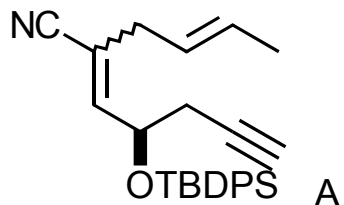


Synthesis Challenge # 46

AG Wegner

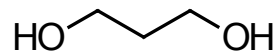
28.04.2016



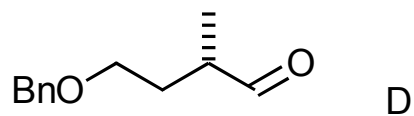
1-6
↓



7-8
↓



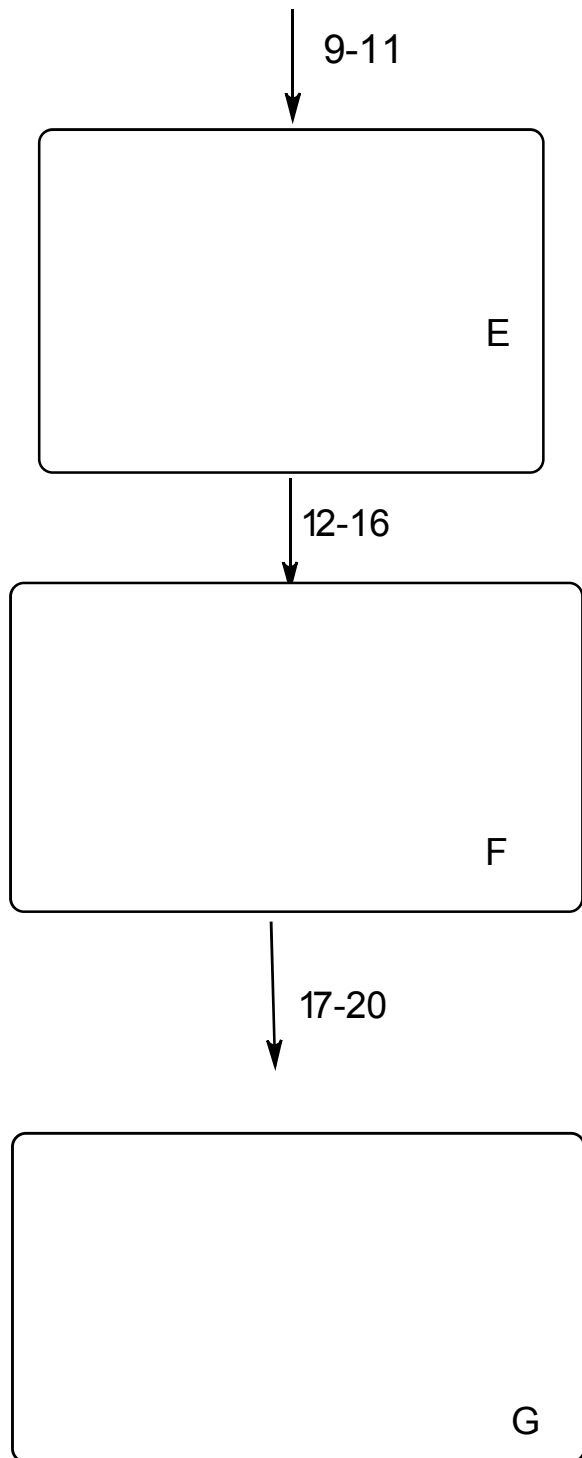
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↓



- 1) DIBAL
- 2) HCl, aq. THF
- 3) NaBH₄, MeOH
- 4) MsCl, Et₃N
- 5) LiBr, THF
- 6) LiBHET₃, THF

- 7) TBAF, THF
- 8) Bu₃SnH, Pd(PPh₃)₄, benzene

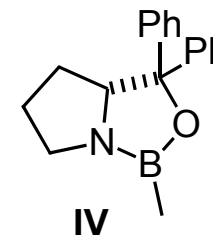
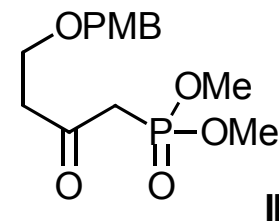
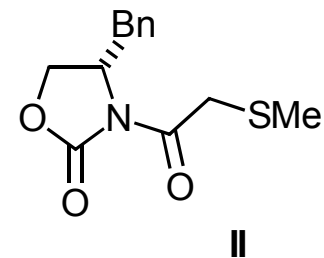
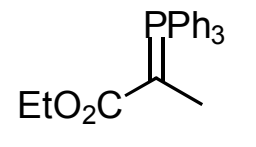
Please, design a synthesis of D from 1,3-propanediol.



9) **I**, benzene reflux
 10) DIBAL
 11) DMP

12) **II**, TiCl_4 , $i\text{Pr}_2\text{NEt}$, *N*-Me-pyrrolidone
 13) Bu_3SnH , AIBN, benzene reflux
 14) Me_3OBF_4 , proton sponge
 15) LiBH_4 , Et_2O , H_2O
 16) DMP

17) **III**, NaH
 18) $\text{BH}_3 \cdot \text{SMe}_2$, (*R*)-Me-CBS (**IV**), toluene
 19) TBSCl, imidazole, DMF
 20) LiDBB, THF, -78°C

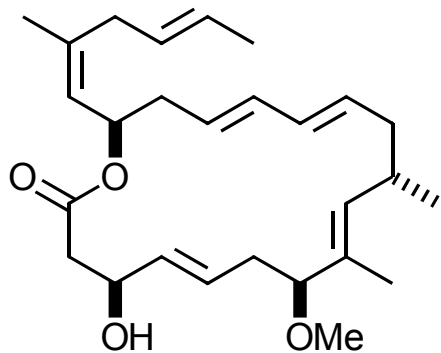


21-25



C + **H**

26-29



- 21) TMPO, BAIB, CH₂Cl₂
- 22) CHI₃, CrCl₂, THF/dioxane
- 23) DDQ, ph 7 buffer
- 24) DMP
- 25) NaClO₂, NaH₂PO₄, 2-Me-2-butene
t-BuOH

- 26) MNBA, DMAP, Et₃N, CH₂Cl₂
- 27) Pd₂(dba)₃, LiCl, DMF
- 28) TBAF, AcOH, THF

MNBA = 2-Methyl-6-nitrobenzoic anhydride