

## NUSNNI - Surface Science Seminar

**Seminar Title: Molecular adsorption system on transition metal surface studied by NEXAFS and XPS**

**Speaker : Professor Shinya Yagi**

**Graduate School of Engineering, Nagoya University**

**Venue: Physics Conference Room, S13-M01-15, Faculty of Science**

**Date: 17 July 2006, Monday**

**Time: 3:00pm - 4:00pm**

### **Abstract:**

To understand the catalytic reaction on metal, we have investigated the molecular adsorption system on transition metal studied by both NEXAFS and XPS techniques with synchrotron light. In the previous study for Rh(100) surface, we have studied the adsorption reaction of dimethylsulfide ((CH<sub>3</sub>)<sub>2</sub>S: DMS) at 90-300 K. There are three kinds of adsorbates, which are chemisorbed DMS, CH<sub>3</sub>S- (dissociated from DMS) and atomic sulfur. From the point of recycling process for the catalytic view, the chemisorbed sulfur atoms occur a sulfur poisoning. The sulfur poisoning makes to decrease the catalytic activity by the electron screening. In the present study, we have cleared that the chemisorbed sulfur atoms can only desorb from the surface under oxygen environment. We will also introduce our recent studies in this seminar.

### **Biographical Data:**

Name: Shinya Yagi  
Born: Hiroshima, Japan 23<sup>rd</sup> March 1966  
Education: B.S. 1990 Faculty of Physics, Hiroshima University  
M.S. 1992 Graduate School of Science, Hiroshima University  
Ph. D. 1995 Hiroshima University

### **Experience:**

Post Doctoral Position	1995-1996	Institute of Molecular Science, Okazaki Jpn
Research Associate University	1996-2000	Synchrotron Radiation Center, Hiroshima
Associate Professor University	2000-	Graduate School of Engineering, Nagoya
Visiting Researcher	2000-	Hiroshima University
Chief Scientist	2003-2005	Innovation Plaza Hiroshima, Japan Science and Technology Agency