# CONTENTS

## CHAPTER 1


**INTRODUCTION** **1-18**

References 19-22


## CHAPTER 2


**EXPERIMENTAL** **23-36**

**Section –I**

Synthesis of polymer supported metal complexes 23-25

Nomenclature 26

**Section -II**

Catalyst characterization 27-30

**Section-III**

Catalytic activity studies 31-35

References 36


## CHAPTER 3


**RESULTS AND DISCUSSION** **37-88**

I. Poly(styrene-divinylbenzene) supported Ru(III)-Schiff base complexes 38-47

II. Poly(styrene-divinylbenzene) supported Fe(III)-Schiff base complexes 48-57

III. Poly(styrene-divinylbenzene) supported Ru(III)-2-aminopyridine complexes 58-68

IV. Mechanistic aspects of epoxidation 69-72

V. Life cycle study 72-73

VI. Poly(styrene-divinylbenzene) supported Pd (II)-Schiff base complexes 74-88

References 89-91

**SUMMARY AND CONCLUSIONS** **92-94**

**LIST OF RESEARCH PUBLICATIONS**