ACKNOWLEDGEMENT

Accomplishment of any work requires the effort and support by many people. It would be sheer ignorance and arrogance to believe that any work or research can be an individual endeavor.

I therefore most humbly acknowledge the valuable guidance, support, encouragement and affection provided by my supervisor Professor V. Subramanian, whose contribution comes first and foremost to my mind. His highly disciplined life, hard work and strong consistency for work has always inspired me. Working with him has not only added depth to my study but also gave direction to my perseverance. No words can invoke the heartfelt gratefulness that envelops me when I look back over the entire research period.

I also owe gratitude to Professor D.K. Banerjee, Dean, the faculty and staff of the School of Environmental Sciences, for providing administrative and research facilities, without which completion of this would have been impossible.

I am grateful to some of my predecessors in the lab, particularly, Dr. R. Ramesh, Dr. Ramanathan, Dr. Chakrapani, Dr. Dilip Dutta and Dr. Lallan Gupta.

I also wish to especially thanks to Dr. MCZ Moturi, a Kenyan Commonwealth Scholar of our lab. He always provided me right approach to work, encouraged me from time to time and enhanced my understanding and knowledge by clarifying my doubts through the discussions.

I am really indebted to Mr. Manoj Kumar for his kind co-operation during my field-work to the industrial areas, in the collection of samples in the heat-biting afternoon of summer and cold winters in the congested and highly polluted industrial areas of Delhi.

I am thankful to Dr. Annadurai and his wife Mrs. Rani Annadurai for their prompt help at the time of need.

I would like to also thank my labmates and project staff of our lab, for providing me the congenial atmosphere necessary to accomplish research namely- Abhay, Anuradha, C.S. Chatterjee, Dhiraj, Dr. D.S. Chaterjee, Deepali, Gautam, Mahdhvan, Sajeev, Satinder, Sujit, Suranjeet, Tamil Selvan and Umesh.

Banita Azaad, Bala Chandran, Kulwinder Kaur, Meenakshi Upreti and Prasuna Chatla deserves
special thanks, as their presence always gave me encouragement and happiness at the time of depression. They shared my worries, tension and co-operated to dissipate them. They will be always a constant source of inspiration and emotional warmth for me.

My sentiments towards my parents, elder brother (Dr. M. S. Rawat) and sister-in-law (Dr. Hema Rawat), younger sisters (Dr. Ganga, Sarita and Sunita), brother in-law (Dr. Lokender Sharma) and lovely niece (Angel) and my sister-in-laws family members, are too deep to be expressed in words. Finally, I must mention that this thesis is the outcome of the unlimited support, I have received from the beginning till the end of my research work from my family especially from my mother and father. I share my happiness with my mother and late father at the completion of this long awaited study.

I extend my gratitude to my husband (Shikhar Ranjan), whose very presence meant a volume of affection in my life. He has been providing tremendous moral support at crucial moments. I am thankful to him for the meticulous proof reading beside his busy schedule. My thanks are also due to all the members of Shikhar's family, who have given me full independence to take my decisions. Amma, Mamaji, Mamiji, Bhaiya and Bhabhiji, Preetidi and Jijaji, Divyadi and Jijaji have always encouraged me to carry out my thesis work. The young ones- Manu, Tanu, Anu, Miti, Kiti, Dhriti and Tarun provide a special happiness on their remembrance. I will be always grateful to Commonwealth Science Congress (CSC), UK and to Professor Jerome Nriagu, University of Michigan organiser of the International Conference on Heavy Metals in the Environment for providing me with financial and other supports to attend this prestigious Conference.

My thanks are also due to Central Instrumentation Facility (CIF) staff- Mr. B.D. Sharma and Mr. Venkat for their help during my studentship in School of Environmental Sciences.

Lastly, I express my thanks to JNU, IIT, IARI, INSDOC, CPCB, WWF- India, CSE, NEERI and TERI library, from where I collected relevant literature to carry out my study.

I am also thankful to the University Grants Commission (UGC) for providing me with the financial assistance to carry out my research work smoothly.

Manju Rawat