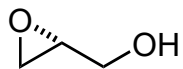
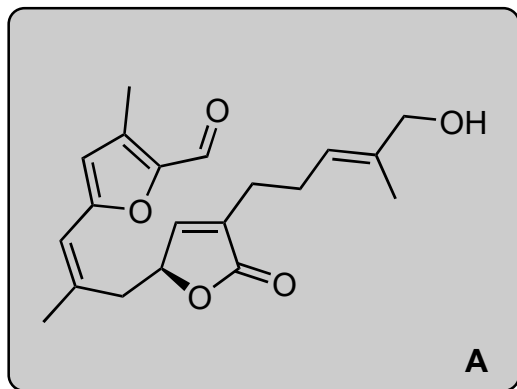


A biomimetic total synthesis of (+)-intricarene

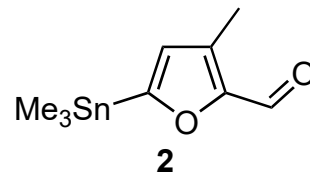
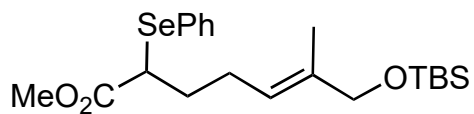
Tang, B.; Bray, C. D.; Pattenden G.
Tetrahedron Lett. **2006**, 47, 6401–6404.



1-10



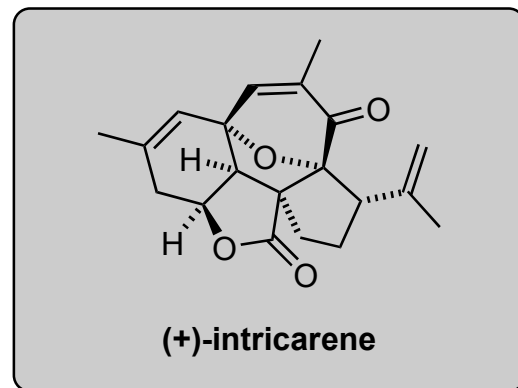
- 1) TMS-acetylene, *n*-BuLi, BF₃•OEt₂, -78°C to -30°C
- 2) K₂CO₃
- 3) Cp₂ZrCl₂, AlMe₃, r.t., *then* reflux *then* I₂, -30°C
- 4) TsCl, pyridine
- 5) K₂CO₃
- 6) **1**, NaHMDS, -78°C *then* substrate, BF₃•OEt₂, 0°C
- 7) *p*-TSA
- 8) H₂O₂, 0°C
- 9) PPTS (cat.)
- 10) **2**, Pd(PPh₃)₄, CuI, CsF



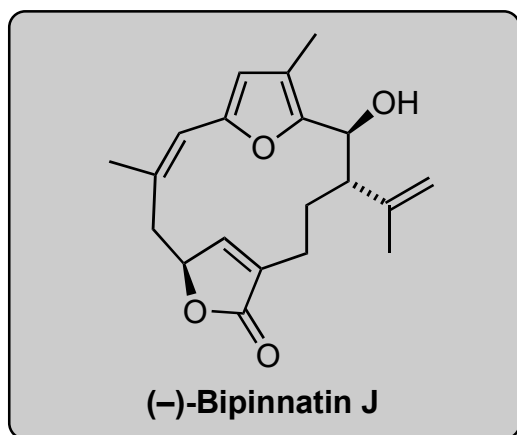
1) Please name the starting material.
(+)-glycidol

3) Hint: Isomerization occurs upon reflux.

10) Please name the reaction.
Stille coupling



11-12

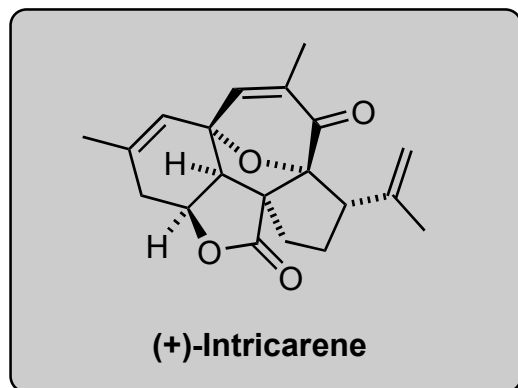


- 11) Ph_3P , NBS
12) CrCl_2

12) These conditions were a precursor to a named coupling reaction. Name this reaction and identify the missing co-catalyst.
Nozaki-Hiyama-Kishi reaction.
 NiCl_2 is the co-catalyst needed for NHK conditions

J. Am. Chem. Soc. 1986, 108(19), 6048-6050.

13-15



- 13) $\text{VO}(\text{acac})_2$, *t*-BuOOH, -20°C
14) Ac_2O , Et_3N , DMAP (cat.)
15) DBU, reflux

15) Please classify the reaction and classify and draw its key intermediate. *Hint: an ylide is formed.*
Oxidopyrylium [5+2] cycloaddition

