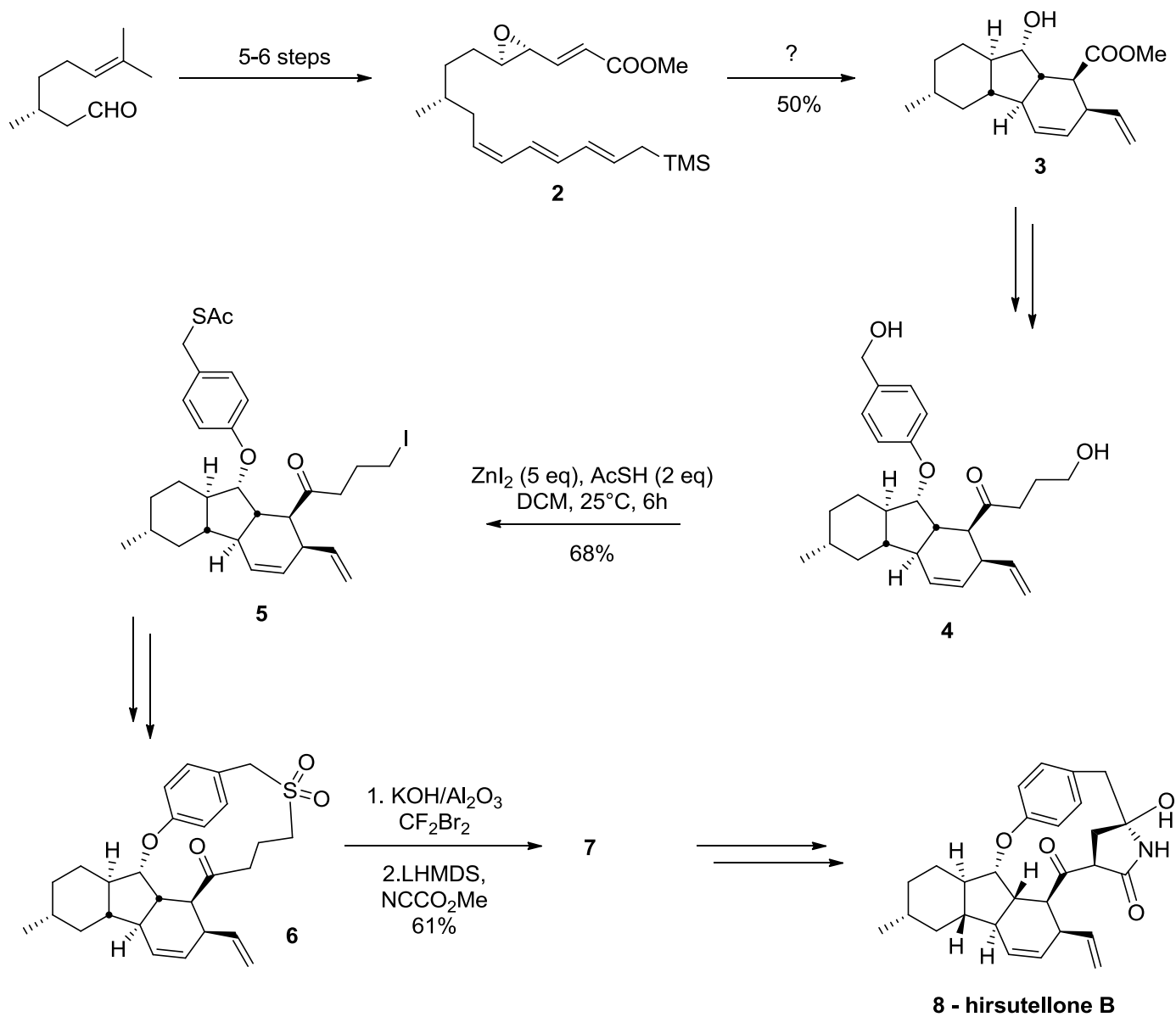


Total synthesis of Hirsutellone B

Proposed by
Ioulia

Nicolaou, K.C.; Sarlah, D.; Wu, T.R.; Zhan, W. *Angew. Chem. Int. Ed.* **2009**, *48*, 6870-6874.

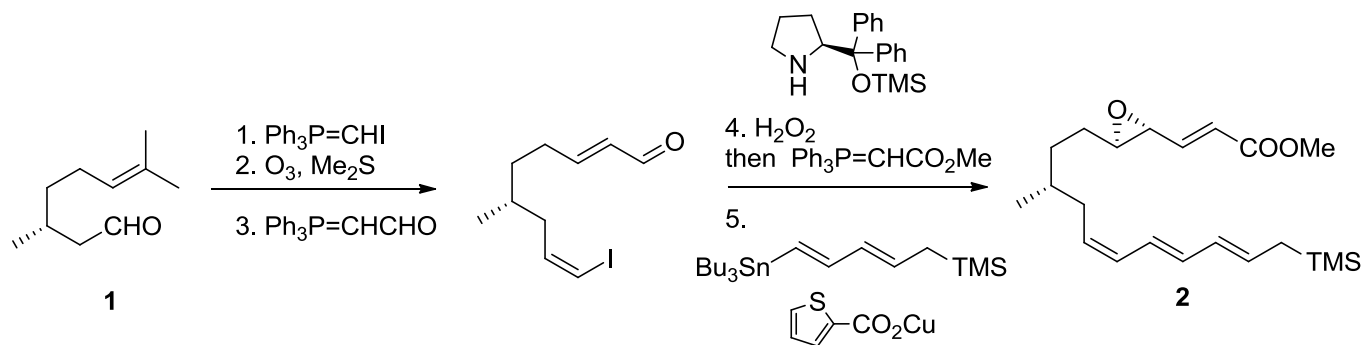


- 1) Propose a synthesis of **2** from **1**
- 2) Propose a mechanism for the reaction forming **3**. What kind of reagent is needed for this reaction ?
- 3) Propose a mechanism for the formation of **5**.
- 4) What is the structure of compound **7** ?
- 5) Propose a 3D structure of **8**.
X ray : <http://csi.chemie.tu-darmstadt.de/ak/immell/structures/xrays/alkaloids/DANYEX.html>

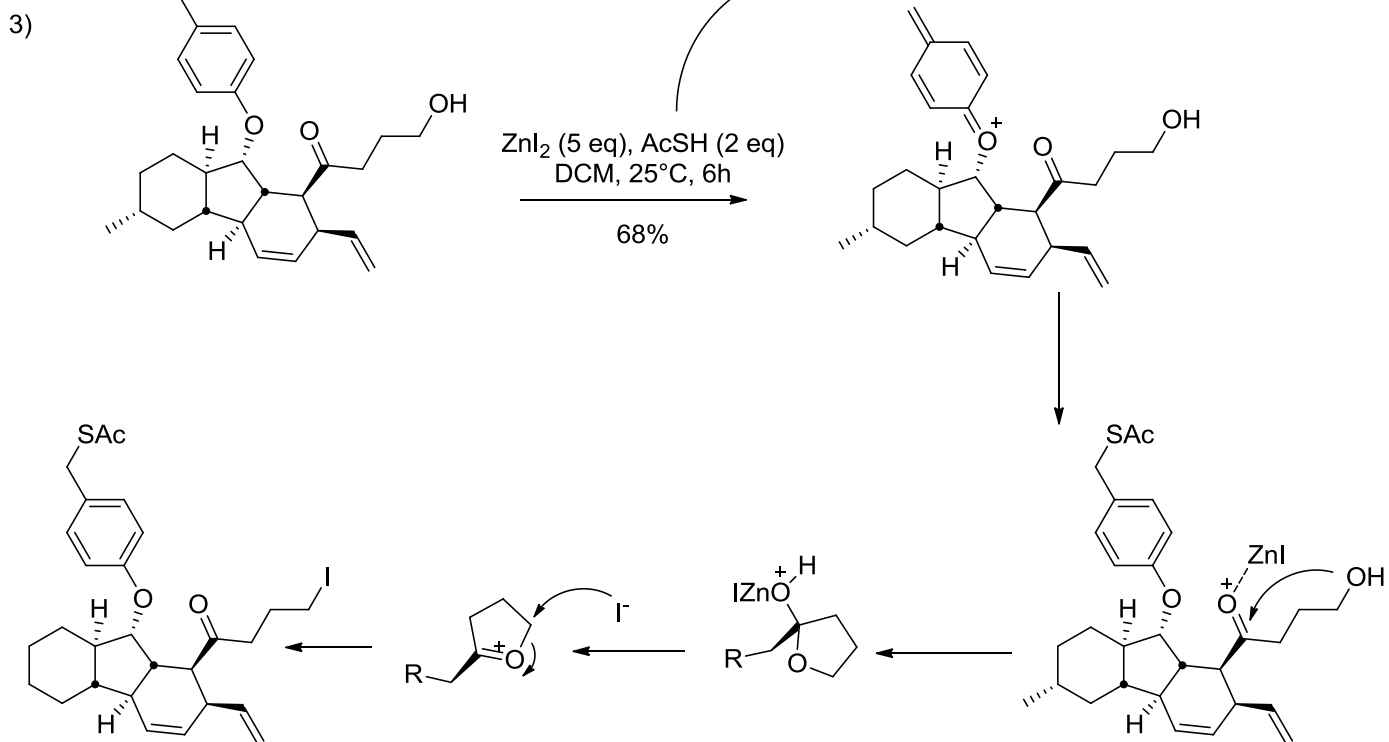
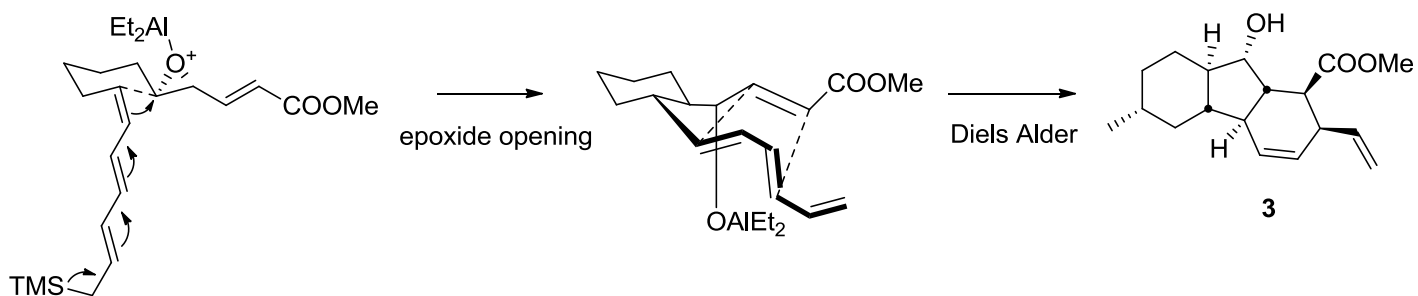
Total synthesis of Hirsutellone B

Proposed by Ioulia

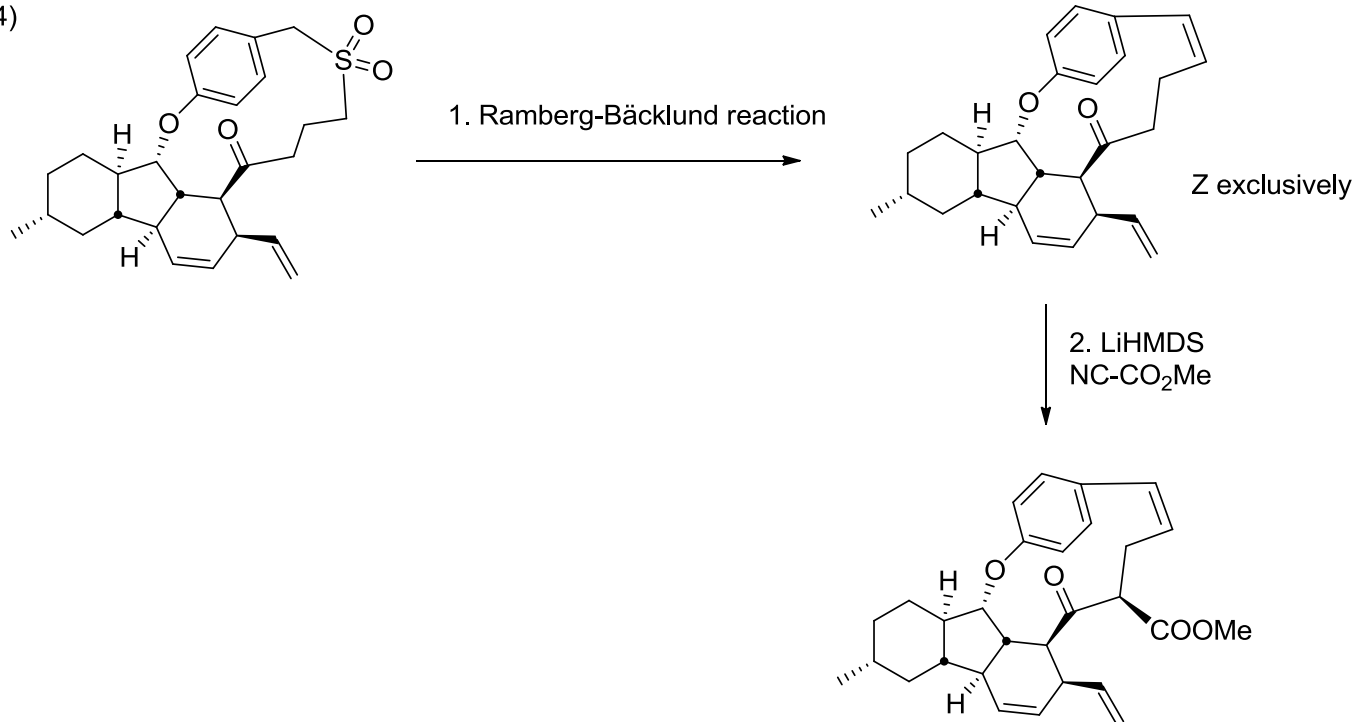
Nicolaou, K.C.; Sarlah, D.; Wu, T.R.; Zhan, W. *Angew. Chem. Int. Ed.* **2009**, *48*, 6870-6874.



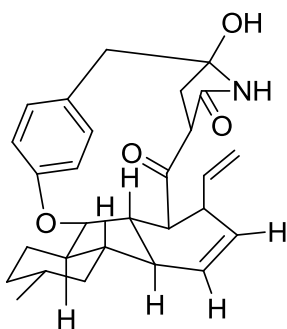
2) Reagent : Et_2AlCl (5 eq), Lewis acid catalyses the 2 reactions of the cascade



4)



5)



based on X ray experiments of Hirsutellone A

<http://csi.chemie.tu-darmstadt.de/ak/imm/structures/xrays/alkaloids/DANYEX.html>