

# 外国人客員所員を経験して

## Report upon the completion of my Visiting Professorship at ISSP

I, Akira OTSUKI, spent 3 month from the 1<sup>st</sup> of June to the 31<sup>st</sup> of August as a visiting professor at the Institute for Solid State Physics (ISSP) at the Kashiwa campus of The University of Tokyo. I was kindly hosted by the group of Prof. Shibayama in the Neutron Science Laboratory. My stay was focusing on the measurement of concentrated colloidal particle suspensions by the scattering method newly developed by his group. Accurate evaluation of dispersion/coagulation in such concentrated suspensions/dispersions is quite important since many of the existing methods require a dilute suspension and could overlook the potential coagulation that may depress the industrial processes dealing those suspensions [e.g. 1]. In a general sense, I have been very interested in the correlation between the chemical/physical environments and the changes in the microscopic particle-particle interaction and macroscopic behavior of suspensions [e.g. 2].

It was very honored for me to visit Prof. Shibayama's group and interact with many of the leading and young scientists at ISSP. I was particularly fond of the instantaneous responses to the necessary actions taken by Prof. Shibayama, Dr. Li, and other members of ISSP in order to enhance our collaborative research activities and address administrative issues. Such quick responses are quite unique and rare around the world. I wish I could stay a little longer to complete the bulk of my work. Also, I would like to acknowledge my appreciations to those students and academics who helped me a lot in terms of conducting experiments and other small things. Some of them work until so late that I never see that situation after I left Japan, except myself. I wish they have a very good success in their research and future, and really hope to see them again.

It was also a pleasure to join some casual dinners during my stay at Kashiwa and Tokai. They were good chances for me and my wife to communicate and know many people within the institute. I wish to acknowledge my thanks to the organizers of those occasions.

Thank you again for the kind help from the members of ISSP during my visit. I look forward to working with Prof. Shibayama and the other colleagues of ISSP in the near future through collaborative research schemes, such as bilateral research program, European project, student/staff exchange program. I have a full list of those opportunities. Should you have any queries about the potential collaborations, I am very happy to hear from you.

Best regards,

Akira Otsuki, PhD

Maître de conférences / associate professor

Ecole Nationale Supérieure de Géologie  
Université de Lorraine  
Campus Brabois, Bat A  
2 rue du Doyen Marcel Roubault, BP10162  
F-54505 VANDOEUVRE-LES-NANCY Cedex - FRANCE  
E-mail: akira.otsuki@univ-lorraine.fr  
Tel: +33 3 72 74 45 43



References:

- [1] Akira Otsuki\*, Gary Bryant, 2015. Characterization of the interactions within fine particle mixture in highly concentrated suspensions for advanced particle processing , *Advances in Colloid and Interface Science*, 226, 37-43.
- [2] Akira Otsuki\*, 2018. Coupling colloidal forces with yield stress of charged inorganic particle suspension: a review, *Electrophoresis*, 39, 690-701.