

(For JSPS Fellow)

Form B-5

Date (日付)

06/02/2015 (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): Si-Young Bae (ID No. P14366)- Participating school (学校名): Yamanashi Prefectural Tsuru High School- Date (実施日時): 23/01/2015 (Date/Month/Year: 日/月/年)- Lecture title (講演題目): (in English) Blue Light-Emitting Diodes for the Future Lighting(in Japanese) 将来の照明のための青色発光ダイオード

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

This lectures covered by self-introduction and my research field. First, I introduced my country, Korea, and the research institute (Gwangju Institue of Sciencd and Technology) where I stayed. Second, I also introduced the Nagoya university where I am currently doing research. Especially, recent Nobel prize in physics is one of good topics to explain my research fields. To understand the lighting in human civilization, brief history of human's lighting was mentioned. Furthermore, history of modern lighting which have used electricity was also mentioned. Recent development of blue light-emitting diodes (LEDs) since 1990s has drmatically influenced to current external/interal lighting to be enough to change previous traditional lighting such as incandecent lamp and fluorensence lamp. This breakthrough in lighting by using blue LEDs could have developed white LEDs and its development give a chance to use much efficient and energy saving lighting in human's life. This is the key reason why three Japanese could get the Nobel prize in physics in 2014. To understand the blue LEDs in detail, operation principle of LEDs and production procedures were introduced. As of my recent research, growth, fabrication, and characterization of nanawire LEDs were quickly explained. In order to give more easy explanation, simple experimental materials were distributed for students to see that directly. After giving a presentation, serveral questions about this GaN-based LEDs were asked from Tsuru high school students.

- 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) 20 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 with simple experimental samples

- ◆ 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))

Assistance by Tsuru highschool teachers

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

None

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

None

- 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。):

None