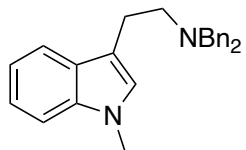


## Synthesis Challenge 89

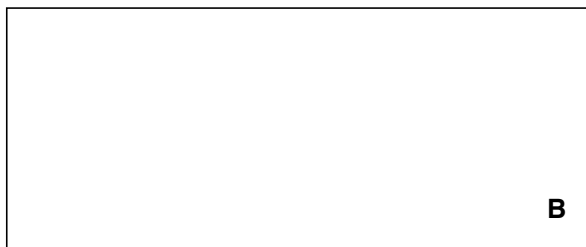
AG Wegner

03.09.2020



**A**

1-3



4-6



7-8



- 1) NBS, DCM, 0 °C~RT, (80%)
- 2) t-BuLi, cyclobutanone, THF, -78 °C
- 3) TMSCl, imidazole, DCM, 0 °C

- 4) Pd(OH)<sub>2</sub>/C, H<sub>2</sub>, MeOH:THF=50:1, 30 °C
- 5) HCO<sub>2</sub>H, CDI, DCM, 0 °C
- 6) NaH, Allyl bromide, THF:DMF=20:1, 0 °C~RT

- 7) Tf<sub>2</sub>O, 2-chloropyridine, DCM, -78 °C~RT
- 8) PTS, toluene, reflux

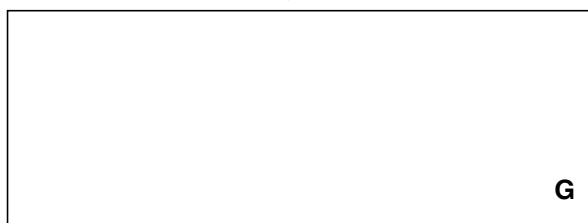
9-12  
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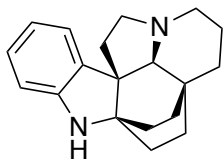
13-16  
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16-19  
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20-27  
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9) N- nitroso-N-methyl-4-toluenesulfonamide, KOH, THF:MeOH:H<sub>2</sub>O=10:3:3, 0 °C~RT  
10) Trimethylsilyldiazomethane, n-BuLi, THF, -78 °C, then MeOH, silica gel column  
11) LiAlH<sub>4</sub>, THF, 0 °C; d) MsCl, Et<sub>3</sub>N, DCM, 0 °C;  
12) LiCl, Li<sub>2</sub>CO<sub>3</sub>, 4Å MS, DMF, 90 °C

13) (Ph<sub>3</sub>P)<sub>4</sub>Pd, 1, 3-Dimethylbarbituric acid, DCM, RT  
14) Et<sub>3</sub>N, Acetyl chloride, DCM, 0 °C  
15) K<sub>2</sub>OsO<sub>4</sub>, NMO, CH<sub>3</sub>CN:H<sub>2</sub>O=3:1, RT, then NaIO<sub>4</sub>, 0 °C  
16) Pyridine hydrochloride, THF:DCM=20:1, RT,

17) TMSCl, imidazole, DCM, 0 °C  
18) LDA, THF, -78 °C  
19) Martin sulfurane, DCM, 0 °C~RT  
20) TBAF 1M in THF, 0 °C  
21) DMP, Pyridine, DCM, 0 °C

22) PtO<sub>2</sub>, H<sub>2</sub>, EtOAc, RT; g) NH<sub>2</sub>NH<sub>2</sub>.H<sub>2</sub>O, Na, ethylene glycol  
23) AlCl<sub>3</sub>, LiAlH<sub>4</sub>, THF, 0 °C  
24) Et<sub>3</sub>N BnMnO<sub>4</sub>, DCM, -78 °C~0 °C  
25) 4 M HCl, 1,4-Dioxane, 70 °C,