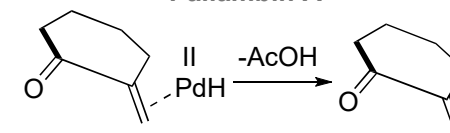
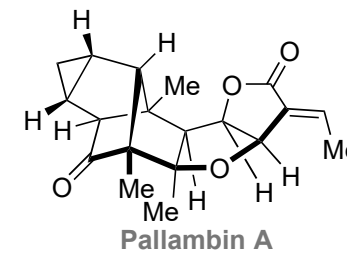


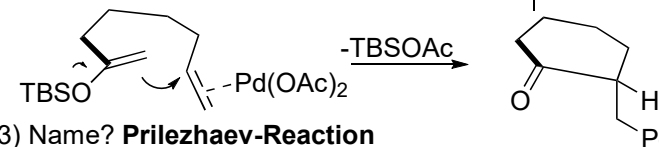
Enantioselective Total Syntheses of Pallambins A-D

Xiwu Zhang, Xinxian Cai, Bin Huang, Lei Guo, Zhongrun Gao, and Yanxing Jia

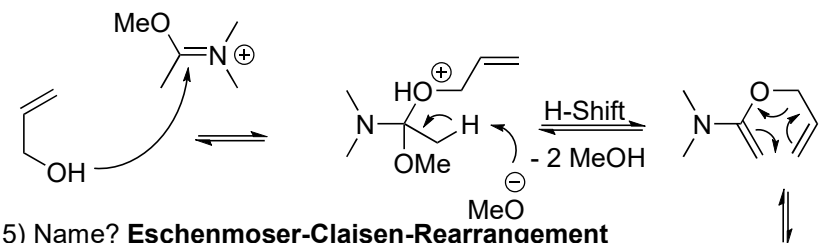
Angew. Chem. Int. Ed. **2019**, DOI: 10.1002/anie.201907523



2) Name? **Wacker-Type Mechanism:**

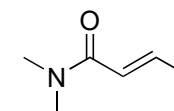


3) Name? **Prilezhaev-Reaction**

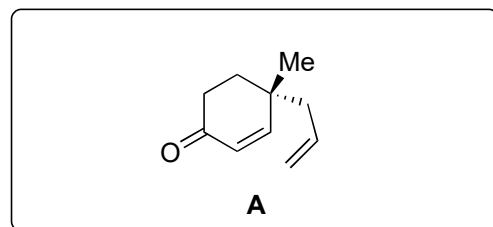


5) Name? **Eschenmoser-Claisen-Rearrangement**

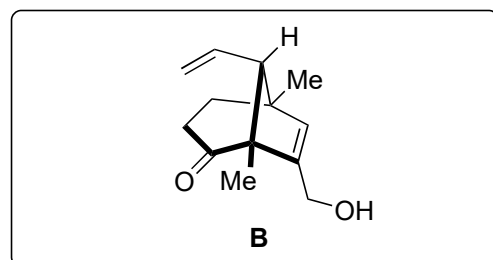
Propose a mechanism



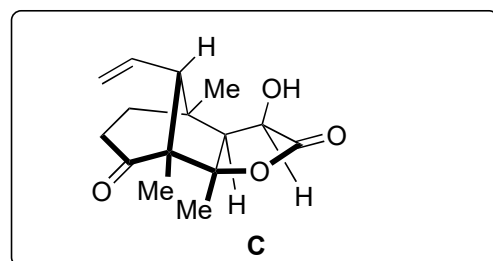
7) Name of reagent? **Davis Oxaziridine**



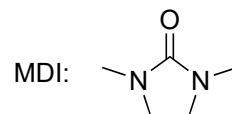
1-5



6-9

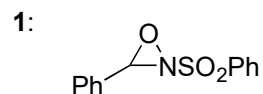


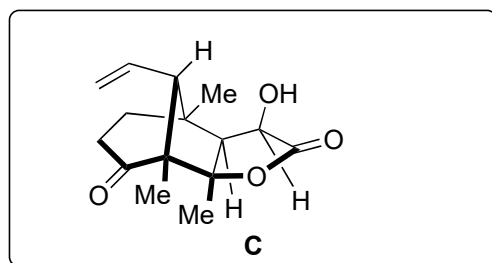
- 1) $\text{CH}_2=\text{CHMgBr}$,
CuBr·Me₂S, -40 °C
then HMPA, MeI
- 2) TBSCl, NEt₃, NaI, MeCN
then Pd(OAc)₂, O₂, DMSO, 85 °C
- 3) *m*-CPBA, CH₂Cl₂
- 4) PTSA, MDI, CH₂Cl₂



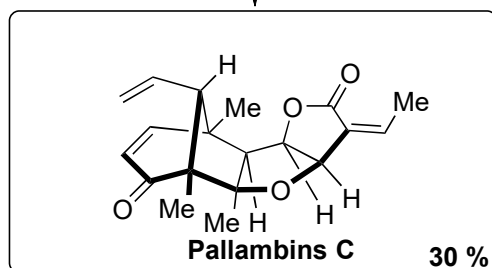
- 5) , 115 °C

- 6) H₂SO₄, EtOH/H₂O, 100 °C
- 7) 3 eq. LiHMDS, **1**, -78 °C
- 8) DMP, CH₂Cl₂
- 9) LiAlH(O*t*-Bu)₃, -78 °C

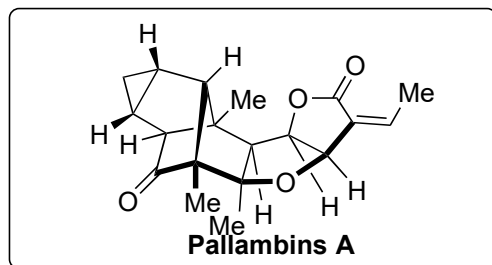




10–14

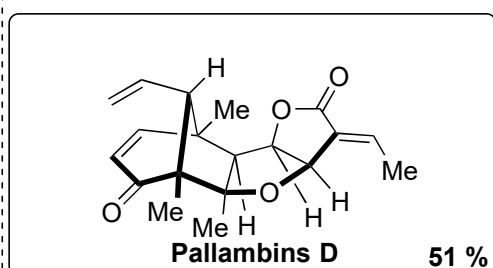


15

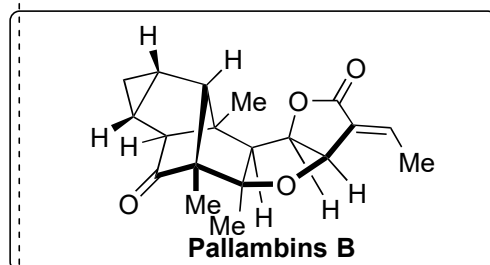


- 10) $\text{Ph}_3\text{P}=\text{C}=\text{C}=\text{O}$, *m*-Xylene, 160 °C
- 11) Red-Al, CuI, THF, -78 °C
- 12) Py·HBr₃, AcOH
- 13) Pd(OAc)₂, PPh₃, NEt₃, DMSO
- 14) LiHMDS, THF, -78 °C, MeCHO
- 15) $h\nu$, CH₂Cl₂

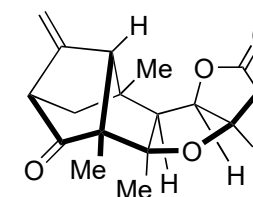
+



15



13)



10) Name? **intramolecular-Wittig-type**

13) What side product would you expect? **Heck-Coupling**

15) Mechanism:

