Tsukuba : A Two and a Half Years’ Experience

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After I finished my studies in Physics in my hometown Sevilla, the capital of Andalusia, in Spain, I went to Bayreuth, Germany to do my PhD on vibrational spectroscopy of photosensitizer dyes for organic solar cells under the supervision of Prof. Kador. Germany and Spain are both in Europe, but still I was shocked by the many cultural differences between the two countries, apart from a very different language! The food, the drinks, the way of interacting with other people, the way of having fun, the lack of physical contact between people, even the weather. The social rules and organization style were simply different, and I had to learn to understand and appreciate the differences in order to enjoy my time there, and have a profit from my work. I was lucky with my “Doktorvater” (thesis supervisor in German, directly translated means father of PhD) and colleagues and the experience was successful. After my PhD, I changed my research field a little and shifted to the scanning probe microscopy world, still in the surface science field. Trying to move from scanning tunneling microscopy (STM) to non-contact atom force microscopy (NC-AFM), I contacted O. Custance in Tsukuba and this opened me the possibility to go to Japan in 2010, particularly to NIMS (National Institute for Materials Science) in the city of science.

My first impression about Japan was that it is quite close to Germany in many aspects: size, population, way of organizing, the physical distance between persons... Even the lack of flexibility, although for foreigners Japanese are more flexible with their rules in order to make us feel comfortable. I think this matching of behaviours make Japanese scientists enjoy their stays in Germany. Slowly, I also discovered that they also have many things in common with the southern European countries, like a much hotter weather than I expected, the way to enjoy the food, and the love for their children. In addition, there are differences with occidental countries due to its oriental-asian culture. But of course, Japan is authentic and unique, so there are things that one can only find in the land of the rising sun.

Altogether I have spent almost two and half years working in the group of Fujita-san with Sagisaka-san mainly doing STM on titania. I did not manage to catch up to switch to NC-AFM. Who was guilty? The big Tohoku Earthquake. To be in Japan during the big Earthquake in 2011 was one of the most impressive and interesting experiences in my life. First, the earthquake itself was felt with a high intensity in Tsukuba, in Ibaraki prefecture, its coast was also hit by the Tsunami. I was impressed about how people reacted in an organized and rational way, and how many people and organizations were ready to help afterwards. Second, the bigger shock came when we managed to go to a place with electricity (our quarter had blackout during 12h after the earthquake), and we saw the images in TV of the Tsunami in Tohoku area. It still breaks my heart when I remember so much suffering. The following days, as a foreigner with survival level of Japanese knowledge, it was a bit difficult to follow what was happening, in particular regarding the Fukushima Daichi nuclear power plant. Luckily many Japanese and foreigners built a net of information via Internet, sharing important data and advices. In the city of science, several institutions started measuring the values of radioactive isotopes in the air and publishing them on Internet. NIMS started repairing damages and after a while, our normal life restarted. Unfortunately, our machines, which are sensitive to mechanical vibrations, were also damaged by the shaking and our research plan was delayed by several months. I was lucky to be in Japan during such a catastrophe, in another country all would have been more chaotic and disorganized. However, I want to criticize the Japanese
politicians who were not fair with the population lying about the circumstances for taking political advantage, not to forget the scandal of the connections of the government with TEPCO.

Coming back to my experience at the Nano Characterization Unit of NIMS, I can summarize it as very positive. The ambiance with the other colleagues was very nice. There were Japanese, Chinese, Indians, and a few Europeans. We had meetings in English every two months where we explained our results and discussed problems. These meetings helped us to understand the work of our colleagues and built a network and collaboration frame. Among my colleagues, there were many female researchers, more than in other Japanese groups, which I see as positive. In our project we had collaborations with the Photovoltaic Materials Unit and with theoreticians from MANA, which enriched our work. The lab was comfortable (especially after installing air conditioning) and part of our experiments successful. I also had the possibility to go to domestic and international conferences inside and outside Japan, which enabled the contact with other scientists (Fig. 1).

Like in every experience, there were also drawbacks and sometimes it has not been always easy to be a foreigner in Japan. There were also work meetings regarding our project that were only in Japanese, and they did not even invited me to them. As a woman and foreigner, sometimes other men, technicians and scientists, ignored me or did not take me seriously. Women in Japan work as hard as men, but their work is not so recognized. I know that this also happens in the rest of the world, but compared to other developed countries, in Japan this is very visible. In Japan it is assumed that once you have kids your career is finished, since men seem not to contribute much to the growth of their children. This seems to be changing slowly, from I could see from my friends and colleagues, but it will take time.

My Japanese experience has been very fruitful: I have met very nice people there (Japanese and other foreigners), discovered another culture, enjoyed the very nice Japanese food, had fun at Isakayas and Karaoke sessions, visited beautiful cities and towns, gotten lost in mountains and valleys, learned a new and interesting language, learned a lot about STM and NC-AFM, and fell in love with Fuji-san, which I could see for my room on clear days (Figs. 2 and 3).

Now I know, that if ever the end of the world happen, the best place for me to be it would be Japan!!