Acknowledgment

It would not have been possible to write this doctoral thesis without the help and support of several kind people around me and appropriate to acknowledge. I would like to express my sincere gratitude to all people who have supported in different ways: in experiments, to understand and interpret the observed results, etc. I am indebted to Department of Physics, University of Rajasthan, Jaipur and National Physical Laboratory, New Delhi for providing me all the necessary facilities to carry out my research work.

This modest piece of this research could have not been accomplished without the support, inspiring, unceasing, thoughtful and combined guidance of Dr. V P S Awana, Principal Scientist (N.P.L., New Delhi) and Dr. K V R Rao, University of Rajasthan, Jaipur.

No words suffice to express my gratitude to my parents, brother and sisters who have given me their unequivocal support throughout this work. My special thanks to my wife Pratigya for her constant support, encouragement, endurance and unwavering love all times. I wish to thank my beloved son
Vedant for his understanding in not taking out for outings and newborn daughter to whom I could not even whisper love sweet nothings at this point of time.

I am thankful to Dr. Hari Kishan, Dr. R K Kotnala for their continuous inspiration, encouragement, valuable suggestions and support. I am fortuitous in working with many Ph.D scholars Anand, Shiv, Rajbir and friends Dr. Rajib, Anjana, V K Jaiswal, Mukesh and Bhasker whose suggestions kept my morale in great state of mind.

Last, but not the least, I acknowledge with profound thanks to my friends Dr. Jagjivan and Manoj who both together always ready to help be personal. Big thanks to my colleagues at work place, Mr. Rajeev Sharma and K. Velayudhan for their liberal support.

(Rajendra Singh Meena)