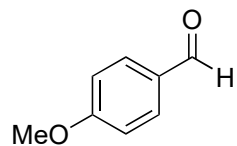
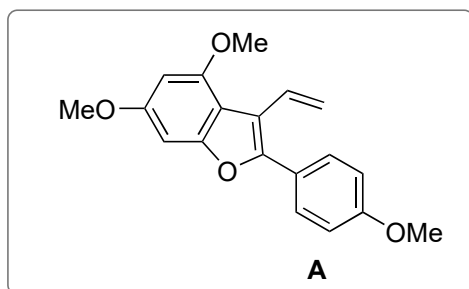


Total Synthesis of (±)-Rocaglamide via Oxidation-Initiated Nazarov Cyclization

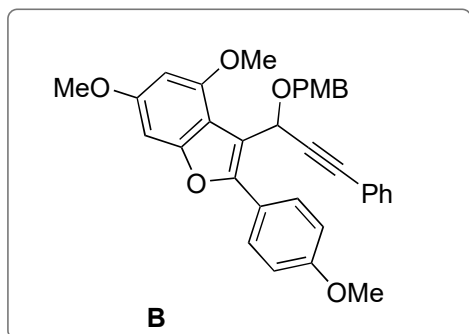
John A. Malona, Kevin Cariou, William T. Spencer, III, and Alison J. Frontier, *J. Org. Chem.* **2012**, *77*, 1891-1908



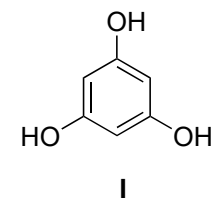
↓ 1 - 4



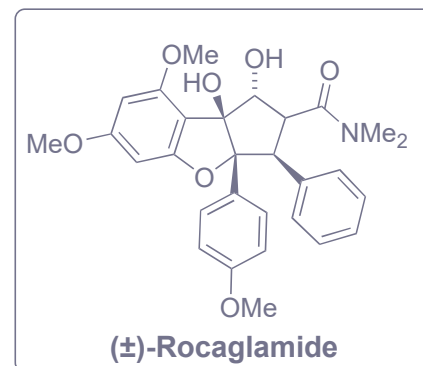
↓ 5 - 6

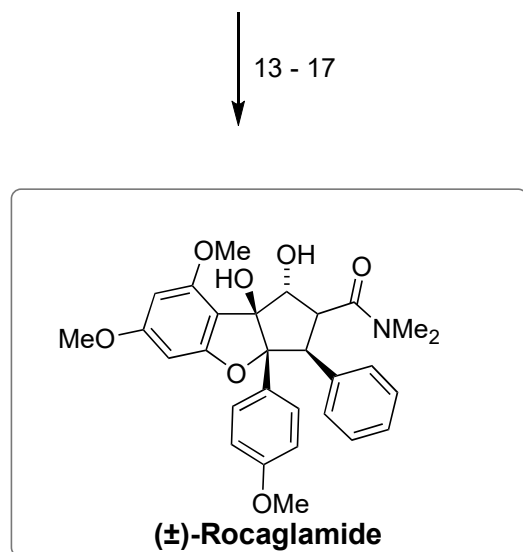
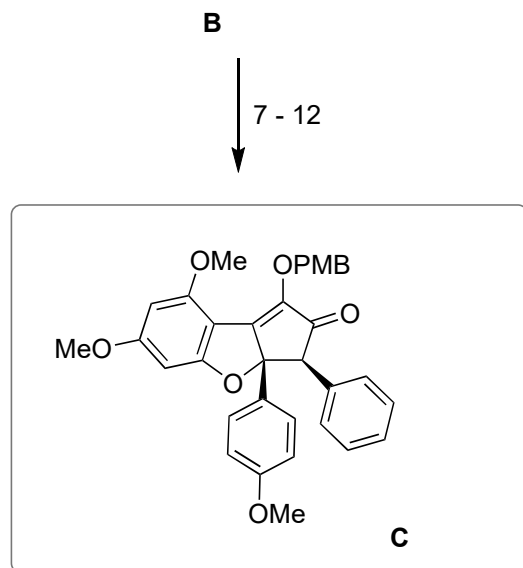


1. KCN, H₂SO₄
2. HCl, **I**
3. Me₂SO₄, K₂CO₃, **I**,
4. CeCl₃, vinylmagnesium bromide
then 1 M HCl



5. OsO₄, NMO, acetone, *t*-BuOH
then NaIO₄
6. *n*-BuLi, HCCPh
7. NaH, PMBCl



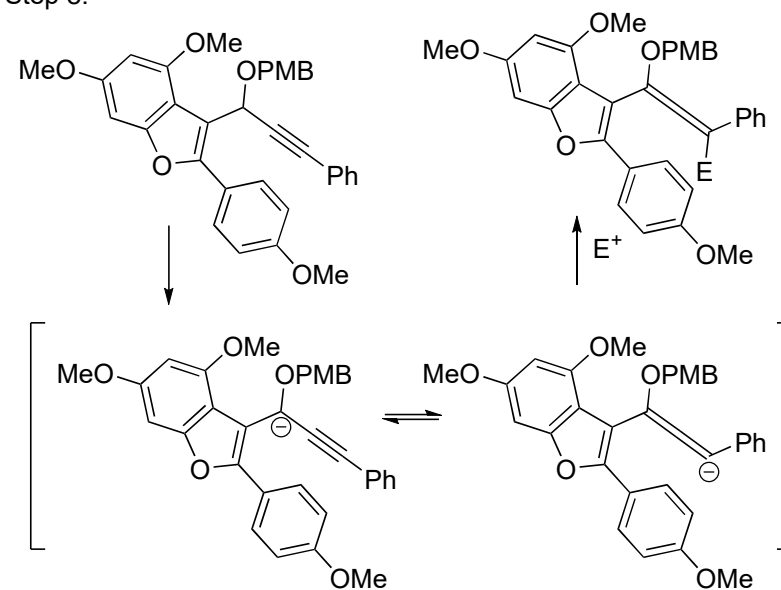


8. *t*-BuLi, then Bu₃SnCl
9. *m*-CPBA

10. DDQ (4.5 equiv), CH₂Cl₂/H₂O
11. KHMDS, PhNTf₂
12. Pd(PPh₃)₄, CO, MeOH, *i*-Pr₂NEt
13. PtO₂, H₂
14. NaHB(OAc)₃, AcOH
15. LiOH, THF/H₂O
16. Me₂NH·HCl, DDC, DMAP

Name reaction in step 9. - Nazarov
Draw the mechanism

Step 8:



Step 9: Oxidation- initiated Nazarov Cyclization

