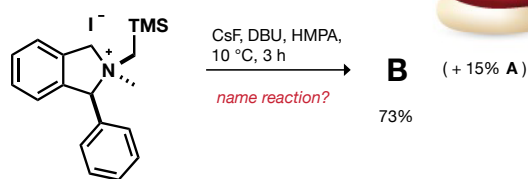
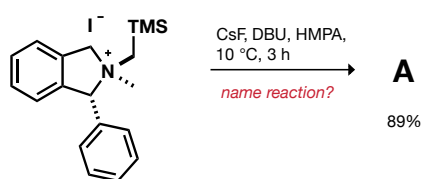


### Warm-up.

1. Rearrangement of *cis*- and *trans*-2-Methyl-1-(substituted phenyl)isoindolinium 2-Methylides.

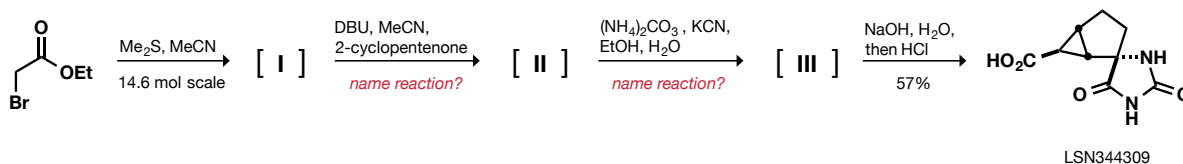
Sato *J. Org. Chem.* **1994**, *59*, 148–153.



### Show your skills.

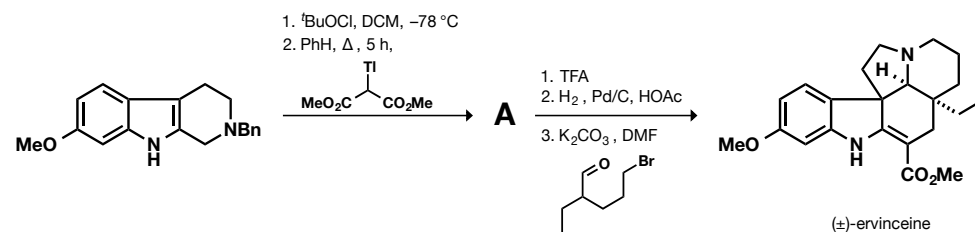
2. Large scale synthesis of LSN344309 — what is the name of the heterocycle of the product?

*Org. Process Res. Dev.* **2006**, *10*, 28–32.



3. Total Synthesis of Ervinceine.

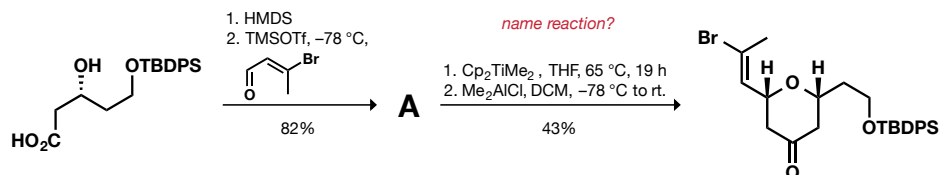
Kuehne, *J. Org. Chem.* **1979**, *44*, 1063.



hint: **A** = 6-5-7 ring system

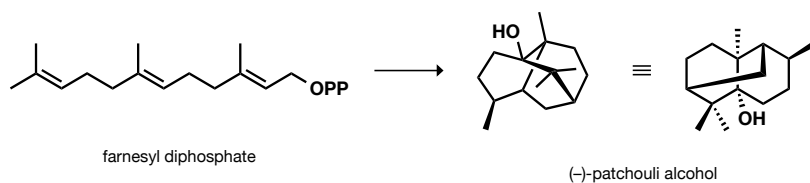
4. Part of Total Synthesis of (+)-Zampanolide.

Smith *JACS* **2001**, *123*, 12426.



### Cool down.

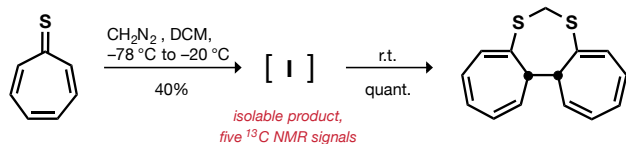
5. Propose a biosynthesis of patchouli alcohol starting from farnesyl diphosphate.



## Warm-up.

6. Reaction of tropothione and diazomethane.

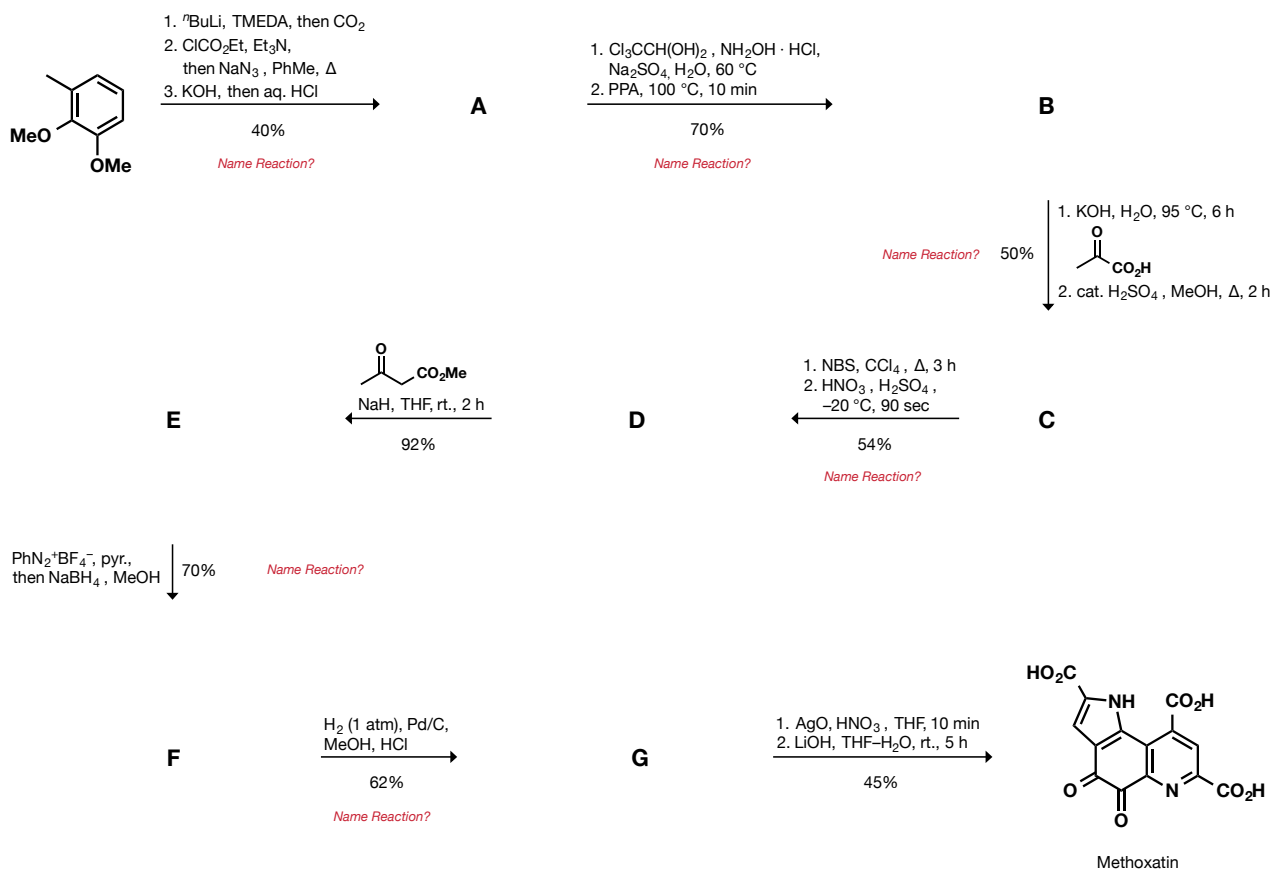
Huisgen *Tet. Lett.* **1985**, 26, 1057–1060.



## Show your skills.

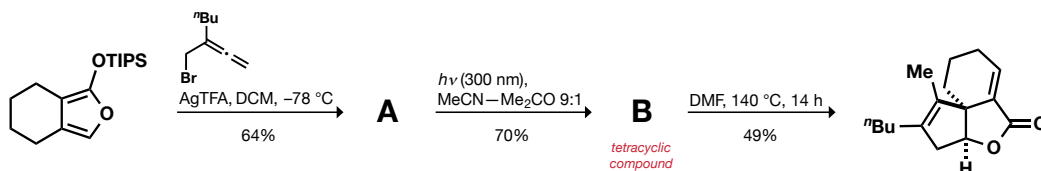
7. Total Synthesis of Methoxatin (Weinreb) — today's heterocycles challenge.

Weinreb *JOC* **1981**, 46, 4317.



8. Intramolecular Butenolide Allene Photocycloadditions

Hiemstra *Eur. J. Org. Chem.* **2011**, 17, 3146–3155.



## Cool down.

9. Synthesis of Complex Hexacyclic Compounds

Davies *Org. Lett.* **2014**, 16, 4794–4797.

