

Nitronc Cycloaddition: Peracid Oxidation of Perhydro-1,2-oxazolo[3,2-c][1,4]oxazines

Prof. SHAIKH ASROF ALI

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

<http://www.kfupm.edu.s>

ABSTRACT

Regiochem. of peracid induced ring opening of perhydro-1,2-oxazolo[3,2-c][1,4]oxazines I (R = Ph, CH₂OH) and II in aprotic solvents is dictated by orientation of the lone pair of electrons on nitrogen. In contrast to the case with the corresponding hexahydro-2H-isoxazolo[2,3-a]pyridines, the oxidn. of I gives mainly an equil. mixt. of aldonitronc (III) and its hydroxylamine tautomer (IV), which undergo stereoselective cycloaddn. with styrene and Me methacrylate. The x-ray diffraction study reveals the 6-5 ring system in I to be cis fused.



