ACKNOWLEDGEMENT

My sincere gratitude to my supervisor, Dr. S. C. Murugavel, Associate Professor, Head, Department of Basic Sciences (Chemistry), PSG College of Technology for his continuous support, patience, motivation, enthusiasm and immense knowledge. I am extremely indebted to Dr. R. Rudramoorthy, Principal, Dr. M. Kumaravel, Head, Department of Chemistry & Applied Chemistry, PSG College of Technology, Coimbatore, for their support.

I warmly thank Dr. M. Natesan, Scientist, CECRI, Karaikudi, Dr. T. Ramachandran, Amirta School of Engineering, Coimbatore and Dr. A. Selvaraj, CBM College, Coimbatore, for their valuable guidance and constructive criticism.

I am grateful to the management, and Rev. Sr. S. Savariammal, Principal, Nirmala College for Women, Coimbatore, for granting permission and providing necessary infrastructure and resources to accomplish my research work. It is my fortune to gratefully acknowledge Dr. G. Geethamalika, Dr. V. G. Vasudha, Mrs. A. D. Rexina, Sr. Kulandai Theresa, Mr. K. Balaji, Mr. M. Natarajan, Mrs. G. Latha, and Mrs. R. Vini for their support and generous care for shaping the thesis.

I would like to pay high regards to my husband Mr. S. Krishnaprakash, son K. P. Hariananthan, daughter K. Visaaka Varshini, my parents, brothers, In-laws and Mr. D. Nagarathinam and his family for their sincere encouragement and inspiration which buttressed me to perform my work comfortably.

GUNAVATHY N