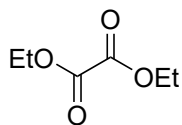


Total Synthesis of Calyciphylline F

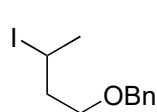
R. Sato, R. Sumida, M. Inoue, R. Kotaka, S. Karanjit, K. Namba, "Total Synthesis of Calyciphylline F" Angew. Chem. Int. Ed. 2025, 64, e202517671.



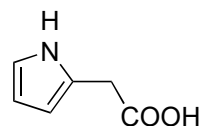
1-15



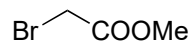
- 1) *t*-BuLi, **1**
- 2) TIPSOTf, Et₃N
- 3) DIBAL
- 4) SO₃·Py, Et₃N, DMSO
- 5) vinyl lithium, TMSCl
- 6) AcOH, H₂O
- 7) IBX
- 8) **2**, Ir[dF(CF₃)ppy]₂(dtbbpy)PF₆, K₂HPO₄, Blue LED
- 9) DIBAL
- 10) TMSCl, ImH
- 11) NsCl, KHMDS
- 12) Tf₂NH
- 13) PhSH, K₂CO₃
- 14) K₂CO₃, MeOH
- 15) **3**, K₂CO₃



1



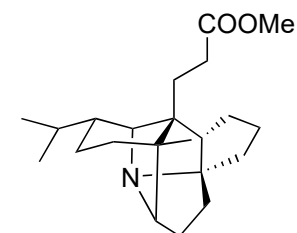
2



3

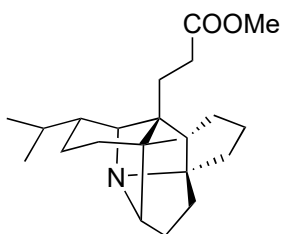
4) Name of the reaction?

12) Type of cycloaddition?



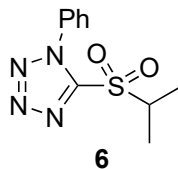
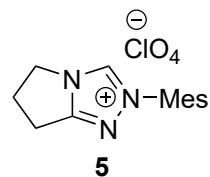
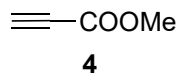
Calyciphylline F

16-32



Calyciphylline F

- 16) H_2 , Pd/C
- 17) TBSCl, AgNO_3 , pyridine
- 18) CS_2 , KHMDS then MeI, AcSK
- 19) HF·py
- 20) **4**, NMO
- 21) AIBN, $n\text{Bu}_3\text{SnH}$
- 22) KHMDS
- 23) TBSCl, AgNO_3 , pyridine
- 24) DIBAL
- 25) MnO_2
- 26) **5**, Cs_2CO_3 , MeOH
- 27) $(\text{COCl})_2$, DMSO, Et_3N
- 28) **6**, KHMDS
- 29) TFA
- 30) MsCl, Et_3N
- 31) NaI
- 32) AIBN, $n\text{Bu}_3\text{SnH}$



22) Type of reaction?

27) Name of the reaction?

28) Name of the reaction?