CONCLUSION
CONCLUSION

From the study undertaken herein, it has become evident that polymer immobilized reagent do have enormous synthetic utility. Borohydride ions have been immobilized and reduction reaction of oxazolones have been carried out in presence of Ni$_2$B (nickel boride) under biphasic condition with the substrate in organic solvents. This procedure has several advantages as it is evident from the experiments carried out. BER-Ni$_2$B have been found to reduce selectively C-4 exocyclic double bond of the oxazolones giving a simple route to the synthesis of $\alpha$-monosubstituted glycines, namely the phenylalanines, in high yield, with the ease of recovery of products, unlike the other procedures reported earlier. Further, BER-Ni$_2$B system is successfully used in carrying out "Solid Phase" reduction of olefinic bond of chalcones and related enones. Although several attempts were earlier made to reduce the double bond cleanly, none of the methods tried so far have been found satisfactory in terms of simplicity of the procedure and ease of recovery of products. But this study establish the simple method for reduction of olefinic bond of chalcones and related enones in high yield with ease of recovery of product. Aryldiazonium ions are immobilized on to a cation exchange resin and subsequently reduced in solid phase by aqueous NaBH$_4$ to give arylhydrazines in good yield. The reduction of immobilized diazonium ions to produce hydrazines by this procedure is noteworthy. Simplicity of work up procedure is an added advantage. Bromate ions which have seldom been used in organic synthesis are indeed used as an oxidizing agent by immobilization onto an ion-exchange resin. It has been possible to emphasize the synthetic importance of bromate exchange resin in carrying out "Solid Phase" oxidation of aromatic aldehydes giving the corresponding carboxylic acids. The utility of bromate exchange resin as an oxidising agent has also been exemplified by the oxidation of alcohols and benzylhalides to the corresponding carbonyls without
overoxidation to carboxylic acids. Further, a simple aspect of synthetic utility of immobilized tribromide ion for bromination of aromatic and olefinic compounds was also investigated.

As already mentioned in the text, three different immobilized reagents and one substrate were selected for investigation. This was done to emphasize the widespread utility of the polymer immobilized reagents/substrate. It is expected that further studies on these systems may open up new horizon of Scientific and Industrial Research.
SOME REPRESENTATIVE
$^1$HNMR SPECTRA
OF
COMPOUNDS
REPORTED IN THE THESIS
^1H NMR SPECTRUM OF
"Methyl-(N-benzoyl)phenylalaninate"

(Compound No. 1a, Ref. Table A.I-3, page no. 68)
'HNMR SPECTRUM OF

"Methyl-(N-benzoyl)-4'-methoxyphenylalaninate"

(Compound No. Ib, Ref. Table A.1-3, page no. 68)
$^1$H NMR SPECTRUM OF
"Methyl-(N-benzoyl)-4'-bromophenylalaninate"
(Compound No. If, Ref. Table A.I-3, page no. 68)
'HNMR SPECTRUM OF
"2,4-Dinitrophenylhydrazone of benzophenone"
(Derivative of product no. 7, Ref. Table A.III-2, page no. 112)
HNMR SPECTRUM OF
"Benzoic acid"
(Product no. 1, Ref. Table B.1-2, page no. 124)
'HNMR' SPECTRUM OF
"Cinnamic acid"
(Product no. 6, Ref. Table B.1-2, page no. 124)
$^1$HNMR SPECTRUM OF
"Benzoin"
(Substrate no. 1, Ref. Table B.II-1, page no. 135)
HImR SPECTRUM OF
"Brazil"
(Product no. 1, Ref. Table B.11-1, page no. 135)
\(^1\)HNMR SPECTRUM OF

"Benzylchloride"

(Substrate no. 7, Ref. Table B.II-1, page no. 135)
'H NMR SPECTRUM OF
"4-Chlorobenzaldehyde"

(Product no. 10, Ref. Table B.II-1, page no. 135)