

The 1,3-Dipolar Cycloaddition Reactions of 3,4,5,6-Tetrahydro-2H-azepine 1-oxide

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ABSTRACT

A study of the regio- and stereochem. behavior of the 1,3-dipolar cycloaddn. of 3,4,5,6-tetrahydro-2H-azepine 1-oxide (I) with a series of di- and trisubstituted alkenes is reported. Significant secondary orbital interactions are obsd. in the addn. reaction of alkenes having conjugated methoxycarbonyl substituents or having oxygen at allylic or homoallylic positions. Quite unexpectedly, the addn. of crotonate and cinnamate esters are found to be nonunidirectional.

