

(For JSPS Fellow)

Form B-5

Date (日付) 29/02/2016

(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): Dr. Wei Zhang (ID No. P15712)

- Participating school (学校名): Soka Senior High School, Tokyo

- Date (実施日時): 24/02/2016 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) Developing graphene-based biosensor for algal toxin detection in drinking water

(in Japanese)

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

My lecture in Soka Senior High Tokyo on 24 February, 2016 consisted of three main sections:

Section 1 I gave a brief introduction about myself, Australian culture and education systems. There was a quick response quiz at the end for students to break the ice.

Section 2 First, I talked about massive algal blooms in sources of water supplies have occurred frequently due to the eutrophication resulting from agricultural run-off, urban waste, and manufacturing of detergents. I also highlighted that they contain harmful cyanobacteria, which can produce and release cyanotoxins, their occurrence have become serious problems for public health. For example, residents in the city of Toledo, USA could not use and drink tap water in the summers of 2013 and 2014 due to the presence of cyanotoxins in drinking water supplies. Therefore, there is a need to develop appropriate sensors for these toxins as well as establishing early alarming systems. Secondly, graphene sensor fabrication technique in my project has been illustrated step by step. Lastly, the advantages of proposed technology in comparison with more conventional ones were summarized.

Section 3 I concluded my presentation with a quick response quiz about my talk for students and free question-answer session from the school staff and 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) 25 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

- ◆ 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))

N/A

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

N/A

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

N/A

- 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。):