ACKNOWLEDGEMENT

I express my deep sense of gratitude and respectful regards to my guide and supervisor Dr. A.K. Banik, Professor and Head, Department of Chemical Engineering, Calcutta University for his unstinted cooperation, constant encouragement and proper guidance throughout the entire course of execution of the present research project.

I also take the opportunity of expressing my respectful regards to Dr. A. Basumajumdar, Reader, Department of Chemical Technology, Calcutta University for helpful suggestion, interest and encouragement.

Sincere thanks are also conveyed to Dr. N.K. Mitra, Professor, Department of Chemical Technology, and Dr. M. Das, Reader, Department of Chemical Engineering, Calcutta University for their kind help and interest in this work.

Thanks are also due to Dr. Shekhar Ghosh, Director and Mr. Sabyasachi Som, Geologist, of the Geological Survey of India, Calcutta, and Dr. A.K. Bhadra of Central Glass and Ceramic Research Institute for their kind assistance.

I am thankful to Mr. Nimai Pal and all my friends and colleagues of our laboratory for their spontaneous help and constant co-operation.

I am greatly indebted to my daughter Krithika for her sacrifice in sparing me to enable the completion of this work.

Finally, I like to express my gratitude to my husband Dr. Kalyan K. Mukherjea for his inspiration, motivation and constructive criticism during the entire period of this work and for undertaking the chores associated with the preparation of this dissertation work.

March 1997
Department of Chemical Engineering
Calcutta University
92, A.P.C. Road
Calcutta - 700 009

NIBEDITA BANDYOPADHYAY