Acknowledgements

I take this opportunity to express my deep sense of gratitude to my research supervisor, Dr R D Mathad, Professor, Department of Physics, Gulbarga University, Kalburgi for his constant and untiring support throughout my research work. I thank him for the encouragement, stimulating discussion and suggestions. I am extremely thankful to him for his adept guidance and attention in successful completion of the thesis. I feel very fortunate to work with such an inspiring and dedicated professor. I am greatly obliged to him not only for his valuable guidance but also for the freedom he gave me during my research work.

I thank Prof. V.M Jali Chairman, Prof. T sankarappa, Prof. S. M. Hanagodimath, Prof Basavaraj Sannaki and Prof. B. R. Kerur, for their cooperation during the studies. I thank all the non-teaching staff of the Department for their kind help. I am also thankful to the University Office Staff (Administration, Academic) and U. S. I. C. Department for their cooperation.

I thank Prof. M.V.N. Ambika Prasad, Department of Materials Science, Gulbarga University Kalburgi for extending the laboratory facilities.

I thanks to University Grant Commission for providing the financial support by UGC-BSR fellowship.

My thanks are due to Dr Pratima Mathad Professor & Chairman Department of Botany Gulbarga University, Kalburgi for her support and kind concern.

I take this opportunity to thank my fellow research scholars: Sadia Afreen, Firdous Jahan, Dr.Rashmi, Dr. Anita G, Tanveer, Nazia, Shilpa, Ashwaject, Dr. Anil Malipatil, Dr. Praveen, Chandraprbha, Mrs.Manjuda, Avinash, Haji Inamdar, Sharanabassamma Dr. T. Rajeshwari, Dr. Balaji, Dr.Ramanna, Mahalesh, Manjunath, Santosh, Dr. Tayyab Ali, Dr. Zakir and Asra . I am grateful to them for their timely help and encouragement to get through the difficult times. I also remember the enjoyable moments I spent with them.
Lastly, and most importantly, I wish to thank for the constant emotional support and encouragement from my parents: Abdul Khader and Mrs. Mahmooda Begum. They always supported me, taught me, and loved me. I am forever indebted to them for their understanding, endless patience, encouragements and standing as my back bone. My big thanks are also due to my brothers Asrar Ahmed and Abrar Ahmed and my sisters Asiya Samreen and Summaiyya Ambreen are worth recalling at this juncture. My nephews: Zoya, Khadija, Maira, Hannan, Ateefa, Sobia and newly born Ashaar Khan for their love and absolute affection. I received maximum moral support from my family members: Mother-in-law Khatunbi, and Father-in-law Syed Abdul Hameed, sister-in-law Syeda Asma and Prof. Anees Fatima, Brother-in-law Syed Saleem, Kaleem, Areefuddin, Prof Zammarud Taj, and Syed Javed I feel very proud to share my present happiness with them.

My special thanks are due to my husband in the crucial time of my thesis writing. Last but not the least, the love, affection and support of my lovely kids, Amaaz M Hussain, Ayesha Zarmain and newly born baby Naumaan M Hussain, who shared my happiness and made me happy, and also for some very special moments when the going was tough. I thank all my family members, relatives and friends.

Shazia Farheen