PREFACE

The work entitled "1,3-Dipolar Cycloaddtion Of α-Amino Nitrone" corresponds to the systematic investigation of 1,3-dipolar cycloaddition reactions of α-Amino-N-Cyclohexyl Nitrone with a variety of alkenes and a few alkynes and the SN_2 reactions of the nitrone with benzyl chloride and iso-propyl bromide.

Chapter-I (Theoretical Approach), deals with the theoretical aspects of the nitrone as 1,3-dipole. Approximate HMO calculation for N-cyclohexyl methylene nitrone and α-amino-N-cyclohexyl nitrone were done to find the existance and approximate stability of the α-amino nitrone. In the same chapter, the mechanistic view point of 1,3-dipolar cycloaddition were also discussed.

Chapter-II, deals with the chemistry of nitrone. Actually this chapter is the review of the previous works.

Chapter-III, is the experimental section.

Chapter-IV,deals with the results and discussion along with the spectral interpretation, viz., Mass and NMR.

Chapter-V, deals with the further scope and objective of the present work.

For cycloaddition reactions, different types of alkenes viz., normal, conjugated, moderately electron deficient and moderately electron rich alkenes were chosen. Reaction conditions, regioselectivity and stereospecificity of cycloaddition reactions of the nitrone with different alkenes and a few alkynes were studied.

The strong nucleophilic character of the nitrone was also studied.

Structures of all the products were assigned on the basis of 2D-NMR, ^1H NMR, Mass and IR spectras.