
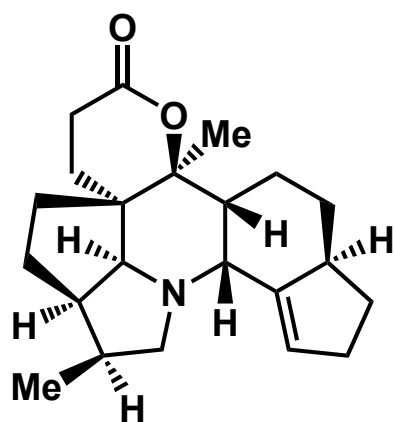


Calyciphylline B-Type Alkaloids: Total Syntheses of (–)-Daphlongamine H and (–)-Isodaphlongamine H

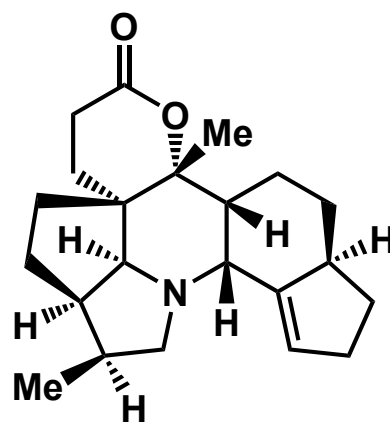
Cedric L. Hugelshofer,* Vignesh Palani, and Richmond Sarpong* 

Department of Chemistry, University of California, Berkeley, California 94720, United States

 Supporting Information

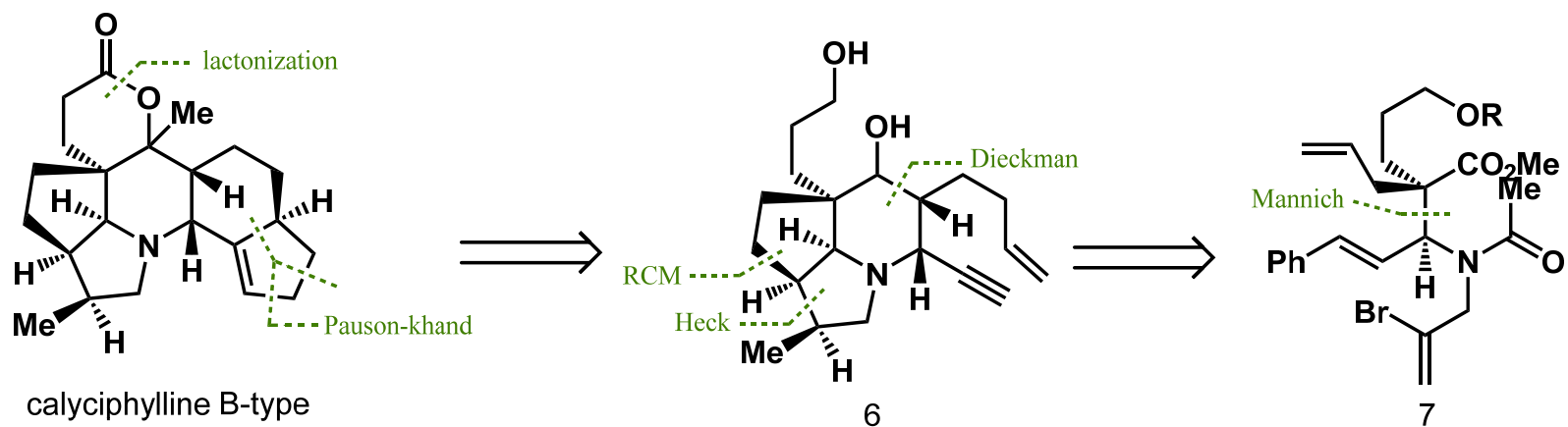


daphlongamine H (4)

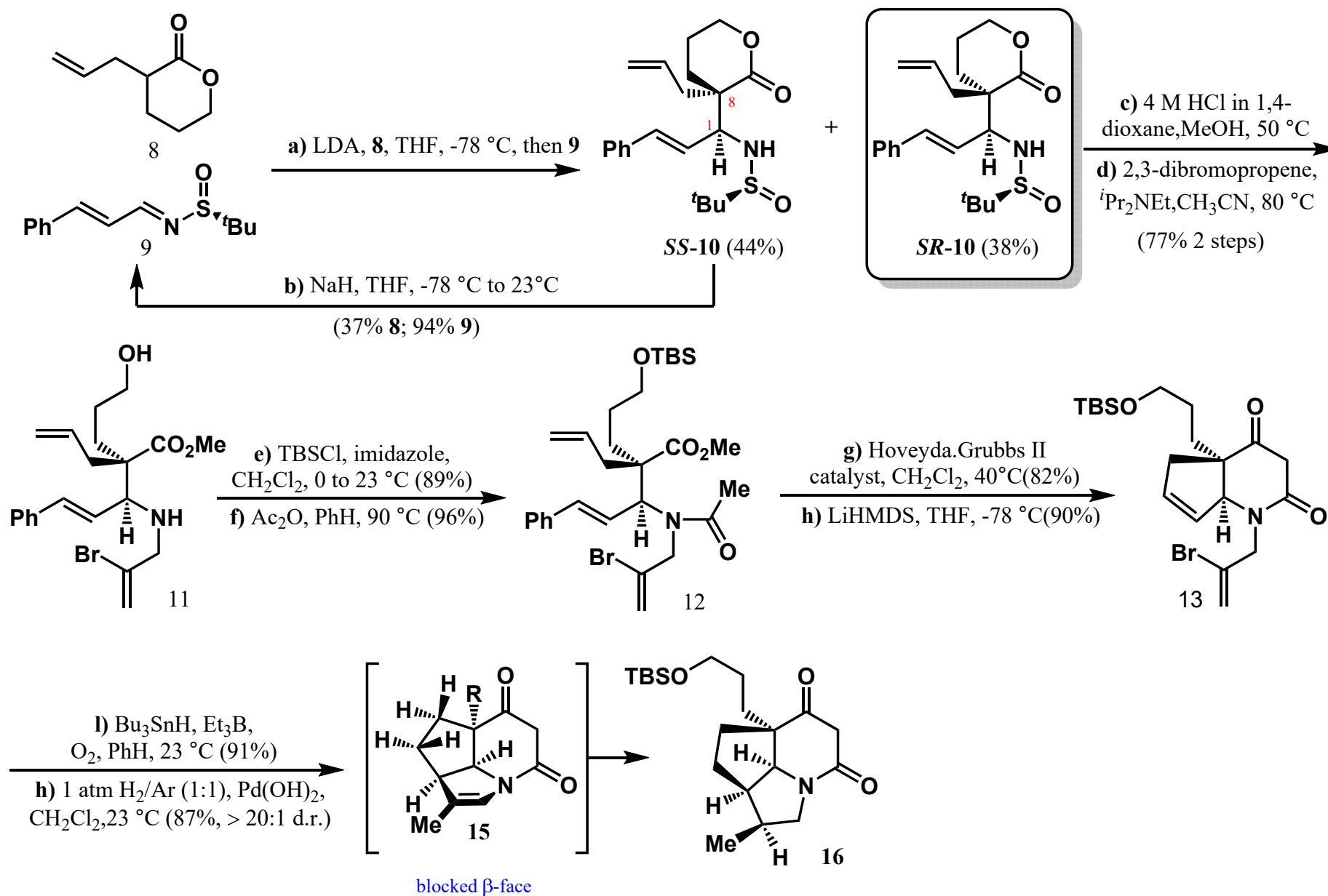


isodaphlongamine H (5)

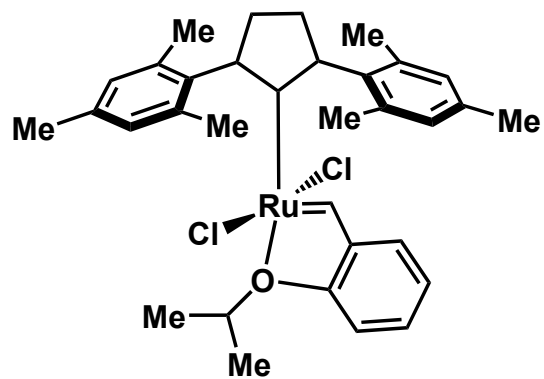
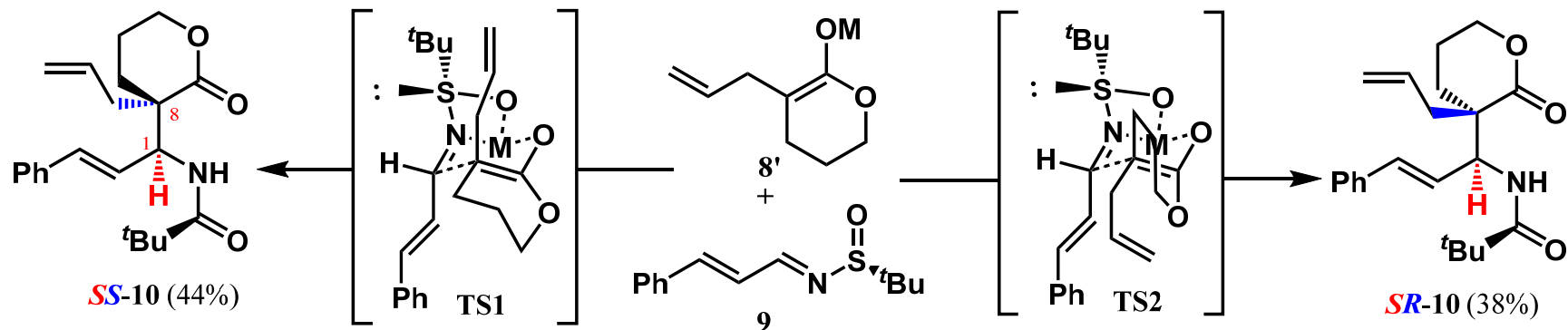
Retrosynthetic analysis of the calyciphylline B-type subfamily



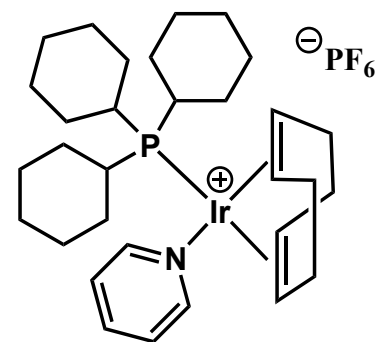
Gram Scale Synthesis of Tricyclic Core 16



Ellman's model

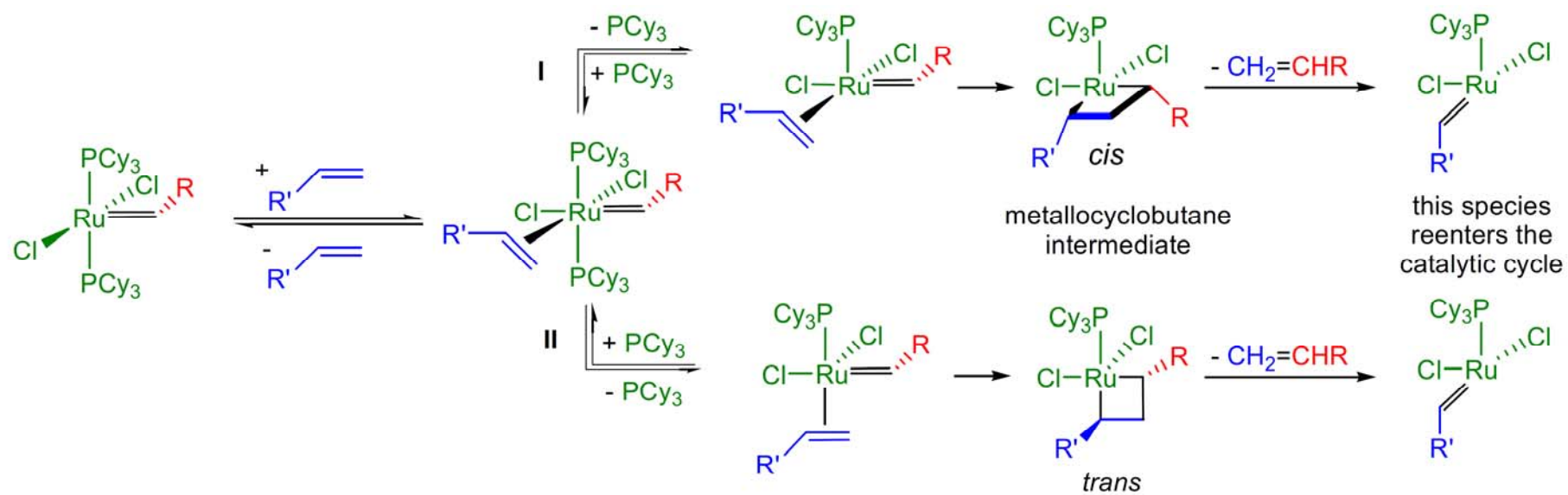


HG II

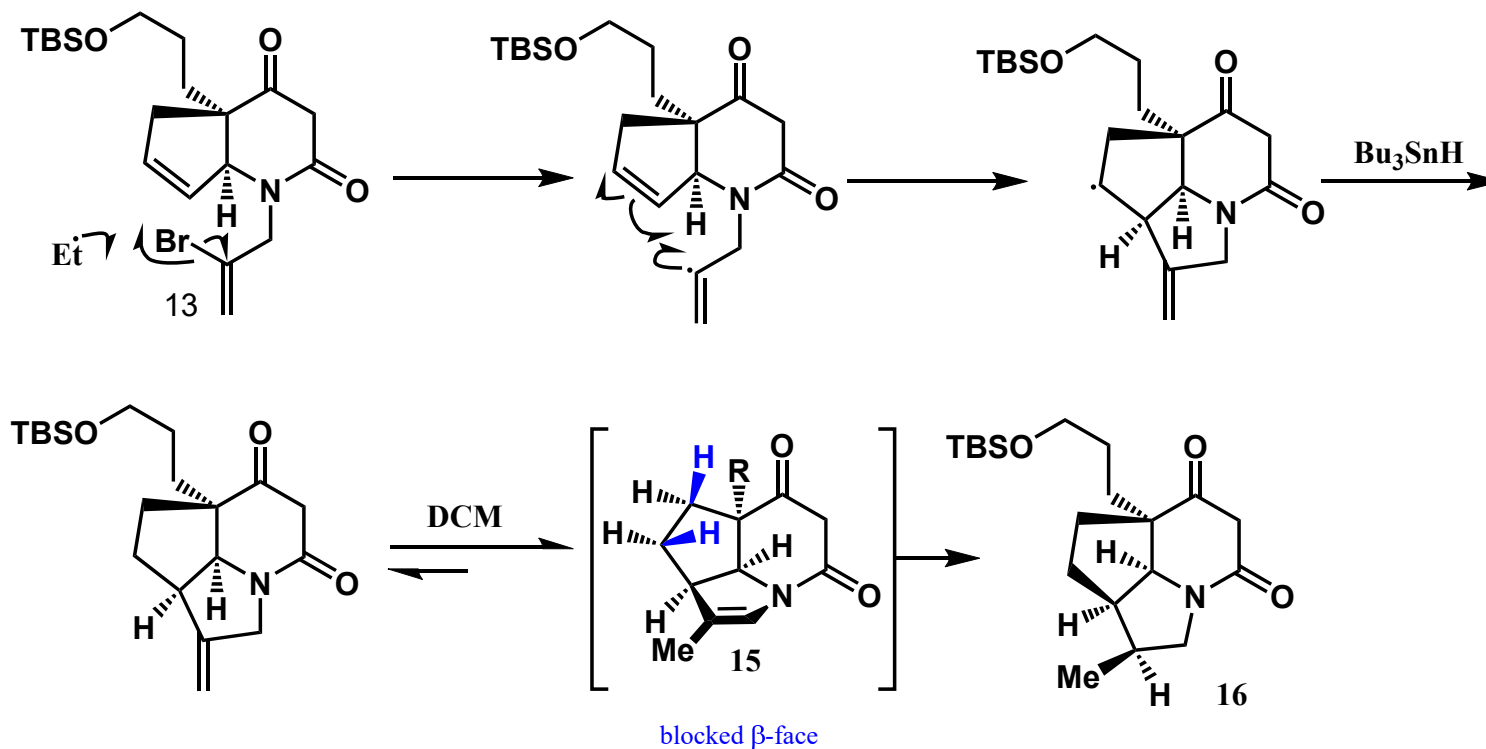


Crabtree's catalyst

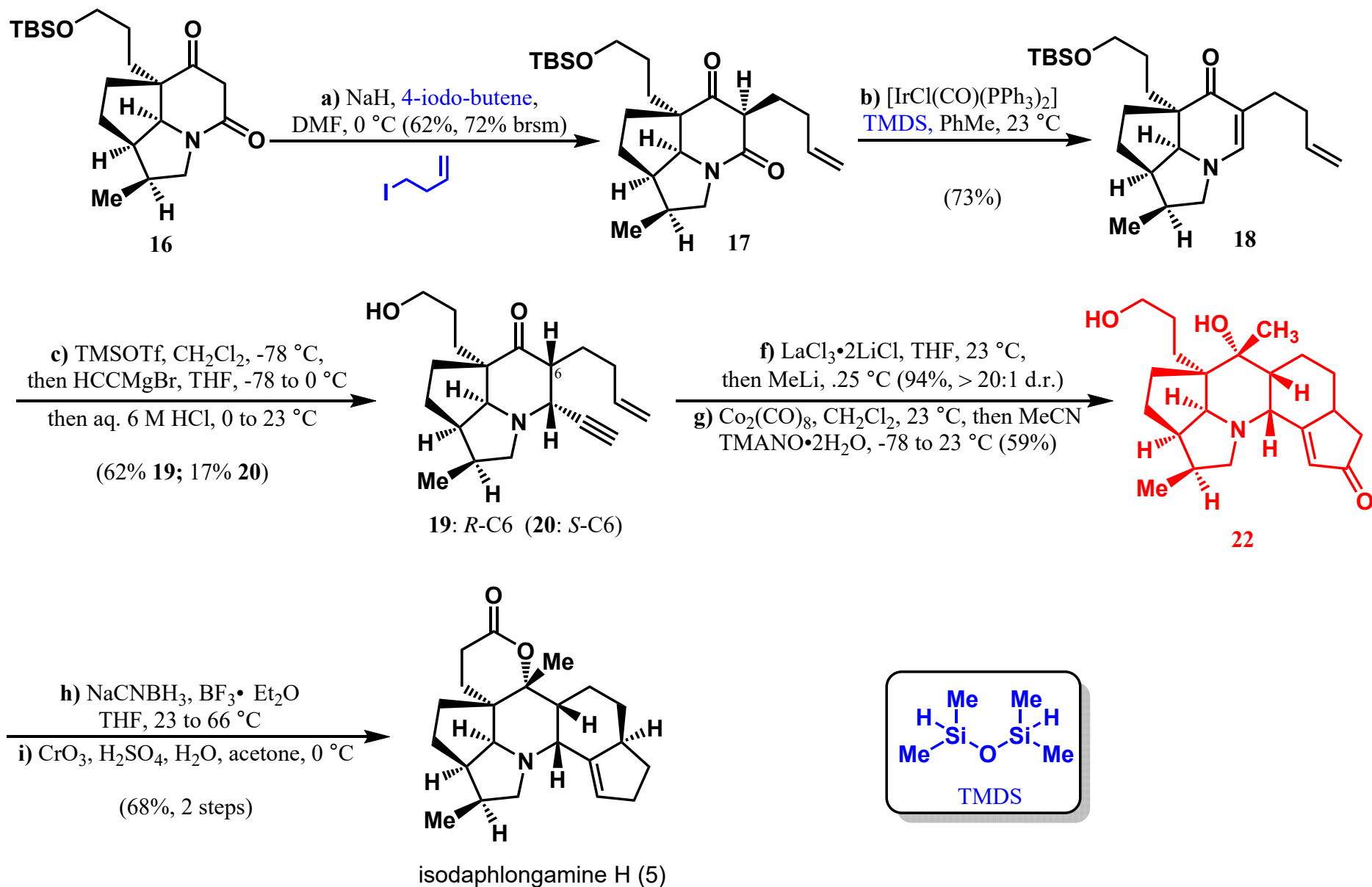
ALKENE (OLEFIN) METATHESIS



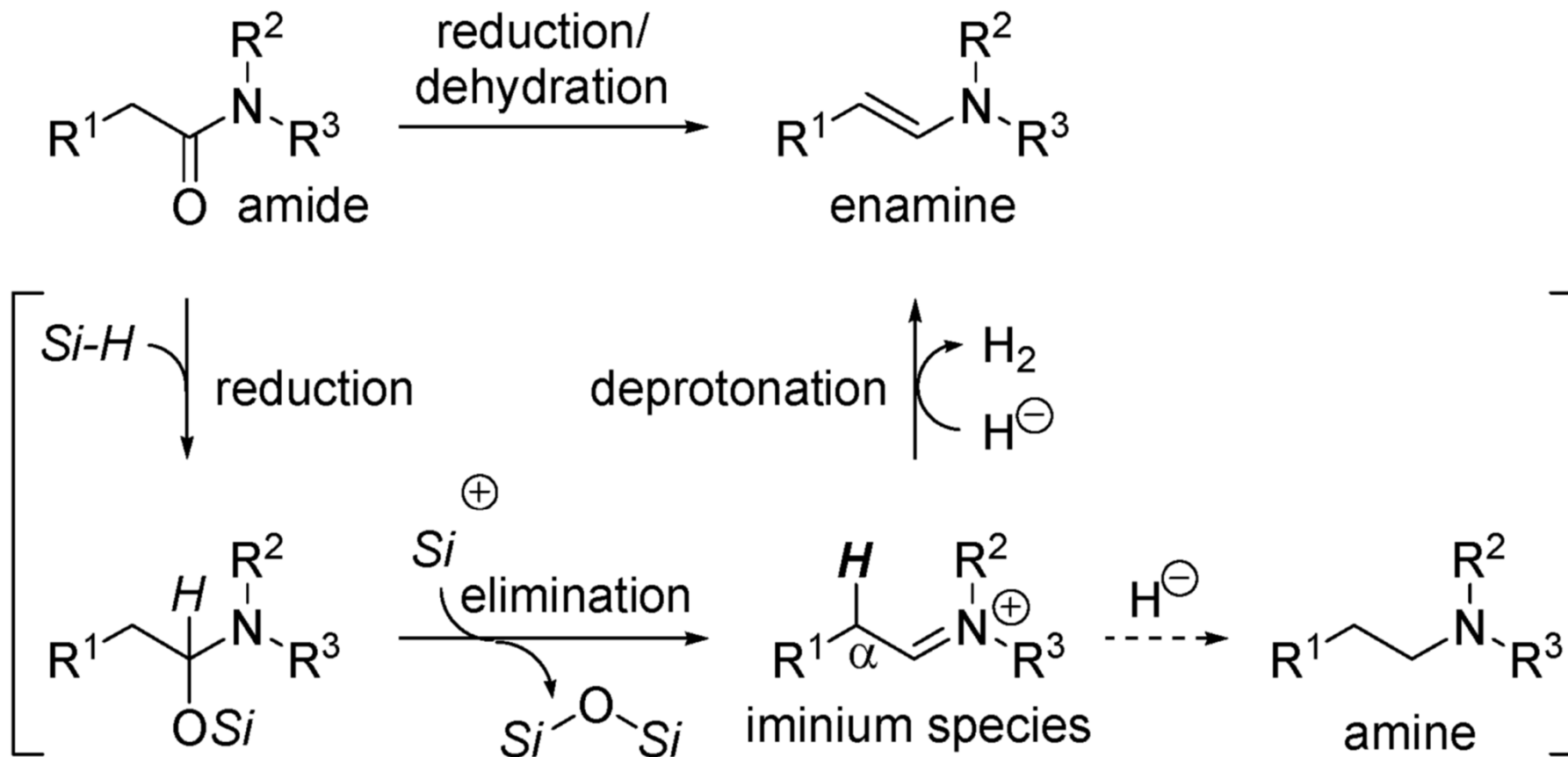
Mechanism of Synthesis of Compound 16 from Compound 13



Synthesis of Isodaphlongamine H (5)



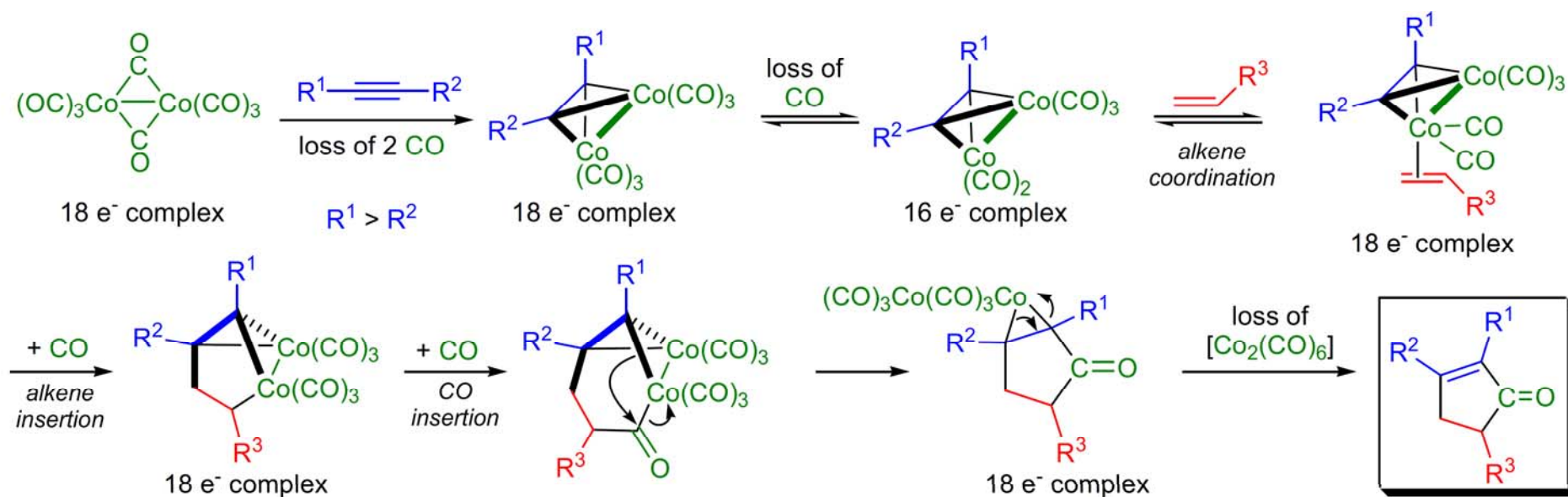
Mechanism of Synthesis of Compound 18 from Compound 17



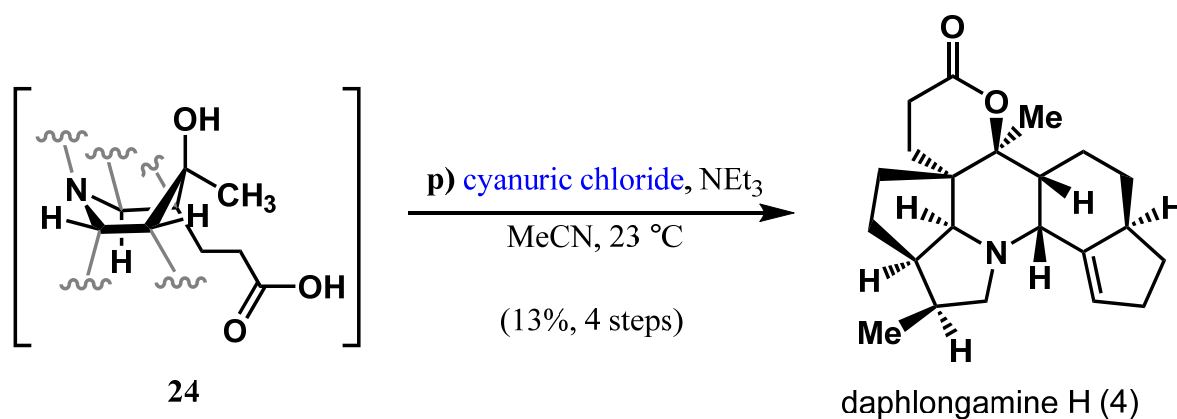
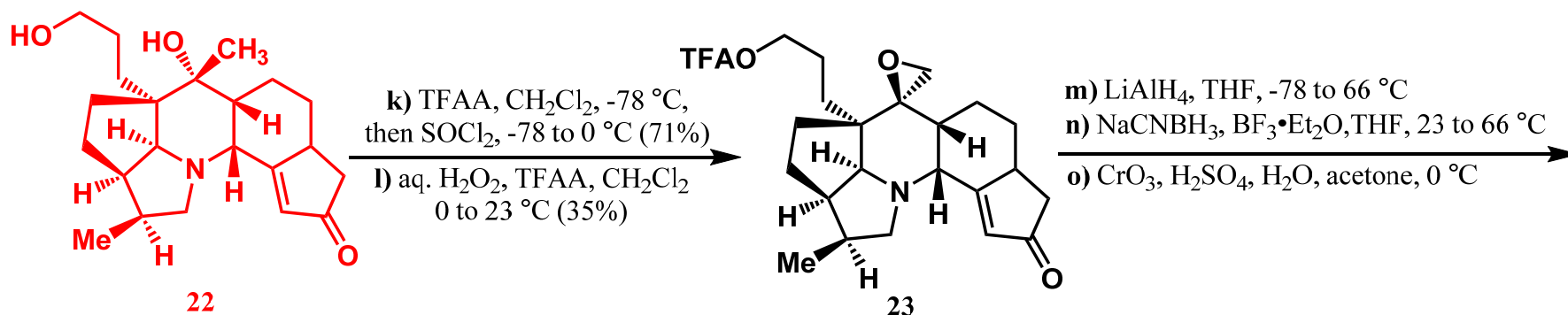
PAUSON-KHAND REACTION

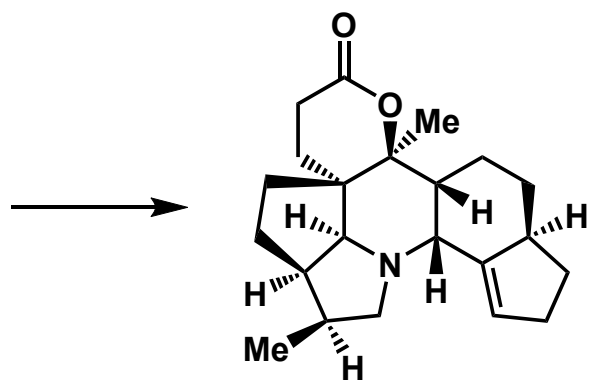
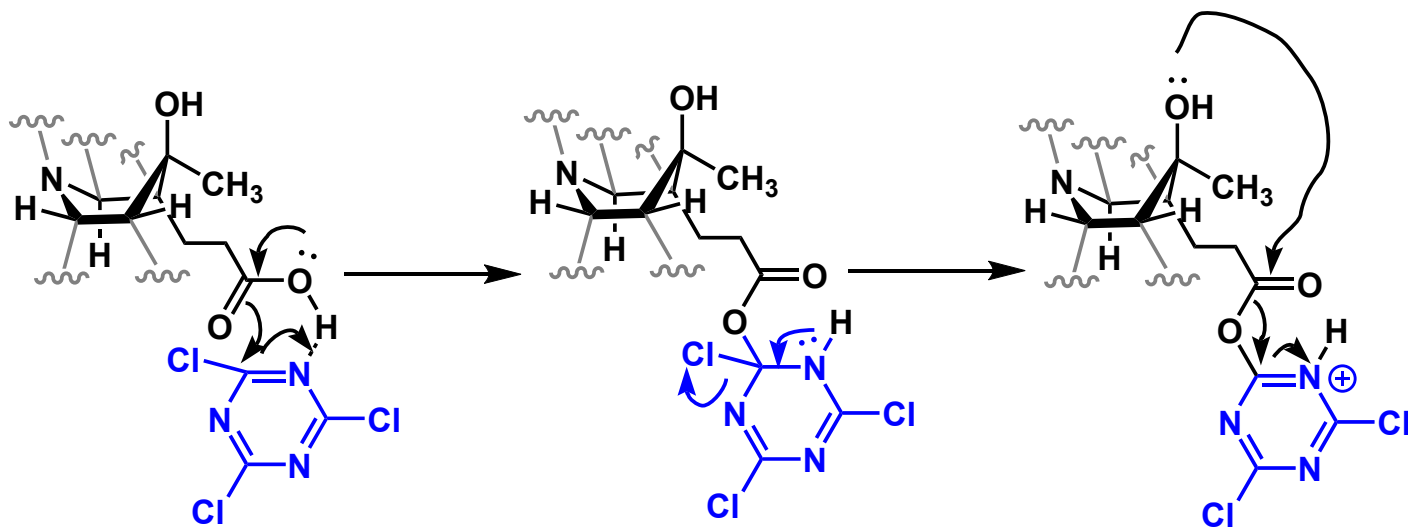
Mechanism: ⁴⁸⁻⁶²

The mechanism of the *Pauson-Khand reaction* has not been fully elucidated. However, based on the regio- and stereochemical outcome in a large number of examples, a reasonable hypothesis has been inferred.



Synthesis of Daphlongamine H (4)





daphlongamine H (4)

谢谢