ACKNOWLEDGEMENT

First of all, I express my gratitude to "Almighty" and it's "Divine Destiny" who has made everything possible.

It is my pleasant duty that I must record my deep sense of thank and gratitude to all those who were associated with me and their collective efforts enabled me to compile this work.

It's my privilege to express deep sense of regard and respect to my supervisor "Prof. P.K. Mishra" for giving me an opportunity to join his prestigious laboratory. I am highly obliged and thankful to him for providing me his illustrious guidance, encouragement and futuristic vision, which enabled me to develop a better understanding of the subject and leads to a successful completion.

I would like to acknowledge my sincere gratitude to "Dr. Pradeep Kumar" (Associate Professor, Department of Chemical Engineering & Technology) and "Prof. S.N. Upadhyay" (Emeritus Professor, Department of Chemical Engineering & Technology) for their kind guidance and constant encouragement throughout the project work. Their supervision, loving and disciplined way of work helped me at every step to accomplish this work. I am indebted to him for cultivating values and confidence in me.

I extend my sincerest thanks to "Prof. V.L. Yadav" (Internal Supervisor, Department of Chemical Engineering & Technology) and "Prof Rajeev Prakash" (External Supervisor, School of Material Science) for their insightful advices and suggestions throughout the research.

My sincere thanks to all respected faculty members of the Department of Chemical Engineering & Technology for their constant inspiration and valuable suggestions. I am also thankful to the Chemical Department for providing me essential research facilities. I extend my thanks to Mr. Gopal Srivastava, Mr. S.K. Verma, Mr. R.C. Singh, Mr. Raj Bahadur, and other staffs for their support and help during research.

I owe my sincerest thanks to my lab mate "Ms. Zeenat Arif" for her constant support and guidance during experimentation. Also I would like to express my special thanks to my friends Mr. S. K. Srikar and Mr. Arun Kumar Gautam for giving me their valuable suggestions and encouragement.

The sequence of acknowledg	gement would be inc	omplete without mentionin	g the love, care
and sacrifice of my loving parents	and my wife Lisa,	who always stand with m	ne and give me
strength and encouragement during the pursuit of my career. I owe my gratitude to all of them.			
Date:		(Naresh Kumar	Sethy)