SUPPORTING INFORMATION

Efficient synthesis of quinazoline-2,4(1*H*,3*H*)-diones from CO_2 using ionic liquids as dual solvent-catalyst at atmospheric pressure

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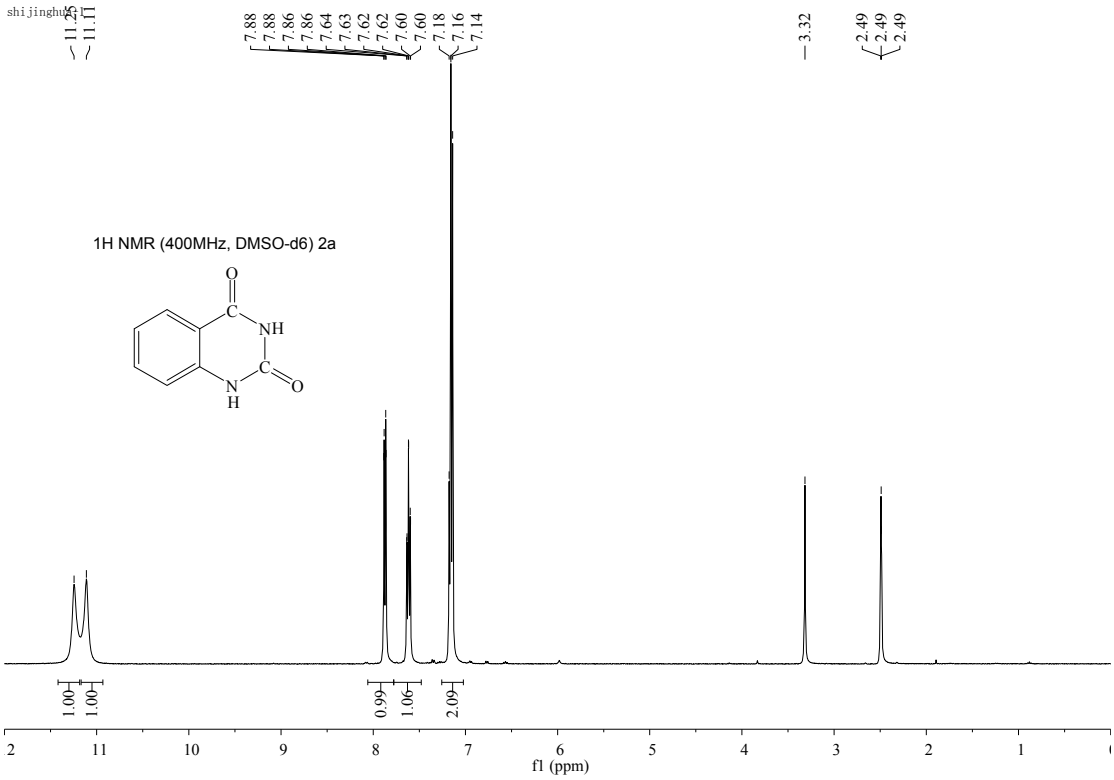
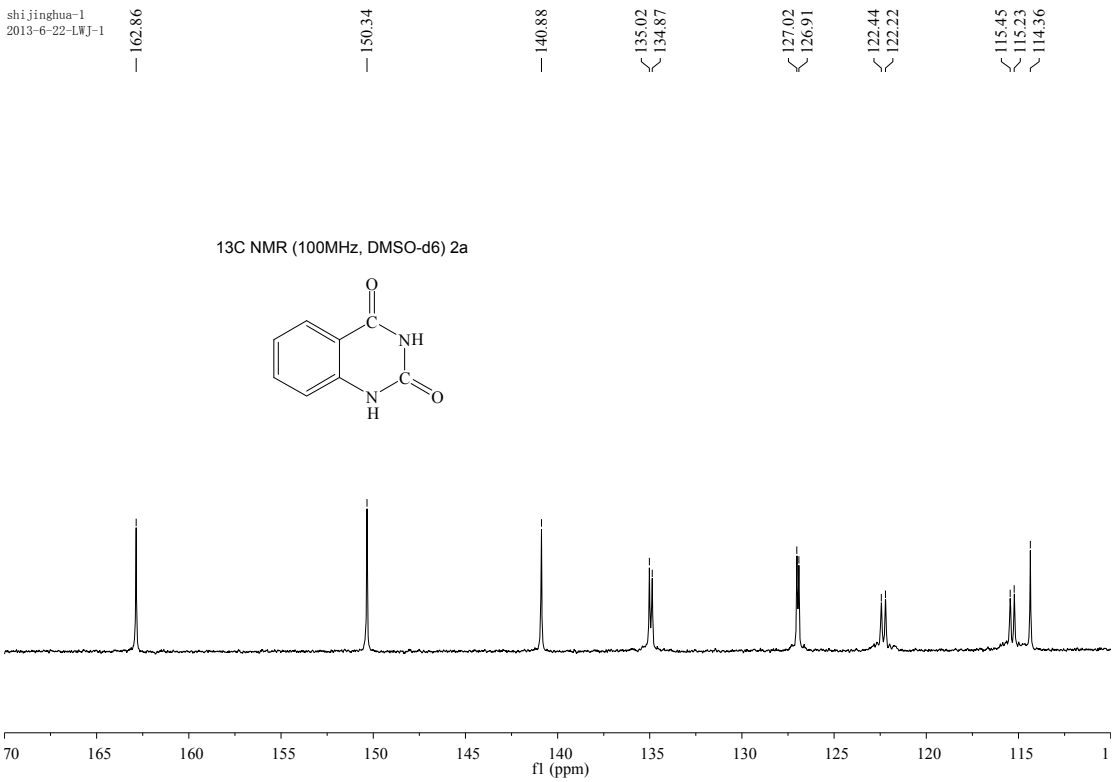
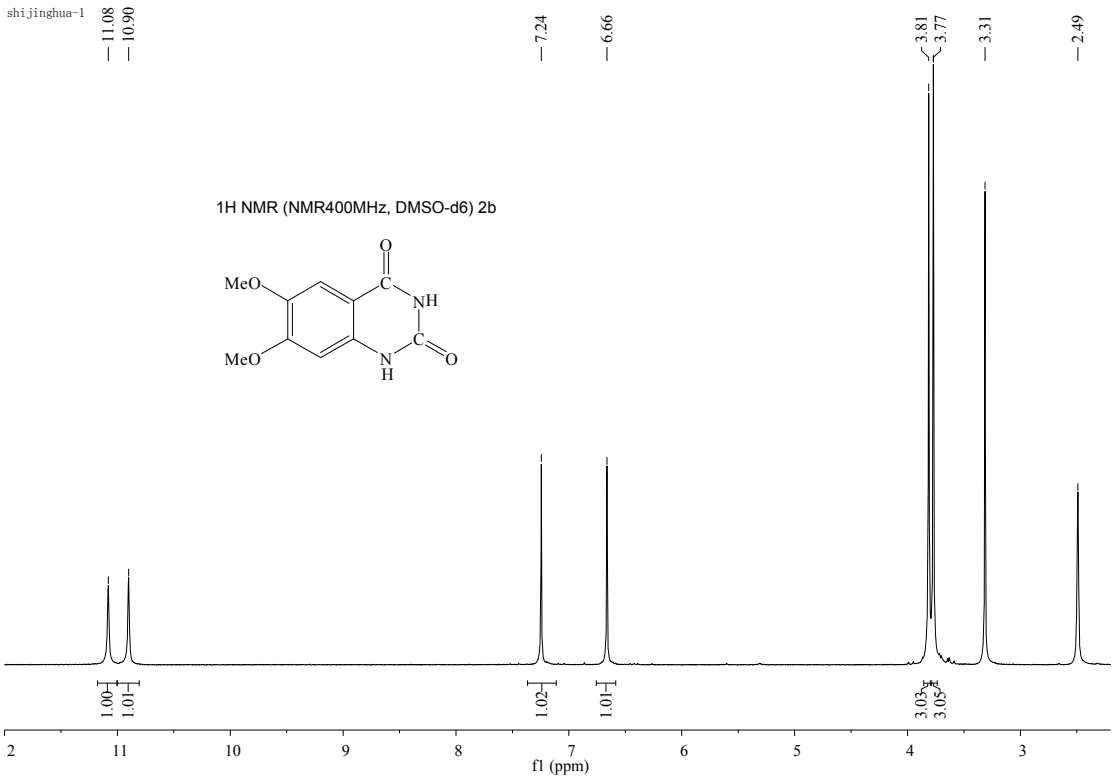
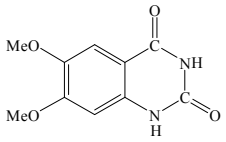
The ^{1}H and ^{13}C NMR Charts for Products 2a-2e

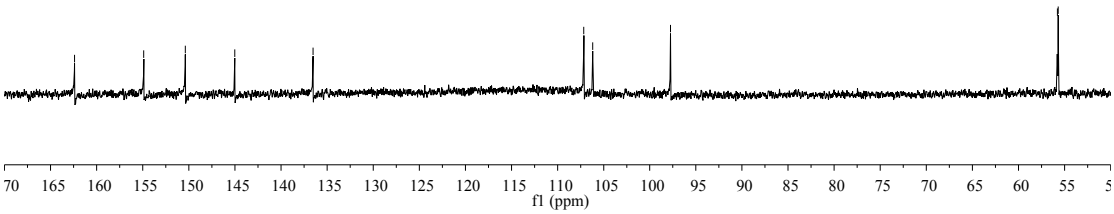



shijinghua-1
2013-6-22-LWJ-1
162.86
150.34
140.88
135.02
134.87
127.02
126.91
122.44
122.22
115.45
115.23
114.36
13C NMR (100MHz, DMSO-d6) 2a
O
C
NH
C
O
N
H
70
165
160
155
150
145
140
135
130
125
120
115
1
f1 (ppm)

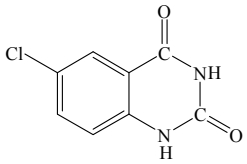

shijinghua-1
11.08
10.90
7.24
6.66
3.81
3.77
3.31
2.49
1H NMR (NMR400MHz, DMSO-d6) 2b
MeO
MeO
O
C
NH
C
O
N
H
1.00
1.01
1.02
1.01
3.03
3.05
2
11
10
9
8
7
6
5
4
3
f1 (ppm)

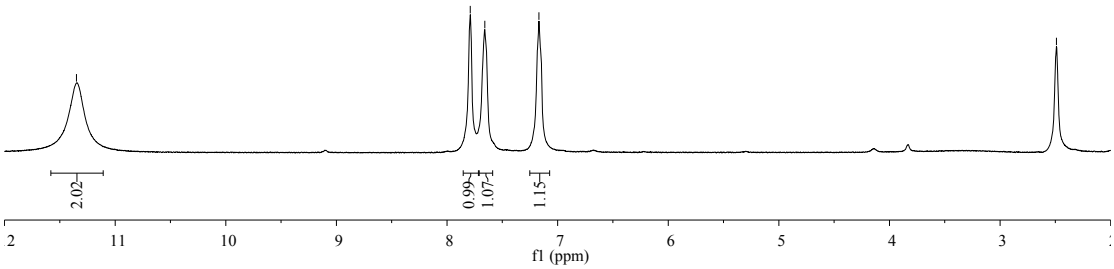
13C NMR (100MHz, DMSO-d6) 2b



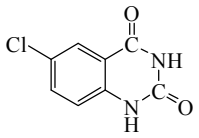


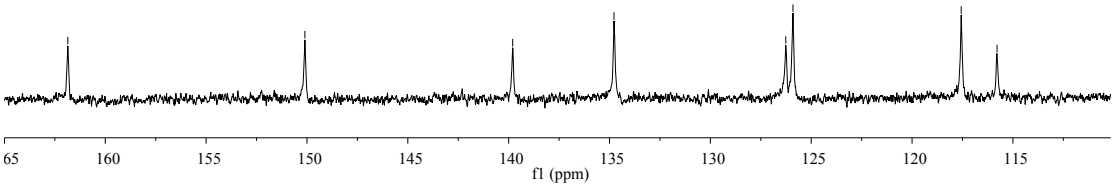
1H NMR (NMR400MHz, DMSO-d6) 2c

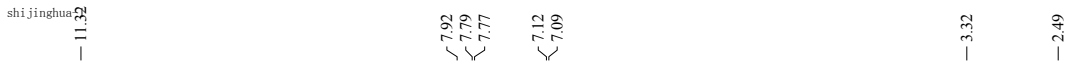




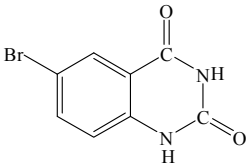
13C NMR (100 MHz, DMSO-d6)2c

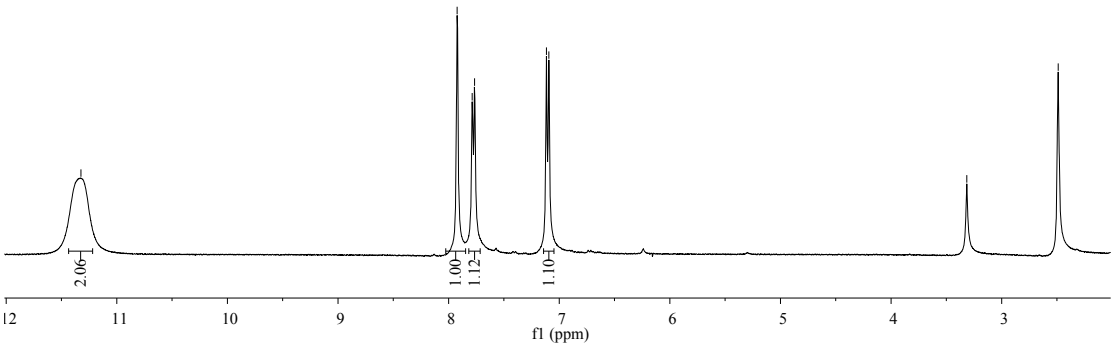


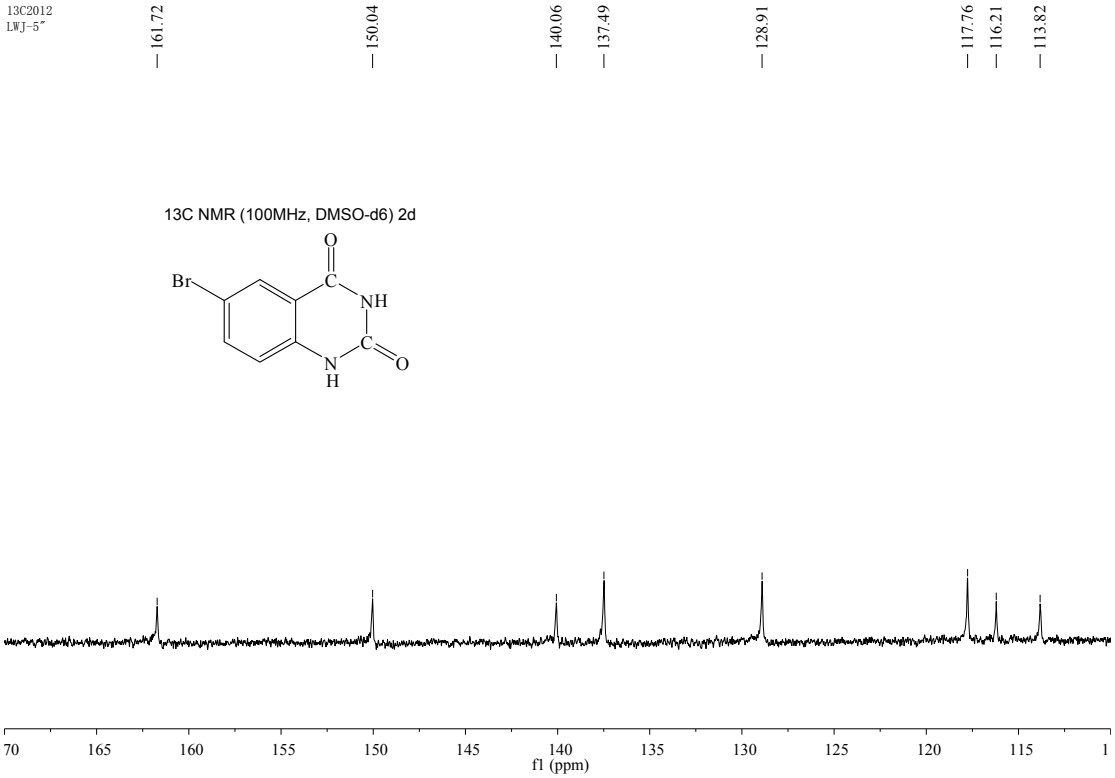


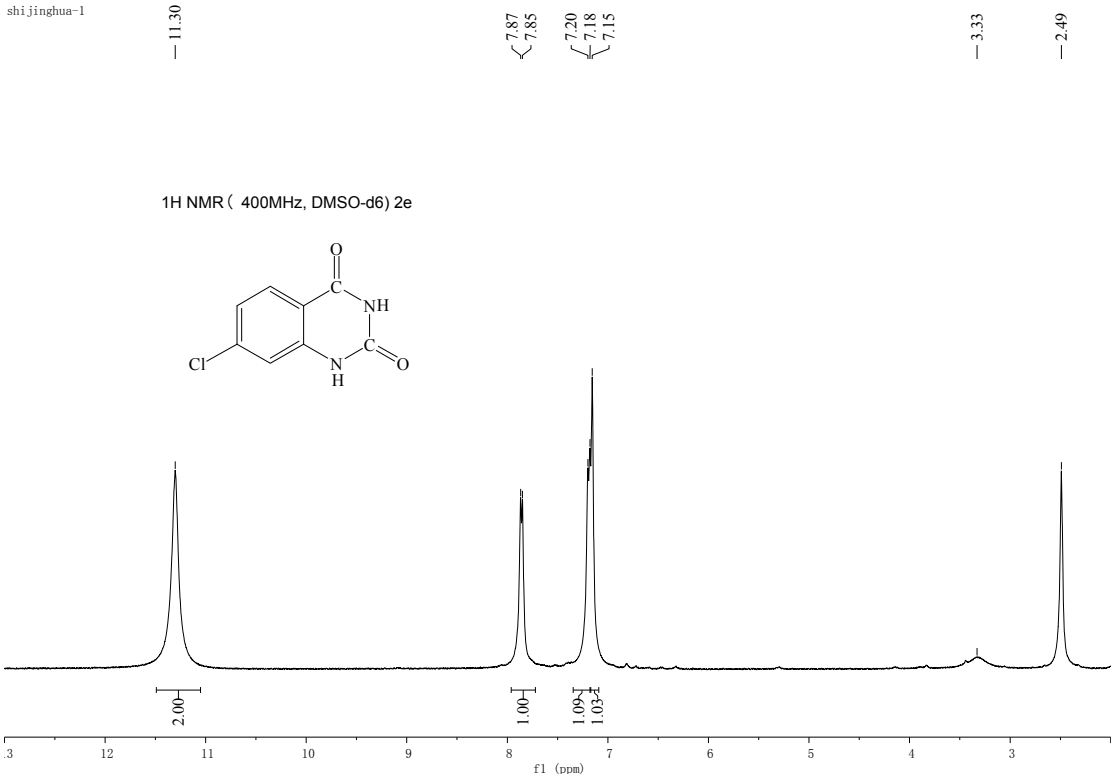


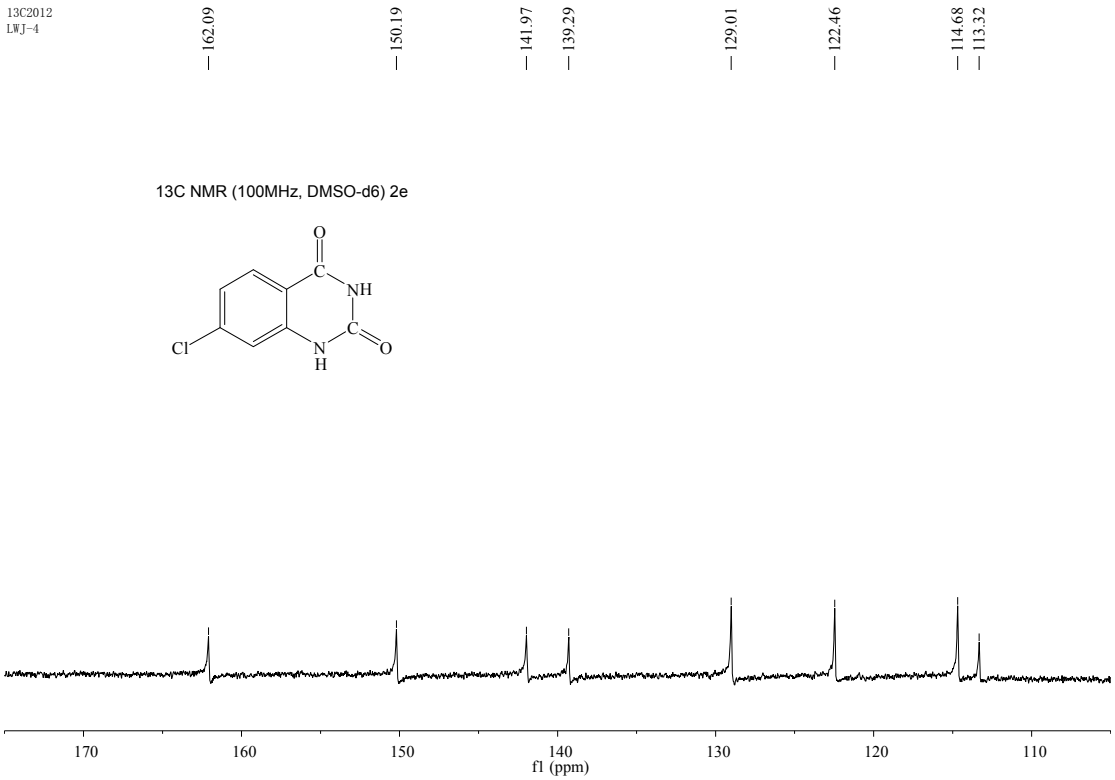
1H NMR (NMR400MHz, DMSO-d6) 2d



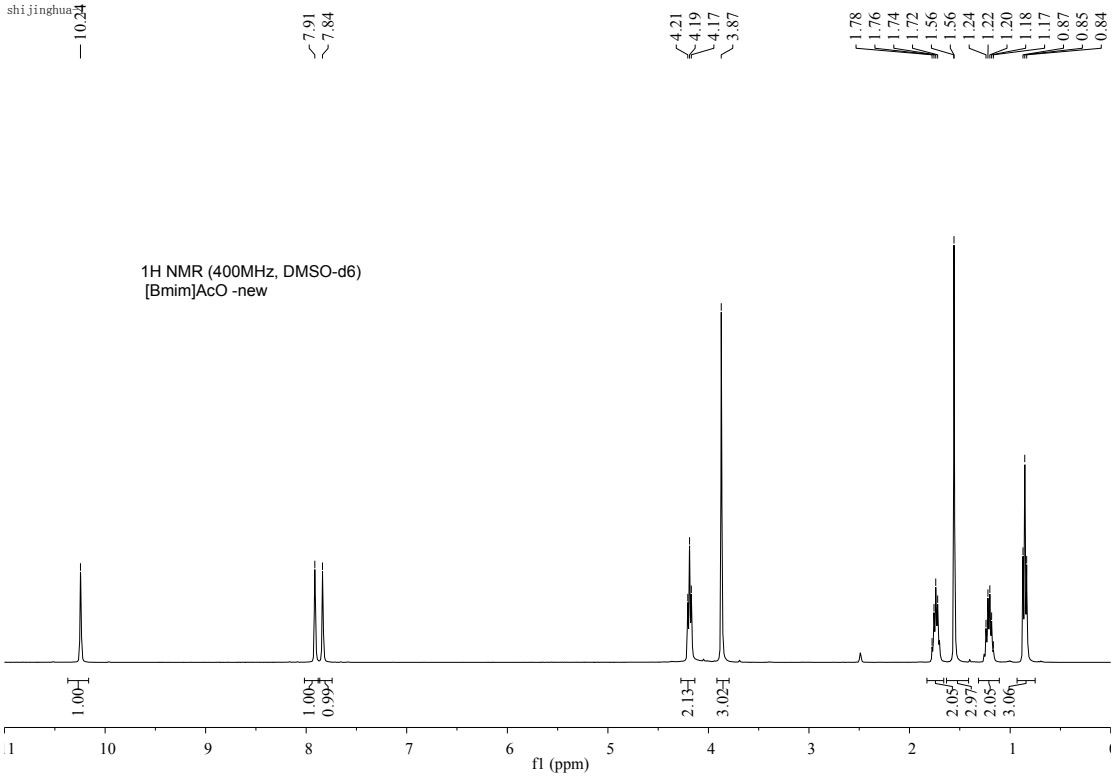


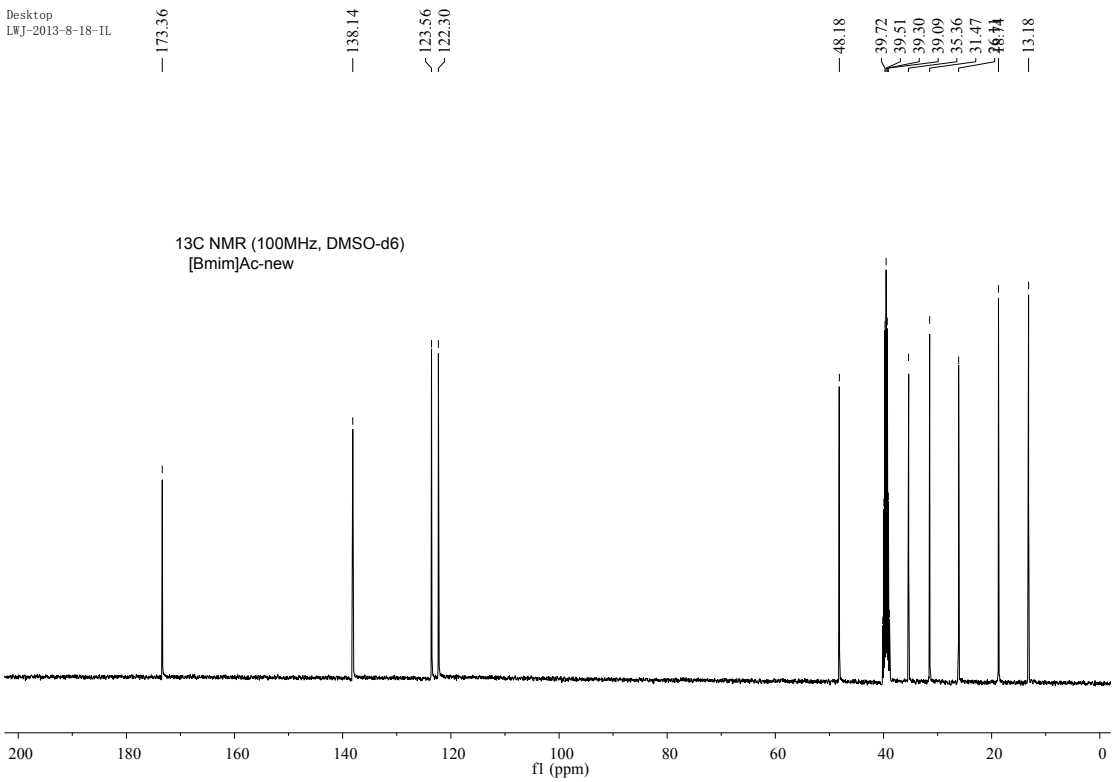

13C2012
LWJ-5'
161.72
150.04
140.06
137.49
128.91
117.76
116.21
113.82
13C NMR (100MHz, DMSO-d6) 2d
Br
O
C
NH
C
O
N
H
70
165
160
155
150
145
140
135
130
125
120
115
1
f1 (ppm)

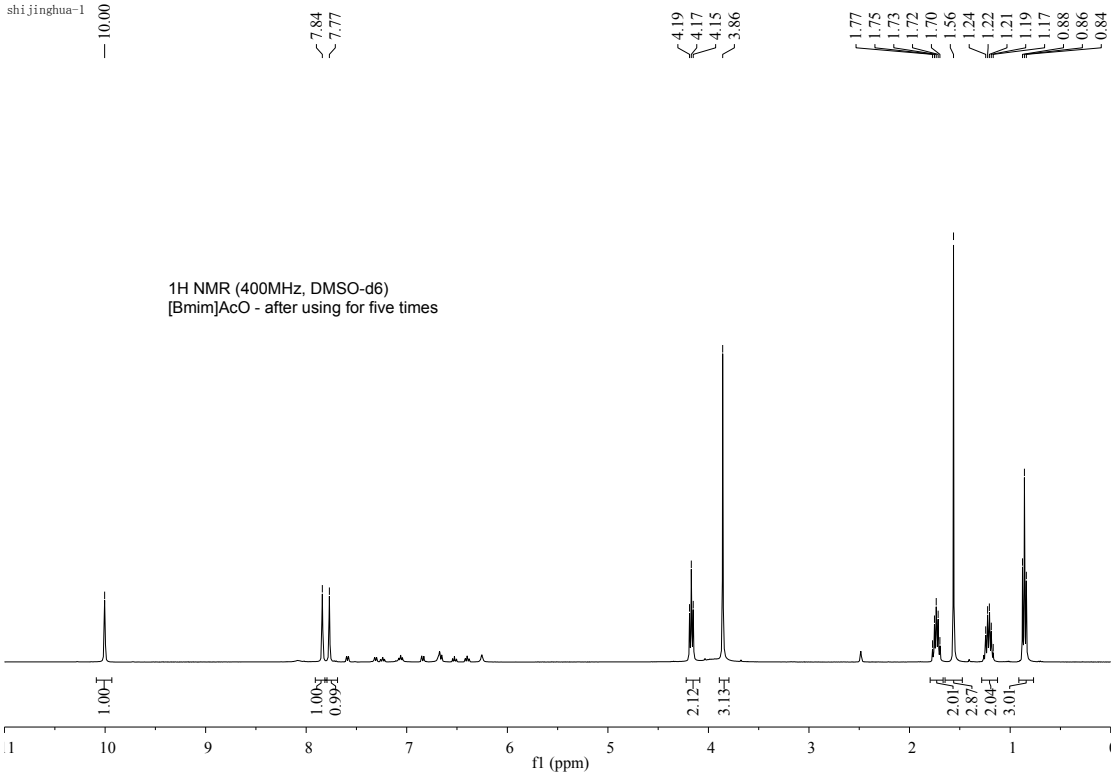

shijinghua-1
11.30
7.87
7.85
7.20
7.18
7.15
3.33
2.49
1H NMR（ 400MHz, DMSO-d6) 2e
Cl
O
C
NH
C
O
N
H
2.00
1.00
1.09
1.03
13
12
11
10
9
8
7
6
5
4
3
f1 (ppm)



The ^{1}H NMR and ^{13}C NMR charts for [Bmim]Ac and [Bmim]Ac used for five times




Desktop
LWJ-2013-8-18-IL
173.36
138.14
123.56
122.30
48.18
39.72
39.51
39.30
39.09
35.36
31.47
13.18
13C NMR (100MHz, DMSO-d6)
[Bmim]Ac-new
200
180
160
140
120
100
80
60
40
20
0
f1 (ppm)


shijinghua-1
10.00
7.84
7.77
4.19
4.17
4.15
3.86
1.77
1.75
1.73
1.72
1.70
1.56
1.24
1.22
1.21
1.19
1.17
0.88
0.86
0.84
1H NMR (400MHz, DMSO-d6)
[Bmim]AcO - after using for five times
1.00
1.00
0.99
2.12
3.13
2.01
2.87
2.04
3.01
10
9
8
7
6
5
4
3
2
1
f1 (ppm)