

(For JSPS Fellow)

Form B-5

Date (日付)

11/10/2016

(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): Ya-Lun HO (ID No. P15359 )

- Participating school (学校名): 千葉市立千葉高等学校

- Date (実施日時): 29/09/2016 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) Light Manipulation in Nano-Scale:

Applications of Nano-Optics

(in Japanese)

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

The lecture was started with the introduction of Taiwan. From the images of Taiwan, the famous products and industries, the history, to the relationship between Japan and Taiwan and also the relation of National Taiwan University and The University of Tokyo, the information of the country and the lecturer was provided in about 20 minutes.

After the introduction, the main part of the lecture related to the research from the lecturer was given in about 40 minutes. The contents includes the introduction of light scattering and absorption, the properties of light interacted with the nano-structures, applications of nano-optics (nanophotonics), and the further discussion about the surface plasmon resonance-based optical sensors. During the lecture, the samples fabricated in advance, including the layers of gold nano-spheres with different sizes and polymer resist nano-grating structures, were demonstrated and circulated to the students. To motivate the students in research, we also discussed the question "What is research", the research works in the university, and the same and the different parts between researchers' works and engineers' works.

In the final parts of the lecture, self-experiences of the international exchange and cooperation, study abroad, and foreign language learning were provided to excite the interest of the students in learning foreign languages. We hope students would have more confidence for learning English, interact and communicate with the people from different countries in the future.

In the Q&A time, the students asked about 6 to 7 questions related to the possibilities to fabricate nano-structures with different materials, the applications and limitations of the optical IC chip, and the signal measurement problems in the practical experiments.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 70 min (分), Q&A time (質疑応答時間) 30 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))

Presentation with a projector and the samples with nano-structures fabricated in advance

◆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))

Only with very short interpretation in Q&A time by the accompanied researcher

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

李 禮林, PhD student (JSPS DC2) in The University of Tokyo

◆Other noteworthy information (その他特筆すべき事項):

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- 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。):