Dr.Ong Soon An

Dr.Ong Soon An, a Perak-born, is a highly prolific researcher in the area of pollutants, treatment and environmental protection. A lecturer at UniMAP, he has more than 50 published journals and conferences in this area. Dr.Ong briefly joined KUKUM (as UniMAP was known) before leaving for Japan to pursue his research interests as a postdoctoral fellow. Besides these, he is also a reviewer for a number of prestigious journals.

The following is a short insight into his thoughts and experiences.

Please give us a rundown of your education background.

I graduated with BSc (Chemistry) and MSc (Environmental Chemistry) from Universiti Sains Malaysia in 1996 and 2000, respectively. After working for a water and wastewater consulting firm as a systems design engineer for about 2 years, I successfully obtained a Monbukagakusho scholarship, sponsored by the Japanese government with which I had the opportunity to further my education, culminating in a PhD (Environmental Engineering) from Oita University, Japan, from 2003 to 2006.

We understand that you had left KUKUM briefly for a position in Japan, please elaborate.

After completing my PhD in 2006, I joined KUKUM as a lecturer at the School of Environmental Engineering. The following year, however, I was awarded with a JSPS fellowship. This was really an honorable award for me, since JSPS is a prestigious fellowship in the research arena. As such, I went to Japan again, on leave from KUKUM and worked as a postdoctoral researcher in Niigata University, Japan. The contract for the JSPS fellowship was for 2 years. When I returned, KUKUM was no more and in its place was UniMAP!

How different is the Japanese R&D culture from Malaysian R&D culture? Identify our problems.

It's undeniable that the research culture in Japan is different from Malaysia in terms of technology and research attitude. In Malaysia, all research instruments and equipment belong to the school or faculty, whereas in Japan all these belong to the laboratory in particular. Thus, all the researchers and students in the laboratory can use the instruments and equipment freely. In general, each laboratory has a group of people ranking from a professor at the top, to the undergraduate students at the bottom.

The laboratory in Oita University, where I had my PhD, is known as Hano-Hirata Laboratory. Here postgraduate and undergraduate students have to work from 9 am to 8 pm , minimum, on week days. Some of the students carry on their experiments until late night and may even sleep in the lab. All postgraduates and undergraduates have to submit their weekly report and discuss with their supervisors every Saturday. During the meeting, the respective supervisor may give his/her comment and advice for the research project.

I also notice that most of the researchers and students in Japan are more concern with publications, patents and collaborations with industrial partners, which is very different from that in Malaysia. In Malaysia, we put too much effort on products rather than scientific publications and patents.

What are your hobbies?

My hobbies are research and travelling. I like to involve in activities related to research such as learning about the latest technology in wastewater management or treatment. Besides this, I like to travel to different places or countries to expose myself to different cultures and thinking.

What is your field of specialisation? Why did you choose it?

My academic background is chemistry and my knowledge on wastewater treatment was very little. I then worked as a waste management engineer at Seagate, Penang after obtaining my B.Sc. from USM. This is where, I learned to manage a wastewater treatment plant and analyze the water quality parameters. Hence, I had obtained an idea to further my education with a M.Sc. in biological wastewater treatment for heavy metal-containing wastewater under SBR operation, in Universiti Sains Malaysia. During my PhD study, I tried to use various biological systems for treating azo dyes-containing wastewater such as SBR, UASB and biofilm systems. I chose these types of wastewater because lots of factories, not only in Malaysia, but other countries as well, generate these types of wastewater especially from industries involved in electronics, electroplating, tannery, textiles, pulp and paper, leather and so on.

I proposed an up-flow constructed wetland for treating azo dye-containing wastewater when I worked as a postdoctoral researcher in Niigata University. A constructed wetland is a cost-effective, efficient and eco-friendly wastewater treatment technology, that has seen growing popularity over the last few decades. Currently a wide range of wastewater from domestic, industrial, agricultural and also landfill leachate are treated in constructed wetland systems. However, studies for the application of constructed wetlands specifically tailored for the textile industry wastewater treatment is still lacking.

How do you juggle your time between all university responsibilities?

I do not hold any administrative position, and I only handle lecturing and supervising final year project students. Furthermore I find research is more rewarding and satisfying than administrative work. However, I am a new in Unimap, therefore I need more time to prepare my lecture notes and learn-on-the-fly while simultaneously adjusting on how to deliver the knowledge or information to students. I cannot really start my research yet because of the teaching preparations, especially being appointed to teach new subjects. That is the main reason why all my journal publications are currently from my previous research, done in Japan. I really hope to devote more time to research and handle a dedicated group of postgraduate and undergraduates soon. In the process I do hope to also publish more scientific papers in journals as well.

As a person who has experienced foreign R&D culture, what would you say to our researchers?

I am still in the learning stage to becoming a professional researcher. There is no short cut in research. We can improve our knowledge in our research area through referring or reading latest scientific papers reported by other researchers. Besides these, we can improve our research skills by working as a postdoctoral fellow or having collaborative work with other experienced researchers from local or overseas universities.