

Final report of the short-stay study abroad program FY2011

School and Dept.	School of High Energy Accelerator Science, Department of Materials Structure Science
Name	AHMED FARGHALY MABIED
Destination country	GERMANY
Receiving /institute	Scientific Service Diffraction Group, Max-Planck-Institute for Solid State Research, Stuttgart.
Period of study	25/08/2011 ~ 21/09/2011

Items:

- ① A general description of the receiving institute (Max-Planck-Institute for Solid State Research (MPI-FKF))

Max Planck Institute for Solid State Research (MPI-FKF, <http://www.fkf.mpg.de/start.html>) in Stuttgart, Germany is part of the Max Planck Society, which consists of nearly 80 research institutes, a number of Max Planck Research Groups (MPRG) and International Max Planck Research Schools (IMPRS), which are located all over Germany and in other European countries. It is considered as one of the most important biggest research institutes over the world.

On the other hand the Scientific Service Diffraction Group of MPI-FKF, is a well known research group in the field of X-ray diffraction, its related sciences and software (<http://www.fkf.mpg.de/xray/>).

- ② Preparation before leaving Japan

As the subject of my doctoral course is studying some organic solid state photo-reactions using time resolved X-ray Powder diffraction data analysis, so after successful experiment using KEK facilities at NW14A time resolved beam line, more knowledge and specific powder analysis was needed.

Then I have found that the Scientific Service Diffraction Group of MPI-FKF does pioneer powder data analysis, specifically parametric refinement of in situ powder data, which is the best analysis method of my powder data to complete my doctoral course.

I learned about the short stay studying abroad program from Sokendi web site also from previous students who had it, then my academic advisor Professor Shinichi Adachi encouraged me to apply for the program,

After that, I established contact with Prof Robert, head of the diffraction group at Maxplanck institute, including my research proposal, which will be done at his group, and then his acceptance had been sent. I was not need to learn German because all processes were done by English language.

③ Research during the stay

Data analysis of my research was started directly after my arrival at Maxplank institute. I stayed there four weeks to complete my work and I did not register for classes. The members of hosting group were helpful and teach me how I can do my data analysis by parametric Rietveld method; it was done using their own software access (TOPAS – Bruker, Powder3d parametric...etc), which was not available at KEK. Finally publication from this analysis in progress

④ Activities other than research during the stay

It was a nice chance not only for research also to see different culture and life, and for that I shared in some social activities there, as farewell party for leaving persons, sport day (waking in the forest) and excursion for castles.

⑤ Expenses

In my case the grant was enough for me and my financial plan was going well, maybe I was lucky, starting from the travel expense I found cheap offer for air tickets, my staying there was close to the host institute so it was not need high cost daily transportation and almost I was cooking my food, plus my work finished in four weeks only. But I think if I was in different conditions, then the grant will not be enough.

⑥ Language at the receiving institute

English was the required language at the receiving institute without specific test for that, but simple German language words were enough for living.

⑦ Difficult things

Almost everything was going well, except some things as paying the air ticket fee in advance before getting the grant, also the conflicting between the monthly attendance schedule of MEXT scholarship and the short stay schedule. I think it would be better in the future if MEXT can give exception for the Short Stay Program applicant for monthly attendance signature.

⑧ Advice for future applicants

I would like to recommend for the future applicants some points:

- 1- I encourage you strongly to apply for the program, it is very useful for completions your PhD course and getting more knowledge from different research schools.
- 2- Please choose the host university / institute and prepare your proposal as soon as possible
- 3- Try to finish all the procedures early to get the grant before your travelling, this well help you a lot.
- 4- Try to work hard at your host side because your time is limited and always you have a lot of work unexpected.

⑨ Acknowledgements

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