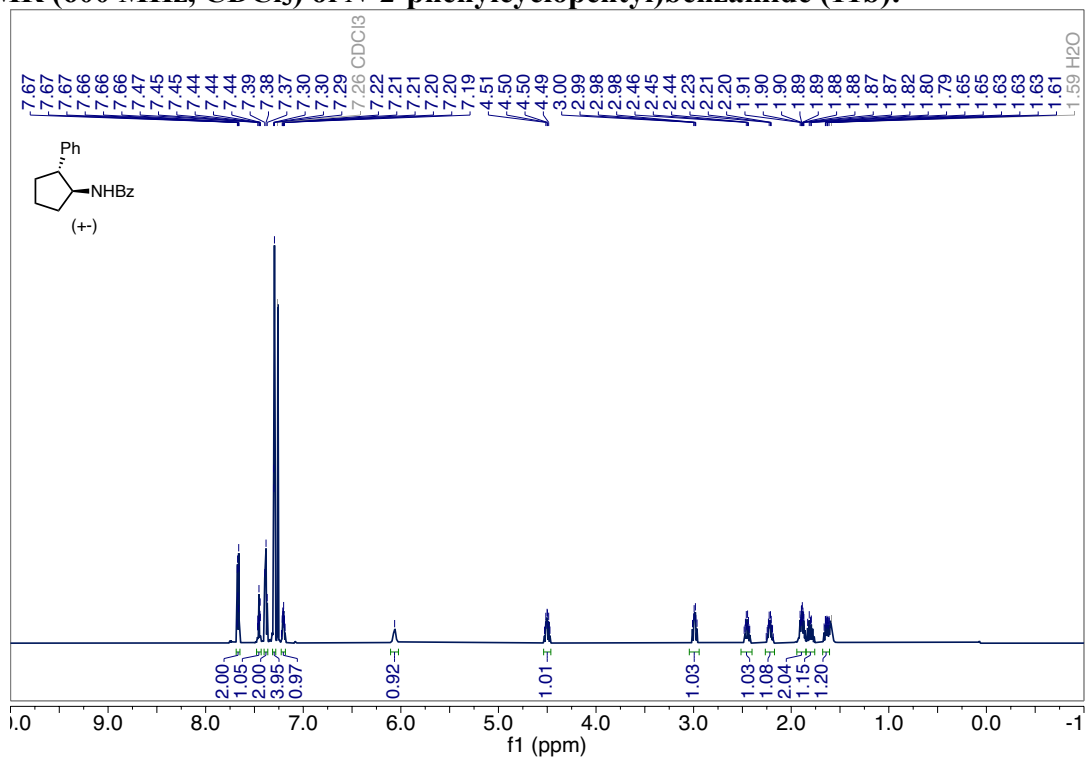
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(4-(methylthio)-2-phenylbutyl)benzamide (10b), mixture of isomers (10:1):



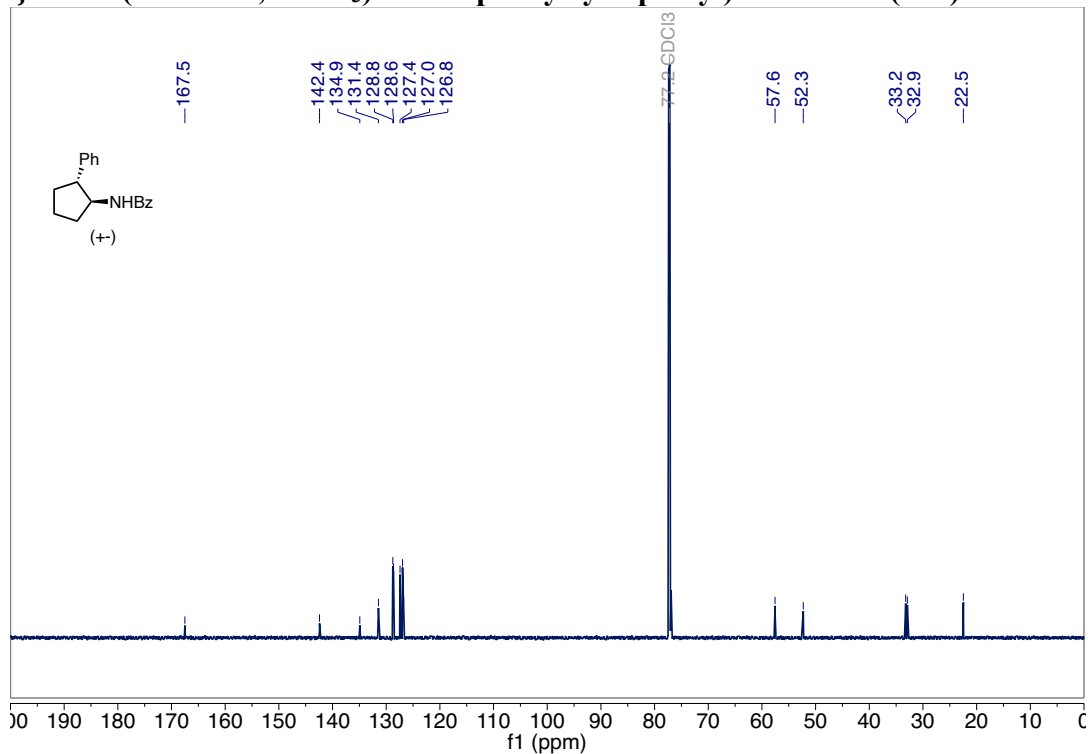
HMBC (600 MHz, CDCl₃) of *N*-(4-(methylthio)-2-phenylbutyl)benzamide (10b), mixture of isomers (10:1):



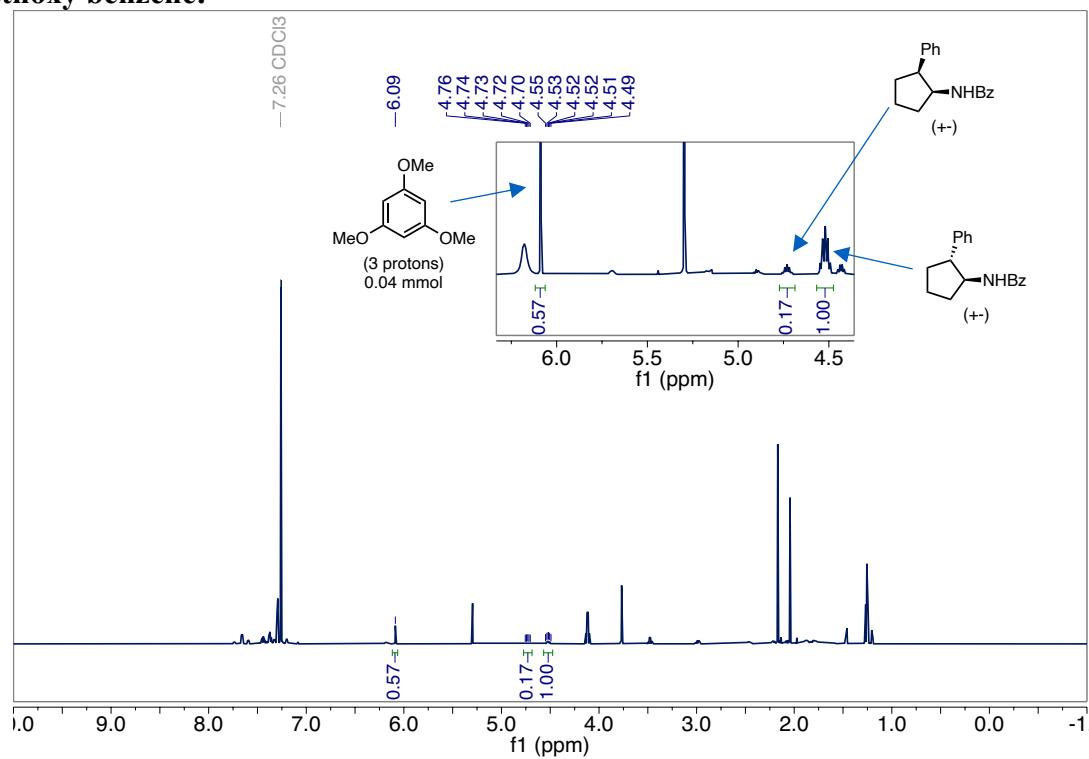
¹H NMR (600 MHz, CDCl₃) of *N*-2-phenylcyclopentylbenzamide (11b):



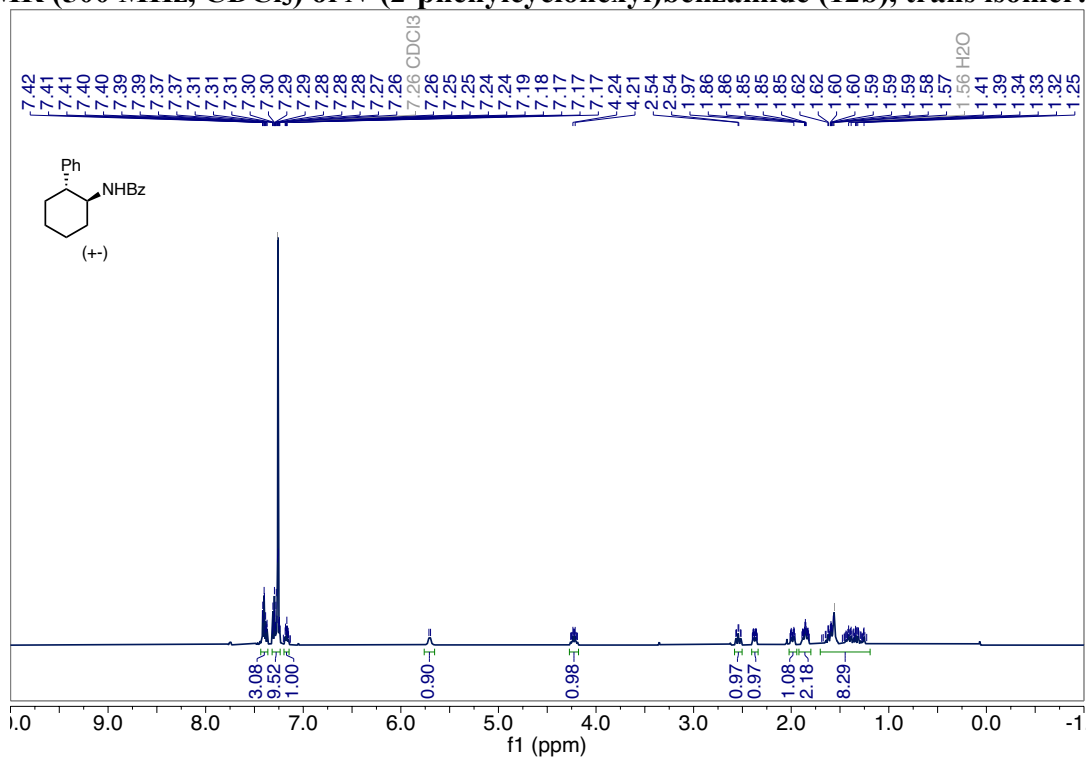
¹³C{¹H} NMR (151 MHz, CDCl₃) of *N*-2-phenylcyclopentylbenzamide (11b):



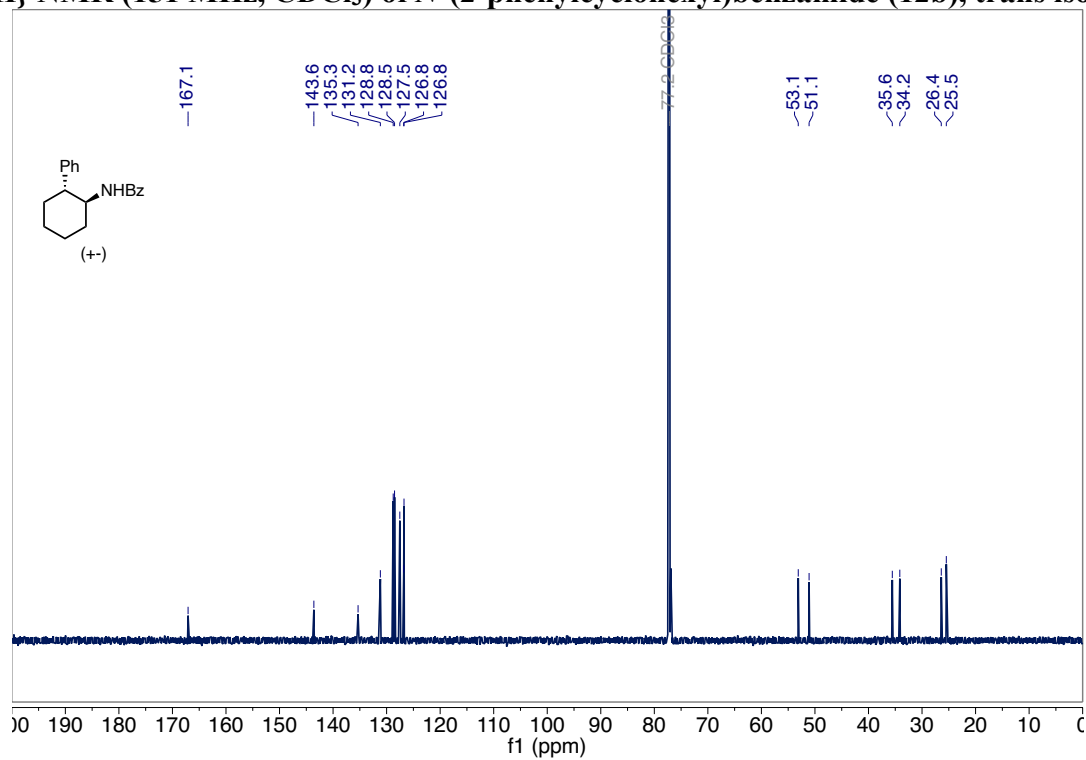
¹H NMR (600 MHz, CDCl₃) yield of *N*-2-phenylcyclopentyl)benzamide (11b) versus trimethoxy benzene:



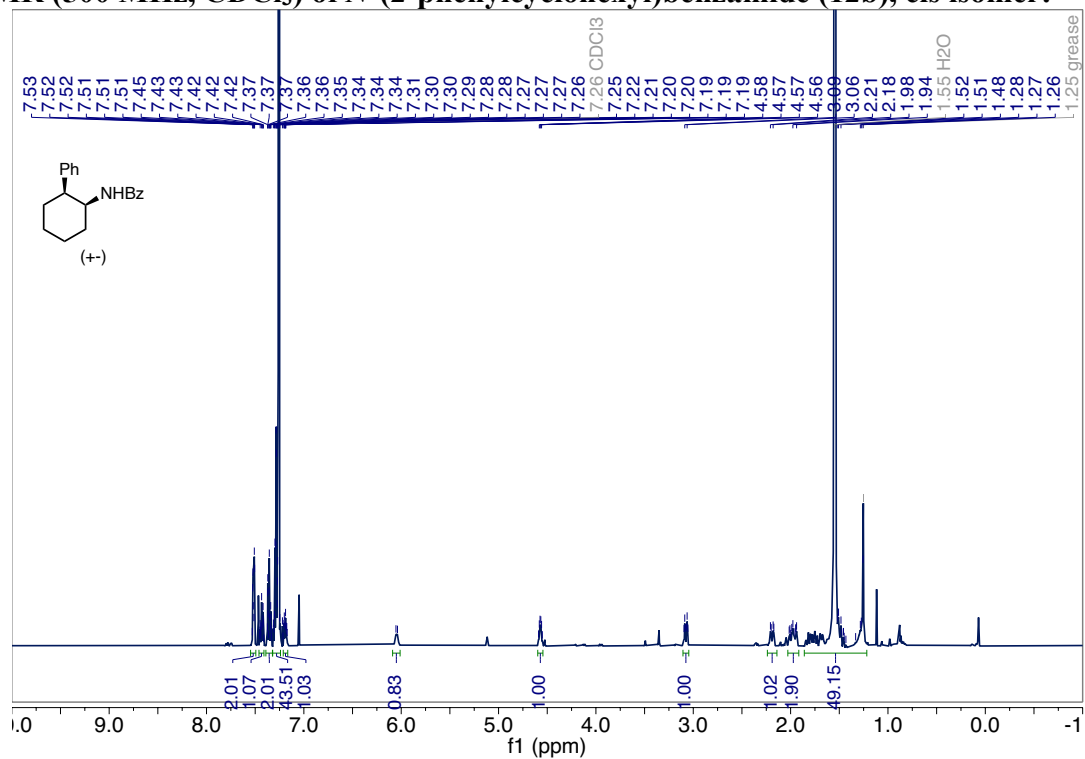
^1H NMR (500 MHz, CDCl_3) of *N*-(2-phenylcyclohexyl)benzamide (12b), trans isomer:



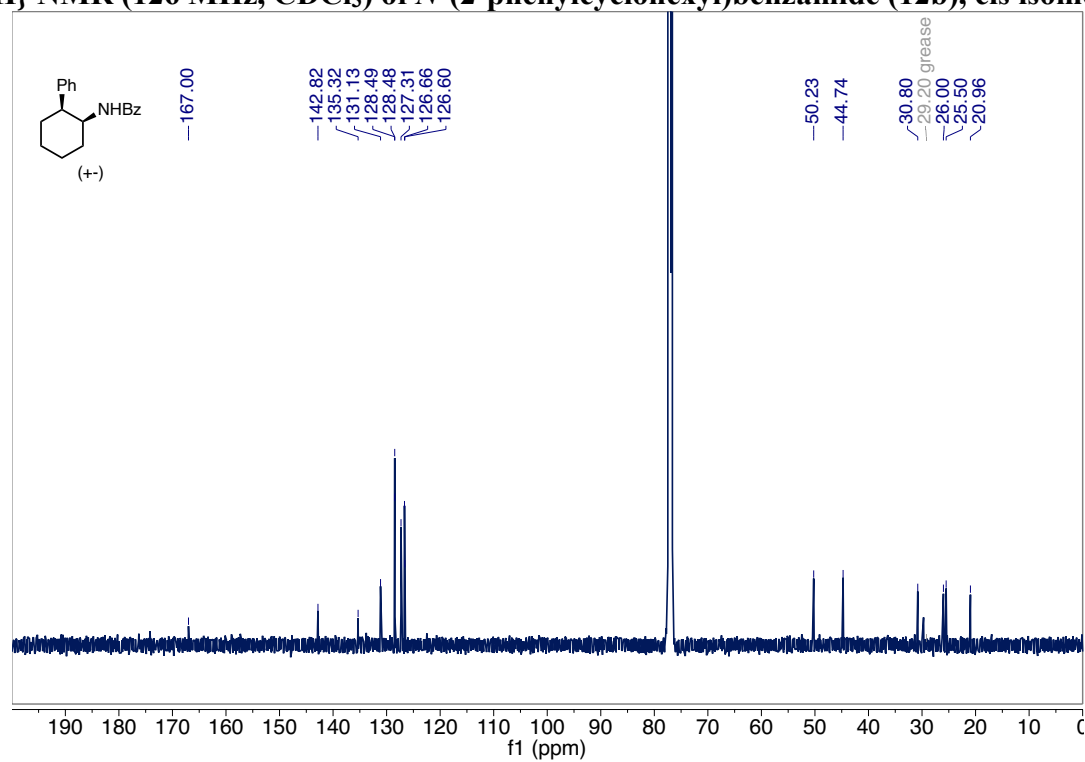
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2-phenylcyclohexyl)benzamide (12b), trans isomer:



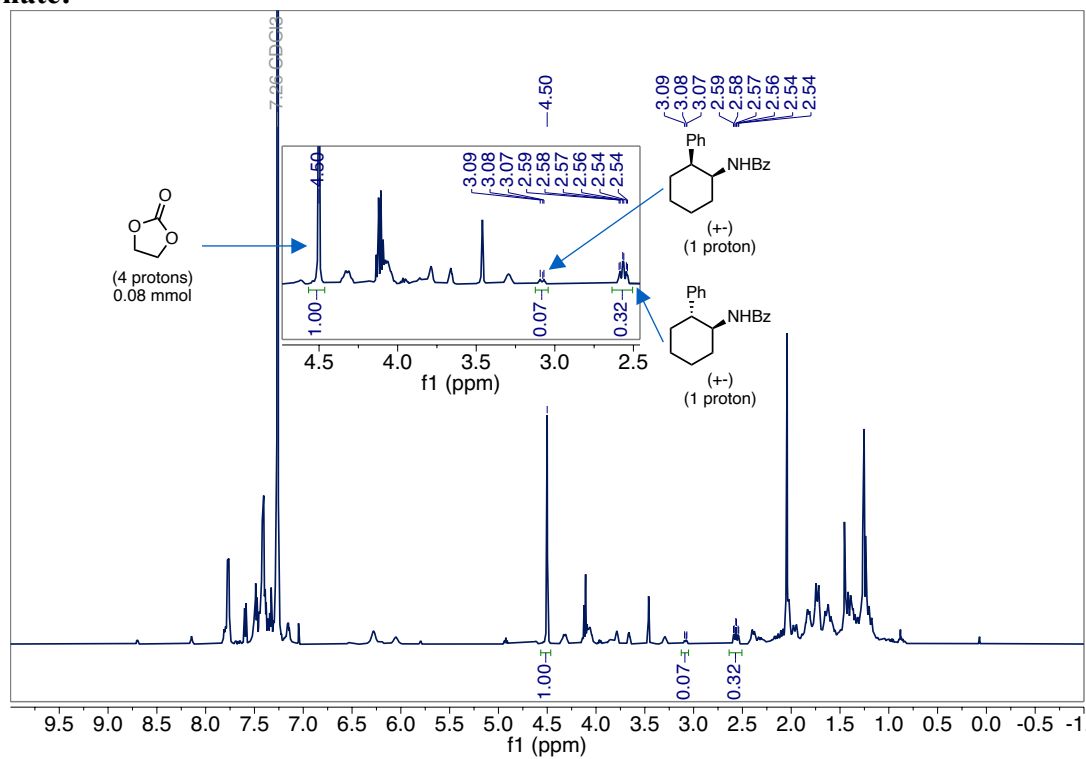
^1H NMR (500 MHz, CDCl_3) of *N*-(2-phenylcyclohexyl)benzamide (12b), cis isomer:



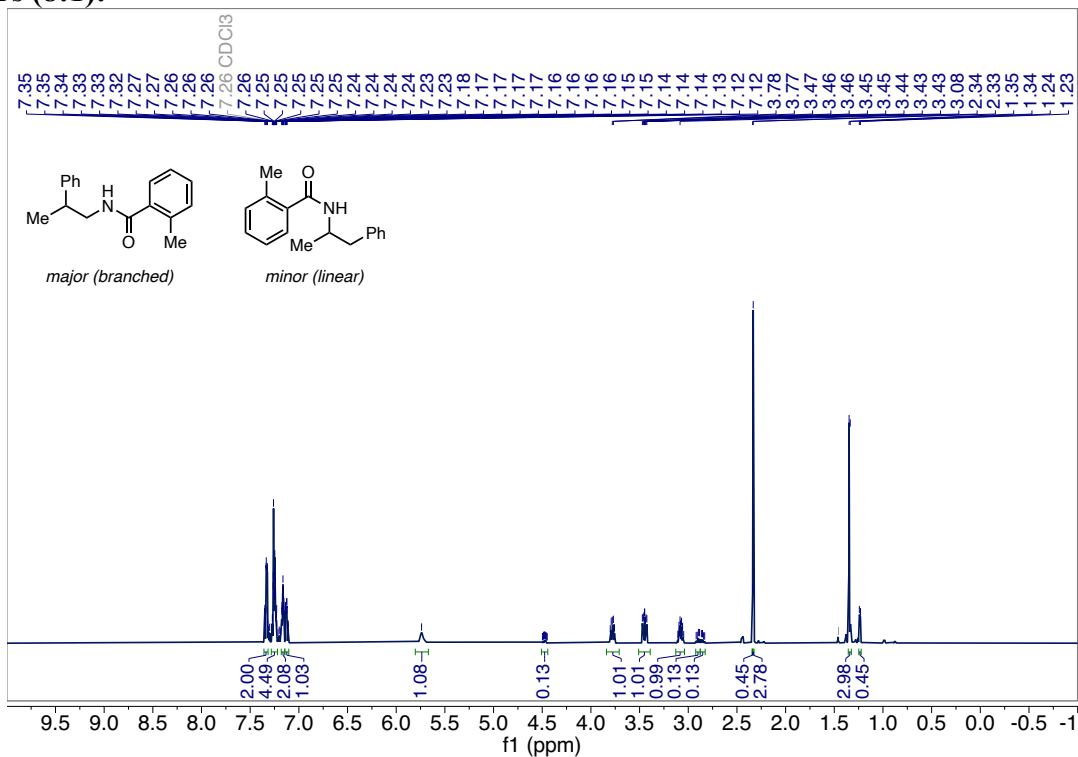
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of *N*-(2-phenylcyclohexyl)benzamide (12b), cis isomer:



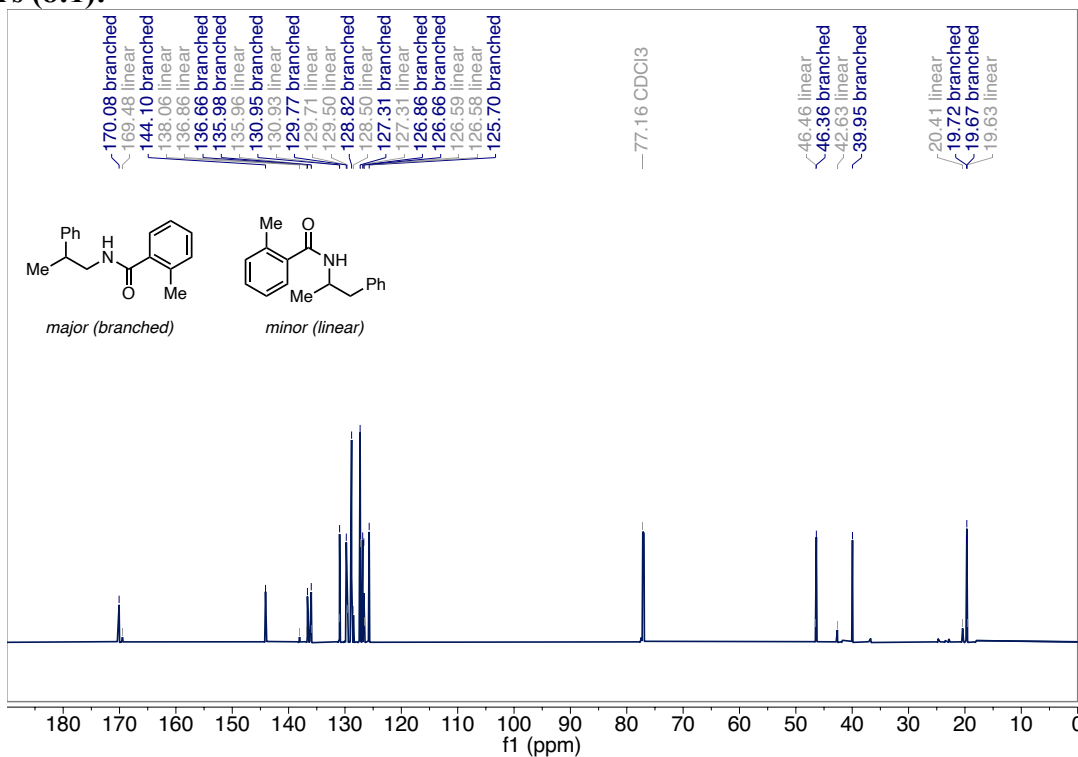
¹H NMR (500 MHz, CDCl₃) yield of *N*-(2-phenylcyclohexyl)benzamide (12b) versus ethylene carbonate:



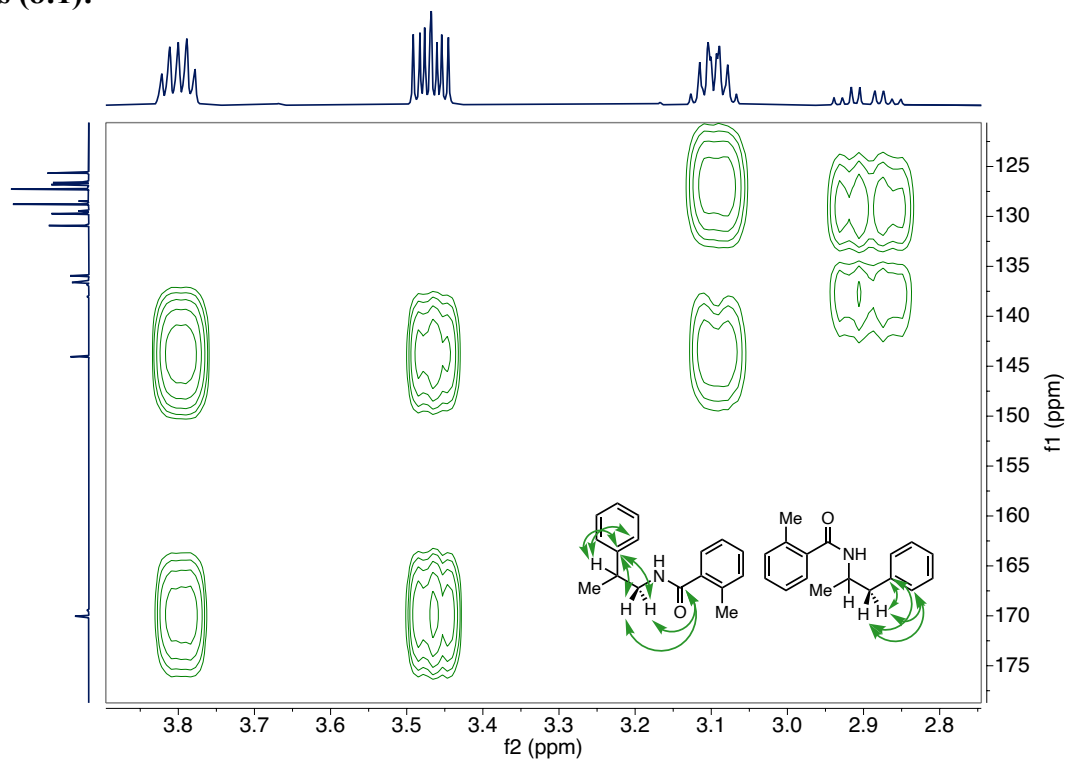
¹H NMR (600 MHz, CDCl₃) of 2-methyl-N-(2-phenylpropyl)benzamide (13b), mixture of isomers (8:1):



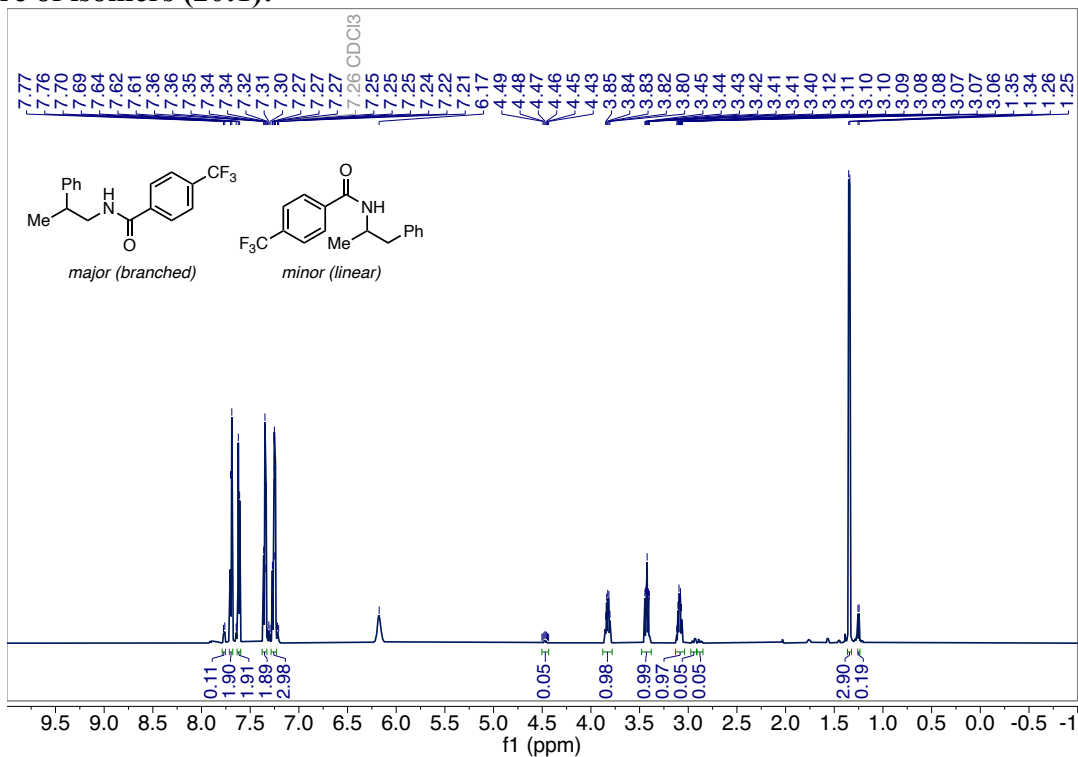
¹³C NMR (151 MHz, CDCl₃) of 2-methyl-N-(2-phenylpropyl)benzamide (13b), mixture of isomers (8:1):



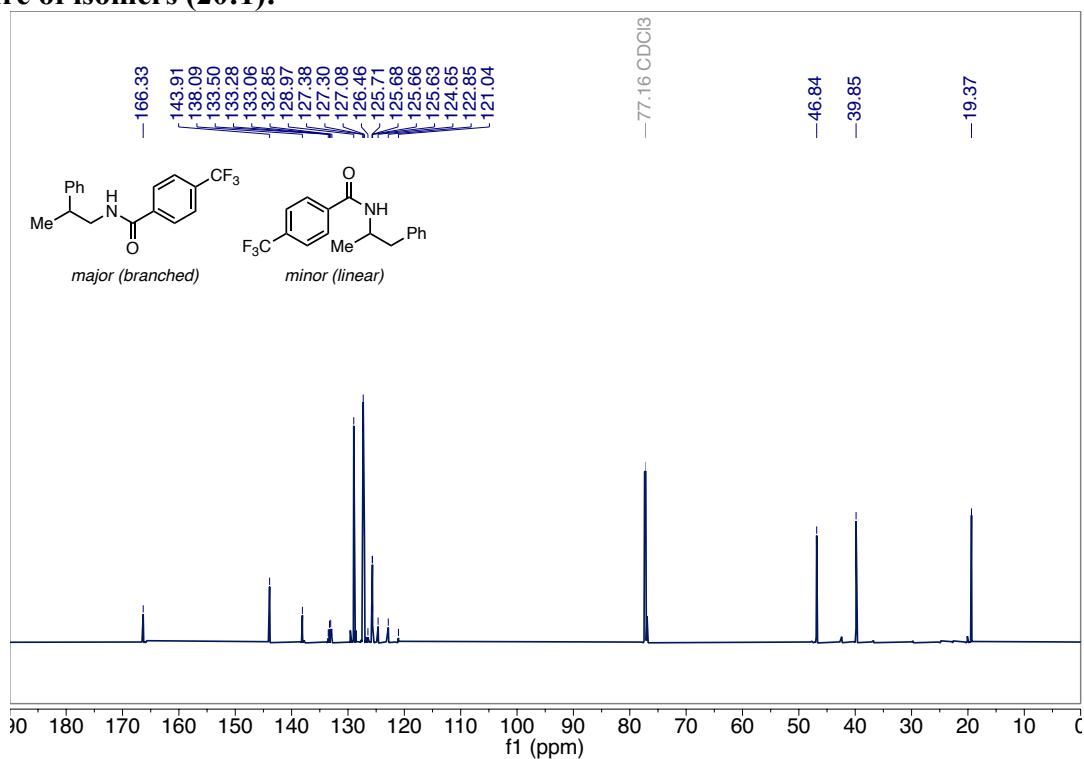
HMBC (600 MHz, CDCl₃) of 2-methyl-N-(2-phenylpropyl)benzamide (13b), mixture of isomers (8:1):



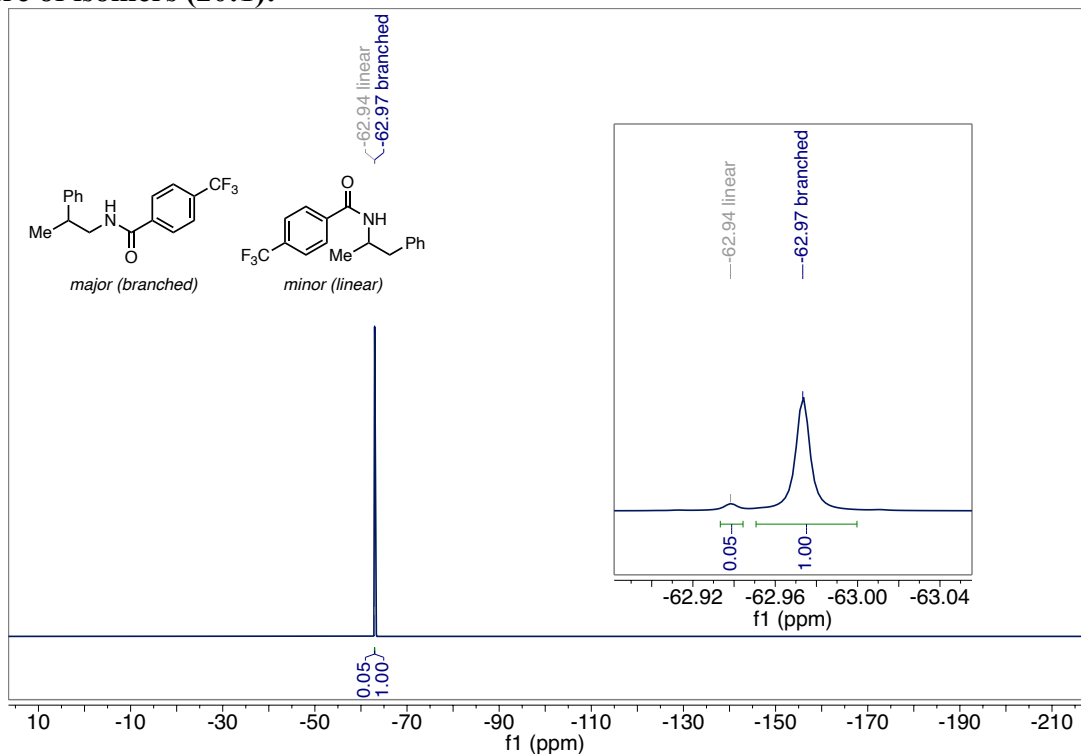
^1H NMR (600 MHz, CDCl_3) of *N*-(2-phenylpropyl)-4-(trifluoromethyl)benzamide (14b), mixture of isomers (20:1):



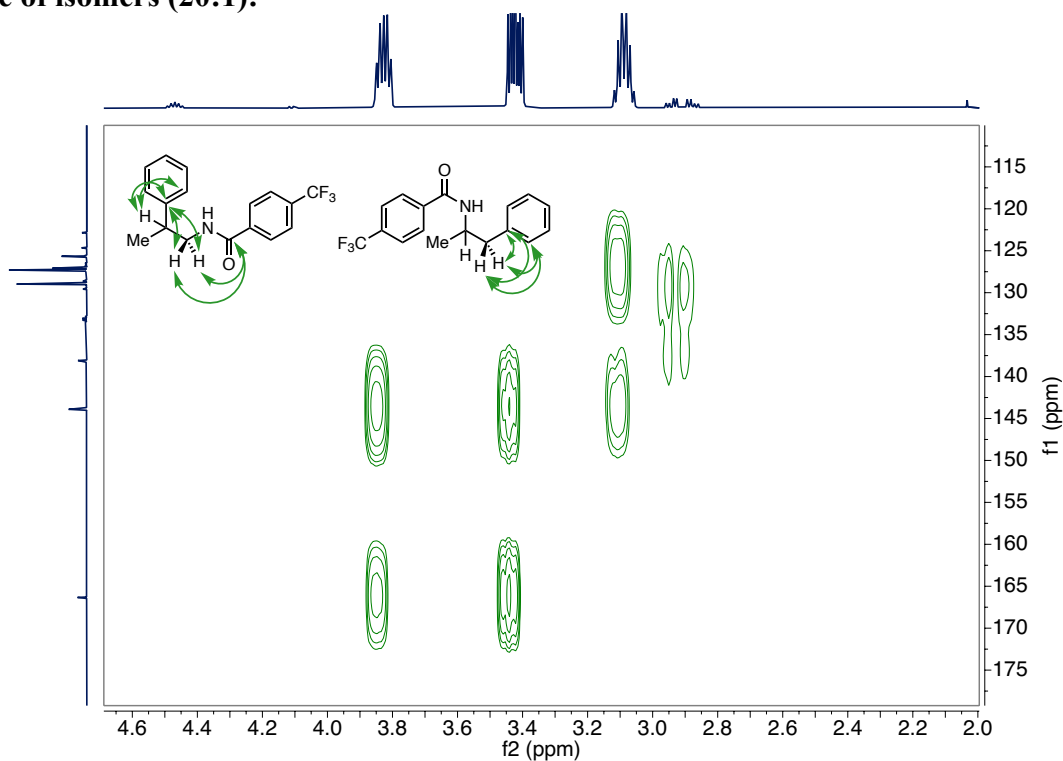
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of *N*-(2-phenylpropyl)-4-(trifluoromethyl)benzamide (14b), mixture of isomers (20:1):



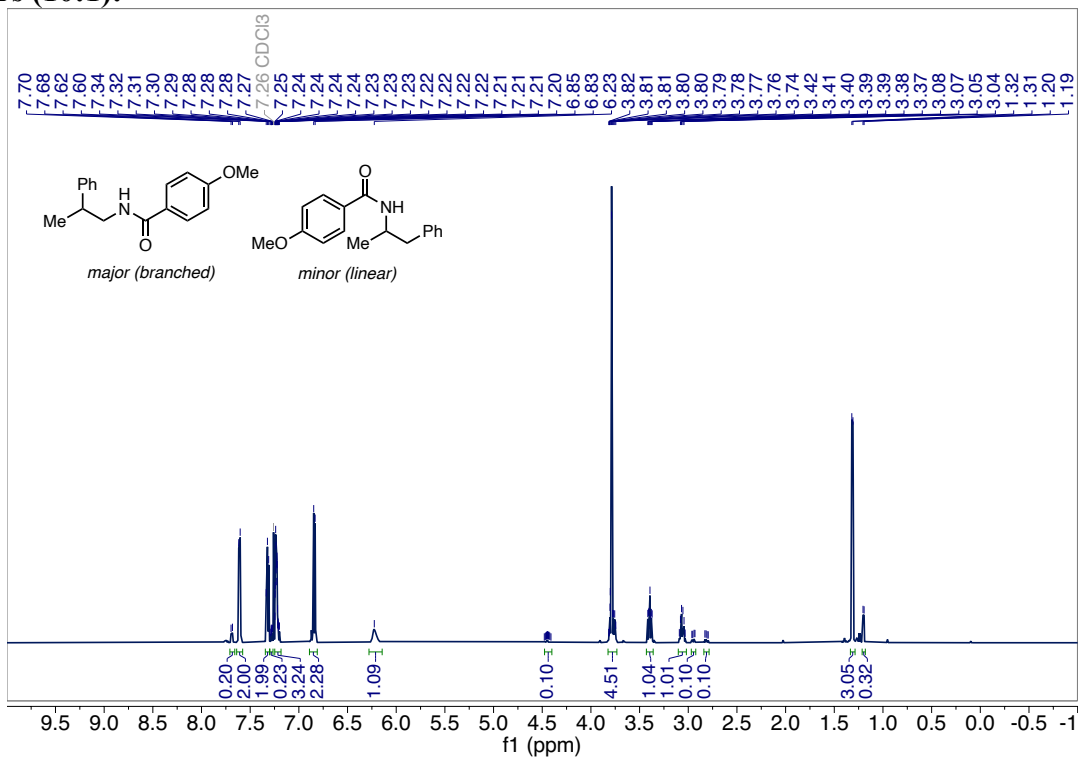
^{19}F NMR (565 MHz, CDCl_3) of *N*-(2-phenylpropyl)-4-(trifluoromethyl)benzamide (14b), mixture of isomers (20:1):



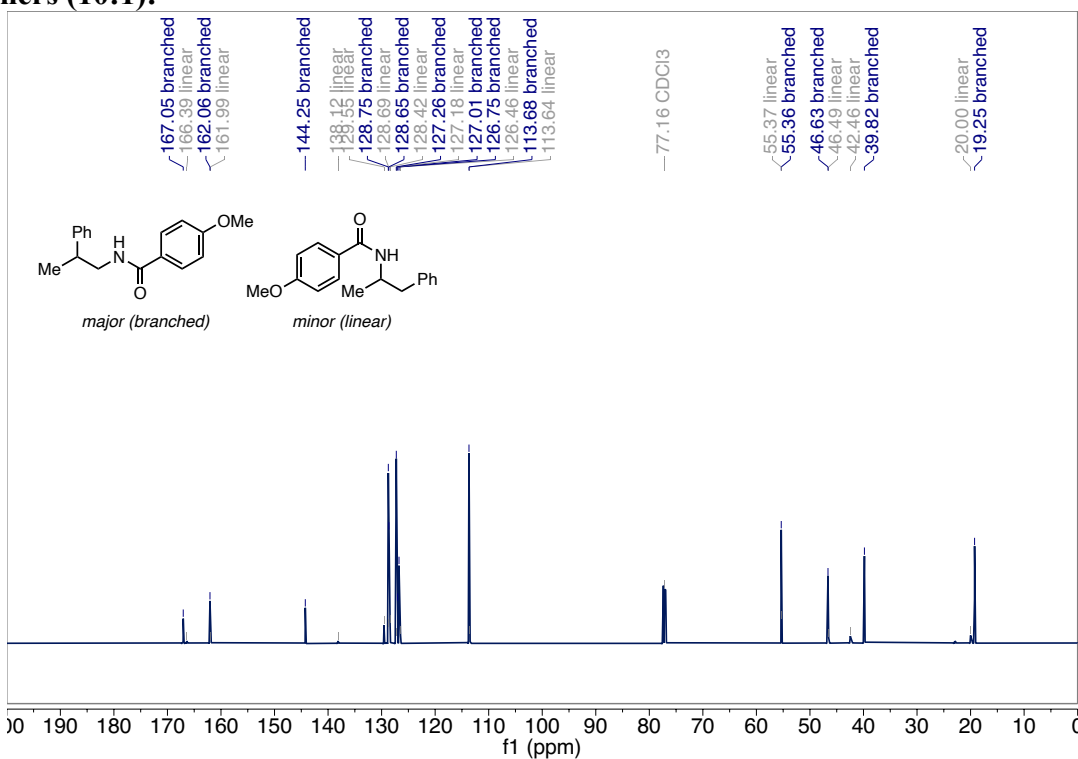
HMBC (600 MHz, CDCl_3) of *N*-(2-phenylpropyl)-4-(trifluoromethyl)benzamide (14b), mixture of isomers (20:1):



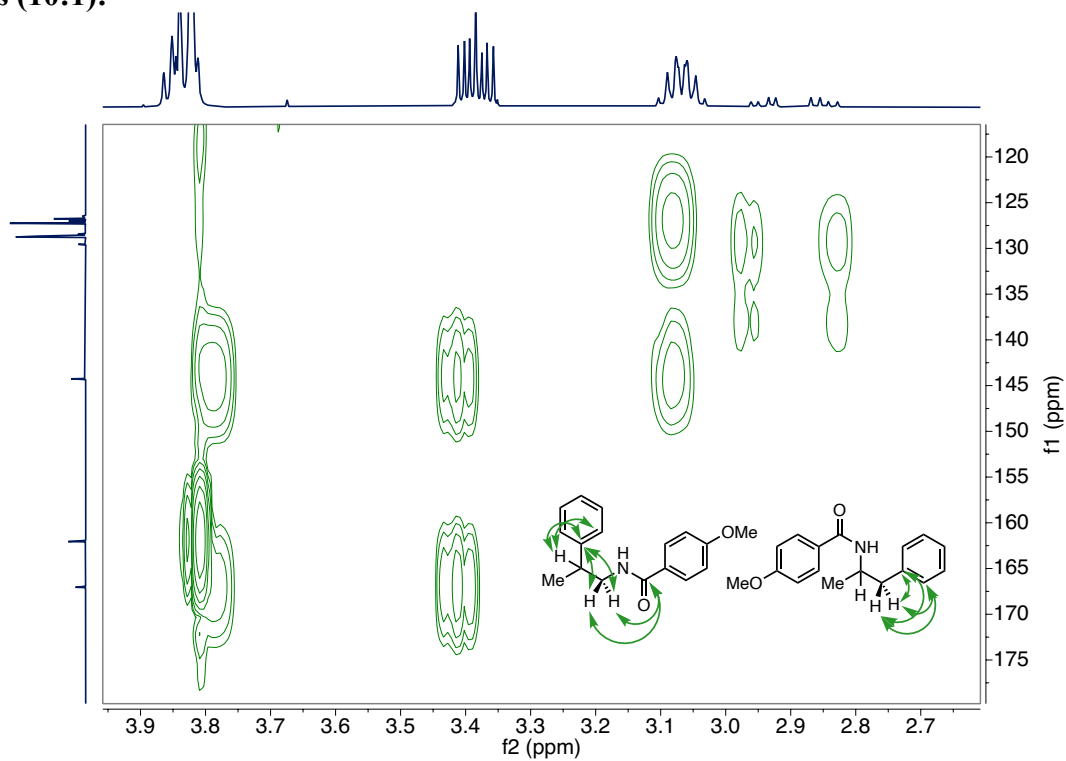
^1H NMR (600 MHz, CDCl_3) of 4-methoxy-N-(2-phenylpropyl)benzamide (15b), mixture of isomers (10:1):



$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of 4-methoxy-N-(2-phenylpropyl)benzamide (15b), mixture of isomers (10:1):

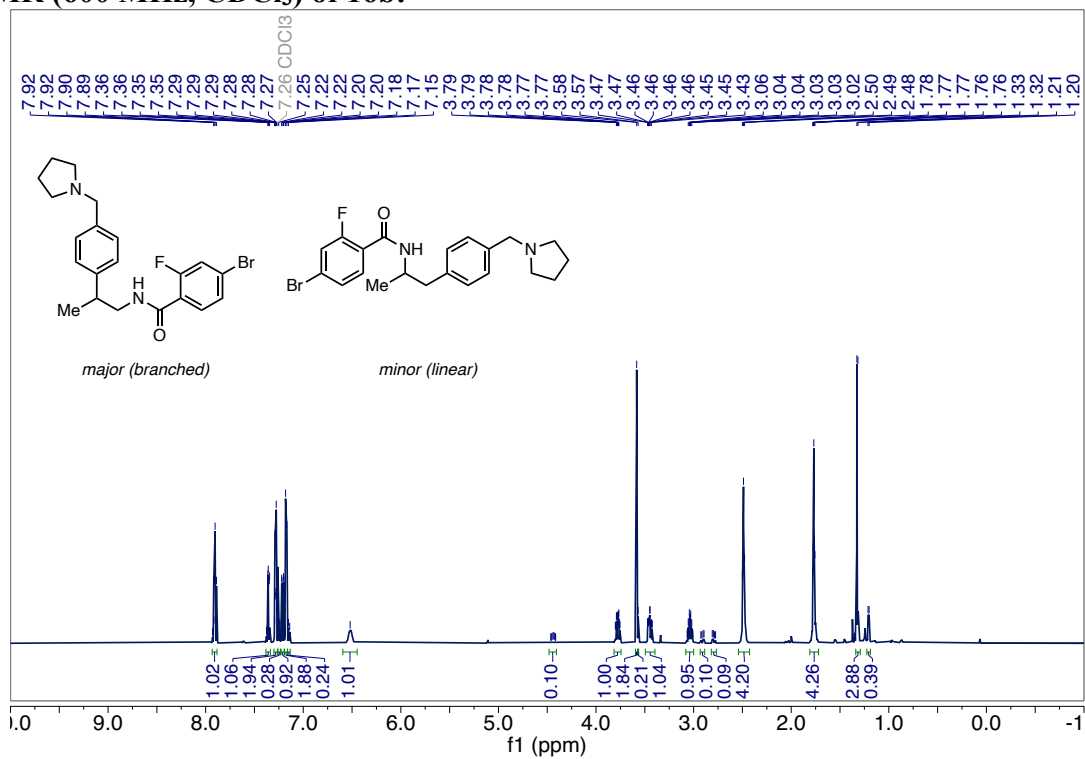


HMBC (600 MHz, CDCl₃) of 4-methoxy-N-(2-phenylpropyl)benzamide (15b), mixture of isomers (10:1):

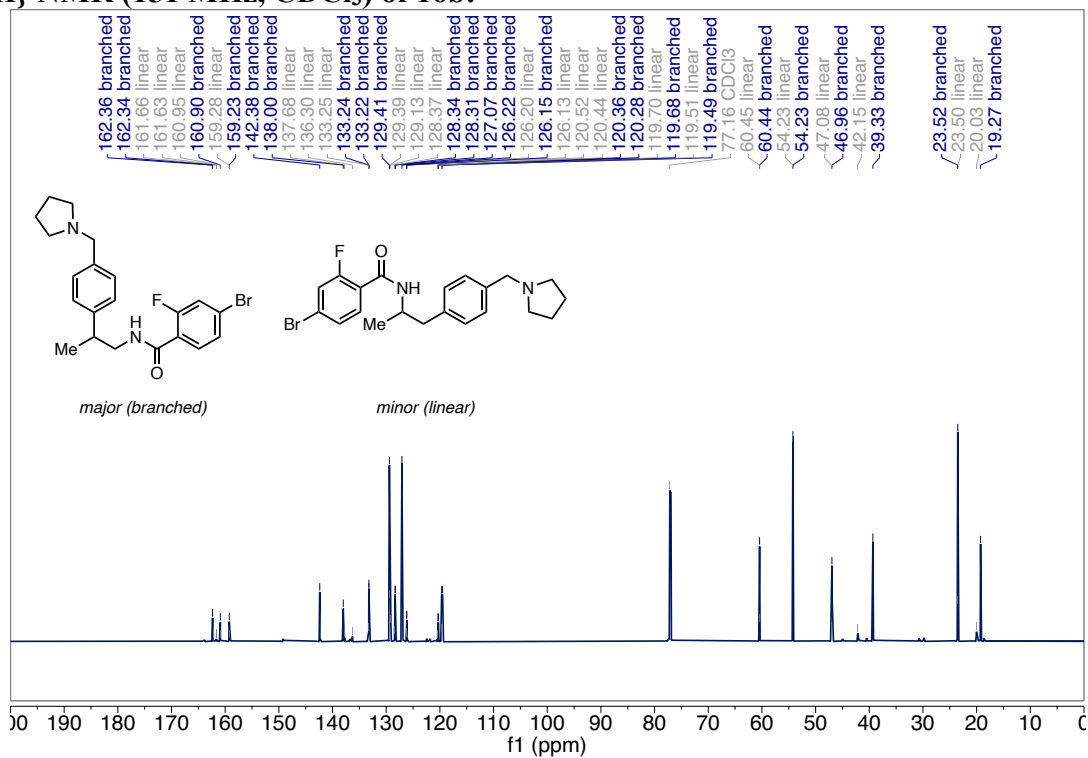


Only correlations necessary to establish branched/linear connectivity are identified.

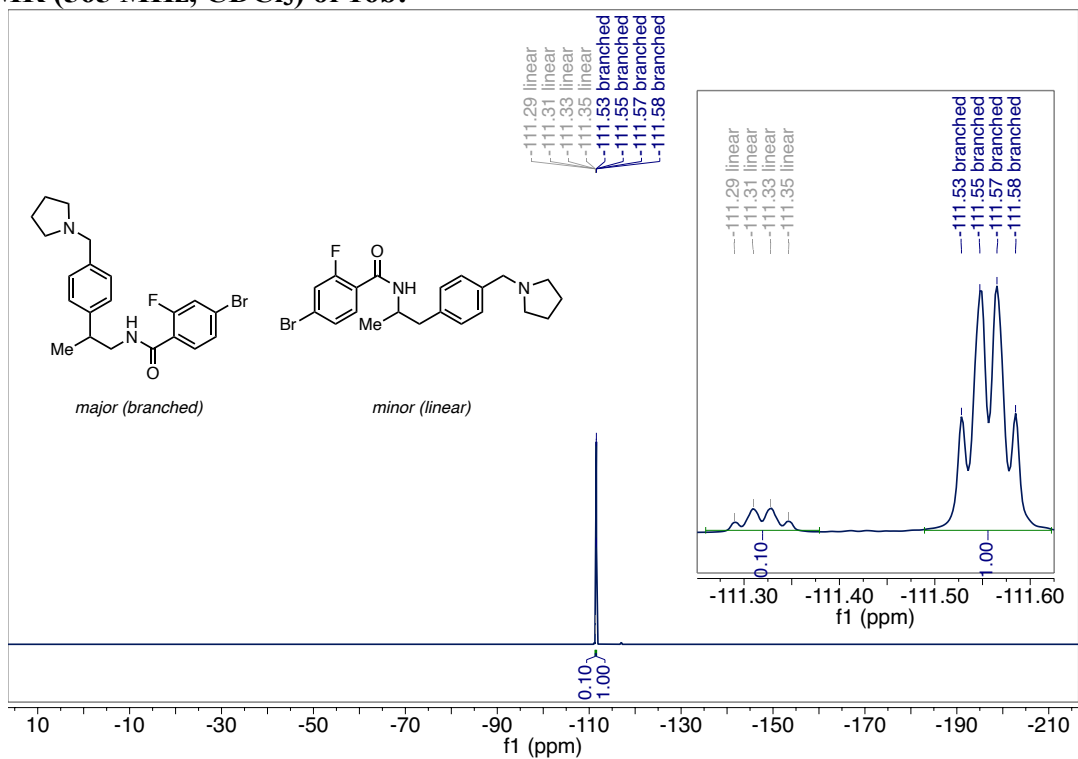
^1H NMR (600 MHz, CDCl_3) of 16b:



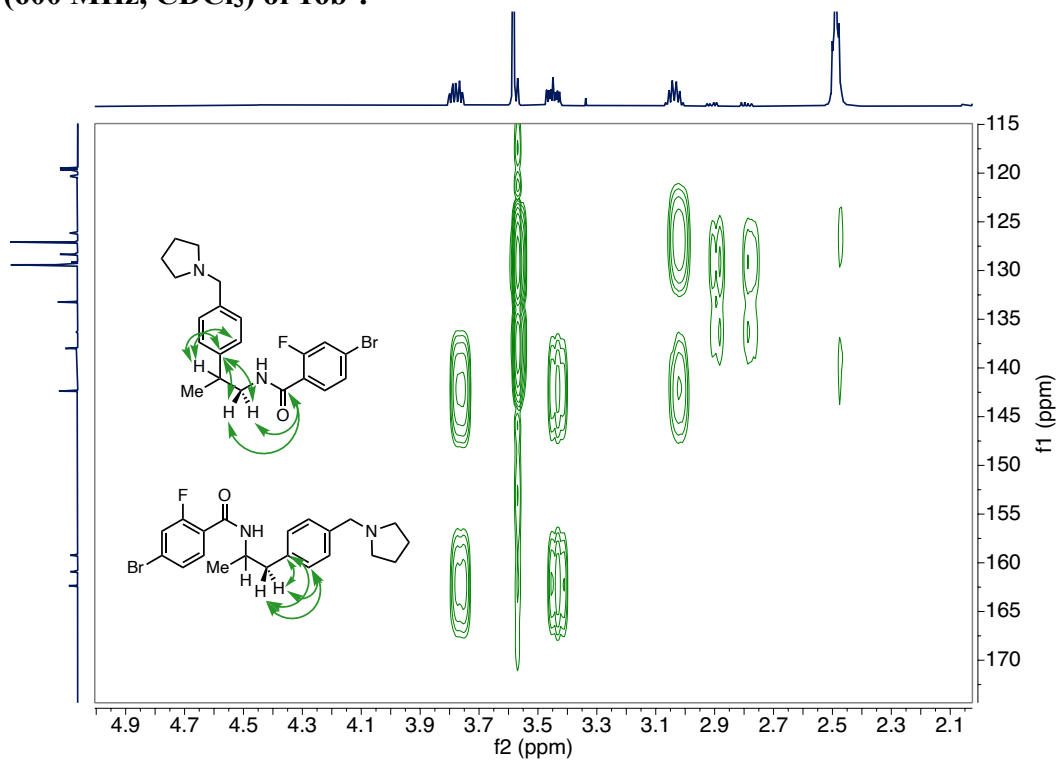
$^{13}\text{C}\{^1\text{H}\}$ NMR (151 MHz, CDCl_3) of 16b:



^{19}F NMR (565 MHz, CDCl_3) of 16b:

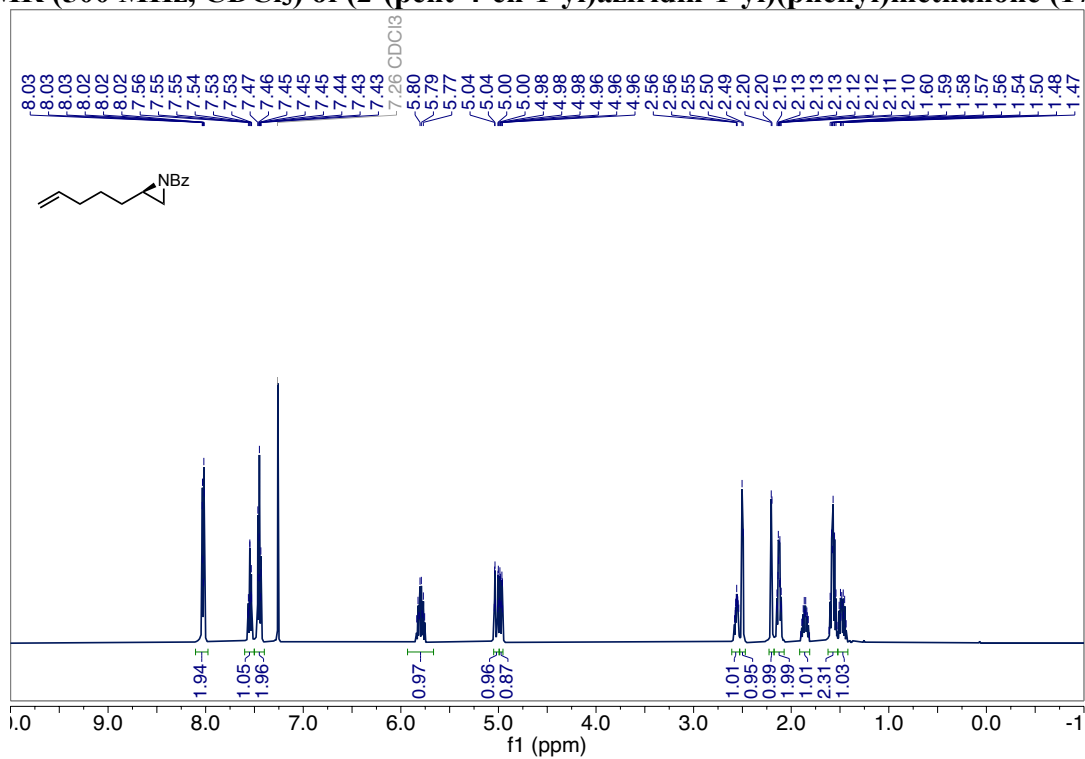


HMBC (600 MHz, CDCl_3) of 16b^a:

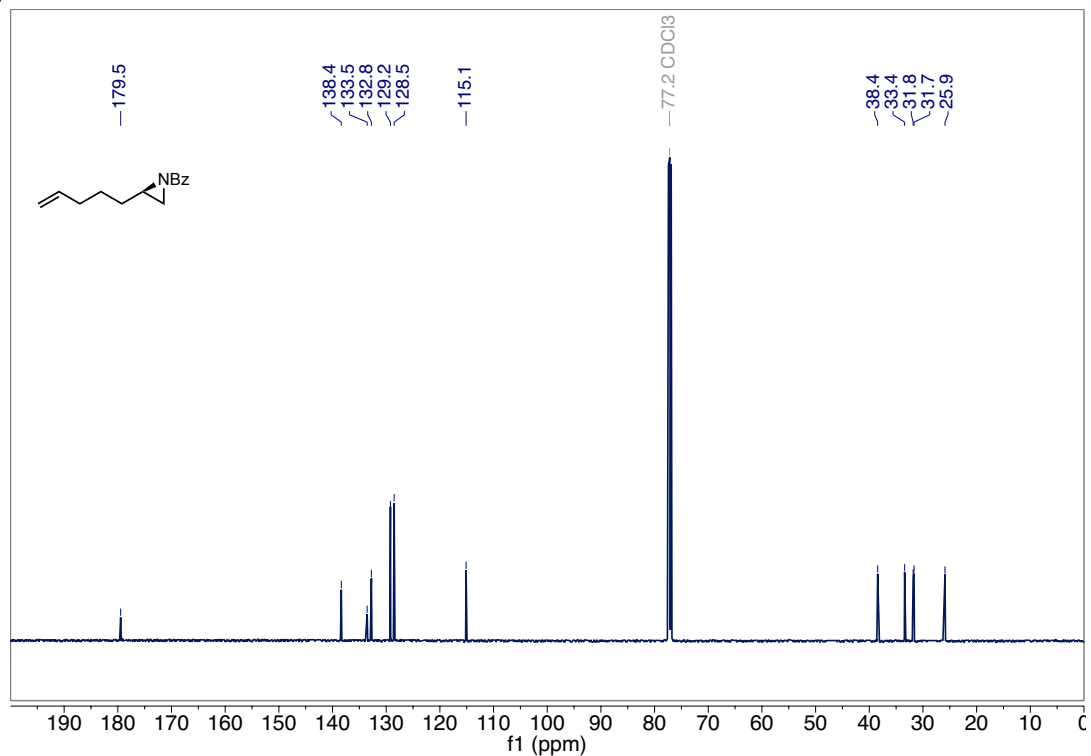


Only correlations necessary to establish branched/linear connectivity are identified.

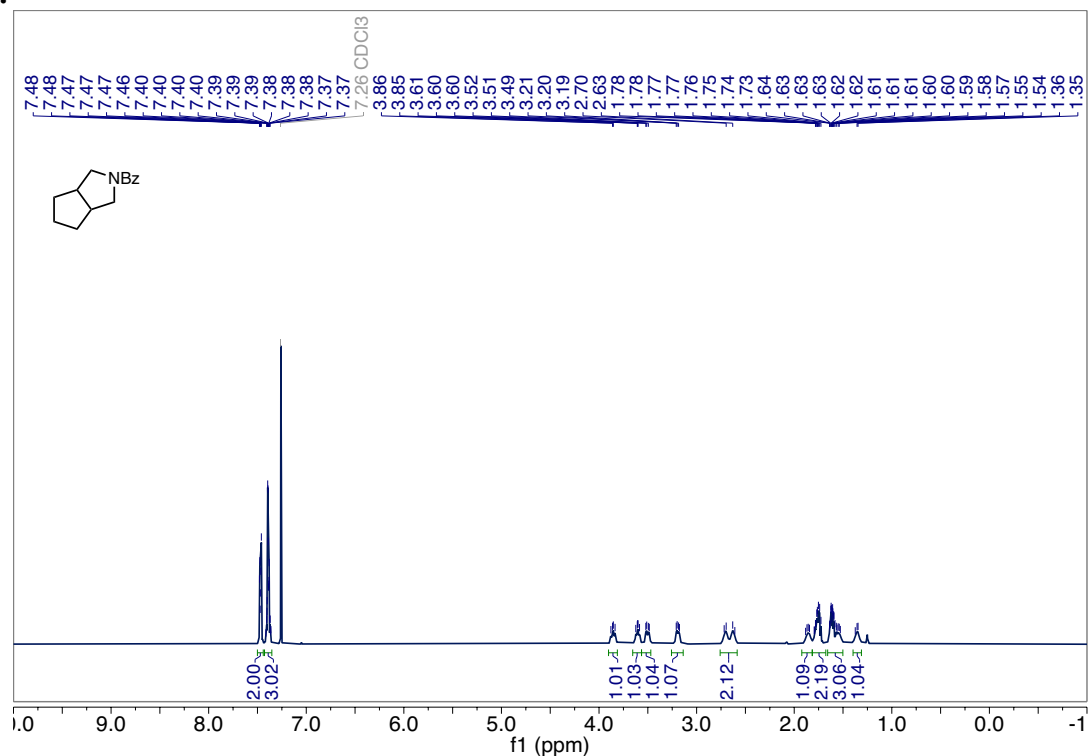
^1H NMR (500 MHz, CDCl_3) of (2-(pent-4-en-1-yl)aziridin-1-yl)(phenyl)methanone (17a):



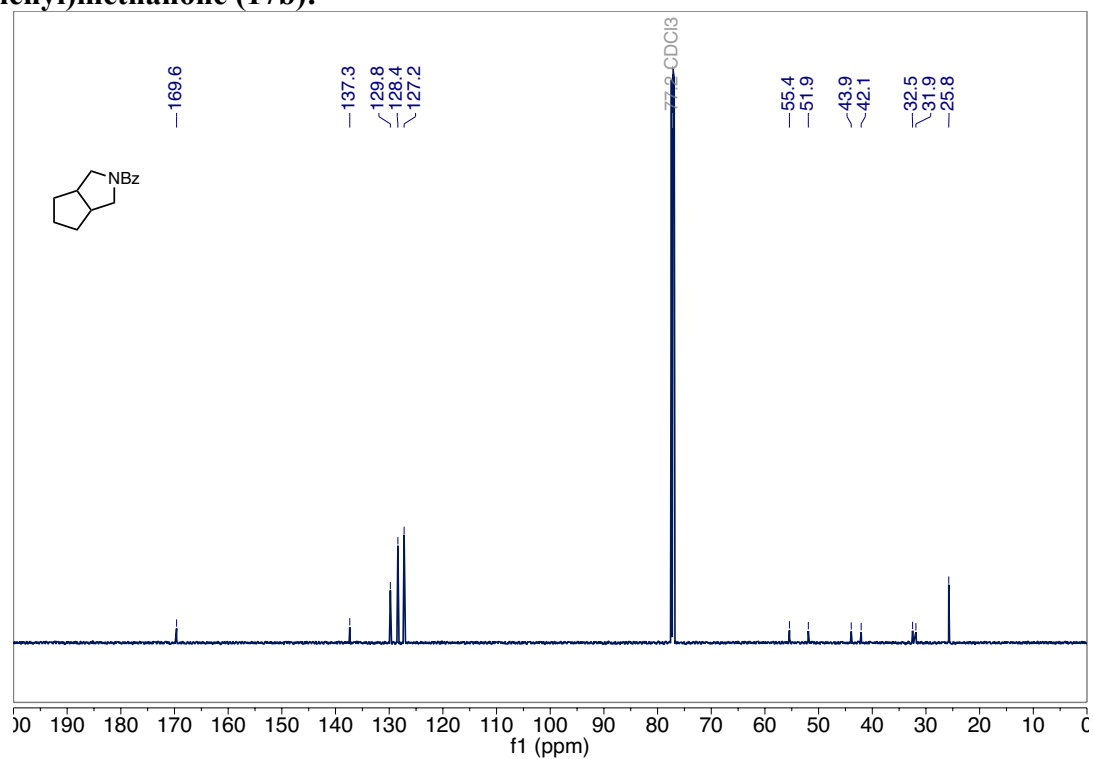
$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of (2-(pent-4-en-1-yl)aziridin-1-yl)(phenyl)methanone (17a):



^1H NMR (500 MHz, CDCl_3) of (hexahydrocyclopenta[*c*]pyrrol-2(*1H*)-yl)(phenyl)methanone (17b):



$^{13}\text{C}\{^1\text{H}\}$ NMR (126 MHz, CDCl_3) of (hexahydrocyclopenta[*c*]pyrrol-2(*1H*)-yl)(phenyl)methanone (17b):



11. References

- (1) Buckley, B. R.; Patel, A. P.; Wijayantha, K. G. U. Observations on the Modified Wenker Synthesis of Aziridines and the Development of a Biphasic System. *J. Org. Chem.* **2013**, *78* (3), 1289–1292. <https://doi.org/10.1021/jo302615g>.
- (2) Li, G.; Ji, C.-L.; Hong, X.; Szostak, M. Highly Chemoselective, Transition-Metal-Free Transamidation of Unactivated Amides and Direct Amidation of Alkyl Esters by N–C/O–C Cleavage. *J. Am. Chem. Soc.* **2019**, *141* (28), 11161–11172. <https://doi.org/10.1021/jacs.9b04136>.
- (3) Shustov, G. V.; Polyak, F. D.; Kadorkina, G. K.; Vosekalna, I. A.; Shokhen, M. A.; Alekperov, R. K.; Eremeev, A. V.; Kostyanovskii, R. G. Chiroptical Properties of the Nonplanar Amide Chromophore in N-Acylaziridines. *Chem. Heterocycl. Compd.* **1989**, *25* (1), 32–39. <https://doi.org/10.1007/bf00472614>.
- (4) Gardiner, J. M.; Loyns, C. R. Synthesis of Novel 1-, 1,4- and 1,7-Substituted 2-Mercapto- and 2-Methylmercapto- Benzimidazoles: Acyclic Analogues of the HIV-1 RT Inhibitor, TIBO. *Tetrahedron* **1995**, *51* (42), 11515–11530. [https://doi.org/10.1016/0040-4020\(95\)00751-s](https://doi.org/10.1016/0040-4020(95)00751-s).
- (5) Hodgson, D. M.; Kaka, N. S. Asymmetric Synthesis of α -Alkylated Aldehydes Using Terminal Epoxide-Derived Chiral Enamines. *Angew. Chem. Int. Ed.* **2008**, *47* (51), 9958–9960. <https://doi.org/10.1002/anie.200804369>.
- (6) McGhee, A.; Cochran, B. M.; Stenmark, T. A.; Michael, F. E. Stereoselective Synthesis of 2,5-Disubstituted Morpholines Using a Palladium-Catalyzed Hydroamination Reaction. *Chem. Commun.* **2013**, *49* (60), 6800–6802. <https://doi.org/10.1039/c3cc44117b>.
- (7) Bates, G. S.; Varelas, M. A. A Mild, General Preparation of N-Acyl Aziridines and 2-Substituted 4(S)-Benzyloxazolines. *Can. J. Chem.* **1980**, *58* (23), 2562–2566. <https://doi.org/10.1139/v80-408>.
- (8) Wood, D. P.; Guan, W.; Lin, S. Titanium and Cobalt Bimetallic Radical Redox Relay for the Isomerization of N-Bz Aziridines to Allylic Amides. *Synthesis* **2021**, *53* (22), 4213–4220. <https://doi.org/10.1055/s-0037-1610779>.
- (9) Crisenza, G. E. M.; McCreanor, N. G.; Bower, J. F. Branch-Selective, Iridium-Catalyzed Hydroarylation of Monosubstituted Alkenes via a Cooperative Destabilization Strategy. *J. Am. Chem. Soc.* **2014**, *136* (29), 10258–10261. <https://doi.org/10.1021/ja505776m>.
- (10) Bakhoda, A. (Gus); Jiang, Q.; Badieli, Y. M.; Bertke, J. A.; Cundari, T. R.; Warren, T. H. Copper-Catalyzed C(sp³)–H Amidation: Sterically Driven Primary and Secondary C–H Site-Selectivity. *Angew. Chem. Int. Ed.* **2019**, *58* (11), 3421–3425. <https://doi.org/10.1002/anie.201810556>.
- (11) Apsunde, T.; Trudell, M. Solvent-Free, Base-Free Microwave-Mediated Iridium-Catalyzed N-Alkylation of Amides with Alcohols. *Synthesis* **2013**, *46* (02), 230–234. <https://doi.org/10.1055/s-0033-1340142>.

- (12) Kawada, T.; Yabushita, K.; Yasuda, T.; Ohta, T.; Yajima, T.; Tanaka, K.; Utsumi, N.; Watanabe, M.; Murata, K.; Kayaki, Y.; Kuwata, S.; Katayama, T. Asymmetric Transfer Hydrogenative Amination of Benzylic Ketones Catalyzed by Cp*Ir(III) Complexes Bearing a Chiral N-(2-Picolyl)Sulfonamidato Ligand. *J. Org. Chem.* **2022**, *87* (13), 8458–8468. <https://doi.org/10.1021/acs.joc.2c00580>.
- (13) Collins, J. L.; Staveness, D.; Sowden, M. J.; Stephenson, C. R. J. A One-Pot Photochemical Method for the Generation of Functionalized Aminocyclopentanes. *Org. Lett.* **2022**, *24* (24), 4344–4348. <https://doi.org/10.1021/acs.orglett.2c01483>.
- (14) Yunlong, S.; Chen, Z.; Fang, G.; Weimin, L.; Qun, D.; Pan, L.; Zhou, Y.; Xin, C.; Xiaodan, F.; Jianbin, M. CLASS OF HETEROAROMATIC COMPOUND, PREPARATION METHOD THEREFOR AND USE THEREOF, August 4, 2022.
- (15) Ishihara, Y.; Kamata, M.; Takekawa, S. Amine Derivative. WIPO Patent WO2004072018. August 26, 2004.
- (16) Austin, A.; Petersson, G. A.; Frisch, M. J.; Dobek, F. J.; Scalmani, G.; Throssell, K. A Density Functional with Spherical Atom Dispersion Terms. *J. Chem. Theory Comput.* **2012**, *8* (12), 4989–5007. <https://doi.org/10.1021/ct300778e>.
- (17) Ditchfield, R.; Hehre, W. J.; Pople, J. A. Self-Consistent Molecular-Orbital Methods. IX. An Extended Gaussian-Type Basis for Molecular-Orbital Studies of Organic Molecules. *J. Chem. Phys.* **1971**, *54* (2), 724–728. <https://doi.org/10.1063/1.1674902>.
- (18) Hehre, W. J.; Ditchfield, R.; Pople, J. A. Self—Consistent Molecular Orbital Methods. XII. Further Extensions of Gaussian—Type Basis Sets for Use in Molecular Orbital Studies of Organic Molecules. *J. Chem. Phys.* **1972**, *56* (5), 2257–2261. <https://doi.org/10.1063/1.1677527>.
- (19) Hariharan, P. C.; Pople, J. A. Accuracy of AH n Equilibrium Geometries by Single Determinant Molecular Orbital Theory. *Mol. Phys.* **1974**, *27* (1), 209–214. <https://doi.org/10.1080/00268977400100171>.
- (20) Hariharan, P. C.; Pople, J. A. The Influence of Polarization Functions on Molecular Orbital Hydrogenation Energies. *Theor. Chim. Acta* **1973**, *28* (3), 213–222. <https://doi.org/10.1007/bf00533485>.
- (21) Francl, M. M.; Pietro, W. J.; Hehre, W. J.; Binkley, J. S.; Gordon, M. S.; DeFrees, D. J.; Pople, J. A. Self-Consistent Molecular Orbital Methods. XXIII. A Polarization-Type Basis Set for Second-Row Elements. *J. Chem. Phys.* **1982**, *77* (7), 3654–3665. <https://doi.org/10.1063/1.444267>.
- (22) Hay, P. J.; Wadt, W. R. Ab Initio Effective Core Potentials for Molecular Calculations. Potentials for the Transition Metal Atoms Sc to Hg. *J. Chem. Phys.* **1985**, *82* (1), 270–283. <https://doi.org/10.1063/1.448799>.

- (23) Wadt, W. R.; Hay, P. J. Ab Initio Effective Core Potentials for Molecular Calculations. Potentials for Main Group Elements Na to Bi. *J. Chem. Phys.* **1985**, *82* (1), 284–298. <https://doi.org/10.1063/1.448800>.
- (24) Hay, P. J.; Wadt, W. R. Ab Initio Effective Core Potentials for Molecular Calculations. Potentials for K to Au Including the Outermost Core Orbitals. *J. Chem. Phys.* **1985**, *82* (1), 299–310. <https://doi.org/10.1063/1.448975>.
- (25) Scalmani, G.; Frisch, M. J. Continuous Surface Charge Polarizable Continuum Models of Solvation. I. General Formalism. *J. Chem. Phys.* **2010**, *132* (11), 114110. <https://doi.org/10.1063/1.3359469>.
- (26) Jamookeeah, C. E.; Beadle, C. D.; Jackson, R. F. W.; Harrity, J. P. A. Investigation of a Flexible Enantiospecific Approach to Aziridines. *J. Org. Chem.* **2008**, *73* (3), 1128–1130. <https://doi.org/10.1021/jo7023637>.
- (27) Wang, F.; Frankowski, K. J. Divergent Electrochemical Carboamidation of Cyclic Amines. *J. Org. Chem.* **2022**, *87* (2), 1173–1193. <https://doi.org/10.1021/acs.joc.1c02534>.
- (28) Ritu; Kolb, D.; Jain, N.; König, B. Synthesis of Linear Enamides and Enecarbamates via Photoredox Acceptorless Dehydrogenation. *Adv. Synth. Catal.* **2023**, *365* (4), 605–611. <https://doi.org/10.1002/adsc.202201259>.
- (29) Ismaeel, N.; Zhuo, Z.; Imran, S.; Yuan, D.; Yao, Y. Synthesis and Characterization of Rare Earth/Lithium Complexes Stabilized by Ethylenediamine-Bridged Bis(Phenolate) Ligands and Their Activity in Catalyzing Amidation Reactions. *Dalton Trans.* **2022**, *51* (36), 13892–13901. <https://doi.org/10.1039/d2dt02642b>.
- (30) Kraïem, J.; Ollevier, T. Atom Economical Synthesis of N -Alkylbenzamides via the Iron(III) Sulfate Catalyzed Rearrangement of 2-Alkyl-3-Aryloxaziridines in Water and in the Presence of a Surfactant. *Green Chem.* **2017**, *19* (5), 1263–1267. <https://doi.org/10.1039/c6gc03589b>.
- (31) Zhao, Y.; Truhlar, D. G. The M06 Suite of Density Functionals for Main Group Thermochemistry, Thermochemical Kinetics, Noncovalent Interactions, Excited States, and Transition Elements: Two New Functionals and Systematic Testing of Four M06-Class Functionals and 12 Other Functionals. *Theor. Chem. Acc.* **2008**, *120* (1–3), 215–241. <https://doi.org/10.1007/s00214-007-0310-x>.
- (32) Luchini, G.; Alegre-Requena, J. V.; Funes-Ardoiz, I.; Paton, R. S. GoodVibes: Automated Thermochemistry for Heterogeneous Computational Chemistry Data. *F1000Research*, **2020**, *9*, 291. DOI: 10.12688/f1000research.22758.1
- (33) Ribeiro, R. F.; Marenich, A. V.; Cramer, C. J.; Truhlar, D. G. Use of Solution-Phase Vibrational Frequencies in Continuum Models for the Free Energy of Solvation. *J. Phys. Chem. B* **2011**, *115* (49), 14556–14562. <https://doi.org/10.1021/jp205508z>.

- (34) Weigend, F.; Ahlrichs, R. Balanced Basis Sets of Split Valence, Triple Zeta Valence and Quadruple Zeta Valence Quality for H to Rn: Design and Assessment of Accuracy. *Phys. Chem. Chem. Phys.* **2005**, 7 (18), 3297–3305. <https://doi.org/10.1039/b508541a>.
- (35) Weigend, F. Accurate Coulomb-Fitting Basis Sets for H to Rn. *Phys. Chem. Chem. Phys.* **2006**, 8 (9), 1057–1065. <https://doi.org/10.1039/b515623h>.
- (36) Marenich, A. V.; Cramer, C. J.; Truhlar, D. G. Universal Solvation Model Based on Solute Electron Density and on a Continuum Model of the Solvent Defined by the Bulk Dielectric Constant and Atomic Surface Tensions. *J. Phys. Chem. B* **2009**, 113 (18), 6378–6396. <https://doi.org/10.1021/jp810292n>.

12. Aryl Iodide SMILES

Cluster A

O=[N+](O)c1cccc(I)c1Br
COc1cc(I)cc(C=O)c1
COc1cc2nnc(Nc3cccc(I)c3)c2cc1OC
Bre1c(I)ccc2cccc12
O=Cc1cccc(Br)c(I)c1
Bre1cc(-n2c3cccc3c3cccc32)ccc1I
CSc1ncc(C(=O)O)c(=Nc2cccc(I)c2)[nH]1
Ic1cccc(Oc2ncccn2)c1
O=[N+](O)c1cccc(Br)c(I)c1
O=C(O)c1cccc(I)c1Br
O=C(O)c1cccc(Br)c(I)c1
OC(=Nc1cccc(I)c1)c1cccc1
N#Cc1cccc(Br)c(I)c1
Clc1cccc1I
FC(F)(F)c1cccc(I)c1Cl
O=C1c2cccc([N+](=O)[O-])c2C(=O)N1c1cccc(I)c1
Cc1ccc(N=C(O)c2cccc2)cc1I
Cc1cc(Br)c(I)c1C
O=[N+](O)c1cccc1Oe1cccc(I)c1
COC(=O)c1ccc(Cl)c(I)c1
CC(C)c1ccc(I)c(Br)c1
Cc1cccc(C(O)=Nc2cccc(I)c2)c1
Cc1ccc(Br)c(I)c1
O=[N+](O)c1cccc(Cl)c(I)c1
O=[N+](O)c1cccc(C(O)=Nc2cccc(I)c2)c1
Oe1cc(I)ccc1-c1ccc(I)cc1O
Cc1cc(Cl)c(I)cc1C
OC(=Nc1CC1)c1cccc(Cl)c(I)c1
Cc1cc(Cl)c(I)cc1C(=O)O
CC(C)(C)c1ccc(Br)c(I)c1
O=[N+](O)c1ccc(Cl)c(C(O)=Nc2cccc(I)c2)c1
O=C(Nc1cccc(I)c1)c1ccc([N+](=O)[O-])cc1
COC(=O)c1cc(O)cc(I)c1
Cc1ccc(I)c(Cl)c1
OCc1ccc(Br)c(I)c1
O=C(O)c1cccc(I)c1Cl
O=C(Nc1cccc(I)c1)c1cccc1
OC(=Nc1cccc(I)c1)c1cccc1
Cc1ccc(N=C(O)c2cccc(N3CCOCC3)nc2)cc1I
COC(=O)c1ccc(Br)c(I)c1
O=C(Nc1cccc(I)c1)c1ccc(F)cc1

OCc1ccc(Cl)c(I)c1
OCc1ccc(I)c(Br)c1
Cc1ccc(I)c(Br)c1
CCc1ccc(I)c(Br)c1
CC(=O)c1ccc(Br)c(I)c1
N#Cc1ccc(Cl)c(I)c1
COC(=O)c1cc(I)c(Cl)cc1C
COC(=O)c1cc(I)c(Cl)cc1C
O=[N+](O)c1ccc(I)c1Cl
O=C(O)c1ccc(Cl)c(I)c1
O=[N+](O)c1ccc(I)c1Cl
Cc1ccc(N=C(O)c2ncccn2)cc1I
N=C(O)c1ccc(Cl)c(I)c1
CCOC(=O)c1ccc(Cl)c(I)c1
Clc1ccc(CBr)ccc1I
COC(=O)c1cc(I)c(Br)cc1C
CCOC(=O)c1cc(F)cc(I)c1
O=C(C(=NO)Nc1cccc(I)c1)
COC(=O)c1cc(N)c(I)c1
Cc1cccc(I)c1Br
COc1cc(I)cc(C(=O)O)c1
N#Cc1cc(N)c(I)c1
Bre1cc(-e2cccc2)ccc1I
CS(=O)(=O)c1ncc(C(=NO)c(=Nc2cccc(I)c2)[nH]1)
FC(F)(F)c1ccc(Br)c(I)c1
Cc1ccc(Cl)c(I)c1
CC(C)(C)c1ccc(Cl)c(I)c1
OC(=Nc1cccc(I)c1)c1cccc1F
CC(C)(C)c1ccc(I)c(Br)c1
O=[N+](O)c1cccc(-e2n(-c3cccc(I)c3)nn2)c1
Clc1ccc(CBr)cc1I
COc1cccc(C(O)=Nc2cccc(I)c2)c1
O=C1C=CC(=O)N1c1cccc(I)c1
Ic1cccc(N=e2[nH]c(-c3cccc3)nc3cccc23)c1
CC(C)(C)OC(O)=Nc1cc(I)cc(C(=O)O)c1
O=C1c2ccc([N+](=O)[O-])cc2C(=O)N1c1cccc(I)c1
O=[N+](O)c1ccc(F)cc(I)c1
CCOC(=O)c1ccc(SC)[nH]c1=Nc1cccc(I)c1
O=C(O)c1ccc(Cl)c(I)c1
N#Cc1cc(F)c(I)c1

Cc1cccc(I)c1Cl
COC(=O)c1cccc(I)c1Cl
[N-]=[N+]=Nc1cccc(I)c1
O=C(O)c1ccc(F)cc(I)c1
COC(=O)c1cccc(I)c1Br
O=Cc1cc(F)cc(I)c1
BrCc1cccc(I)c1Br
CSc1ncc(C(=NO)c(=Nc2cccc(I)c2)[nH]1)
O=[N+](O)c1cccc1S(=O)(=O)Nc1cccc(I)c1
CON(C)C(=O)c1ccc(Cl)c(I)c1
CCOC(=O)c1cc(N)c(I)c1
O=C(Nc1cccc(I)c1)c1cccc1
Cc1cc(Br)c(I)cc1C(=O)O
CC(C)(C)c1ccc(C(=O)Nc2cccc(I)c2)cc1
OC(=Nc1cccc(I)c1)c1cccc1
OC(CN1CCCC1)=Nc1cccc(I)c1
Nc1cc(I)cc([N+](=O)[O-])c1
OCc1cccc(I)c1Br
FC(F)(F)c1ccc(I)c1Br
Bre1cccc1I
Cc1cc(=O)cc2cc(OCC(O)=Nc3cccc(I)c3)ccc12
OC(=Nc1cccc(I)c1)c1ccc2cccc2c1
O=[N+](O)c1cccc1C(O)=Nc1cccc(I)c1
Ic1cc2cccc2cc1I
O=c1c2cccc2sn1-c1cccc(I)c1
O=Cc1cccc(I)c1Br
Bre1cc2cccc2cc1I
O=Cc1ccc(Cl)c(I)c1
S=C=Nc1cccc(I)c1
O=C(O)c1ccc(Cl)cc1NC(O)=Nc1cccc(I)c1
N#Cc1cccc(I)c1Br
Nc1cc(I)cc(C(=O)O)c1
CCOC(=O)C(=Nc1cccc(I)c1)C(=O)OCC
COc1cc(I)cc([N+](=O)[O-])c1
Cc1cc(Cl)c(I)cc1CO
CCOC(=O)c1cc(I)cc(O)c1
OC(=Nc1cccc(I)c1)c1c(O)nc2cccc2c1O
COC(=O)c1ccc(F)cc(I)c1
Cc1ccc(N=C(O)c2cccc(Cl)c2)cc1I
OC(=Nc1cccc(I)c1)c1cccc1C(F)(F)F
Cc1ccc(N2C(=O)c3cccc3C2=O)cc1I

Cluster B

Nc1c(F)cc(F)c(F)c1I
COc1cc(OC)c(C(C)=O)c(O)c1I
Oe1cc(OCc2cccc2)ccc1I
O=C(O)c1cc(F)c(I)c(F)c1
COC(=O)c1cc(I)c(O)cc1OC
Fc1cc(F)c(I)c(F)c1
Nc1ccc(I)c(F)c1F
COCCNS(=O)(=O)c1ccc(I)cc1
COc1cc(F)c(I)cc1OC
CCCCOe1ccc(I)c(F)c1F
O=C(O)c1cc(F)cc(F)c(I)c1F
COc1ccc(F)c(I)c1OC
Fc1cc(F)c(I)cc1F
CON(C)C(=O)c1cccc(Cl)c1I
Oe1cc(F)c(Cl)cc1I
Nc1cc(F)c(I)cc1[N+](=O)[O-]
COc1cccc(O)c1I

Oe1cc(I)c(F)c1F
Nc1cc(F)c(Br)cc1I
CC(O)=Nc1cc(F)c(I)c(F)c1
O=S(=O)(NCC1CCCO1)c1ccc(I)cc1
Nc1cc(F)c(Cl)cc1I
CC(C)NS(=O)(=O)c1ccc(I)cc1
FC(F)(F)c1ccc(Cl)c1I
COc1cc(N)c(I)cc1C(=O)O
O=S(=O)(c1ccc(I)cc1)N(Cc1cccc1)Cc1cccc1
Oe1cc(F)c(I)c(F)c1
COc1cc(Br)ccc1I
OCc1cc(F)c(I)c(F)c1
COc1ccc(F)c(F)c1I
CC(C)NS(=O)(=O)c1ccc(I)cc1
OB(O)c1cc(Br)ccc(I)c1F
COC(=O)c1cc(I)c(F)c1F
N#Cc1cc(I)c(N)cc1Cl

N#Cc1cc(N)ccc(I)c1F
COC(=O)c1cc(I)c(O)c1F
COC(=O)c1cc(I)c(O)c1Cl
CCOe1cccc(F)c1I
COc1c(F)ccc(I)c1F
Cc1cc(I)c(F)c1Cl
Nc1cc(Cl)ccc1I
O=C(Nc1cccc(I)cc1)c1cc2cc(Br)ccc2oc1=O
COc1ccc(C(=O)O)c2c(I)c(OC)cc(OC)c2C(C)=O)c1
Fc1cc(Cl)c(Br)cc1I
O=S(=O)(NCCO)c1ccc(I)cc1
COc1cc(OC)c(I)c(OC)c1
FC(F)(F)Sc1ccc(I)cc1
COc1cc(F)c(F)cc1I
Nc1cc(Br)ccc1I
Nc1cc(I)cc(Br)c(F)c1F

COC(=O)c1ccc(C)c(I)c1Cl
O=C(O)c1cc(I)c(F)c(F)c1F
N#Cc1cc(I)c(O)c1F
COc1ccc(OC)c(I)c1F
COc1cc(N)c(I)c1Cl
CN(C)c1ccc(I)c(F)c1
BrCe1ccc(Br)c1I
COc1cc(OC)c(I)c1Cl
COC(=O)c1cc(I)c(N)cc1Cl
Nc1c(F)c(F)c(I)c(F)c1F
Oc1c(Br)ccc(I)c1F
Fc1ccc(I)c(F)c1Cl
N#Cc1cc(F)c(I)c(F)c1
COc1cc(I)c(N)cc1Br
Oc1cc(F)ccc1I
Nc1ccc(I)c(OC(F)(F)(F)c1
O=C(O)CNS(=O)(=O)c1ccc(I)cc1
COc1cc(I)c(OC)cc1Cl
CC(O)=NCC1CN(c2ccc(I)c(F)c2)C(=O)O1
Oc1c(I)ccc(I)c1O
Nc1c(I)ccc(F)c1F
COC(=O)c1cc(N)c(I)c(O)c1
COc1cc(Cl)cc(C)c1I
COC(=O)c1cc(O)c(I)c(O)c1
Nc1cc(Br)c(Cl)cc1I
Nc1cc(Cl)c(Br)cc1I
Nc1cc(O)ccc1I
COc1cc(Br)c(F)cc1I
O=Cc1cc(I)c(O)cc1F
Fc1cc(I)c(F)cc1Cl
Nc1cc(F)c(F)c(F)c1I
Oc1cc(Br)cc(F)c1I
C#CC(C)(C)NS(=O)(=O)c1ccc(I)cc1
Cc1cc(Br)c(I)c(C(=O)O)c1
COc1ccc(N)c1I
Fc1c(F)c(I)c(F)c(F)c1I
Nc1ccc(F)c1I
COc1cc(N)ccc1I
CCOc1cc(Br)ccc1I
Fc1cc(F)c(I)cc1Cl
Fc1c(Br)cc(I)c(F)c1F
O=C(Nc1ccc(I)cc1)c1cc([N+](=O)[O-]
)cc([N+](=O)[O-])c1
Cc1cc(O)c(I)c(O)c1
O=C(O)c1ccc(Br)c1I
Cc1cc(C)c(I)c(Br)c1
Fc1cc(Cl)ccc1I
COc1ccc(I)c(F)c1
Oc1ccc(I)c(F)c1
Nc1cc(OC(F)(F)F)ccc1I
COc1cc(I)c(F)cc1F
Nc1cc(Br)c(F)c1I
O=[N+](=[O-])c1cc(I)c(F)c(F)c1F
Fc1c(I)ccc(Cl)c1Cl
C=CCNS(=O)(=O)c1ccc(I)cc1
COc1cc(N)c(I)cc1OC
Nc1ccc(I)c(F)c1
Cc1ccc(Br)c1I
Fc1ccc(Cl)c(F)c1I
Br1ccc2ccc2c1I
Cc1cc(Cl)cc(O)c1I
Cc1cc(I)c(O)cc1Cl
O=C(Nc1ccc(I)cc1)c1cc([N+](=O)[O-])ccc1Cl
O=C(Nc1ccc(I)cc1)c1ccc(Cl)cc1[N+](=O)[O-]
COc1ccc(OC)c1I
COc1cc(F)c(I)cc1C(=O)O
Cc1cc(I)c(N)cc1Cl
Nc1c(I)ccc(Br)c1Cl

COc1ccc(I)c(OC)c1OC
O=C1OC(CO)CN1c1ccc(I)c(F)c1
Nc1cc(I)c(F)cc1Cl
Nc1c(F)ccc(F)c1I
NNS(=O)(=O)c1ccc(I)cc1
Nc1ccc(O)c1I
COc1cc(F)c(C(=O)O)cc1I
COC(=O)c1ccc(N)c(I)c1O
Nc1cc(Cl)c(Cl)cc1I
COC(=O)c1cc(I)c(N)cc1OC
CC(C)(C)NS(=O)(=O)c1ccc(I)cc1
CC(C)C(NS(=O)(=O)c1ccc(I)cc1)C(=O)O
Cc1cc(I)c(F)c1F
O=P(O)(O)c1ccc(I)cc1
Fc1c(I)ccc(I)c1F
Fc1c(I)ccc(Br)c1Cl
CCc1cc(F)c(I)c(F)c1
CC(C)(C)OC(=O)c1ccc(I)c(F)cc1F
C[Si](C)(C)c1c(F)ccc(I)c1F
COc1c(I)ccc(I)c1OC
FC(F)(F)Oc1cc(Br)ccc1I
Oc1cc(Cl)ccc1I
OCc1ccc(Br)c1I
O=S(=O)(c1ccc(I)cc1)N1CCc2ccc2C1
COc1cc(Br)c(Cl)cc1I
Cc1ccc(Oc2c(F)c(F)c(I)c(F)c2F)cc1
CCOc1cc(Cl)ccc1I
COC(=O)c1ccc(Br)c1I
Fc1cc(F)c(I)c1F
COc1cc(Br)c(C(F)(F)F)cc1I
FC(F)(F)c1ccc(Br)c1I
OCc1cc(I)c(F)cc1F
Nc1cc(F)c(C(F)(F)F)cc1I
COc1ccc(I)c(N)c1
Nc1cc(F)ccc1I
Nc1cc(F)c(Br)c(F)c1I
O=[N+](=[O-])c1ccc(F)c(I)c1F
O=S(=O)(Nc1ccc1)c1ccc(I)cc1
O=C(Nc1ccc(I)cc1)c1ccc2ccc2oc1=O
COc1ccc(C=O)c(O)c1I
Nc1ccc(F)c(F)c1I
OB(O)c1cc(F)c(I)c(F)c1
COc1cc(C=O)c(I)c(OC)c1
COc1cc(Br)cc(OC)c1I
Fc1ccc(I)c(F)c1F
N#Cc1cc(I)c(N)cc1F
Nc1cc(Cl)c(F)cc1I
COc1ccc(Cl)c(F)c1I
COc1cc(C)c(I)c(OC)c1OC
O=C(O)c1c(F)c(F)c(F)c1I
COc1cc(N)c([N+](=O)[O-])cc1I
Fc1ccc(I)c(F)c1Br
Fc1ccc(I)c(F)c1OC(F)(F)F
CSc1ccc(F)c(I)c1F
Oc1ccc(I)c(F)c1F
COC(=O)c1cc(OC)cc(OC)c1I
Oc1cc(I)c(O)cc1I
O=[N+](=[O-])c1ccc(Oc2c(F)c(F)c(I)c(F)c2F)cc1
Fc1ccc(F)c1I
COc1ccc(F)c(OC)c1I
COc1cc(N)c(C(=O)O)cc1I
COC(=O)c1cc(I)c(F)cc1OC
Nc1c(F)c(F)c(F)c1I
O=C(Nc1ccc(I)cc1)Nc1ccc([N+](=O)[O-])cc1
OCc1ccc(F)c1I
O=Cc1cc(F)c(I)c(F)c1
Nc1c(I)cc(F)c(F)c1F
Fc1ccc(I)c(F)c1

Nc1c(I)ccc(F)c1[N+](=O)[O-]
CN(C)S(=O)(=O)c1ccc(I)cc1
O=Cc1cc(I)c(F)cc1F
Fc1c(Cl)ccc(I)c1F
Nc1cc(Br)c(C(F)(F)F)cc1I
O=S(=O)(O)c1ccc(I)cc1
O=C(Nc1ccc(I)cc1)c1ccc1[N+](=O)[O-]
CCOP(=O)(OCC)c1ccc(I)cc1
COc1cc(Br)cc(C)c1I
Oc1cc(F)c(F)cc1I
Fc1c(F)c(F)c(I)c(F)c1F
N#Cc1ccc(Br)c1I
Oc1cc(I)c(F)cc1Cl
CS(=O)(=O)c1ccc(I)cc1
COc1cc(O)c(C(=O)O)cc1I
COCCNS(=O)(=O)c1ccc(I)cc1
COc1cc(I)c(OC)cc1I
O=[N+](=[O-])c1c(F)ccc(I)c1F
O=S(=O)(NC1CCCC1)c1ccc(I)cc1
CCOC(=O)c1cc(O)c(I)c(O)c1
FC(F)Oc1cc(Br)ccc1I
COc1c(Cl)ccc(I)c1F
Fc1c(I)ccc(Br)c1Br
Cc1cc(I)c(N)cc1Br
O=[N+](=[O-])c1cc(I)c(F)cc1F
O=S(=O)(Oc1ccc(Cl)cc1)c1ccc(I)cc1
COc1cc(I)c(F)cc1Cl
CCNS(=O)(=O)c1ccc(I)cc1
FS(F)(F)(F)c1ccc(I)cc1
Cc1cc(I)c(N)cc1O
Cc1cc(Cl)cc(N)c1I
COc1cc(OC)c(C(C)C)cc1I
O=S(=O)(Nc1ccc1)c1ccc(I)cc1
COc1cc(Br)cc(F)c1I
O=S(=O)(NC1CC1)c1ccc(I)cc1
Fc1cc(OC(F)(F)F)ccc1I
O=C(O)c1cc(I)c(O)cc1O
NCC1CN(c2ccc(I)c(F)c2)C(=O)O1
Fc1cc(Br)ccc1I
Fc1cc(I)c(F)cc1Br
COc1cc(Br)c(C)c1I
Oc1ccc(O)c1I
Fc1cc(F)c(CBr)cc1I
O=C(O)c1c(F)ccc(I)c1F
O=C(O)c1cc(O)c(I)c(O)c1
COc1ccc(I)c(OC)c1
COc1cc(C(=O)Nc2ccc(I)cc2)c([N+](=O)[O-]
)cc1OC
COc1ccc(C(C)=O)c(O)c1I
COc1ccc(I)c(O)c1
CCOc1cc(Cl)c(C#N)cc1I
N#Cc1cc(I)c(O)cc1Cl
Fc1ccc(Br)c(F)c1I
Nc1ccc(Cl)c(F)c1I
COC(=O)c1c(F)ccc(I)c1F
Fc1c(I)ccc(OCc2ccc2)c1F
CCOC(=O)c1ccc(Br)c1I
Oc1c(I)ccc(F)c1F
COC(=O)c1cc(I)c(N(C)C)cc1O
COc1ccc(Br)c(F)c1I
O=C(O)c1cc(I)c(O)cc1F
CC(O)=NC[C@H]1CN(c2ccc(I)c(F)c2)C(=O)O1
CC(C)Oc1cc(Cl)ccc1I
Cc1ccc(F)c(I)c1F
CCOc1ccc(I)c(F)c1F
O=C(O)c1ccc(Cl)c1I
COc1ccc(I)c(OC)c1F
COc1cc(CO)c(I)c(OC)c1

Ne1ccc(Br)c(F)c1I
O=C(O)c1ccc(I)c(F)cc1F
Cc1cccc(Cl)c1I
Ne1cc(I)ccc1I
Oc1cc(Br)ccc1I
COC(=O)c1ccc(I)c(OC)cc1N
COc1cc(F)c(C=O)cc1I
CC(=O)c1c(F)ccc(I)c1F
N#Cc1cc(I)c(F)cc1F
COc1ccc(I)c(F)c1F
Cc1cc(I)c(N)cc1F
COc1cc(OC)c(C=O)cc1I
Cc1c(N)c(I)cc(Br)c1Cl
Fc1cc(I)ccc1I
Clc1ccc(I)c(OCc2ccc2)c1
Ne1c(Br)cc(F)c(F)c1I
Fc1c(Br)ccc(I)c1F

Fc1c(Br)cc(Br)c(F)c1I
CNS(=O)(=O)c1ccc(I)cc1
Ne1cc(F)c(F)cc1I
NS(=O)(=O)c1ccc(I)cc1
Cc1c(F)ccc(I)c1F
Ne1ccc(F)c(I)c1F
Fc1cc(Br)c(Cl)cc1I
Cc1cc(Br)cc(F)c1I
Ne1cc(F)c(I)c(F)c1
COc1cc(Cl)ccc1I
COc1cc(OC)c(OC)cc1I
Cc1c(Br)ccc(I)c1F
Fc1cc(Br)cc(F)c1I
Ne1cc(F)c(I)cc1C(=O)O
COc1cc(F)ccc1I
O=S(=O)(NCc1ccc1)c1ccc(I)cc1
Cc1cc(I)c(F)cc1N

CCC(C)NS(=O)(=O)c1ccc(I)cc1
CCCNS(=O)(=O)c1ccc(I)cc1
Fc1cc(F)c(I)cc1Br
CCOc1cc(F)c(I)c(F)c1
Cc1c(N)ccc(I)c1F
COc1cc(O)c(C=O)cc1I
Fc1cc(Cl)cc(F)c1I
Ne1ccc(I)c(F)c1[N+](=O)[O-]
COC(=O)c1cccc(Cl)c1I
COC(=O)c1cc(I)c(F)cc1N
COc1cc(I)c(OC)cc1Br
COc1cccc(F)c1I
NC[C@H]1CN(c2ccc(I)c(F)c2)C(=O)O1
Ne1cc(F)c(I)cc1F
Fc1cc(F)c(F)c(I)c1

Cluster C

Fe1cccc(COe2ccc(I)cc2)c1
FC(F)(F)Oe1ccc(Oe2ccc(I)cc2)cc1
Fe1cccc1Oe1ccc(I)cc1
Fc1cc(Cl)enc1Oe1ccc(I)cc1
NCCOe1ccc(I)cc1
OCCOe1ccc(I)cc1
Ic1ccc(OC2CCC2)cc1
CSCCOe1ccc(I)cc1
CC(=O)Oe1ccc(I)cc1
N#CCOe1ccc(I)cc1
O=C(O)CCCOe1ccc(I)cc1
Clc1ccc(Oe2ccc(I)cc2)cc1Cl
Cc1ccc(NC(=O)e2ccc(COe3ccc(I)cc3)o2)cc1F
Cc1ccc(Oe2ccc(I)cc2)c(C)c1
FC(F)(F)Oe1ccc(I)cc1
Ic1ccc(Oe2ccc(I)cc2)cc1
Cc1cc(C)cc(Oe2ccc(I)cc2)c1
O=C(O)c1cccc(N=C(O)COe2ccc(I)cc2)c1
Cc1ccc(S(=O)(=O)Oe2ccc(I)cc2)cc1
Ic1ccc(OC2CC2)cc1
O=C(Oe1ccc(I)cc1)N(c1cccc1)c1cccc1
CC(C)(C)OC(=O)N1C[C@H](Oe2ccc(I)cc2)C[C@H]1C(=O)O
CC(O)=N[C@H]1[C@H](Oe2ccc(I)cc2)O[C@H](CO)[C@H](O)[C@H]1O
Ic1ccc(OCCN2CCCC2)cc1
FC(F)C(F)(F)Oe1ccc(I)cc1
OC(COe1ccc(I)cc1)=NC1CCN(Ce2ccc2)CC1
O=C(O)COe1ccc(I)cc1
NN=C(O)COe1ccc(I)cc1

N#Cc1ccc(COe2ccc(I)cc2)cc1
COe1ccc(COe2ccc(I)cc2)cc1
COC(=O)c1cccc(COe2ccc(I)cc2)c1
Ic1ccc(OCe2ccc2)cc1
Oe1ccc(Oe2ccc(I)cc2)cc1
CC(C)(C)[Si](C)(C)Oe1ccc(I)cc1
O=C(O)c1ccc(Oe2ccc(I)cc2)cc1
COe1cccc1Oe1ccc(I)cc1
NCC(O)COe1ccc(I)cc1
Ne1cccc1Oe1ccc(I)cc1
Ic1ccc(OCC2CC2)cc1
CC(C)Oe1ccc(I)cc1
O=C(Cl)COe1ccc(I)cc1
C[C@H](Oe1ccc(I)cc1)C(=O)O
BrCCOe1ccc(I)cc1
CC(Oe1ccc(I)cc1)C(=O)O
FC(F)(F)COe1ccc(I)cc1
Ic1ccc(OCe2ccc2)cc1
COe1ccc(Oe2ccc(I)cc2)cc1
Clc1ccc(COe2ccc(I)cc2)c(Cl)c1
CCOC(=O)COe1ccc(I)cc1
Fc1cccc(F)c1Oe1ccc(I)cc1
N#Cc1ccc(Oe2ccc(I)cc2)cc1
Ic1ccc(Oe2ccc2)cc1
Oe1ccc(I)cc1
OC(COe1ccc(I)cc1)=NCC1CCCO1
N=C(O)COe1ccc(I)cc1
O=C(O)c1ccc(COe2ccc(I)cc2)cc1
COC(=O)COe1ccc(I)cc1

OC(COe1ccc(I)cc1)=NCCe1nc2ccc2[nH]1
Fc1ccc(Oe2ccc(I)cc2)cc1
CCOe1ccc(I)cc1
Ic1ccc(OC2CCCC2)cc1
COe1ccc(I)cc1
Clc1ccc(Oe2ccc(I)cc2)cc1
Cc1cccc(NC(=O)e2ccc(COe3ccc(I)cc3)o2)c1
O=C(Ne1ccc(F)c(F)c1)c1ccc(COe2ccc(I)cc2)o1
OCCNCCOe1ccc(I)cc1
COC(=O)c1ccc(COe2ccc(I)cc2)o1
Ic1ccc(OC2CCOCC2)cc1
N=C(O)c1cccc(COe2ccc(I)cc2)c1
COC(=O)c1ccc(Oe2ccc(I)cc2)cc1
FC(F)Oe1ccc(I)cc1
O=S(=O)(Oe1ccc(I)cc1)C(F)(F)F
C#CCOe1ccc(I)cc1
COCCOe1ccc(I)cc1
CC(C)(C)Oe1ccc(I)cc1
CCCCOe1ccc(I)cc1
OC(COe1ccc(I)cc1)=NCCe1nc2ccc2[nH]1
Ic1ccc(OC2CCCC2)cc1
Clc1ccc(COe2ccc(I)cc2)cc1
O=C(O)CCOe1ccc(I)cc1
Cc1ccc(Oe2ccc(I)cc2)cc1
Ic1ccc(OCe2ccc2)cc1
COC(=O)c1ccc(C)c(NC(=O)e2ccc(COe3ccc(I)cc3)o2)c1

Cluster D

Cc1cc(C)cc(NC(=O)e2ccc(I)cc2)c1
NC(=O)c1ccc(I)cc1
O=C(O)/C=C/c1ccc(I)cc1
O=C(O)C=Cc1ccc(I)cc1
NNC(=O)c1ccc(I)cc1
Oe1nc(SCe2ccc(I)cc2)nc2ccc212
O=Cc1ccc(I)cc1
COe1ccc(N=C(O)e2ccc(I)cc2)cc1
OC1=NC(=S)/S/C1=C/c1ccc(I)cc1
O=C(/C=C/c1ccc([N+](=O)[O-])cc1)c1ccc(I)cc1
CC(C=O)c1ccc(I)cc1
O=C(NO)c1ccc(I)cc1
O=C(CC1OC(=O)e2ccc21)c1ccc(I)cc1
Ic1ccc(/C=C/c2ccc(I)cc2)cc1
O=C(Nc1cccc1O)c1ccc(I)cc1

Ic1ccc(CSc2nc3cccc3[nH]2)cc1
Ic1ccc(-c2noc(-c3cccc3)n2)cc1
CCOC(=O)c1cccc1C(=O)c1ccc(I)cc1
CC(=O)Cc1ccc(I)cc1
O=Cc1ccc(-c2ccc(I)cc2)cc1
O=C(NC1CCN(Ce2ccc2)CC1)c1ccc(I)cc1
O=[N+](O-)]c1ccc(N=C(O)e2ccc(I)cc2)cc1
COe1cccc1N1CCN(C(=O)e2ccc(I)cc2)CC1
O=C(CO)c1ccc(I)cc1
Ic1ccc(-c2nc(-c3cccc3)n2)cc1
O=C(N=c1cc[nH]cc1)c1ccc(I)cc1
O=C(CC(=O)C(F)(F)c1ccc(I)cc1)
OC1=NN=C(c2ccc(I)cc2)CC1
O=C(c1ccc(I)cc1)N(c1cccc1)c1cccc1
CC(C)c1ccc(N=C(O)e2ccc(I)cc2)cc1

COe1cccc1CNC(=O)c1ccc(I)cc1
O=C(O)CCC(=O)c1ccc(I)cc1
O=C(Nc1cccc2ccc212)c1ccc(I)cc1
CCNC(=O)c1ccc(I)cc1
COe1ccc(/C=C/C(=O)e2ccc(I)cc2)c1
Ic1ccc(-c2nc3cccc3s2)cc1
O=C(c1ccc(I)cc1)c1cccc1Cl
COe1cccc1NC(=O)c1ccc(I)cc1
CCN1CCN(C(=O)e2ccc(I)cc2)CC1
Ic1ccc(-c2ncc2)cc1
OC1=NC(S)=N/C1=C/c1ccc(I)cc1
Oe1nnc2ccc(-c3ccc(I)cc3)nc12
Ic1ccc(C#Cc2ccc2)cc1
Ic1ccc(-c2nc3ncccc3o2)cc1
COe1ccc(C=CC(=O)e2ccc(I)cc2)cc1O

O=C(C(=O)c1ccc(I)cc1)c1cccc1
O=C(Nc1cccc1)c1ccc(I)cc1
CC(=O)c1ccc(-c2ccc(I)cc2)cc1
O=C(COC(=O)c1ccc(I)cc1)c1ccc(Br)cc1
O=C(C=Cc1cccs1)c1ccc(I)cc1
O=C(CCl)c1ccc(I)cc1
NCCNC(=O)c1ccc(I)cc1
O=C(OCc1ccc(I)cc1)c1ccc([N+](=O)[O-])cc1
O=C(c1ccc(Br)cc1)c1ccc(I)cc1
CC1(C)CC(=O)C2=C(C1)Nc1ccc3cccc3c1C2c1
ccc(I)cc1
CC(=Cc1ccc(I)cc1)C(=O)O
COc1cc(C=CC(=O)c2ccc(I)cc2)ccc1O
Ic1ccc(-c2nnc(CN3CCCC3)o2)cc1
Cc1ccc(NC(=O)c2ccc(I)cc2)nc1
N#Cc1ccc(C(=O)c2ccc(I)cc2)cc1
O=C(O)c1ccc(-c2ccc(I)cc2)nc2cccc12
Ic1ccc(-c2ccc(-c3ccc(I)cc3)cc2)cc1
O=C(CBr)c1ccc(I)cc1
O=C1N=C(O)C(=C/c2ccc(I)cc2)S1
COc1ccc2nc(NC(=O)c3ccc(I)cc3)sc2c1
O=C(OCc1cccc1)c1ccc(I)cc1
CC(O)=Nc1nc(-c2ccc(I)cc2)cs1
Ic1ccc(-c2cno2)cc1
COC(=O)CNC(=O)c1ccc(I)cc1
O=C(c1ccc(I)cc1)n1nnc2cccc21
CCN(CC)c1ccc(C=O)c(OCc2ccc(I)cc2)c1
O=C(C=Cc1csc1)c1ccc(I)cc1
CCOC(=O)c1ccc(C(=O)c2ccc(I)cc2)cc1
COc1cccc1CC(=O)c1ccc(I)cc1
O=c1c=Cc2ccc(I)cc2)sc2nc3cccc3n12
Cc1cccc(N(c2cccc2)c2ccc(-c3ccc(I)cc3)cc2)c1
O=C(O)CN1C(=O)C(=C/c2ccc(-
c3ccc(I)cc3)o2)SC1=S
CN1CC(NC(=O)c2ccc(I)cc2)CC1
OC(=Nc1ccc(Br)cc1)c1ccc(I)cc1
Cc1cc(C)c(NC(=O)c2ccc(I)cc2)c(C)c1
O=C(Nc1cccc(Cl)c1)c1ccc(I)cc1
CN(C)CCNC(=O)c1ccc(I)cc1
O=C(O)/C(S)=C/c1ccc(I)cc1
COC(=O)c1cccc1NC(=O)c1ccc(I)cc1
O=c1nc(-c2ccc(I)cc2)[nH]o1
O=C(Nc1cccc1Cl)c1ccc(I)cc1
CC(C)(C)OC(=O)c1ccc(I)cc1
Ic1ccc(B2Nc3cccc4ccc(c34)N2)cc1
O=C(c1ccc(O)cc1)c1ccc(I)cc1
Nc1ccc(C(=O)c2ccc(I)cc2)cc1
CN1CCN(C(=O)c2ccc(I)cc2)CC1
O=C(Nc1cccc1C(=O)O)c1ccc(N=C(O)c2ccc(I)cc2)cc1
Cc1cccc(NC(=O)c2ccc(I)cc2)n1
O=Cc1ccc(OCc2ccc(I)cc2)cc1
CCOC(=O)CC(=O)c1ccc(I)cc1
COc1ccc2oc(=O)c(-c3ccc(I)cc3)cc2c1
O=C(ON1C(=O)CCC1=O)c1ccc(I)cc1
CCOC(=O)CCCC(=O)c1ccc(I)cc1
COC(=O)CC(=O)c1ccc(I)cc1
CN(C)/C=C/C(=O)c1ccc(I)cc1
Nc1ccc(-c2ccc(I)cc2)no1
CCOC(=O)C1=C(C)NC(C)=C(C(=O)OCC)C1c1c
cc(I)cc1

CC1(C)C(c2ccc(I)cc2)=[N+](=[O-])C(C)(C)N1O
Cc1cccc1NC(=O)c1ccc(I)cc1
Ic1ccc(-c2noc(-c3cccs3)n2)cc1
O=C(Nc1cccc1O)c1ccc(I)cc1
Cc1ccc(C)n2c1C(=C1C=CC(=[+])C=C1)c1c(C)cc
(C)n1[B-]2(F)F
N#CCCCC(=O)c1ccc(I)cc1
Cc1ccc(C(=O)c2ccc(I)cc2)cc1
COc1ccc(NC(=O)c2ccc(I)cc2)cc(OC)c1
O=C(O)c1ccc(I)cc1
N#CCCC(=O)c1ccc(I)cc1
O=C(c1ccc(F)cc1)c1ccc(I)cc1
O=c1cccc1Cc1ccc(I)cc1
O=C(CBr)CCc1ccc(I)cc1
O=C(O)C(=O)c1ccc(I)cc1
O=C(O)c1ccc(N=C(S)N=C(O)c2ccc(I)cc2)cc1
C1ccc(C(=O)c2ccc(I)cc2)c1
Cc1ccc(I)cc1Cc1ccc(-c2ccc(F)cc2)s1
Cc1nnc(-c2ccc(I)cc2)n1
COc1cc(OC)c(OC)cc1C=CC(=O)c1ccc(I)cc1
O=c1/e(C/c2ccc(I)cc2)sc2nc3cccc3n12
ClC(=NNc1cccc1)c1ccc(I)cc1
O=C(c1cccc1)c1ccc(I)cc1
O=C(NC1CCN(Cc2cccc2)C1)c1ccc(I)cc1
O=C(Nc1cccc1F)c1ccc(I)cc1
O=Cc1ccc(-c2ccc(I)cc2)o1
CC1=NN(C(=O)c2ccc(I)cc2)C(C)(O)C1
Ic1ccc(-c2cenc2)cc1
Cc1ccc2cc(-c3ccc(I)cc3)nc12
ClCc1nnc(-c2ccc(I)cc2)o1
O=C(Cc1ccc(I)cc1)C(F)F
N#CCC(=O)c1ccc(I)cc1
CCOC(=O)CCC(=O)c1ccc(I)cc1
O=C(c1ccc(Cl)cc1)c1ccc(I)cc1
O=C(Nc1cccc(F)c1)c1ccc(I)cc1
O=c1oc2ccc(Cl)cc2cc1-c1ccc(I)cc1
Cc1cccc(NC(=O)c2ccc(I)cc2)c1
O=C(O)c1ccc(-c2ccc(I)cc2)c1
O=C(O)C(S)=Cc1ccc(I)cc1
O=C(O)c1ccc(-c2ccc(I)cc2)nc2ccc(Br)cc12
Ic1ccc(CSc2nnc(-c3cccc3)o2)cc1
O=C(Cc1cccc1F)c1ccc(I)cc1
COc1cc(C=O)ccc1OCc1ccc(I)cc1
CCC(=O)Cc1ccc(I)cc1
O=C(C=Cc1ccc(I)cc1)c1ccc(B(O)O)cc1
O=c1oc2cccc2cc1-c1ccc(I)cc1
CCN=c1cc(C)nc(N2CCN(C(=O)c3ccc(I)cc3)CC2
)[nH]1
CN(C(=O)c1ccc(I)cc1)c1cccc1
CCOC(=O)CCC(NC(=O)c1ccc(I)cc1)C(=O)OCC
N=C(O)c1cccc1NC(=O)c1ccc(I)cc1
C=CCNC(=O)c1ccc(I)cc1
Ic1ccc(-c2en3cccc3n2)cc1
O=C(O)CCCC(=O)c1ccc(I)cc1
N=c1[nH]c(-c2ccc(I)cc2)es1
O=C(Nc1cccc1)c1ccc(I)cc1
O=C(O)CCCCC(=O)c1ccc(I)cc1
COc1ccc(C(=O)c2ccc(I)cc2)cc1
O=Cc1en(Cc2ccc(I)cc2)c2cccc12
Cc1ccc(S(=O)(=O)CC(=O)c2ccc(I)cc2)cc1
OC1=NC(=S)SC1=Cc1ccc(I)cc1

O=C(Cc1cccc1Cl)c1ccc(I)cc1
O=C(NCc1cccc1)c1ccc(I)cc1
O=C(NC1CC1)c1ccc(I)cc1
CCOC(=O)Cc1ccc(NC(=O)c2ccc(I)cc2)n1
Ic1ccc(/N=N/c2ccc(I)cc2)cc1
Cc1cccc1C(=O)c1ccc(I)cc1
COC(=O)[C@@H]1CS[C@H](c2cccc2Cl)N1C
(=O)c1ccc(I)cc1
CCC(=O)c1ccc(I)cc1
Ic1ccc(-c2cc(-c3cccc3)nc(-c3cccc3)c2)cc1
O=C(O)c1ccc(-c2ccc(I)cc2)cc1
O=C(Cc1ccc(Cl)cc1)c1ccc(I)cc1
NC(=S)c1ccc(I)cc1
ON=Cc1ccc(I)cc1
CC(C)(C(=O)c1ccc(I)cc1
O=C(Cc1cccc1)c1ccc(I)cc1
CCOc1ccc(C(=O)c2ccc(I)cc2)cc1
OC(=Nc1ccc(Cl)cc1)c1ccc(I)cc1
CCSc1ccc2nc(-c3ccc(I)cc3)en2c1
O=Cc1cccc1OCc1ccc(I)cc1
CC(C)(C)OC(=O)CC(=O)c1ccc(I)cc1
O=C(O)c1ccc(NC(=O)c2ccc(I)cc2)cc(C(=O)O)c1
O=C(Nc1cccc1)c1ccc(I)cc1
Ic1ccc(-c2cno2)cc1
N=c1nc(-c2ccc(I)cc2)[nH]c(=N)[nH]1
O=C(c1ccc(I)cc1)c1ccc(I)cc1
CC1(C)CC(=O)C2=C(C1)OC1=C(C(=O)CC(C)(
C)C1)C2c1ccc(I)cc1
C=C(C(=O)OC)c1ccc(I)cc1
O=C(c1ccc(I)cc1)C(F)F
CN=c1[nH]c(-c2ccc(I)cc2)es1
COC(=O)C1=C(C)NC(C)=C(C(=O)OC)C1c1ccc(
I)cc1
OC(=Nc1ccc(F)cc1)c1ccc(I)cc1
C=CCOC(=O)C1=C(C)NC(C)=C(C(=O)OCC=C)
C1c1ccc(I)cc1
O=S(=O)(Cl)Cc1ccc(I)cc1
COc1ccc(NC(=O)c2ccc(I)cc2)cc1
FC(F)(F)c1ccc(-c2ccc(I)cc2)cc(C(F)(F)F)c1
CC(=O)c1ccc(I)cc1
Ic1ccc(-c2nc3cccc3nc2-c2cccc2)cc1
O=C(NC1CCCCC1)c1ccc(I)cc1
Nc1ccc(-c2ccc(I)cc2)n1-c1cccc1
O=C(NC1CCCCC1)c1ccc(I)cc1
Cc1ccc(C(=O)O)cc1NC(=O)c1ccc(I)cc1
O=C(Cl)c1ccc(I)cc1
O=C(Nc1cccc1)c1ccc(I)cc1
COc1ccc(C(=O)NN=C(O)c2ccc(I)cc2)cc1
COc1ccc(/C=C/C(=O)c2ccc(I)cc2)c(OC)c1OC
Ic1ccc(-c2nc3cccc3nc2-c2cccc2)cc1
CCN(CC)CCNC(=O)c1ccc(I)cc1
COc1ccc(C=CC(=O)c2ccc(I)cc2)cc1OC
Cc1ccc(-c2cc(-c3cccc3)cc(-c3ccc(I)cc3)n2)cc1
O=C(NCCN1CCCCC1)c1ccc(I)cc1
CC(=O)CCc1ccc(I)cc1
O=C1N=C(O)CCC1(c1cccc1)C1CCN(Cc2ccc(I)
cc2)CC1
O=[N+](=[O-])c1ccc(-c2ccc(I)cc2)cc1

Cluster E

COC(=O)CCc1ccc(I)cc1
Ic1ccc(CN2CCOCC2)cc1
CC(C)(C)OC(O)=N[C@@H](CC(=O)O)Cc1ccc(I)
cc1

OCc1ccc(I)cc1CO
C=Cc1ccc(I)cc1
CC(NC1CC1)c1ccc(I)cc1
C=C(C)c1ccc(I)cc1

OCc1ccc(I)cc1
N#Cc1ccc(I)cc1
O=C(c1ccc(I)cc1)N1CCOCC1
OCC1CCN(Cc2ccc(I)cc2)CC1

CCCCC1ccc(-c2ccc1)cc1
Cc1ccc(I)cc1N=C(O)OC(C)C
CC1ccc(I)cc1C
FC[C@H]1N=C(c2ccc2)O[C@@H]1c1ccc(I)cc1
Ic1ccc(Cc2ccc(I)cc2)cc1
OCc1ccc(I)cc1C(F)F
CSCc1ccc(I)cc1
ClCc1ccc(I)cc1
CCCc1ccc(I)cc1
COC(=O)C(N)Cc1ccc(I)cc1
CC(C)C(OC(=O)N)CCN(Cc2ccc(I)cc2)CC1
Clc1ccc(-c2ccc(I)cc2)cc1
CC(C)C(OC(=O)N)CCC[C@H]1c1ccc(-
o2ccc(I)cc2)[nH]1
O=C(O)[C@H](Cc1ccc(I)cc1)N=C(O)OCc1ccc
1
CC(C)C(OC(=O)N)Cc1ccc(I)cc1C(=O)O
Cc1ccc(I)cc1C#C
Ic1ccc(C2CC2)cc1
OCCc1ccc(I)cc1
Ic1ccc(C2CCCN2)cc1
CN1CCN(Cc2ccc(I)cc2)CC1
COC(=O)[C@H](Cc1ccc(I)cc1)N=C(O)OC(C)
C)C
O=C(O)[C@H](O)Cc1ccc(I)cc1
CC(C)C(NC(=O)Cc1ccc(I)cc1)
Cc1ccc(I)cc1C(F)F
CC(C)C(c1ccc(I)cc1)
CCCC12COC(c3ccc(I)cc3)(OC1)OC2
O=C(NCCn1ccc1)c1ccc(I)cc1
Cc1ccc(I)cc1-c1ccc1
Cc1ccc(I)cc1C(=N)O
CCOC(=O)Cc1ccc(I)cc1
NCc1ccc(I)cc1
Cc1ccc(I)cc1C(C)C
CC(C)O)c1ccc(I)cc1
N=C(O)Cc1ccc(I)cc1
Cc1ccc(-c2ccc(I)cc2)cc1
Ic1ccc(COc2ccc2)cc1
CCOC(=O)[C@H](Cc1ccc(I)cc1)N=C(O)OC(C)
C)C
CCCCc1ccc(-c2ccc(I)cc2)cc1
OC(c1ccc(I)cc1)(C(F)F)C(F)F
CSc1ccc(I)cc1
Cc1ccc(I)cc1C(=O)O)c1C
CCc1ccc(-c2ccc(I)cc2)cc1
Ic1ccc(Cn2ccc2)cc1
O=C(NCC1CC1)c1ccc(I)cc1
CC1(C)COB(c2ccc(I)cc2)OC1
CC(C)N=C(O)Cc1ccc(I)cc1
CON(C)C(=O)c1ccc(I)cc1
CCOP(=O)(Cc1ccc(I)cc1)OCC
CN(C)C(=O)c1ccc(I)cc1
Ic1ccc(C2CCNCC2)cc1
NC(C(=O)O)c1ccc(I)cc1
CN(Cc1ccc1)C(=O)c1ccc(I)cc1
CN(C)Cc1ccc(I)cc1
OC[C@H]1N=C(c2ccc2)O[C@@H]1c1ccc(I)cc
1
O=C(O)CCc1ccc(I)cc1
CC1CC(C)C(O)B(c2ccc(I)cc2)O1
FC(F)c1ccc(I)cc1
CC(C)C(OC(=O)Cc1ccc(I)cc1)
Cc1ccc(I)cc1CO[Si](C)C(C)C(C)C
CNC(=O)c1ccc(I)cc1
CC(C)c1ccc(I)cc1
Ic1ccc(Cn2ccc2)cc1
CN(C)c1ccc(-c2ccc(I)cc2)cc1

CC(C)C(OC(=O)N[C@H](Cc1ccc(I)cc1)C(=O)
O
CC(C)C(Si)(C)OCc1ccc(I)cc1
CC(C)NC(=O)c1ccc(I)cc1
N#CC(c1ccc1)c1ccc(I)cc1
C[C@H](N)c1ccc(I)cc1
O=C(O)CCc1ccc(I)cc1
O=C(O)CCCCc1ccc(I)cc1
N[C@H](CC(=O)O)Cc1ccc(I)cc1
Ic1ccc(CN2CCCC2)cc1
Ic1ccc(-c2ccc2)cc1
CCc1ccc(I)cc1C
C=CCN(CC=C)C(=O)c1ccc(I)cc1
COCNC(=O)c1ccc(I)cc1
O=C(Cl)Cc1ccc(I)cc1
NCCc1ccc(I)cc1
Br1ccc(-c2ccc(I)cc2)cc1
CC(O)=NCCN(C=O)c1ccc(I)cc1
N#CC1(c2ccc(I)cc2)CC1
CC(Br)c1ccc(I)cc1
Ic1ccc(-c2en3ccc3n2)cc1
CC(C)C(OC(=O)N)Cc1ccc(I)cc1
CC(C)C(OC(=O)N)CC(=O)c1ccc(I)cc1
Nc1ccc(-c2ccc(I)cc2)cc1
FC(F)C(F)C(F)c1ccc(I)cc1C(F)F
O=C(O)[C@H](Cc1ccc(I)cc1)N=CO
CCCCCCCCC1ccc(I)cc1
FC(F)F)c1ccc(I)cc1CBr
Ic1ccc(CN2CCOCC2)cc1
CC(N)c1ccc(I)cc1
COC(=O)Cc1ccc(I)cc1
Cc1ccc(I)cc1C(=O)O
O=C(O)C(Cc1ccc(I)cc1)N=C(O)OCc1ccc1
CCN(CC)C(=O)c1ccc(I)cc1
N#CCc1ccc(I)cc1
Cc1ccc(I)cc1-c1ccc(I)cc1C
CCCCC1ccc(I)cc1
NC1(c2ccc(I)cc2)CC1
Ic1ccc(CN2CCNCC2)cc1
CCCCC1CCC(c2ccc(I)cc2)CC1
Ic1ccc(-c2ccc(I)cc2)cc1
CCc1ccc(I)cc1
NC(Cc1ccc(I)cc1)C(=O)O
CC(F)F)c1ccc(I)cc1
Ic1ccc(CN2CCCC2)cc1
O=C(O)CCCCCCCCC1ccc(I)cc1
CC(C(=O)O)c1ccc(I)cc1
O=C(c1ccc(I)cc1)N1CCCC(c2nc3ccc3s2)C1
FC(F)F)c1ccc(I)cc1
CC[C@H](CO)NC(=O)c1ccc(I)cc1
O=C(c1ccc(I)cc1)N1CCCC1
O=C(O)C1(c2ccc(I)cc2)CC1
CCCc1ccc(I)cc1
N[C@H](CF)[C@H](O)c1ccc(I)cc1
Cc1ccc(I)cc1-c1ccc(I)cc1C
COC(=O)[C@H](Cc1ccc(I)cc1)N=C(O)OC(C)
C)C
Br1ccc(-c2ccc(I)cc2)cc1
COCc1ccc(I)cc1
CC(C)C(OC(=O)N[C@H](CO)Cc1ccc(I)cc1)
Cc1ccc(I)cc1CO
O=C(NC1CCOCC1)c1ccc(I)cc1
N=C(N)c1ccc(I)cc1
Cc1ccc(I)cc1C(F)F
COc1ccc(-c2ccc(I)cc2)cc1
BrCc1ccc(I)cc1
N[C@H](CC(=O)O)Cc1ccc(I)cc1
CC(C)C(OC(=O)N)CC(=O)Cc1ccc(I)cc1
CC(C)Cc1ccc(I)cc1

Sc1ccc(I)cc1
CCCCC1ccc(I)cc1
C[Si](C)C(C)C#Cc1ccc(I)cc1
Cc1ccc(I)cc1C
O=C(NC1ccc1)c1ccc(I)cc1
FC(F)F)Cc1ccc(I)cc1
O=C(Cc1ccc(I)cc1)N1CCCCC1
CCN(CC)Cc1ccc(I)cc1
O=C(O)CCCCc1ccc(I)cc1
FC(F)F)c1ccc(I)cc1C(F)F
CCc1ccc(-c2ccc(I)cc2)cc1
CCOC(=O)c1ccc(I)cc1
OC(c1ccc1)c1ccc(I)cc1
NNCc1ccc(I)cc1
CCCCC1ccc(I)cc1
SCc1ccc(I)cc1
Cc1ccc(I)cc1CBr
CC(C)C(OC(=O)N[C@H](Cc1ccc(I)cc1)C(=O)
O)
NCC1(c2ccc(I)cc2)CCCC1
O=C(OCc1ccc(I)cc1)c1ccc1
OB(O)c1ccc(I)cc1
C#Cc1ccc(I)cc1
O=C(c1ccc(I)cc1)N1CCCC(F)CC1
CCOC(=O)C(Cc1ccc(I)cc1)N=C(O)OC(C)C
O=c1ccc(I)cc1Cc1ccc(I)cc1
N[C@H](C(=O)O)c1ccc(I)cc1
NC1(Cc2ccc(I)cc2)CC1
CC(C)N(C(=O)c1ccc(I)cc1)C(C)C
Cc1ccc(I)cc1
O=C(O)Cc1ccc(I)cc1
COC(=O)c1ccc(I)cc1C
Ic1ccc(P(c2ccc2)c2ccc2)cc1
C#CCN(C=O)c1ccc(I)cc1
CN(Cc1ccc(I)cc1)C(=O)OC(C)C
O=C([O-])Cc1ccc(I)cc1
Ic1ccc([Si](c2ccc2)(c2ccc2)c2ccc2)cc1
O=C(Cc1ccc(I)cc1)N1CCCC1
C[C@H](N=C(O)OC(C)C)c1ccc(I)cc1
CCNC(=O)c1ccc(I)cc1
N[C@H](Cc1ccc(I)cc1)C(=O)O
CC(C)C)c1ccc(-c2ccc(I)cc2)cc1
COC(=O)C1(c2ccc(I)cc2)CC1
Ic1ccc(Cc2ccc2)cc1
CC1(c2ccc(I)cc2)N=C(O)N=C1O
COC(=O)C1C2CCC(CC1c1ccc(I)cc1)N2
COC(=O)c1ccc(I)cc1
CC(C)S(=O)(=O)N[C@H]1CCOC[C@H]1c1cc
c(I)cc1
O=C(Cc1ccc(I)cc1)N1CCOCC1
O=C(c1ccc(I)cc1)N(Cc1ccc1)Cc1ccc1
CC(C)C(OC(=O)N)CCN(C(=O)c2ccc(I)cc2)CC
1
N[C@H](Cc1ccc(I)cc1)C(=O)O
CC1(C)OB(c2ccc(I)cc2)OC1(C)C
Oc1ccc(-c2ccc(I)cc2)cc1
CC(O)=NC(Cc1ccc(I)cc1)C(=O)O
CC(O)c1ccc(I)cc1
Ic1ccc(C2=NCCC2)cc1
Cc1ccc(I)cc1C#N
O=C1OCCC1N=C(O)Cc1ccc(I)cc1
CC(C)CNC(=O)c1ccc(I)cc1
C[C@H](O)c1ccc(I)cc1
CCOC(=O)C(c1ccc(I)cc1)P(=O)(OCC)OCC
Ic1ccc(-c2en[nH]e2)cc1

Cluster F

O=C(Nc1ccc(I)cc1)c1ccc(I)cc1
OC(=Nc1ccc(I)cc1)c1ccc(C(F)F)cc1
COCCN=C(O)Nc1ccc(I)cc1
O=[N+](O-)c1ccc(N=C(O)Nc2ccc(I)cc2)c1
O=C(CCCN1C(=O)c2ccc2C1=O)Nc1ccc(I)cc1
CC(C)C(=O)Nc1ccc(I)cc1
Cc1cc(C=O)c(C)n1-c1ccc(I)cc1
COc1ccc(Cl)cc1N=C(S)Nc1ccc(I)cc1
O=C(O)c1ccc(I)cc1
O=C1Nc2ccc2C1=Nc1ccc(I)cc1
Cc1cc(I)ccc1NC(O)=Nc1ccc(I)cc1
O=C(Nc1ccc(I)cc1)C(=O)c1ccc(F)cc1
NN=C(O)CNc1ccc(I)cc1
O=C(O)C1C2CCC(O2)C1C(=O)Nc1ccc(I)cc1
CCOC(=O)C(=CNc1ccc(I)cc1)C(=O)OCC
Cc1cc2e(n1-c1ccc(I)cc1)CC(C)C)CC2=O
CC(C)=CC(=O)Nc1ccc(I)cc1
NN=C(S)Nc1ccc(I)cc1
O=C(Nc1ccc(I)cc1)c1ccc(I)cc1
CC(C)C(c1ccc(OCC(=O)Nc2ccc(I)cc2)cc1
O=[N+](O-)c1ccc(NC(=S)Nc2ccc(I)cc2)cc1
O=C1/C(=C/c2ccc2O)C(O)=NN1c1ccc(I)cc1
O=C(CCCc1ccc(I)cc1)Nc1ccc(I)cc1
O=C1N(c2ccc(I)cc2)CCCC1(C)Cl
OC(=Nc1ccc(I)cc1)c1ccc2ccc2n1
COC(=O)c1ccc(I)cc1N=C(O)Nc1ccc(I)cc1
CC(C)C(c1ccc(-
c2nn(CNc3ccc(I)cc3)c(=S)O2)cc1
Cc1cc(C(=O)O)c2ccc(I)cc2)cc1[N+](=O)[O-]
O=C(Nc1ccc(I)cc1)c1ccc(I)cc1
CN(C)c1ccc(I)cc1Br
O=c1c(Oc2ccc(I)cc2)ccc2cc(O)ccc12
O=C(Nc1ccc(I)cc1)c1c(F)ccc1F
O=C1c2ccc2CN1c1ccc(I)cc1
O=C(Nc1ccc(I)cc1)C1CC(=O)N(C2CCCC2)C1
CCOC(O)=NC(N=C(S)Nc1ccc(I)cc1)C(Cl)Cl
CS(=O)(=O)Nc1ccc(I)cc1
O=C(O)c1ccc(I)cc1N=C(O)OCc1ccc(I)cc1
Cc1ccc(I)cc1C(=O)Nc1ccc(I)cc1
CC(C)C(O)=Nc1ccc(I)cc1C(=O)O
CC(Oc1ccc(I)cc1)C(=O)Nc1ccc(I)cc1
O=C1C(Cl)=C(Cl)C(=O)N1c1ccc(I)cc1
O=c1c(Oc2ccc(I)cc2)ccc2cc(O)ccc(O)c12
CC(O)=Nc1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
O=C1/C(=C/c2cc(Br)ccc2O)C(O)=NN1c1ccc(I)cc1
O=C1CSC(=S)N1c1ccc(I)cc1
CC(=O)OCC(=O)Nc1ccc(I)cc1
O=C=Nc1ccc(I)cc1
O=S(=O)(Nc1ccc(I)cc1)c1ccc(I)cc1
Ic1ccc(-n2cnn2)cc1
Cc1c(Cl)ccc1N=C(O)CN(c1ccc(I)cc1)S(C)(=O)
=O
CCCCS(=O)(=O)Nc1ccc(I)cc1
O=C(O)c1ccc(I)cc1-c1ccc1C(=O)Nc1ccc(I)cc1
CCOe1ccc1N=C(O)Nc1ccc(I)cc1
O=C(CCNc1ccc(I)cc1)c1ccc(I)cc1
OC(=Nc1ccc(I)cc1)c1ccc(COe2ccc2Br)O1
O=C(COe1ccc(I)cc1)Nc1ccc(C(=O)O)cc1
CC(Br)C(=O)N(C)c1ccc(I)cc1
Cc1cc(I)ccc(C)c1NC(=O)c1ccc(I)cc1
COe1ccc(OC(C)C(=O)Nc2ccc(I)cc2)cc1
O=C(Nc1ccc(I)cc1)N(c1ccc(I)cc1)c1ccc(I)cc1
OC(=Nc1ccc(I)cc1)c1ccc(F)cc1
O=C(O)c1ccc(I)cc1Nc1ccc(I)cc1
CC(C)C)OC(O)=Nc1ccc(I)cc1C(=O)O

O=C(O)C1CC=CCC1C(=O)Nc1ccc(I)cc1
CC(=O)Oe1ccc(C(=O)=Nc2ccc(I)cc2)cc1
Cc1cc(I)ccc1NC(=O)CC1
O=C1C=CC(=O)N1c1ccc(I)cc1
Cc1cc(I)ccc1N=C(O)c1ccc2ccc2n1
O=C(Nc1ccc(I)cc1)c1ccc([N+](=O)[O-])cc1
CCCC(O)=NC(=S)Nc1ccc(I)cc1
CC(O)=NC(=S)Nc1ccc(I)cc1
Ic1ccc(N=c2c3ccc3[nH]c3ccc23)cc1
O=C1O[C@@H](CO)CN1c1ccc(I)cc1
CC(=O)C(=C/Nc1ccc(I)cc1)c1ccc(I)cc1
O=[N+](O-)c1ccc(N=C(S)Nc2ccc(I)cc2)c1
Cc1cc(C(=O)Nc2ccc(I)cc2)C(O)1
CCOe1cc(OCC)e2c(=O)c(Oc3ccc(I)cc3)ccc2e1
OC(=Nc1ccc(I)cc1)c1ccc(I)cc1
S=C(Nc1ccc(I)cc1)Nc1ccc(I)cc1
CC(=O)N(C)c1ccc(I)cc1
O=C(Nc1ccc(I)cc1)C(F)F
O=C(Oc1ccc(I)cc1)C1c2ccc2Oe2ccc2e1
N#CC(C#N)=Nn1ccc(I)cc1
COe1ccc2ccc(/C=C/c3cc(I)ccc3OC(C)=O)nc12
O=C(CC(Nc1ccc(I)cc1)c1ccc(I)cc1)cc1
CCN=C(S)Nc1ccc(I)cc1
OC(=Nc1ccc(I)cc1)c1ccc(I)cc1N=C(O)c1ccc2ccc2
e12
O=C1c2ccc2C(=O)N1C1c1ccc(I)cc1
OC(=Nc1ccc(Br)cc1)Nc1ccc(I)cc1
Cc1cc(NC(=O)c2ccc([N+](=O)[O-]
])e2C)c(C)cc1
CC(C)C(c1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
O=C(Nc1ccc(I)cc1)c1ccc(I)cc1
O=C(Nc1ccc(I)cc1)OCc1ccc(I)cc1
CC(O)=Nc1ccc(I)cc1
O=[N+](O-)c1ccc(C(O)=Nc2ccc(I)cc2)O1
O=C(O)C1CCCC1C(=O)Nc1ccc(I)cc1
CN1CCN(c2ccc(I)cc2)CC1
Cn1c(=O)c(C(=O)Nc2ccc(I)cc2)c(O)c2ccc2
OC(=NC(S)=Nc1ccc(I)cc1)c1ccc(Br)O1
O=C(Nc1ccc(I)cc1)c1ccc(Cl)cc1Cl
Oe1ccc(I)cc1C=N/c1ccc(I)cc1
Oe1ccc(/C=N/c2ccc(I)cc2)c1O
O=[N+](O-)c1ccc(O)c(C=N/c2ccc(I)cc2)c1
CNc1ccc(I)cc1
O=C(CS(=O)(=O)c1ccc(I)cc1)Nc1ccc(I)cc1
O=S(=O)(Nc1ccc(I)cc1)c1ccc(F)cc1
CN(C(=O)OC(C)C)C1ccc(I)cc1
CC(C)(Oe1ccc(Cl)cc1)C(=O)Nc1ccc(I)cc1
CCOe1ccc(NC(=O)Nc2ccc(I)cc2)cc1
CC(=O)Oe1ccc1C(=O)Nc1ccc(I)cc1
O=C1N=C(O)CCN1c1ccc(I)cc1
Ic1ccc(-n2cnn2)cc1
O=C(CSCc1c(F)ccc1Cl)Nc1ccc(I)cc1
O=C(CCc1ccc(I)cc1)Nc1ccc(I)cc1
O=S(=O)(Nc1ccc(I)cc1)c1ccc(Br)cc1
O=C(O)CCC(=O)Nc1ccc(I)cc1
Ic1ccc(N2CCNCC2)cc1
O=C1C2C3e4ccc4C(c4ccc43)C2C(=O)N1c1
ccc(I)cc1
OC(=Nc1ccc(I)cc1)c1ccc(I)cc1
O=C1/C(=C/c2ccc2)C(O)=NN1c1ccc(I)cc1
O=C1c2ccc3ccc(c23)C(=O)N1c1ccc(I)cc1
O=[N+](O-)c1ccc(I)cc1/C=N/c1ccc(I)cc1
SC(=Nc1ccc(I)cc1)Nc1ccc(I)cc1
O=S(=O)(Nc1ccc(I)cc1)c1ccc2ccc2e12
Cc1cc(Nc2ccc(I)cc2)n2cnc2n1
CC(C)c1ccc(/C=C/C(O)=Nc2ccc(I)cc2)cc1

CN(C)c1ccc(/N=N/c2ccc(I)cc2)cc1
CCN(CC)c1ccc(/C=C2/C(=O)N(c3ccc(I)cc3)N=C
2O)c(O)c1
Cc1cc(I)ccc1NC1=CC(=O)CC(C)C)C1
Cc1cc(C(=O)c2ccc2)c(=S)n1-c1ccc(I)cc1
OC(=Nc1ccc2ccc2)Nc1ccc(I)cc1
O=C(CN1CCOCC1)Nc1ccc(I)cc1
O=C(CCl)Nc1ccc(I)cc1
OC(=Nc1ccc(Cl)cc1)c1ccc(COe2ccc(I)cc2)O1
O=C(Nc1ccc(I)cc1)c1ccc(F)cc1
O=C(Nc1ccc(I)cc1)c1ccc(C(F)F)cc1
O=[N+](O-)c1ccc(Oe2ccc(I)cc2)cc1
OC(=Nc1ccc(I)cc1)c1ccc(I)cc1
Cc1cc(I)ccc1NC(=O)C=C(C(=O)O)
O=C(Nc1ccc(I)cc1)c1ccc(I)cc1
CCCCC(O)=NC(=S)Nc1ccc(I)cc1
Fc1ccc(NC(=S)Nc2ccc(I)cc2)cc1
CC(=O)Oe1cc(OC(C)=O)c2c(=O)c(Oc3ccc(I)cc3
)ccc2e1
O=C1CC(NC2ccc2)C(=O)N1c1ccc(I)cc1
Cc1cc(I)ccc1NC(=O)OC(C)C
OC(=Nc1ccc(I)cc1)C(O)=Nc1ccc(I)cc1
O=C1CC(N2CCN(c3ccc(Cl)cc3)CC2)C(=O)N1c1
ccc(I)cc1
COe1ccc(C(O)=Nc2ccc(I)cc2)cc1
OC(=NC1CCCC1)Nc1ccc(I)cc1
C=CCn1c(CNc2ccc(I)cc2)mnc1SCC(=O)c1ccc(I)cc1
N#Cc1ccc(/C=N/c2ccc(I)cc2)cc1
O=C(Nc1ccc(I)cc1)c1ccc(Onc2ccc2c1O
Cc1cc(C)c(S(=O)(=O)Nc2ccc(I)cc2)c(C)c1
O=C(CSc1cc(O)c2ccc2n1)Nc1ccc(I)cc1
O=C(CClC=CCC1)Nc1ccc(I)cc1
O=C(O)c1ccc(I)ccc1N=C(O)Cc1ccc(I)cc1
O=C(O)c1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1O
Cc1cc(I)ccc(C(=O)O)c1N=C(O)C(F)F
CC(O)=Nc1ccc(I)cc1C
O=C1CC(NC2CCCC2)C(=O)N1c1ccc(I)cc1
Cc1cc(=O)n(c2ccc(I)cc2)[nH]1
OC(=Nc1ccc(I)cc1)c1ccc(CN2CCOCC2)cc1
O=C(Nc1ccc([N+](=O)[O-]
])c1)c1ccc(COe2ccc(I)cc2)O1
O=c1cc2ccc2c(Oc2ccc(I)cc2)c1[N+](=O)[O-]
CCS(=O)(=O)Nc1ccc(I)cc1
O=C(COe1ccc(I)cc1)c1ccc(Br)cc1
O=C(O)c1ccc(C(=O)Nc2ccc(I)cc2)c(C(=O)O)c1
O=C(Nc1ccc(I)cc1)c1ccc(I)cc1
CCc1ccc(I)ccc1N=C(O)c1ccc([N+](=O)[O-])O1
CCN(CC(=O)Nc1ccc(I)cc1)c1ccc(I)cc1
CN=C(S)Nc1ccc(I)cc1
O=C(Nc1ccc(I)cc1)N1CCCC1
O=C(Nc1ccc(I)cc1)c1ccc(I)cc1
O=C(O)CCC(=O)Nc1ccc(S(=O)(=O)Nc2ccc(I)cc2
2)cc1
Ic1ccc(Nc2ccc(I)cc2)cc1
Ic1ccc(/N=C/c2ccc2)cc1
O=[N+](O-)c1ccc(S(=O)(=O)Nc2ccc(I)cc2)c1
N=C(O)Nc1ccc(I)cc1
O=C1/C(=C/c2ccc2)C(O)=NN1c1ccc(I)cc1
O=C(Nc1ccc(I)cc1)c1ccc(I)cc1
OC(=Nc1ccc(I)cc1)c1ccc(I)cc1
O=[N+](O-)c1ccc([N+](=O)[O-]
])c2ccc2c1Nc1ccc(I)cc1
CC(C)C)OC(=O)N1CCN(c2ccc(I)cc2)CC1
O=C(O)C1C(=O)Nc2ccc(I)cc2)CC1
NS(=O)(=O)c1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
O=C(Nc1ccc(I)cc1)Nc1ccc(I)cc1
O=C(Nc1ccc(I)cc1)C1CCCC1

COc1cc2nnc(Nc3ccc(I)cc3)c2cc1OC
Ce1cc(NC(=O)c2ccc(C)([N+](=O)[O-]
])c2)c(C)cc1I
O=C(Nc1ccc(I)cc1)C1CCCCO1
NC(=Nc1ccc(I)cc1)C(N)=Nc1ccc(I)cc1
O=C(Nc1ccc(I)cc1)N1CCOCC1
O=C(CCCCCC(O)=NO)Nc1ccc(I)cc1
O=C1C(c2ccc2)=C(Nc2ccc(I)cc2)c2ccc2
CC(CC(=O)Nc1ccc(I)cc1)c1ccc1
CCCC(=O)Nc1ccc(I)cc1
O=[N+](O-)]c1ccc1S(=O)(=O)Nc1ccc(I)cc1
OC(CNc1ccc(I)cc1)Cn1c2ccc2c2ccc2
Ic1ccc(NC2nnc3C2CCCC3)cc1
Ce1cc(I)ccc1Nc1c(C(O)=NOCC2C2)cc(F)c(F)c
1F
CCCCC(O)=Nc1ccc(I)cc1C(=O)O
Ic1ccc(-n2ccn2)cc1
CCn1c(=O)c(C(=O)Nc2ccc(I)cc2)c(O)c2ccc21
FC(F)(F)c1cnc(Oc2ccc(I)cc2)c(Cl)c1
O=S(=O)(Nc1ccc(I)cc1)c1ccc2ccc12
CCCCC(=O)Nc1ccc(I)cc1
Ce1ccc(C(O)=Nc2ccc(I)cc2)cc1
O=[N+](O-)]c1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
O=C1c2ccc2C(O)(c2ccc2)N1c1ccc(I)cc1
O=C1CCCCN1c1ccc(I)cc1
Nc1c(C(=O)O)cc(I)cc1C(=O)O
CCOC(=O)Nc1ccc(I)cc1
OC(=NCC1CC1)Nc1ccc(I)cc1
COC(=O)c1ccc(N=C(O)COc2ccc(I)cc2)c1
CC(C)=CC(=O)Nc1ccc(I)cc1C
O=S(=O)(Nc1ccc(I)cc1)c1ccc(Cl)cc1
Clc1ccc(/C=N/c2ccc(I)cc2)cc1
Ce1cc(C)c2[nH]c(C)cc(=Nc3ccc(I)cc3)c2c1
O=C(Nc1ccc(I)cc1)C1CC1
N#CCC(=O)Nc1ccc(I)cc1
OC(=Nc1ccc(Cl)c(Cl)c1)Nc1ccc(I)cc1
COc1ccc(C(=O)Nc2ccc(I)cc2)c1
N=C(S)Nc1ccc(I)cc1
O=[N+](O-)]c1ccc(Oc2ccc(I)cc2)nc1
Ce1oncc1C(=O)Nc1ccc(I)cc1
O=C(O)CCCC(=O)Nc1ccc(I)cc1
O=C(CSc1nc2ccc([N+](=O)[O-]
])cc2[nH]1)Nc1ccc(I)cc1
CC1=NN(c2ccc(I)cc2)C(=O)C1
CC(Cl)C(=O)Nc1ccc(I)cc1
COc1ccc(Nc2ccc(I)cc2)c2ccc(OC)c2)cc1
O=C(Cc1c[nH]c2ccc12)Nc1ccc(I)cc1
CC(O)=Nc1ccc(I)cc1C(F)(F)F
O=[N+](O-)]c1ccc1Oe1ccc(I)cc1
CCCCn1c(=O)c(C(=O)Nc2ccc(I)cc2)c(O)c2ccc
21
O=[N+](O-)]c1ccc(/C=N/c2ccc(I)cc2)cc1
Ic1ccc(-n2cnnc2)cc1

N=C(O)CNc1ccc(I)cc1
Ce1ccc2nnc(Nc3ccc(I)cc3)c2c1
Ic1ccc(Oc2cccn2)cc1
O=[N+](O-)]c1ccc(C(F)(F)F)cc([N+](=O)[O-]
])c1Oe1ccc(I)cc1
Bre1onc(Oe2ccc(I)cc2)nc1
Ic1ccc(NC2CCCC2)cc1
CCOC(=O)C(=CNc1ccc(I)cc1)C(=O)OCC
COc1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
NNc1ccc(I)cc1
COc1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1OC
O=C(Cc1ccc(F)cc1F)Nc1ccc(I)cc1
Ce1cc(C(=O)Nc2ccc(I)cc2C(=O)O)ccc1[N+](=O)
[O-]
COc1ccc(/C=N/c2ccc(I)cc2)c1O
O=C(Nc1ccc(I)cc1)C(O)=NCCO)c1ccc1
OC(=NC(=S)Nc1ccc(I)cc1)c1ccc1
O=C(Nc1ccc(I)cc1)C1CCN(C(=O)c2ccc2)CC1
Ic1ccc(Nc2ccc2)c2ccc2)cc1
Cn1nc(C2CC2)cc1C(O)=Nc1ccc(I)cc1
O=C1C=C(Nc2ccc(I)cc2)CCC1
Ce1cc(I)ccc1NC(O)=Nc1ccc2ccc12
CC(C)C)c1ccc(C(O)=Nc2ccc(I)cc2)cc1
OC1=NC(=S)N=C(O)C1=Cc1ccn1-c1ccc(I)cc1
NS(=O)(=O)c1ccc(NC(=S)Nc2ccc(I)cc2)cc1
Ic1ccc(N2COC2)cc1
OC(=NOCC1CC1)c1ccc(F)c(F)c1Nc1ccc(I)cc1C1
CC(C)C)OC(=O)Nc1ccc(I)cc1
Ce1cc(I)ccc1Nc1c(C(=O)O)cc(F)c(F)c1F
O=C(COe1ccc1C(O)=Nc1ccc1)Nc1ccc(I)cc
1
O=C(Nc1ccc(I)cc1)c1ccc2cc1=O
Ic1ccc(N=P(c2ccc2)(c2ccc2)c2ccc2)cc1
OC(=Nc1ccc1)Nc1ccc(I)cc1
CCOC(=O)c1ccc(NC(=O)Nc2ccc(I)cc2)cc1
O=C(O)c1ccc1C(=O)Nc1ccc(I)cc1
Ce1nc2ccc2c(=O)n1-c1ccc(I)cc1
Ce1ccc(/C=N/N=c2[nH]c3nnc3[nH]c2=Nc2ccc
(I)cc2)o1
CC1=C(C)CC(C(=O)Nc2ccc(I)cc2)C(C(=O)O)C1
CCOC(=O)c1ccc(NC(=S)Nc2ccc(I)cc2)cc1
O=[N+](O-)]c1ccc(Nc2ccc(I)cc2)c([N+](=O)[O-]
])c1
CC1(C)CN(c2ccc(I)cc2)C1=O
NCCS(=O)(=O)Nc1ccc(I)cc1
CCc1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
CCCCC(=O)Nc1ccc(I)cc1
N=c1nnc(Nc2ccc(I)cc2)[nH]1
CN(C)c1ccc(I)cc1
O=C(Nc1ccc(I)cc1)c1ccc1F
O=C1C(N2COC2)=CCCN1c1ccc(I)cc1
CCOC(=O)/C(=N)N=C(Nc1ccc(I)cc1)
O=C/C=C/c1ccc1)Nc1ccc(I)cc1

CCN(CC)C(=O)Nc1ccc(I)cc1
CCOC(=O)c1c[nH]c2ccc(OCC)cc2c1=Nc1ccc(I)c
c1
CC(=O)c1ccc(NC(=O)Nc2ccc(I)cc2)cc1
Ic1ccc(-n2c3ccc3c3ccc3)cc1
O=C(Nc1ccc(I)cc1)c1ccc1C(F)(F)F
[N-]=[N+]=Nc1ccc(I)cc1
CCC(=O)Nc1ccc(I)cc1
O=C1SC(Nc2ccc(I)cc2)C(=O)N1c1ccc1
O=Cc1ccc1Oe1ccc(I)cc1
O=C(O)c1ccc(I)ccc1N=C(O)c1ccc1
SC(=Nc1ccc1)Nc1ccc(I)cc1
O=[N+](O-)]c1ccc(C(O)=Nc2ccc(I)cc2)cc1
Ic1ccc(N2CCCC2)cc1
Nc1ccc(I)cc1
CC(=O)CC(=O)Nc1ccc(I)cc1
O=S(=O)(Nc1ccc(I)cc1)c1ccc1
Ce1ccc(S(=O)(=O)N=C(O)Nc2ccc(I)cc2)cc1
Ce1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
O=C(Nc1ccc(I)cc1)C(c1ccc1)c1ccc1
Ic1ccc(-n2ccc2)cc1
O=C(CCCC1)Nc1ccc(I)cc1
NCC(=O)Nc1ccc(I)cc1
O=C(O)CNc1ccc(I)cc1
Ce1ncn1-c1ccc(I)cc1
CCN(CC)c1ccc(/C=N/c2ccc(I)cc2)c(O)c1
O=C1OC(Nc2ccc(I)cc2)c2ccc21
CS(=O)(=O)c1ccc(C(O)=Nc2ccc(I)cc2)cc1
Nc1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
COCc1cc(C)nc2sc(C(=O)Nc3ccc(I)cc3)c(N)c12
O=Cc1ccc(OCC(=O)Nc2ccc(I)cc2)cc1
O=C(Nc1ccc(I)cc1C(=O)Nc1ccc(Cl)cc1)c1ccc1
Ic1ccc(N=c2nnc3[nH][nH]cc2-3)cc1
S=C(Nc1ccc(Br)cc1)Nc1ccc(I)cc1
CC(C)C)OC(O)=Nc1ccc(I)cc1[N+](=O)[O-]
Ce1c(C(=O)O)mn1-c1ccc(I)cc1
COC(=O)c1ccc1N=C(O)COc1ccc(I)cc1
Ce1ccc(C)n1-c1ccc(I)cc1
O=C(Nc1ccc(I)cc1)c1ccc1
O=C1/C(=C/c2ccc(N3COC3)cc2)C(O)=NN1c
1ccc(I)cc1
CC(=O)c1ccc(I)cc1C1NC(=O)C(F)(F)F
O=C1/C(=C/c2ccc2)C(O)=NN1c1ccc(I)cc1
O=C(O)c1ccc(F)c(F)c1Nc1ccc(I)cc1C1
CCOC(=O)CNc1ccc(I)cc1
O=Cc1ccn1-c1ccc(I)cc1
CC(=O)c1ccc(Oe2ccc(I)cc2)nc1
O=C(Cc1ccc1)Nc1ccc(I)cc1
COCCN=C(O)Nc1ccc(I)cc1
Ce1cc(I)ccc1NC(=O)C(F)(F)F
Ce1cc(I)ccc1N1C(=O)C=CC1=O
OC(=Nc1ccc(I)cc1)c1ccc(Cl)cc1

Cluster G

O=C(O)c1c(F)ccc1I
Sc1ccc(I)c1
Ce1cc(N)cc(I)c1
CC(C)C)OC(O)=Nc1cc(Br)cc(I)c1
Oe1cc(Br)cc(I)c1
N#Cc1c(F)cc(I)cc1F
Fe1cc(I)cc(F)c1I
Oe1cc(Cl)cc(I)c1
Cc1ccc(N=C(O)c2ccc2)cc1I
OC(=Nc1ccc1)c1ccc(F)cc1I
Nc1ccc(CO)c(I)c1
Cc1ccc(O)cc1I

CC(O)=Nc1ccc(S(=O)(=O)Nc2ccc(I)cc2)cc1
Nc1ccc(I)c1C(=O)O
N=C(O)c1ccc(I)cc1F
Ic1ccc(Oc2ccc2)cc1
Fc1ccc(I)c1C(F)(F)F
Ce1cc(F)cc(I)c1C(=O)O
CN(C)CCOe1ccc(I)cc1
CN(C)C1cccn1)Cc1ccc(I)cc1
COc1ccc(CO)c(I)c1
Ce1c(F)cc(F)cc1I
OCc1ccc(F)cc1I
N=C(O)c1ccc(I)cc1N

Ce1ccc(N=C(O)c2ccc2)cc1I
Fe1cc(I)cc(F)c1C1
Oe1cc(O)cc(I)c1
O=C(O)c1c(I)ccc(C(F)(F)F)c1F
Nc1ccc(I)cc1F
COC(=O)c1c(F)ccc1I
CN(C)c1cc(F)cc(I)c1
Ic1ccc(N2COC2)cc1
COc1ccc(I)c(=O)O)cc1
CS(=O)(=O)Nc1ccc(I)cc1
N#Cc1ccc(N)cc1I
OC(=Nc1ccc(I)cc1)C(Cl)cc1

O=Cc1c(I)ccc(Br)c1F
Ce1ccc(C)n1-c1ccc(I)c1
CN=C(O)c1ccc(I)cc1F
N#CCc1ccc(I)cc1F
Cc1cc(O)cc(I)c1
COC(=O)c1c(O)cccc1I
O=C(O)c1c(F)cc(F)cc1I
OC(Ce1c[nH]e2cccc12)=Nc1ccc(I)c1
Bre1ccc(I)c1
Cc1ccc(I)c(C(=O)O)c1F
Fe1cc(Cl)cc(I)c1
CC1(C)OB(c2c(F)cccc2)OC1(C)C
Fe1ccc(N=C=S)c1I
COc1cc(Br)cc(I)c1
N=C(O)Nc1ccc(I)c1
Ce1ccc(N)cc1I
O=[N+][O-]c1c(F)cccc1I
CC(C)(C)OC(O)=Nc1ccc(F)cc1I
OB(O)c1c(F)cccc1I
COc1cc(Cl)cc(I)c1
Fe1cc(I)cc2cccc12
O=Cc1c(I)ccc(Cl)c1F
Ce1ccc(N)c(C)c1I
CC(C)Oe1ccc(I)c1
CN(C)Ce1ccc(I)c1
O=C(O)c1c(O)cccc1I
OCc1ccc(I)cc1F
Ce1ccc(S(=O)(=O)Nc2cccc(I)c2)c1
Cc1cc(F)cc(I)c1
COc1cc(I)c([N+](=O)[O-])cc1Br
COCCN=C(O)Nc1ccc(I)c1
CCOC(=O)c1c(F)cccc1I
Oe1cc(F)cc(I)c1
OC(Cl)=Nc1ccc(I)c1
Ce1c(Br)cc(F)cc1I
Nc1ccc([N+](=O)[O-])c(I)c1
COc1ccc(C(=O)Cl)c1I
COc1cc(I)cc(C(F)F)c1
Ic1cccc(N2CCCC2)c1
COCCOe1ccc(I)c1
OC(=Nc1ccc(I)c1)OCc1ccc1
CC(C)(C)OC(O)=Nc1c(F)cccc1I
COc1cc(I)c([N+](=O)[O-])cc1I
Ce1cc(C)c1cc1N
CNc1ccc(I)c1
OC(Ce1ccc1)=Nc1ccc(I)c1
Ce1ccc(I)cc1F
Cc1ccc(S(=O)(=O)Nc2ccc(C)c(I)c2)cc1
O=S(=O)(Nc1ccc(I)c1)c1ccc1
CC(C)(C)OC(O)=Nc1ccc(I)c1
OC(=NCC1CC1)Nc1ccc(I)c1
CCN(CC)CC(O)=Nc1ccc(I)c1
O=Cc1c(O)cccc1I
Ce1c(F)cccc1I
Fe1ccc(Oe2cccc(I)c2)cc1
Nc1cc(N)cc(I)c1
COc1ccc(I)c1C(=O)O
COc1ccc(I)c1C
O=C(O)Cc1ccc(F)cc1I
Ic1ccc(NCc2cccc2)c1
OCc1c(F)cccc1I
C=C1[CH]C(I)=CC=C1.[Br-].[Zn+]
COC(=O)c1c(N)cccc1I
O=[N+][O-]c1c(O)cccc1I

COc1ccc([N+](=O)[O-])c(I)c1
CCOe1ccc(I)c1
OCCOe1ccc(I)c1
OC(=Nc1ccc(I)c1)C(F)F
Ic1cccc(-n2ccmn2)c1
CCCOe1ccc(I)c1
Ce1c(N)cc(Cl)cc1I
N#CCC(O)=Nc1ccc(I)c1
O=C(O)Cc1ccc(I)cc1F
Ic1cccc(CN2CCOCC2)c1
Nc1ccc(I)c1
CC(C)(C)[Si](C)(C)Oe1ccc(I)c1
OCc1ccc(I)cc1OCc1ccc1
O=Cc1c(F)cccc1I
N#Cc1ccc(F)cc1I
Fe1cc(I)cc(C(F)F)c1
Ce1c(N)cccc1I
BrCCOe1ccc(I)c1
Cn1c(=O)c2c(nen2CC(O)=Nc2cccc(I)c2)n(C)c1=O
Cc1c(F)cc(I)cc1F
OCc1cc(F)cc(I)c1
CNc1cc(Br)cc(I)c1
COc1ccc(C(=O)O)c(I)c1
Nc1cc(I)cc(C(F)F)c1
O=C(O)c1c(I)ccc(Br)c1F
CC(C)(C)OC(=O)N1CCN(c2cccc(I)c2)CC1
O=Cc1ccc(F)cc1I
COc1ccc(N=C(O)OC(C)(C)C)c1I
Fe1ccc(CBr)c1I
O=Cc1ccc(O)cc1I
N#Cc1c(I)ccc(Cl)c1F
O=C=Nc1ccc(I)c1
Fe1cc(I)ccc1C(F)F
O=C(Cl)c1c(F)cccc1I
Fe1cc(I)cc(F)c1Br
CCOC(=O)COc1ccc(I)c1
Fe1cc(I)cc(OC(F)F)c1
COc1ccc(I)c1C#N
COC(=O)c1cc(Br)c1I
Ic1ccc(NC2COC2)c1
Ce1ccc(N=C(O)Nc2cccc(I)c2)c1
CC(O)=Nc1ccc(I)c1
O=[N+][O-]c1c(F)cc(F)cc1I
CN(C)C1ccc(I)c1
CC(O)=Nc1ccc(F)cc1I
O=C(O)c1ccc(OC(F)F)cc1I
Fe1ccc(I)c1
CSc1ccc(I)c1
CC(O)=Nc1ccc(C)c1I
Fe1cc(F)cc(I)c1
CCNc1ccc(F)cc1I
O=S(=O)(Nc1ccc(I)c1)c1ccc1
COc1cc(N)cc(I)c1
Ce1ccc(F)cc1I
O=C(O)c1c(F)cc(I)cc1F
CN=C(O)Nc1ccc(I)c1
COc1ccc(C(=N)O)c(I)c1
O=C(O)c1ccc(F)cc1I
COc1ccc(I)c1
COC(=O)c1cc([N+](=O)[O-])c(I)cc1O
N=C(O)c1c(F)cccc1I
O=C(O)COe1ccc(I)c1
CCCC(O)=Nc1ccc(F)cc1I

O=[N+][O-]c1cc(Br)c(F)cc1I
COC(=O)c1ccc(F)cc1I
Fe1cc(I)cc(C(F)F)c1
CC(=O)Oe1ccc(I)c1
Ic1ccc(N2CCCC2)c1
Fe1cc(Br)cc(I)c1
Nc1cc(F)cc(I)c1
Nc1cc(Cl)cc(I)c1
N#Cc1c(F)cccc1I
COc1ccc(C#N)c1I
COC(=O)c1ccc(N)cc1I
Nc1ccc(C(=O)O)c1I
COc1ccc(I)c1N=C(O)OC(C)(C)C
COC(=O)c1ccc(OC)cc1I
COc1ccc(C=O)c1I
BrCCOe1ccc(I)c1
FC(F)(F)Oe1cc(Br)cc(I)c1
Fe1ccc(I)c1CBR
Ce1ccc(N=C(O)CC)c1I
FC(F)(F)Oe1ccc(I)c1
CNc1ccc(OC)cc1I
Nc1c(O)cccc1I
COc1ccc(C)c1I
Cc1ccc(I)c(C)c1N
FC(F)Oe1ccc(I)c1
Nc1cc(I)cc(CO)c1
O=C(O)c1c(I)ccc(Cl)c1F
CC(C)(C)O=Nc1ccc(I)c1
COc1ccc(I)c1C=O
O=[N+][O-]c1ccc(F)cc1I
O=Cc1c(F)cc(I)cc1F
OCCCOe1ccc(I)c1
COc1ccc(C(C)=O)c1I
Nc1cc(Br)cc(I)c1
Ic1cccc(CN2CCCC2)c1
C#CCOe1ccc(I)c1
Oe1cc(I)cc(C(F)F)c1
Ic1ccc(Oe2cccc2)c1
COC(=O)c1c(I)cccc1OC
O=C(O)c1ccc(O)cc1I
O=[N+][O-]c1ccc(O)cc1I
COc1cc(I)cc(OC)c1
Nc1cccc1Oe1ccc(I)c1
OC(Cl)=Nc1ccc(F)cc1I
OB(O)c1ccc(I)cc1F
N#Cc1c(I)ccc(Br)c1F
OCc1c(F)cc(I)cc1F
Clc1ccc(I)c1
OC(=Nc1ccc(I)c1)C1CC1
Oe1ccc(I)c1
COc1cc(F)cc(I)c1
Fe1cc(I)cc(F)c1C(F)F
Fe1cc(I)cc(CBr)c1
CC(C)Nc1ccc(I)c1
COc1ccc(I)c1[N+](=O)[O-]
N#CCc1ccc(F)cc1I
OC(=Nc1ccc(F)cc1)c1ccc1
Ce1ccc(OCe2cccc2)cc1I
Fe1cc(I)cc1CBR
O=S(=O)(Nc1ccc(I)c1)c1ccc(Cl)cc1
CCOC(=O)c1c(I)cccc1OC
OC(=NC1CCCC1)Nc1ccc(I)c1
O=[N+][O-]c1c(F)cc(I)cc1F
COc1ccc(I)c1C(=N)O

Cluster H

Ce1ccc(OS(=O)(=O)Nc2ccc(I)cc2)cc1
O=S(=O)(Nc1ccc1)c1ccc(I)cc1

O=C(O)c1ccc(I)c(C(F)F)c1
O=S(=O)(c1ccc(I)cc1)N1CCOCC1

Ce1cc([N+](=O)[O-])ccc1I
CC(=O)c1ccc(I)c(C(F)F)c1

O=S(=O)(NCCCN1CCOCC1)c1ccc(I)cc1
N=C(O)c1cc([N+](=O)[O-])ccc1I
O=S(=O)(NC(=Nc1cccc1)c1ccc(I)cc1
O=[N+](=[O-])c1ccc(I)cc1Cl
O=S(=O)(Oc1c(F)c(F)c(F)c1F)c1ccc(I)cc1
O=[N+](=[O-])c1ccc(I)cc1
CCOC(=O)c1cc([N+](=O)[O-])ccc1I
COC(=O)c1cc(C(F)F)ccc1I
O=S(=O)(c1ccc(I)cc1)N1CCCC1
O=S(=O)(F)c1ccc(I)cc1
Cc1cc([N+](=O)[O-])c(C)ccc1I
O=S(=O)(Nc1cccc1)c1ccc(I)cc1
COC(=O)c1ccc(I)c(C(F)F)ccc1
COC(=O)c1cc(C#N)ccc1I
O=S(=O)(Nc1cccc1)c1ccc(I)cc1
N#Cc1cc([N+](=O)[O-])ccc1I
N#Cc1ccc(I)c(C(F)F)ccc1
O=S(=O)(NCCN1CCOCC1)c1ccc(I)cc1
C#CCN=C(O)c1cc([N+](=O)[O-])ccc1I
O=[N+](=[O-])c1ccc(I)cc1C(F)F
COC(=O)c1ccc(S(=O)(=O)Cl)ccc1I
Cc1cccc1NS(=O)(=O)c1ccc(I)cc1

O=S(=O)(Oc1cccc2cccc12)c1ccc(I)cc1
N#Cc1ccc(I)c(C(=O)O)c1
COc1ccc(NS(=O)(=O)c2ccc(I)cc2)cc1
O=S(=O)(Cl)c1ccc(I)cc1
CC(C)(C)OC(=O)Cc1cc(I)ccc1[N+](=O)[O-]
O=C(O)c1ccc([N+](=O)[O-])ccc1I
O=C(O)c1cccc1NS(=O)(=O)c1ccc(I)cc1
CCN(CC)S(=O)(=O)c1ccc(I)cc1
O=[N+](=[O-])c1ccc(I)cc1CO
O=[N+](=[O-])c1ccc(-[n+]2nc(-c3cccc3)nm2-
e2ccc(I)cc2)cc1
O=Cc1cc(I)ccc1[N+](=O)[O-]
O=Cc1cc(C(F)F)ccc1I
O=S(=O)(Cl)c1ccc(I)cc1Cl
COC(=O)c1ccc(I)c(C(=O)O)c1
CCN=C1cc(C)nc(N2CCN(S(=O)(=O)c3ccc(I)cc3)
CC2)[nH]1
O=S(=O)(c1ccc(I)cc1)N1CCCC1
Cc1ccc(NS(=O)(=O)c2ccc(I)cc2)cc1
COC(=O)c1cc([N+](=O)[O-])ccc1I
Cc1cc(I)ccc1[N+](=O)[O-]
CC(=O)c1ccc(NS(=O)(=O)c2ccc(I)cc2)cc1
O=c1[nH]c2cccc2nc1CS(=O)(=O)c1ccc(I)cc1

O=S(=O)(NCc1ccc2c(c1)OCO2)c1ccc(I)cc1
O=S(c1ccc(I)cc1)c1ccc(I)cc1
CC1CCCCN1S(=O)(=O)c1ccc(I)cc1
O=[N+](=[O-])c1ccc(I)cc1Br
CCc1nc(C)en1S(=O)(=O)c1ccc(I)cc1
CN1CCN(S(=O)(=O)c2ccc(I)cc2)CC1
O=S(=O)(Nc1ccc(F)cc1)c1ccc(I)cc1
O=S(=O)(c1cccc1)c1ccc(I)cc1
CCN1CCN(S(=O)(=O)c2ccc(I)cc2)CC1
O=[N+](=[O-])c1ccc(I)c(C(F)F)ccc1
O=C(c1cccc1)c1ccc(NS(=O)(=O)c2ccc(I)cc2)cc
1
O=[N+](=[O-])c1ccc(OS(=O)(=O)c2ccc(I)cc2)cc1
CC(C)(C)OC(=O)c1cc([N+](=O)[O-])ccc1I
Cc1cccc1NS(=O)(=O)c1ccc(I)cc1
O=C(O)c1ccc(I)c(C(=O)O)c1
O=C(O)c1ccc(NS(=O)(=O)c2ccc(I)cc2)cc1
Cc1cc([N+](=O)[O-])c(Cl)ccc1I
CCCN(CCC)S(=O)(=O)c1ccc(I)cc1
O=C(O)c1ccc(I)cc1[N+](=O)[O-]
O=S(=O)(Nc1ccc(Br)cc1)c1ccc(I)cc1

Cluster I

FC(F)F)c1ccc(I)cc1
OC(=NCCc1ccc1)c1ccc(I)cc1
CCOC(=O)c1ccc(I)cc1F
OC(c1cccc1)c1ccc(I)cc1
Nc1cc(I)ccc1C(=O)O
O/N=C/c1ccc(I)cc1
Clc1cc(I)cc(Cl)c1Br
OC(=Nc1cccc1F)c1ccc(I)cc1
Cc1ccc(NS(=O)(=O)c2ccc(NC(=O)c3cccc(I)cc3)
cc2)n1
CCOC(=O)c1cc(Br)cc(I)cc1
CC(C)(C)c1cc(I)cc(C(C)(C)C)c1
CS(=O)(=O)c1ccc(I)cc1
Nc1cccc(I)cc1
Cc1ccc(C(=O)c2cccc(I)cc2)cc1
N=C(O)c1cc(I)cc([N+](=O)[O-])c1
Ic1cccc(-c2nnc(-c3cccc3)cc2)c1
CCn1c2cccc2c2c(/C=N/N=C(O)c3cccc(I)cc3)cc
e21
O=S(=O)(O)c1ccc(I)cc1
Ic1cccc(C2CCC2)c1
O=C(Cl)Cc1ccc(I)cc1
N=C(O)c1cccc1N=C(O)c1ccc(I)cc1
Cc1c(Br)cc(I)cc1C(=O)O
NS(=O)(=O)c1ccc(I)cc1
O=Cc1ccc(I)cc1F
COc1cc(I)ccc1C(=O)O
N#Cc1ccc(I)cc1F
CC(C)c1ccc(I)cc1
O=C(ON1C(=O)CCC1=O)c1ccc(I)cc1
O=C(c1ccc(Br)cc1)c1ccc(I)cc1
Cc1c(N=C(S)N=C(O)c2cccc(I)cc2)c(=O)n(-
e2cccc2)n1C
CC(C)(C)OC(=O)Nc1ccc(I)cc1
O=c1nc(-c2cccc(I)cc2)[nH]o1
OC(=NN=C(O)c1ccc(I)cc1)c1ccc(I)cc1
Cc1ccc(/C=N/N=C(O)c2ccc(I)cc2)o1
COC(=O)c1ccc(I)cc1
Clc1ccc(=N/N=C/c2cccc(I)cc2)[nH]n1
COC(=O)c1cc(C)cc(I)cc1
BrCc1cc(Br)cc(I)cc1
Cc1cc(C)cc(I)cc1

Ic1cc(-c2cccc2)cc(-c2cccc2)c1
BrCc1cc(I)cc(CBr)c1
CC(C)(C)n1nc(Cc2cccc(I)cc2)c2c(N)ncn21
O=C(Oc1cccc1[N+](=O)[O-])c1ccc(I)cc1
OCc1cc(I)cc(CO)c1
O=C(Cl)c1ccc(I)cc1
Cc1ccc(I)cc1C(=O)c1ccc(-c2ccc(F)cc2)s1
Cc1cccc1N=C(O)c1ccc(I)cc1
Cc1ccc(I)cc1C#N
CN1CCN(C(=O)c2ccc(I)cc2)CC1
CC(=O)c1ccc(I)cc1
N#Cc1cc(I)cc(C(F)F)ccc1
C/C(=N)NS(=O)(=O)c1ccc(C)cc1)c1ccc(I)cc1
COC(=O)c1ccc(I)cc1O
O=C(c1ccc(F)cc1)c1ccc(I)cc1
COc1cccc1N1CCN(C(=O)c2ccc(I)cc2)CC1
O=C(O)c1cc(I)ccc1C(F)F
Ic1cccc(-c2nc3cccc3s2)c1
COc1ccc2nc(N=C(O)c3cccc(I)cc3)sc2e1
COc1cc(I)ccc1C=O
NN=C(O)c1ccc(I)cc1
CC(C)c1cc(Br)cc(I)cc1
COc1ccc2c(c1)CCC1C2=NN(C(C)=O)C1c1ccc(I)
I)cc1
CN(C)C(=O)c1ccc(I)cc1
OC(=Nc1ccc(Cl)c(C(F)F)cc1)c1ccc(I)cc1
Cc1cc(Cl)cc(I)cc1
CCOC(=O)c1cc(I)cc([N+](=O)[O-])cc1
O=S(=O)(Cl)c1ccc(I)cc1
O=[N+](=[O-])c1cc(I)ccc1CO
OC(=Nc1ccc(Cl)c(-
c2nc3cccc3[nH]2)c1)c1ccc(I)cc1
CC(C)(C)OC(=O)c1cc(Br)cc(I)cc1
NCCc1ccc(I)cc1
CC(C)(C(=O)c1ccc(I)cc1
BrCc1ccc(I)cc1
O=[N+](=[O-])c1ccc(I)cc1F
O=C(O)c1ccc(I)cc1[N+](=O)[O-]
COC(=O)C[C@@H](N)c1ccc(I)cc1
FC(F)c1cc(Br)cc(I)cc1
FS(F)(F)(F)c1ccc(I)cc1
COC(=O)c1cc(Cl)cc(I)cc1

CCN=C(O)c1ccc(I)cc1
COC(=O)c1cc(I)cc(Cl)c1C
Clc1cccc(-c2cccc(I)cc2)c1
COC(=O)c1cc(I)cc1C
O=C(c1cccc1)c1cc2c(cc1N=C(O)c1ccc(I)cc1)O
CCO2
O=C(CBr)c1ccc(I)cc1
Cc1cc(I)cc(/C=C/C#N)c1
CC(C)(C)N=C(O)c1ccc(I)cc1
O=C(O)c1cc(I)cc(C(F)F)ccc1
COC(=O)c1ccc(I)cc1OCc1cccc1
O=C(c1ccc(I)cc1)N1CCCC(F)CC1
Cc1c(I)ccc(C#N)c1Cl
CCOC(=O)Cc1ccc(I)cc1
O=[N+](=[O-])c1cc(I)cc([N+](=O)[O-])cc1
OC(=Nc1cc(C(F)F)ccc1N1CCCC1)c1ccc(I)cc
e1
N#CCc1ccc(I)cc1
O=Cc1cc(I)cc(C(=O)O)c1
N#Cc1ccc(I)cc1Br
CC(C)(C)c1cc(Br)cc(I)cc1
Cc1cc(I)cc(C(=O)O)c1
Ic1cccc(-c2nc3cccc3cc2)c1
Cc1cc(I)cc([N+](=O)[O-])cc1
NC(Cc1cccc(I)cc1)C(=O)O
Cc1cc([N+](=O)[O-])c(N)ccc1I
O=C(O)CCc1ccc(I)cc1
O=C(O)COCc1ccc(I)cc1
Clc1cc(Br)cc(I)cc1
O=C(O)C(O)c1ccc(I)cc1
O=[N+](=[O-])c1ccc(I)cc1O
C=Cc1ccc(I)cc1
CC(C)(C)OC(=O)N[C@H](Cc1ccc(I)cc1)C(=O)
O
Cc1cc(I)cc(C)cc1C=O
CN1CCN(C(=O)c2cc(Br)cc(I)cc2)CC1
COC(=O)c1cc(I)ccc1CBr
O=[N+](=[O-])c1cc(I)ccc1CBr
N#Cc1cc(Br)cc(I)cc1
COC(OC)(OC)c1ccc(I)cc1
N=C(O)c1cc(Cl)cc(I)cc1
OC(=Nc1cccc(F)cc1)c1ccc(I)cc1

O=C(O)c1c(Cl)cc(Cl)c1
OC(=Nc1cc2e(cc1C(O)c1cccc1)OCCO2)c1cccc
1)c1
N#Cc1cc1(I)ccc1C(F)(F)F
COC(=O)c1cccc1(I)cc1F
O=Cc1cccc1(I)cc1Br
OCc1c(Cl)cc1(I)cc1Cl
O=C(c1cccc1(I)c1)C(F)(F)F
OC(=Nc1ccc(F)c(Cl)c1)c1cccc1(I)c1
O=[N+](=[O-])c1cc1(I)cc(CO)c1
CCCCc1ccc(C(=O)c2cccc1(I)c2)cc1
CC(C)(C)OC(=O)c1cccc1(I)cc1Br
Cc1ccc1(I)cc1C(=O)O
O=C(O)c1cccc1(I)c1
Cc1cccc(C)c1N=C(O)c1cccc1(I)c1
O=C(O)C(=O)c1cccc1(I)c1
O=C(c1cccc1(I)cccc1(I)c1
O=Cc1cc1(I)cc(CO)c1
CCOC(=O)CC(=O)c1cccc1(I)c1
Ic1cccc(C2CC2)c1
O=C(Nc1ccc(Cl)cc1)c1cccc1(I)c1
FCc1cccc1(I)c1
CCOC(=O)c1cccc1C(=O)c1cccc1(I)c1
Ic1cccc(Cn2ccc2)c1
OC(=Nc1cccc(O)c1)c1cccc1(I)c1
FC(F)(F)c1cc1(I)cc(CBr)c1
CC(C)N(C(=O)c1cccc1(I)c1)C(C)C
CN(Cc1cccc1C(=O)c1cccc1(I)c1
O=Cc1ccc(OCc2cccc1(I)c2)cc1
COC(=O)c1cc1(I)cc(C(=O)OC)c1
N#CC1=C(N)Oe2cc(N)ccc2C1c1cccc1(I)c1
COc1cc1(I)ccc1C#N
Nc1ccc(NC(=O)c2cccc1(I)c2)cc1
CCOC(=O)C1=C(C)NC(C)=C(C(=O)OCC)C1c1c
ccc1(I)c1
CC1(C)OB(c2ccc(Br)cc1(I)c2)OC1(C)C
OC(=Nc1CC1)c1cccc1(I)c1
N#Cc1cccc1(I)c1
CC(=O)SCc1cccc1(I)c1
O=C(OCc1ccc(Br)cc1)c1cccc1(I)c1
CCN(CC)C(=O)c1cccc1(I)c1
O=C(NN=C(O)c1cccc1(I)c1)c1cccc1
Ic1cccc(C2CCCN2)c1
COC(=O)c1ccc1(I)cc1[N+](=O)[O-]
OCc1ccc(Br)cc1(I)c1
COC(=O)c1cc(Br)cc1(I)c1
CC(C)(C)OC(=O)Cc1cccc1(I)c1
OC1=Nc2c(ccc3cccc23)C(c2cccc1(I)c2)C1
COC(=O)CC(N)c1cccc1(I)c1
CC(O)=NN=C(O)c1cccc1(I)c1
CCOC(=O)c1cccc1(I)cc1N
O=C(c1ccc(Cl)cc1)c1cccc1(I)c1
OC(=NN=Cc1cccc1(I)c1)cccc1(I)c1
O=C(O)c1c(Cl)cc1(I)cc1Cl
O=Cc1cccc1(I)cc1Cl
N#Cc1cc1(I)cc([N+](=O)[O-])c1
CNc1cccc1(I)c1
O=Cc1cccc1(I)cc1[N+](=O)[O-]
Ic1cccc(-c2cccc2)c1
CCCCc1cccc1(I)c1
Cc1c([N+](=O)[O-])cc1(I)cc1[N+](=O)[O-]
CC(C)(C)OC(O)=NN=C(O)c1cccc1(I)c1
Ic1cccc1
O=C1C(=O)N(Cc2cccc1(I)c2)c2cccc21
O=Cc1cc1(I)cc(C(F)(F)F)c1
COC(=O)c1ccc1(I)cc(C2CC2)c1
Br1cc1(I)cc2cccc12
O=C(O)c1ccc1(I)cc(C(=O)O)c1
O=C(O)C=Cc1cccc1(I)c1

Cc1c(CC(=O)O)c(=O)oc2c(C)c(OCc3cccc1(I)c3)c
cc12
COC(=O)c1ccc1(I)cc(C=O)c1
CN(C)C(=O)c1ccc(Br)cc1(I)c1
N=C(S)c1cccc1(I)c1
CC(=O)c1ccc1(I)cc1F
CCc1cccc1(I)c1
N=C(O)c1ccc(Br)cc1(I)c1
Cc1cc1(I)cc(C#N)c1
FC(F)c1cccc1(I)c1
COC(=O)c1ccc1(I)cc1C(=O)OC
Br1ccc(-c2cccc1(I)c2)cc1
FC(F)(F)c1cc1(I)cc1(I)c1
N[C@@H](C)c1cccc1(I)c1C(=O)O
N#C/C=C/c1cccc1(I)c1c1nc2cccc2[nH]1
CC(C)CC(O)=Nc1ccc2oc(-c3cccc1(I)c3)nc2e1
O=Cc1cccc1(I)cc1O
COCCN=C(O)c1cccc1(I)c1
O=C(O)c1ccc1(I)cc([N+](=O)[O-])c1
N[C@H](C)c1cccc1(I)c1C(=O)O
O=[N+](=[O-])c1cc1(I)cc(C)c1(I)c1
OCc1cccc1(I)c1
COC(=O)c1ccc1(I)cc(C(F)(F)F)c1
CNc1cc1(I)ccc1C(=O)O
O=C(Oc1cccc1(I)c1)cccc1(I)c1
Cc1cc(C)cc(N=C(O)c2cccc1(I)c2)c1
CC(C)(C)OC(=O)c1cccc1(I)cc1F
CNS(=O)(=O)c1cccc1(I)c1
N#Cc1cccc1(I)cc1Cl
Cc1cc(O)c(C2=NCCSC(c3cccc1(I)c3)C2)c(=O)O1
O=C(O)Cc1cccc1(I)c1
O=Cc1cccc1(I)cc1C(F)(F)F
CN(C)C(=O)Cc1cccc1(I)c1
OC(=NN=C(O)C)CCCC1c1cccc1(I)c1
Cc1c(Cl)cc1(I)cc1C(=O)O
NC(CC(=O)O)c1cccc1(I)c1
CCOC(=O)c1ccc1(I)ccc1C
COC(=O)c1ccc1(I)cc1S(N)(=O)=O
O=C(Cc1cccc1(I)c1)C(F)(F)F
CN=C(O)c1cccc1(I)c1
O=Cc1c(Cl)cc1(I)cc1Cl
COC(=O)c1ccc1(I)cc1OC
CC(=O)c1ccc(Br)cc1(I)c1
O=C(c1cccc1(I)c1)N1CCC(Cc2cccc2)CC1
CC(C)(C)OC(=O)CC(=O)c1cccc1(I)c1
Cc1c(-c2cccc1(I)c2)[nH]c2ccc3c(cc2c1=O)OCCO3
COC(=O)c1c(Cl)cc1(I)cc1Cl
Ic1cccc(COc2cccc2)c1
Cc1c(C(=O)O)c(-c2cccc1(I)c2)c(-
c2cccc1(I)c2)n1C
O=Cc1cc(Br)cc1(I)c1
OC(=Nc1nc2cccc2[nH]1)c1cccc1(I)c1
CCC(=O)c1ccc2c(cc1N=C(O)c1cccc1(I)c1)OCCO2
CC(C)(C)c1cccc1(I)c1
Cc1cccc1(I)c1
CCCCNc1cccc1(I)c1
O=Cc1cccc1(I)cc1C(=O)O
N#Cc1cccc1(I)cc1C(=O)O
OC(=Nc12CC3CC(C(C)C)C2)c1cccc1(I)c1
N#Cc1cc1(I)cc1(I)c1
CCOC(=O)c1cccc1(I)c1
O=C(O)c1cccc1(I)cc1O
O=[N+](=[O-])c1cccc1(I)c1
COC(=O)c1ccc1(I)cc1C(F)(F)F
N#Cc1cccc1(I)cc1C#N
O=C(O)c1cccc1(I)cc1F
Cc1ccc(-c2nc3cccc3s2)cc1N=C(O)c1cccc1(I)c1
OC(=Nc1cccc1(I)c1)cccc1(I)c1
OC(=Nc1cccc2cccc12)c1cccc1(I)c1

CC(C)c1cccc1(I)cc1[N+](=O)[O-]
CN(Cc1cccc1(I)c1)C(=O)OC(C)(C)C
CCOC(=O)c1ccc1(I)cc(-c2cccc1(I)c2)n1
Cc1ccc1(I)cc1C(=O)Cl
Cc1c(Cl)cc1(I)cc1Cl
OC(=N/N=C/c1cccc(O)c1O)c1cccc1(I)c1
OC(=Nc1nc2cccc2s1)c1cccc1(I)c1
COc1cccc(C(O)=NN=C(O)c2cccc1(I)c2)c1
Clc1cc(Cl)cc1(I)c1
Cc1ccc1(I)cc1[N+](=O)[O-]
OC(=Nc1cccc1(I)c1)cccc1(I)c1
CSC(=CC(=O)c1cccc1(I)c1)SC
CC(C)c1nnc(N=C(O)c2cccc1(I)c2)s1
CC1(C)OB(c2cccc1(I)c2)OC1(C)C
O=Cc1cc1(I)cc(C=O)c1
CC(=O)c1ccc2c(cc1N=C(O)c1cccc1(I)c1)OCCO2
CCCN=C(O)c1cccc1(I)c1
OC(=N/N=C/c1ccc(O)c(O)c1)c1cccc1(I)c1
Ic1cccc(C2=Nc3cc4c(cc3C(c3cccc3)O2)OCCO4
)c1
CC(C)(C)OC(=O)c1cccc1(I)c1
CCc1cc(Br)cc1(I)c1
O=C(O)c1ccc1(I)cc1(I)c1
O=C(O)CCCCN=C(O)c1cccc1(I)c1
Cc1c(Br)cc1(I)cc1Br
N=C(O)c1cccc1(I)c1
Br1cc(Br)cc1(I)c1
COC(=O)Cc1cccc1(I)c1
Clc1cc1(I)cc(CBr)c1
Cc1cc(Br)cc1(I)c1
OB(O)c1cccc1(I)c1
O=Cc1cccc1OCc1cccc1(I)c1
COc1ccc(Cc2mnc(N=C(O)c3cccc1(I)c3)s2)cc1
OC(=N/N=C/c1cccc1(O)c1)cccc1(I)c1
OCc1cc1(I)cc1(I)c1
O=C(OCc1cccc1(I)c1)cccc1(I)c1
CCOC(=O)C1=C(C)NC2=C(C(=O)O)CC2C1c1c
ccc1(I)c1
O=C(O)c1ccc1(I)cc1C(=O)O
O=[N+](=[O-])c1cc1(I)cc(C(F)(F)F)c1
Cc1c(N=C(O)c2cccc1(I)c2)c(=O)n(-c2cccc2)n1C
O=C(O)c1ccc(Br)cc1(I)c1
FC(F)(F)c1cc1(I)cc(C(F)(F)F)c1
CC(C)(C)Oc1ncc(-c2cccc1(I)c2)c(OC(C)(C)C)n1
Cc1cccc(OC(CO)=N/N=C/c2cccc1(I)c2)c1
CC(C)N=C(O)c1cccc1(I)c1
Ic1cccc(-c2cccc2)c1
N=C(O)Cc1cccc1(I)c1
CC(=O)c1ccc1(I)cc1O
O=C(c1cccc1(I)c1)N1CCCC1
N#CCC(=O)c1cccc1(I)c1
C[Si](C)(C)C#Cc1cccc1(I)c1
Cc1cccc(C(=O)c2cccc1(I)c2)c1
O=C(O)CCCCN=C(O)c1cccc1(I)c1
ON=C(O)c1cccc1(I)c1
CC(C)(C)OC(O)=N[C@@H](C)c1cccc1(I)c1C(=O
)O
COC(=O)c1ccc1(I)cc([N+](=O)[O-])c1
FC(F)(F)c1cc1(I)cc(Br)cc1(I)c1
N#Cc1cccc1(I)cc1C(F)(F)F
C=C(O)c1cccc1(I)c1
CCCCN=C(O)c1cccc1(I)c1
O=Cc1cccc1(I)c1
CCCCOC(=O)C1=C(C)NC2=C(C(=O)O)CC(C)(C)
C2)C1c1cccc1(I)c1
O=C(O)c1ccc1(I)cc1N=C(O)c1cccc1(I)c1
Ic1cccc(COCCc2cccc2)c1
CC(C)(C)n1nc(Cc2cccc1(I)c2)c(C#N)c1N
COC(=O)c1ccc1(I)cc(Br)cc1CBr

O=C(O)/C=C/c1cccc(I)c1
Ic1cccc(Cc2cccc2)c1
O=C(O)c1ccc(I)cc1C(F)(F)F
Cc1ccc(I)cc1C=O
COC(=O)c1cccc1N=C(O)c1cccc(I)c1
COc1cc(I)ccc1[N+](=O)[O-]
O=Cc1cc(C)cc(I)c1
OC(=N)Cc1ccc(F)cc1c1cccc(I)c1
ClCc1cccc(I)c1
Ic1cccc(Cn2en2)c1
OC(=Nc1cccc1-c1nc2cccc2s1)c1cccc(I)c1

O=C(c1cccc(I)c1)N1CCOCC1
COC(=O)c1cc(I)cc(C(=O)O)c1
COC(=O)c1ccc(I)cc1N
CN=C(O)c1ccc(Br)cc(I)c1
COc1cccc1N=C(O)c1cccc(I)c1
COc1cc(N=C(O)c2cccc(I)c2)cc(OC)c1
O=C(Nc1ccc(F)cc1)c1cccc(I)c1
O=C(O)c1ccc(I)cc1C1
O=[N+](=[O-])c1cc(Br)cc(I)c1
CC(C)Cc1cccc(I)c1
CS(=O)(=O)c1cc(I)cc(S(C)(=O)=O)c1

CON=C(O)c1cccc(I)c1
OCc1cc(-c2cccc(I)c2)on1
O=C(c1cccc(I)c1)N1CCCCC1
OC(=Nc1cc(Cl)ccc1O)c1cccc(I)c1
CC(Br)c1cccc(I)c1
O=C(O)c1cc(I)ccc2cccc12
O=[N+](=[O-])c1cccc(N=C(O)c2cccc(I)c2)c1
OCc1cc(I)cc(C(F)(F)F)c1
COCCCN=C(O)c1cccc(I)c1
COC(=O)c1cc(I)cc(Br)c1C
O=C(c1cccc(I)c1)c1cccc(I)c1

Cluster J

O=Cc1c(I)ccc(F)c1C1
COc1ccc(I)cc1CN
FC(F)(F)Oc1ccc(I)cc1Br
COc1cc(I)cc(C(=O)O)c1OC
CCN=C(O)c1ccc(OC)c(OC)cc1I
OCCON=C(O)c1ccc2en2c1Nc1ccc(I)cc1F
CCc1cc(OC)ccc1I
O=C(O)c1cc(F)c(F)cc1I
CC(C)(C)c1cc(I)ccc1N
CC(C)(C)OC(=O)N1CCN(C(=O)c2cc(I)ccc2O)C
C1
Nc1cc(I)ccc1Br
FC(F)(F)Oc1ccc(I)cc1C1
CCOC(=O)c1cc(I)ccc1OC
CN=C(O)c1cc(I)ccc1N
CC(O)c1cc(I)ccc1Br
Cc1cc(I)ccc(C(=O)O)c1O
Nc1cc(I)ccc1C1
O=Cc1cc(F)ccc1I
CC(O)=Nc1ccc(I)cc1C1
Cc1cc(I)ccc1F
Nc1ccc(I)cc1F
COc1cc(I)ccc([N+](=O)[O-])c1N
CCOC(=O)c1cc(OC)ccc1I
OB(O)c1cc(I)ccc1Br
COC(=O)c1cc(I)cc(F)c1N
Oc1ccc(I)c2cccc12
Cc1cc(I)ccc1OCc1cccc1
FC(F)(F)c1ccc(I)cc1Br
COC(=O)c1cc(I)ccc(F)c1C
Cc1cc(I)ccc(C)c1N
Nc1ccc(I)cc1C(=O)c1cccc1
COc1cc(C)c1cc1C
CC(C)Oc1ccc(I)cc1C#N
COc1ccc(I)cc(C=O)c1
CCOc1ccc(C(O)c2cc(I)ccc2Cl)cc1
N=C(O)c1cc(I)ccc1C1
COc1ccc(I)cc(C)(C)c1
COc1cc(F)c(F)c(Nc2ccc(I)cc2F)c1[N+](=O)[O-]
Cc1cc(I)ccc(C)c1Br
Clc1ccc(I)cc1Br
Nc1cc(F)cc(I)cc1C(=O)O
CC(C)(C)OC(O)=Nc1ccc(I)cc1C1
CCc1cc(I)ccc1Br
CC1(C)OB(c2cc(O)ccc2I)OC1(C)C
Cc1cc(O)c(C(=O)O)cc1I
O=C(O)c1ccc(I)cc1Br
CC(C)c1ccc(I)cc1N
Cc1cc(I)ccc1N
COc1cc(I)cc(C=O)c1O
COc1cc(I)ccc1O
CN1C(=O)/C=C/c2ccc(I)ccc2O)SC1=S
CCOCOc1cc(I)cc(CCN=C(O)OC(C)(C)C)cc1OCOC
CC

Cc1cc(OC(F)(F)F)ccc1I
Cc1cc(C(O)=NOCCO)c(Nc2ccc(I)cc2F)n(C)c1=
O
Cc1cc(N)ccc1I
CC(C)(C)OC(O)=NCCc1cc(O)c(O)cc1I
CC(C)(C)OC(O)=Nc1ccc(I)cc1F
COc1ccc(I)cc1C#N
COc1cc(I)cc(C(=O)O)cc1OC
Cc1cc(C)c2ccc(C)j2cc(I)ccc2O)j1
Cc1cc(I)cc(F)c1Br
COc1ccc(I)cc(B2OC(C)(C)C(C)C)O2)c1
C[C@H](O)c1cc(F)ccc1I
N#CCc1cc(I)ccc1Br
Fc1c(Cl)ccc(I)cc1C(F)(F)F
FC(F)(F)c1cc(I)ccc1Br
COc1ccc(I)cc1C(Nc1cc(C)ccn1)c1ccc2ccccc2c1
O
Brc1ccc(I)cc1Br
Oc1cc(F)ccc(I)cc1F
OCc1ccc(I)cc1Br
COc1ccc(I)cc(C(F)(F)F)c1
O=Cc1cc(O)ccc1I
Oc1ccc(I)cc1-c1cc(I)ccc1O
CC(C)(C)[Si](C)(C)Oc1ccc(I)c2cccc12
COc1cc(Br)cc(I)cc1Br
Brc1ccc(I)cc1C1OCCO1
N[C@@H](Cc1cc(I)ccc1Br)C(=O)O
CC(O)=Nc1cc(I)ccc1C1
Fc1ccc(I)cc1
CC(C)(C)c1cc(I)cc(C=O)c1O
O=C(O)c1cc(O)ccc1I
C=Cc1ccc(I)cc1C1
Nc1ccc(I)cc1CO
O=C(c1ccc(I)ccc1F)C(F)(F)F
O=Cc1cc(I)ccc1F
CC(O)=Nc1ccc(I)cc1OC(F)(F)F
COc1cc(I)ccc1CO
Cc1cc(F)ccc(I)cc1C(=O)O
O=Cc1cc(I)ccc(F)c1Br
N[C@@H](Cc1cc(I)ccc1F)C(=O)O
Fc1cc(I)ccc1Br
COc1ccc(I)cc(C(=N)O)c1
COc1ccc(I)cc1C=O
CC(C)(C)OC(O)=Nc1cc(OCc2cccc2)c2cccc2c1
I
COC(=O)c1ccc(I)cc1Br
Nc1ccc(I)cc1C=O
FC(F)(F)Oc1cc(I)ccc1Br
Cc1cc(OCc2cccc2)ccc1I
Clc1ccc(I)cc1Cc1ccc(O[C@H]2CCOC2)cc1
Cc1cc(N)cc([N+](=O)[O-])cc1I
Cc1cc(I)ccc1OC(C)C
COc1cc(I)cc(CN=C(C)O)cc1OC
Cc1cc(I)cc(C)c1F

Fc1cc(I)ccc1C1
CC(C)(C)OC(O)=NCCc1cc(I)ccc1F)C(=O)O
Cc1ccc(I)cc1C1
CCOc1ccc(I)cc1C#N
Nc1ccc(I)cc(C(=O)O)c1
O=[N+](=[O-])c1cc(F)cc(F)c(F)c1Nc1ccc(I)cc1F
Clc1ccc(I)cc1Cc1ccc(OC2CCOC2)cc1
COC(=O)c1cc(I)cc(N=C(C)O)cc1OC
COC(=O)c1cc(I)ccc1N
COc1cc(C)c1cc1C(=O)O
COc1ccc(I)cc1N
N=C(O)c1cc(I)cc1Br
Nc1cc(F)cc(I)cc1C1
O=C(O)c1cc(I)ccc1O
Fc1ccc(I)cc1Br
CCc1cc(O)ccc1I
Cc1cc(I)ccc(F)c1C(=O)O
CC(C)c1cc(I)ccc1O
N#CC1(N=C(O)c2cc(I)ccc2Cl)CC1
CC(=O)c1cc(I)ccc1N
Cc1ccc(I)cc1O
CC(C)(C)c1cc(I)ccc1O
COc1cc(F)cc(I)cc1F
COC(=O)c1cc(OC)c(OC)cc1I
COc1cc(I)ccc1N
Cc1cc(F)c(C(=O)O)cc1I
CCOc1ccc(Cc2cc(I)ccc2Cl)cc1
Cc1cc(N)c(F)cc1I
CC(C)CCOC(=O)c1cc(I)ccc1O
COC(=O)c1ccc(I)cc1C1
CC(C)c1cc(O)ccc1I
COc1ccc(I)cc1C
Cc1ccc(I)cc1Br
O=C(O)c1cc(I)cc(Br)c1F
N=C(O)c1cc(I)ccc(Br)c1F
Cc1cc(I)cc(N)c1N
N#Cc1cc(I)ccc1O
O=C(Cl)c1cc(I)ccc1F
Nc1ccc(I)cc1C(=O)O
COC(=O)c1cc(I)ccc1O
O=C=Nc1ccc(I)cc1C1
CNc1ccc(I)cc1C(=O)O
Clc1ccc(I)cc1C1
Oc1cc(I)ccc1C1
COc1ccc(I)cc1Br
COc1cc(I)ccc1Br
Oc1ccc(I)cc1Br
Oc1cc(Br)cc(I)cc1Br
COC(=O)c1cc(I)cc(C)c1N
OCc1cc(F)ccc1I
COc1ccc(I)cc1OCc1cccc1
Cc1ccc(C)n1-c1cc(I)ccc1F

OC[C@@H](O)CON=C(O)c1ccc(F)c(F)c1Ne1cc
c(I)ccc1F
COc1cc(I)ccc1F
Clc1ccc(I)cc1CBr
Cc1c(O)ccc(I)c1C
COc1ccc(I)cc1C
O=C(O)c1cc(Br)c(F)cc1I
CC(C)Oc1ccc(I)cc1Br
COc1ccc(I)c(Cc(=O)O)c1
COc1ccc(I)cc1Cl
Ne1ccc(I)cc1C(F)(F)F
Ce1cc(I)c(C)ccc1N
Oc1ccc(Cc2ccc(I)ccc2Cl)cc1
N=C(O)c1cc(I)ccc1F
Fc1ccc(I)c2ccccc12
COc1ccc(I)c(C#N)c1
O=C(O)c1cc(F)ccc1I
OC(=NC1CCCC1)c1cc(I)ccc1Cl
Oc1ccc(I)cc1C(F)(F)F
O=[N+](O-)]c1cc(I)ccc1OC(F)(F)F
Fc1ccc(I)c(C(F)(F)F)c1
OCc1cc(I)ccc1F
COc1ccc(I)cc1CO
NN=C(O)c1cc(I)ccc1O
Ce1cc(F)c(O)ccc1I
COC(=O)c1cc(I)ccc1F
FC(F)c1cc(I)ccc1Br
OC(=NC1CC1)c1cc(I)ccc1Cl
Ce1cc(F)c(Br)ccc1I
N=C(O)c1cc(F)c(F)ccc1I
C=Cc1cc(I)ccc1OC
CN=C(O)c1cc(F)ccc1I
COc1c(Cl)cc(I)cc1Cl
Fc1c(Cl)cc(I)cc1Br
OCCON=C(O)c1ccc(F)c(F)c1Ne1ccc(I)cc1F
CC(O)=Ne1ccc(I)cc1F
Ce1cc(I)ccc(C)c1O
OCc1cc(I)ccc1Cl
FC(F)(F)c1ccc(I)cc1Cl
OCc1ccc(I)cc1O
Ce1cc(I)ccc1O
CC(C)c1cc(I)ccc1Br
N#Cc1cc(F)ccc1I
C=CCOc1ccc(I)cc1C=O
CC(C)(C)c1cc(I)cc(Br)c1O
NS(=O)(=O)c1cc(I)ccc1Cl
Oc1cc(I)ccc1F
N#Cc1c(I)ccc(F)c1F
C[C@@H](O)c1cc(F)ccc1I
OCc1cc(I)cc(C)cc1F
Ce1cc(N)c(C(=O)O)ccc1I
COc1cc(I)c(Cc2nccc3cc(OC)c(OC)cc23)cc1OC
BrCe1cc(I)ccc1Br
CCOc1c(Cl)cc(I)cc1Cl
Clc1cc(I)ccc1CBr
COc1cc(I)ccc1I
Ce1ccc(I)ccc1N
Fc1ccc(I)cc1CBr
COc1cc(I)ccc1OCc1ccccc1
COc1cc(I)ccc(C(=O)O)c1N
CCCCOC(=O)c1cc(I)ccc1O
COc1cc(I)c(CCN=C(C)O)cc1OC
FC(F)Oc1ccc(I)cc1Br
CC(C)(C)OC(O)=Ne1cc(I)ccc1Br
COc1ccc(I)ccc1O
COC(=O)c1cc(F)c(F)ccc1I
COc1cc(I)c(C=O)cc1OC
COC(=O)c1cc([N+](=O)[O-]
]c(F)c(F)c1Ne1ccc(I)cc1F

Cc1cc(I)cc(C)c1Cl
O=[N+](O-)]c1cc(I)ccc1O
N=C(O)c1cc(I)ccc1O
CC(C)COC(=O)c1cc(I)ccc1O
CCOC(=O)c1ccc(I)cc1Cl
CC(C)c1cc(I)ccc1F
COC(=O)c1cc(I)c(C)cc1OC
CC(C)OC(=O)c1cc(I)ccc1O
CCOc1ccc(I)ccc1F
COc1ccc(I)c2ccccc12
COc1cc(I)ccc1N=C(O)OC(C)(C)C
COC(=O)c1cc(N)ccc1I
CC(C)(C)OC(O)=Ne1ccc(I)cc1O
CC(=O)Oc1ccc(I)cc1C(=O)O
Oc1c(Cl)cc(I)cc1Cl
CCOC(=O)c1cc(I)ccc1O
Oc1ccc(I)cc1-c1ccccc1
Ne1c(Cl)cc(I)cc1Cl
CCOc1ccc(I)cc1C
O=C(O)c1ccc(F)c(F)c1Ne1ccc(I)cc1F
OB(O)c1cc(I)ccc1F
OCc1ccc(I)cc1Cl
Fc1cc(I)ccc1OC(F)(F)F
Oc1ccc(I)cc1Cl
FC(F)c1ccc(I)cc1Br
CC(=O)c1cc(F)ccc1I
Sc1cc(I)ccc1Br
CC(C)Ne1ccc(I)cc1C(=O)O
O=S(=O)(Ne1cc(F)ccc1I)c1ccccc1
Fc1ccc(I)cc1Cl
ClCe1ccc(I)cc1Br
O=C(O)c1c(I)ccc(F)c1F
COc1ccc(I)c(C(=O)O)c1OC
CC(=O)c1cc(I)cc(C)c1N
Ce1cc(O)ccc1I
OC(=NC1CC1)Ne1ccc(I)cc1F
Clc(I)ccc(F)c1[N+](=O)[O-]
COC(=O)c1cc(I)ccc1OC
COC(=O)c1cc(OC)ccc1I
COc1ccc(I)cc1OC
Clc1cc(I)ccc1Br
Oc1ccc(I)cc1F
FC(F)(F)c1cc(I)ccc1Cl
CCc1cc(N)c(C(=O)OC)cc1I
COc1cc(I)cc(OC)c1OC
lc1ccc(I)cc1
O=C(O)c1cc(I)cc(F)c1F
Ne1ccc(I)cc1[N+](=O)[O-]
O=[N+](O-)]c1cc(I)ccc1F
Ne1cc(I)ccc1O
COc1cc(I)c(Cc(=O)O)cc1OC
Ne1ccc(I)ccc1O
Ce1cc(I)ccc1OC(F)F
CC(C)(C)c1cc(O)ccc1I
COc1ccc(I)c(C(=O)O)c1F
Clc1ccc(I)cc1
OB(O)c1cc(OCc2ccccc2)ccc1I
Ne1ccc(I)c2ccccc12
CC(O)=Ne1cc(F)ccc1I
CCOC(=O)c1cc(I)ccc1F
N#CCC(=O)N(C(O)=Ne1ccc(I)cc1F)C1CC1
COc1ccc(I)c(CO)c1
COc1ccc(I)cc1[N+](=O)[O-]
CCc1cc(I)ccc1N
Ne1ccc(I)cc1Br
Ne1cc(I)ccc1CO
COc1ccc(I)c(C(=O)O)c1
CC(=O)Oc1ccc(I)cc1C(=O)Ne1ccc(Cl)cc1

Cc1cc(O)c(Cl)ccc1I
Ne1ccc(I)cc1OC(F)(F)F
Ne1cc(I)ccc1F
Fc1ccc(I)cc1C(F)(F)F
Ne1c(Cl)cc(I)cc1[N+](=O)[O-]
CC(C)c1cc(I)cc(C)(C)c1O
Fc1ccc(I)c(CBr)c1
Ne1cc(=O)n(C2CC2)c(=O)n1-c1ccc(I)cc1F
CCCCCOC(=O)c1cc(I)ccc1O
Sc1ccc(I)cc1Cl
Ce1cc(I)ccc1Cl
COc1ccc(I)cc1F
CCOc1cc(I)ccc1F
CC(C)(C)OC(O)=Ne1ccc(I)cc1N
Fc1ccc(I)cc1F
O=C(O)c1cc(OC(F)(F)F)ccc1I
Ne1ccc(I)c(C(F)(F)F)c1
O=Cc1cc(I)ccc1O
Ce1cc(I)cc(Cl)c1N
COC(=O)c1cc(I)c(C)cc1O
ClCc1cc(I)ccc1Cl
COc1cc(I)c(C(=O)N(C)C)cc1OC
COC(=O)c1cc(I)cc(C)cc1F
Cc1cc(Br)c(F)cc1I
O=C(O)c1cc(I)ccc1F
O=C(N/N=C/c1cc(I)ccc1O)c1ccccc1
COC(=O)c1cc(F)c(Br)ccc1I
COC(=O)c1cc(I)c(C(F)(F)F)ccc1N
FC(F)(F)Oc1cc(I)ccc1Cl
COc1cc(I)cc(OC)c1O
Ce1cc(F)ccc1I
Clc1cc(NC(=O)OC(C)C)ccc1I
O=C(O)c1ccccc1Ne1ccc(I)cc1F
O=C(O)c1cc(Br)c(Cl)cc1I
CS(=O)(=O)Ne1ccc(I)cc1F
Ne1ccc(I)cc1Cl
CC(=O)c1cc(I)ccc1O
COc1cc(I)cc(C=O)c1OC
BrCc1ccc(I)cc1Br
CCOC(=O)c1c(I)ccc(F)c1C
OCc1cc(I)ccc1O
CCc1cc(I)ccc(C)c1N
COC(=O)c1c(I)ccc(Br)c1F
COc1ccc(I)c(C)c1C
Fc1cc(I)cc(F)c1F
O=Cc1cc(I)cc(Br)c1F
COc1ccc2c(OC)ccc(I)c2c1
COc1cc(I)cc(OC)c1Br
N=C(O)c1cc(I)ccc1N
O=C(O)COc1ccc(I)cc1C(=O)O
Ce1cc(I)ccc1Br
CCN=C(O)c1cc(F)ccc1I
CCOc1ccc(I)cc1C(=O)OC
CNc1cc(=O)n(C2CC2)c(=O)n1-c1ccc(I)cc1F
COC(=O)c1cc(F)ccc1I
OCc1cc(I)ccc1Br
Ce1cc(F)cc(C(=O)O)c1I
COc1cc(I)ccc1C
CCCCOC(=O)c1cc(I)ccc1O
O=C1CCCCNc1ccc(I)cc1F
O=C(NC[C@@H](O)CO)c1ccccc1Ne1ccc(I)cc1F
O=C(NC[C@@H](O)CO)c1ccccc1Ne1ccc(I)cc1
F
O=C(O)c1c(I)ccc(F)c1Cl
CCOC(=O)c1cc(O)ccc1I
Ne1ccc(I)ccc1N
OC(=N)C1ccccc1c1cc(I)ccc1O
COc1cc(F)c(F)c(Nc2ccc(I)cc2F)c1N

CCCCCCCC(O)=NCe1cc(OC)c(O)cc1I
CN(C)/C=N/e1cc(=O)n(C2CC2)c(=O)n1-
c1ccc1)cc1F
Fe1c(Cl)cc1)cc1Cl
O=C(O)c1cc1)cc1Cl)c1F
Ne1c(F)cc1)cc1F
COC(O)=Ne1cc(F)c(Cl)cc1I
CCCCOC(=O)e1cc1)cc1O
COe1ccc1)cc1C(=O)O
NN=C(O)c1cc1)cc1Cl
Oe1cc1)cc1Br
CC(C)(C)OC(=O)e1cc1)cc1O
Ce1c(N)ccc1)cc1C
Cc1cc1)cc1C)cc1O

Ce1cc1)cc1C(=O)O)c1N
O=C(OCe1ccc1)cc1)cc1O
COC(=O)c1cc1)cc1I
Bre1ccc1)cc1
COe1cc1)cc1Cl
N#Cc1cc1)cc1N
COe1ccc1)cc1B(O)O)c1
CC(=O)c1cc1)cc1F
O=C(O)c1cc1)cc1N1CCOCC1
CC(C)(C)OC(=O)c1cc1)cc1N
CNe1ccc1)cc1[N+](=O)[O-]
CCOC(=O)c1cc1)cc1N
N=C(O)c1cc1)cc1Br
Ce1cc1)cc1C(=O)c1O

COe1ccc1)cc1OC(C)=O
COe1ccc1)cc1N=C(O)OC(C)(C)C
Ne1c(Cl)cc1)cc1C(=O)O
CON(C)C(=O)c1cc1)cc1F)cc1I
O=[N+](O-)]c1cc1)cc1(Br)c1O
Ce1c(O)c2c(=O)n(C3CC3)c(=O)n(-
c3ccc1)cc3F)c2n(C)c1=O
N#Cc1cc1)cc1F
Ce1cc1)cc1[N+](=O)[O-]c1N
OCC(O)CON=C(O)c1ccc(F)c1Nc1ccc1)cc1F
COe1ccc1)cc1C(O)=NC(C)C)c1

Cluster K

COe1ccc(CNc2ccc2)cc1
Ce1c(C(O)=Ne2ccc2)cc1[N+](=O)[O-]
N#Cc1ccc(C(=O)Nc2ccc2)cc1
COe1ccc1I
CCOC(O)=Ne1ccc(C(F)(F)F)cc1I
O=[N+](O-)]c1ccc1C(O)=Ne1ccc1I
O=C(O)CCC(O)=Ne1ccc1I
CCC(C(O)=Ne1ccc1)cc1
C=C1[CH]C=CC=C1I.[Br-].[Zn+]
Ic1ccc1Oe1ccc1
Ic1ccc1OCe1ccc1
N=C(S)Ne1ccc1I
N#CC1=C(N)Oe2cc(O)c(/C=N/c3ccc3)cc2C1c
1ccc1
CN=C(O)Ne1ccc1I
OC(=NC(S)=Ne1ccc1)cc1
CC(=O)Oe1ccc1I
OC(Cc1ccc1)=Ne1ccc1I
COe1ccc(OC)c1C(O)=Ne1ccc1I
CC(O)=Ne1ccc(C(F)(F)F)cc1I
O=S(=O)(Ne1ccc1)cc1
O=[N+](O-)]c1ccc(S(=O)(=O)Nc2ccc2)cc1
Ic1ccc1N=c1e2ccc2[nH]e2ccc12
COe1c(C)ccc1I
FC(F)Oe1ccc1I
Ic1ccc1Ne1nc2nnc2[nH]c1=N/N=C/c1ccc1
COCOe1ccc1I
NNe1ccc1I
O=C1CCCCN1c1ccc1I
CCC(CC)C(O)=Ne1ccc1I
Clc1ccc(Oc2ccc2)cc1
COe1ccc(S(=O)(=O)Nc2ccc2)cc1OC
OC(=Ne1ccc1)cc1F
CC(O)=Ne1ccc(S(=O)(=O)Nc2ccc2)cc1
Ce1ccc(S(=O)(=O)Nc2ccc2)cc1
CN(C)c1ccc1I
COe1ccc(CC(O)=Ne2ccc2)cc1
Ic1ccc1NCC1CC1
CCOe1ccc(C(=O)Nc2ccc2)cc1
OC(/C=C/c1ccc1)=Ne1ccc1I
Ic1ccc1C1CCNCC1
O=C(Nc1ccc1)cc1cc1([N+](=O)[O-])cc1
CN(C)CC(O)c1ccc1I
O=C(Nc1ccc1)cc1cc1(Cl)cc1
OC(CCC1CCCC1)=Ne1ccc1I
Ic1ccc1Nc1ccc1
Ce1ccc1C(O)=Ne1ccc1I
O=S(=O)(Nc1ccc1)cc1cc1(Br)cc1
O=S(=O)(Nc1ccc1)cc1cc1nnc12
O=[N+](O-)]
]c1cc(C(O)=Ne2ccc2)cc1([N+](=O)[O-])c1

OC(Cc1ccc1)cc1)=Ne1ccc1I
O=C1c2cc([N+](=O)[O-])cc3cc([N+](=O)[O-]
]cc(e23)C(=O)N1c1ccc1I
OC(=Ne1ccc1)C1CCCC1
CCCN=C(O)Ne1ccc1I
OC(=Ne1ccc1)Nc1ccc(Cl)cc1
OC(=Ne1ccc1)cc1cc1(F)c1
O=S(=O)(Nc1ccc1)cc1cc1C(F)(F)F
OC(=Ne1ccc1)C12CC3CC(CC(C3)C1)C2
O=C(Nc1ccc1)cc1cc1
CCOe1ccc1I
O=[N+](O-)]c1ccc(C(O)=Ne2ccc2)cc1
CCOC(=O)C(=O)NNc1ccc1I
OC(=Ne1ccc1)C1CCC1
CC(N)c1ccc1I
O=C(O)COe1ccc1I
OC(=Ne1ccc1)cc1cc1Cl
O=[N+](O-)]c1ccc1S(=O)(=O)Nc1ccc1I
O=S(=O)(Oe1ccc1)C(F)(F)F
Ce1nc2ccc2c(=O)n1-c1ccc1I
CNc1ccc1I
O=C(COe1ccc1)cc1cc1[nH]1
CC(C)(C)c1ccc(C(=O)Nc2ccc2)cc1
CC(C)(C)OC(=O)COe1ccc1I
OC(=Ne1ccc1)C(F)(F)F
OC(=Ne1ccc1)cc1cc1
CCC(O)=Ne1ccc1I
OC(=Ne1ccc1)cc1cc2o1
COC(=O)c1ccc1N=C(O)Nc1ccc1I
O=C(Nc1ccc1)cc1cc1
OC(=Ne1ccc1)cc1cc1
Ic1ccc1CNC1CC1
CC(O)=Ne1ccc1I
OC(=Ne1ccc1)cc1cc1C1
OC(Cc1c[nH]e2ccc12)=Ne1ccc1I
COCCOe1ccc1I
Ic1ccc1OC1CCOCC1
CCCC(O)=Ne1ccc1I
Ce1ccc(C(O)=Ne2ccc2)cc1
SC(=Ne1ccc1)Nc1ccc1I
O=C1C=CC(=O)N1c1ccc1I
COe1ccc1C(O)=Ne1ccc1I
O=C1CSC(=S)N1c1ccc1I
OC(=Ne1ccc1)cc1cc1
OC(=Ne1ccc1)cc1cc1Br
CS(=O)(=O)Nc1ccc1I
C=CCN=C(O)Nc1ccc1I
N#CCC(O)=Ne1ccc1I
COe1ccc1CC(O)=Ne1ccc1I
O=C1c2ccc2C(=O)N1c1ccc1I

OC(=NC1CCCC1)Nc1ccc1I
Ic1ccc1Nc1CCCC1
COe1ccc(C(=O)Nc2ccc2)cc1
O=C(O)CCNc1ccc1I
Ce1cc(C)c(S(=O)(=O)Nc2ccc2)cc1C)c1
CC(C)(C)OC(=O)Nc1ccc1I
CCCOe1ccc1I
CC(C)(C(O)=Ne1ccc1I
OC(=Ne1ccc1)C(F)(F)C(F)(F)C(F)(F)F
OC(=Ne1ccc1)cc1cc1
C=CC(O)=Ne1ccc1I
COe1ccc(S(=O)(=O)Nc2ccc2)cc1
O=C=Ne1ccc1I
OCCOe1ccc1I
O=C1Nc2ccc2C1=Ne1ccc1I
OC(=Ne1ccc1)OCc1ccc1
Ic1ccc1CN1CCNCC1
Ce1ccc(C)n1-c1ccc1I
COC(=O)c1ccc1S(=O)(=O)Nc1ccc1I
OC(=Ne1ccc1)cc1cc1
Ce1c(C(O)=Ne2ccc2)cc2ccc12
N#Cc1ccc(Oc2ccc2)cc1(Br)c1
O=S(=O)(Nc1ccc1)cc1cc1(F)cc1
O=C(Nc1ccc1)cc1cc1(F)cc1
C=C(COe1ccc1)C(=O)O
O=C1CC(Sc2nc3ccc3s2)C(=O)N1c1ccc1I
C#CCOe1ccc1I
CCOC(=O)C(=CNc1ccc1)C(=O)OCC
Oe1ccc1I
O=C(O)CCCC(O)=Ne1ccc1I
CC(O)N(/C=C1Sc2ccc2C1=O)c1ccc1I
CC(Cl)C(O)=Ne1ccc1I
CC(C(O)=Ne1ccc1)cc1cc1
OC(CCc1ccc1)=Ne1ccc1I
S=C=Ne1ccc1I
O=C(O)CCOe1ccc1I
O=S(=O)(Nc1ccc1)cc1cc1(C(F)(F)F)cc1
OC(Cc1ccc1)=Ne1ccc1I
OC(=Ne1ccc1)cc1cc2nccc12
Sc1ccc1I
CNc1ccc1I
OC(CCl)=Ne1ccc1I
COe1c(C)cc(C)cc1I
Oe1ccc(N=c2[nH]e3nnc3n2Nc2ccc2)cc1
Ic1ccc1CN1CCCC1
Ce1ccc(C(=O)Nc2ccc2)cc1
Ce1ccc(C(=O)Nc2ccc2)cc1C
OC(=Nc1ccc1)C(O)(c1ccc1)cc1cc1
[C-]#[N+]c1ccc1I
OC(=Ne1ccc1)Nc1ccc1I

CC(C)(C)OC(O)=Ne1cccc1I
Ic1cccc1CNC1CCCC1
O=C(Nc1cccc1I)e1cccc1
O=C(Nc1cccc1I)e1ccc(Br)cc1
OC(=Nc1cccc1I)e1cccc1I
Ic1cccc1-n1cccc1
OC(=Nc1cccc1I)C1CCCO1

CC(C)(C)OC(=O)N(C(=O)OC(C)(C)C)c1cccc1I
O=S(=O)(Nc1cccc1I)e1cccc1
Ic1cccc1OC1CC1
Ic1cccc1C1CCCN1
FC(F)(F)Oc1cccc1I
OC(/C=C/c1cccc1)=Ne1cccc1I
CC(C)(C)C(O)=Ne1cccc1I

CCc1ccc(C(=O)Ne2cccc2I)cc1
CC(C)Oe1cccc1I
Ic1cccc1NCe1cccs1
OC(=Nc1cccc1I)e1cccc1C(F)(F)F
CCOC(=O)e1ccc(NC(O)=Ne2cccc2I)cc1
Fc1cccc1CNe1cccc1I
N#Cc1ccc(CNe2cccc2I)cc1

Cluster L

COC(=O)c1ccc(Br)cc(I)c1C
Cc1cc(I)c(C)cc1C1
COC(=O)c1ccc(C(C)(C)C)cc(C(=O)OC)c1I
Cc1cc(Br)ccc(I)c1C
Cc1cc(I)cccc1CC#N
Cc1cc(I)ccc(Br)c1C1
CC(C)(C)C(O)=Ne1cccc1I
OCc1ccc(Cl)ccc1I
Cc1cc(Cl)ccc1I
N=C(S)Ne1ccc(Br)cc1I
O=Cc1cc(Br)ccc1I
CCc1ccc(I)c(CC(=O)O)c1
N#Cc1ccc(Cl)cc1I
OC(=Nc1cccc1I)c1ccc(Br)ccc1I
CCOC(=O)c1ccc(I)c(C)c1
Cc1ccc(C#N)ccc(C)c1I
ClCc1ccc(Cl)ccc1I
Cc1cccc(C)c1I
Cc1cc(I)cccc1CBr
CC(O)=Nc1ccc(C)c(I)c(C)c1
COC(=O)c1cc(C)cc(Br)cc1I
FC(F)(F)Oc1ccc(Br)cc1I
Cc1ccc(C(F)(F)F)ccc1I
CCc1ccc(I)c(C)c1
Cc1ccc(C(=O)Ne2cccc2I)cc1
CN=C(O)c1ccc(C)c(I)c1
N=C(O)c1ccc(Br)ccc1I
Cc1cc(C)c(I)c(C)c(C)c1I
Cc1ccc(Br)c(C)c(I)c1
Cc1ccc(I)c1C(=O)O
OCc1ccc(C(F)(F)F)ccc1I
Cc1ccc(S(N)(=O)=O)ccc1I
Cc1ccc(I)c(C(=O)O)ccc1C
CCOC(=O)c1cccc(C)c1I
CN=C(O)c1ccc(C)ccc1I
CC(C)c1cccc(C(C)C)c1I
N#CCc1ccc(Br)ccc1I
Cc1cc(I)cccc1C(=O)O
Cc1ccc(CCO)c(I)c1
O=C(O)Cc1cc(Br)ccc1I
Cc1ccc(F)cc(C)c1I
N#Cc1cc(Cl)ccc1I
N=C(O)c1ccc(Cl)cc1I
Cc1cc(I)c(C)cc1Br
COC(=O)c1ccc(Br)c(C)c1I
Cc1ccc(C(=N)N)ccc1I
C[C@@H](N=C(O)c1ccc(Br)ccc1I)c1cccc1
Cc1ccc(O)cc(C)c1I
Cc1ccc(I)c1-c1c(C)ccc1I
CC(=O)Oc1ccc(C)c(I)c(C)c1
OCc1ccc(I)c(CO)cc1I
BrCc1ccc(Br)ccc1I
Cc1ccc(C(C)(C)C)cc(C)c1I
FC(F)Oc1ccc(Br)cc1I
O=C(O)c1ccc(CO)ccc1I
COC(=O)c1cc(I)ccc(C)c1Br
FC(F)(F)c1ccc(Br)ccc1I

Cc1cc(I)ccc1CO
Cc1ccc(C)c(I)c1
O=Cc1ccc(Cl)cc1I
Cc1ccc(CO)ccc1I
CCc1cc(Cl)ccc1I
COC(=O)c1cc(C)ccc1I
OCc1cc(Cl)ccc1I
Cc1ccc(I)c(C(O)=NC(C)C)c1
N#Cc1cc(Br)ccc1I
Cc1ccc(I)c1CO
Cc1ccc(-c2cccc2)c(I)c1
Cc1ccc(C)c(I)c1C
Cc1cc(Br)cc(C(=O)O)cc1I
Cc1ccc(F)cc(CO)c1I
Cc1ccc(C(=O)N(C)C)ccc1I
Cc1ccc(C)c(I)c(C)c1
N=C(O)c1ccc(C(F)(F)F)ccc1I
CC(O)=Nc1ccc(C)c(I)cc1C
Cc1cc(F)cc(C(=O)O)cc1I
COC(=O)c1ccc(C)c1I
CC(C)N=C(O)c1ccc(Br)ccc1I
Cc1ccc(I)c(CO)c1
Cc1ccc(CBr)cc1I
O=C(O)c1cc(I)ccc1C(F)(F)F
N#CC1(Cc2ccc(Br)cc2I)CCC1
Cc1cccc(CO)c1I
ClCc1ccc(Br)cc1I
BrCc1ccc(Oc2cccc2)c(I)c1
BrCc1ccc(Br)cc1I
Cc1cc(F)cc(C(O)=NC2CC2)cc1I
OCc1ccc(C(F)(F)F)cc1I
Cc1cccc(C(=O)O)cc1I
OCc1ccc(CO)c(I)c1
Cc1ccc(Br)cc1I
COC(=O)c1ccc(I)c(C)c1
COC(=O)c1ccc(C)cc1I
Cc1ccc(-c2cccc2)ccc1I
O=C(O)c1ccc(Cl)ccc1I
COC(=O)c1ccc(I)c1C
N=C(O)c1ccc(Cl)ccc1I
CNC(=O)c1ccc(I)c(C)c1
Cc1cccc(C(=N)O)c1I
Cc1ccc(I)c(C)c1
Cc1ccc(C(O)=NC2CC2)cc1I
Cc1ccc(I)ccc1I
Cc1cccc1N=C(O)c1cc(C)ccc1I
Cc1ccc(CBr)cc1I
O=C(O)c1ccc(Br)cc1I
CC(C)N=C(O)c1ccc(Cl)ccc1I
FC(F)(F)c1ccc(Br)cc1I
Cc1ccc(Cl)cc(I)c1CBr
OCc1ccc(C(F)(F)F)c(I)c1
Cc1ccc(S(C)(=O)=O)ccc1I
N#CCc1ccc(Br)cc1I
FC(F)(F)c1ccc(I)c(CBr)c1
Cc1ccc(Br)cc(C)c1I
N#CC1(Cc2ccc(Br)cc2I)CC1

Cc1ccc(C(F)(F)F)cc1I
Cc1ccc(I)c(C)cc1I
Cc1ccc(I)c(C(=O)O)c1Br
CC(C)(C)OC(=O)N(C(=O)OC(C)(C)C)c1ccc(Br)cc1I
Clc1ccc(-n2cnm2)c(I)c1
CCc1ccc(Br)ccc1I
OCc1ccc(Br)cc1I
COC(=O)c1cc(Cl)ccc1I
CCN=C(O)c1ccc(Br)ccc1I
Cc1ccc(C(=O)O)c(I)c1
CC(C)(C)OC(=O)c1ccc(Br)cc1I
Nc1ccc(Cl)ccc1I
Ic1ccc(C2CCCC2)c(I)cc1C1CCCC1
Cc1ccc(C)c(I)c1C
FC(F)(F)c1ccc(CBr)ccc1I
O=C(Cl)c1ccc(Cl)cc1I
N#CCc1ccc(C(F)(F)F)ccc1I
Cc1ccc(S(N)(=O)=O)ccc1I
Cc1ccc(Cl)ccc1I
Cc1ccc(C(C)(C)C)cc1I
CON=C(O)c1ccc(C)ccc1I
Ic1cc(-c2cccc2)ccc1-c1cccc1
O=C(O)c1cc(Br)ccc1I
Cc1cc(C)c(C)c(I)c(C)c1C
Clc1ccc(CBr)c(I)c1
CC(O)=Nc1ccc(Br)cc1I
CC(C)c1ccc(Br)cc1I
O=C(O)c1cc(Cl)ccc1I
OCc1cc(Br)ccc1I
CCc1ccc(C(C)(C)C(=O)O)cc1I
Nc1ccc(Br)ccc1I
O=Cc1cc(Cl)ccc1I
ClCc1ccc(Br)ccc1I
Cc1cc(I)cccc1C(F)(F)F
FC(F)(F)c1ccc(I)c(C(F)(F)F)c1
Clc1ccc(I)c(CBr)c1
COC(=O)c1ccc(C)c(C)cc1I
COC(=O)CCN=C(O)c1ccc(C)ccc1I
Cc1cc(I)cccc1CC(=O)O
N#Cc1ccc(Br)cc1I
Cc1cc(Cl)ccc1C(=O)O
CCOC(=O)c1ccc(C)ccc1I
Cc1cc(I)ccc(Br)cc1C(=O)O
CC(=O)Oc1cc(C)c(I)c(C)c(O)C(=O)c1C
Cc1ccc(C)c(I)cc1Br
Cc1ccc(C(O)=NN)cc1I
COC(=O)c1ccc(Cl)cc1I
Cc1ccc(CO)cc1I
CCc1cccc(C)c1I
CC(C)(C)OC(O)=Nc1ccc(Br)cc1I
Cc1ccc(I)c(-c2cccc2)c1
Cc1ccc(Cl)cc(I)c1C(=O)O
Cc1ccc(Cl)ccc(C)c1I
COC(=O)c1ccc(F)c(C)c(I)c1
Cc1ccc(C(=O)N2CCCC2)cc1I
Cc1ccc(C(=O)O)c(I)c1C

Cc1cc(C)c(I)c(C)c1Br
O=C(O)Cc1cc(Br)ccc1I
ClCc1ccc(CCl)c(I)c1
O=Cc1ccc(Br)cc1I
O=C(O)c1cc(Br)ccc1I
Cc1ccc(I)c1CBr
FC(F)(F)c1cc(Cl)ccc1I
CCN=C(O)c1cc(C)ccc1I
CC1(C)N=C(O)N(c2ccc(I)c(C(F)(F)F)c2)C1=O
Cc1c(F)cc([N+](=O)[O-])cc1I
FC(F)(F)c1ccc(Cl)ccc1I
Cc1ccc(I)c(C(F)(F)F)c1
Cc1ccc(I)c1C
COC(=O)CCCN=C(O)c1cc(Br)ccc1I
O=C(O)Cc1ccc(Br)cc1I
CCc1cc(Cl)ccc1I
FC(F)(F)c1ccc(C(F)(F)F)c1I
Cc1ccc(C(=N)O)cc1I
Cc1cc(N)cc(C)c1I
Cc1c(Cl)cc(Cl)cc1I
Ne1c(I)cc(Br)cc1C(=O)O
BrCc1c(Br)ccc1I

N=C(O)c1c(Cl)cccc1I
O=C(Cl)c1c(Cl)ccc1I
O=C(O)Cc1ccc(Cl)cc1I
CCOC(=O)c1ccc(Cl)cc1I
OCc1cc(Br)ccc1I
Clc1ccc(I)c1CBr
Cc1cc(Br)cc(I)c1C(=O)O
OCc1ccc(Cl)cc1I
COc1c(C)ccc(I)c1C
Cc1cc(Br)cc(C(=O)O)c1I
COc1c(Br)ccc1I
Cc1ccc(CO)c1I
Cc1cc(C)c1Ic(C(=O)O)c1
Cc1cc(C#N)ccc1I
Cc1cc(Br)ccc1I
Cc1ccc(C(=O)N(C)C)cc1I
Cc1ccc(I)c(C(=O)O)c1I
Clc1ccc(C2CC2)c1I
Cc1ccc(C(=O)OC(C)C)cc1I
CCc1cc(Br)cc(C)c1I
O=C(O)c1cc(C(F)(F)F)ccc1I
Cc1c(I)cc(Br)cc1[N+](=O)[O-]

Cc1ccc(C#N)cc1I
O=C(O)Cc1cc(C(F)(F)F)ccc1I
Cc1c(Br)ccc1I
Cc1cc(C)c1Ic(C)c1
CCc1ccc(C)c1I
CCOC(=O)c1cc(Br)cc(C)c1I
COC(=O)c1ccc(Br)cc1I
COC(=O)c1c(Br)ccc1I
Cc1c(I)cc(Cl)cc1[N+](=O)[O-]
O=C(O)c1ccc(Cl)cc1I
Cc1cc(I)c(CO)cc1C
Bre1ccc(I)c(-c2ccc2)c1
CCOC(=O)c1c(Cl)ccc1I
CC(C)c1ccc(I)c(C(C)C)c1
CCc1cc(Br)cc(C)c1I
CC(C)c1ccc(Cl)cc1I
Cc1ccc(C(=O)N(C)C)cc1I
COc1c(Cl)ccc1I
Cc1ccc(Cl)cc1I
CN=C(O)c1ccc(C)c1I
Cc1cc(-c2ccc(I)c(C)c2)ccc1I

Cluster M

Cc1nc(-c2ccc(CCN=C(O)c3ccc3)cc2)es1
Ic1ccc2ccc3ccc3e12
Cc1ccc(C(O)=Nc2sc3c(c2C(N)=O)CCCC3)cc1I
O=C(Cl)c1ccc1I
O=C(O)c1ccc2ccc(I)c12
Ic1ccc2ccc3ccc(I)c3e12
CCOC(=O)c1ccc1C(=O)c1ccc1I
N#Cc1ccc1I
Cc1ccc(I)c1C=O
CC(=O)Cc1ccc1I
O=C(c1ccc(F)cc1)c1ccc1I
COC(=O)c1ccc(I)c1CBr
Cc1c(I)cc([N+](=O)[O-])cc1[N+](=O)[O-]
Ne1cc2c(cc1C(=O)c1ccc1)OCCO2
CON(C)C(=O)c1ccc([N+](=O)[O-])cc1I
O=C(O)c1ccc(CBr)c1I
Ic1ccc1/C=C/c1ccc1I
OC(=N)Cc1ccc2c(c1)OCO2)c1ccc1I
O=C(O)c1ccc(C2CCCC2)cc1)c1ccc1I
COc1cc2nc(-c3ccc3)oc(=O)c2e1OC
Cc1ccc(C(=O)Nc2ccc(Nc3ccc3)cc2)cc1I
O=C(Nc1ccc(F)cc1)c1ccc1N=C(O)c1ccc1I
CC(C)(C)c1ccc(C(=O)O)cc1I
O=C(COC(=O)c1ccc1I)c1ccc(-c2ccc2)cc1
COC(=O)c1ccc2ccc(I)c12
N#Cc1cc(C(F)(F)F)ccc1I
Ic1ccc1-c1nn2c(-c3ccc3)nn2s1
COC(=O)c1ccc1N=C(O)c1ccc1I
N#Cc1ccc2ccc2e1I
CC(C)(C)C(=O)COC(=O)c1ccc1I
CC(C)(C)OC(O)=Nc1ccc([N+](=O)[O-])cc1I
CC(=O)c1ccc(I)c1C
OC1=NC(c2ccc2)=C(c2nc3ccc3[nH]2)C(c2ccc2)N1
N#Cc1cc2ccc2cc1I
O=C(c1ccc1I)N1CCN(c2nccn2)CC1
COC(=O)c1cc(I)c(C)c([N+](=O)[O-])c1
O=C(O)c1cc2ccc2cc1I
Cc1ccc(N=C(O)c2ccc2)cc1I
OC(=Nc1ccc(Cl)c(Cl)c1)c1ccc1I
N=C(O)c1ccc(N=C(O)c2ccc2)cc1I
Ic1ccc2ccc2c1

Cc1ccc(C(O)=NNC(=O)c2ccc(NC(=O)c3ccc3)cc2)cc1I
Clc1ccc(-c2noc(-c3ccc3)n2)cc1
O=C(COC(=O)c1ccc1I)c1ccc1I
Cc1cc(C)c1C(=O)cc1I
Cc1ccc([N+](=O)[O-])cc1I
OC(=Nc1ccc(F)c1)c1ccc1I
Cc1ccc(-c2csc(C(=O)N)C(=O)c3ccc3)n2)cc1I
O=C(O)c1ccc(C(F)F)c1I
O=C(c1ccc1I)n1ccn1
COc1cc(N=C(O)c2ccc2)cc(OC)c1
Cc1ccc(C#N)cc1I
O=S(=O)(Cl)Cc1ccc1I
O=C(O)c1ccc1I
OC(=N)N=C(c1ccc(Cl)c1Cl)c1ccc1I
Cc1ccc(C(=O)c2ccc2)cc1I
Ne1ccc2c(I)ccc12
N#Cc1c(N=C(O)c2ccc2)sc2c1CCCC2
Cc1cc(I)c(C=O)cc1C
CCCc1ccc(C(=O)c2ccc2)cc1I
[N-]=[N+]=NCc1ccc1I
CCOC(=O)c1ccc(C(F)(F)F)cc1I
COc1ccc2c(I)ccc12
O=C(CCc1ccc1I)c1ccc2ccc2c1
O=C(O)Cc1ccc([N+](=O)[O-])cc1I
O=C(O)c1ccc(=O)cc2ccc12)c1ccc1I
Cc1ccc(I)c(C)c1I[N+](=O)[O-]
CCc1ccc(C(=O)c2ccc2)cc1I
CCOC(=O)c1sc(N=C(O)c2ccc2)cc(C(=O)OC)c1C
Cc1ccc(C(O)=NN=C(O)C2CC2)cc1I
CCc1ccc(C(=O)OC)cc1I
O=c1cc(-c2ccc2)nc2cc(C)ccc12
Ic1ccc2ccc3ccc3e2e1-c1ccc1I
Bre1ccc2cc(I)ccc2e1
O=[N+](I)cc1ccc(N=C(O)C(F)(F)F)c1I
O=C(c1ccc1I)c1en(CCCCCO)c2ccc12
O=C(Nc1ccc(OCc2ccc2)cc1)c1ccc1I
CCN(CC)CCOC(=O)c1ccc1I
Bre1ccc2ccc(I)c12
Cc1cc(C)cc(C(=O)c2ccc2)cc1I
Cc1c(I)ccc1[N+](=O)[O-]
[N-]=[N+]=Nc1ccc2c(I)ccc12

CC(=O)c1ccc1I
COCc1I/c(=N/C(=O)c2ccc2)se2ccc21
COC(=O)c1ccc(C(C)C)c1I
OC(=Nc1ccc(C(F)(F)F)c1)c1ccc1I
COC(=O)c1ccc(C#N)c1I
N#Cc1ccc([N+](=O)[O-])cc1I
O=C(c1ccc1F)c1ccc1I
Oc1nc2cc3c(cc2c(-c2ccc2))c1-c1ccc1)OCCO3
CCCCC1ccc(C(=O)c2ccc2)cc1I
N#C/C=C/c1ccc1I
Ic1ccc1-c1nc2ccc2[nH]1
N=C(S)c1ccc1I
O=S(=O)(Cl)c1ccc2c(I)ccc12
CCCCCN1cc(C(=O)c2ccc2)cc2ccc21
CC(=O)c1ccc2ccc2c1I
CCc1ccc(C(=O)c2ccc2)cc1I
N#Cc1ccc(C#N)cc1I
CCOC(=O)c1ccc(N=C(O)c2ccc2)cc1I
Cc1ccc(N=C(O)c2ccc2)cc1F
CC(C)(C)c1ccc(C(=O)c2ccc2)cc1I
CCOC(=O)c1ccc(C)c1I
Cc1ccc(OC(=O)c2ccc2)cc1I
Cc1cc(C(=O)OC(C)C)ccc1I
COC(=O)Cc1ccc(NC(=O)c2ccc2)cc1I
Cc1cc(C)c1C(=O)O)cc1I
CON=C(O)c1ccc(C)c1I
O=C(O)Cc1c(I)ccc1[N+](=O)[O-]
O=C(Nc1ccc(NC(=O)C2CC2)cc1)c1ccc1I
O=Cc1ccc1OCc1ccc1I
Cc1ccc(C(O)=Nc2cc(F)c(Cl)c2)cc1I
Cc1ccc(C(=O)OCc2ccc2)cc1I
OC(=NN=C(O)c1ccc1I)c1ccc1I
O=Cc1ccc(C(F)(F)F)cc1I
O=C(c1ccc1I)C(F)(F)F
O=[N+](I)cc1ccc(NN=C(O)c2ccc2)cc1I
Cc1ccc(I)c(C=O)c1
Cc1cc(C)cc(-e2c1)ccc3ccc4ccc4c23)c1
CC(=O)c1ccc(I)c1C
Cc1cc(C(=O)O)ccc1I
O=C(c1ccc(Br)cc1)c1ccc1I
O=C(N)N=C(c1ccc1I)c1ccc1I

Ce1cccc(C(=O)e2cccc2I)e1
O=C(Ne1ccc(N2COCOC2)cc1)e1cccc1I
Ic1cccc1-c1nc(-c2cccc2)no1
O=C(COC(=O)e1cccc1I)e1ccc([N+](=O)[O-])cc1
FC(F)(F)e1ccc(CBr)c(I)c1
OC(=Ne1cccc(Cl)e1)c1cccc1I
O=C(O)CN1C(=O)C(=C/c2cccc2I)SC1=S
O=C(CBr)e1cccc1I
OC(CSe1nc2cccc2[nH]1)=N/N=C/c1cccc1I
COe1cccc(CN=C(O)e2cccc2I)e1
CN1CCN(C(=O)C=C/c2cccc2I)CC1
N#Cc1ccc(C(F)(F)F)cc1I
O=Cc1ccc(OCc2cccc2I)e1
CC(C=O)e1cccc1I
O=C(C=Cc1cccc1I)e1cccc1Cl
COC(=O)e1cccc(N=C(O)e2cccc2I)e1
O=Cc1ccc([N+](=O)[O-])cc1I
Ce1ccc2nc(-c3ccc(NC(=O)e4cccc4I)cc3)cn12
O=C(Ne1ccc2oc(=O)ccc2c1)e1cccc1I
Ic1cccc1C=Nn1cnc1
CC(C)e1ccc(C(=O)e2cccc2I)cc1
CSe1cccc1N=C(O)e1cccc1I
C/C(=N)N=C(O)e1cccc1I)e1ccc(N)cc1
CN(C)CCOC(=O)e1cccc1I
Ic1ccc2ccc3cccc4ccc1c2c34
Ic1cccc2cccc(I)c12
Ic1ccc2cccc2e2cccc12
Ce1ccc(C(O)=Ne2cccc([N+](=O)[O-])e2)cc1I
COe1ccc(C(=O)COC(=O)e2cccc2I)cc1
Ce1cc(C)e([N+](=O)[O-])cc1I
COC(=O)e1ccc(CBr)c(I)c1
O=C(O)e1ccc(C(F)(F)F)cc1I
O=[N+](=[O-])e1cccc(I)e1CBr
COe1cccc1N=C(O)e1cccc1I
O=Cc1ccc(C=O)c(I)c1
N#Cc1ccc(C(=O)O)c(I)c1
Ic1ccc2cc(I)ccc2c1
O/N=C/c1cccc1I
Ic1cccc1-c1nn2c(-c3cccc3)nn2s1
Ce1cccc1C(=O)e1cccc1I
COC(=O)e1ccc(C)cc1I
O=[N+](=[O-])e1ccc(C(=N)N=C(O)e2cccc2I)j1
CCn1c2cccc2c2cc(N=C(O)c3cccc3I)ccc2I
Ic1cccc2e(I)cccc12
CC(=O)e1ccc(C(=O)O)c(I)c1
NS(=O)(=O)e1ccc(NC(=O)e2cccc2I)cc1
N#Cc1ccc(NC(=O)e2cccc2I)cc1
COC(=O)e1ccc(I)e1C(=O)OC
O=C(c1cccc1I)n1cnc2cccc2I
O=C(c1cccc(F)e1)c1cccc1I
N#CCCCC(=O)e1cccc1I
OC(=Ne1ccc(F)e(Cl)e1)c1cccc1I
Ce1ccc(C=O)cc1I
COC(=O)e1ccc(NC(=O)e2cccc2I)cc1
Ic1ccc2c(ccc3cccc32I)e1
Ce1cccc(I)e1C#N
O=C1N=C(O)C(=C/c2cccc2I)C(O)=N1
Fe1ccc2c(I)cccc2e1
Ce1ccc([N+](=O)[O-])c(C)e1I
CCN1C(=O)C(=C/c2cccc2I)SC1=S
OCe1cccc2cccc(I)e12
O=C(O)e1ccc(C(F)(F)F)cc1I
O=C(c1cccc1I)e1cc2c(cc1[N+](=O)[O-])OCCO2
CC(C)e1ccc(NC(=O)e2cccc2I)cc1
CN(C(=O)e1cccc1I)e1cccc2cccc12
CCOC(=O)CC(=O)e1cccc1I
N#CCCC(=O)e1cccc1I

OC(=Ne1cccc2ccnc12)c1cccc1I
COC(=O)e1ccc(C(=O)OC)c(I)c1
Ce1ccc(I)c(C)c([N+](=O)[O-])c1
Ce1ccc(C(=O)Ne2ccc(Cl)cc2)cc1I
N#CCc1c(I)ccc1[N+](=O)[O-]
N#Cc1cccc(C(F)(F)F)cc1I
O=[N+](=[O-])e1ccc(N=C(O)e2cccc2I)e1
OC(=Ne1ncs1I)c1cccc1I
OC(=Ne1ccc(-c2nc3cccc3s2I)c1)e1cccc1I
N#C/C(=C/c1cccc1I)c1nc(-c2cccc2)es1
Ce1c(I)cc([N+](=O)[O-])cc1C(=O)O
Ic1cccc2cccc12
Ce1ccc(C(=O)e2cccc2I)cc1C
CCOC(=O)e1cc2cccc2cc1I
COe1ccc(Cl)cc1N=C(O)e1cccc1I
CCOC(=O)e1ccc(C#N)c(I)c1
O=C1OC(c2cccc2I)=NC1=Cc1ccc(-n2cnc2)cc1
CCN(CC)S(=O)(=O)e1ccc(NC(=O)e2ccc(C)c(I)c2)cc1
O=C(O)e1ccc2cccc(I)e2c1
Ic1c2cccc2cc2cccc12
O=C(c1cccc1I)e1cccc1I
O=C(ON1C(=O)e2cccc2C1=O)e1cccc1I
O=C(O)e1ccc([N+](=O)[O-])cc2cccc(I)c12
COe1ccc(CC(=O)O)cc1SCe1cccc1I
O=C(Ce1cccc1I)e1cccc1I
OC1=Ne2c(cc(Br)c3cccc23)C(c2cccc2I)C1
CCON=C(O)e1ccc(C)c(I)c1
O=C(O)/C=C/c1cccc1I
Ic1ccc2ccc(I)ccc2c1
Ce1ccc(C(=O)Ne2ccc(S(=O)(=O)Nc3ncs3)cc2)c1I
Oe1ccc(Cl)cc1/C=C/c1cccc1I
O=C(c1cccc1Cl)e1cccc1I
CCOC(=O)e1c(-c2cccc2)sc1N=C(O)e1cccc1I
CC(=O)e1cc2c(cc1N=C(O)e1cccc1I)OCCO2
O=[N+](=[O-])e1ccc(CBr)c(I)c1
CCCe1ccc(C(=O)O)cc1I
CC(C)(C)OC(=O)N(C(=O)OC(C)(C)C)c1ccc([N+](=O)[O-])cc1I
Ce1ccc(C(=O)O)cc1I
COC(=O)CC(=O)e1cccc1I
Oe1ccc2c(I)cccc12
COe1cccc(C=O)c1OCe1cccc1I
OC(=Ne1cccn1I)e1cccc1I
CCe1ccc(C(=O)O)cc1I
Ce1cc(C=O)c(C)cc1I
N#Cc1ccc(C(=O)O)cc1I
N=C(O)e1ccc([N+](=O)[O-])cc1I
Ce1c(I)ccc(N)e1C(=O)O
Oe1ccc2cccc(I)e2c1
O=C(OC(C(=O)e1cccc1I)c1cccc1I)e1cccc1I
Ce1ccc(C(=O)Cl)cc1I
CN(C)C(=S)e1cccc1I
O=C(c1ccc(Cl)cc1)c1cccc1I
O=C(c1ccc(Cl)cc1)c1cccc1I
OC(=Ne1cccc2cccc12I)e1cccc1I
Ce1cc(C=O)cc1I
Oe1nnc(-c2cccc2I)O1
Ne1cccc2cccc(I)c12
Ce1cc(C=O)cc(C)c1I
Ce1cnc(N=C(O)e2cccc2I)e1
N#Cc1ccc(CBr)c(I)c1
O=Cc1cccc1I
N#Cc1c(N=C(O)e2cccc2I)se21CCCC2
CCOC(=O)e1ccc(NC(=O)e2cccc2I)cc1
COC(=O)e1ccc([N+](=O)[O-])cc1I
Ce1c(I)cccc1C#N
O=C(O)e1ccc(I)c1C(=O)O

O=C(OCCN1CCOCC1)c1cccc1I
Ce1ccc(C(=O)Ne2ccc([N+](=O)[O-])cc2)cc1I
CC(=O)e1ccc(C)c(I)c1
COC(=O)c1ccc(C(=O)O)cc1I
COe1cccc(C=N)N=C(O)e2cccc2I)c1O
N=C(O)e1cccc1N=C(O)e1cccc1I
Ce1noc(-c2cccc2I)n1
COC(=O)c1ccc(I)c(C)cc1C
O=C1CCCC2=C1C(c1cccc1I)e1c(ccc3ncccc13)N2
COC(=O)e1ccc(C(F)(F)F)cc1I
O=C(Ne1ccc(Cl)cc1)c1cccc1I
Ce1c(I)ccc1C=O
CC(=O)e1ccc(NC(=O)e2cccc2I)cc1
O=C(OCCN1CCOCC1)c1cccc1I
COC(=O)e1ccc(C)c(I)c1
O=C(COC(=O)e1cccc1I)c1ccc(Br)cc1
O=C(O)c1c(I)ccc1[N+](=O)[O-]
O=C(O)CCe1nnc(-c2cccc2I)O1
Ce1ccc2cccc2e1I
COe1cccc(N=C(O)e2cccc2I)e1
Ic1ccc2c3cccc3c3cccc3e2c1
CC1(C)C(=O)OC(c2cccc2I)C(C)(C)C1=O
O=[N+](=[O-])e1ccc(CO)c(I)c1
O=C(OC1CCCC1=O)e1cccc1I
OC(=Ne1ccc(O)c1)c1cccc1I
N=c1[nH]nc(-c2cccc2I)s1
CC(C)(C)OC(=O)CC(=O)e1cccc1I
OC(=Ne1ccc(-c2nnc(-c3ccc3)O)2I)c1e1cccc1I
O=C(O)e1ccc(C(=O)O)c(I)c1
O=C(c1cccc1I)n1cnc2cccc2I
O=C(c1cccc1I)e1cc2c(cc1N=C(O)C1cccc1)OCCO2
BrCe1ccc(CBr)c(I)c1
O=C(c1cccc1I)n1ccc2cccc2I
COC(=O)e1ccc(C)c(I)c(C)c1
N#Cc1cccc(N=C(O)e2cccc2I)c1
O=C(O)CN1C(=O)C(=C/c2cccc2I)SC1=S
CCOC(=O)e1cccc1N=C(O)e1cccc1I
OC(=Ne1ccc2cccc2s1I)e1cccc1I
Ce1ccc(C(=O)Ne2ccc(S(=O)(=O)N3CCCC3)cc2)cc1I
Ce1ccc(S(=O)(=O)N=C/c2cccc2I)cc1
N#C/C(=C/c1cccc1I)c1nc(-c2ccc(Br)cc2)es1
CCOC(=O)C1C(O)=NC(SC)=C(C#N)C1e1cccc1I
O=C(O)e1ccc(N=C(O)e2cccc2I)c1
N#CC(C#N)=C1NC(N)=C(C#N)(c2cccc2I)=C1C#N
COC(=O)e1ccc(I)c(-c2cccc2)c1
Ce1ccc(N=C(O)e2cccc2I)c(C)c1
N#Cc1cccc(C(=O)O)c1I
Ce1ccc(N=C(O)e2cccc2I)c([N+](=O)[O-])c1
Ce1ccc(C(N)=O)cc(C)c1I
Ce1ccc(S(=O)(=O)Cl)cc1I
O=C(Ne1ccc(S(=O)(=O)Nc2ncs2)cc1)c1cccc1I
O=C(O)c1ccc([N+](=O)[O-])cc1I
O=C(CCC1OCCCO1)c1cccc1I
Ic1cccc1-c1nn2c(-c3cccc3)nn2s1
Ce1c(N=C(O)e2cccc2I)c(=O)n(-c2cccc2)n1C
CCCc1ccc(-c2ccc(C(C#N)=C/c3cccc3I)n2)cc1
CCOC(=O)C1=C(C)NC2=C(C(=O)CC(C)(C)C2)C1e1cccc1I
COC(=O)e1ccc(C(=O)O)cc1I
O=C(c1cccc1I)c1cnc(CCCCF)c2cccc12
Clc1ccc2cc(I)ccc2c1
Ce1ccc(C(N)=O)cc1I
CCOC(=O)C1=C(CCl)OC(N)=C(C#N)C1e1cccc1I
Bre1ccc2c(I)cccc12

CC(C)c1ccc(C(=O)O)cc1I

CcN1c2cccc2c2cc(/C=N/N=C(O)c3cccc3I)ccc2
1

COC(=O)c1c(I)cccc1CBr

Cluster N

O=C(O)c1ccc(Cl)c(N=C(S)N=C(O)c2cc(I)ccc2Cl)
c1
Clc1ccc(I)c(Cl)c1Cl
COC(=O)c1ccc(Cl)c(I)cc1O
Clc1c(Br)ccc(I)c1Cl
Fc1cc(I)c(Cl)cc1Br
COc1cc(Cl)c(I)cc1N
Clc1c(Cl)c(Cl)c(I)c(Cl)c1Cl
Nc1cc(Br)c(I)c(Br)c1
O=[N+][([O-])c1ccc(I)c(Cl)c1]
CCOC(=O)c1ccc(Br)ccc1I
CS(=O)(=O)Nc1cc(C(F)F)c(C#N)cc1I
COC(=O)c1ccc(I)c(Br)c1
N#Cc1cc(I)ccc1Cl
Bre1ccc(I)c2cccc12
O=[N+][([O-])c1c(I)ccc(Br)c1Cl]
Fc1c(Br)ccc(I)c1Cl
O=[N+][([O-])c1ccc(Cl)cc1I
O=C(c1cc(Cl)ccc1I)c1c(F)cccc1F
Clc1cc(Br)c(I)cc1Cl
O=[N+][([O-])c1ccc(I)c([N+](=O)[O-])c1]
O=C(O)c1cc(I)c(Br)cc1F
N=C(O)c1cc(I)c(Br)c(F)c1N
CCNS(=O)(=O)c1ccc1I
O=[N+][([O-])c1ccc(I)c(Br)c1]
Cc1c(Br)ccc(I)c1Cl
FC(F)F)c1cc(Cl)c(I)c(Br)c1
FC(F)F)c1ccc(I)c(Br)c1
Fc1ccc(I)c(Br)c1
O=[N+][([O-])c1ccc(CO)ccc1I
Oc1ccc(I)c(Cl)c1
CC(C)(C)c1ccc(I)c([N+](=O)[O-])c1
Bre1ccc(I)c(Br)c1Br
FC(F)F)Oc1cc(Cl)c(I)c(Cl)c1
CC(C)c1ccc(I)c([N+](=O)[O-])c1
Fc1cc(Cl)c(I)c(C(F)F)F)c1
Cc1cc(Cl)cc([N+](=O)[O-])c1I
Bre1ccc(I)c(Br)c1
O=[N+][([O-])c1ccc(O)ccc1I
O=C(O)c1cc(I)c(C(=O)O)cc1I
Clc1cc(Cl)c(I)cc1Cl
COC(=O)c1ccc(I)c(Cl)c1
Nc1cc(Br)c(I)cc1Br
COC(=O)c1cc(I)c(Cl)cc1Br
Nc1ccc(Cl)c(I)c1
CC(=O)c1cc(Br)ccc1I
FC(F)F)Oc1ccc(I)c(Br)c1
COC(=O)c1cc(I)c(Cl)cc1N
CCOC(=O)c1ccc(I)ccc1Cl
N#Cc1cc(Br)ccc1I
Fc1cc(F)c(Br)c(I)c1Br
O=[N+][([O-])c1ccc(CBr)ccc1I
Nc1ccc(I)c(Br)c1
O=[N+][([O-])c1ccc(Br)ccc1I
FC(F)F)Oc1ccc(I)c1Cl
N#Cc1ccc(I)c([N+](=O)[O-])c1
COc1ccc(Cl)c(I)c1
O=S(=O)(Cl)c1ccc(Cl)cc1I
CCOC(=O)c1ccc(I)c(Br)c1
O=[N+][([O-])c1cc(Cl)cc(Cl)c1I
O=[N+][([O-])c1cc(Cl)ccc1I
Cc1ccc(I)c([N+](=O)[O-])c1
O=C(O)c1cc(Cl)cc(Cl)c1I

O=[N+][([O-])c1c(I)cccc1C(F)F)
O=C(c1ccc(F)cc1)c1ccc(I)ccc1Cl
Cc1cc(Cl)c(I)c(Br)c1
COC(=O)c1cccc([N+](=O)[O-])c1I
O=C(O)c1cc(I)c(Cl)cc1F
Clc1ccc(Br)c1I
Oc1ccc(Cl)c(I)c1
O=C(c1ccc(O)[C@H]2CCOC2)cc1)c1ccc(I)ccc1Cl
CC(C)(C)c1cc(Br)c(I)c(Br)c1
O=[N+][([O-])c1ccc(Br)ccc1I
COC(=O)c1cc(I)ccc1I
FC(F)F)c1ccc(Cl)c(I)c1Cl
N#Cc1ccc(I)c(Cl)c1
CCOC(=O)c1ccc(I)c(Cl)c1
Cc1cc(I)c(Cl)cc1F
N#Cc1c(F)ccc(I)c1Cl
Clc1ccc(I)c1Br
OC(=Nc1cccc1)c1cc(Br)ccc1I
Cc1ccc(-e2esc(N=C(O)c3cc(I)ccc3Cl)n2)cc1
O=Cc1cc(Cl)c(I)c(Cl)c1
COc1cc(Cl)c(I)cc1F
Fc1cc(Br)c(I)c(C(F)F)F)c1
CS(=O)c1cccc1I
Clc1ccc(I)c(Cl)c1
Cc1cc(Br)ccc(Cl)c1I
CC(C)(C)OC(=O)c1cc(Cl)ccc1I
COc1cc(Br)c(I)c(Br)c1
Nc1ccc2oc(-c3cc(I)ccc3Cl)n2c1
COC(=O)c1cc(I)c(N=C(C)O)cc1Cl
O=[N+][([O-])c1ccc(Br)ccc1I
O=C(Cl)c1ccc(I)ccc1I
O=C(O)c1cc(I)c(S(=O)(=O)Cl)c1
FC(F)F)Oc1ccc(I)c(Cl)c1
Cc1cc(Cl)c(I)c(Cl)c1
Nc1cc(Cl)c(I)cc1F
O=C(O)c1cc(I)cc(Cl)c1Br
Clc1ccc(I)c1Cl
COC(=O)c1cc(I)c(Br)c(F)c1F
Clc1cc(Br)ccc1I
COc1cc(I)c(Cl)cc1C(=O)O
FC(F)F)c1cc(Cl)c(I)c(Cl)c1
O=[N+][([O-])c1cc(Cl)c(I)c(Cl)c1
O=S(=O)(Cl)c1ccc1I
Fc1cc(Br)c(I)cc1Cl
Fc1ccc(-e2ccc(Cc3cc(I)ccc3Cl)s2)en1
COc1cc(Cl)c(I)cc1C(=O)O
CCOC(=O)c1cc(I)ccc1I
O=C(O)c1cccc1N=C(S)N=C(O)c1cc(I)ccc1Cl
O=C(O)c1cc(I)ccc1Br
Cc1cc(Br)c(I)cc1Cl
O=[N+][([O-])c1cc(CBr)ccc1I
Oc1ccc(I)c1Br
Bre1ccc(Br)c(I)c1
CSc1cc(I)ccc1Br
OCc1cc(Cl)c(I)c(Cl)c1
O=Cc1cc(I)ccc1Cl
O=[N+][([O-])c1ccc(Cl)c1I
COC(=O)c1cc(I)c(Cl)cc1Cl
O=C(O)c1cc(Br)cc(C(=O)O)c1I
Oc1cc(Br)c(I)c(Br)c1
Nc1ccc(I)c(Cl)c1
COC(=O)c1cc(I)c(Cl)cc1F

COC(=O)c1cc(I)cc(Br)c1Cl
COC(=O)c1cc(I)ccc1Cl
O=C(O)c1cc(I)ccc1Cl
COc1ccc(I)c(Br)c1
Fc1cc(Cl)c(I)c(Cl)c1
O=C(O)c1ccc(I)c(S(=O)(=O)O)c1
Cc1cc(C)c(I)c([N+](=O)[O-])c1
O=S(=O)(Cl)c1cc(Cl)ccc1I
COc1cccc(I)c1Cl
Clc1ccc(Cl)c1I
Oc1cc(I)c(Br)cc1Cl
COc1ccc(I)c(S(=O)(=O)Cl)c1
COc1ccc(F)c1C(=O)c1cc(Cl)ccc1I
N#Cc1ccc(I)c(Br)c1
Cc1cc(Br)c(I)c([N+](=O)[O-])c1
N#Cc1cc(Cl)c(Cl)c1I
Cc1cc(I)c(Cl)cc1Br
Fc1cc(Br)c(I)cc1F
Cc1ccc2nc(-
e3cccc(N=C(O)c4cc(I)ccc4Cl)c3)oc2c1
O=C(O)c1cccc([N+](=O)[O-])c1I
O=C(Cl)c1cc(Br)ccc1I
Nc1ccc(I)c([N+](=O)[O-])c1
Cc1cc(I)cc(C(=O)O)c1Br
Cc1cc(I)c(Br)cc1Br
Cc1ccc([N+](=O)[O-])c(I)c1
COC(=O)c1cc(Cl)cc(Br)c1I
Clc1ccc(Br)cc1I
Fc1cc(I)c(Br)cc1Cl
Clc1cc(Cl)c(I)c(Cl)c1
COc1cc(Cl)c(I)c(Cl)c1
O=C(O)c1ccc(I)c([N+](=O)[O-])c1
CC(C)(C)OC(=O)c1cc(Br)ccc1I
COS(=O)(=O)c1cccc1I
Oc1ccc(I)c1Cl
Clc1cc(Cl)c(I)c(Br)c1
Cc1cc(Cl)cc(Cl)c1I
O=C(O)c1cc(Cl)c(I)c(Cl)c1
Cc1cc(Br)c(I)c(Br)c1
Cc1cc(F)cc(Br)c1I
O=[N+][([O-])c1cc(I)ccc1Cl
O=[N+][([O-])c1ccc(CO)ccc1I
O=C(Cl)c1cc(I)ccc1Br
Fc1cc(Br)c(I)c(Br)c1
O=[N+][([O-])c1cc(C(F)F)ccc1I
O=C(O)c1cc(Br)c(I)cc1F
Cc1c(F)ccc(I)c1Cl
Bre1ccc(Br)c1I
N#Cc1cc(Br)cc(Cl)c1I
COc1cc(Br)c(I)cc1OC
Fc1ccc(Cl)c(I)c1
COC(=O)c1cc(Br)ccc1I
Fc1ccc(Br)c(I)c1
O=[N+][([O-])c1cc(I)ccc1I
FC(F)F)c1ccc(I)c(Cl)c1
Cc1cc(I)c([N+](=O)[O-])cc1C
O=[N+][([O-])c1ccc1I
Clc1ccc(Cl)c(I)c1
COC(=O)c1cc(Br)cc([N+](=O)[O-])c1I
Cc1ccc(I)c1[N+](=O)[O-]
O=[N+][([O-])c1cc(Br)c(Cl)cc1I
COC(=O)c1cc(Cl)ccc1I
O=S(=O)(O)c1ccc1I

Ne1ccc(I)c(Cl)c1Cl
Ce1cc(Br)cc([N+](=O)[O-])c1I
FC(F)(F)c1cc(I)ccc1I
Ce1cccc([N+](=O)[O-])c1I
COC(=O)c1cc(Br)c(I)cc1F
O=C=Nc1ccc(I)c(Cl)c1
Bre1cc(Br)c(I)c(Br)c1
O=Cc1cc(I)ccc1Br
O=C(Cl)c1cc(I)ccc1Cl
O=C(O)c1ccc(I)c(Br)c1
Cle1c(Br)ccc1I
CSe1ccc(Br)ccc1I
O=Cc1ccc(I)c(Br)c1
COC(=O)c1cc(I)ccc1Br
Fe1cc(I)c(Br)c(F)c1Br
CCOC(=O)c1ccc(I)c([N+](=O)[O-])c1
CSe1ccc(I)c(C#N)c1
Sc1cc(Cl)ccc1I
Ce1cc([N+](=O)[O-])c(I)ccc1Cl
Fe1cc(I)c(Br)(F)c1F
CC(=O)c1cc(I)ccc1Br
NS(=O)(=O)c1ccc1I
O=Cc1cc(I)c(Br)ccc1F
O=Cc1ccc(Br)c1I
Cle1ccc(I)c(Br)c1Cl
N#Cc1cc(I)ccc1Br
O=[N+](=[O-])c1cc(F)cc(Br)c1I
CCOc1ccc(C(=O)c2cc(I)ccc2Cl)cc1
O=C(O)c1cc(I)cc(Br)c1Cl
Fe1ccc(I)c1Cl
COc1cc(Cl)c(I)cc1NCC(=O)O
Ce1cc([N+](=O)[O-])c(C)c(Br)c1I
N=C(O)c1ccc([N+](=O)[O-])c1I
Cle1cc(Cl)c(Cl)c(I)c1
O=C(O)c1cc(I)ccc1I
Cc1c(N)ccc(I)c1Cl
CC(=O)c1ccc(I)c(Br)c1
COC(=O)c1ccc(I)c([N+](=O)[O-])c1
Ne1cc(Br)c(I)cc1C(=O)O
Cle1ccc(Br)c(I)c1
COc1ccc(I)c1Br
O=S(=O)(F)c1ccc1I
Cle1ccc(I)c(Br)c1
Cle1ccc(Cl)c(I)c1Cl
Ce1cc(Cl)c(I)c1Cl

COC(=O)c1cc(Br)cc(C(=O)OC)c1I
COC(=O)c1cc(Br)cc(C)c1I
C=CC(=O)N1CCN(C(=O)C)Nc2cc(I)c(Cl)cc2O)C
Cl
Ce1cc(Br)cc(Br)c1I
COc1cc(I)c(Cl)c1cc1Cl
Ce1ccc(I)c(Cl)c1Cl
Ce1c(Cl)ccc(I)c1Cl
COc1ccc(I)c([N+](=O)[O-])c1
Ce1cc(Br)c(I)ccc1Br
O=Cc1c(F)ccc(I)c1Cl
O=[N+](=[O-])c1c(Cl)ccc1I
Ne1cc(Cl)c(I)cc1C(=O)O
N#Cc1ccc([N+](=O)[O-])c1I
O=[N+](=[O-])c1ccc([N+](=O)[O-])c1I
COc1ccc(Br)c(I)c1
O=C(O)c1cc([N+](=O)[O-])c(I)ccc1Cl
COP(=S)(OC)Oe1cc(Cl)c(I)ccc1Cl
CNS(=O)(=O)c1ccc1I
Ne1ccc(I)c(Cl)c1F
O=C(O)c1cc(Cl)cc(I)c1Br
CC(C)(C)OC(=O)c1cc(I)ccc1Cl
O=Cc1cc(Cl)ccc1I
COc1cc(Cl)c(I)cc1[N+](=O)[O-]
CC(C)c1cc(Br)c(I)c(Br)c1
Ne1ccc(Cl)c(I)c1Cl
Ne1cc(Cl)c(I)c1Cl
COc1ccc(Br)c(I)c1Br
COC(=O)c1cc(C)cc([N+](=O)[O-])c1I
N#Cc1cc(Cl)ccc1I
Ce1cc(Br)c(C(=O)O)ccc1I
COc1cc(I)c(Cl)c1Br
CN(C)c1ccc(I)c(Br)c1
Fe1c(Cl)ccc(I)c1Br
Ne1ccc(I)c1Br
Ce1ccc(S(=O)(=O)Cl)c(I)c1
O=[N+](=[O-])c1cc(Br)c(I)c(Br)c1
Ce1cc(I)c(Br)ccc1F
Bre1c(I)ccc(I)c1Br
Cc1ccc(S(N)(=O)=O)c(I)c1
N#Cc1cc(I)ccc1I
O=Cc1ccc(I)c(Cl)c1
Fe1cc(Cl)c(I)ccc1Cl
Cle1cc(Br)cc(Cl)c1I
CC(C)Oc1ccc(I)c(Br)c1

COC(=O)c1cc(Cl)c(I)c(Cl)c1
CCOC(=O)CNc1cc(I)c(Cl)cc1OC
COc1ccc(I)c(S(=O)(=O)F)c1
Oe1ccc(I)c(Br)c1
Ne1cc(Cl)c(I)ccc1N
CC(=O)c1cc(Cl)ccc1I
O=[N+](=[O-])c1cc(F)ccc1I
O=Cc1ccc(I)c(Br)c1F
O=Cc1cc(Br)ccc1I
COC(=O)c1cc(I)c(Cl)ccc1Cl
CSe1c(Cl)ccc1I
COC(=O)c1cc(Cl)c(I)ccc1OC
O=[N+](=[O-])c1ccc(-c2ccc2)ccc1I
O=[N+](=[O-])c1ccc2ccc2cc1I
FC(F)(F)Oe1ccc(Br)c1I
O=C(O)c1cc(I)c(Cl)ccc1Cl
Bre1cc(I)c(Br)ccc1I
Cle1cc(Br)c(I)c(Br)c1
N=C(O)c1ccc(I)c([N+](=O)[O-])c1
COC(=O)c1cc(I)c(Cl)ccc1OC
O=[N+](=[O-])c1cc(OC(F)(F))ccc1I
Ne1ccc(Br)c(I)c1
COc1ccc(I)c(Cl)c1
CSe1cc(Br)ccc1I
O=C(O)c1cc(Cl)ccc(Br)c1I
O=[N+](=[O-])c1cc(I)ccc1Br
O=[N+](=[O-])c1ccc(C(F)(F)F)ccc1I
Fe1ccc(I)c1Br
Cc1cc(Br)c(I)c(Br)c1[N+](=O)[O-]
OCc1ccc(Cl)c(I)c1Cl
CCOC(=O)c1cc(I)ccc1Br
CC(O)=Nc1cc(Cl)c(I)c1Cl
Ne1cc(I)c(Cl)ccc1O
O=Cc1ccc([N+](=O)[O-])c1I
Fe1ccc(I)c(Cl)c1
Bre1cc(Br)c(I)ccc1Br
O=[N+](=[O-])c1cc(Br)ccc1I
O=Cc1c(Cl)ccc(Cl)c1I
Ne1cc(Cl)c(I)ccc1Cl
Oe1ccc(Br)c(I)c1
O=S(=O)(Cl)c1cc(I)ccc1Cl
Ne1cc(Cl)c(I)ccc1[N+](=O)[O-]
Cc1cc(F)cc([N+](=O)[O-])c1I

OCc1ccc1I
O=C(O)C(O)c1ccc1I
CC(C)(C)c1ccc1I
N#CC(O)c1ccc1I
Cc1ccc(CN=C(O)c2ccc2I)c1
OC(=Nc1ccc1)c1ccc1I
CC1(C)OB(c2ccc2I)OC1(C)C
CN=C(O)c1ccc1I
CCc1ccc(NC(=O)c2ccc2I)cc1
CCCCN(CCC)C(=O)c1ccc1I
O=C(c1ccc1I)N1CCc2ccc2I
Cc1ccc(C)c1N=C(O)c1ccc1I
OC(=NN1CCCC1)c1ccc1I
CCN(Cc1ccc1)C(=O)c1ccc1I
COc1ccc(CCN=C(O)c2ccc2I)cc1OC
O=C(O)c1ccc(C(=O)O)c1I
COCCN=C(O)c1ccc1I
C=CCN(CC=C)C(=O)c1ccc1I
OC(=NC1CCCC1)c1ccc1I
Ce1cc(C)cc(N=C(O)c2ccc2I)c1
OC(=NCCc1ccc1)cc1c1ccc1I

O=C(O)CN=C(O)c1ccc1I
COCCCN=C(O)c1ccc1I
Ic1ccc1-c1ccc1
O=C(c1ccc1I)N1CCCC1
OC(=Nc1ccc(Br)c1)c1ccc1I
O=C(c1ccc1I)N(Cc1ccc1)Cc1ccc1
BrC(c1ccc1)c1ccc1I
Ce1ccc1CN=C(O)c1ccc1I
Ce1cc(NC(=O)c2ccc2I)on1
Cc1ccc(N=C(O)c2ccc2I)c1
CC(C)(OSCF)(F)F)c1ccc1I
OC(=NC(c1ccc1)c1ccc1)c1ccc1I
C=Cc1ccc1I
CC(C)CN=C(O)c1ccc1I
CCOC(=O)c1ccc1I
OC(=NCCc1ccc1)cc1c1ccc1I
CCCN=C(O)c1ccc1I
CC(C)(C)OC(O)=N[C@@H](Cc1ccc1I)C(=O)
O
CSe1ccc1I
N#CCN=C(O)c1ccc1I

CCC(C)c1ccc1N=C(O)c1ccc1I
CCCCN=C(O)c1ccc1I
CCCCCCCN=C(O)c1ccc1I
Ne1ccc1N=C(O)c1ccc1I
COC(=O)C(N)c1ccc1I
O=C(Nc1ccc(F)cc1)c1ccc1I
Cc1ccc(NC(=O)c2ccc2I)cc1
ClCc1ccc1I
OC(=Nc1ccc1F)c1ccc1I
O=C(c1ccc1I)N1CCNCC1
NC(Cc1ccc1I)C(=O)O
CC(C)(C)OC(O)=Nc1ccc1I
CN(C)CC(Cl)c1ccc1I
OC(=NOCc1ccc1)c1ccc1I
Ce1cc(C)c(N=C(O)c2ccc2I)c(C)c1
O=C1N=C(O)CCC1N=C(O)c1ccc1I
OC(=Nc1ccc(Cl)cc1)c1ccc1I
Ic1ccc1C1n1n1
O=C(Nc1ccc(Oc2ccc2)cc1)c1ccc1I
OC(=Nc1ccc1Cl)c1ccc1I
N#CCc1ccc1I

O=C(Nc1ccc(O)cc1)c1cccc1I
O=C(O)C1(c2ccc2)CC1
OC(=Nc1ccc(Br)cc1)c1cccc1I
CC(C)(O)c1cccc1I
CCCCCN=C(O)c1cccc1I
Ce1ccc(C(O)=NN=C(O)c2ccc2)j1
OC(e1ccc1)C(F)(F)F
COC(=O)C(O)c1cccc1I
C[C@@H](N=C(O)c1cccc1)j1cccc1
O=C(O)CCc1cccc1I
SCCc1cccc1I
O=C(O)c1ccc1N=C(O)c1cccc1I
COCc1cccc1I
COC(=O)Cc1cccc1I
CC(C)(C)OC(=O)c1cccc1I
N=C(O)Cc1cccc1I
CN(C)CCN=C(O)c1cccc1I
C[Si](C)(C)OC(C#N)c1cccc1I
COc1ccc(CN=C(O)c2ccc2)c(OC)c1
COc1ccc(N2CCN(C(=O)c3ccc3)CC2)cc1
CC(C)N=C(O)c1cccc1I
CCOC(=O)CN=C(O)c1cccc1I
OC(e1ccc1)j1cccc1I
CC(C)(C)OC(=O)N1CCN(C(=O)c2ccc2)CC1
CCc1cccc1I
COc1ccc(N(C)C(=O)c2ccc2)cc1
CCOC(=O)Cc1cccc1I
C=CCN=C(O)c1cccc1I
CCN(CC)CCN=C(O)c1cccc1I
O=C(c1ccc1)N1CCc2ccc2
N[C@H](Cc1ccc1)C(=O)O
CC(C)CCN=C(O)c1cccc1I
O=C(O)c1ccc(C(F)F)cc1I
OC(=Nc1ccc1)j1cccc1I
OCCN=C(O)c1cccc1I
CN1CCN(C(=O)c2ccc2)CC1
NCc1ccc(C(F)F)cc1I
CC(C)(C)N=C(O)c1cccc1I

FC(F)(F)c1cccc1I
OC(=Nc1ccc(C(F)F)cc1)c1cccc1I
CN(C(=O)c1ccc1)j1cccc1I
BrCc1cccc1I
C=C(C(=O)OCC)c1cccc1I
CCN=C(O)c1cccc1I
O=C(c1ccc1)N1CCOCC1
OC(=Nc1ccc1)j1cccc1I
Ce1cc(=NC(=O)c2ccc2)[nH]o1
CCCCCN=C(O)c1cccc1I
CCOe1ccc(NC(=O)c2ccc2)cc1
CC(O)=Nc1ccc1N=C(O)c1cccc1I
OC(=Nc1ccc1Cl)c1cccc1I
OC(=Nc1ccc(Cl)cc1)j1cccc1I
CCc1cccc1I
N[C@@H](Cc1ccc1)C(=O)O
CN(C)(C(=O)O)C(=O)c1cccc1I
OB(O)c1cccc1I
CC(C)c1cccc1I
OC(=Nc1ccc(F)cc1)j1cccc1I
O=P(c1ccc1)(c1ccc1)c1cccc1I
O=C(O)Cc1cccc1I
OC(=Nc1ccc1)j1cccc1I
OC(=Nc12CC3CC(C(C)C)C2)c1cccc1I
O=C([O-])CN=C(O)c1cccc1I
O=C(Cl)Cc1cccc1I
OC(=Nc1ccc(F)cc(F)c1)j1cccc1I
O=C(O)c1ccc(-c2ccc2)j1
OC(=Nc1cc(Cl)cc(Cl)c1)j1cccc1I
Ce1ccc(N=C(O)c2ccc2)c(O)c1
Ce1ccc(N(C)C(=O)c2ccc2)cc1
CCN(C(=O)c1ccc1)j1cccc1I
CN(Cc1ccc1)C(=O)c1cccc1I
CN(C)(C(=O)c1cccc1I
OC(=NCC1CCCC1)c1cccc1I
Cc1ccc(CN=C(O)c2ccc2)cc1
O=C(N=c1cc[nH]cc1)c1cccc1I
COC(OC)c1cccc1I
C=C(C)c1cccc1I

Cc1ccc(NC(=O)c2ccc2)cc1C
CP(C)(=O)c1cccc1I
COC(=O)C1CCCCN1C(=O)c1cccc1I
OC(=Nc1ccc(C(F)F)cc1)c1cccc1I
COC(=O)C(N)Cc1cccc1I
OC(=Nc1CCCC1)c1cccc1I
O=C(Nc1ccc(N2CCCC2)cc1)j1cccc1I
Nc1ccc(NC(=O)c2ccc2)cc1
NS(=O)(=O)Cc1cccc1I
COC(=O)c1cccc1I
Cc1cccc1I
OC(=NCC12CC3CC(C(C)C)C2)c1cccc1I
Ic1ccc1-c1cccc1I
OC(=NCCc1ccc1)j1cccc1I
OC(=Nc1CC1)j1cccc1I
O=C(c1ccc1)N1CCC(Cc2ccc2)CC1
CN(Cc1ccc1)C(=O)O(C)(C)C
O=C(c1ccc1)N1CCCCC1
Bre1ccc1-c1cccc1I
CC(C)N(C(=O)c1ccc1)C(C)C
OCCc1cccc1I
Ic1ccc1C1CCOCC1
N=C(O)c1cccc1I
COc1ccc(CN=C(O)c2ccc2)cc1
FC(F)c1cccc1I
NCc1cccc1I
N#CC(N)c1cccc1I
O=C(Cc1ccc1)N=c1cc[nH]cc1
OC(CNc1ccc1)j1cccc1I
Cc1ccc1N=C(O)c1cccc1I
COC(=O)C(C)(C)N=C(O)c1cccc1I
C=C(C(=O)O)Cj1cccc1I
C#CCN=C(O)c1cccc1I
COC(=O)C(CCSC)N=C(O)c1cccc1I
OC(=Nc1ccc1)j1cccc1I
NN=C(O)c1cccc1I
OC(=NCC1CC1)c1cccc1I

Cluster P

Cc1ccc(I)c(F)c1
COc1ccc(C(C)C)c(O)cc1I
COC(=O)c1ccc(C)c(O)c1c1
Fe1c(I)ccc(C2OCCO2)c1F
Ce1cc(F)c(I)cc1[N+](=O)[O-]
O=[N+](=[O-])c1ccc(O)c1I
Nc1c(I)ccc(F)cc1[N+](=O)[O-]
Nc1ccc([N+](=O)[O-])cc1I
COc1ccc(S(=O)(=O)NCc2ccc3c(c2)OC3)cc1I
COC(=O)c1ccc(Br)cc1I
COC(=O)c1ccc(Br)cc1I
CCN1C(=O)C(=Cc2ccc(O)c(I)c2)C(=O)N(CC)C1
=S
OCc1ccc(F)c1I
O=Cc1ccc(Br)cc1I
COc1ccc(C=N/NC(=O)c2ccc3c(ccc4cccc43)o2)cc
(I)c1O
Oc1ccc(Cl)cc1I
CCOC(=O)c1ccc(N)c(I)c1
Fe1c(Cl)ccc(Cl)c1I
Nc1ccc(C(=O)O)cc1I
CCCCN=C(O)c1ccc(OC)c(I)c1
O=Cc1c(Br)ccc(I)c1F
COc1ccc(NCCO)cc1I
COc1ccc([N+](=O)[O-])cc1I
Cc1ccc(N)c(I)cc1I

COc1ccc(C=O)cc(I)c1OCc1ccc([N+](=O)[O-])cc1
Nc1ccc(Br)cc1I
COc1ccc(C(C)C)cc1I
CCOe1cc(C)ccc1I
O=C(O)c1ccc(Br)cc1I
O=Cc1ccc(F)c(F)c1I
N#Cc1ccc(O)c(I)c1
Fe1c(Cl)ccc(Br)c1I
Oe1c(I)ccc(Br)cc1C(F)(F)F
CC(=O)c1ccc(I)c(O)c1
COc1ccc(C=O)cc(I)c1OC(C=O)
COc1ccc(C=O)cc(I)c1OC
CSe1ccc(N)c(I)c1
Fe1ccc(CBr)cc1I
COC(=O)c1ccc(Br)cc1I
O=C(O)c1ccc(I)c(O)c1
COc1c(I)ccc([N+](=O)[O-])c2ccc2
Fe1ccc(Cl)cc1I
CC(C)(C)OC(O)=Nc1ccc(F)c1I
Oe1c(Br)ccc(F)c1I
Cc1ccc(O)c(I)cc1[N+](=O)[O-]
Oe1ccc2ccc2c1I
COC(=O)c1ccc(OC)c(I)cc1[N+](=O)[O-]
CC(C)(C)OC(O)=Nc1ccc(N)c(I)c1
NCc1ccc(I)c(F)c1C

COc1ccc(C(=O)Nc2ccc(S(N)(=O)=O)cc2)cc1I
COc1ccc(S(=O)(=O)NC(C)(C)C)cc1I
COc1c(I)ccc(C(F)F)cc1C(F)F
Ce1cc(Br)cc1c1F
Nc1c(I)ccc(Br)cc1[N+](=O)[O-]
Oe1ccc(I)c1O
O=Cc1ccc(I)c(F)c1F
Cc1ccc(O)c1I
COc1ccc(-c2ccc2)cc1I
Fe1ccc(C(F)F)cc1I
CC(=O)c1ccc(F)c(I)c1
O=Cc1c(Cl)ccc(I)c1F
CCOe1ccc(C=O)cc(I)c1OC
O=Cc1ccc(I)c1F
CNc1ccc(C#N)cc1I
Fe1ccc(OC(F)F)cc1I
CNc1ccc(C=O)cc1I
Oe1c(F)ccc1I
Nc1ccc(C(F)F)cc1I
OCc1ccc(I)c1c1
O=Cc1ccc([N+](=O)[O-])cc1I
N#Cc1ccc(F)c(N)c1I
Nc1ccc(Cl)cc1I
COC(=O)c1ccc(I)c(F)cc1C
Cc1ccc(I)c1N

O=C(O)c1cc(I)c(F)cc1Cl
Oe1ccc(F)c(I)e1
O=C(O)Cc1ccc(O)c(I)e1
COc1ccc(/C=C2/SC(=S)N=C2O)cc1I
COC(=O)[C@H](Cc1ccc(OC)c(I)e1)N=C(O)OC(C)(C)C
COe1ccc(C(O)=Nc2ccc2)cc1I
CCc1ccc(N)c(I)e1
N#Cc1cc(I)c(N)c(C(F)F)c1
COc1cc(C(=N)O)ccc1I
COe1cc(C=C2C(=O)OC(C)(c3ccc3)OC2=O)cc(I)e1O
COe1cc(C=O)cc(I)e1OC(C)C
O=[N+][([O-])c1cc(I)c(Oe2ccc2)c([N+](=O)[O-])e1
COe1ccc(S(=O)(=O)Nc2ccc(F)c(F)c2)cc1I
COe1cc(C(F)F)c(Br)cc1I
Oe1ccc(Cl)c1I
CCCCOe1c(I)cc(C=O)cc1OC
N#Cc1ccc(N)c(I)e1
Ne1c(I)ccc1[N+](=O)[O-]
CCOe1ccc(C=O)cc1I
COCOe1cc(C)ccc1I
Oe1c(Cl)ccc1I
COe1cc(C(C)C)c(Oe2enc(NC(CO)CO)[nH]c2=N)cc1I
O=Ce1cc(Cl)cc(I)e1O
C=C(C)COe1c(I)cc(C=O)cc1OC
O=C(e1ccc(I)c(F)e1)N1CCOCC1
O=Ce1ccc(I)c1O
Ce1cc(F)c(I)cc1C
O=C(O)c1cc(Cl)c(F)c(I)e1
Ne1cc(C(=O)O)ccc1I
O=[N+][([O-])c1ccc(F)c1I
COe1cc(C=O)c(OC)cc1I
CCCCOe1ccc(/C=C/C(=O)O)cc1I
Fe1ccc(Br)cc1I
Fe1cc(Cl)cc(Br)cc1I
Ce1ccc(N)c(I)e1
CC(C)(C)c1ccc(O)c(I)e1
N#Cc1ccc(I)c(N)c1
OCe1ccc(F)c(F)e1I
Ce1noc(C)c1-e1cc(N)c(N)c(I)e1
Fe1cc(F)c(I)c(Cl)e1
N#Cc1cc(I)c(N)cc1C(F)F
O=[N+][([O-])c1ccc(I)c1F
COe1cc(C(F)F)ccc1I
COe1ccc2ccc2c1I
Oe1c(I)ccc1C(F)F
COe1ccc(C=O)c(I)e1OC
COC(=O)[C@H](C)[C@H](c1ccc(I)c(O)c1)C1CC1
COC(=O)c1ccc(Oe2ccc2)c(I)e1
Ne1ccc(Cl)c1I
COC(=O)c1ccc(N=C(O)C(F)F)c(I)e1
CCOe1cc(C=O)cc(I)e1OCc1ccc([N+](=O)[O-])cc1
O=C(O)CCc1ccc(O)c(I)e1
COCOe1c(I)ccc1OC
CCOe1c(F)ccc1I
Ne1cc(C(F)F)c(Cl)cc1I
CCOe1cc(C(C)(C)C)ccc1I
CC(=O)c1cc(Br)cc(I)c1N
N#Cc1ccc(I)c1N
O=Ce1cc(OC(F)F)c(I)c1O
COC(=O)c1ccc(I)c(N)c1
COC(=O)c1ccc(OC(F)F)c(I)c1
O=Ce1cc(C=O)O)cc(I)e1O
COC(=O)c1ccc(I)c1N

COe1cc(I)c(OC)cc1C
CCOe1cc(C=O)cc(I)c1OCc1ccc(C)cc1
COe1ccc(C=O)cc1I
Ce1c(Br)ccc(N)c1I
Ne1ccc(-e2ccc2)cc1I
CC(=O)c1ccc(N)c(I)e1
COC(=O)c1cc(Cl)cc(I)e1N
O=Ce1cc(OCe2ccc2)c(I)c([N+](=O)[O-])c1
C=CCOe1c(I)cc(C=O)cc1OC
COe1ccc(/C=C(\C#N)c2nc3ccc3[nH]2)cc1I
CC(=O)Oe1ccc(C(=O)O)cc1I
Fe1c(Cl)ccc(C(F)F)c1I
COC(=O)c1cc(Br)c(N)c(I)e1
COe1ccc(C=O)c(I)c1O
COe1c(C=O)ccc(I)c1F
CCOe1cc(C#N)cc(I)c1O
COe1ccc(C(=O)n2enc3ccc32)cc1I
Ce1cc(N)c(I)cc1F
CCOe1cc(C=O)cc(I)c1O
COe1ccc([N+](=O)[O-])cc1I
Fe1c(I)cc(Br)c2ccc2
Ne1c(I)cc(C(F)F)cc1[N+](=O)[O-]
O=C(O)c1ccc(I)c(F)c1
COe1cc(C(F)F)c(F)cc1I
COe1cc(C=C2C(=O)c3ccc3C2=O)cc(I)c1O
Ce1ccc(C#N)c(F)c1I
Fe1cc(F)c(F)c(I)e1
COe1ccc(F)cc1I
COe1cc(/C=N/O)cc(I)c1O
Fe1cc(CBr)cc1I
Ce1ccc(F)c(I)e1
COe1cc(CNe2ccc(C)c(Cl)c2)cc(I)c1OC
N=C(S)N/N=C/c1ccc(O)c(I)c1
N#Cc1cc(F)c(O)c(I)e1
OCe1ccc(F)c(I)e1
Ce1cc(I)c(O)c([N+](=O)[O-])c1
COe1cc(C#N)cc(I)c1O
COe1ccc(I)c1N
CCOe1cc(C=O)cc(I)c1OCC
COe1cc(C#N)cc(I)c1OCC#N
Ne1c(Br)cc(Cl)cc1I
OCe1ccc(I)c(O)c1
Oe1ccc(Br)cc1I
OCe1ccc(I)c1F
COe1cc(C(C)C)c(Oe2e[nH]c(=N)[nH]c2=N)cc1I
Ne1c(I)cc([N+](=O)[O-])cc1C(F)F
COe1cc(CO)ccc1I
COC(=O)c1ccc(N=C(C)O)c(I)c1
COe1ccc(C(F)F)cc1I
COe1ccc(I)c1F
CC(C)c1ccc(N)c(I)c1
COe1ccc(CO)c1I
Ne1ccc(Br)cc1I
COe1cc(/C=C2/SC(=O)N=C2O)cc(I)c1O
Ce1cc(OC(=O)c2ccc(Br)c2)c(I)c(C)c1C1
COC(=O)c1ccc(C#N)cc(I)c1O
Ce1cc(C(=O)O)cc(I)c1O
Ne1c(I)cc(C(=O)O)cc1[N+](=O)[O-]
N#Cc1ccc(I)c(F)c1C1
COe1ccc(/C=C/[N+](=O)[O-])cc1I
CCOe1c(I)cc(C=O)cc1OC
COe1ccc(C)c1I
Ne1ccc(I)c1N
Fe1ccc(C(F)F)cc1I
COe1c(I)cc(Br)cc1C=O
COe1ccc(Cl)c1I
Ne1c(F)cc(Br)cc1I
Ic1c(OCe2ccc2)ccc1OCe1ccc1

Ne1cc(Cl)cc(Br)c1I
COe1ccc(OC)c(I)e1
COC(=O)c1cc(N)c(I)cc1OC
Oe1c(Cl)cc(Cl)c1I
Ne1c(Cl)ccc1I
Fe1ccc1I
Ne1ccc(Br)c(Cl)c1I
COe1cc(C#N)cc(I)c1OC
O=[N+][([O-])c1ccc(I)c(O)c1
CCCCCCCOe1ccc2cc(C(=O)O)ccc2c1I
COe1cc(Cl)cc(Cl)c1I
COe1cc(C=O)cc(I)c1OCe1ccc1
COC(=O)c1cc(N)c(I)cc1C
COe1cc(C(=O)O)cc(I)c1O
O=[N+][([O-])c1ccc(O)c(I)c1
COe1cc(C=O)ccc1I
COC(=O)Ce1ccc(O)c(I)c1
Ce1cc(Cl)cc(I)c1O
COe1cc(C(=N)O)cc(I)c1OCe1ccc1
CCOC(=O)COc1c(I)cc(C=O)cc1OC
CC(C)Oe1ccc(C(=O)O)cc1I
Oe1cc(C(F)F)c(Br)cc1I
COe1ccc(N)cc1I
Ne1c(Cl)cc(Br)cc1I
Ce1cc(I)c(N)c([N+](=O)[O-])c1
CC(=O)c1ccc(I)c1F
CC(C)(C)OC(O)=Ne1ccc(Cl)c(F)c1I
N#Cc1cc(Br)ccc(I)c1F
COe1cc2ccc2c1I
Ne1c(I)cc(Cl)cc1C(=O)O
CCOe1c(I)cc(Br)cc1C=O
COe1ccc([N+](=O)[O-])c1I
COC(=O)c1ccc(N2CCCC2)c(I)c1
Ne1c(F)cc(C(F)F)cc1I
Fe1c(Cl)ccc1I
Fe1cc(Br)c(F)c(Br)c1I
O=[N+][([O-])c1ccc(I)c(F)c1
Fe1c(Cl)cc(Br)cc1I
COe1cc(C(=N)O)cc(I)c1OC
N=C(O)c1ccc(I)c(O)c1
Ne1c(F)cc(Cl)cc1I
Ne1cc(C(F)F)c(Br)cc1I
Ne1cc(CO)ccc1I
Oe1c(F)c(Br)cc1I
Ce1ccc(N)c1I
O=C(O)c1ccc(F)c1I
COe1ccc(C(=O)Oe2ccc2C(C)=O)cc1I
Ce1cc(F)c1cc1C(=O)O
COC(=O)CCe1ccc(O)c(I)c1
OC(c1ccc(I)c(F)c1)(C(F)F)C(F)F
Oe1c(F)cc(F)cc1I
Fe1cc(Br)cc(Cl)c1I
O=P(c1ccc1)(c1ccc1)c1ccc(I)c(F)c1
COe1cc([C@H](O)(C)(C)C)c([N+](=O)[O-])cc1I
COe1ccc(C(=O)O)cc1I
C#CCOe1c(I)cc(C=O)cc1OC
O=C(O)c1cc(Br)cc(I)c1O
N#Cc1ccc(N)c(I)c1
Fe1ccc(Br)c1I
CCOC(=O)c1ccc(I)c(OCC)c1
Ne1ccc1I
O=C(O)c1ccc(I)c(OC(F)F)c1
COe1ccc(C2=NC(C)(C)CO2)c1I
Ne1c(I)cc(F)c1C(=O)O
Oe1cc(C(F)F)ccc1I
COe1cc(C(C)C)c(OS(=O)(=O)c2ccc(C)cc2)cc1I
CCCCOe1c(I)cc(C=O)cc1OC

Fe1cc(C2CC2)ccc1
COc1c(F)cc(Br)cc1
COc1cc(CO)cc1c1O
COc1ccc(N)c1c1
COC(=O)c1ccc(F)c1c1
COc1c(I)cc(-n2ccc(O)nc2=O)c1C(C)(C)C
Ne1cc(F)c(I)c(Br)c1
Ce1cc(Br)cc1c1N
Oe1cc(Cl)cc(Cl)c1I
O=Cc1ccc(F)c1c1
O=C(O)c1ccc(F)c1c1
COc1ccc(C(=O)Nc2ccc(S(=O)(=O)N3CCCC3)cc2)cc1
Ne1c(F)cccc1
O=[N+][([O-])c1cc(I)c(F)cc1Br
COc1cc(CO)cc(I)c1OCc1ccc(C(=O)O)c1
Ce1cc(Cl)cc1c1N
Ne1ccc(O)cc1
COc1ccc1c1O
COC(=O)c1ccc(I)c1c1
Ne1c(Cl)cc(C(=O)O)cc1
COC(=O)c1ccc(C(F)F)cc1c1N
Ne1cc(C(F)F)Fccc1
N#Cc1ccc(F)c1
O=C(O)c1c(Br)cc1c1F
COC(=O)c1ccc(I)c1c1
Fe1c(Br)ccc(Cl)c1
COc1c(I)ccc2cccc12
CCOe1c(I)cc(C(=N)O)c1OCe1ccc1
COc1cc(/C=N/NC(=O)e2ccc2)cc1c1O
Ne1c(I)ccc1C(=O)O
Oe1ccc(F)cc1
COC(=O)c1cc(C)c(N)c1c1
Oe1c(Cl)cc(Br)cc1
COc1cc(C=O)cc(I)c1OCe1ccc(C)cc1
Ne1ccc([N+](=O)[O-])c1
COc1cc(C=O)cc(I)c1OCCO
CC(O)=Nc1cc(F)c1c1C
COc1ccc(O)cc1
Ne1ccc2cccc2c1
Ce1ccc(I)c(F)c1C
O=C(O)c1ccc(O)c1c1
COc1cc(C(O)C(C)(C)C)c([N+](=O)[O-])cc1
COc1ccc(C(O)=NNC(=O)e2ccc(NC(=O)C(C)C)c2)cc1
COc1c(F)cccc1
Fe1c(Br)ccc1
Ce1ccc(I)c(F)c1F
CCCCc1ccc(N)c1c1
N#Cc1ccc(I)c(F)c1
Ne1c(Cl)cc(Cl)c1
CCOC(=O)c1cc(I)c(N)c([N+](=O)[O-])c1
COc1cc(C(=O)O)cc1c1OC
O=C(O)c1ccc(I)c1F
Ce1cc(F)c(I)c(Br)c1
COC(=O)c1cc(N)c(I)cc1CS(C)(=O)=O
Ne1ccc(OC(F)F)c(Cl)c1
COc1ccc(O)c1c1
COC(=O)C(C)(C)c1ccc(N)c1c1
Ne1ccc(Br)c1
Ne1ccc(CC(=O)O)cc1
COc1ccc(C(F)F)cc1
COc1cc(Cl)cc(Br)c1
COC(=O)c1cc(F)cc1c1N
CCOe1c(I)cc(C(=N)O)cc1OC
CC(C)Ne1ccc1
COC(=O)c1cc(I)c(F)cc1C
COc1ccc(C(O)=Nc2ccc([N+](=O)[O-])c2)cc1
COc1cc(/C=C/c2ccc3ccc(OC)c3n2)cc1c1OC

Ce1cc(Cl)c(N)c(I)c1
CCOC(=O)c1ccc(O)c1c1
CCOC(=O)C=C(C)N=C(O)NC1c1cc(I)c(O)c(O)C)c1
CCc1ccc(N)c1c1
Ne1c(Cl)cc(C(F)F)cc1
COC(=O)c1ccc(I)c(OCc2cccc2)c1
CC(C)(C)OC(O)=N[C@H](Cc1ccc(O)c1)c1C(=O)O
COc1cc(C)c(Cl)cc1
CCN1C(=O)C(=C)c2ccc(OCc3ccc(C(=O)O)cc3)c1c2)N=C1O
N#Cc1cc(Br)cc1c1O
Ne1ccc(C(=O)O)c1
CC(C)(C)c1ccc(I)c(N)c1
COCc1c(F)cccc1
CCOC(=O)Cc1ccc(N)c1c1
N#Cc1ccc(I)c(O)c1
N[C@H](Cc1ccc(O)c1)c1C(=O)O
Ce1cc(C)c(N)c1c1
OCc1ccc(O)c1c1
Ne1ccc(O)c1c1
Ne1c(I)cc(Cl)cc1[N+](=O)[O-]
Ce1ccc(F)c1
Oe1c(Br)ccc1
COC(=O)c1cc(I)c(N)c1C
COc1cc(/C=C/C(=O)O)cc1c1O
O=C(O)c1ccc(I)c1O
COc1cc(C=C2C(O)=NC(=S)N=C2O)cc1c1O
COc1cc(/C=C(C#N)C(=O)c2ccc(O)c(O)c2)cc1c1O
Oe1cc(Br)cc1c1F
CCN(CC)S(=O)(=O)c1ccc(NC(=O)c2ccc(OC)c1c2)cc1
Ne1ccc(I)c1F
Ce1cc(F)c(N)c1c1
COc1ccc(C)cc1
COc1cc(C)ccc1
CC1(C)OB(c2ccc(I)c2F)OC1(C)C
O=[N+][([O-])c1ccc(F)c1c1
Ne1cc(C(F)F)F)cc1
COc1c(I)ccc1C(=O)OC(C)(C)C
Ce1ccc(I)c(O)c1
CCN1C(=O)C(=C/c2cc(I)c(O)c(OC)c2)S/C1=N/e1ccc1
COc1c(F)cc(F)cc1
COc1ccc(I)c1OC
COC(=O)Cc1ccc(N)c1c1
Ne1cc(C(F)F)F)cc(Br)c1
COC(=O)c1ccc(I)c(N=C(O)O)c1
COc1cc(C(=O)O)ccc1
COc1cc(C(C)=O)cc1c1O
O=Cc1ccc(OC(F)F)cc1c1
OC(=Nc1ccc(F)c1)C(F)F
COc1cc(C=C2C(=O)OC(c3cccc3)OC2=O)cc1c1O
Ce1cc(C)c(I)c(N)c1
N#Cc1c(Br)ccc1c1F
COc1cc(C=O)cc1c1O
COC(=O)c1cc(I)c(N)c([N+](=O)[O-])c1
COC(=O)c1cc(F)c(N)c1c1
COc1cc(C2C(C#N)=C(N)OC3=C2C(=O)CC(C)(C)C3)cc1c1O
O=[N+][([O-])c1ccc(I)c1O
COc1cc(-c2cc(=O)c3cc(O)ccc3o2)cc1c1O
O=C(O)c1ccc(F)c1c1
O=Cc1cc(I)c(O)c(OCc2cccc2)c1
COc1cc(I)c(F)cc1C
COc1cc(-c2cc(=O)c3cccc3o2)cc1c1O
COc1ccc(CO)cc1

Fe1c(OCc2cccc2)ccc(Br)c1
O=Cc1cc(I)c(O)c([N+](=O)[O-])c1
COc1ccc2cc([C@H]1C)C(=O)O)ccc2c1
COc1ccc(C#N)cc1
CNc1ccc([N+](=O)[O-])cc1
O=C(N/N=C/c1cc(Br)cc1c1O)c1ccc1
CCOC(=O)c1ccc(I)c(F)c1
O=C(O)Cc1ccc(I)c(F)c1
COc1ccc(C(=O)O)cc1
Ce1cc(O)c1cc1C
O=Cc1ccc(O)c1c1
Fe1c(I)ccc(C(F)F)cc1F
O=C(O)c1c(F)ccc(F)c1
Ce1ccc(I)c(N)c1
N[C@H](Cc1ccc(O)c1)c1C(=O)O
Ne1c(Br)ccc1
Fe1cc(Br)cc(Br)c1
COc1ccc(Br)cc1
Oe1cc(F)cc(Br)c1
Ne1c(Br)cc(OC(F)F)cc1
COc1cc(C#N)ccc1
COC(=O)c1cc(Cl)c(N=C(C)O)c1c1O
Fe1cc(P(c2cccc2)c2cccc2)ccc1
Fe1c(I)ccc2cccc12
COC(=O)c1ccc(N)c1c1
FC(F)F)c1ccc(OCc2cccc2)c1c1
COc1c(Cl)cc(Br)cc1
COC(=O)c1ccc(/N=C/c2cc(Cl)cc1c2O)cc1
Ce1cc(I)c(N)cc1C(F)F
N#Cc1cc(Cl)c(N)c1c1
CCCOe1c(I)cc(C(=O)O)cc1OC
N#Cc1cc(I)c(O)c([N+](=O)[O-])c1
CSc1ccc(I)c1F
Fe1ccc(CBr)cc1
O=C(O)c1cc(Cl)cc1c1O
Ce1cc([N+](=O)[O-])cc1c1N
Oe1c(F)cc(Cl)cc1
CCOC(=O)c1ccc(I)c(N)c1
Ne1cc(C(F)F)F)cc([N+](=O)[O-])cc1
COc1cc(C=O)cc([N+](=O)[O-])c1
O=C(O)c1ccc(I)c(F)c1F
COc1cc(C=O)cc1c1OCC(=O)O
COc1ccc(Cl)cc1
Oe1cc(OC(F)F)cc1
Oe1ccc2cc(Br)ccc2c1
C=Cc1ccc(O)c1c1
CCOe1cc(C(=N)O)cc1c1OCC
CCCCCCCCOe1cc(C=O)c(OC)CCCC)cc1
CCOC(=O)c1ccc(OC)c1c1
Ce1cc(N)c1cc1C#N
COc1cc(C(C)=O)ccc1
Fe1cc(Br)c(I)c(F)c1F
Oe1ccc(O)c1c1
O=C(O)c1ccc(O)c1c1
N#Cc1ccc(I)c(F)c1F
O=Cc1ccc(Cl)c1c1F
Oe1ccc(-c2cccc2)cc1
COc1ccc(C(=O)O)cc1
O=Cc1ccc(O)c1c1
Fe1ccc(Br)c(Cl)c1
CC(C)c1ccc(I)c(O)c1
Ne1cc(OC(F)F)cc1
COc1ccc(F)c1c1
O=C(O)c1ccc(-n2cccn2)c1c1
O=[N+][([O-])c1cc(Br)cc1c1O
COc1ccc(Cl)c1c1
COC(OC)c1ccc(-c2ccc(I)c(F)c2)n1
Fe1ccc(OC(F)F)cc1

Ne1ccc(F)cc1I
N#Cc1ccc(F)c(I)c1Cl
COC(=O)c1ccc(F)c(I)c1C
Ne1c(I)ccc(F)c(Br)c1F
COC(=O)c1ccc(N)c1I
CNc1ccc(C(=O)OC)cc1I
COc1cc(F)cc(Br)c1I
COC(=O)c1ccc(N)c(I)c1Cl
CC(O)=Nc1ccc(C(=O)O)ccc1I
Ne1c(F)cc(F)cc1I
COC(=O)c1ccc(I)c1F
COC(=O)c1ccc(OC)c(I)c1
N[C@@H](C)C1ccc(O)c(I)c1C(=O)O
COc1ccc(S(N)(=O)=O)cc1I
Fe1c(Br)cc(Cl)cc1I
Ne1cc([N+](=O)[O-])ccc1I
Cc1ccc(F)c(I)c1C(=O)O
COC(=O)c1ccc(F)c1I
COc1cc(OC)c(C(C)=O)c(OC(=O)c2ccc(OC)c(I)c2)c1
Ne1ccc(Cl)c(Cl)c1I
COC(=O)c1ccc(I)c(O)c1Cl
Ne1ccc(I)c1O
COc1cc(C(C)C)C)ccc1I
Fe1ccc(Cl)c1I
Cc1cc(F)c(I)cc1O
O=[N+](=[O-])c1ccc(Oc2ccc2)c(I)c1
COc1ccc(OC)c(-c2c(C(C)C)cc(C(C)C)cc2C(C)C)c1I
O=Cc1ccc(I)c(O)c1
COc1cc(C(OC(C)=O)OC(C)=O)cc(I)c1OC(C)=O
Fe1ccc(F)c(I)c1
O=P(c1ccc1)(c1ccc1)c1ccc(F)c1I
Oe1ccc(I)c1F
Cc1cc(Br)c(N)c(I)c1
CC(C)C)OC(O)=N[C@@H](C)C1ccc(O)c(I)c1C(=O)O

CCOc1cc(C=N=N=C(O)C)Oc2ccc(C)cc2cc(I)c1O
Ne1ccc(OC(F)F)cc1I
N#Cc1ccc(F)c(I)c1
N=C(O)c1ccc(F)c1I
COC(=O)c1cc(I)c(N)c(OC)c1
Oe1ccc(Br)c1I
N#Cc1ccc(-c2ccc(O)c(I)c2)cc1
COc1cc(C(=O)O)c(I)c1OCc1ccc(Cl)c1
Oe1c(I)cc(Cl)cc1-c1csnn1
CC(=O)c1ccc(I)c1O
C=CCNS(=O)(=O)c1ccc(OC)c(I)c1
COC(=O)c1c(F)ccc(F)c1I
COC(=O)c1ccc(O)c(I)c1
COc1c(F)cc(Cl)cc1I
Ne1cc(Br)cc(I)c1N
Cc1ccc(C(=O)O)c(F)c1I
Oe1ccc(C(F)F)cc1I
COc1ccc(Oc2ccc(C[C@H](N=C(C)O)C(=N)O)cc2I)cc1
Fe1cc(F)c(I)c(Br)c1
COc1c(I)ccc1C(=O)O
COc1cc(C=N/O)cc(I)c1OC
N#Cc1cc(Br)c(N)c(I)c1
Cc1ccc(O)c(I)c1
COc1cc(C=C2/SC(=S)N(c3ccc3C)C2=O)cc(I)c1O
COc1cc(C)c(C)cc1I
COC(=O)[C@@H](N)Cc1ccc(O)c(I)c1
O=Cc1ccc(F)c1I
Ne1ccc(N)c(I)c1
COC(=O)c1ccc(I)c(OC)c1
Cc1ccc(I)c1F
C=CCN(CC=C)C(=O)c1ccc(OC)c(I)c1
COc1cc(C=N/N=C(O)c2ccc(F)c2)cc(I)c1O
CCOC(O)=Nc1ccc(F)c(F)c1I
N=C(O)c1ccc(I)c(F)c1
Ne1cc2ccc2cc1I

COc1cc(C=O)cc(I)c1OC(=O)c1ccc1
CC(C)c1ccc(I)c(F)c1
COC(=O)c1ccc(OC)c1I
Ne1ccc(CCO)cc1I
O=Cc1ccc(I)c(F)c1
CCOc1cc(C=C/c2ccc3ccc(OC)c3n2)cc(I)c1OC(C)=O
Fc1ccc(I)c1F
COc1ccc(C#N)c1I
COc1cc(OC)c2c(=O)cc(-c3ccc(OC(C)C)c(I)c3)oc2c1
CC(C)C)c1ccc(N)c(I)c1
Fe1c(Cl)ccc(-n2cc(C(F)F)nn2)c1I
CC(=O)c1ccc(O)c(I)c1
Ne1c(Br)cc(C(F)F)cc1I
COc1cc(Br)cc(Cl)c1I
Ne1ccc(F)c(I)c1
OC1=N/C(=C/c2ccc(O)c(I)c2)C(O)=N1
O=Cc1ccc(Br)c(I)c1F
Cc1cc(N)c(I)cc1C
COc1cc(C=N/NC(=O)c2ccc2)cc(I)c1OC
Fe1c(Cl)cc(C(F)F)cc1I
N#Cc1ccc(I)c1F
CCOC(=O)c1cc(Br)c(N)c(I)c1
CC(C)C)c1ccc(I)c(O)c1
Cc1cc(I)c(O)c(C(=O)O)c1
COc1ccc(-c2nc3ccc3s2)cc1I
O=Cc1ccc(Cl)c(I)c1O
CC(=O)c1ccc(I)c(F)c1F
O=Cc1ccc(O)c(O)c1I
CCOc1cc(C=C2C(O)=NC(=S)N=C2O)cc(I)c1OC
Ne1cc(F)cc(Br)c1I
COc1ccc(Br)c1I
COc1c(C)cc([N+](=O)[O-])cc1I
OB(O)c1ccc(I)c(F)c1F
Fe1ccc(Cl)c(Br)c1I