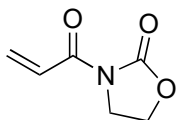
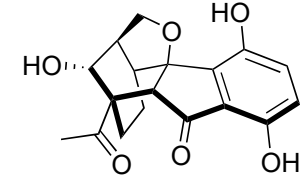


Enantioselective total synthesis of (-)-lucidumone enabled by tandem prins cyclization/cycloetherification sequence

Xian-Zhang Liao, Ran Wang, Xin Wang, and Guang Li *Nat. Commun.* **2024**, 15 (1), 2647.

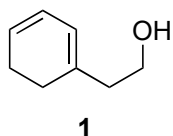


1-14

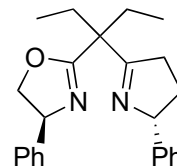


(-)-lucidumone

- 1) Ph_3SiH , $\text{Co}_2(\text{CO})_8$
- 2) TfOH , 2,6-lutidine, then **1**
- 3) $[\text{L1-Cu}](\text{OTf})_2$
- 4) H_2O_2 , LiOH
- 5) $\text{BH}_3\cdot\text{THF}$, then $\text{NaBO}_3\cdot 4\text{H}_2\text{O}$
- 6) TBSCl , imidazole
- 7) DMP , NaHCO_3

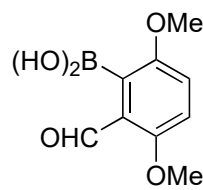


1



L1

- 8) KHMDS , PhNTf_2
- 9) **2**, $\text{Pd}(\text{dppf})\text{Cl}_2$, S-Phos , K_3PO_4
- 10) HCl (2M in EtOAc), then DMP , NaHCO_3
- 11) KF , H_2O_2 , KHCO_3
- 12) 2-nitrophenylselenocyanate, py , PBu_3 , then H_2O_2
- 13) $\text{Fe}(\text{dbm})_3$, PhSiH_3
- 14) AlCl_3 , 1-dodecanthiol

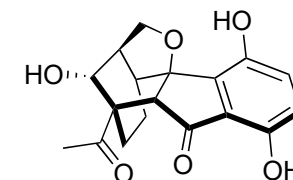


2

- 1) Name of the auxiliary:
Evans

- 5) Hint: Two reactions occur.

- 9) Name of the reaction:
Suzuki-Miyaura coupling
- 10) Hint: Key tandem reaction. Formation of two new cycles.
- 11) Name of the reaction:
Fleming-Tamao oxidation
- 12) Name of the reaction:
Grieco reaction



(-)-lucidumone