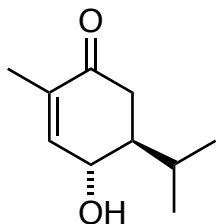
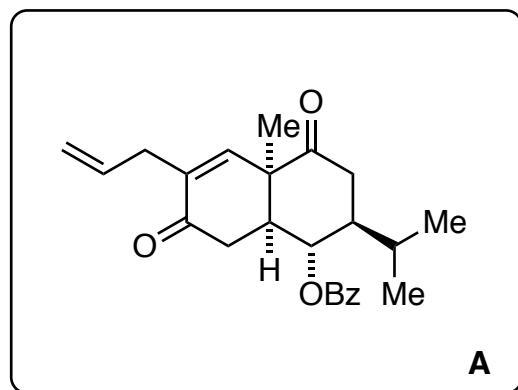


## Total Synthesis of (-)-Pavidolide B

R. Rao, J. Hu, J. Xuan, H. Ding  
*J. Org. Chem.* **2019**, *84*, 9385–9392.

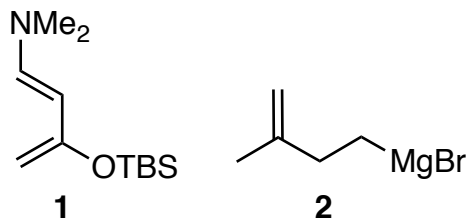


1-4



5-9

- 1)  $\text{Bz}_2\text{O}$ ,  $\text{NEt}_3$ , DMAP
- 2) **1** (neat),  $70\text{ }^\circ\text{C}$  then HF  $-78\text{ }^\circ\text{C}$  - r.t.
- 3)  $\text{TMSN}_3$ ,  $\text{I}_2$ , pyridine
- 4)  $n\text{-Bu}_3\text{Sn(allyl)}$ ,  $\text{Pd(PPh}_3)_4$



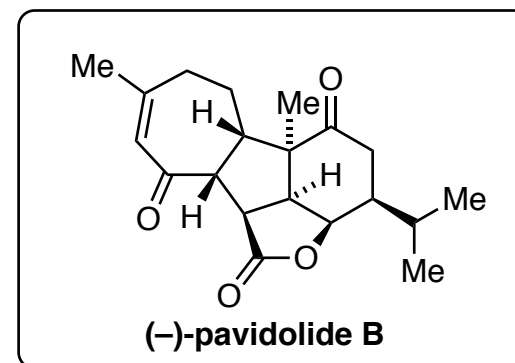
- 5) **2**,  $\text{CuBr} \cdot \text{SMe}_2$ , HMPA, TMSCl then AcOH
- 6) Grubbs II
- 7)  $\text{trisylIN}_3$ , KOH, TBAB, 18-crown-6 then KOH/MeOH
- 8) MsCl,  $\text{NEt}_3$ , DMAP
- 9)  $h\nu$ , THF, r.t.

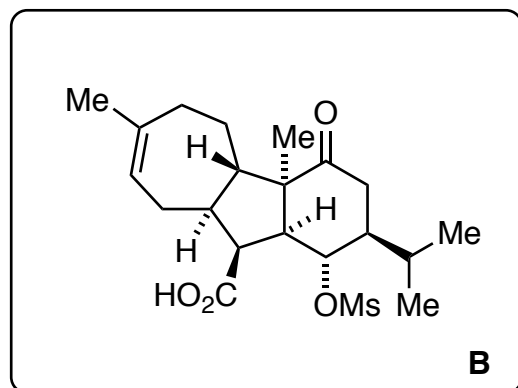
- 2) please name the transformation.  
*double Mukaiyama-Michael addition/ elimination, unusual reactivity of 1!*  
Who introduced dienes of type **1**?  
*V. Rawal.*

*note: the silyl group translocates during the first step*

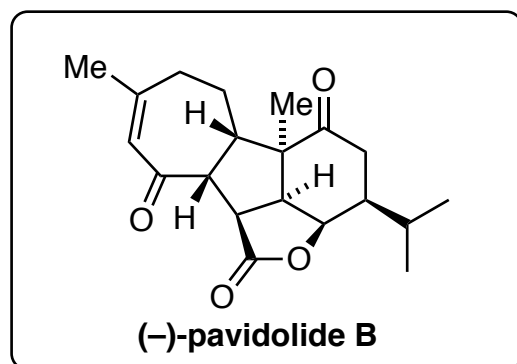
**trisylIN<sub>3</sub>** =

2,4,6-triisopropylbenzenesulfonyl azide





10-13



- 10)  $K_2CO_3$ , 18-crown-6
- 11) TPPO *then*  $PPh_3$
- 12)  $TEMPO^+BF_4^-$   
*then* DMP,  $NaHCO_3$
- 13) DBU

- 9) Please name the reaction  
*Wolff rearrangement*

**TPPO** = triphenyl phosphite ozonide

- 11) Name and Mechanism?  
*selectivity 4.2:1 for desired Schenk-ene,  $(PhO)_3PO_3$  is  $1O_2$  precursor*
- 12) How does this transformation work?  
*Dauben-Michno oxidative rearrangement*