

(For JSPS Fellow)

Form B-5

Date (日付)

11/02/2017 (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): Dr. Sanjog Sunil Nagarkar (ID No. P15037)
- Participating school (学校名): Fukui Prefectural Wakasa High School, Obama City, Fukui
- Date (実施日時): 25/01/2017 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Coordination Polymers for Clean Energy Applications
(in Japanese) 配位高分子を利用したクリーンエネルギーへの応用
- Lecture summary (講演概要):

In the beginning of my presentation, I gave brief introduction about my education and why I became researcher. Then as a part of my advanced research project I introduced them to the importance of gas separation technology for having pollution free clean energy. 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 the how difficult is it to separate CO₂ gas from air and what are the possible strategies that can be used to separate the CO₂ and other gases. Then we had a break for 5 min. In next session, I introduced students to Coordination Polymer (CP) materials, what are CP's, how it is made, how is the structure of CP's. Students made the different CP's models by themselves using chemistry model box. Next I talked about the use of CP's in separation of CO₂ from air by using difference in size and shape of the gas molecules and effectiveness of the strategy. Thereafter, the improvement in the CO₂ gas separation efficiency by using ideas available in biology to further enhance the gas separation performance of CP's was presented. The principal of school (who was a chemistry graduate from Osaka University) also attended my presentation and got interested in the topic. He asked me few questions about the strategy to separate CO₂ and carbon monoxide (CO) gas using CPs. Students asked question in between the lecture to have clear understanding of the topic. At the end I asked some questions to students based on lecture and thought students a new way of counting the numbers. The English teacher from the school helped me during the lecture.
- Language used (使用言語): English
- Lecture format (講演形式): Power Point Presentation
 - ◆Lecture time (講演時間) 110 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))

Power Point Presentation and Coordination Polymer Models were made students

◆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))

By English Teacher from School

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

NA

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

NA

- 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。): **NA**