Acknowledgements

Any serious endeavour requires providential guidance in abundance and I thank Almighty God for guiding me throughout this research and for helping me to make this dissertation a definite reality.

I owe a great deal to many persons and institutions for the invaluable help they have rendered to me in the preparation of this thesis. I would like to place on record my profound debt of gratitude to Prof.(Dr.) Sabu Thomas, School of Chemical Sciences, Mahatma Gandhi University, Kottayam for his proper guidance, help and constant encouragement through every stage of the research work. Guidance and help of Dr. Zachariah Oommen, Reader in Chemistry, CMS College, Kottayam and Dr. Kuruvilla Joseph, Reader in Chemistry, St. Berchman’s College Changanacherry is gratefully acknowledged.

I am extremely thankful to the Manager of Mar Thoma College, the Principal Dr. Abraham George, Dr. Abraham Varghese (HOD of Chemistry), other faculty members of the Department of Chemistry and all other teaching and non teaching staff of MarThoma College, Tiruvalla for their valuable support. I also acknowledge the service rendered by the Principal and other faculty members of CMS College.

Thanks are due to the University Grants Commission, whose Faculty Improvement Programme had made it possible for me to take time off from my regular academic work and devote full attention to this academic pursuit.

I am also thankful to the Director, the faculty members and all others at School of Chemical Sciences for their support and encouragement during the Ph. D programme.

I deeply appreciate the help rendered to me by Prof. (Dr.) N. R. Neelakantan, Former Head, High Polymer Engineering Division, Prof. (Dr.) N. G. Nair, Former Head, Composites Technology Centre and Prof. (Dr.) S. K. Malhotra, Head, Composites...
Technology Centre, IIT Madras, Chennai. Help extended by Dr. Abdel Boudenne University of Paris, France, is gratefully acknowledged.

Discussions with the composite experts of my lab Dr. Geethamma V.G., Dr. Laly A. Pothen, Dr. Sreekala M.S., Dr. Manikantan Nair, Dr. Maya Jacob and Dr. Seena Joseph were deeply enlightening. Special thanks to Dr. Leena. B. Cheriyan for her valuable comments.

This work would not have been possible without the unflinching support bestowed upon me by my colleagues. My deep gratitude and sincere thanks are due to my dear friends Sobha V Nair, Seno Jose, Dr. Bijoy Francis, Dr. Ranimol Stephen, Dr. Susan Joseph, Dr. Molly K.A, Anil Kumar, Biju, Marykutty Joseph, Cibi Komalan, Raju Thomas, Selvin Thomas, Aju Joseph, Jesmy Jose, Meera A. P., Sreekumar P. A., Jacob John, Indose Aravind, Viju Susan Mathew, Sherly Annie Paul, Indira K. N., Tomlal, Shaji Joseph, Thomas P.C, Umadevi, Roscillin, Jyothish Kumar, Anu Tressa Sunny and Dr. Bindu P of Polymer Technology Laboratory, Mahatma Gandhi University.

Bijumon George, Shijo, Jaimol Jacob and Sholly Paul provided lab and computer assistance.

I would like to thank all the members of my family who were considerate enough to create a congenial environment at my home, and also for their unstinting love, support and prayers without which I would not have been able to complete this work. Special thanks to my beloved husband Dr. Raju. P. George, whose support and enthusiasm made it possible for me to complete the assignment through the turbulent times. My daughters Eima and Reyma deserve a special mention for their unconditional love and cooperation.

Thanks are due to Shibu K.V. and Unni, Minitek Computers for their valuable help in finalizing this thesis.

Thank you all. 

Maries Idicula