## **ACKNOWLEDGEMENT**

I had the rare privilage of carrying out my research work under Prof. J.R.Pandya, Department of Physics, Faculty of Science, M.S.University of Baroda, Baroda. Through out the course of my investigation, he guided me with utmost sympathy and understanding. I pay my most respectful homage to this truly great teacher.

My sincere thanks to Prof. S.K.Shah, Head Department of Physics, Faculty of Science and Prof. T.R.Joshi, Head, Applied Physics Department, Faculty of Technology and Engineering for providing research facilities in the respective departments. I express my sincere thanks to Dr. (Miss) Neera Tressler and Dr. D.K.Kanchan for their help in computer work and also to Dr.A.J.Shah, Dr.R.T.Shah, Dr.G.R.Pandya, Dr.C.F.Desai and Dr.(Miss) M.B.Patel for their kind cooperation.

I am highly grateful to Dr. M.B.Sureshkumar, Dr. D.R.Joshi and Dr. Annie Kuruvilla for their extensive help in the present work.

I am thankful to Prof. A.B.Darji, Dr. P.M.Shah and Dr. N.R.Shah for their constant encouragement.

It is a pleasure to record my sincere thanks to all my friends and collegues who helped me directly or indirectly in the accomplishment of this research work.

I owe my thanks to all in the Central Workshop for their kind cooperation.

Mr. Suresh Dalwadi deserves my special thanks for his cheerful help and cooperation in getting the thesis typed.

Without my wife, Beena, nothing would have been possible. I am highly indepted to her for her immense interest and encouragement. Lastly I would like to record my gratefulness to all other family members for their goodwill and forebearance during the period of this investigation.

-Raveendran.R.