

Acknowledgement

This thesis is not only the experiments conducted on bench but is a journey lived through which holds a spectrum of experiences. It has moments of happiness on first day of Ph.D, first salary cheque, first international trip for attending conference; moments of responsibility after being allotted dissertation students, after getting incharge of instruments; moments of eureka after getting results of experiments, after troubleshooting the trickiest problem; moments of frustration for the silly mistakes which spoilt the whole day, whole week or whole year long experiments, for the rejections of the manuscript; moments of anger when the instruments break down which you need the most; moments of enlightenment after brainstorming discussions with lab mates and students; moments of pride for the praise after annual presentation, after receiving an award, after receiving a positive feedback from students for teaching them; moments of satisfaction after having a mug full of tea/coffee and a sandwich or after seeing favourite dish prepared for dinner by mom at the end of a tiring day; moments of sorrow for not spending enough time with family and loved ones; moments of fun while celebrating festivals and birthdays with lab-mates, while pulling each other's legs, while planning pranks on each other; moments of consoling and getting consoled in difficult times; moments of being philosophical after feeling nothing is in control and things happen when only they are meant to be; moments of fulfilment after publishing a paper and while writing thesis. The journey cannot be contained in words but is a bouquet of feelings which has the most beautiful flowers along with thorns. The journey is memorable and an amazing learning experience because of the contribution of many people whom I am grateful to.

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