MIT visit report

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Well known “Stata center” designed by Frank O. Gehry.

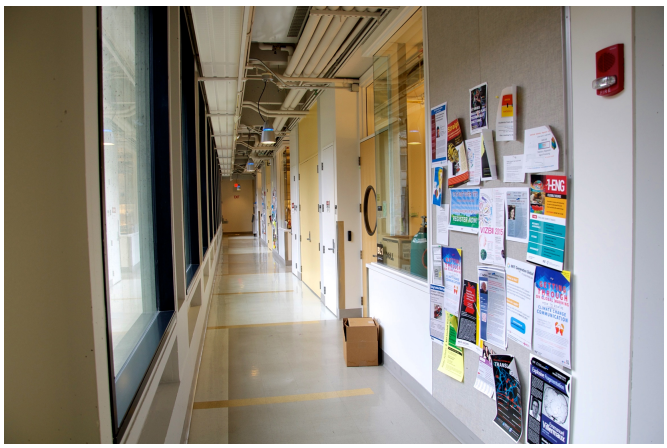
Entrance of the building for chemical engineering.

While our stay in Boston, we have visited two labs in MIT. The lab members kindly gave us the introduction of their research, and also talked about their everyday-life in MIT. It was very informative and stimulative experience that we cannot receive in Japan. In this report, I as chemistry student would like to write down the several differences between U.S. and Japan that I noticed during my stay in Boston.

First, I was surprised at the scale of the campus itself. The campus consists of many beautifully designed buildings, such as a well known “Stata center” designed by famous american architect F. O. Gehry. Also, the campus itself harmonizes with the townscape, with a plenty of beautiful nature. I think Katsura campus is also well-designed, but the scale of the campus cannot be realized in Japan. The building of department of chemical engineering, where we visited, is located near the Stata center.

Inside the building, it is also beautifully designed. The wall of the corridor was filled with information for students and postdocs, and it also contains many notification of research seminars. I think this is one of the reasons that most of american (and european) students do not hesitate to discuss with others, not like Japanese university students. In addition, it is important to absorb knowledge from other researchers, especially the researchers who have different interest and field. The students in MIT have many opportunity to do this, which makes me envious.

The laboratory I visited is tidier and much cleaner compared to that of average Japanese university labs. The layout is also well thought, and despite many equipments, there are plenty of space for movement. What surprised me the most is that their equipments are similar, or even in some cases, inferior to ours. I again realized that our research environment in Kyoto university is one of the most advanced the in the world, and we should grateful for the good fortune of being able to work in such a good environment.



Clean and tidy corridor filled with a plenty of information for students.

The detail of the research of Prof. Jensen’s lab is little different from my speciality, but still some of the research interests me very much. If I had a chance to visit MIT again, I would like to visit electrochemical energy lab. In Prof. Jensen’s lab, most of the researches are collaborative research with companies, such as Novartis and Corning. It may be due to the contents of their research, and it was very fresh to me. Also the staff composition is very different from Japan, there are more than 10 postdocs and very few undergraduate students. One of the postdoc member told us that after graduation of the doctoral course, they have to be at least 2 to 3 years as postdocs to become an assistant professor. After getting job as an assistant

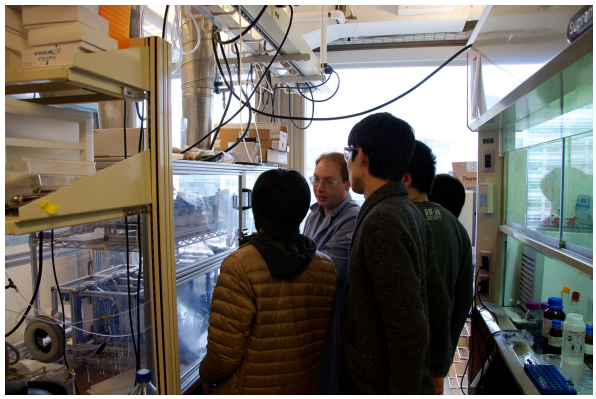
professor, they can have their own research group. Although this is very attractive, it means that they have to find enough funding for their labs to acquire talented players to keep the quality of researches. Furthermore, the university evaluates the research results periodically to push the researchers to stay at top level. Failing in this evaluation simply means that they are could be fired. This is very competitive system, but works well in the U. S. Therefore, many postdocs polish their work wishing to have their own research group someday, and the result of this, many interesting achievement have been reported.

As same as the U.S., MIT is also a great melting pot of races. I think this clearly shows the research in the MIT have an attraction for researchers all over the world. In my laboratory, there are only four overseas students who cannot speak Japanese. Actually, there are also three Chinese students in our lab, but they have started living in Japan from their high school ages, so in this case, I do not account them. Because Japan is not an english-speaking county, it is difficult to choose Japan for the country to study abroad. However, we should re-consider this present condition to keep our quality and superiority in scientific research while understanding the decrement of number of Japanese students in the future.

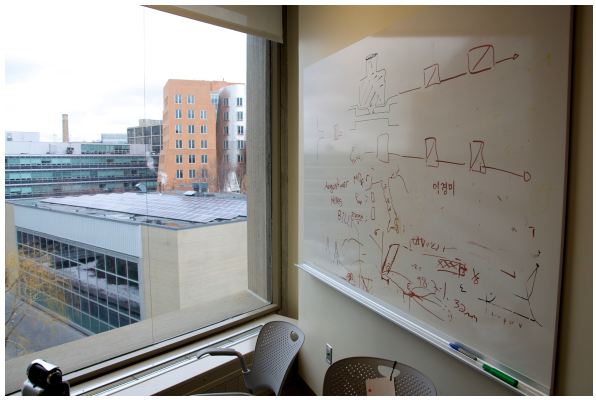
The three-day short trip to Boston was a precious experience for me. I learned the importance of study abroad, not just to improve my research but also feel the differences in the education and research environment. By staying the foreign labs, we can absorb the processes involved in solving problems as well as the experimental methods used in the lab. Moreover, studying abroad deepens exchanges with students and researchers all over the world. This can be achieved only by face-to-face communication. It creates a broad range of personal connections, and I think this network of friends might be supporting my future research.

Finally, I want to thank SGU program for giving me the opportunity to visit the MIT.

VERY clean and tidy laboratory. Well equipped and the layout is well thought-out.



Students listening the explanation of the experimental equipment.



The view from Prof. Jensen's lab.

Beautiful scenery in Boston.