## ACKNOWLEDMENT

In preparing this dissertation, I have had the benefit of co-operation of a number of people. I wish to express my appreciation to all of them and make the following specific acknowledgments.

The dissertation is the fruit of the valuable guidance given by my guide respectable Dr. B. K. Chougule, Professor in materials science. This is my great fortune that I got his skilful direction. The work presented here could not have been accomplished without his inspiring guidance, constructive criticism and constant encouragement during the course of my research program.

I am greatful to Prof. A. V. Rao, Head, Department of Physics, Shivaji University Kolhapur for his assistance and words of appreciation.

I am thankful to Dr. Y. D. Kolekar, Dr. S. T. Lotake, for their earnest suggestions and encouragement during this work. I am also thankful to Prof. C. H. Bhosale, Dr. C. D. Lokhande, Dr. P. S. Patil, Dr. S. T. Navare, Dr. K. Y. Rajpure, Dr. V. J. Fulari, Dr. R. S. Vatkar, Dr. V. Puri, Dr. A. K. Sharma, Dr. L. D. Jadhav, and other faculty members for extending their helping hand whenever I required.

I thank my colleagues Dr. C. M. Kanamadi, Dr. R. S. Devan, Dr. D. R. Patil, Dr. S. A. Lokare, Miss. S. S. Chougule, M. M. Mallapur, P. U. Mahamuni, Mr. N. M. Burange, P. A. Jadhav, H. V. Jamadar, M. B. Shelar for their co-operation and fruitful discussion related to my work.

I also should express my thanks to my friends, Radhika, Manda, Swati, Sujata, Shaila, Priti, Reshma, Aruna, Sarita, Amol and Mrs. Herur, for their friendly suggestions and timely help making my stay at my aim firmly.

I am thankful to all the non teaching staff of Physics and Electronics Departments and especially Mr. R. D. Nalawade for their co operation. I am thankful to CFC and USIC staff for providing the experimental facilities It is my duty to thanks my sisters Sangita, Jayashri and Daya, brother Shrikant and Mr. S. Dhumal, Mr. A. Koli, and Mr. S. Beske for providing me the moral support in this endeavor.

Lastly, I would like to thanks my loving parents who taught me to go on the right way and never to be depressed even in the complicated situations.

Yogita B. Kamble