

The Search for an Epoxide Precursor in Trimethylenemethane (TMM) Cycloaddition Reactions

Author: Christopher Miko

Affiliation: Chemistry

Trimethylenemethane (TMM) cycloaddition is a Pd(0)-catalyzed process in which new carbon rings are formed, which can be potentially useful in synthetic organic processes. The epoxide starting material (trimethyl(2-oxiranyl-2-propenyl)silane) was created in a three-step process from propargyl alcohol. This molecule was subjected to various reaction conditions in order to test the theoretical assumptions of the reaction mechanism. Efforts to characterize the product(s) are ongoing.

Information about the Author:

Christopher Miko is a physics and chemistry major at Valparaiso University. He plans to continue his work in chemistry in the Air Force after graduation.

Faculty Sponsor: Kevin Jantzi

Student Contact: Chris.Miko@valpo.edu