ACKNOWLEDGEMENTS

It is my proud privilege to express my deep sense of gratitude, wholehearted sincerity and respect to my esteemed supervisor Dr. E. Purushothaman, Professor (Retd), Department of Chemistry, University of Calicut, for giving me an opportunity to join his research team. His constant encouragement, able guidance, constant support and valuable suggestions throughout the period of research enabled me to complete this study.

I am extremely grateful to Dr. P. Raveendran, Head of the Department of Chemistry and also to the former HOD’S Dr. K. Muraleedharan and Dr. V. M. Abdul Mujeeb for providing research facilities in the department. I owe my sincere thanks to Dr. M. T. Ramesan for his valuable, positive suggestion and help for the improvement of research programme. I also take this opportunity to express my sincere gratitude to Dr. Abraham Joseph, Dr. N. K. Renuka, Dr. A. I. Yahia, Dr. Pradeepan Periyatt, Dr. D. Bahulayan, Dr. K. Aravindakshan and Dr. P. Mohammed Shafi, for their timely intervention, encouragement and motivation. I would like to acknowledge non teaching staff in the department for the help and support rendered by them.

I express my sincere thanks to Dr. A. Sujith, Assistant professor, NIT Calicut, Roy K.J, my colleague at Govt. Arts and Science College, Kozhikode for providing the research facilities of NIT and making arrangement for SEM, TG and FTIR – ATR, for the facilities of DLS by Dr. V. Sajith Assistant professor NIT Calicut, Dr. P. P. Pradyumnan, Department of Physics, University of Calicut for the XRD measurements, Dr. C. Rajesh and P. Divia, MES college Valanchery for helping me to do characterization, Dr. C. Radhakumari, Sreechithra Institute of Biomedical technology wing, Thiruvananthapuram for DSC measurements, Dr. Sarath Josh, IISER Kolkata for SEM analysis. I also express my sincere gratitude to technical
consultancy division, RRI Kottayam for the rheological measurement, CFSC Manjeri and Changanasseri for mechanical property measurements and STIC, CUSAT.

It gives me immense pleasure to put on record my deepest gratitude to my research group members Sreejith M.P, Aparna K Balan, Subair N, Jinitha T.V and Dipin T for their help, support, suggestions and discussion throughout the research. I express my special thanks to Jasna Nihmath, Jayakrishnan and Suhailath from organic lab for their sincere friendship, help and support. I extend my gratitude to lab mates Rajeena, Soumya, Thasneem, Shamsiya, Jithin, Mohammed Salim, Nidhisha, Jency and Syam sankar. I also wish to express my special thanks to the senior research scholar of our research group Sareena C for her valuable help and timely suggestions. I would like to acknowledge Kavitha, Soufeena, Safna and other research scholars in the Department of Chemistry for their friendly approach and cooperation. I also remember my students Sagitha and Vipin for their help for characterization in the course of my study.

I would like to express my gratefulness and thanks to University Grant Commission (UGC) and the Collegiate Education Department, Govt. of Kerala for giving me the opportunity to complete the research work under FDP scheme. I am also obliged to Principals Sri. Raghavan, Sri. P Sivaramakrishnan, my colleagues at the Department of Chemistry, Dr. C.E Renjini, Smt. N.I Sajini, Dr. S Jayasree, Mr. K.J. Roy, Dr. C.P Muneer Dr. Nidhin Paul, Dr. K. Jasila, Dr. C. Sangeetha, other colleagues and nonteaching staff of Govt. Arts & Science College, Kozhikode for their support, encouraging approach, motivation and finely continuous cooperation wherever needed.

I am deeply indebted to my parents and sisters, for the prayers and their care was a source of strength and support to my effort. I have immense pleasure to express my heartfelt gratitude to my husband Dr. K.V. Mohammed Kunhi, daughters Fahma and Farha for their love, support, help, motivation,
encouragement, prayers and patience all along the research programme. They have to adjust so much during my research period, which becomes a positive energy to complete my work within the stipulated period.

Above all, I bow to the God Almighty, the most merciful and beneficent, by the grace of Him I reached upto this stage and completed this study.

Shaniba.V (Vakketh).