

京都大学若手人材海外派遣事業 スーパージョン万プログラム
研究者派遣プログラム

英文報告書

提出日：平成 26 年 10 月 1 日

1. 渡航者 (日本語)			
氏名	宮崎晃平	採択年度	平成 25 年度
部局	工学研究科	電話	
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研究課題名	固体高分子形燃料電池の高活性電極触媒に関する研究		
海外渡航期間	平成 26 年 3 月 10 日～ 平成 26 年 8 月 29 日		
渡航先 (英語表記)	国名：Switzerland 大学等研究機関名：Paul Scherrer Institute 研究室名等：Electrochemistry Laboratory 受入研究者名：Prof. Thomas J. Schmidt		
2. 渡航の報告 (英文)			
<p>渡航先の研究環境、研究者との交流、研究発表の状況等、渡航中の滞在経験について英語 (500～1000 語) で記述して下さい。受入研究者と撮影した写真や研究発表で用いた図等について、可能な範囲で別添として提出して下さい。ページ数については増加してもかまいません。</p>			
<p>Paul Scherrer Institute (PSI) is one of the largest national research institutes in Switzerland. This institute is named after Prof. Paul Scherrer (1890 – 1969, physicist and mathematician at ETH Zürich), who is famous for X-ray scattering phenomenon (Debye-Scherrer method). PSI originated from Swiss Institute for Nuclear Research (SIN), and mainly there are three research topics: materials sciences, energy and environments, and health. PSI employs more than 1500 full-time staff, and runs three large research facilities (Swiss Spallation Neutron Source, Swiss Light Source, and Swiss Muon Source). In addition, more than 300 Ph.D. students are working on their doctoral research projects. PSI is located in Canton of Aargau, where German is the main language. Therefore, almost all documents and traffic signs in towns are written only in German. However, English is the standard language at PSI, because researchers and Ph.D. students come from many different countries, such as France, Germany, England, Italy, Zimbabwe, China, etc. Every Tuesday morning, our research group (supervised by Prof. T.J. Schmidt) has a group meeting to share the common important information and review our each research activities in English. I feel that this short reviewing is very helpful for presenters to recognize their present status and for the others to understand what the other people are doing in laboratory. In Japan, most of Ph. D. students tend to concentrate on their own research topics and do not pay attention for the issues of the others. It is preferable for Japanese students to communicate more actively with each other beyond the border of their own laboratory. Furthermore, it is much easier to collaborate with other research groups not only in PSI but also in other institutes. This is mainly because there are many inter-institute (and international) research</p>			

projects, so each researcher has wide and strong relationship to cultivate their collaboration research. Actually, Switzerland does not join in EU, but the institutes in Switzerland can exceptionally apply to the joint research funds of EU. I think that the joint funding system is very helpful to strengthen the connection between researchers in EU beyond their country borders.

Fortunately, I had an opportunity to make a presentation on my research topic in the group seminar. I could introduce our research results and share some information with the audience. We confirmed that some research targets can be investigated together as a joint project in the near future.

As for living in Switzerland, this country has plenty of beautiful nature spots and artistic old architectures. I lived in an old, small town in Brugg, where many aged buildings are preserved and utilized even now, and local people love their quiet and unhurried lives. Their attitude seems to be unfriendly for newcomers at the beginning, but they are getting gradually to be amiable after exchanging some greetings. In weekends, Switzerland people spend their time to go for hiking in nature or to have a party with friends. They enjoy Raclette (Swiss dish, small potatoes with melt cheese) at home and BBQ in a garden. Thankfully, I was invited to some local residents' homes for the dinners, and I savored the strong smell and tastes of Raclette cheese. Switzerland is a small country with a population of about 8 million, and its permanent foreign residents percentage is more than 25%. Actually, there is a movement "against mass immigration" in Switzerland. However, this country attracts many people not only because of high average wages (more than 4000 EUR/month !), but also breathtaking nature landscape. I hope to share some experiences that I learned in Switzerland with my students and colleagues, and play a role to expand the international research relationship between Switzerland and Japan.

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