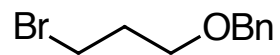


# Synthesis Challenge # 38

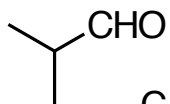
AG Wegner

30.07.2015



A

1-2



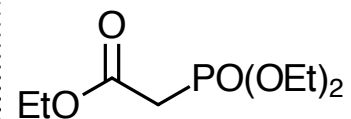
C

3-6



- 1) **I**, NaH, THF
- 2) KOH, aq. EtOH

- 3) Ti(OiPr)<sub>4</sub>, KO<sup>t</sup>-Bu, THF
- 4) HC(OMe)<sub>3</sub>, *p*-TsOH, MeOH
- 5) **B**, DCC, DMAP, CH<sub>2</sub>Cl<sub>2</sub>
- 6) aq HCl, acetone



**I**

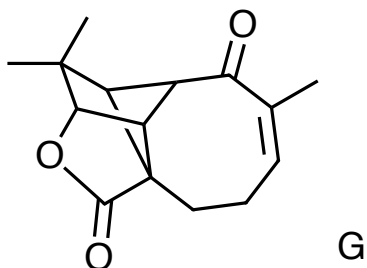
7-8



9-14



15-18



- 7) NaH, THF
- 8)  $(\text{CH}_2\text{O})_n$ ,  $(\text{Cy})_2\text{NH}$ , CuI, 1,4-dioxane

- 9) light (300 nm)
- 10)  $\text{BH}_3$ , THF, then  $\text{H}_2\text{O}_2$ , NaOH
- 11) DMP,  $\text{CH}_2\text{Cl}_2$
- 12)  $\text{EtMgBr}$ ,  $\text{Et}_2\text{O}$
- 13)  $\text{H}_2$ , 10% Pd/C, EtOAc
- 14) DMP (2.5 eq.)  $\text{CH}_2\text{Cl}_2$

- 15)  $\text{HC}(\text{OMe})_3$ ,  $\text{CeCl}_3 \cdot 7 \text{H}_2\text{O}$
- 16) LHMDS, THF,  $-78^\circ\text{C}$ , then,  $\text{Me}_3\text{SiCl}$
- 17)  $\text{BF}_3 \cdot \text{OEt}_2$ ,  $\text{CH}_2\text{Cl}_2$ ,  $-78^\circ\text{C}$  to rt
- 18) *p*-TsOH, toluene, reflux

Please provide a detailed mechanism for step 8).

Please provide a detailed mechanism for step 9).

Please provide a detailed mechanism for step 17).

What is the name of the reaction in step 19)