

ACKNOWLEDGEMENT

I pick up this opportunity to express my feelings of gratitude to all those who co-operated with me during the course of this research work.

At the outset, I wish to thank my guide, Prof. A.K. Rakshit for his constant encouragement, suggestions & constructive criticism. His persistence alone sustained me to undertake this research problem and complete it in the required time.

I am grateful to Prof. A.C. Shah, Head, Dept. of Chemistry and Prof. P.K. Bhattacharya for providing me the laboratory and instrumentation facilities for this study.

I am highly indebted to Dr. T.S.R. Prasada Rao [IIP, Dehradun], Dr. V.K. Kaushik [R&D, IPCL, Baroda], Dr. U. Dayal [R&D, IPCL, Baroda] for the surface area, ESCA and GPC analyses.

I am thankful to Dr. Sychanthavong, Geology Department, M.S. University, for the SEM analysis.

My sincere thanks are also due to Dr. J.T. Guthrie, Department of Color Chemistry, Leeds University, Leeds, U.K. for gifting Guyana rubber and the Contact- θ -meter, without which the present study would have been incomplete.

I gratefully acknowledge the financial support from University Grants Commission [UGC], Government of India, by awarding me the Junior Research Fellowship [1988-1990] and the Senior Research Fellowship [1990-1992] during the tenure of this research work.

I would be failing in my duty if I don't acknowledge my research colleagues : Roychen, Ajith Cherian, and Ajith S. for their helping hand.

Had it not been for my friends, I would not have reached this final stage of my thesis. I sincerely thank them : Leena, Beena Rawat, Ashutosh, Beena Shah, Ujval, Pushpa, Atul, Paulomi, Shailesh Patel and Shailesh Bhatt for their memorable companionship and moral support.

Above all, a word of love to my sister and parents for understanding me.

Lastly, I thank Mr. Harshad Mody of Swastick Zero Type for doing an excellent typing and bringing this thesis in the final form.

Veena Vangani

VEENA VANGANI