ACKNOWLEDGEMENT

It gives me great pleasure to express my deep indebtedness and gratitude to PROF. G.R. PANDYA, Physics Department, Faculty of Science, M.S. University of Baroda, whose consistent guidance, inspiration, encouragement and constructive suggestions have enabled me to pursue the research work with sustained interest and enthusiasm.

I am grateful to PROF. V. P. BHATT, PROF. C.F. DESAI, DR. R.C. SHAHI and departmental teaching staff for their fond interest in my progress and encouragement during my research work. I take this opportunity to express my profound regards to PROF. D.R.S. SOMAYAJULU Head, Department of Physics, Faculty of Science, The M.S. University of Baroda, for providing necessary laboratory facilities and support under DRS programmer.

I am also thankful to PROF. S.N. MURTHY, Metallurgy Department, Faculty of Technology and Engineering, M.S. University of Baroda, for co-operation in X-ray work.

I am thankful to my senior research colleagues, DR. S.M. VYAS, DR. SAURABH BHAVSAR, DR. PRUTHVIRAJ SONI, DR. SONAL GUPTE, DR. SUMI DHAR, DR. HARSHVADAN PANCHAL, NARESH PATEL, MITESH SARKAR, MITESH JOSHI,
MANISH GADKARI, DHIREN SHAH AND KEYUR VYAS for extending their kind co-operation in the laboratory in one way or another. I am also thankful to the Central Workshop Staff for their co-operation whenever required during the course of my work.

I am also thankful to MR. JIGNESH SHAH for taking all the strains in preparation of the thesis in the final form.

I can never forget the moral support given to me by all my family members.

PLACE : VADODARA
Date: 29/02/02

KAMAL R. SHAH