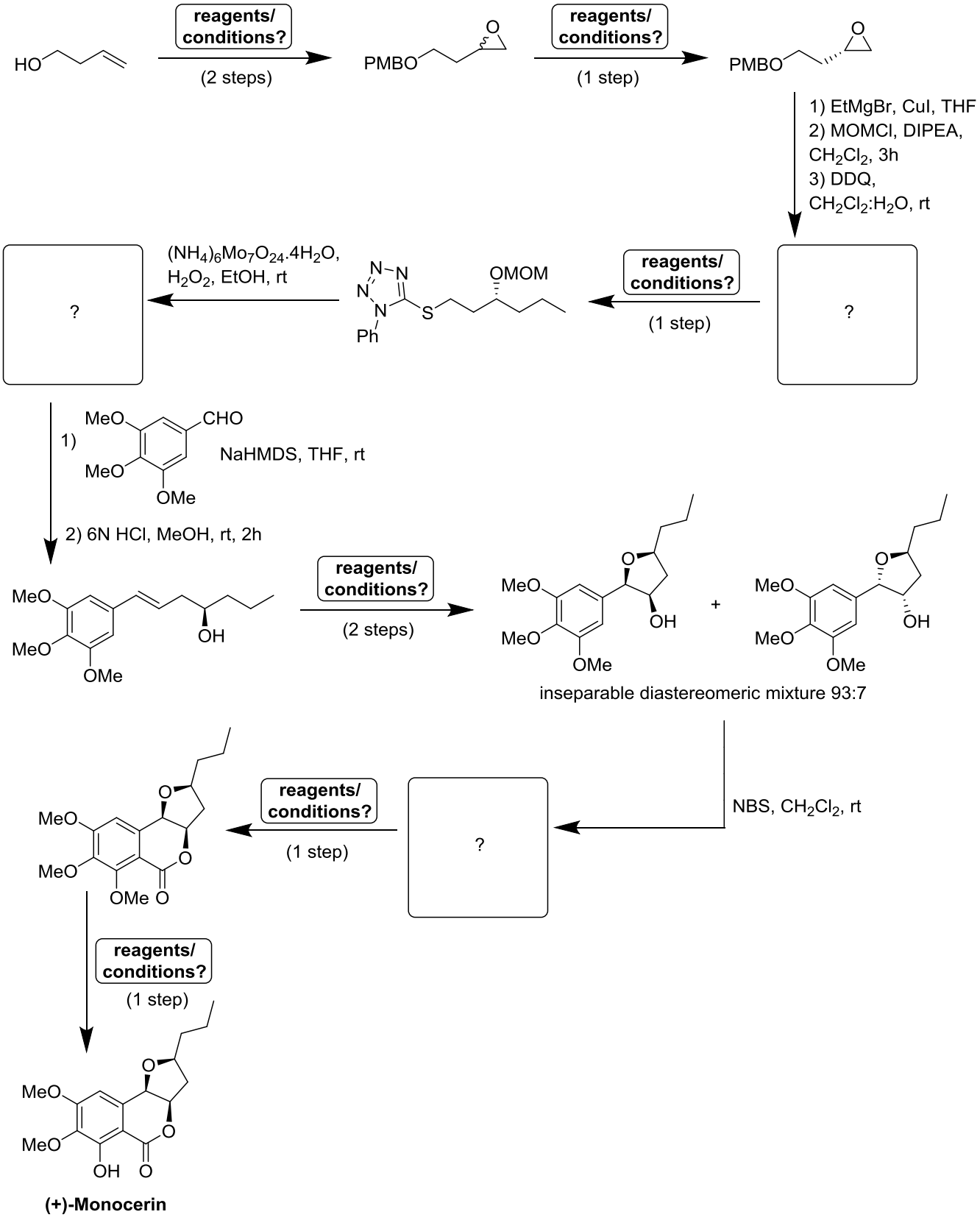
Spivey Group Problem Session – Total Synthesis of (+)-Monocerin and Nostodione A

Lucy Smith - September 2014

Monocerin and its analogues are polyketide natural products exhibiting a broad spectrum of biological properties including antifungal and insecticidal activity. Below is a recent total synthesis of (+)-monocerin, please provide reagents, conditions and intermediates where indicated and mechanisms for all steps.



Nostodione A is part of a small group of alkaloids that have been isolated from cyanobacteria and have displayed anti-mitotic and proteosomal activities. Below is a recent total synthesis of nostodione A, please provide reagents, conditions and intermediates where indicated and mechanisms for all steps.