The Stereochemistry of 1,3-dipolar cycloaddition of internally H-bonded chiral methylenenitrones

Prof. SHAIKH ASROF ALI

Dept. of Chemistry , College of Science ,
King Fahd University of Petroleum & Minerals

http://www.kfupm.edu.s

ABSTRACT

A study of diastereoselectivity in the cycloaddn. reactions of a series of mono- and disubstituted alkenes with two chiral, internally H-bonded methylenenitrones has been carried out. The high degree of stereochem. control in the presence of anhyd. magnesium bromide has been explained in terms of a metal chelated transition state. Intramol. cycloaddn. involving a methylenenitrone contg. an alkene moiety linked to a nitrogen gave a stereoselective addn. product.