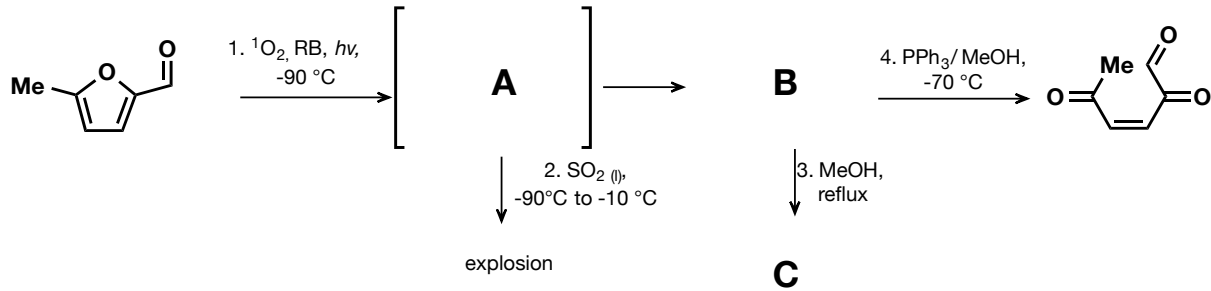


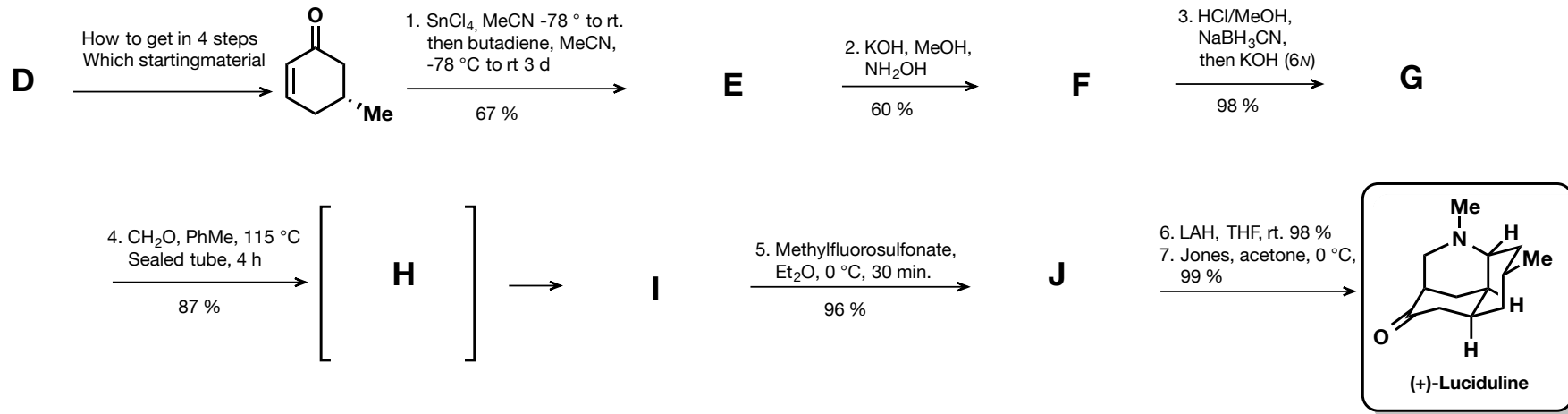
**Denksport 13.06.2013**

D. Schwarzer

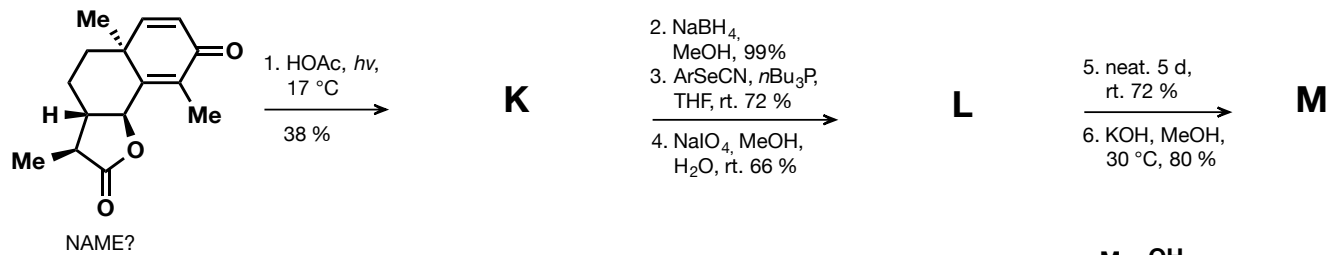
K. Gollnick, A. Griesbeck, *Tetrahedron* **1985**, *41*, 2057–2068



W. Oppolzer, M. Petrzilka, *Helvetica Chimia Acta* **1978**, *61*, 2755–2762



H. Zhai *et al.*, *JACS* **2005**, *127*, 18-19.



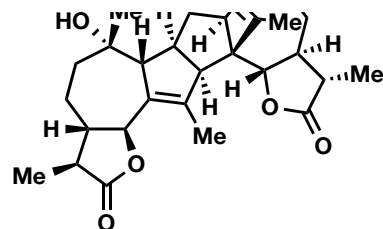
7.  $\text{SOCl}_2$  (Xs),  $\text{Et}_3\text{N}$ , THF,  $-78^\circ\text{C}$   
 8.  $\text{OsO}_4$ , NMO, acetone,  $\text{H}_2\text{O}$ , rt.  
 9.  $\text{NaIO}_4$ , acetone,  $\text{H}_2\text{O}$ , rt.

77 % o. 3 steps

**N**

10. MeLi (2.1 eq.),  
 THF,  $-78^\circ\text{C}$

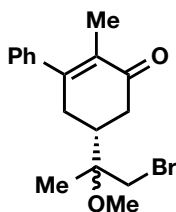
89 %



Srikrishna *et al.*, *JOC* **1993**, *58*, 2509-2516.

**O**  
 Substrate?

1.  $\text{PhMgBr}$ ,  $\text{Et}_2\text{O}$ ,  
 then PCC,  $\text{SiO}_2$ ,  
 $\text{CH}_2\text{Cl}_2$ , 85 %  
 2. NBS,  $\text{CH}_2\text{Cl}_2/\text{MeOH}$ , 75 %



3.  $\text{KO}^t\text{Bu}$ ,  
 THF/ $\text{BuOH}$ ,  
 rt. 75 %

**P**

4.  $\text{BBr}_3$ ,  $\text{CH}_2\text{Cl}_2$ ,  
 $-60^\circ\text{C}$ , 1 h,  
 78 %

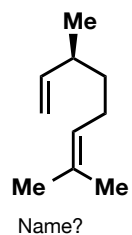
**Q**

**R**

5. Methylacrylate,  
 AIBN,  $n\text{Bu}_3\text{SnH}$

**S**

Barrett *et al.*, *JOC* **1986**, *51*, 4840-4856



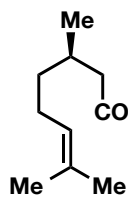
1.  $\text{O}_3$   
 2. PDC

**T**

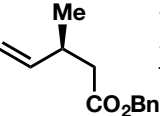
3.  $\text{I}_2$ , MeCN  
 4.  $\text{Bu}_3\text{SnH}$

**U**

Collum *et al.*, *JACS* **1980**, *102*, 2117-2121

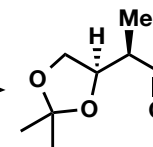


2 steps

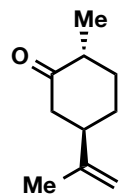


1. KOH  
 2.  $\text{I}_2$ , MeCN

**V**



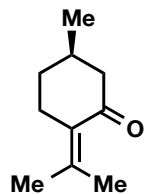
J. M. Conia *et al.*, *JOC* **1978**, *43*, 564.



400  $^\circ\text{C}$   
 Conia reaction

**W**

J. D. Wuest *et al.*, *JOC* **1977**, *42*, 2111-2113.



1.  $\text{Br}_2$   
 2. NaOH

**X**

3.  $(\text{COCl})_2$ , PhH, rt.  
 4. DABCO, PhH,  
 reflux

**Y**

5.  $\text{H}_2\text{NOH}$ ,  $\text{EtOH}/\text{H}_2\text{O}$ ,  
 $\text{NaOH}_{(\text{aq})}$ ,  $0^\circ\text{C}$ ,  
 then reflux

