ETAg-JSPS Seminar

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On September 26, 2019, a joint seminar of JSPS and ETAg was held in Tallinn, Estonia. I attended as a researcher from the Japanese side. I, as the first speaker, gave a lecture titled "New frontiers in Materials Science with Mixed-anion Compounds". In this lecture, I mainly introduced two research topics from my group at Kyoto on mixed-anion compounds, which are attracting attention as game-changing materials. The first one concerns development of emerging functions utilizing hydride anions in an oxide and the other development of oxyhalides as a visible-light responsive catalyst for water splitting. These works have been funded by the "Mixed Anion" project from Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) (2016–2021) and the CREST project from Japan Science and Technolgy (JST) (2014–2020). Secondly, Prof. Raivo Stern from National Institute of Chemical Physics and Biophysics gave a lecture entitled "NMR insight to dimer quantum magnets – $BaCuSi_2O_6$ and $SrCu_2(BO_3)_2$". He showed interesting NMR measurements on quantum spin systems, especially using state-of-the-art experimental tools combined with ultra-strong magnetic fields. Subsequently, Dr. Ilona Oja Açik from Tallinn University of Technology gave a lecture entitled "Thin films for energy and environmental applications", which focused on the development of thin film materials for solar cells. Finally, Prof. Mikk Lippmaa, the University of Tokyo, gave a lecture titled "Whence comes our hydrogen?" on hydrogen energy development and the thin film growth technology. Many of the lectures featured current energy issues, such as the use of solar energy and the realization of a hydrogen society. There were researchers from a range of research fields such as biochemistry among the audience.

Following the lectures, a panel discussion was held. Moderated by the chair Dr. Liis Seiberg, four speakers got on stage, answered various questions from participants, mainly about energy issues, global warming issues, and environmental issues. The discussion was very exciting and interesting as it not only concerned scientific questions, but also political matters. Participants were particularly interested in energy related issues, and there were many questions about hydrogen that Prof. Lippmaa and I talked about. I think there is no denying that global issues have been ignored by politicians, as it was mentioned in a recent UN speech by Greta Thunberg. At the same time, I thought it is about time for researchers and research organizations in each country to stop pursuing only their own profits. Shouldn't we work together as a multi-country and take a researcher initiative to explore a science-based way to solve the global problems? After the seminar, we had a social gathering and deepened our friendship. Many people from Estonian universities and Institutions spoke to me, and I wanted to do research exchanges in the future.

Prof. Kageyama during his lecture

Estonia seems to be getting stricter on research budgets, where the research budget is concentrated, and it is extremely difficult to obtain a budget. Even full-time researchers cannot rest assured. Many Japanese researchers feel that the situation in Japan is exactly the same. In my "Mixed Anion" project from MEXT, we pursue extensive collaborative research as a virtual "one team" with over 60 PI researchers throughout Japan, leading to many interesting results in this emerging research field. I believe that both Japan and Estonia should stop this over-selection and concentration, and introduce this style now. If not, we won't be able to compete with big powers like China and the United States. Now there is a strong tendency to get things done in just a few words. Is it all right to go on with such a "Twitter" politics and "Twitter" science?

Not stopping with this symposium, I think that it is important to further develop the exchange between the two countries through science. I would like to contribute not only to personal joint research but also to networking between the two countries.