

● My Internship Experience

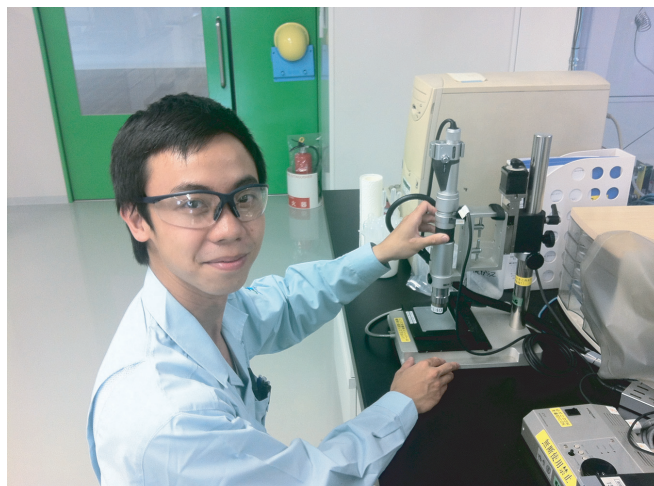
Vance Nguyen

Working in Japan has been a life altering experience to say the least. From a Canadian perspective, Japan is a land of novelty. No one would come here to live seriously. Japan is a place you visit for a short time to set your senses ajar. When you get tired of the menial day-to-day life in North America, you end up desperately searching for this novelty and Japan is the answer. The land of ninja and samurai and giant robots and Hello Kitty, Japan is the fantasy world where you go when you want a taste of adventure. At least, that was what I thought when my plane touched down at Narita Airport. Who could imagine what living and working there would really be like?

My name is Vance Nguyen, I am 22 years old, and I am a Canadian intern student at Toagosei's Nagoya Research and Development Centre. I work for the Base Technology Research Group, developing tackifiers for pressure sensitive adhesives (PSA). I am a third year student at the University of Waterloo, majoring in nanotechnology engineering. My university is one of the top universities in Canada in the fields of engineering and mathematics and is the university with the largest internship program in the world. In my five-year academic program, we have the opportunity to spend twenty-four months working as interns for a variety of companies. Prior to my internship at Toagosei, I worked as a research intern at a University of Waterloo mechanical engineering lab and at a Harvard Medical School-Brigham and Women's Hospital biomaterials lab. Evidently, through my school, I have had the fortunate opportunity to perform research in many different fields and I feel privileged to have Toagosei allow me to continue my exploration of research as a career.

My work at Toagosei involves performing radical polymerization to produce tackifiers to use as additives to improve the properties of PSA. Having taken two polymers courses at school, I was familiar with much of the basic concepts I had to apply for my tasks. However, I was able to learn much more in depth about the

techniques of radical polymerization from my colleagues, more than I could have hoped from a course at school.



To be specific, my project involved performing fast small scale polymerizations to achieve a high conversion of low molecular weight acrylate copolymers. I had to determine the polymerization recipe in order to produce copolymers with very specific compositions and properties. Afterward, I had to determine ideal precipitation parameters for the polymer. With the final polymer product I would have to perform different types of characterization tests including gas chromatography, gel permeation chromatography, nuclear magnetic resonance, differential scanning calorimetry and observation under an optical microscope. I had learned of these processes in school but have not had the opportunity to familiarize myself with them until now. I have gained invaluable experience that I am sure will be applicable in my future work, whether that is in Canada, Japan or another country.

Although I struggled to accustom myself to daily life in a Japanese work place, it has exposed me to things I couldn't have imagined. I was required to learn the customs and manners of working in a new culture. There were several changes in routine that seemed odd to me at the time. Small differences that I did not expect, such as

changing between indoor shoes and outdoor shoes, and performing the morning exercise routine every day, took some time to get used to. There were also many very big differences in company culture that I experienced. First was the routine structure at the company. Everyone arrives at the company before 7:50am. At 7:55am the morning exercises start. At 8:00am the work day starts. At 12:00pm everyone leaves for lunch. At 12:55pm lunch ends. At each time there would be an indication over the speakers. This reminded me of grade school back in Canada. Back home, my research positions have had completely flexible schedules that would depend on the experiments I was required to perform. It would not be uncommon to have to come in to work in the middle of the night or on a weekend in order to collect a sample. It would also not be uncommon to come to work late if there was nothing scheduled in the morning. Even in school, my schedule was not very regular. Some weeks I would have classes in the early morning and other weeks my classes would go on until late at night. In Canada, I feel like I had more freedom with my schedule, but the downside was that it was sporadic and sometimes unpredictable. I have not had a schedule as routine as I had in Japan for a long time so it was a welcome change and a great new experience to learn from.



Working at Toagosei, I am particularly amazed at how team oriented the work is. I found that Japanese people have a very strong sense of community, and that is very evident in the company office. In my labs in North America, people were highly competitive and tended to focus only on their own projects. At Toagosei everyone seems to be part of a team. There have been frequent team outings to various restaurants in Nagoya, where I had the opportunity to learn more about my colleagues and build friendly relationships. Of course, that's not to mention it was a great chance to explore the city I lived in and to explore Japanese cuisine. It was very motivating to work in such a supportive environment where everyone is aiming for the same goals. Another indicator of the cohesiveness in the workplace was the daily team meeting. Daily meetings are not common in my past research labs. Here, everyone discusses their work for the day and the safety precautions they must take as a group. Rather than having a third party set safety procedures in the company, employees have much more responsibility over their working environment. Every Friday, all of the

employees must perform tasks to clean the workplace such as sweeping the floors, taking out the garbage and emptying the liquid waste. Every month, all of the employees have a responsibility to clean the factory premises and remove weeds during their unpaid lunch break. In North America, these tasks would be left to cleaning services. I have been told that this sense of responsibility in cleaning one's work area was developed in elementary school where students would be required to regularly keep their classrooms clean. It's clear that these responsibilities help build the strong sense of community I experienced at Toagosei. Even outside of work, the company is a very strong component of an employee's identity. Many employees, myself included, live together in the dorms for example. Furthermore, during commutes to the office, we are required to wear long pants and closed shoes. As employees, we must remember that we represent the company at all times. Those are only a few of the many indicators of the cohesive team-oriented nature of Japanese workplaces.

Work was only half of the reason I came to Japan though. I was interested in experiencing as much of the country as possible. In order to do that, language was one of the largest obstacles I needed to overcome. I quickly learned that even though everyone in Japan studied English as a student, I would not be able to live comfortably in Japan using only English. I had studied Japanese at university, but I seldom had a chance to practice in Canada. Luckily, I am currently in the best environment to improve my Japanese. I was introduced to many Japanese friends who helped me learn colloquialisms and casual language which I would not have learned in school. Through the help of the Nagoya International Centre, I was introduced to a private tutoring program designed for foreigners in Japan. With my tutor's help every week, I quickly picked up a lot of Japanese grammar concepts and improved my conversational skills. It is still very difficult to express myself in group conversations since I cannot speak quickly enough to interject my thoughts. My Japanese is still very weak after 8 months but I hope to continue improving when I return to school in Canada. My university has a Japanese club with many Japanese international students and I'm looking forward to sharing my experiences and travels with them.



Much of my free time was spent travelling after all. By land area, Japan is a small country compared to Canada, but Japan has a history many times longer than that of Canada. There is a surprising amount of culture to see in such a small country, and Nagoya is the best place to call home base. Nagoya is located in a prime location at the center of Japan. There are express train lines in every direction. There's the Kintetsu that services the historic Kansai region. There's the Shinkansen heading to the west, toward Fukuoka, and to the northeast, toward Aomori. There's the Shirasagi to the north to Ishikawa. There's the local JR Hida line that goes north into Gifu. There's the Shinano that goes northeast into the Japanese Alps to Nagano. Such an extensive train system is impossible in a country as vast as Canada. While living here in Japan though, I used these train lines to my fullest advantage. I was able to see the famous Kenrokuen garden in Kanazawa. I skied through the mountains of Nagano. I attended the famous Gion Matsuri in Kyoto. I biked through Nara, one of the oldest regions in Japan. I was able to compare the okonomiyaki of Hiroshima and Osaka. I liked Osaka's better. I explored the wildly diverse regions of Tokyo, from Koenji to Harajuku to Asakusa to Roppongi to Ginza to Akihabara. The mixture of different subcultures all concentrated in a single city was truly unbelievable. I also had the chance to witness all three of Japan's famous scenic views, including Itsukushima Shrine in Hiroshima prefecture, Amanohashidate in Kyoto prefecture and Matsushima in Miyagi Prefecture (pictured). I was connected to a network of Canadian intern students from Canada that I made the most of. They were located all over Japan so it was great to have a place to stay and a local tour guide to show me around

when I visited.

Besides those travels however, I was able to explore my home city of Nagoya. It is one of the largest cities in Japan but doesn't have any major tourist attractions. Because of that, I feel like I am able to have experiences the average tourist would not be able to have. I enjoyed many local festivals including the Tanabata Matsuri in Ichinomiya, the Summer Festival in Osu Kannon and the one in Tokai-shi. It is amazing to see how lively and exciting an otherwise quiet area can be during a festival. I went up the Nagoya TV tower, explored Nagoya Castle, watched the stars in the Planetarium and even made my way to Ise Shrine in Mie prefecture. Out of all of the cities in Japan, I am very fortunate to be living in Nagoya. It has been my gateway to experiencing every facet of Japanese culture.



I want to thank Toagosei for this unique cultural experience. Although at times I struggled with the work and with day-to-day life, my coworkers have been available to help me. From simple things like looking for a bicycle shop to things like setting up my internet connection, I was fortunate to be part of such a supportive group of people at the Base Technology Research Group. I am certain that my experiences, both in work and in leisure, here will remain with me forever.

To all of my colleagues at Toagosei, I am regretful that I didn't have a chance to speak with you at length due to my lack of skill in Japanese. I hope that if we do meet again, by that time, I will have become fluent in Japanese. To those foreigners who share my path, I hope

that you have the strength to overcome your struggles and enjoy your time here in Japan. I hope that you take the opportunity to try things you've never tried and go places you've never been. I hope you take big risks, encounter interesting people and make lasting memories. I sure have. I will definitely return to Japan in the future, and when I do, it will without a doubt be a deeply nostalgic experience.