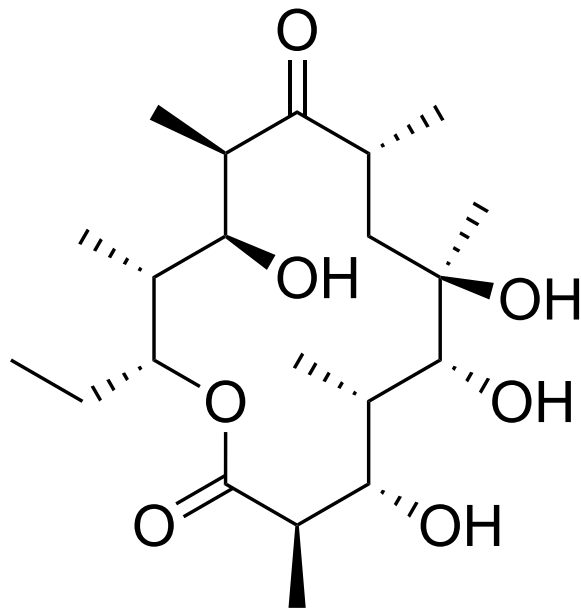


Erythronolide B



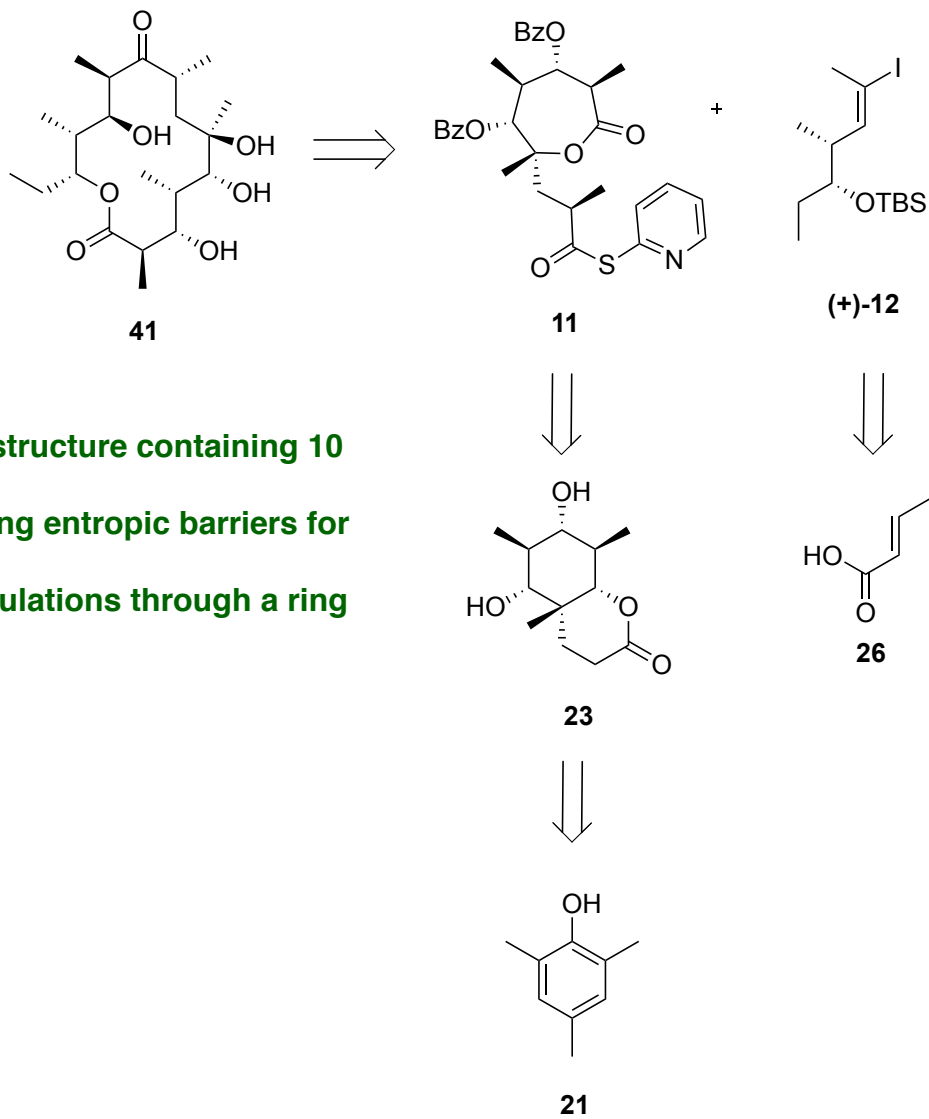
Nick Wills

CEM 852

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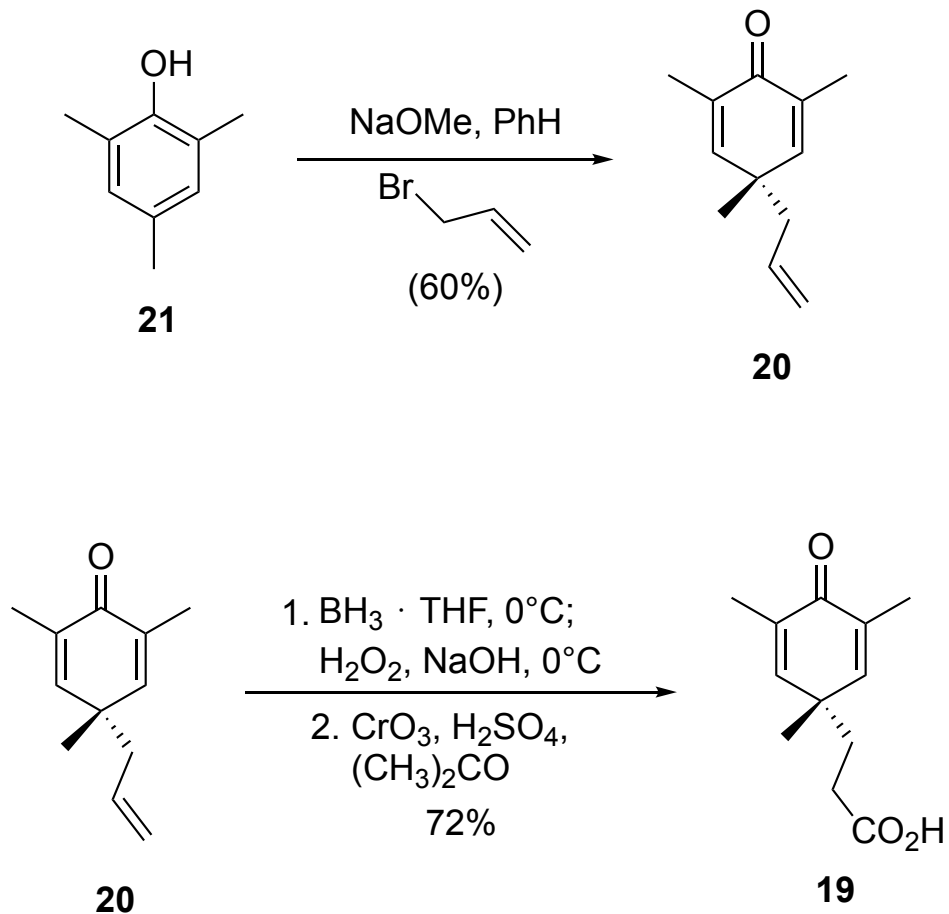
Corey, E. J.; Kim, S.; Yoo, S.-E.; Nicolaou, K. C.; Melvin, L. S.; Brunelle, D. J.; Falck, J. R.; Trybulski, E. J.; Lett, R.; Sheldrake, P. W.
Total Synthesis of Erythromycins. 4. Total Synthesis of Erythronolide B. *J. Am. Chem. Soc.* **1978**, *100* (14), 4620–4622.

Retrosynthesis

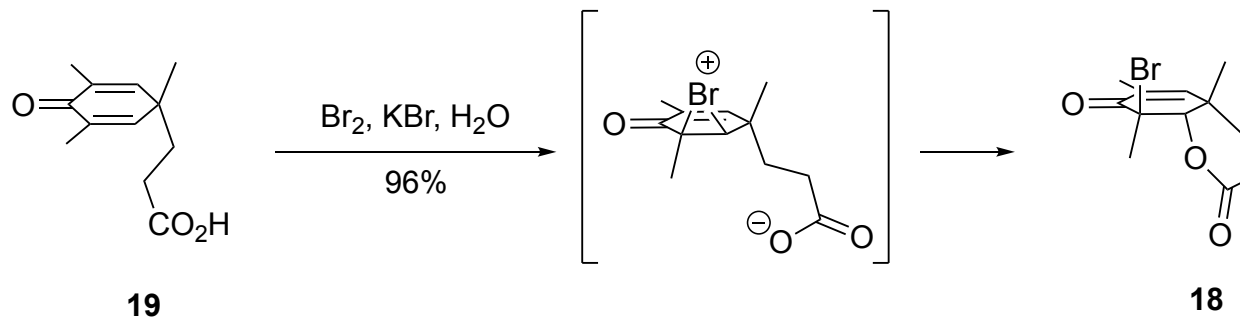
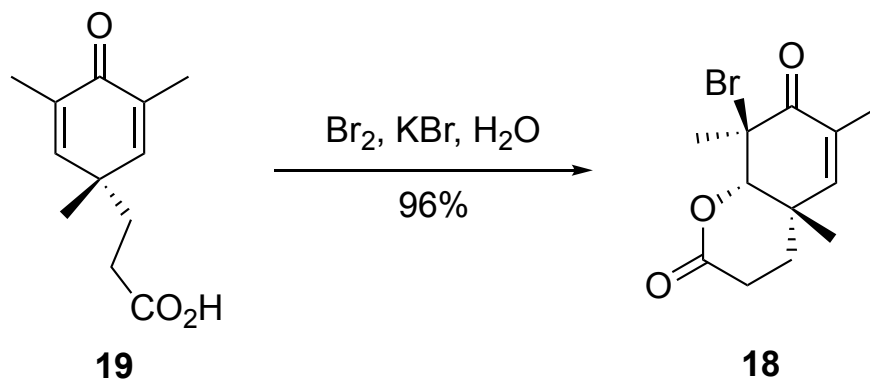


- 14-membered Macrocyclic structure containing 10 stereogenic centers
- Novel method for overcoming entropic barriers for macrocyclization
- Stereocenters set by manipulations through a ring system

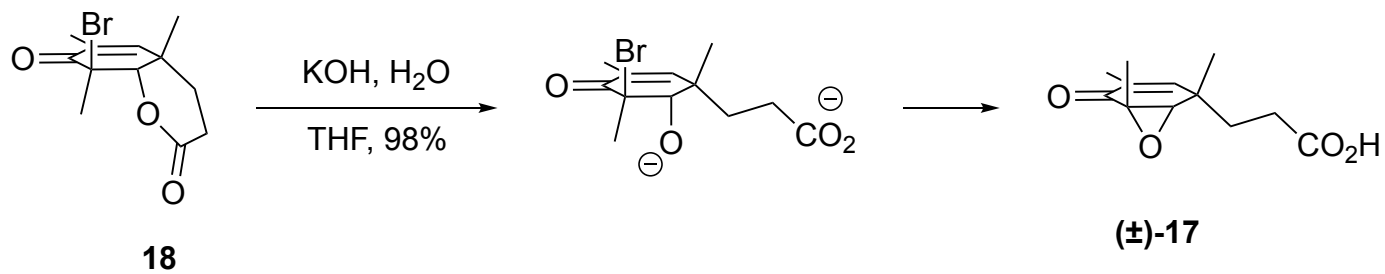
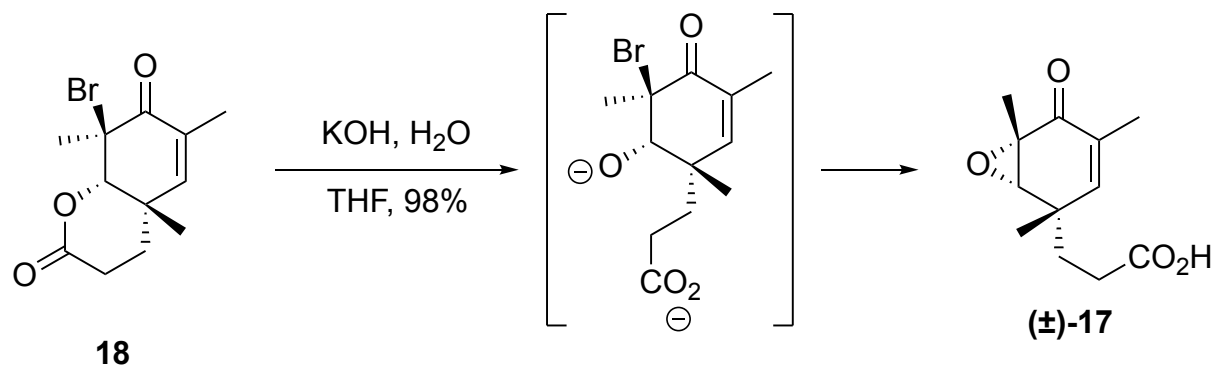
Synthesizing Substrate 11



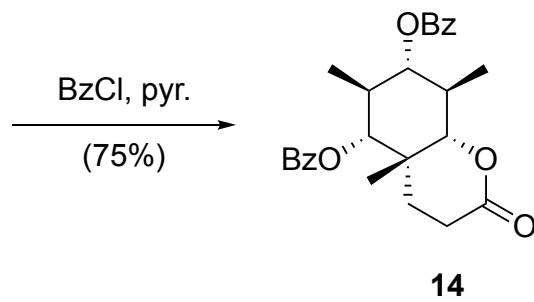
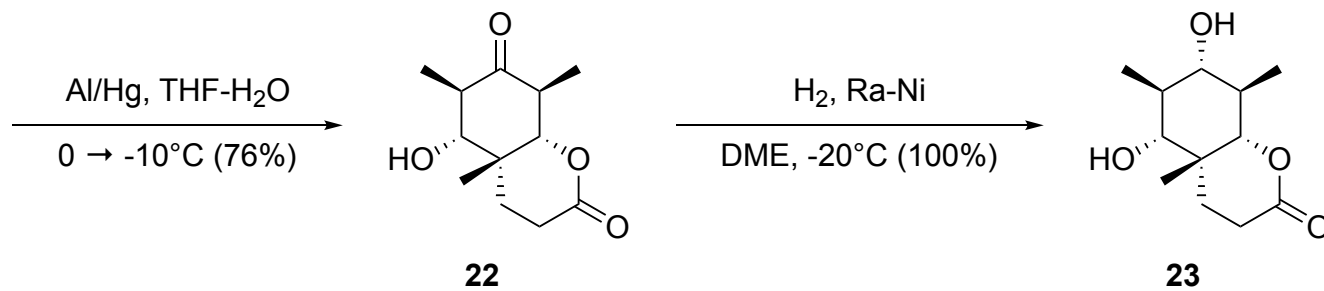
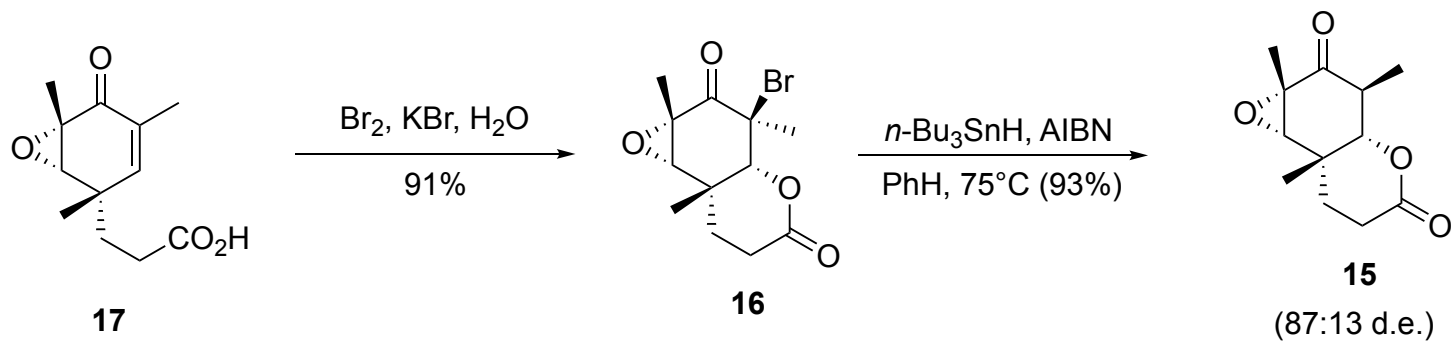
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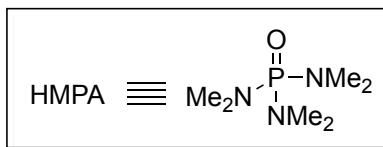
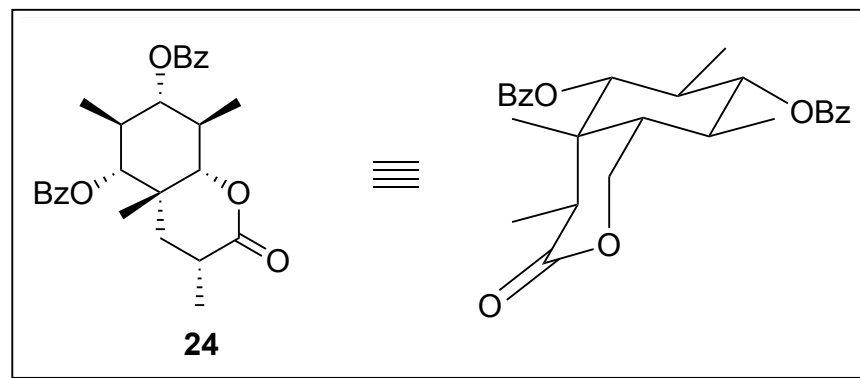
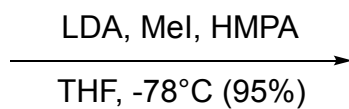
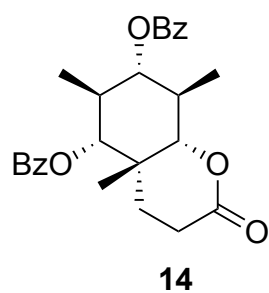
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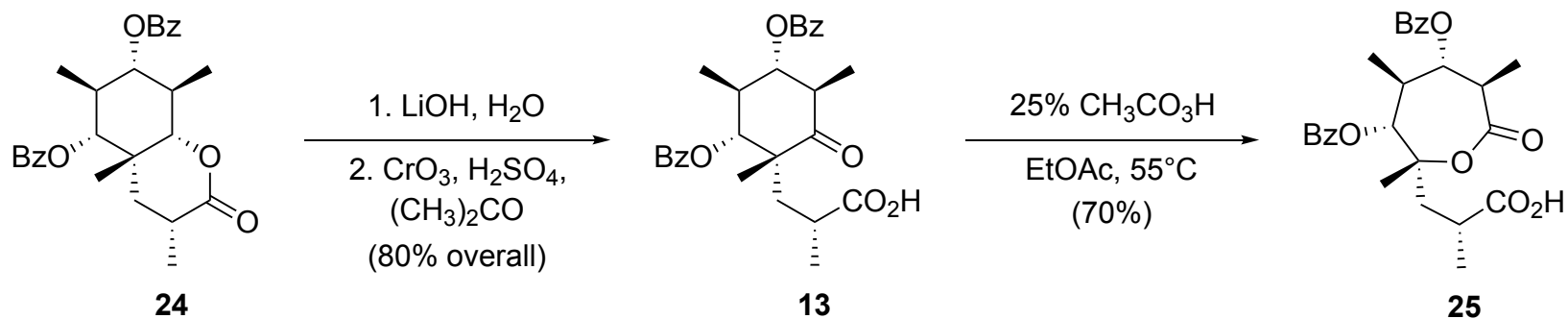
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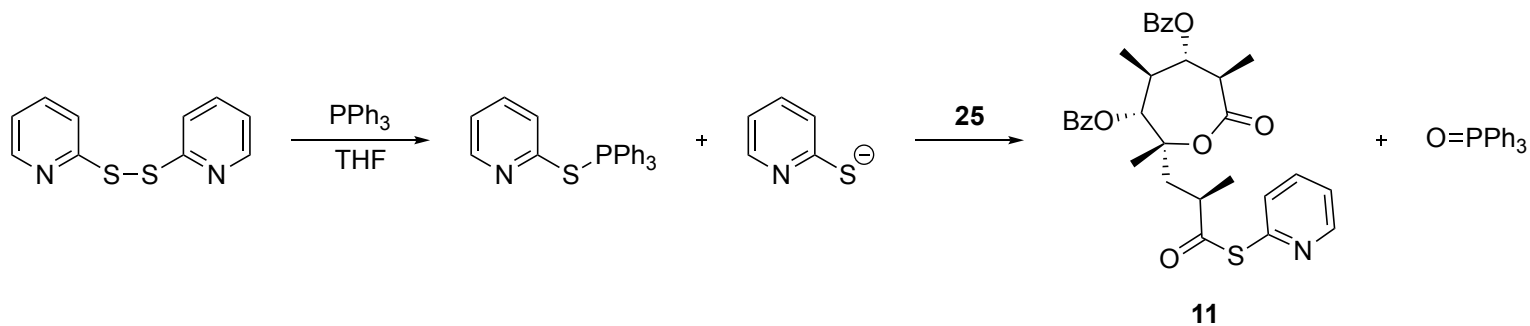
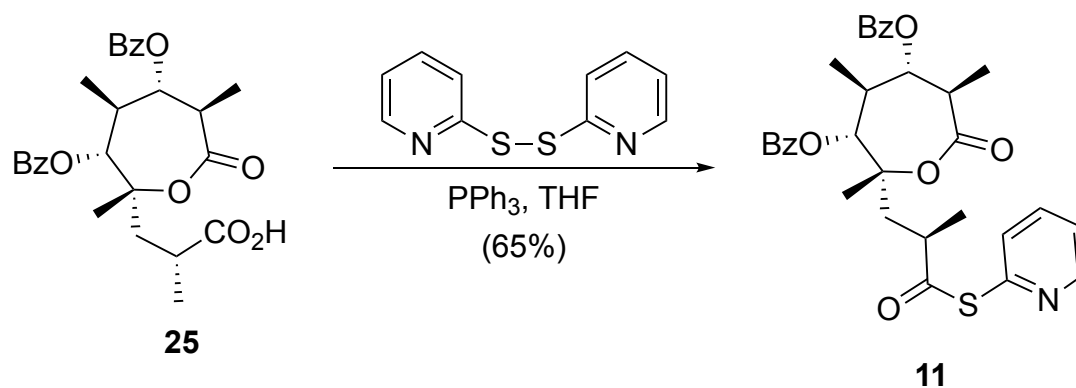
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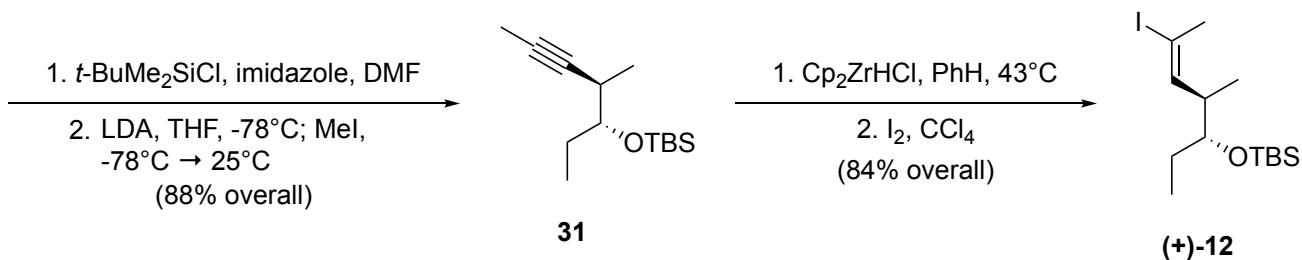
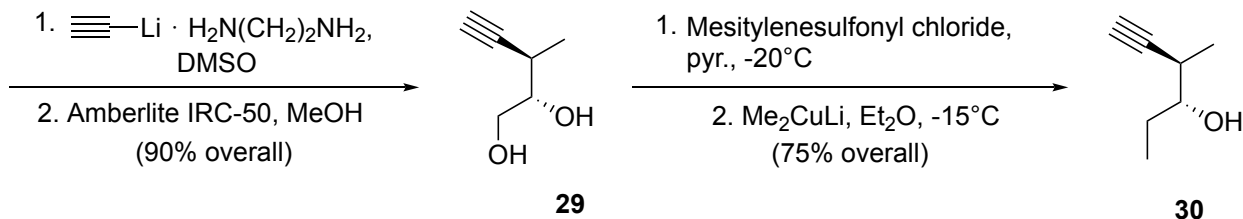
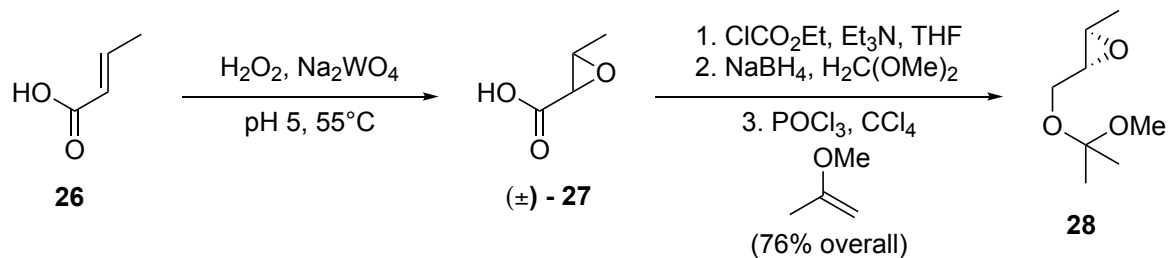
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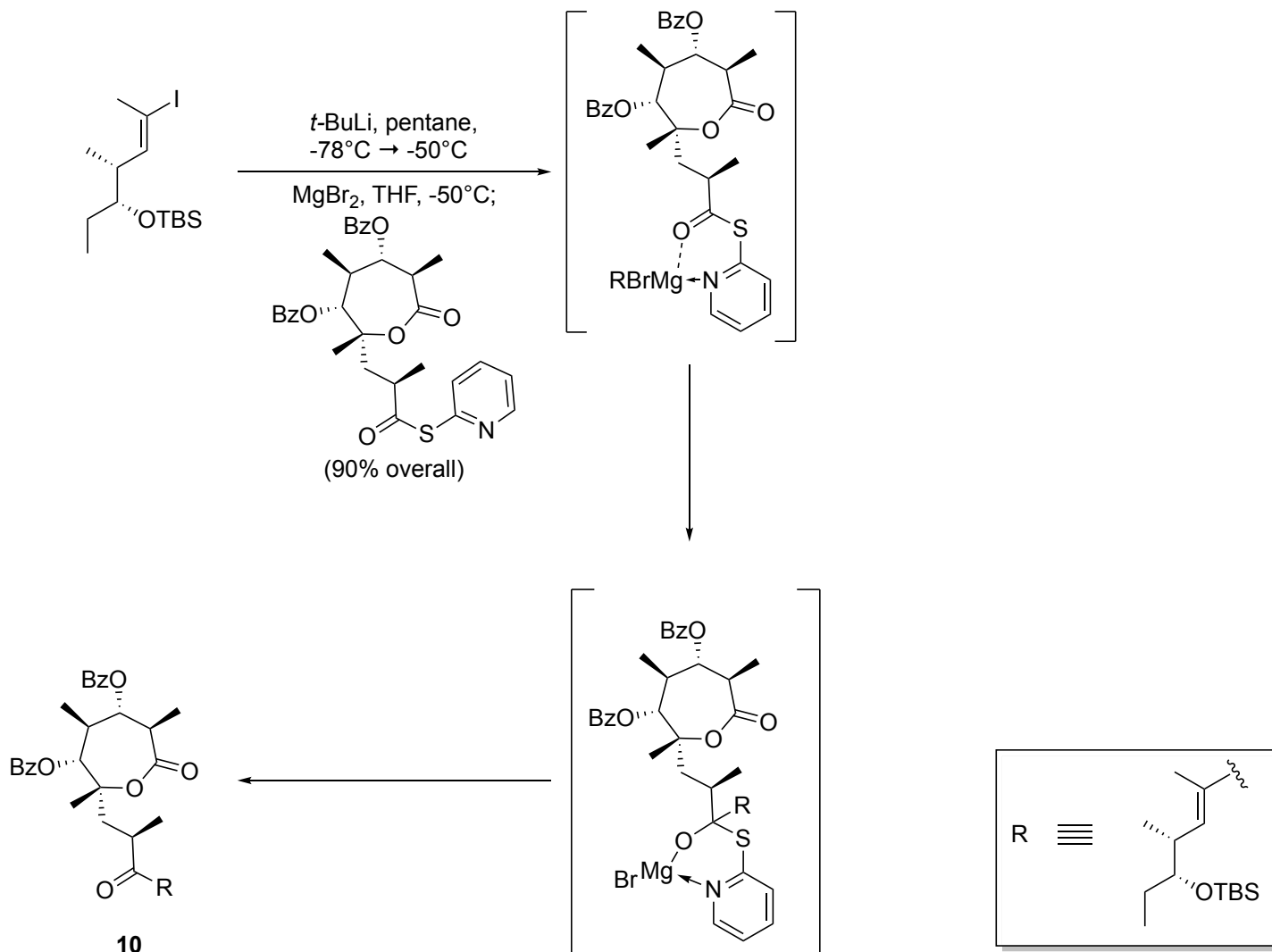
Synthesizing Substrate 11



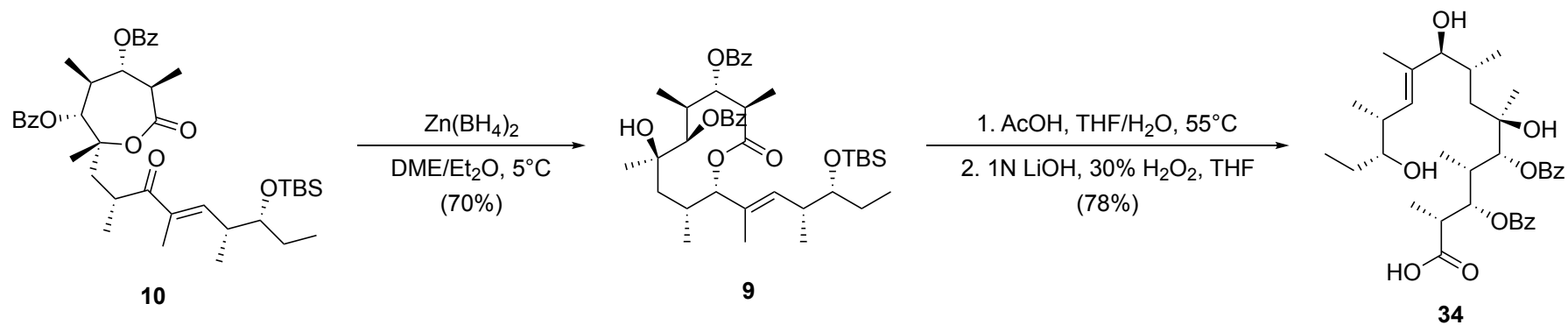
Synthesizing Substrate 12



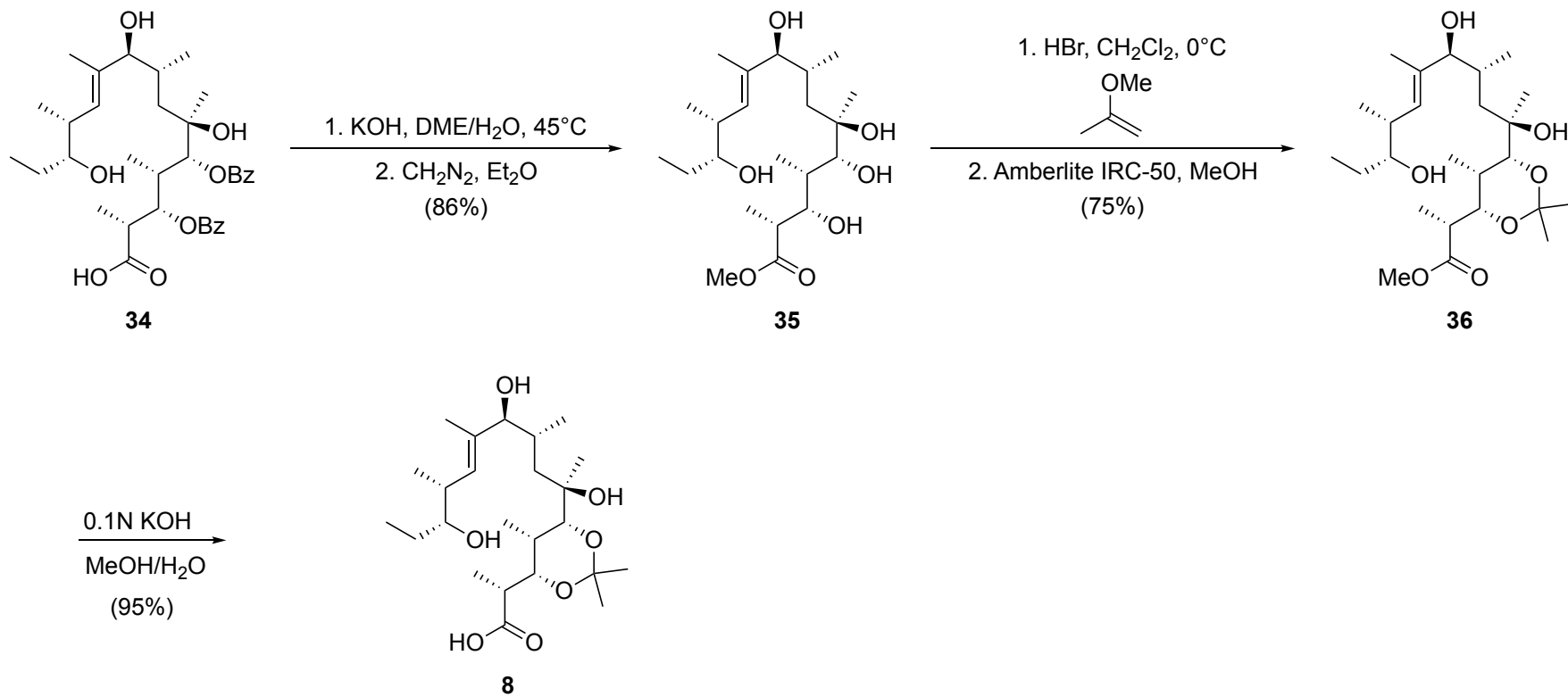
Assembling Substrates 11 and 12



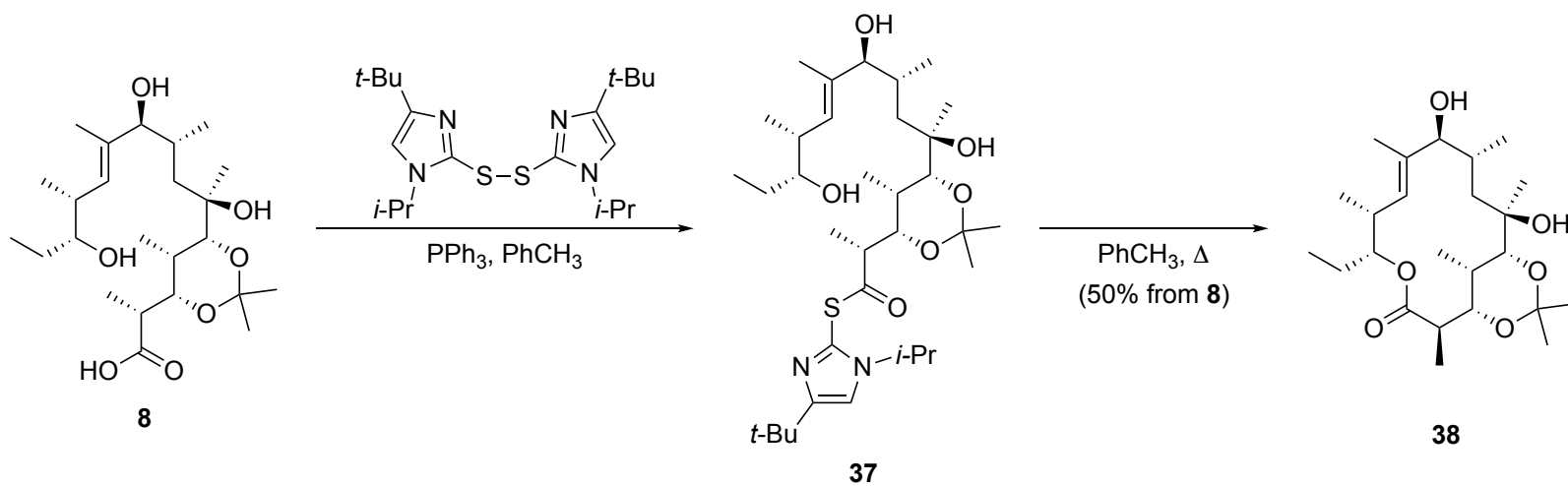
Ring opening for Macrolactonization



Preparation for Macrolactonization



Assembling the Macrocycle through Macrolactonization



Finishing Touches to the Macrocycle

