

# Young Researcher Visitor Report

Visit to: National Institute of Materials Science (NIMS), Tsukuba, Japan  
Visit period: 9. June to 27. August 2017  
Visitor: Martin Diehl (TCMPrecipSteel)  
Host: Masahiko Demura

The National Institute of Materials Science (NIMS) is large research center in Japan. It is located at the city of Tsukuba, a “Science City” in the vicinity of Tokyo. More than 1 500 employers work in the fields of metals, organic and inorganic materials. Diverse topics such as biomaterials, structural materials, superconducting, and spintronic materials are covered and various experimental and computational methods are employed.

I was hosted by Dr. Eng. Masahiko Demura, the deputy vice president of the *Research and Services Division of Materials Data and Integrated System* (MaDIS). This group aims at integrating the different computational tools developed and used at NIMS into an “integrated materials development system”. This *Computational Materials Engineering Approach* (ICME) is of great interest for the research in the *TCMPrecipSteel* project as it also aims at coupling different models for a combined thermo-chemo-mechanical treatment.

During my stay, I had the chance to get in contact with scientists from different areas, from *ab initio* modelling to data science. For me, coming from the comparably small MPI für Eisenforschung, it was interesting to see the large NIMS with its many department and research groups. Moreover, I was also able to visit Prof. Motoyama at Kyushu University and discuss with Prof. Inoue from the University of Tokyo. Last but not least, I could explore Japan and enjoy the Shinkansen trains and many nice places and the excellent food.

I have to thank Dr. Demura and the NIMS for the financial support of my stay and the war welcome and support during my visit.