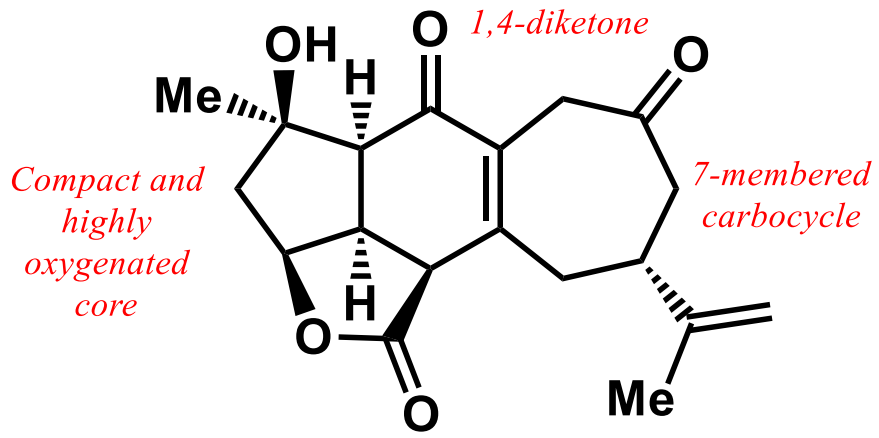
JACS

The Total Synthesis of (−)-Scabrolide A

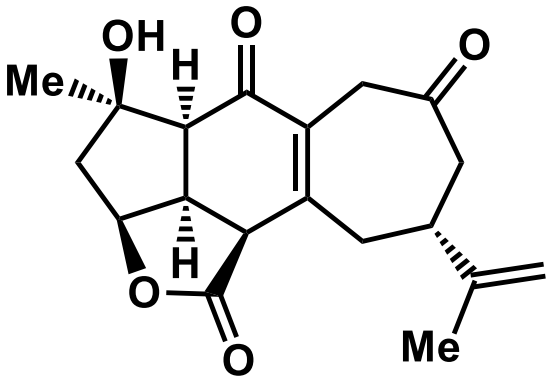


No synthese to date

- **6 stereocenters--5 contiguous, 1 remote**
- **Compact,densely functionalized core**
- **Dissonant 1,4-diketone**
- **7-membered carbocycle**

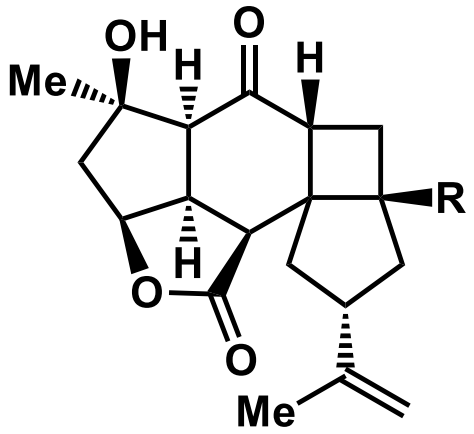
Doi: 10.1021/jacs.0c02513

Retrosynthetic analysis of scabrolide A



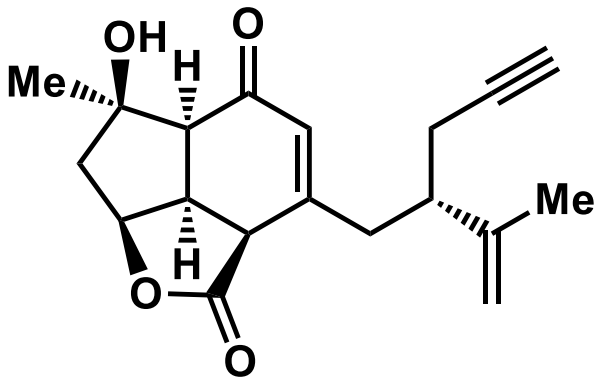
1

Oxidative fragementation



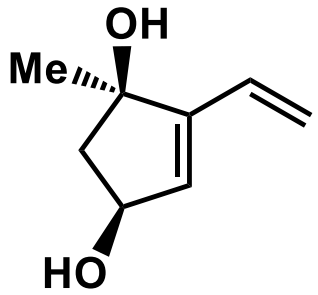
4a, R = OH
4b, R = $Si(CH_3)_2Ph$

Hydrosilylation/ [2+2]/ Tamao-Fleming



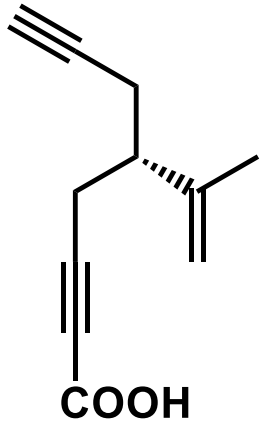
5

Esterification/ Dialls-Alder/ Oxdation



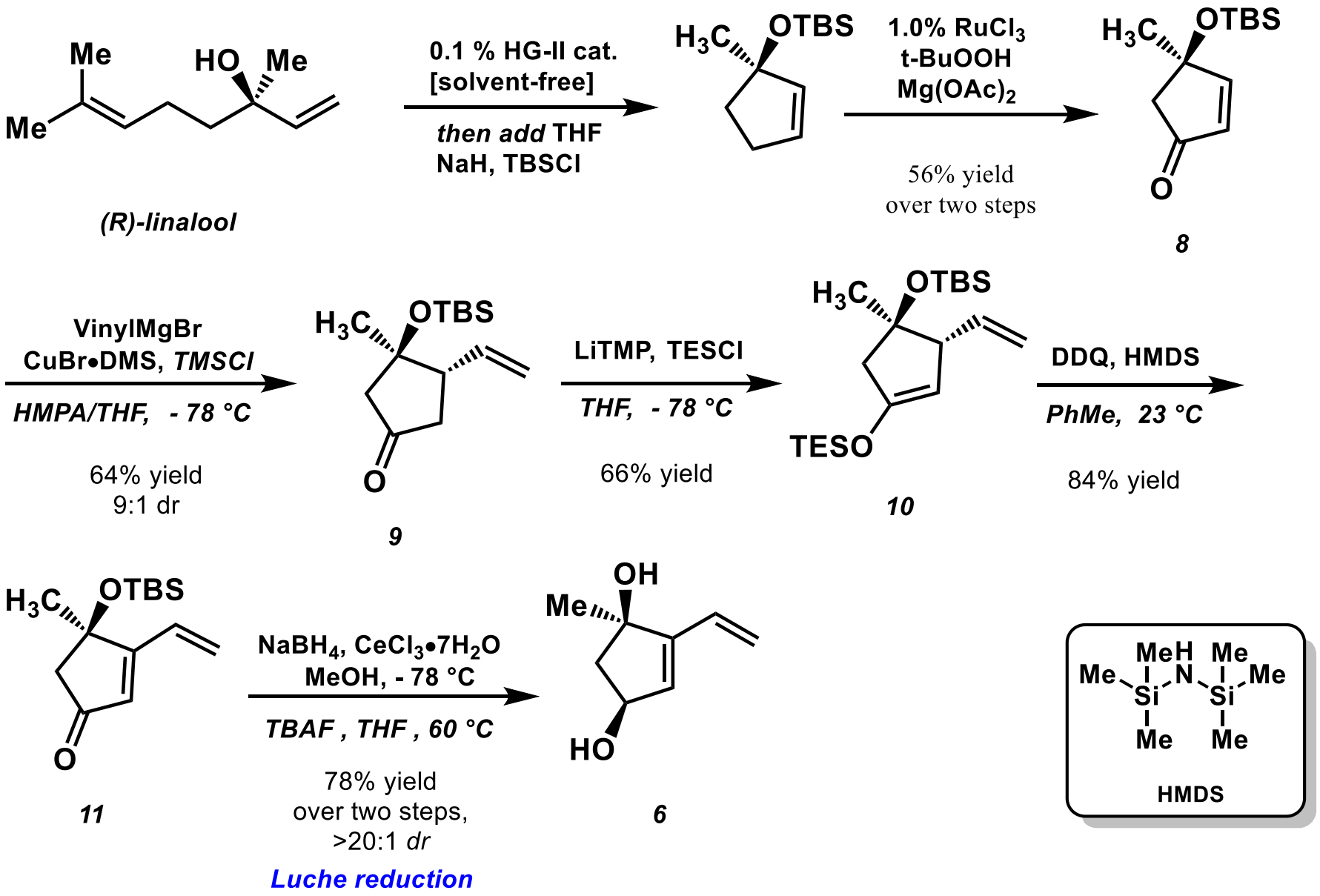
6

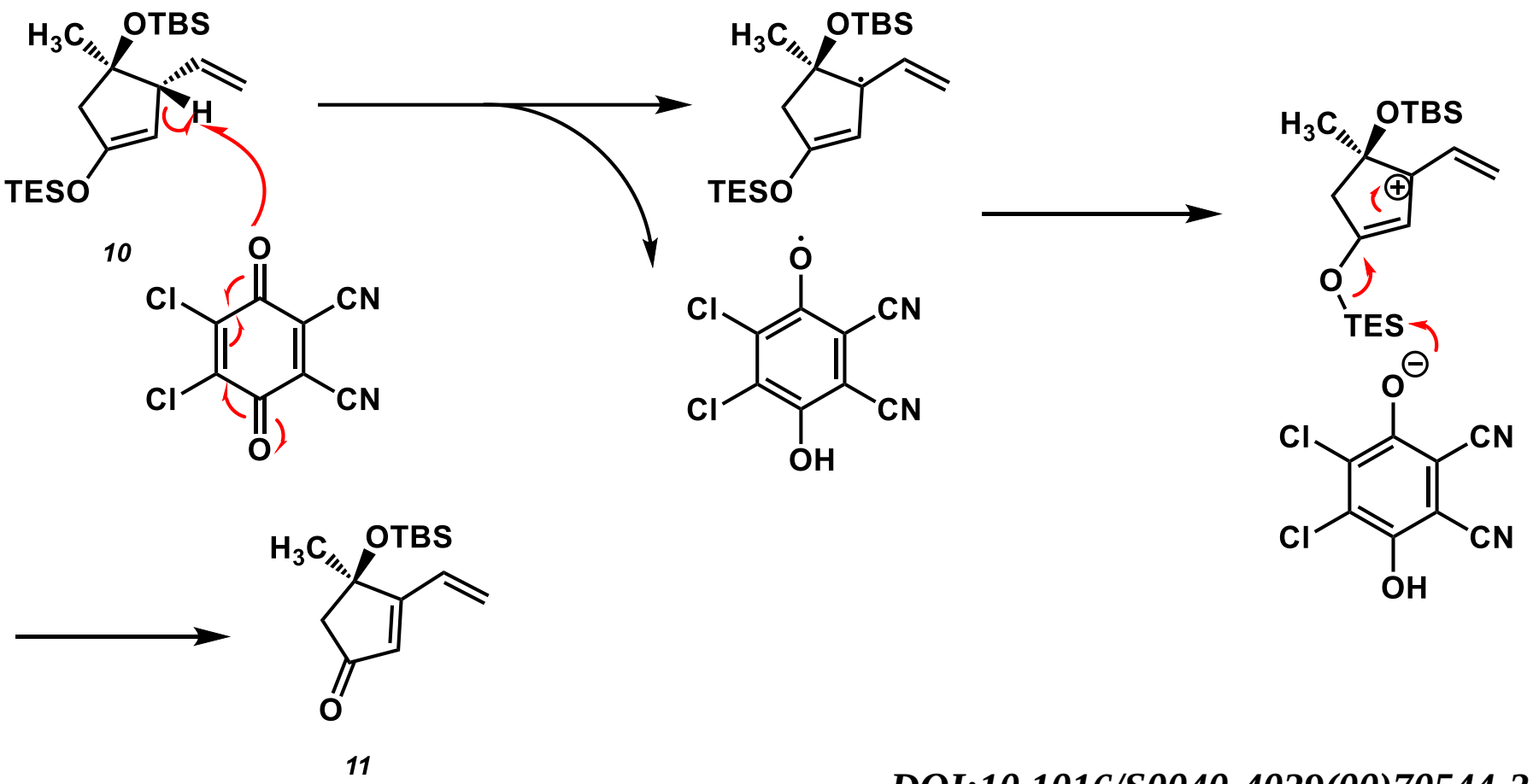
+



7

Preparation of Dihydroxyvinylcyclopentene 6

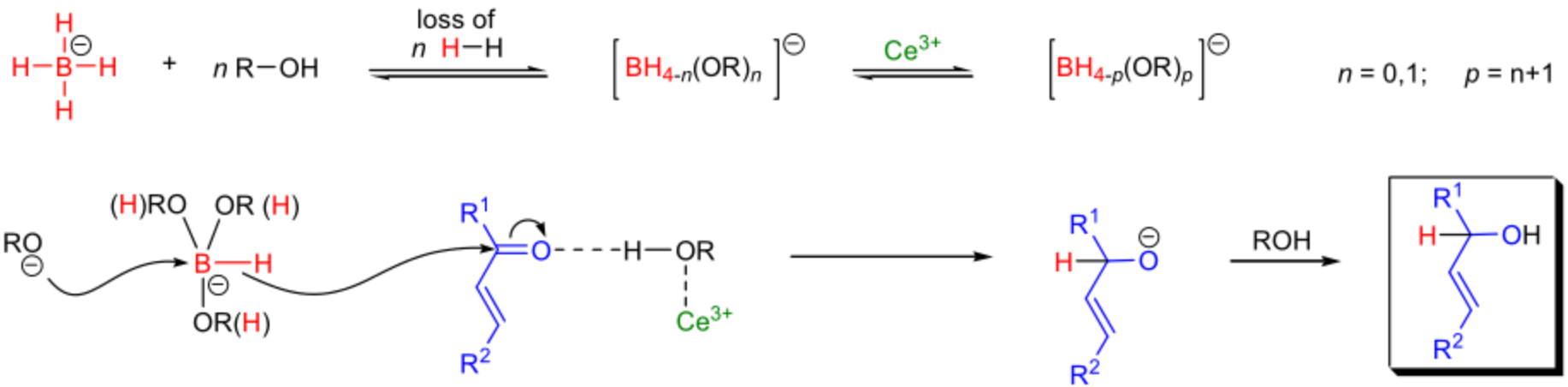




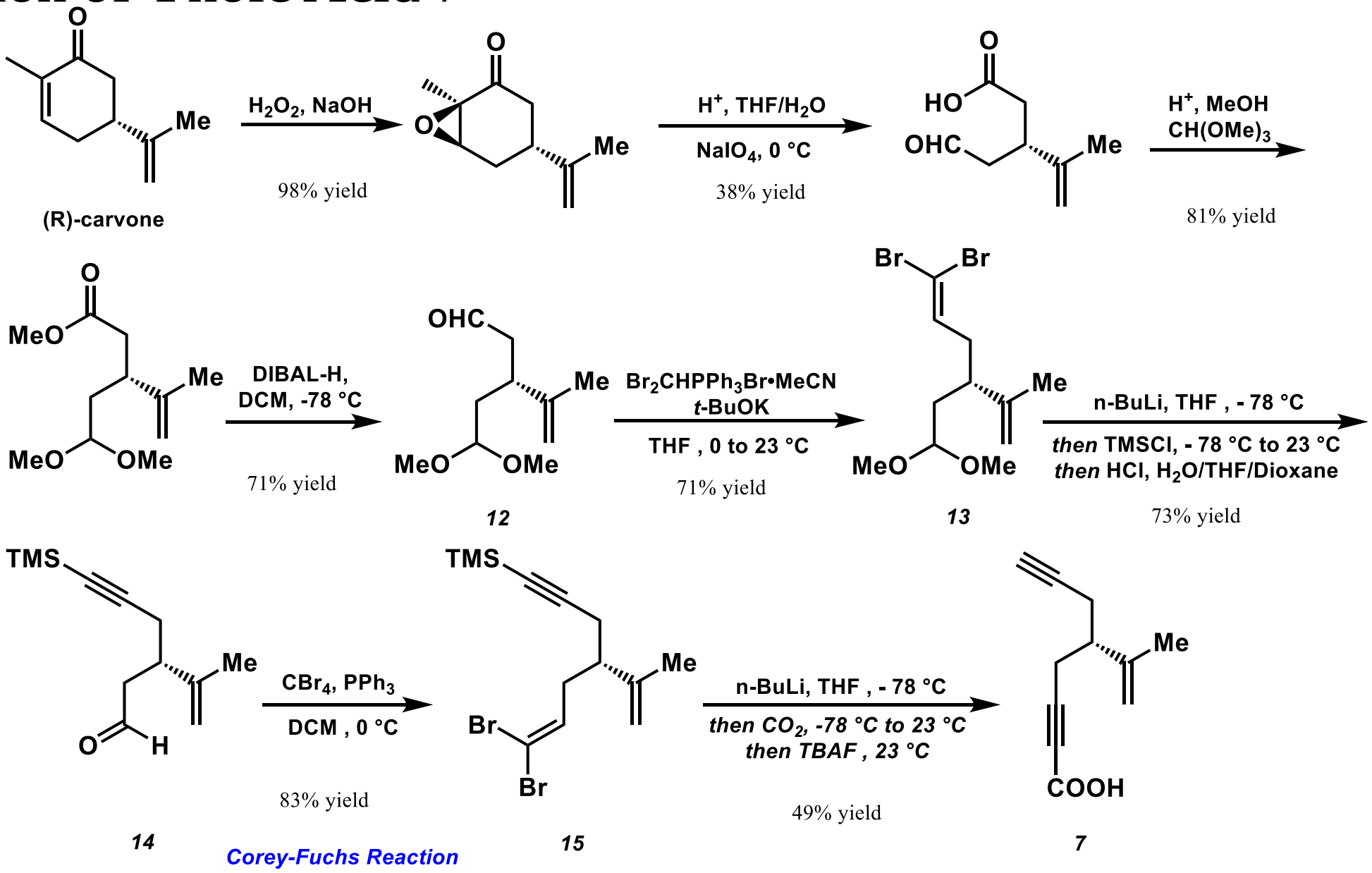
DOI:10.1016/S0040-4039(00)70544-2.

LUCHE REDUCTION

(References are on page 622)



Preparation of Ynoic Acid 7

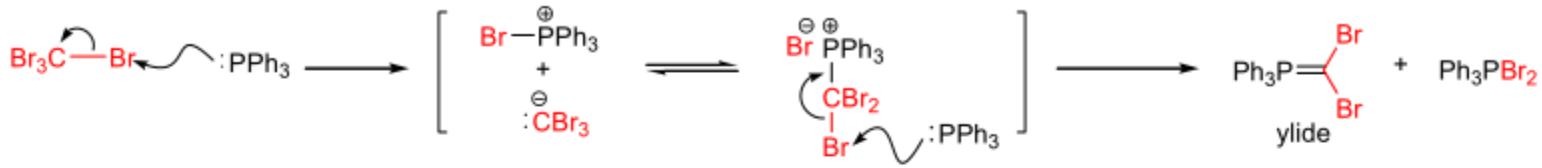


Corey-Fuchs Reaction

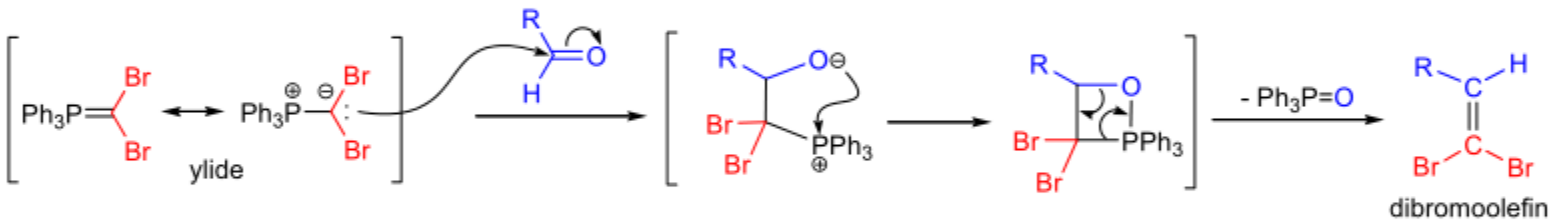
COREY-FUCHS ALKYNE SYNTHESIS

(References are on page 566)

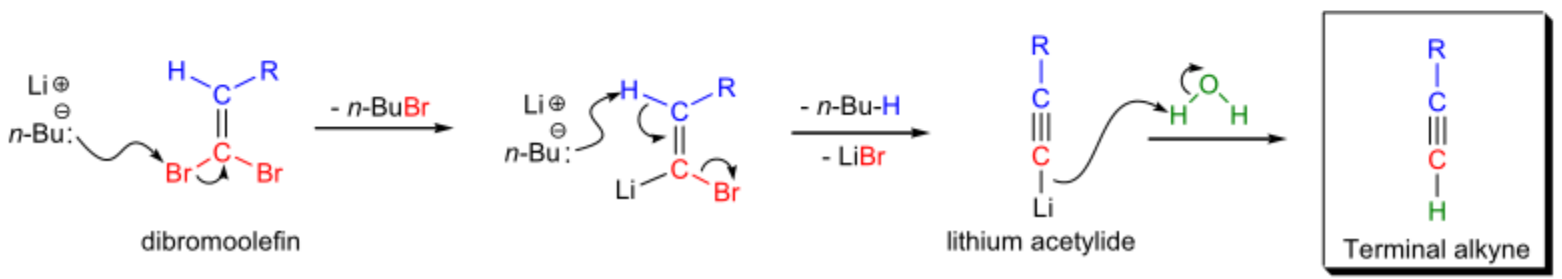
Generation of the phosphorous ylide:



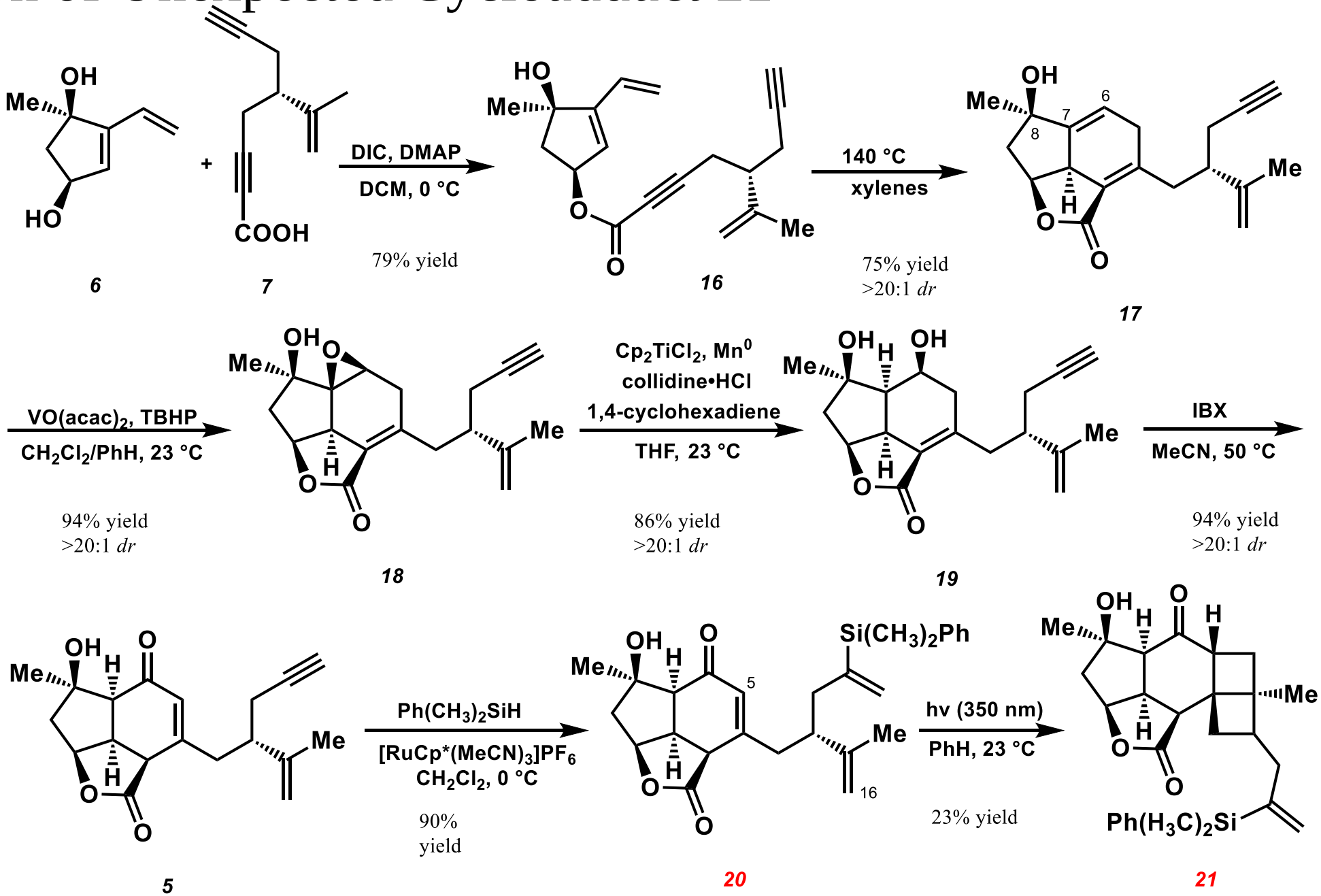
Reaction of the phosphorous ylide with the aldehyde:

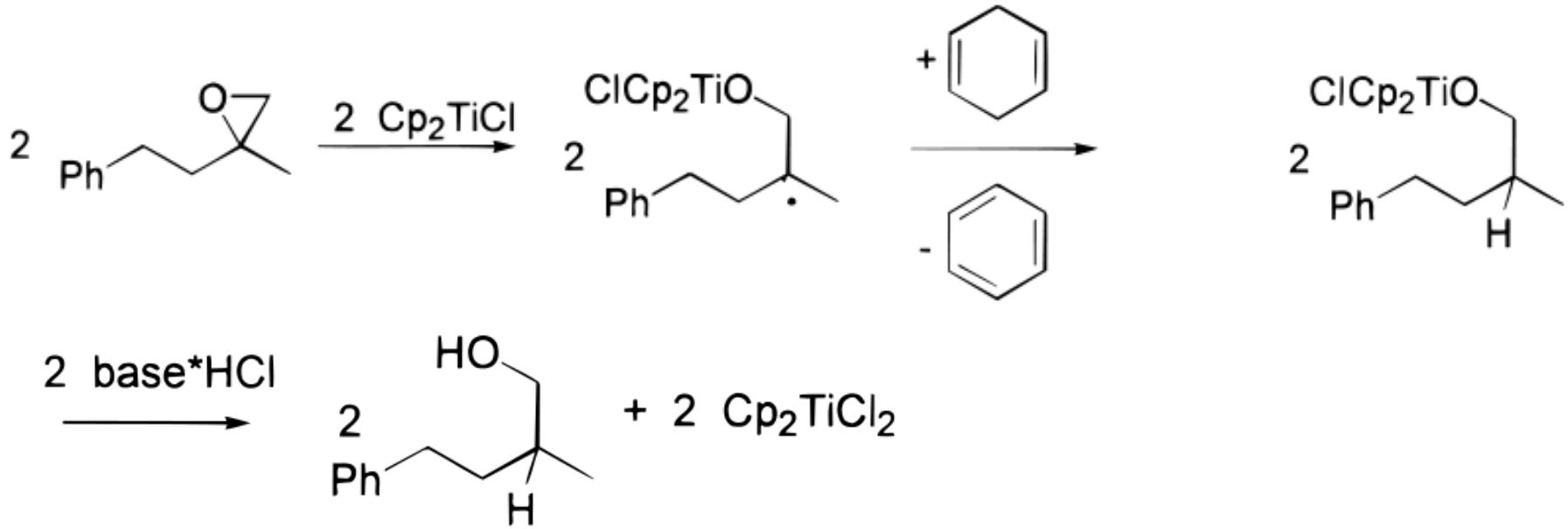


Conversion of dibromoolefin to terminal alkyne:



Formation of Unexpected Cycloadduct 21





DOI: 10.1021/ja981635p.

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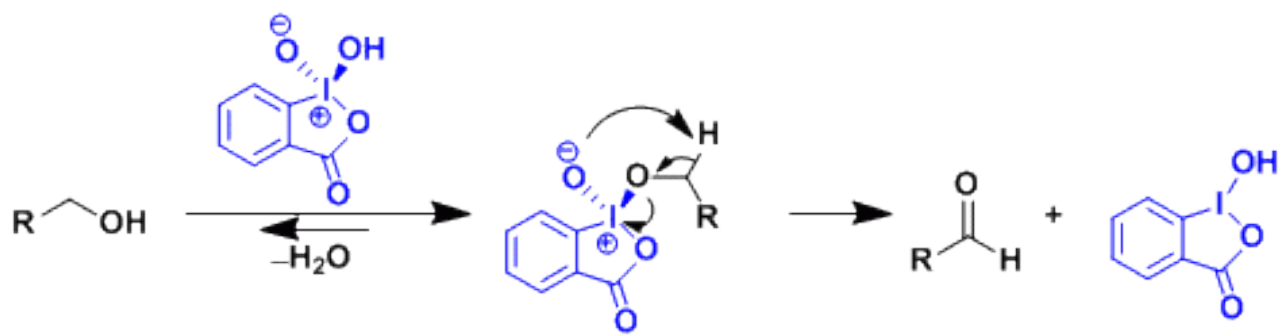
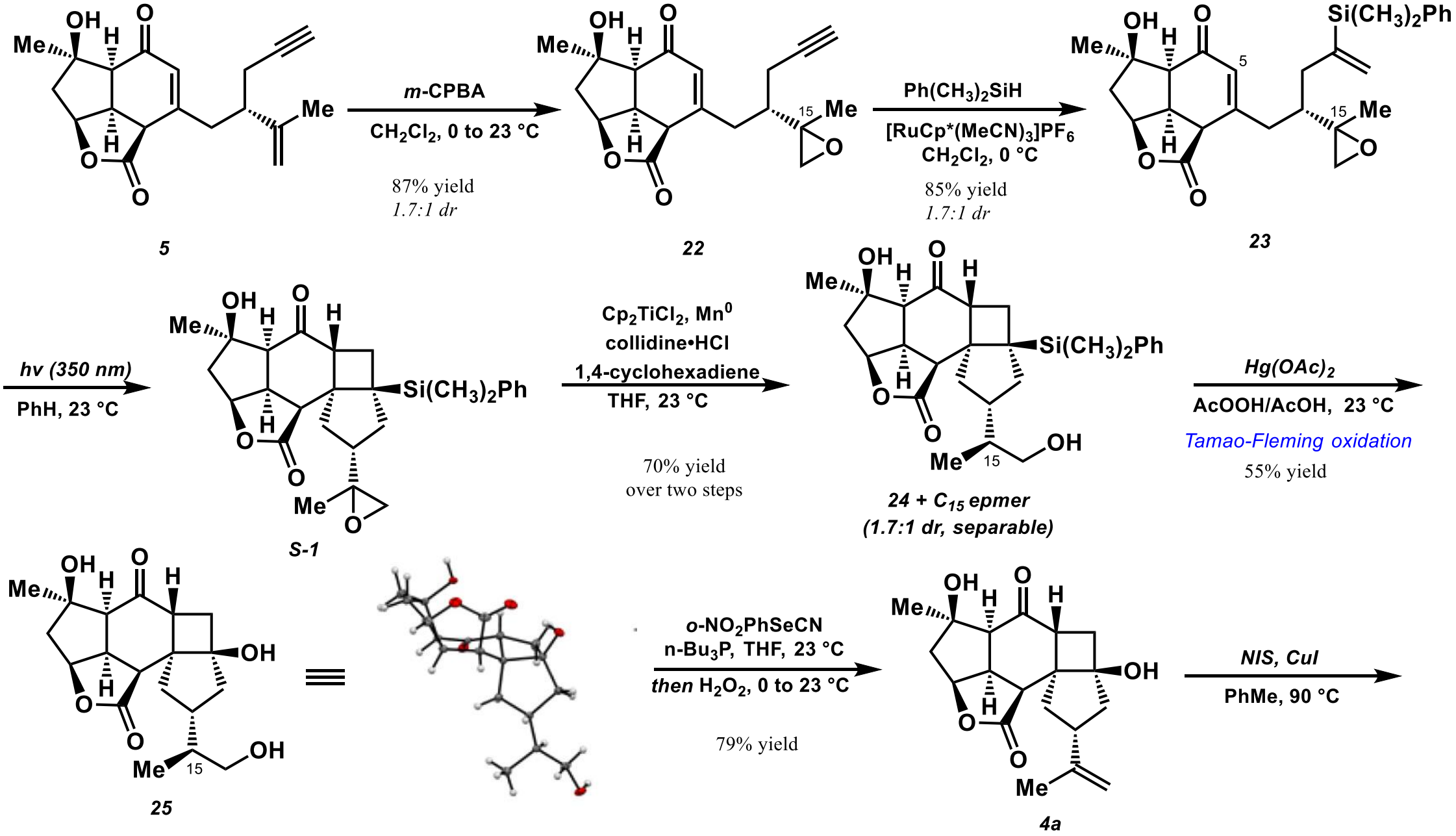
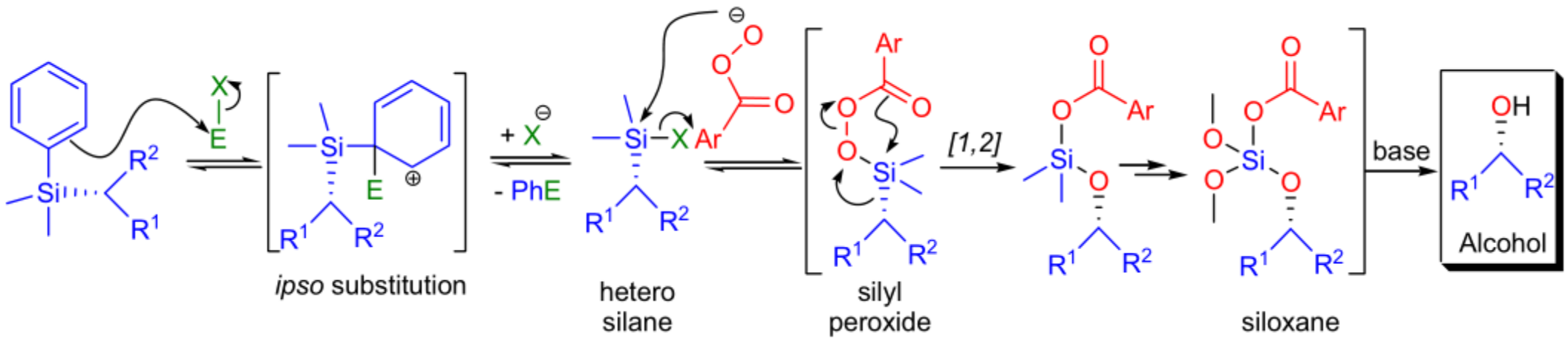


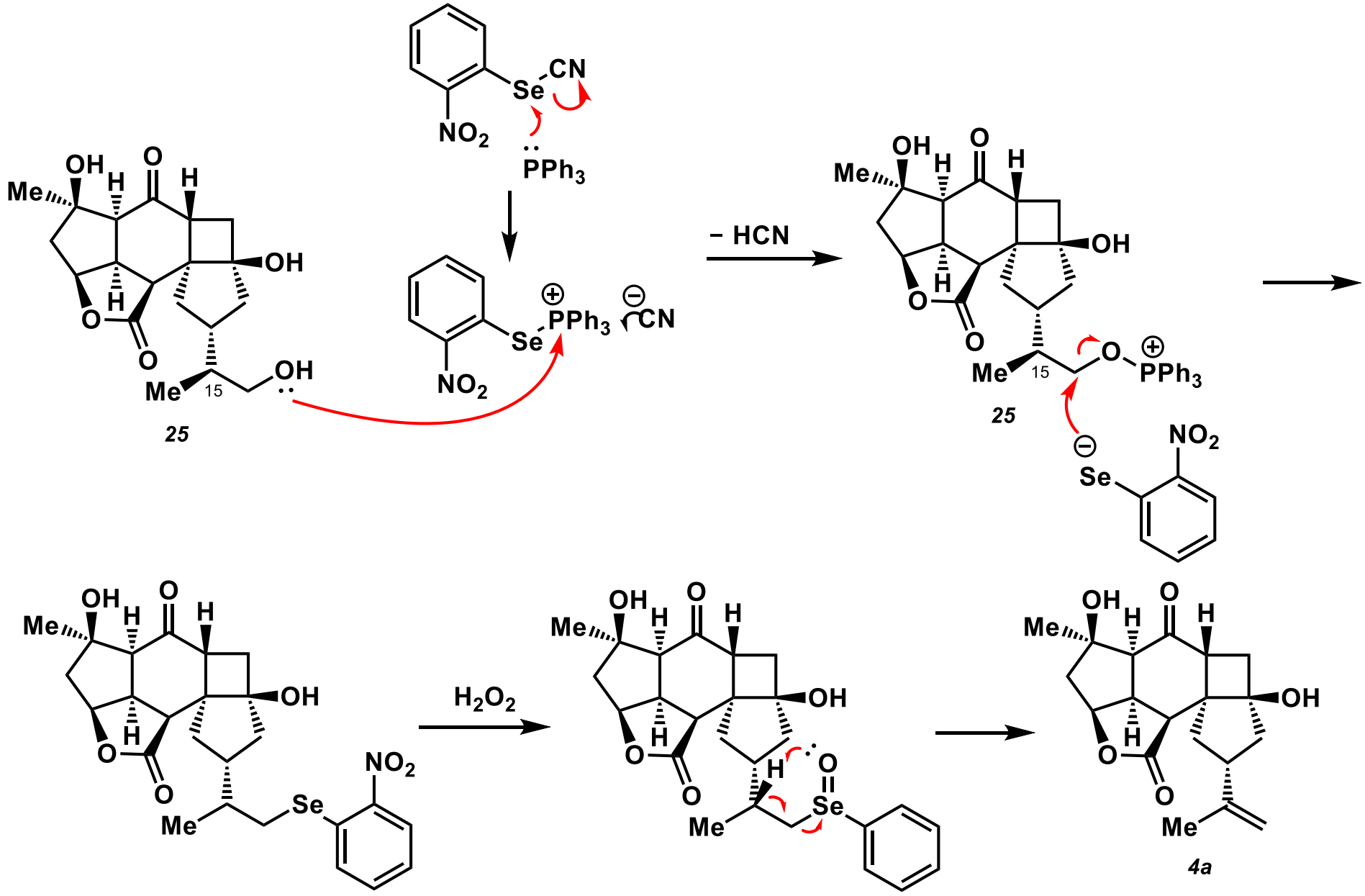
Completion of the Total Synthesis of Scabrolide A (1)



FLEMING-TAMAO OXIDATION

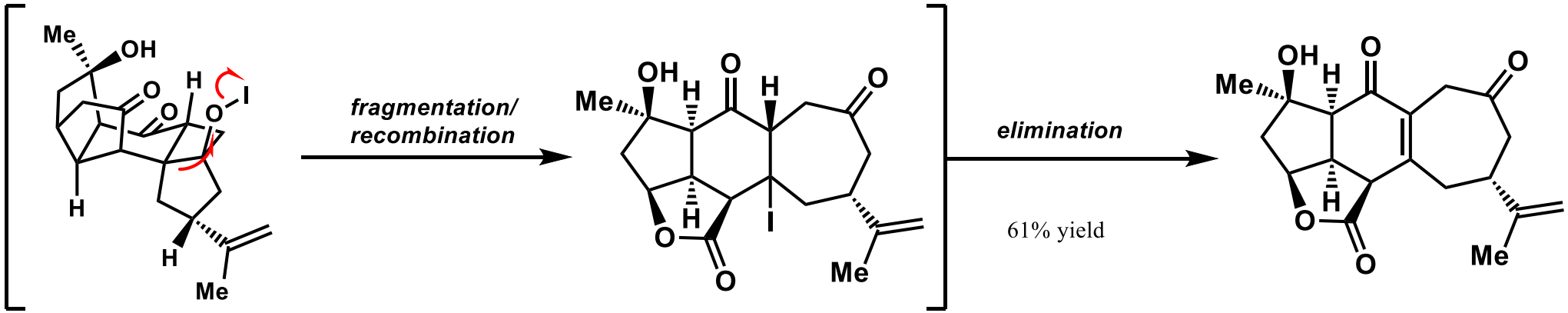
(References are on page 588)





DOI: 10.1021/jo00870a052

Completion of the Total Synthesis of Scabrolide A (**1**)



26 *27* *(-)-Scabrolide A(1)*