(19)

(12)

(10)

(45)

(21) 201810332224.0

(22) 2018.04.13

(65)

CN 108483397 A

(43) 2018.09.04

(73) ㈜

453007 ㈜

46㎡

(72)

(74) ㈜

( ) 41139

(51) Int.Cl.

C01B 6/13 (2006.01)

(56)

CN 104725409 A,2015.06.24

US 2017214067 A1,2017.07.27

GB 826557 A,1960.01.13

Huizhen Li et al..Formation η ‡ 3Ь 1 È Mechanisms, Struc

1.

MBH_4 NH_4X BX_3 -30 50 $NH_2B_2H_5$ M = Na Li X = F Cl Br

2. 1

schlenk

100:1 1:20 schlenk

0.5 5 mol/L -

1:1

$THF·BH_3$ $NH_2B_2H_5$

[0001]

[0002] Aminodiborane, ADB, $NH_2B_2H_5$
1938

B N H B-H N-H B-N

[0003]
$NH_2B_2H_5$

[0004] 1 $NH_2B_2H_5$
-130
10%

[0005] 2

[0006] 3 THF · BH_3 THF

[0007] $NH_2B_2H_5$
THF · BH_3

[0008]

[0009]
MBH_4
NH_4X BX_3 -30 50
$NH_2B_2H_5$ M = Na Li X = F Cl Br

[0010]
schlenk
100:1 1:20 schlenk
0.5 5 mol/L -
1:1 THF·BH_3
$NH_2B_2H_5$

[0011] $NH_2B_2H_5$

[0012] $4NaBH_4 + NH_4Cl + 4BF_3 \rightarrow NH_2B_2H_5 + NaCl + H_2 + 3NaBF_4$

[0013]

[0014] 1 1 $NH_2B_2H_5$ ^{11}B

[0015] 2 1 $NH_2B_2H_5$ $^{11}B\{H\}$

[0016]

[0017] 1

[0018] 100 mL schlenk 1.52 g 1.06 g schlenk 20 mL 4:1 1 mol/L - 4 mL 1:1 $THF\cdot BH_3$ $NH_2B_2H_5$ $NH_2B_2H_5$ 0.065 g 62% 100% $NH_2B_2H_5$

[0019] 2

[0020] 100 mL schlenk 1.52 g 1.06 g schlenk -30 20 mL 4:1 1 mol/L - 4 mL 1:1 $THF\cdot BH_3$ $NH_2B_2H_5$ $NH_2B_2H_5$ 0.058 g 60% 100%

[0021] 3

[0022] 100 mL schlenk 1.52 g 1.06 g schlenk 20 mL 4:1 1 mol/L - 4 mL 1:1 50 $THF\cdot BH_3$

$NH_2B_2H_5$ $NH_2B_2H_5$ 0.065 g

62% 100%

[0023] 4

[0024] 100 mL schlenk

1.52 g 1.06 g schlenk

20 mL 4:1

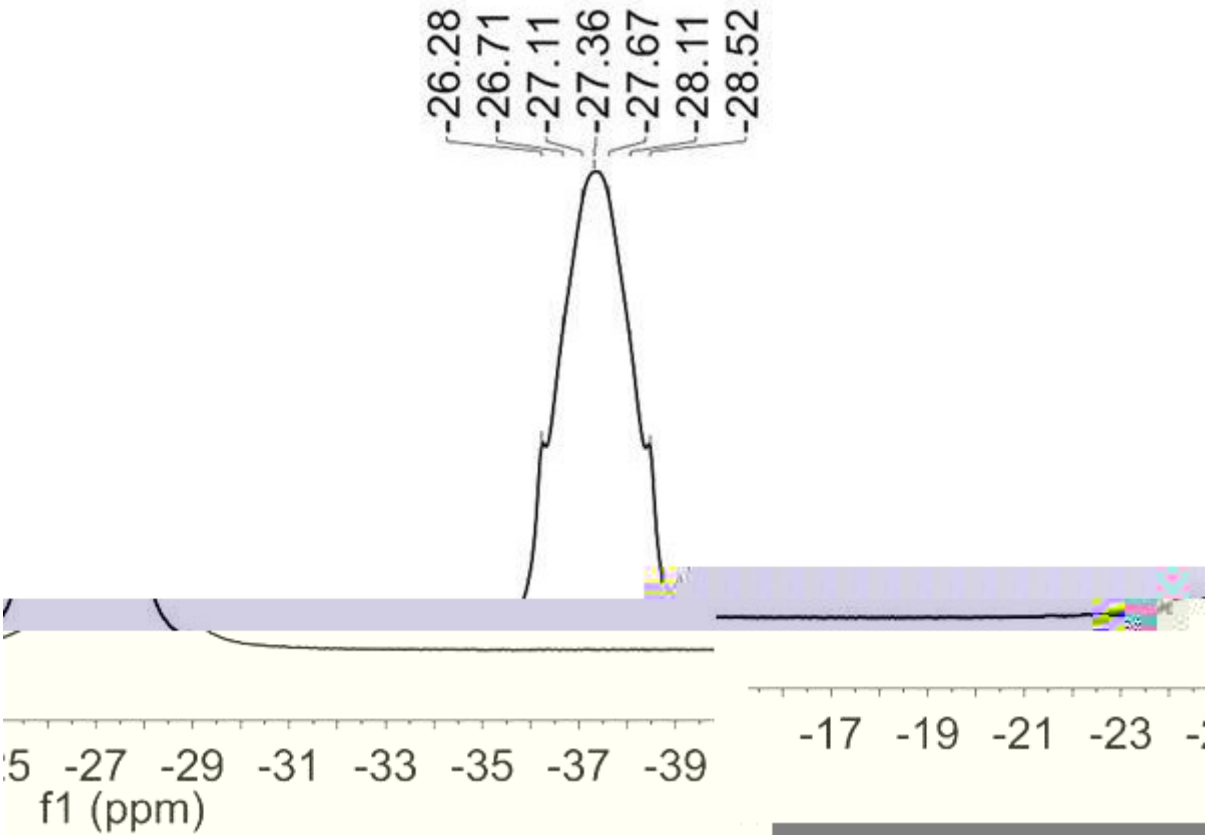
1 mol/L - 4 mL

1:1 $THF \cdot BH_3$

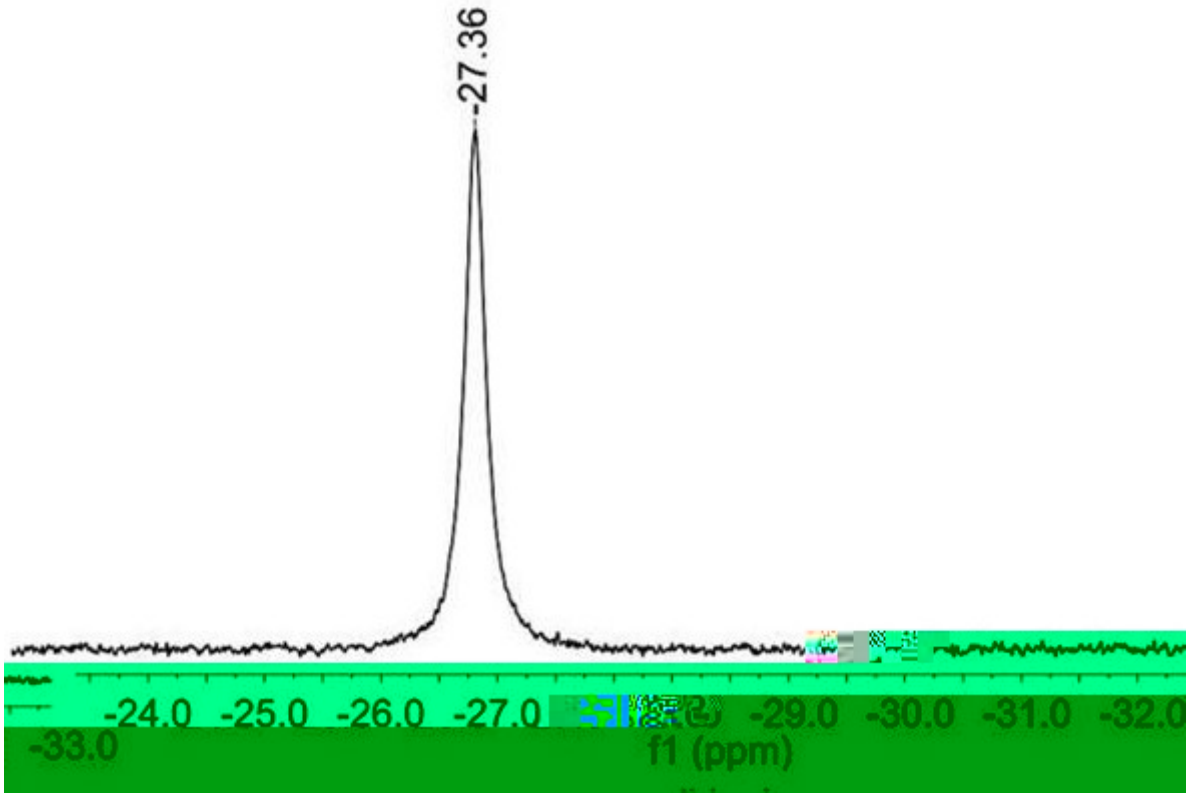
NB_2H_7 $NH_2B_2H_5$ 0.065 g

62% 100%

[0025]


-26.28
-26.71
-27.11
-27.36
-27.67
-28.11
-28.52
-27 -29 -31 -33 -35 -37 -39
f1 (ppm)
-17 -19 -21 -23

1



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