

Asymmetric Total Synthesis of (-)-Phaeocaulisin A

D. J. Procter

Phaeocaulisin A, which is a natural product of *C. phaeocaulis* and has been shown to be a potent inhibitor of the growth of *C. phaeocaulis*.

Phaeocaulisin A is a bicyclic compound consisting of a cyclohexane ring fused to a five-membered ring.

Phaeocaulisin A is a bicyclic compound consisting of a cyclohexane ring fused to a five-membered ring.

The synthesis of phaeocaulisin A is a challenging task due to the complexity of the molecule and the need for high enantioselectivity.

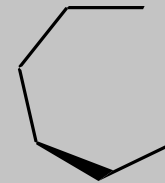
For further information, see: *J. Am. Chem. Soc.* **2021**, *143*, 3655.

Nat Catal. **2019**, *2*, 211.

Organomet. Chem., **2016**, *40*, 1. (Review article)

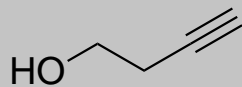
Tomoya Ozaki, Liu Group, Boston College

2022/04/22



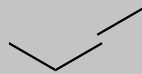
Reheic Anal i

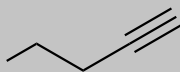




2

0.52 !/g



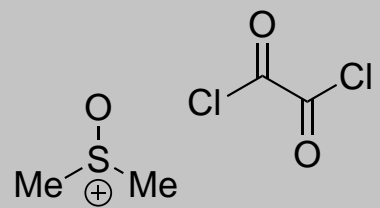


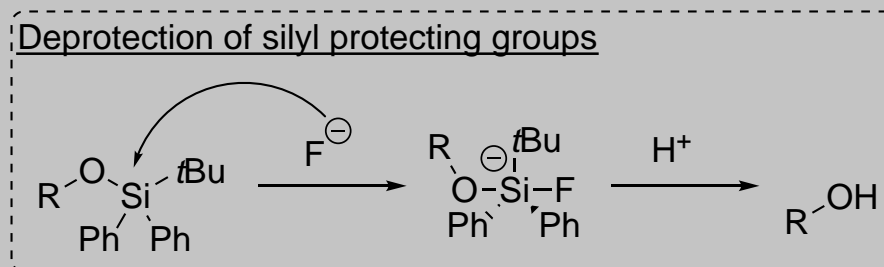
2

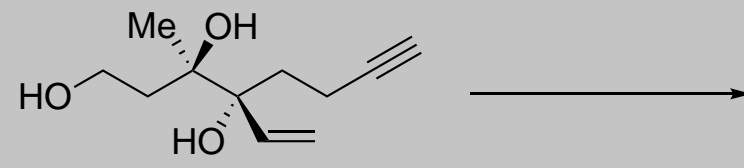
0.52 !/g



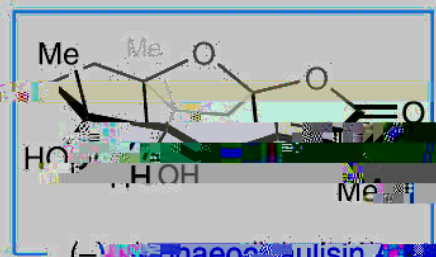
Swern Oxidation







b



natural
 $[\alpha_D^{25}] = +38.4$

synthetic
 $[\alpha_D^{25}] = -40.0$

(-)-pauisinsin A
(synthetic, proposed natural)

(revised natural)