The 2nd GCOE International Symposium
Hokkaido University Global COE Program
" Catalysis as the Basis for the Innovation in Materials Science "

Conference Hall, Hokkaido University
(N8W5, Sapporo, Japan) [Lectures]
Centennial Hall, Hokkaido University
(N9W6, Sapporo, Japan) [Poster presentations]

December 18th(Thu) 9:00-20:00, 2008
19th(Fri) 9:00-12:00

[SCOPE]

The transformation and syntheses of materials using catalysts are key technologies that encompass the main fields in innovations of materials science. Continual research on catalysis has been vigorously conducted at eight schools and institutes in Hokkaido University, including the graduate school of engineering and the graduate school of science. These activities have achieved many pioneering results in the field of fundamental theory, surface analysis and design, and the development of practical catalysts and catalytic reactions. These successful achievements led to the selection in the "Global COE (Center of Excellence) program" of the Ministry of Education, Culture, Sports, Science and Technology, Japan in 2007, which continues till 2011. The title of the selected program is "Catalysis as the Basis for the Innovation in Materials Science".

In this program, twenty-two staff members in five schools are organized into the following four fields, aiming for effective advancement of fundamental research.

a) Catalysis Theory and Analysis
b) Catalyst Design
c) Material Transformation
d) Syntheses of Materials

The 2nd GCOE International Symposium: Catalyst Development Based on Structured Reaction Field

As one of the activities of this program, an international symposium is held annually for establishing new concepts in catalyst design. This year's symposium will take place in Hokkaido University on December 18 and 19. The main topic of this year's symposium is "Catalyst Development Based on Structured Reaction Field", an indispensable concept for the designing of molecular catalysts, surface of solid catalysts, pore structure of solid catalysts, mass and heat transfer in and out of catalysts, and catalytic reaction system.

This symposium is constituted by two types of presentations; one is lectures by celebrated pioneers in the field of catalysis and the other is poster presentations by post doctoral fellows and doctor course students. We hope that, and are quite confident that active discussions among the attendants in this symposium are sure to lead to the establishment of new concepts in catalyst science.

The 2nd GCOE International Symposium
Hokkaido University Global COE Program

Catalysis as the Basis for the Innovation in Materials Science

- Catalyst Development Based on Structured Reaction Field -

Conference Hall Bldg.2nd Floor, and Centennial Hall Bldg. 1st Floor

Hokkaido University, Sapporo, Japan, December 18-19, 2008

Day 1: Thursday, December 18, 2008

OPENING REMARKS SESSION *Conference Hall Bldg.*

8:10 *Registration & Coffee Break*

8:50 Opening Remarks

Each presentation includes 5-minutes Q&A

SESSION 1. Catalysis Theory and Analysis *Conference Hall Bldg.*

9:00 Invited Lecture 1:
"Theory Meets Experiments"
Prof. Eiichi Nakamura (University of Tokyo, Japan)

9:40 Invited Lecture 2:
"Molecules Confined in Potential Wells of Nanoporous Solids"
Prof. Katsumi Kaneko (Chiba University, Japan)

- Coffee break -

SESSION 2. Catalyst Design and Syntheses of Materials *Conference Hall Bldg.*

10:40 Invited Lecture 3:
"Transport and Catalysis of Hydrocarbons in Confined Spaces"
Prof. Johannes A Lercher (TU Munchen, Germany)

11:20 Invited Lecture 4:
"Development of Highly Active, Nano-structured Catalysts for Deep Hydrodesulfurization"
Prof. Sang H. Moon (Seoul National University, Korea)

- Lunch -

13:20 Invited Lecture 5:

"Design of Zeolites and Mesoporous Materials Having Reaction Space for Efficient Catalytic Reactions"

Prof. Takashi Tatsumi (Tokyo Institute of Technology, Japan)

14:00 Invited Lecture 6:

"Iridium-catalysed Asymmetric Hydrogenation: New Catalysts with Increased Substrate Scope"

Prof. Pher G. Andersson (Uppsala University, Sweden)

- Coffee break -

SESSION 3. Poster *Conference Hall Bldg., Centennial Hall Bldg.*

15:00 Poster Parade (*Conference Hall Bldg.*)

17:10 Poster Presentation (*Centennial Hall Bldg.*)

Postdoctoral Fellows and Research Associates

- Banquet -

Day 2: Friday, December 19, 2008

8:30 *Registration & Coffee Break*

SESSION 4. Material Transformation *Conference Hall Bldg.*

9:00 Invited Lecture 7:

"New Dimension of Acid and Base Catalysis"

Prof. Shu Kobayashi (University of Tokyo, Japan)

9:40 Invited Lecture 8:

"Metal-catalyzed C-C Bond Forming Reactions via C-H Bond Activation"

Prof. Jonathan Ellman (University of California, Berkeley, USA)

- Coffee break -

10:40 Invited Lecture 9:

"Effect of Metal Support-interaction on Re-dispersion of Metal Deposits for Environmental Catalysis"

Prof. Koichi Eguchi (Kyoto University, Japan)

11:20 Invited Lecture 10:

"Hydrogen Production from Methanol with Structured Catalysts"

Prof. Akira Igarashi (Kogakuin University, Japan)

12:00 *Closing Remarks, Symposium Ends*

REGISTRATION IS FREE:

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