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Synthesis of an Epoxide for TMM Cycloadditions

Will Prusinski
Valparaiso University

Chase Freeland
Valparaiso University

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Authors: **Will Prusinski and Chase Freeland**

Department: Chemistry

Faculty Sponsor: Kevin Jantzi

Title: *Synthesis of an Epoxide for TMM Cycloadditions*

Abstract:

In order to produce a highly functionalized five-membered ring useful for further synthetic processes via Palladium catalysis, a series of precursors need to be synthesized in order to form the epoxide used in cyclic formation. First, a trimethylsilane alcohol is synthesized from beta-Methallyl alcohol. The alcohol will then be subjected to Swern oxidation conditions, forming a TMS aldehyde. The aldehyde prepared will then undergo epoxidation, forming the desired precursor for Palladium catalyzed cycloaddition. The Swern oxidation has yet to occur in good conversion due to sensitivity, but when performed using a model compound the oxidation, and epoxidation both worked to form a model epoxide precursor.