ACKNOWLEDGEMENTS

I am highly grateful to place on record the indubitable and constant care and support of my research supervisor Dr. B. Sreenivasa Rao, Associate Professor, Department of Chemistry, GITAM Institute of Technology, GITAM UNIVERSITY, Visakhapatnam, who is responsible for inspiring and guiding me.

I sincerely, thank Prof. Z.Vishnuvardhan, Head, Department of Environmental sciences and Chairman, Board of Studies for having provided the necessary research facilities. I also thank to Dr.A.V.V.S.Swamy, Asst.Professor, ANU for their co-operation. I have no words to express my deep sense of gratitude to the Senior Professors and all other faculty members in the Department of Environmental Sciences ANU for their constant moral support and encouragement.

I wish to thank Management of GITAM University, Prof. D. Prasada Rao, Principal and Prof G.V Ramanadham, Head, Dept. of Chemistry, and Prof. A.V.L.N.S.H. HARIHARAN, Department of Chemistry, GITAM Institute of Technology GITAM University for their encouragement

CHANDALURI SUBBA RAO