PREFACE

The dissertation entitled, "SOME SYNTHETIC AND COMPARATIVE STUDIES OF STABILIZED AND NON STABILIZED YLIDES" embodies investigations on the reactivity of some stabilized and non-stabilized azomethine, phosphonium and sulfonium ylides and has been divided into seven chapters. Each chapter deals with specific aspect of Ylide Chemistry.

In Chapter I, an exhaustive literature survey on preparation and reactions leading to comparative aspect of stabilized and non-stabilized azomethine, phosphonium and sulfonium ylides has been described in separate sections.

The Chapter II, gives an account of the synthesis of 2, 4, 6-triarylpyridines and 2, 4-diaryl-6-(β-Phenyl Vinyl) pyridines by the interaction of some p-substituted phenacylpyridinium bromides with α, β-unsaturated ketone in presence of a mixture of ammonium acetate and acetic acid. The structures of pyridines were confirmed by elemental IR and NMR data.

In Chapter III, exploration of studies is directed towards the reactivity of O-nitro benzylidene pyridinium ylide generated in situ from O-nitro benzylpyridinium bromide with a large variety of α,β-unsaturated ketones in presence of sodium acetate and anhydrous ZnCl₂.
or AlCl₃ at reflux temperature to give 1, 3-diaryl -5-nitro naphthalenes in 45-75% yield.

In Chapter IV, a stereoselective reactions of a new semi-stabilized phosphonium ylide viz. (9-anthrylmethylene) triphenyl phosphorane has been reported which involves the interaction of corresponding salt of a new phosphonium ylide with aromatic aldehydes in presence of sodamide in benzene or sodium methoxide in methanol to give exclusively trans-1-(9-anthryl)-2-substituted ethylenes in fair to good yields.

In Chapter V, we have concentrated our studies on a new stable phosphonium ylide viz. 10-anthrorylidene-triphynylphosphorane prepared by action of alcoholic sodium ethoxide on its corresponding 10-anthroryltriphenyl phosphonium bromide. The reaction of this ylide with a series of mono, di and tri-substituted bezaldehydes to gives substituted 10-benzylideneanthrones in fair to good yields.

In Chapter VI, a new sulfonium ylide. viz. p-flurophenacyldenedimethyl sulfurane, has been synthesized by action of NaOH on p-fluorophenacnacyldimethyl-sulfonium bro-mide and coupled with α,β-unsaturated ketones in presence of ammonium acetate in acetic acid or methanol to give asymmetrical pyridines having different substituents. Similarly, when the salt or ylide were coupled with 4-fluorobenzal -4-acetophenones, symme-
trical pyridines having identical substitutents at C₂ & C₆ positions were formed in 50-70% yields.

In the Chapter VII, the reactions of some substituted phenacyldimethylsulfonium bormide, with aromatic primary amines in presence of N, N-dimethylaniline to give 2-arylindoles in 40-70% yields. The course of reaction proceeded via the nucleophilic addition of aniline to carbonyl group of sulfonium salt which, in turn, underwent ylide formation after dehydrohalogenation.