

様式 A-1
(FY2018)

平成31年1月18日

サイエンス・ダイアログ 実施報告書

1. 学校名・担当者氏名: 三重県立川越高等学校・市川 亮子
2. 講師氏名: Dr. Mel Hainey, Jr.
3. 同行者氏名: なし
4. 実施日時: 平成31年1月17日 (木) 13:15~15:05
5. 参加生徒: 2年生 77人、 ___年生 ___人、 ___年生 ___人 (合計77人)
備考: 国際文理科2学年の生徒
6. 講義題目: Crystal Growth and Engineering: Playing with Really, Really Small Legos
7. 講義概要: Although we may not think about it, crystals play an important role in our everyday life. Crystals can be found in almost every part of your life: for example, in ice, medicine, a computer chip, a samurai sword, rocks deep inside the earth, or asteroids in outer space. In materials science (材料工学), and particularly crystal growth and engineering(結晶成長/結晶工学), we study how crystals grow and how to make them with the properties that we would like. Because we are building crystals from atoms or molecules, crystal growth is similar to building with very small LEGO blocks.
In the first part of this talk, I will discuss what a crystal is and how to discover the arrangement of the atoms and molecules in a crystal. Then, I will give some basic examples of crystal growth and its use in biology, transportation, geology and electronics in Japan. This will lead into a discussion of some of my own research, growing crystals for light-emitting diodes (LEDs) and computer chips under unique conditions. Finally, the class will have the chance to grow some crystals together!
8. 使用言語: 英語
9. 講義形式:
 - (1) 講義時間 60分 実験・質疑応答時間 40分
 - (2) 講義方法 プロジェクター使用による講義、実験
 - (3) 通訳 なし
 - (4) 事前学習時使用教材(事前学習を行った場合のみ): プリント(講義の概要と参考となるURLs)
10. その他特筆すべき事項: 特になし