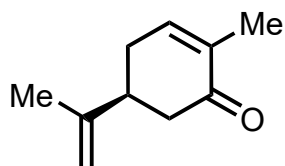


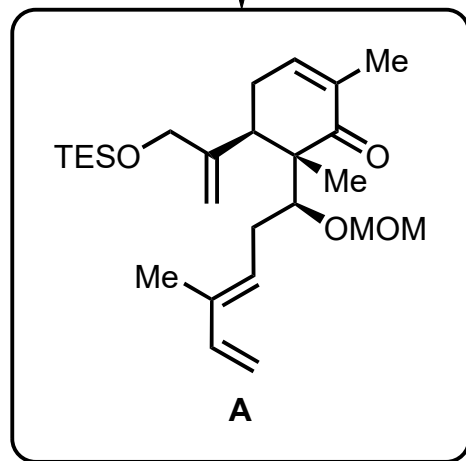
Development of Multiple Local Computational Models in Retrosynthetic Analysis: Total Synthesis of (-)-Deoxylimonin

Leanna M. Gharbaoui, Jungmin Eun, Yizhou Zhao, Timothy R. Newhouse*

J. Am. Chem. Soc. **2026**, *148*, 4886–4892.



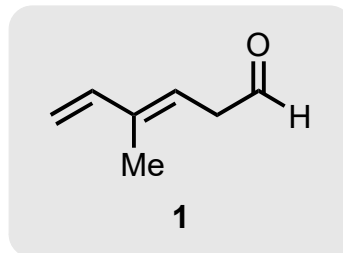
- 1) NaOCl, KH₂PO₄; then NaHCO₃
- 2) TESCl, py
- 3) LDA, MeI
- 4) LDA, **1**
- 5) MOMBr, DIPEA



- 6) L-Selectride; then ZnBr₂, **2**
- 7) Ac₂O, 4-DMAP, py; then PCC

Name of starting material?

(S)-carvone

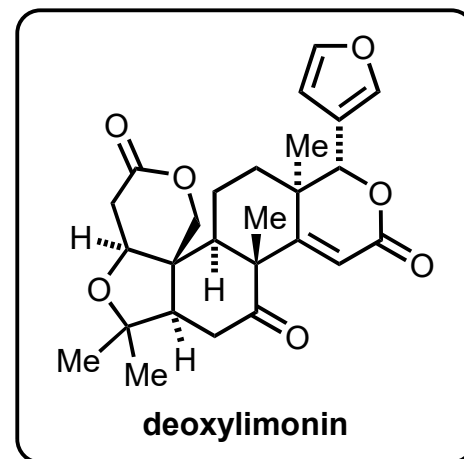
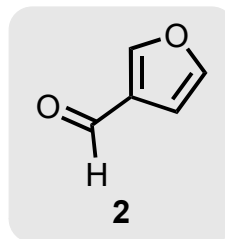


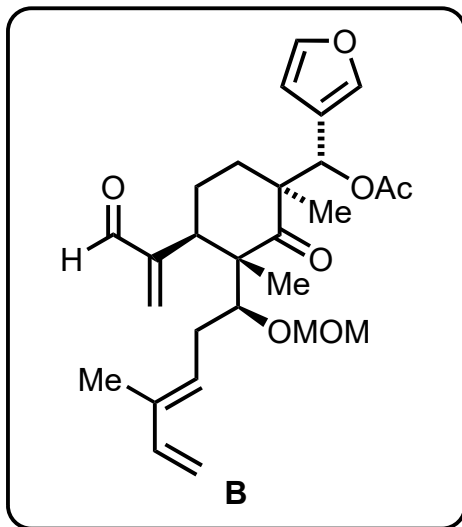
4) Name reaction & rationalize diastereoselectivity.

Aldol reaction

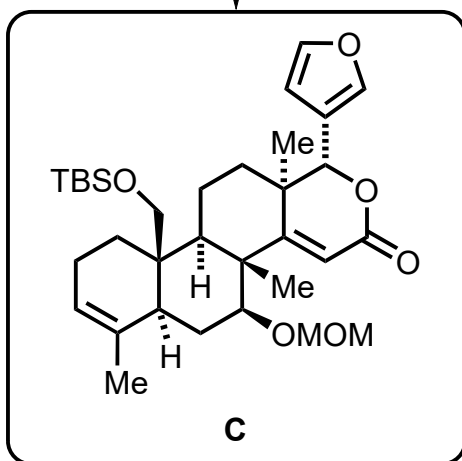
6) Name reaction & rationalize diastereoselectivity.

Aldol reaction



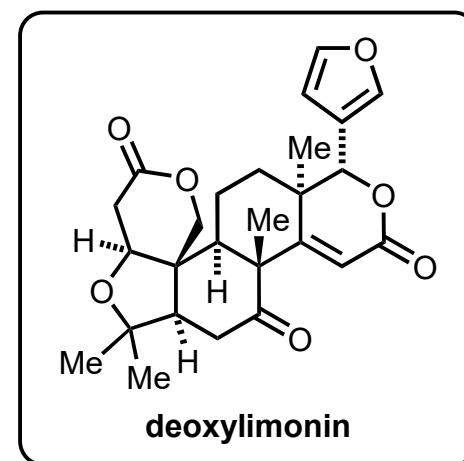


8) toluene, 180 °C;
 then NaBH₄, CeCl₃·7H₂O
 9) TBSOTf, py
 10) LiHMDS;
 then SOCl₂

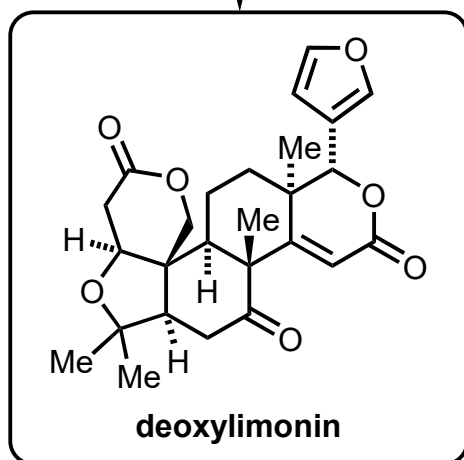


8) Name reaction.
 Diels–Alder cycloaddition

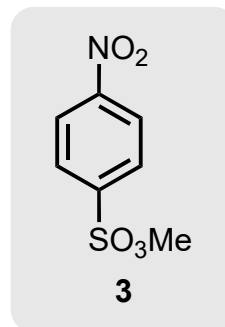
10) Name reaction.
 Aldol condensation (stepwise)



- 11) $K_2Os(OH)_4$;
then $NaIO_4$
 12) $HC(OMe)_3$
 13) $Ph_3P=CH_2$
 14) TBAF
 15) PCC
 16) LiHMDS, PhSeBr;
then H_2O_2
 17) **3**, $Fe(acac)_3$, $PhSiH_3$
 18) H_2SO_4 , CrO_3



- 13) Name reaction.
 Wittig olefination



- 17) Name reaction.
 Studer variation of the Mukaiyama hydration