ACKNOWLEDGEMENTS

My gratitude to my revered teacher, Prof. V. Rama Murthy, Professor of Physics and Dean of Physical Sciences, Sri Krishnadevaraya University, Anantapur, cannot be expressed in words alone. He has been not only a great source of inspiration but also a pillar of strength to me throughout the duration of my research. His continuous encouragement, guidance and valuable advice have played a crucial part in this research work. At the same time, I express my heartfelt thanks to him.

I am greatly indebted to Prof. D.V. Subbaiah, Professor and Head of the Department of Physics, SK University and all other former heads of the Department who kindly provided the required laboratory facilities to me during the course of my research.

Besides, I convey my gratefulness to Prof. E. Rajagopal, Professor of Physics and Chairman, Board of Studies, Department of Physics, SK University for evincing keen interest and for his continuous encouragement.

I take great pleasure in expressing my sincere thanks to Prof. T.V. Ramakrishna Rao, Prof. N. Manohara Murthy, Prof. V. Hyderkhan and Prof. K.V. Siva Kumar, Department of Physics, SK University, Anantapur.

I am also thankful to Dr. R. Ramakrishna Reddy, Associate Professor, Dr. R. Jeevan Kumar, Associate Professor and other Faculty Members in the Department of Physics, SK University, Anantapur for the help rendered by them.

I would be failing in my duty if I do not convey my gratefulness to Prof. S. Venkata Naidu, Department of Polymer Science and Technology and present Registrar, S.K. University, Anantapur, who is also my bosom friend for his unstinted support.

I am also thankful to Prof. A. Varada Rajulu, Dr. N. Subbarami Reddy, Associate Professor, Dr. K. Chowdip Rao, Associate Professor, other Faculty Members and Dr. R. Lakshminarayana Reddy, Research Scholar, Department of Polymer Science and Technology for their valuable suggestions and kind help in furnishing books of reference.
I would like to express my thanks to my co-research scholars, Sri B. Phani Raja Rao, Lecturer in Physics, Government College, Anantapur and Sri M. Suresh Babu, Junior Lecturer in Physics, APR Junior College, Kodigehalli, Hindupur. Dr. Y. Nazeer Ahmed and Mr. K. Ramagopal for their valuable assistance and encouragement.

I take this opportunity to express my heartfelt gratitude to Sri P.L.N. Reddy, Correspondent. SSBN College, Anantapur, without whose persistent words of encouragement and support, this research work would not have been possible. I also pay my humble and respectful thanks to him.

My sincere thanks are also to the Principal and all colleagues of my parent institution, SSBN College, Anantapur.

I feel that words are inadequate to acknowledge my thanks for the affection, hospitality and encouragement from Smt. Savithri Rama Murthy.

I deem it my duty to thank my parents and express my appreciation to my betterhalf Smt. M. Subbalakshamma for her whole-hearted cooperation during the period of my research. It is not out of place to mention that my children Chi. M. Madhusudana Reddy and Chi. M. Swetha, being always cheerful, allowed me to do the best.

Finally, I would like to thank Sri V. Sahadevan and Mr. S. Sandeep for their excellent computing and printing work.

M. NARASIMHA REDDY