

███ ACKNOWLEDGEMENTS ███

I wish to express my sincere thanks and regards to my guide **Dr. A. Venkateswara Rao**, Reader, Department of Physics, Shivaji University, Kolhapur for his invaluable guidance and constant encouragement through out the course of this work. The successful completion of this work is entirely due to his able guidance. Without his effort, I could not completed this work within the time limit.

I am also grateful to **Dr. A.T. Varute**, Vice-Chancellor and **Dr. B.P. Sabale**, Registrar, Shivaji University, Kolhapur for their timely help and encouragement.

I also express my sincere thanks to **Prof. K.L. Narayana**, Head of the Department of Physics and of the Physics Department to **Prof. R.N. Patil**, Former Head, for their valuable help, keen interest and providing laboratory facilities.

I must also thank to **Mrs. N.N. Paravathy** (S.R.F.) Department of Physics, Shivaji University, Kolhapur, **Dr. S.N. Patil**, **Dr. M.R. Shedam** and **Mr. P.V. Patil**, **Mr. N.D. Chaudhari**, **Mr. R.T. Aher**, **Mr. S.M. Gadekar**, **Mr. R.N. Patil**, **Mr. P.D. Malekar**, **Mr. Ghatage**, **Mr. Pratap Wagh** (J.R.F.), other office staff and Laboratory staff for their kind co-operation in my work.

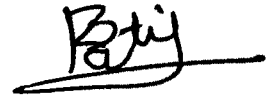
I am also thankful to **Mr. G.E. Warke**, **Mr. P.P. Pawar** and artist **Sadanand Sutar** for an artistic photography and my special

thanks are due to Mr. Satish S. Anekar and Mr. Shrikant Bknalkar for typing the thesis.

Lastly, I would like to acknowledge my debt to my Father and Mother for their help and co-operation. I have to mention that the co-operation of my brother Prof. Vilas B. Patil and Mrs. Kavita V. Patil lead to the graceful completion of my present work.

Place : KOLHAPUR.

Date : 8/8/94



K.B. Patil