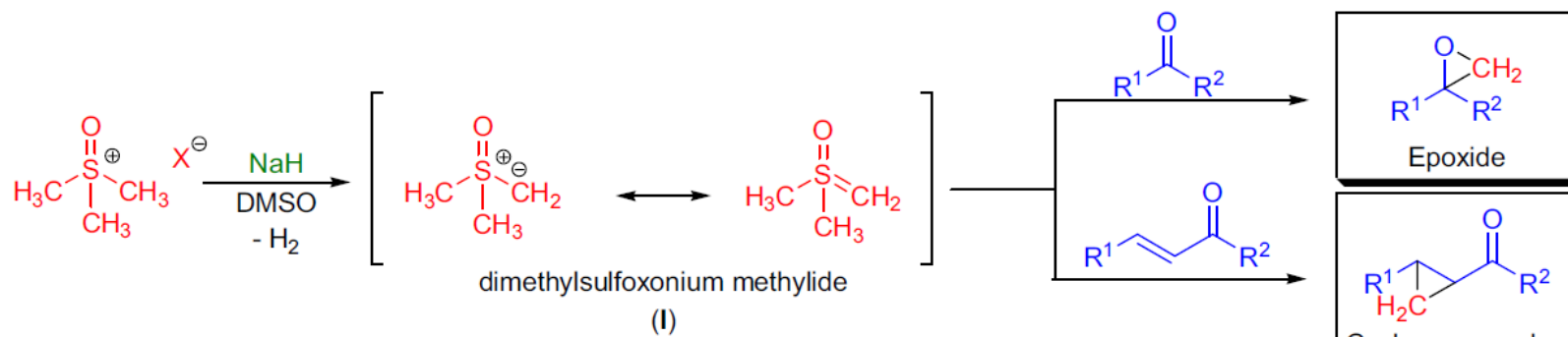
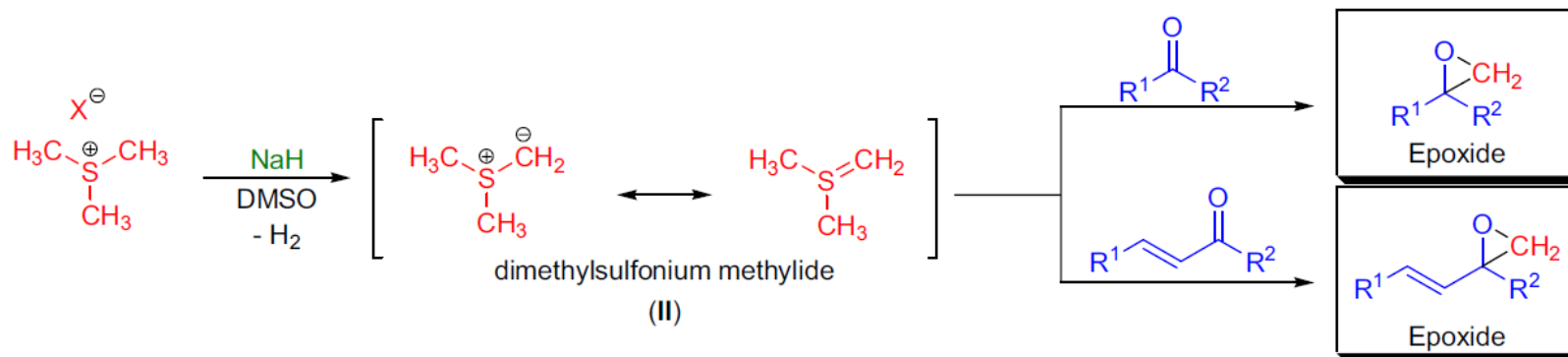


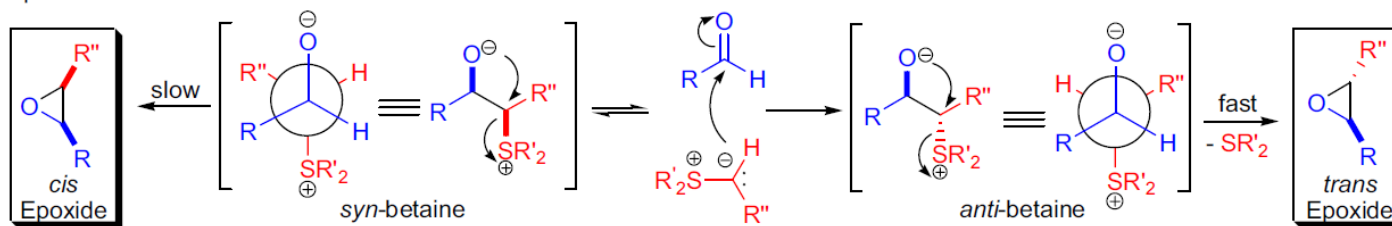
# **COREY-CHAYKOVSKY EPOXIDATION AND CYCLOPROPANATION**



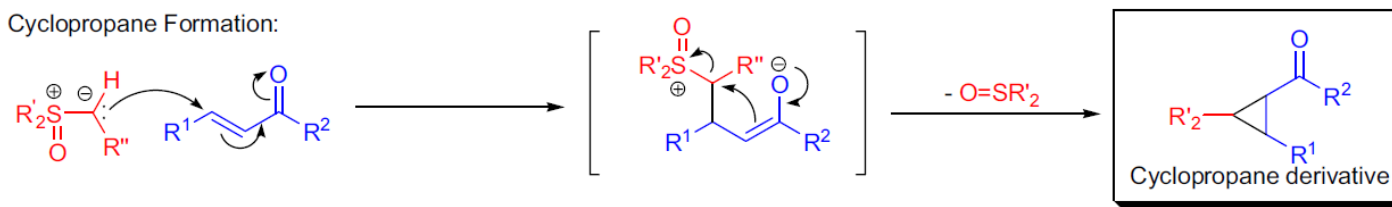
X = Cl, Br, I

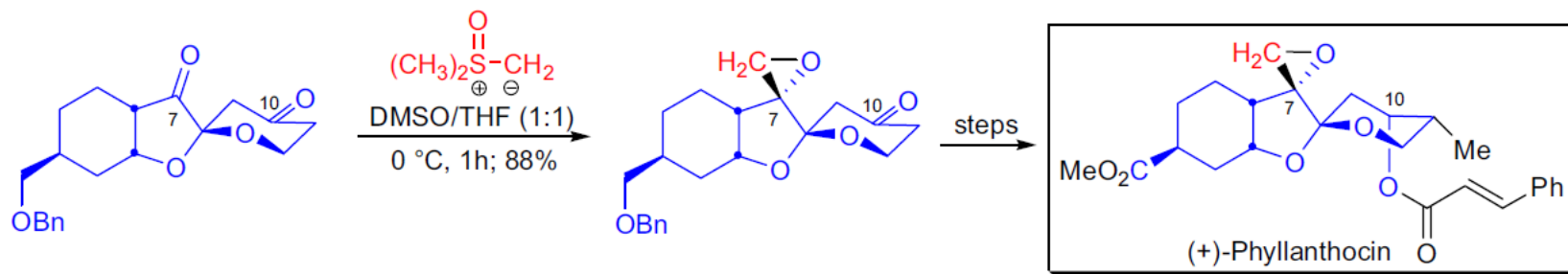


Epoxide Formation:



Cyclopropane Formation:





One of the steps in the highly stereoselective total synthesis of ( $\pm$ )-isovelleral involved the cyclopropanation of an  $\alpha,\beta$ -unsaturated ketone using dimethylsulfoxonium methylide.<sup>29</sup> C.H. Heathcock and co-workers studied this transformation under various conditions and they found that THF at ambient temperature gave superior results to DMSO, which is the most common solvent for the *Corey-Chaykovsky cyclopropanation*.

