

Form B-5

Date (日付)

3/08/2012 (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): TSAREV Vasily (ID No. P11341)

- Participating school (学校名): Gifu Prefectural Gizan High School

- Date (実施日時): 25/07/2012 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) Some facts about Russia and chemistry, my research efforts therein and abroad, and introduction into my investigations in Japan

(in Japanese)

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

At the beginning of my lecture I've presented my country (Russia) and gave some information about places there I performed my study and research, including abroad postdoctoral stay in Germany. I briefly focused on the life of the scientist and reasons why I decided to become a chemist and came to Japan. Next I've talked about famous russian chemists including D.I. Mendeleev, the creator of the Periodic Table of Elements and A.M. Butlerov, one of the principal creators of the theory of chemical structure. Both they made a great impact into understanding of chemical science and further development of chemistry. I explained in detail the existence of isomerism (was explained by A.M. Butlerov for the first time) and chirality of molecules from the natural source (sugars, amino acids, DNA etc.) in terms of their physiological activity. Then I described the stereoselective synthesis as method for production of enantiomers via transition metal catalysis and Nobel Prize research of Prof. R. Noyori. Advantages of the use of catalyst for chemical reactions and its basic principles of action also were explained. At the end of my talk I've focused on my previous research and current topic in terms of importance of nitrogen-containing compounds for medical industry and advantages of catalytic methods for their synthesis.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 45 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))

PowerPoint presentation with use of "molymod®" molecular model sets during the lecture to show the difference between molecules of enantiomers. After lecture the students in small groups (4-5 people) using molymod® molecular model sets investigate and construct all

possible isomeric models for C₄H₁₀O formula. This part was combined with Q&A time (I've answered their questions and assist with construction of a models).

- ◆ 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)

D1 student Takashi Miura, 三浦 隆志

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

I am very appreciate the warm welcome in the Gizan High School by Ms. Miho Kori and also assistance and interpretation of Mr. Takashi Miura during the lecture

- 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。):