ACKNOWLEDGEMENT

It is with immense pleasure that I express my deep sense of gratitude to honourable my guide Dr. A. ARUN, M.Sc., Ph.D., P.D.F. (Netherlands), Assistant professor, PG & Research Department of Chemistry, Government Arts College, Tiruvannamalai, for his inspiration, impressive ideas, unflinching interest, valuable advice, excellent guidance, continuous motivation, and considerable encouragement and his constructive suggestions which made the presentation of my thesis a grand success.

I take this opportunity to sincerely acknowledge the Department of Science and Technology (DST), Government of India, New Delhi, for providing financial assistance in the form of JRF and SRF which buttressed me to perform my work comfortably.

My heartfelt thanks are due to the Vice Chancellor, the Registrar and C.O.E. for giving me an opportunity to register with Manonmaniam Sundaranar University for my Ph.D., work. Further my grateful thanks to the Head and other staff members of PG and Research Department of Chemistry, M.S. University for their whole heartfelt support to finish my Ph.D. work.

I would like to express my profound gratitude to Dr. M. Subramani, M.Sc., M.Phil., B.Ed., Ph.D., Principal, Government Arts College, Tiruvannamalai for providing the necessary facilities to carry out the work.

I express my sincere thanks to the Head of the Department Dr. V. Manivannan, M.Sc., Ph.D., PG & Research Department of Chemistry, Government Arts College, Tiruvannamalai, for his encouragement in successfully completing the project.
I express my sincere thanks to sister Prof. M. Kayalvizhi, M.Sc., M.Phil., of our PG & Research Department of Chemistry, Govt. Arts College, Thiruvannamalai for their valuable suggestions and timely helping for economic support.

I would like to thank to Dr. M. Maheshwari, M.Sc., Ph.D., P.D.F. Department of Chemistry, Anna University, Chennai and Dr. S. Devaraj, M.Sc., M.Phil., Ph.D., P.D.F. Department of Chemistry, Taiwan University, Taiwan for their co-operation and support in helping me finish my project work successfully.

I would like to thank to Dr. A. Ravi, Mrs. K. Rajathi, Prof. M. Ganapathi, Dr. J. Dhanraj, Dr. G. Elango, Mrs. T. Deepa, Mrs. R. Shanthi and all the Chemistry Guest lecturers for their valuable suggestions during my Ph. D work.

I am grateful to Dr. S. Nagarajan, Research Associate and Angayarkani Reaserch Scholar, Central Leather Research Institute, Adyar, Chennai for providing the instrumental facilities to carry out this project.

My special thanks to Revathy Selvaraj, P. Uma, K. Moorthy, Mr. J. Suresh, Mr. S. Karthik, Mr. V. Thangaraj, Mr. S. Elumalai, Research Scholars, Department of Chemistry, Tiruvannamalai and V.V. Srinivasan, Research Scholar, Department of Chemistry, Anna University, Chennai for their most valuable help during the tenure of the project. I also like to thank all the OPEN Research Center group members for making this lab a wonderful workplace.

I would like to thank all teaching staff members of other Department and non-teaching staff members of our department and special thanks to Mr. M. Palraj, Lab. Assistant and other Lab. Assistant for their kind help during the course work.
Last but not least, I would like to pay high regards to my father Mr. M. Ekambaran, mother Mrs. E. Munigantha, uncle Mr. M. Karthikeyan, and my brother E. Vinoth, my sister E. Srilasri, E. Jayasree, lover baby K. Srimonish, and friends for their sincere encouragement and inspiration throughout my research work and lifting me uphill this phase of life. I owe everything to them. Besides this, several people have knowingly and unknowingly helped me in the successful completion of this project.