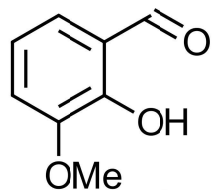


Synthesis Challenge #77

AG Wegner

14.03.2019



↓ 1

A



↓ 2, 3



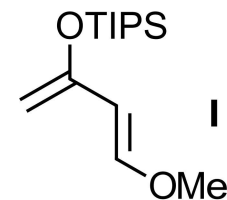
↓ 4, 5



1) $\text{HBF}_4 \cdot \text{Et}_2\text{O}$ (10 mol%), $\text{N}_2\text{CHCO}_2\text{Et}$,
DCM, then H_2SO_4

2) I, 160°C
then PTSA, toluene
3) L-Selectride, THF

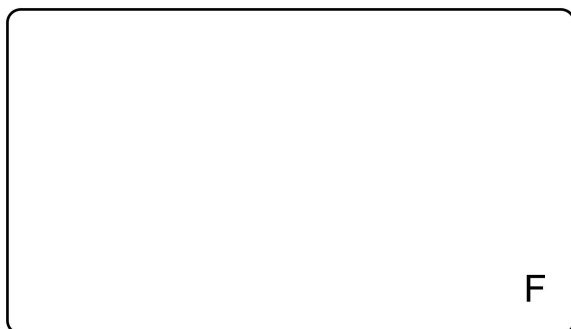
4) $\text{Pd}(\text{TFA})_2$ (2mol%), 1,10-phenanthroline
(2mol%), Et_3N , ethyl vinyl ether, 50°C
5) 2,6-lutidine, xylene, 160°C , then PTSA



↓ 6,7



↓ 8,9



↓ 2-3 steps

(+/-)-Morphine

6) SeO_2 , 1,4-dioxane, then DMP, DCM
7) DIBAL-H, THF, -78°C

8) $\text{Ph}_3\text{PCH}_2\text{OMeCl}$, tBuOK, THF,
then HCl (12 M)
9) MeNH_2 , MeOH, rt, then NaBH_4

Please, provide reagents
for the last transformation