

(For JSPS Fellow)

Form B-5

Date (日付)

11/1/2012 (Date/Month/Year : 日/月/年)

### Activity Report -Science Dialogue Program-

(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名) : FLEURENCE, Antoine (ID No. P10069)

- Participating school (学校名) : Kanazawa University High School

- Date (実施日時) : 16/12/2011 (Date/Month/Year:日/月/年)

- Lecture title (講演題目) : (in English) A French materials scientist in Ishikawa  
(in Japanese) 石川県の仏人材料科学者

- Lecture summary (講演概要) :

My wish for this presentation was to give to the students an overview of the life in a foreign country like France, what is research and in particular, what my research is about.

I started this presentation by a short introduction of France, my home country, the life in high-school there and how the study system is working. Then, I briefly described my courses at the university, which drove me to decide to get specialized in nanosciences and nanotechnology, whose purposes are to study the properties of the matter and to control the fabrication at the nanoscale. To illustrate the importance of quantum mechanics at this scale, I spent few slides to describe the tunnel effect which allows particles to go through a thin energy wall. This also allowed me to explain the functioning of the Scanning Tunneling Microscope, a technique of surface imaging, that I am mainly using.

About my research, I presented few achievements related to both my PhD works and those done at the Japan Advanced Institute of Science and Technology (JAIST). To point out the advantages of the so-called self-organization as an elaboration technique able to challenge usual nanofabrications methods, I presented the results of the study of the growth of magnetic particles on a textured template.

Then I gave an outlook of what we are currently working on at JAIST: the investigation of an emerging and promising 2D material made of silicon called silicene.

I wanted to finish this talk by delivering the students a few recommendations based on my own experience: I wish them to spend time abroad and to learn foreign languages. It is very beneficial for them, for both their future career and personal life.

- Language used (使用言語) : English

- Lecture format (講演形式) :

Lecture time (講演時間) 80 min (分), Q&A time (質疑応答時間) 10 min (分)

Lecture style (ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

used projector

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- Interpretation (ex.: assistance by accompanied person, provided Japanese explanation by yourself) (通訳 (例: 同行者によるサポート、講師本人による日本語説明))

At regular intervals an accompanying person (Prof. Y. Yamada-Takamura) summarized in Japanese what it has been said. At these occasions students were invited to ask questions if any.

- Name and title of accompanied person (同行者 職・氏名)

Y. Yamada-Takamura, Associate professor at the Japan Advanced Institute of Science and Technology

北陸先端科学技術大学院大学 マテリアルサイエンス研究科 准教授 高村(山田)由起子

- Other note worthy information (その他特筆すべき事項):

We decided to insert Q/A sessions as breaks at regular intervals during the presentation

- Impressions and opinions from accompanied person (同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。):

日本の若者が早い段階で世界を意識する良い切っ掛けをつくる事業だと思いました。今後も是非続けていただきたいと思います。自分が高校生の頃にこういう講演を聞いたら、どう思ったか、などと考えながら楽しく参加させていただきました。