## ACKHOWLEDGEMENT

This work could not have been possible without the stimulation provided by Dr.K.L.Narayane, Professer of Physics, Shivaji University, Kolhapur. I shall remain ever greatful to him.

I am thankful to Directors, R.S.I.C. Nagpur for making available $X$-ray diffraction data.

I express my sincere thanks to the University authorities for encouragement and making available the experimental laboratory facilities at the Department of Physics, Shivaji University, Kolhapur.
llam grateful to Prof.R.N.Patil Head of Physics Department, Shivaji University, Kolhapur. Prim.D. A.Patil, Vivekanand College, Kolhapur. Mr.S.I.Patil, Mr. H.R.Jadhay, Mr.S.H.Otari and my colleagues of Physics Department, Vivaekanand College, Kolhapur for their help and cooperation.

I am thankful to Dr.S.A.Patil, Dr.S.H.Chavan, Mr.A.P.Kashid and all the teaching and non-teaching staff of the Physics/Electronics Department, Shivaji University, Kolhapur, for their discussions and among a valuable help during the progress of my research work.

I appriciate the typing of the dissertation by Hrs.Ratna Prasad, and Shri.P.V.Ravan for the fine tracing work.

Place : Kolhapur
Date :

### 2.9 MAY 1989

(J.N.Patil) ${ }^{\prime}$

Lecturer in Physics, Vivekanand College, Kolhapur.

