

(For JSPS Fellow)

Form B-5

Date (日付)

18/12/2015 (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): Shih-Wei Hung (ID No. P14364)- Participating school (学校名): Hikawa High School- Date (実施日時): 10/12/2015 (Date/Month/Year: 日/月/年)- Lecture title (講演題目): (in English) Introduction to Molecular Simulation(in Japanese)

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

In the first part, I introduced myself and my country, Taiwan. I talked about the geography, foods, and culture of Taiwan. The historical relation between Taiwan and Japan was also presented. The difference of living in Taiwan and Japan was compared. I demonstrated some short movies to draw the students' attention to Taiwan. In the end of this part, I explained why I chose to be a scientist.

In the second part, I explained what is computer simulation and why it becomes important recently. Then, I explained the nanotechnology and the relation between nanotechnology and molecular simulation. The theory and the applications of molecular dynamics simulation were introduced briefly. I presented two of my research works, protein adsorption on surfaces and wettability of surfaces using molecular dynamic simulation. For protein adsorption part, I introduced the biochip, surface modification and related physics and demonstrated some simulation results. For wettability part, I explained what is wettability and how it relates to our daily life. I also demonstrated the simulation results of wettability of different surfaces. In the end of this part, I demonstrated my simulation results, such as sculpting of a molecule and droplet spreading on the surface, with the visualized software, PyMOL.

- 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 powerpoint with projector. demonstrated videos of Taiwan, and animation of

simulation

- ◆ 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 accompanied person

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

Lei Feng, PhD student

- ◆ Other note worthy 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。):

It's great opportunity for me to be able to participate in this program this time, and I surely benefited a lot through this. It becomes significantly important nowadays for local students to gain chances to communicate with outside world, either via individual relations or academic activities like science dialogue of this program, using English. When I see the high school students trying hard to speak English, I retrospect my same past experiences. I still think such activities can surely be occasions to stimulate local students who are eager to initiate their ways to become researchers in the future. I really hope this program would continue blossoming and benefit both researchers and our successors like them.