

Form B-2  
(FY2020)  
Must be typed

Date (日付)  
12/11/2020 (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): LOUIS Marine (ID No.P19342)
- Name and title of the accompanying person (講義補助者の職・氏名)  
Mr GOTO Yora
- Participating school (学校名): Tezukayama Junior and Senior High School
- Date (実施日時): 11/11/2020 (Date/Month/Year: 日/月/年)
- Lecture title (講義題目):  
Introduction to Photochemistry
- Lecture format (講義形式):  
◆Lecture time (講義時間) 1h15 min (分), Q&A time (質疑応答時間) 30 min (分)  
◆Lecture style (ex.: used projector, conducted experiments)  
(講義方法 (例: プロジェクター使用による講義、実験・実習の有無など))  
Power Point presentation with 2 little experiments to show the relation before light and energy and the difference between fluorescence and phosphorescence \_\_\_\_\_
- Lecture summary (講義概要): Please summarize your lecture within 200-500 words.

During the lecture I first introduced my country and my hometown, spending some time on the art and cultural heritage, as well as on the history and gastronomy. I then quickly talked about my academic path. I explained how I came to choose scientific research as a career, describing the benefits and the challenges.

Finally I introduced my research interests "Thermally activated Delayed fluorescence (TADF)" in a step by step way.

This talk was divided in 5 parts:

1. Introduction to the nature of light
2. Fluorescence
3. Phosphorescence
4. TADF
5. TADF real-life application

## SD

※弊会記入欄

I first talked about the nature of light and how light's colors (or wavelengths) can be linked to energy through a simple equation. Afterwards, I explained fluorescence, its origin and its principle. I performed a little experiment to show the students how fluorescence can be activated by light irradiation using a light possessing the right energy level. I then showed and explained the photophysics differences between fluorescence and phosphorescence (the students were given little phosphorescent snow flakes and could observe phosphorescence by themselves with a weak UV light), and how the theory could explained their observations. From there, I could explain the theory of TADF, how to design a TADF emitters and how we could observe it experimentally. I finished by explaining why TADF molecules are so important in the making of OLEDs used in TV and phone screens.

At the end of the talk the students were given a short quiz prepared by Mr Goto. This enabled a direct interaction with the students and to spot the points that needed further/deeper explanations.

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

- 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。):

時間内のうち一通りの講義を早めに終え、生徒の理解状況をクイズなどを用いて把握したうえで改めて重点的に説明するという方法を用いたが非常に効果的でした。英語を理解することにも負担がかかるので一部の生徒だけが理解しているような状況を避けるためにも、時間を区切った理解の確認をする必要があると感じました。

生徒も非常に意欲的であり、科学についてはもちろん、積極的に英語でのやり取りが行われ、一方で講演する側も興味を持ってもらえるポイントや生活との関りなど多くのことを学ばせていただきました。