PREFACE

Polarized ketene dithioacetals, which are easily available from wide structural variants of active methylene compounds have been extensively explored in this laboratory for the development of several new synthetic methods for a variety of heterocyclic and carbocyclic compounds. The work described in this thesis has also been carried out as a part of this continuing research programme and highlights new transformations of oxoketene S,S- and S,N-acetals.

The thesis consists of four chapters. The first chapter gives a general introduction of polarized ketene dithioacetals and some of the recent transformations reported from this laboratory. The second chapter is divided into two parts. Part one deals with the reaction of S,N-acetals with nitrosyl chloride and the thermal cyclization of the resulting hydroxiiminoimines for the synthesis of novel 2,2-disubstituted 2H-imidazoles. In part two reaction of 1-N-aryl/alkyl carbonimidodithioates for the synthesis of 1-N-substituted imidazoles is described.

In the third chapter, a novel heteroaromatic annelation approach for the synthesis of 1,2-benzisoxazoles is discussed. Darzen's condensation on α-oxoketene dithioacetals for versatile synthesis of substituted and annelated furoates has been described in the last chapter.

All the compounds synthesized have been characterized with the help of their spectral data. The entire documentation in the thesis is supported by appropriate references; The references of the published work of the present investigation are cited in the respective chapter.