Must be typed

（For JSPS Fellow）

Form B-5

Date（日付）
09/02/2017 （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）: Mohd Asmadi Bin Mohammed Yussuf （ID No. P15101）

- Participating school（学校名）: Wakayama Prefectural Koyo High School

- Date （実施日時）: 30/01/2017 （Date/Month/Year:日/月/年）

- Lecture title（講演題目）: （in English） Thermochemical Conversion of Biomass into Value-added Bioproducts

（in Japanese） 熱化学変換によるバイオマスからの高付加価物の製造

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

Outline of the lecture has been split into 3 parts, namely Part 1-My beloved country, Part 2- My journey as a researcher, and Part 3-Biomass conversion into bioproducts. The questions-and-answer session has been opened for students at the end of each part.

Part 1-My beloved country

I have presented about my country (Malaysia), where is Malaysia, the capital city (Kuala Lumpur) including the prestigious landmarks, and populations. I also portray the culture, harmony, and unity among ethnics in Malaysia through the concept of 1Malaysia. Then I talked about our festivals, martial arts, sports, marriage, cartoon & animation, weather, and lifestyle. In the end of this part, I have suggested beautiful places and their locations for the traveling purposes.

Part 2-My journey as researcher

This section I have explained about my job and workplace before coming to Japan. Then I talked about my motivations for becoming a researcher and my life as a researcher. In the end of this part, I showed to student my laboratory and lab members in the Saka laboratory, Graduate School of Energy Science, Kyoto University.

Part 3-Biomass conversion into bioproducts

This is the final and core part of the lecture. At the beginning of this part, I asked student did they know the definitions of biomass and further, I explained the definitions in detailed. After that, I talked about the renewable energy that can replace fossil fuel. One of the renewable energy is biomass that has many advantages such as transportable as compare to the other renewable energy. I presented also the biomass resources in the earth, which abundantly available in the

forest. Then I explained about woody biomass and their hierarchical wood structure from meter to nanometer size. After that, I explained the promising technologies that can convert biomass into products, this is, pyrolysis/gasification (P/G), the concept of P/G, application of P/G and the problems of the products from P/G processes. To overcome the problems, we have introduced our research strategy, presented how we carried out the experiment and finally showed the instrumental analyzer for products analysis.

- Language used（使用言語）: English

- Lecture format（講演形式）:

◆Lecture time（講演時間） 60 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））

The lecture styles mainly using power point and projector. I also brought some wood blocks i.e., hardwood (Japanese beech and Japanese walnut) and softwood (Japanese cedar and Japanese cypress) to distinguish their differences, and a wood trunk to explain the wood structure. I also used matches to explain the concept of combustion and pyrolysis, showed the liquid-fuel in the lighter that can be replaced by woody biomass-derived products, and showed wood pellets as an example of products from biomass that can be used for boiler or cooking.

◆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 a supervisor

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

Assoc. Prof. Haruo Kawamoto

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

- 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。）:

訪問先の向陽高校の生徒さんは、非常に熱心に Mohd Asmadi 氏の講義を受けてくれていたのが印象的でした。英語を母国語としないマレーシア人の英語ですので聞き取りにくい部分もあったかと思いますが、研究の現場、若手研究者の意気込みなどを肌で感じ取ることができたのではないかと思われます。このような経験は高校生にとって有意義であり、Mohd Asmadi 氏にとってもよい経験になったものと思います。