

ACKNOWLEDGMENT

I wish to take this opportunity to place on record my deep sense of gratitude to **Prof.S.Mohan, Ph.D., D.Sc., Dip.in German, M.Inst.P., F.I.C.S.,** Raman School of Physics, Pondicherry University, for his valuable insights and stimulating guidance. This work would not have been satisfactorily accomplished but for his genuine cordiality, patience, encouragement and motivation.

I am grateful to **Prof.A.Srinivasa Rao, Ph.D.,** Head of the Department and other Faculty Members of Raman School of Physics, Pondicherry University for their encouragement and good wishes in this venture.

I owe a lot to **Shri.R.Murugan,** Senior Research Fellow, who helped me in this endeavour with utmost care and concern. Also, I thank **Shri.K.Settu,** and other Research Scholars of Raman School of Physics, for their timely help.

I am thankful to **Prof.Wang Ding Shing and Prof.Shen Dian Hong,** Institute of Physics, Beijing, for providing the raw materials.

My thanks are also due to Prof.Dr.Csakvari Bela, Dr.Miklos Gal, Prof.K.Zimmer, Dr.J.Mink, Dr.I.Hargittari, Eotvos University, Hungary, for extending the laboratory facilities and also for their enlightening discussions.

I wish to acknowledge the help received from the Faculty Members of Material Science Research Centre, I.I.T, Madras.