ACKNOWLEDGEMENTS

I owe my deepest dept of gratitude to Dr. L.M. Manocha, Professor and Head, Department of Materials Science, Sardar Patel University, Vallabh Vidyanagar under whom I had the opportunity of working as research student. I am very deeply indebted to Prof. L.M. Manocha and Prof (Mrs.) S. Manocha, Department of Materials Science for their important and stimulating ideas. The insightful discussions with them gave me invaluable help in organization of the experimental work, interpretation of the results and in writing the thesis. It is they who taught me the rudiments of research and guided me very painstakingly. I have been highly benefited from their constructive criticism at all stage of my work. The years spent in their counsel and company will have a long lasting positive impact on my professional career. Special thanks are due to Dr. (Mrs.) S. Manocha for her guidance in every aspect of life. This thesis is an outcome of her binding concern, support and blessings. She gave me a much needed moral support when things were ups and downs. I would like to express my gratitude for her care, help and guidance.

I sincerely thank my friends and colleagues Dr. Vanraj Chauhan, Dr. Mitesh Patel, Dr. Ashish Warrier, Dr. Jignesh Valand, Dr. Raviraj Shah, Dr. Rakesh Patel, Dr. Bharat Patel, Dr. Rakesh Raj, Dr. Narendra Movaliya, Dr. Nikesh Patel, Dr. Amit Brambhatt, and Dr. Harshad Patel for their timely help and support during and towards successful completion of my research work.

I am also thankful to non-teaching staffs Mr. S.A. Barot, Mr. B. Maheriya, Mr. R.M. Rana, Mrs. Parul Sheth and Mr. Hardik Shah for their constant cooperation.

I am grateful to the ARDB for providing me financial assistance as Research fellow.

I am grateful to the University Grant Commission (UGC), Govt. of India for providing me financial assistance as Research Fellow under the Programme of “Center of Excellence of Applied Polymer (CEAP)”. 
For the present work extensive use of the testing facilities was needed for measurements for elemental analysis at Sophisticated Instrumentation Center for advance Research and Testing (SICART), Vallabh Vidyanagar. I am grateful for characterizing the samples and the Management of SICART-CVM for providing the facility.

With deep and heartiest sense of gratitude I thank my mentor Prof. L. M. Manocha, Prof. (Mrs.) S. Manocha, my parents, my lovable wife Mrs. Neeta and my son Yuvraj for their loving support who were there from the beginning always encouraging me to strive for the best I could do in everything.