

## Overview

In 2015, I was awarded a JSPS postdoctoral fellowship for two years to carry out research at the National Institute for Materials Science (NIMS) in Tsukuba, Japan. My position was based in the MANA center at NIMS working with Dr Jonathan Hill and Prof. Katsuhiko Ariga. The project



also included collaborative research with Prof. Charl Faul and Dr Craig Butts at the University of Bristol. NIMS is a specialist national research and development agency which focuses on the advancement of materials science through fundamental and applied research.

## Research Summary

My research was focused on the preparation of functional nanomaterials based on chiral perylene diimides (PDIs). Novel PDI materials were synthesized, and their self-assembly properties were investigated using techniques such as UV-vis spectroscopy, circular dichroism spectroscopy and scanning electron microscopy. The relationship between the structure and



self-assembly of the PDIs was used to optimize the properties for application. During my JSPS fellowship I had the opportunity to present at conferences in Japan and internationally. In addition, I also participated in the JSPS Science Dialogue outreach program

(<https://www.jsps.go.jp/english/e-plaza/e-sdialogue/index.html>);

interacting with local students was a rewarding and fun experience. I introduced the concept of nanomaterials to the students and then they did an activity in which they made hydrogels or 'slime'.

## Are there any tips you may have for effective working methods in a Japanese research environment or for living in Japan?

It was my first time in Japan, and indeed in the initial stages I would say I experienced some culture shock. It is a very different feeling from being on holiday in a country to actually living in a country. Settling into life in Japan was an enjoyable and enriching experience. There were entertaining moments as well as frustrating times, but I believe this is probably true for any person relocating to a new country. I was very fortunate to have had assistance from new friends and colleagues during this time, in addition to wonderful support from the JISTEC (Japan International Science and Technology Exchange Center) team in Tsukuba.

My advice for living and working in Japan would be to try to learn the language and use it as

much as possible. It can be quite isolating being in a new country especially if you do not speak the language. Although it is important to pursue research goals, I also think it is important to develop activities outside of work. For me this involved sightseeing in Japan when possible during weekends/holidays, and joining clubs/interest groups to meet like-minded people. I believe this really enhanced my experience in Japan! Success in research often comes from good communication with your colleagues and your host. I think communicating effectively is very important for productive working in a Japanese research environment.

I wish other fellows the best of luck in their tenures. If you have any questions about life in Japan, please do get in touch.



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