

International Internship at Rice University

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Period: 4th March 2019 – 22nd March 2019 (3 weeks)

13rd January 2020 – 28th February 2020 (7 weeks)

Principal Investigator: Prof. Emilia Morosan

Institute: Department of Physics and Astronomy, Rice University

City: Houston, Texas, America

Research

I visited Emilia Morosan group at Rice University twice. She is a physicist and investigates physical properties of new intermetallic compounds using single crystals. I met her for the first time when she came to Kyoto University as an invited lecturer of JGP seminar. I got interested in her research after



Group Photo

hearing her lecture. I visited her lab in 2019 to learn the methods of growing single crystals. I tried to grow a single crystal of HfMnSb_2 , which synthesis was first succeeded in Kageyama lab at Kyoto University. The process of growing the crystal was a success. However, its size wasn't enough for measuring the physical properties. I learned the method of single crystal growth and set up the system in Kageyama lab after I came back to Japan.

I visited Morosan group again since I had an opportunity to go to a foreign lab. This time, my purpose was not only to grow single crystals but also to measure physical properties of the single crystals. I measured two physical properties, resistivity and magnetism. The group meeting in Morosan group is held every Wednesday. I only heard other students' presentation last year. But this year, I gave my own presentation. Emilia and her group members are experts of solid-state physics. It was stimulating for me to study with her and the members of her group.



Single crystal I grew

My life in Houston

Rice University is located at the center of Houston. The campus is so large and has plenty of nature. I saw wild squirrels for the first time at the campus. There is a large urban park with a big lake. Also, there is a zoo and a museum in this park. My apartment was to the south of Rice University and the park, and I shared it with a roommate. I went to the campus from my apartment by bus, and it took about 15 minutes. There was a supermarket next to my apartment, and there I saw some vegetables which I had never seen in Japan.



My room

The culture of Texas

The culture of Texas is mixed with that of Mexico since Texas is adjacent to Mexico. For example, tex-mex, which is a kind of Americanized Texas cuisine, is popular in Texas. There is a tacos shop in the campus, and I enjoyed tacos and tortilla there.

One of the biggest festivals in America, Houston Livestock Show and Rodeo, was held at the stadium near my apartment for three weeks in March. So many people gathered not only from all over America but also from all over the world.



Tacos I ate at the cafeteria of Rice University

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