FIG. 1A

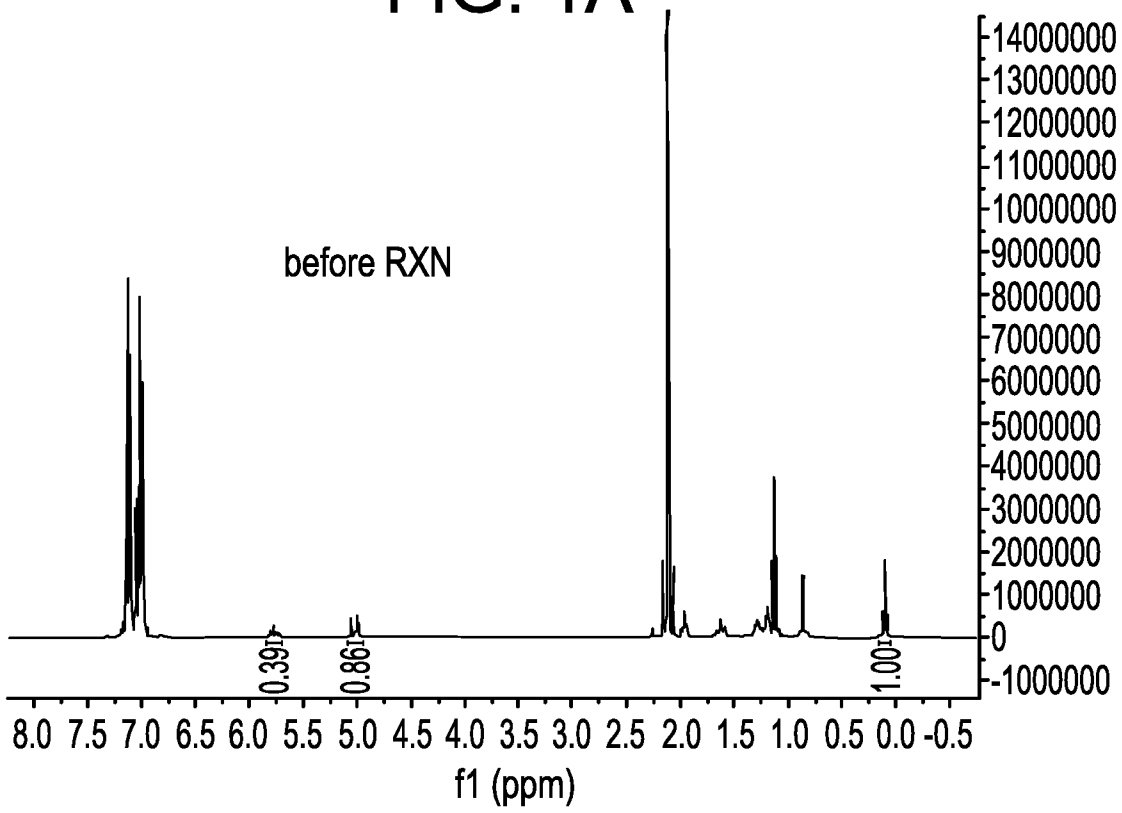

before RXN
0.39
0.86
1.00
14000000
13000000
12000000
11000000
10000000
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
-1000000
8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)

FIG. 1B

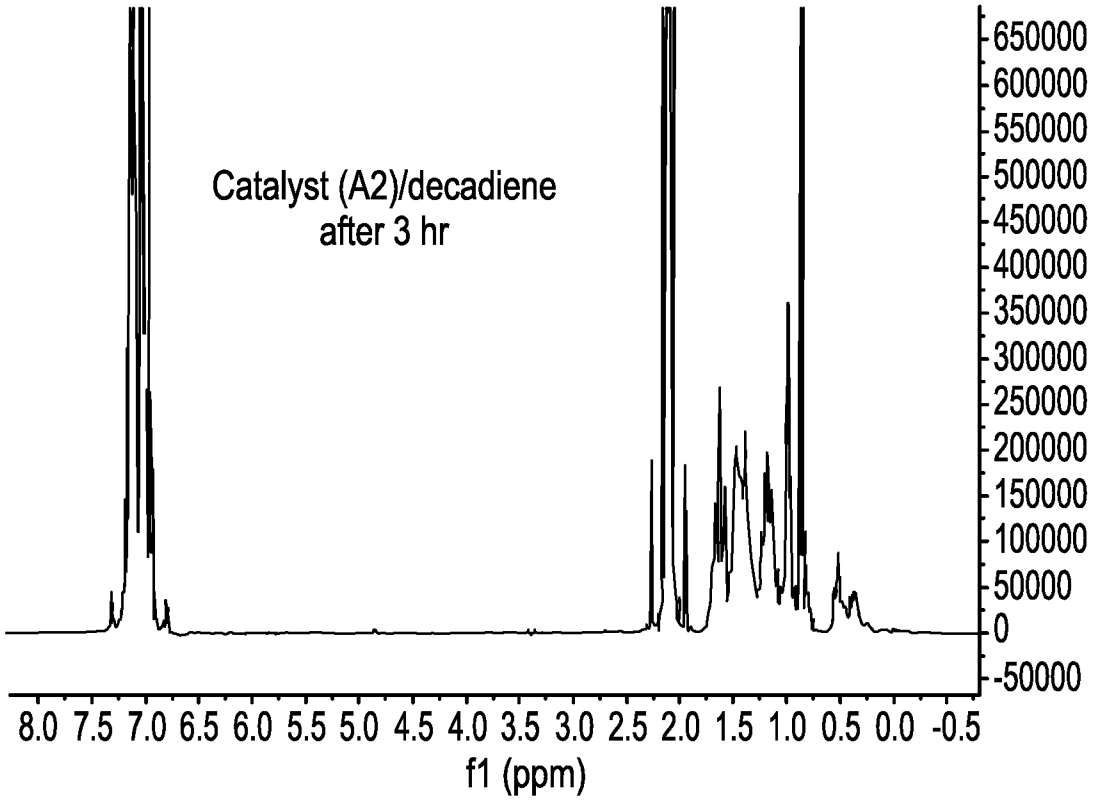

Catalyst (A2)/decadiene
after 3 hr
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
-50000
8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)

FIG. 2

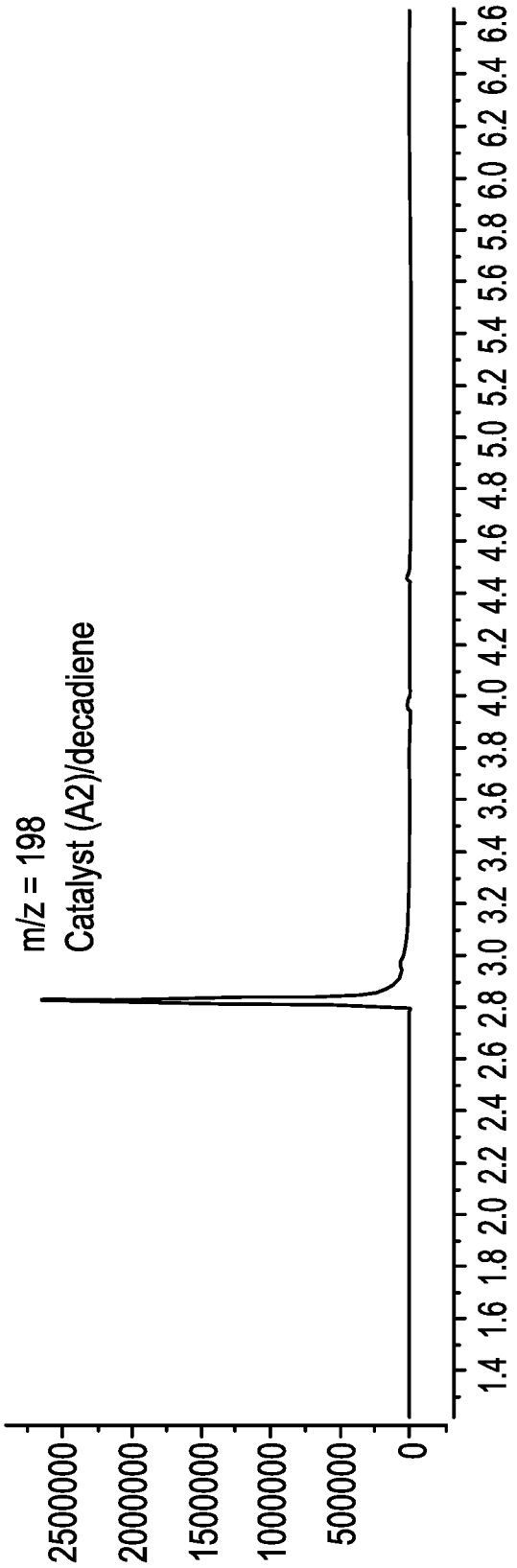

m/z = 198
Catalyst (A2)/decadiene
2500000
2000000
1500000
1000000
500000
0
1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6
Retention time (min)

FIG. 3

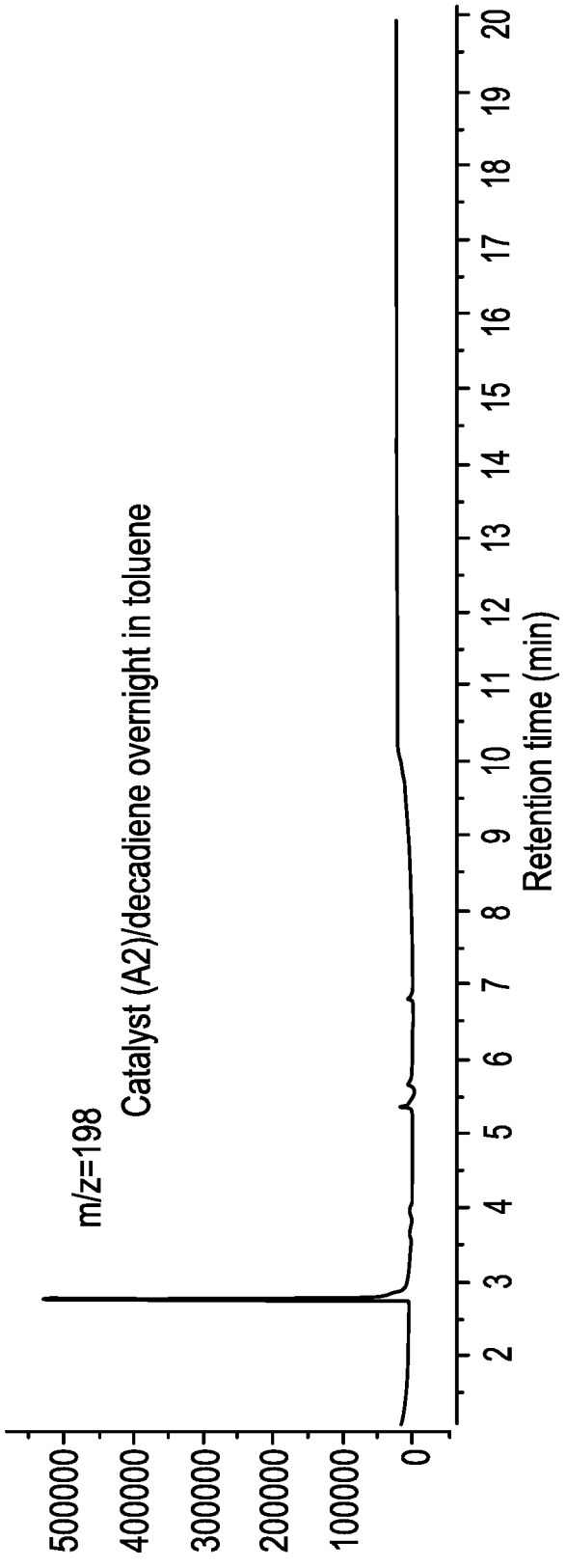
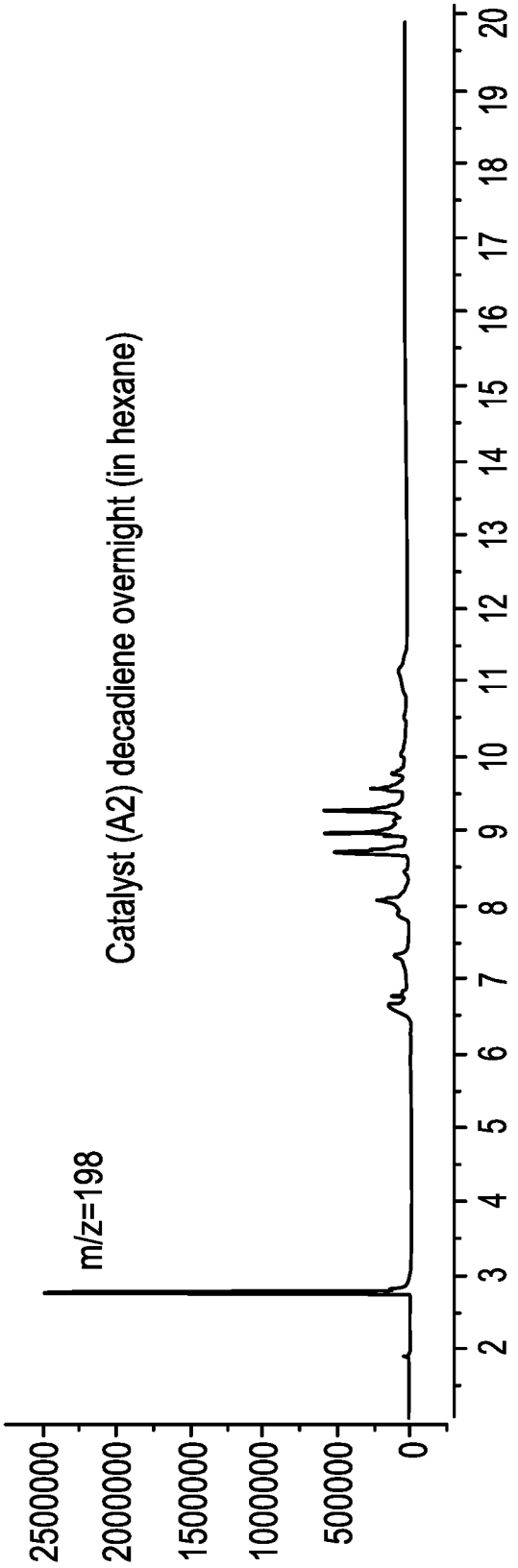

m/z=198
Catalyst (A2)/decadiene overnight in toluene
500000
400000
300000
200000
100000
0
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Retention time (min)

FIG. 4


Catalyst (A2) decadiene overnight (in hexane)
m/z=198
2500000
2000000
1500000
1000000
500000
0
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Retention time (min)