

Collaborative Research Visit to the Shimakawa Lab, ICR, Kyoto University

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Thanks to Professor Yuichi Shimakawa and ICR of Kyoto University, I was able to visit Professor Shimakawa's group after two years since graduating with my PhD from the same research group. Although it was a short-time stay, I had opportunity to run the high pressure apparatus once more to continue my “high-pressure” career. Additionally, I shared my new work, the construction of a new high-resolution neutron powder diffractometer in China, with the group members, which helped to strengthen the collaborations between the two groups.

My purpose this time was to prepare hexagonal perovskite oxides with unusually high-valence Fe ions: BaFeO_3 , and $\text{Ba}_7\text{Fe}_5\text{Ge}_2\text{O}_{20}$. The Fe^{4+} ions in these two compounds exhibit very complicated charge redistribution phenomena, forming complex magnetic structures. To reveal the detailed magnetic structures, a large amount of powder sample was required for neutron powder diffraction (NPD). Fortunately, I was allowed to use the high-pressure apparatus "INFINITE", which I had previously used nearly 300 times, to prepare several batches of these compounds. These batches are now ready for NPD experiments.

Over the weekend, I visited some of my old friends in Japan, including a trip to Hakone. Although the clouds were thick and we missed the opportunity to see Mt. Fuji, Ashinoko was still very beautiful, and the onsen (hot spring) in our room was very comfortable.

Finally, I would like to acknowledge the financial support provided by the ICR-iJURC research program for giving me the precious opportunity to visit Shimakawa's group at Kyoto University. I am grateful to Professor Shimakawa for his kindness and supervision, as well as Kan-sensei, Goto-sensei, and other group members for their assistance and collaboration.

ありがとう。また会おう！



Fareware party at Madang!!



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