

(For JSPS Fellow)

Form B-2
(FY2018)

Date (日付) 19 / 11 / 2018
(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): Alfredo ROSAS SANCHEZ (ID No. **P18036**)

- Participating school (学校名): Ichikawa Gakuen, Ichikawa Senior High School

- Date (実施日時): 10 / 11 / 2018 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): A Deep Look Inside Crystals.

- Name and title of your accompanying person (講義補助者 職・氏名)

- Lecture format (講演形式):

◆Lecture time (講演時間) 90 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))

Use of projector for powerpoint presentation and microscopes for the observation of crystals.

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

The lecture consisted on a brief introduction about me and my home country. I showed how nice and beautiful is Mexico and I invited the students to visit it. I explained why *curiosity* was the main reason I became chemist and we discussed about science, specifically chemistry, in daily life. I also pointed out the importance of chemistry and the different areas in where chemists can develop their work.

After the introduction, I described what an atom is, showing a short video related to its size and composition. I explained why electron density is very important to understand chemical properties and reactivity of compounds. I also described what a single crystal is and how it is formed. I presented X-ray Crystallography not only as a technique for determining the three-dimensional structure of molecules at atomic resolution, but also as a very useful technique to analyze electron density distribution. In this part, we discussed about properties of electromagnetic radiation and how crystalline molecules can diffract X-rays.

Finally, I described my research at RIKEN, showing some preliminary results and pointing out the importance of the study and the aims that we have established on the project. A short Q&A session followed the lecture.

After the presentation, the students had the opportunity to observe crystal samples through optical microscopes and finally a second Q&A session was held.

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

I recommend making use of easy to understand terms and graphical information that can help students to understand the topic. I realized that the attending students are really enthusiastic about listening to the speaker and they really enjoy the lecture. To keep focused their attention, I suggest to make some funny comments or jokes during the presentation, this will also help the students to feel confident asking questions and/or making observations. Additionally, it is very important to keep a slow speaking, so that the students can understand the English.

If the speaker enjoys the talk, the students too.

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

I consider JSPS Scientific Dialogue Program as a great chance for fellows to improve their skills in the public dissemination of science (which is also part of our duties as scientists) and a very valuable opportunity for getting high school students closer to science, since from among them will come future scientists.

- Impressions and comments from the accompanying person (講義補助者の方から、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。)

No accompanying person.