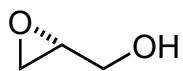


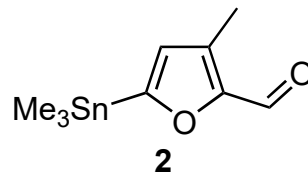
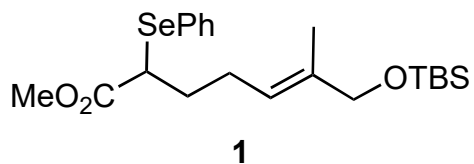
## A biomimetic total synthesis of (+)-intricarene

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



1-10

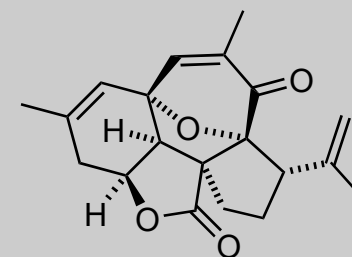
- 1) TMS-acetylene, *n*-BuLi, BF<sub>3</sub>•OEt<sub>2</sub>, -78°C to -30°C
- 2) K<sub>2</sub>CO<sub>3</sub>
- 3) Cp<sub>2</sub>ZrCl<sub>2</sub>, AlMe<sub>3</sub>, r.t., *then* reflux *then* I<sub>2</sub>, -30°C
- 4) TsCl, pyridine
- 5) K<sub>2</sub>CO<sub>3</sub>
- 6) **1**, NaHMDS, -78°C *then* substrate, BF<sub>3</sub>•OEt<sub>2</sub>, 0°C
- 7) *p*-TSA
- 8) H<sub>2</sub>O<sub>2</sub>, 0°C
- 9) PPTS (cat.)
- 10) **2**, Pd(PPh<sub>3</sub>)<sub>4</sub>, CuI, CsF



1) Please name the starting material.

3) Hint: Isomerization occurs upon reflux.

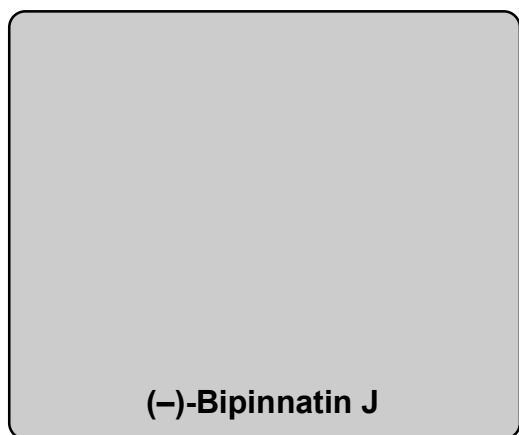
10) Please name the reaction.



**(+)-intricarene**

A

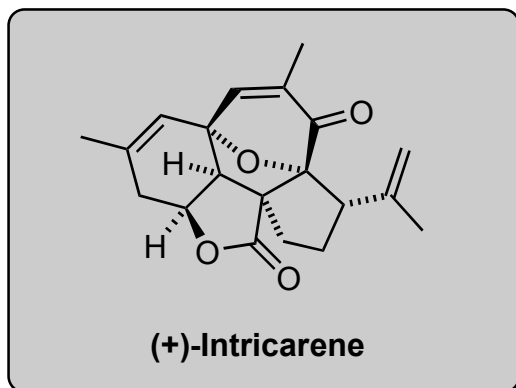
11-12



11)  $\text{Ph}_3\text{P}$ , NBS  
12)  $\text{CrCl}_2$

12) These conditions were a precursor to a named coupling reaction. Name this reaction and identify the missing co-catalyst.

13-15



13)  $\text{VO}(\text{acac})_2$ , *t*-BuOOH,  $-20^\circ\text{C}$   
14)  $\text{Ac}_2\text{O}$ ,  $\text{Et}_3\text{N}$ , DMAP (cat.)  
15) DBU, reflux

15) Please classify the reaction and classify and draw its key intermediate. *Hint*: an ylide is formed.