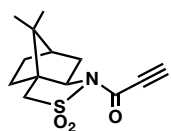
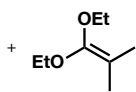


Total Synthesis of (-) Pestalotiopsin A
K. Tadano, *Angew. Chem.* **2008**, *47*, 3426.

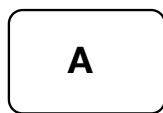


Name the reagent!
Alternatives?



How would you
synthesize it?

1. $ZrCl_4$, CH_2Cl_2
reflux, 6d

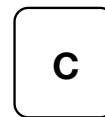


2. L-Selectride, PhMe
-78°C, 30min, then
aq. NH_4Cl , warming
from -78°C to 0°C



How does L-Selectride
look like?

4. TsCl, Et_3N ,
DMAP
5. KCN, DMSO



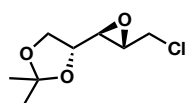
8. 5 M HCl, 70°C
9. AD-mix- α
10. TBDPSCI



How does the
AD mix look like?

13. MPMOC(NH)CCl₃
TfOH
Name the reagent!

11. DMP
12. $NaBH_4$, MeOH

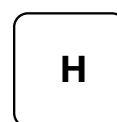


14. 3 eq. nBuLi, THF, -35°C,
1h, then 2eq MeI, HMPA, rt
15. TsOH, MeOH

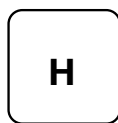
Provide the mechanism
for 14!



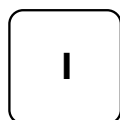
16. Bu_3SnH , Pd(PPh₃)₂Cl₂
THF, rt, 15min
17. I_2 , CH_2Cl_2 , 0°C, 15min
18. $NaIO_4$, silica supported



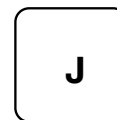
Come up with a retrosynthesis
for this!



19. NaHDMS, THF,
-78°C, 15min, then to
rt, 5min
20. MOMCl, DIPEA
21. TBAF, AcOH

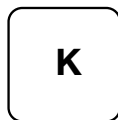


22. DMP
23. $CrCl_2$, $NiCl_2$, DMSO,
rt, 19h, 92%



Name the reaction!

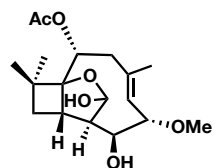
24. Ms_2O , DMAP, pyr
25. 4 M HCl, THF, rt
26. TESOTf, pyr



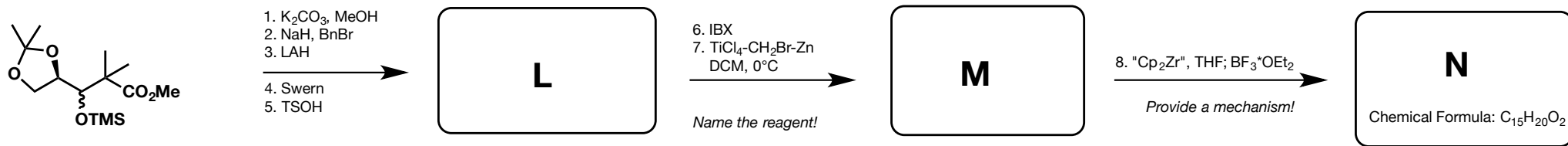
27. DDQ

28. $Pd_2(dba)_3$, nBu₃P
 $NaBH_4$
29. DiBAL-H
30. Ac_2O , pyr

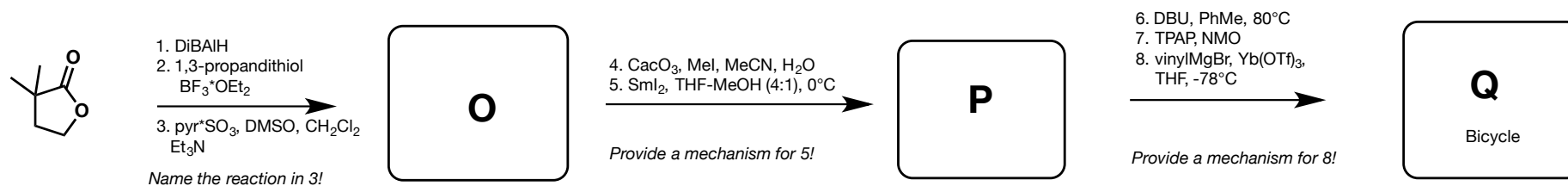
31. AcOH/ H_2O /THF
(1:1:1)



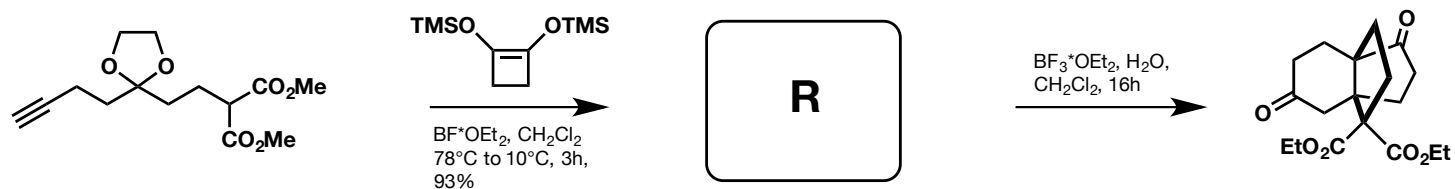
Construction of potential building block
L. Paquette *JOC*, **2007**, 72, 7125.



Construction of potential building block
D. J. Procter, *Org. Biomol. Chem.* **2003**, 1, 328.



Random Fun: D. P. Curran, *JOC*, 1995, 60, 345.



Random Fun: J. L. Wood *JACS*, 2001, 123, 2097

