ACKNOWLEDGEMENT

I would like to thank many people who have helped and supported me during my studies leading to this dissertation.

First of all, I express my respectful and deep sense of gratitude to my guide Dr. C.K. Mahadevan for his valuable guidance, erudite suggestions, timely corrections, friendly nature and the keen interest in the completion of the present work.

I am grateful to my former Principal Dr. P. Girijakumari Amma, the present Principal Dr. D. Chandralekha, the Head of the Department Dr. K. Jayakumari, faculty members of Physics department, and the Management of Sree Ayyappa College for Women, Chungankadai, Nagercoil for their constant encouragement and support throughout this research work.

I am highly thankful to the Chairman - Secretary Er. P. Arumugam Pillai and the Principal Dr. A. Meenakshi Sundararajan of S.T. Hindu College, Nagercoil for their encouragement throughout this research work.

I am thankful to the Management of S.T. Hindu College for extending the facilities for me to work at S.T. Hindu College. Also I thank the University Grants Commission for the FDP award for two years.

I record my sincere thanks to Mr. P. Sekar Ramasubramanian, Head of the Department of Physics, S.T. Hindu College for the generous support extended towards the successful completion of this research work.
I feel happy to thank Dr. T.H. Freeda, Associate Professor, Mr. K.U. Madhu, Assistant Professor and Dr. M. Meena, Assistant Professor, of the Department of Physics, S.T. Hindu College, Nagercoil for their encouragement during the course of study.

My special thanks to Dr. M. Vimalan, Research Associate in Physics, S.T. Hindu College, Nagercoil for his timely help in characterization studies and in the preparation of the thesis.

I would like to extend my heartful thanks to the full time Ph.D. scholars Mrs. D. Shiney Manoj, Mrs. K. Usha, Mrs. G. Deepa, Mrs. R. Sunitha, Mrs. C. Kaladevi (FDP-scholar) and Mrs. C. Latha (FDP-scholar) for their kind cooperation.

I have no words to express my deepest sense of gratitude for the everlasting blessings of my parents Sri. V. Somasekharan Nair and Smt. Indira Bai Amma, who are the source of inspiration for me in all my endeavours. I acknowledge the moral support and guidance given by my sister Mrs. Anitha Nirmalan and brother Mr. Harikumar.

With sincere thanks, I express my deep sense of gratitude to my beloved husband Mr. T. Vijayan and affectionate children Mr. V.P. Vipin and Master V.P. Nithin, for their constant inspiration and encouragement, and for bearing my un-availability and negligence towards them during the tenure of this work.
I would like to express my sincere gratitude to my guide’s wife Mrs. Sakunthala Mahadevan and children Mr. M.S. Gajanand and Master M.S. Karthicanand for their generous support and co-operation.

I am also thankful to ‘Win-tech Computers’, Nagercoil, for their sincere effort in the preparations of the final report. I thank one and all who have extended their support and help towards the completion of the research work and preparation of the thesis.

Finally, I owe everything to God.