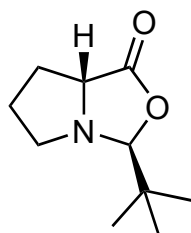


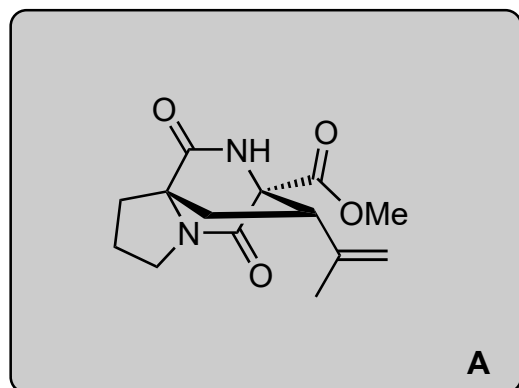
Total Synthesis of Notoamides F, I, and R and Sclerotiamide

Zhang, B.; Zheng, W.; Wang, X.; Sun, D.; Li, C.

Angew. Chem. Int. Ed. **2016**, 55, 10435-10438.

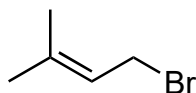


1-7

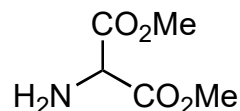


8-10

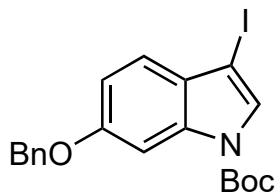
- 1) LDA, **1**
- 2) H₂O, H₂SO₄
- 3) Boc₂O
- 4) **2**, HATU, DIPEA
- 5) TFA, DCM, 0 °C
- 6) AcOH, PhMe, reflux
- 7) FeCl₃



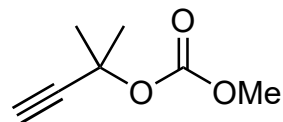
1



2



3



4

- 8) First **3**, *i*-PrMgCl; then **A**
- 9) Co-salen complex, PhSiH₃; then DMP
- 10) Pd/C, HCO₂NH₄

Starting material is known as **Seebach's acetal**.

What is the role of *t*-Bu group?

regenerates (saves) proline stereochem during enolization

Try to list some other notable things described by Dieter Seebach's group.

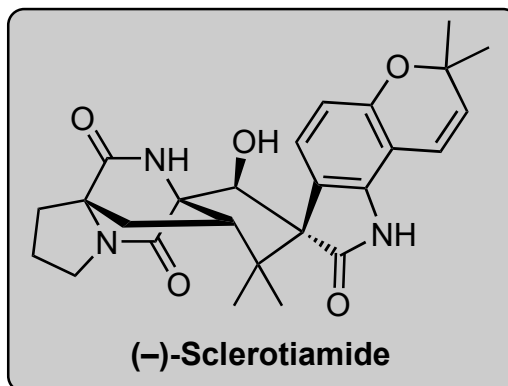
e.g. umpolung strategy, Corey-Seebach, TADDOL chemistry, total syntheses, CAM magic stain
see Baran slides for more

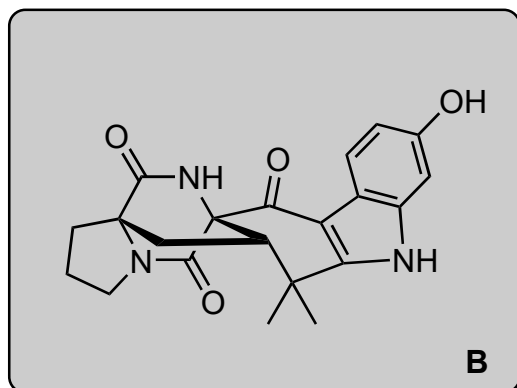
4) How is **2** prepared?
nitrosation/reduction

7) Oxidation/cyclization cascade
Name the cyclization?
aza-Prins

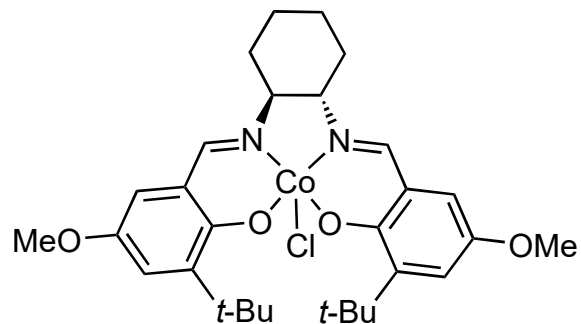
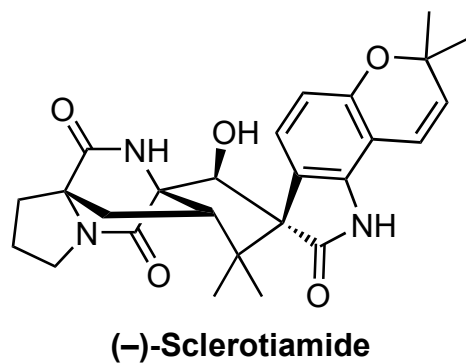
9) DMP = Dess-Martin periodinane
Used for rearomatization

10) HCO₂NH₄ is H₂ source

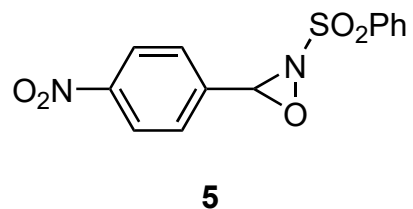




11-14



- 11) **4**, CuCl₂ (5 mol%), DBU
- 12) 180 °C
- 13) DIBAL "(1 equiv.)"
- 14) **5**



- 11) Propargylation
- 12) Three reactions occur
propargyl Claisen, allene O-alkylation,
Boc deprotection (thermal)