ACKNOWLEDGEMENT

The author is indebted to her supervisor, Dr. S. Moorthy Babu, Lecturer, Crystal Growth Centre, for the stimulating discussions, constant encouragement and scholarly advice to carry out the research work.

The author expresses deep sense of indebtedness to her joint supervisor, Prof. P. Ramasamy, Director, Crystal Growth Centre, for his inspiring guidance, enthusiastic encouragement, scientific proficiency, moral support and personal interest.

The author is thankful to Prof. C. Subramanian, Emeritus Scientist and Prof. R. Dhanasekaran, Professor, Crystal Growth Centre for their helpful suggestions. The author is extremely grateful to Dr. P. Santhanaraghavan, Assistant Professor, Crystal Growth Centre for the invaluable help rendered during the course of this investigation. The author expresses her heartfelt gratitude to Dr. J. Kumar, Reader and Dr. K. Baskar, Lecturer, Crystal Growth Centre for their continuous encouragement.

The author owes a deep intellectual debt to Dr. N. Senguttuvan, Shonan Institute of Technology, Japan for his continuous help, critical comments and moral support throughout her research career. The author is indebted to her friends, Dr. R.R. Sumathi, Ms. C. Vijila, Ms. K. Meera, Ms. S. Boomadevi and Ms. S. Akila for their constant encouragement. The author acknowledges the assistance given by Mr. P. Ragunathan, Technical Assistant, Crystal Growth Centre throughout this work. The author is also thankful to all the members of Crystal Growth Centre for their cooperation. The author places on record the help rendered by Prof. V. Sastry, IGCAR, Kalpakkam and Dr. K. Subramanian, Department of Chemistry, Anna University in characterisation studies.

The author is also thankful to the Council of Scientific and Industrial Research (CSIR), Government of India for the award of Senior Research Fellowship.

The author thinks back in gratitude the help rendered by her late father all through her career. The author expresses her deep sense of gratitude to her mother for her constant encouragement and moral support. The author is greatly indebted to her brother, sisters and their families for their continuous encouragement. The author is grateful to her husband for his cooperation and support in completing this work successfully.

PREMILA MOHAN