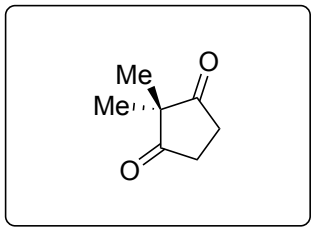
University of Zurich[UZH]

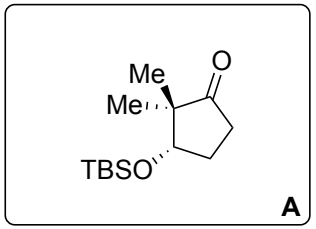
Total Synthesis of Mollanol A

Yuran Wang, Rong Zhao, and Ming Yang*; *J. Am. Chem. Soc.* **2022**, *144, 33, 15033*

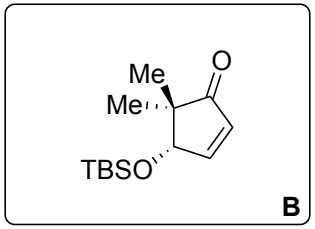
Gademann Group
Micha Hofer
29.11.2022



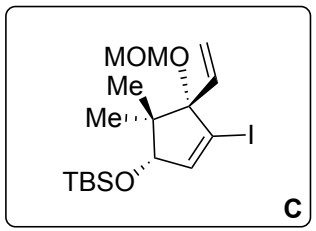
i) (*R*)-Me-CBS, N,N-Diethylaniline, HBCat, Toluene, -55 to - 45 °C, **57%**
ii) TBSCl, Im., DMF, rt, **86%**



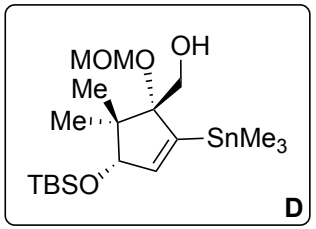
i) LiHMDS, TMSCl, THF, 0 °C
ii) $Pd(OAc)_2$, O_2, DMSO, rt
93% (two steps)
Name?

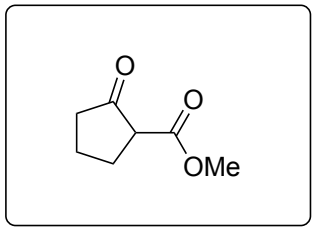


i) K_2CO_3, DMAP, I_2, THF/H_2O (1:1), 0 °C
ii) VinylMgBr, Et_2O, - 60 °C
72% (two steps)
iii) MOMBr, NaI, DIPEA, DME, rt to 80 °C, **77%**

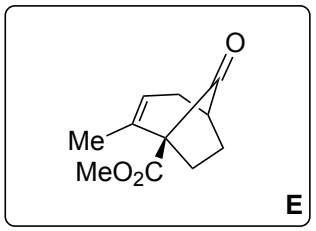


i) O_3, DCM/MeOH/Py (4:4:1), -78 °C, *then* Me_2S
ii) $NaBH_4$, MeOH, rt, **80% (two steps)**
iii) Sn_2Me_6, $Pd(PPh_3)_4$, benzene, 80 °C, **50%**

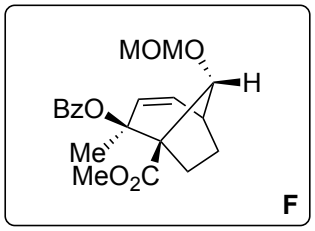




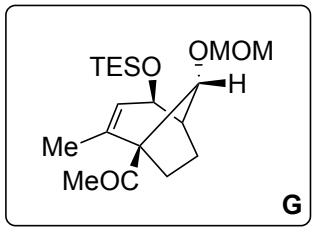
i) NaH, HMPA, *n*BuLi, 1-bromobut-2-yne, THF, - 78 °C to rt
ii) $InCl_3$ (cat.), DCE, 80 °C, **62% (two steps)**
Name of ii) ?



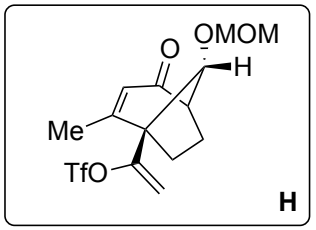
i) CuBr (cat.), BzO*t*Bu, PhCl, 100 °C, **49%**
ii) $NaBH_4$, MeOH, 0 °C
iii) DIPEA, MOMBr, DCM, 0 °C
72% (two steps)
Name & mechanism of i) ?



i) $TMSCH_2Li$, THF, 0 °C *then* MeOH, **70%**
ii) TESOTf, 2,6-lutidine, DCM, 0 °C, **80%**



i) KHMDS, Comins' reagent, THF, - 78 °C, *then* 1M HCl, **68%**
ii) PDC, DCM, 0 °C, **96%**



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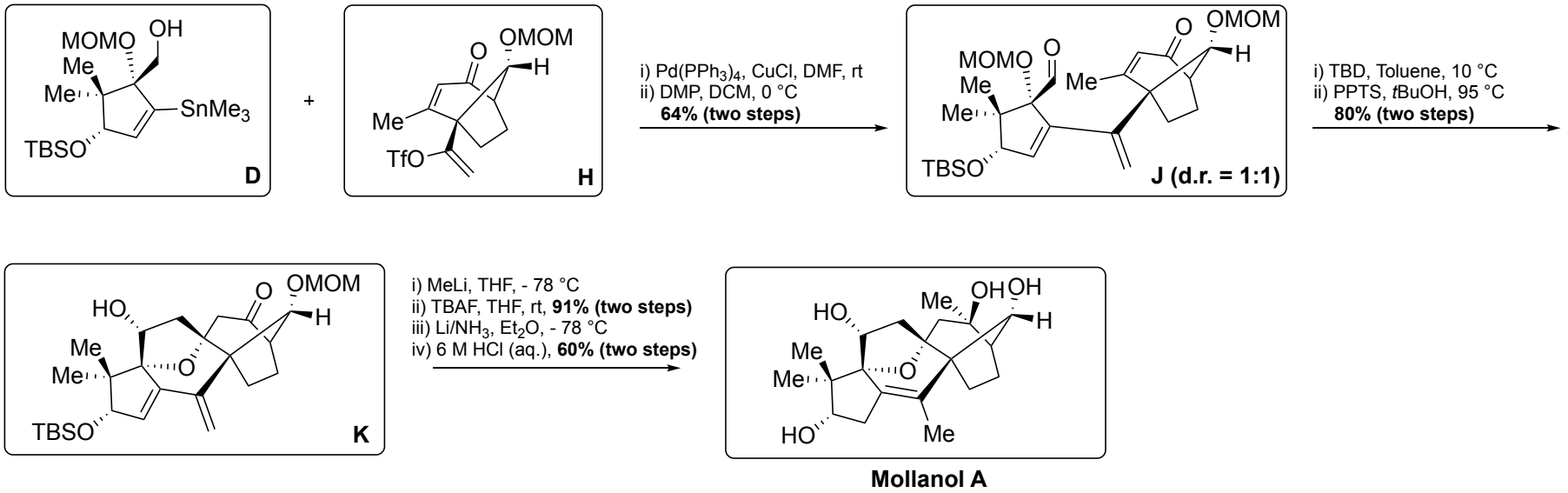

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