

(For JSPS Fellow)

Form B-5

Date (日付)

18/07/2017 (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): Selvam Kaliyamoorthy (ID No. P16040)

- Participating school (学校名): Kariya High school

- Date (実施日時): 12/07/2017 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Visible Light photocatalysis towards Sustainable Future

- Name and title of your company (同行者 職・氏名)

Mr. Shogo Mori, M1 student, Nagoya University

- Lecture format (講演形式):

◆Lecture time (講演時間) 50 min (分), Q&A time (質疑応答時間) 30 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))

Projector

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

My lecture contains the brief introduction of life, history, inventions, food habits and famous people of India, similarities and differences between Japan and India. I also explained about my life as a researcher, my educational details and the reason why I became a researcher. And I explain quickly what is research (in general chemistry), and what a researcher does. Then as a part of my advanced research project I introduced them to the importance of carbon dioxide utilization technology for having pollution free clean energy. Then I discussed about the increasing concentration of carbon dioxide (CO₂) due to burning of fossil fuels and its deleterious effects on environment causing global warming. Then I talked about how difficult is it to convert CO₂ to fuel or organic chemicals and what are the possible strategies that can be used to utilize/convert the CO₂ and other gases for sustainable future. In next part, I explained about solar energy, its importance, Band diagram of Conductor, Semiconductor or Insulator, what is a Photocatalysis, types of photocatalysis, how to use homogeneous and heterogeneous photocatalysis for CO₂ reduction and fixations reactions using solar energy and also other applications of photocatalysis. Further I talked about how to fabricate Z scheme type or combined homogeneous and heterogeneous photocatalysts for efficient CO₂ reduction. Then I conclude my talk by discussing the challenges of photocatalysis in CO₂ reduction reaction especially in visible light. After presentation we had question and answer session and had a good discussion.

- Overall advice or comments to future participants in the program (今後の講師へのアドバイス):

If I have to give some advice for future participants, I think I will say: speaker should make a preparation sheet for students, which is about their lecture. I think there will be some technical terms or something they should know before to understand lecture better. So, if students can learn about it before, it will be much smoother to understand the speaker's presentation.

- Other noteworthy information (その他特筆すべき事項):

Mr.Shogo Mori extensively participated in the presentation and question and Answer session to encourage the students to participate, which greatly improved the atmosphere in the classroom.

- Impressions and opinions from a company (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。)

発表者は聞き取りやすい英語を心がけた親切な発表を行った。質疑応答の時間には、生徒から文化や化学に関する数多くの質問が寄せられ、活発な議論が展開された。本事業を通して生徒たちの好奇心が刺激されただろう。