

(For JSPS Fellow)

Form B-5

Date (日付)

3/12/2015 (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): Facun Jiao (ID No. P15051)
- Participating school (学校名): Gifu Prefectural Kamo Senior High School
- Date (実施日時): 30/11/2015 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Transformation behavior of trace elements in fly ash during oxy-fuel coal combustion
(in Japanese)
- Lecture summary (講演概要): Please summary your lecture 200-500 words.

I firstly gave a short introduction about my country, China, and talked something about the importance of English study for a researcher. Then, some research results on the transformation of trace elements during oxy-fuel coal combustion were given in this lecture. Coal is an energy resource in the world, especially in Japan and China. Oxy-fuel combustion technology is a viable alternative to removing CO₂ from the flue gas generated by conventional air-fired fossil fuel plant. The species of one of heavy metals, chromium (Cr), in the resulting fly ash are further characterized with the use of X-ray Adsorption Near-edge Structure (XANES) analysis which can provide some detail information about the chemical oxidation state of Cr, such as Cr(III) and Cr(VI). The dependence of Cr transformation behavior on the combustion atmosphere (O₂/N₂ vs. O₂/CO₂) and inorganic minerals in coal were elucidated.

- Language used (使用言語): English
- Lecture format (講演形式):
 - ◆Lecture time (講演時間) 85 min (分), Q&A time (質疑応答時間) 10 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))
Project was used for this Lecture
 - ◆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))
Japanese explanation was given by Prof. Yoshihiko Ninomiya
 - ◆Name and title of accompanied person (同行者 職・氏名)
Yoshihiko Ninomiya Professor

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

None

- 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。):