Acknowledgements

I am deeply indebted to Prof. K. A. Suresh for his inspiring and constant help, and his keen interest in my work. It has been a great pleasure to work with him. I am also thankful to Prof. G. S. Ranganath for his encouragement and help, especially in going through all my papers and my thesis.

I would like to thank Prof. N. V. Madhusudana, Prof. B. K. Sadashiva, Prof. V. Lakshminarayanan, Prof. Joseph Samuel and Dr. V. A. Raghunathan for their encouragement.

I profusely thank the staff of the LC lab for their help, which is beyond any comparison. I would like to specially mention the help of Mr. Nagaraj, Mr. Mani, Mr Dhason and Mr. Ram of the workshop and Mr. K. Subramanya and Mr. Radhakrishna, for their help in many different ways. The continuous supply of distilled water, ice and other chemicals whenever required from the chemistry lab merits a lot of thanks.

Some of my equipment was fabricated in the basement workshop. I thank the staff of the workshop for their timely help when needed. I thank Mr. K. Krishnamo Raju, Mr. Raghavachar and Mr. G. V. Srinivasa for their help on many occasions.

The RRI library has been a great help, as is known to everybody. I thank Dr. Ratnakar, Mrs. Girija, Mrs. S. Geetha, Mrs. Vrinda, Mr. Nagaraj and Mr. Manjunath for their help with the library work. I thank Mr. Chowdappa and Mr. Hanumappa for their help in xeroxing and providing me access to other libraries in Bangalore, and for xeroxing my thesis. I thank Mr. Chowdappa for xeroxing my thesis and Mr. Elumalai for binding my thesis.

The help from the computer centre has been great. I would especially mention Mr. Rajsekar, Mr. Ramdurai, Ms. Ashima, Mr. Devdas, Mr. Nandakumar and finally Mr. Jacob Rajan for their untiring help in solving all my problems, which were not a few.

My work involved a lot of photography work, and it never became a burden
due to the help of Mr. Raju Verghese of the photolab. I thank him for his help, for which he even had to work at odd hours.

I thank Dr. N. Rathnashree for her help and encouragement and for teaching me the tricks of Pgplot.

My stay in Bangalore was made memorable and enjoyable by many good friends, too many to name. I would like to specially mention Pavan, Giri, Dipanjan, Moja, Vikram, Pramod, Pannu, Sushil, Subbu, Vatsa, Nirma, GK, Kasthuri, Dev, Sreejith, Gungwong, Kheya, Deb and Rajeev.

I thank Sukanta, Amarpreet, Jivan, Rajesh and Kalbinder for their support through letters and e-mails, inspite of being in very far flung places.

There can be no belittling the help of Giri, Dipanjan, Vikram, Kheya and Vishwanath in going through the thesis whenever I asked for it.

I thank my parents for their encouragement and support through the highs and lows of my life. I also thank my sister, Roompa for her understanding and support. Thanks are also due to all my friends and relatives who helped and encouraged me in my work.

As I did my entire work in a government institute, I finally thank the taxpayer for the financial support.