

(For JSPS Fellow)

Form B-5

Date (日付)

24/01/2012: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): Po-Chun Liu (ID No. P 11033)

- Participating school (学校名): Fukushima Prefectural High School

- Date (実施日時): 23th Jan. 2012 (Date/Month/Year:日/月/年)

- Lecture title (講演題目): (in English) To mimic the real world by using small molecules
(in Japanese)

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

The origin of chemistry can be traced back to the first century. At that time, many people tried to produce gold from other matters. From these experiments, people gradually learn some knowledge, which become the field of chemistry.

Today, chemistry has four major fields, which are organic chemistry, inorganic chemistry, physical chemistry and analytic chemistry. My researches belong to the coordination chemistry, which is a subfield of the inorganic chemistry. In the research field of coordination chemistry, our interests are to study transition metal ions. The first step to do a chemistry study is to design a project and choose a target complex. Then we have to synthesize this complex and study its physical properties and activities.

My past researches include studies of biomimetic models and molecular materials. The aim to develop biomimetic models is to design a compound, which can mimic the real organism. The designed biomimetic model can help us to understand the structure and function of real organisms. In my research, I developed trinuclear copper(II) compounds, which can mimic the active site of particular methane monooxygenase. On the other hand, since it is nano-age, chemists attempted to reduce the size of materials to molecule level. Based on this purpose, our group successfully designed and synthesized molecular wires and molecular switches.

- Language used (使用言語): English

- 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, slides and animations

- ◆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))

Providing Japanese explanation by accompanied person

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

Prof. Hiroki Oshio

- ◆Other note worthy information (その他特筆すべき事項):

- 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。):