Supporting Information

Structure–Activity Studies on Bis-Sulfonamide SHIP1 Activators

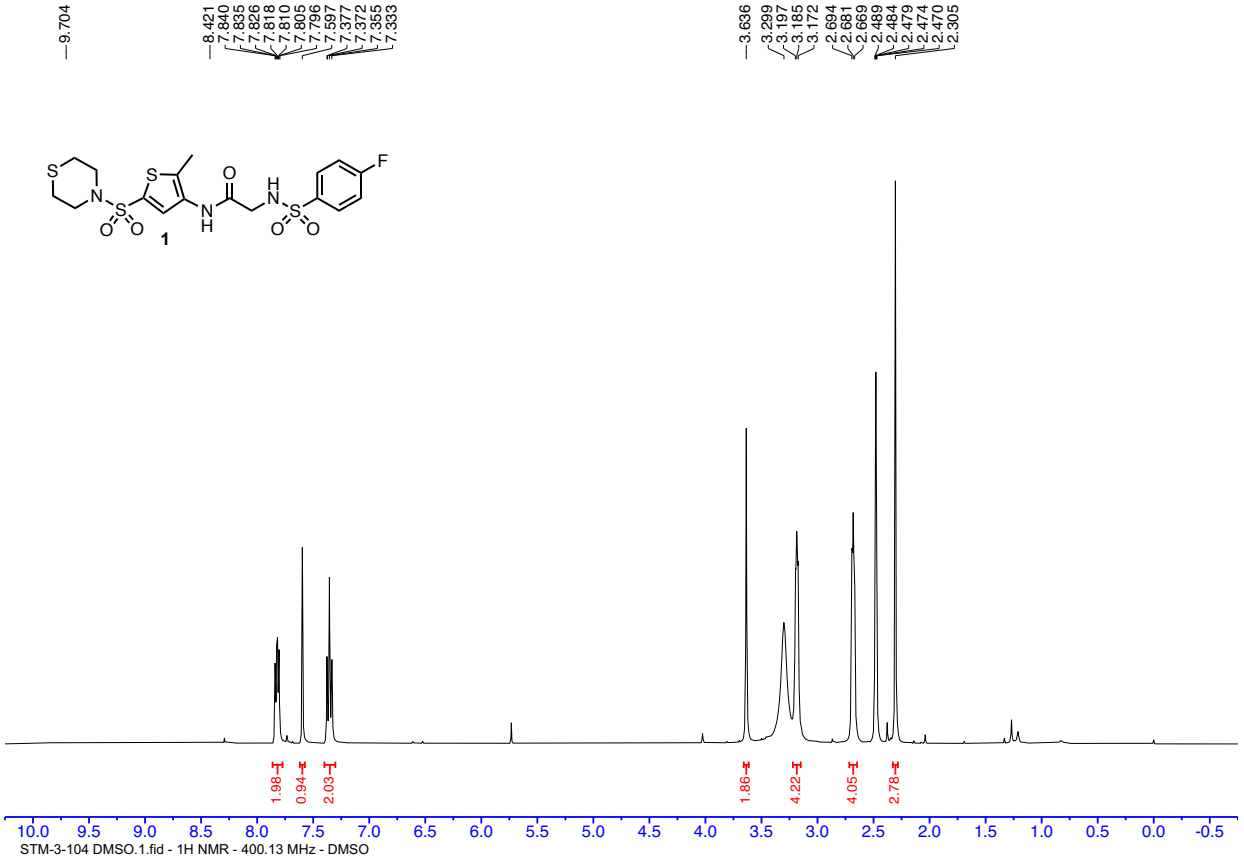
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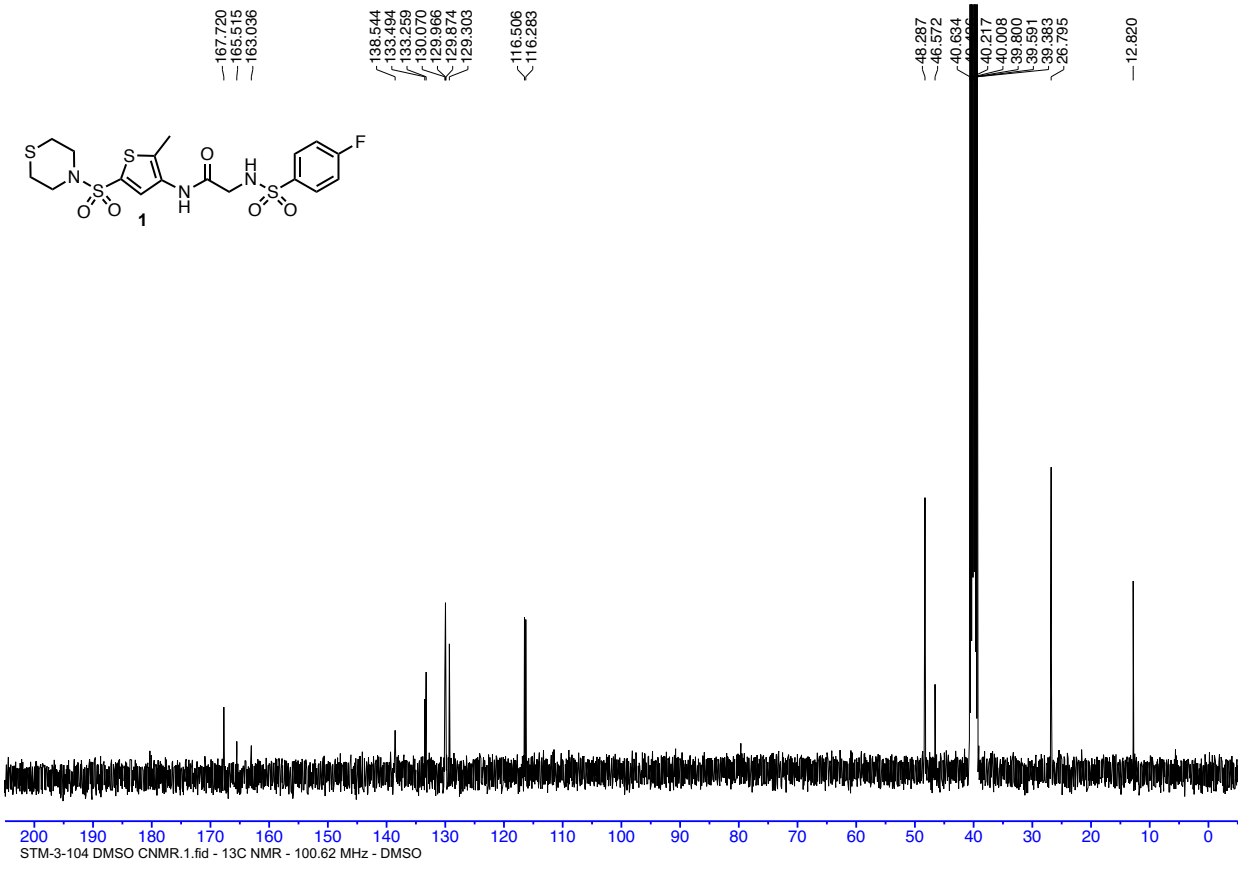
[1]Department of Chemistry, Syracuse University, Syracuse, NY, USA and [2]Department of Microbiology & Immunology, SUNY Upstate Medical University, Syracuse, NY, USA

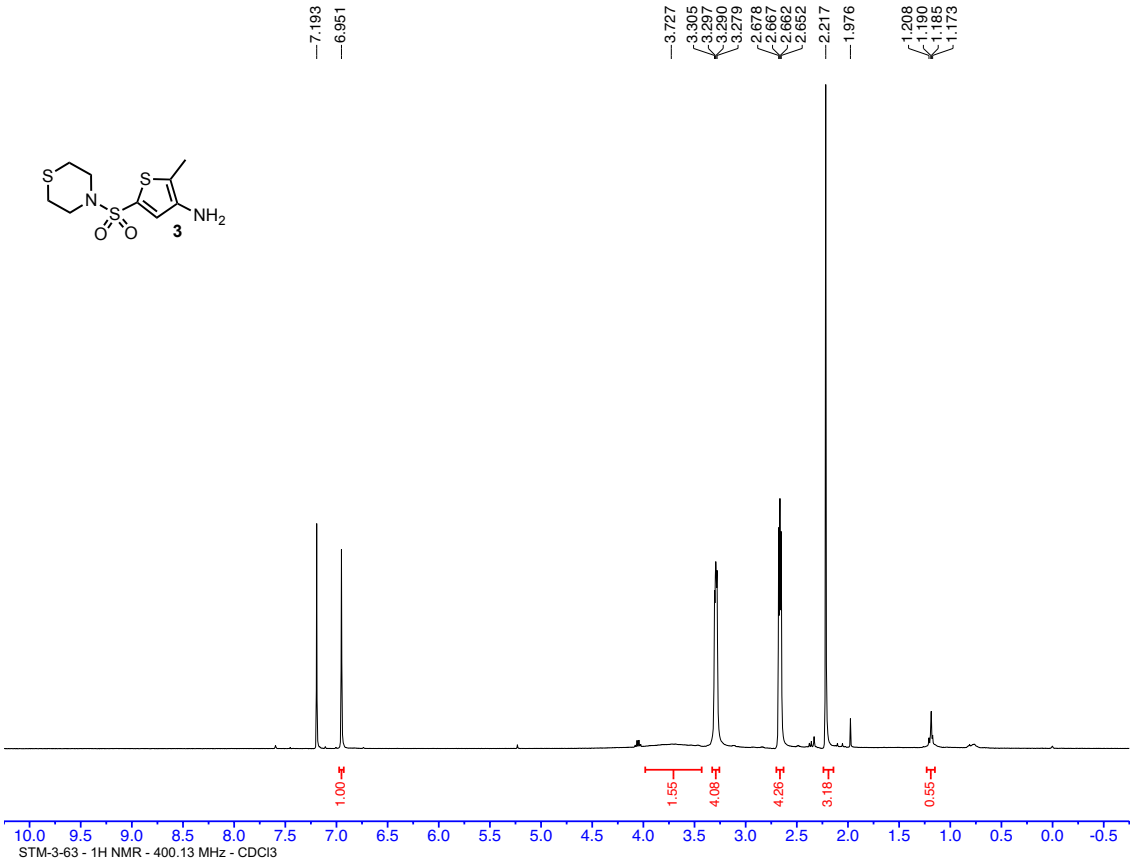
jdchisho@syr.edu

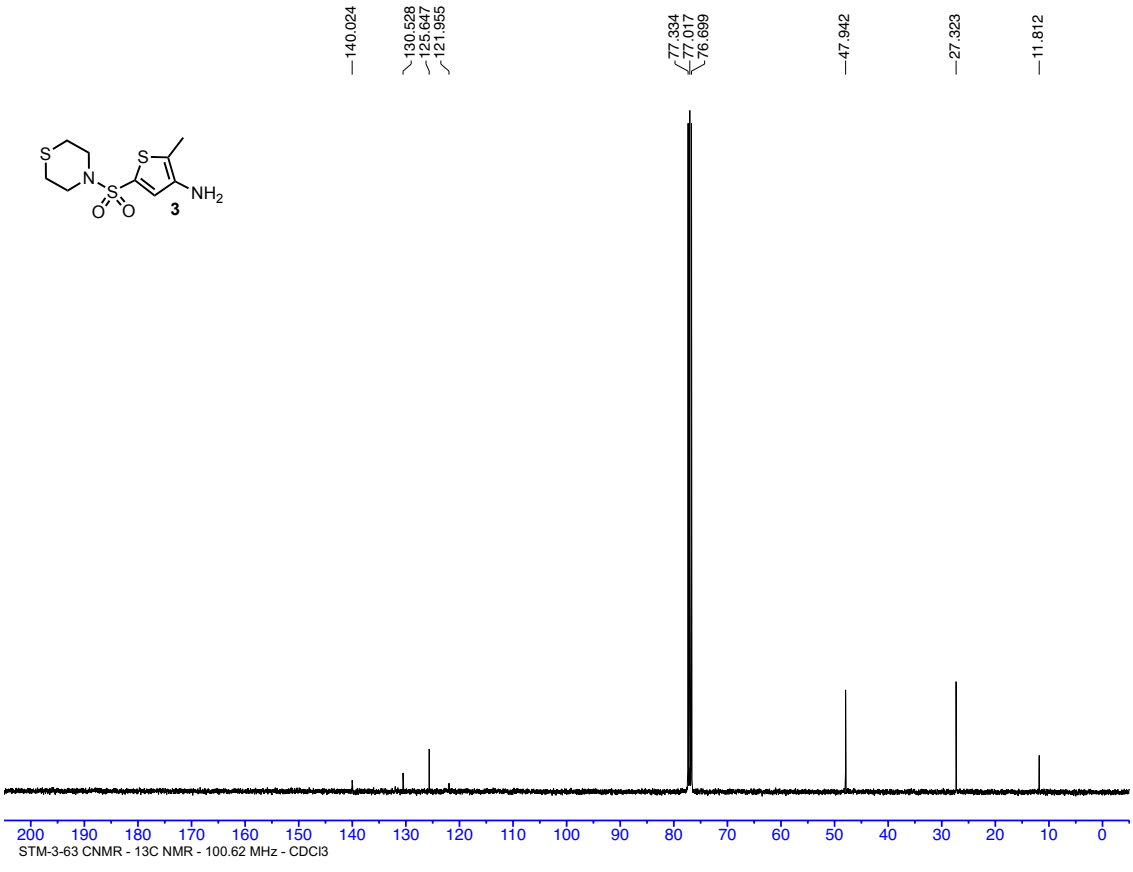
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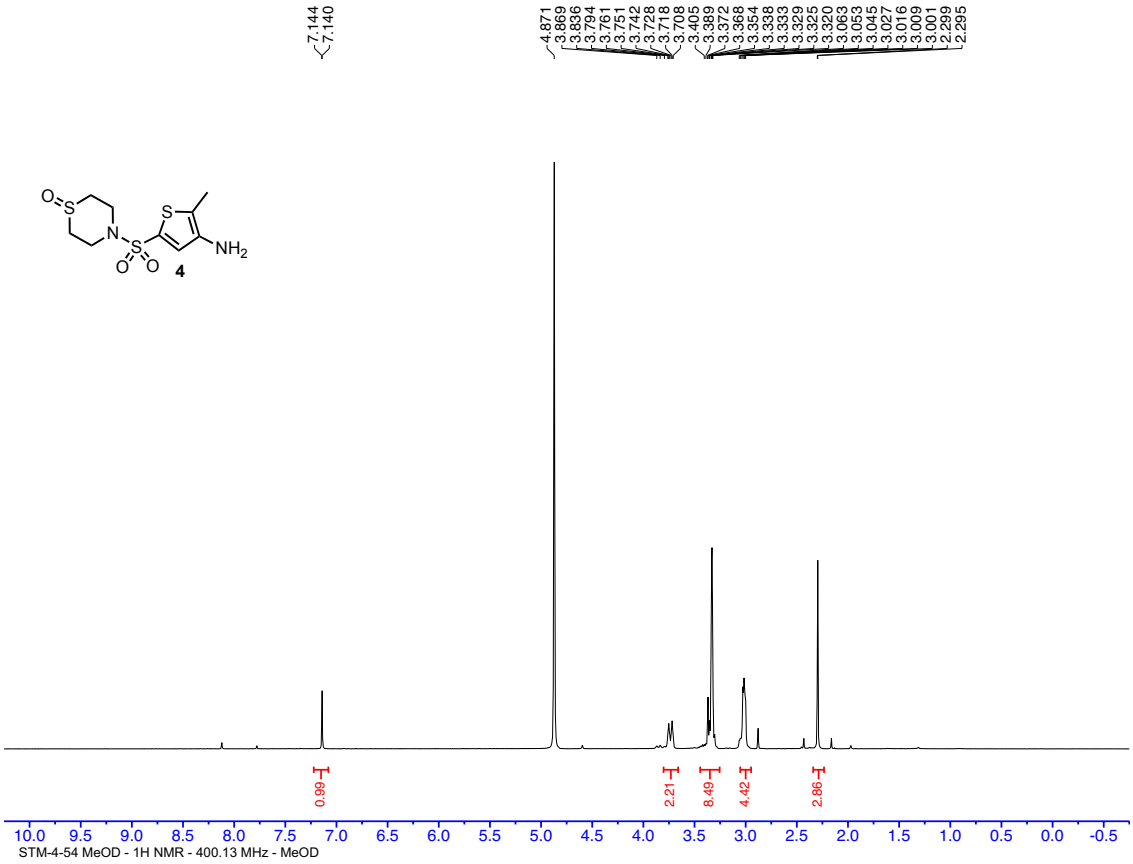
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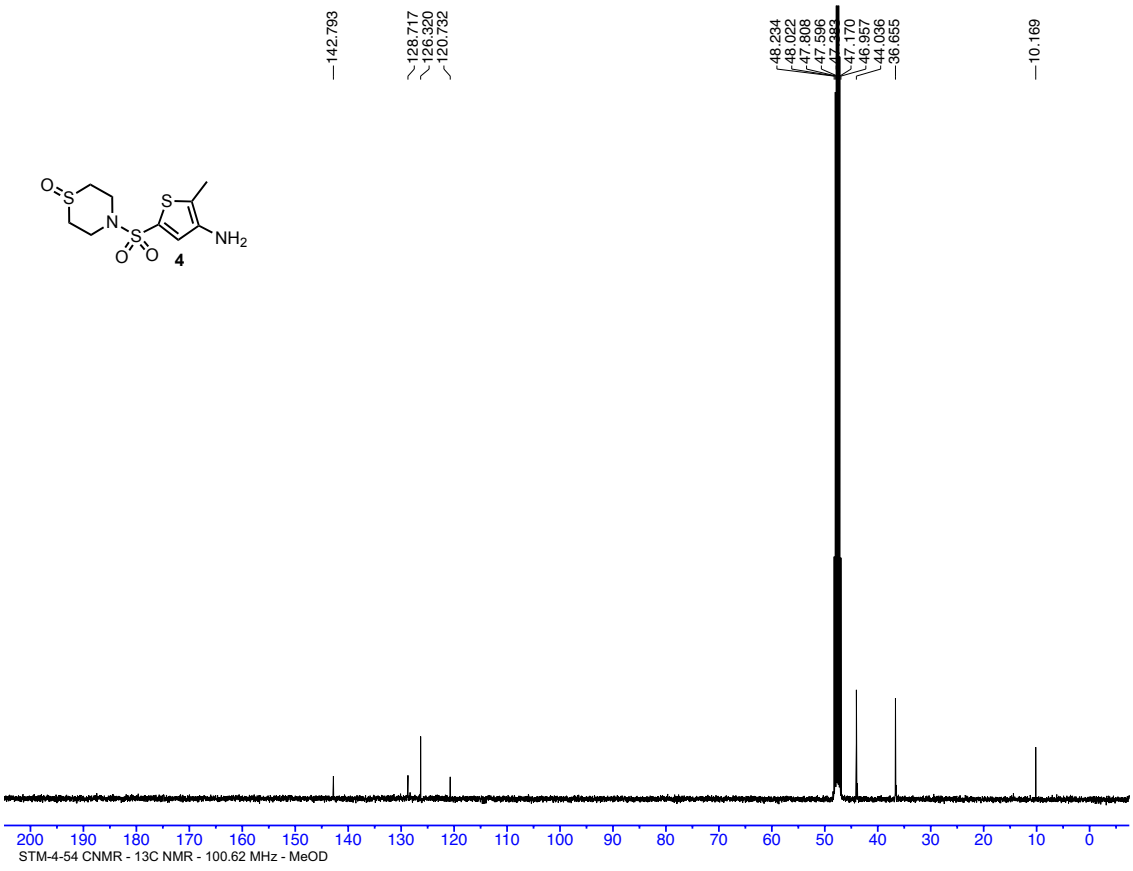

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7.840
7.835
7.826
7.818
7.810
7.805
7.796
7.597
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7.372
7.355
7.333
3.636
3.299
3.197
3.185
3.172
2.694
2.681
2.669
2.489
2.484
2.479
2.474
2.470
2.305
1
1.98
0.94
2.03
1.86
4.22
4.05
2.78
STM-3-104 DMSO.1.fid - 1H NMR - 400.13 MHz - DMSO

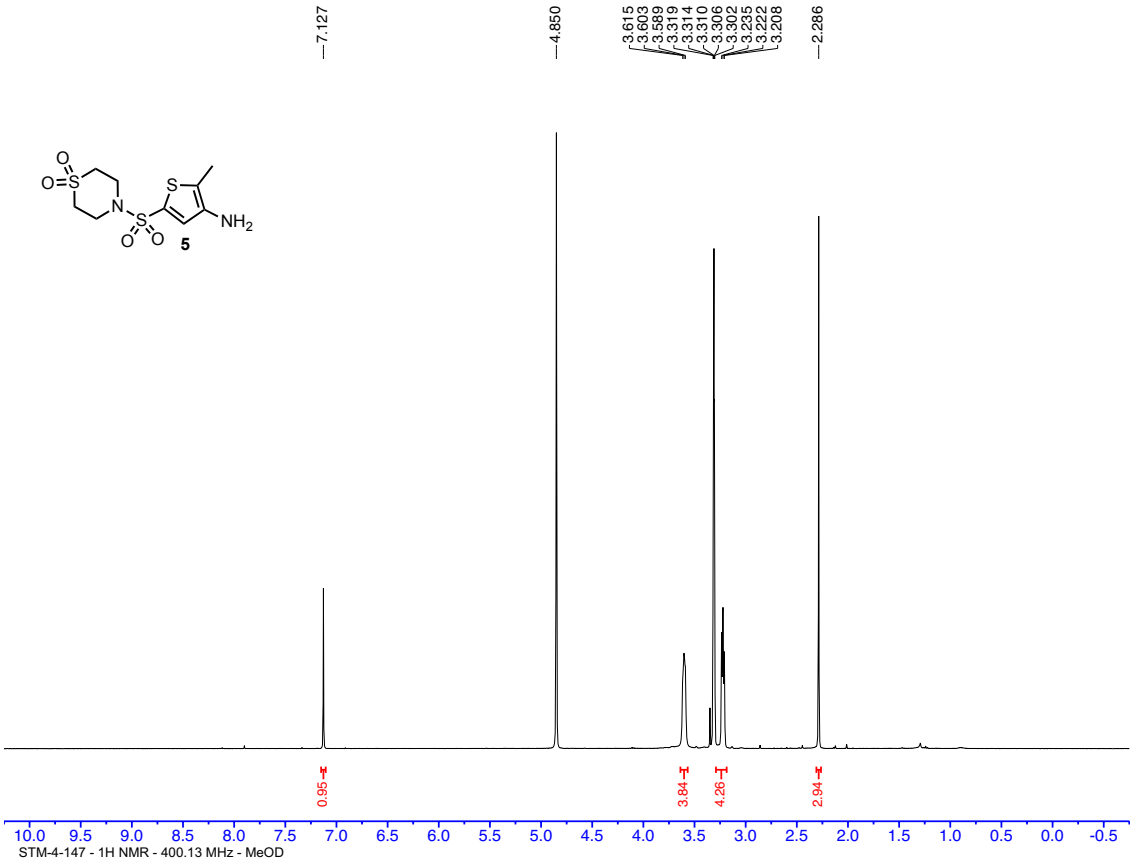

167.720
165.515
163.036
138.544
133.494
133.259
130.070
129.966
129.874
129.303
116.506
116.283
48.287
46.572
40.634
40.217
40.008
39.800
39.591
39.383
26.795
12.820
1
STM-3-104 DMSO CNMR.1.fid - 13C NMR - 100.62 MHz - DMSO

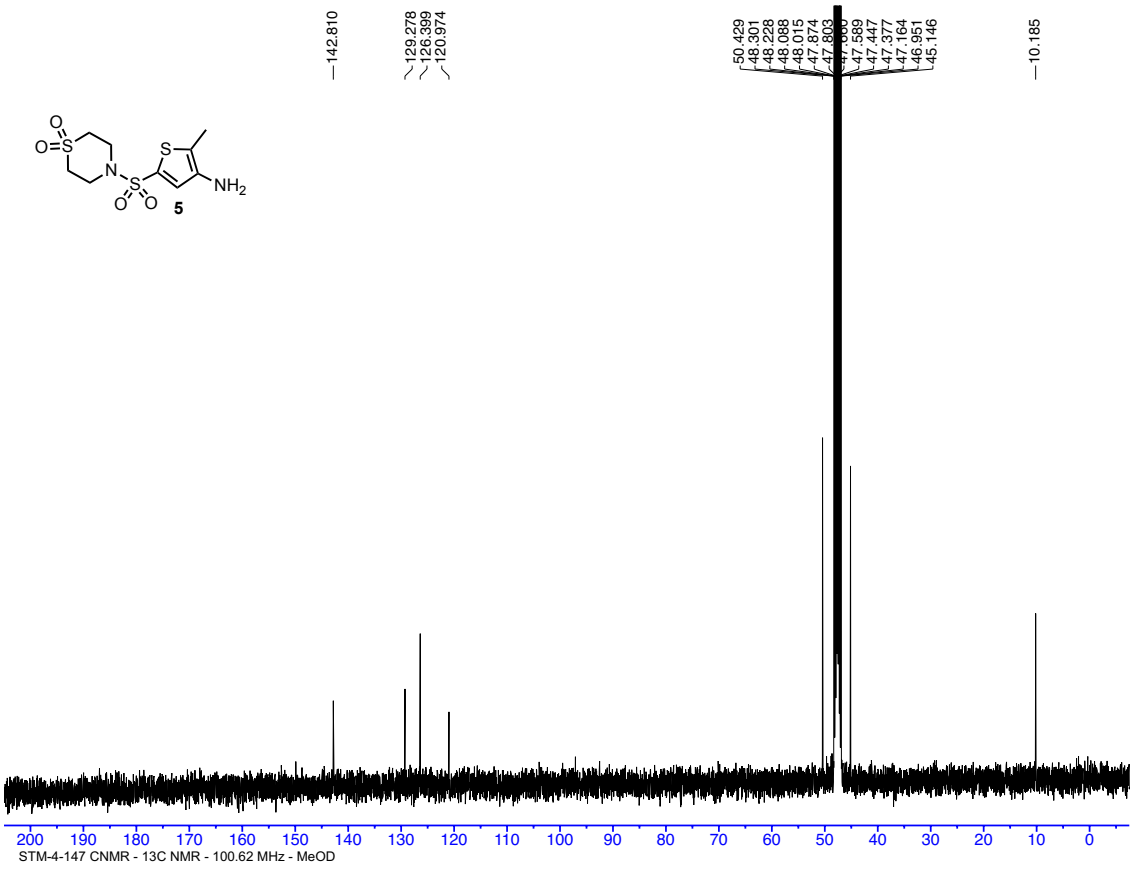

7.193
6.951
3.727
3.305
3.297
3.290
3.279
2.678
2.667
2.662
2.652
2.217
1.976
1.208
1.190
1.185
1.173
3
1.00
1.55
4.08
4.26
3.18
0.55
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-3-63 - 1H NMR - 400.13 MHz - CDCl3

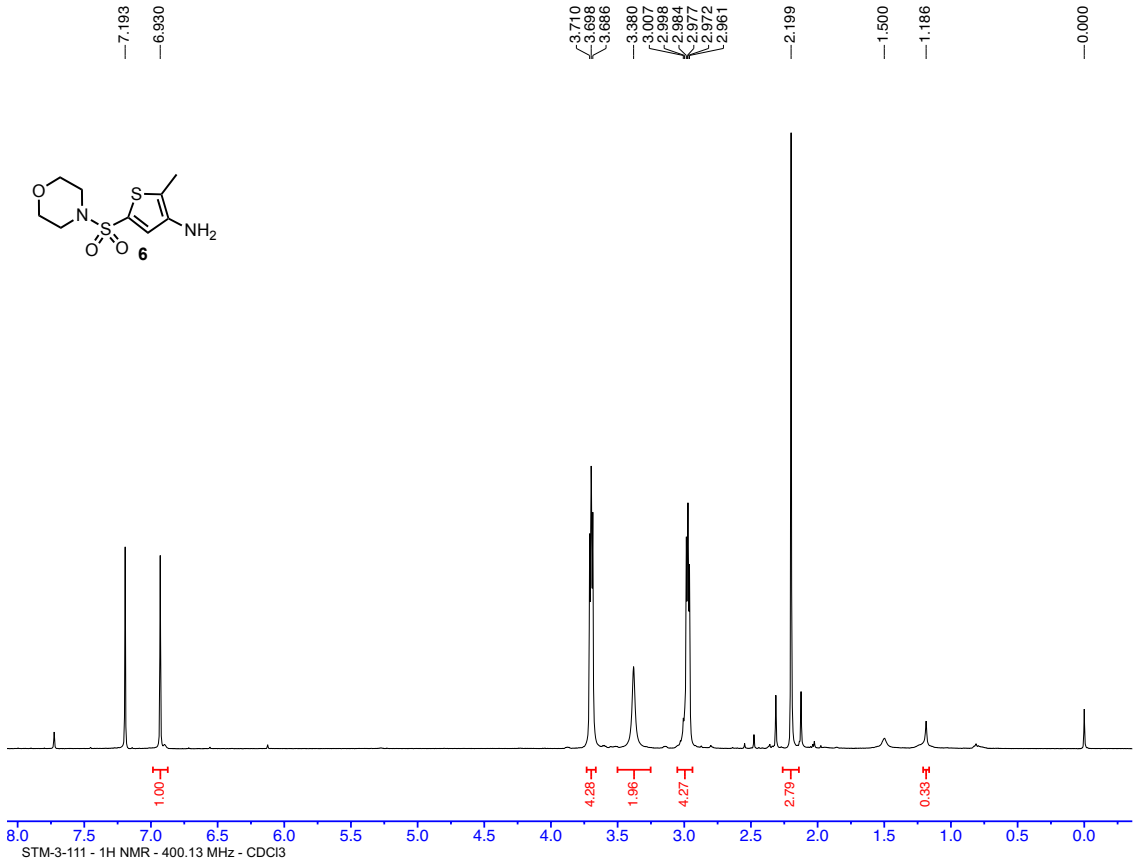

140.024
130.528
125.647
121.955
77.334
77.017
76.699
47.942
27.323
11.812
3
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-3-63 CNMR - 13C NMR - 100.62 MHz - CDCl3

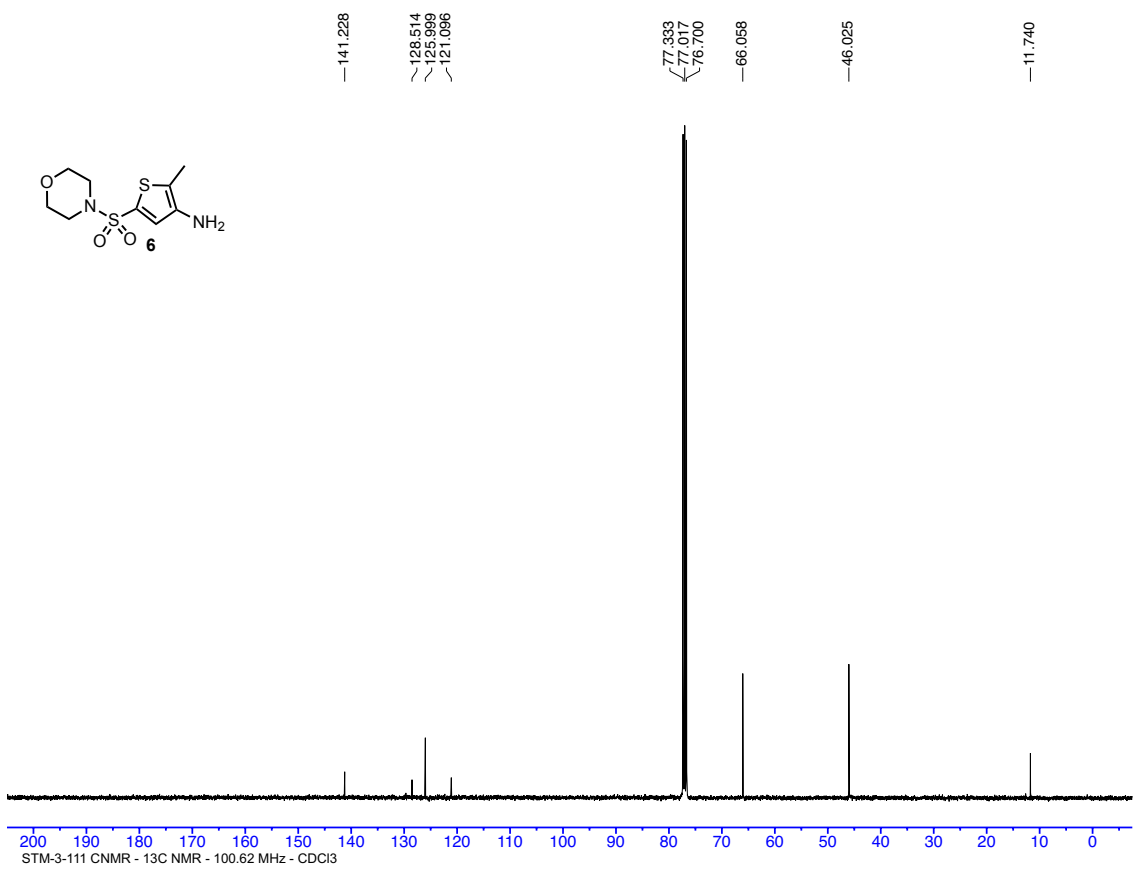

7.144
7.140
4.871
3.869
3.836
3.794
3.761
3.751
3.742
3.728
3.718
3.708
3.405
3.389
3.372
3.368
3.354
3.338
3.333
3.329
3.325
3.320
3.063
3.053
3.045
3.027
3.016
3.009
3.001
2.299
2.295
4
0.99
2.21
8.49
4.42
2.86
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-54 MeOD - 1H NMR - 400.13 MHz - MeOD

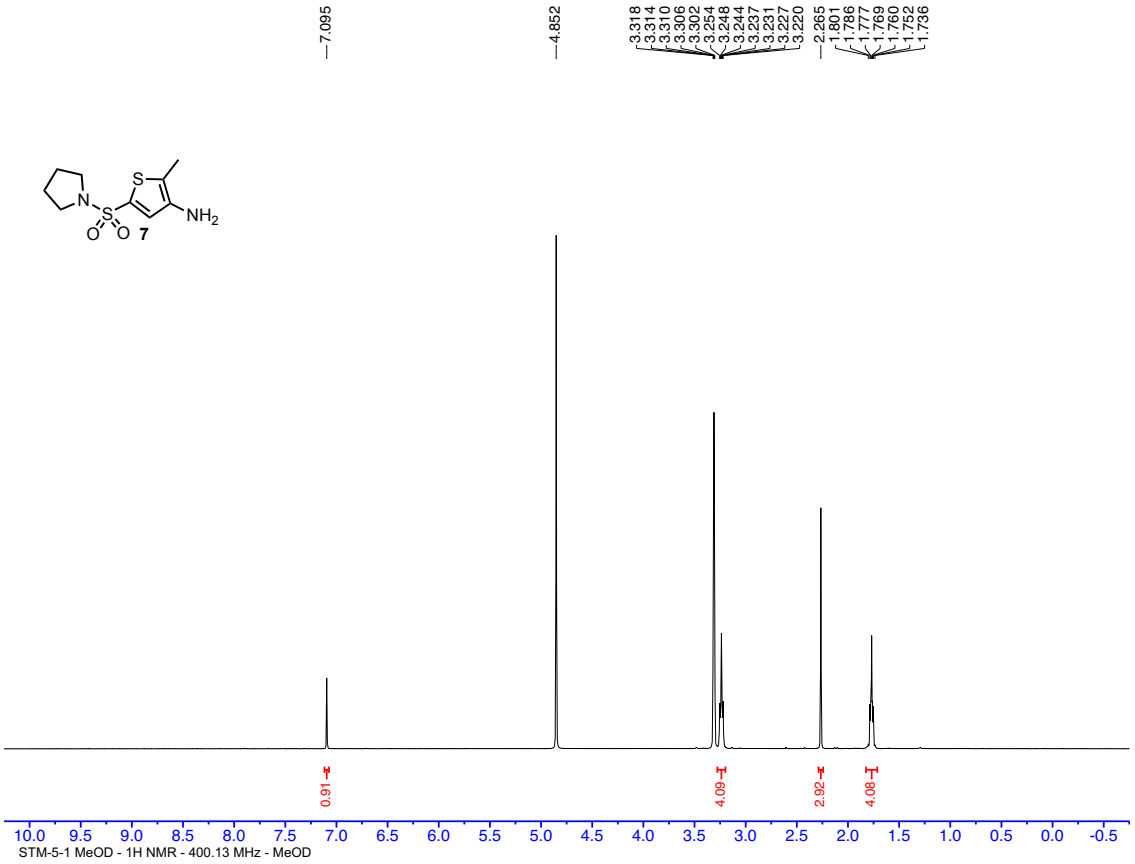

142.793
128.717
126.320
120.732
48.234
48.022
47.808
47.596
47.383
47.170
46.957
44.036
36.655
10.169
4
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STM-4-54 CNMR - 13C NMR - 100.62 MHz - MeOD

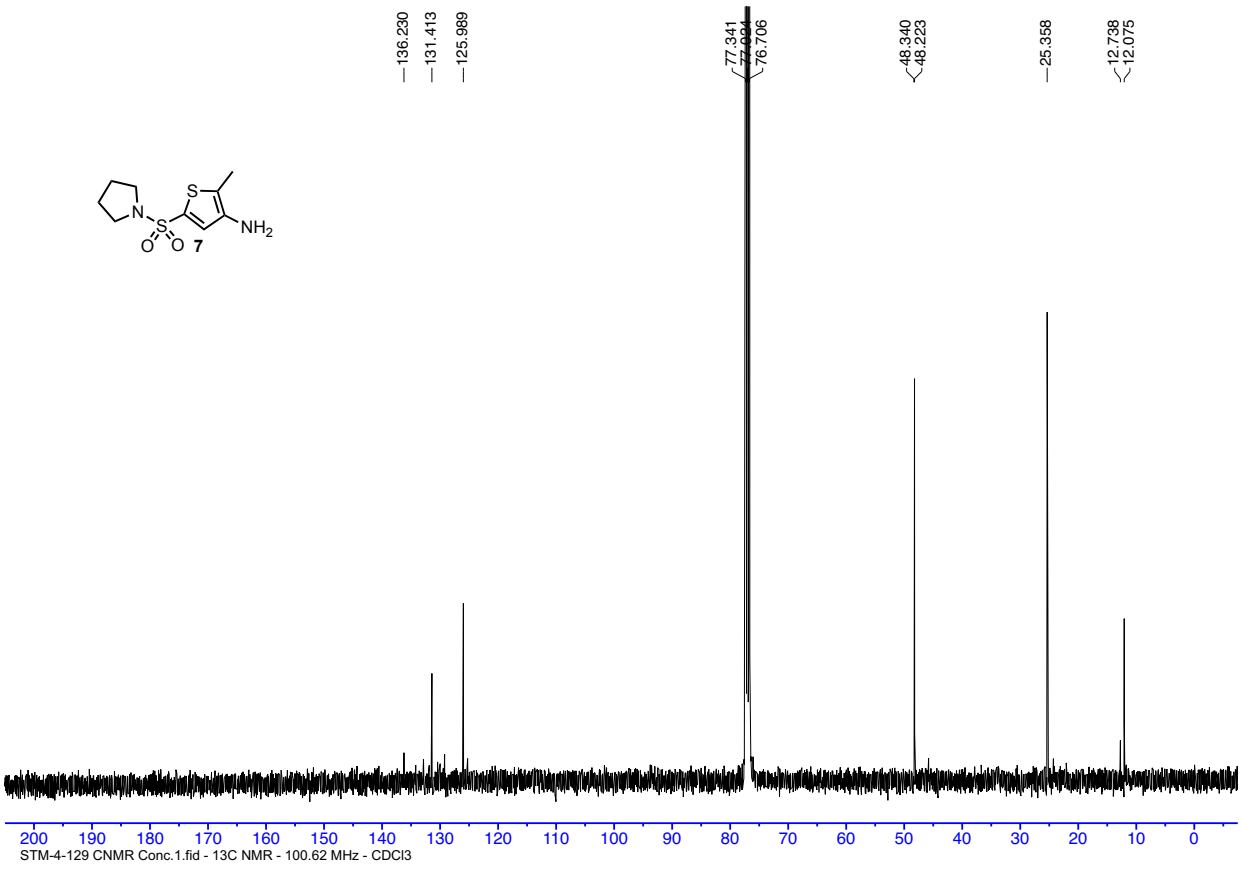

7.127
4.850
3.615
3.603
3.589
3.319
3.314
3.310
3.306
3.302
3.235
3.222
3.208
2.286
0.95
3.84
4.26
2.94
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-147 - 1H NMR - 400.13 MHz - MeOD

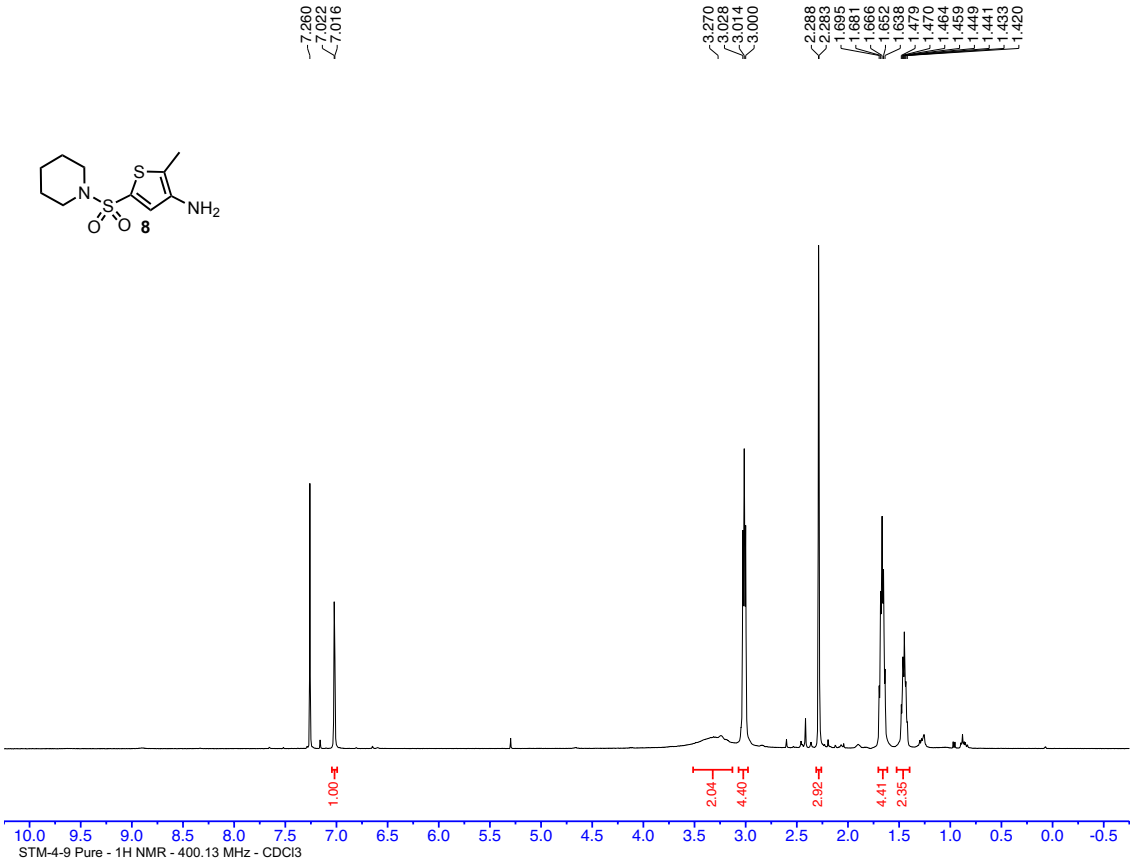

142.810
129.278
126.399
120.974
50.429
48.301
48.228
48.088
48.015
47.874
47.803
47.589
47.447
47.377
47.164
46.951
45.146
10.185
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STM-4-147 CNMR - 13C NMR - 100.62 MHz - MeOD

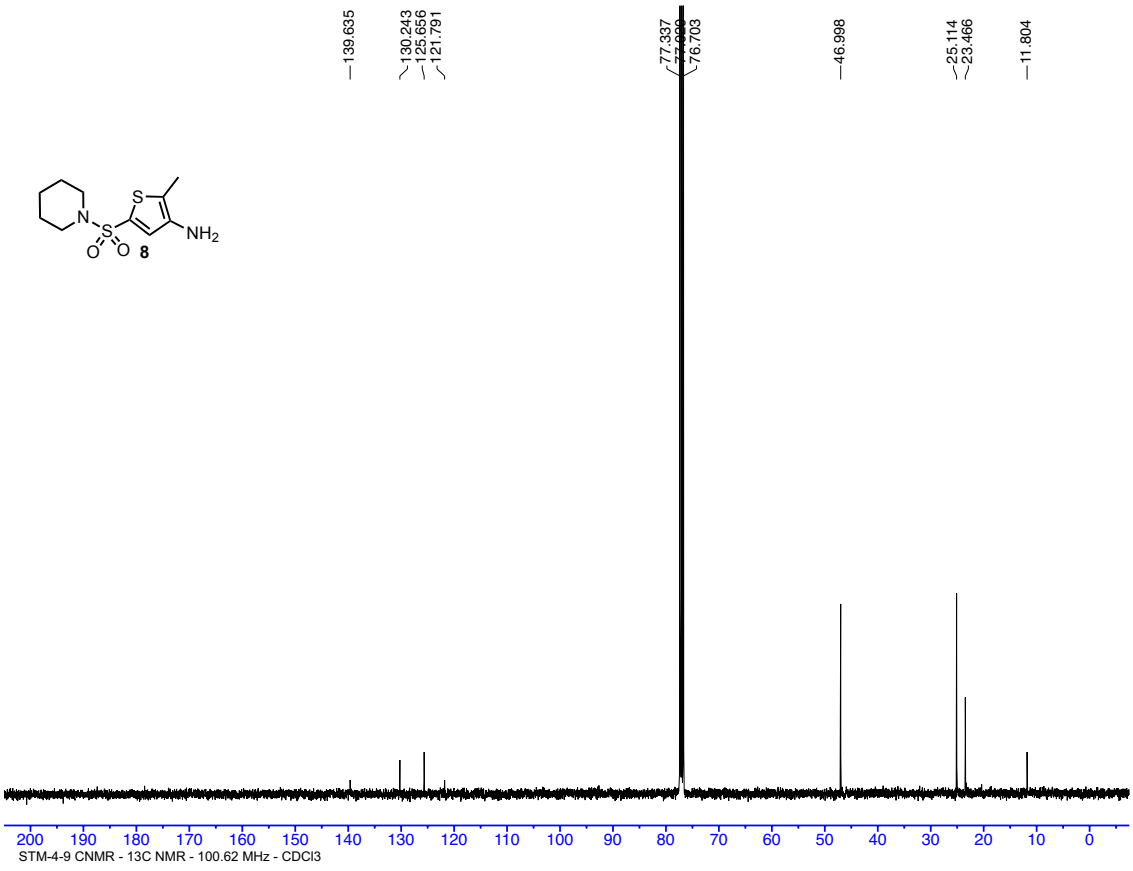

7.193
6.930
3.710
3.698
3.686
3.380
3.007
2.998
2.984
2.977
2.972
2.961
2.199
1.500
1.186
0.000
6
1.00
4.28
1.96
4.27
2.79
0.33
8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
STM-3-111 - 1H NMR - 400.13 MHz - CDCl3

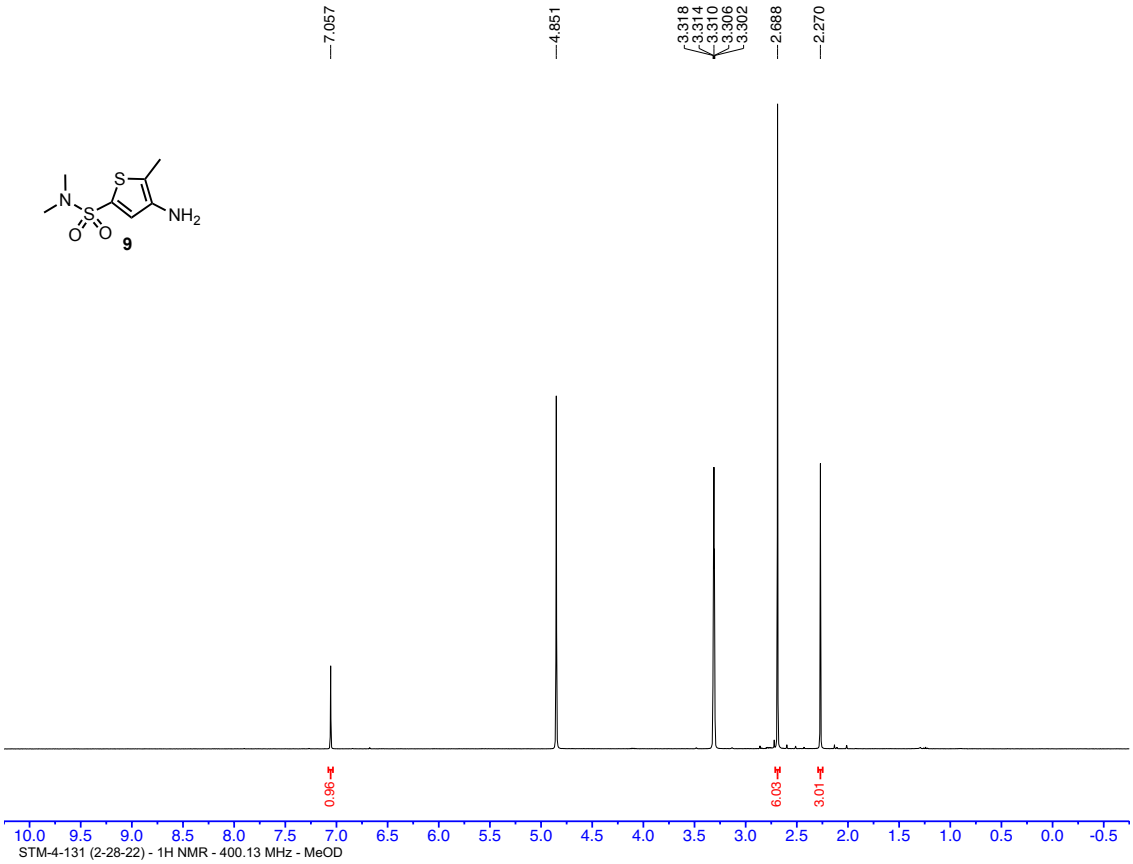

141.228
128.514
125.999
121.096
77.333
77.017
76.700
66.058
46.025
11.740
6
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-3-111 CNMR - 13C NMR - 100.62 MHz - CDCl3

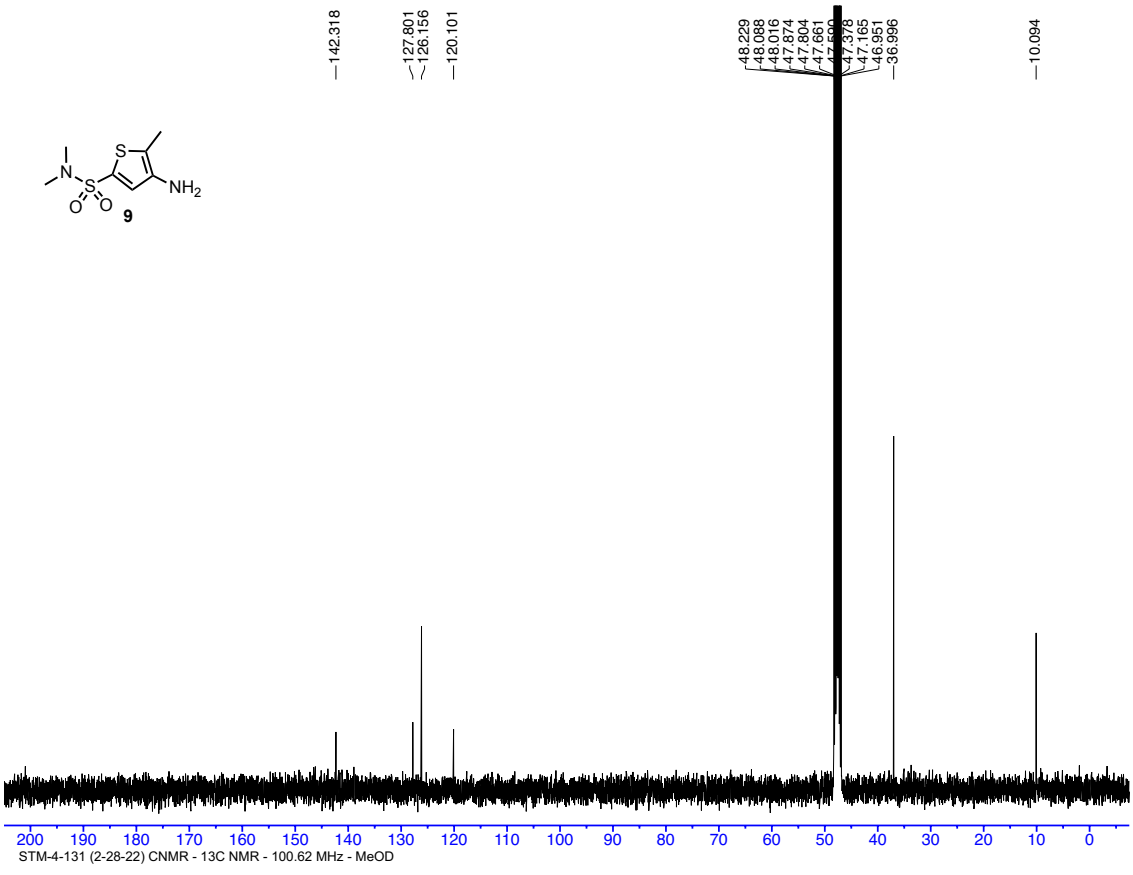

7.095
4.852
3.318
3.314
3.310
3.306
3.302
3.254
3.248
3.244
3.237
3.231
3.227
3.220
2.265
1.801
1.786
1.777
1.769
1.760
1.752
1.736
7
NH2
0.91
4.09
2.92
4.08
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-1 MeOD - 1H NMR - 400.13 MHz - MeOD

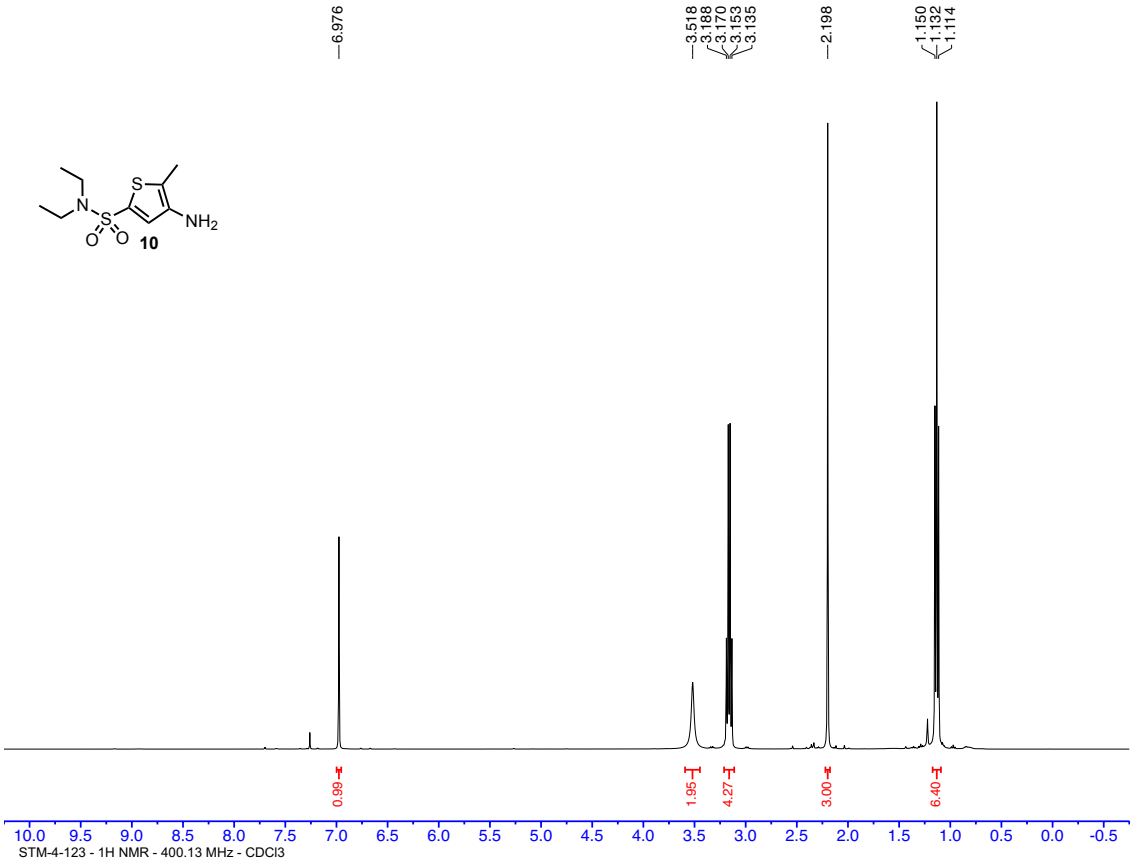

136.230
131.413
125.989
77.341
77.024
76.706
48.340
48.223
25.358
12.738
12.075
7
NH2
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-129 CNMR Conc.1.fid - 13C NMR - 100.62 MHz - CDCl3

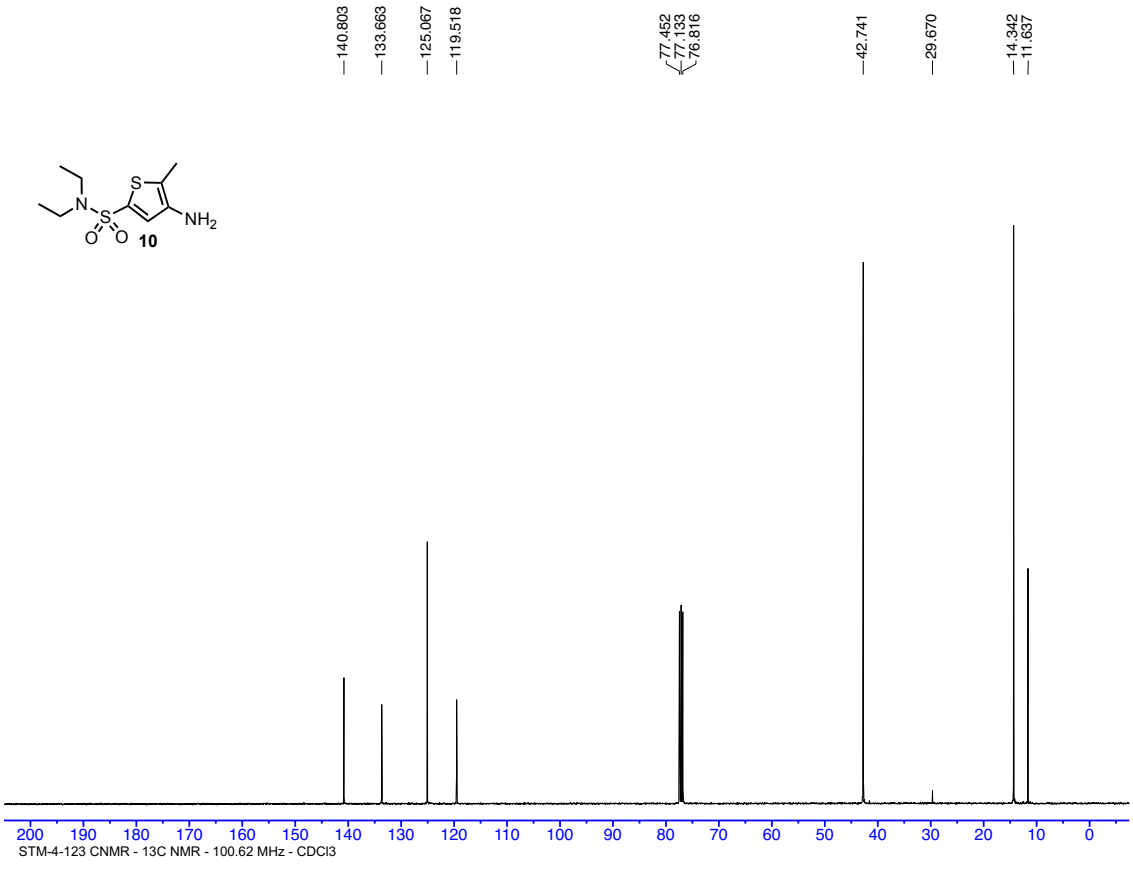

7.260
7.022
7.016
3.270
3.028
3.014
3.000
2.288
2.283
1.695
1.681
1.666
1.652
1.638
1.479
1.470
1.464
1.459
1.449
1.441
1.433
1.420
NH2
8
1.00
2.04
4.40
2.92
4.41
2.35
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-9 Pure - 1H NMR - 400.13 MHz - CDCl3

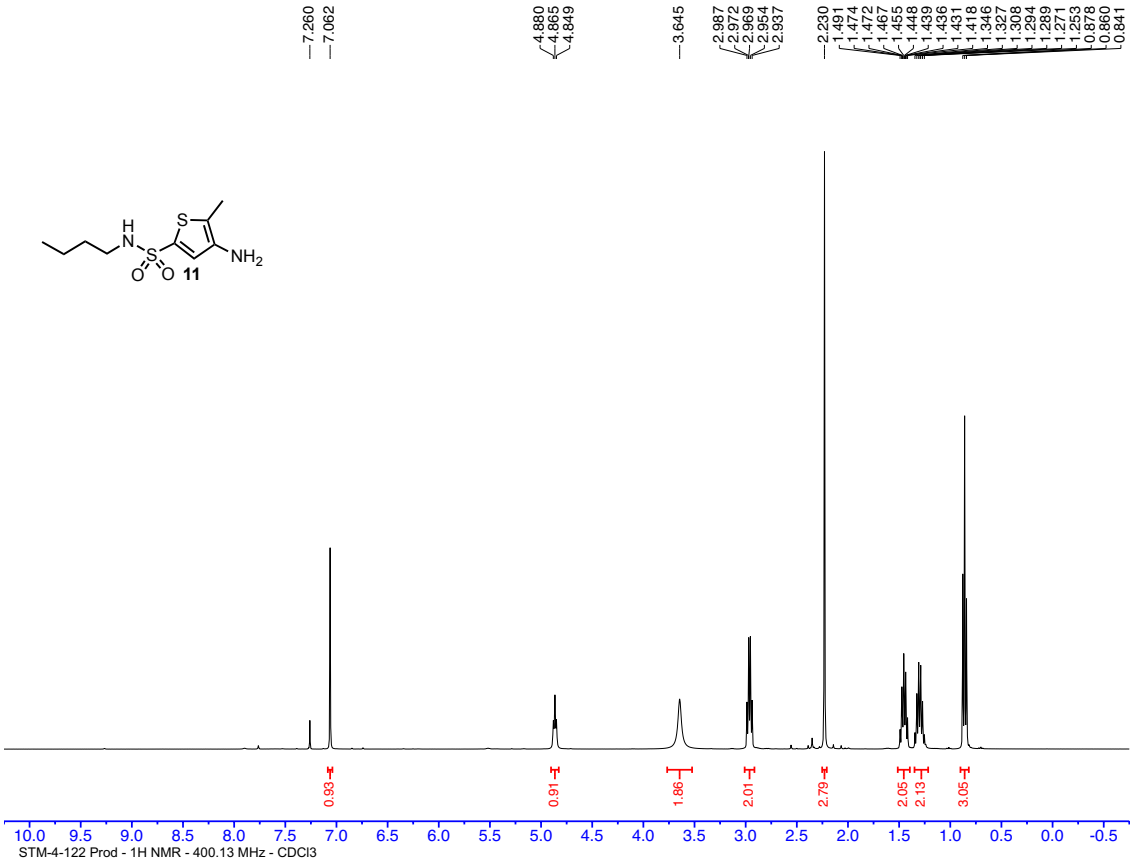

139.635
130.243
125.656
121.791
77.337
77.020
76.703
46.998
25.114
23.466
11.804
NH2
8
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-9 CNMR - 13C NMR - 100.62 MHz - CDCl3

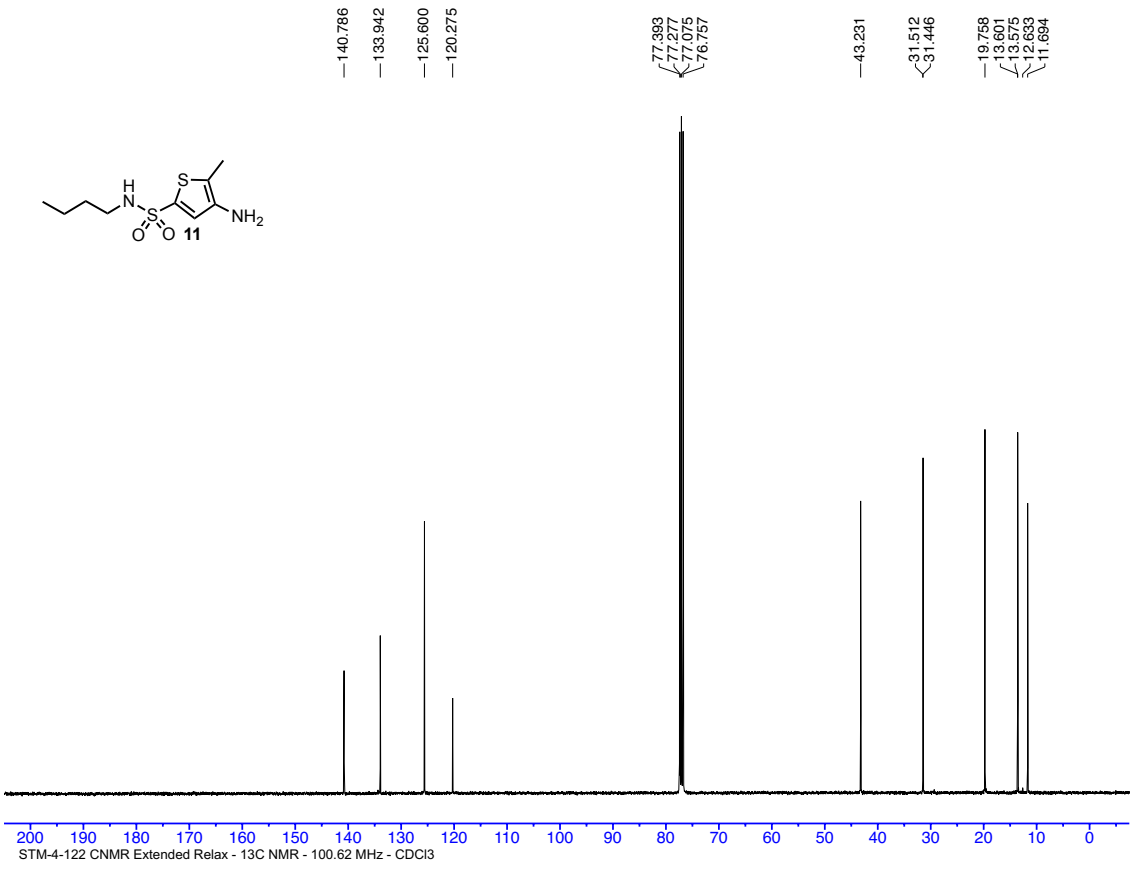

7.057
4.851
3.318
3.314
3.310
3.306
3.302
2.688
2.270
0.96
6.03
3.01
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-131 (2-28-22) - 1H NMR - 400.13 MHz - MeOD

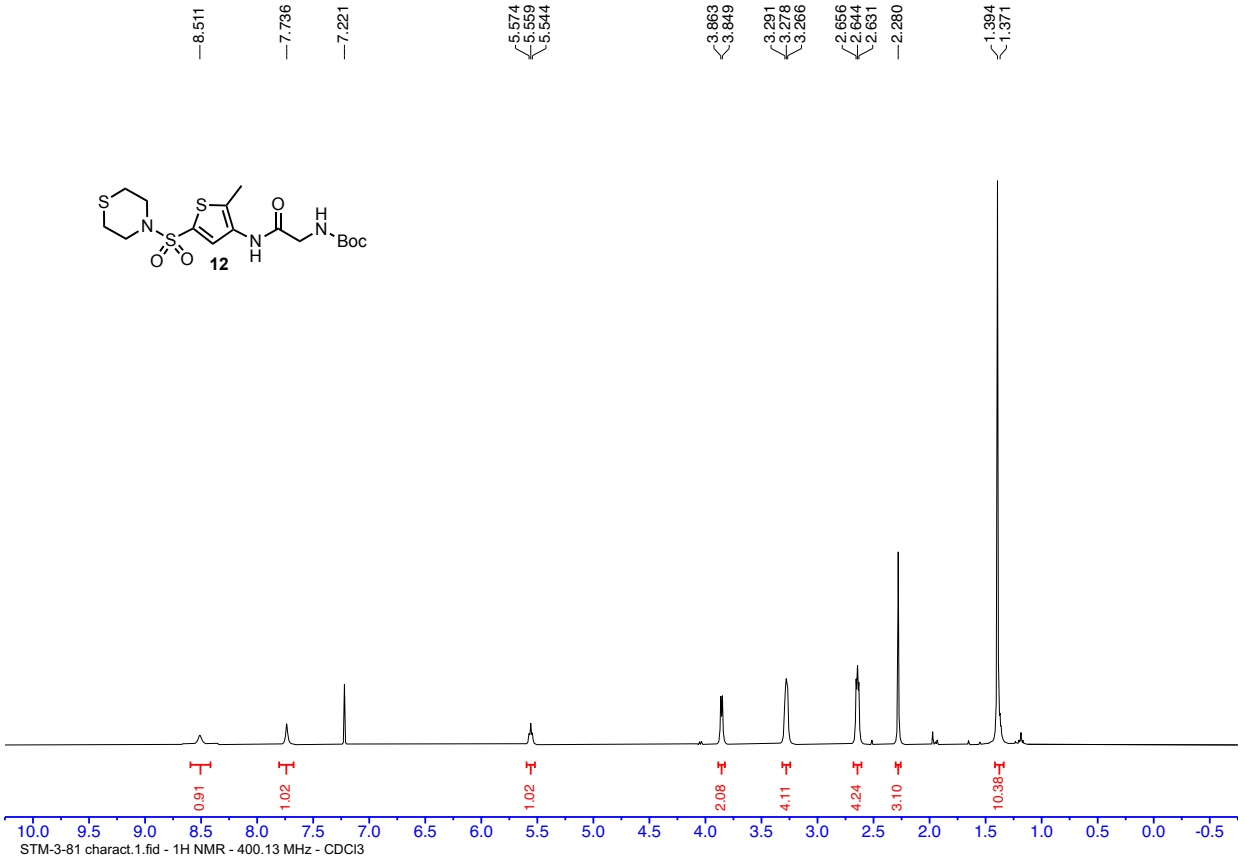

142.318
127.801
126.156
120.101
48.229
48.088
48.016
47.874
47.804
47.661
47.590
47.378
47.165
46.951
36.996
10.094
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-131 (2-28-22) CNMR - 13C NMR - 100.62 MHz - MeOD

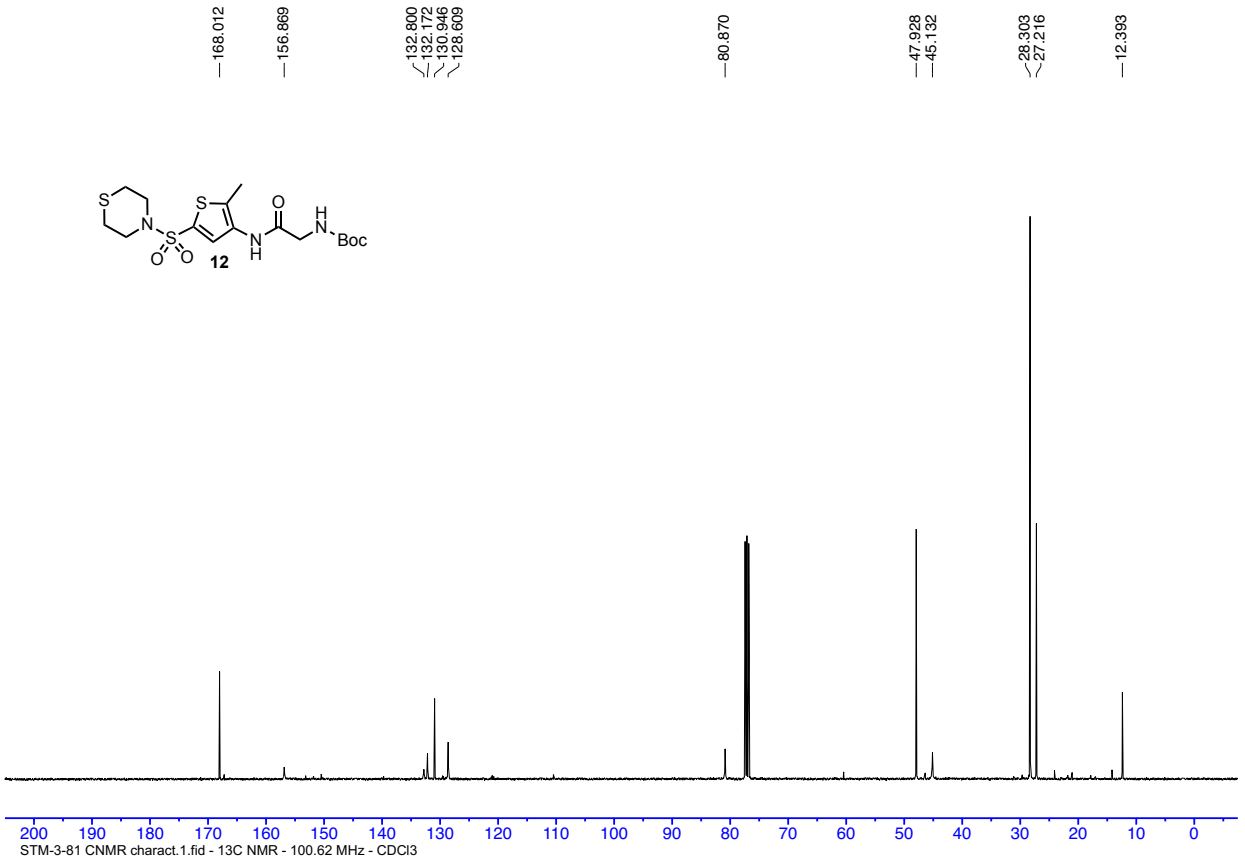

6.976
3.518
3.188
3.170
3.153
3.135
2.198
1.150
1.132
1.114
NH2
10
0.99
1.95
4.27
3.00
6.40
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-123 - 1H NMR - 400.13 MHz - CDCl3

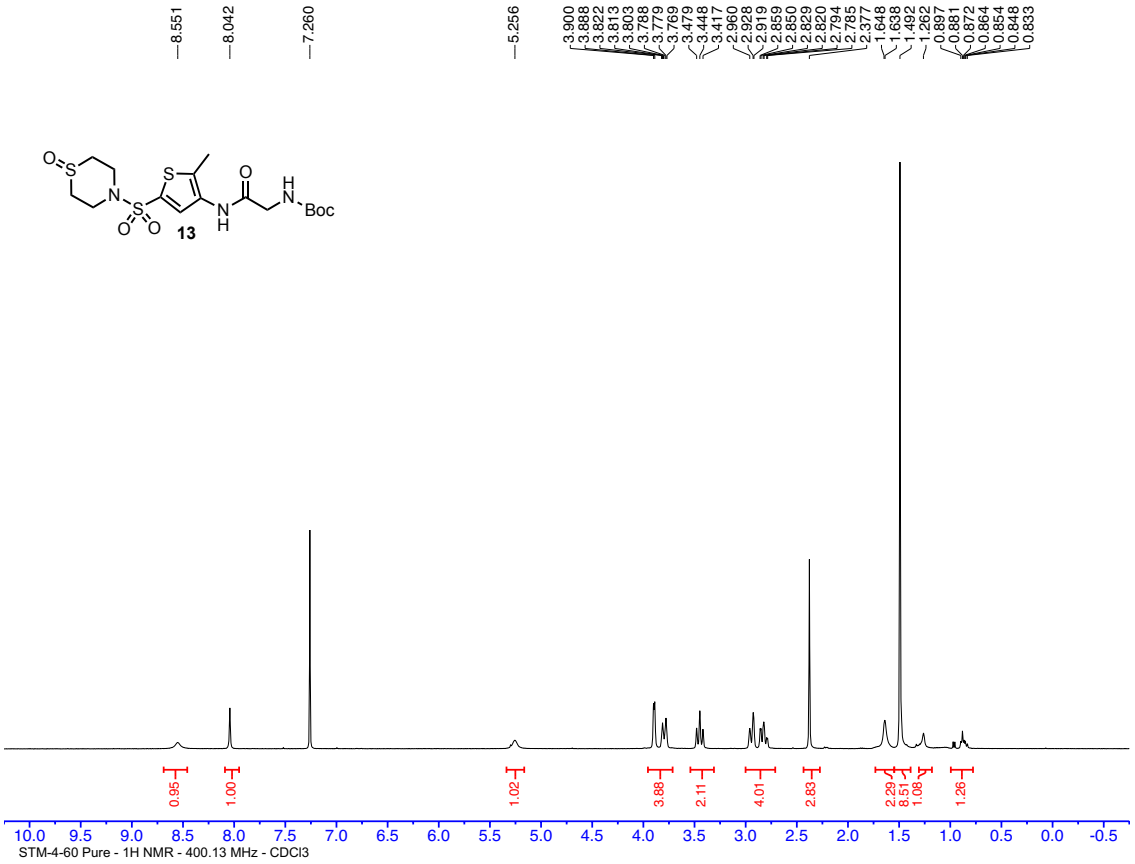

140.803
133.663
125.067
119.518
77.452
77.133
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42.741
29.670
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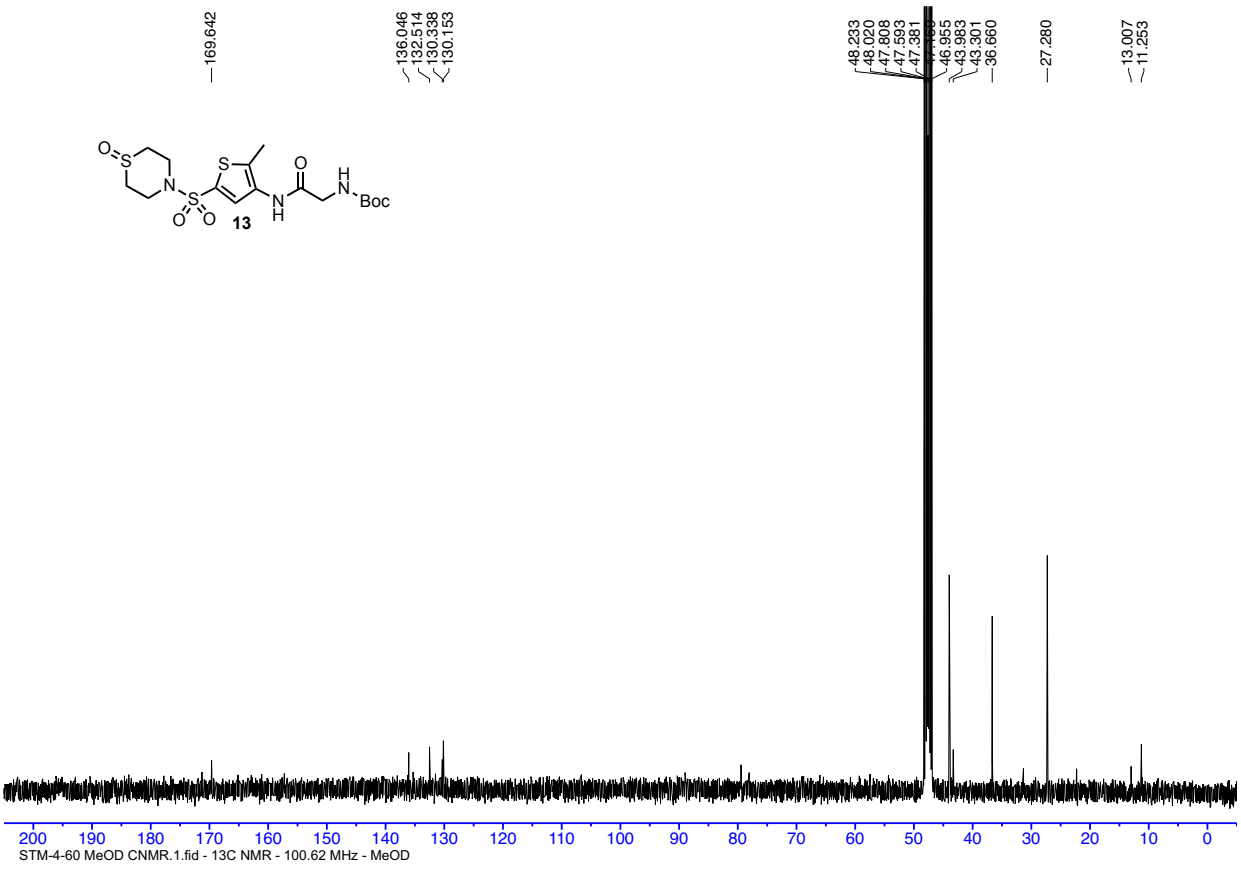

7.260
7.062
4.880
4.865
4.849
3.645
2.987
2.972
2.969
2.954
2.937
2.230
1.491
1.474
1.472
1.467
1.455
1.448
1.439
1.436
1.431
1.418
1.346
1.327
1.308
1.294
1.289
1.271
1.253
0.878
0.860
0.841
11
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2.05
2.13
3.05
STM-4-122 Prod - 1H NMR - 400.13 MHz - CDCl3

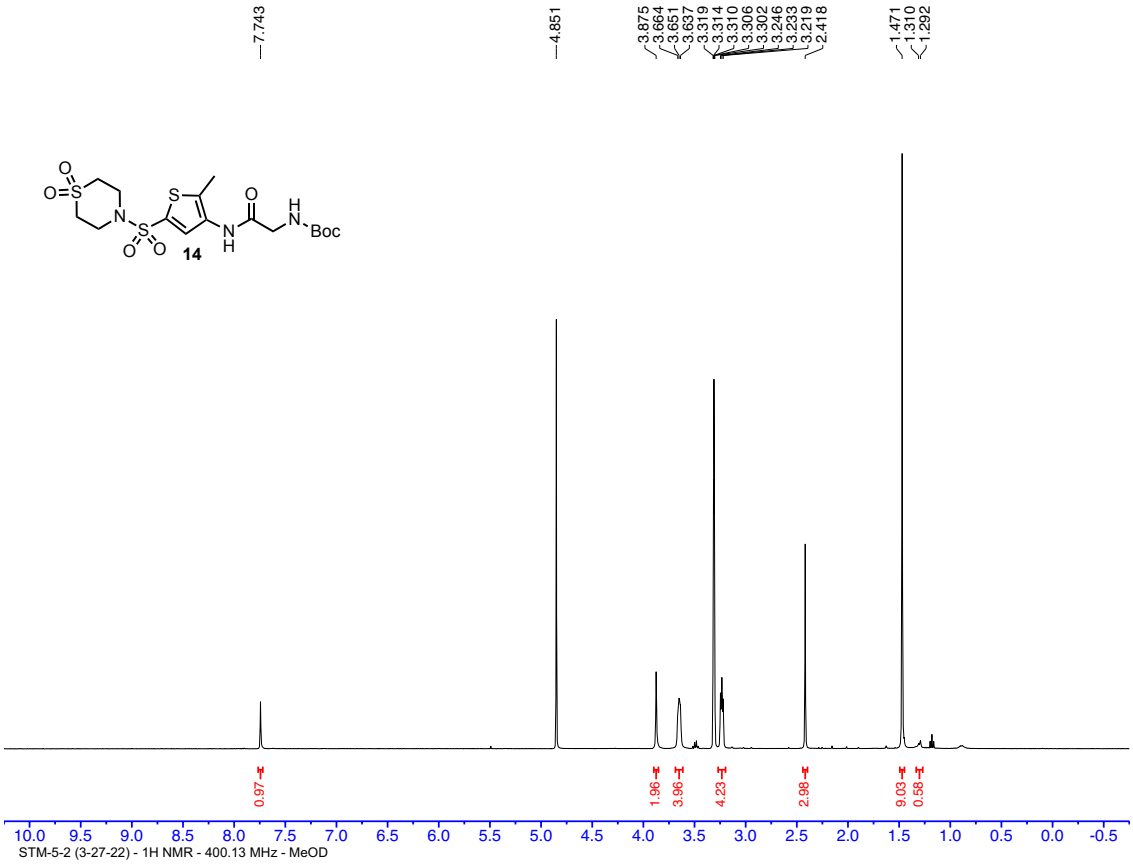

140.786
133.942
125.600
120.275
77.393
77.277
77.075
76.757
43.231
31.512
31.446
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13.601
13.575
12.633
11.694
11
STM-4-122 CNMR Extended Relax - 13C NMR - 100.62 MHz - CDCl3

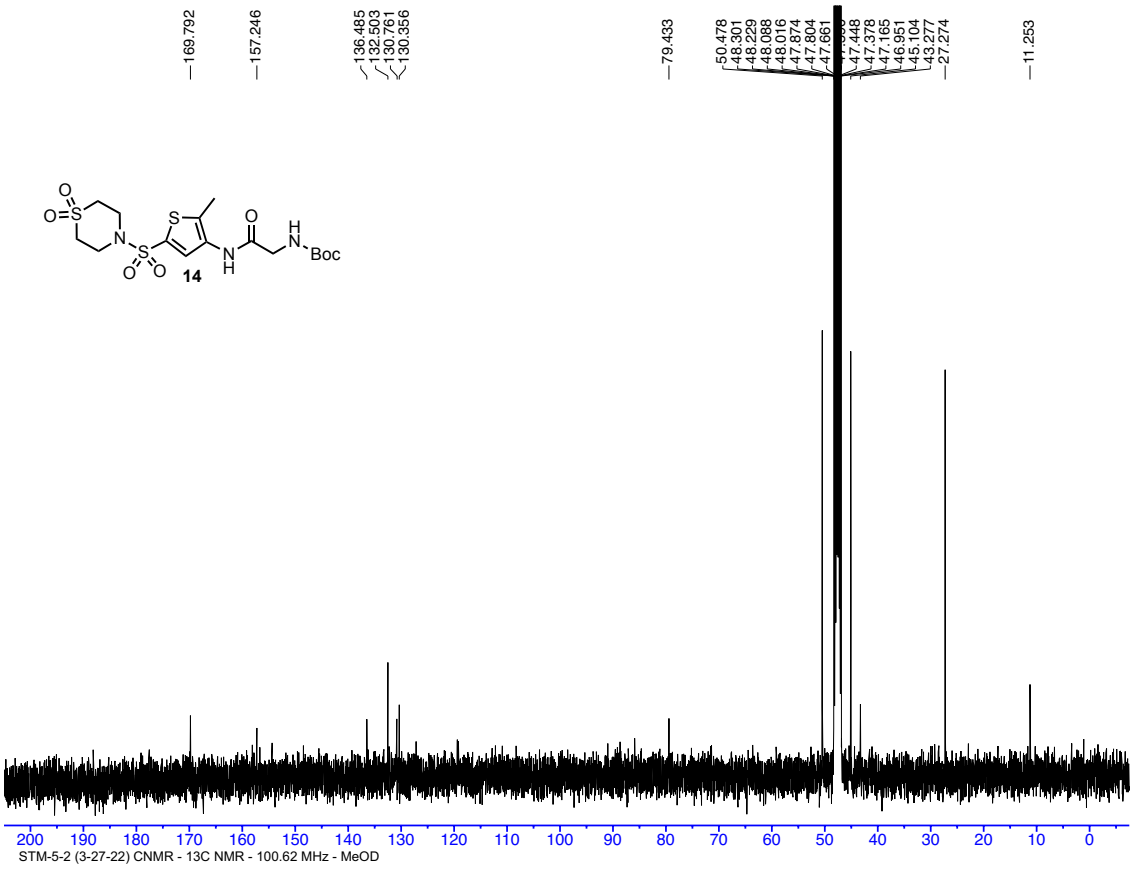

8.511
7.736
7.221
5.574
5.559
5.544
3.863
3.849
3.291
3.278
3.266
2.656
2.644
2.631
2.280
1.394
1.371
12
Boc
0.91
1.02
1.02
2.08
4.11
4.24
3.10
10.38
STM-3-81 charact.1.fid - 1H NMR - 400.13 MHz - CDCl3

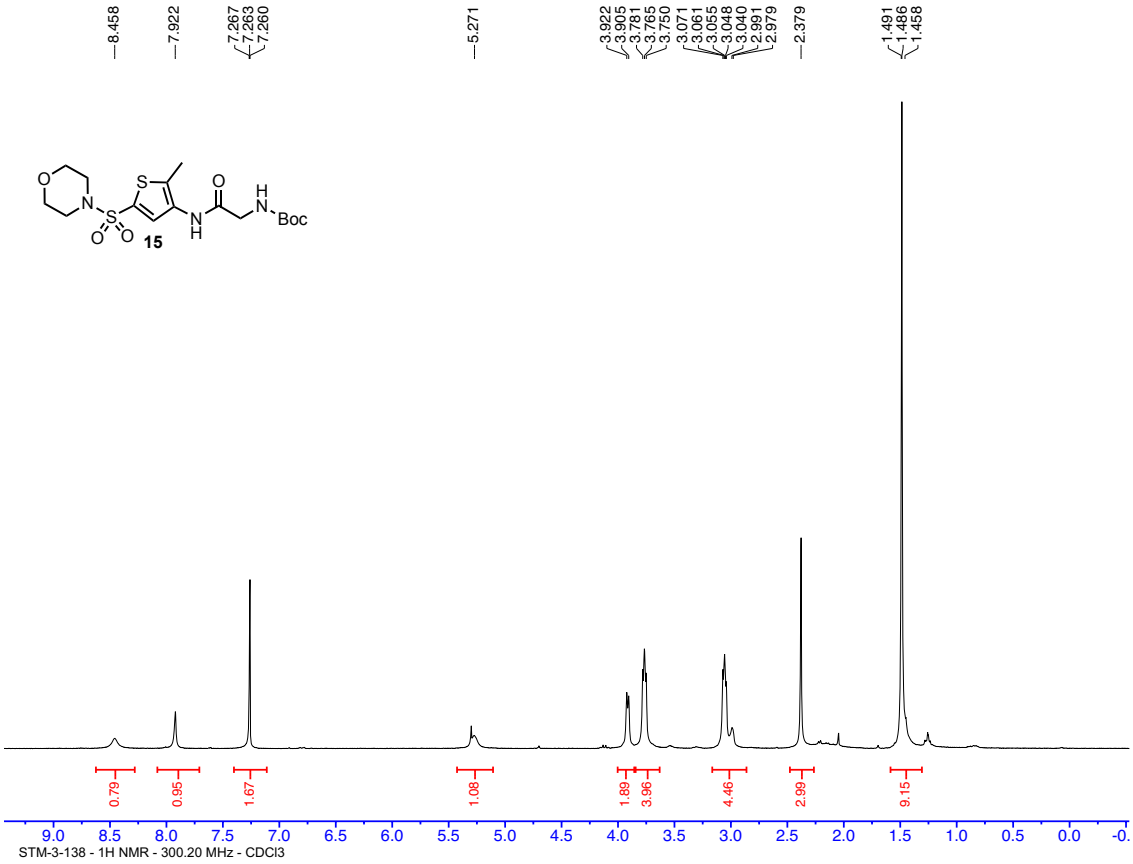

168.012
156.869
132.800
132.172
130.946
128.609
80.870
47.928
45.132
28.303
27.216
12.393
12
Boc
STM-3-81 CNMR charact.1.fid - 13C NMR - 100.62 MHz - CDCl3

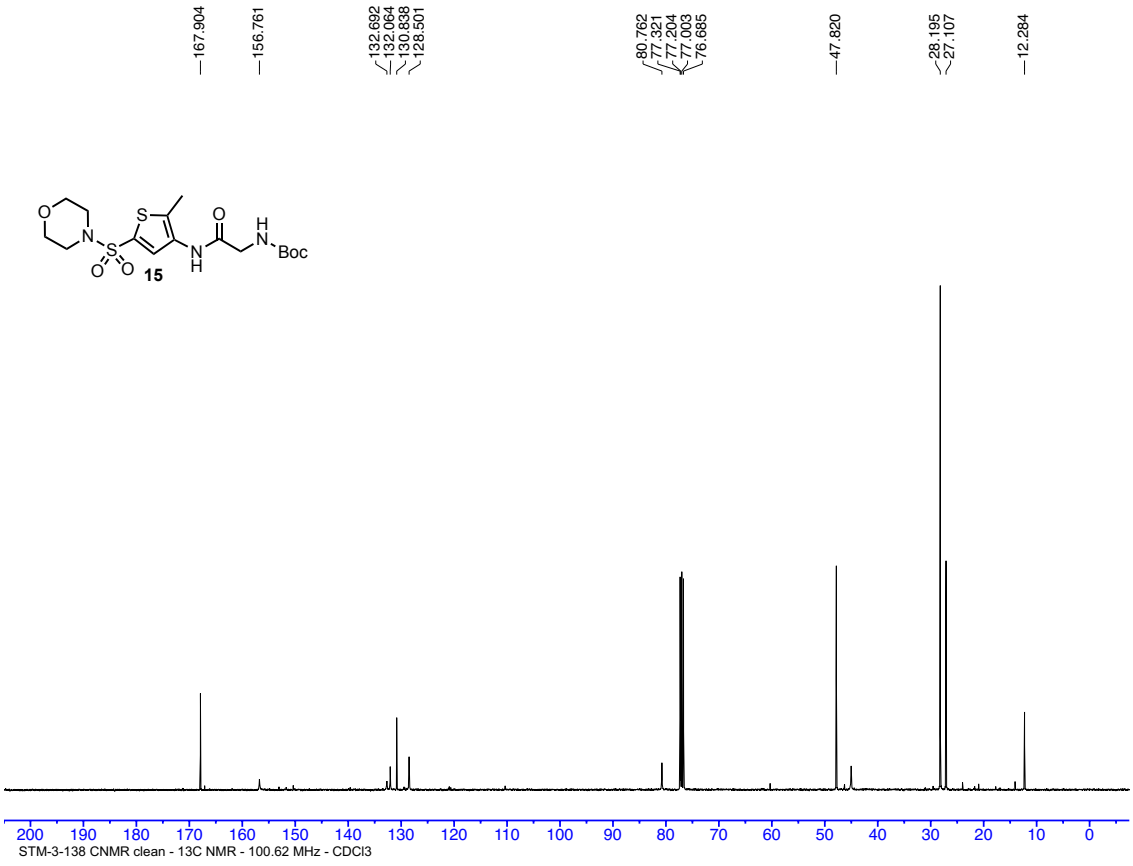

8.551
8.042
7.260
5.256
3.900
3.888
3.822
3.813
3.803
3.788
3.779
3.769
3.479
3.448
3.417
2.960
2.928
2.919
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2.829
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2.785
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1.648
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1.492
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0.872
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1.00
1.02
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8.51
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STM-4-60 Pure - 1H NMR - 400.13 MHz - CDCl3

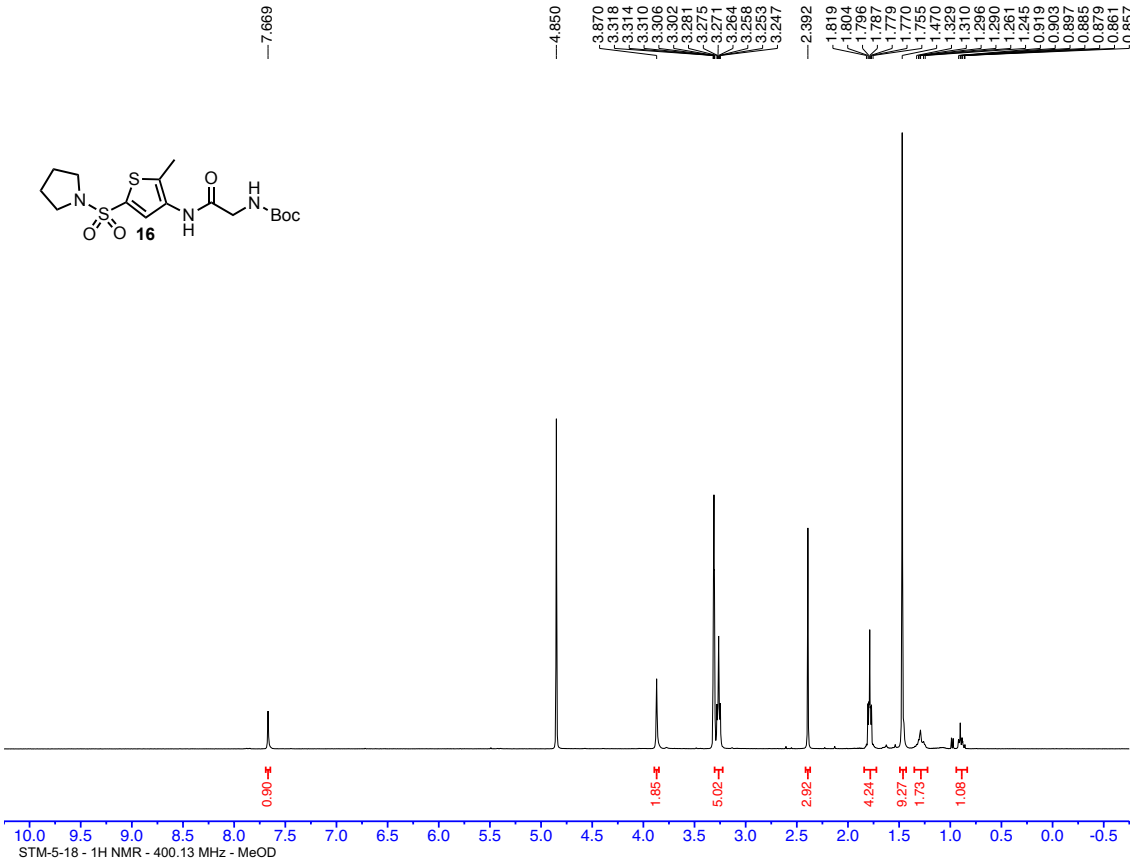

169.642
136.046
132.514
130.338
130.153
48.233
48.020
47.808
47.593
47.381
46.955
43.983
43.301
36.660
27.280
13.007
11.253
13
STM-4-60 MeOD CNMR.1.fid - 13C NMR - 100.62 MHz - MeOD

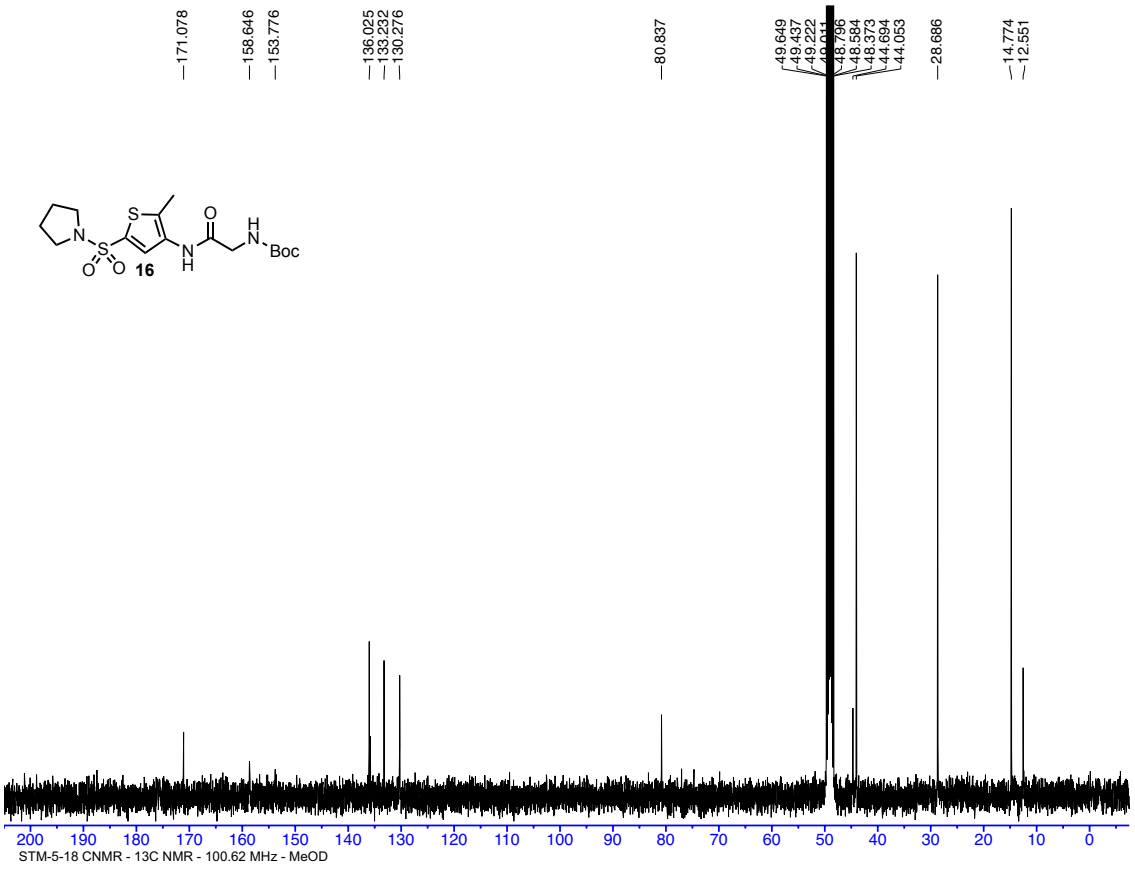

7.743
4.851
3.875
3.664
3.651
3.637
3.319
3.314
3.310
3.306
3.302
3.246
3.233
3.219
2.418
1.471
1.310
1.292
14
0.97
1.96
3.96
4.23
2.98
9.03
0.58
STM-5-2 (3-27-22) - 1H NMR - 400.13 MHz - MeOD

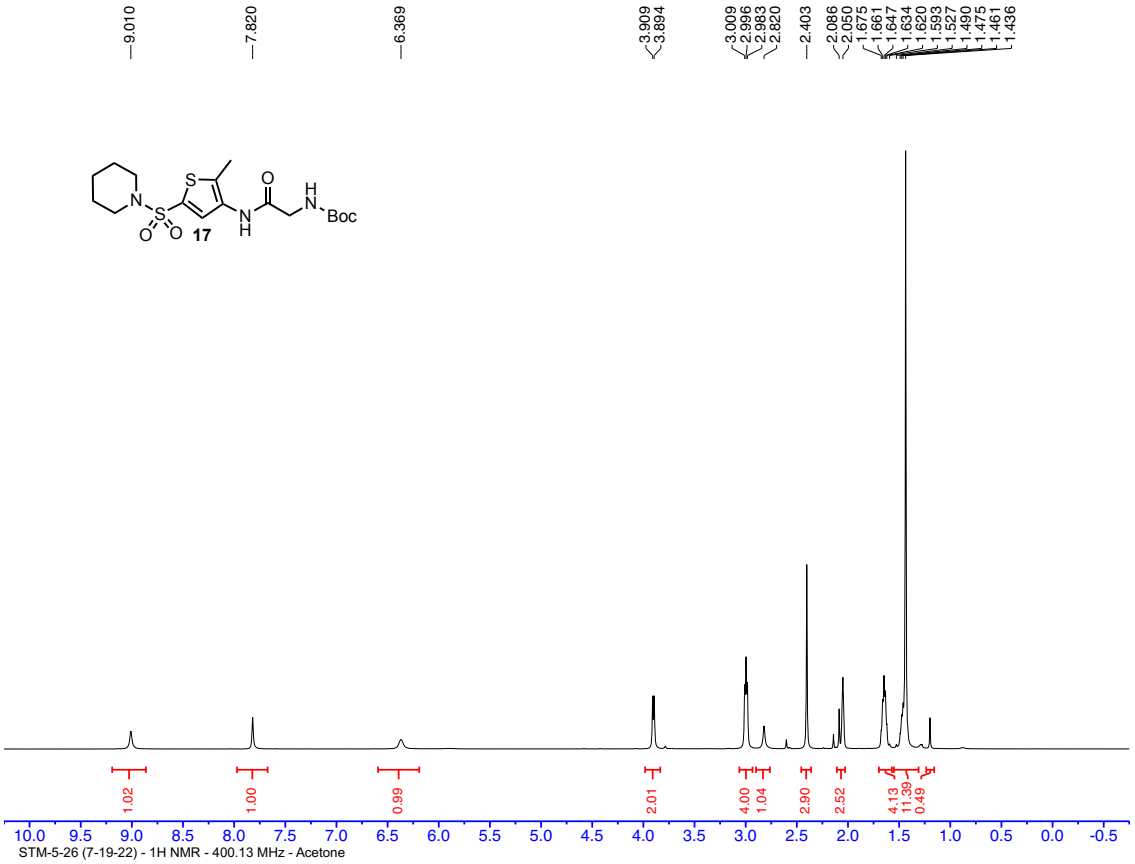

169.792
157.246
136.485
132.503
130.761
130.356
79.433
50.478
48.301
48.229
48.088
48.016
47.874
47.804
47.661
47.448
47.378
47.165
46.951
45.104
43.277
27.274
11.253
14
STM-5-2 (3-27-22) CNMR - 13C NMR - 100.62 MHz - MeOD

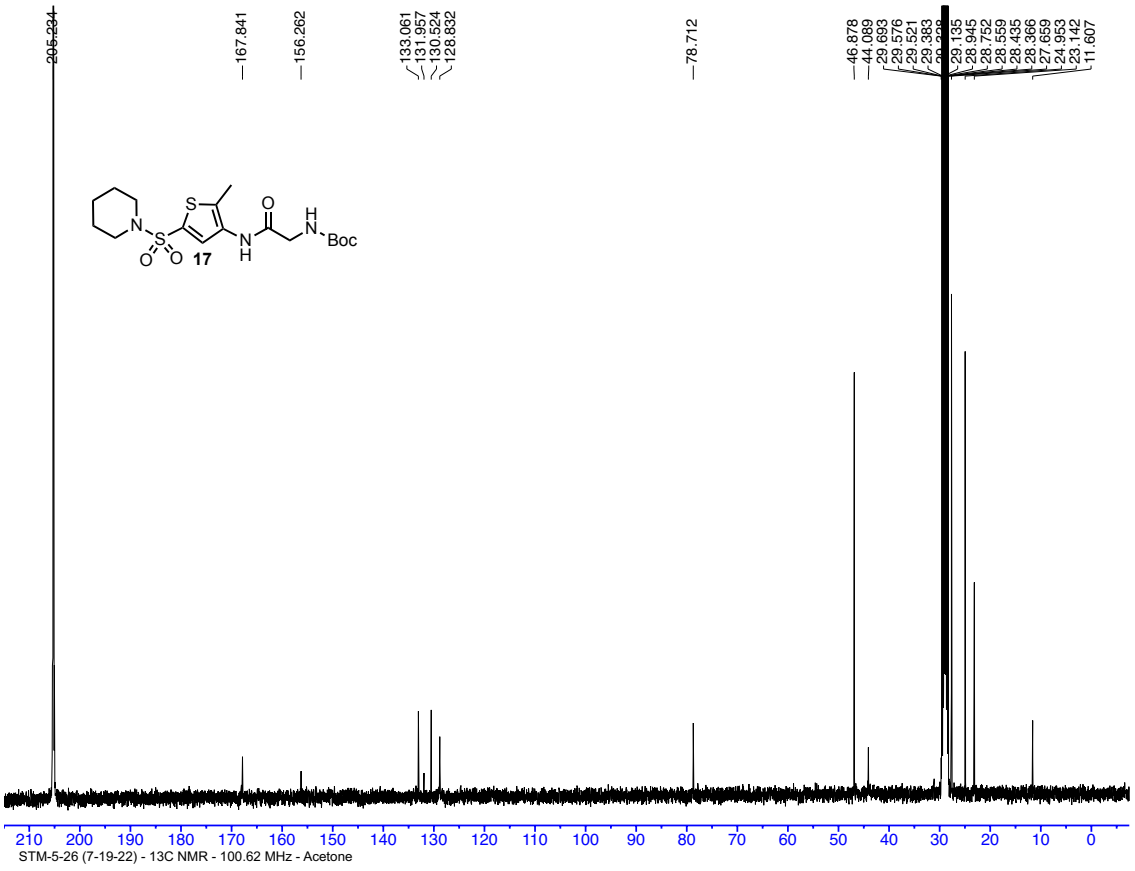

8.458
7.922
7.267
7.263
7.260
5.271
3.922
3.905
3.781
3.765
3.750
3.071
3.061
3.055
3.048
3.040
2.991
2.979
2.379
1.491
1.486
1.458
15
0.79
0.95
1.67
1.08
1.89
3.96
4.46
2.99
9.15
STM-3-138 - 1H NMR - 300.20 MHz - CDCl3

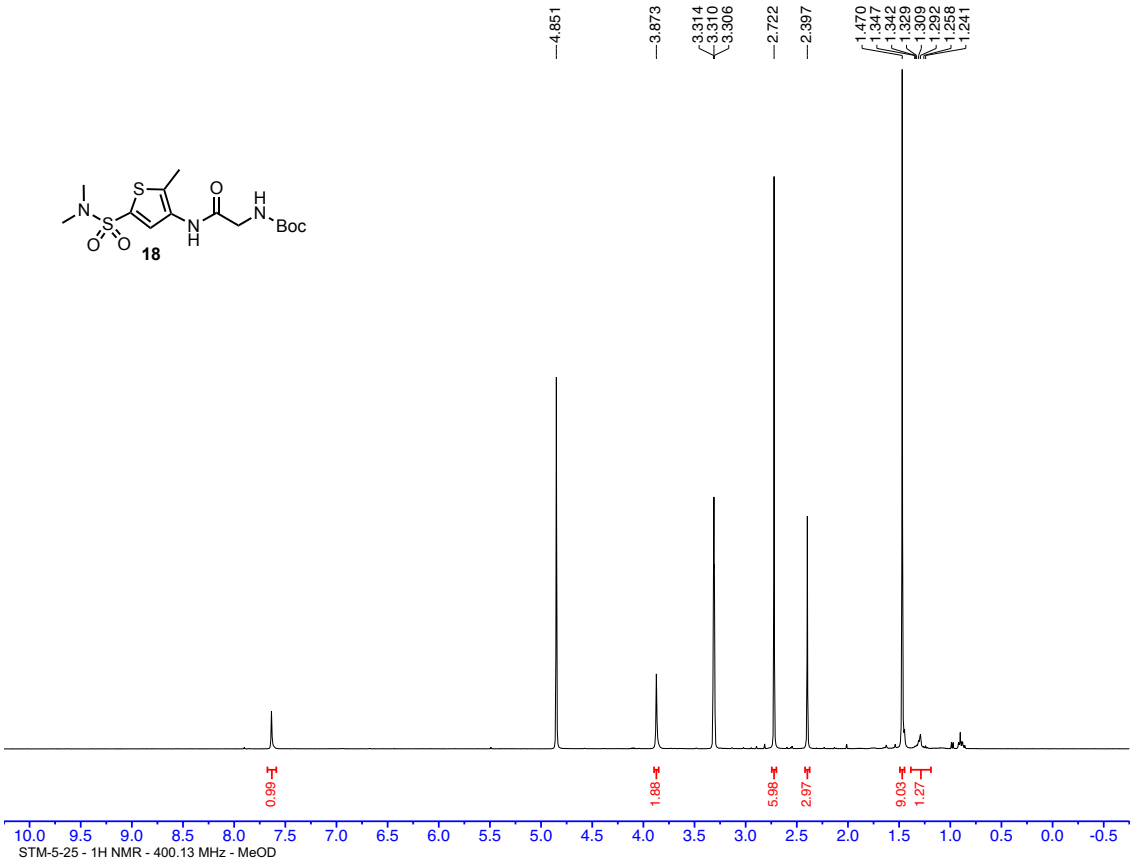

167.904
156.761
132.692
132.064
130.838
128.501
80.762
77.321
77.204
77.003
76.685
47.820
28.195
27.107
12.284
15
STM-3-138 CNMR clean - 13C NMR - 100.62 MHz - CDCl3

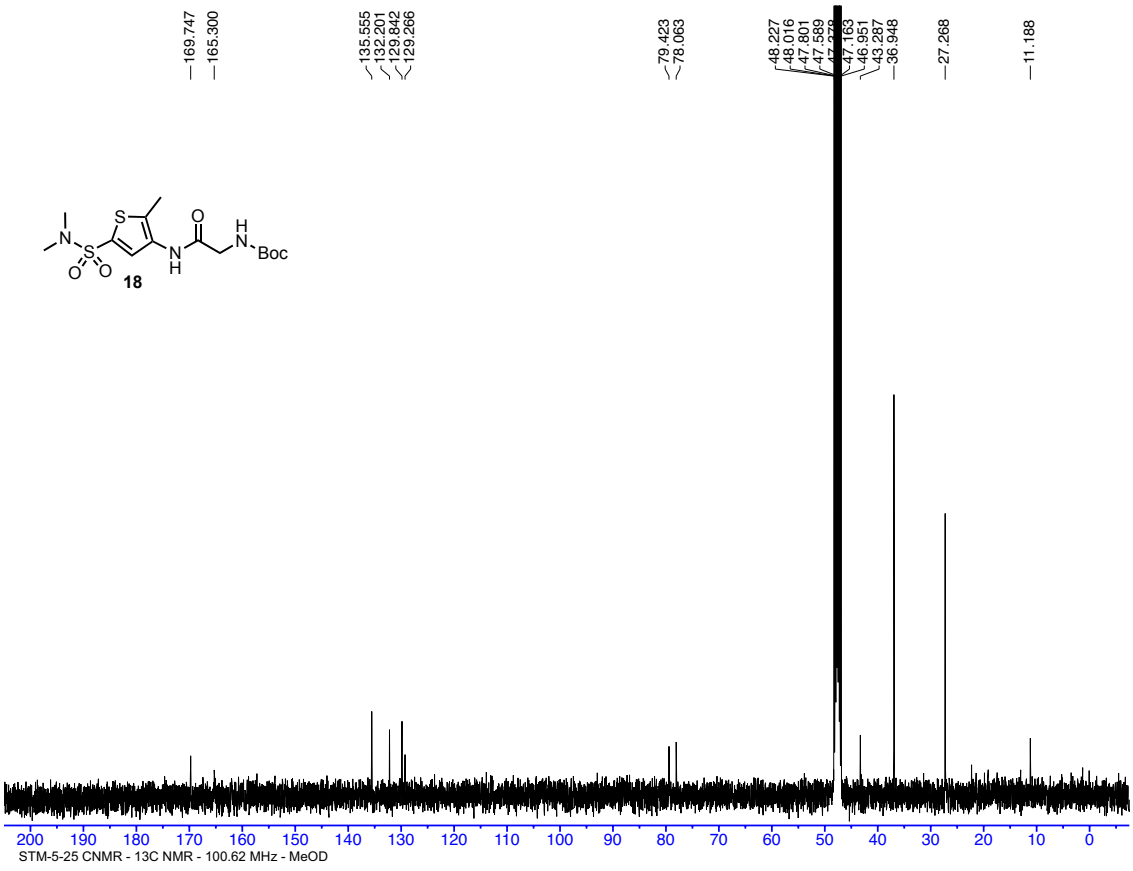

7.669
4.850
3.870
3.318
3.314
3.310
3.306
3.302
3.281
3.275
3.271
3.264
3.258
3.253
3.247
2.392
1.819
1.804
1.796
1.787
1.779
1.770
1.755
1.470
1.329
1.310
1.296
1.290
1.261
1.245
0.919
0.903
0.897
0.885
0.879
0.861
16
Boc
0.90
1.85
5.02
2.92
4.24
9.27
1.73
1.08
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-18 - 1H NMR - 400.13 MHz - MeOD

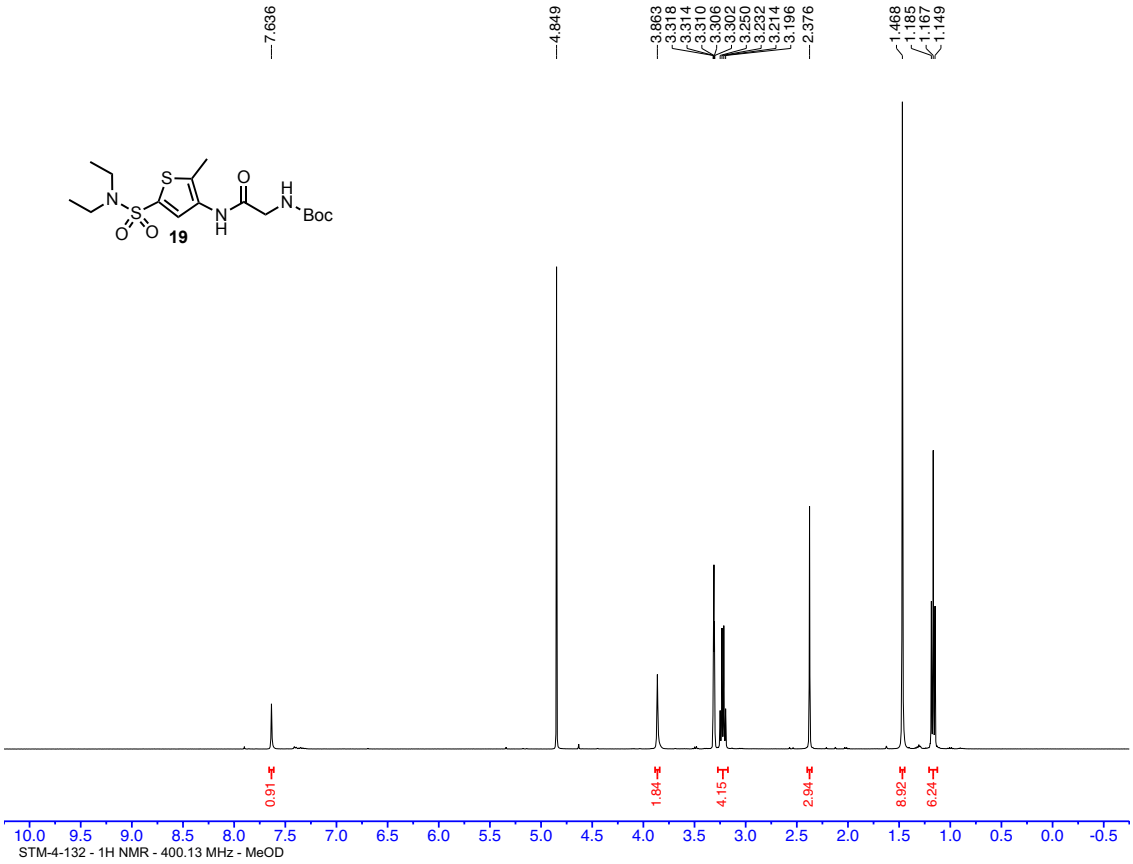

171.078
158.646
153.776
136.025
133.232
130.276
80.837
49.649
49.437
49.222
49.011
48.796
48.584
48.373
44.694
44.053
28.686
14.774
12.551
16
Boc
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-18 CNMR - 13C NMR - 100.62 MHz - MeOD

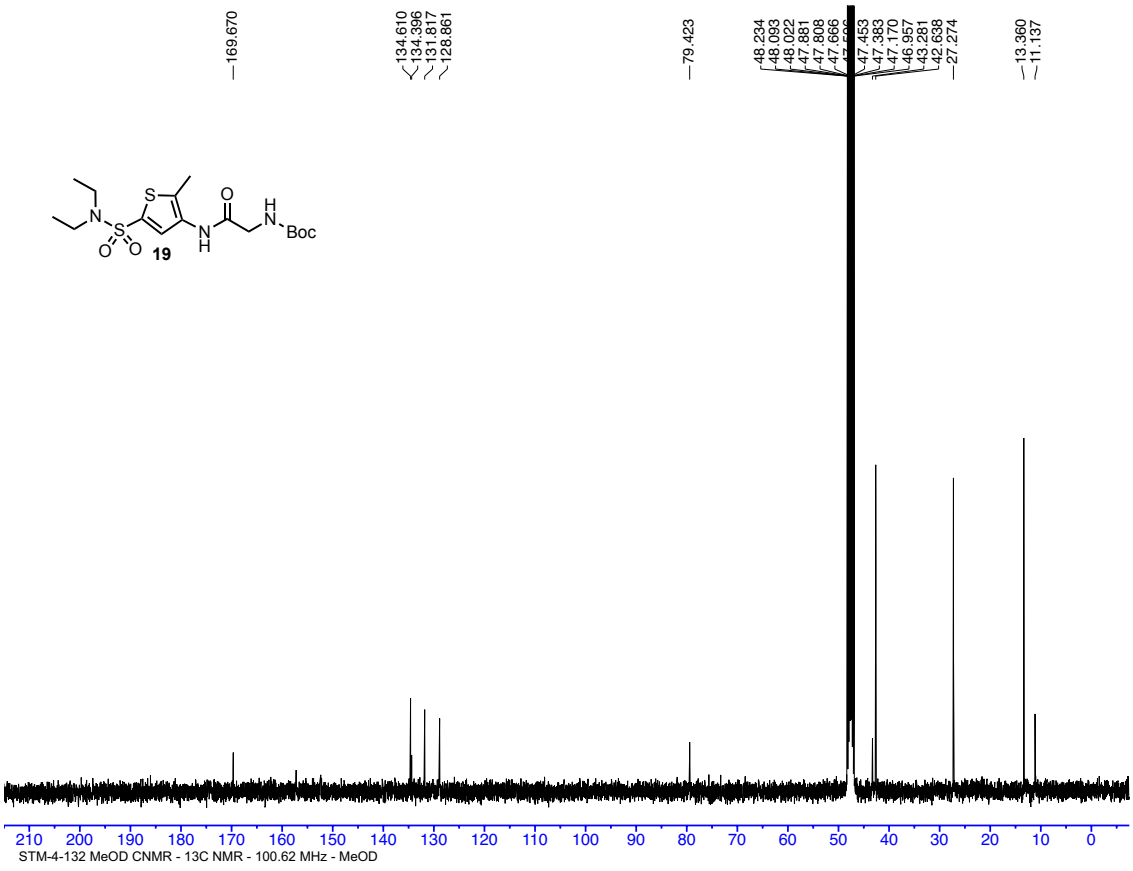

9.010
7.820
6.369
3.909
3.894
3.009
2.996
2.983
2.820
2.403
2.086
2.050
1.675
1.661
1.647
1.634
1.620
1.593
1.527
1.490
1.475
1.461
1.436
17
1.02
1.00
0.99
2.01
4.00
1.04
2.90
2.52
4.13
11.39
0.49
STM-5-26 (7-19-22) - 1H NMR - 400.13 MHz - Acetone

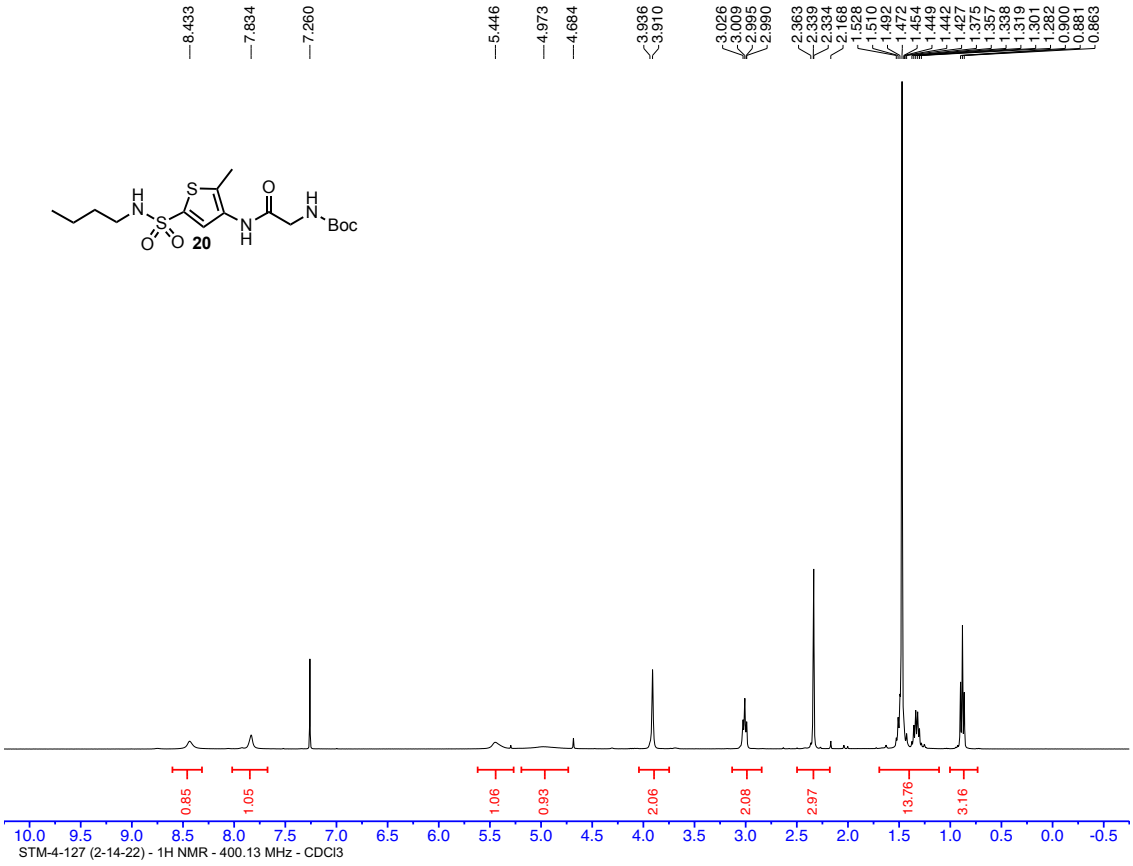

205.234
167.841
156.262
133.061
131.957
130.524
128.832
78.712
46.878
44.089
29.693
29.576
29.521
29.383
29.135
28.945
28.752
28.559
28.435
28.366
27.659
24.953
23.142
11.607
17
STM-5-26 (7-19-22) - 13C NMR - 100.62 MHz - Acetone

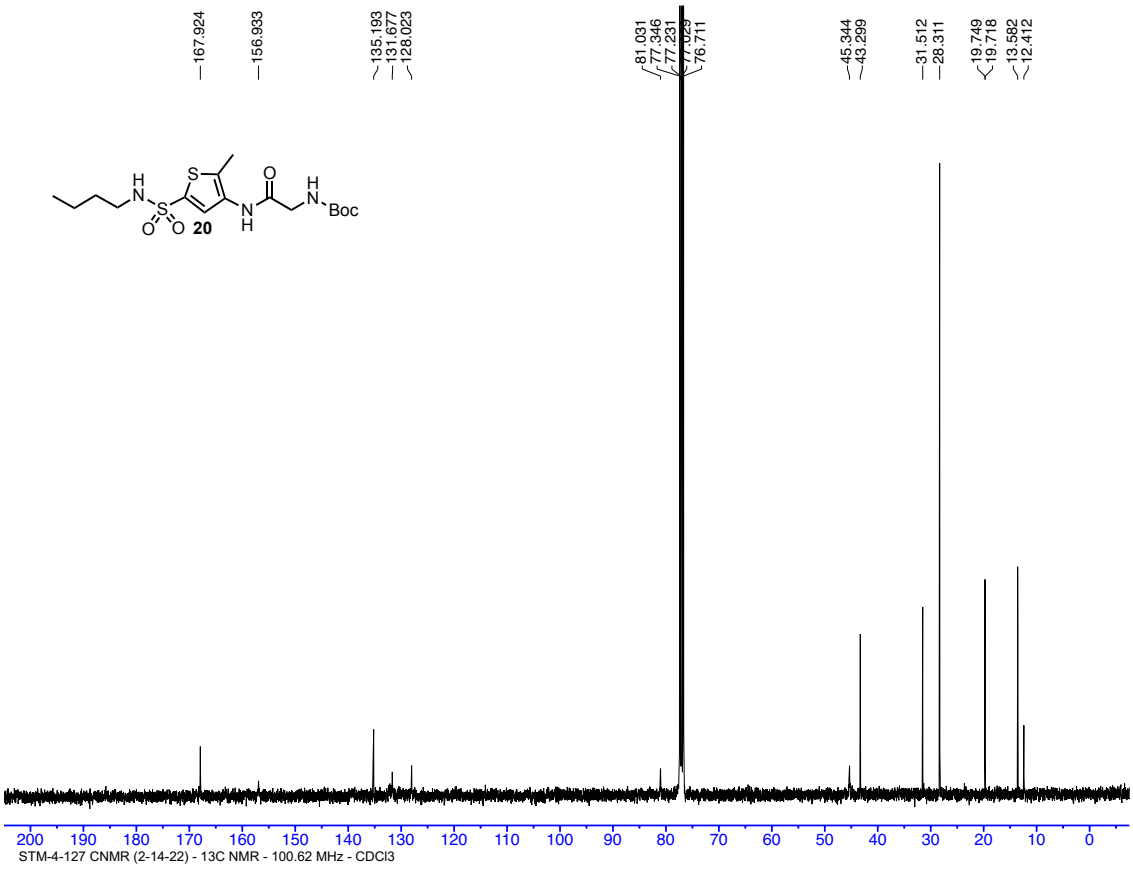

4.851
3.873
3.314
3.310
3.306
2.722
2.397
1.470
1.347
1.342
1.329
1.309
1.292
1.258
1.241
18
0.99
1.88
5.98
2.97
9.03
1.27
STM-5-25 - 1H NMR - 400.13 MHz - MeOD

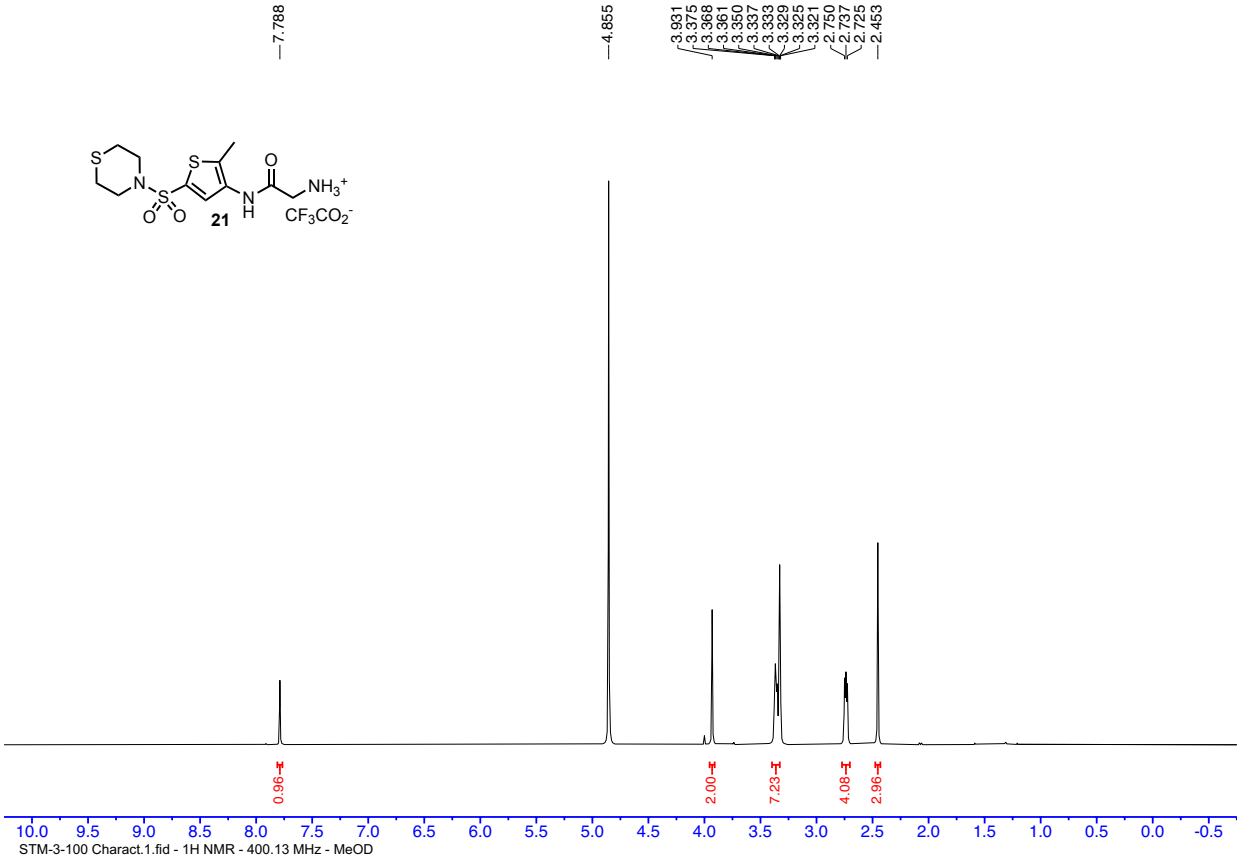

169.747
165.300
135.555
132.201
129.842
129.266
79.423
78.063
48.227
48.016
47.801
47.589
47.376
47.163
46.951
43.287
36.948
27.268
11.188
18
STM-5-25 CNMR - 13C NMR - 100.62 MHz - MeOD

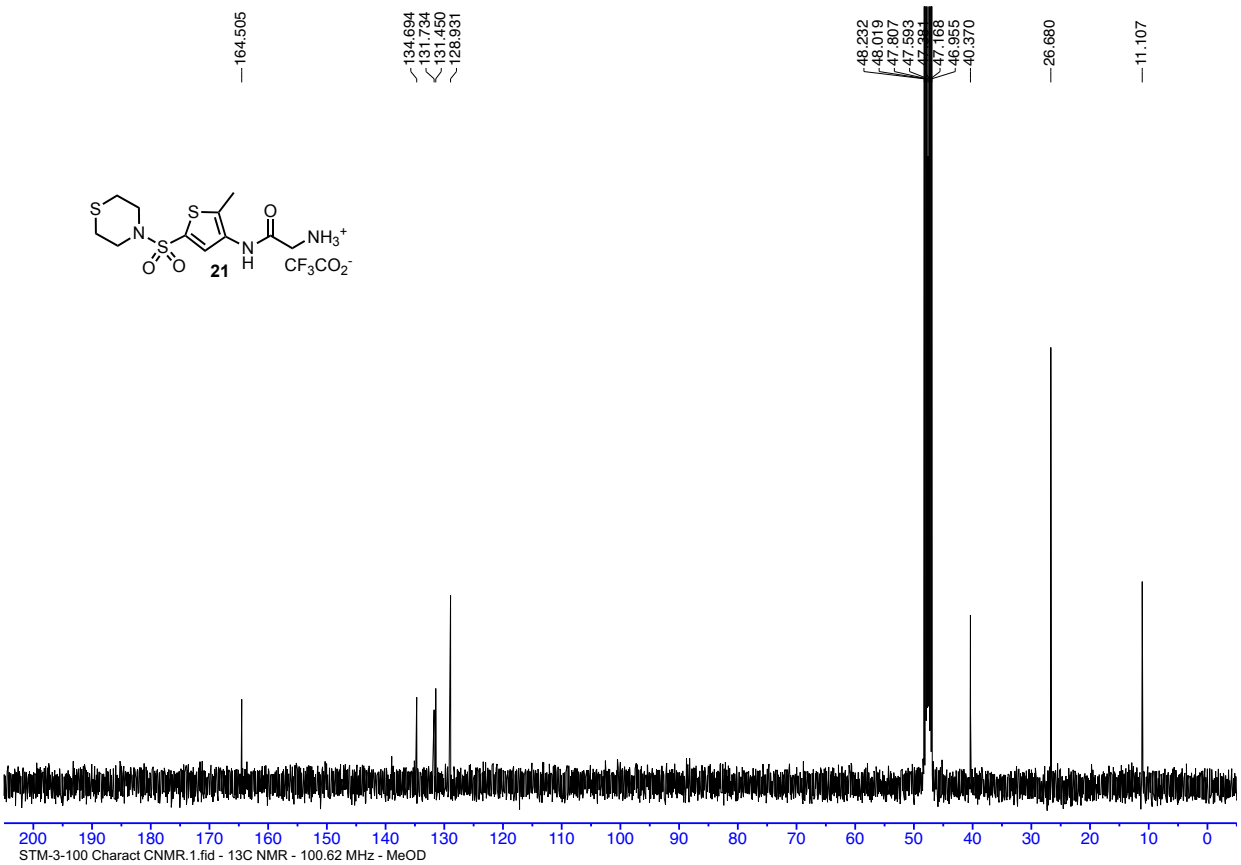

7.636
4.849
3.863
3.318
3.314
3.310
3.306
3.302
3.250
3.232
3.214
3.196
2.376
1.468
1.185
1.167
1.149
19
0.91
1.84
4.15
2.94
8.92
6.24
STM-4-132 - 1H NMR - 400.13 MHz - MeOD

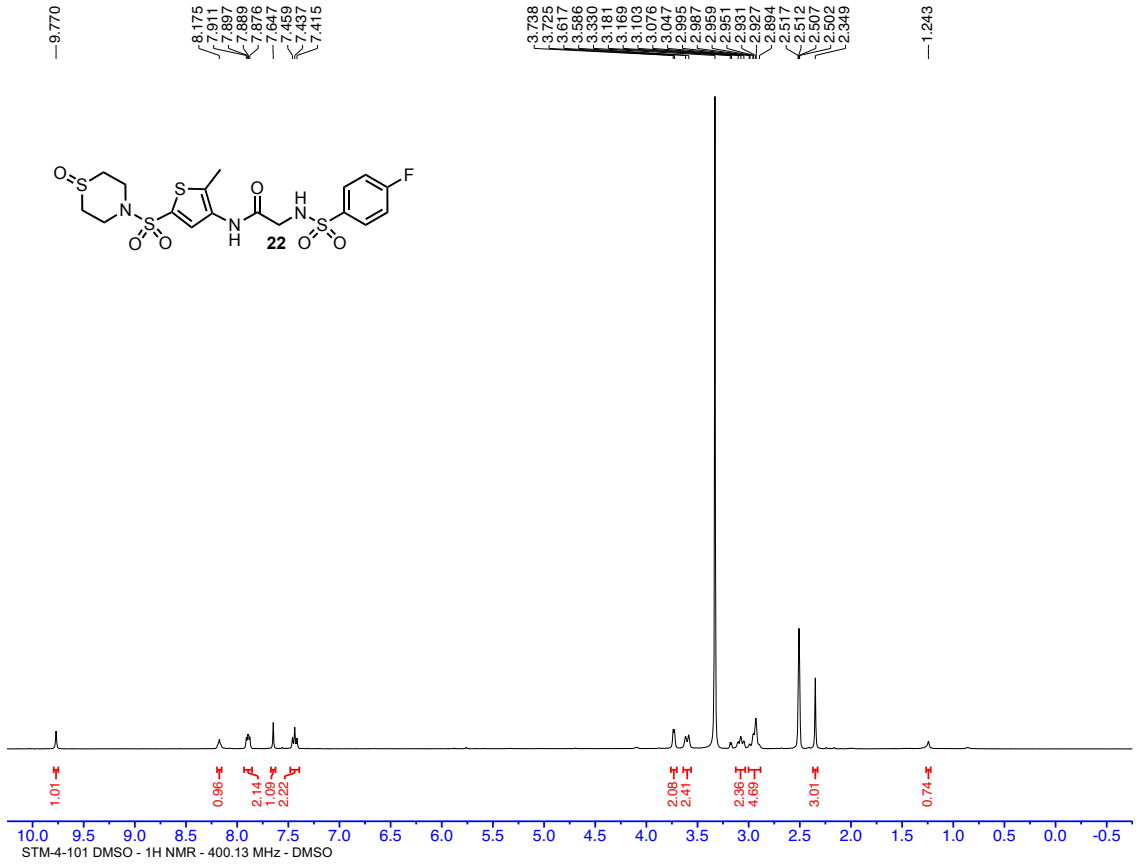

169.670
134.610
134.396
131.817
128.861
79.423
48.234
48.093
48.022
47.881
47.808
47.666
47.453
47.383
47.170
46.957
43.281
42.638
27.274
13.360
11.137
19
STM-4-132 MeOD CNMR - 13C NMR - 100.62 MHz - MeOD

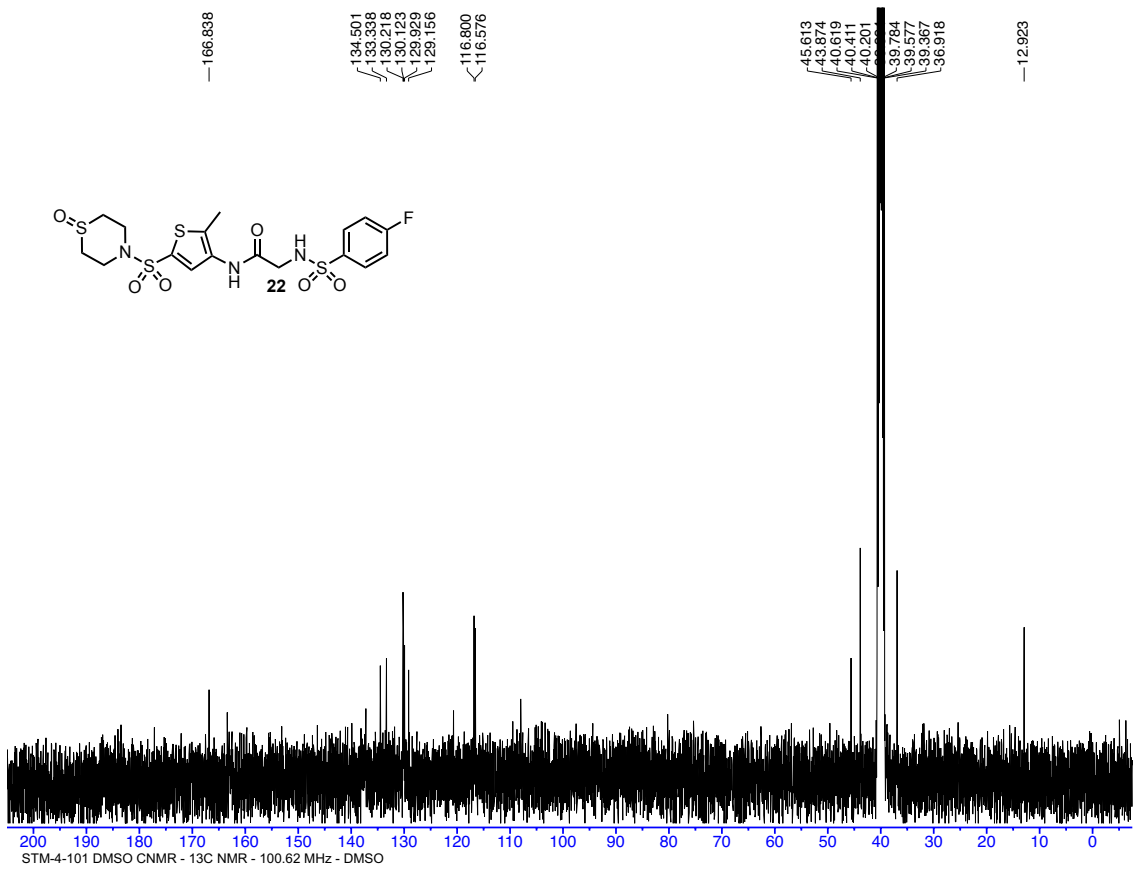

8.433
7.834
7.260
5.446
4.973
4.684
3.936
3.910
3.026
3.009
2.995
2.990
2.363
2.339
2.334
2.168
1.528
1.510
1.492
1.472
1.454
1.449
1.442
1.427
1.375
1.357
1.338
1.319
1.301
1.282
0.900
0.881
0.863
20
0.85
1.05
1.06
0.93
2.06
2.08
2.97
13.76
3.16
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-127 (2-14-22) - 1H NMR - 400.13 MHz - CDCl3

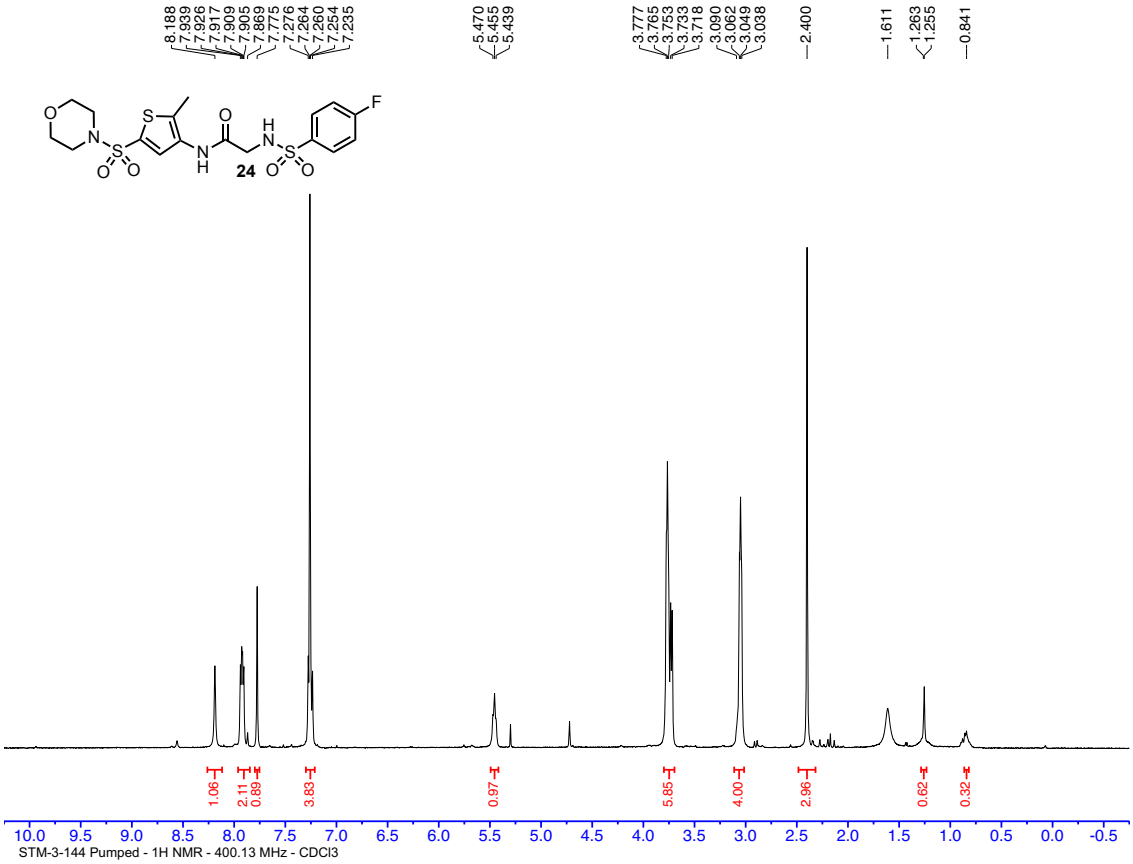

167.924
156.933
135.193
131.677
128.023
81.031
77.346
77.231
77.029
76.711
45.344
43.299
31.512
28.311
19.749
19.718
13.582
12.412
20
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-127 CNMR (2-14-22) - 13C NMR - 100.62 MHz - CDCl3

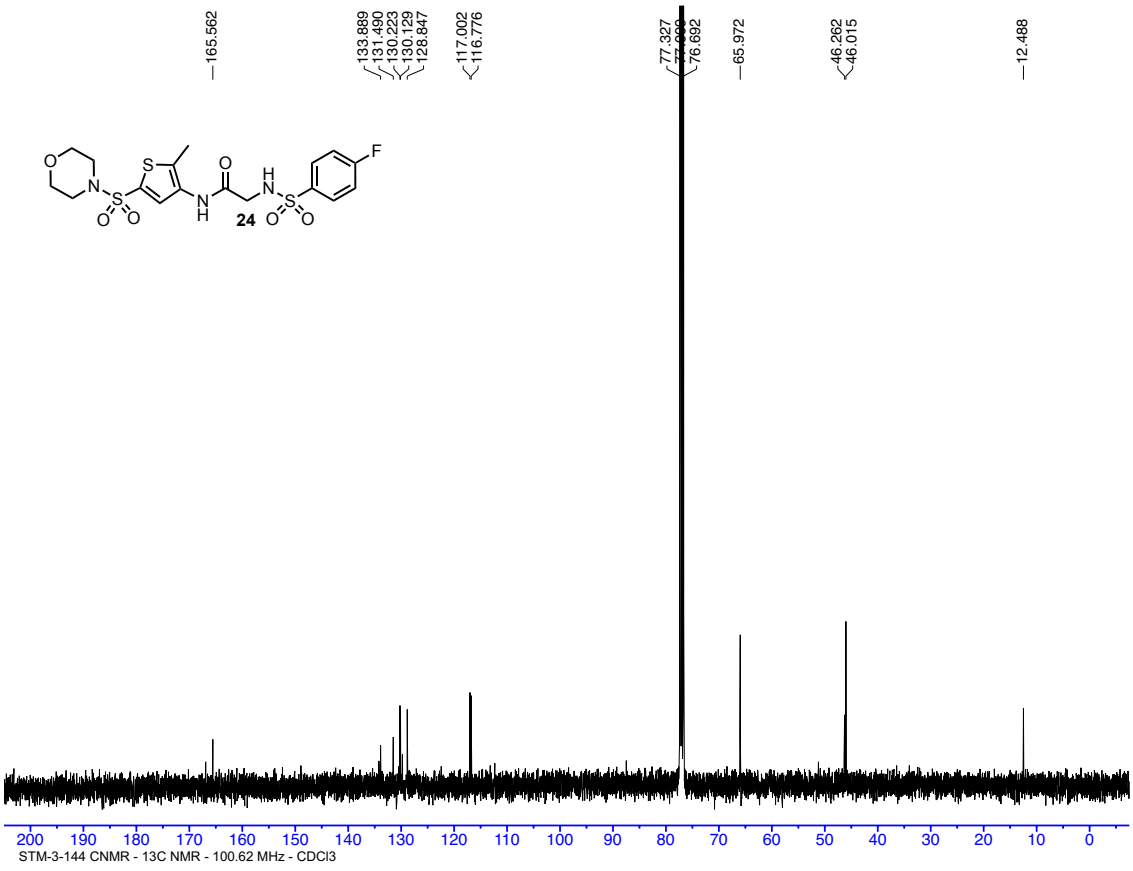

7.788
4.855
3.931
3.375
3.368
3.361
3.350
3.337
3.333
3.329
3.325
3.321
2.750
2.737
2.725
2.453
21
0.96
2.00
7.23
4.08
2.96
STM-3-100 Charact.1.fid - 1H NMR - 400.13 MHz - MeOD

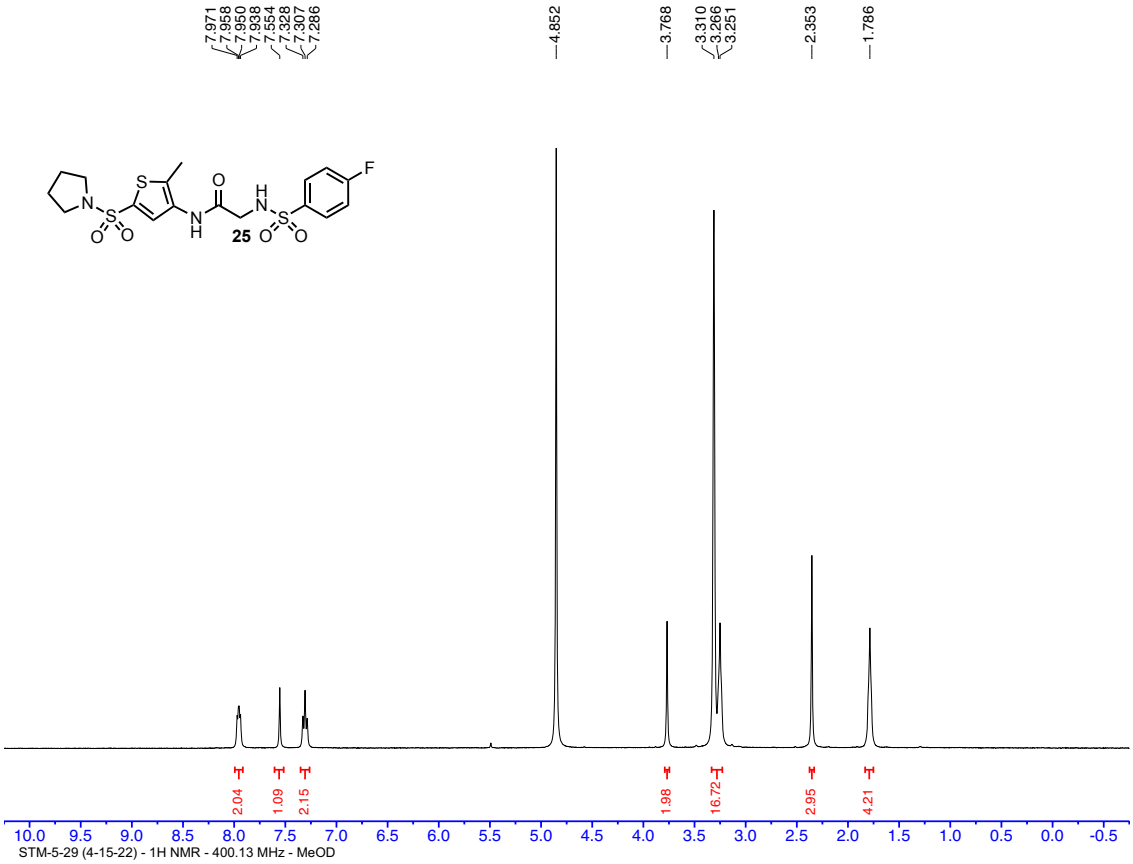

164.505
134.694
131.734
131.450
128.931
48.232
48.019
47.807
47.593
47.381
47.168
46.955
40.370
26.680
11.107
21
STM-3-100 Charact CNMR.1.fid - 13C NMR - 100.62 MHz - MeOD

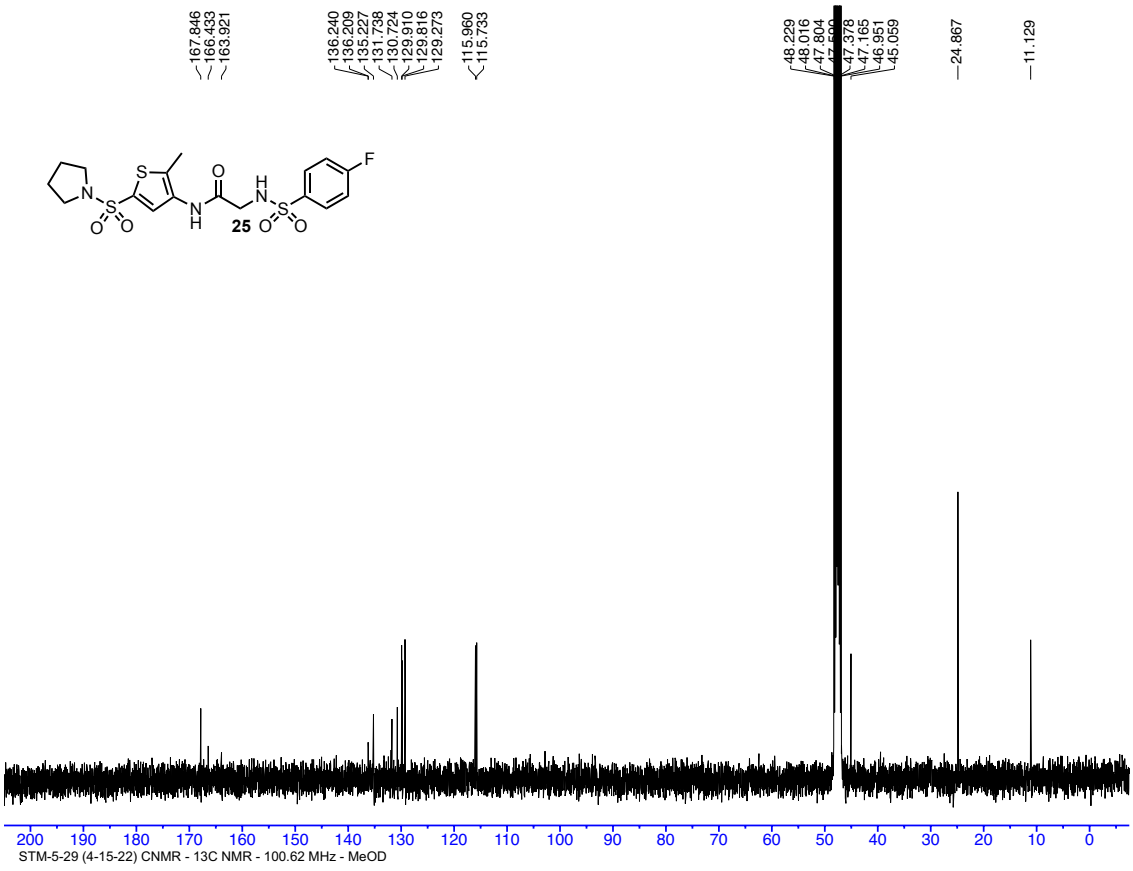

9.770
8.175
7.911
7.897
7.889
7.876
7.647
7.459
7.437
7.415
3.738
3.725
3.617
3.586
3.330
3.181
3.169
3.103
3.076
3.047
2.995
2.987
2.959
2.951
2.931
2.927
2.894
2.517
2.512
2.507
2.502
2.349
1.243
22
1.01
0.96
2.14
1.09
2.22
2.08
2.41
2.36
4.69
3.01
0.74
STM-4-101 DMSO - 1H NMR - 400.13 MHz - DMSO

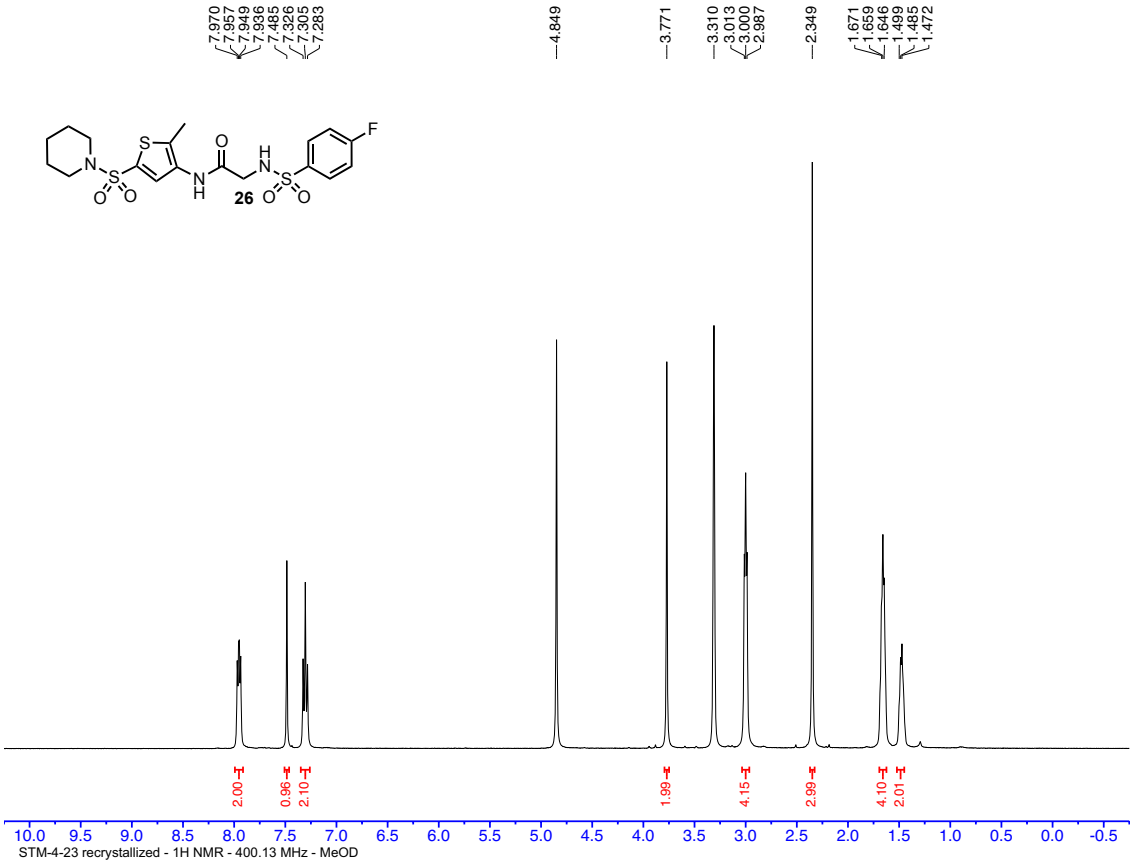

166.838
134.501
133.338
130.218
130.123
129.929
129.156
116.800
116.576
45.613
43.874
40.619
40.411
40.201
39.784
39.577
39.367
36.918
12.923
22
STM-4-101 DMSO CNMR - 13C NMR - 100.62 MHz - DMSO

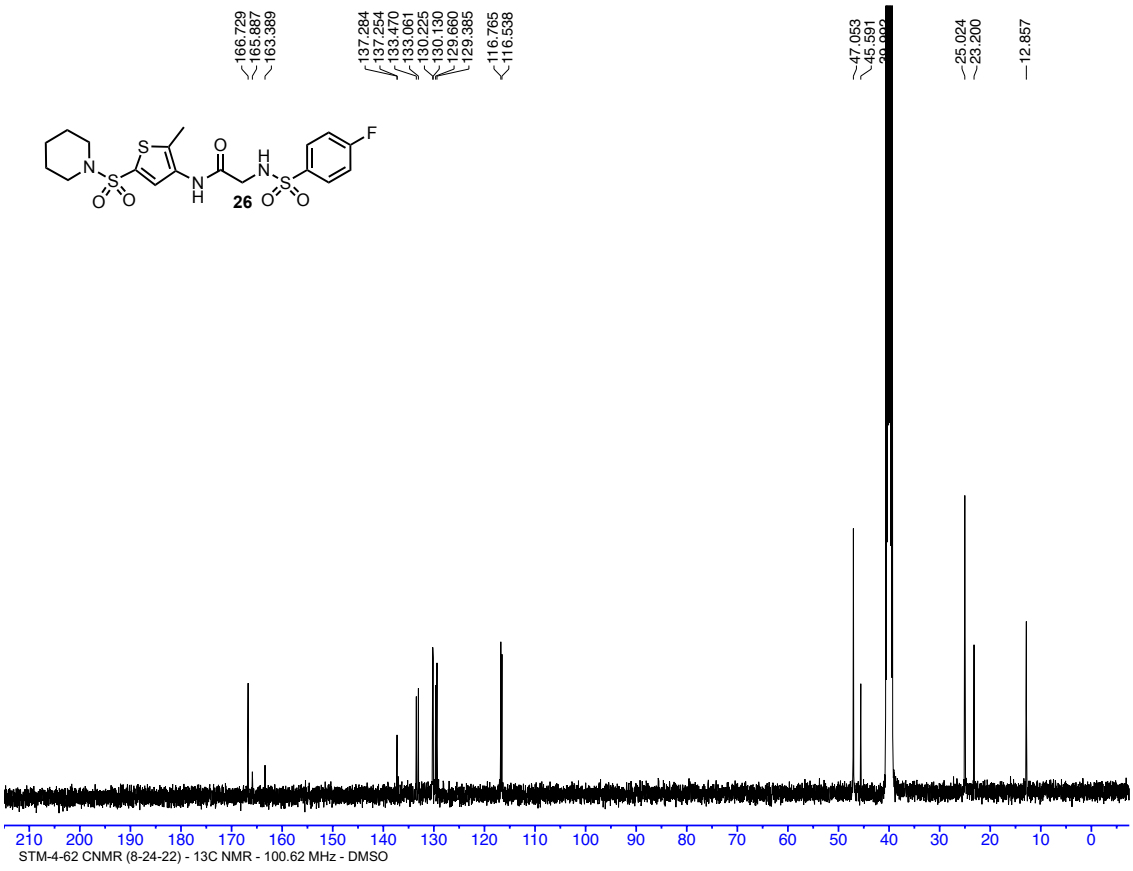

8.188
7.939
7.926
7.917
7.909
7.905
7.869
7.775
7.276
7.264
7.260
7.254
7.235
5.470
5.455
5.439
3.777
3.765
3.753
3.733
3.718
3.090
3.062
3.049
3.038
2.400
1.611
1.263
1.255
0.841
24
1.06
2.11
0.89
3.83
0.97
5.85
4.00
2.96
0.62
0.32
STM-3-144 Pumped - 1H NMR - 400.13 MHz - CDCl3

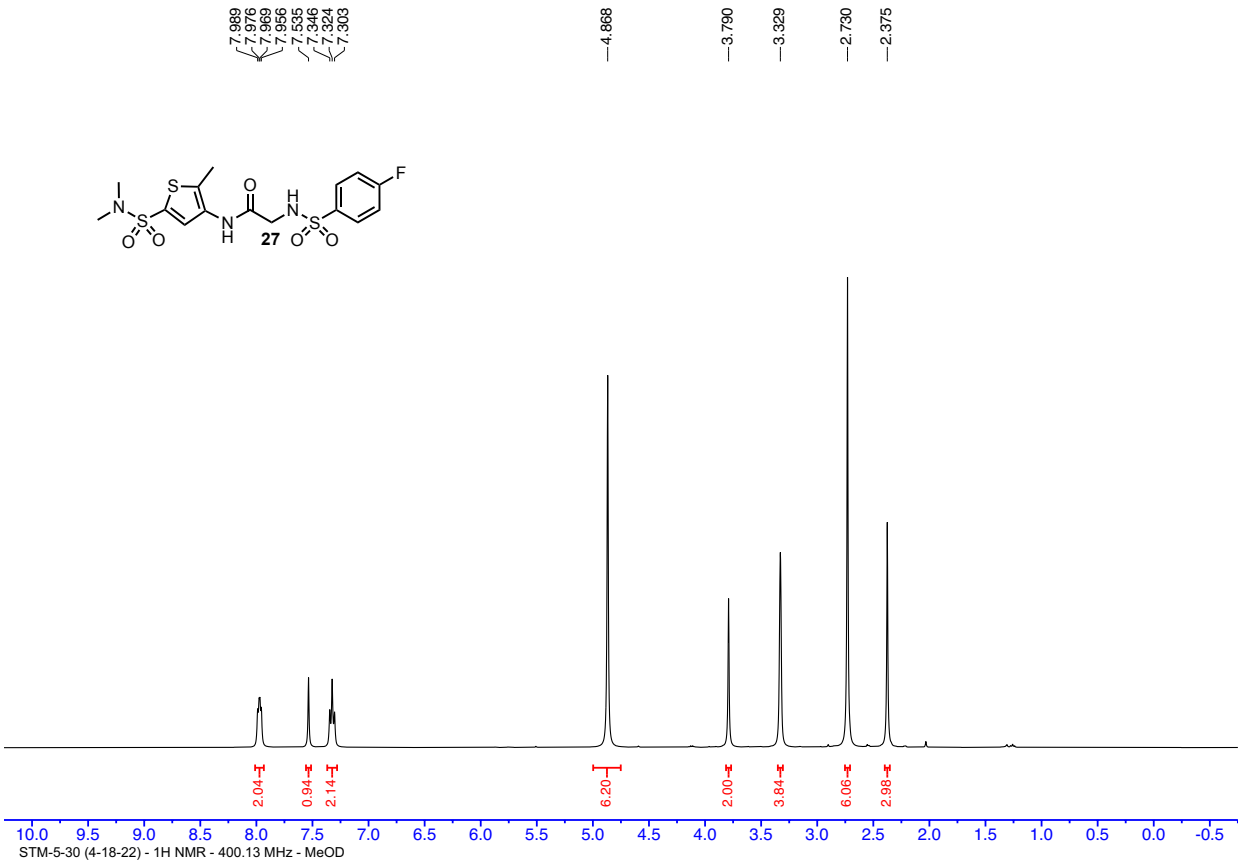

165.562
133.889
131.490
130.223
130.129
128.847
117.002
116.776
77.327
77.000
76.692
65.972
46.262
46.015
12.488
24
STM-3-144 CNMR - 13C NMR - 100.62 MHz - CDCl3

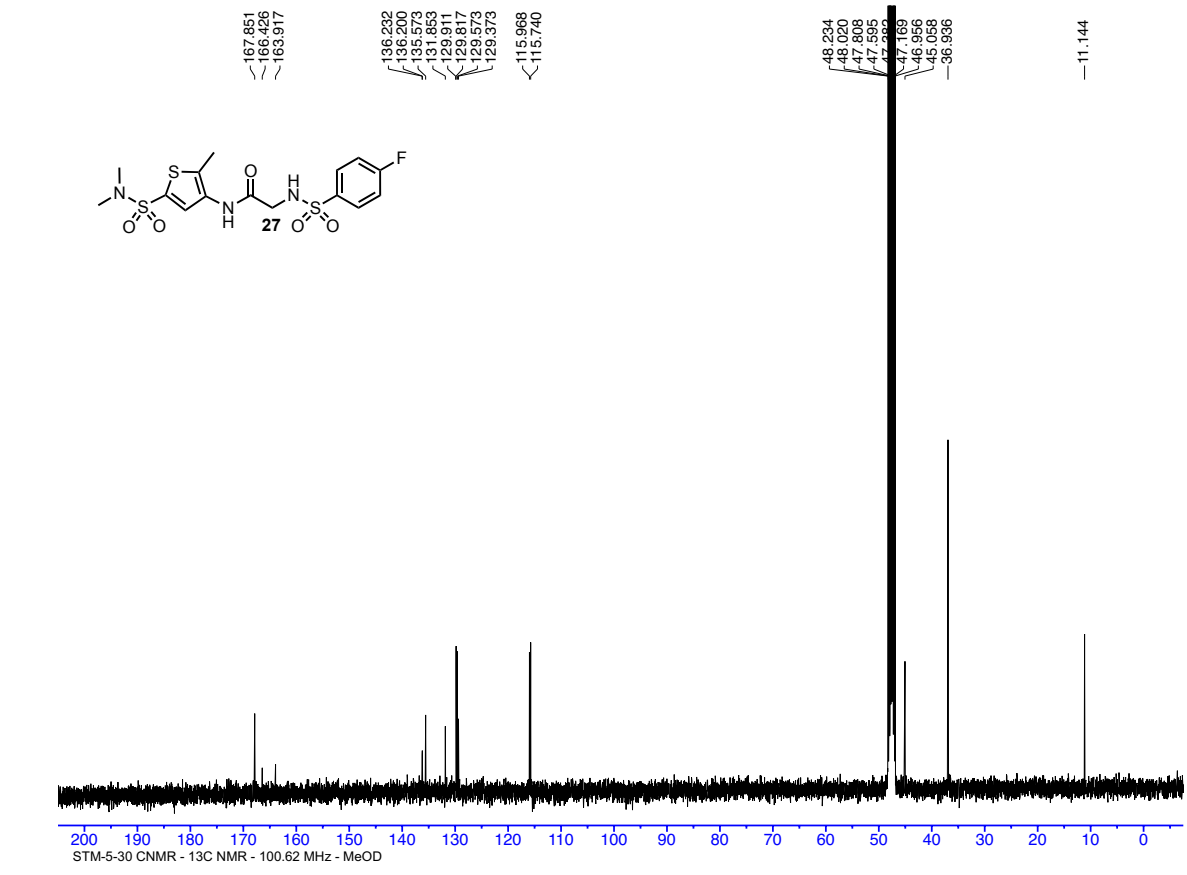

7.971
7.958
7.950
7.938
7.554
7.328
7.307
7.286
4.852
3.768
3.310
3.266
3.251
2.353
1.786
25
2.04
1.09
2.15
1.98
16.72
2.95
4.21
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-29 (4-15-22) - 1H NMR - 400.13 MHz - MeOD

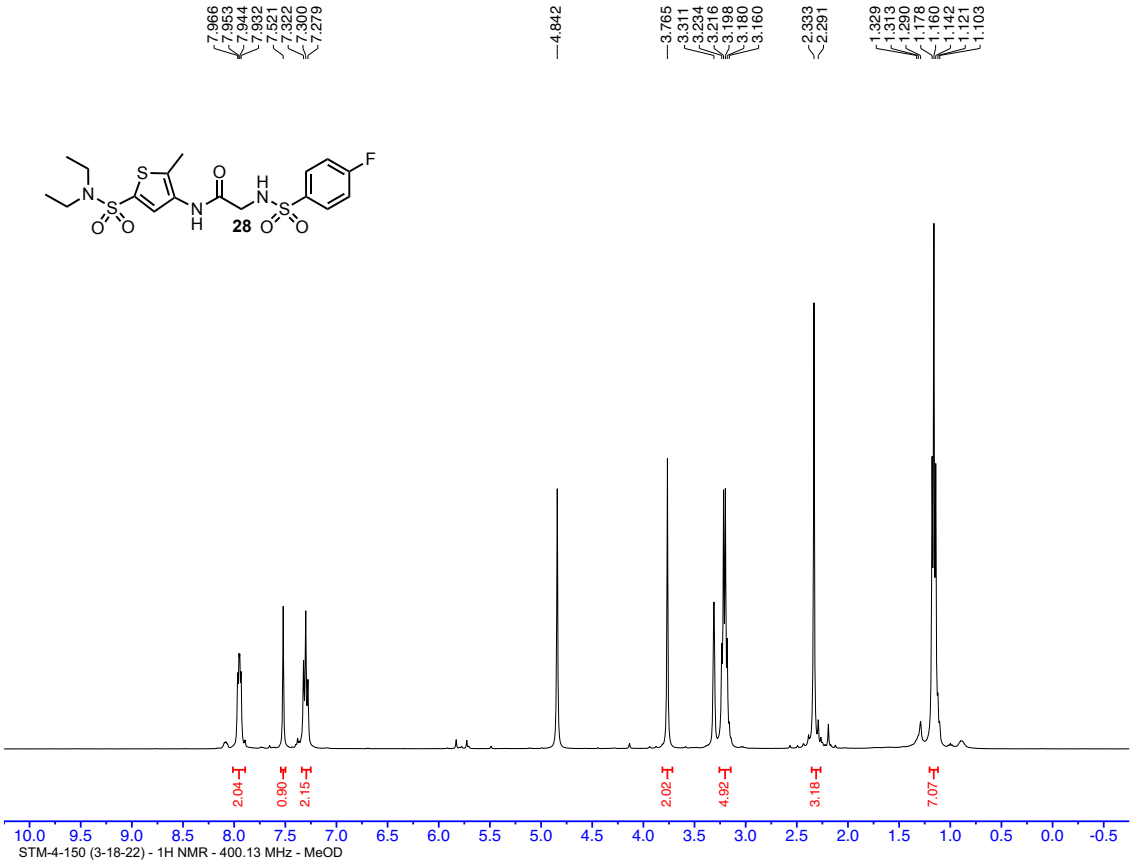

167.846
166.433
163.921
136.240
136.209
135.227
131.738
130.724
129.910
129.816
129.273
115.960
115.733
48.229
48.016
47.804
47.590
47.378
47.165
46.951
45.059
24.867
11.129
25
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-29 (4-15-22) CNMR - 13C NMR - 100.62 MHz - MeOD

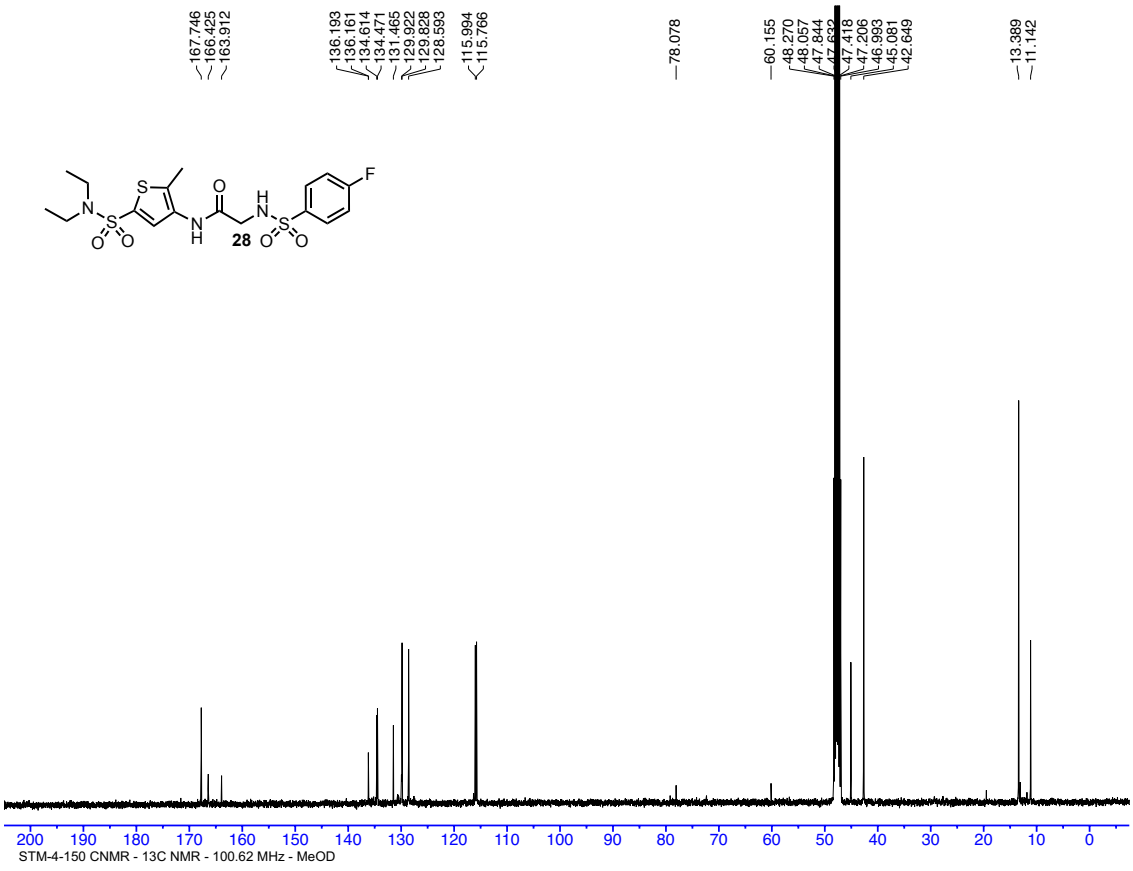

7.970
7.957
7.949
7.936
7.485
7.326
7.305
7.283
4.849
3.771
3.310
3.013
3.000
2.987
2.349
1.671
1.659
1.646
1.499
1.485
1.472
26
2.00
0.96
2.10
1.99
4.15
2.99
4.10
2.01
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-23 recrystallized - 1H NMR - 400.13 MHz - MeOD

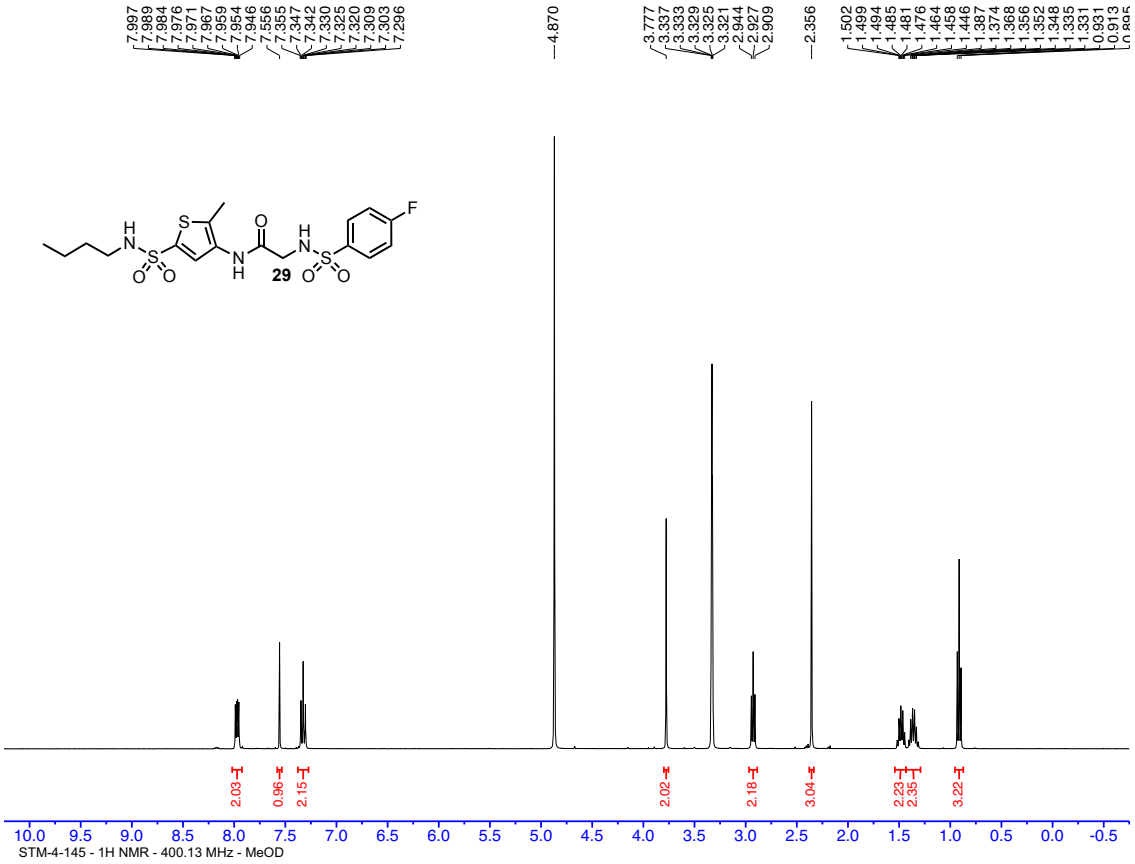

166.729
165.887
163.389
137.284
137.254
133.470
133.061
130.225
130.130
129.660
129.385
116.765
116.538
47.053
45.591
25.024
23.200
12.857
26
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-62 CNMR (8-24-22) - 13C NMR - 100.62 MHz - DMSO

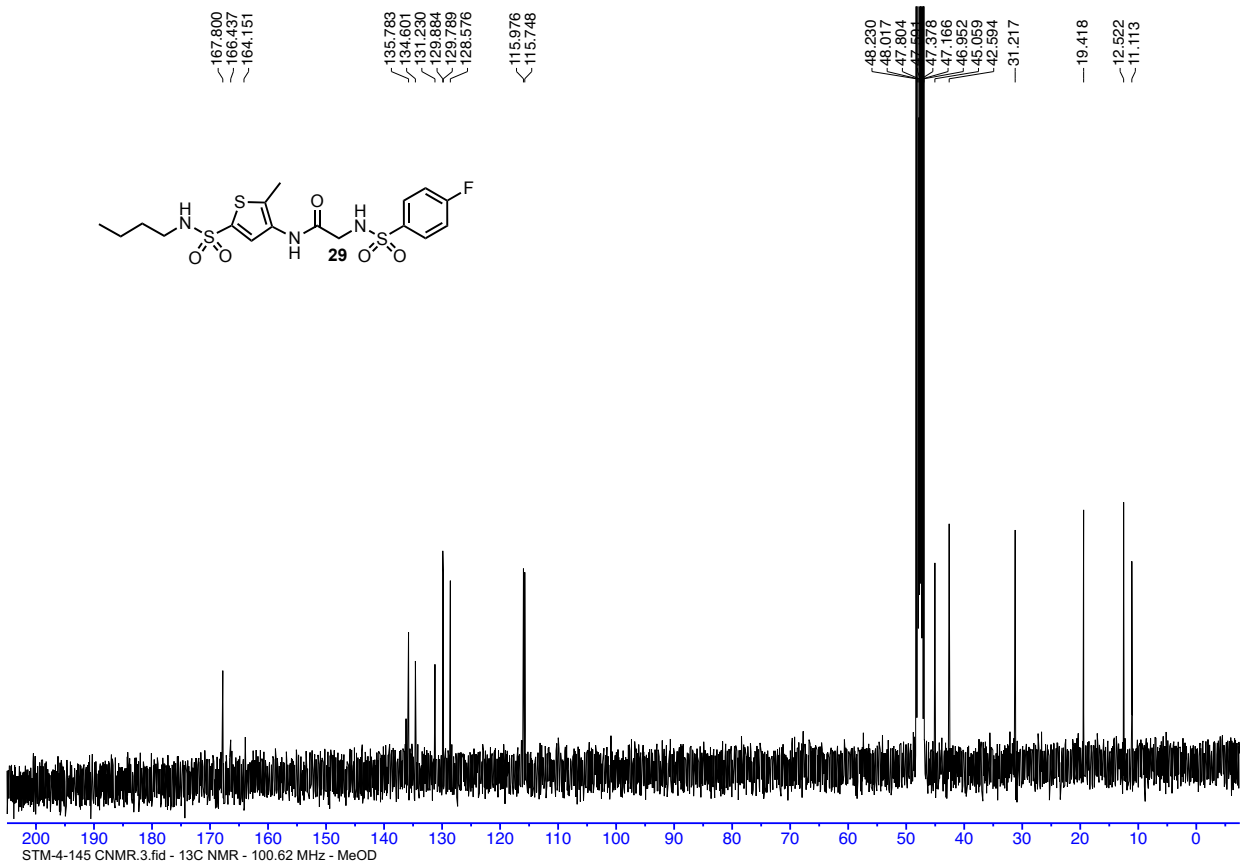

7.989
7.976
7.969
7.956
7.535
7.346
7.324
7.303
4.868
3.790
3.329
2.730
2.375
27
2.04
0.94
2.14
6.20
2.00
3.84
6.06
2.98
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-30 (4-18-22) - 1H NMR - 400.13 MHz - MeOD

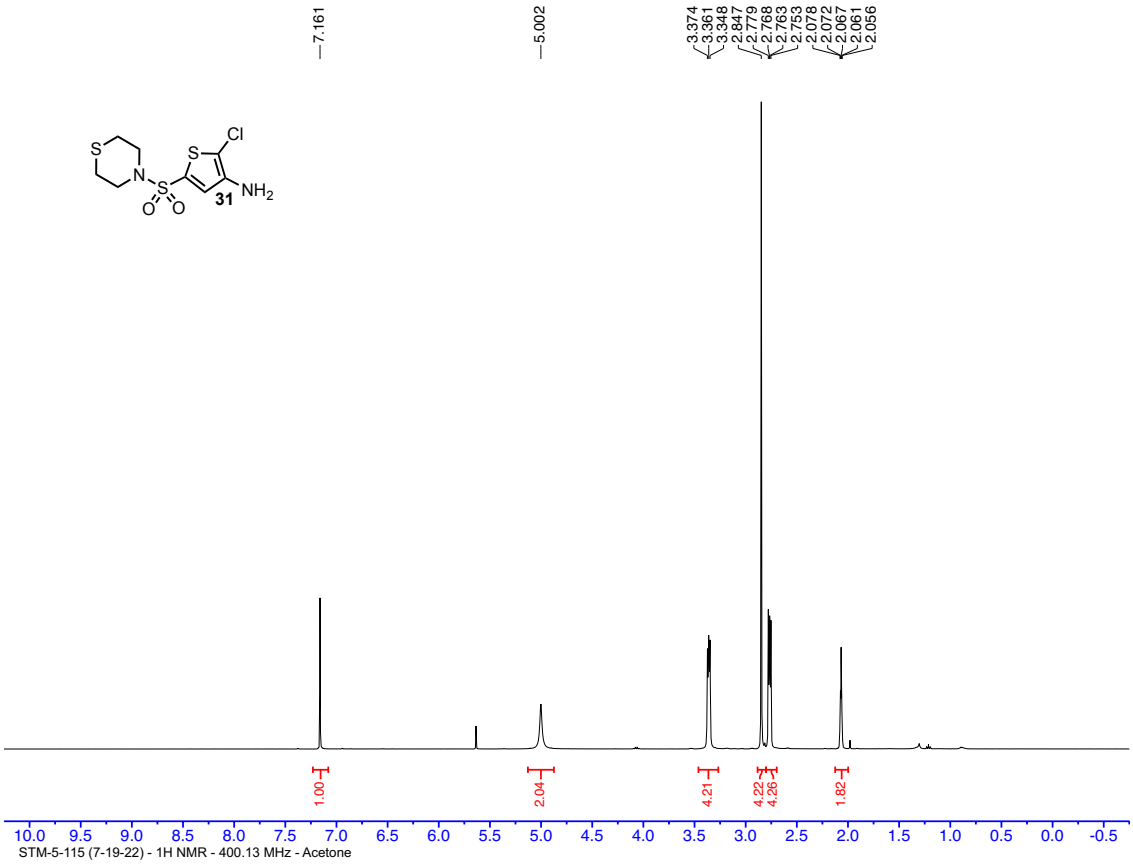

167.851
166.426
163.917
136.232
136.200
135.573
131.853
129.911
129.817
129.573
129.373
115.968
115.740
48.234
48.020
47.808
47.595
47.169
46.956
45.058
36.936
11.144
27
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-30 CNMR - 13C NMR - 100.62 MHz - MeOD

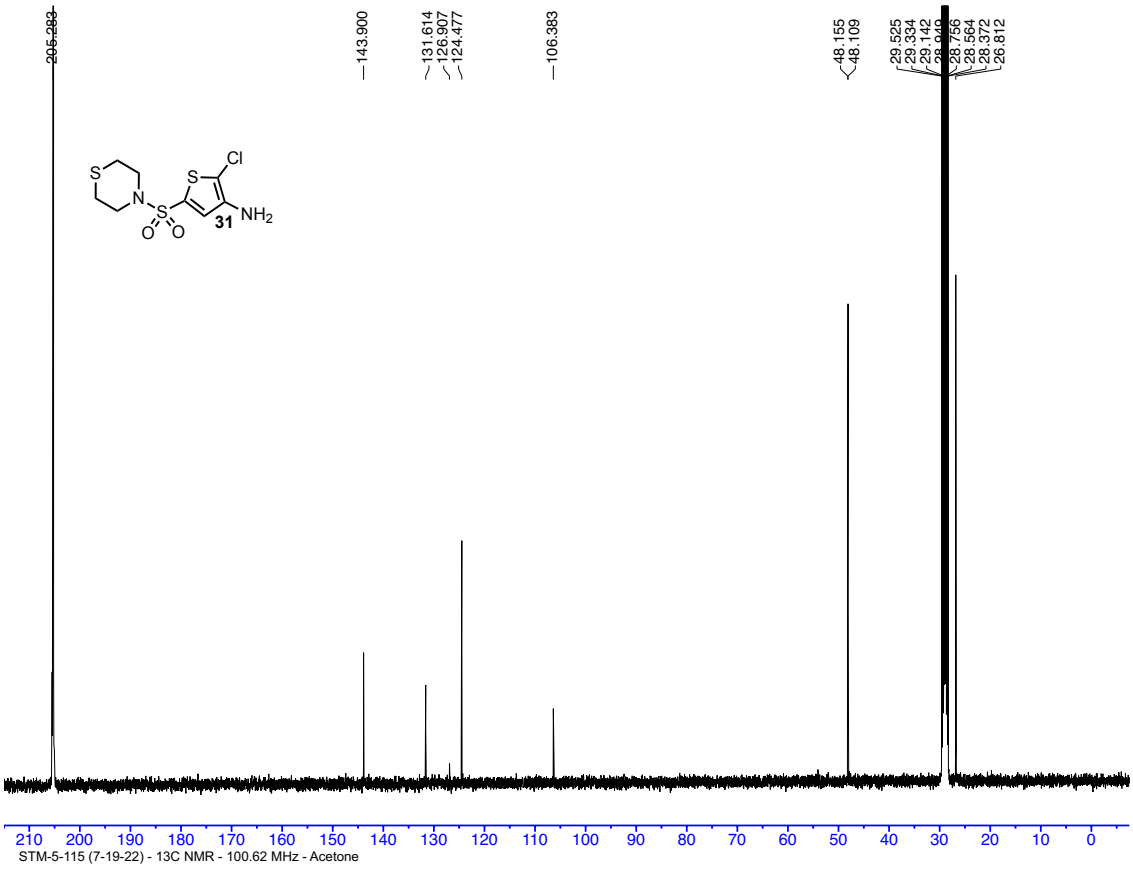

7.966
7.953
7.944
7.932
7.521
7.322
7.300
7.279
4.842
3.765
3.311
3.234
3.216
3.198
3.180
3.160
2.333
2.291
1.329
1.313
1.290
1.178
1.160
1.142
1.121
1.103
28
2.04
0.90
2.15
2.02
4.92
3.18
7.07
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-150 (3-18-22) - 1H NMR - 400.13 MHz - MeOD

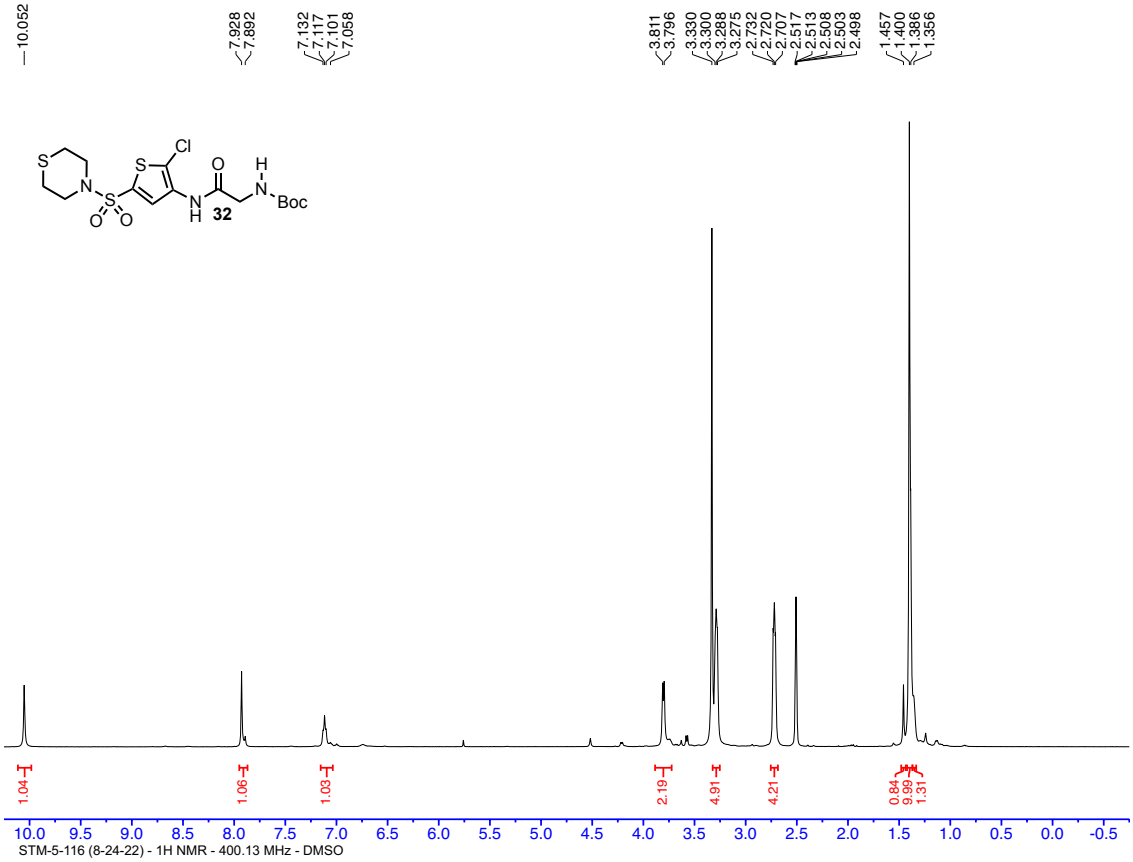

167.746
166.425
163.912
136.193
136.161
134.614
134.471
131.465
129.922
129.828
128.593
115.994
115.766
78.078
60.155
48.270
48.057
47.844
47.630
47.418
47.206
46.993
45.081
42.649
13.389
11.142
28
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-150 CNMR - 13C NMR - 100.62 MHz - MeOD

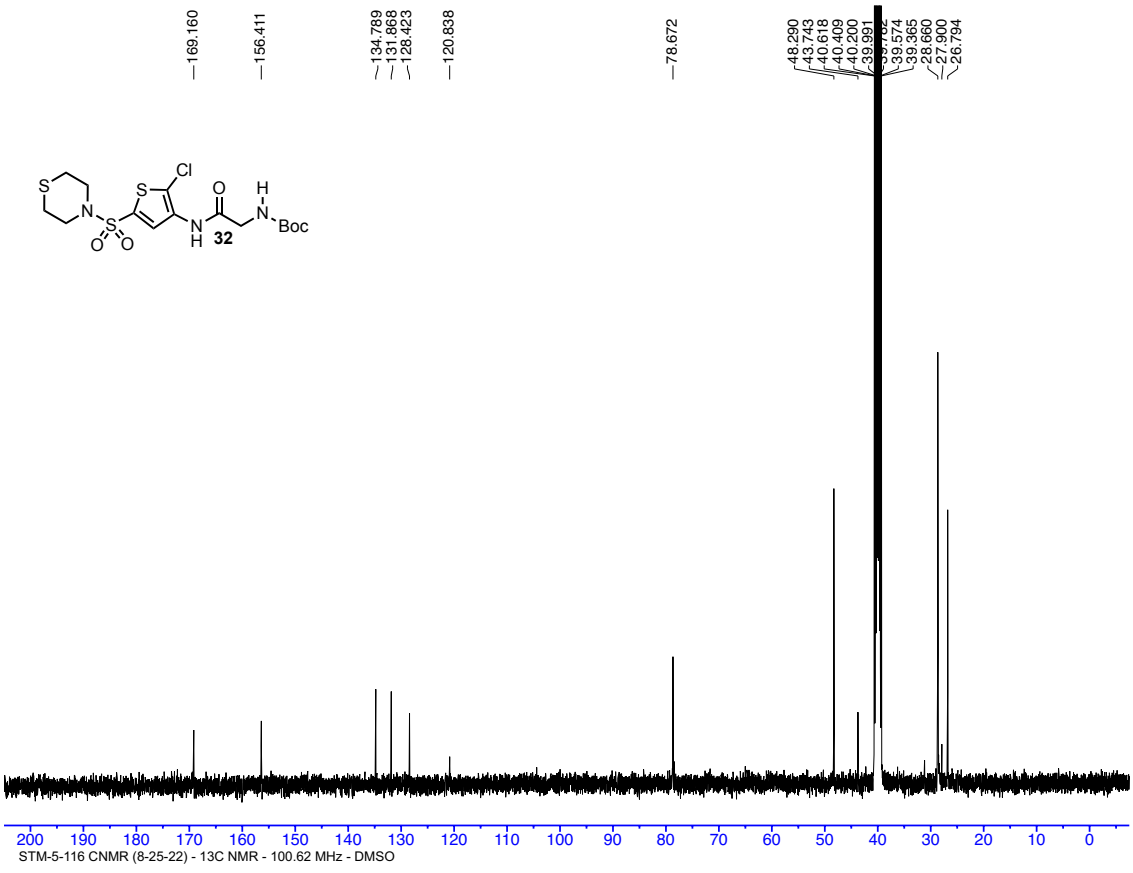

7.997
7.989
7.984
7.976
7.971
7.967
7.959
7.954
7.946
7.556
7.355
7.347
7.342
7.330
7.325
7.320
7.309
7.303
7.296
4.870
3.777
3.337
3.333
3.329
3.325
3.321
2.944
2.927
2.909
2.356
1.502
1.499
1.494
1.485
1.481
1.476
1.464
1.458
1.446
1.387
1.374
1.368
1.356
1.352
1.348
1.335
1.331
0.931
0.913
29
2.03
0.96
2.15
2.02
2.18
3.04
2.23
2.35
3.22
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-145 - 1H NMR - 400.13 MHz - MeOD

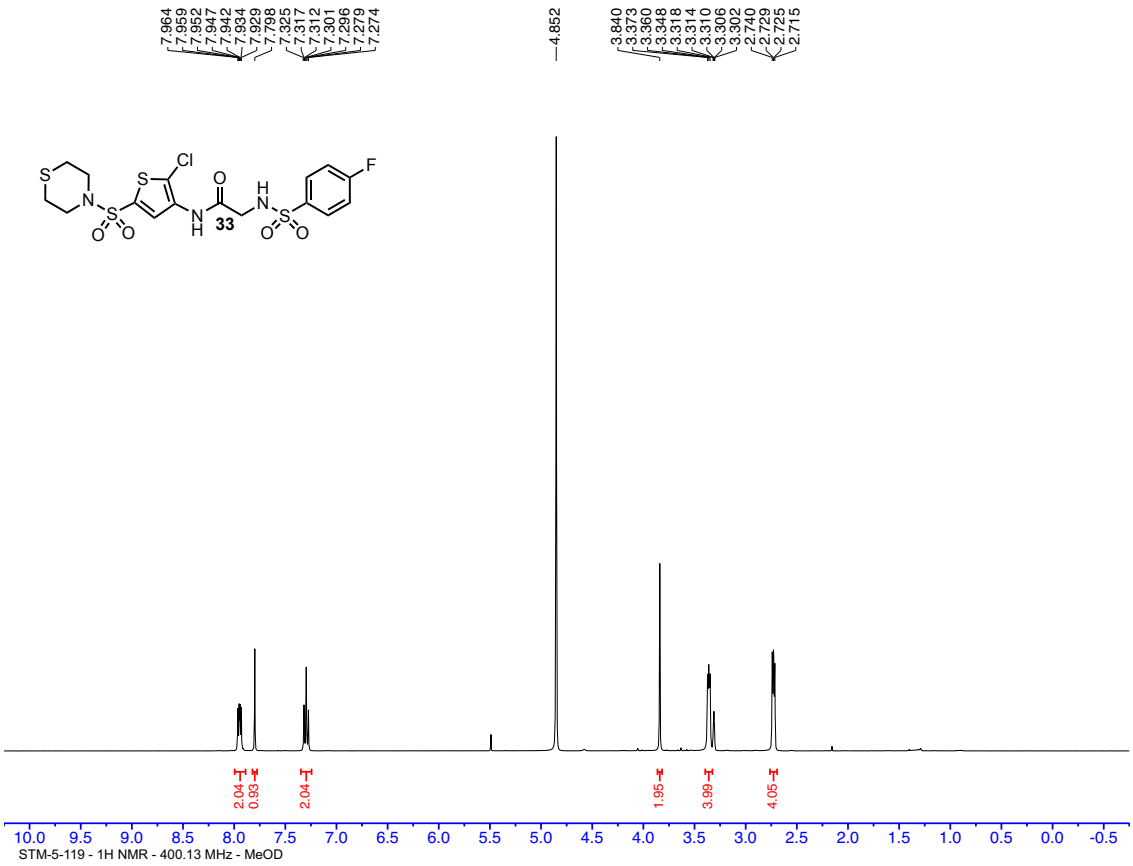

167.800
166.437
164.151
135.783
134.601
131.230
129.884
129.789
128.576
115.976
115.748
48.230
48.017
47.804
47.591
47.378
47.166
46.952
45.059
42.594
31.217
19.418
12.522
11.113
29
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-145 CNMR.3.fid - 13C NMR - 100.62 MHz - MeOD

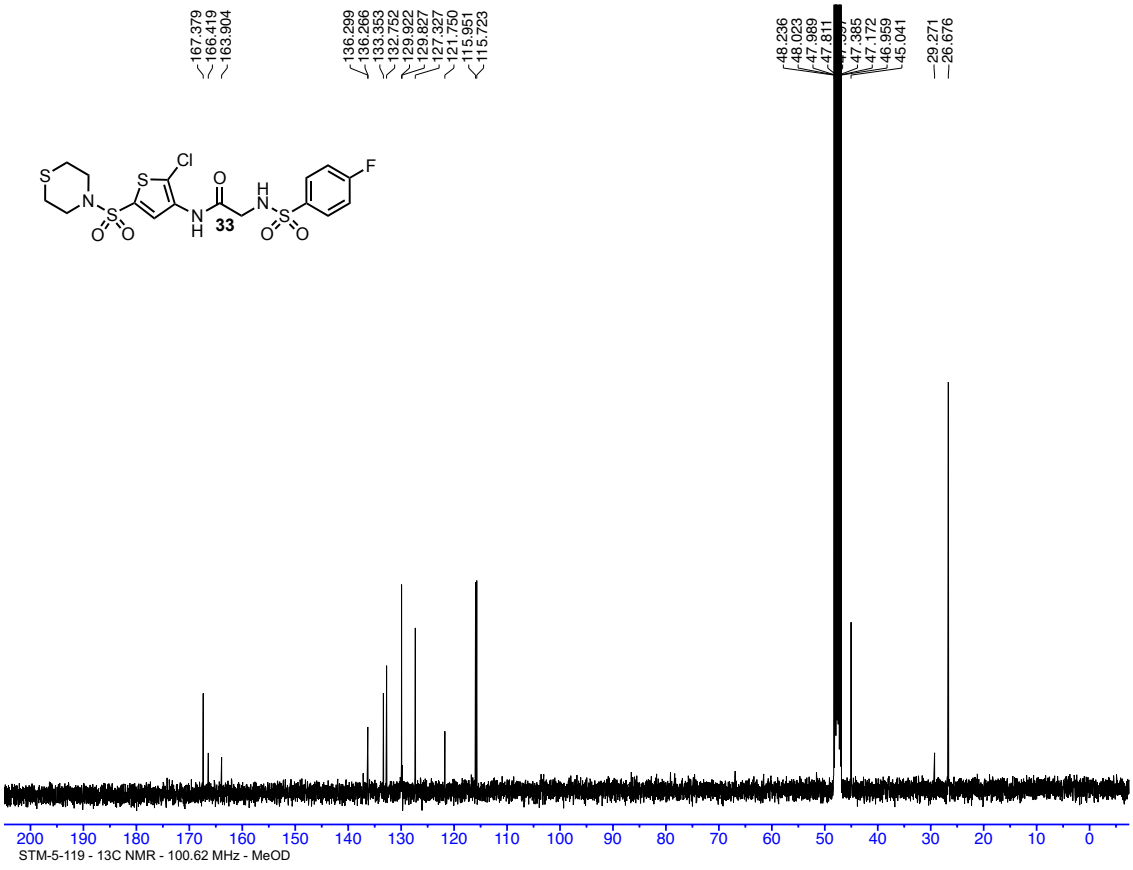

7.161
5.002
3.374
3.361
3.348
2.847
2.779
2.768
2.763
2.753
2.078
2.072
2.067
2.061
2.056
Cl
S
S
N
S
O
O
NH2
31
1.00
2.04
4.21
4.22
4.28
1.82
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-115 (7-19-22) - 1H NMR - 400.13 MHz - Acetone

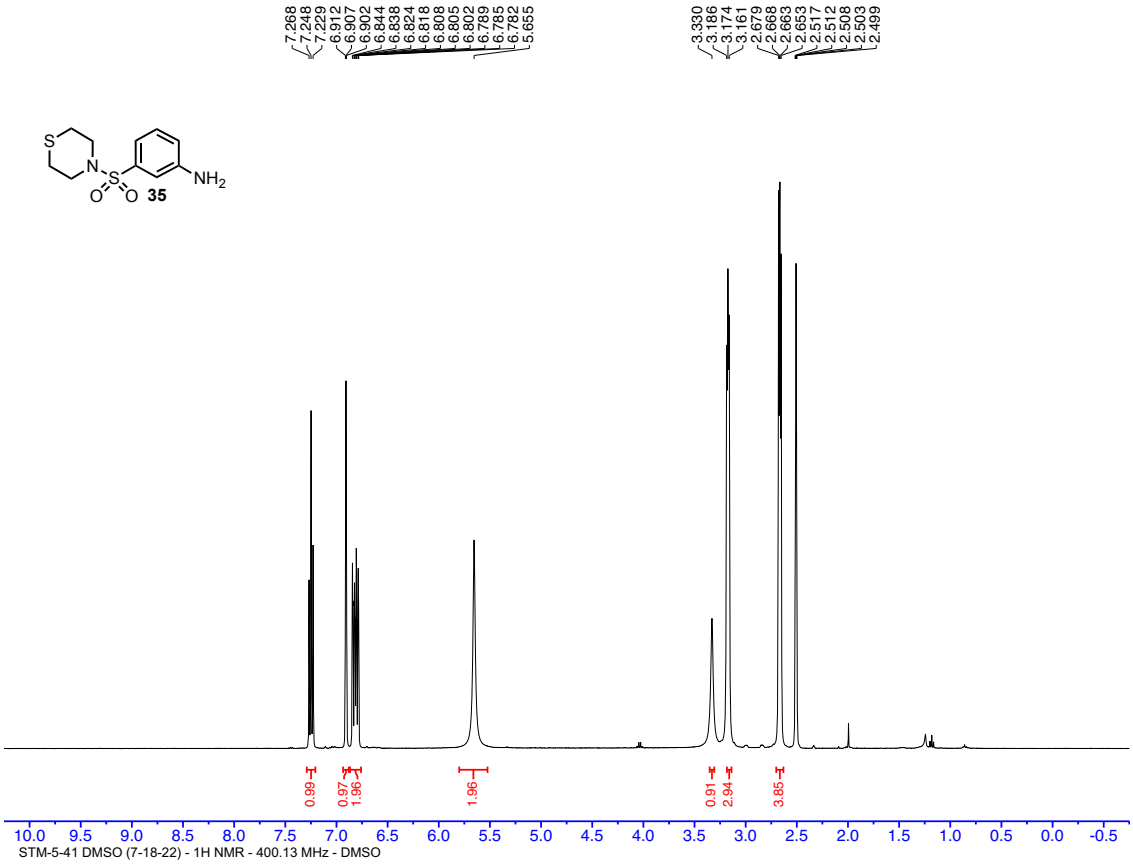

205.283
143.900
131.614
126.907
124.477
106.383
48.155
48.109
29.525
29.334
29.142
28.756
28.564
28.372
26.812
Cl
S
S
N
S
O
O
NH2
31
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-115 (7-19-22) - 13C NMR - 100.62 MHz - Acetone

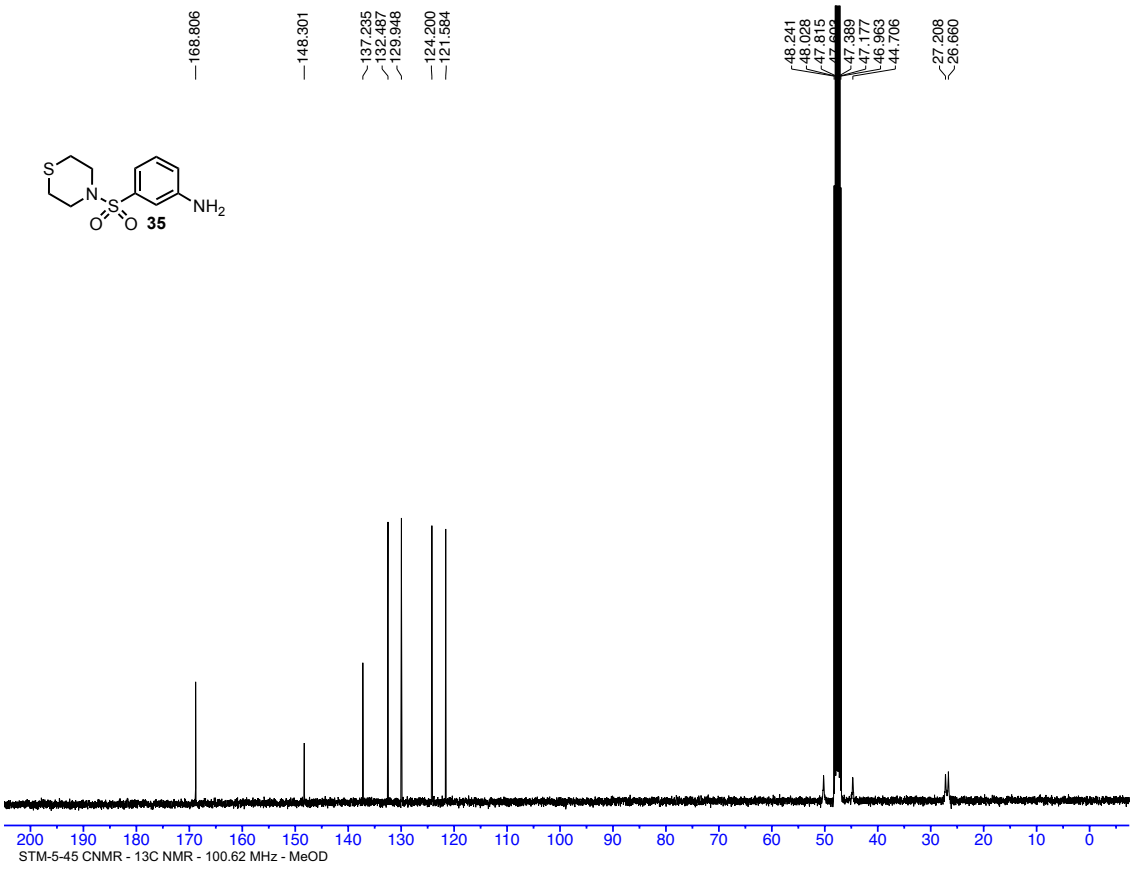

10.052
7.928
7.892
7.132
7.117
7.101
7.058
3.811
3.796
3.330
3.300
3.288
3.275
2.732
2.720
2.707
2.517
2.513
2.508
2.503
2.498
1.457
1.400
1.386
1.356
Cl
S
N
S
O
O
O
N
H
H
N
Boc
32
1.04
1.06
1.03
2.19
4.91
4.21
0.84
9.99
1.31
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-116 (8-24-22) - 1H NMR - 400.13 MHz - DMSO

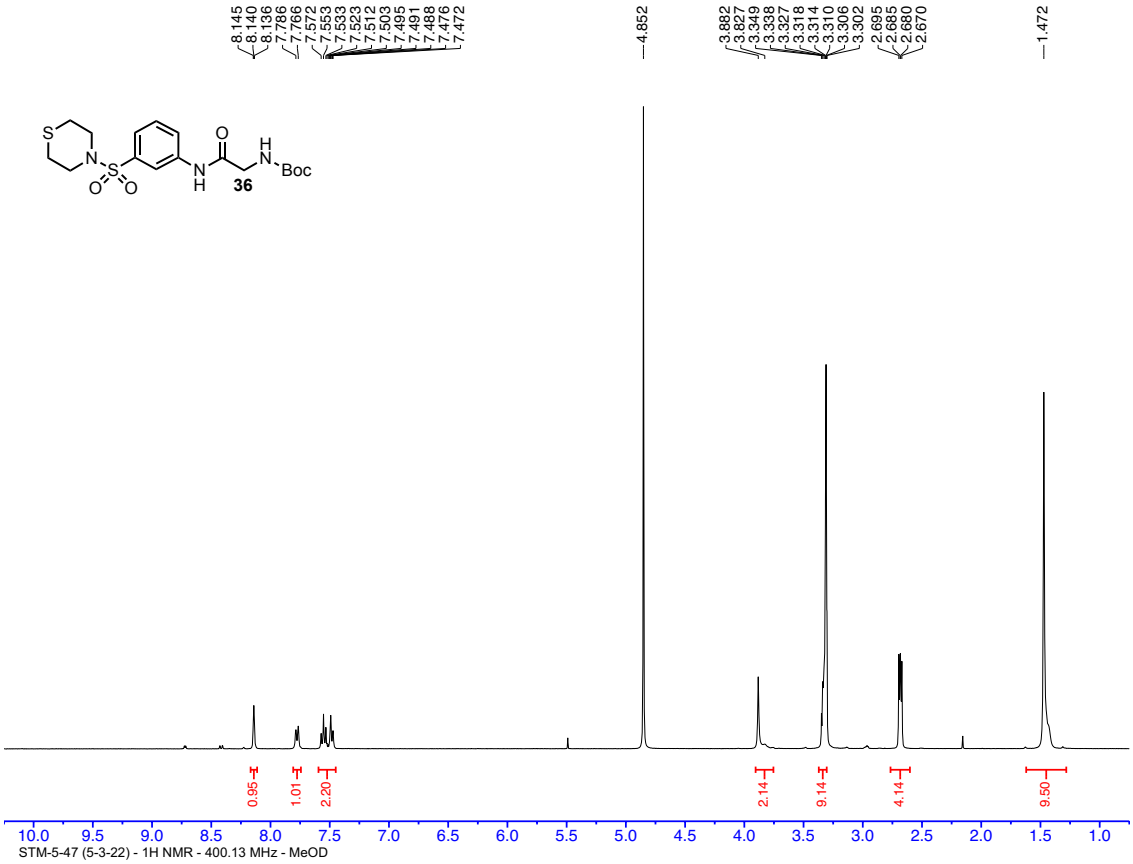

169.160
156.411
134.789
131.868
128.423
120.838
78.672
48.290
43.743
40.618
40.409
40.200
39.991
39.574
39.365
28.660
27.900
26.794
Cl
S
N
S
O
O
O
N
H
H
N
Boc
32
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-116 CNMR (8-25-22) - 13C NMR - 100.62 MHz - DMSO

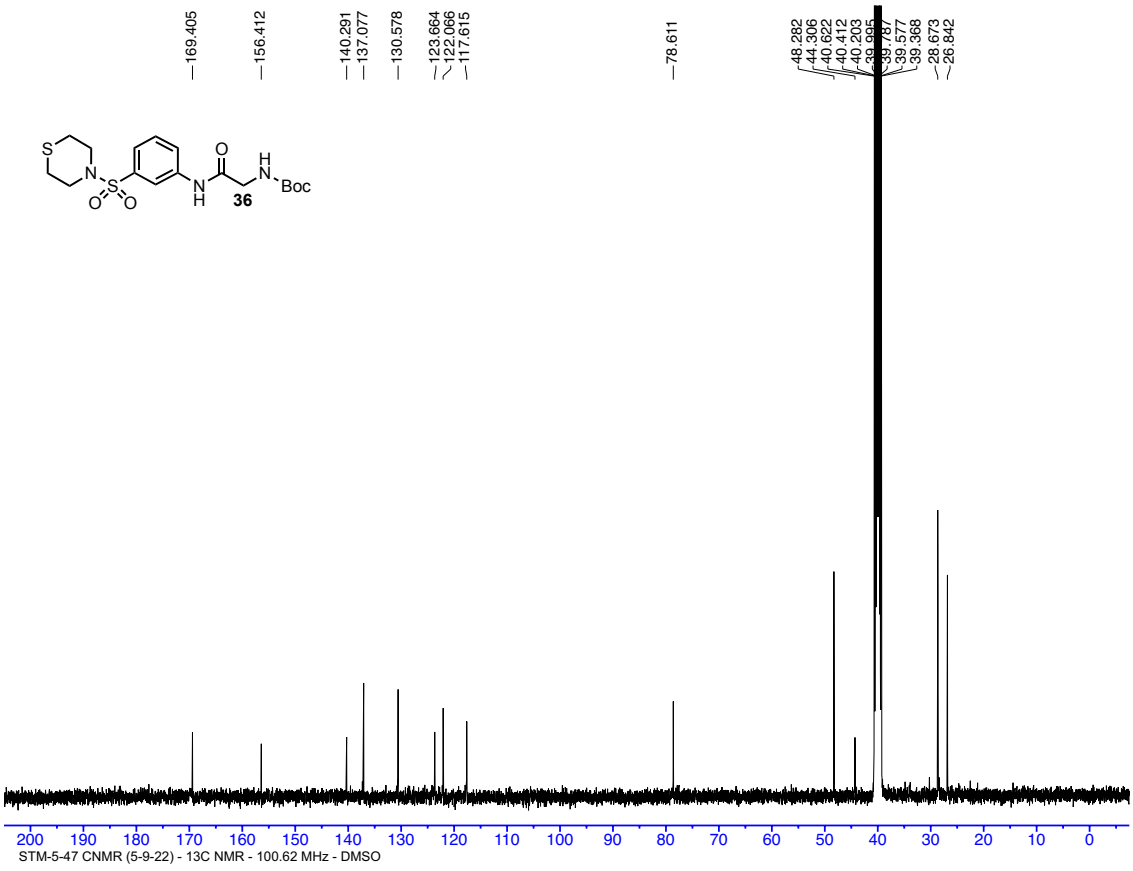

7.964
7.959
7.952
7.947
7.942
7.934
7.929
7.798
7.325
7.317
7.312
7.301
7.296
7.279
7.274
4.852
3.840
3.373
3.360
3.348
3.318
3.314
3.310
3.306
3.302
2.740
2.729
2.725
2.715
Cl
F
33
2.04
0.93
2.04
1.95
3.99
4.05
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-119 - 1H NMR - 400.13 MHz - MeOD

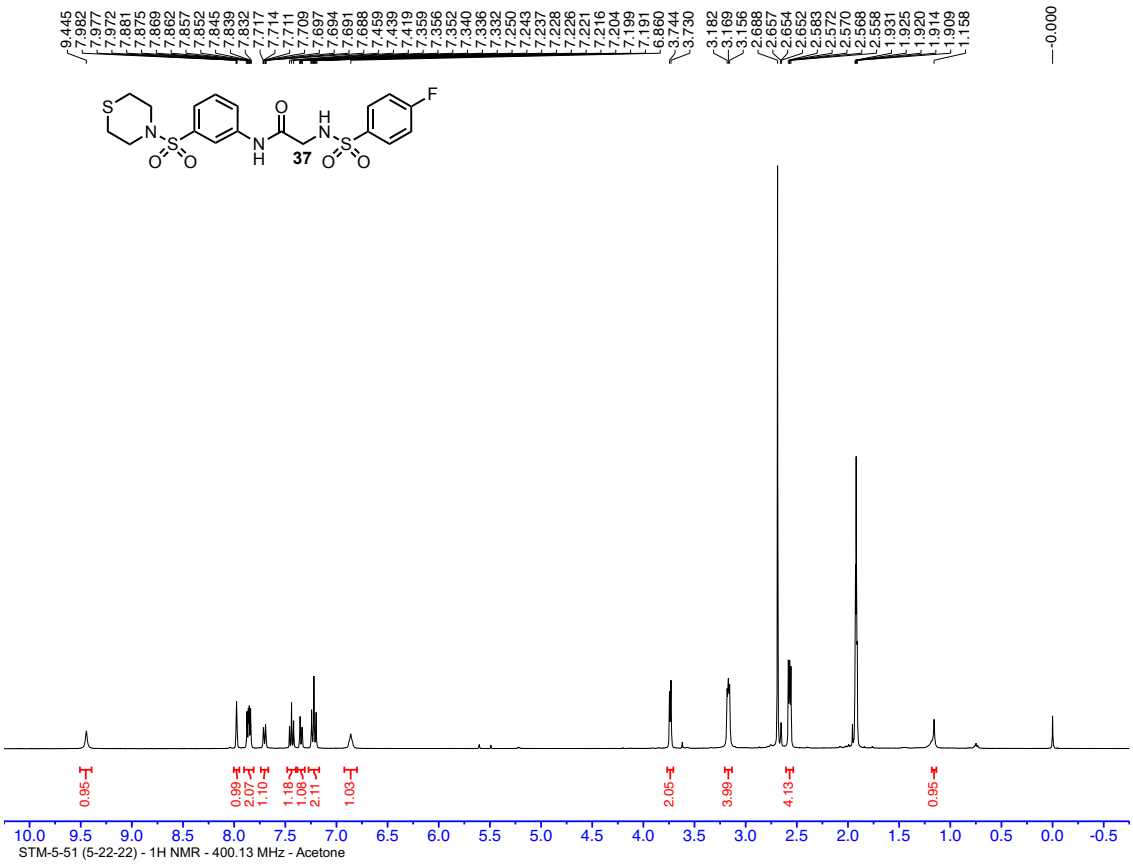

167.379
166.419
163.904
136.299
136.266
133.353
132.752
129.922
129.827
127.327
121.750
115.951
115.723
48.236
48.023
47.989
47.811
47.385
47.172
46.959
45.041
29.271
26.676
Cl
F
33
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-119 - 13C NMR - 100.62 MHz - MeOD

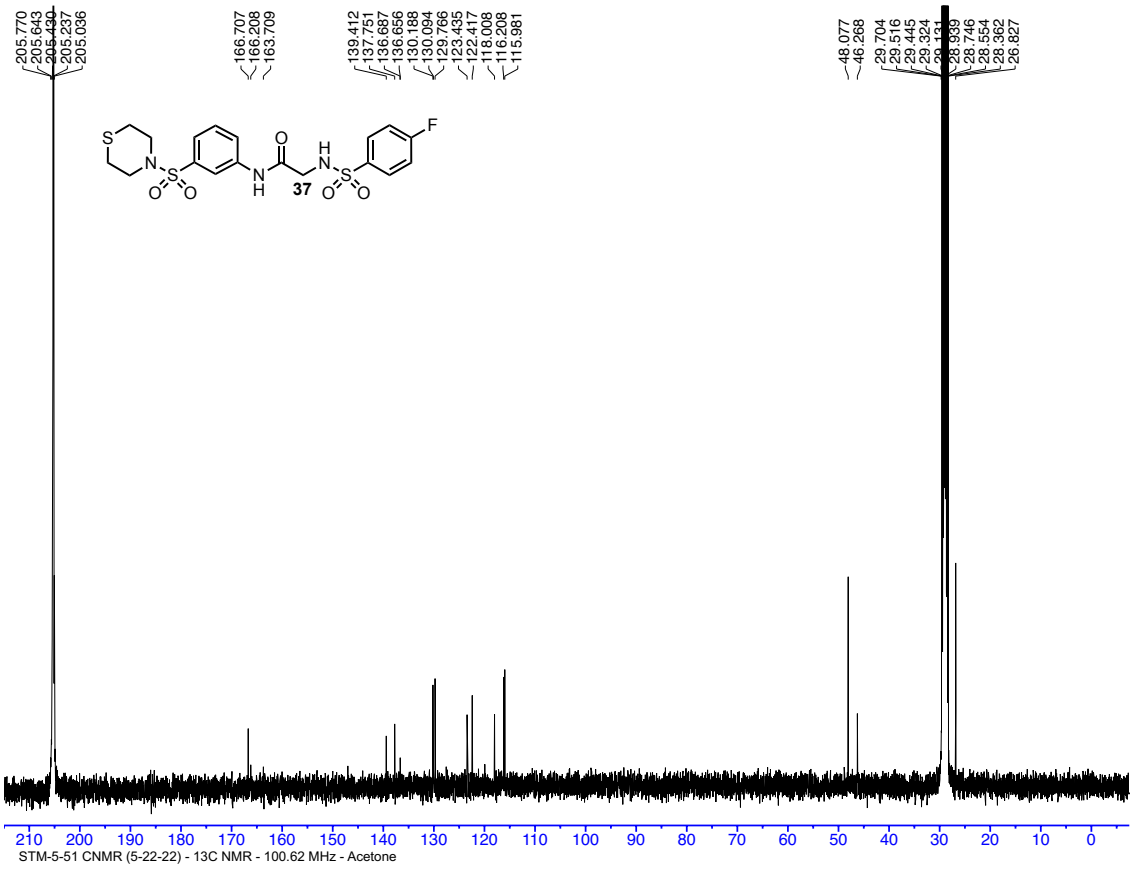

7.268
7.248
7.229
6.912
6.907
6.902
6.844
6.838
6.824
6.818
6.808
6.805
6.802
6.789
6.785
6.782
5.655
3.330
3.186
3.174
3.161
2.679
2.668
2.663
2.653
2.517
2.512
2.508
2.503
2.499
S
N
S
O
O
NH2
35
0.99
0.97
1.96
1.96
0.91
2.94
3.85
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-41 DMSO (7-18-22) - 1H NMR - 400.13 MHz - DMSO

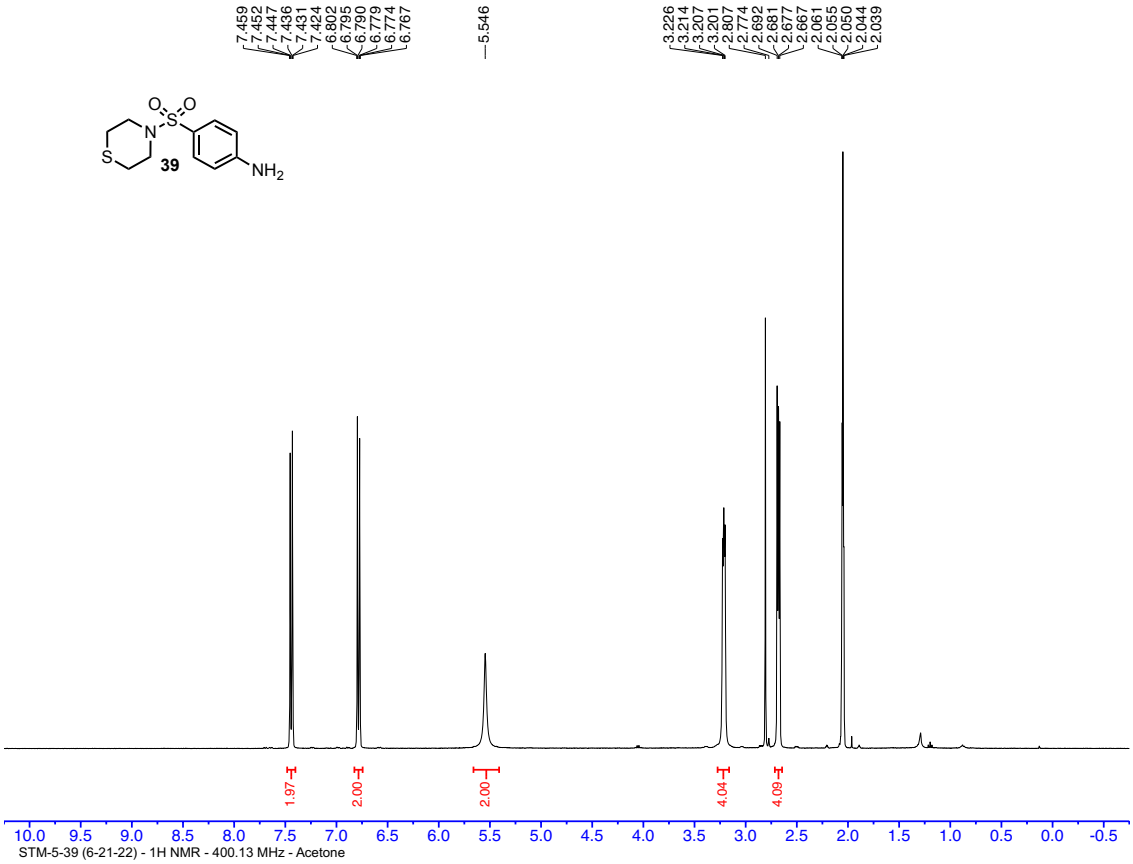

168.806
148.301
137.235
132.487
129.948
124.200
121.584
48.241
48.028
47.815
47.389
47.177
46.963
44.706
27.208
26.660
S
N
S
O
O
NH2
35
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-45 CNMR - 13C NMR - 100.62 MHz - MeOD

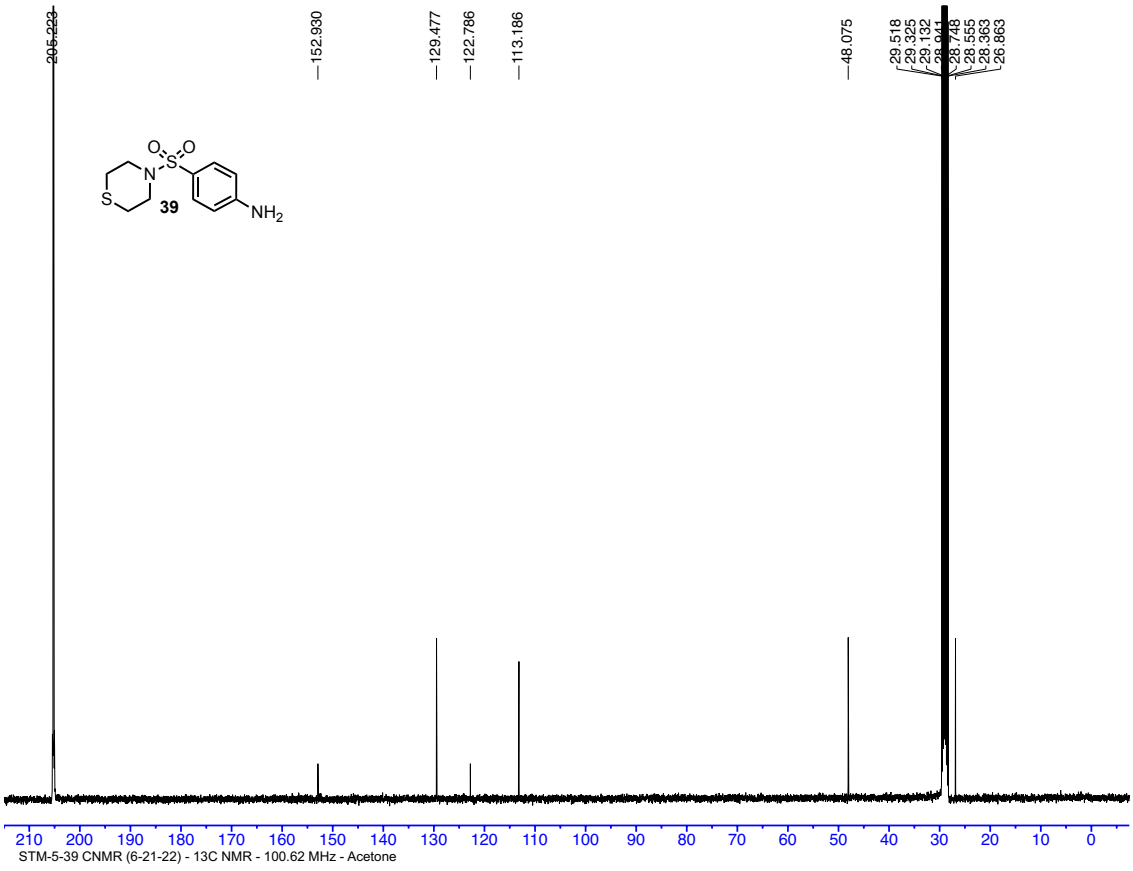

8.145
8.140
8.136
7.786
7.766
7.572
7.553
7.533
7.523
7.512
7.503
7.495
7.491
7.488
7.476
7.472
4.852
3.882
3.827
3.349
3.338
3.327
3.318
3.314
3.310
3.306
3.302
2.695
2.685
2.680
2.670
1.472
S
N
S
O
O
N
H
O
H
N
Boc
36
0.95
1.01
2.20
2.14
9.14
4.14
9.50
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0
STM-5-47 (5-3-22) - 1H NMR - 400.13 MHz - MeOD

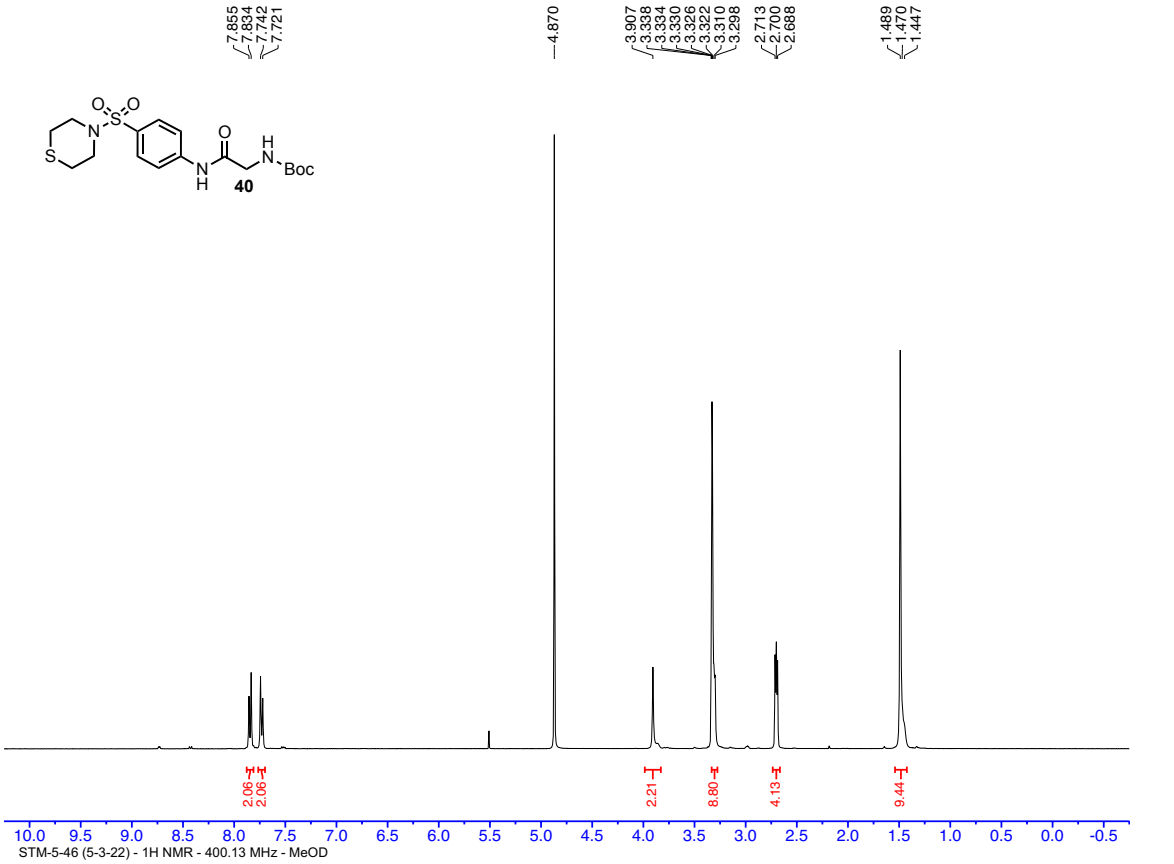

169.405
156.412
140.291
137.077
130.578
123.664
122.066
117.615
78.611
48.282
44.306
40.622
40.412
40.203
39.787
39.577
39.368
28.673
26.842
S
N
S
O
O
N
H
O
H
N
Boc
36
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-47 CNMR (5-9-22) - 13C NMR - 100.62 MHz - DMSO

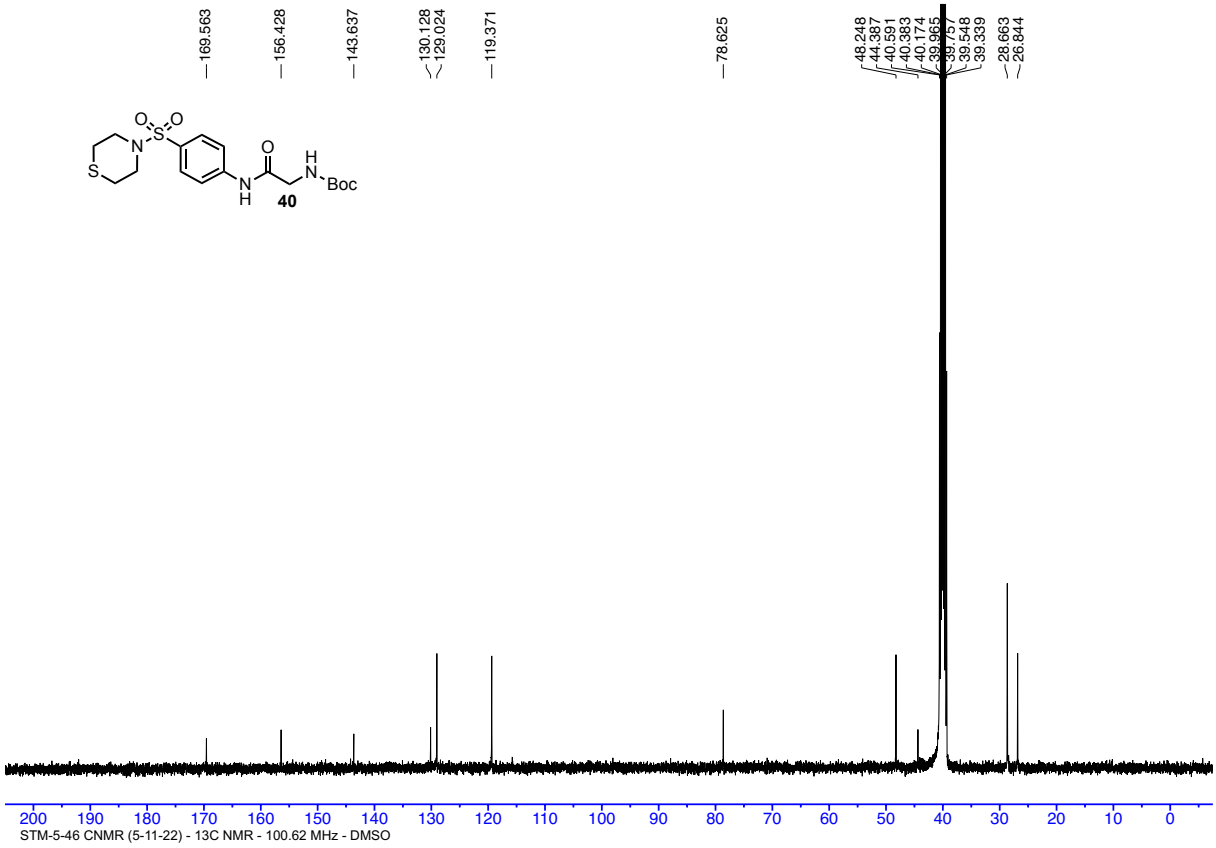

9.445
7.982
7.977
7.972
7.881
7.875
7.869
7.862
7.857
7.852
7.845
7.839
7.832
7.717
7.714
7.711
7.709
7.697
7.694
7.691
7.688
7.459
7.439
7.419
7.359
7.356
7.352
7.340
7.336
7.332
7.250
7.243
7.237
7.228
7.226
7.221
7.216
7.204
7.199
7.191
6.860
3.744
3.730
3.182
3.169
3.156
2.688
2.657
2.654
2.652
2.583
2.572
2.570
2.568
2.558
1.931
1.925
1.920
1.914
1.909
1.158
-0.000
37
0.95
0.99
2.07
1.10
1.18
1.08
2.11
1.03
2.05
3.99
4.13
0.95
STM-5-51 (5-22-22) - 1H NMR - 400.13 MHz - Acetone

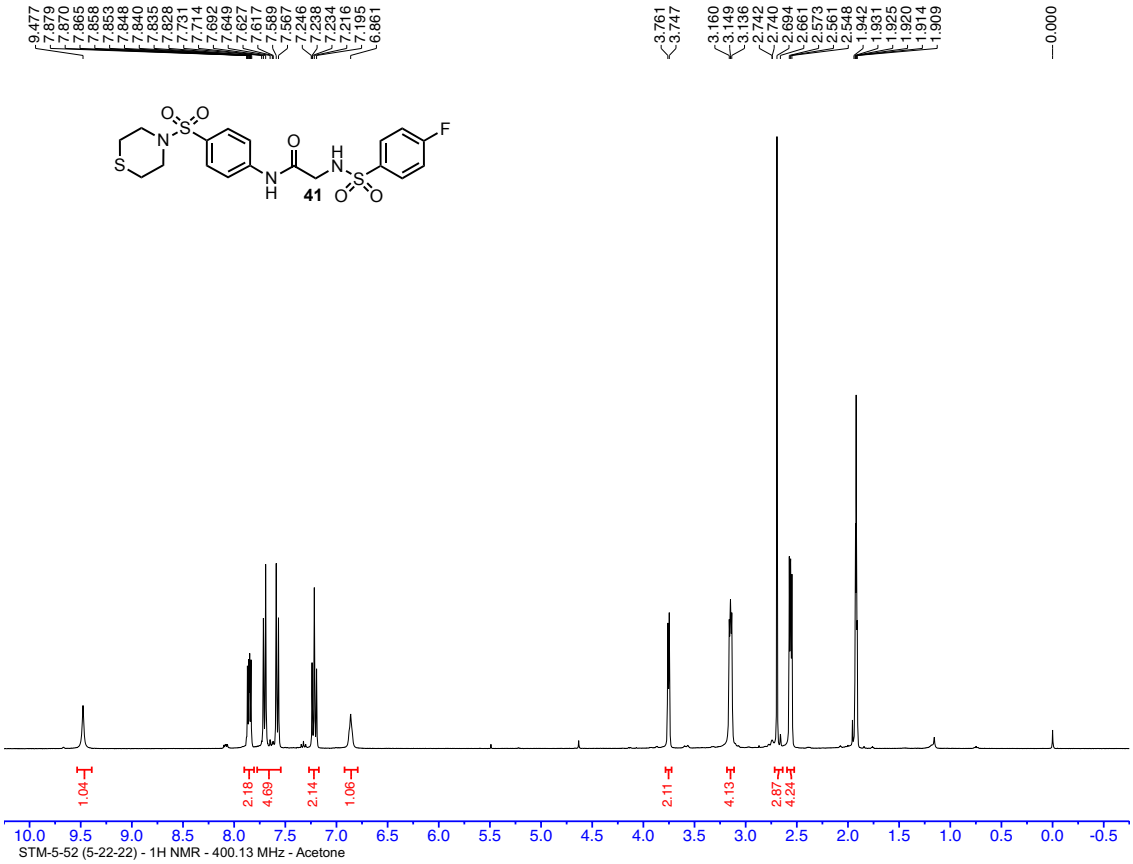

205.770
205.643
205.430
205.237
205.036
166.707
166.208
163.709
139.412
137.751
136.687
136.656
130.188
130.094
129.766
123.435
122.417
118.008
116.208
115.981
48.077
46.268
29.704
29.516
29.445
29.324
29.131
28.939
28.746
28.554
28.362
26.827
37
STM-5-51 CNMR (5-22-22) - 13C NMR - 100.62 MHz - Acetone

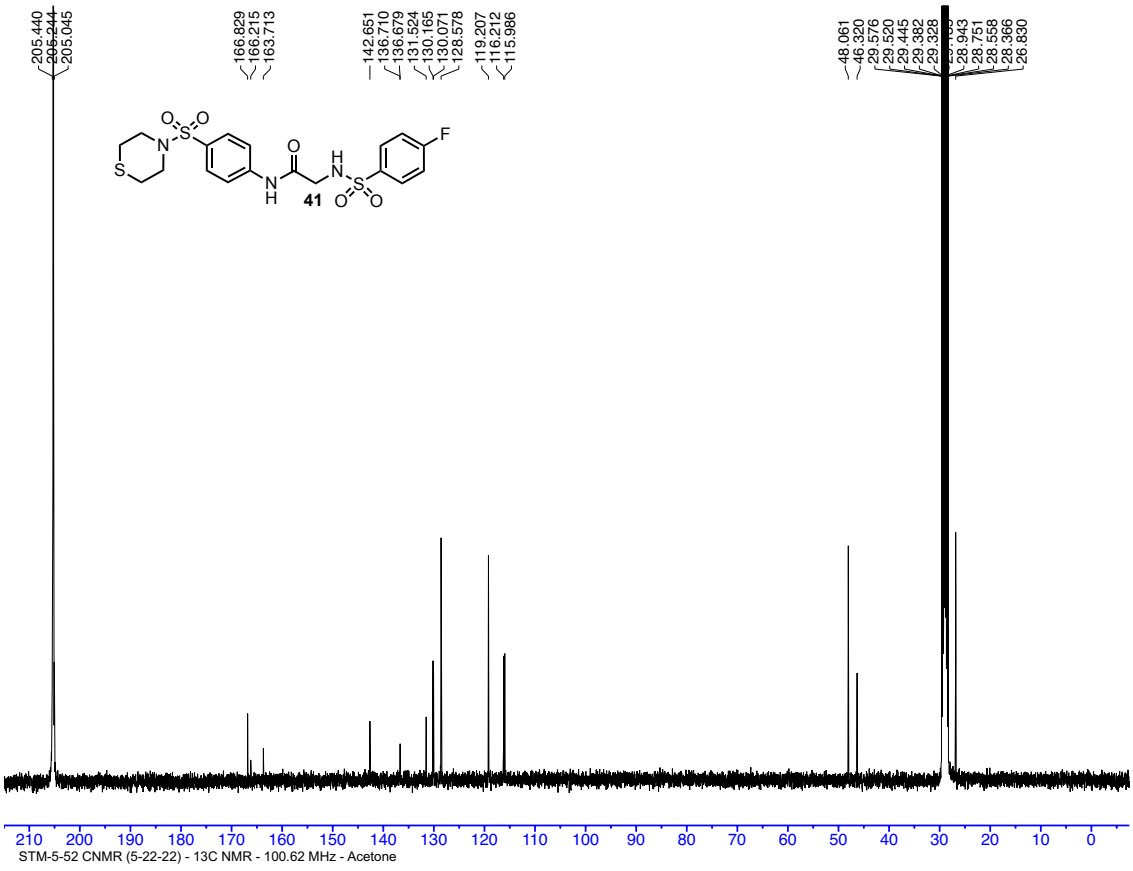

7.459
7.452
7.447
7.436
7.431
7.424
6.802
6.795
6.790
6.779
6.774
6.767
5.546
3.226
3.214
3.207
3.201
2.807
2.774
2.692
2.681
2.677
2.667
2.061
2.055
2.050
2.044
2.039
39
NH2
1.97
2.00
2.00
4.04
4.09
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-39 (6-21-22) - 1H NMR - 400.13 MHz - Acetone

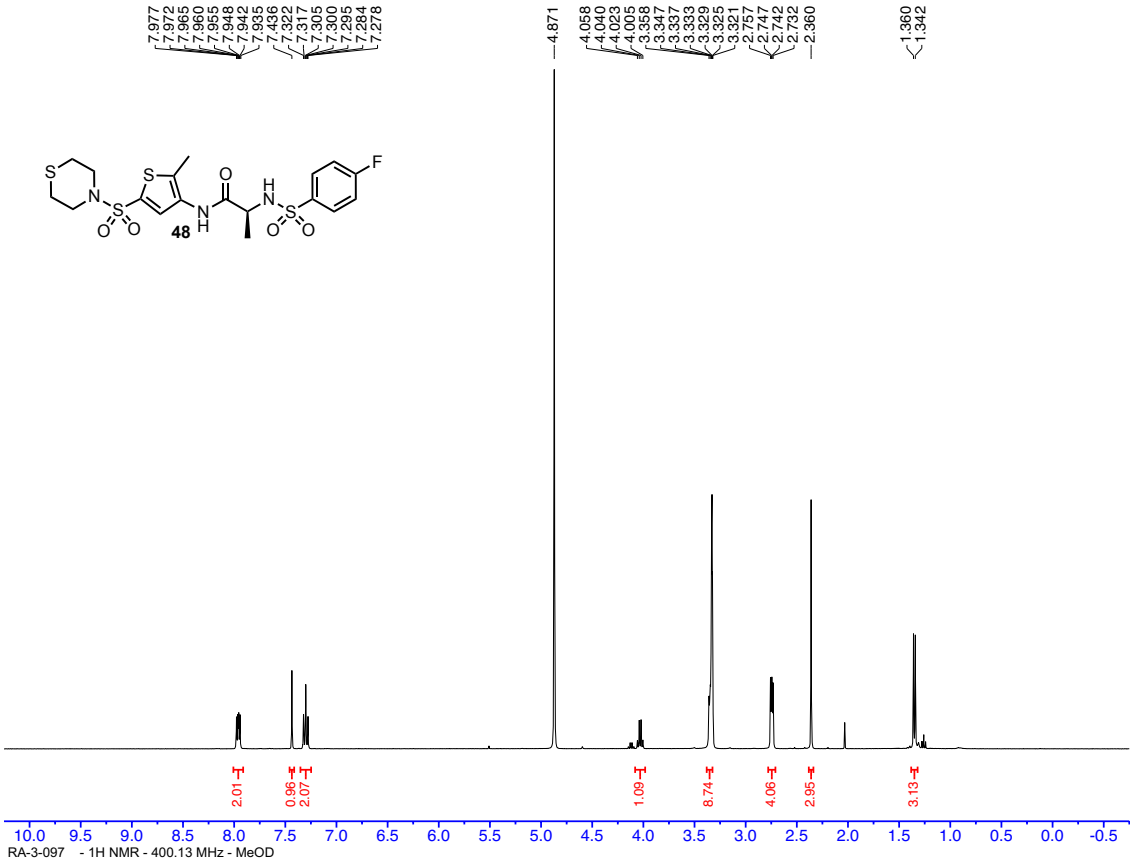

205.223
152.930
129.477
122.786
113.186
48.075
29.518
29.325
29.132
28.748
28.555
28.363
26.863
39
NH2
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-39 CNMR (6-21-22) - 13C NMR - 100.62 MHz - Acetone

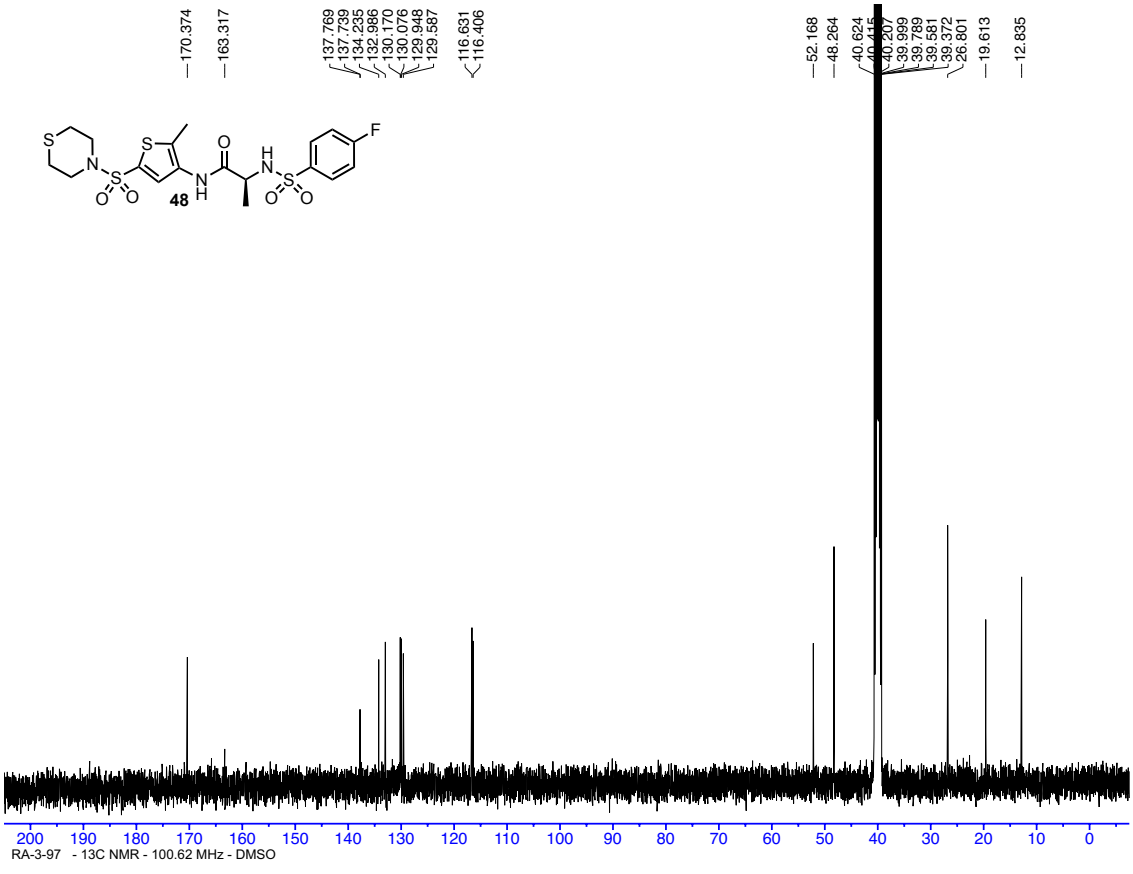

7.855
7.834
7.742
7.721
4.870
3.907
3.338
3.334
3.330
3.326
3.322
3.310
3.298
2.713
2.700
2.688
1.489
1.470
1.447
O
O
S
N
S
O
N
H
H
N
Boc
40
2.06
2.06
2.21
8.80
4.13
9.44
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-46 (5-3-22) - 1H NMR - 400.13 MHz - MeOD

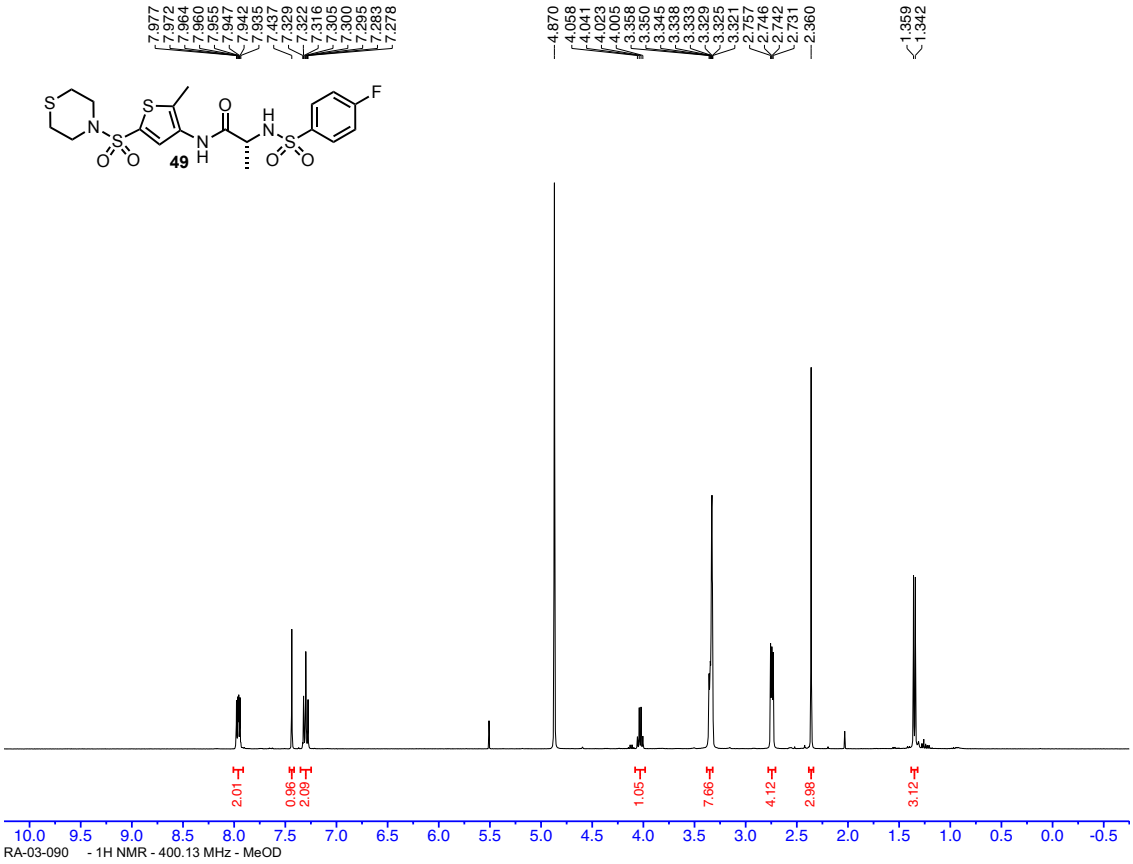

169.563
156.428
143.637
130.128
129.024
119.371
78.625
48.248
44.387
40.591
40.383
40.174
39.965
39.757
39.548
39.339
28.663
26.844
O
O
S
N
S
O
N
H
H
N
Boc
40
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-46 CNMR (5-11-22) - 13C NMR - 100.62 MHz - DMSO

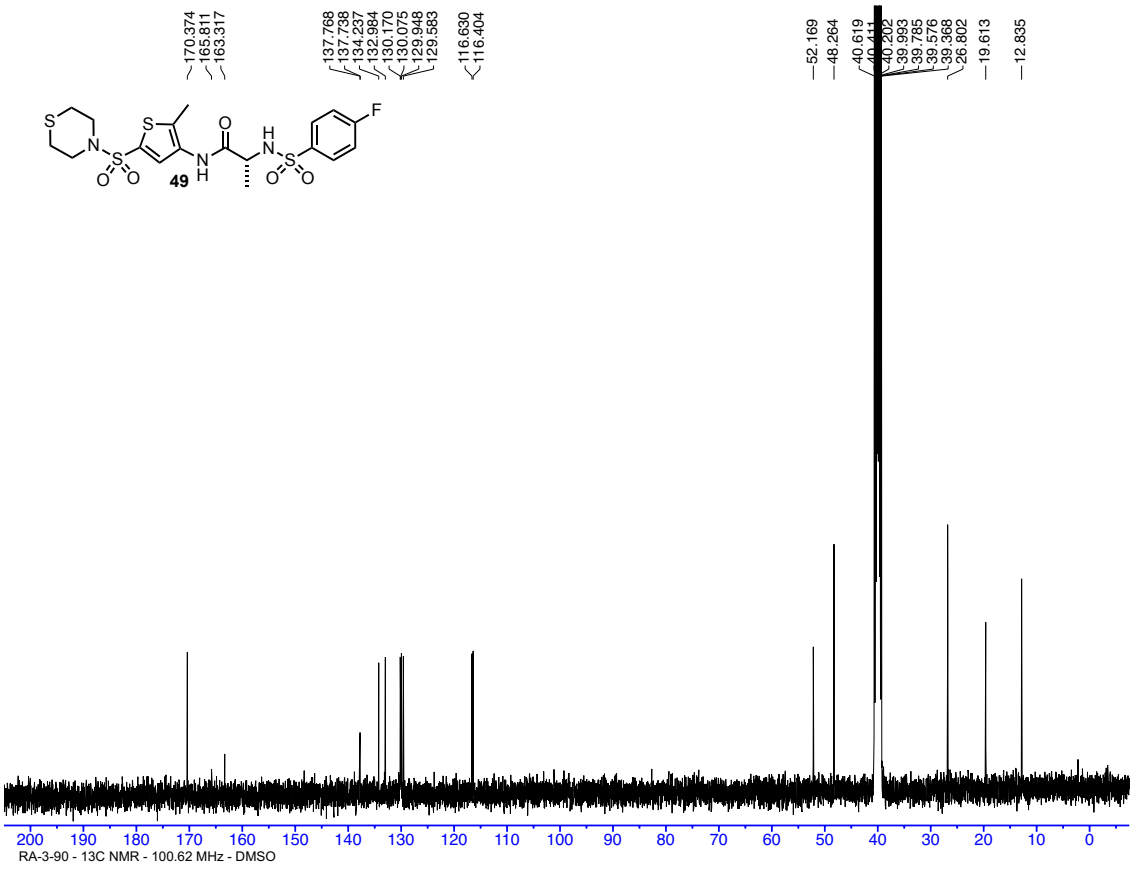

9.477
7.879
7.870
7.865
7.858
7.853
7.848
7.840
7.835
7.828
7.731
7.714
7.692
7.649
7.627
7.617
7.589
7.567
7.246
7.238
7.234
7.216
7.195
6.861
3.761
3.747
3.160
3.149
3.136
2.742
2.740
2.694
2.661
2.573
2.561
2.548
1.942
1.931
1.925
1.920
1.914
1.909
0.000
41
1.04
2.18
4.69
2.14
1.06
2.11
4.13
2.87
4.24
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-52 (5-22-22) - 1H NMR - 400.13 MHz - Acetone

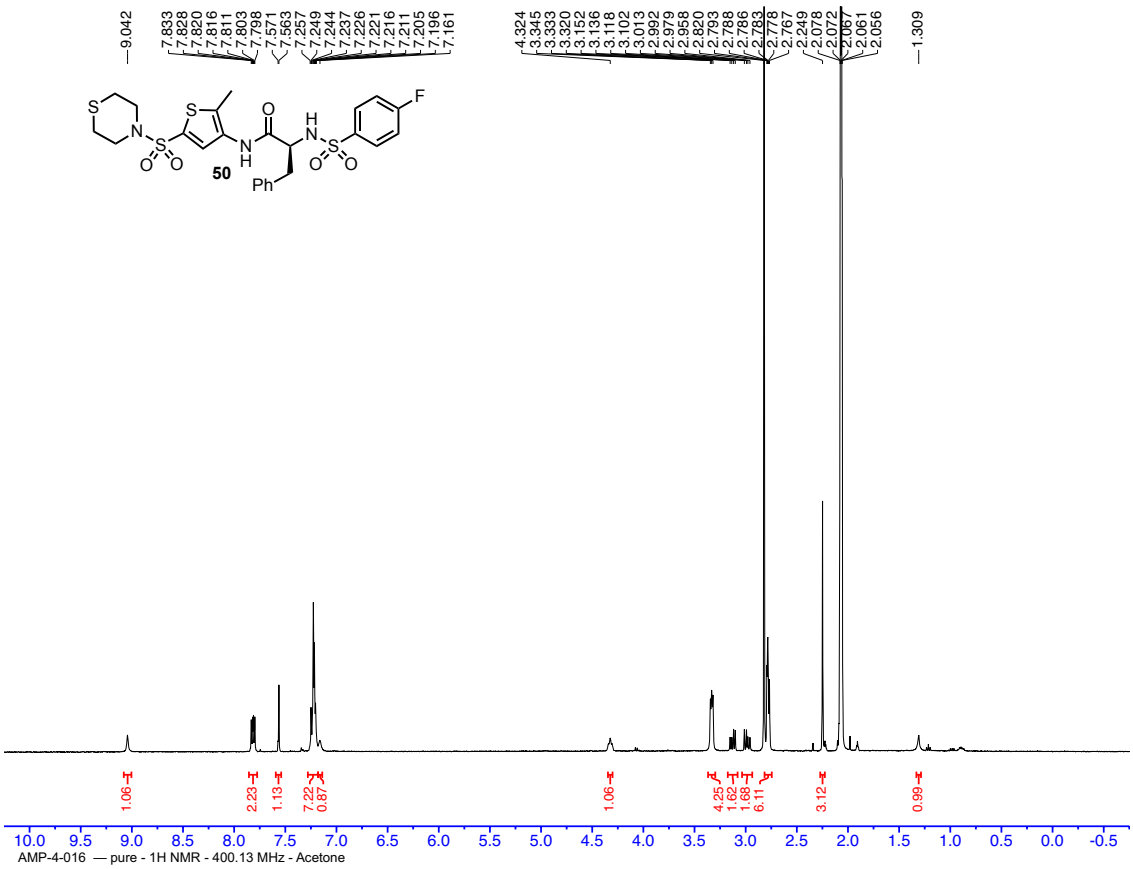

205.440
205.244
205.045
166.829
166.215
163.713
142.651
136.710
136.679
131.524
130.165
130.071
128.578
119.207
116.212
115.986
48.061
46.320
29.576
29.520
29.445
29.382
29.328
28.943
28.751
28.558
28.366
26.830
41
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-52 CNMR (5-22-22) - 13C NMR - 100.62 MHz - Acetone

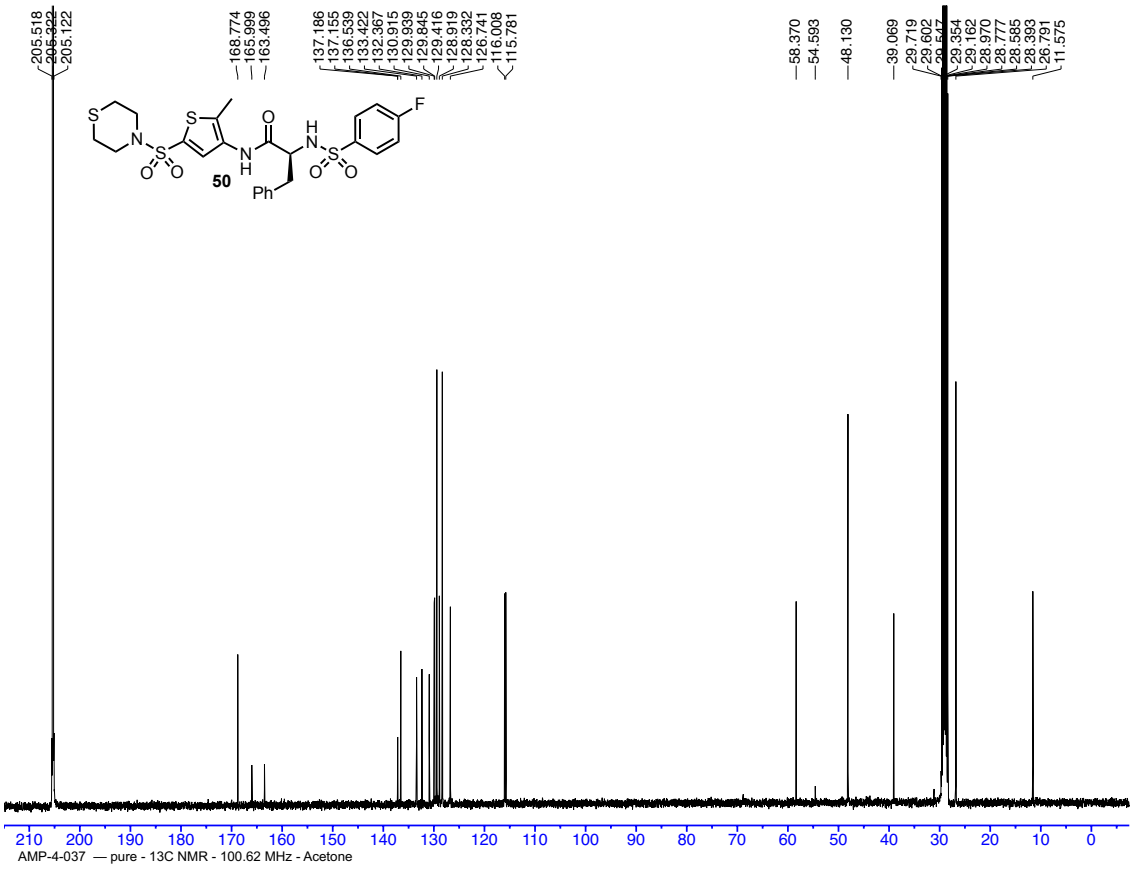

7.977
7.972
7.965
7.960
7.955
7.948
7.942
7.935
7.436
7.322
7.317
7.305
7.300
7.295
7.284
7.278
4.871
4.058
4.040
4.023
4.005
3.358
3.347
3.337
3.333
3.329
3.325
3.321
2.757
2.747
2.742
2.732
2.360
1.360
1.342
48
2.01
0.96
2.07
1.09
8.74
4.06
2.95
3.13
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
RA-3-097 - 1H NMR - 400.13 MHz - MeOD

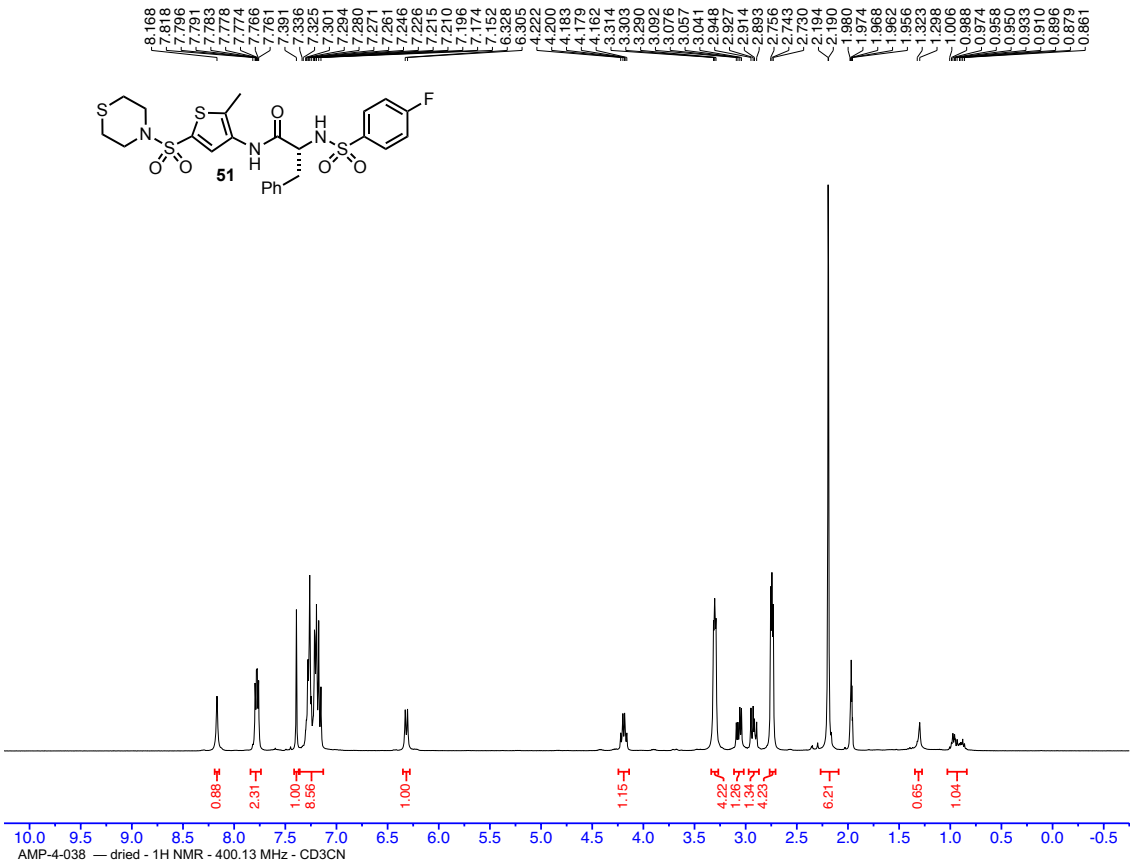

170.374
163.317
137.769
137.739
134.235
132.986
130.170
130.076
129.948
129.587
116.631
116.406
52.168
48.264
40.624
40.415
40.207
39.999
39.789
39.581
39.372
26.801
19.613
12.835
48
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
RA-3-97 - 13C NMR - 100.62 MHz - DMSO

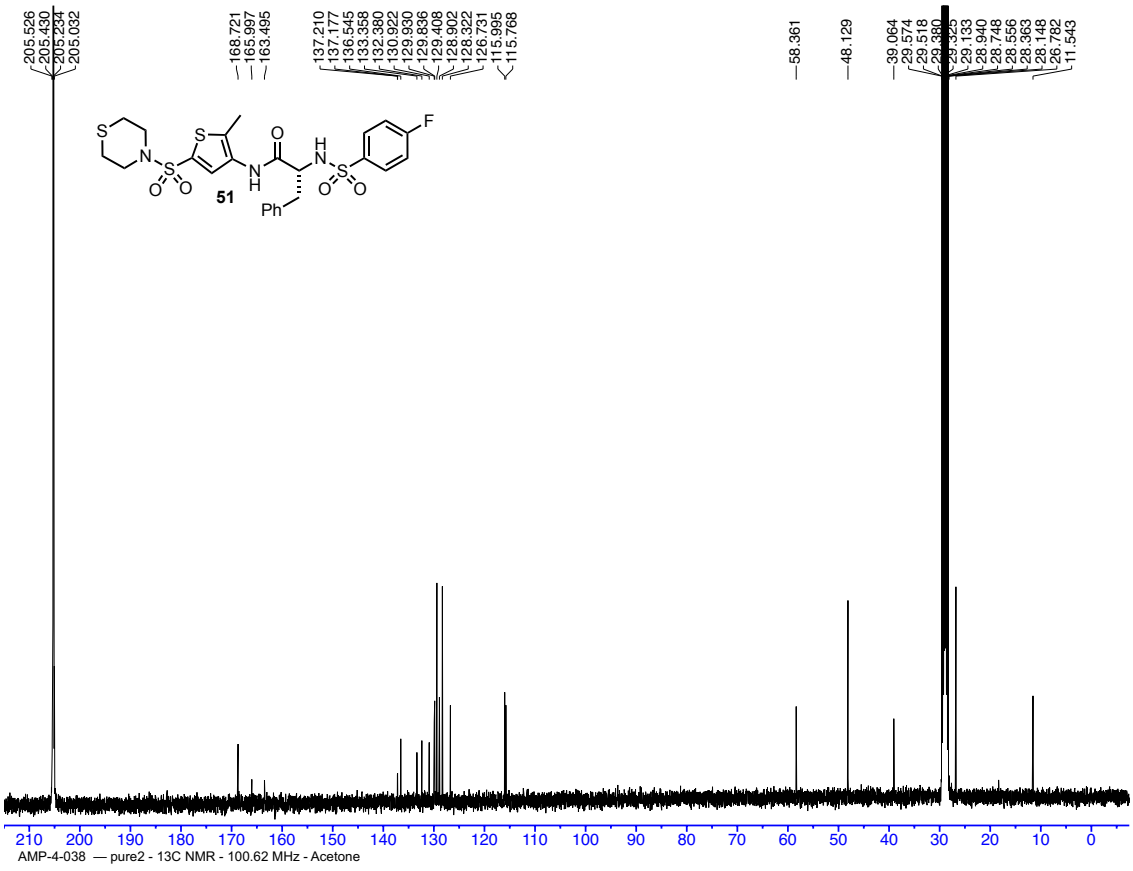

7.977
7.972
7.964
7.960
7.955
7.947
7.942
7.935
7.437
7.329
7.322
7.316
7.305
7.300
7.295
7.283
7.278
4.870
4.058
4.041
4.023
4.005
3.358
3.350
3.345
3.338
3.333
3.329
3.325
3.321
2.757
2.746
2.742
2.731
2.360
1.359
1.342
49
2.01
0.96
2.09
1.05
7.66
4.12
2.98
3.12
RA-03-090 - 1H NMR - 400.13 MHz - MeOD

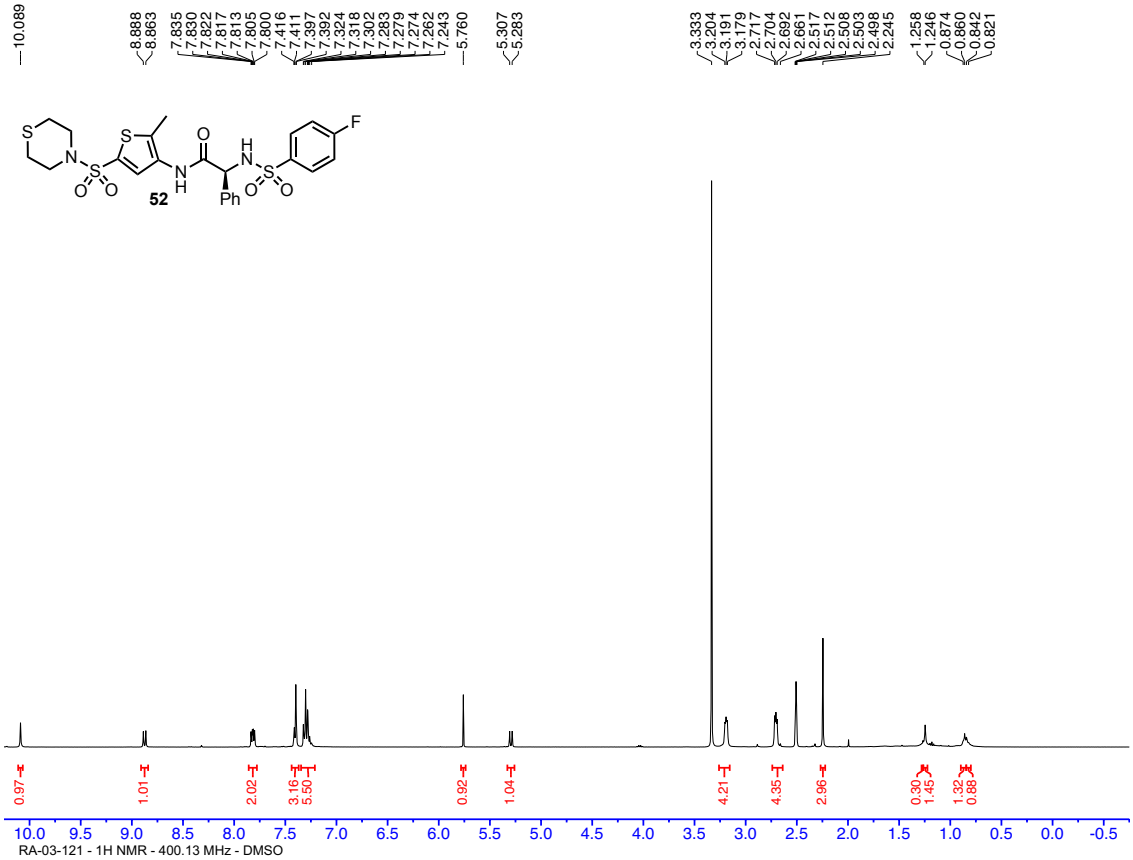

170.374
165.811
163.317
137.768
137.738
134.237
132.984
130.170
130.075
129.948
129.583
116.630
116.404
52.169
48.264
40.619
40.411
40.202
39.993
39.785
39.576
39.368
26.802
19.613
12.835
49
RA-3-90 - 13C NMR - 100.62 MHz - DMSO

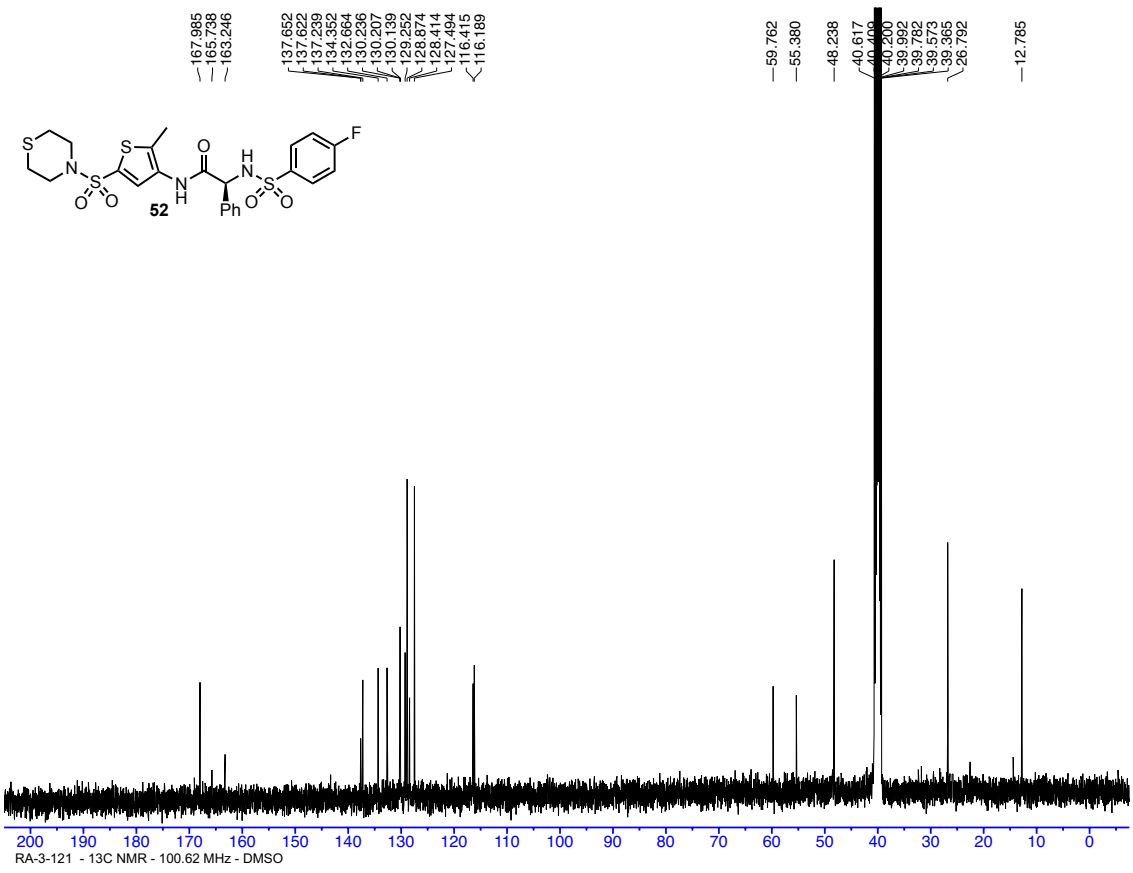

9.042
7.833
7.828
7.820
7.816
7.811
7.803
7.798
7.571
7.563
7.257
7.249
7.244
7.237
7.226
7.221
7.216
7.211
7.205
7.196
7.161
4.324
3.345
3.333
3.320
3.152
3.136
3.118
3.102
3.013
2.992
2.979
2.958
2.820
2.793
2.788
2.786
2.783
2.778
2.767
2.249
2.078
2.072
2.067
2.061
2.056
1.309
50
Ph
1.06
2.23
1.13
7.22
0.87
1.06
4.25
1.62
1.68
6.11
3.12
0.99
AMP-4-016 — pure - 1H NMR - 400.13 MHz - Acetone

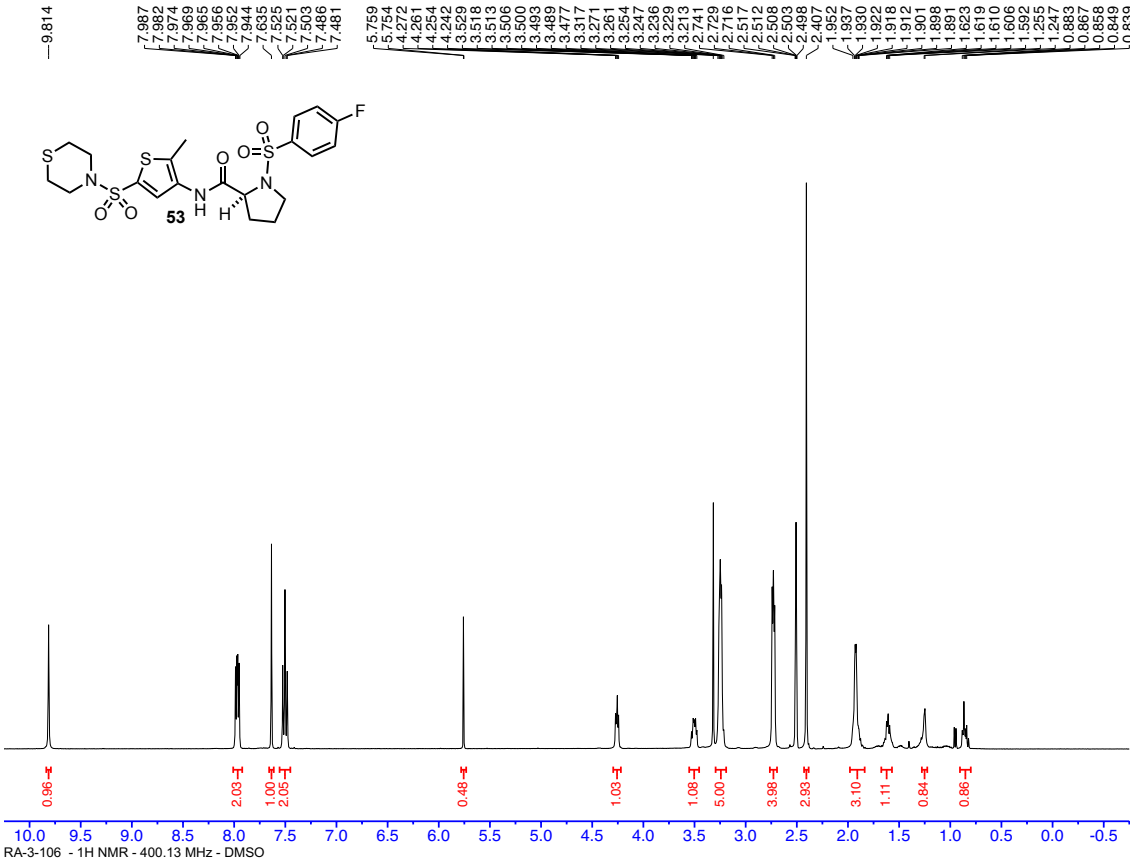

205.518
205.322
205.122
168.774
165.999
163.496
137.186
137.155
136.539
133.422
132.367
130.915
129.939
129.845
129.416
128.919
128.332
126.741
116.008
115.781
58.370
54.593
48.130
39.069
29.719
29.602
29.354
29.162
28.970
28.777
28.585
28.393
26.791
11.575
50
Ph
AMP-4-037 — pure - 13C NMR - 100.62 MHz - Acetone

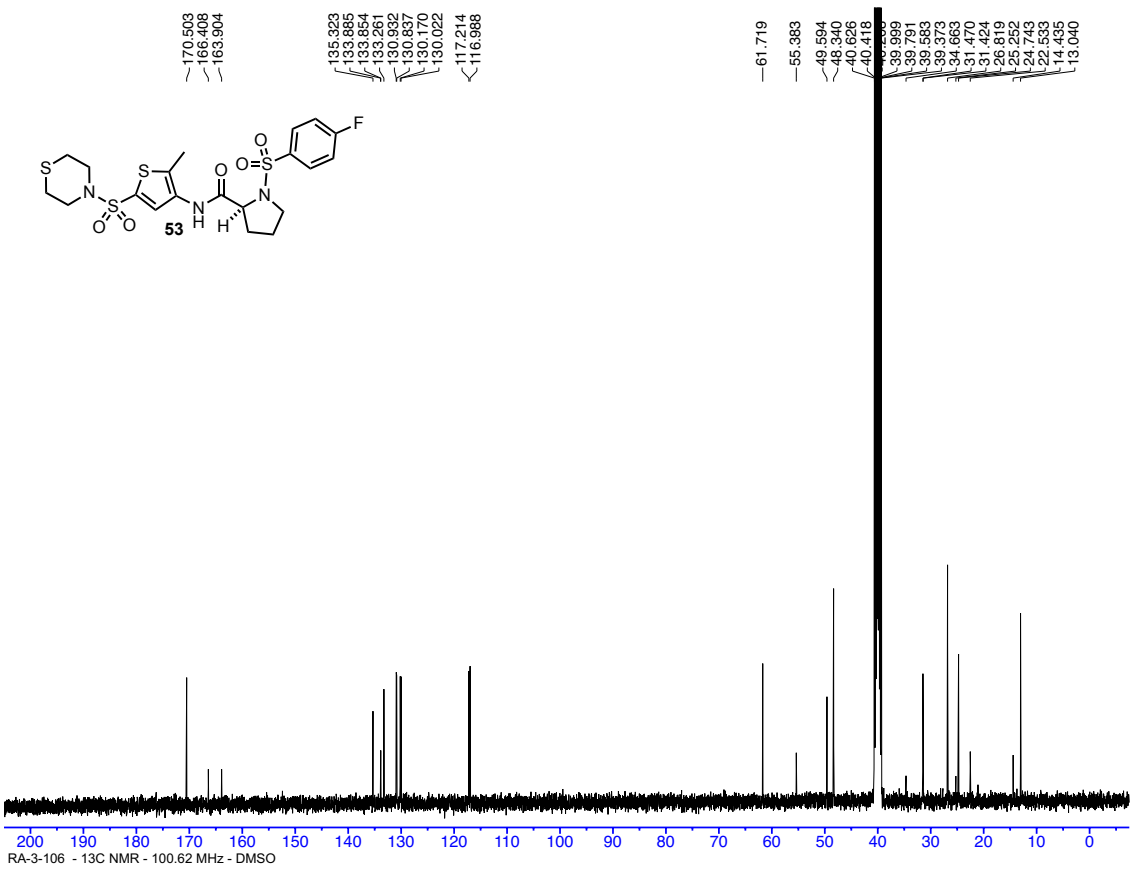

8.168
7.818
7.796
7.791
7.783
7.778
7.774
7.766
7.761
7.391
7.336
7.325
7.301
7.294
7.280
7.271
7.261
7.246
7.226
7.215
7.210
7.196
7.174
7.152
6.328
6.305
4.222
4.200
4.183
4.179
4.162
3.314
3.303
3.290
3.092
3.076
3.057
3.041
2.948
2.927
2.914
2.893
2.756
2.743
2.730
2.194
2.190
1.980
1.974
1.968
1.962
1.956
1.323
1.298
1.006
0.988
0.974
0.958
0.950
0.933
0.910
0.896
0.879
0.861
51
0.88
2.31
1.00
8.56
1.00
1.15
4.22
1.26
1.34
4.23
6.21
0.65
1.04
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
AMP-4-038 — dried - 1H NMR - 400.13 MHz - CD3CN

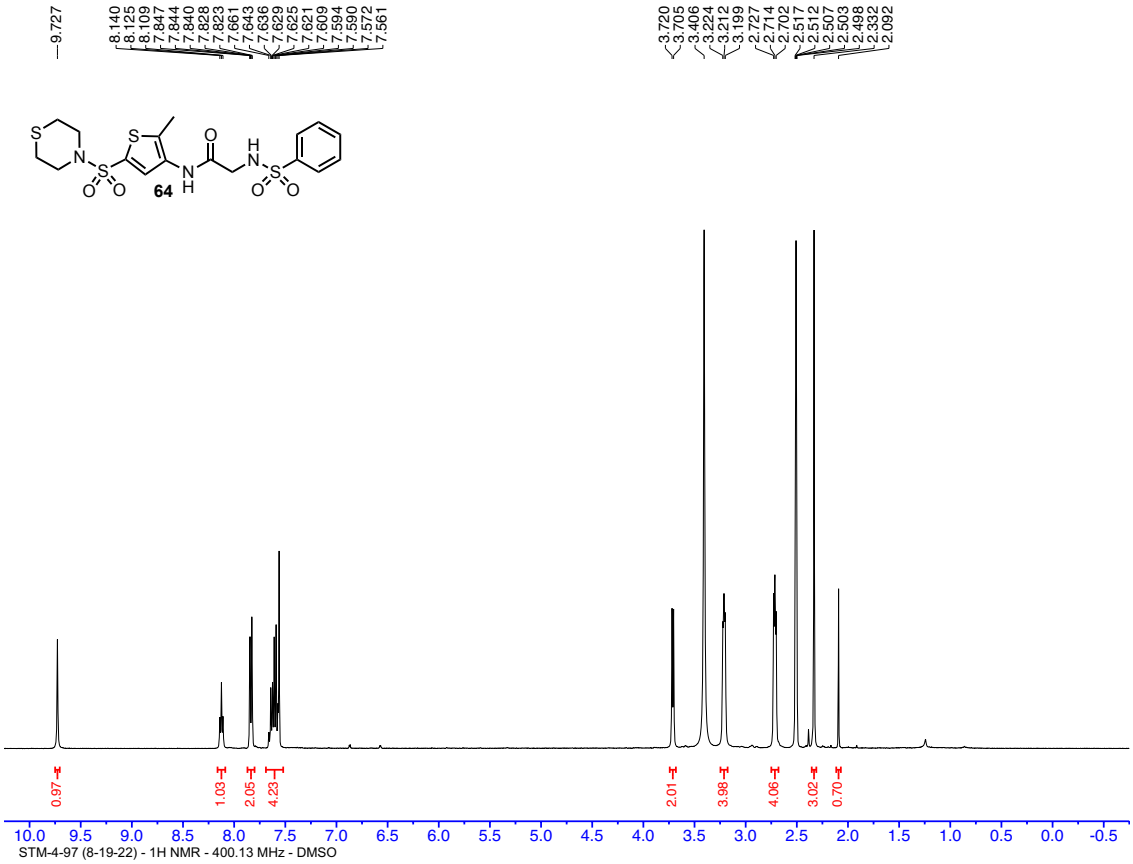

205.526
205.430
205.234
205.032
168.721
165.997
163.495
137.210
137.177
136.545
133.358
132.380
130.922
129.930
129.836
129.408
128.902
128.322
126.731
115.995
115.768
58.361
48.129
39.064
29.574
29.518
29.380
29.325
29.133
28.940
28.748
28.556
28.363
28.148
26.782
11.543
51
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
AMP-4-038 — pure2 - 13C NMR - 100.62 MHz - Acetone

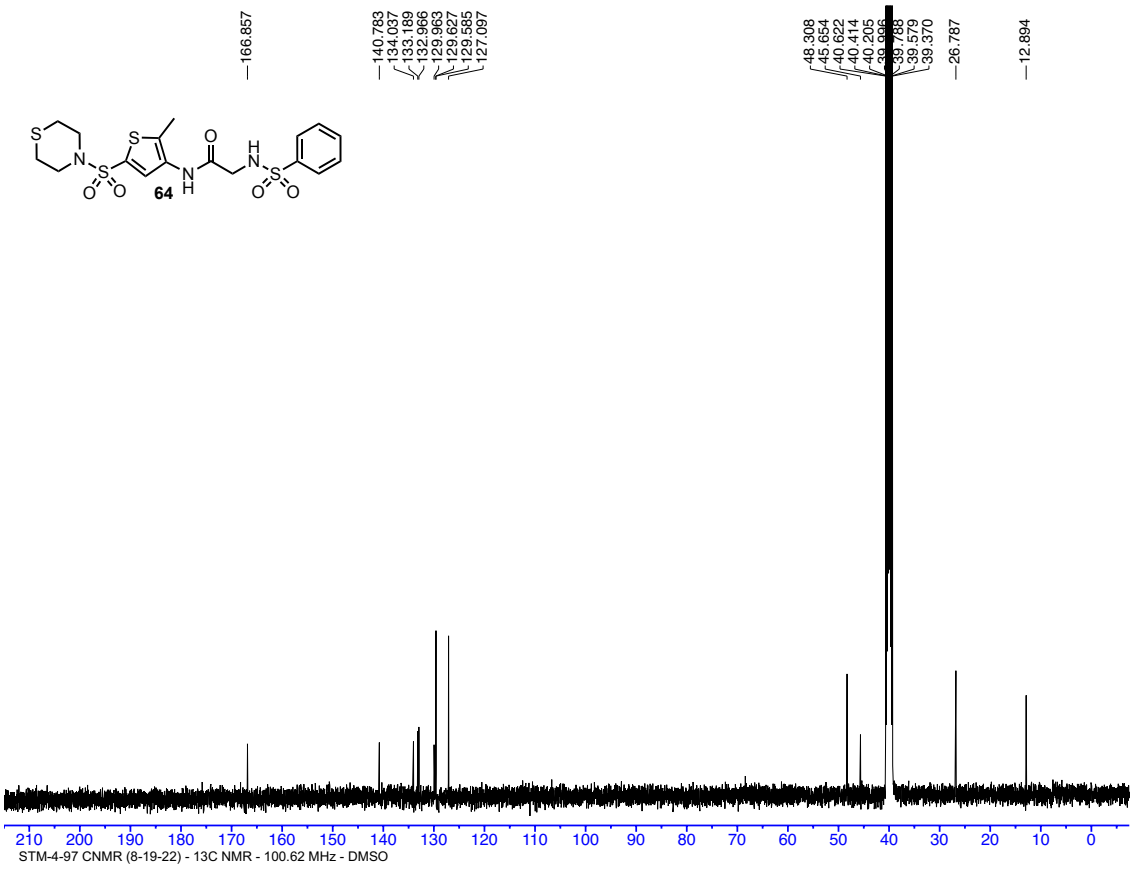

10.089
8.888
8.863
7.835
7.830
7.822
7.817
7.813
7.805
7.800
7.416
7.411
7.397
7.392
7.324
7.318
7.302
7.283
7.279
7.274
7.262
7.243
5.760
5.307
5.283
3.333
3.204
3.191
3.179
2.717
2.704
2.692
2.661
2.517
2.512
2.508
2.503
2.498
2.245
1.258
1.246
0.874
0.860
0.842
0.821
52
0.97
1.01
2.02
3.16
5.50
0.92
1.04
4.21
4.35
2.96
0.30
1.45
1.32
0.88
RA-03-121 - 1H NMR - 400.13 MHz - DMSO

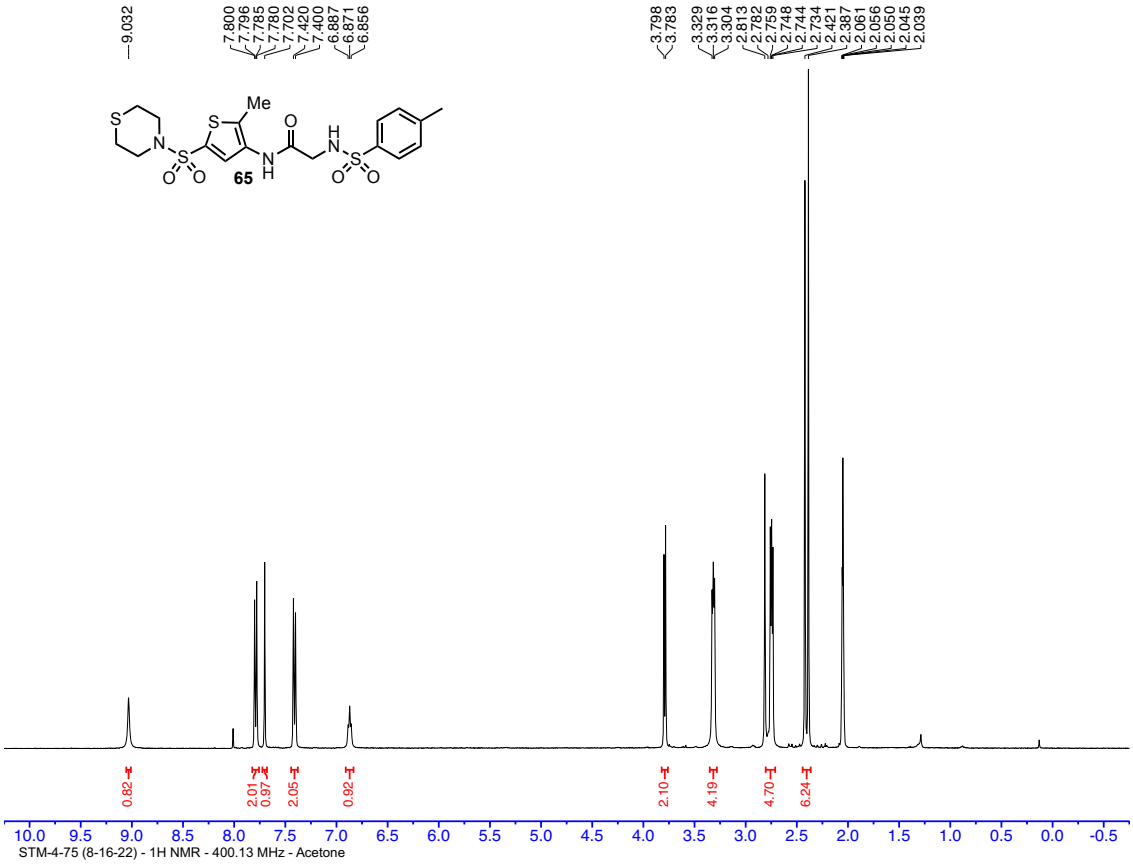

167.985
165.738
163.246
137.652
137.622
137.239
134.352
132.664
130.236
130.207
130.139
129.252
128.874
128.414
127.494
116.415
116.189
59.762
55.380
48.238
40.617
40.409
40.200
39.992
39.782
39.573
39.365
26.792
12.785
52
RA-3-121 - 13C NMR - 100.62 MHz - DMSO

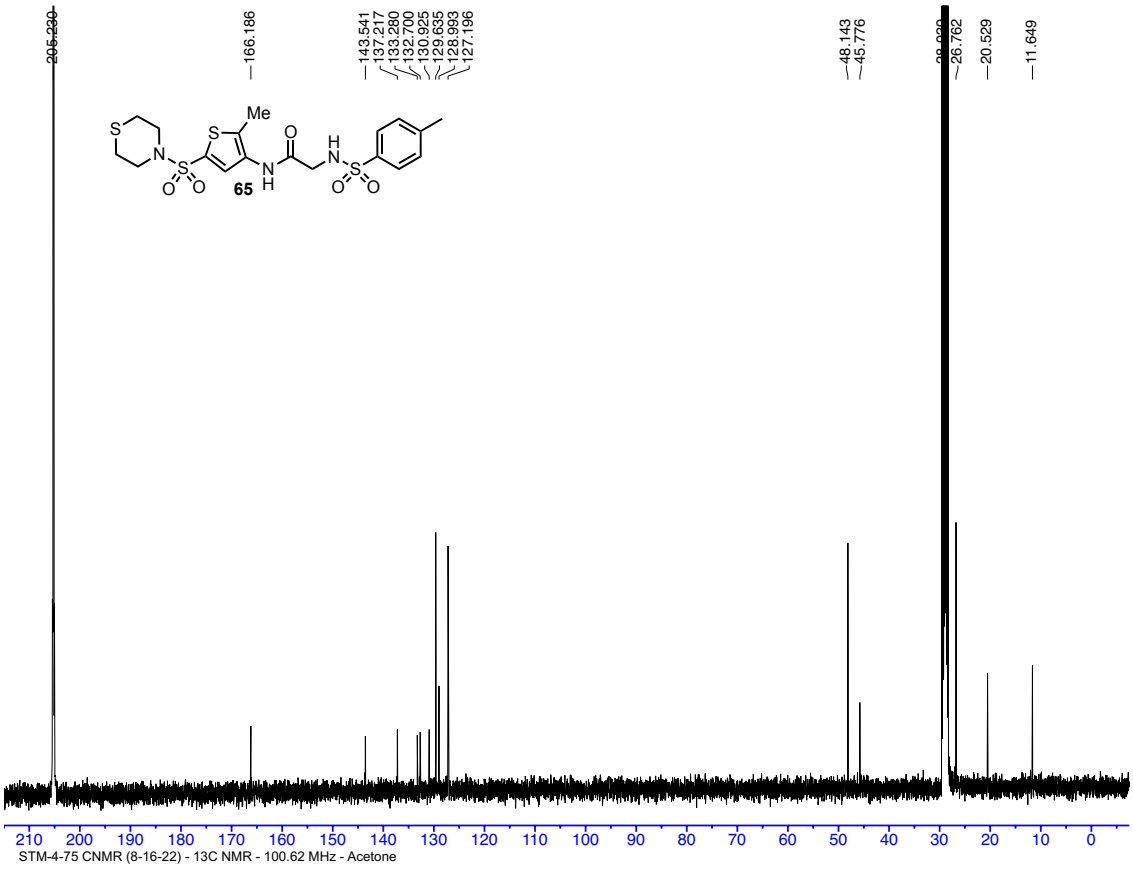

9.814
7.987
7.982
7.974
7.969
7.965
7.956
7.952
7.944
7.635
7.525
7.521
7.503
7.486
7.481
5.759
5.754
4.272
4.261
4.254
4.242
3.529
3.518
3.513
3.506
3.500
3.493
3.489
3.477
3.317
3.271
3.261
3.254
3.247
3.236
3.229
3.213
2.741
2.729
2.716
2.517
2.512
2.508
2.503
2.498
2.407
1.952
1.937
1.930
1.922
1.918
1.912
1.901
1.898
1.891
1.623
1.619
1.610
1.606
1.592
1.255
1.247
0.883
0.867
0.858
0.849
53
0.96
2.03
1.00
2.05
0.48
1.03
1.08
5.00
3.98
2.93
3.10
1.11
0.84
0.86
RA-3-106 - 1H NMR - 400.13 MHz - DMSO


170.503
166.408
163.904
135.323
133.885
133.854
133.261
130.932
130.837
130.170
130.022
117.214
116.988
61.719
55.383
49.594
48.340
40.626
40.418
39.999
39.791
39.583
39.373
34.663
31.470
31.424
26.819
25.252
24.743
22.533
14.435
13.040
53
RA-3-106 - 13C NMR - 100.62 MHz - DMSO

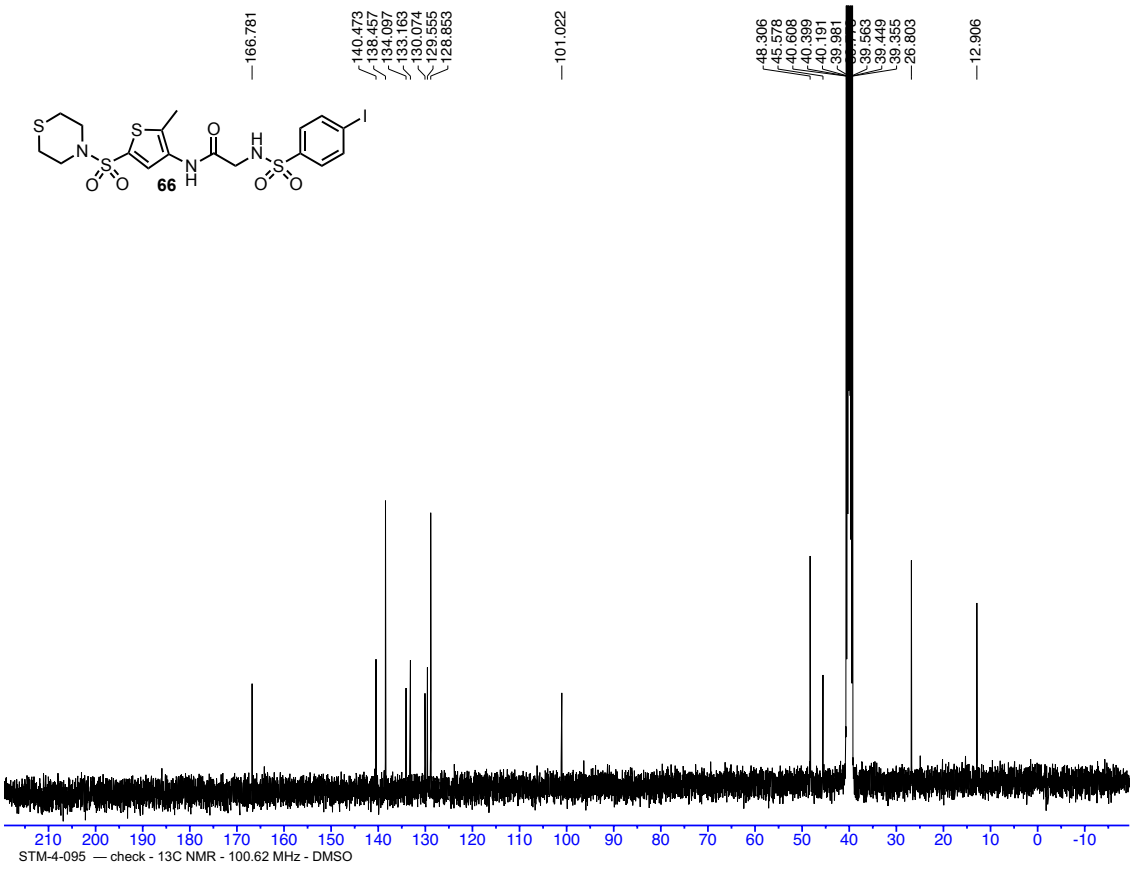

9.727
8.140
8.125
8.109
7.847
7.844
7.840
7.828
7.823
7.661
7.643
7.636
7.629
7.625
7.621
7.609
7.594
7.580
7.572
7.561
3.720
3.705
3.406
3.224
3.212
3.199
2.727
2.714
2.702
2.517
2.512
2.507
2.503
2.498
2.332
2.092
64
0.97
1.03
2.05
4.23
2.01
3.98
4.06
3.02
0.70
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-97 (8-19-22) - 1H NMR - 400.13 MHz - DMSO

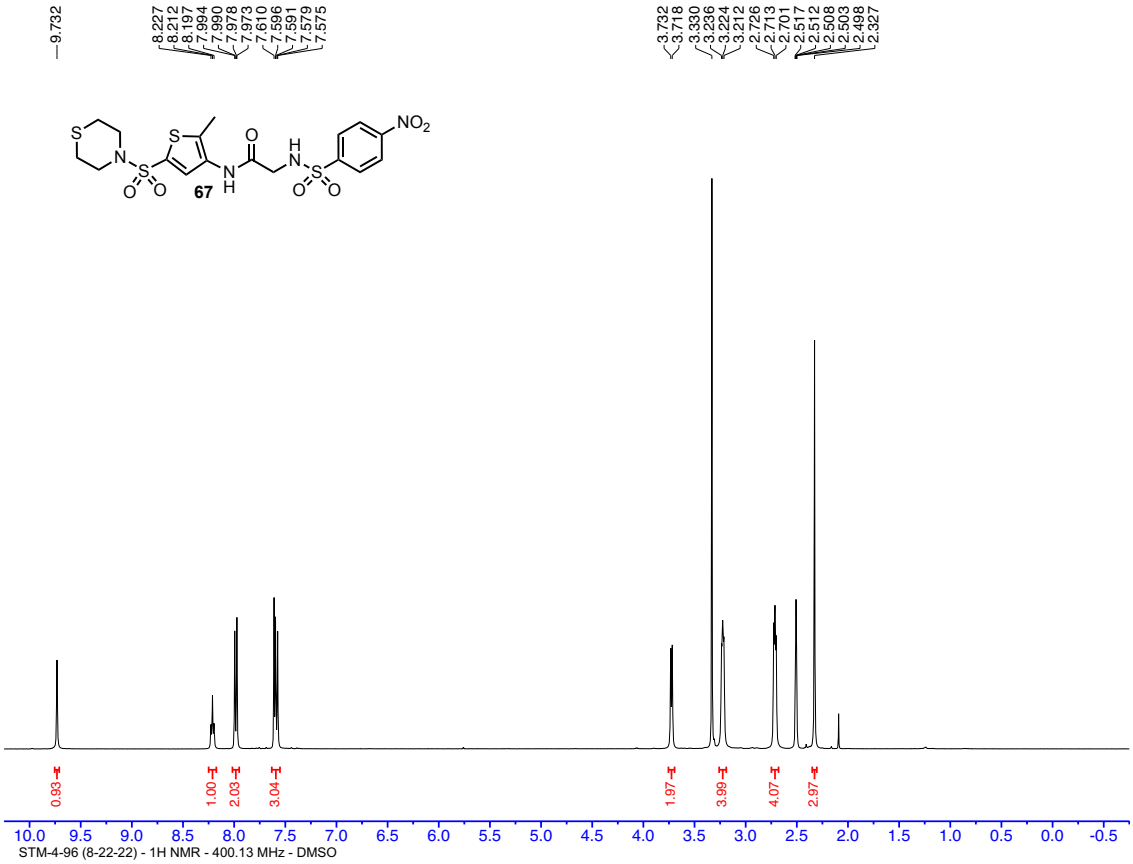

166.857
140.783
134.037
133.189
132.966
129.963
129.627
129.585
127.097
48.308
45.654
40.622
40.414
40.205
39.788
39.579
39.370
26.787
12.894
64
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-97 CNMR (8-19-22) - 13C NMR - 100.62 MHz - DMSO

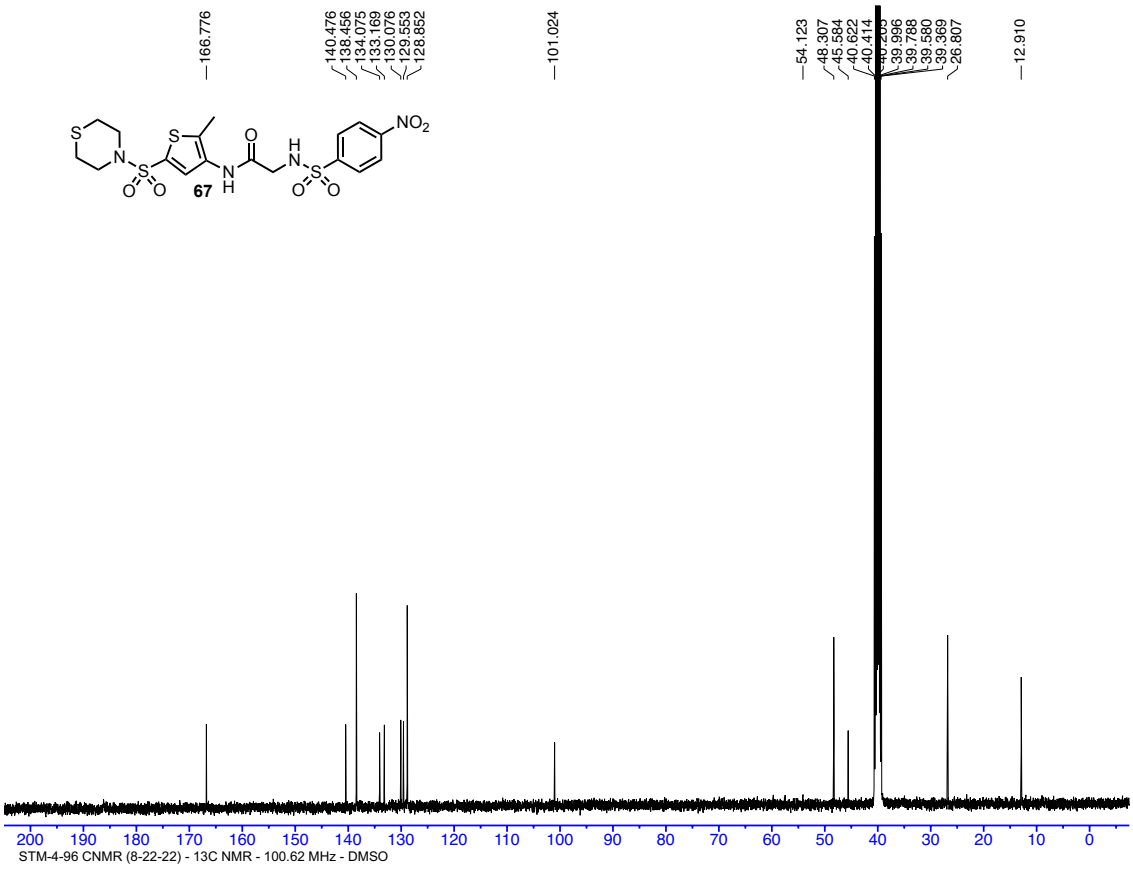

9.032
7.800
7.796
7.785
7.780
7.702
7.420
7.400
6.887
6.871
6.856
3.798
3.783
3.329
3.316
3.304
2.813
2.782
2.759
2.748
2.744
2.734
2.421
2.387
2.061
2.056
2.050
2.045
2.039
Me
65
0.82
2.01
0.97
2.05
0.92
2.10
4.19
4.70
6.24
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-75 (8-16-22) - 1H NMR - 400.13 MHz - Acetone

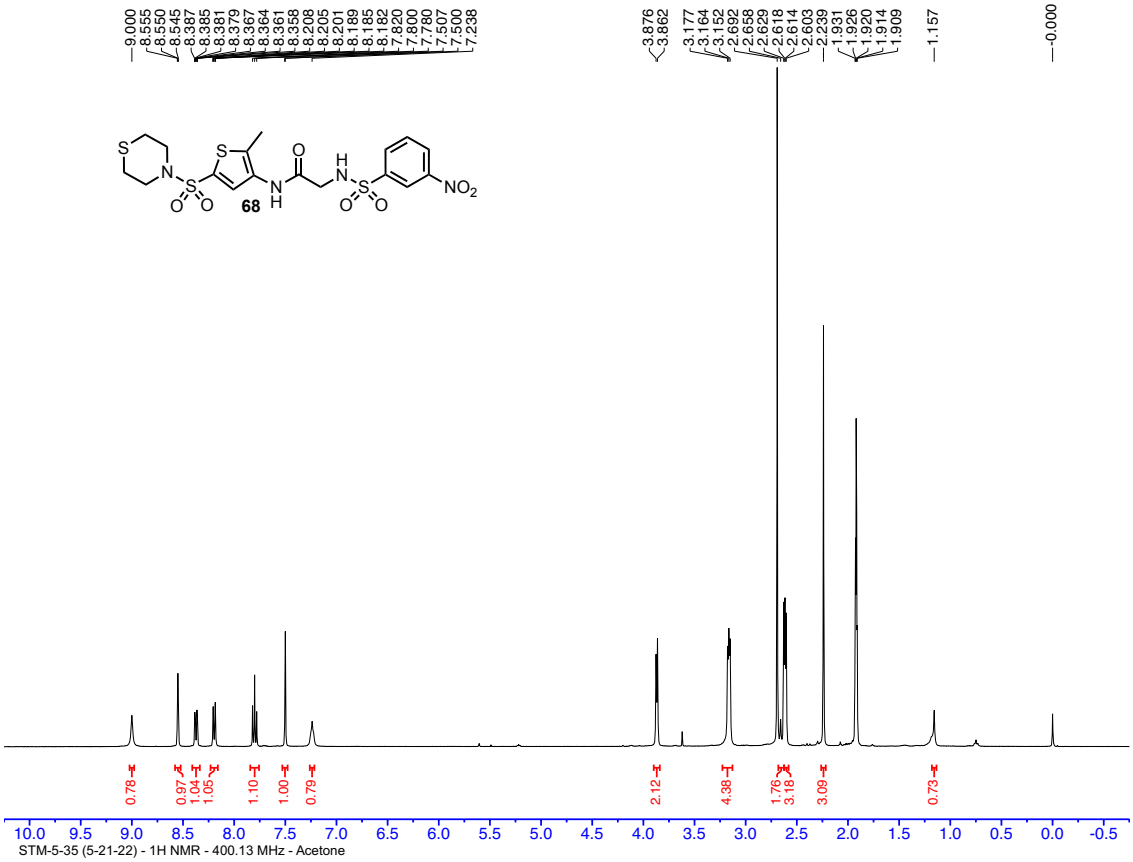

205.230
166.186
143.541
137.217
133.280
132.700
130.925
129.635
128.993
127.196
48.143
45.776
26.762
20.529
11.649
Me
65
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-75 CNMR (8-16-22) - 13C NMR - 100.62 MHz - Acetone

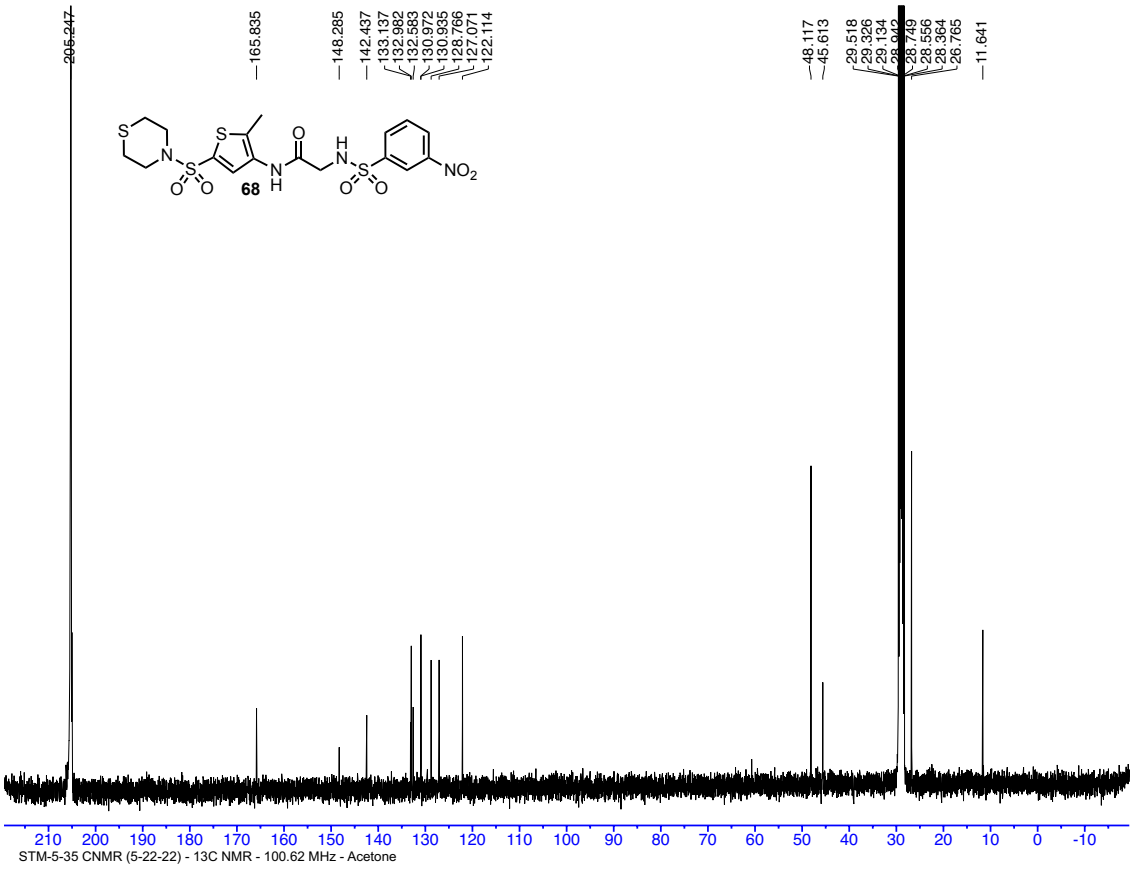

9.735
8.227
8.212
8.197
7.994
7.978
7.973
7.608
7.595
7.590
7.579
7.574
3.732
3.717
3.345
3.237
3.224
3.212
2.726
2.713
2.701
2.518
2.513
2.509
2.504
2.499
2.326
66
0.93
1.02
2.00
2.99
1.95
4.12
4.05
2.93
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-095 — check - 1H NMR - 400.13 MHz - DMSO

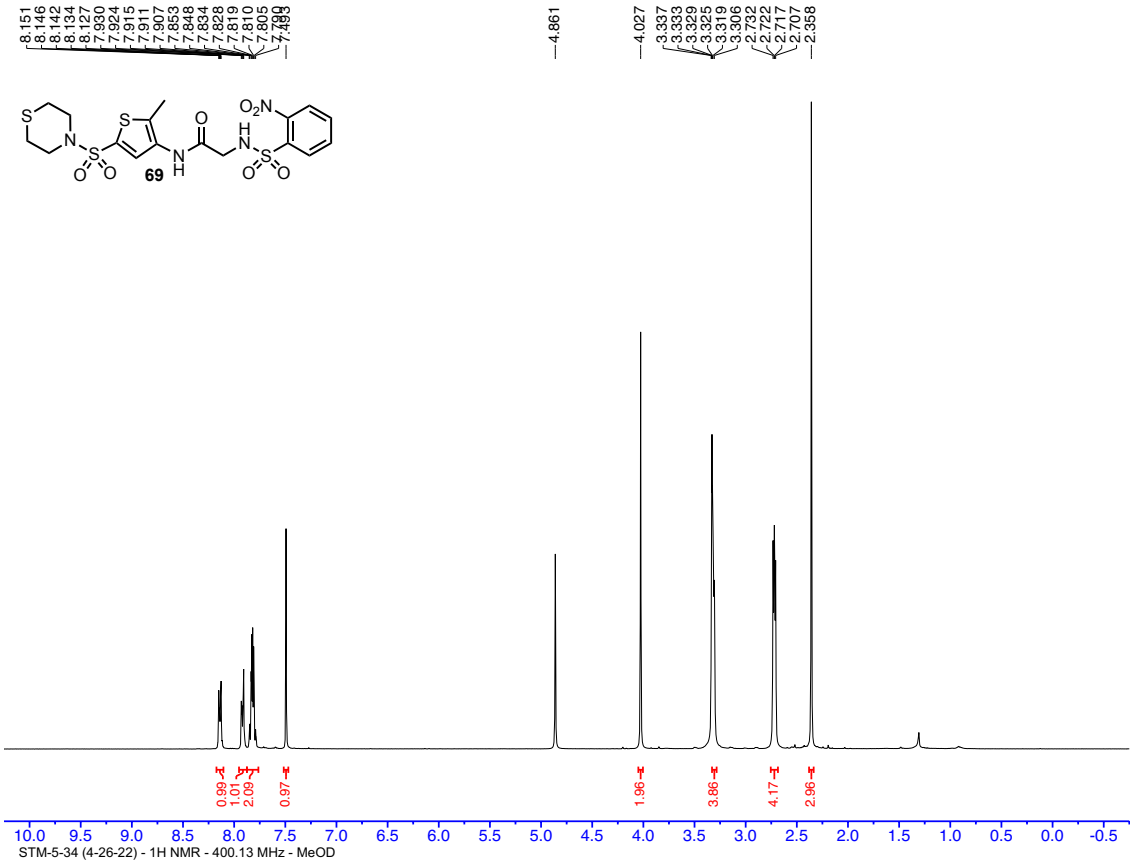

166.781
140.473
138.457
134.097
133.163
130.074
129.555
128.853
101.022
48.306
45.578
40.608
40.399
40.191
39.981
39.563
39.449
39.355
26.803
12.906
66
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10
STM-4-095 — check - 13C NMR - 100.62 MHz - DMSO

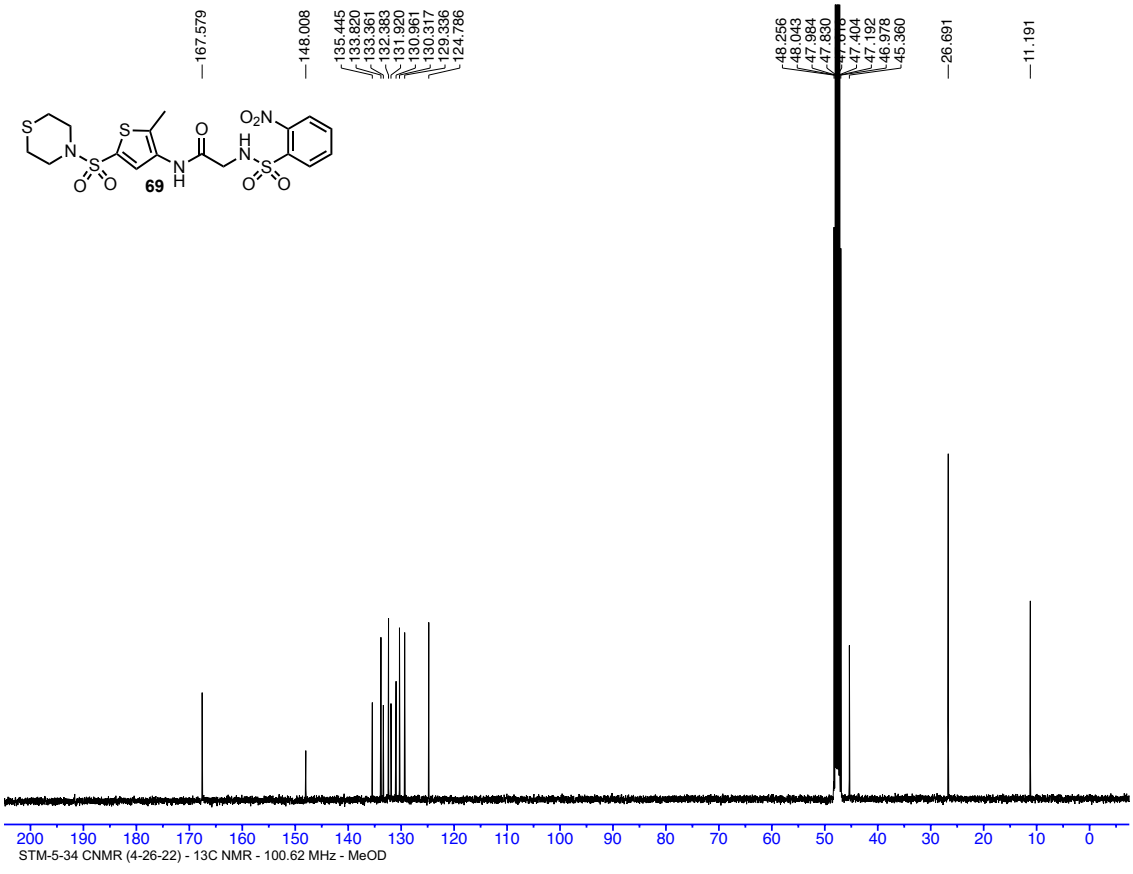

9.732
8.227
8.212
8.197
7.994
7.990
7.978
7.973
7.610
7.596
7.591
7.579
7.575
3.732
3.718
3.330
3.236
3.224
3.212
2.726
2.713
2.701
2.517
2.512
2.508
2.503
2.498
2.327
NO2
67
0.93
1.00
2.03
3.04
1.97
3.99
4.07
2.97
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-96 (8-22-22) - 1H NMR - 400.13 MHz - DMSO

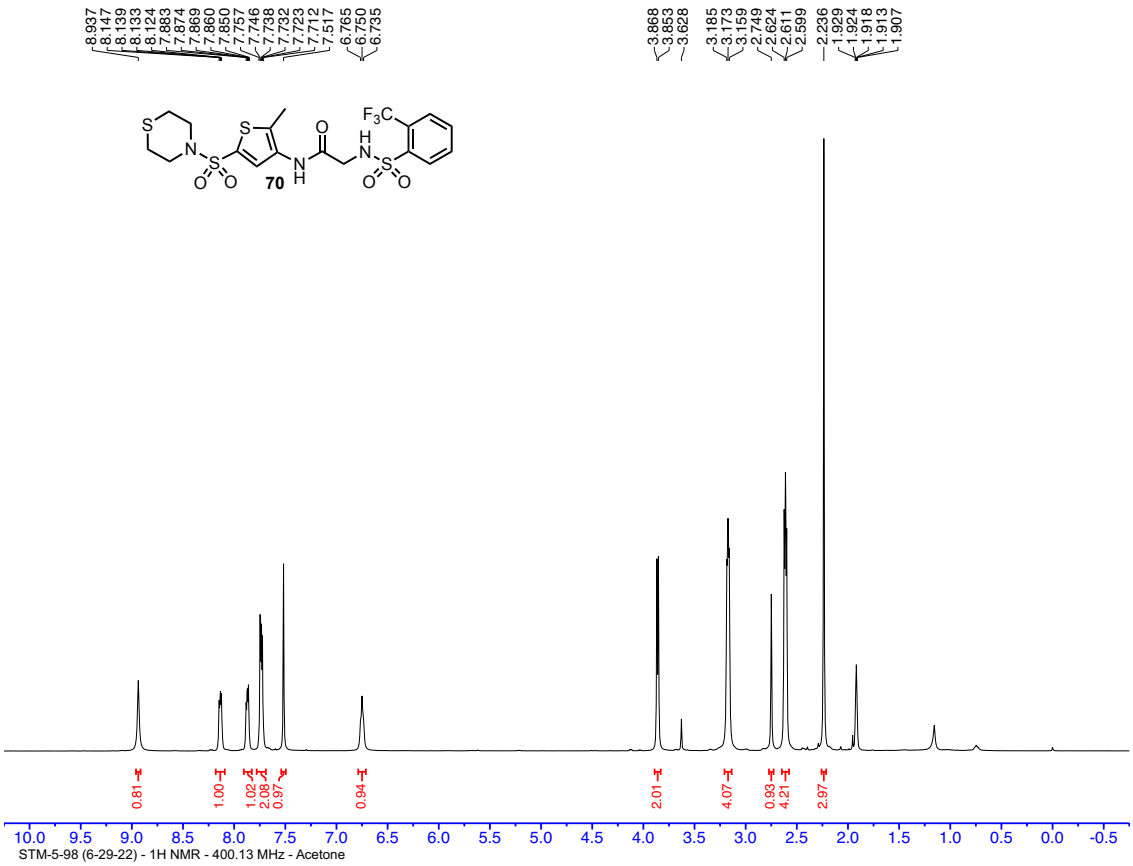

166.776
140.476
138.456
134.075
133.169
130.076
129.553
128.852
101.024
54.123
48.307
45.584
40.622
40.414
39.996
39.788
39.580
39.369
26.807
12.910
NO2
67
200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-96 CNMR (8-22-22) - 13C NMR - 100.62 MHz - DMSO

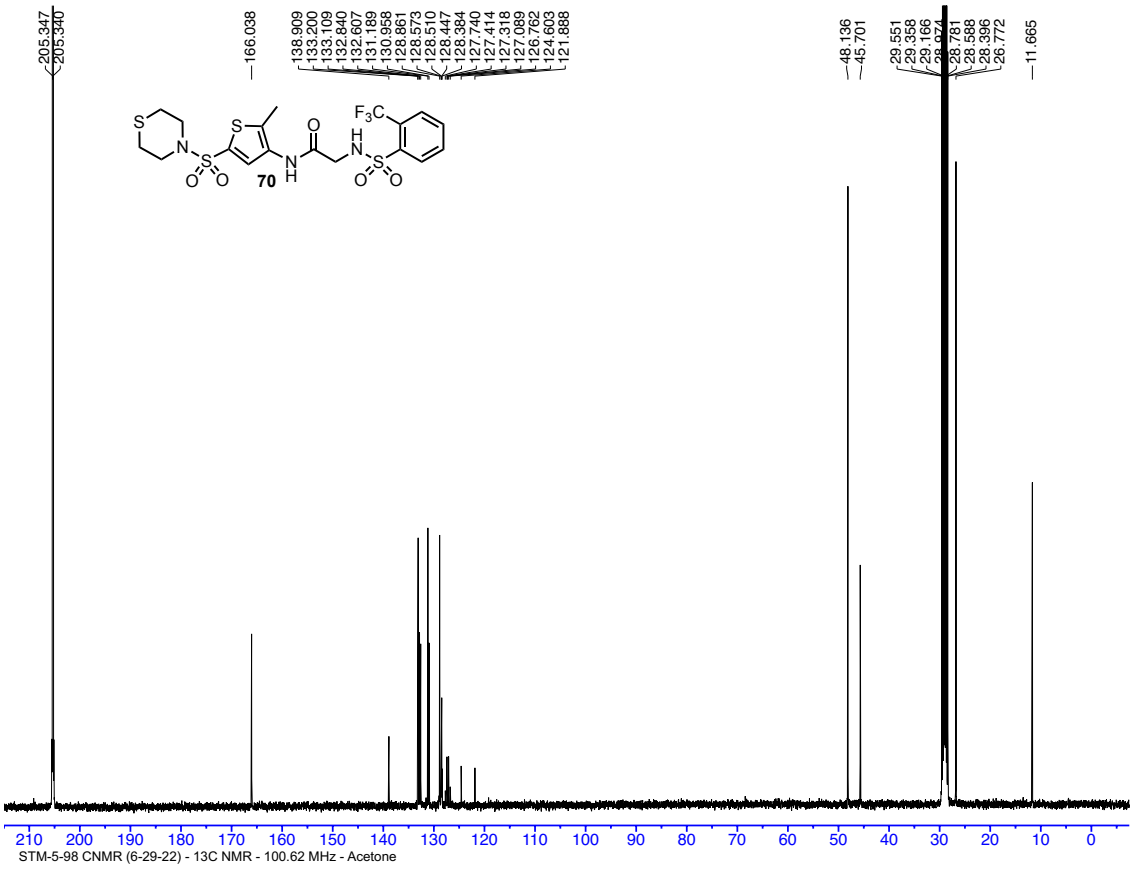

9.000
8.555
8.550
8.545
8.387
8.385
8.381
8.379
8.367
8.364
8.361
8.358
8.208
8.205
8.201
8.189
8.185
8.182
7.820
7.800
7.780
7.507
7.500
7.238
3.876
3.862
3.177
3.164
3.152
2.692
2.658
2.629
2.618
2.614
2.603
2.239
1.931
1.926
1.920
1.914
1.909
1.157
-0.000
68
NO2
0.78
0.97
1.04
1.05
1.10
1.00
0.79
2.12
4.38
1.76
3.18
3.09
0.73
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-35 (5-21-22) - 1H NMR - 400.13 MHz - Acetone

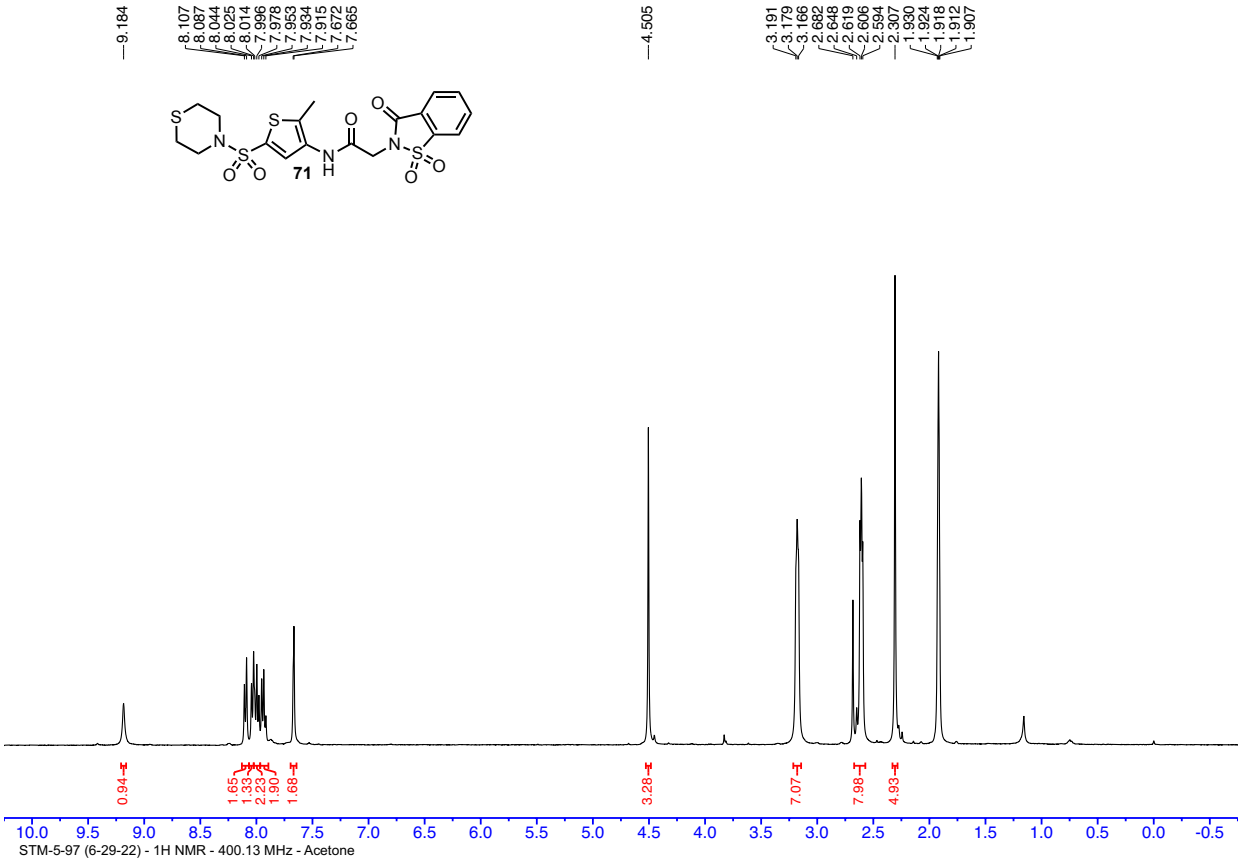

205.247
165.835
148.285
142.437
133.137
132.982
132.583
130.972
130.935
128.766
127.071
122.114
48.117
45.613
29.518
29.326
29.134
28.749
28.556
28.364
26.765
11.641
68
NO2
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10
STM-5-35 CNMR (5-22-22) - 13C NMR - 100.62 MHz - Acetone

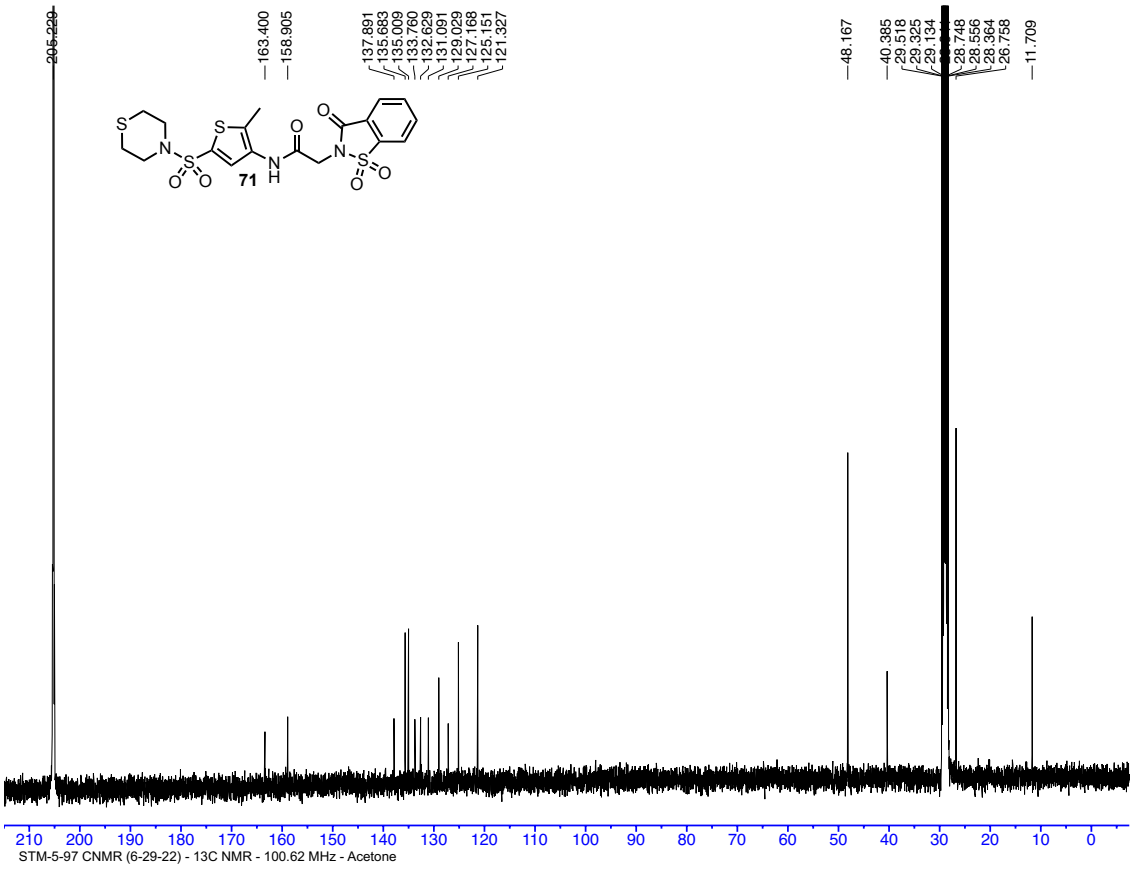

8.151
8.146
8.142
8.134
8.127
7.930
7.924
7.915
7.911
7.907
7.853
7.848
7.834
7.828
7.819
7.810
7.805
4.861
4.027
3.337
3.333
3.329
3.325
3.319
3.306
2.732
2.722
2.717
2.707
2.358
69
0.99
1.01
2.09
0.97
1.96
3.86
4.17
2.96
STM-5-34 (4-26-22) - 1H NMR - 400.13 MHz - MeOD

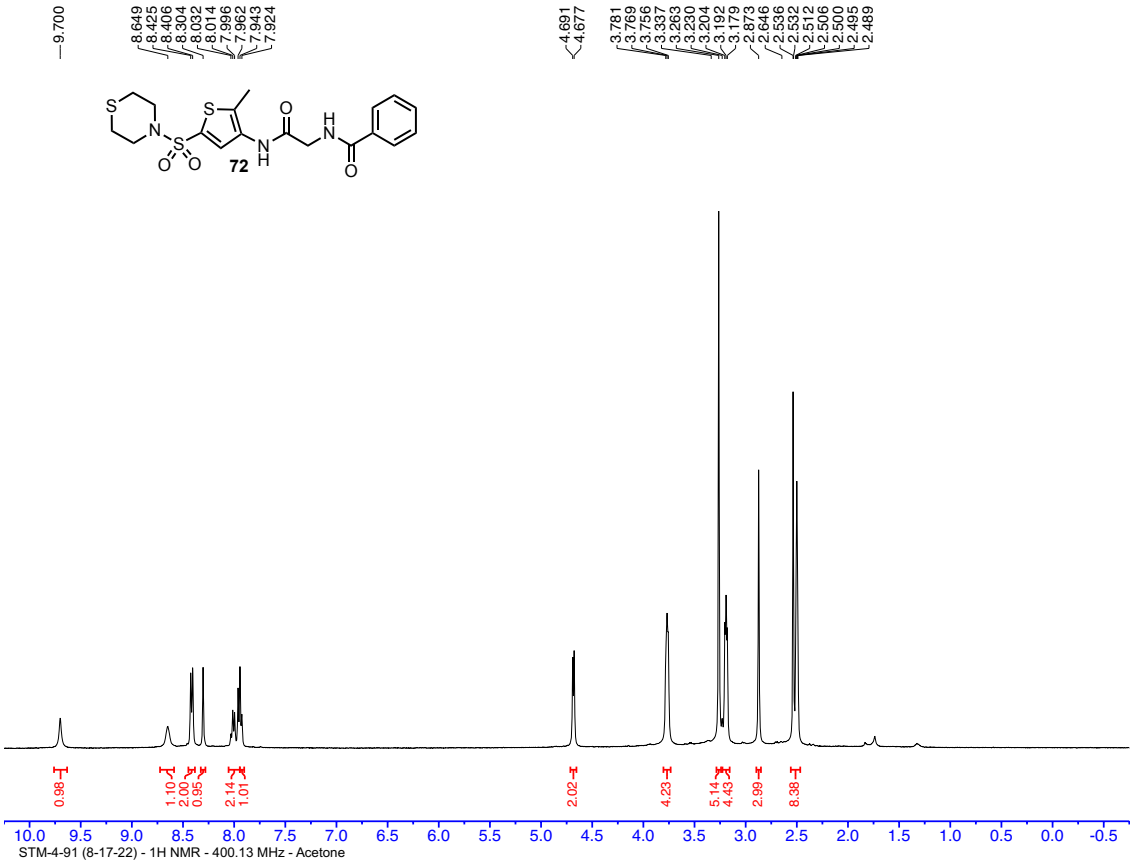

167.579
148.008
135.445
133.820
133.361
132.383
131.920
130.961
130.317
129.336
124.786
48.256
48.043
47.984
47.830
47.404
47.192
46.978
45.360
26.691
11.191
69
STM-5-34 CNMR (4-26-22) - 13C NMR - 100.62 MHz - MeOD

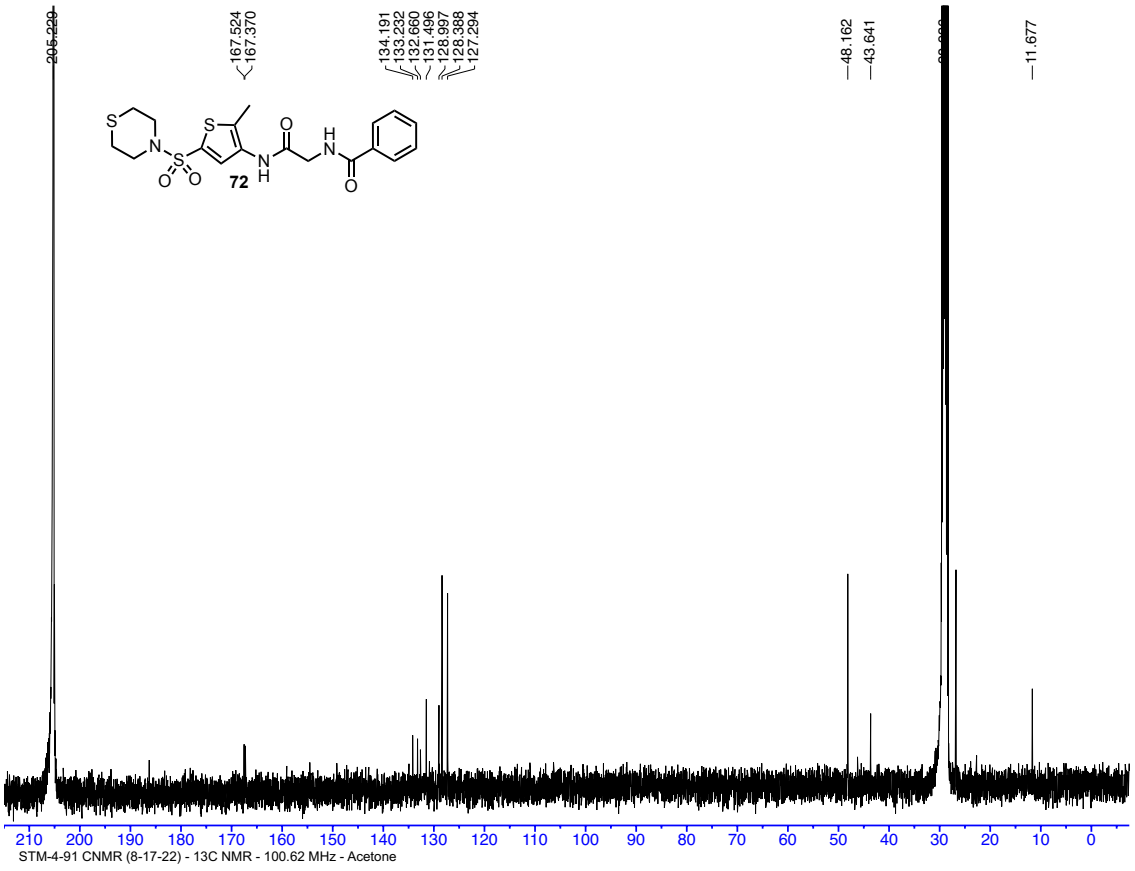

8.937
8.147
8.139
8.133
8.124
7.883
7.874
7.869
7.860
7.850
7.757
7.746
7.738
7.732
7.723
7.712
7.517
6.765
6.750
6.735
3.868
3.853
3.628
3.185
3.173
3.159
2.749
2.624
2.611
2.599
2.236
1.929
1.924
1.918
1.913
1.907
70
0.81
1.00
1.02
2.08
0.97
0.94
2.01
4.07
0.93
4.21
2.97
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-5-98 (6-29-22) - 1H NMR - 400.13 MHz - Acetone

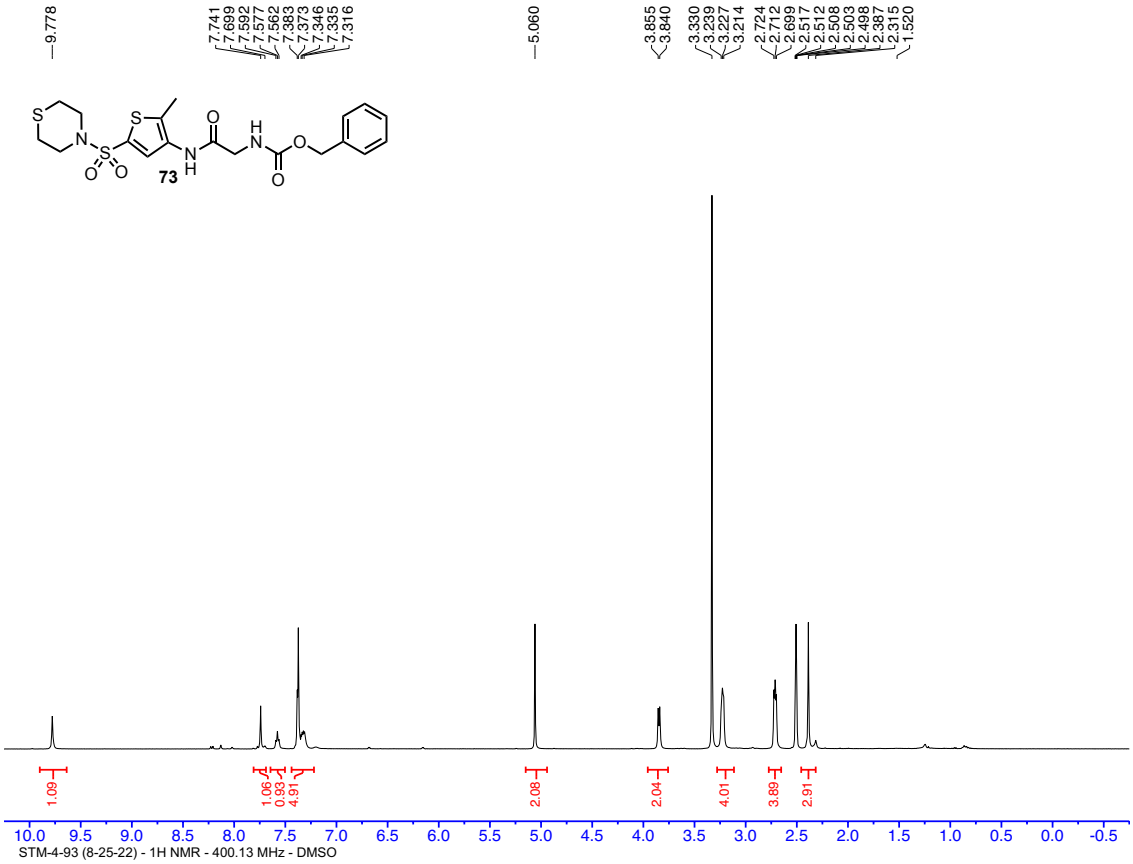

205.347
205.340
166.038
138.909
133.200
133.109
132.840
132.607
131.189
130.958
128.861
128.573
128.510
128.447
128.384
127.740
127.414
127.318
127.089
126.762
124.603
121.888
48.136
45.701
29.551
29.358
29.166
28.974
28.781
28.588
28.396
26.772
11.665
70
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-5-98 CNMR (6-29-22) - 13C NMR - 100.62 MHz - Acetone

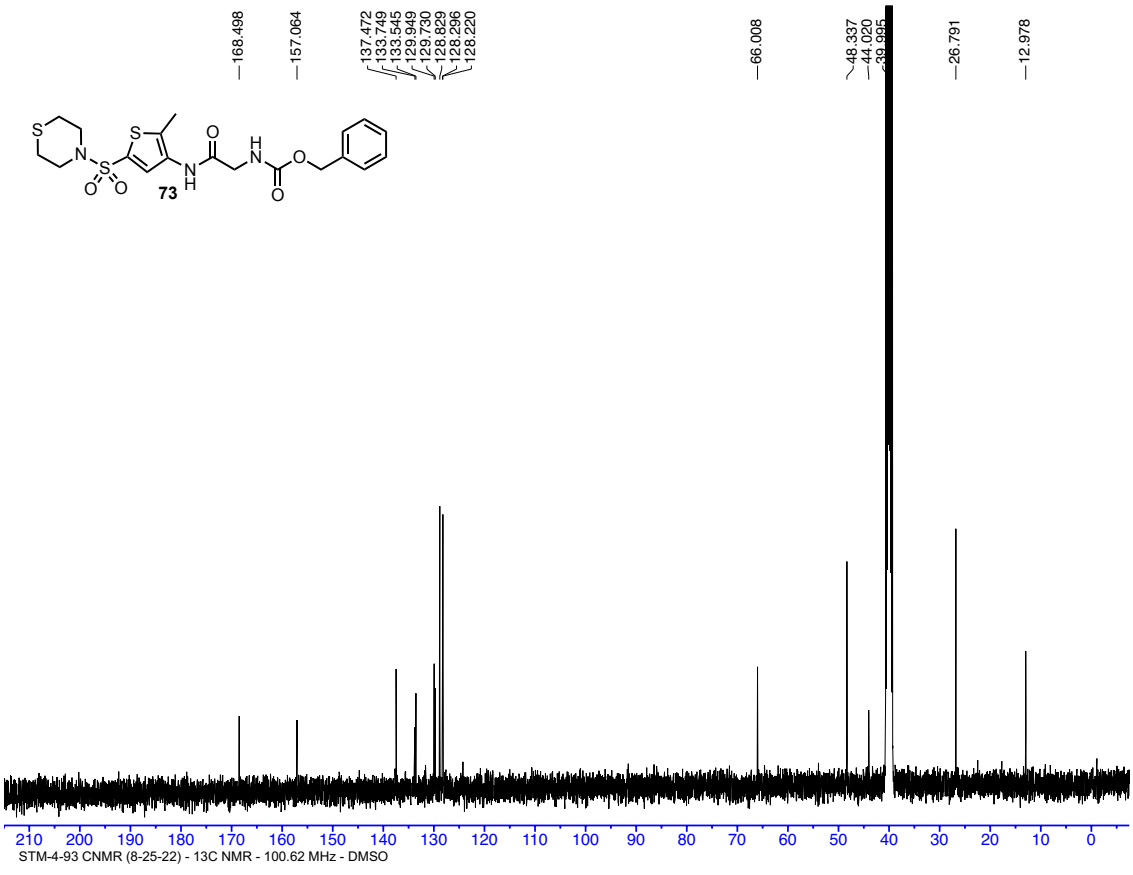

9.184
8.107
8.087
8.044
8.025
8.014
7.996
7.978
7.953
7.934
7.915
7.672
7.665
4.505
3.191
3.179
3.166
2.682
2.648
2.619
2.606
2.594
2.307
1.930
1.924
1.918
1.912
1.907
71
0.94
1.65
1.33
2.23
1.90
1.68
3.28
7.07
7.98
4.93
STM-5-97 (6-29-22) - 1H NMR - 400.13 MHz - Acetone


205.220
163.400
158.905
137.891
135.683
135.009
133.760
132.629
131.091
129.029
127.168
125.151
121.327
48.167
40.385
29.518
29.325
29.134
28.748
28.556
28.364
26.758
11.709
71
STM-5-97 CNMR (6-29-22) - 13C NMR - 100.62 MHz - Acetone


9.700
8.649
8.425
8.406
8.304
8.032
8.014
7.996
7.962
7.943
7.924
4.691
4.677
3.781
3.769
3.756
3.337
3.283
3.230
3.204
3.192
3.179
2.873
2.646
2.536
2.532
2.512
2.506
2.500
2.495
2.489
72
0.98
1.10
2.00
0.95
2.14
1.01
2.02
4.23
5.14
4.43
2.99
8.38
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-91 (8-17-22) - 1H NMR - 400.13 MHz - Acetone


205.220
167.524
167.370
134.191
133.232
132.660
131.496
128.997
128.388
127.294
48.162
43.641
11.677
72
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-91 CNMR (8-17-22) - 13C NMR - 100.62 MHz - Acetone


9.778
7.741
7.699
7.592
7.577
7.562
7.383
7.373
7.346
7.335
7.316
5.060
3.855
3.840
3.330
3.239
3.227
3.214
2.724
2.712
2.699
2.517
2.512
2.508
2.503
2.498
2.387
2.315
1.520
73
1.09
1.06
0.93
4.91
2.08
2.04
4.01
3.89
2.91
10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
STM-4-93 (8-25-22) - 1H NMR - 400.13 MHz - DMSO


168.498
157.064
137.472
133.749
133.545
129.949
129.730
128.829
128.296
128.220
66.008
48.337
44.020
39.995
26.791
12.978
73
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
STM-4-93 CNMR (8-25-22) - 13C NMR - 100.62 MHz - DMSO