



One splendid summer at the Institute for Molecular Science

Puspendu K. Das

I spent three months during the summer of 2003 amidst mostly rain, at the Department of Electronic Structure, which has been a highly satisfying experience for me. I thank my colleague and friend Prof. N. Nishi for the invitation to spend a summer in IMS for developing a long-lasting interaction and relationship between our groups in the near future. During my stay, I came in touch with some extraordinary scientists in the group and in the Institute, who have enlightened and spiced my curiosity in research in many directions. I have very much enjoyed many long discussions with Prof. Nishi from magnetic molecules to Japanese history during my stay. For me, those discussions have been both informative as well as educational. I am personally indebted to him and the members of his group for their kind hospitality and warm friendship which made my stay at Okazaki both wonderful and enjoyable.

This was my second coming to IMS. I visited Prof. Nishi at the same department in the summer of 1989 for three days. I found IMS as a cheerful and vibrant place for research then and now. I was involved in two projects in the lab during this visit. In one, we were trying to characterize the light emitted from a gold nanocluster on a graphite surface excited by a STM tip at low temperatures. The nanoclusters were elegantly made by Prof. T. Tsukuda and his group. I enjoyed many insightful and scienceful discussions with Prof. Tsukuda during the formulation of this project. In another, albeit unrelated, project we investigated the nature of interaction between

phenol and chlorobenzene in a 1:1 gas-phase complex in the neutral as well as singly charged cationic ground states by infrared spectroscopy. The near IR absorption spectra of the O–H stretching vibration of bare phenol shifts to the red and becomes broad indicating strong interaction between the OH group of phenol and the π -ring electrons of chlorobenzene as the cause for the observed change. More experiments as well as quantum chemical calculations are necessary before concluding the results of this experiment.

On a different, rather personal note, I have found people in the Okazaki area very much caring and friendly. I had no problem dealing with them in the stores, restaurants, train stations and shopping malls, although, at times, I wished I had some working knowledge in Japanese! In spite of the language barrier, communicating to people was easy because of the politeness and patient attitude shown by the Okazaki area residents. Inside IMS, everyone spoke very good English and I did not need to know Japanese!

IMS has great laboratories: well equipped, modern and sophisticated. The scientists are all very diligent, capable and brilliant, however, I felt that it had far less number of young researchers than it can handle. Although some students of the Graduate school of Advanced Studies carry out their Ph. D. work in IMS, I have found well-lit sophisticated labs remaining unused because of lack of personals to work inside! I would suggest the planners and authorities of IMS to seriously consider admitting

doctoral students to its labs through a separate IMS program. That way the unique labs and facilities of IMS will be utilized more and a group of future scientists of Japan will receive first rate research training comparable to the bests of the world working in these labs. However, there might be some administrative hurdles that need to be overcome to make this happen.

By the time I started to feel much more at home in the Mishima Lodge apartment or bicycling through the lanes and streets of Okazaki, I realized that it's time to go back to the place where I belong, that is, to the Indian Institute of Science in Bangalore. However, as the interaction between my research group and IMS grows, I hope to visit the serene environment of the Okazaki castle or bicycle trails along the Otto river again in the near future.